

## **ATTACHMENT 2.H.1: VDHR PRE-APPLICATION ANALYSIS**

April 18, 2023

## APPALACHIAN POWER COMPANY

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**Stuart Area 138-kV Transmission Improvements Project  
Component 3: Mayo River (Stuart) to Bassett Transmission Line  
Improvements  
Patrick and Henry Counties, Virginia  
Case No. PUR-2023-00024**

*Virginia Department of Historic Resources Pre-Application Analysis*

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0158529

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*Virginia Department of Historic Resources Pre-Application Analysis*

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## EXECUTIVE SUMMARY

With the Stuart Area 138-kV Transmission Improvements Project (“Stuart Project” or “Project”), Appalachian Power Company (“Appalachian Power”) is planning to upgrade the local electric transmission grid in four Virginia counties: Carroll, Floyd, Henry, and Patrick. The Stuart Project provides a new electrical source for the area, upgrades the voltage of equipment from 69-kilovolt (“kV”) to 138-kV, improves the local distribution system, and addresses aging infrastructure. The Stuart Project will ensure adequate power delivery to the area to support today’s electrical load and provide continued support during an extended outage.

The Project is organized into three components which are generally the construction sequence. The Mayo River (Stuart) to Bassett Area Transmission Improvements Component (“Component 3”) is the subject of this report and is depicted on **Appendix A: Maps 1 - 3**. Component 3 consists of rebuilding approximately 25.5 miles of existing 69-kV transmission line to 138-kV from north of the new Mayo River 138-kV Substation to the new Stoneleigh 138-kV Substation, to the existing Fieldale 69/138-kV Substation, to the new Smith River 138-kV Substation, and to existing Structure No. 1365-4 near the existing Philpott 138-kV Switch Station. The majority is in or near existing right-of-way (“ROW”), with the exception of approximately 3.0 miles of transmission line to be built in new ROW to integrate the proposed rebuilt transmission lines into the new substations and system. Approximately 4.5 miles of Component 3 will be double-circuit transmission line and the remainder is single circuit. Component 3 also involves retiring the existing Stanleytown, West Bassett, and Bassett substations. Portions of the existing transmission line will be rebuilt between the proposed Mayo River Substation and the proposed Smith River Substation in Patrick County (approximately 9.5 miles) and Henry County (approximately 16.0 miles). The transmission line will be rebuilt to upgrade the voltage of aging equipment originally constructed in the 1930s through the 1960s. In addition, Appalachian Power’s existing Fieldale Substation will be upgraded, and the Philpott Dam Substation will be expanded to accommodate the future electrical upgrades associated with Component 3. Component 3 will be constructed largely within and adjacent to the existing 50-foot-wide to 100-foot-wide ROW, which will be expanded to 100 feet in locations as necessary; however, there are minor deviations from the existing centerline and new greenfield portions to optimize the design or avoid constraints.

In August 2022, POWER Engineers, Inc. (“POWER”) conducted a Pre-Application Analysis of cultural resources for the Mayo River (Stuart) to Bassett Area Transmission Improvements Component (“Component 3”) in Henry and Patrick counties, Virginia. The analysis was performed on behalf of Appalachian Power, an affiliated operating company of American Electric Power Company, Inc. in support of a Virginia State Corporation Commission application. The analysis was conducted in accordance with the Virginia Department of Historic Resources’ (VDHR’s) *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (2008), or simply, *Guidelines*.

The existing 69 and 138-kV lines were constructed as single-circuit transmission lines in the 1930s through the 1960s primarily using a combination of wood H-frame and wood three-pole structures, which are now over 70 years old. The transmission lines will be rebuilt primarily using single-circuit steel H-frame structures and double-circuit monopole structures; however, final structure types will be dependent on engineering and terrain. Based on preliminary engineering, Appalachian Power anticipates primarily using galvanized steel H-frame and monopole structures with a low-reflective finish for the Project. The anticipated heights of the proposed structures on Component 3 range between 55 and 115 feet, with an average proposed structure height of 80 feet for the H-frames, 80 feet for the single-circuit monopole structures, and 100 feet for the double-circuit monopole structures. The proposed structures will typically

be 45 feet taller on average than the existing structures with the largest height difference being 70 feet. See Appendix D for Typical Structures that will be used for the Project.

VDHR resources within the Virginia Cultural Resource Information System were reviewed based on the tiered study areas outlined in the *Guidelines*. Resource documentation and current aerial photography was examined for listed, eligible, or potentially eligible previously recorded historic resources within the different tiered study areas per the *Guidelines*.

Field reconnaissance revealed that the existing transmission line to be rebuilt as part of Component 3 will physically affect archaeological sites 44HR0241 (no effect) and 44PK0049 (minimal effect). Site 44PK0049 was recommended for further study by its original surveyor. Component 3 will be at least partially visible from three National Register of Historic Places-listed properties and one National Register of Historic Places-eligible property. All of the in-view above ground resources are recommended as minimally affected, with the exception of the Basset Historic District (VDHR ID: 044-5180) and the Hordsville Enslaved / Freed African American Cemetery (044-5177 [44HR0220]) which will each be *moderately* impacted by Component 3. A Phase I survey of the substation component that will affect the district was already conducted in 2022, VDHR File No. 2021-0215. VDHR concurred that the Project would present a moderate adverse effect to the resource. POWER is in the process of consulting with the VDHR concerning resource 044-5177. Component 3 is not visible from the remaining 12 historical properties due to terrain and vegetative cover blocking views (Table ES1).

POWER recommends that Component 3 can move forward but notes that a Phase I cultural resources survey will be necessary to confirm the integrity of intersected resources and to determine the existence of previously unrecorded resources within Component 3's ROW. Additionally, POWER recommends that prior to construction AEP should continue coordination and mitigation efforts with VDHR concerning resources 044-5177 and 044-5180.

#### **ES1. SUMMARY TABLE OF POTENTIAL IMPACTS TO PREVIOUSLY RECORDED RESOURCES**

VDHR # / NR	RESOURCE HISTORIC NAME	ELIGIBILITY STATUS	IMPACTS
044-0004	Hordsville / Peter Hairston Plantation	Eligible	None
044-0007	Hillcroft / Rangely House	Eligible	None
044-0087 / NR-82001820	Stoneleigh	NRHP Listed, VLR Listed	None
044-5010 / NR-00000495	Virginia Home	NRHP Listed, VLR Listed	None
044-5011 / NR-99000960	Eltham Manor	NRHP Listed, VLR Listed	Minimal
044-5111	Haley House / Pringle House	Eligible	None
044-5166 / NR-05000523	The Fieldcrest Lodge / The Marshall Field & Company Clubhouse	NRHP Listed, VLR Listed	Minimal
044-5168	Fieldale Elementary School / Fieldale High School	Eligible	None
044-5169 / NR-05001587	John D. Bassett High School	NRHP Listed, VLR Listed	None
044-5172 / NR-07000231	Edgewood	NRHP Listed, VLR Listed	None
044-5173 / NR-08000072	Fieldale Historic District	NRHP Listed, VLR Listed	Minimal
044-5174 / NR-06000708	R.L. Stone House	NRHP Listed, VLR Listed	None
044-5177 (44HR0220)	Hordsville Enslaved / Freed African American Cemetery	Not evaluated*	Moderate
044-5179	Copeland House / House, 503 Field Avenue	Eligible	None
044-5180	Bassett Historic District	Eligible	Moderate
044-5576 / NR-Unknown	The Highlands / W. Burton Dillon House	NRHP Listed, VLR Listed	None

VDHR # / NR	RESOURCE HISTORIC NAME	ELIGIBILITY STATUS	IMPACTS
070-0005 / NR-71000987	Reynolds Homestead / Rock Spring Plantation	NHL Listed, NRHP Listed**, VLR Listed	None
44HR0241	Unnamed	Unknown	None
44PK0049	Unnamed	Unknown	Minimal

Notes: NRHP = National Register of Historic Places; NHL = National Historic Landmark

\* The Hordsville Enslaved / Freed African American Cemetery has been recommended by the VDHR regional archaeologist for further study. The cemetery is located 50 feet north of the Stoneleigh Substation and will not be physically impacted by Component 3 or the substation.

\*\* The Reynolds Homestead is a NRHP Listed resource; however since it is located approximately 1.03 mile from the proposed route for Component 3, it is only included in the NHL tier of the study area.

Source: VDHR 2022

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## ACRONYMS AND ABBREVIATIONS

Appalachian Power	Appalachian Power Company
ca.	circa
Component 3	Mayo River (Stuart) to Bassett Area Transmission Improvements
GIS	Geographic Information Systems
<i>Guidelines</i>	<i>VDHR's Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia</i>
kV	kilovolt
NHL	National Historic Landmark
NRHP	National Register of Historic Places
POWER	POWER Engineers, Inc.
ROW	right-of-way
SCC	State Corporation Commission
Stuart Project or Project	Stuart Area Transmission Improvements Project
USGS	United States Geological Systems
VCRIS	Virginia Cultural Resources Information System
VDHR	Virginia Department of Historic Resources
VLR	Virginia Landmarks Register

## 1.0 INTRODUCTION

With the Stuart Area 138-kV Transmission Improvements Project (“Stuart Project” or “Project”), Appalachian Power Company (“Appalachian Power”) is planning to upgrade the local electric transmission grid in four Virginia counties: Carroll, Floyd, Henry, and Patrick. The Stuart Project provides a new electrical source for the area, upgrades the voltage of equipment from 69-kilovolt (“kV”) to 138-kV, improves the local distribution system, and addresses aging infrastructure. The Stuart Project will ensure adequate power delivery to the area to support today’s electrical load and provide continued support during an extended outage.

The Project is organized into three components which are generally the construction sequence. The Mayo River (Stuart) to Bassett Area Transmission Improvements Component (“Component 3”) is the subject of this report and is depicted in **Appendix A**. Component 3 consists of rebuilding approximately 25.5 miles of existing 69-kV transmission line to 138-kV standards from north of the new Mayo River 138-kV Substation, to the new Stoneleigh 138-kV Substation, to the existing Fieldale 69/138-kV Substation, to the new Smith River 138-kV Substation, and to existing Structure No. 1365-4 near the existing Philpott 138-kV Switch Station. The majority is in or near existing right-of-way (“ROW”), with the exception of approximately 3.0 miles of transmission line to be built in new ROW to integrate the proposed rebuilt transmission lines into the new substations and system. Approximately 4.5 miles will be double-circuit transmission line and the remainder is single circuit. Component 3 also involves retiring the existing Stanleytown, West Bassett, and Bassett substations. Portions of the existing transmission line will be rebuilt between the proposed Mayo River Substation and the proposed Smith River Substation in Patrick County (approximately 9.5 miles) and Henry County (approximately 16.0 miles). The transmission line will be rebuilt to upgrade the voltage of aging equipment originally constructed in the 1930s through the 1960s. In addition, Appalachian Power’s existing Fieldale Substation will be upgraded, and the Philpott Dam Substation will be expanded to accommodate the future electrical upgrades associated with Component 3. Component 3 will be constructed largely within and adjacent to the existing 50-foot-wide to 100-foot-wide ROW, which will be expanded to 100 feet in locations as necessary; however, there are minor deviations from the existing centerline and new greenfield portions to optimize the design or avoid constraints.

In August 2022, POWER Engineers, Inc. (“POWER”) conducted a Pre-Application Analysis of cultural resources for Component 3 in Henry and Patrick counties, Virginia. Component 3 is a part of the larger Stuart Area 138-kV Transmission Improvements Project, which consists of approximately 72.0 miles of new or rebuilt transmission line in Carroll, Floyd, Patrick, and Henry counties, Virginia. The analysis was performed on behalf of Appalachian Power, an affiliated operating company of American Electric Power Company, Inc. in support of a Virginia State Corporation Commission (“SCC”) application. The analysis was conducted in accordance with the Virginia Department of Historic Resources’ (“VDHR”) *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (2008), or simply, *Guidelines*.

The analysis was conducted to provide technical assistance in accordance with VDHR and the SCC’s guidance. The analysis provides information regarding previously recorded cultural resources that are eligible for, or listed on, the National Register of Historic Places (“NRHP”) or recorded as a National Historic Landmark (“NHL”) within a 0.5-, 1.0- and 1.5-mile study area, and previously recorded archaeological sites located within the proposed ROW for Component 3. The analysis does not include assessment of the potential impacts upon unrecorded and/or historic resources that have not been evaluated for listing on the NRHP. If a federal undertaking is identified for Component 3, this analysis will not satisfy Section 106 of the National Historic Preservation Act cultural resource identification and

evaluation requirements. However, it can serve as a planning tool and assist in determining if further cultural resource identification efforts may be warranted.

This report contains a research design outlining the scope and methodology of the analysis, discussion of previously identified historic properties and an assessment of potential impacts. POWER cultural resources specialist Tanner Haynes, M.A., R.P.A., conducted the analysis and co-authored the report with Travis Corwin who also served as Field Director. The POWER personnel who conducted this analysis meet the professional qualification standards of the United States Department of the Interior (48 Federal Register 44738-9).

## **2.0 COMPONENT 3 DESCRIPTION**

Appalachian Power is planning to rebuild existing transmission lines due, in part, to the deteriorated condition, performance, and risk associated with the asset, which was originally built in the 1930s through 1960s. Component 3 consists of rebuilding approximately 25.5 miles of transmission line, including the construction of approximately 3.0 miles of new transmission line, the construction of the new Stoneleigh and Smith River substations, the conversion of the existing Patrick Henry Substation, and upgrades at the existing Fieldale and Fairystone substations. Component 3 consists of the following:

- Rebuild approximately 25.5 miles of existing 69-kV transmission line to 138-kV standards from north of the new Mayo River 138-kV Substation to the new Stoneleigh 138-kV Substation, to the existing Fieldale 69/138-kV Substation, to the new Smith River 138-kV Substation, and to existing Structure No. 1365-4, located near the existing Philpott 138-kV Switch Station. This includes the rebuild of approximately 0.7 mile of the Claytor-Fieldale 138-kV Transmission Line between the Philpott 138-kV Switch Station and West Bassett 69/138-kV Substation. The majority of the line rebuild is in or near existing ROW, with the exception of approximately 3.0 miles of transmission line to be built in new ROW to integrate the proposed rebuilt transmission lines into the new substations and system.
- Construction of a new Stoneleigh 138-kV Substation (replaces Stanleytown 69-kV Substation).
- Construction of a new Smith River 138-kV Substation (replaces Bassett 69-kV Substation and West Bassett 69/138-kV Substation).
- Conversion of the Patrick Henry 69-kV Substation to 138 kV.
- Upgrades at the existing Fieldale 69/138-kV Substation.
- Minor upgrades at the existing Fairystone 138-kV Substation.

## 3.0 SCOPE AND METHODOLOGY

### 3.1 Archival Research

POWER conducted background research, using data available online through Virginia Cultural Resources Information System (“VCRIS”) in August 2022, with the goal of identifying all previously recorded cultural resources according to the *Guidelines* and within the tiered study areas (Table 1). Archival research also included any additional potential cultural resource locations referred to in historic documents. Details and histories of individual resources were pulled from the information provided by the original surveyors and VDHR within the VCRIS. Background research included review of the following sources:

- VCRIS (VDHR 2022)
  - Architectural Site Forms
  - Archaeological Site Forms
  - NRHP Nomination Forms
- National Park Service’s NRHP Database (2022)

**TABLE 1 TIERED STUDY AREA BUFFERS**

RADIAL BUFFERS (MILES)	CONSIDERED RESOURCES
1.5	National Historic Landmarks
1.0	Above resources, and: NRHP Properties (listed) Battlefields Historic Landscapes (e.g., Rural Historic Districts)
0.5	Above resources, and: NRHP-eligible (as determined by VDHR)
0.0 (within ROW)	Above resources, and: Archaeological Sites

Source: VDHR 2008

### 3.2 Field Reconnaissance

Based on the VDHR’s *Guidelines*, a field reconnaissance was conducted for each previously recorded resource that meets the criteria of the tiered study area for Component 3 to assess each resource’s integrity with regard to feeling, setting, and associations. Visual inspection included digital photo documentation of each resource’s existing conditions including its setting and views toward Component 3. All photographs were taken from a point of public access and where feasible, photographs were taken of primary elevations, general setting, and existing viewsheds.

### 3.3 Simulation Methodology

Per the VDHR’s *Guidelines*, simulations are required for transmission line rebuilds when the proposed transmission structures are substantially taller (greater than 10% or 20 feet) than the existing structures. POWER’s cultural resources specialists produced 20 viewshed simulations of the historic resources to Component 3 (see **Appendix B**). POWER collected photographs from public vantage points to simulate

the proposed viewshed effects, if any, upon historic resources, as defined in the *Guidelines*. In order to estimate the potential viewshed effects of Component 3 the following attributes were taken into account:

- The height of the existing transmission line structures (average of 52 feet tall).
- The current visibility of the existing transmission line from a given resource.
- The height of the proposed transmission line structures which range from 55 to 115 feet tall with an average height of 80 feet for the H-frame structures, 80 feet for the single-circuit monopole structures and 100 feet for double-circuit monopole structures.
- The impact to visibility given intervening topography and distance to Component 3.
- Visibility differences between winter and summer months.

Various Geographic Information System (GIS) software, including ArcGIS Earth and Google Earth Pro, were used in the evaluation of potential viewshed effects of a given resource. The proposed heights of the structures, as determined by the preliminary engineering analysis, were used for the simulations. Analytical tools, including aerial imagery, elevation tools, 3D terrain, and Street View were employed. During analysis, polygons were drawn around wooded areas based on aerial imagery to simulate the effects of tree cover on the visibility of Component 3. An average tree height of 40 feet was assumed during this process given the location of Component 3 and typical tree species (a variety of pine species, maple species, and oak species). The line of sight displayed in the simulations is drawn between the closest tower requiring visual simulation and the resource at ground level. While Component 3 can be seen through tree cover, particularly in the winter, POWER operated under the assumption that 150 feet of continuous tree branch cover, based on typical tree species and vegetation density, is sufficient to block views of Component 3 even if leaves are not present.

### 3.4 Assessment of Potential Impacts

In accordance with VDHR's *Guidelines*, an assessment of the potential impacts of Component 3 to previously recorded potentially eligible, NRHP-eligible, NRHP-listed historic resources, and NHL's within VDHR's tiered study areas was completed. This entails consideration of those qualities and characteristics that qualify a property for listing on the NRHP and whether Component 3 has the potential to alter or diminish the integrity of the property and its associated significance. Effects upon historic properties can be direct or indirect. Direct effects refer to the causality, and not the physicality, of the effect upon historic properties. Direct effects occur at the same time and place. Indirect effects refer to those caused at a later time or farther removed in the distance but still reasonably foreseeable (National Trust for Historic Preservation v. Todd Semonite 2019). This analysis was performed at a level that meets the purpose and intent of VDHR and the SCC's guidance, and therefore an assessment of potential impacts to unrecorded and/or historic resources that have not been evaluated for NRHP eligibility is not included. The following terminology was used in reference to the impacts on a given resource:

- **None:** Component 3 is not visible from the property
- **Minimal:** Occur within viewsheds that have existing, unrelated transmission and distribution lines, locations where there will be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate:** Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.

- **Severe:** Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

## 4.0 PREVIOUSLY IDENTIFIED HISTORIC PROPERTIES

The archival research indicated there are 19 previously identified resources within the tiered study areas (**Appendix A: Map 2; Table 2**). Of these resources, one (Reynolds Homestead<sup>1</sup> [070-0005 / NR-71000987]) is an NHL and is also individually listed as an NRHP property within the 1.5-mile buffer, nine additional NRHP-listed resources are within 1.0 mile of Component 3, six NRHP-eligible resources are within 0.5 mile of Component 3, and two archaeological sites are within the proposed ROW. These two archaeological sites (44HR0241 and 44PK0049) have not been formally assessed for NRHP eligibility. The Hordsville Enslaved / Freed African Cemetery (044-5177 [44HR0220]) has not been evaluated by the VDHR, however, due to sensitivity of the burials and its association with the enslaved and freed African Americans, its likely affiliation with the NRHP-potentially eligible Hordsville Plantation, proximity to Component 3, and the VDHR regional archaeologist's recommendation for further study, that although the cemetery is outside of the tiered study area, POWER has chosen to include this resource in the VDHR Pre-Application analysis.

**TABLE 2 PREVIOUSLY RECORDED HISTORIC PROPERTIES**

RADIAL BUFFER (MILES)	CONSIDERED RESOURCES	RESOURCE NAME (VDHR ID / NR)
0.0 to 1.5	NHL	Reynolds Homestead / Rock Spring Plantation (070-0005 / NR-71000987)
0.0 to 1.0	NRHP-listed Historic landscapes (e.g., Rural Historic District)	Stoneleigh (044-0087 / NR-82001820) Virginia Home (044-5010 / NR-00000495) Eltham Manor (044-5011 / NR-99000960) Fieldcrest Lodge / The Marshall Field & Company Clubhouse (044-5166 / NR-05000523) John D. Bassett High School (044-5169 / NR-05001587) Edgewood (044-5172 / NR-07000231) Fieldale Historic District (044-5173 / NR-08000072) R.L. Stone House (044-5174 / NR-06000708) The Highlands / W. Burton Dillon House (044-5576 / NR-Unknown)
0.0 to 0.5	NRHP-eligible or potentially eligible (determined by VDHR)	Hordsville / Peter Hairston Plantation (044-0004) Hillcroft / Rangely House (044-0007) Haley House / Pringle House (044-5111) Fieldale Elementary School / Fieldale High School (044-5168) Hordsville Enslaved / Freed African American Cemetery (044-5177 [44HR0220]) <sup>*</sup> Copeland House / House, 503 Field Avenue (044-5179) Bassett Historic District (044-5180)
0.00 (within ROW)	Archaeological sites	Unnamed (44HR0241) Unnamed (44PK0049)

<sup>1</sup> The Reynolds Homestead is a NRHP Listed resource; however, it is located approximately 1.03 mile from the proposed route for Component 3 as is therefore listed only NHL tier.

\* The Hordsville Enslaved / Freed African American Cemetery has been recommended by the VDHR regional archaeologist for further study. The cemetery is located 50 ft north of the Stoneleigh Substation and will not be physically impacted by Component 3 or the substation.  
Source: VDHR 2022

## 5.0 RESULTS OF FIELD RECONNAISSANCE

In accordance with the VDHR's *Guidelines*, each of the previously recorded historic properties either listed or determined eligible for listing in the NRHP are discussed in this analysis. The results of the field reconnaissance for each resource are summarized below in Table 3 and discussed in the following pages.

**TABLE 3 RESOURCE EVALUATION SUMMARY**

VDHR # / NR	RESOURCE NAME	NRHP STATUS	VIEW	IMPACTS
044-0004	Hordsville / Peter Hairston Plantation	Eligible	None	None: Existing unrelated powerlines and partial obscuring by landscape render impacts to the viewshed negligible.
044-0007	Hillcroft / Rangely House	Eligible	None	None: Component 3 is blocked by vegetation and terrain.
044-0087 / NR-82001820	Stoneleigh	Listed	None	None: Component 3 is blocked by landscape and vegetation.
044-5010 / NR-00000495	Virginia Home	Listed	None	None: Component 3 is blocked by terrain and vegetation.
044-5011 / NR-99000960	Eltham Manor	Listed	Minimal	Minimal: Resource already has expansive views of existing transmission line.
044-5111	Haley House, / Pringle House	Eligible	None	None: Component 3 is blocked vegetation and terrain.
044-5166 / NR-5000523	The Fieldcrest Lodge /The Marshall Field & Company Clubhouse	Listed	Minimal	Minimal: Existing lines render impacts to the viewshed negligible.
044-5168	Fieldale Elementary School / Fieldale High School	Eligible	None	None: Component 3 is blocked by buildings and terrain.
044-5169	John D. Bassett High School	Listed	None	None: Component 3 is blocked by vegetation and terrain.
044-5172	Edgewood	Listed	None	None: Component 3 is blocked by landscape and vegetation.
044-5173 / NR-8000072	Fieldale Historic District	Listed	Minimal	Minimal: Existing lines render impacts to the viewshed negligible as well as many contributing resources viewsheds to Component 3 are blocked by the landscape.
044-5174 / NR-06000708	R.L. Stone House	Listed	None	None: Component 3 is blocked by vegetation and terrain.
044-5177 [44HR0220]	Hordsville Enslaved / Freed African Cemetery	Not Evaluated	Moderate	Moderate: Existing utility lines and industrial buildings are a part of the viewshed. VDHR regional archaeologist recommend the cemetery for further study. Cemetery is likely affiliated with the Hordsville Plantation and Hairston family.
044-5179	Copeland House / House, 503 Field Avenue	Eligible	None	None: Component 3 is blocked by buildings and terrain.



VDHR # / NR	RESOURCE NAME	NRHP STATUS	VIEW	IMPACTS
044-5180	Bassett Historic District	Eligible	Moderate	Moderate: Existing utility lines and industrial buildings are a part of the viewshed. Integrity of setting is not mentioned in site form as a criteria for eligibility.
044-5576	The Highlands / W. Burton Dillon House	Listed	None	None: Terrain and vegetation block view of Component 3.
070-0005	Reynolds Homestead / Rock Spring Plantation	Listed*	None	None: Distance and vegetation block view of Component 3.
44HR0241	Unnamed	Undetermined	N/A	None: No ground disturbing activities are proposed within the site.
44PK0049	Unnamed	Undetermined	N/A	Minimal: A transmission structure is proposed along the edge of the site along an existing ROW.

\* The Reynolds Homestead is a NRHP Listed resource; however since it is located approximately 1.03 mile from the proposed route for Component 3, it is only included in the NHL tier of the study area.

Source: VDHR 2022

## 044-0004 - Hordsville / Peter Hairston Plantation

RESOURCE BACKGROUND INFORMATION	
<b>Status</b>	VDHR Board Det. Eligible
<b>Setting and Location</b>	The main house at Hordsville is located on a knoll overlooking the Smith River adjacent to the relocated State Route 682 in Henry County, southeast of Stanleytown. The walk leading to the front door is lined with English boxwood standing 10 to 11 feet and dating to the antebellum period, as is a similar walk leading to the cemetery behind the house.
<b>Resource Description</b>	The house is basically rectangular with two flanking wings slightly smaller in width than the main house. It is bilaterally symmetrical, each element, front and back, side and side, reflecting its opposite. On the back of the house, there is a porch which is covered and partly enclosed. The main block of the house has a central hallway which connects the front and rear doors on the first floor. This hallway is flanked by one room on each side, each of which is in turn flanked by the wings of the house. Each room of the house has a fireplace centrally located in an end wall. These connect to four chimneys in the endwalls of the house. The brick walls are two feet thick and laid in Flemish Bond with the chimneys and endwalls laid in Common Bond. The front door has an elliptical fan light above and side lights on either side and is framed by a simple one-story porch with four Doric columns. The roof of the house was originally wooden shingle but is now a standing seam sheet metal one.
<b>Original Surveyor Evaluation</b>	This plantation was originally owned by George Hairston II, who represented the county in influence, and was also primarily responsible for the completion of the Richmond and Danville Railroad. The main house at Hordsville is notable for some interesting architectural features. The flying staircase in the center of the house is one of the most beautiful of these features, rising three floors to the attic and having a solid hand carved walnut banister. [Criterion C]

Source: VDHR 2022

Resource 044-0004 is 0.30 mile north of the proposed Stoneleigh Substation and adjoining transmission line (**Appendix A: Map 3, Page 10; Appendix B: Figures 1a and 1b; Appendix C: P-18a**). The



proposed route of Component 3 will not be visible from the resource due to intervening landscape and vegetation. POWER recommends that there will be *no effect* upon this resource.

### 044-0007 – Hillcroft House / Rangely House

RESOURCE BACKGROUND INFORMATION	
Status	VDHR Staff: Eligible
Setting and Location	Henry County
Resource Description	The residence was constructed in five stages, ca. 1740, 1815, 1841, 1940 and 1967. The earliest portion is built in saltbox style. The 1740 and 1815 sections are of frame all others are of handmade brick. The 1841 section is English bond, the others are Flemish bond. The residence has an outbuilding with a single story and a seam gabled roof built in the Antebellum Period outbuilding
Original Surveyor Evaluation	Hillcroft is believed to be the only extant eighteenth-century example in Southside Virginia. [Criterion C]

Source: VDHR 2022

The existing and proposed transmission line are not visible from the resource as shown in the photo-simulation (**Appendix A: Map 3, Page 3; Appendix B: Figure 2; Appendix C: P-6**). Component 3 is located 0.44 mile from the resource and is not visible. POWER recommends that the rebuilt Component 3 will have *no impact* on the NRHP-eligible resource.

## 044-0087 / NR-82001820 - Stoneleigh

RESOURCE BACKGROUND INFORMATION	
Status	NRHP Listing, VLR Listing
Setting and Location	Stoneleigh is set on a small hill overlooking the hilly countryside that encompasses Stanleytown and Basset Forks, two neighboring communities. The original gardens were planned by E.S. Draper, landscape architect of Charlotte, North Carolina; in 1961, they were extensively redesigned by Charles Gillette, a Richmond landscape architect.
Resource Description	Entrance to the 56-acre estate is provided by a long drive that leads to a stone-and-brick paved circle in front of the Tudor Revival-style residence. The circle echoes the materials used to construct the house, also built of stone and brick and covered with a complementing red and gray slate roof. The facade (north) is divided into a three-bay center section with flanking wings of two bays. The main section contains a projecting entrance pavilion and abutting dining room bay. The main entrance consists of a stone-carved, Georgian-style doorway with a broken pediment. The carved multi-paneled door is framed by a simple molded architrave flanked by fluted pilasters with carved foliated capitals.
Original Surveyor Evaluation	Stoneleigh is significant both as a distinguished example of the Tudor Revival style and as the former residence of Virginia Governor Thomas B. Stanley. The house was built in 1929 to 1931 on a small hill amidst the rolling countryside of Henry County after the plans of Leland McBroom of the firm of Tinsley and McBroom of Des Moines, Iowa. Because of its antiquarian and English flavor, the Tudor style achieved considerable popularity in Virginia during the 1920s and early 1930s, appealing especially to the wealthy classes seeking an established prosperous look for their dwellings. A pioneer furniture manufacturer, Thomas B. Stanley, organized the Vaughan-Bassett Furniture Company before starting his own furniture factory at what is now Stanleytown in 1924. The completion of Stoneleigh signaled the end of Stanley's active business career and his entrance into the state political arena. From his position as a delegate in the General Assembly, Stanley rose through the ranks of the state Democratic party organization to become Speaker of the House of Delegates, a United States Congressman, and finally Governor of Virginia from 1954 to 1958. [Criteria B and C]

Source: VDHR 2022

The existing and proposed transmission line are not visible from the resource as shown in the photo-simulation and elevation model (**Appendix A: Map 3, Page 11; Appendix B: Figure 3; Appendix C: P-19**). The Project, including the proposed Stoneleigh Substation, is located 0.68 mile from the resource and will not be visible. POWER recommends that the rebuilt Component 3 will have *no impact* on the NRHP-listed resource.

## 044-5010 / NR-00000495 - Virginia Home

RESOURCE BACKGROUND INFORMATION	
<b>Status</b>	NRHP Listing, VLR Listing
<b>Setting and Location</b>	The Virginia Home is located in Fieldale, Virginia in the southern Piedmont region. The Fieldcrest Mills and the Smith River lie directly to the south and east of the Virginia Home and one-story single-family worker's houses extend in either direction along Field Avenue.
<b>Resource Description</b>	The Virginia Home is a two-story, seven-bay vernacular wood-frame boarding house with a hip roof and a full, two-story porch. Asbestos shingles cover the original German siding of the house. The interior features a dining room, kitchen, parlor, and a double-loaded corridor with bedrooms on the second floor. The building is rectangular in plan with a brick foundation.
<b>Original Surveyor Evaluation</b>	The Virginia Home is significant for its association with the labor history of a textile mill and company town in the early twentieth century. It is locally significant as a domestic boarding house for female textile workers. The town of Fieldale was created between 1917 and 1919 by the Marshall Field and Company of Chicago to supply domestic textiles to their retail stores as well as a worldwide market. For more information, please see file. [Criteria A]

Source: VDHR 2022

The existing and proposed transmission line are not visible from the resource as shown in the photo-simulation (**Appendix A: Map 3, Page 4; Appendix B: Figure 4; Appendix C: P-11**). Component 3 is located 0.27 mile from the resource and is not visible. The existing Fieldale Substation and related lines are 0.35 mile from the resource and are not visible. POWER recommends that the rebuilt Component 3 will have *no impact* on the NRHP-listed resource.

## 044-5011 / NR-99000960 - Eltham Manor

RESOURCE BACKGROUND INFORMATION	
<b>Status</b>	NRHP Listing, VLR Listing
<b>Setting and Location</b>	Eltham Manor is located near the community of Cassett in the Blue Ridge foothills of northwest Henry County, Virginia. The mansion's park-like setting encompasses approximately 200 acres and features a lake and barn from the 1930s.
<b>Resource Description</b>	The Georgian Revival mansion is a Flemish-bond house with a graduated three-part form featuring a five-bay central section with two-story wings projecting from the gable-ends. The central section has a west-facing main approach front and a porticoed east-facing river front. Arcaded porches on the west elevations of the wings extend into curved hyphens that link to a two-story garage and servant's quarters at the north end and a one-story open-air pavilion at the south end. All sections have gable roofs covered with Buckingham slate, and the central section roof has gabled dormers with beaded flush-board sides. The interior has approximately 12,000 square feet of floor space with mantels, surrounds, and plaster ornament derived largely from the Georgian and Federal styles.
<b>Original Surveyor Evaluation</b>	Eltham Manor is significant as an impressive example of Georgian Revival design. The property is also significant in the area of industry for its associations with W.M. Bassett, an important figure in Virginia's twentieth-century industrial history. The period of significance extends from the date of the home's construction in 1936 through 1949, embracing the middle years of Bassett's career. [Criteria B and C]

Source: VDHR 2022

The existing and proposed transmission line run along the southwest boundary of the resource and can be seen from the southwest portion of the resource. However, the existing and proposed transmission line

cannot be seen from the primary resource, the Manor building, as it is blocked by intervening vegetation and terrain (**Appendix A: Map 3, Page 18; Appendix B: Figure 5; Appendix C: P-16**). Because of the existing transmission line's proximity to the resource boundary and its obscurity from the Manor building, POWER recommends that the rebuilt Component 3 will have a *minimal* impact on the NRHP-listed resource.

## 044-5111 - Haley House / Pringle House

RESOURCE BACKGROUND INFORMATION	
<b>Status</b>	VDHR Staff: Eligible
<b>Setting and Location</b>	The house sits on top of a hill facing east. The driveway is paved. Landscaping includes mature boxwood and gardens in the rear.
<b>Resource Description</b>	This two-and-a-half story Georgian Revival-style dwelling is composed of a five-bay central block with a protruding pedimented central bay, a two-story side wing to the north, and a one-story three-bay porch on the south end. This high style house has many architectural details including a wooden modillioned cornice with dentils, 12/15 and 9/6 windows, paneled and louvered wooden shutters with iron shutter dogs shaped like a grape cluster, etc. Although the house was built in 1952, it is in keeping with earlier high-style Colonial Revival dwellings in the same neighborhood that were constructed by members of the Bassett family and other prominent citizens.
<b>Original Surveyor Evaluation</b>	The industrialization of Henry County and Martinsville, in which Bassett Furniture Company played an important part, began in the early twentieth century. The 1952 Pringle House was built by the granddaughter of C.C. Bassett on a portion of his original 480 tract of land along the Smith River. The architecturally sophisticated Pringle House was designed in 1952 by the architect William Roy Wallace for Ralph and Avis W. Helms (later Pringle). The landscape architect was Robert G. Campbell of Philadelphia. The grand Georgian Revival-style dwelling demonstrates a continuity of high style architecture in the Bassett community that dates back to the early twentieth century. [Criteria A and C]

Source: VDHR 2022

The existing and proposed transmission line are not visible from the resource as shown in the photo-simulation and elevation model (**Appendix A: Map 3, Page 14; Appendix B: Figure 6; Appendix C: P-22**). Component 3 is located 0.38 mile from the resource and is not visible. Since the existing transmission is currently not in view of the resource POWER recommends that the rebuilt Component 3 will have *no impact* on the VDHR NRHP-eligible resource.

## 044-5166 / NR-05000523 - The Fieldcrest Lodge / The Marshall Field & Company Clubhouse

RESOURCE BACKGROUND INFORMATION	
Status	NRHP Listing, VLR Listing
Setting and Location	On a mountain top in 488 acres of woods, near pastures and the Smith River.
Resource Description	The lodge has two-stories and a partial basement. Using local fieldstones, box beams, pebble dash stucco, and terra cotta tile the resource is in a Tudor Revival style. Built in 1917, the lodge was built in conjunction with the town and mill by the Marshall Field Company as a recreational facility.
Original Surveyor Evaluation	The Fieldcrest Lodge was designed and built by W. C. Northrup for the Marshall Field Co. of Chicago and used by company executives. Collectively, the buildings and grounds appear to be eligible under Criterion C for architecture, and possibly Criterion A for recreation.

Source: VDHR 2022

The existing and proposed transmission line is visible from the resource as shown in the photo-simulation (**Appendix A: Map 3, Page 7; Appendix B: Figure 7; Appendix C: P-7**). At its nearest point, the existing Fieldale Substation is located 0.75 mile north of the resource, where several high voltage transmission lines enter and exit the substation and is visible. However, as shown in the photo-simulation there is no considerable difference in the viewshed from the existing and proposed conditions. POWER recommends that the rebuilt Component 3 will have a *minimal* impact on the NRHP-listed resource.

## 044-5168 - Fieldale Elementary School / Fieldale High School

RESOURCE BACKGROUND INFORMATION	
Status	VDHR Board Determined Eligible
Setting and Location	Next to the Community Center on the main thoroughfare at the center of Fieldale.
Resource Description	The Georgian Revival-styled was built in 1941 as a high school. Once a replacement was constructed in 1964 it became the elementary school.
Original Surveyor Evaluation	The Fieldale High School, later the Fieldale Elementary School, is significant for its striking Georgian Revival-styled architecture as well as for its role in the education of generations of children in a small, rural, mill company town [...] This building is recommended as a contributing resource in the Fieldale National Register Historic District. [Criteria A and C]

Source: VDHR 2022

The existing and proposed transmission line is not visible from the resource as shown in the photo-simulation and elevation model (**Appendix A: Map 3, Page 5; Appendix B: Figure 8; Appendix C: P-9**). Component 3 is located 0.55 mile from the resource and is not visible. While the Fieldale Elementary School is 0.55 mile from Component 3, it is a contributing resource to the NRHP-listed Fieldale Historic District which is 0.08 mile from Component 3. POWER recommends that the rebuilt Component 3 will have *no impact* on the VDHR NRHP-eligible resource.

## 044-5169 / NR-05001587 - John D. Bassett High School

RESOURCE BACKGROUND INFORMATION	
Status	NRHP Listing, VLR Listing
Setting and Location	The school is set on flat ground that is a floodplain to the south of Smith River, roughly between the towns of Bassett and North Bassett, which are contiguous, and is backed by a tall, wooded hill.
Resource Description	Built in 1964, the Georgian Revival-styled school features circular drive, with flagpoles in the center, leads to the school building, which is flanked by tennis courts (a non-contributing site) to the south and a ball field to the north.
Original Surveyor Evaluation	The John D. Bassett High School is eligible for listing on the National Register under Criterion A in the areas of Education and Social History for of its central role to the Bassett community throughout the second half of the twentieth century. The John D. Bassett High School is also eligible under Criterion C for its high quality of design and construction as it exemplifies the Georgian-Revival style and progressive school-building design in Virginia in the period just after World War II. The building and its grounds retain a high level of integrity and are significant on the local level for the period 1947-1955.

Source: VDHR 2022

The existing and proposed transmission line is not visible from the resource as shown in the photo-simulation and elevation model (**Appendix A: Map 3, Page 17; Appendix B: Figure 9; Appendix C: P-25a**). Component 3 is located 0.18 mile from the resource and is not visible. The existing transmission line is currently not visible from the resource and POWER recommends that the rebuilt Component 3 will have *no impact* on the VDHR NRHP-listed resource.

## 044-5172 / NR-07000231 - Edgewood

RESOURCE BACKGROUND INFORMATION	
Status	NRHP Listing, VLR Listing
Setting and Location	1937: 2.8 miles north of Martinsville on Route 220. 1.0 mile northwest on Rt 57. 500 yards north on a private road. In the yard, there was once a boxwood and a flower garden was in the rear.  2006: The house is facing a narrow public roadway, situated on a knoll with a large magnolia tree and six large maples in front.
Resource Description	A manor house built in the 1830s, Edgewood is a Palladian three-part form with a projecting two-story, three bay, pedimented, Greek-temple-form central mass and two-story flanking wings, all of Flemish bond brick, with three semi-integral end chimneys, and a one-story front porch.
Original Surveyor Evaluation	Edgewood is significant under Criterion C in the area of architecture for its rarity of form and quality of design and construction. Its period of significance begins ca. 1830 and extends through the period of renovations undertaken by architect William Roy Wallace, ending in 1953. [The resource has maintained an integrity of Location and Setting.]

Source: VDHR 2022

The proposed transmission line will not be visible from the resource as shown in the photo-simulation and elevation model (**Appendix A: Map 3, Page 12; Appendix B: Figure 10; Appendix C: P-21**). Component 3 is located 0.77 mile from the resource and will not be visible due to intervening terrain and vegetation. POWER recommends that Component 3 will have *no impact* on the VDHR NRHP-listed resource.

## 044-5173 / NR-08000072 - Fieldale Historic District

RESOURCE BACKGROUND INFORMATION	
<b>Status</b>	NRHP Listing, VLR Listing
<b>Setting and Location</b>	The Fieldale Historic District is located within the unincorporated town of Fieldale and is situated in central Henry County, approximately 4.0 miles west of Martinsville and 5.0 miles southwest of the county seat of Collinsville. [...] The general topography is hilly and the street pattern consists of long roads that generally follow natural contours and shorter, straight side roads that run east-west.
<b>Resource Description</b>	Fieldale functioned throughout much of the twentieth century as an important company-owned textile mill town in the Piedmont region of the American Southeast. The town is located southwest of the Smith River four miles northwest of Martinsville, the seat of government for Henry County, Virginia. Marshall Field & Company began acquisition of the 1,800-acre Fieldale tract of land in 1916, and cotton mill production began in 1919. By 1930 Fieldale attained most of its historic stock of company-owned housing and a relatively constant population of 1,250. Throughout the town's period of significance from 1917 to 1958 (due to mill closing in 2003), Fieldale residents lived together in a close-knit community sustained by ties of friendship and by mill-owner provided benefits.
<b>Original Surveyor Evaluation</b>	The Fieldale Historic District is significant on the regional level of significance as a company town developed by the Marshall Field Company beginning in 1917 for the manufacture of cotton towels and, later, hosiery. Fieldale still contains most of the components of the town laid out and developed by the Marshall Field Company, including the fabric and hosiery mills, schools, a community center, a commercial district, and approximately 220 residences built by the company for its workers. It is NRHP listed under Criteria A for association with the forming of Fieldale and C for its architectural style.

Source: VDHR 2022

The proposed and existing transmission line will only be visible from certain areas of the district as shown in the photo-simulations and elevation models (**Appendix A: Map 3, Page 8; Appendix B: Figures 8, 11, and 13; Appendix C: P-8, P-10c, P-10d, P-12, and P-13a**). At its nearest point Component 3 is located 0.08 mile north of the district. Multiple existing buildings, transmission and distribution lines, and a substation are within the district's view. Trees and other vegetation seasonally obstruct the view of Component 3 as shown in the photo-simulations (**Appendix B: Figure 11**). Therefore, POWER recommends Component 3 will have a *minimal* impact on the NRHP-listed Fieldale Historic District.

## 044-5174 / NR-06000708 – R. L. Stone House

RESOURCE BACKGROUND INFORMATION	
Status	NRHP Listing, VLR Listing
Setting and Location	The R.L. Stone house is located at 3136 Fairystone Park Highway in Bassett, Virginia and sits on a 2.88-acre site in the town of Bassett, Virginia, just outside of downtown and near several Bassett furniture facilities. [...] The site is densely planted and only partially visible from the main road below. The house lies on a steep hill above Fairystone Park Highway and overlooking the Smith River which borders it from the south.
Resource Description	The two-story brick Classical Revival style house was constructed ca. 1930 to 1938 as the primary home for Reed Lewis Stone and his wife Nancy Susan “Dink” Stone. R.L. Stone purchased the land for the home in 1930, the same year that Bassett Furniture and its subsidiaries transformed into the large furniture conglomerate of Bassett Furniture Industries, Inc., the height of Reed Stone’s career. [...] R.L. Stone was the most prominent builder in Bassett, Virginia at that time and likely served as builder for his own home as well as influencing its design. The house sits on a full raised basement with a symmetrical front half, but small variations in the rear. The R.L. Stone house has a prominent full height entry porch with a pediment leading into a large entry hall.
Original Surveyor Evaluation	The resource is recommended locally significant under Criteria B (for Reed Lewis Stone) and C for Architecture, with a period of significance of 1930 to 1956 [...] [A Phase II investigation recommended that it had maintained integrity of Association, Design, Feeling, Location, Setting, and Workmanship]

Source: VDHR 2022

The existing and proposed transmission line are not visible from the resource as shown in the photo-simulation and elevation model (**Appendix A: Map 3, Page 16; Appendix B: Figure 12; Appendix C: P-23**). Component 3 is located 0.45 mile from the resource and will not be visible due to the terrain and vegetation. POWER recommends that Component 3 will have *no impact* on the NRHP-listed resource.



## 044-5177 (44HR0220) – Hordsville Enslaved / Freed African American Cemetery

RESOURCE BACKGROUND INFORMATION	
Status	Not Evaluated – Recommended for further study by the VDHR regional archaeologist.
Setting and Location	The cemetery is located on a ridgetop and side slope that dips gently to the south by southeast. It is bordered on the north, west and south by parcels owned and developed by Appalachian Power. A narrow sliver of land lies between the east side of the cemetery and River Road. This privately owned parcel appears to be on the market.
Resource Description	<p>Local knowledge indicates this cemetery was established as a cemetery for enslaved people and their free descendants and is likely one of the cemeteries that served the Hordsville Plantation established in 1830. Site boundaries were documented by using the horizontal distribution of graves and existing surface evidence of a fence that once enclosed the cemetery. Ground surface evidence of grave markers and rectangular depressions with the correct west-east orientation indicates there are at least 58 graves in the cemetery. It is likely that other unmarked graves and graves with fallen and covered grave markers exist. The observed graves include twenty with uninscribed fieldstones at the head and foot of the graves, six with uninscribed fieldstones at the head of graves, and four with uninscribed fieldstones at the foot of graves. All of these graves are also visible as ground surface depressions. There are at least ten unmarked graves visible as depression, and there are also three separate uninscribed fieldstones not associated with depressions. These may present graves of infants. Fifteen other graves have more formal marble, cement, and soapstone markers. Death dates on inscribed markers range from 1908 through 1953; however, some graves without markers or with uninscribed markers may date as early as the third quarter of the nineteenth century (VDHR 2022).</p> <p>Based on Geophysical Survey conducted by Ohio Valley Archaeology, Inc. in April 2021 and survey conducted by the VDHR region archaeologist in May 2021 the cemetery potentially extends 251.4 north-south by 214.8 east-west, encompassing 1.15 acres. The incomplete remains of the fence that once surrounded the cemetery indicate a size of 137 feet north to south by 100 feet east to west, as estimated by pacing. On the east side, the wire mesh fence affixed to wood posts still stands (VDHR 2022). The fence is present on the south side, but the post has deteriorated, and the fence is smashed to ground surface and nearly covered by leaf litter. On the west side, the boundary is marked by sporadically placed iron stakes about four feet high. Land has been developed beyond the stakes, and within twelve feet is the fence that encloses Appalachian Power equipment storage lot. The north side of the cemetery abuts the AEP property and there is no fence. The AEP parcel to the north was graded down about four feet and a building was constructed in 1990-1991. While it is possible the grading disturbed part of the cemetery, local surveys of the cemetery prior to 1990 are not recorded (VDHR 2022).</p> <p>There are also two stone markers for members of the Hord family that are interpreted as cenotaphs. Both markers are located about 30 feet outside of the fence that marks the east boundary of the cemetery. These markers appear to be on a privately owned parcel. The cemetery is covered with a stand of mixed deciduous and pine trees. The high canopy of the trees and the lush carpet of periwinkle on the ground surface combine to impede the growth of other plants. Other than some windthrow, the cemetery surface is open and easy accessed. It appears unused and unmaintained (VDHR 2022).</p>
Original Surveyor Evaluation	Recommended for Further Study

Source: VDHR 2022

There are currently no existing transmission lines in view of the Hordsville Enslaved / Freed African American Cemetery (VDHR IDs 044-5177 [44HR0220]) (**Appendix A: Map 3, Page 9; Appendix C: P-52**). Component 3 is located 50 feet from the resource and will be visible. Based on the current design

plan the Hordsville Enslaved / Freed African American Cemetery (VDHR IDs 044-5177 [44HR0220]) will not be physically impacted by Component 3. POWER recommends that Component 3 will have *moderate impact* on the resource due to the dramatic change to the viewshed caused by the proposed Stoneleigh Substation; however, the overall impact is diminished due to the existing AEP facility parking lot within the viewshed.

## 044-5179 - Copeland House / House, 503 Field Avenue

RESOURCE BACKGROUND INFORMATION	
<b>Status</b>	VDHR Board Det. Eligible
<b>Setting and Location</b>	The house is located just south of the Fieldale commercial district, and across a hedge line to the west of the former Fieldale Elementary School. It is set back from Field Ave., on a wooded lot of 1.44 acres.
<b>Resource Description</b>	In 1916, Marshall Field & Co. bought a significant tract of land in Henry County to establish a textile mill town. The company laid out the entire town with a system of streets and utilities and constructed a towel mill and a retail center consisting of stores, post office, bank, movie theatre and hotel [...] The only unique residence was the log home built for the mill manager who was the only CEO in the village [...] There was an ancillary structure on the site that served as a dry cleaner, scout hut, and other similar functions. (This structure later served as a rental house until deterioration left it unsuitable for habitation and it was burned as a training exercise by the volunteer fire department).
<b>Original Surveyor Evaluation</b>	This house is within the boundaries of the Fieldale Historic District [...] The survey documented 100 buildings of about 250 within the historic district boundary [...] [It is recommended as NRHP eligible under Criteria A for association with the founding of Fieldale and C for its architectural style. In 2006, a Phase II survey recommended that the resource had maintained integrity of Association, Design, Feeling, Location, Materials, Setting, and Workmanship.]

Source: VDHR 2022.

The proposed transmission line will not be visible from the resource as shown in the photo-simulation and elevation model (**Appendix A: Map 3, Page 6; Appendix B: Figure 13; Appendix C: P-54**).

Component 3 is located 0.69 mile from the resource and will not be visible due to the intervening terrain and buildings. While the Copeland House is 0.69 mile from Component 3, it is a contributing resource to the NRHP-listed Fieldale Historic District which is 0.08 mile from Component 3. POWER recommends that Component 3 will have *no impact* on the NRHP-eligible resource.

## 044-5180 - Bassett Historic District

RESOURCE BACKGROUND INFORMATION	
<b>Status</b>	VDHR Staff: Eligible
<b>Setting and Location</b>	The proposed district occupies level floodplain on the Smith River, and on both sides of Fairystone Park Highway /State Route 57; in the town of Bassett in central Henry County, Virginia. The primarily residential area occupies the west side of the river, while the (North) Bassett Manufacturing Plant is located just across the river to the north. [113 acres]
<b>Resource Description</b>	Bassett began in 1902 as the Bassett family's locally owned center for furniture manufacturing [...] Bassett's population was about 1,400 in 1930 [...]. Into the 1950s Bassett's mill and town population were integrated with about 15% black workers and residents [...] Mills ceased operations around 2000. The proposed Bassett Historic District is comprised mainly of single-family dwellings situated along Fairystone Park Highway /State Route 57, and the Bassett Manufacturing plant just across the Smith River, in North Bassett. The dwellings are primarily workers' houses associated with the Bassett Furniture Company plant located just across the Smith River, to the northeast.
<b>Original Surveyor Evaluation</b>	[The district is NRHP listed under Criteria A for its association with the founding of Bassett and C for architectural style.]

Source: VDHR 2022

The existing and proposed transmission line run through portions of the resource and the proposed Smith River Substation is located within the resource. According to the State Historic Preservation Office's definitions listed in Section 3.4, the proposed Component 3 will have a *moderate* impact on the historic district. A Phase I survey has already been conducted at the location of the proposed Smith River Substation, and the VDHR has concurred with the assessment of moderate impacts. (**Appendix A: Map 3, Page 17; Appendix B: Figures 14 and 15; Appendix C: P-26 to 27).**

## 044-5576 / NR-Unknown - The Highlands / W. Burton Dillon House

RESOURCE BACKGROUND INFORMATION	
<b>Status</b>	NRHP Listing, VLR Listing
<b>Setting and Location</b>	The W. Burton Dillon House stands at the high point of a 13.01-acre parcel amid extensive plantings including a garden area with boxwood rows, brick walkways, a parterre, and a Tudor Revival gazebo [...] The property has distant views of hills on the other side of Smith River and closer views of neighboring houses including the National Register-listed house Stoneleigh, which stands across Edgewood Drive.
<b>Resource Description</b>	The house [is] an opulent brick English Tudor-style building with prominent clustered chimneys on the south-facing (front) and west (side) elevations. With approximately 4,075 square feet of floor area, it was an exceedingly large house for its time and place. The house, garden, and landscaping were designed in 1936 by Roanoke architectural firm Eubank and Caldwell for Hooker Furniture executive W. Burton Dillon and his wife Alma, who lived there until her death at the age of 101. Dillon was a descendant of the Vaughn family (of Vaughn-Bassett Furniture fame) on his mother's side.
<b>Original Surveyor Evaluation</b>	The Highlands is eligible for the National Register under Criterion C in the architecture area of significance for the quality and sophistication of its Tudor Revival architecture and landscaped grounds, both the work of professional designers. The period of significance extends from 1936, the year work began on the house, through ca. 1950, representative of the mid-twentieth century construction of the property's several outbuildings and structures and the design of the garden in the late 1940s. The Highlands is eligible at the local level of significance.

Source: VDHR 2022

The proposed transmission line will not be visible from the resource as shown in the photo-simulation and elevation model (**Appendix A: Map 3, Page 13 ; Appendix B: Figure 16; Appendix C: P-20a, Pb-20b**). Component 3 is located 0.78 mile from the resource and will not be visible due to the intervening terrain and vegetation. POWER recommends that Component 3 will have *no impact* on the NRHP-listed resource.

### 070-0005 / NR-71000987 - Reynolds Homestead / Rock Spring Plantation

RESOURCE BACKGROUND INFORMATION	
Status	NHL Listing, NRHP Listing, VLR Listing
Setting and Location	1958: Turn north on Route 626 from Route 58, 7.0 miles east of Stuart. Four miles north on the left, marked by stone pillars, is the house.  1968: 0.2 mile east of Mill Creek, east side of Route 798, 0.5 mi. north of intersection of Route 798 and Route 626.
Resource Description	The Reynolds Homestead, more formally called Rock Spring Plantation, was built in 1843 by Hardin Williams Reynolds on land inherited from his father, Abraham Reynolds, an early settler in the area. It was in the brick plantation house that Hardin Reynolds' wife, Nancy Jane Cox, gave birth to their 16 children, the second son of whom was Richard Joshua Reynolds (1850-1918), founder of the R.J. Reynolds Tobacco Company.
Original Surveyor Evaluation	Richard Joshua Reynolds, according to Joseph C. Robert, a leading expert on the history of the American tobacco industry, introduced "the first modern cigarette. . . . No less an authority than the Supreme Court of the United States, U.S. 791, has affirmed that the R. J. Reynolds Tobacco Company with its Camels 'revolutionized the cigarette industry [...]' [The resource is NRHP-listed under Criteria B and C for its association with R. J. Reynolds and architectural style.]

Source: VDHR 2022

The proposed and existing transmission line is not visible from the resource, as shown in the photo-simulation and elevation model (**Appendix A: Map 3, Page 1; Appendix B: Figure 17; Appendix C: P-3a - d**). Component 3 is located 1.03 miles from the resource and will not be visible due to its distance and intervening vegetation. POWER recommends that Component 3 will have *no impact* on the NRHP-listed resource.

### 44HR0241

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**44PK0049**

SENSITIVE INFORMATION REGARDING ARCHAEOLOGICAL RESOURCES IS  
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## **6.0 SUMMARY**

There are 19 resources located within the three tiered-study areas, and the subject of this analysis. Of these 19 resources, one (Reynolds Homestead [070-0005 / NR-71000987]) is an NHL and also individually listed as an NRHP property within the 1.5-mile buffer, nine additional NRHP-listed resources are within 1.0 mile of Component 3, six NRHP-eligible resources are within 0.5 mile of Component 3, and two archaeological sites are within the proposed ROW. These two archaeological sites (44HR0241 and 44PK0049) have not been formally assessed for NRHP eligibility. The Hordsville Enslaved / Freed African Cemetery (044-5177 [44HR0220]) has not been evaluated by the VDHR, however, due to sensitivity of the burials and its association with the enslaved and freed African American groups, its likely affiliation with the NRHP-potentially eligible Hordsville Plantation, its proximity to Component 3, and the VDHR regional archaeologist's recommendation for further study, POWER has chosen to include this resource in the VDHR Pre-Application analysis even though the cemetery is outside of the tiered study area.

Field reconnaissance reveals that the existing transmission line to be rebuilt as part of Component 3 will physically affect archaeological sites 44HR0241 (no effect) and 44PK0049 (minimal effect). Site 44HR0241 is recommended as ineligible for the NRHP. Site 44PK0049 will only have an existing pole removed from it. Component 3 will be at least partially visible from three NRHP-listed properties and one NRHP-eligible property. All of the above ground resources will be minimally affected, with the exception of the Basset Historic District (VDHR ID 044-5180) and the Hordsville Enslaved / Freed African Cemetery (044-5177 [44HR0220]) which will each be *moderately* impacted by Component 3. A Phase I survey of the substation component that will affect the Basset Historic District was already conducted in 2022 (VDHR File No. 2021-0215). VDHR concurred that Component 3 would present a moderate adverse effect to the resource. Component 3 is not visible from the remaining 12 historical properties due to intervening terrain and vegetative cover blocking views.

POWER recommends that Component 3 can move forward but notes that a Phase I cultural resources survey will be necessary to confirm the integrity of intersected resources and to determine the existence of previously unrecorded resources within Component 3's ROW. Additionally, POWER recommends that prior to construction AEP continue coordination and mitigation efforts with VDHR concerning resources 044-5177 and 044-5180.

## 7.0 REFERENCES

National Park Service (NPS). 2022. National Register of Historic Places. Map. Available online: <https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466>. Accessed May to September 2022.

National Trust for Historic Preservation v. Todd Semonite. 2019. 1:17-cv-01574, Case #18-5179, United States Court of Appeal for the D.C. Circuit (March 1, 2019)

Virginia Department of Historic Resources (VDHR). 2008. *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia*.

\_\_\_\_\_. 2010. Assessing Visual Effects on Historic Properties.

\_\_\_\_\_. 2022. Virginia Cultural Resource Information System (VCRIS). Available online at <https://vcris.VDHR.virginia.gov/VCRIS/Account/Login?ReturnUrl=%2fvcris%2f> (restricted access). Accessed May to September 2022.

## APPENDIX A    MAPS

SENSITIVE INFORMATION REGARDING ARCHAEOLOGICAL RESOURCES IS  
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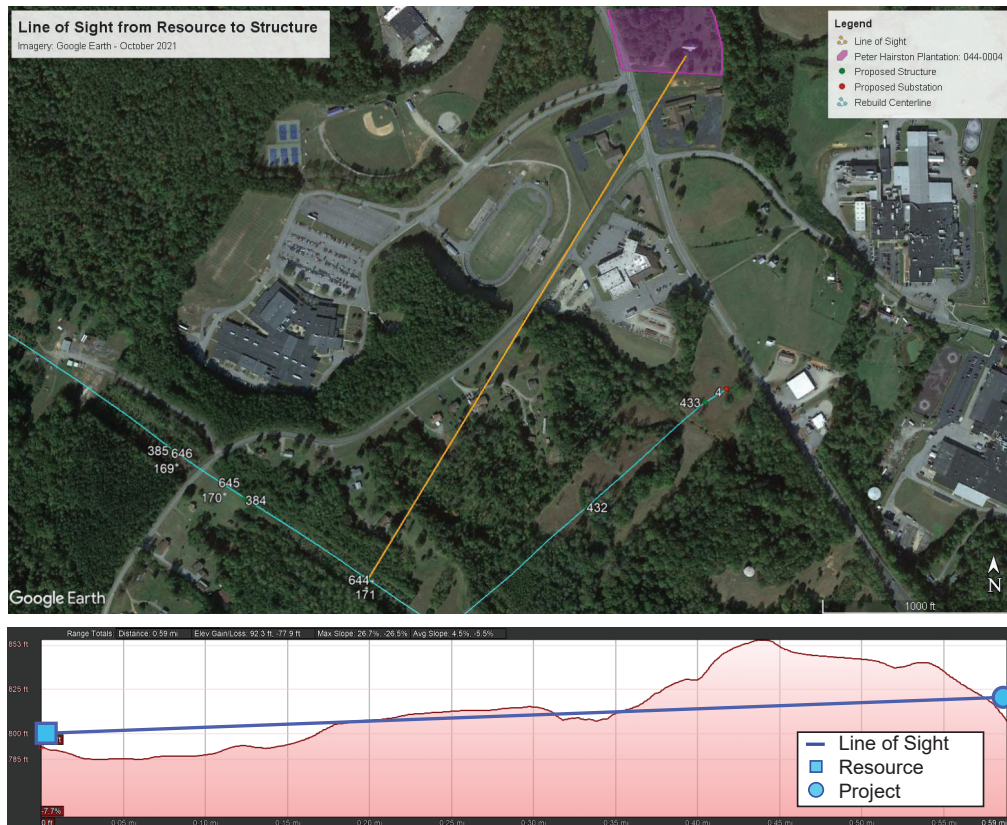
## **APPENDIX B    VISUAL SIMULATION AND LINE OF SIGHT ANALYSIS**

# Figure 1A

## Peter Hairston Plantation: 044-0004

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

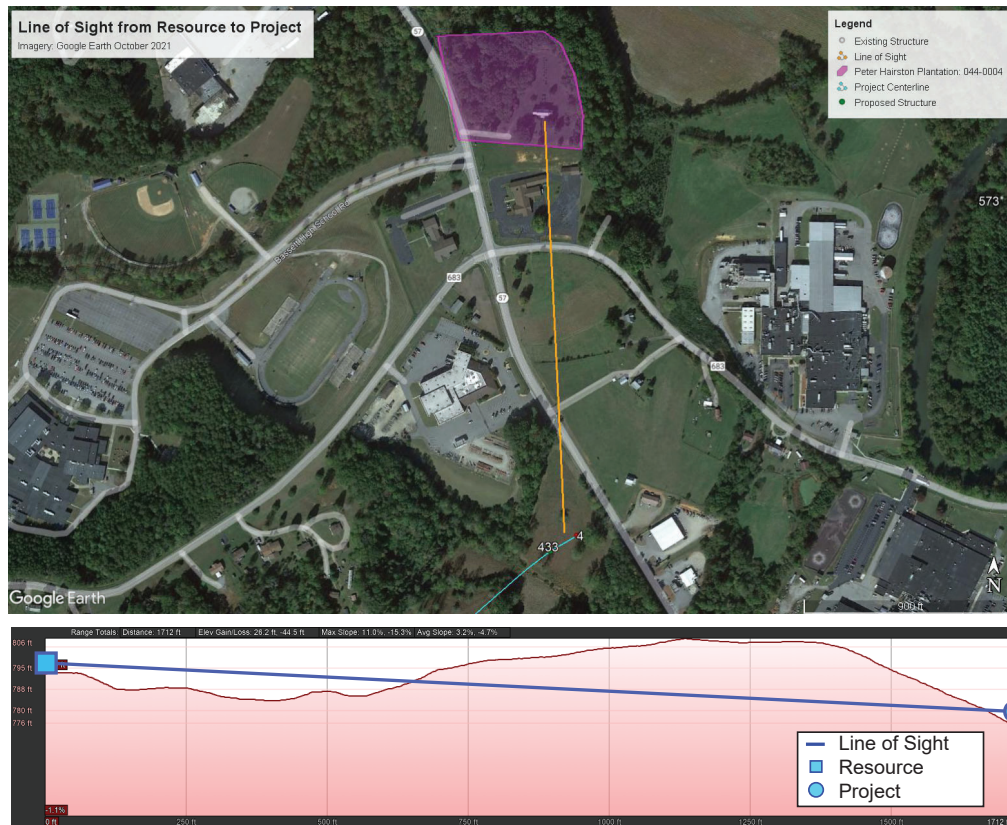


## Figure 1B

### Peter Hairston Plantation: 044-0004

#### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



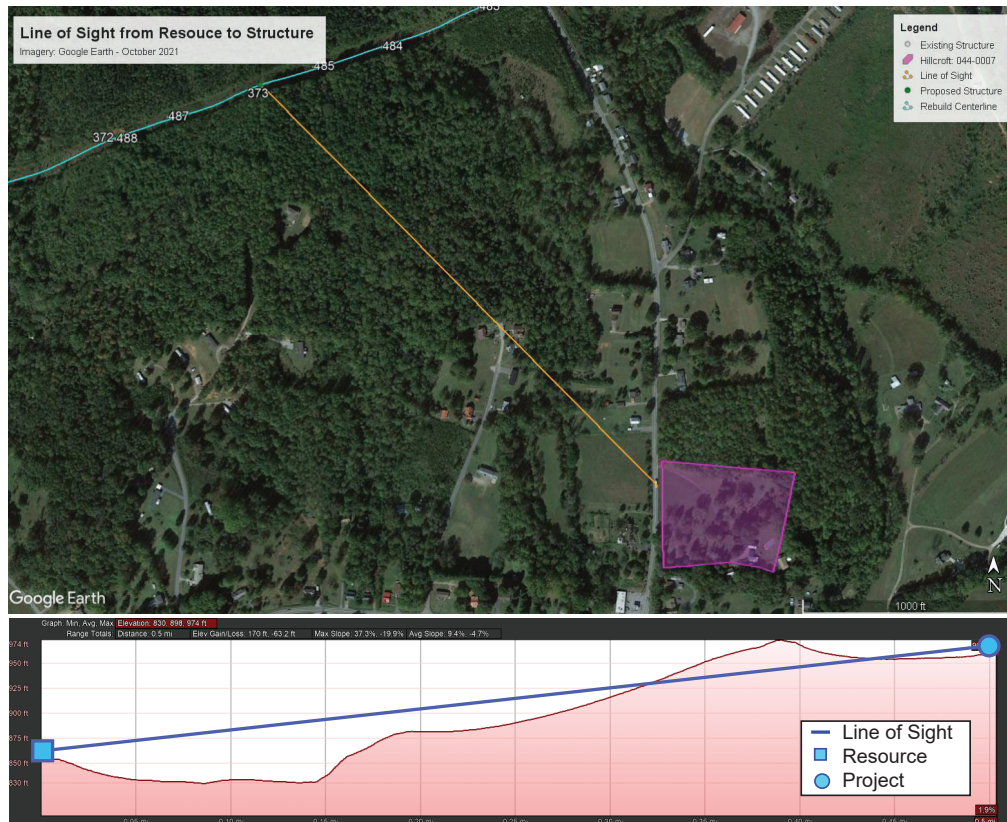
The visual simulation is an approximation. Final engineering and construction details are not complete.



**Figure 2**  
Hillcroft: 044-0007

# *Visual Simulation and Line of Sight Analysis*

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

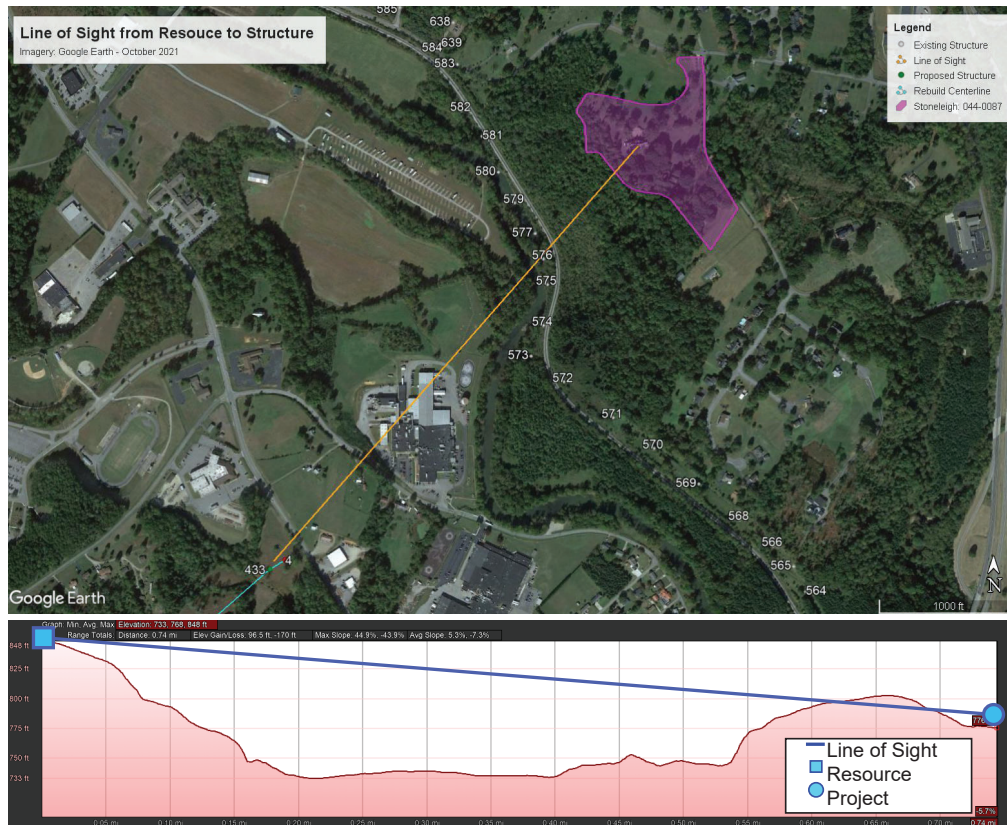


# Figure 3

## Stoneleigh: 044-0087/ NR-82001820

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

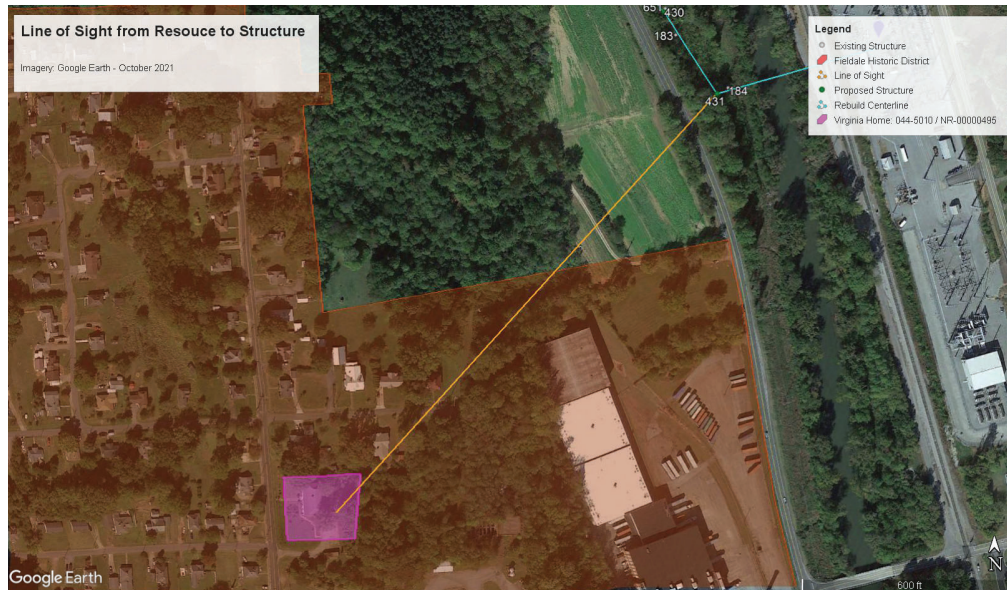


## Figure 4

Virginia Home: 044-5010 / NR-00000495  
Fieldale Historic District: 044-5173 / NR-08000072

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

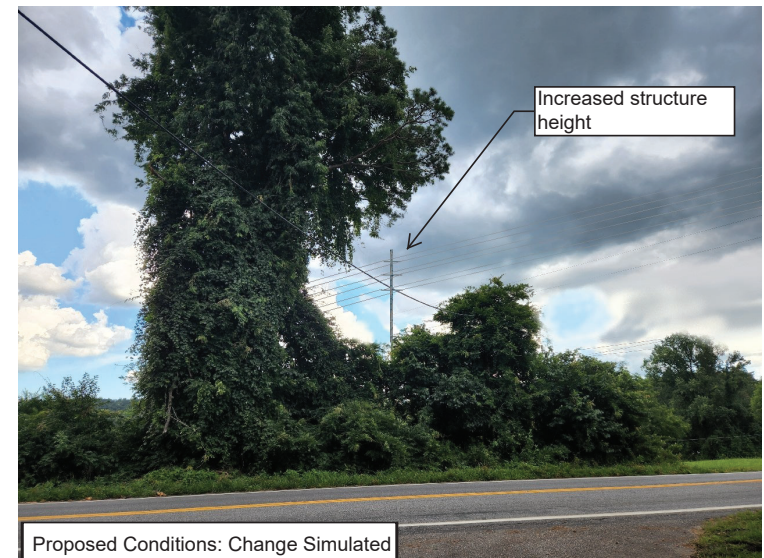
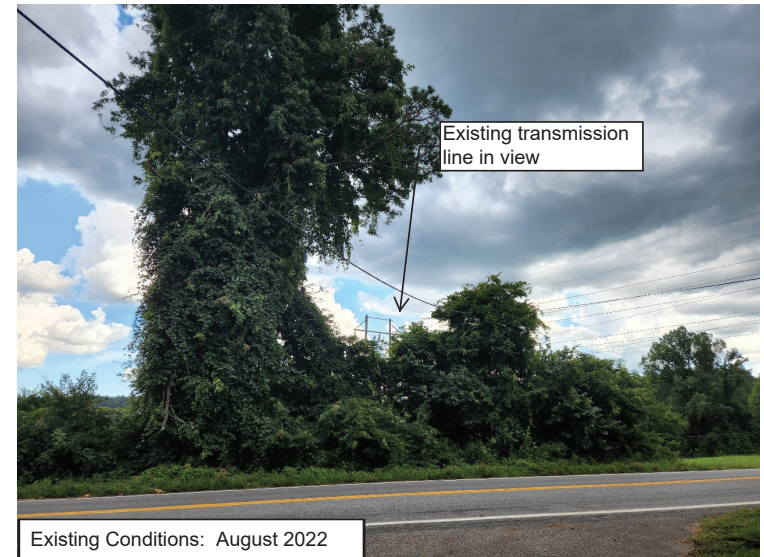
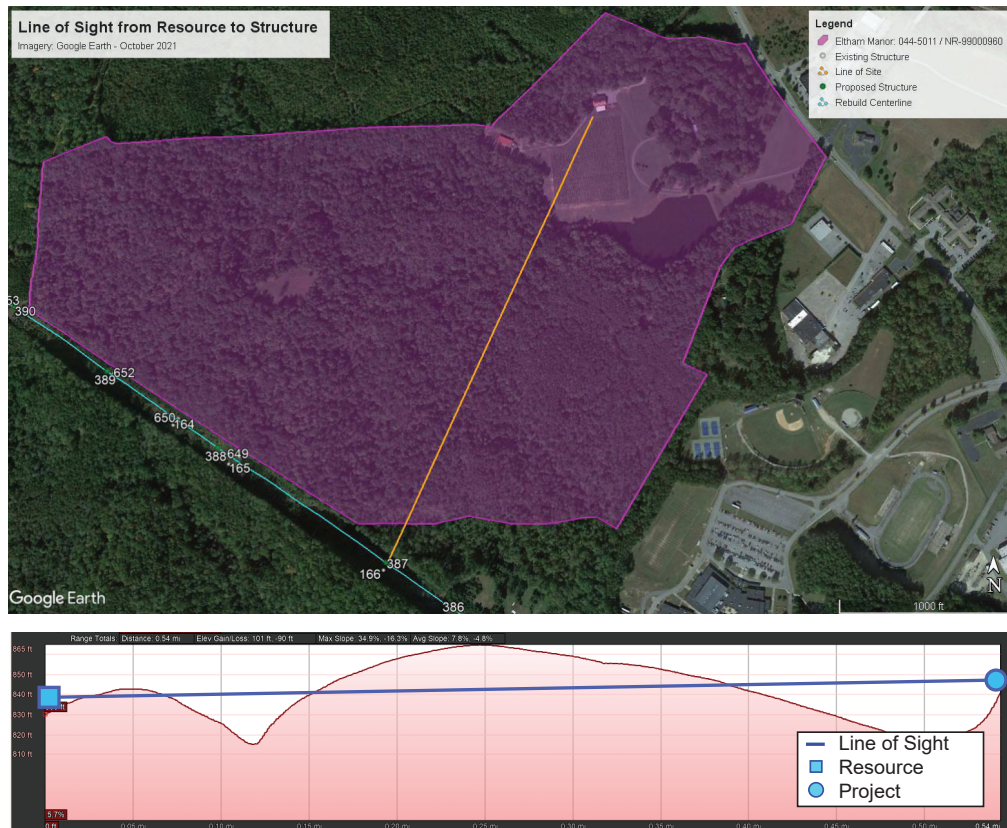


# Figure 5

## Eltham Manor: 044-5011 / NR-99000960

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



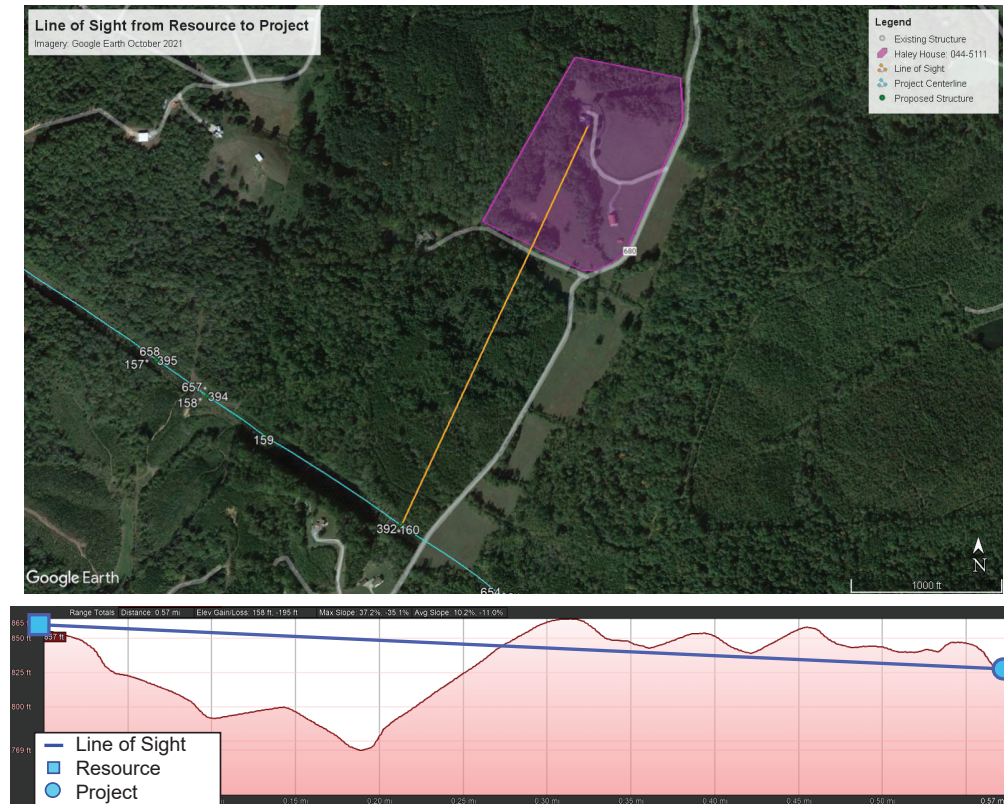
The visual simulation is an approximation. Final engineering and construction details are not complete.



## Figure 6 Haley House: 044-5111

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

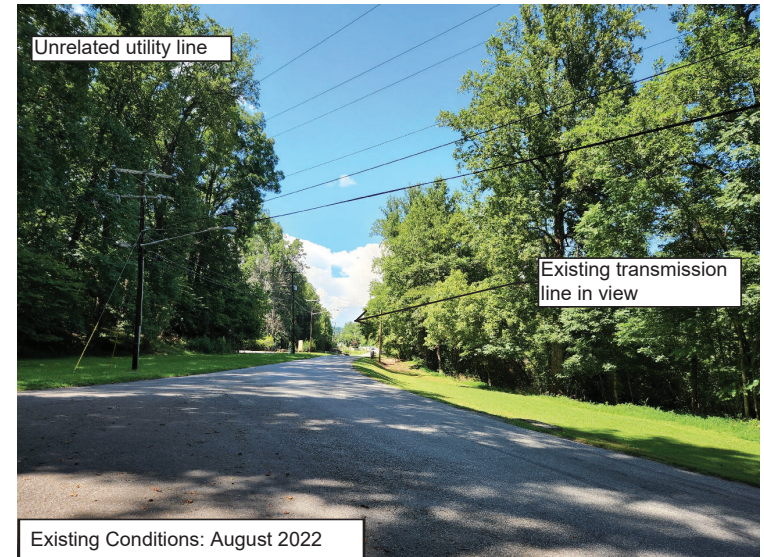
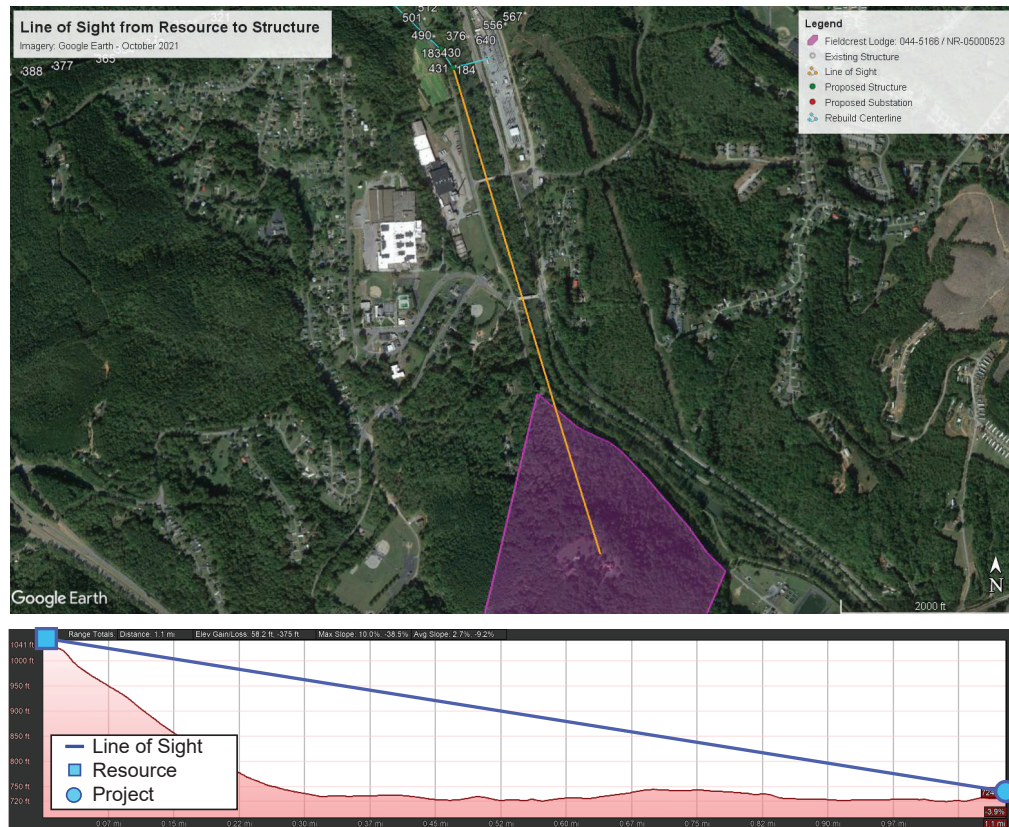


# Figure 7

## Fieldcrest Lodge: 044-5166 / NR-05000523

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.



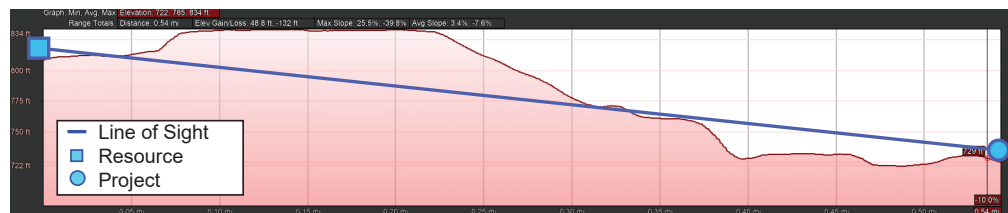
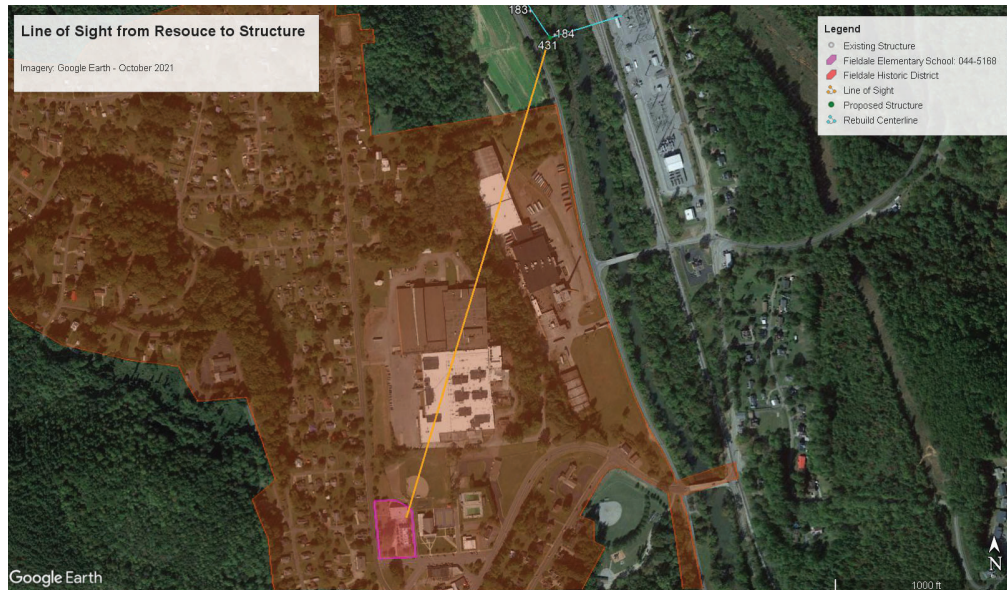
# Figure 8

## Fieldale Elementary School: 044-5168

### Fieldale Historic District: 044-5173 / NR-08000072

#### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

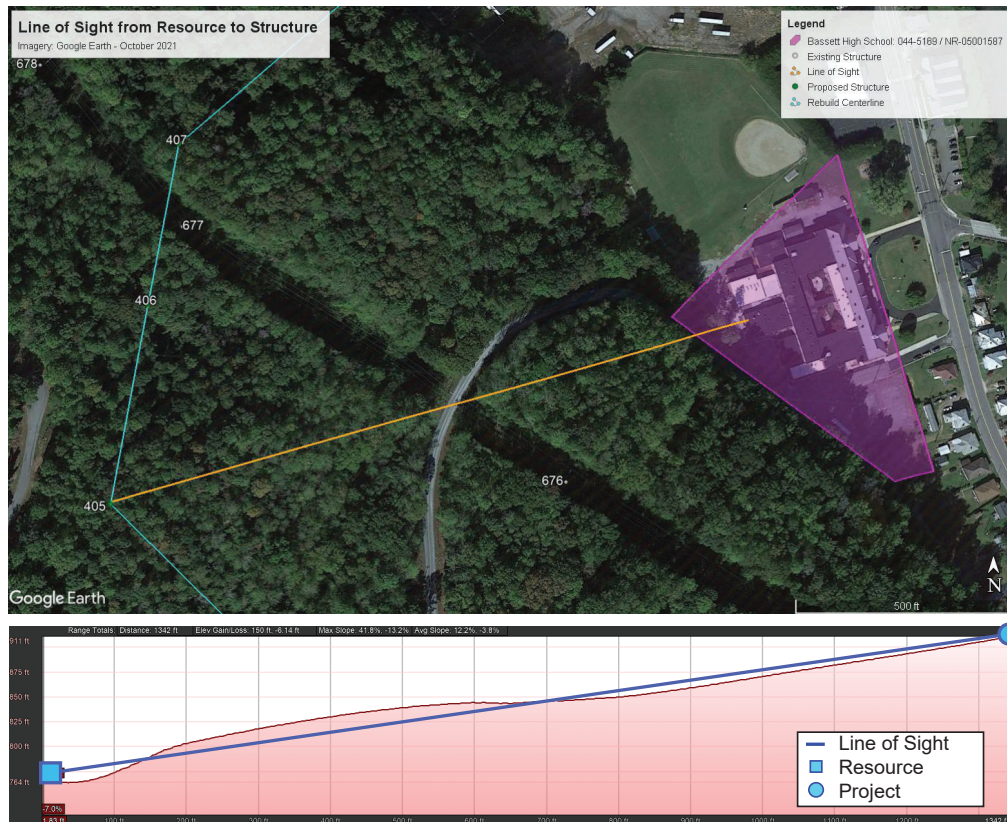


# Figure 9

## Bassett High School: 044-5169 / NR-05001587

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.





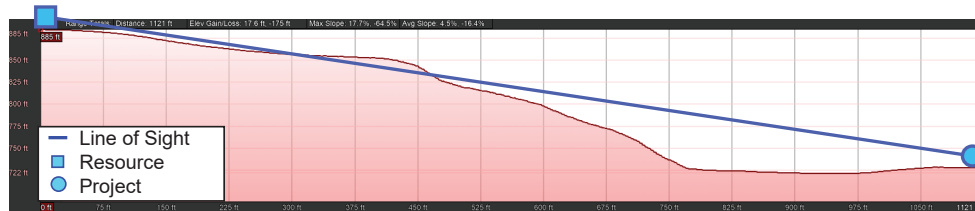
The visual simulation is an approximation. Final engineering and construction details are not complete.



## Figure 11

### Fieldale Historic District: 044-5173 / NR-08000072 Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

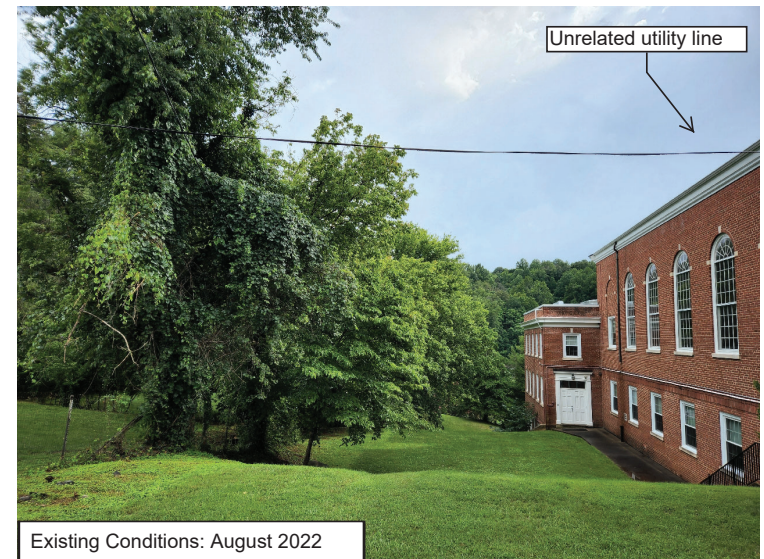
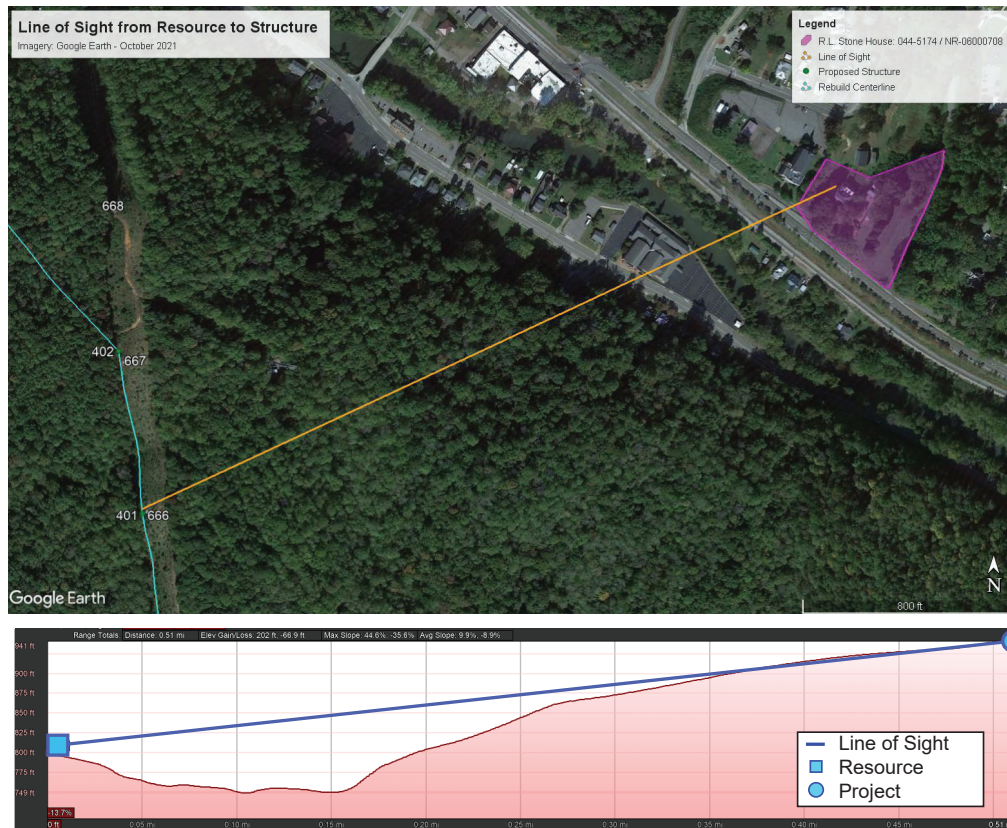


## Figure 12

### R.L. Stone House: 044-5174 / NR-06000708

#### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.



# Figure 13

## Fieldale Historic District: 044-5173 & Copeland House 044-5179

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



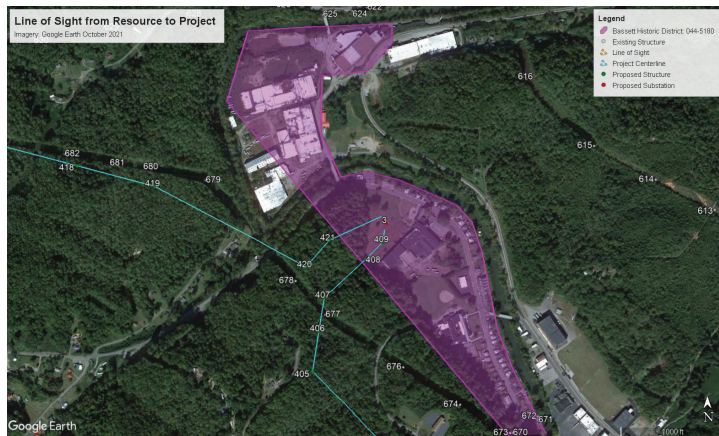
The visual simulation is an approximation. Final engineering and construction details are not complete.



## Figure 14 Bassett Historic District: 044-5180

### *Visual Simulation and Line of Sight Analysis*

Produced by POWER Engineers Inc.  
Cultural Resources Department



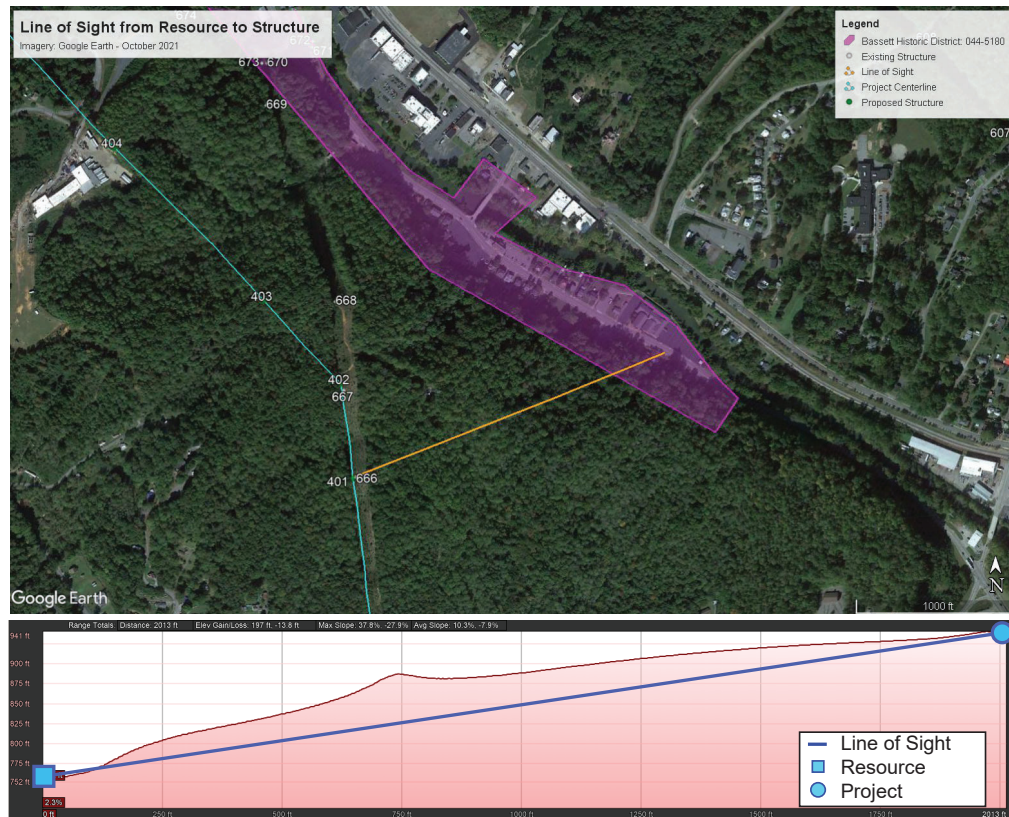
The visual simulation is an approximation. Final engineering and construction details are not complete.



## Figure 15 Bassett Historic District: 044-5180

### *Visual Simulation and Line of Sight Analysis*

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

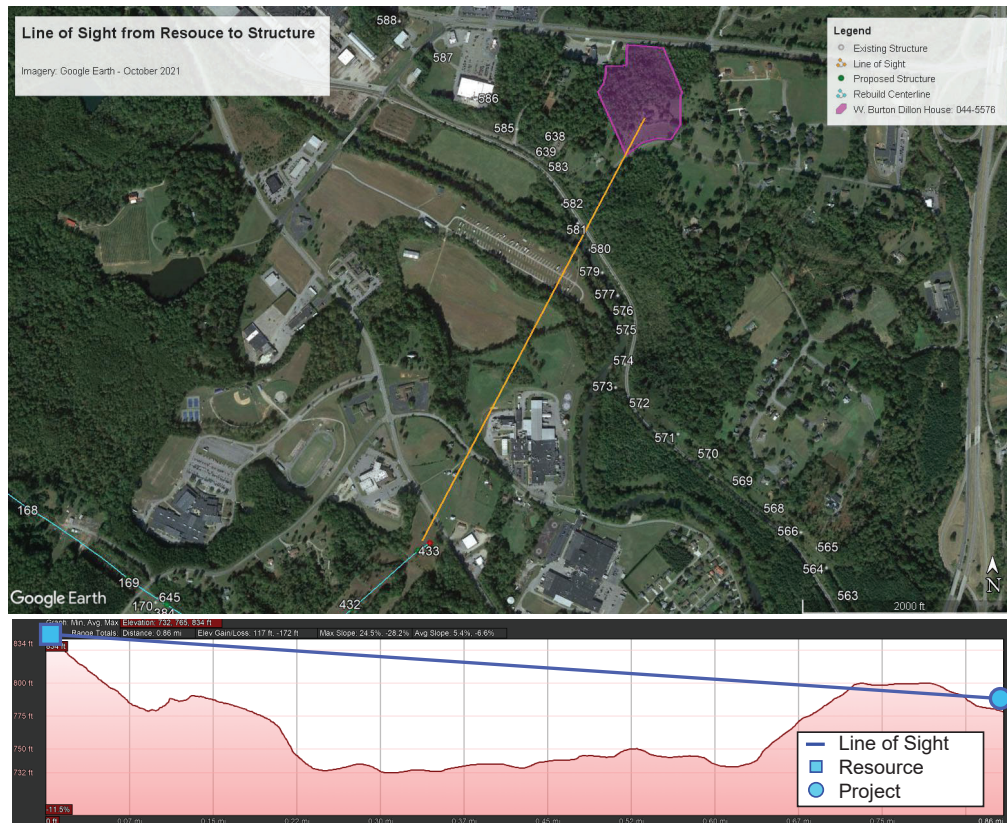


### Figure 16

The Highlands / W. Burton Dillon House: 044-5576

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

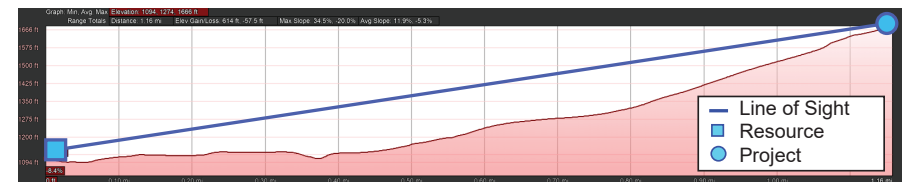


# Figure 17

## Reynolds Homestead: 070-0005

### Visual Simulation and Line of Sight Analysis

Produced by POWER Engineers Inc. Cultural Resources Department



The visual simulation is an approximation. Final engineering and construction details are not complete.

**Figure 18**  
Archaeological Site: 44HR0241

*Visual Simulation and Line of Sight Analysis*

*Produced by POWER Engineers Inc. Cultural Resources Department*



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**Figure 19**  
**44PK0049**

*Visual Simulation and Line of Sight Analysis*

*Produced by POWER Engineers Inc. Cultural Resources Department*



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## **APPENDIX C    PHOTO LOG**



**PHOTO****DESCRIPTION**

P-3a  
070-0005 / NR-71000987 - Reynolds  
Homestead / Rock Spring Plantation  
Towards resource

Direction: North  
Date: 08/15/22  
Photographer: Travis Corwin



P-3c  
070-0005 / NR-71000987 - Reynolds  
Homestead / Rock Spring Plantation  
Towards resource

Direction: South  
Date: 08/15/22  
Photographer: Travis Corwin



P-3d  
070-0005 / NR-71000987 - Reynolds  
Homestead / Rock Spring Plantation  
Views towards line

Direction: Northwest  
Date: 08/15/22  
Photographer: Travis Corwin



P-3b  
070-0005 / NR-71000987 - Reynolds  
Homestead / Rock Spring Plantation  
Resource

Direction: Southeast  
Date: 08/15/22  
Photographer: Travis Corwin

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P-5a  
44PK0049  
View of line  
  
Direction: East  
Date: 08/15/22  
Photographer: Travis Corwin

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WITHHELD AS PUBLIC DISCLOSURE OF SUCH  
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P-5b  
44PK0049  
View towards site and line  
  
Direction: West  
Date: 08/15/22  
Photographer: Travis Corwin





P-6b  
044-0007  
View towards line

Direction: North  
Date: 08/15/22  
Photographer: Travis Corwin



P-6a  
044-0007  
View of resource

Direction: East  
Date: 08/15/22  
Photographer: Travis Corwin



P-7a  
044-5166 / NR-05000523 - The Fieldcrest  
Lodge / The Marshall Field & Company  
Clubhouse  
View towards lodge

Direction: South  
Date: 08/08/22  
Photographer: Travis Corwin





P-8b  
044-5173 / NR-08000072 - Fieldale Historic District  
Towards line

Direction: Northeast  
Date: 08/08/22  
Photographer: Travis Corwin



P-8a  
044-5173 / NR-08000072 - Fieldale Historic District  
Towards Marshall street

Direction: Southwest  
Date: 08/08/22  
Photographer: Travis Corwin



P-9a  
044-5168 - Fieldale Elementary School /  
Fieldale High School  
Photo of resource

Direction: Southwest  
Date: 08/08/22  
Photographer: Travis Corwin





P-9b  
044-5168 - Fieldale Elementary School /  
Fieldale High School  
View towards line

Direction: Northeast  
Date: 08/08/22  
Photographer: Travis Corwin



P-10c  
044-5173 / NR-08000072 - Fieldale Historic  
District  
View of district

Direction: East  
Date: 08/08/22  
Photographer: Travis Corwin



P-10d  
044-5173 / NR-08000072 - Fieldale Historic  
District  
View towards line

Direction: North  
Date: 08/08/22  
Photographer: Travis Corwin





P-11a  
044-5010 / NR-00000495 - Virginia Home

Direction: Northeast  
Date: 08/08/22  
Photographer: Travis Corwin



P-11b  
044-5010 / NR-00000495 - Virginia Home

Direction: Northeast  
Date: 08/08/22  
Photographer: Travis Corwin



P-12a  
044-5173 / NR-08000072 - Fieldale Historic District  
Towards line

Direction: East  
Date: 08/08/22  
Photographer: Travis Corwin





P-12b  
044-5173 / NR-08000072 - Fieldale Historic District  
Neighborhood

Direction: West  
Date: 08/08/22  
Photographer: Travis Corwin



P-12c  
044-5173 / NR-08000072 - Fieldale Historic District  
View towards Component 3 from Fieldale Historic District

Direction: East  
Date: 08/08/22  
Photographer: Travis Corwin



P-13a  
044-5173 / NR-08000072 - Fieldale Historic District  
View of Fieldale Historic District

Direction: South  
Date: 08/08/22  
Photographer: Travis Corwin





P-13b  
044-5173 / NR-08000072 - Fieldale Historic District  
View towards Component 3 from Fieldale Historic District

Direction: East  
Date: 08/08/22  
Photographer: Travis Corwin



P-16a  
044-5011  
View towards resource

Direction: Northwest  
Date: 08/08/22  
Photographer: Travis Corwin



P-16b  
044-5011 / NR-99000960 - Eltham Manor  
Views of line

Direction: Southeast  
Date: 08/08/22  
Photographer: Travis Corwin

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P-17a  
44HR0241  
View towards proposed substation

Direction: South  
Date: 08/22/22  
Photographer: Travis Corwin

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P-17b  
44HR0241  
Towards site and proposed line

Direction: Southwest  
Date: 08/22/22  
Photographer: Travis Corwin



P-18a  
044-0004 - Hordsville / Peter Hairston  
Plantation  
View of resource

Direction: North  
Date: 08/08/22  
Photographer: Travis Corwin





P-19a  
044-0087 / NR-82001820 - Stoneleigh  
Towards resource

Direction: South  
Date: 08/08/22  
Photographer: Travis Corwin



P-19b  
044-0087 / NR-82001820 - Stoneleigh  
View towards line

Direction: Southwest  
Date: 08/08/22  
Photographer: Travis Corwin



P-20a  
044-5576 / NR-Unknown - The Highlands /  
W. Burton Dillon House  
View of resource

Direction: North  
Date: 08/08/22  
Photographer: Travis Corwin





P-20b  
044-5576 / NR-Unknown - The Highlands /  
W. Burton Dillon House  
View of line

Direction: Southwest  
Date: 08/08/22  
Photographer: Travis Corwin



P-21a  
044-5172 / NR-07000231 - Edgewood  
Towards property, towards line

Direction: South  
Date: 08/08/22  
Photographer: Travis Corwin



P-21b  
044-5172 / NR-07000231 - Edgewood  
Towards property, towards line

Direction: Southwest  
Date: 08/08/22  
Photographer: Travis Corwin





P-22a  
044-5111 - Haley House / Pringle House  
View of resource

Direction: West  
Date: 08/08/22  
Photographer: Travis Corwin



P-22b  
044-5111 - Haley House / Pringle House  
View of line

Direction: South  
Date: 08/08/22  
Photographer: Travis Corwin



P-23a  
044-5174  
View towards resource

Direction: Southwest  
Date: 08/08/22  
Photographer: Travis Corwin





P-23b  
044-5174 / NR-06000708 – R. L. Stone  
House  
View towards resource

Direction: Southeast  
Date: 08/08/22  
Photographer: Travis Corwin



P-23c  
044-5174 / NR-06000708 – R. L. Stone  
House  
View towards line

Direction: Southeast  
Date: 08/08/22  
Photographer: Travis Corwin



P-25a  
044-5169 / NR-05001587 - John D. Bassett  
High School  
Towards line

Direction: West  
Date: 08/08/22  
Photographer: Travis Corwin





P-26a  
044-5180 - Bassett Historic District  
Warehouse and current lines

Direction: Southwest  
Date: 08/08/22  
Photographer: Travis Corwin



P-26b  
044-5180 - Bassett Historic District  
Homes

Direction: Northeast  
Date: 08/08/22  
Photographer: Travis Corwin



P-27a  
044-5180 - Bassett Historic District  
View towards district

Direction: North  
Date: 08/08/22  
Photographer: Travis Corwin





P-27b  
044-5180 - Bassett Historic District  
View towards line

Direction: South  
Date: 08/08/22  
Photographer: Travis Corwin



P-27c  
044-5180 - Bassett Historic District  
Homes

Direction: Northeast  
Date: 08/08/22  
Photographer: Travis Corwin



P-52a  
044-5177 (44HR0220) – Hordsville Enslaved  
/ Freed African American Cemetery

Direction: Northwest  
Date: 08/22/22  
Photographer: Travis Corwin



P-54a  
044-5179 - Copeland House / House, 503  
Field Avenue  
Towards property

Direction: South  
Date: 08/08/22  
Photographer: Travis Corwin



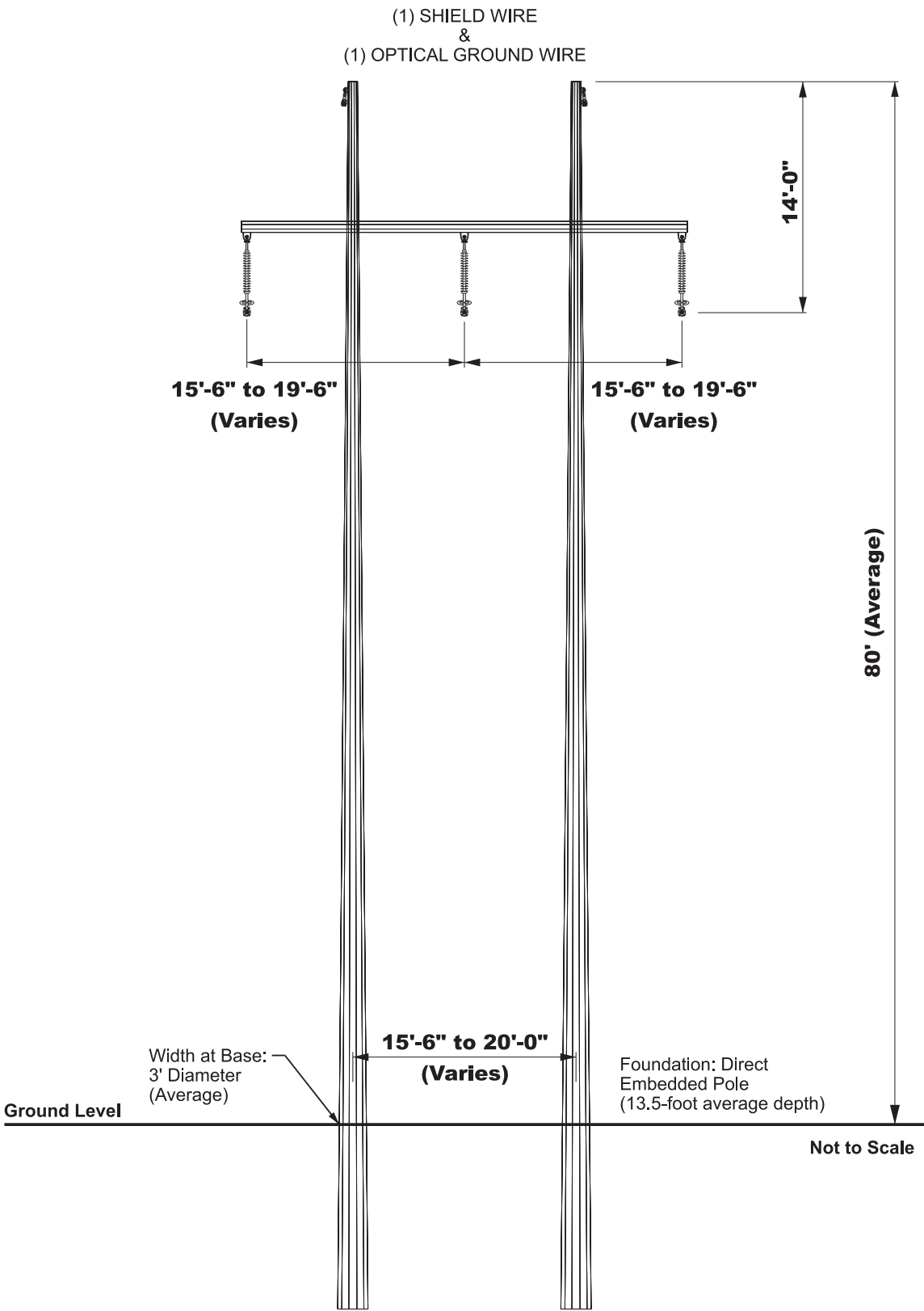
P-54b  
044-5179 - Copeland House / House, 503  
Field Avenue  
Towards line

Direction: North  
Date: 08/08/22  
Photographer: Travis Corwin

## **APPENDIX D    TYPICAL STRUCTURES**

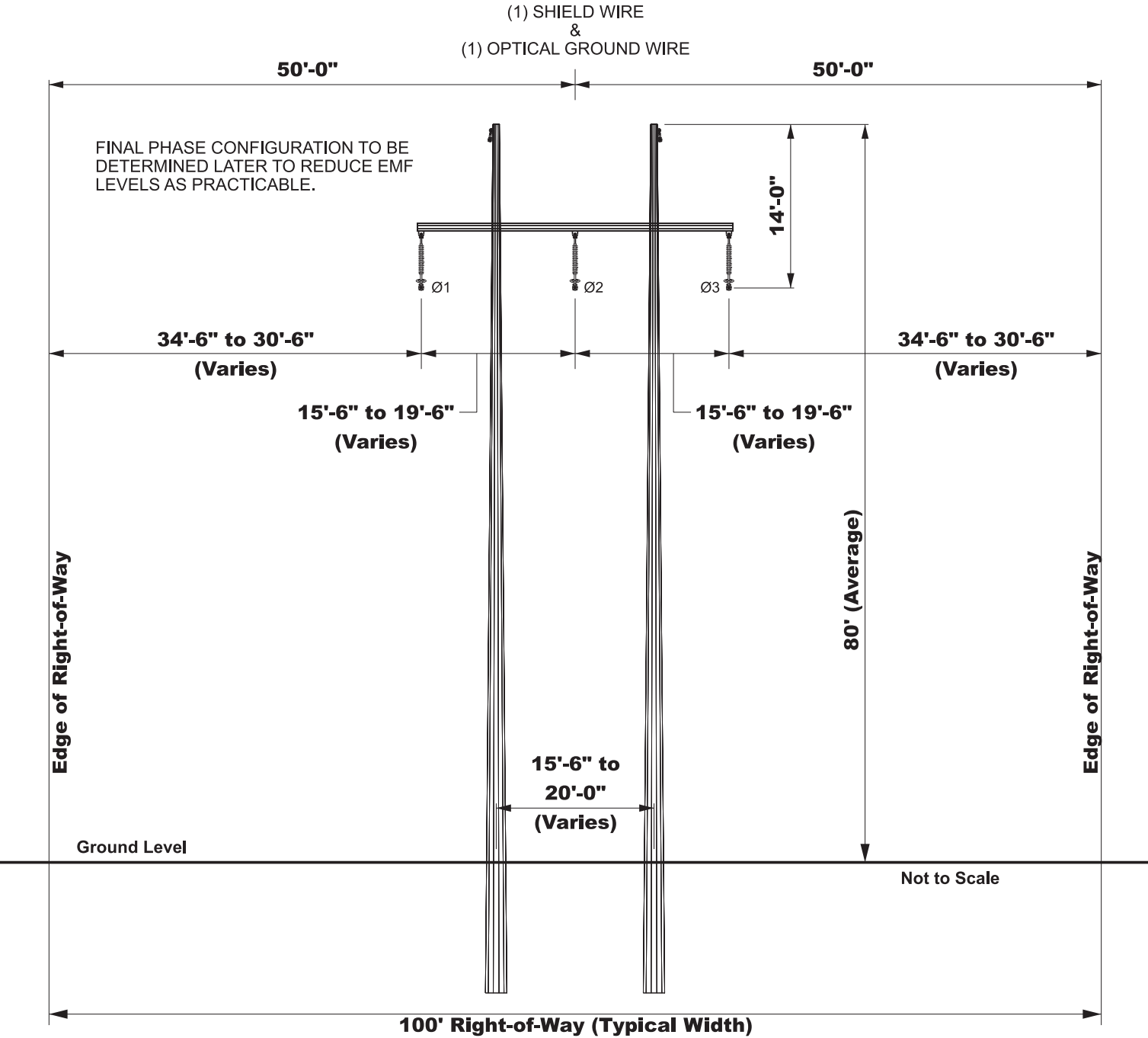


**STEEL H-FRAME (Single Circuit)**



TYPICAL SCHEMATIC





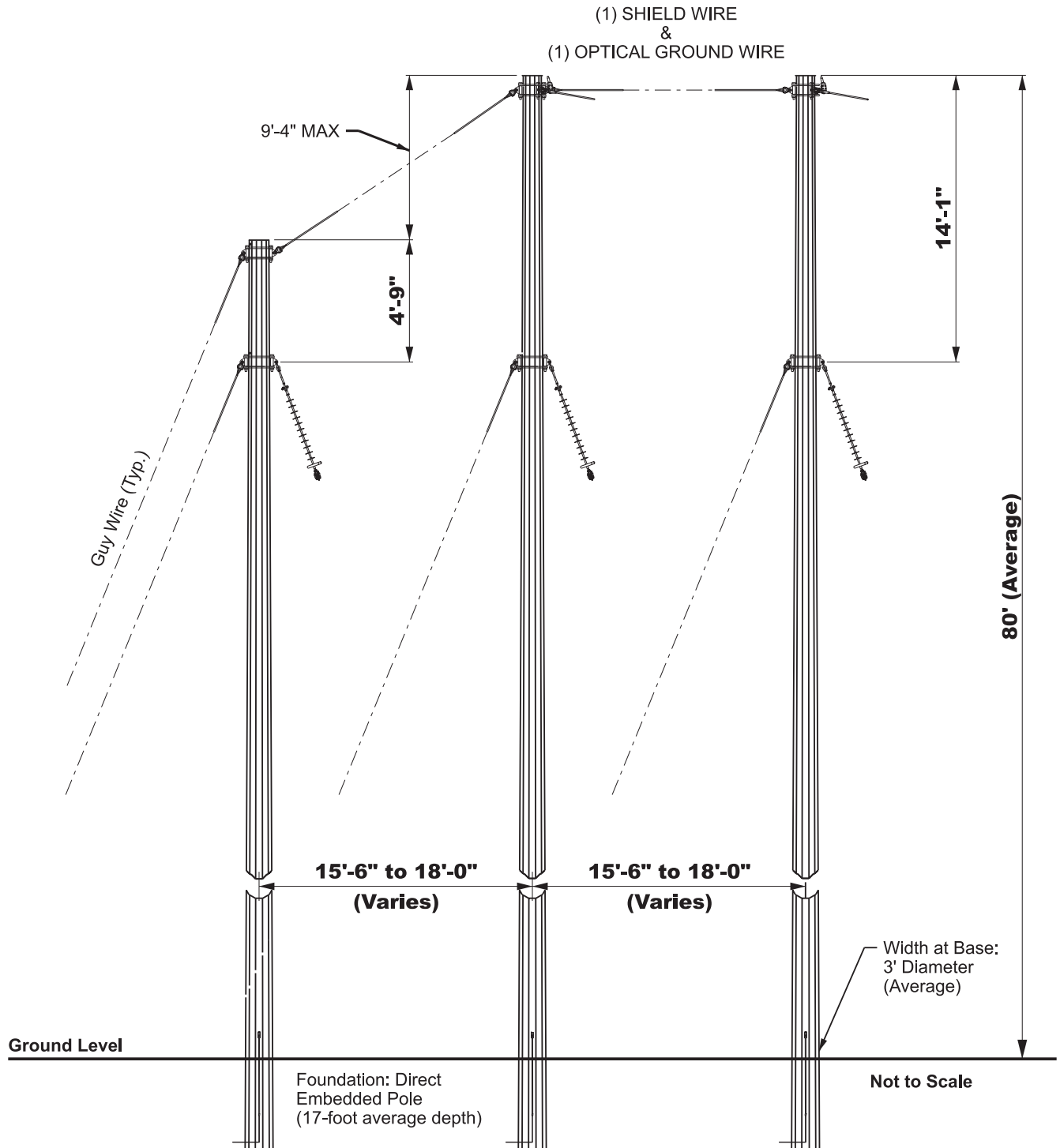
TYPICAL RIGHT-OF-WAY CROSS SECTION



#### COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

# STEEL THREE-POLE RUNNING ANGLE (Single Circuit)



TYPICAL SCHEMATIC



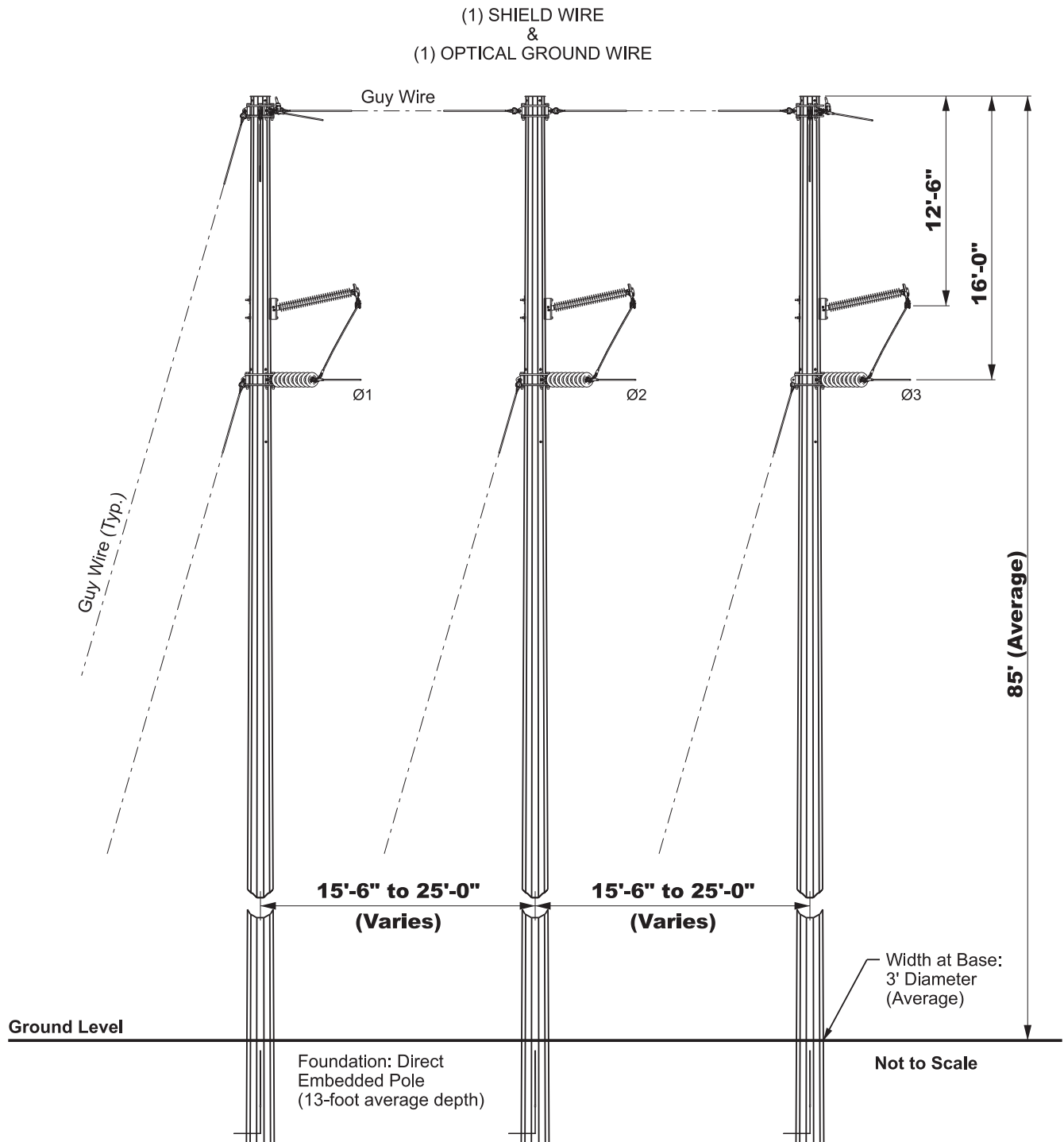
## TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

# STEEL THREE-POLE DEAD-END (Single Circuit)

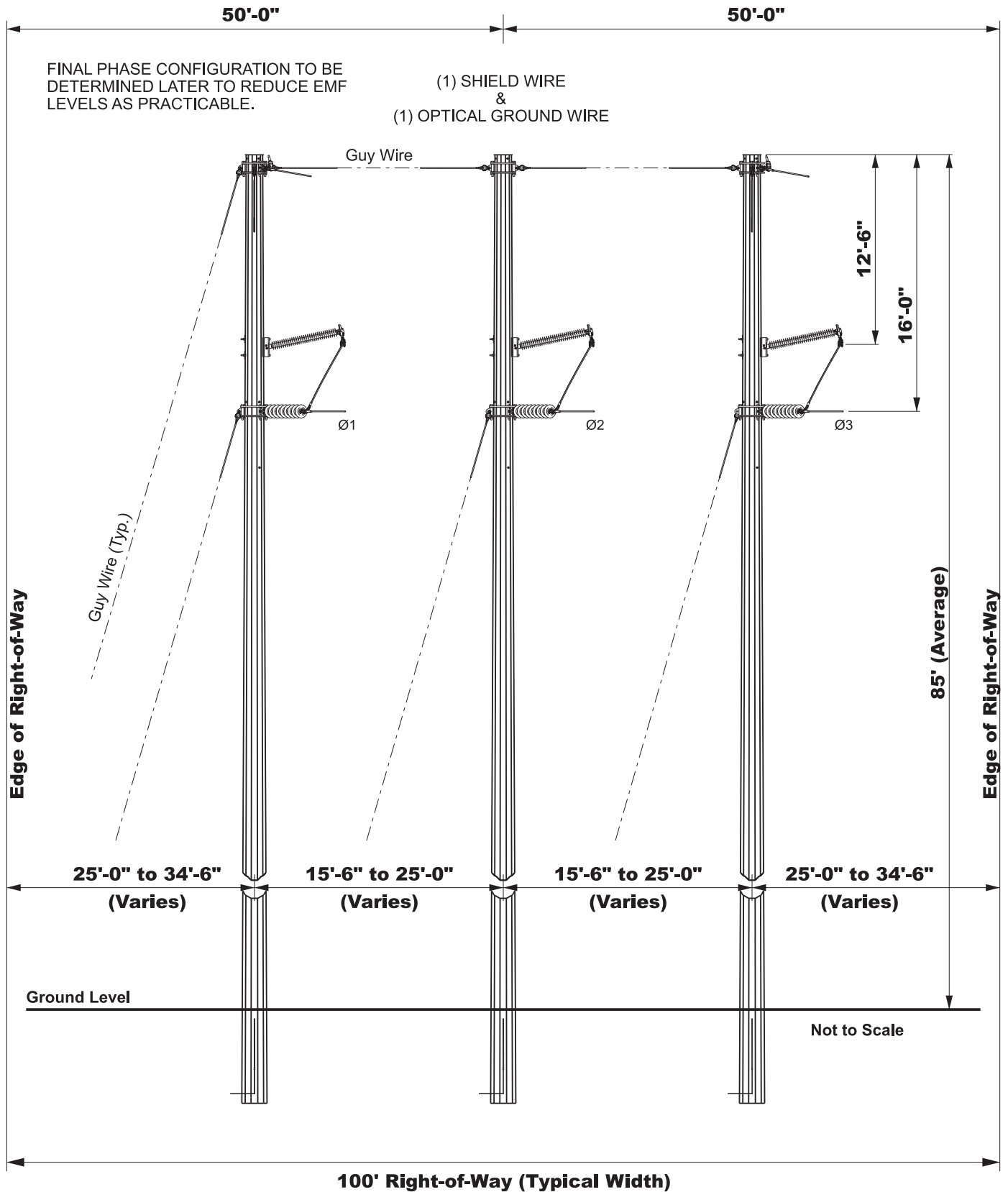


TYPICAL SCHEMATIC



EXHIBIT 12  
PROPOSED 138-kV TRANSMISSION STRUCTURES (Page 2 of 3)

## STEEL THREE-POLE DEAD-END (Single Circuit)



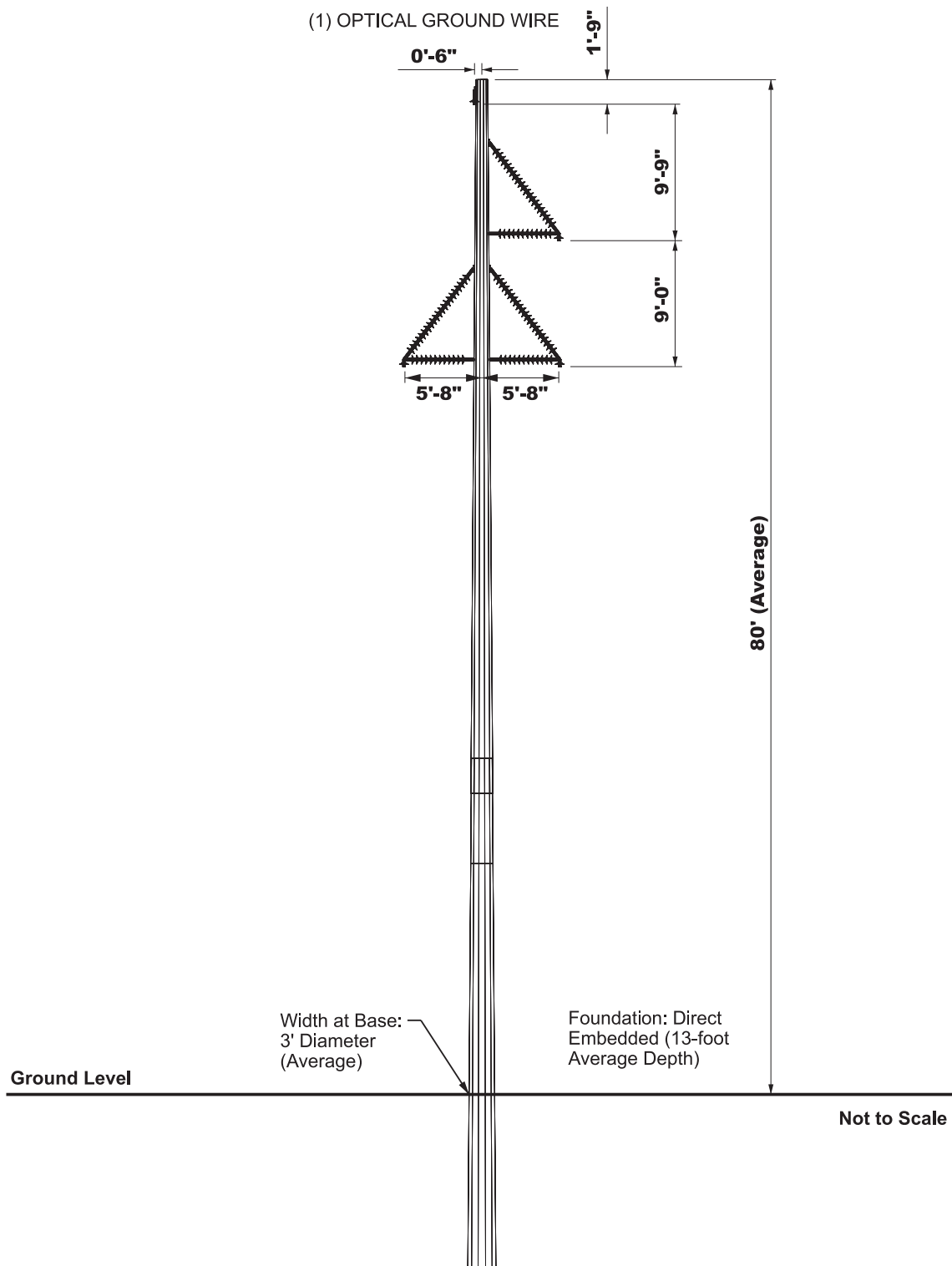
TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

# STEEL MONOPOLE WITH BRACED POSTS (Single Circuit)



TYPICAL SCHEMATIC



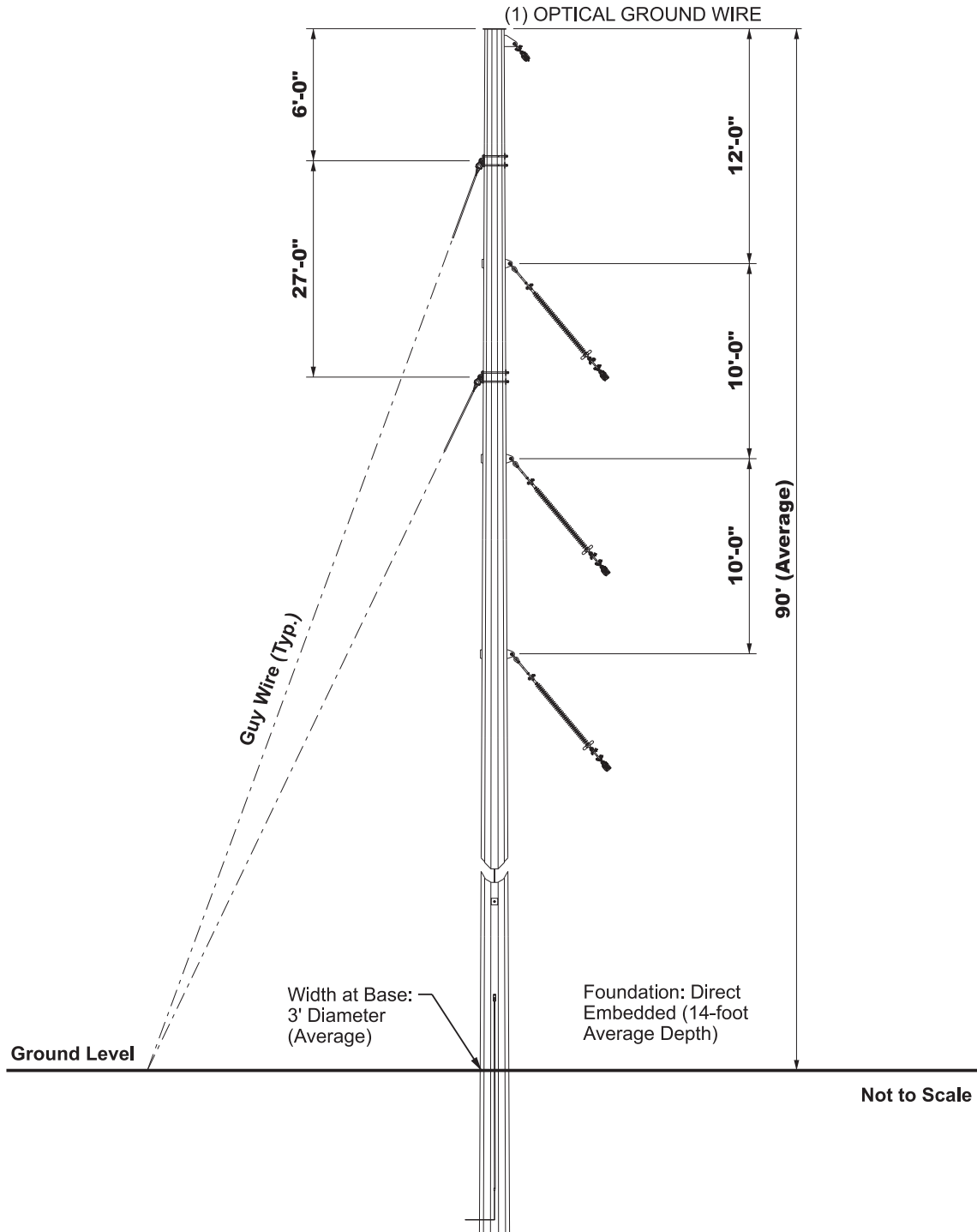
## TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

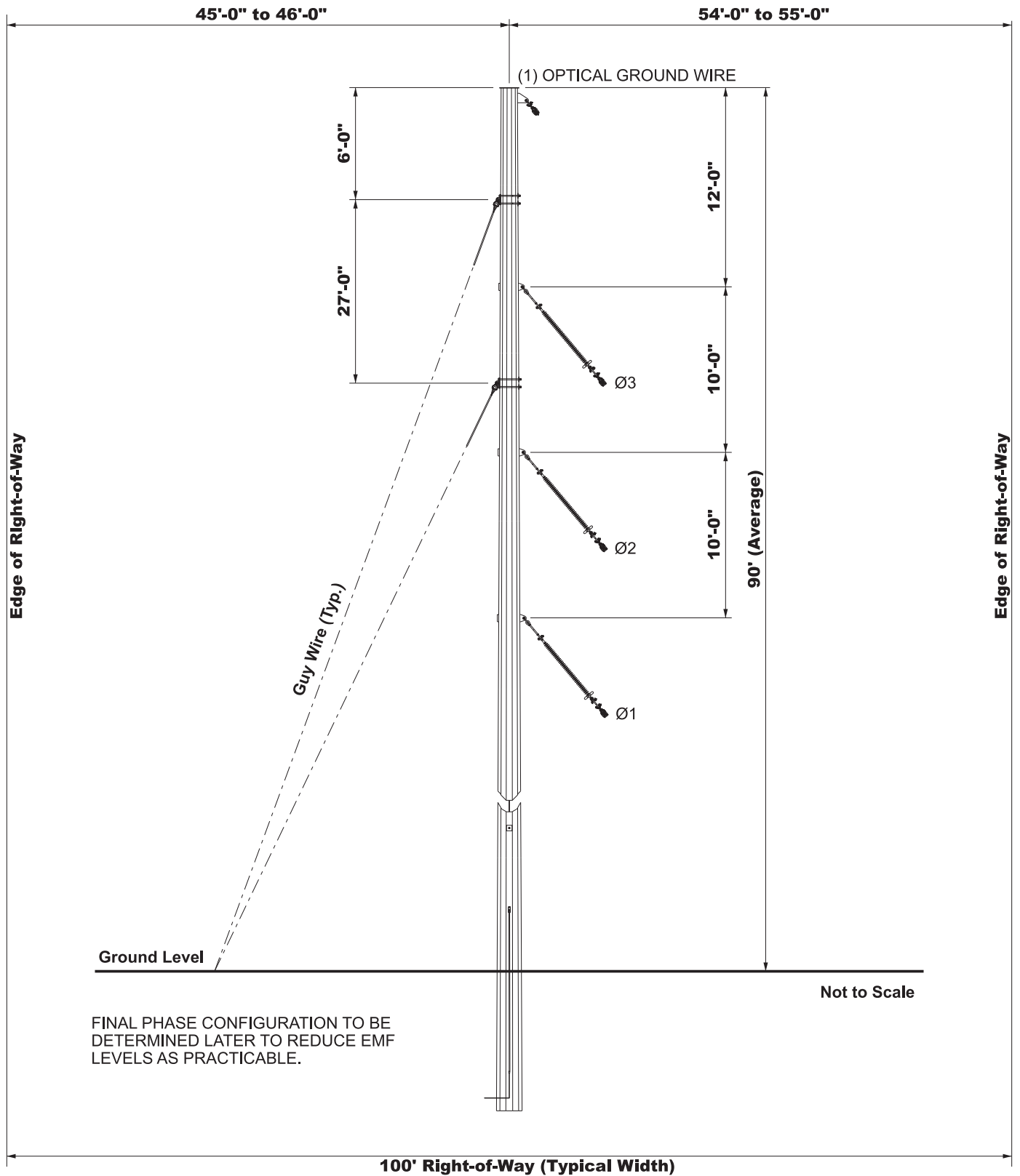
EXHIBIT 14  
PROPOSED 138-kV TRANSMISSION LINE STRUCTURES (Page 1 of 3)  
**STEEL MONOPOLE RUNNING ANGLE (Single Circuit)**



TYPICAL SCHEMATIC



EXHIBIT 14  
PROPOSED 138-kV TRANSMISSION LINE STRUCTURES (Page 2 of 3)  
**STEEL MONOPOLE RUNNING ANGLE (Single Circuit)**



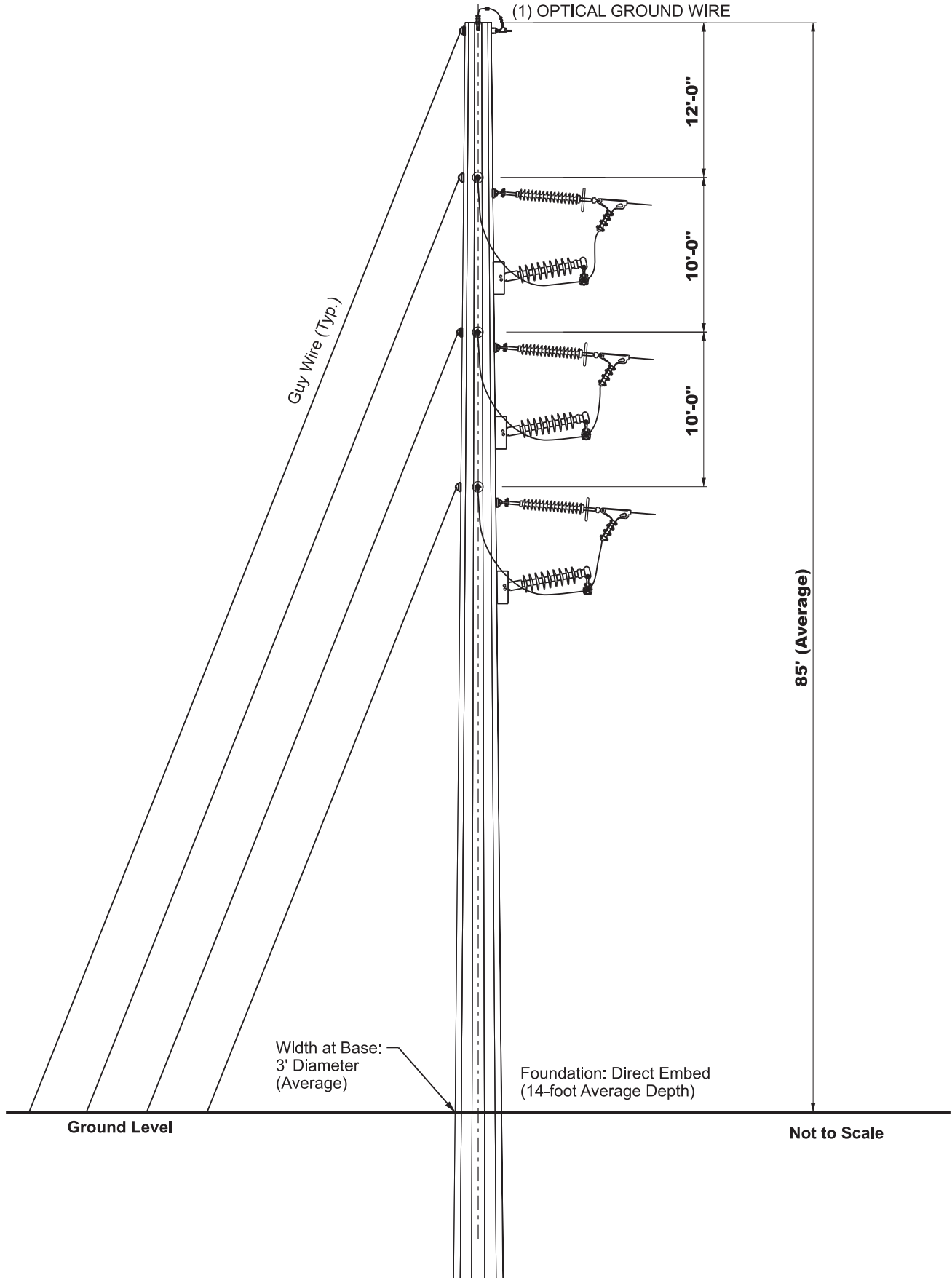
TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

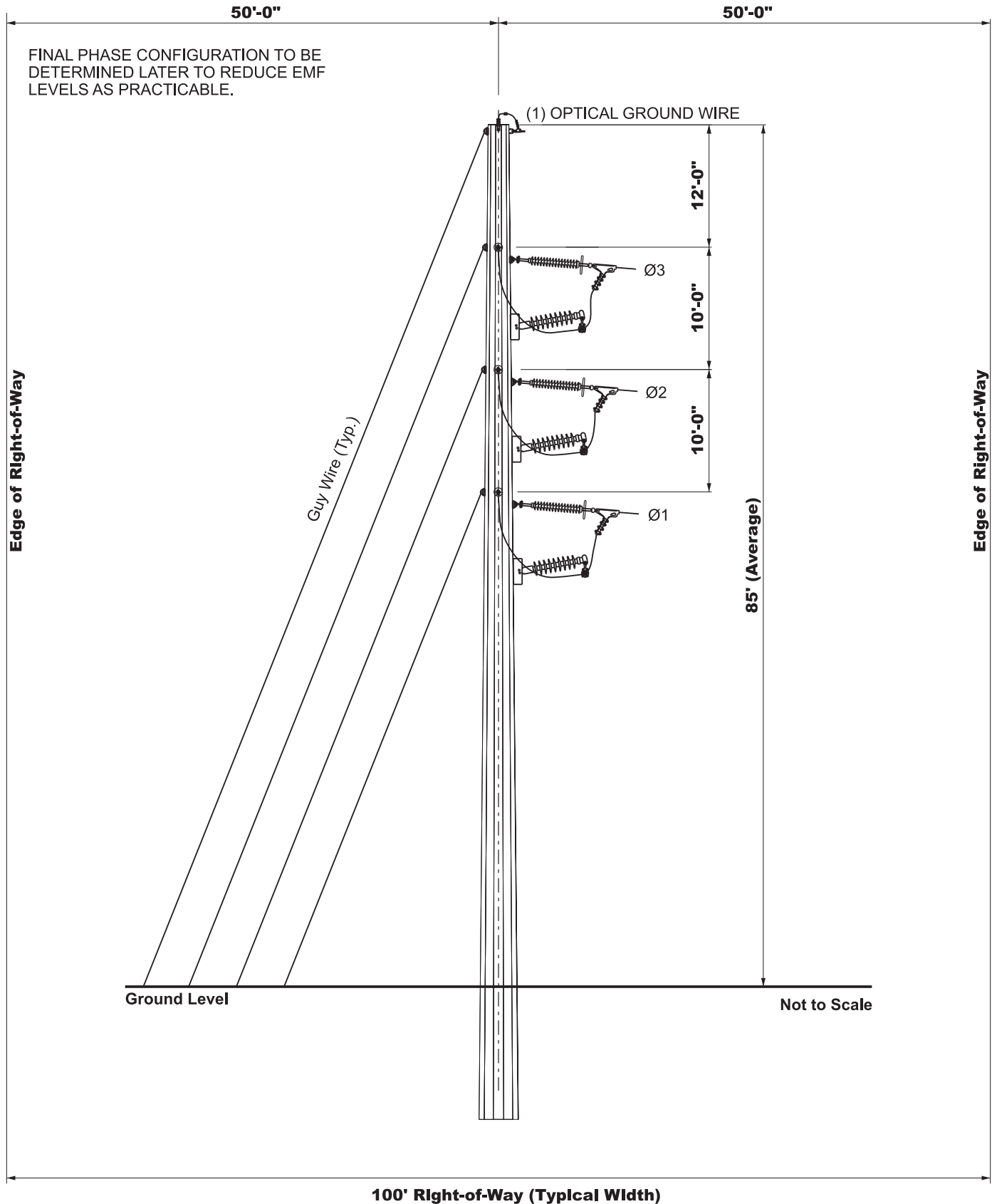
# GUYED STEEL MONOPOLE DEAD-END (SINGLE CIRCUIT)



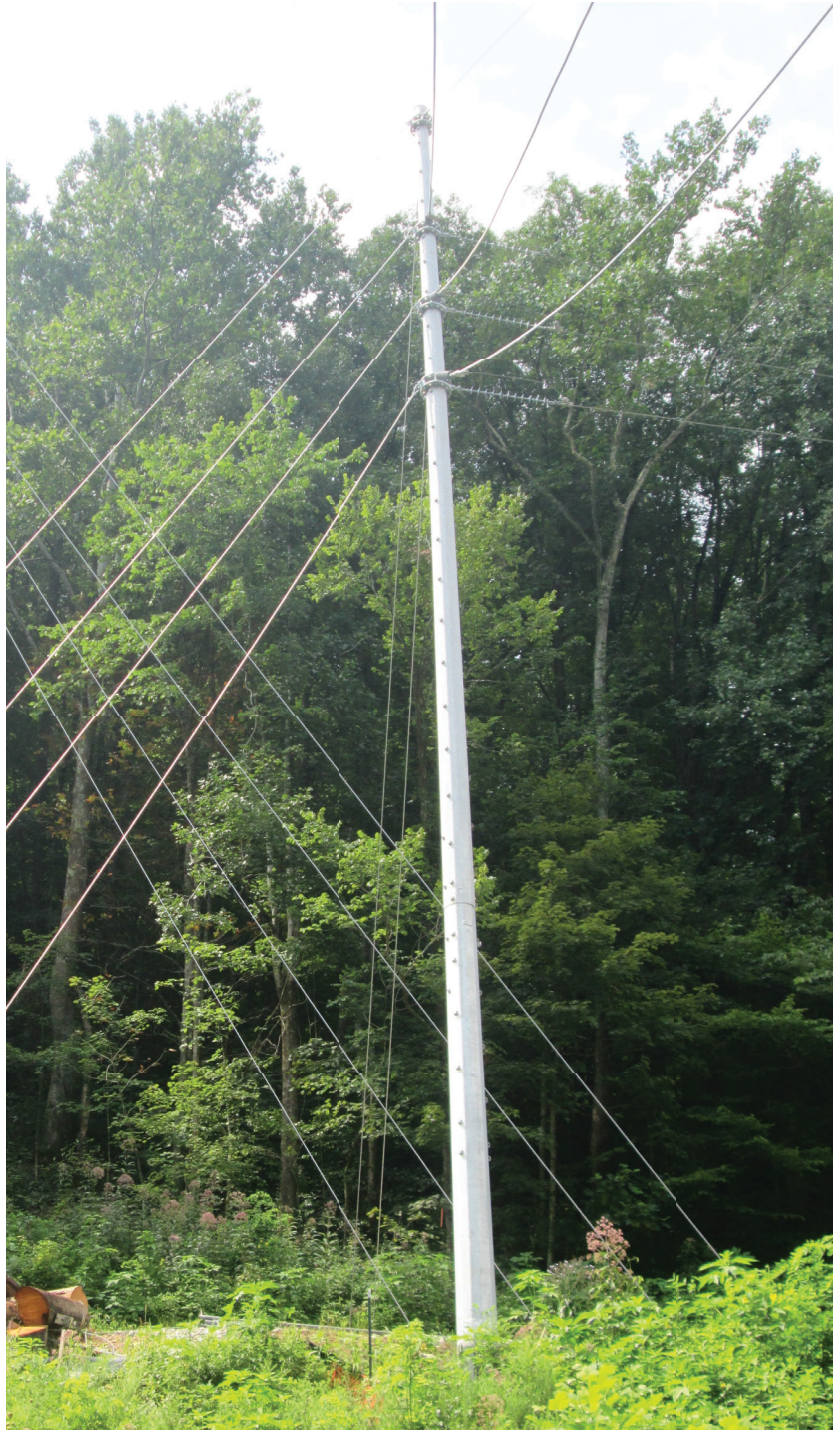
TYPICAL SCHEMATIC



EXHIBIT 15  
PROPOSED 138-kV TRANSMISSION STRUCTURES (Page 2 of 3)  
**GUYED STEEL MONOPOLE DEAD-END (SINGLE CIRCUIT)**



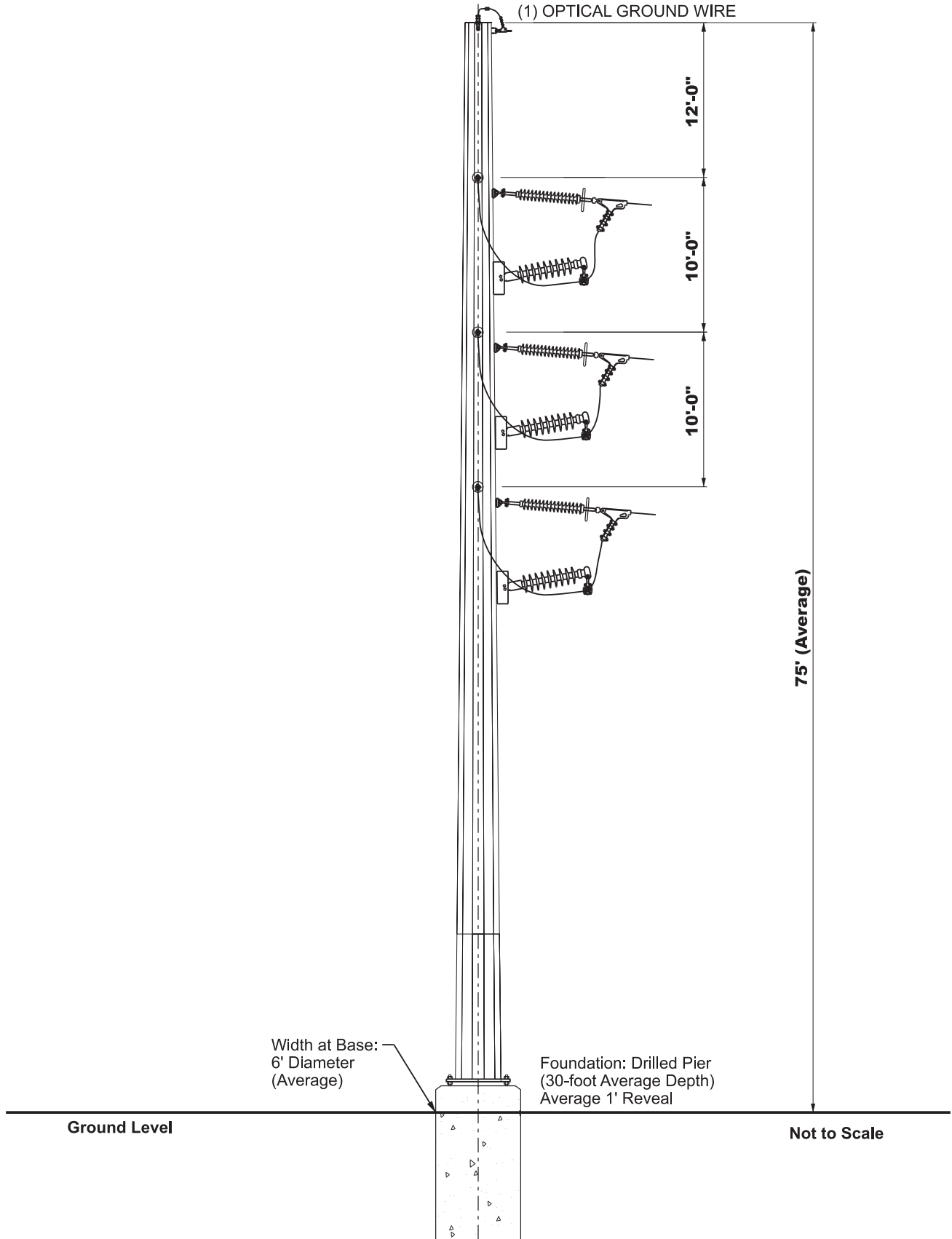
**TYPICAL RIGHT-OF-WAY CROSS SECTION**



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

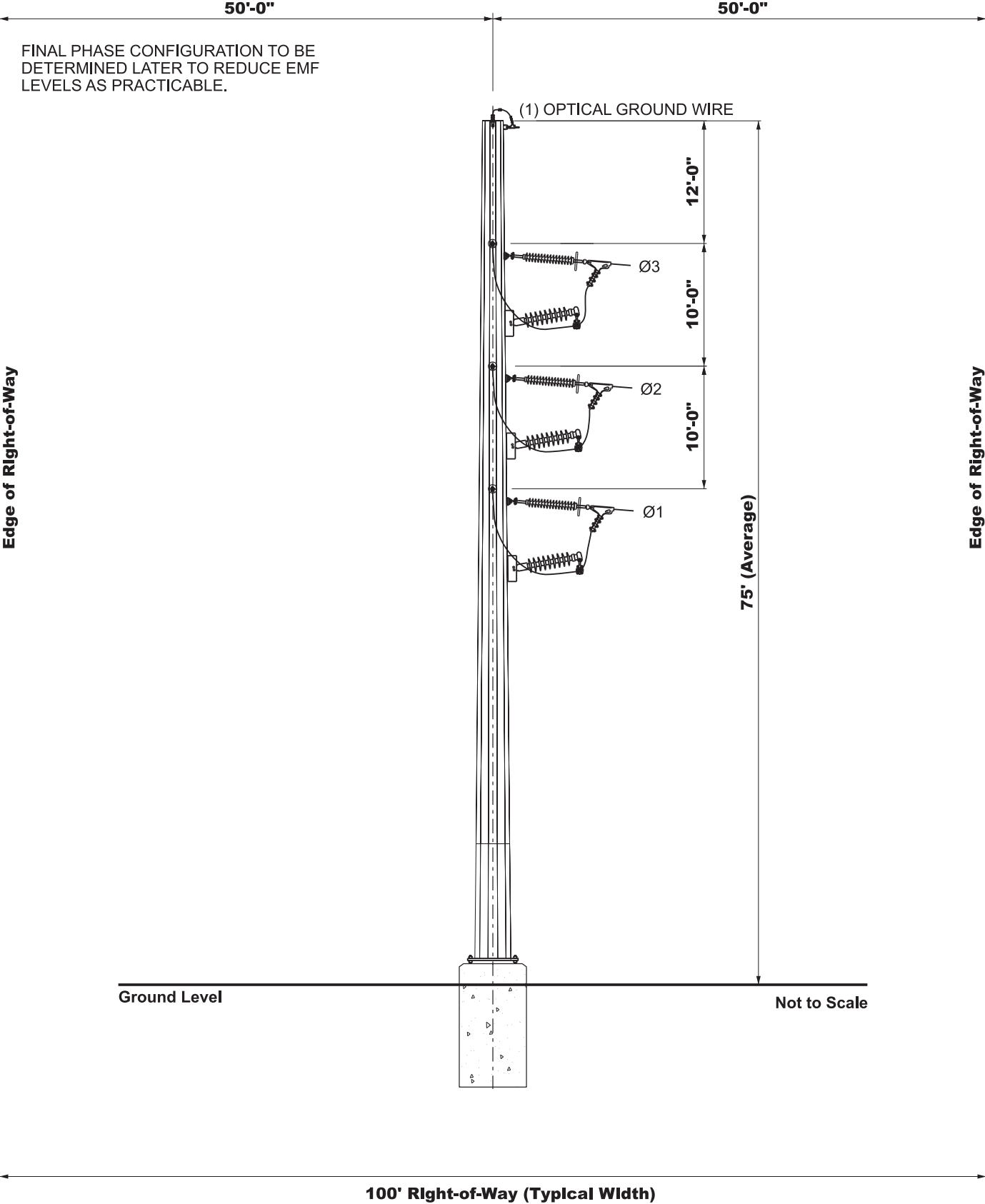
Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

# STEEL MONOPOLE DEAD-END (SINGLE CIRCUIT)



TYPICAL SCHEMATIC





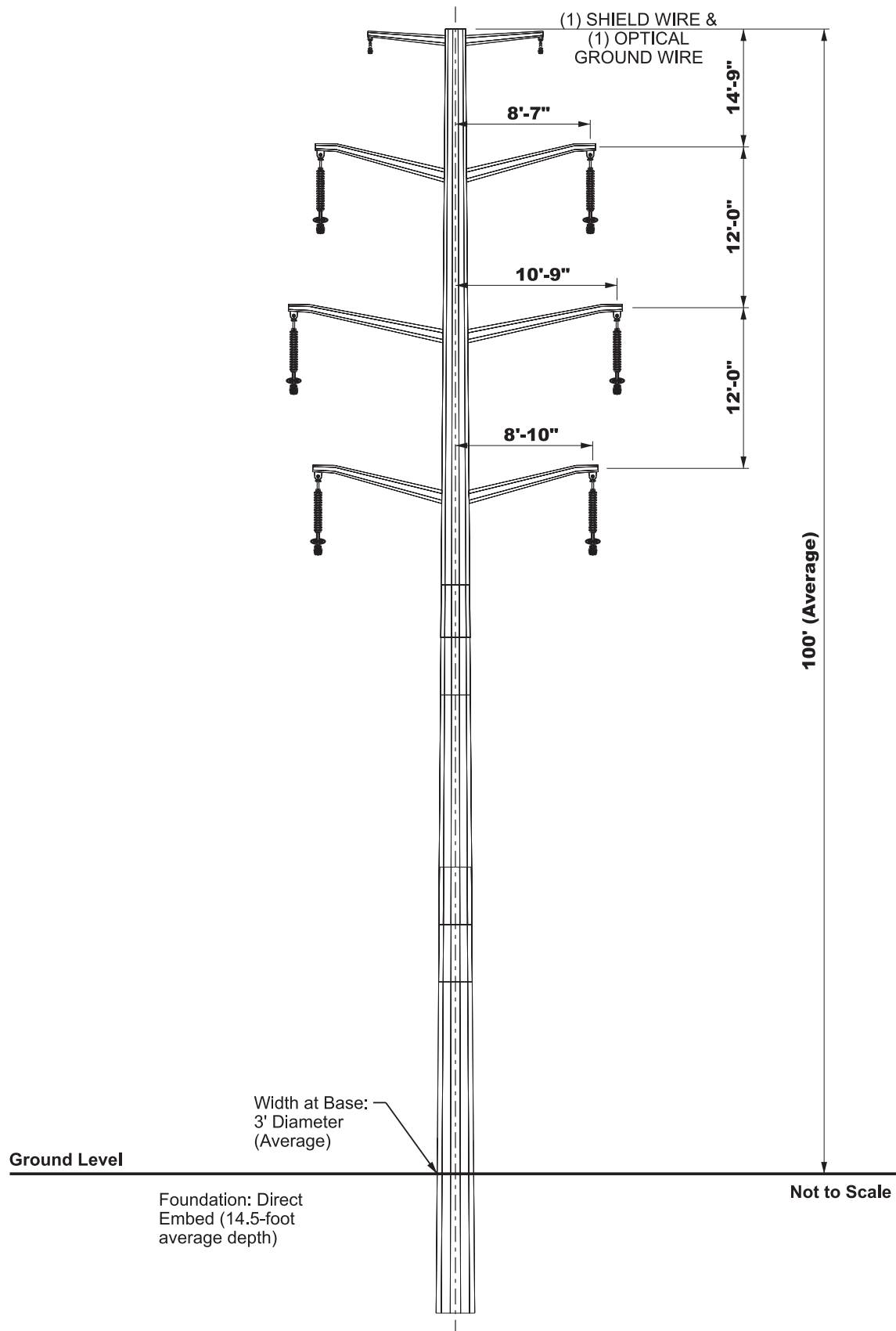
TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

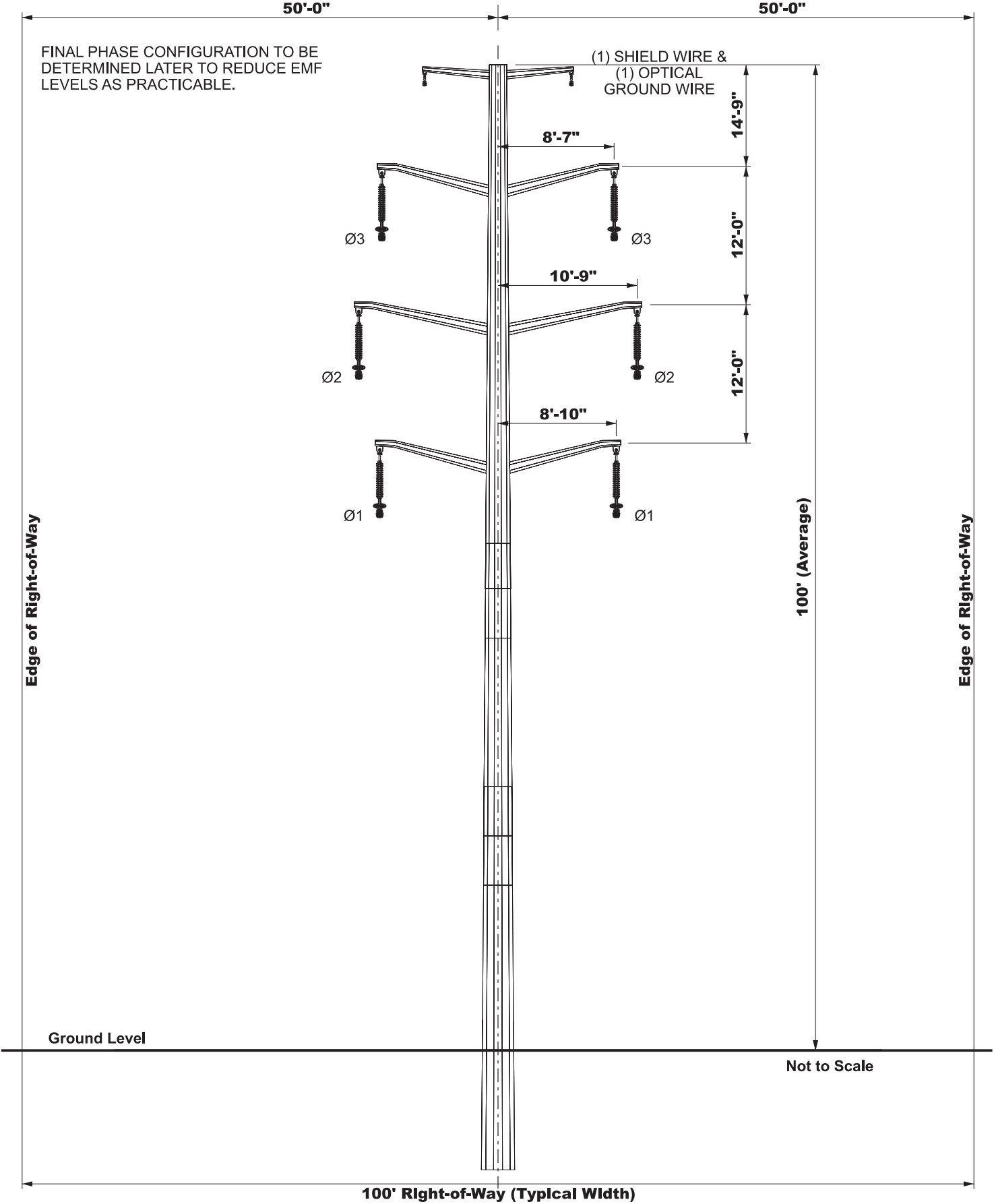
# STEEL MONOPOLE TANGENT WITH DAVIT ARMS (Double Circuit)



TYPICAL SCHEMATIC



STEEL MONOPOLE TANGENT WITH DAVIT ARMS (Double Circuit)



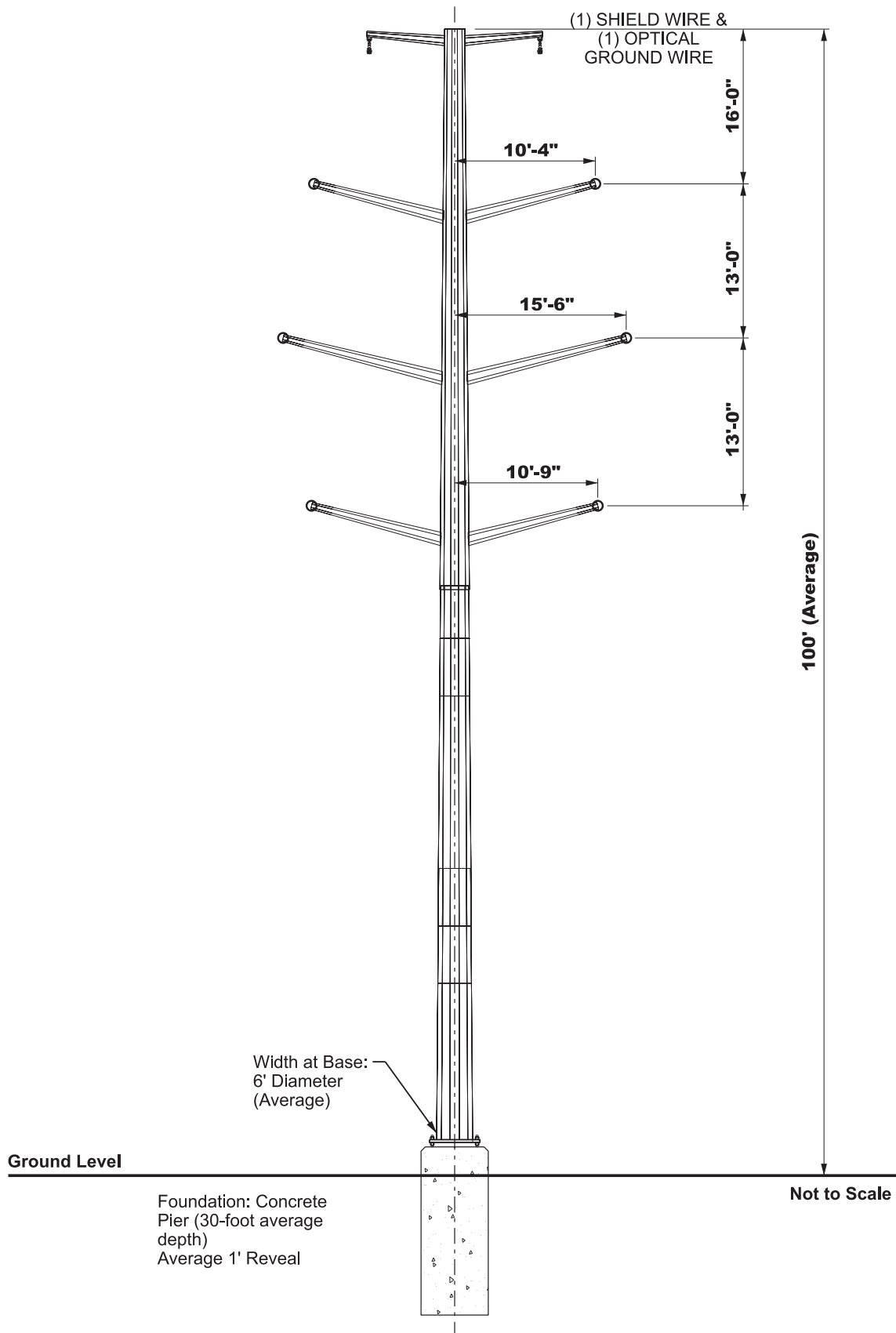
TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

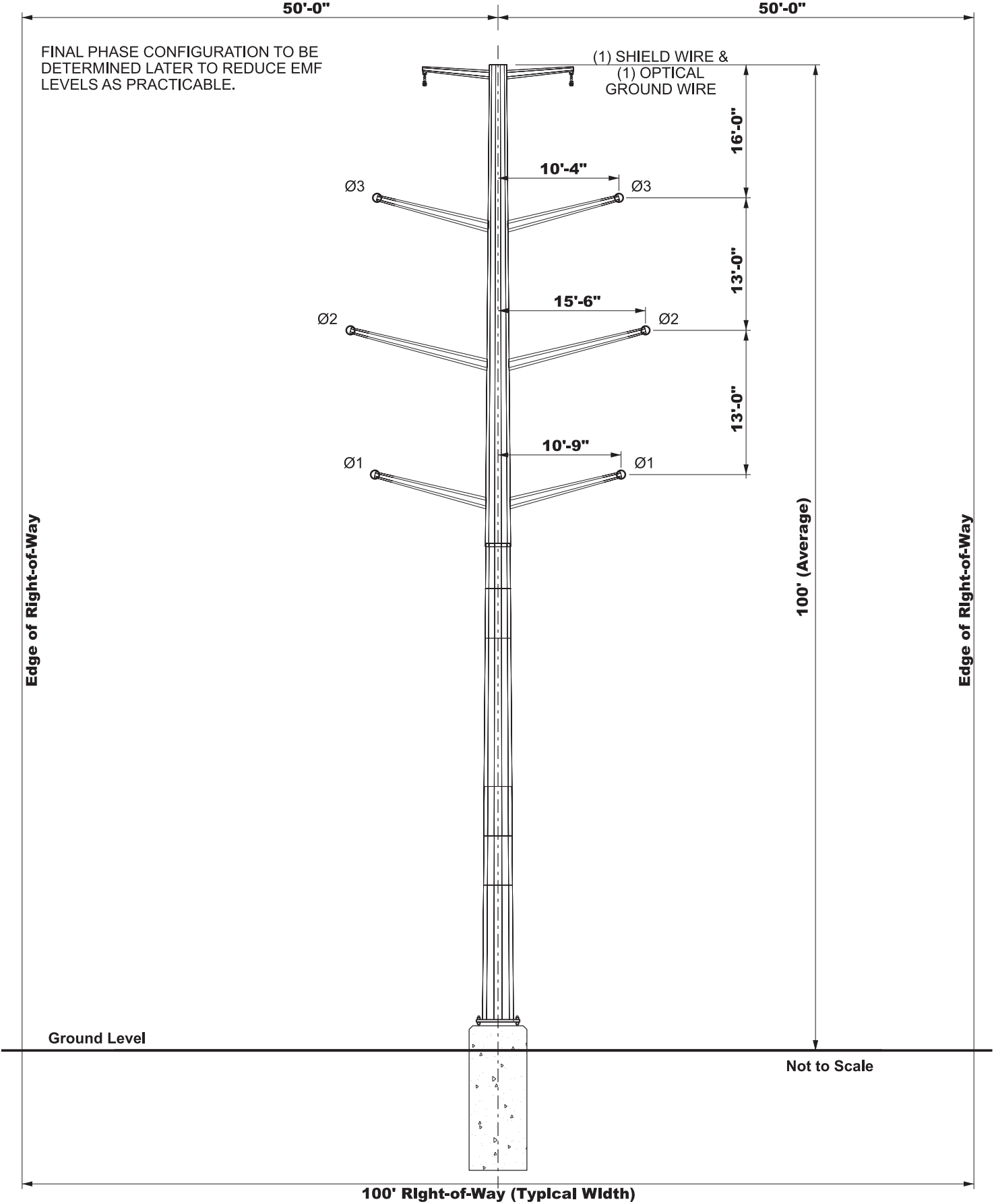
# STEEL MONOPOLE DEAD-END WITH DAVIT ARMS (Double Circuit)



TYPICAL SCHEMATIC



STEEL MONOPOLE DEAD-END WITH DAVIT ARMS (Double Circuit)



TYPICAL RIGHT-OF-WAY CROSS SECTION

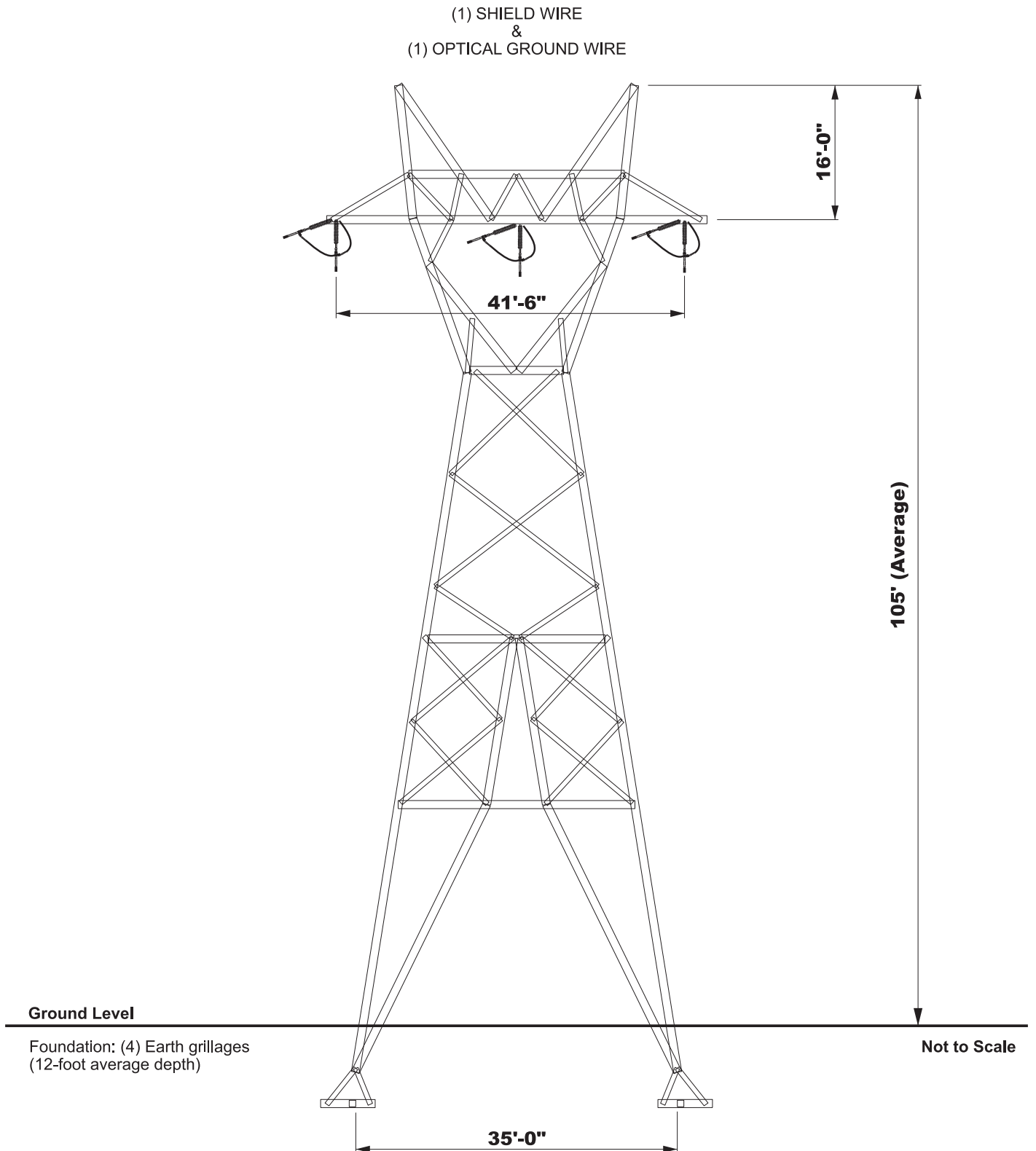
## STEEL MONOPOLE DEAD-END WITH DAVIT ARMS (Double Circuit)



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

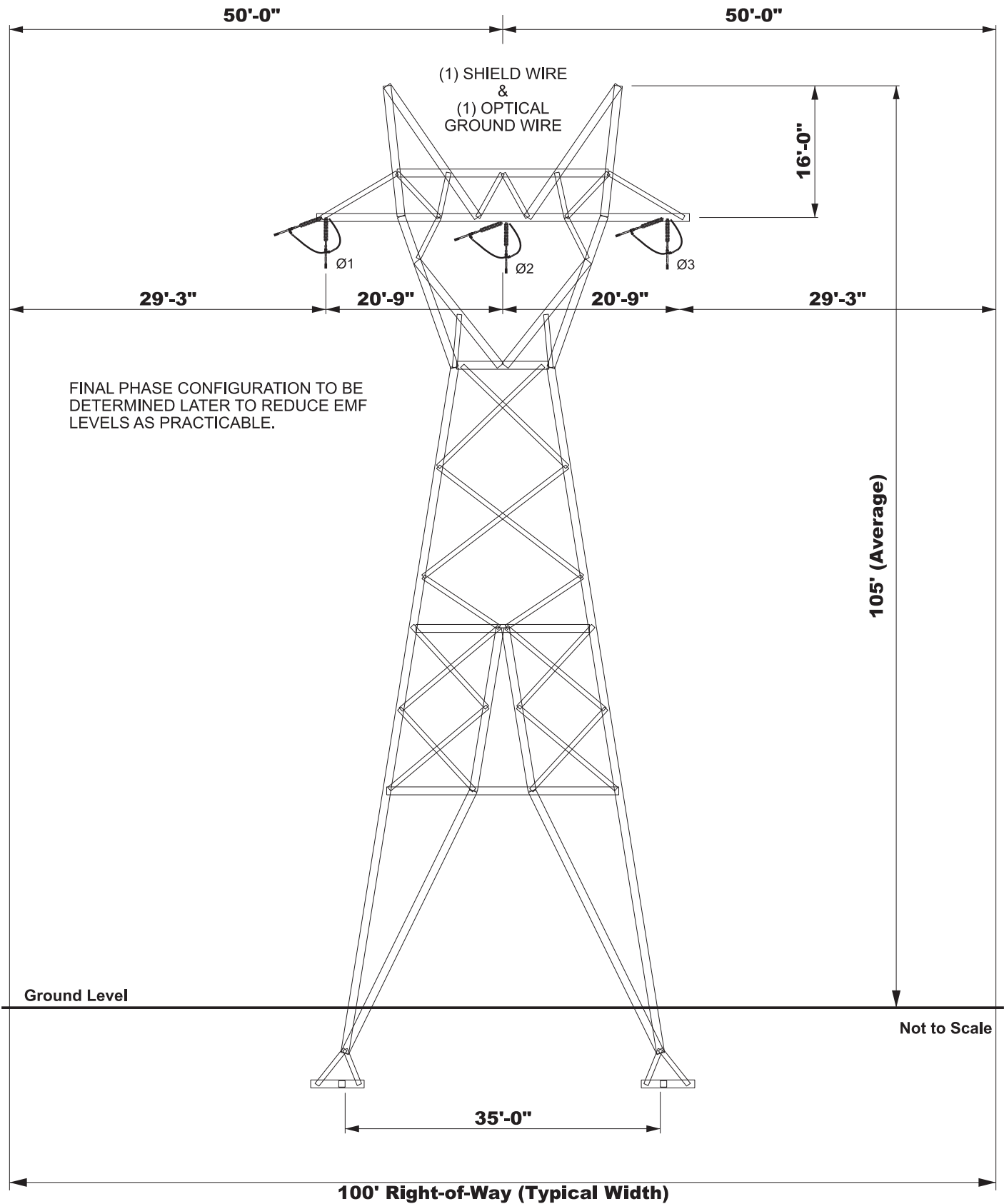
# SELF-SUPPORTING STEEL LATTICE TOWER (Single Circuit)



TYPICAL SCHEMATIC



**SELF-SUPPORTING STEEL LATTICE TOWER (Single Circuit)**



TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH

Note: The proposed material for the typical structure will be galvanized steel with a dulled finish (as shown above)

## **AGENCY CORRESPONDENCE**



Stuart Area 138-kV Transmission Improvements Project Agency Correspondence						
Jurisdiction	Component(s)	Full Name	Title	Organization	Date Notice Sent	Date Response Received
STATE	1, 2, 3	Ms. Amy Ewing	Biologist Manager	Virginia Department of Wildlife Resources (DWR) Wildlife Information and Environmental Services Section	November 23, 2021.	No response received.
STATE	1, 2, 3	Mr. Wil Orndorff	Karst Protection Coordinator	Virginia Department of Conservation and Recreation (DCR) Natural Heritage Program	November 23, 2021.	No response received.
STATE	1, 2, 3	Ms. René Hypes	Environmental Review Coordinator	Virginia Department of Conservation and Recreation (DCR) Natural Heritage Program	November 23, 2021.	December 17, 2021
STATE	1, 2, 3	Mr. Irvine Wilson	Natural Area Protection Specialist	Virginia Department of Conservation and Recreation (DCR)	November 23, 2021.	No response received.
STATE	1, 2, 3	Mr. Robert Weld	Regional Director	Virginia Department of Environmental Quality, Blue	November 23, 2021.	No response received.

Stuart Area Transmission Improvements Project Agency Correspondence						
Jurisdiction	Component(s)	Full Name	Title	Organization	Date Notice Sent	Date Response Received
				Ridge Regional Office		
STATE	1, 2, 3	Ms. Michelle Henicheck	Senior Wetland Ecologist	Virginia Department of Environmental Quality, Central Office	November 23, 2021.	No response received.
STATE	1	Mr. Jeffrey Hurst	Regional Director	Virginia Department of Environmental Quality, Southwest Regional Office	November 23, 2021.	No response received.
STATE	1, 2, 3	Ms. Bettina Rayfield	Manager, Environmental Impact Review	Virginia Department of Environmental Quality, Office of Environmental Impact Review	November 23, 2021.	No response received.
STATE	1, 2, 3	Mr. Jay Roberts	VWP Permit Manager	Virginia Department of Environmental Quality, Office of Wetland and Stream Protection, Blue Ridge Regional Office	November 23, 2021.	No response received.
STATE	1	Ms. Kelly Miller	Stormwater Manager	Virginia Department of Environmental	November 23, 2021.	No response received.

Stuart Area Transmission Improvements Project Agency Correspondence						
Jurisdiction	Component(s)	Full Name	Title	Organization	Date Notice Sent	Date Response Received
				Quality, Department of Water, Southwest Regional Office		
STATE	1, 2, 3	Mr. Randy Owen	Chief of Habitat Management	Virginia Marine Resources Commission, Habitat Management Division	November 23, 2021.	No response received.
STATE	1, 2, 3	Ms. Jennifer Perkins	Coordinator	Virginia Department of Agriculture and Consumer Services, Office of Farmland Preservation	November 23, 2021.	No response received.
STATE	1, 2, 3	Mr. Timothy Roberts	Project Review Archaeologist	Virginia Department of Historic Resources (DHR), Review and Compliance Division (RCD)	November 23, 2021.	December 22, 2021
STATE	1, 2, 3	Ms. Martha Little	Deputy Director of Stewardship	Virginia Outdoors Foundation	November 23, 2021.	January 20, 2022
STATE	1, 2, 3	Mr. Tommy Oravetz	Conservation Specialist	Virginia Outdoors	November 23, 2021.	No response received.



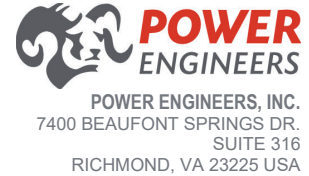
Stuart Area Transmission Improvements Project Agency Correspondence						
Jurisdiction	Component(s)	Full Name	Title	Organization	Date Notice Sent	Date Response Received
				Foundation, Blacksburg Office		
STATE	1, 2, 3	Mr. Karl Didier	Forestland Conservation Program Manager	Virginia Department of Forestry	November 23, 2021.	January 7, 2022
STATE	3	Mr. Keith Kevin	Area Forester	Virginia Department of Forestry, Spencer Office	November 23, 2021.	No response received.
STATE	2	Mr. Hosack Daniel	Area Forester	Virginia Department of Forestry, Floyd Office	November 23, 2021.	No response received.
STATE	1, 2, 3	Mr. Scott Denny	Senior Aviation Planner	Virginia Department of Aviation	November 23, 2021.	December 7, 2021
STATE	1, 2, 3	Mr. David Spears	Director, Division of Geology and Mineral Resources	Virginia Department of Mines, Minerals, and Energy	November 23, 2021.	No response received.
STATE	1, 2, 3	Mr. Jeffrey Wells	Regional Director	Virginia Department of Health, Office of Drinking Water, Danville Field Office	November 23, 2021.	December 13, 2021
STATE	1, 2	Mr. Brian Blankenship	Regional Director	Virginia Department of Health, Office of Drinking Water,	November 23, 2021.	No response received.

Stuart Area Transmission Improvements Project Agency Correspondence						
Jurisdiction	Component(s)	Full Name	Title	Organization	Date Notice Sent	Date Response Received
				Abingdon Field Office		
STATE	1, 2, 3	Mr. Ken King, P.E.	District Engineer	Virginia Department of Transportation (VDOT) Salem District	November 23, 2021.	No response received.
STATE	1, 2, 3	Mr. Michael Gray	District Planner	Virginia Department of Transportation (VDOT) Salem District	November 23, 2021.	January 3, 2022
STATE	1, 2, 3		Regulator of the Day	U.S. Army Corps of Engineers (USACE) Norfolk District, Western Section	November 23, 2021.	No response received.
STATE	1, 2, 3	Ms. Diana Esher	Acting Regional Administrator	U.S. Environmental Protection Agency (EPA) Region 3	November 23, 2021.	No response received.
STATE	1, 2, 3	Ms. Cindy Schulz	Field Supervisor	U.S. Fish and Wildlife Service (USFWS) Virginia Ecological Services	November 23, 2021.	No response received.
FEDERAL	1, 2, 3	Mr. Troy Andersen	Supervisory Fish & Wildlife Biologist	U.S. Fish and Wildlife Service (USFWS) Virginia	November 23, 2021.	No response received.

Stuart Area Transmission Improvements Project Agency Correspondence						
Jurisdiction	Component(s)	Full Name	Title	Organization	Date Notice Sent	Date Response Received
				Ecological Services		
FEDERAL	1, 2, 3	Mr. John Harper	State Soil Scientist and State Resource Inventory Coordinator	U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Virginia	November 23, 2021.	No response received.
FEDERAL	1, 2, 3	Mr. John Simkins	Planning and Environment Team Lead	U.S. Department of Transportation (DOT) Federal Highway Administration, Virginia Division	November 23, 2021.	No response received.
FEDERAL	1, 2, 3	Mr. Jeff Slaughter	Manager	U.S. Department of Transportation (DOT) Federal Aviation Administration (FAA) Flight Standards District Office	November 23, 2021.	December 8, 2021
FEDERAL	1, 2, 3	Ms. Patricia Henn	Manager	U.S. Department of Transportation (DOT) Federal Aviation Administration	November 23, 2021.	No response received.



Stuart Area Transmission Improvements Project Agency Correspondence						
Jurisdiction	Component(s)	Full Name	Title	Organization	Date Notice Sent	Date Response Received
				(FAA) Eastern Region, Planning & Programming Branch		
<b>FEDERAL</b>	<b>2</b>	Ms. Heather McNichols	Realty Specialist	National Park Service (NPS) Blue Ridge Parkway	November 23, 2021.	No response received.



November 23, 2021

RE: Appalachian Power Company – Stuart Area Improvements Project: Carroll, Floyd, Henry, Patrick Counties, Virginia

Dear:

Appalachian Power Company (Appalachian Power) is proposing the Stuart Area Improvements Project (the Project), which is comprised of several components. Appalachian Power contracted POWER Engineers, Inc. (POWER) to conduct route selection studies for the Project's components and prepare the Certificate of Public Convenience and Necessity application for filing with the Virginia State Corporation Commission (SCC). On behalf of Appalachian Power, POWER is requesting your input on the Project's components: Stuart – Willis Gap, Stuart – Floyd, and Stuart – Bassett (**Attachment 1**). The upgrades replace equipment that is 80 to 100 years old, add an additional power source to the area, upgrade the voltage of equipment from 69-kilovolt (kV) to 138-kV, and add two new distribution substations to improve the local distribution system.

The first component, **Stuart – Willis Gap**, is located in Carroll and Patrick counties and includes the following in a new 100-foot-wide right-of-way (ROW):

- Build approximately 22 miles of new 138 kV transmission line (Patrick and Carroll counties)
- Build approximately 1.5 miles of new double-circuit 138 kV at a proposed 138 kV substation (Patrick County)
- Build two new 138 kV substations (Patrick County)
- Retire the Stuart Substation (Town of Stuart)
- Upgrade the Willis Gap and Huffman substations (Carroll County)

The second component, **Stuart – Floyd**, is located in Patrick and Floyd counties, and includes the following in or near existing ROW:

- Rebuild approximately 20 miles of 69 kV line to 138 kV standards (Patrick and Floyd counties)
- Upgrade the Woolwine Substation (Patrick County)
- Expand the Floyd Substation (Floyd County)

The third component, **Stuart – Bassett**, is located in Patrick and Henry counties, and includes the following in or near existing ROW:

- Rebuild approximately 30 miles of 69 kV line to 138 kV standards (Patrick and Henry counties)
- Build approximately two miles of new 138 kV line (Henry County)
- Build two new 138 kV substations in Henry County
- Upgrade the Fieldale and Philpott substations (Henry County)
- Retire the Philpott Switch, West Bassett, Bassett, and Stanleytown substations (Henry County)

November 10, 2021

Appalachian Power Company and POWER have identified study segments for the Stuart – Willis Gap component and a study area for the proposed substations and transmission line rebuilds. **Attachment 2** shows the Stuart – Willis Gap component in Carroll and Patrick counties. **Attachment 3** shows the Stuart – Floyd component in Patrick and Floyd counties, and **Attachment 4** shows the Stuart – Bassett component in Henry and Patrick counties.

Appalachian Power is requesting input from you during the route development and siting phase of the Project. We appreciate your input and your comments will be incorporated into the filing with the SCC. Appalachian Power plans to file the Project in Fall 2022. Please distribute this notification to staff members who may be involved with the phases for review and comment.

Should you have questions, please contact me via email at [roya.pardis@powereng.com](mailto:roya.pardis@powereng.com) or by phone at 281-765-5548. If you wish to speak with an Appalachian Power representative, please contact Scott Kennedy via email at [skennedy@aep.com](mailto:skennedy@aep.com).

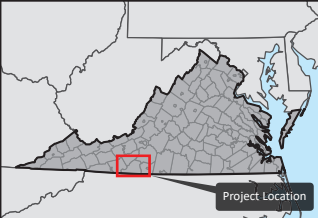
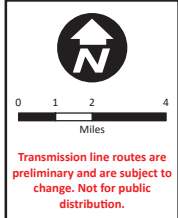
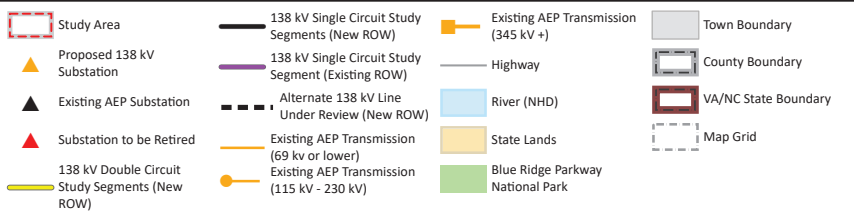
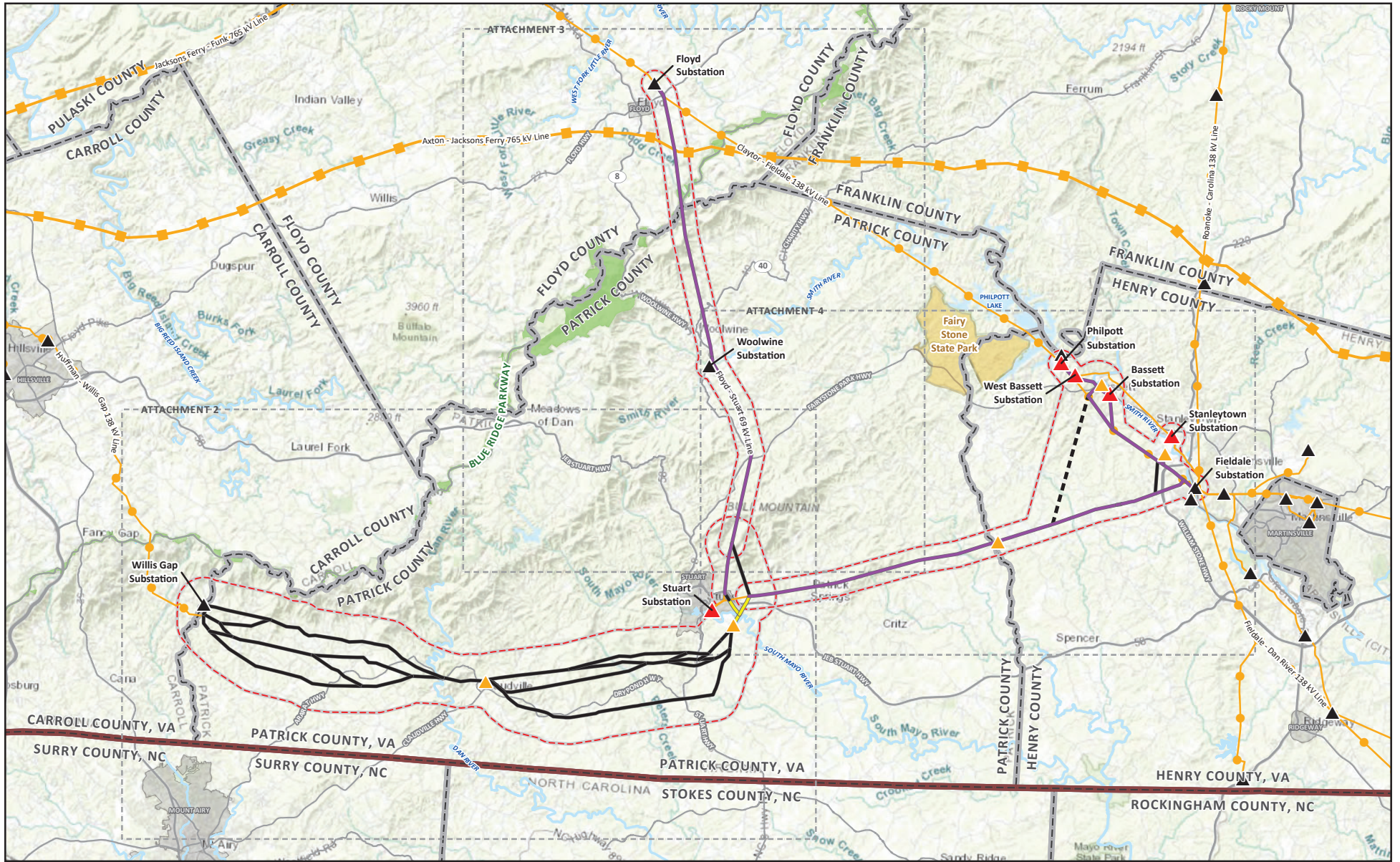
Sincerely,



Roya Pardis  
POWER Engineers, Inc.

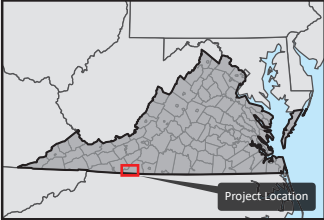
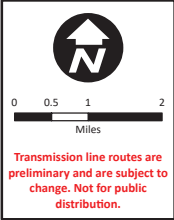
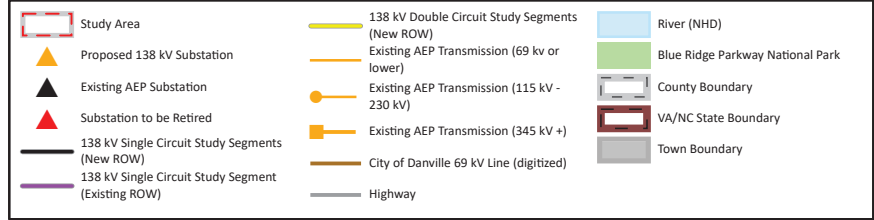
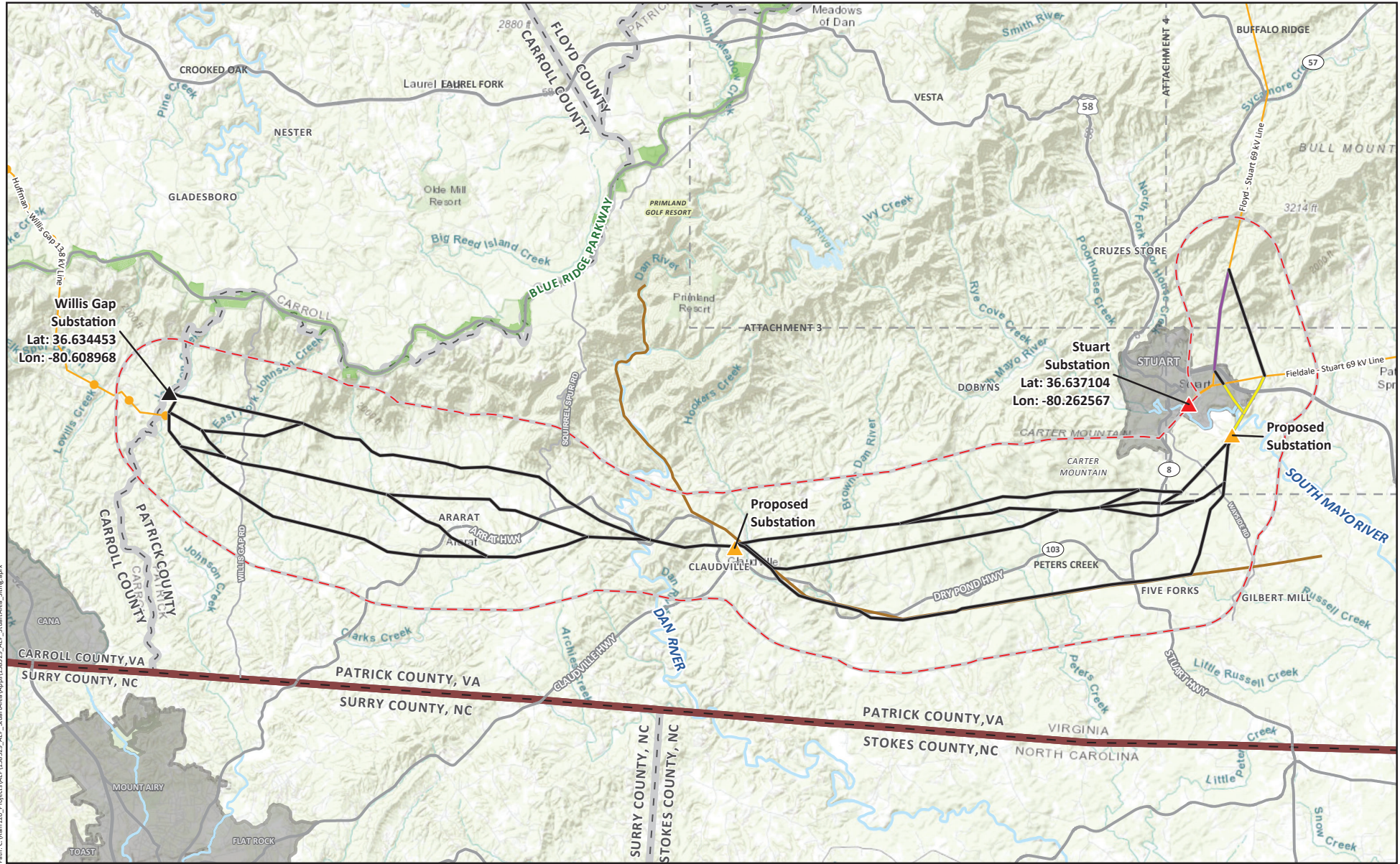
Enclosure(s): Attachment 1: Stuart Area Improvements Project Map  
Attachment 2: Stuart – Willis Gap Component Map  
Attachment 3: Stuart – Floyd Component Map  
Attachment 4: Stuart – Bassett Component Map





<b>PROJECT STUDY AREA</b> Carroll, Floyd, Henry, & Patrick Counties, Virginia		<b>ATTACHMENT 1</b> Stuart Area Improvements Project
NAD 1983 StatePlane Virginia South FIPS 4502 Feet Lambert Conformal Conic North American 1983		
Date: 11/15/2021 Author: CK POWER: 158529		





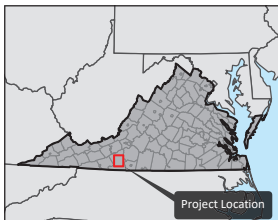
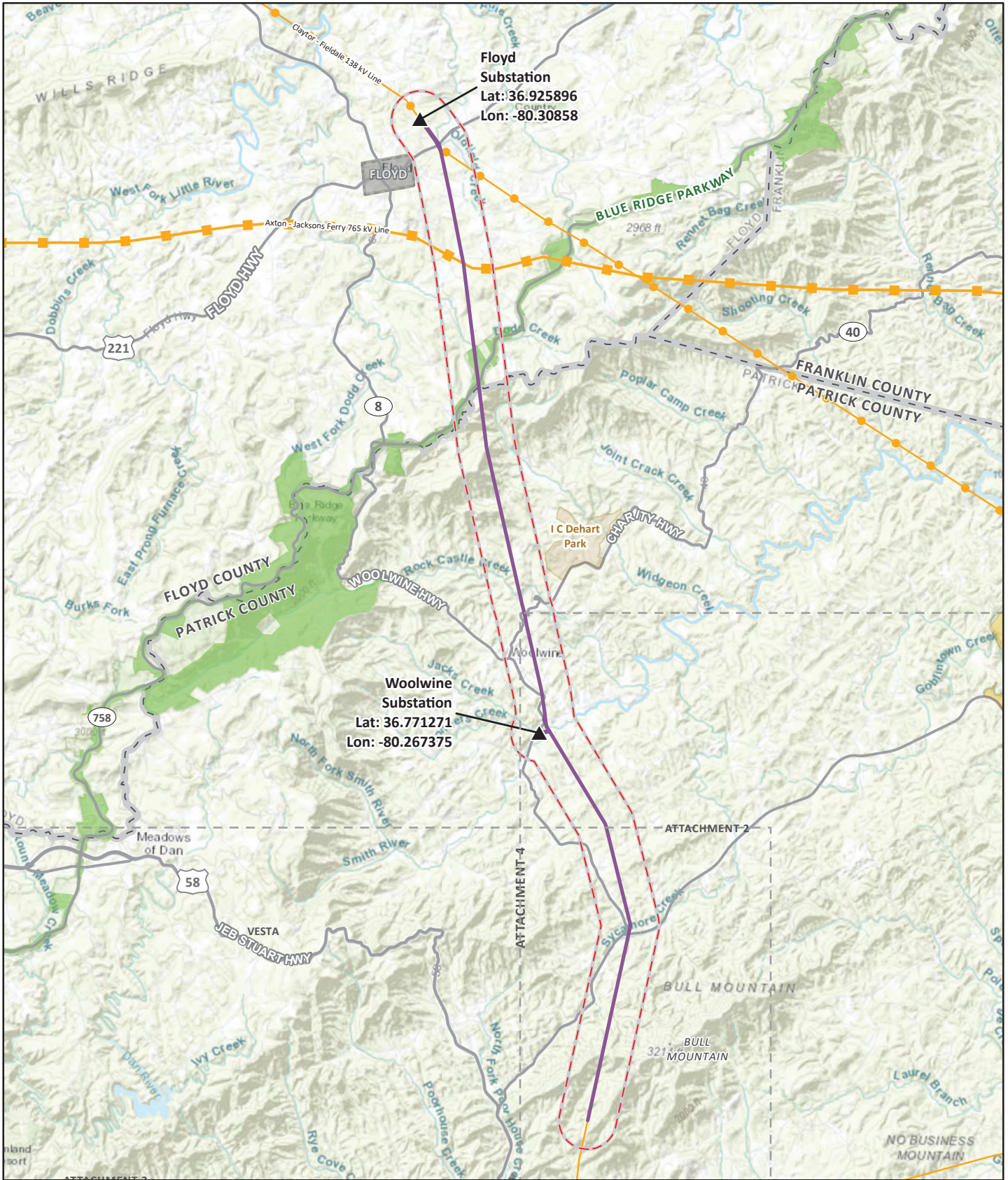
PROJECT STUDY AREA
Carroll & Patrick Counties, Virginia
NAD 1983 StatePlane Virginia South FIPS 4502 Feet Lambert Conformal Conic North American 1983
Date: 11/11/2021 Author: CK POWER: 158529

**ATTACHMENT 2**

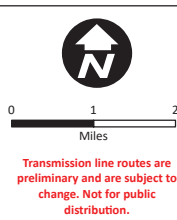
Stuart Area Improvements Project



Path: C:\Ram120\_Projects\AEP\158529\_AEP\_StuartArea\AEP\_StuartArea.aprx



- Study Area
- Existing AEP Substation
- 138 kV Study Segment (in or near Existing ROW)
- Existing AEP Transmission (69 kv or lower)
- Existing AEP Transmission (115 kv - 230 kv)
- Existing AEP Transmission (345 kv +)
- Highway
- Blue Ridge Parkway National Park
- County Boundary
- River (NHD)
- Town Boundary
- Local Park
- State Lands



Floyd & Patrick Counties  
Virginia,

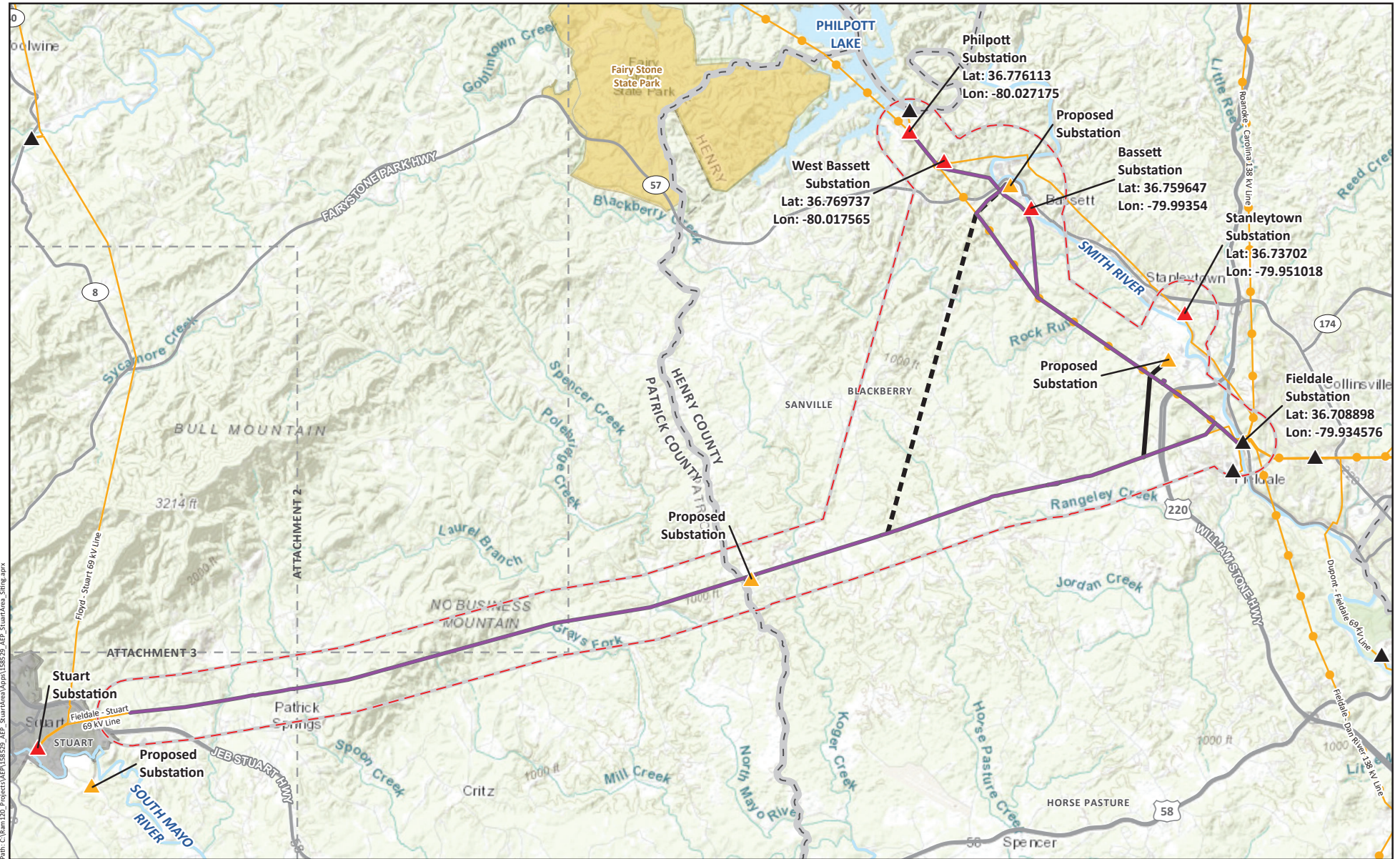
NAD 1983 State Plane Virginia South  
FIPS 4502 Feet  
Lambert Conformal Conic  
North American 1983

Date: 11/15/2021  
By: CK  
POWER: 158529

### ATTACHMENT 3

Stuart Area Improvements  
Project





<p><b>Study Area</b></p> <ul style="list-style-type: none"> <li>Proposed 138 kV Substation</li> <li>Existing AEP Substation</li> <li>Substation to be Retired</li> <li>138 kV Study Segment (in or near Existing ROW)</li> </ul>	<ul style="list-style-type: none"> <li>138 kV Study Segment (New ROW)</li> <li>Alternate 138 kV Line Under Review (New ROW)</li> <li>Existing AEP Transmission (69 kv or lower)</li> <li>Existing AEP Transmission (115 kv - 230 kv)</li> <li>Road</li> </ul>	<ul style="list-style-type: none"> <li>Highway</li> <li>County Boundary</li> <li>River (NHD)</li> <li>Town Boundary</li> <li>State Lands</li> </ul>	<p><b>Scale</b></p> <p>0 0.75 1.5 Miles</p> <p>Transmission line routes are preliminary and are subject to change. Not for public distribution.</p>	<p><b>Project Location</b></p>	<p><b>PROJECT STUDY AREA</b></p> <p>Henry &amp; Patrick Counties, Virginia</p> <p>NAD 1983 StatePlane Virginia South FIPS 4502 Feet Lambert Conformal Conic North American 1983</p> <p>Date: 11/11/2021 Author: CK POWER: 158529</p>	<p><b>ATTACHMENT 4</b></p> <p>Stuart Area Improvements Project</p> <p><b>APPALACHIAN POWER</b></p> <p><b>POWER ENGINEERS</b></p>
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# COMMONWEALTH of VIRGINIA

Mark K. Flynn  
Director

**Department of Aviation**  
5702 Gulfstream Road  
Richmond, Virginia 23250-2422

V/TDD • (804) 236-3624  
FAX • (804) 236-3635

December 7, 2021

Ms. Roya Parris  
Power Engineers, Inc.  
7400 Beaufort Springs Drive  
Suite 316  
Richmond, Virginia 23225

RE:     Appalachian Power Company Stuart Area Improvements Project: Carroll, Floyd, Henry, Patrick Counties,  
          Virginia

Dear Ms. Parris:

Thank you for your letter dated November 22, 2021 requesting our courtesy review of the above referenced project. Following our review the Department finds that a portion of the proposed project lies within 20,000 linear feet of the Blue Ridge Airport. This portion of the project is located between the proposed Stuart Substation and the Fieldale Substation.

Any portion of the proposed project that is within 20,000 linear feet of a public-use airport and/or reaches a height of 200' above ground level requires a 7460 Airspace Study to be submitted to the Federal Aviation Administration (FAA) for review. This airspace study will determine if the development of the project will result in the creation of a "hazard to air navigation". Provided the FAA determines the proposed project will not result in the creation of a hazard to air navigation, the Department has no objection to the project as it has been presented. Please note that a 7460 form should also be submitted for any construction crane that will reach a height above ground level of 200'.

Please contact me if you have any question regarding these comments or if you would like to discuss the project further. I can be reached at (804) 236-3638 or via email at [scott.denny@doav.virginia.gov](mailto:scott.denny@doav.virginia.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "S. Scott Denny".

S. Scott Denny  
Senior Aviation planner  
Virginia Department of Aviation



**From:** [Pardis, Roya](#)  
**To:** [Dombrowski, Cheryl](#)  
**Cc:** [Weyard, Ryan](#)  
**Subject:** FW: Appalachian Power  
**Date:** Wednesday, December 8, 2021 1:58:21 PM  
**Attachments:** [image001.png](#)  
[Appalachian Power Company letter.dtd.11222021.pdf](#)

Cheryl,  
See the attached response from FAA for our records. We can remove them from future lists and just use the state dept contacts moving forward.

Ryan,  
Is it too early in the project to file prelim Stuart structures using the OE/AAA tool or is this something we have completed at a high-level?

Thanks!  
  
ROYA PARDIS  
ENVIRONMENTAL PLANNER  
[281-765-5548](tel:281-765-5548)  
[804-422-2609](tel:804-422-2609) cell  
**POWER Engineers, Inc.**  
[www.powereng.com](http://www.powereng.com)

**From:** 9-AEA-AVS-RICASA (FAA) <9-AEA-AVS-RICASA@faa.gov>  
**Sent:** Wednesday, December 8, 2021 8:55 AM  
**To:** Pardis, Roya <roya.pardis@powereng.com>  
**Subject:** [EXTERNAL] Appalachian Power

**CAUTION:** This Email is from an **EXTERNAL** source. **STOP. THINK** before you **CLICK** links or **OPEN** attachments.

Good Morning:  
  
We are in receipt of the attached letter but our office does not process this type of request. The correct office should be Obstruction Evaluation/Airport Airspace Analysis (OE/AAA):  
<https://ocaaa.faa.gov/ocaaa/external/portal.jsp> [[ocaaa.faa.gov](https://ocaaa.faa.gov)].

The website provides for both On and Off airport construction.

If construction or alteration IS NOT LOCATED on an airport:	If construction or alteration IS LOCATED on an airport:
File forms 7450-1 and 7450-2 electronically via this website - <a href="#">New User Registration</a> .  E-filing your proposal is preferred because - It's the fastest, most accurate method to submit to the FAA and immediately assigns an aeronautical study number to your case. - It establishes an electronic communications link with FAA and allows you to obtain project status and notifications directly from this site.  or  If you are unable to file electronically please click <a href="#">here</a>  <b>Questions?</b> Please contact the <a href="#">appropriate representative</a> .	File forms 7450-1 and 7450-1 electronically via this website - <a href="#">New User Registration</a> .  or  Find the <a href="#">FAA Airports Region / District Office</a> having jurisdiction over the airport on which the construction is located, and file to that address.

V/r,  
Richmond FSDO-21 Admin Team  
5707 Huntsman Rd., Ste. 100  
Richmond, VA 23250  
Office (804) 222-7494, ext. 1  
Fax (804) 222-4843

**PRIVACY NOTICE:** The information in this email is confidential and may be legally privileged. Access to this email by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted or to be taken in reliance on it is prohibited and may be unlawful. If you are not the intended recipient, please reply to or forward a copy of this message to the sender and delete the message, any attachments, and any copies thereof from your system.



**From:** [Pardis, Roya](#)  
**To:** [Dombrowski, Cheryl](#)  
**Subject:** FW: [EXTERNAL] Appalachian Power Company - Stuart Area Improvements  
**Date:** Monday, December 13, 2021 7:47:49 AM

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FYI

ROYA PARDIS  
ENVIRONMENTAL PLANNER

[281-765-5548](tel:281-765-5548)  
[804-822-6659](tel:804-822-6659) cell  
**POWER Engineers, Inc.**  
[www.powereng.com](http://www.powereng.com)

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**From:** Wells, Jeffrey <[jeff.wells@vdh.virginia.gov](mailto:jeff.wells@vdh.virginia.gov)>  
**Sent:** Monday, December 13, 2021 7:47 AM  
**To:** Pardis, Roya <[roya.pardis@powereng.com](mailto:roya.pardis@powereng.com)>  
**Cc:** skennedy@aep.com; Ray Weiland <[ray.weiland@vdh.virginia.gov](mailto:ray.weiland@vdh.virginia.gov)>  
**Subject:** [EXTERNAL] Appalachian Power Company - Stuart Area Improvements

<p><b>CAUTION:</b> This Email is from an <b>EXTERNAL</b> source. <b>STOP. THINK</b> before you CLICK links or OPEN attachments.</p>
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Dear Mr. Pardis,

We received your letter dated November 22, 2021 outlining proposed improvements to electrical infrastructure in Carroll, Floyd, Henry and Patrick Counties.

We do not have any comments or objections to the proposed work.

Thank you for the opportunity to comment and please call or email with any questions.

*Jeffrey S. Wells, P.E.*

*Field Director*

*VDH-Office of Drinking Water*

*211 Nor Dan Drive, Suite 1040*

*Danville, Virginia 24540*

*Mainline (434) 836-8416*

*Directline (434) 549-8314*

**From:** [Pardis, Roya](#)  
**To:** [Dombrowski, Cheryl](#)  
**Subject:** Fwd: [EXTERNAL] Re: NEW SCOPING Stuart Area Improvements Project, Carroll, Floyd, Henry, and Patrick Counties  
**Date:** Monday, December 13, 2021 5:15:47 PM

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ROYA PARDIS  
ENVIRONMENTAL PLANNER

**POWER Engineers, Inc.**  
[www.powereng.com](http://www.powereng.com)

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**From:** Warren, Arlene <arlene.warren@vdh.virginia.gov>  
**Sent:** Monday, December 13, 2021 4:57:52 PM  
**To:** Pardis, Roya <roya.pardis@powereng.com>  
**Cc:** rr Environmental Impact Review <eir@deq.virginia.gov>  
**Subject:** [EXTERNAL] Re: NEW SCOPING Stuart Area Improvements Project, Carroll, Floyd, Henry, and Patrick Counties

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**Project Name: NEW SCOPING Stuart Area Improvements Project**

Project #: N/A

UPC #: N/A

**Location: Carroll, Floyd, Henry, & Patrick Counties**

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility**.

The following public groundwater wells are located within a 1 mile radius of the project site (wells within a 1,000 foot radius are formatted in **bold**):

PWS ID Number	City/County	System Name	Facility Name
<b>1063220</b>	<b>FLOYD</b>	<b>FLOYD-FLOYD CO PSA</b>	<b>WELL NO. 6</b>
1063220	FLOYD	FLOYD-FLOYD CO PSA	WELL NO.1 - CHRISTIE WELL
1063220	FLOYD	FLOYD-FLOYD CO PSA	WELL NO.2 - SHORTT WELL
1063220	FLOYD	FLOYD-FLOYD CO PSA	WELL NO.3 - FRANK SWEENEY WELL
1063155	FLOYD	FLOYD ECO VILLAGE COMMUNITY CENTER	ECO VILLAGE COMMUNITY CENTER
5141285	PATRICK	DOLLAR GENERAL-WOOLWINE	WELL NO. 1
5141815	PATRICK	WOOLWINE ELEMENTARY SCHOOL	WELL NO. 1
5141815	PATRICK	WOOLWINE ELEMENTARY SCHOOL	WELL NO. 2
5141548	PATRICK	ORCHARD VIEW MARKET	DRILLED WELL
5141805	PATRICK	HANESBRANDS_ INC.	WELL NO. 3

The following surface water intakes are located within a 5 mile radius of the project site:

PWS ID Number	System Name	Facility Name



5141640	STUART_ TOWN OF	SOUTH MAYO RIVER RAW WATER INTAKE
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The project is within the watershed of the following public surface water sources:

PWS ID Number	System Name	Facility Name
1750100	RADFORD, CITY OF	INTAKE ON NEW RIVER
1121057	NRV REGIONAL WATER AUTH	NEW RIVER (RAW WATER) PUMP STATION
1121643	RADFORD ARMY AMMUNITION PLANT	NEW RIVER
5117310	CLARKSVILLE, TOWN OF	KERR RESERVOIR INTAKE
5089852	UPPER SMITH RIVER WATER SUPPLY	SMITH RIVER INTAKE
5117707	ROANOKE RIVER SERVICE AUTHORITY	LAKE GASTON INTAKE
5780600	HCSA- LEIGH STREET PLANT	RAW WATER INTAKE
5590100	DANVILLE, CITY OF	DAN RIVER INTAKE

Best Management Practices should be employed, including Erosion & Sedimentation Controls and Spill Prevention Controls & Countermeasures on the project site.

Well(s) within a 1,000 foot radius from project site should be field marked and protected from accidental damage during construction.

Materials should be managed while on site and during transport to prevent impacts to nearby surface water.

***The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.***

Best Regards,

Arlene Fields Warren

**GIS Program Support Technician**

**Office of Drinking Water**

**Virginia Department of Health**

109 Governor Street

Richmond, VA 23219

(804) 864-7781

On Mon, Dec 6, 2021 at 2:05 PM Fulcher, Valerie <[valerie.fulcher@deq.virginia.gov](mailto:valerie.fulcher@deq.virginia.gov)> wrote:

**Good afternoon—attached is a request for scoping comments on the following:**

**Stuart Area Improvements Project: Carroll, Floyd, Henry and Patrick Counties**

If you choose to make comments, please send them directly to the project sponsor ([Roya.pardis@powereng.com](mailto:Roya.pardis@powereng.com)) and copy the DEQ Office of Environmental Impact Review: [eir@deq.virginia.gov](mailto:eir@deq.virginia.gov). We will coordinate a review when the environmental document is completed.

DEQ-OEIR's scoping response is also attached.

If you have any questions regarding this request, please email our office at [eir@deq.virginia.gov](mailto:eir@deq.virginia.gov).

Valerie

--

Valerie A. Fulcher, CAP, OM, Admin/Data Coordinator Senior

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

1111 East Main Street

Richmond, VA 23219

[804/698-4330](tel:8046984330)

Email: [Valerie.Fulcher@deq.virginia.gov](mailto:Valerie.Fulcher@deq.virginia.gov)

<https://www.deq.virginia.gov/permits-regulations/environmental-impact-review>  
[\[deq.virginia.gov\]](https://www.deq.virginia.gov)

**OUR ENFORCEABLE POLICIES HAVE BEEN UPDATED FOR 2021:** <https://www.deq.virginia.gov/permits-regulations/environmental-impact-review/federal-consistency> [\[deq.virginia.gov\]](https://www.deq.virginia.gov)

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Ann Jennings  
Secretary of Natural and Historic  
Resources and Chief Resilience Officer

Clyde E. Cristman  
Director



Rochelle Altholz  
Deputy Director of  
Administration and Finance

Nathan Burrell  
Deputy Director of  
Government and Community Relations

Darryl M. Glover  
Deputy Director of  
Dam Safety & Floodplain  
Management and Soil & Water  
Conservation

Thomas L. Smith  
Deputy Director of  
Operations

**COMMONWEALTH of VIRGINIA**  
DEPARTMENT OF CONSERVATION AND RECREATION

December 17, 2021

Cheryl Dombrowski  
POWER Engineers, Inc.  
7400 Beaufont Springs Drive, Suite 316  
Richmond VA, 23225

Re: 158529, Stuart Area Improvements Project

Dear Ms. Dombrowski:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

**Smith River Component**

According to the information currently in our files, this site is located within the Smith River Slope Conservation Site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Smith River Slope Conservation Site has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resources associated with this site are:

*Stewartia ovata*

Mountain Camellia

G4/S2/NL/NL

Mountain camellia is a mountain-coastal plain disjunct. Mountain camellia is uncommon throughout its range and is considered very rare in Virginia. A shrub of the tea family, mountain camellias have simple oval leaves and bear white flowers in mid-summer. They tend to grow on mesic to dry, mostly acidic forests, especially on river bluffs and ravine slopes among dense ericaceous shrubs. Threats to populations include direct habitat destruction from clearing or erosion and alteration of the species microclimate through clearing of adjacent lands (Clark, 1993). This species is currently known from only 4 locations and historically known from multiple locations in Virginia.



Additionally, the Rich Creek Conservation Site is located within the project site including a 100 foot buffer. The Rich Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resource of concern at this site is:

Small-anthered bittercress

*Cardamine micranthera*

G2/S2/LE/LE

Small-anthered bittercress inhabits seepages, wet rock crevices, streambanks, sandbars, and wet woods along streams. Threats to this species include impoundment, channelization, conversion of habitat for agriculture/silviculture, and flooding (U.S. Fish and Wildlife Service, 1991). Small-anthered bittercress is known from one county, Patrick, in Virginia and one extant county, Stokes, in North Carolina. Surveys for small-anthered bittercress are recommended from April 22 -May 15 when the plant is in flower and most visible, as well as being most distinguishable from round-leaf watercress (*Cardamine rotundifolia*). Please note that this species is currently classified as endangered by the United States Fish and Wildlife Service (USFWS) and the Virginia Department of Agriculture and Consumer Services (VDACS).

This project has the potential to impact a large percentage of the known populations of Small-anthered bittercress. In addition, according to DCR's predicted suitable habitat modeling and review by a DCR biologist, there is a potential for additional undocumented populations of Small-anthered bittercress to occur in the project area if suitable habitat exists on site.

Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory for Small-anthered bittercress in the study area. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

DCR-Division of Natural Heritage biologists are qualified to conduct inventories for rare, threatened, and endangered species. Please contact Anne Chazal, Natural Heritage Chief Biologist, at [anne.chazal@dcr.virginia.gov](mailto:anne.chazal@dcr.virginia.gov) or 804-786-9014 to discuss availability and rates for field work. A list of other individuals who are qualified to conduct inventories may be obtained from the USFWS.

Furthermore, the Smith River - Jordan Creek Stream Conservation Unit (SCU) is located immediately downstream from the project site. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Smith River – Jordan Creek SCU has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resource of concern associated with this site is:

*Percina rex*

Roanoke logperch

G1G2/S1S2/LE/LE

The Roanoke logperch is endemic to the Roanoke and Chowan River drainages in Virginia (Burkhead and Jenkins, 1991) and inhabits medium and large, warm and usually clear rivers with sandy to boulder spotted bottoms (NatureServe, 2009). Please note that this species is currently classified as endangered by the United States Fish and Wildlife Service (USFWS) and the Virginia Department of Wildlife Resources (VDWR).

The Roanoke logperch is threatened by channelization, siltation, impoundment, pollution, and de-watering activities (Burkhead & Jenkins, 1991).

In addition, the Smith River has been designated by the VDWR as a “Threatened and Endangered Species Water” for this species.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. Due to the legal status of the Roanoke logperch, DCR also recommends coordination with the USFWS and the VDWR to ensure compliance with protected species legislation.

DCR recommends avoidance of all conservation sites and impacts to associated natural heritage resources.

### Woolwine Component

According to the information currently in our files, the Oldfield Creek Seep Conservation Site is located within the project site including a 100 foot buffer. The Oldfield Creek Seep Conservation Site has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resource of concern at this site is:

<i>Epilobium leptophyllum</i>	Bog Willow Herb	G5/S2S3/NL/NL
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Bog willow herb is a perennial plant that reaches a maximum height of 40 inches (Minnesota Wildflowers, 2021). It is found in bogs, fens, seeps and boggy meadows with a variety of soil chemistry often at higher elevations (Virginia Botanical Associates, 2021). The flowers are white to pink and give rise to a dry dehiscent fruit that produces numerous seeds (Minnesota Wildflowers, 2021).

The Thomas Grove Flats is also located within the project site including a 100 foot buffer. The Thomas Grove Flats Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resources of concern at this site are:

<i>Lilium grayi</i>	Gray’s lily	G3/S2/NL/NL
<i>Glyptemys muhlenbergii</i> ,	Bog Turtle	G3/S2/LT/LE
<i>Epilobium leptophyllum</i>	Bog Willow Herb	G5/S2S3/NL/NL
<i>Calopogon tuberosus</i>	Tuberous Grass-pink	G5/S1S2/NL/NL

Furthermore, both Slusher Bog Conservation Site and Robertson Bog Conservation Site occur within the project boundary. Slusher Bog Conservation Site and Robertson Bog Conservation Site have been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resource of concern associated with both conservation sites is:

<i>Glyptemys muhlenbergii</i> ,	Bog Turtle	G3/S2/LT/LE
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The Dodd Creek- Rakes Mill Pond is also located within the project site including a 100 foot buffer. The Dodd Creek- Rakes Mill Pond Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resource of concern at this site is:

<i>Lilium grayi</i>	Gray’s lily	G3/S2/NL/NL
<i>Euphorbia purpurea</i>	Glad Spurge	G3/S2/NL/NL
<i>Glyptemys muhlenbergii</i> ,	Bog Turtle	G3/S2/LT/LE

Gray's lily is a Southern Appalachian endemic plant that typically inhabits bogs, seepages, grassy balds, moist forests, and wet meadows at medium to high elevations (Weakley, in prep). In Virginia, this plant occurs in western Virginia with the majority of the occurrences in the southern Blue Ridge region. Surveys for Gray's lily are recommended during the blooming period in June and July.

Growing to 1 meter (3 feet) in height glade spurge is named for the purplish, glandular bracts (leaves that enclose inflorescences) that are characteristic of members of its plant family. It is a perennial that forms from a thick rhizome. Its lightly fuzzy leaves are 1 to 3 cm long and occur alternate each other along the stem. This spurge blooms in May and forms small (6 to 8 mm long) fruits covered with irregular bumps.

This stout perennial is found in river bottoms and mesic lower slopes of river and larger stream valleys and is also known from higher-elevation seeps over calcareous or mafic substrates. It is known from the piedmont and mountains of the mid-Atlantic region from Delaware to Ohio and West Virginia and is rare throughout its range (NatureServe 2008). In Virginia the species can be found in a few sites along the Blue Ridge as well as the Ridge and Valley from Rockbridge County south to Russell County. Wetland alteration, grazing by deer and livestock, competition by non-native invasive species, and trampling by recreational activity pose a threat to its long-term survival. The optimal time for surveys for glade spurge is from May-June when the plant is in flower or fruit.

The bog turtle is a small, freshwater turtle which has a spotty distribution from New York through Maryland, and southwestern Virginia along the Blue Ridge into Georgia (Buhlmann et al., 2008). In Virginia, bog turtles are documented from Floyd, Carroll, Grayson, and Patrick counties. They inhabit small upland wetland seeps, marshes, and meadows with slow-moving streams (Mitchell, 1994).

Bog turtles are highly susceptible to man-induced alterations of their wetland habitats (Buhlmann, 1992). Ditching and draining of seeps, wet meadows, and other wetlands destroys quality bog turtle habitat (Buhlmann, 1992; Mitchell, 1994). They are also threatened by collection for the pet trade industry (Mitchell, 1994). Please note that this species is currently classified as threatened by the United States Fish and Wildlife Service (USFWS) and as endangered by the Virginia Department of Wildlife Resources (VDWR).

DCR recommends coordination with the US Fish and Wildlife Service (USFWS) and the VDWR, Virginia's regulatory authority for the management and protection of this species to ensure compliance with protected species legislation. DCR also recommends that work crews be given educational materials on the bog turtle and all sightings be reported to the appropriate regulatory authorities. If heavy equipment will be crossing sedge or bulrush-dominate habitats, DCR recommends that mats be used to reduce impacts.

The Smith River – Sycamore Creek – White Falls Stream Conservation Unit (SCU) is located downstream from the project site. The Smith River – Sycamore Creek – White Falls SCU has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resource of concern associated with this SCU is:

*Percina rex*

Roanoke logperch

G1G2/S1S2/LE/LE

In addition, the Smith River has been designated by the VDWR as a "Threatened and Endangered Species Water" and is downstream from the project site. The species associated with this T & E Water are the Roanoke logperch and the Orange-fin madtom (*Noturus gilberti*, G2/S2/SOC/LT).



DCR recommends avoidance of all conservation sites and impacts to associated natural heritage resources. To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. Due to the legal status of the Roanoke logperch and Orange-fin madtom, DCR also recommends coordination with the USFWS and the VDGIF to ensure compliance with protected species legislation.

## Willis Gap

According to the information currently in our files, the Long Branch- Peters Creek is located within the project site including a 100 foot buffer. The Long Branch- Peters Creek has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resources of concern at this site are:

Small-anthered bittercress	<i>Cardamine micranthera</i>	G2/S2/LE/LE
Sweet-shrub	<i>Calycanthus floridus</i> var. <i>floridus</i>	G5T4/S1/NL/NL

Sweet-shrub is a state rare deciduous shrub, inhabits forested slopes and stream banks (Weakley, in prep.). This aromatic plant produces maroon flowers, which are often lighter at the tips, from April to May (Radford et. al., 1968). Sweet-shrub is currently known from four locations in Virginia's coastal plain and piedmont regions.

The Sandy Creek – Patrick County Conservation Site, Gilbert Mill Conservation Site, Elk Creek Northwest Tributary Conservation Site, Rich Creek Conservation Site, and Simmons Mountain Creek Conservation Site is located within the project site including a 100 foot buffer. The Sandy Creek – Patrick County Conservation Site, Elk Creek Northwest Tributary Conservation Site, and Gilbert Mill Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The Rich Creek Conservation Site, and Simmons Mountain Creek Conservation Site of B3, which represents a site of high significance. The natural heritage resource of concern at this site is:

Small-anthered bittercress	<i>Cardamine micranthera</i>	G2/S2/LE/LE
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This project has the potential to impact a large percentage of the known populations of Small-anthered bittercress. In addition, according to DCR's predicted suitable habitat modeling and review by a DCR biologist, there is a potential for additional undocumented populations of Small-anthered bittercress to occur in the project area if suitable habitat exists on site.

Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory for Small-anthered bittercress in the study area. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

DCR-Division of Natural Heritage biologists are qualified to conduct inventories for rare, threatened, and endangered species. Please contact Anne Chazal, Natural Heritage Chief Biologist, at [anne.chazal@dcr.virginia.gov](mailto:anne.chazal@dcr.virginia.gov) or 804-786-9014 to discuss availability and rates for field work. A list of other individuals who are qualified to conduct inventories may be obtained from the USFWS.

The Browns Dan River – Rt. 645 Bridge Crossing Stream Conservation Unit is located downstream from the project site. The Browns Dan River – Rt. 645 Bridge Crossing SCU has been given a biodiversity ranking of B4, which represents a site of moderate significance. Natural heritage resource associated with this site is:

<i>Thoburnia hamiltoni</i>	Rustyside sucker	G3/S2/NL/NL
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The Rustyside sucker, a fish known only from the upper Roanoke drainage in Patrick County, occupies moderate and swift currents of riffles, runs, and heads of pools, with clean or very slightly silted gravel, rubble, boulder, and bedrock substrates (Burkhead & Jenkins, 1991). Larger individuals are restricted to moderate to swift riffles and runs, and the head of pools.

Land use practices that lead to siltation and industrial development are forms of habitat degradation that adversely affect the continued viability of the Rustyside sucker (Jenkins & Burkhead, 1993).

The Johnson Creek – Ararat River Stream Conservation Unit (SCU) is also located downstream from the project site. The Johnson Creek – Ararat River SCU has been given a biodiversity ranking of B5, which represents a site of general significance. The natural heritage resource associated with this site is:

<i>Etheostoma brevispinum</i>	Carolina Fantail darter	G4/S1/NL/NL
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The Carolina fantail darter, a state rare fish species, is found from South Carolina to Virginia (Blanton and Schuster, 2008). In Virginia, the Carolina fantail darter is only known from the Upper Pee Dee drainage (Blanton and Schuster, 2008). There is little information about *E. brevispinum* specifically, but this is a recently recognized species distinct from *Etheostoma flabellare* (Blanton and Schuster, 2008), so many life history traits may be similar. *E. flabellare* typically occurs in small to medium streams in areas where there are cobbles and rocks which provide suitable microhabitat for egg laying, protection from predators, and foraging (Jenkins and Burkhead, 1993).

Threats to the Carolina fantail darter may include conditions or events which degrade or alter the microhabitats such as siltation, water pollution, and channelization.

According to the information currently in our files, the Poorhouse Creek – Mayo River Stream Conservation Unit (SCU) is adjacent to the project site. The Poorhouse Creek – Mayo River SCU has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resource of concern associated with this SCU is:

<i>Noturus gilberti</i>	Orangefin madtom	G2/S2/SOC/LT
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According to the information currently in our files, the Dan River – Rt. 645 Bridge Crossing Stream Conservation Unit (SCU) is located downstream from the project site. The Dan River – Rt. 645 Bridge Crossing SCU has been given a biodiversity ranking of B3, which represents a site of high significance. The natural heritage resources associated with this site are:

<i>Noturus gilberti</i>	Orangefin madtom	G2/S2/SOC/LT
<i>Lasmigona subviridis</i>	Green floater	G3/S2/NL/LT

The Orangefin madtom is native to the Roanoke and James River systems of North Carolina and Virginia (NatureServe, 2009). The Orangefin madtom inhabits moderate to strong riffles and runs having little or no silt in

moderate-gradient, intermontane and upper Piedmont streams. This species is an intersticine dweller, found in or near cavities formed by rubble and boulders (Jenkins and Burkhead, 1993). Please note that this species is currently classified as a species of concern (not a legal designation) by the United States Fish and Wildlife Service (USFWS) and as threatened by the Virginia Department of Wildlife Resources (VDWR).

Threats to the Orange-fin madtom include channelization, siltation, various forms of chronic pollution, catastrophic chemical spills, impoundment, dewatering, and bait-seining (NatureServe, 2009). Its low reproductive rate and short life span (Simonson 1997, Simonson and Neves 1992, Simonson 1987) exacerbate these threats (Burkhead and Jenkins 1991).

The Green floater, a rare freshwater mussel, ranges from New York to North Carolina in the Atlantic Slope drainages, as well as the New and Kanawha River systems in Virginia and West Virginia (NatureServe, 2009). In Virginia, there are records from the New, Roanoke, Chowan, James, York, Rappahannock, and Potomac River drainages. Throughout its range, the Green floater appears to prefer the pools and eddies with gravel and sand bottoms of smaller rivers and creeks, smaller channels of large rivers (Ortman, 1919) or small to medium-sized streams (Riddick, 1973). Please note that this species has been listed as state threatened by the Virginia Department of Wildlife Resources (VDWR).

Considered good indicators of the health of aquatic ecosystems, freshwater mussels are dependent on good water quality, good physical habitat conditions, and an environment that will support populations of host fish species (Williams et al., 1993). Because mussels are sedentary organisms, they are sensitive to water quality degradation related to increased sedimentation and pollution. They are also sensitive to habitat destruction through dam construction, channelization, and dredging, and the invasion of exotic mollusk species.

In addition, the Dan River has been designated by the VDWR as a “Threatened and Endangered Species Water” and is downstream from the project site. The species associated with this T & E Water are the Orange-fin madtom and the Green floater.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. Due to the legal status of the Orange-fin madtom and Green floater, DCR also recommends coordination with VDWR to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

## **General Comments**

If work occurs outside of established right-of-way (ROW), the proposed project will fragment Ecological Cores (C1, C2, C3, C4 and C5) as identified in the Virginia Natural Landscape Assessment (<https://www.dcr.virginia.gov/natural-heritage/vaconvisvnla>), one of a suite of tools in Virginia ConservationVision that identify and prioritize lands for conservation and protection. Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: <http://vanhde.org/content/map>.

Ecological Cores are areas of unfragmented natural cover with at least 100 acres of interior that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitats. Cores also provide benefits in terms of open space, recreation, water quality (including drinking water protection and erosion prevention), and air quality (including carbon sequestration and oxygen production), along with the many associated economic benefits of these functions. The



cores are ranked from C1 to C5 (C5 being the least ecologically relevant) using many prioritization criteria, such as the proportions of sensitive habitats of natural heritage resources they contain.

Fragmentation occurs when a large, contiguous block of natural cover is dissected by development, and other forms of permanent conversion, into one or more smaller patches. Habitat fragmentation results in biogeographic changes that disrupt species interactions and ecosystem processes, reducing biodiversity and habitat quality due to limited recolonization, increased predation and egg parasitism, and increased invasion by weedy species.

Therefore minimizing fragmentation is a key mitigation measure that will reduce deleterious effects and preserve the natural patterns and connectivity of habitats that are key components of biodiversity. DCR recommends efforts to minimize edge in remaining fragments, retain natural corridors that allow movement between fragments and designing the intervening landscape to minimize its hostility to native wildlife (natural cover versus lawns).

DCR recommends the development and implementation of an invasive species plan to be included as part of the maintenance practices for the right-of-way (ROW). The invasive species plan should include an invasive species inventory for the project area based on the current DCR Invasive Species List (<http://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf>) and methods for treating the invasives. DCR also recommends the ROW restoration and maintenance practices planned include appropriate revegetation using native species in a mix of grasses and forbs, robust monitoring and an adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur.

In addition there are documented rare plants in the transmission ROW within the project area. DCR recommends following these guidelines:

1. DCR recommends documenting and avoiding Natural Heritage Resources (Rare, Threatened and Endangered) within the ROW. The maintenance of the ROW as early-successional habitats with open canopy provide suitable habitat for many rare resources.
2. All rare plant sites are marked with signs from the transmission towers just outside the rare plant populations so that the population(s) are contained entirely within the defined area.
3. Right-of-Way Maintenance- Chemical Control of Vegetation -DCR recommends maintenance of vegetation using annual mowing in the non-growing season between 15 October and April 1 and minimal to no use of chemicals especially in sensitive areas with documented natural heritage resources.
4. When woody plant management is required, the woody species at these sites are carefully treated with herbicide. This treatment is conducted under a different contract than used on non-rare plant lines. The rate set up for this contract helps insure precise herbicide application with less accidental overspray.
5. When transmission lines intersect Virginia Natural Area Preserves, the same maintenance regime as defined in numbers 1-3 above is used and Natural Heritage staff are notified before management takes place.
6. A subset of rare plant populations are monitored carefully to make sure that this management prescription is effective in maintaining the rare plant populations.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity. However, the project area does intersect the Blue Ridge Parkway National Park, specifically the Woolwine component.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. Survey results should be coordinated with DCR-DNH and USFWS. Upon review of the results, if it is determined the species is present, and there is a likelihood of a negative impact on the species, DCR-DNH will recommend coordination with VDACS to ensure compliance with Virginia's Endangered Plant and Insect Species Act.

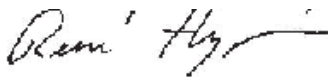
New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

A fee of \$330.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24<sup>th</sup> Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The Virginia Department of Wildlife Resources (VDWR) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Amy Martin at 804-367-2211 or [amy.martin@dwr.virginia.gov](mailto:amy.martin@dwr.virginia.gov).

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,



S. René Hypes  
Natural Heritage Project Review Coordinator

Cc: Amy Martin, VDWR  
Troy Andersen, USFWS

### Literature Cited

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# COMMONWEALTH of VIRGINIA

Ann Jennings  
Secretary of Natural  
and Historic Resources

**Department of Historic Resources**  
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan  
Director

Tel: (804) 367-2323  
Fax: (804) 367-2391  
TDD: (804) 367-2386  
[www.dhr.virginia.gov](http://www.dhr.virginia.gov)

December 22, 2021

Roya Pardis  
Power Engineers  
7400 Beaufort Springs Dr.  
Suite 316  
Richmond VA, 23225

Re: Stuart Area Improvements Project (Willis Gap, Floyd, Bassett)  
Carroll, Floyd, Henry, Patrick Counties, Virginia  
DHR File No. 2021-5024

Dear Roya,

We have received your request for comments on the project referenced above. The undertaking, as presented, involves multiple components including the upgrade of equipment, adding an additional power source to the area, upgrades to the voltage and two new distribution substations, and the construction of new transmission lines. Our comments are provided as technical assistance to Appalachian Power. We have not been notified by any state or federal agency of their involvement in this project; however, we reserve the right to provide additional comment pursuant to the National Historic Preservation Act, if applicable.

We understand that the proposed project meets the requirements to be filed with the Virginia State Corporation Commission (SCC). We recommend that Appalachian Power follows the *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia*, developed by DHR and the SCC to assist project proponents in developing transmission line projects that minimize impacts to historic resources.

We recommend that the project proponent establish a study area for each route alternative under consideration and gather information on known resources. A qualified cultural resources consultant in the appropriate discipline should perform an assessment of impact for each known historic resource present within the proposed study area.

Once the route alternatives have been finalized, DHR recommends that full archaeological and architectural surveys be performed to determine the effect of the project on all historic resources listed in or eligible for listing in the National Register. This process involves the identification and recordation of all archaeological sites and structures greater than 50 years of age, the evaluation of those resources for listing in the National Register, determining the degree of impact of the project on eligible resources, and developing a plan to avoid, minimize, or mitigate any negative impacts. Comments received from the public or other stakeholder

Western Region Office  
962 Kime Lane  
Salem, VA 24153  
Tel: (540) 387-5443  
Fax: (540) 387-5446

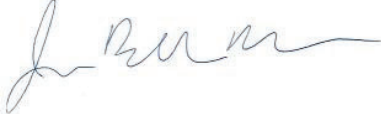
Northern Region Office  
5357 Main Street  
PO Box 519  
Stephens City, VA 22655  
Tel: (540) 868-7029  
Fax: (540) 868-7033

Eastern Region Office  
2801 Kensington Avenue  
Richmond, VA 23221  
Tel: (804) 367-2323  
Fax: (804) 367-2391

regarding impacts to specific historic resources should be addressed as part of this survey and assessment process.

Thank you for seeking our comments on this project. If you have any questions at this time, please do not hesitate to contact me at [jennifer.bellville-marrion@dhr.virginia.gov](mailto:jennifer.bellville-marrion@dhr.virginia.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Bellville-Marrion", with a long horizontal flourish extending to the right.

Jenny Bellville-Marrion, Project Review Archaeologist  
Review and Compliance Division



## COMMONWEALTH of VIRGINIA

### DEPARTMENT OF TRANSPORTATION

731 HARRISON AVENUE  
SALEM, VIRGINIA 24153

Stephen Brich, P.E.  
COMMISSIONER

January 3, 2022

To: Roya Pardis  
POWER Engineers, Inc.

From: Carol J.L. Moneymaker, Planning Specialist  
VDOT Salem District Planning *Carol J.L. Moneymaker*

Subject: RE: Stuart Area Improvements Project: Carroll, Floyd, Henry and Patrick Counties

VDOT received a request to review transportation impacts of the above referenced project. Appalachian Power contracted POWER Engineers, Inc. (POWER) to conduct route selection studies for the Project's components and prepare the Certificate of Public Convenience and Necessity application for filing with the Virginia State Corporation Commission (SCC). The project will replace equipment that is 80 to 100 years old, add an additional power source to the area, upgrade the voltage of equipment from 69-kilovolt (kV) to 138-kV, and add two new distribution substations to improve the local distribution system. The project will be completed in three components: Stuart - Willis Gap, Stuart - Floyd, and Stuart - Bassett as detailed in the attachments.

The first component, Stuart - Willis Gap, is located in Carroll and Patrick counties and includes the following in a new 100-foot-wide right-of-way (ROW):

- Build approximately 22 miles of new 138 kV transmission line (Patrick and Carroll counties)
- Build approximately 1.5 miles of new double-circuit 138 kV at a proposed 138 kV substation (Patrick County)
- Build two new 138 kV substations (Patrick County)
- Retire the Stuart Substation (Town of Stuart)
- Upgrade the Willis Gap and Huffman substations (Carroll County)

The second component, Stuart - Floyd, is located in Patrick and Floyd counties, and includes the following in or near existing ROW:

- Rebuild approximately 20 miles of 69 kV line to 138 kV standards (Patrick and Floyd counties)
- Upgrade the Woolwine Substation (Patrick County)
- Expand the Floyd Substation (Floyd County)



The third component, Stuart - Bassett, is located in Patrick and Henry counties, and includes the following in or near existing ROW:

- Rebuild approximately 30 miles of 69 kV line to 138 kV standards (Patrick and Henry counties)
- Build approximately two miles of new 138 kV line (Henry County)
- Build two new 138 kV substations in Henry County
- Upgrade the Fieldale and Philpott substations (Henry County)
- Retire the Philpott Switch, West Bassett, Bassett, and Stanleytown substations (Henry County)

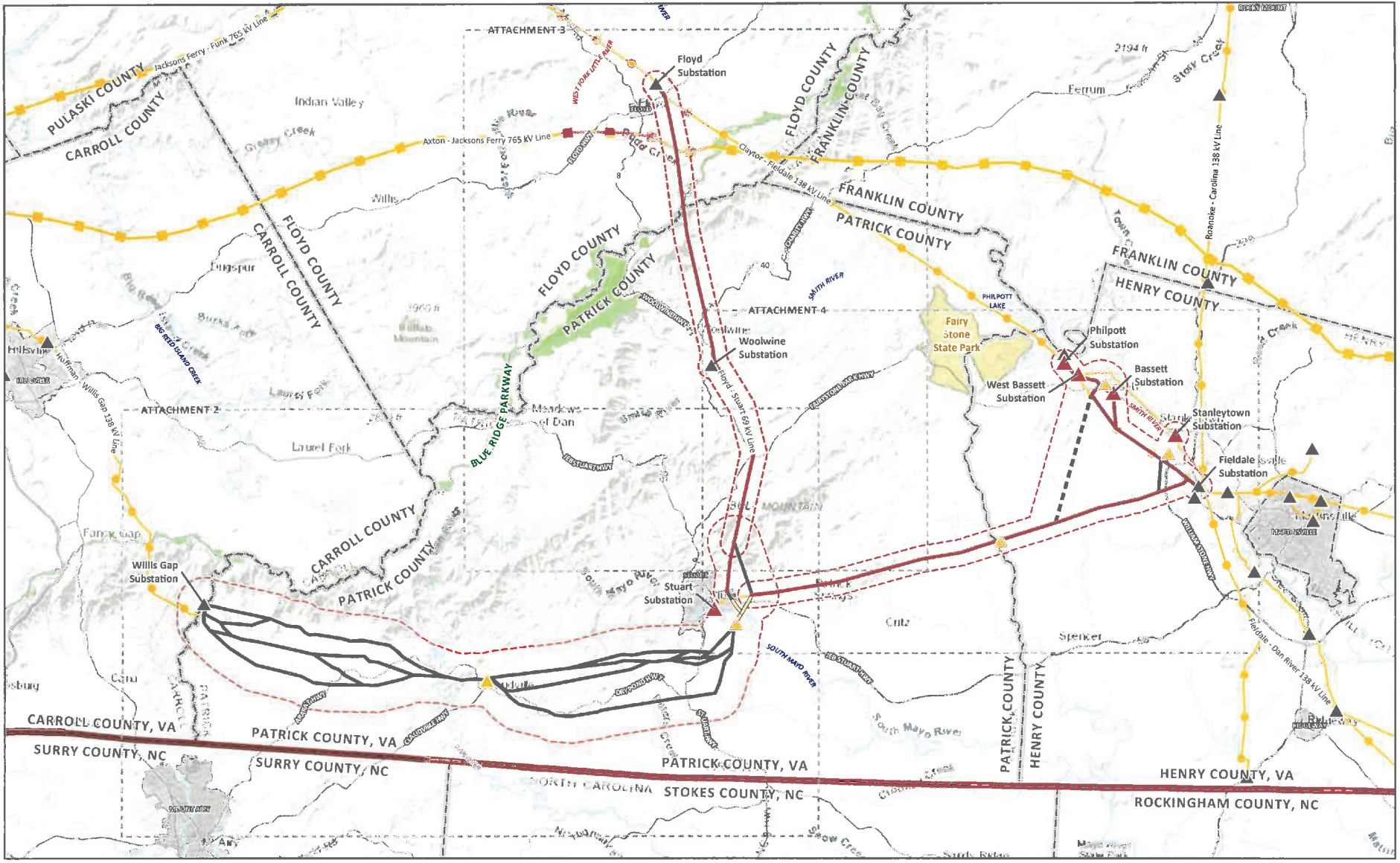
**Comments:**

- All circumstances where the proposed project may impact transportation operations should be coordinated with VDOT Residency staff:
  - Martinsville Residency covers Carroll, Henry and Patrick Counties,
  - Christiansburg Residency covers Floyd County.
- The areas of potential impact include roads adjacent to or being crossed by construction as well as pedestrian, bicycle, and transit operations near the construction sites.
- Activities requiring detours or other modifications to transportation operations should be conducted at times during which impacts will be minimized.
- Road signs should be provided to alert drivers, bicyclists, and pedestrians of utility work ahead, and any detours necessary to navigate around the work.

If you have questions or need additional information, please contact me at (540) 520-3515.

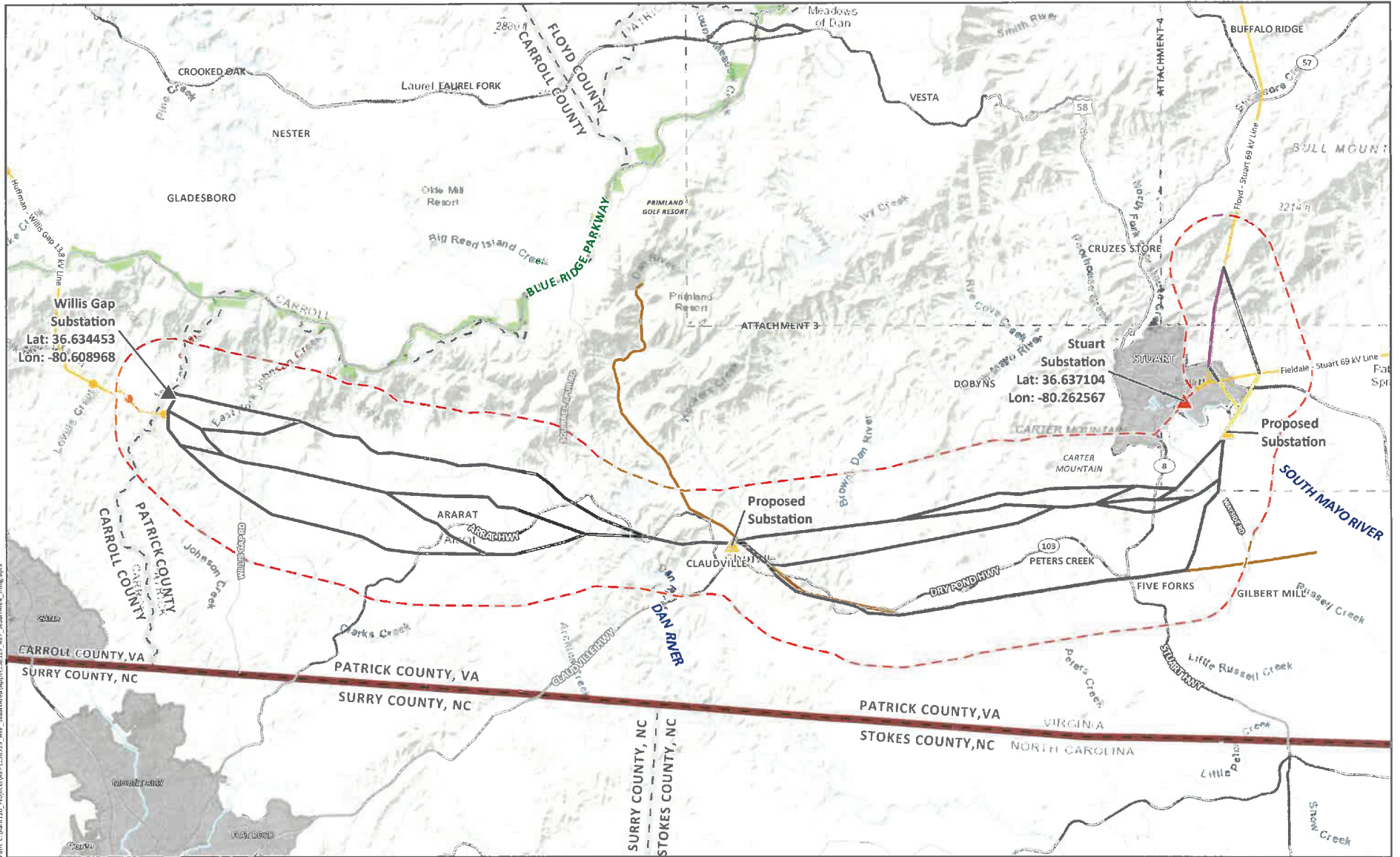
cc: Michael Gray – Salem District Planner  
Lisa Hughes – Martinsville Residency – Resident Engineer  
David Clarke – Christiansburg Residency – Resident Engineer  
Robin Simpson – Salem District Environmental Manager  
EIR Coordination Listserv

Attachments (4)



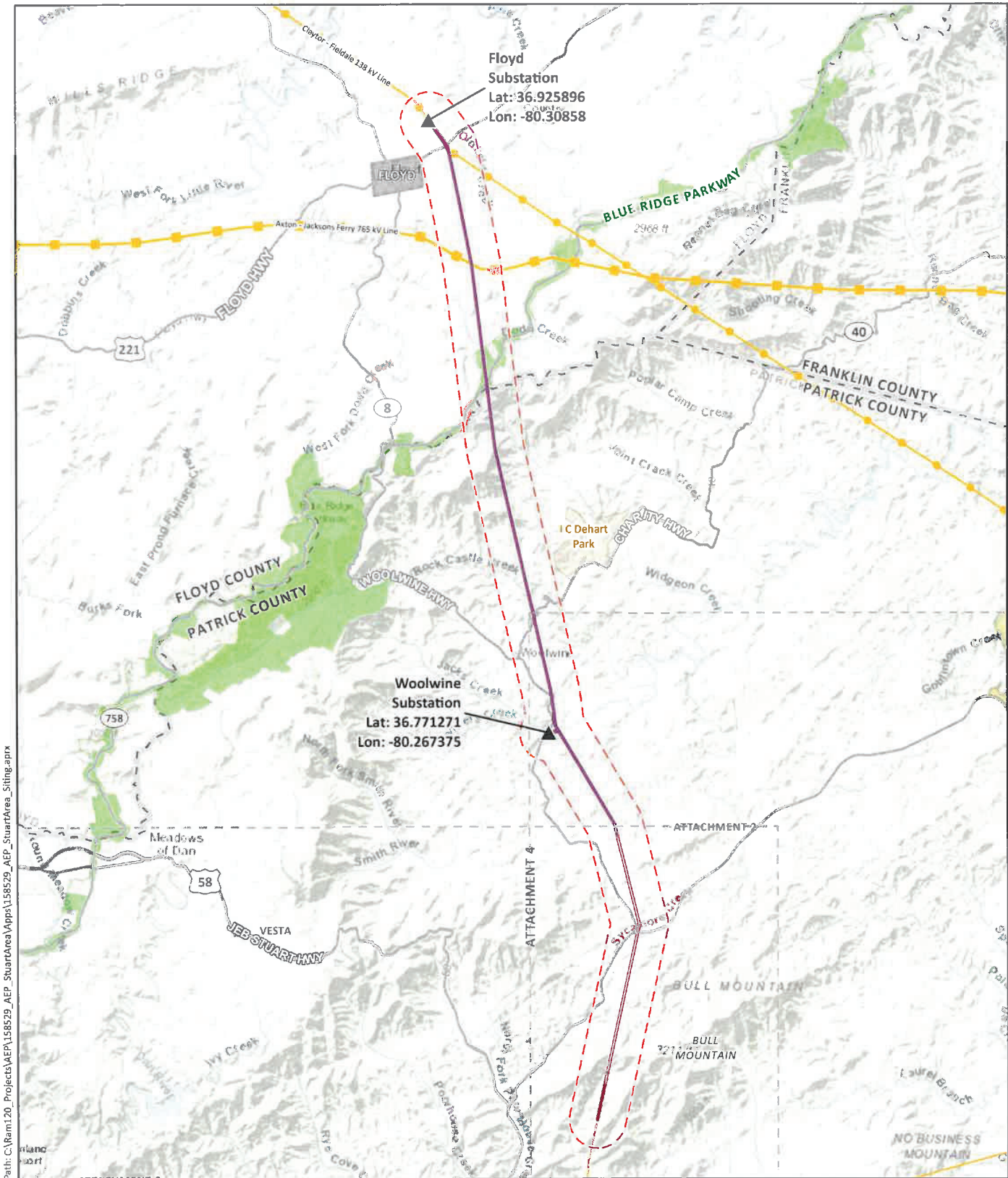
<ul style="list-style-type: none"> <li>Study Area</li> <li>Proposed 138 kV Substation</li> <li>Existing AEP Substation</li> <li>Substation to be Retired</li> <li>138 kV Double Circuit Study Segments (New ROW)</li> </ul>	<ul style="list-style-type: none"> <li>138 kV Single Circuit Study Segments (New ROW)</li> <li>138 kV Single Circuit Study Segment (Existing ROW)</li> <li>Alternate 138 kV Line Under Review (New ROW)</li> <li>Existing AEP Transmission (69 kv or lower)</li> <li>Existing AEP Transmission (115 kv - 230 kv)</li> </ul>	<ul style="list-style-type: none"> <li>Existing AEP Transmission (345 kv +)</li> <li>Highway</li> <li>River (NHD)</li> <li>State Lands</li> <li>Blue Ridge Parkway National Park</li> </ul>	<ul style="list-style-type: none"> <li>Town Boundary</li> <li>County Boundary</li> <li>VA/NC State Boundary</li> <li>Map Grid</li> </ul>	<p>Transmission line routes are preliminary and are subject to change. Not for public distribution.</p>		<p><b>PROJECT STUDY AREA</b></p> <p>Carroll, Floyd, Henry, &amp; Patrick Counties, Virginia</p> <p>NAD 1983 StatePlane Virginia South EPS 4502 Feet Lambert Conformal Conic North American 1983</p> <p>Date: 11/15/2021 Author: CE POWER: 158528</p>	<p><b>ATTACHMENT 1</b></p> <p>Stuart Area Improvements Project</p> <p><b>APPALACHIAN POWER</b></p> <p><b>POWER ENGINEERS</b></p>
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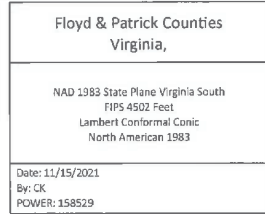
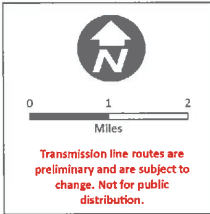
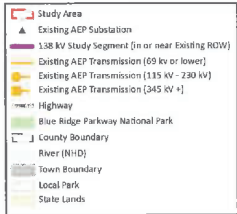
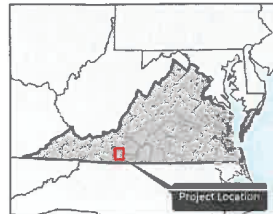


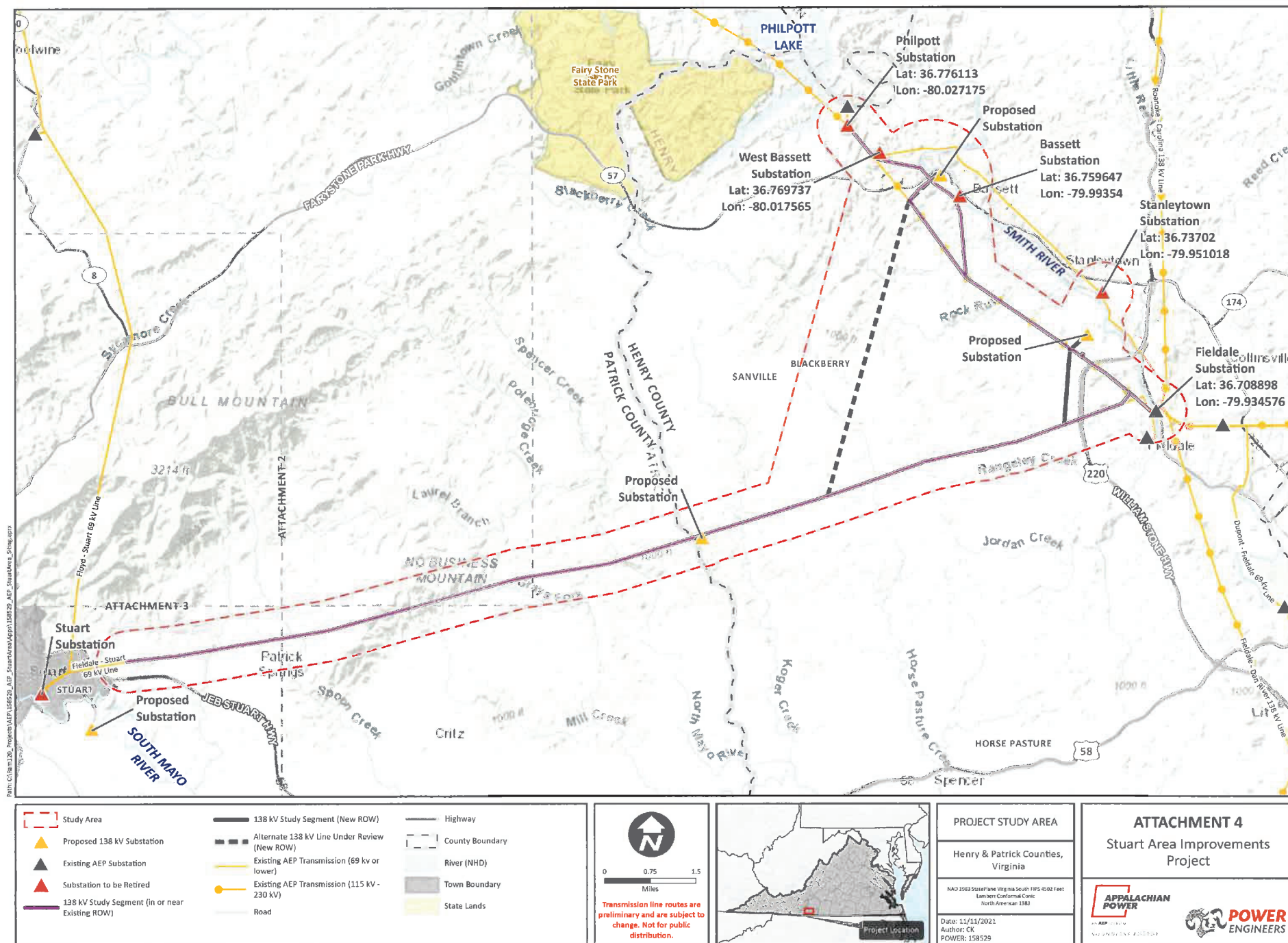
<p><b>Study Area</b></p> <ul style="list-style-type: none"> <li>Proposed 138 kV Substation</li> <li>Existing AEP Substation</li> <li>Substation to be Retired</li> <li>138 kV Single Circuit Study Segments (New ROW)</li> <li>138 kV Single Circuit Study Segment (Existing ROW)</li> </ul>	<ul style="list-style-type: none"> <li>138 kV Double Circuit Study Segments (New ROW)</li> <li>Existing AEP Transmission (69 kV or lower)</li> <li>Existing AEP Transmission (115 kV - 230 kV)</li> <li>Existing AEP Transmission (345 kV+)</li> <li>City of Danville 69 kV Line (digitized)</li> <li>Highway</li> </ul>	<ul style="list-style-type: none"> <li>River (NHD)</li> <li>Blue Ridge Parkway National Park</li> <li>County Boundary</li> <li>VA/NC State Boundary</li> <li>Town Boundary</li> </ul>	<p><b>Scale</b></p> <p>0 0.5 1 2 Miles</p> <p>Transmission line routes are preliminary and are subject to change. Not for public distribution.</p>	<p><b>PROJECT STUDY AREA</b></p> <p>Carroll &amp; Patrick Counties, Virginia</p> <p>NAD 1983 StatePlane Virginia South FIPS 4502 Feet Lambert Conformal Conic North American 1983</p> <p>Date: 11/11/2021 Author: CK POWER: 158529</p>	<p><b>ATTACHMENT 2</b></p> <p>Stuart Area Improvements Project</p> <p><b>APPALACHIAN POWER</b></p> <p><b>POWER ENGINEERS</b></p>
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Robert Farrell  
State Forester



# COMMONWEALTH of VIRGINIA

## Department of Forestry

900 Natural Resources Drive, Suite 800 • Charlottesville, Virginia 22903  
(434) 977-6555 • Fax: (434) 296-2369 • [www.dof.virginia.gov](http://www.dof.virginia.gov)

Friday, January 7, 2022

Roya Pardis  
POWER Engineers, Inc.

Subject: Stuart Area Improvements Project

Dear Roya,

Thank you for the opportunity to provide input on the Stuart Area Improvements Project in Carroll, Floyd, Henry, and Patrick Counties as described in your letter to Karl Didier on November 22<sup>nd</sup>, 2021.

The study area for the first component, Stuart-Willis Gap, contains approximately 40,066 acres of forest, including nearly 9,000 acres of which are considered Very High or Outstanding Conservation Value according to the Virginia Department of Forestry's Forest Conservation Value map<sup>1</sup>. The study area for the second component, Stuart – Floyd contains approximately 9,052 acres of forest, including over 4,000 acres of which are considered Very High or Outstanding Conservation Value. The study area for the third component, Stuart-Bassett, contains approximately 17,951 acres of forest including 2,398 acres of which are considered Very High or Outstanding Conservation Value. These resources contribute to the maintenance of water quality, clean air, a healthy climate, forest and aquatic biodiversity, and scenic values. In addition, the forests and associated timber represent valuable economic assets for the Commonwealth and its residents. For these reasons, it is important to avoid as much as possible the removal of or impacts to forests and associated vegetation, especially riparian forests and high conservation value timber stands.

The Department of Forestry recommends that existing ROWs be utilized wherever possible and that if new ROW's must be established, that every effort be made to avoid or minimize disturbance to high conservation value forest, streams or wetlands, and conserved lands. In instances where trees or forest vegetation needs to be removed,

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<sup>1</sup> K Basiolli, J Pugh, M Santucci. 2020. Forest Conservation Value Model, 2020 Edition. Virginia Department of Forestry, Charlottesville, VA. See interactive GIS map at <https://arcg.is/18aWaf>. See PDF map and short description at <https://www.dcr.virginia.gov/natural-heritage/vaconvisforest>.



converted, or otherwise negatively impacted by project activities, we recommend mitigating these impacts by establishing new trees, forests, or forest vegetation on site or in the general vicinity in such a way as to maintain or improve overall water quality, ecosystem functions, scenic value, and value for timber or other forest products.

Once project plans are finalized for submission to the Department of Environmental Quality for review, we will be happy to provide more specific information on the impacts of the final set of proposed transmission pathways.

Should you require any advice or assistance with forest management, pre-harvest planning, or mitigation efforts, please feel free to contact me or other staff at the Department of Forestry.

Sincerely

*Sarah Parmelee*  
Sarah Parmelee

Forestland Conservation Coordinator



January 20, 2022

[SENT VIA EMAIL]

Roya Pardis  
Power Engineers, Inc.  
7400 Beaufont Springs Drive  
Suite 316  
Richmond, VA 23225  
[roya.pardis@powereng.com](mailto:roya.pardis@powereng.com)

**RE: Appalachian Power Company - Stuart Area Improvements Project:  
Carroll, Floyd, Henry, Patrick Counties, Virginia**

Dear Roya Pardis:

The Virginia Outdoors Foundation (VOF) thanks you for the advance notice of the referenced project and the opportunity to provide direct comments regarding upgrades to this area.

Based on information received in early December 2021, the Appalachian Power Company is proposing a series of improvements comprised of several components in and around Stuart, Virginia. Per the November 22, 2021 letter, these improvements will replace equipment that is 80 – 100 years old, add an additional power source to the area, upgrade the voltage of equipment from 69-kilovolt (kV) to 138-kV, and add two new distribution substations to improve the local distribution system. Please accept these comments in response to your inquiry.

VOF, an agency of the Commonwealth, was established by the General Assembly in 1966 to promote the preservation of Virginia's natural and cultural resources by encouraging private philanthropy in fulfillment of state policy. As a result of Virginia's commitment to ensure a vibrant natural environment for today and future generations, VOF owns thousands of acres managed for public access and holds more than 4,000 open-space easements across the Commonwealth, which protect over 860,000 acres.

An open-space easement is a legal interest in real property that creates a relationship between the holders of the easement and the property owner. By means of the easement, VOF has an interest in specific conservation values of the property and a legal obligation to protect these values. VOF easements provide important public benefits by protecting in perpetuity significant tracts of mostly undeveloped land which may contribute to the protection of water quality, productive soils, natural heritage resources, historic resources, and scenic viewsheds. VOF easements represent over \$1 billion of public investment and fulfillment of Title XI of the Virginia Constitution and other public policies to ensure the conservation of natural and cultural resources.

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Regarding the first component, **Stuart – Willis Gap**, although VOF has no projects in this area, we encourage both POWER Engineers, Inc., and Appalachian Power Company to consider the natural, scenic, and cultural resources in area.

Concerning the second component, **Stuart – Floyd**, VOF holds open-space easements on three properties intersected by the project rebuild. These easements, directly and indirectly, protect numerous conservation values for the benefit of the public and contribute to the overall high quality of life in the Commonwealth. As such, VOF is concerned about the potential characteristics of the proposed replacement structures and associated project components. While recognizing engineering constraints, we strongly advocate for the replacement structures and the associated project components to be minimized in their presence on the landscape to the greatest extent possible, or at the least mimic the characteristics of the existing H-frame towers in height, size, and reflectivity. Furthermore, any proposal that would extend beyond the existing right-of-way would likely be limited and require extensive review by our Board of Trustees.

As for the third component, **Stuart – Bassett**, VOF holds one open-space easement in Henry County on a 231-acre property near Bassett, almost directly south of the Bassett Substation, where a presumed 69kV and 138kV line converge. This easement also, directly and indirectly, protects numerous conservation values for the benefit of the public and contributes to the overall high quality of life in the Commonwealth. As such, VOF is concerned about the potential characteristics of the proposed replacement structures and associated project components. While recognizing engineering constraints, we strongly advocate for the replacement structures and the associated project components to be minimized in their presence on the landscape to the greatest extent possible, or at the least mimic the characteristics of the existing H-frame towers in height, size, and reflectivity. That said, this particular open-space easement does appear to allow for some expansion of the right-of-way pending thorough review by VOF.

Thank you for the notice, and we look forward to working with POWER Engineers, Inc. and the Appalachian Power Company in the continued planning and development of this project. If you have any further questions or comments, please feel free to contact me at (540) 430-0292 or via email at [hhibbitts@vof.org](mailto:hhibbitts@vof.org).

Sincerely,



Harry Hibbitts  
*Assistant Director*

CC: Scott Kennedy, Appalachian Power Company  
DEQ Office of Environmental Impact Review