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November 18, 2020

BY ELECTRONIC FILING

Mr. Bernard Logan, Interim Clerk
c/o Document Control Center
State Corporation Commission
1300 East Main Street
Tyler Building – 1st Floor
Richmond, Virginia 23219

Application of Virginia Electric and Power Company for approval and certification of electric transmission facilities: Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project
Case No. PUR-2020-00269

Dear Mr. Logan:

Please find enclosed for electronic filing in the above-captioned proceeding the application for approval of electric transmission facilities on behalf of Virginia Electric and Power Company (the "Company"). This filing contains the Application, Appendix, Direct Testimony, and DEQ Supplement, including attachments.

As indicated in Section II.A.12.b of the Appendix, three (3) color copies of the map of the Virginia Department of Transportation "General Highway Map" for Greensville County were mailed to the Commission's Division of Energy Regulation on November 16, 2020. The Company also provided the Division of Energy Regulation electronic access, via e-room on November 17, 2020, to the digital geographic information system ("GIS") map required by § 56-46.1 of the Code of Virginia, which is Attachment II.A.2 to the Appendix.

Please do not hesitate to call if you have any questions in regard to the enclosed.

Very truly yours,

Vishwa B. Link

Enclosures
cc: William H. Chambliss, Esq.
David J. DePippo, Esq.

Dominion Energy®

Application, Appendix, DEQ Supplement, Direct Testimony and Exhibits of Virginia Electric and Power Company

Before the State Corporation Commission of Virginia

Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project

Application No. 302

Case No. PUR-2020-00269

Filed: November 18, 2020

Volume 1 of 3

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC FACILITIES

Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project

Application No. 302

Case No. PUR-2020-00269

Filed: November 18, 2020

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY For approval and certification of electric transmission facilities: Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project	)))))))	Case No. PUR-2020-00269

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY FOR APPROVAL AND CERTIFICATION OF ELECTRIC TRANSMISSION FACILITIES: CLUBHOUSE-DRY BREAD LINE #2201 AND DRY BREAD-LAKEVIEW LINE #254 230 kV VIRGINIA REBUILD PROJECT

Pursuant to § 56-46.1 of the Code of Virginia ("Va. Code") and the Utility Facilities Act, Va. Code § 56-265.1 *et seq.*, Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), by counsel, files with the State Corporation Commission of Virginia (the "Commission") this application for approval and certification of electric facilities (the "Application"). In support of its Application, Dominion Energy Virginia respectfully shows as follows:

1. Dominion Energy Virginia is a public service corporation organized under the laws of the Commonwealth of Virginia furnishing electric service to the public within its Virginia service territory. The Company also furnishes electric service to the public in portions of North Carolina. Dominion Energy Virginia's electric system—consisting of facilities for the generation, transmission, and distribution of electric energy—is interconnected with the electric systems of neighboring utilities and is a part of the interconnected network of electric systems serving the continental United States. By reason of its operation in two states and its interconnections with other utilities, the Company is engaged in interstate commerce.

2. In order to perform its legal duty to furnish adequate and reliable electric service, Dominion Energy Virginia must, from time to time, replace existing transmission facilities or construct new transmission facilities in its system.

3. In this Application, In order to maintain the structural integrity and reliability of its transmission system in compliance with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company proposes in Greensville County, Virginia, the following:

(i) Rebuild, entirely within existing right-of-way or on Company-owned property, approximately 1.6 miles of the existing 230 kV overhead single circuit Clubhouse-Dry Bread Line #2201 on single circuit structures, which runs from Structure #2201/1A within the Company's existing Clubhouse Substation to Structure #2201/14 / #254/14 within the Company's existing Dry Bread Substation;

(ii) Rebuild, entirely within existing right-of-way or on Company-owned property, approximately 10.9 miles of the existing 230 kV overhead single circuit Dry Bread-Lakeview Line #254 on single circuit structures, which runs from Structure #2201/14 / #254/14 within the Company's existing Dry Bread Substation to Structure #254/113 at the Virginia state line; and

(iii) Perform system protection coordination studies and relay resets at Clubhouse and Dry Bread Substations, as well as line terminal upgrade work at Clubhouse Substation[1]

(collectively, the "Virginia Rebuild Project").[2]

[1] Dry Bread Substation, which is located between the Company's Clubhouse and Lakeview Substations along what was formerly the approximately 18.0-mile 230 kV Clubhouse-Lakeview Line #254, was energized in October 2020. Once Dry Bread Substation was energized, Line #254 between Clubhouse and Dry Bread Substations was renamed Clubhouse-Dry Bread Line #2201. Between Dry Bread and Lakeview Substations, Line #254 was renamed Dry Bread-Lakeview Line #254.

[2] With this Application, the Company is seeking a certificate of public convenience and necessity ("CPCN" or "certificate") from the Virginia State Corporation Commission ("Commission") for the rebuild of approximately 1.6 miles of Line #2201 located between Clubhouse Substation and Dry Bread Substation, and approximately 10.9 miles of Line #254 located between the Clubhouse Substation and the Virginia state line (*i.e.*, through Structure #254/113), all of which is located entirely within Greensville County, Virginia (*i.e.*, the Virginia Rebuild Project). The remaining approximately 5.5 miles of Line #254 that is to be rebuilt is located entirely within North Carolina, extending from the Virginia state line and concluding at the Company's existing Lakeview Substation (the "North Carolina Rebuild Project") (together, the Virginia Rebuild Project and North Carolina Rebuild Project are referred to herein as the "VA-NC Rebuild Project"). The Company is not seeking approval of the North Carolina Rebuild Project herein or from

4. The proposed Virginia Rebuild Project will replace aging infrastructure at the end of its service life in order to comply with the Company's mandatory electric transmission planning criteria (the "Planning Criteria"), thereby enabling the Company to maintain the overall long-term reliability of its transmission system.

5. As of April 2020, the Company's system has approximately 3,115 miles of overhead transmission lines built prior to 1980 (approximately 47% of the overall overhead transmission system mileage). The Company has developed a proactive plan to rebuild transmission lines that are comprised of wood pole structures that are experiencing maintenance and reliability issues, including cracked and decaying wood, ground line rot and woodpecker damage. The 230 kV system accounts for approximately 2,861 miles of the Company's total overhead transmission line system, of which approximately 1,502 miles were built primarily before 1980.

6. Lines #2201 and #254 were constructed in 1962 primarily on wood H-frames, which have been identified for rebuild in accordance with Dominion Energy Virginia's Planning Criteria. Industry experience indicates that life for wood pole structures is approximately 35 to 55 years, for conductor and connectors is approximately 40 to 60 years, and for porcelain insulators

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the North Carolina Utilities Commission ("NCUC"). Pursuant to § 62-101(a) of the North Carolina General Statutes ("NCGS"), a certificate is required from the NCUC "to construct a new transmission line," not to rebuild an existing line. Further, NCGS § 62-101(c)(2) specifically provides that "[a] certificate is not required for construction of the following lines:… (2) [t]he replacement or expansion of an existing line with a similar line in substantially the same location, or the rebuilding, upgrading, modifying, modernizing, or reconstructing of an existing line for the purpose of increasing capacity or widening an existing right-of-way…." Accordingly, as the North Carolina Rebuild Project proposes to rebuild existing Line #254 entirely within existing right-of-way for the purpose of upgrading, modifying, and increasing capacity of that line, NCUC approval of the North Carolina Rebuild Project is not required. To the extent information is provided within this Appendix, it should be viewed as applicable only to the Virginia Rebuild Project, and not the North Carolina Rebuild Project or the VA-NC Rebuild Project, unless so specifically stated. Any such information related specifically to the North Carolina Rebuild Project or the VA-NC Rebuild Project should be viewed as informational only, and should not be considered as applicable for the approval being sought in this Application for a CPCN for the Virginia Rebuild Project.

is approximately 50 years. The need for the Virginia Rebuild Project is described in detail in Section I of the Appendix attached to this Application.

7. The desired in-service date for the Virginia Rebuild Project is October 15, 2023. The Company estimates it will take approximately 23 months for detailed engineering, scheduled outages, materials procurement, permitting, and construction of the VA-NC Rebuild Project after a final order from the Commission on the Virginia Rebuild Project. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order on the Virginia Rebuild Project by September 1, 2021. Should the Commission issue a final order by September 1, 2021, the Company estimates that construction of the VA-NC Rebuild Project should begin on February 1, 2022 and be completed by October 15, 2023. This construction timeline will enable the Company to meet the targeted in-service date for the Virginia Rebuild Project.

8. The estimated conceptual cost of the Virginia Rebuild Project is approximately $16.42 million, which includes approximately $16.1 million for transmission-related work and $0.31 million for substation-related work (2020 dollars).

9. Given the availability of existing right-of-way and the statutory preference given to the use of existing rights-of-way, and because additional costs and environmental impacts would be associated with the acquisition and construction of new right-of-way, the Company did not consider any alternate routes requiring new right-of-way for the Virginia Rebuild Project. The impact of the proposed Virginia Rebuild Project on scenic, environmental, and historical features is described in detail in Section III of the Appendix.

10. Based on consultations with the Virginia Department of Environmental Quality ("DEQ"), the Company has developed a supplement ("DEQ Supplement") containing information

designed to facilitate review and analysis of the proposed facilities by the DEQ and other relevant agencies. The DEQ Supplement is attached to this Application.

11. Based on the Company's experience, the advice of consultants, and a review of published studies by experts in the field, the Company believes that there is no causal link to harmful health or safety effects from electric and magnetic fields generated by the Company's existing or proposed facilities. Section IV of the Appendix provides further details on Dominion Energy Virginia's consideration of the health aspects of electric and magnetic fields.

12. Section V of the Appendix provides a proposed route description for public notice purposes and a list of federal, state, and local agencies and officials that the Company has or will notify about the Application.

13. In addition to the information provided in the Appendix and the DEQ Supplement, this Application is supported by the prefiled direct testimony of Company Witnesses Christopher G. Mertz, Amanda L. Savage, Santosh Bhattarai, and Nancy R. Reid filed with this Application.

WHEREFORE, Dominion Energy Virginia respectfully requests that the Commission:

(a) direct that notice of this Application be given as required by § 56-46.1 of the Code of Virginia;

(b) approve pursuant to § 56-46.1 of the Code of Virginia the construction of the Virginia Rebuild Project; and,

(c) grant a certificate of public convenience and necessity for the Virginia Rebuild Project under the Utility Facilities Act, § 56-265.1 *et seq.* of the Code of Virginia.

VIRGINIA ELECTRIC AND POWER COMPANY

By: _____/s/ Vishwa B. Link_____
Counsel for Applicant

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Counsel for Applicant Virginia Electric and Power Company

November 18, 2020

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC FACILITIES

Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project

Application No. 302

Appendix

Containing Information in Response to
"Guidelines for Transmission Line Applications Filed Under title 56 of the Code of Virginia"

Case No. PUR-2020-00269

Filed: November 18, 2020

TABLE OF CONTENTS

EXECUTIVE SUMMARY

In order to maintain the structural integrity and reliability of its transmission system in compliance with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") proposes in Greensville County, Virginia, the following:

(i) Rebuild, entirely within existing right-of-way or on Company-owned property, approximately 1.6 miles of the existing 230 kV overhead single circuit Clubhouse-Dry Bread Line #2201 on single circuit structures, which runs from Structure #2201/1A within the Company's existing Clubhouse Substation to Structure #2201/14 / #254/14 within the Company's existing Dry Bread Substation;

(ii) Rebuild, entirely within existing right-of-way or on Company-owned property, approximately 10.9 miles of the existing 230 kV overhead single circuit Dry Bread-Lakeview Line #254 on single circuit structures, which runs from Structure #2201/14 / #254/14 within the Company's existing Dry Bread Substation to Structure #254/113 at the Virginia state line; and

(iii) Perform system protection coordination studies and relay resets at Clubhouse and Dry Bread Substations, as well as line terminal upgrade work at Clubhouse Substation[1]

(collectively, the "Virginia Rebuild Project").[2]

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[1] Dry Bread Substation, which is located between the Company's Clubhouse and Lakeview Substations along what was formerly the approximately 18.0-mile 230 kV Clubhouse-Lakeview Line #254, was energized in October 2020. Once Dry Bread Substation was energized, Line #254 between Clubhouse and Dry Bread Substations was renamed Clubhouse-Dry Bread Line #2201. Between Dry Bread and Lakeview Substations, Line #254 was renamed Dry Bread-Lakeview Line #254.

[2] With this Application, the Company is seeking a certificate of public convenience and necessity ("CPCN" or "certificate") from the Virginia State Corporation Commission ("Commission") for the rebuild of approximately 1.6 miles of Line #2201 located between Clubhouse Substation and Dry Bread Substation, and approximately 10.9 miles of Line #254 located between the Clubhouse Substation and the Virginia state line (*i.e.*, through Structure #254/113), all of which is located entirely within Greensville County, Virginia (*i.e.*, the Virginia Rebuild Project). The remaining approximately 5.5 miles of Line #254 that is to be rebuilt is located entirely within North Carolina, extending from the Virginia state line and concluding at the Company's existing Lakeview Substation (the "North Carolina Rebuild Project") (together, the Virginia Rebuild Project and North Carolina Rebuild Project are referred to herein as the "VA-NC Rebuild Project"). The Company is not seeking approval of the North Carolina Rebuild Project herein or from the North Carolina Utilities Commission ("NCUC"). Pursuant to § 62-101(a) of the North Carolina General Statutes ("NCGS"), a certificate is required from the NCUC "to construct a new transmission line," not to rebuild an existing line. Further, NCGS § 62-101(c)(2) specifically provides that "[a] certificate is not required for construction of the following lines: . . . (2) [t]he replacement or expansion of an existing line with a similar line in substantially the same location, or the rebuilding, upgrading, modifying, modernizing, or reconstructing of an existing line for the purpose of increasing capacity or widening an existing right-of-way. . . ." Accordingly, as the North Carolina Rebuild Project proposes to rebuild existing Line #254 entirely within existing right-of-way for the purpose of upgrading, modifying, and increasing capacity of that line, NCUC approval of the North Carolina Rebuild Project is not required. To the extent information is provided within this Appendix, it should be viewed as applicable only to the Virginia Rebuild Project, and not the North Carolina Rebuild Project or the VA-NC Rebuild Project, unless so specifically stated. Any such information related specifically to the North Carolina Rebuild Project or the VA-NC Rebuild Project should be viewed as informational only, and should not be considered as applicable for the approval being sought in this Application for a CPCN for the Virginia Rebuild Project.

As of April 2020, the Company has approximately 3,115 miles of overhead transmission lines built prior to 1980 (approximately 47% of the overall overhead transmission system mileage). The Company has developed a proactive plan to rebuild transmission lines that are comprised of wood pole structures that are experiencing maintenance and reliability issues, including cracked and decaying wood, ground line rot, and woodpecker damage. The 230 kV system accounts for approximately 2,861 miles of the Company's total overhead transmission line system, of which approximately 1,502 miles were built primarily before 1980.

Lines #2201 and #254 were constructed in 1962 primarily on wood H-frames, which have been identified for rebuild in accordance with Dominion Energy Virginia's electric transmission planning criteria (the "Planning Criteria"). Industry experience indicates that life for wood pole structures is approximately 35 to 55 years, for conductor and connectors is approximately 40 to 60 years, and for porcelain insulators is approximately 50 years.

The proposed Virginia Rebuild Project will replace aging infrastructure at the end of its service life in order to comply with the Company's mandatory Planning Criteria, thereby enabling the Company to maintain the overall long-term reliability of its transmission system.

Because the existing right-of-way and Company-owned property is adequate to construct the proposed Virginia Rebuild Project, no new right-of-way is necessary. Given the availability of existing right-of-way and the statutory preference given to the use of existing rights-of-way, and because additional costs and environmental impacts would be associated with the acquisition and construction of new right-of-way, the Company did not consider any alternate routes requiring new right-of-way for the Virginia Rebuild Project.

The estimated conceptual cost of the Virginia Rebuild Project is approximately $16.4 million, which includes approximately $16.1 million for transmission-related work and $0.3 million for substation-related work (2020 dollars).

The desired in-service date for the Virginia Rebuild Project is October 15, 2023. The Company estimates it will take approximately 23 months for detailed engineering, scheduled outages, materials procurement, permitting, and construction of the VA-NC Rebuild Project after a final order from the Commission on the Virginia Rebuild Project. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order on the Virginia Rebuild Project by September 1, 2021. Should the Commission issue a final order by September 1, 2021, the Company estimates that construction of the VA-NC Rebuild Project should begin on February 1, 2022 and be completed by October 15, 2023. This construction timeline will enable the Company to meet the targeted in-service date for the Virginia Rebuild Project.

I. NECESSITY FOR THE PROPOSED PROJECT

A. State the primary justification for the proposed project (for example, the most critical contingency violation including the first year and season in which the violation occurs). In addition, identify each transmission planning standard(s) (of the Applicant, regional transmission organization ("RTO"), or North American Electric Reliability Corporation) projected to be violated absent construction of the facility.

Response: The proposed Virginia Rebuild Project is necessary to rebuild existing 230 kV Lines #2201 and #254, which are nearing their end of life. See Attachment I.A.1 for a Virginia Rebuild Project overview map.

Dominion Energy Virginia's transmission system is responsible for providing transmission service: (i) for redelivery to the Company's retail customers; (ii) to Appalachian Power Company, Old Dominion Electric Cooperative, Northern Virginia Electric Cooperative ("NOVEC"), Central Virginia Electric Cooperative, and Virginia Municipal Electric Association for redelivery to their retail customers in Virginia; and, (iii) to North Carolina Electric Membership Corporation and North Carolina Eastern Municipal Power Agency for redelivery to their customers in North Carolina (collectively, the "Dominion Energy Zone" or the "DOM Zone").

Dominion Energy Virginia is part of PJM Interconnection, LLC ("PJM"), the regional transmission organization that provides service to a large portion of the eastern United States. PJM currently is responsible for ensuring the reliability of, and coordinating the movement of, electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. This service area has a population of approximately 65 million and on August 6, 2006, set a record high of 166,929 megawatts ("MW") for summer peak demand, of which Dominion Energy Virginia's load portion was approximately 19,256 MW serving 2.4 million customers. On July 20, 2020, the Company set a record high of 20,087 MW for summer peak demand. On February 20, 2015, the Company set a winter peak and all-time record demand of 21,651 MW. Based on the 2020 PJM load forecast, the Dominion Energy Zone is expected to be one of the fastest growing zones in PJM, with average growth rates of 1.2% summer and 1.4% winter over the next 10 years compared to the PJM average of 0.6% and 0.6% over the same period for the summer and winter, respectively.

Dominion Energy Virginia is also part of the Eastern Interconnection transmission grid, meaning its transmission system is interconnected, directly or indirectly, with all of the other transmission systems in the United States and Canada between the Rocky Mountains and the Atlantic Coast, except for Quebec and most of Texas. All of the transmission systems in the Eastern Interconnection are dependent on each other for moving bulk power through the transmission system and for reliability support. Dominion Energy Virginia's service to its customers is extremely reliant on a robust and reliable regional transmission system.

NERC has been designated by the Federal Energy Regulatory Commission ("FERC") as the electric reliability organization for the United States. Accordingly, NERC requires that the planning authority and transmission planner develop planning criteria to ensure compliance with NERC Reliability Standards. Mandatory NERC Reliability Standards require that a transmission owner ("TO") develop facility interconnection requirements that identify load and generation interconnection minimum requirements for a TO's transmission system, as well as the TO's reliability criteria.[3]

Federally-mandated NERC Reliability Standards constitute minimum criteria with which all public utilities must comply as components of the interstate electric transmission system. Moreover, the Energy Policy Act of 2005 mandates that electric utilities follow these NERC Reliability Standards and imposes fines on utilities found to be in noncompliance up to approximately $1.3 million per day per violation.

PJM's Regional Transmission Expansion Plan ("RTEP") is the culmination of a FERC-approved annual transmission planning process that includes extensive analysis of the electric transmission system to determine any needed improvements.[4] PJM's annual RTEP is based on the effective criteria in place at the time of the analyses, including applicable standards and criteria of NERC, PJM, and local reliability planning criteria, among others.[5] Projects identified through the RTEP process are developed by the TO in coordination with PJM, and are presented at the Transmission Expansion Advisory Committee ("TEAC") meetings prior to inclusion in the RTEP that is then presented for approval by the PJM Board of Managers (the "PJM Board").

Outcomes of the RTEP process include three types of transmission system upgrades or projects: (i) baseline upgrades are those that resolve a system reliability criteria violation, which can include planning criteria from NERC, ReliabilityFirst, SERC Reliability Corporation, PJM, and TOs; (ii) network upgrades are new or upgraded facilities required primarily to eliminate reliability criteria violations caused by proposed generation, merchant transmission, or long-term firm transmission service requests; and (iii) supplemental projects are projects initiated by the TO in order to interconnect new customer load, address degraded equipment performance, improve operational flexibility and efficiency, and increase infrastructure resilience. While supplemental projects are included in the RTEP, and the PJM Board administers stakeholder review of supplemental projects as part of the RTEP process, the PJM Board does not actually approve such projects.

[3] See FAC-001-2, effective January 1, 2016, at http://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-001-2.pdf.
[4] PJM Manual 14B focuses on the RTEP process and can be found at https://www.pjm.com/library/manuals.aspx.
[5] See PJM Manual 14B, Attachment D: PJM Reliability Planning Criteria.

As of April 2020, the Company's system has approximately 3,115 miles of overhead transmission lines built prior to 1980 (approximately 47% of the overall overhead transmission system mileage). The Company has developed a proactive plan to rebuild transmission lines that are comprised of wood pole structures that are experiencing maintenance and reliability issues, including cracked and decaying wood, ground line rot, and woodpecker damage. The 230 kV system accounts for approximately 2,861 miles of the Company's total overhead transmission line system, of which approximately 1,502 miles were built primarily before 1980.

Under the broader VA-NC Rebuild Project, the Company proposes to wreck and rebuild a total of approximately 18.0 miles of existing Lines #2201 and #254 in existing right-of-way or on Company-owned property starting at the Company's existing Clubhouse Substation and continuing through the existing Dry Bread Substations in Virginia, and concluding at the Company's existing Lakeview Substation in North Carolina. The Virginia Rebuild Project proposes to rebuild approximately 12.5 miles out of the 18.0 miles, which are located in Greensville County, Virginia. Lines #2201 and #254 were constructed in 1962 on wood H-frames, which have been identified for rebuild based on the Company's assessment in accordance with the Company's electric transmission planning criteria (the "Planning Criteria").

Effective March 24, 2020, the Company's Planning Criteria was updated so that infrastructure to be evaluated under end-of-life ("EOL") criteria changed from "all transmission lines at 69 kV and above" to "all regional transmission lines operated at 500 kV and above." The remaining transmission lines below 500 kV were provisioned to be evaluated per the Company's Attachment M-3 End-of-Life Planning Criteria. This M-3 End-of-life Planning Criteria was presented at the June 16, 2020 PJM Sub-Regional RTEP meeting. See Attachment I.A.2 for updated slides presented by the Company at that meeting. As discussed in Attachment I.A.2, EOL projects under 500 kV that were approved by PJM after March 24, 2020, were formerly designated as baseline projects and are now classified as supplemental projects. However, the process for determining that an asset has reached its EOL remains the same; therefore, the Company continues to use the criteria evaluation process outlined in Section C.2.9 of the Planning Criteria.

Section C.2.9 of the Planning Criteria addresses electric transmission infrastructure approaching its end of life:[6]

[6] The Company's Transmission Planning Criteria can be found in revised Exhibit A of the Company's Facility Interconnection Requirements document, which is available online at the following address under the Facility Interconnection Requirements:
https://www.dominionenergy.com/our-company/moving-energy/electric-transmission-access.

Electric transmission infrastructure reaches its end of life as a result of many factors. Some factors such as extreme weather and environmental conditions can shorten infrastructure life, while others such as maintenance activities can lengthen its life. Once end of life is recognized, in order to ensure continued reliability of the transmission grid, a decision must be made regarding the best way to address this end-of-life asset.

For this criterion, "end of life" is defined as the point at which infrastructure is at risk of failure, and continued maintenance and/or refurbishment of the infrastructure is no longer a valid option to extend the life of the facilities consistent with Good Utility Practice and Dominion Energy Transmission Planning Criteria. The infrastructure to be evaluated under this end-of-life criteria are all regional transmission lines operated at 500 kV and above.

The decision point of this criterion is based on satisfying two metrics:

1) *Facility is nearing, or has already passed, its end of life, and*
2) *Continued operation risks negatively impacting reliability of the transmission system.*

For facilities that satisfy both of these metrics, this criterion mandates either replacing these facilities with in-kind infrastructure that meets current Dominion Energy standards or employing an alternative solution to ensure the Dominion Energy transmission system satisfies all applicable reliability criteria.

Dominion Energy will determine whether the two metrics are satisfied based on the following assessment:

1. *End of Life*
   Factors that support a determination that a facility has reached its end of life include, but are not limited to,
   - Condition of the facility, taking into consideration:
     - Industry recommendations on service life for the particular type of facility
     - The facility's performance history
       - Documented evidence indicating that the facility has reached the end of its useful service life
     - The facility's maintenance and expense history
   - Third-party Assessment - While not required, Dominion Energy has the option of seeking a third-party assessment of a facility to determine if industry specialists agree the facility has reached the end of its useful service life

2. *Reliability and System Impact*
   The reliability impact of continued operation of a facility will be determined based on a planning assessment and operational performance considerations. The end-of-life determination for a facility to be tested for reliability impact will be assessed by evaluating the impact on short and long term reliability with and without the facility in service. The existing system with the facility removed will become the base case system for which all reliability tests will be performed.

The primary four (4) reliability tests to be considered are:

1. NERC Reliability Standards
2. PJM Planning Criteria As documented in PJM Manual 14B PJM Region Transmission Planning Process
3. Dominion Energy Transmission Planning Criteria contained in this document
4. Operational Performance – This test will be based on input from PJM and/or Dominion Energy System Operations as to the impact on reliably operating the system without the facility

Additional factors to be evaluated under system impact may include but not be limited to:

1. Market efficiency
2. Stage 1A ARR sufficiency
3. Public policy
4. SERC reliability criteria

Failure of any of these reliability tests, along with the end-of-life assessment discussed herein, will indicate a violation of the End-of-Life Criteria and necessitate replacement as mandated earlier in this document.

After the end of service life and reliability impact of a facility are evaluated and it has been determined that the facility violates the End-of-Life Criteria, a determination will be made as to whether replacement of the facility is the most effective solution for an identified reliability need, or whether an alternative solution should be employed. One or more of the following factors may be considered in determining whether to proceed with facility replacement or with an alternative solution:

- Planning analysis which may include power flow studies
- Operational performance
- System Reliability
- Effectiveness of the alternative as compared to the replacement facility
- Future load growth in the study area
- Future transmission projects or interconnects that impact the study area
- Constructability comparison
- Cost comparison

The Company submitted the VA-NC Rebuild Project proposal, which would rebuild Lines #2201 and #254 consistent with current 230 kV standards, to the PJM RTEP process to address the end-of-life criteria.[7] The VA-NC Rebuild Project was initially reviewed at the June 2019 TEAC meeting and was recommended for approval at the July 2019 TEAC meeting. See Attachments I.A.3 and I.A.4 for the relevant slides from the June and July 2019 TEAC meetings. While the PJM Board approved the VA-NC Rebuild Project in July 2019 as a baseline project (b3121), as noted above, the VA-NC Rebuild Project would have been considered a supplemental project under the M-3 End-of-life Planning Criteria if it had been presented to PJM after that criteria became effective March 24, 2020.

1) Facility is nearing, or has already passed, its end of life

In regards to the first metric of the Company's Planning Criteria addressing end of life, the structures on Lines #2201 and #254 are primarily wood H frames that were erected in 1962. Industry experience indicates that life for wood pole structures is approximately 35 to 55 years, for conductor and connectors is approximately 40 to 60 years and for porcelain insulators is approximately 50 years. As the pictures and the list of structures identified that need to be replaced in Section I.L of this Appendix indicate, there are wood structures that have been identified for replacement and other line components are showing signs of their age. The majority of these structures are 58 years old, and the Company believes it is more cost-effective to rebuild the line versus replacing individual components.

Specifically, such an individual component replacement would include replacing 94 structures and components attached to structures, such as grounding and insulators, as well as removing and replacing conductor and static wire for approximately 12.5 miles of line located in Virginia. Based on the transmission-related conceptual estimate that was completed to rebuild the approximately 12.5 miles of line in Virginia, replacing the line in a piecemeal fashion would cost approximately $24.1 million. The transmission-related costs for the proposed

[7] Note that when the VA-NC Rebuild Project was submitted to PJM in June 2019, the Dry Bread Substation had not yet been energized; therefore, the line proposed for rebuild at that time was the Clubhouse-Lakeview Line #254. *See supra* n. 1.

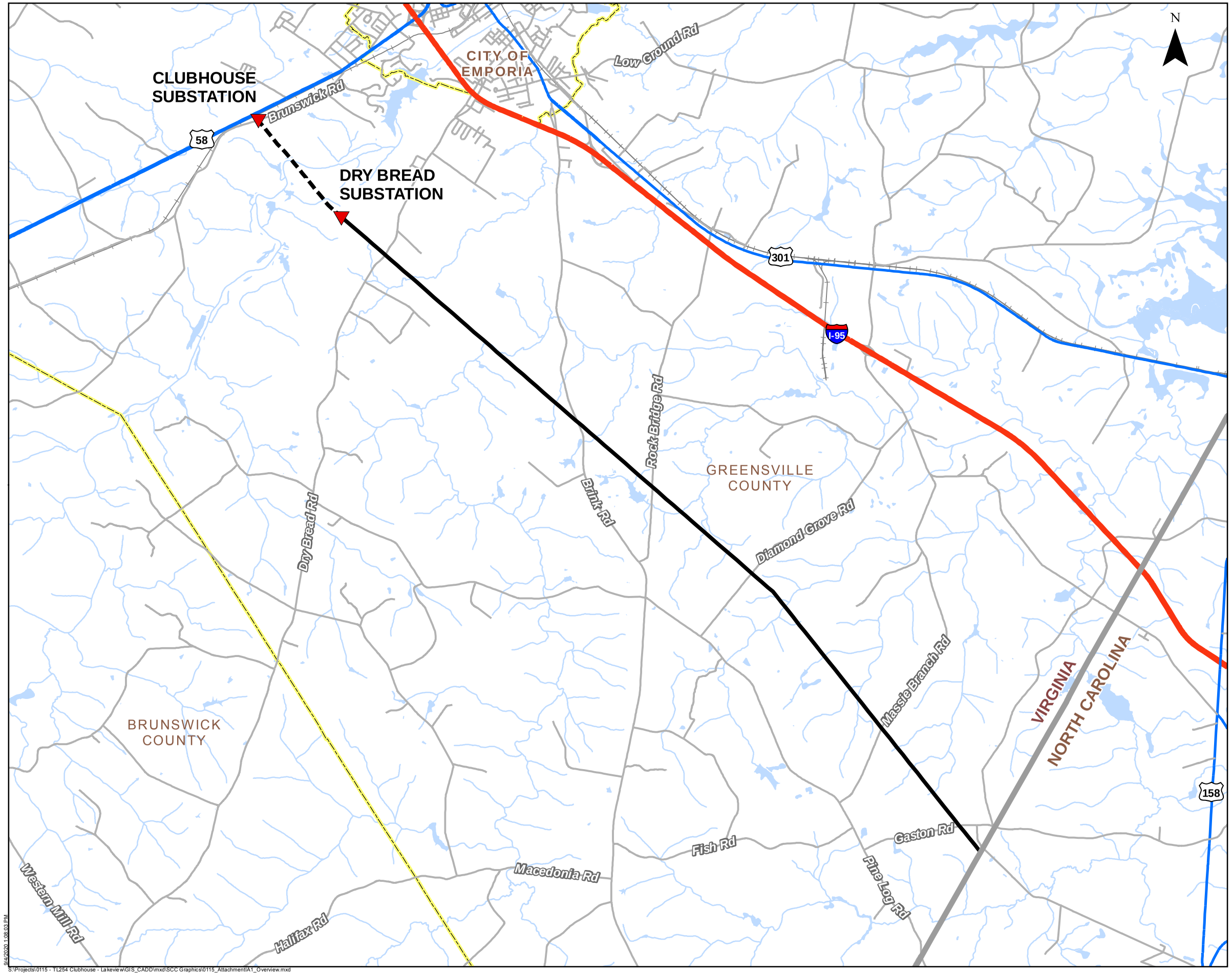
Virginia Rebuild Project, by contrast, are estimated to be approximately $16.1 million, which would result in an approximately $8.0 million savings to customers.

2) Continued operation risks negatively impacting reliability of the transmission system.

With regard to the second metric, the Company performed reliability assessments as if the lines were retired that indicated Line #254 and Line #2201 are needed. Furthermore, if Line #254 and Line #2201 were retired, interconnected generation from Dry Bread Substation would be left unserved. Additionally, an assessment determining if generation interconnected at Dry Bread Substation could be interconnected radially from either Line #2201 or Line #254 was performed using conventional NERC reliability analysis. Analysis shown in Section I.D, and specifically in Attachment I.D.1, shows that overloads persist in both scenarios where generation is interconnected radially to either Lakeview or Clubhouse. Line #254 and Line #2201 continue to play a vital role in facilitating the reliable transmission of power from south central to central Virginia.

***

In summary, the proposed Virginia Rebuild Project will replace aging infrastructure at the end of its service life in order to comply with the Company's mandatory Planning Criteria, thereby enabling the Company to maintain the overall long-term reliability of its transmission system.



ATTACHMENT I.A.1

PROJECT OVERVIEW MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	09/04/20

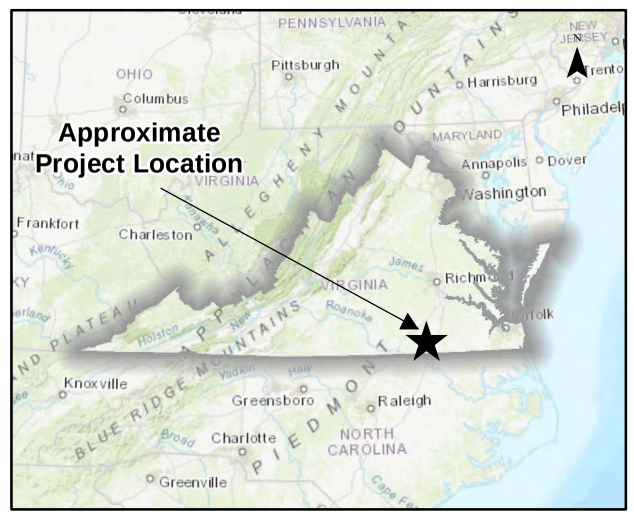
0 0.5 1 2 Miles

Scale is 1 IN = 1 MI when printed at original size of 11x17

SITE DATA

- Line #2201
- Line #254
- Existing Substation
- Limited Access Highways
- US and VA Primary Highways
- Local and Main Roads
- Railroad
- Virginia Border
- County Boundary
- NHD Flowline
- NHD Waterbody

Notes:
1. Basemap Source: Esri, HERE, Garmin, Intermap, increment P Corp., GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, Meti, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: NHD, VGIN, and the GIS User Community



ENVIRONMENTAL

Dominion Energy®

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Dominion Energy

PJM Southern Sub-Regional RTEP Meeting

Update to the Dominion Energy Local Planning Assumptions previously discussed at the December 2019 Sub-Regional RTEP Meeting

Attachment I.A.2

Dominion Energy

Planning Criteria and Assumptions

- PJM Assumptions Apply
- All analysis and solutions must satisfy
  - NERC TPL standards
  - PJM Planning Criteria in Attachment D & G of PJM Manual 14B
  - Dominion Energy's Facility Interconnection Requirements
    - Requirements to connect to Dominion's Transmission system
    - Exhibit A – Dominion's FERC 715 Planning Criteria
    - Exhibit C – Generation Interconnection Protection Requirements
    - Supplemental Project Drivers as Described Below
- PJM and Dominion validate each other's study results to ensure solutions resolve specific need and create no other harm to system
- Proposed solutions are presented
  - TEAC for facilities 230 kV and above
  - Southern Sub-regional for facilities below 230 kV

Update to Slide #2

Dominion Energy

Dominion Energy's Form No. 715 End of Life Planning Criteria

- Dominion has an End of Life (EOL) FERC 715 criteria for addressing transmission lines
  - The Infrastructure to be evaluated under this end-of-life criteria are all regional transmission lines operated at 500 kV and above.
  - The decision point of this criterion is based on satisfying two metrics:
    1) Facility is nearing, or has already passed, its end of life, and
    2) Continued operation risks negatively impacting reliability of the transmission system.
- Projects approved by PJM under this criteria are classified as baseline
- Detailed discussion on the End of Life criteria can be found in Exhibit A, section C.2.9 of Dominion Energy's Facility Interconnection Requirements document
- All other asset management of transmission infrastructure is covered by the M-3 Supplemental process
- The Appendix lists transmission lines expected to be evaluated using the Form No. 715 and Attachment M-3 End of Life criteria in the 2020 RTEP cycle

Update to Slide #4

Dominion Energy

Equipment Material Condition, Performance and Risk

Types of equipment assessed include but not limited to:

- Transmission Lines below 500 kV
- Line Components (not part of EOL Criteria)
- Transformers
- Breakers
- Circuit Switchers
- Reactors
- Capbanks
- Wave Traps
- Relaying
- Switches
- Bus Work, Leads
- FACTS Devices

Update to Slide #10

Dominion Energy's Attachment M-3 End of Life Planning Criteria

- Infrastructure to be evaluated under this end-of-life criteria are all transmission lines below 500 kV
- Projects must satisfy the following two decision point metrics:
  1) Facility is nearing, or has already passed, its end of life, and
  2) Continued operation risks negatively impacting reliability of the transmission system, including our ability to serve local load.
- Projects will be classified as supplemental
- The Appendix lists transmission lines expected to be evaluated using the Form No. 715 and Attachment M-3 End of Life criteria in the 2020 RTEP cycle

New Slide #14

Dominion Energy

Appendix: Transmission lines expected to be evaluated using Form No. 715 and Attachment M-3 End of Life criteria in 2020 RTEP cycle

Line A	Line B	Line Section	Line A kV	Line B kV	Line A Year	Line B Year
293		Staunton – Valley	230		1981/1971	
1001		Battleboro – Chestnut	115		1959	
1024		Chestnut – South Justice Branch	115		1959	
2019		Greenwich – Thalia	230		1970/1988	
87		Chesapeake Energy Center – Churchland	115		1957	
514		Goose Creek – Doubs	500		1966	
204	220	Gum Springs -Jefferson St, Gum Springs - Ox	230		1966	
579	2110	Septa – Yadkin, Suffolk – Thrasher	500	230	1975	1975
26		Balcony Falls – Lexington	115		1928	
2007		Lynnhaven – Thalia	230		1970	
2049		Chesterfield – Allied	230		1994	

Note: This list covers lines to be evaluated under Dominion's Form No. 715 and Attachment M-3 End of Life criteria during the 2020 planning cycle. The evaluation could lead to some of these facilities being delayed, cancelled or removed from consideration as well as other facilities added.

Update to Appendix

Dominion Energy

Reliability Analysis Update

Transmission Expansion Advisory Committee

June 13, 2019

Dominion Transmission Zone: Baseline
230kV Line #254 Rebuild (End of Life Criteria)

Process Stage: First Review

Criteria: End of Life

Assumption Reference: FERC 715

Model Used for Analysis: 2018 Series 2023 Summer RTEP

Proposal Window Exclusion: FERC 715 (TO Criteria)

Problem Statement:
The 230kV Line #254, from Clubhouse to Lakeview, is approximately 18 miles long and was constructed on wooden H-frame structures in 1962. Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years and porcelain insulators are 50 years.

Reliability studies indicate that retiring Line #254 will result in thermal overloads in accordance with P1, P2, P4, P6, and P7 NERC criteria violations. There is also an operational performance need for Line #254, as generator AB2-100 would be left unserved if the line were retired.

Existing Facility Rating: 399 MVA STE

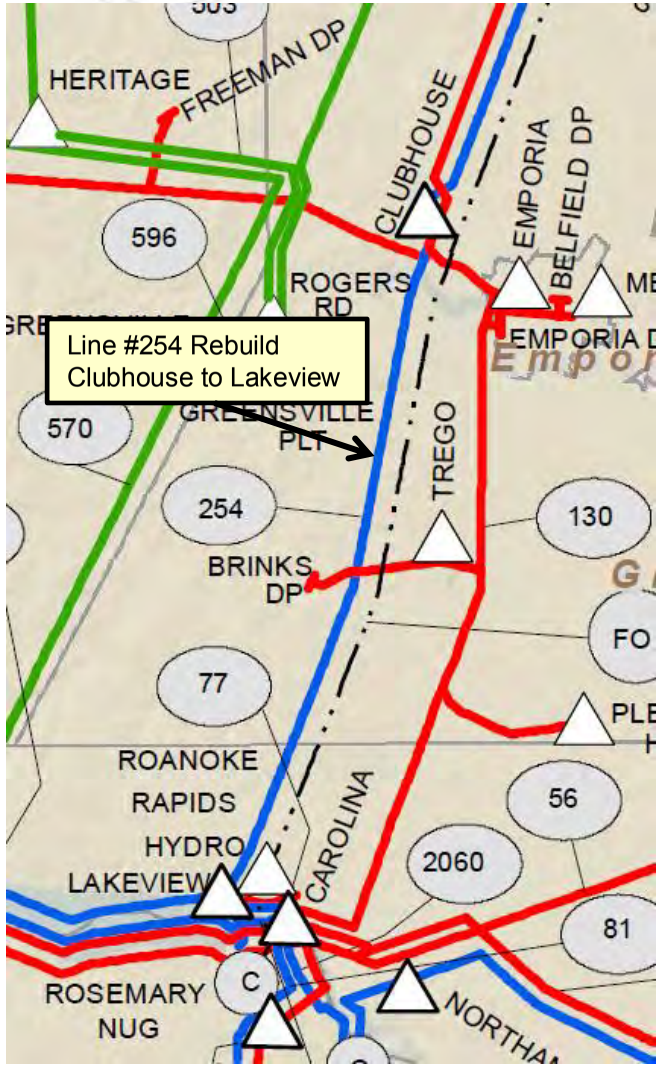
Proposed Solution:
Rebuild 230kV Line #254 with single-circuit wood pole equivalent structures at the current 230kV standard with a minimum rating of 1047 MVA.

- **Estimated Cost:** $27.0 M

Alternatives:
No feasible alternatives.

Required In-Service: Immediate Need

Project Status: Conceptual



COLOR	VOLTAGE	TRANSMISSION LINE NUMBER
	500 KV.	500 thru 599
	230 KV.	200 thru 299 & 2000 thru 2099
	115 KV.	1 thru 199
	138 KV.	AS NOTED
	69 KV.	AS NOTED

Reliability Analysis Update

Transmission Expansion Advisory Committee

July 11, 2019

Dominion Transmission Zone: Baseline 230kV Line #254 Rebuild (End of Life Criteria)

Process Stage: Recommended Solution

Criteria: End of Life

Assumption Reference: FERC 715

Model Used for Analysis: 2018 Series 2023 Summer RTEP

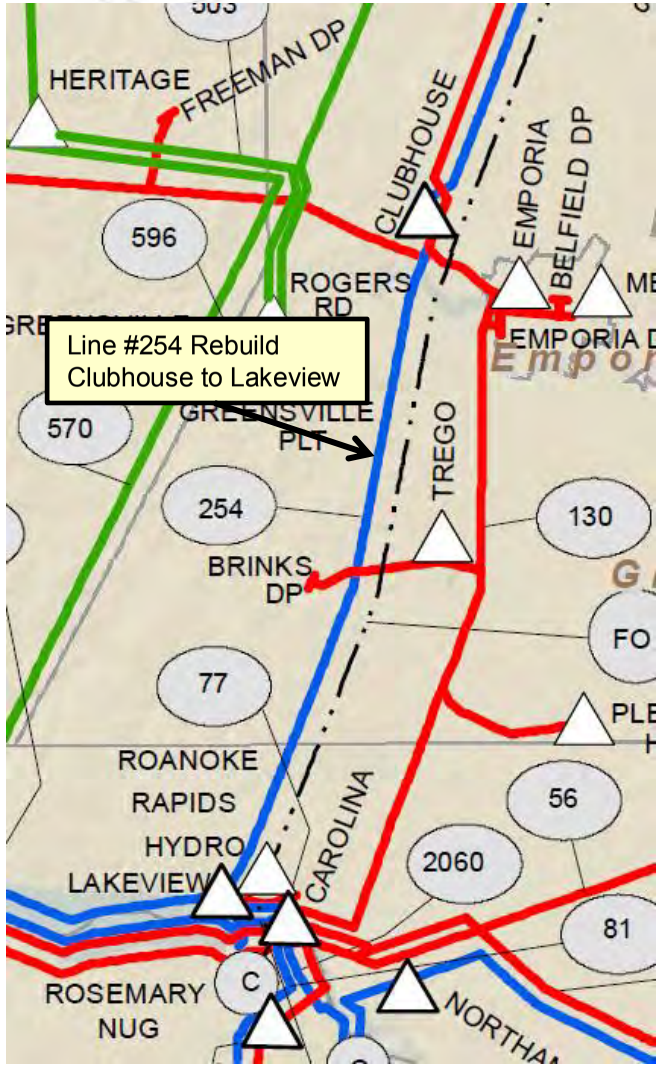
Proposal Window Exclusion: FERC 715 (TO Criteria)

Problem Statement:

The 230kV Line #254, from Clubhouse to Lakeview, is approximately 18 miles long and was constructed on wooden H-frame structures in 1962. Industry guidelines indicate equipment life for wood structures is 35-55 years, conductor and connectors are 40-60 years and porcelain insulators are 50 years.

Reliability studies indicate that retiring Line #254 will result in thermal overloads in accordance with P1, P2, P4, P6, and P7 NERC criteria violations. There is also an operational performance need for Line #254, as generator AB2-100 would be left unserved if the line were retired.

Existing Facility Rating: 399 MVA STE
Preliminary Facility Rating: 1047 MVA STE



COLOR	VOLTAGE	TRANSMISSION LINE NUMBER
	500 KV.	500 thru 599
	230 KV.	200 thru 299 & 2000 thru 2099
	115 KV.	1 thru 199
	138 KV.	AS NOTED
	69 KV.	AS NOTED

Continued on next slide…

Dominion Transmission Zone: Baseline 230kV Line #254 Rebuild (End of Life Criteria)

Recommended Solution:
Rebuild 230kV Line #254 with single-circuit wood pole equivalent structures at the current 230kV standard with a minimum rating of 1047 MVA. **(b3121)**

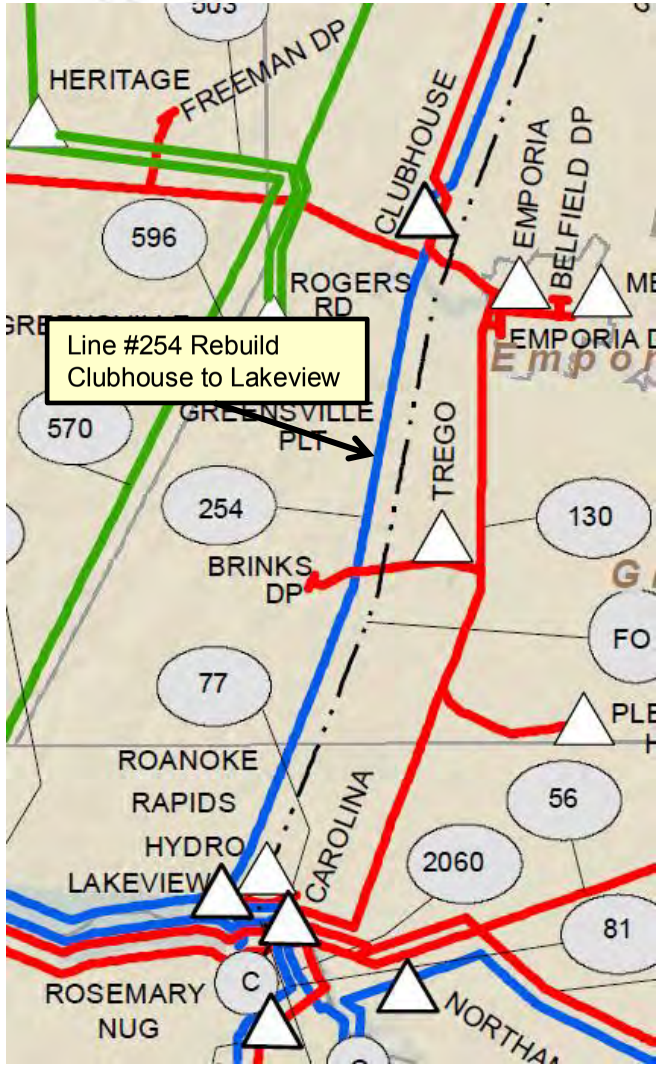
- **Estimated Cost:** $27.0 M

Required In-Service: Immediate Need

Projected In-Service: 12/31/2024

Project Status: Conceptual

Previously Presented: 6/13/2019 TEAC



COLOR	VOLTAGE	TRANSMISSION LINE NUMBER
	500 KV.	500 thru 599
	230 KV.	200 thru 299 & 2000 thru 2099
	115 KV.	1 thru 199
	138 KV.	AS NOTED
	69 KV.	AS NOTED

I. NECESSITY FOR THE PROPOSED PROJECT

B. [1] Detail the engineering justifications for the proposed project (for example, provide narrative to support whether the proposed project is necessary to upgrade or replace an existing facility, to significantly increase system reliability, to connect a new generating station to the Applicant's system, etc.). [2] Describe any known future project(s), including but not limited to generation, transmission, delivery point or retail customer projects, that require the proposed project to be constructed. [3] Verify that the planning studies used to justify the need for the proposed project considered all other generation and transmission facilities impacting the affected load area, including generation and transmission facilities that have not yet been placed into service. [4] Provide a list of those facilities that are not yet in service.

Response: **(1) <u>Engineering Justification for Project</u>**

For a detailed description of the engineering justification of the proposed Virginia Rebuild Project, see Section I.A.

(2) <u>Known Future Projects</u>

There are no known future projects that require the Virginia Rebuild Project to be constructed. The Virginia Rebuild Project is required by the Company's end-of-life criteria as described in Section I.A.

(3) <u>Planning Studies</u>

See Section I. D.

(4) <u>Facilities List</u>

Not applicable.

I. NECESSITY FOR THE PROPOSED PROJECT

C. Describe the present system and detail how the proposed project will effectively satisfy present and projected future electrical load demand requirements. Provide pertinent load growth data (at least five years of historical summer and winter peak demands and ten years of projected summer and winter peak loads where applicable). Provide all assumptions inherent within the projected data and describe why the existing system cannot adequately serve the needs of the Applicant (if that is the case). Indicate the date by which the existing system is projected to be inadequate.

Response: Attachment I.G.1 shows the portion of the Company's existing transmission system in the area of the VA-NC Rebuild Project. The existing Lines #2201 and #254 are part of the Company's 230 kV network.

The tables in Attachment I.C.1 provide 10 years of historical summer and winter loads for the central region of the Dominion Energy Virginia system (including Richmond, Chesterfield, and Southside, for purposes of this Appendix) and 10 years of projected summer and winter peak loads for the central region of the Dominion Energy Virginia system.

The existing Lines #2201 and #254 cannot continue to adequately serve the needs of the Company and its customers because of the aging infrastructure, as discussed in Section I.A. The Company has created a plan to address its end-of-life facilities, setting target completion dates for end-of-life projects based on the condition of the facilities, the Company's resources, and the need to schedule outages. The desired in-service date for completion of the proposed VA-NC Rebuild Project is October 15, 2023.

Completing the proposed Virginia Rebuild Project will support Dominion Energy Virginia's continued reliable electric service to retail and wholesale customers and will support the future overall growth and system generation capability in the area, as discussed in Section I.A.

Historical Loads (MW)

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
(Summer)	Dominion Central Region – Richmond	1,999	2,037	1,979	1,873	1,894	1,927	1,980	1,908	1,947	1,919
	Dominion Central Region - Chesterfield	1,708	1,754	1,686	1,631	1,630	1,688	1,744	1,687	1,650	1,666
	Dominion Central Region - Southside	573	584	562	567	593	597	621	583	642	633
(Winter)	Dominion Central Region – Richmond	1,987	1,950	1,868	1,940	2,269	2,433	2,098	2,311	2,441	2,235
	Dominion Central Region - Chesterfield	1,835	1,726	1,690	1,782	2,099	2,231	1,809	2,129	2,269	1,863
	Dominion Central Region - Southside	638	601	612	637	768	824	727	812	842	783

Projected Loads (MW)*

		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
(Summer)	Dominion Central Region – Richmond	2,076	2,107	2,133	2,155	2,177	2,199	2,213	2,234	2,252	2,275
	Dominion Central Region - Chesterfield	1,762	1,788	1,799	1,811	1,824	1,830	1,830	1,841	1,849	1,862
	Dominion Central Region - Southside	651	647	649	652	656	661	664	669	673	678
(Winter)	Dominion Central Region – Richmond	2,362	2,422	2,463	2,502	2,539	2,599	2,636	2,673	2,709	2,744
	Dominion Central Region - Chesterfield	2,112	2,127	2,153	2,177	2,200	2,242	2,265	2,287	2,308	2,329
	Dominion Central Region - Southside	805	818	829	841	853	873	886	898	911	923

* PJM 2020 Load Forecast

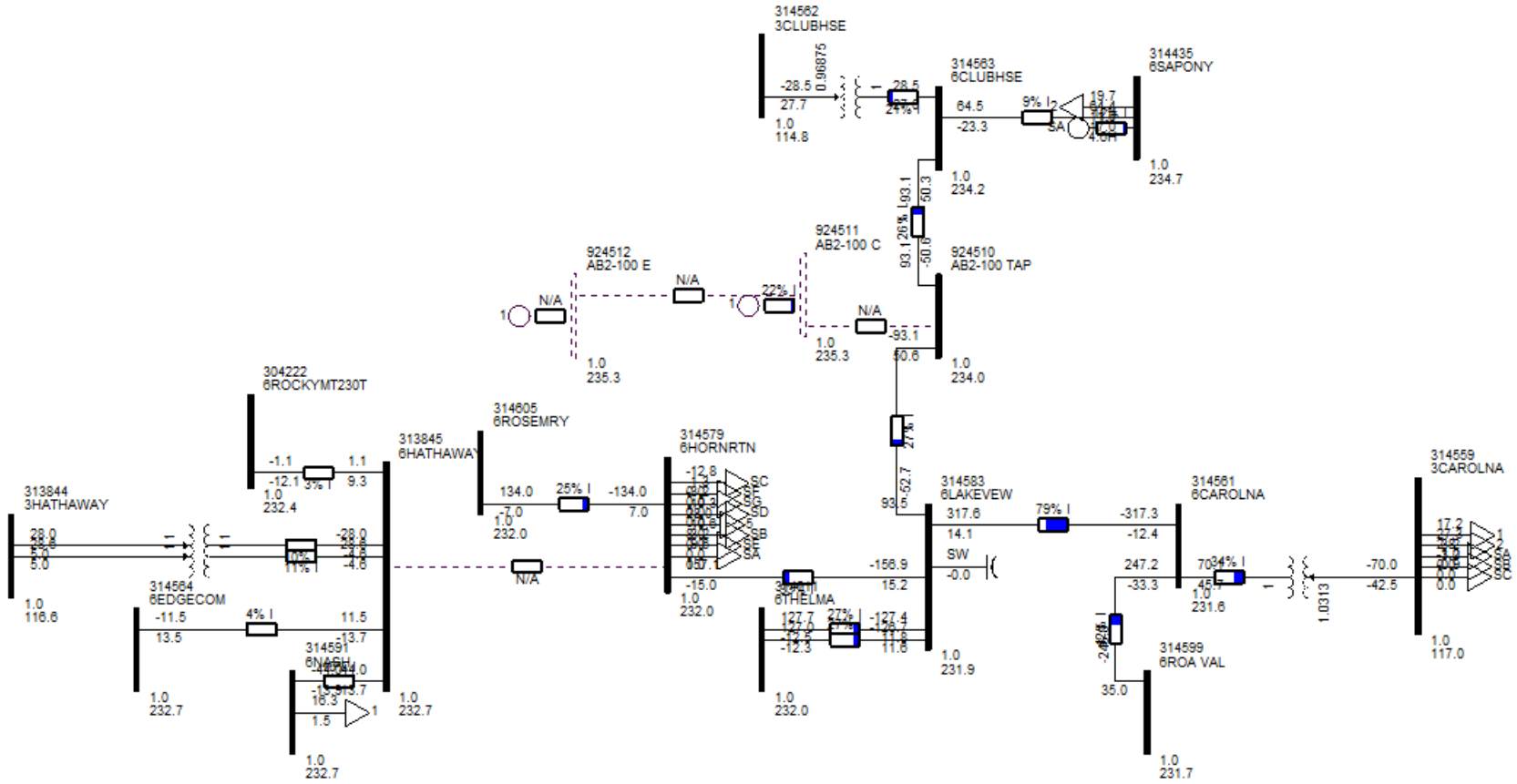
I. NECESSITY FOR THE PROPOSED PROJECT

D. If power flow modeling indicates that the existing system is, or will at some future time be, inadequate under certain contingency situations, provide a list of all these contingencies and the associated violations. Describe the critical contingencies including the affected elements and the year and season when the violation(s) is first noted in the planning studies. Provide the applicable computer screenshots of single-line diagrams from power flow simulations depicting the circuits and substations experiencing thermal overloads and voltage violations during the critical contingencies described above.

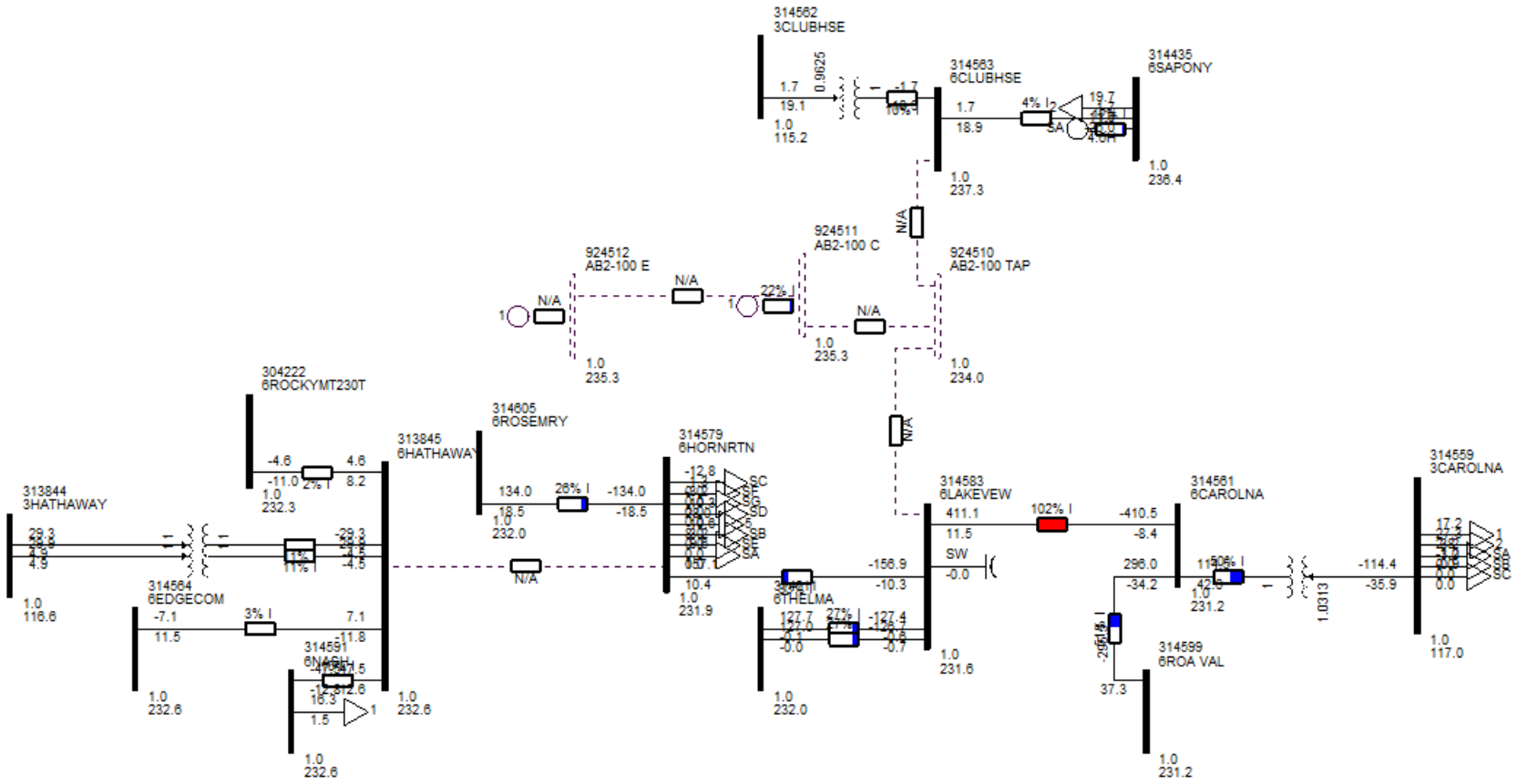
Response: The Company's end-of-life evaluation consists of running steady-state power flow analysis to determine if any overloads would be present in the system with the line removed from service. With Lines #2201 and #254 removed from service, violations are present in all sets of contingency analysis. Tabled results from TARA are shown in Attachment I.D.1.

Scenar_	Monitored Facility	Cont Name	Base Flow (MVA)	Cont Flow (MVA)	Final DC %Loadin	Final AC %Loadin
Single	314561 6CAROLNA 230 314583 6LAKEVEW 230 1	DVP_P1-2: LN 2056	202.4	408.5	102.49	102.38
Branch	314561 6CAROLNA 230 314583 6LAKEVEW 230 1	313845 6HATHAWAY 230 314579 6HORNRTN 230 1	202.4	408.5	102.49	102.38
Tower	314561 6CAROLNA 230 314583 6LAKEVEW 230 1	DVP_P7-1: LN 81-2056	202.4	408.6	102.48	102.4
FB	314561 6CAROLNA 230 314583 6LAKEVEW 230 1	DVP_P4-2: 205602	202.4	408.5	102.49	102.38
FB	314561 6CAROLNA 230 314583 6LAKEVEW 230 1	DVP_P4-2: 2056T2181	202.4	408.4	102.46	102.35

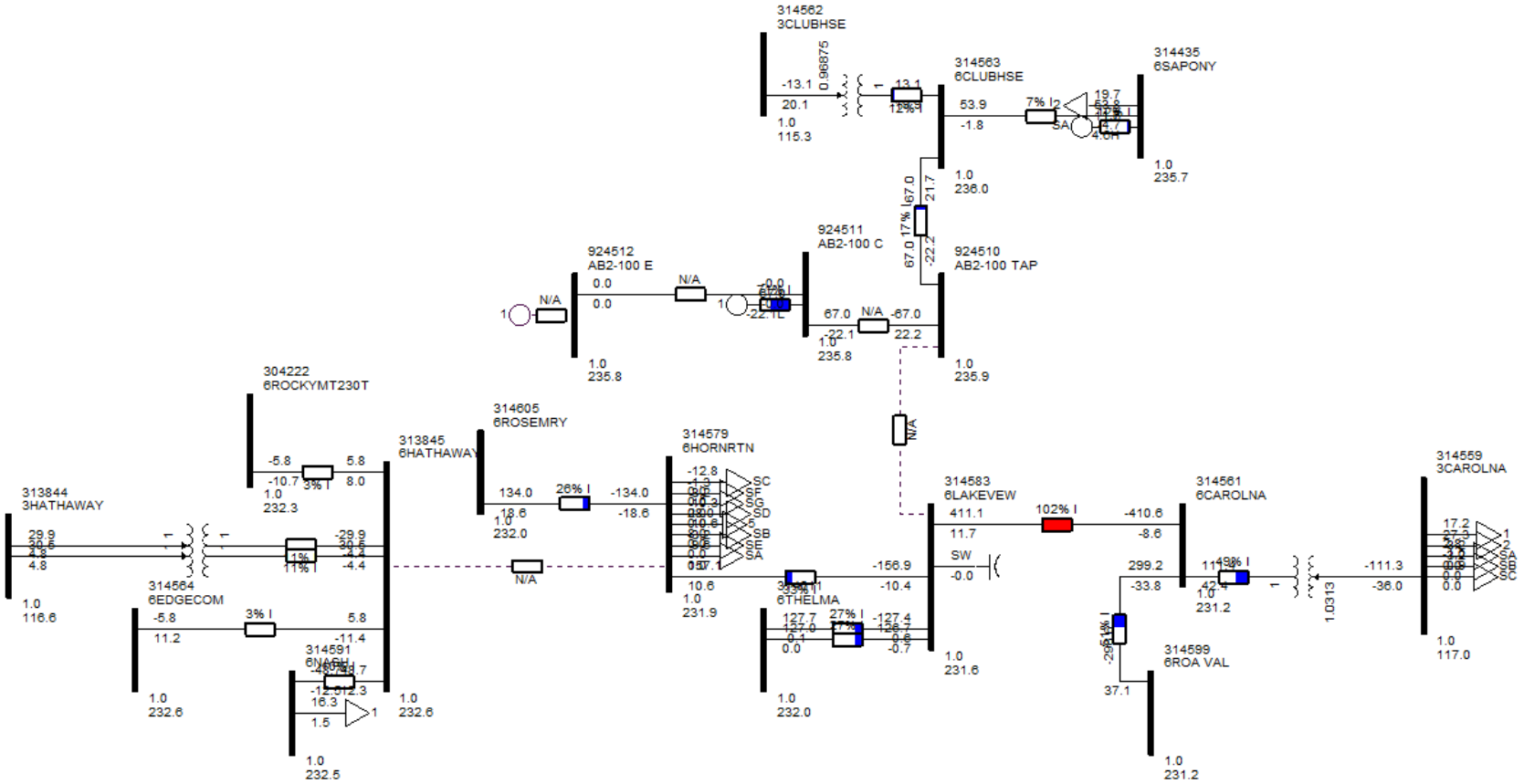
Tara Results



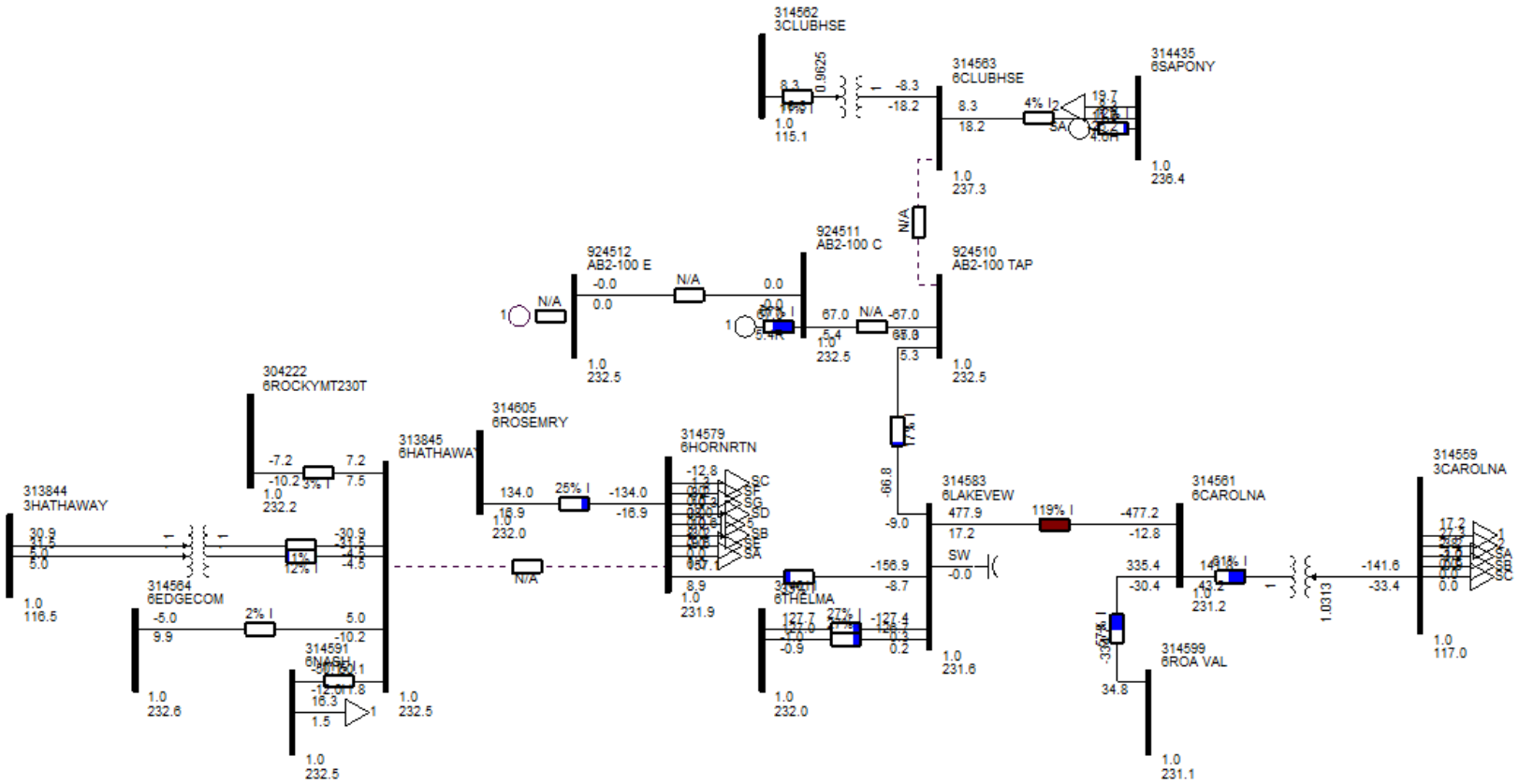
N-1: Line 254/Line 2201 In-Service – Lakeview to Carolina Loading – Contingency: Line 2056 (Hathaway – Hornertown)



N-1: Line 254/Line2201 Out-of-Service – Lakeview to Carolina Overload – Contingency: Line 2056 (Hathaway – Hornertown)



N-1: Line 2201 Out-of-Service – Lakeview to Carolina Overload – Contingency: Line 2056 (Hathaway – Hornertown)



N-1: Line 254 Out-of-Service – Lakeview to Carolina Overload – Contingency: Line 2056 (Hathaway – Hornertown)

I. NECESSITY FOR THE PROPOSED PROJECT

E. Describe the feasible project alternatives, if any, considered for meeting the identified need including any associated studies conducted by the Applicant or analysis provided to the RTO. Explain why each alternative was rejected.

Response: No feasible alternatives have been submitted to PJM since the driver of the VA-NC Rebuild Project is the need to replace aging infrastructure at the end of its service life in compliance with the Company's mandatory Planning Criteria. See Section I.A. Alternatives that would require acquisitions of new right-of-way or new lines to be built were not considered.

Pursuant to the Commission's November 26, 2013, Order entered in Case No. PUE-2012-00029, and its November 1, 2018, Final Order entered in Case No. PUR-2018-00075 ("2018 Final Order"), the Company is required to provide analysis of demand-side resources ("DSM") incorporated into the Company's planning studies. DSM is the broad term that includes both energy efficiency ("EE") and demand response ("DR"). In this case, PJM and the Company have identified a need for the proposed VA-NC Rebuild Project based on aging infrastructure that is at the end of its service life to maintain the overall long-term reliability of its transmission system and to maintain the overall generating capabilities of the system.[8] Notwithstanding, when performing an analysis based on PJM's 50/50 load forecast, there is no adjustment in load for DR programs that are bid into the PJM reliability pricing model ("RPM") auction because PJM only dispatches DR when the system is under stress (*i.e.*, a system emergency). Accordingly, while existing DSM is considered to the extent the load forecast accounts for it, DR that has been bid into PJM's RPM market is not a factor in this particular Application because of the identified need for the VA-NC Rebuild Project. Based on these considerations, the evaluation of the VA-NC Rebuild Project demonstrated that despite accounting for DSM consistent with PJM's methods, the VA-NC Rebuild Project is necessary. As noted in the 2018 Final Order, pursuant to the Grid Transformation and Modernization Act of 2018, the Company must propose $870 million of EE programs by 2028. Since July 1, 2018, the Company has proposed approximately $344 million for the design, implementation, and operation of energy efficiency programs in the Commonwealth. This amount includes approximately $173.5 million of new energy efficiency programs, designated as "Phase VIII" of the Company's DSM portfolio, which the Commission approved on July 30, 2020. These programs have not been accounted for in PJM's load forecast, and thus, were not part of the Company's planning studies.

[8] While the PJM load forecast does not directly incorporate DR, its load forecast incorporates variables derived from Itron that reflect EE by modeling the stock of end-use equipment and its usages. Further, because PJM's load forecast considers the historical non-coincident peak ("NCP") for each load serving entity ("LSE") within PJM, it reflects the actual load reductions achieved by DSM programs to the extent an LSE has used DSM to reduce its NCPs.

I. NECESSITY FOR THE PROPOSED PROJECT

F. Describe any lines or facilities that will be removed, replaced, or taken out of service upon completion of the proposed project, including the number of circuits and normal and emergency ratings of the facilities.

Response: The Virginia Rebuild Project includes the removal and replacement of existing facilities on existing Lines #2201 and #254 as described below. There will be no lines permanently taken out of service as part of the proposed Virginia Rebuild Project.

Ninety-two 230 kV wood/wood pole equivalent H-frame structures, and two 230 kV wood/wood pole equivalent three-pole structures supporting Lines #2201 and #254 will be replaced with ninety-four 230 kV weathering steel H-frame structures. See Attachment II.B.5.a.

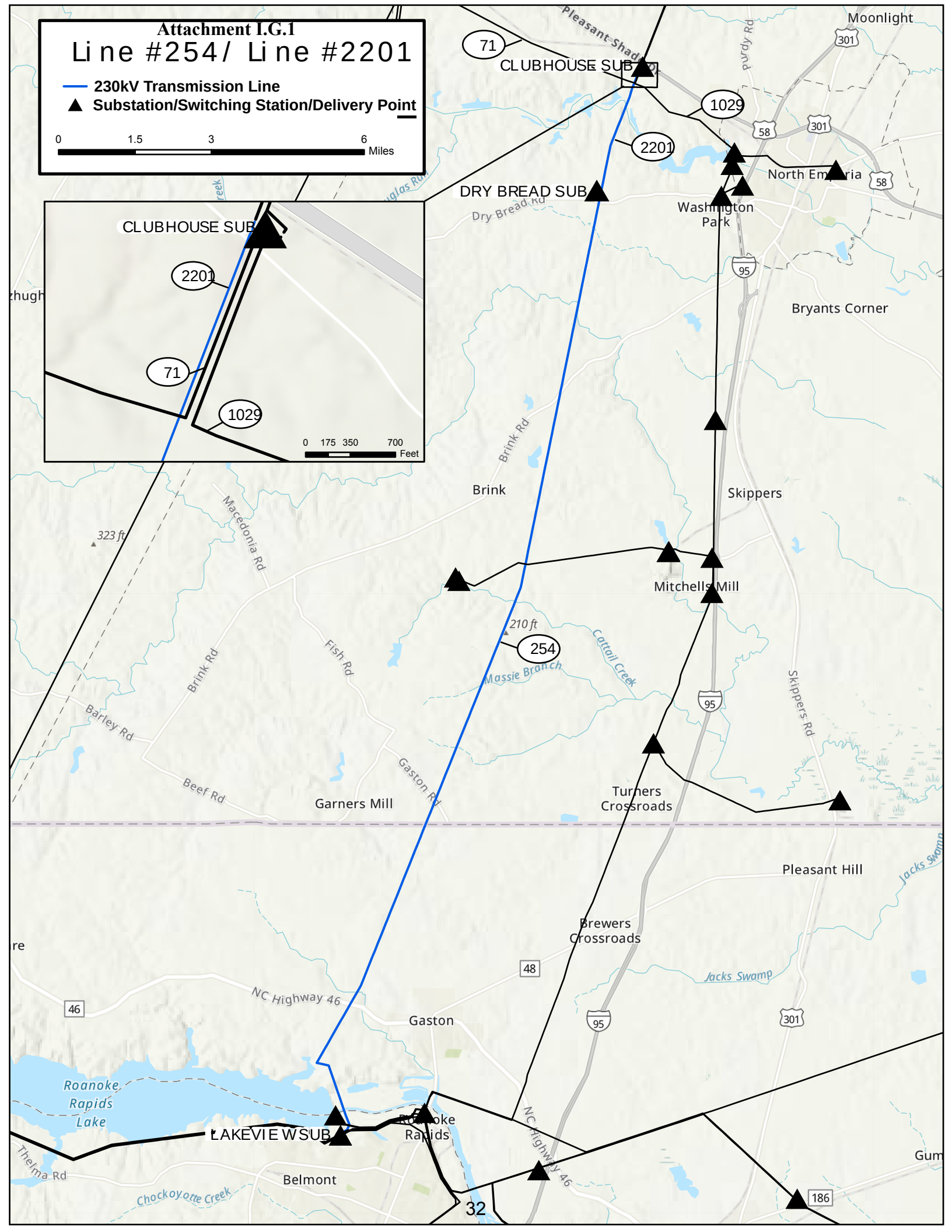
In addition to the structure replacements, the existing 3-phase 795 ACSR conductors will be replaced with 3-phase twin-bundled 636 ACSR conductors. The one 3#6 alumoweld and 7#7 alumoweld shield wires, and one 26_39MM2 fiber optic shield wire will be replaced with two optical ground wire ("OPGW") fiber optic shield wires.

The existing capacity of Lines #2201 and #254 has normal/emergency ratings of 399/399 megavolt amperes ("MVA") summer and 505/505 MVA winter. With the Virginia Rebuild Project, the capacity of the rebuilt lines will have normal/emergency ratings of 1047/1047 MVA summer and 1160/1160 MVA winter.

I. NECESSITY FOR THE PROPOSED PROJECT

G. Provide a system map, in color and of suitable scale, showing the location and voltage of the Applicant's transmission lines, substations, generating facilities, etc., that would affect or be affected by the new transmission line and are relevant to the necessity for the proposed line. Clearly label on this map all points referenced in the necessity statement.

Response: See Attachment I.G.1.


Attachment I.G.1
Line #254/ Line #2201
230kV Transmission Line
Substation/Switching Station/Delivery Point
0 1.5 3 6 Miles
CLUBHOUSE SUB
2201
71
1029
0 175 350 700 Feet
71
CLUBHOUSE SUB
1029
2201
DRY BREAD SUB
Dry Bread Rd
Moonlight
Purdy Rd
Pleasant Shade
North Emporia
Washington Park
Bryants Corner
Brink Rd
Brink
Skippers
Mitchells Mill
323 ft
Macedonia Rd
210 ft
254
Massie Branch
Cattail Creek
Fish Rd
Barley Rd
Beef Rd
Garners Mill
Gaston Rd
Turners Crossroads
Skippers Rd
Pleasant Hill
Jacks Swamp
Brewers Crossroads
NC Highway 46
Gaston
Roanoke Rapids Lake
LAKEVIEW SUB
Roanoke Rapids
Thelma Rd
Belmont
Chockoyotte Creek
32
186
Gum
58
301
95
48
46

I. NECESSITY FOR THE PROPOSED PROJECT

H. Provide the desired in-service date of the proposed project and the estimated construction time.

Response: The desired in-service date for the VA-NC Rebuild Project is October 15, 2023.

The Company estimates it will take approximately 23 months for detailed engineering, scheduled outages, materials procurement, permitting, and construction of the VA-NC Rebuild Project after a final order from the Commission on the Virginia Rebuild Project. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order on the Virginia Rebuild Project by September 1, 2021. Should the Commission issue a final order by September 1, 2021, the Company estimates that construction of the VA-NC Rebuild Project should begin on February 1, 2022 and be completed by October 15, 2023. This construction timeline will enable the Company to meet the targeted in-service date for the Virginia Rebuild Project.

I. NECESSITY FOR THE PROPOSED PROJECT

I. Provide the estimated total cost of the project as well as total transmission-related costs and total substation-related costs. Provide the total estimated cost for each feasible alternative considered. Identify and describe the cost classification (e.g. "conceptual cost," "detailed cost," etc.) for each cost provided.

Response: The total estimated conceptual cost of the Virginia Rebuild Project is approximately $16.4 million (2020 dollars), which includes the following:

- Approximately $16.1 million for transmission-related work, which includes the removal and replacement of the existing 230 kV transmission Lines #2201 and #254 facilities from within the Clubhouse Substation (Structure #2201/1A) to the Virginia state line (Structure #254/113); and

- Approximately $0.3 million for substation-related work at the existing Clubhouse and Dry Bread Substations as described in Section II C.

The total estimated conceptual cost of the VA-NC Rebuild Project is approximately $23.6 million (2020 dollars), which includes estimated costs associated with the North Carolina Rebuild Project.

I. NECESSITY FOR THE PROPOSED PROJECT

J. If the proposed project has been approved by the RTO, provide the line number, regional transmission expansion plan number, cost responsibility assignments, and cost allocation methodology. State whether the proposed project is considered to be a baseline or supplemental project.

Response: The proposed VA-NC Rebuild Project was approved by the PJM Board at its July 2019 meeting as a baseline project (b3121). See Attachment I.A.4. While the PJM Board approved the VA-NC Rebuild Project as a baseline project, the rebuild would have been considered a supplemental project under the M-3 EOL Planning Criteria if it had been presented to PJM after that criteria became effective March 24, 2020. See Section I.A.

The VA-NC Rebuild Project is presently allocated 100% to the DOM Zone.

I. NECESSITY FOR THE PROPOSED PROJECT

K. If the need for the proposed project is due in part to reliability issues and the proposed project is a rebuild of an existing transmission line(s), provide five years of outage history for the line(s), including for each outage the cause, duration and number of customers affected. Include a summary of the average annual number and duration of outages. Provide the average annual number and duration of outages on all Applicant circuits of the same voltage, as well as the total number of such circuits. In addition to outage history, provide five years of maintenance history on the line(s) to be rebuilt including a description of the work performed as well as the cost to complete the maintenance. Describe any system work already undertaken to address this outage history.

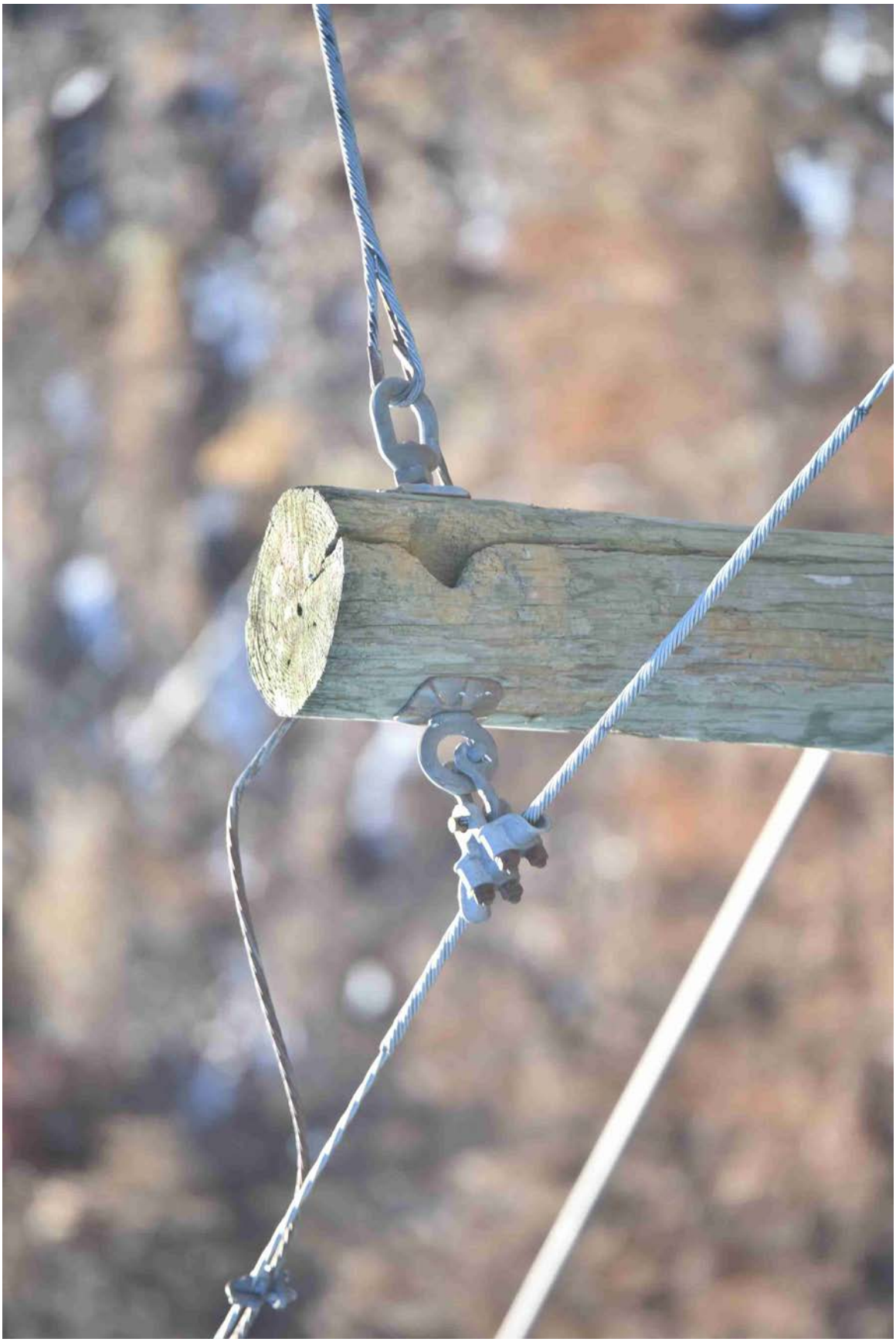
Response: The need for the proposed Virginia Rebuild Project is not driven by outage history, but rather by the need to replace transmission infrastructure nearing its end of life. See Section I.A.

I. NECESSITY FOR THE PROPOSED PROJECT

L. If the need for the proposed project is due in part to deterioration of structures and associated equipment, provide representative photographs and inspection records detailing their condition.

Response: See Attachment I.L.1 for pictures of the deterioration of Virginia Rebuild Project structures on Lines #2201 and #254, and Attachment I.L.2 for a list of structures supporting Lines #2201 and #254 in Virginia where structure damage has been reported that requires structure replacement within the next five years.

Str. 2201/10



Str. 2201/12

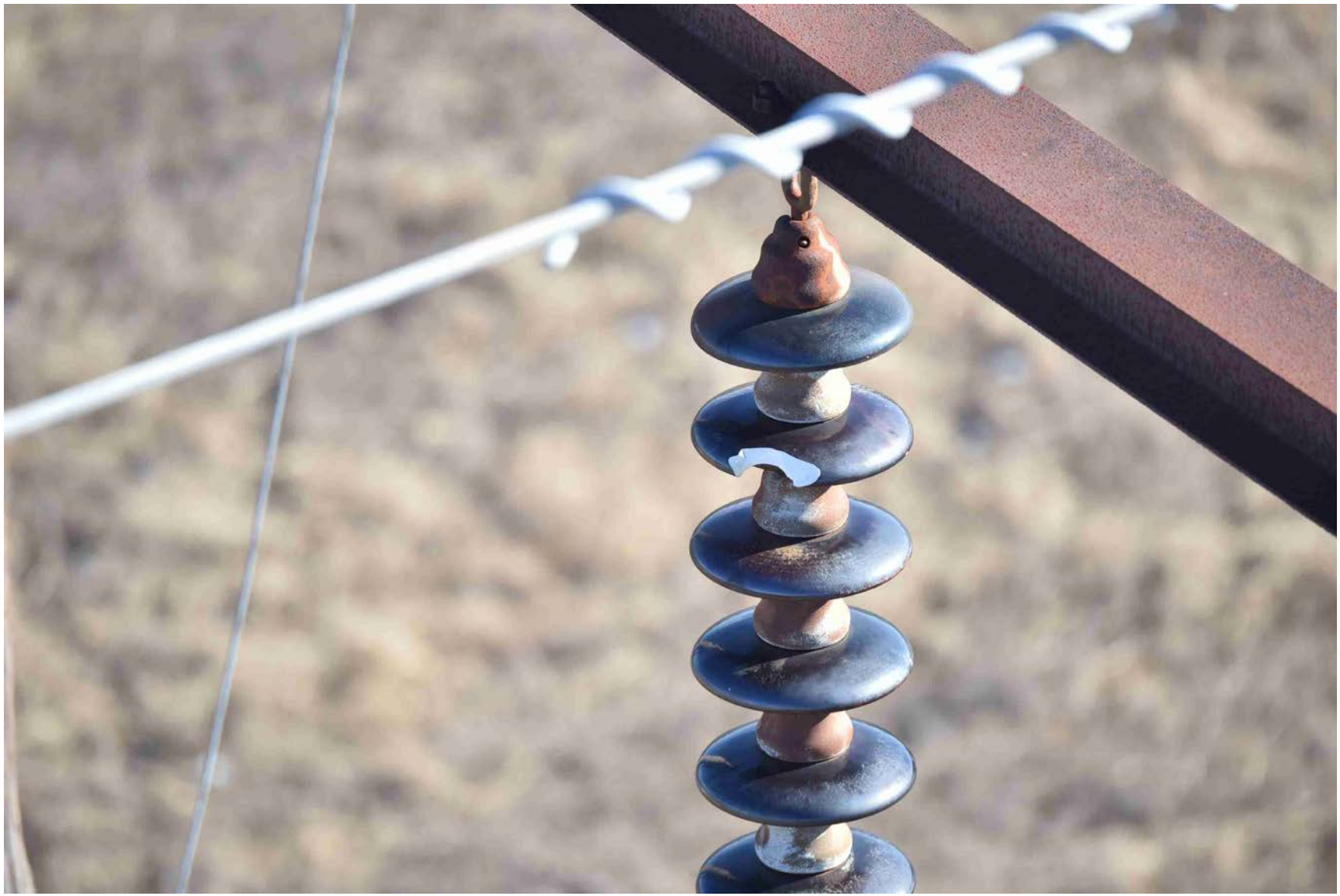
Str. 254/17

Str. 254/30

Str. 254/30

Str. 254/41

Str. 254/41



Str. 254/45

Str. 254/46

Str. 254/56

Str. 254/68

Str. 254/99

Lines 2201 and 254 - Structures Requiring Replacement within the next Five Years		
Equipment	**Reported Structure Damage**	**State**
2201/5	Pole Rot/Decay	VA
2201/10	Woodpecker Damage, Pole Rot/Decay	VA
2201/12	Woodpecker Damage, Pole Rot/Decay	VA
254/17	Woodpecker Damage, Pole Rot/Decay	VA
254/27	Woodpecker Damage, Pole Rot/Decay	VA
254/28	Pole Rot/Decay	VA
254/30	Woodpecker Damage, Pole Rot/Decay	VA
254/37	Pole Rot/Decay	VA
254/41	Woodpecker Damage, Pole Rot/Decay, Insulator Damage	VA
254/44	Woodpecker Damage, Pole Rot/Decay, Insulator Damage	VA
254/45	Woodpecker Damage, Pole Rot/Decay	VA
254/46	Pole Rot/Decay	VA
254/50	Woodpecker Damage, Pole Rot/Decay	VA
254/52	Pole Rot/Decay	VA
254/53	Woodpecker Damage, Pole Rot/Decay	VA
254/56	Woodpecker Damage, Pole Rot/Decay	VA
254/57	Woodpecker Damage, Pole Rot/Decay	VA
254/59	Woodpecker Damage, Pole Rot/Decay	VA
254/60	Woodpecker Damage, Pole Rot/Decay	VA
254/63	Woodpecker Damage, Pole Rot/Decay	VA
254/65	Woodpecker Damage, Pole Rot/Decay	VA
254/66	Woodpecker Damage, Pole Rot/Decay	VA
254/68	Pole Damage	VA
254/70	Woodpecker Damage, Pole Rot/Decay	VA
254/71	Woodpecker Damage, Pole Rot/Decay	VA
254/72	Woodpecker Damage, Pole Rot/Decay	VA
254/74	Pole Rot/Decay	VA
254/75	Pole Damage	VA
254/76	Pole Damage	VA
254/77	Woodpecker Damage, Pole Rot/Decay	VA
254/81	Pole Rot/Decay	VA
254/84	Pole Rot/Decay	VA
254/89	Pole Rot/Decay	VA
254/99	Woodpecker Damage, Pole Rot/Decay	VA

I. NECESSITY FOR THE PROPOSED PROJECT

M. In addition to the other information required by these guidelines, applications for approval to construct facilities and transmission lines interconnecting a Non-Utility Generator ("NUG") and a utility shall include the following information:

1. The full name of the NUG as it appears in its contract with the utility and the dates of initial contract and any amendments;

2. A description of the arrangements for financing the facilities, including information on the allocation of costs between the utility and the NUG;

3. a. For Qualifying Facilities ("QFs") certificated by Federal Energy Regulatory Commission ("FERC") order, provide the QF or docket number, the dates of all certification or recertification orders, and the citation to FERC Reports, if available;

b. For self-certificated QFs, provide a copy of the notice filed with FERC;

4. Provide the project number and project name used by FERC in licensing hydroelectric projects; also provide the dates of all orders and citations to FERC Reports, if available; and

5. If the name provided in 1 above differs from the name provided in 3 above, give a full explanation.

Response: Not applicable.

I. NECESSITY FOR THE PROPOSED PROJECT

N. Describe the proposed and existing generating sources, distribution circuits or load centers planned to be served by all new substations, switching stations and other ground facilities associated with the proposed project.

Response: Not applicable.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

1. Provide the length of the proposed corridor and viable alternatives.

Response: The length of the existing right-of-way for the Virginia Rebuild Project is approximately 1.6 miles from the Clubhouse Substation (Structure #2201/1A) to the Dry Bread Substation (Structure #2201/14 / #254/14), and continues for an additional 10.9 miles from Dry Bread Substation to the Virginia state line (Structure #254/113).

The Virginia Rebuild Project will be constructed entirely within existing transmission line right-of-way or on Company-owned property, with no additional right-of-way required. Because alternatives to the Virginia Rebuild Project that would require acquisitions of new rights-of-way were not considered, no alternative routes are proposed. See Section II.A.9 for an explanation of the Company's route selection.

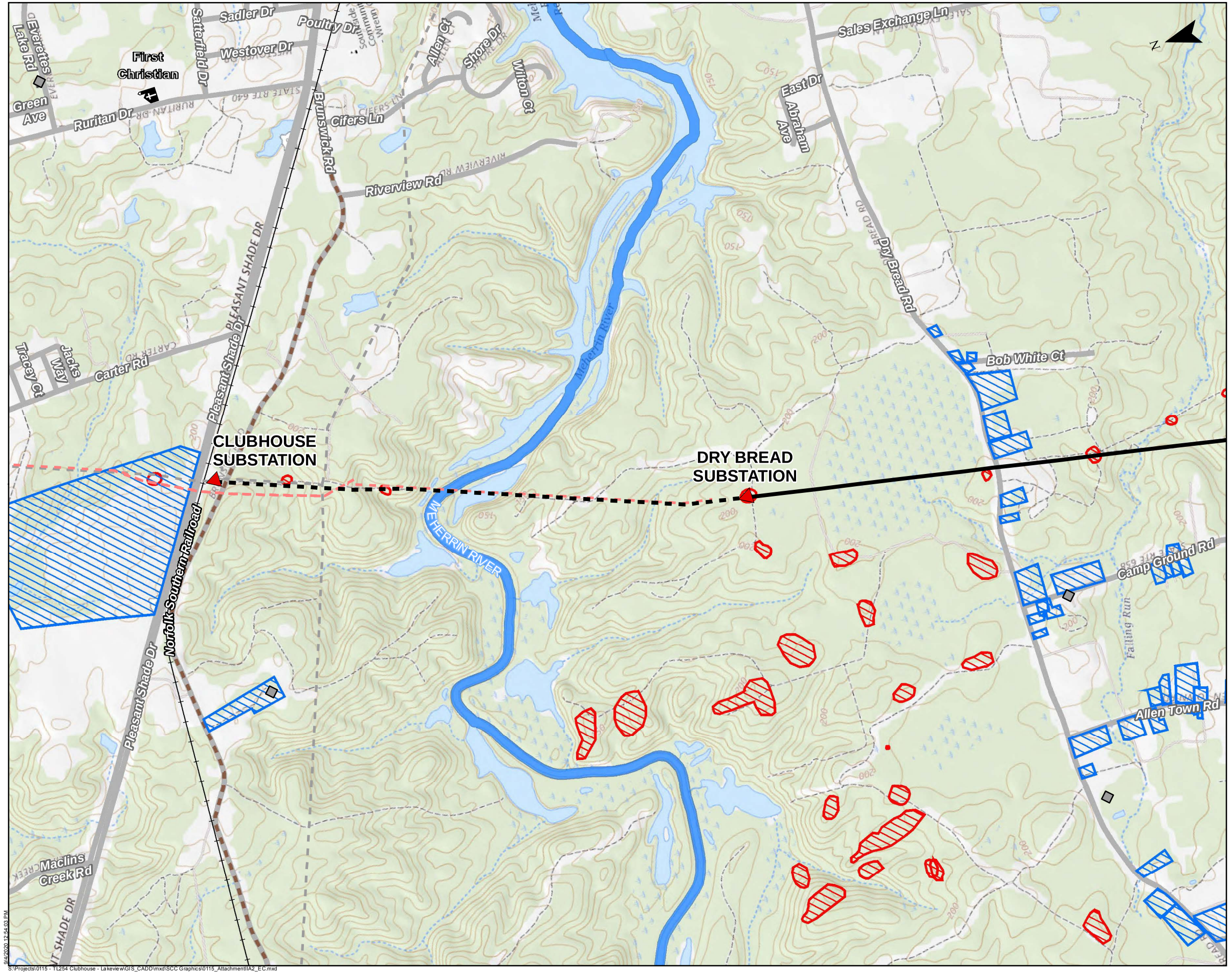
II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

2. Provide color maps of suitable scale (including both general location mapping and more detailed GIS-based constraints mapping) showing the route of the proposed line and its relation to: the facilities of other public utilities that could influence the route selection, highways, streets, parks and recreational areas, scenic and historic areas, open space and conservation easements, schools, convalescent centers, churches, hospitals, burial grounds/cemeteries, airports and other notable structures close to the proposed project. Indicate the existing linear utility facilities that the line is proposed to parallel, such as electric transmission lines, natural gas transmission lines, pipelines, highways, and railroads. Indicate any existing transmission ROW sections that are to be quitclaimed or otherwise relinquished. Additionally, identify the manner in which the Applicant will make available to interested persons, including state and local governmental entities, the digital GIS shape file for the route of the proposed line.

Response: See Attachment II.A.2.a. The proposed Virginia Rebuild Project shares the existing transmission right-of-way with Line #71 and Line #1029 for approximately 0.3 mile from the Clubhouse Substation to Structure #2201/3. A gas line also parallels and is co-located in the right-of-way for approximately 1.4 miles from the Clubhouse Substation and heading south to Structure #254/24. No portion of the right-of-way is proposed to be quitclaimed or relinquished.

The Company will make the digital Geographic Information Systems ("GIS") shape file available to interested persons upon request to counsel for the Company as listed in the Virginia Rebuild Project Application.



ATTACHMENT II.A.2

ENVIRONMENTAL CONSTRAINTS MAP

Line 2201 Clubhouse to Dry Bread
and Line 254 Dry Bread to Lakeview
230 kV Transmission Line Rebuild

Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	09/04/20

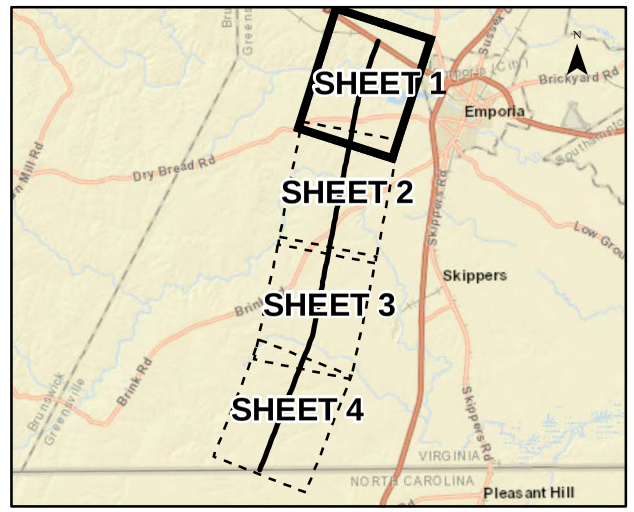
0 750 1,500 3,000 Feet

Scale is 1 IN = 1,500 FT when printed at original size of 11x17

SITE DATA

- Line #2201
- Line #254
- Existing Substation
- Existing Gas Line
- Other Existing Transmission Line
- Church
- Cemetery
- DCR Potentially Scenic River
- DCR Beaches to Bluegrass Trail
- Archaeological Resources
- Architecture Resources
- Railroad
- Road

Notes:
1. Basemap Source: USGS National Map: National Boundaries; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: VDHR, VDCR, VGIN, and the GIS User Community
3. Structure locations and existing transmission line locations provided by Dominion Energy Virginia



ENVIRONMENTAL

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SHEET 1 OF 4

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ATTACHMENT II.A.2

ENVIRONMENTAL CONSTRAINTS MAP

Line 2201 Clubhouse to Dry Bread
and Line 254 Dry Bread to Lakeview
230 kV Transmission Line Rebuild

Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	09/04/20

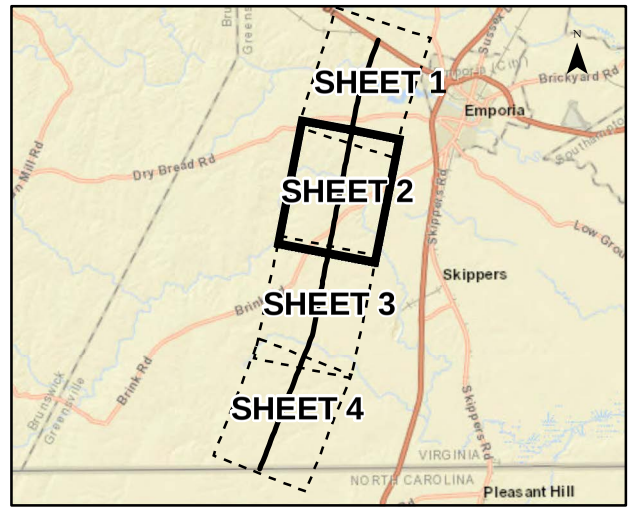
0 750 1,500 3,000 Feet

Scale is 1 IN = 1,500 FT when printed at original size of 11x17

SITE DATA

- Line #2201
- Line #254
- Existing Substation
- Existing Gas Line
- Other Existing Transmission Line
- Church
- Cemetery
- DCR Potentially Scenic River
- DCR Beaches to Bluegrass Trail
- Archaeological Resources
- Architecture Resources
- Railroad
- Road

Notes:
1. Basemap Source: USGS National Map: National Boundaries; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: VDHR, VDCR, VGIN, and the GIS User Community
3. Structure locations and existing transmission line locations provided by Dominion Energy Virginia



ENVIRONMENTAL

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SHEET 2 OF 4

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ATTACHMENT II.A.2

ENVIRONMENTAL CONSTRAINTS MAP

Line 2201 Clubhouse to Dry Bread
and Line 254 Dry Bread to Lakeview
230 kV Transmission Line Rebuild

Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	09/04/20

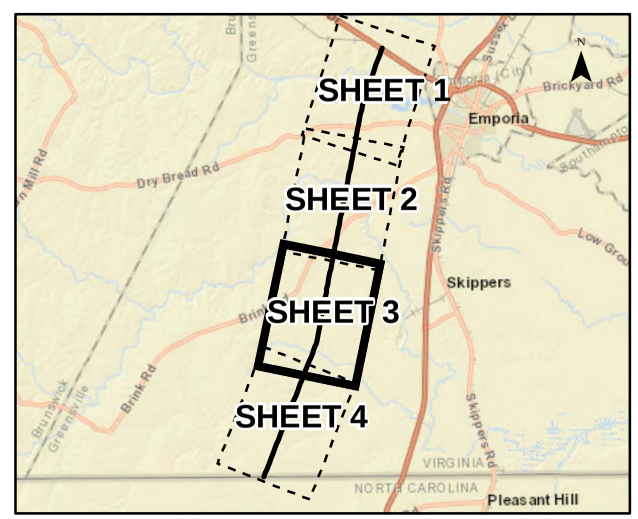
0 750 1,500 3,000 Feet

Scale is 1 IN = 1,500 FT when printed at original size of 11x17

SITE DATA

- Line #2201
- Line #254
- Existing Substation
- Existing Gas Line
- Other Existing Transmission Line
- Church
- Cemetery
- DCR Potentially Scenic River
- DCR Beaches to Bluegrass Trail
- Archaeological Resources
- Architecture Resources
- Railroad
- Road

Notes:
1. Basemap Source: USGS National Map: National Boundaries; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: VDHR, VDCR, VGIN, and the GIS User Community
3. Structure locations and existing transmission line locations provided by Dominion Energy Virginia



ENVIRONMENTAL

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SHEET 3 OF 4

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ATTACHMENT II.A.2

ENVIRONMENTAL CONSTRAINTS MAP

Line 2201 Clubhouse to Dry Bread
and Line 254 Dry Bread to Lakeview
230 kV Transmission Line Rebuild

Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	09/04/20

0 750 1,500 3,000 Feet

Scale is 1 IN = 1,500 FT when printed at original size of 11x17

SITE DATA

- Line #2201
- Line #254
- Existing Substation
- Existing Gas Line
- Other Existing Transmission Line
- Church
- Cemetery
- DCR Potentially Scenic River
- DCR Beaches to Bluegrass Trail
- Archaeological Resources
- Architecture Resources
- Railroad
- Road

Notes:
1. Basemap Source: USGS National Map: National Boundaries; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: VDHR, VDCR, VGIN, and the GIS User Community
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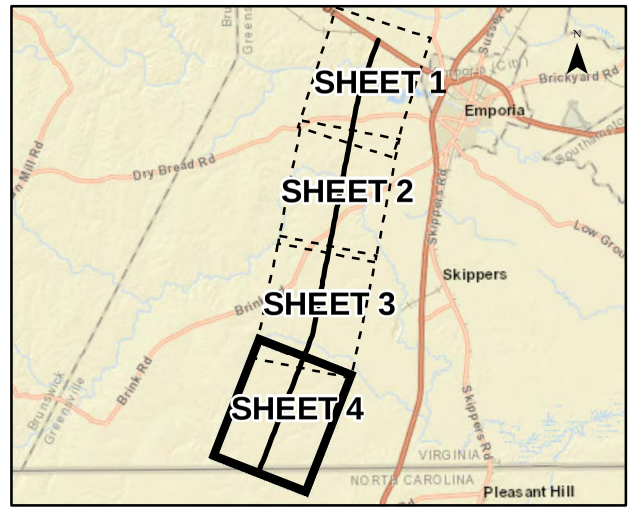

ENVIRONMENTAL

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SHEET 4 OF 4

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II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

3. Provide a separate color map of a suitable scale showing all the Applicant's transmission line ROWs, either existing or proposed, in the vicinity of the proposed project.

Response: See Attachment I.G.1.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

4. To the extent the proposed route is not entirely within existing ROW, explain why existing ROW cannot adequately service the needs of the Applicant.

Response: Not applicable.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

5. Provide drawings of the ROW cross section showing typical transmission line structure placements referenced to the edge of the ROW. These drawings should include:

a. ROW width for each cross section drawing;

b. Lateral distance between the conductors and edge of ROW;

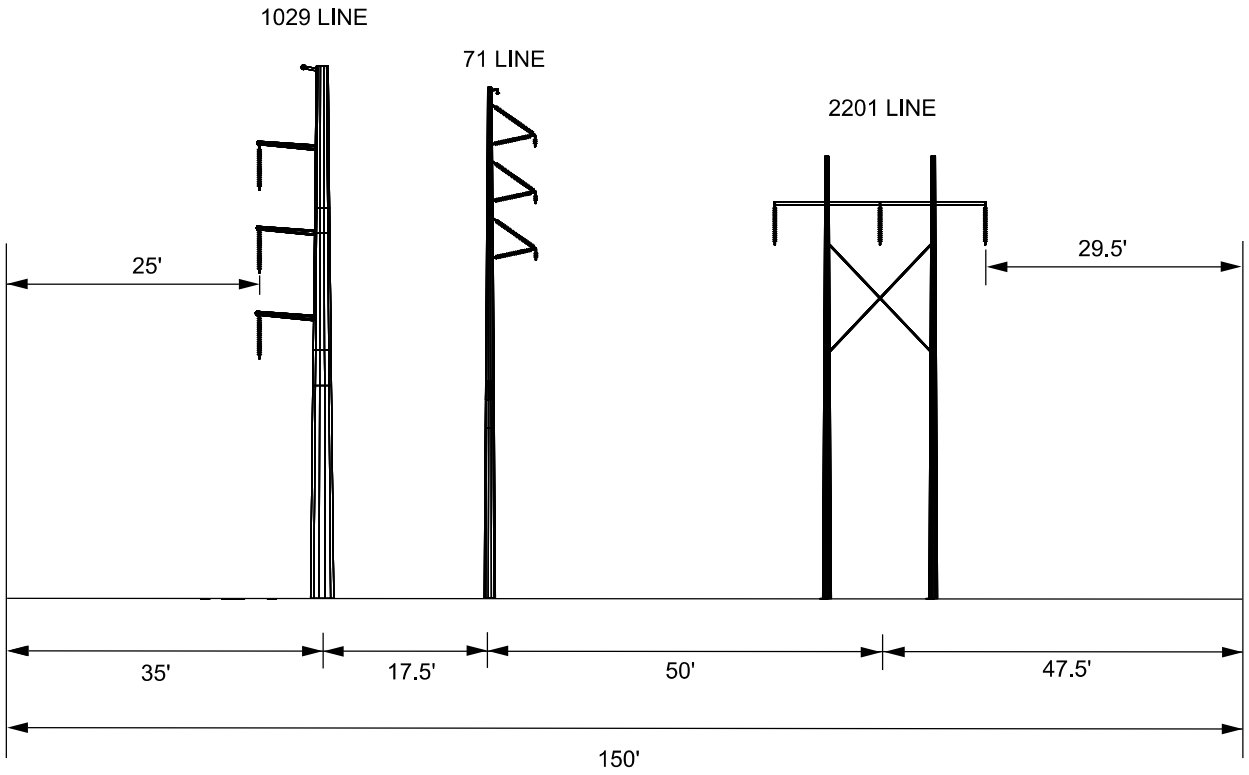
c. Existing utility facilities on the ROW; and

d. For lines being rebuilt in existing ROW, provide all of the above (i) as it currently exists, and (ii) as it will exist at the conclusion of the proposed project.

Response: See Attachments II.A.5.a through II.A.5.l for cross-section drawings for the Virginia Rebuild Project.

Attachment II.A.5.a

SECTION 1: EXISTING



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Glen Allen, VA 23060

STR. 2201/1-2201/3

LOOKING TOWARDS LAKEVIEW SUBSTATION

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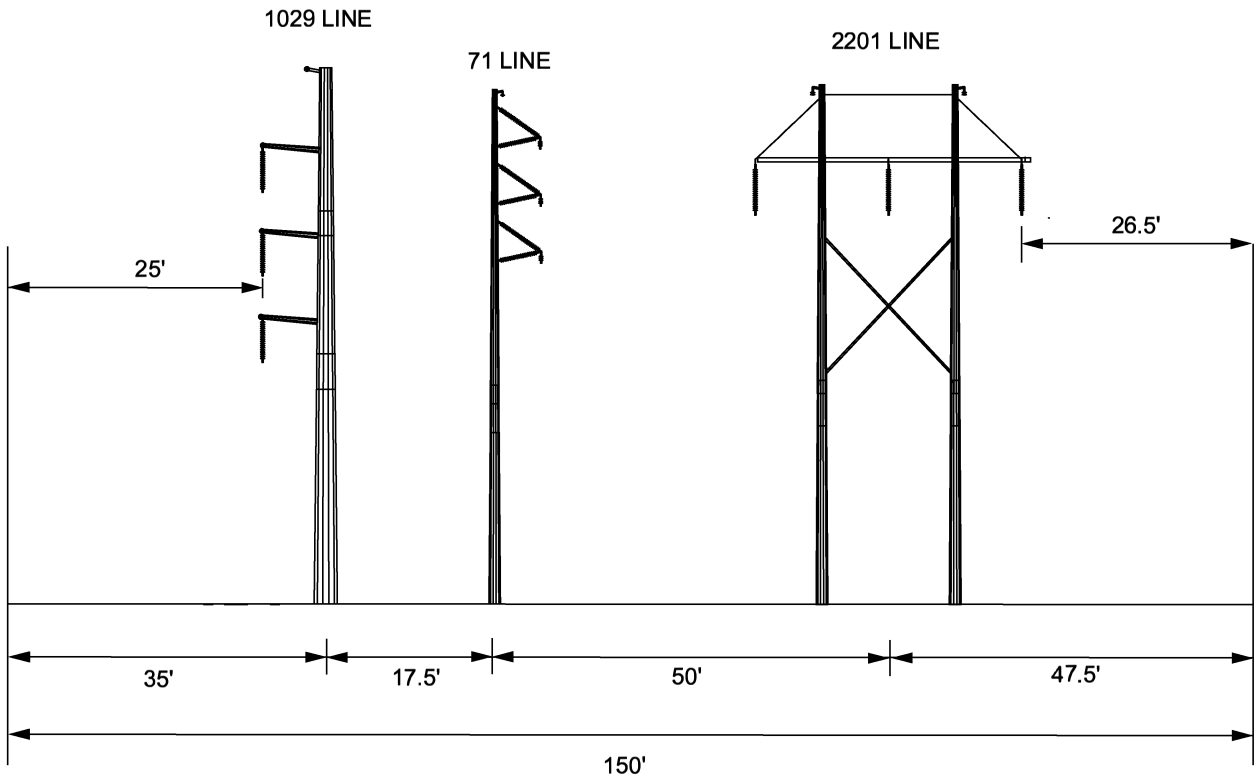
SECTION 1: PROPOSED



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STR. 2201/1-2201/3

LOOKING TOWARDS LAKEVIEW SUBSTATION

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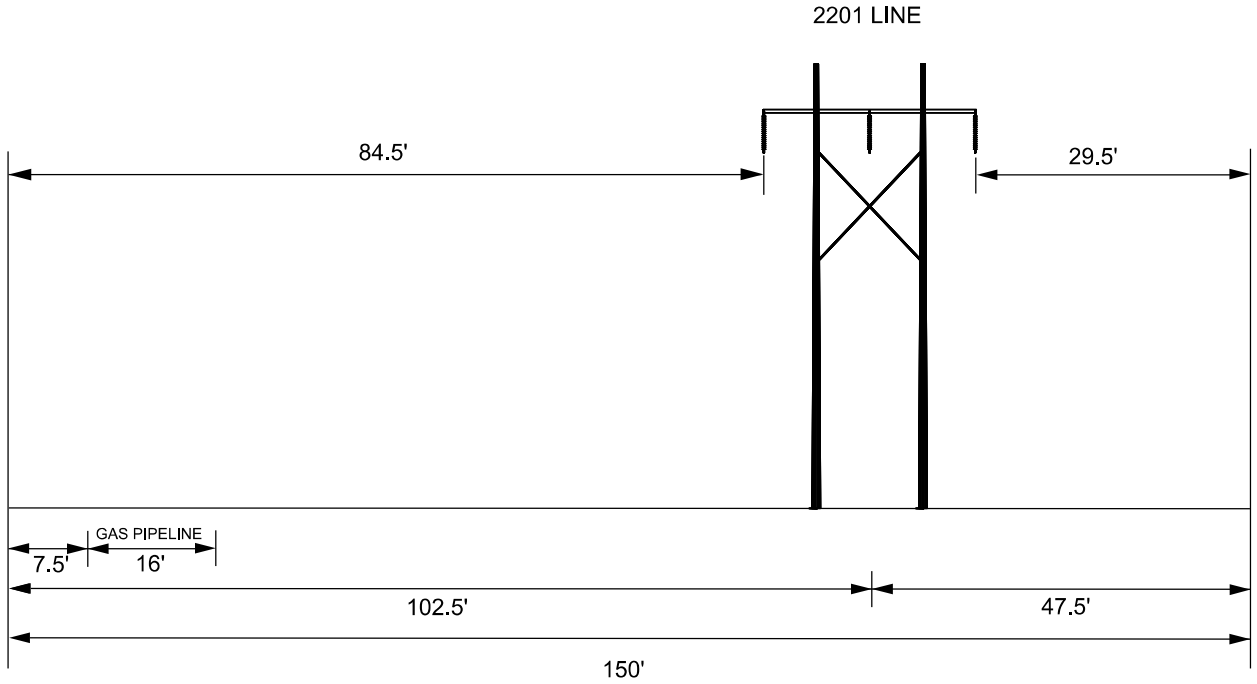
NOTE: INFORMATION CONTAINED ON DRAWING IS CONSIDERED
PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN

SECTION 2: EXISTING



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STR. 2201/4

LOOKING TOWARDS LAKEVIEW SUBSTATION

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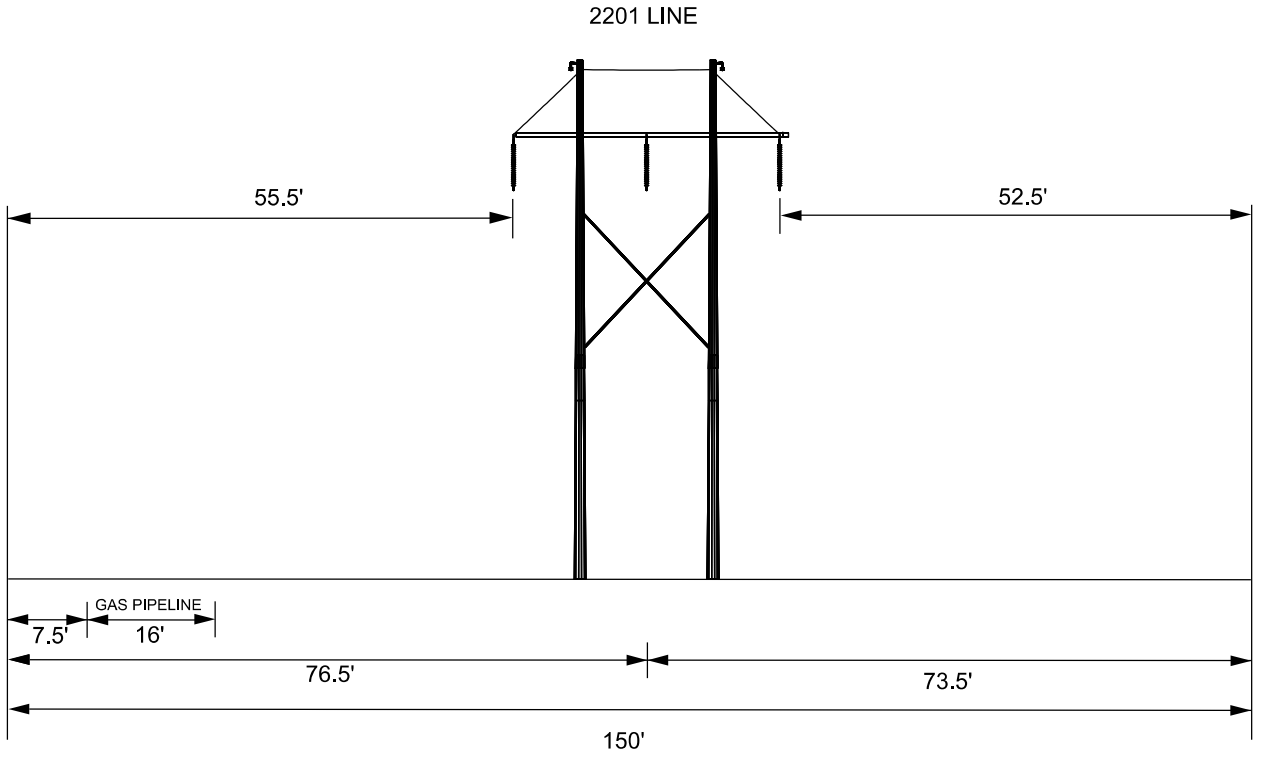
Attachment II.A.5.d

SECTION 2: PROPOSED



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PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN

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STR. 2201/4

LOOKING TOWARDS LAKEVIEW SUBSTATION

	ORIG.	REV.	REV.	DRAWING NO.
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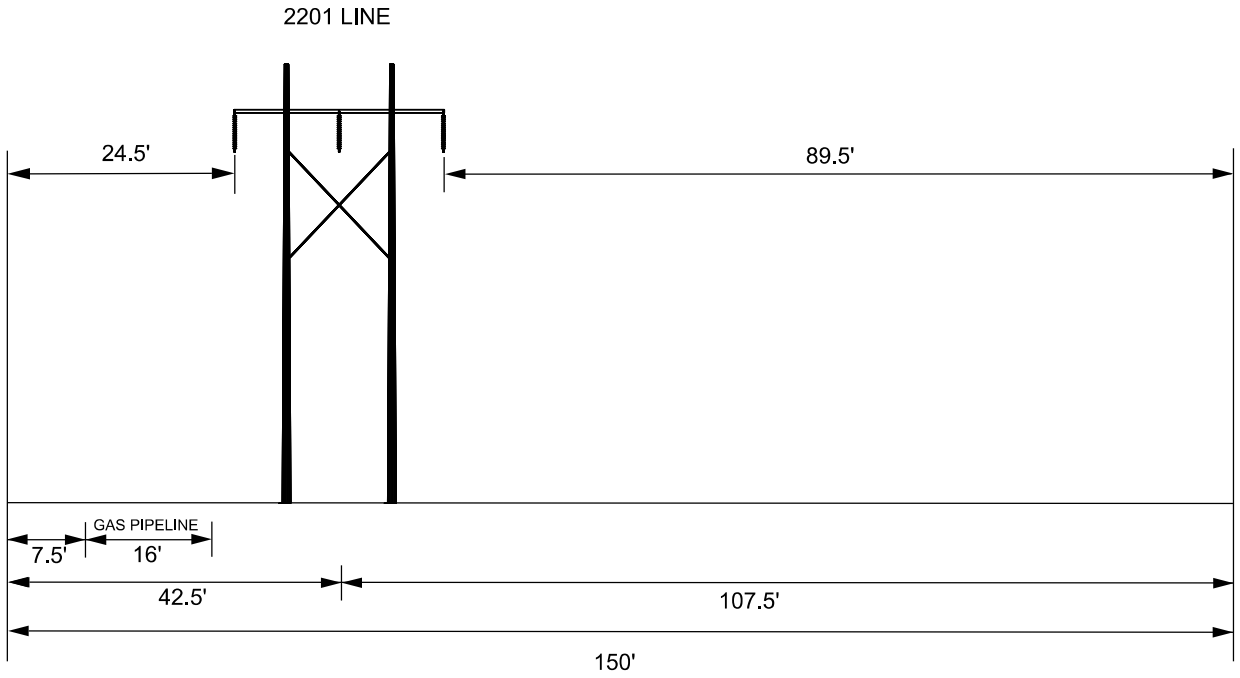
Attachment II.A.5.e

SECTION 3: EXISTING



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STR. 2201/5-2201/12

LOOKING TOWARDS LAKEVIEW SUBSTATION

	ORIG.	REV.	REV.	DRAWING NO.
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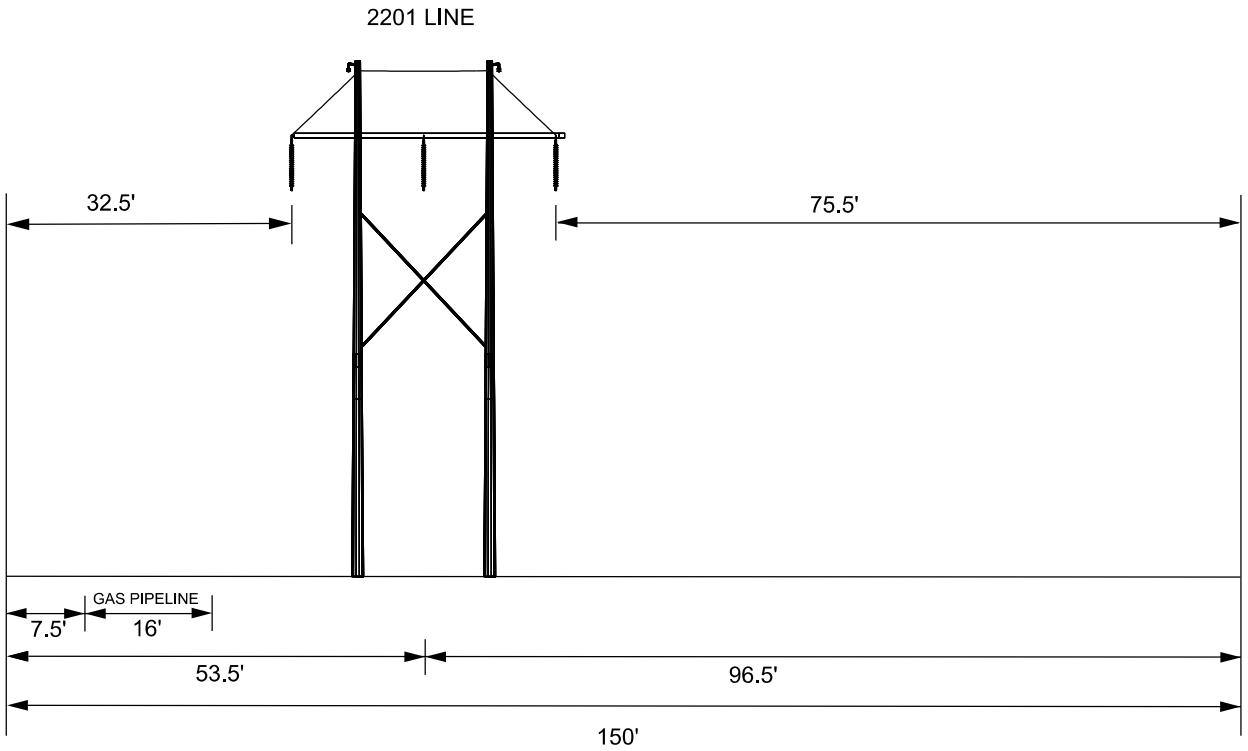
Attachment II.A.5.f

SECTION 3: PROPOSED



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STR. 2201/5-2201/12

LOOKING TOWARDS LAKEVIEW SUBSTATION

	ORIG.	REV.	REV.	DRAWING NO.
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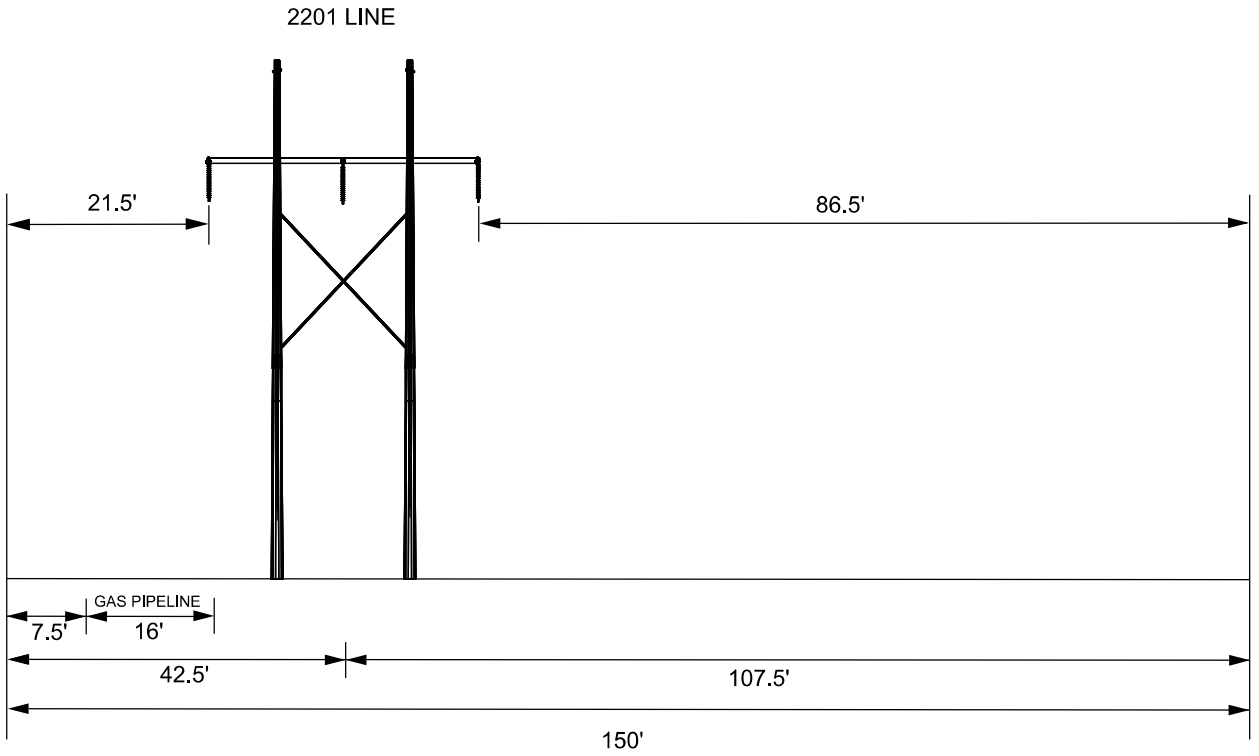
NOTE: INFORMATION CONTAINED ON DRAWING IS CONSIDERED PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN

SECTION 4: EXISTING



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STR. 2201/13

LOOKING TOWARDS LAKEVIEW SUBSTATION

	ORIG.	REV.	REV.	DRAWING NO.
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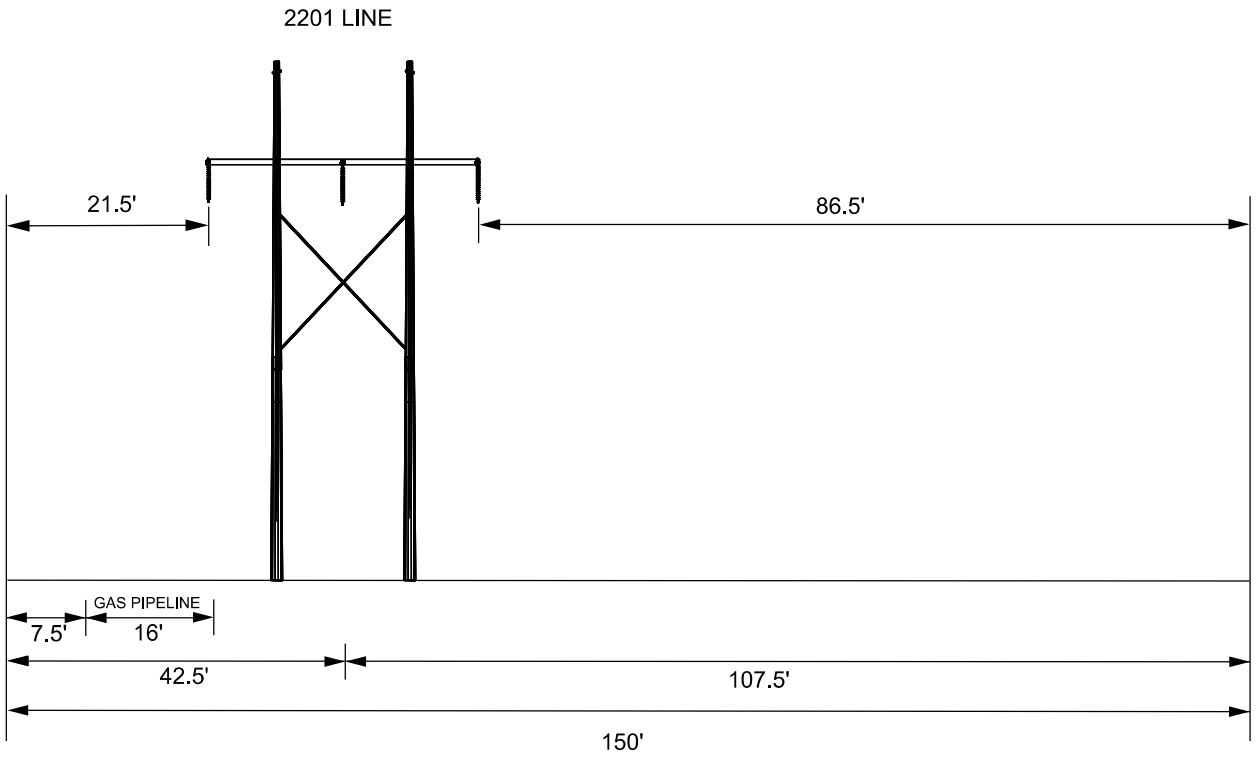
SECTION 4: PROPOSED



NOTE: INFORMATION CONTAINED ON DRAWING IS CONSIDERED
PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN

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Glen Allen, VA 23060

STR. 2201/13

LOOKING TOWARDS LAKEVIEW SUBSTATION

	ORIG.	REV.	REV.	DRAWING NO.
DRAWN	ALS			ATTACHMENT II.A.5.h
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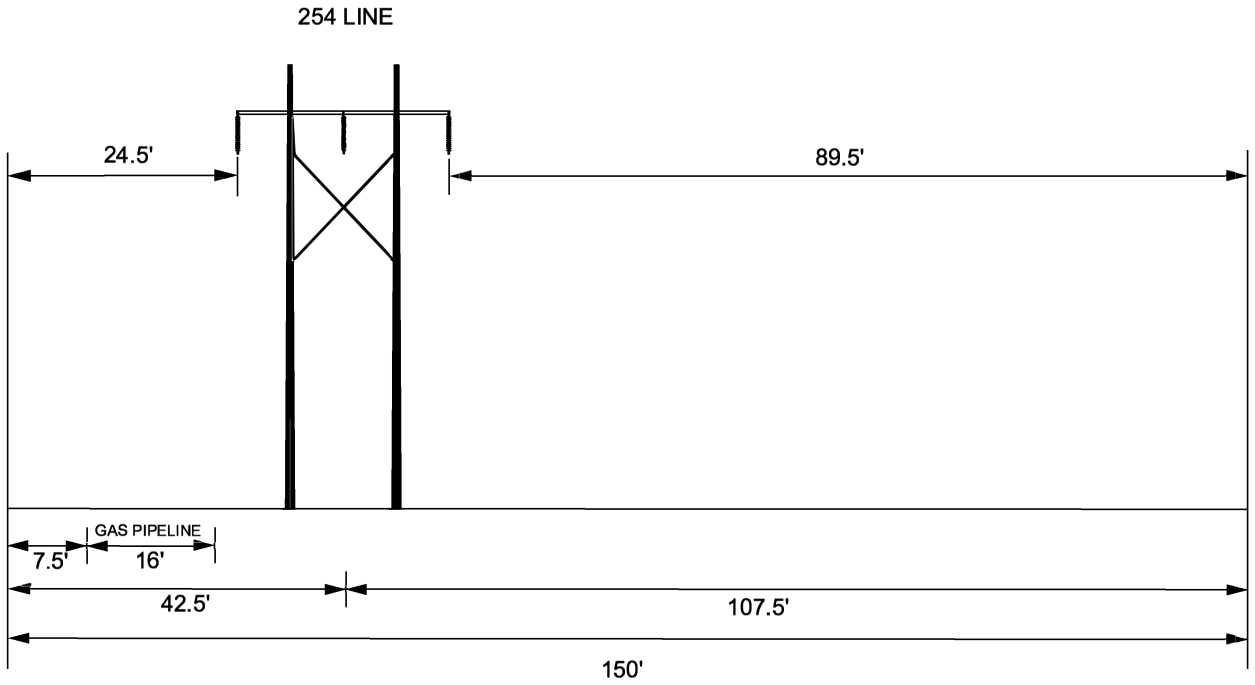
APPROVED				
DATE				

SECTION 5: EXISTING



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Glen Allen, VA 23060

STR. 254/15-254/24

LOOKING TOWARDS LAKEVIEW SUBSTATION

	ORIG.	REV.	REV.	DRAWING NO.
DRAWN	ALS			ATTACHMENT II.A.5.i
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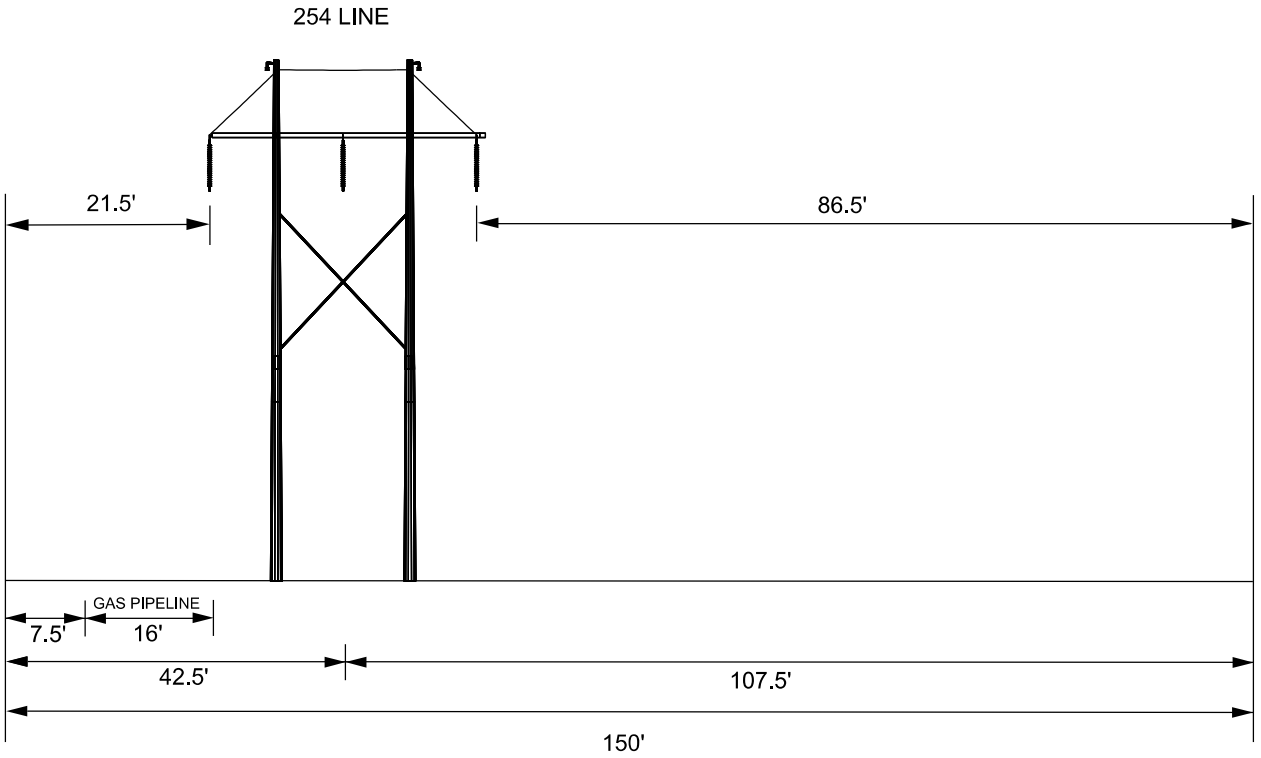
APPROVED				
DATE				

Attachment II.A.5.j

SECTION 5: PROPOSED



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STR. 254/15-254/24

LOOKING TOWARDS LAKEVIEW SUBSTATION

	ORIG.	REV.	REV.	DRAWING NO.
DRAWN	ALS			ATTACHMENT II.A.5.j
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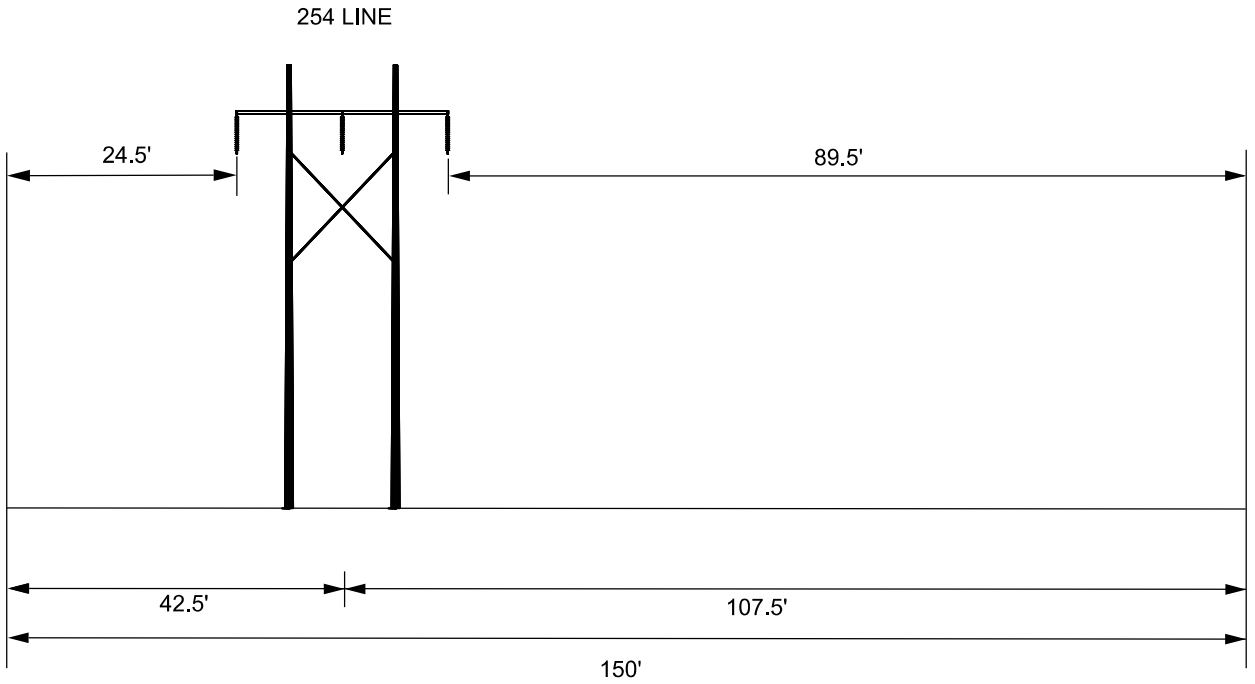
APPROVED				
DATE				

NOTE: INFORMATION CONTAINED ON DRAWING IS CONSIDERED
PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN

Attachment II.A.5.k

SECTION 6: EXISTING



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STR. 254/25-254/113

LOOKING TOWARDS LAKEVIEW SUBSTATION

	ORIG.	REV.	REV.	DRAWING NO.
DRAWN	ALS			ATTACHMENT II.A.5.k
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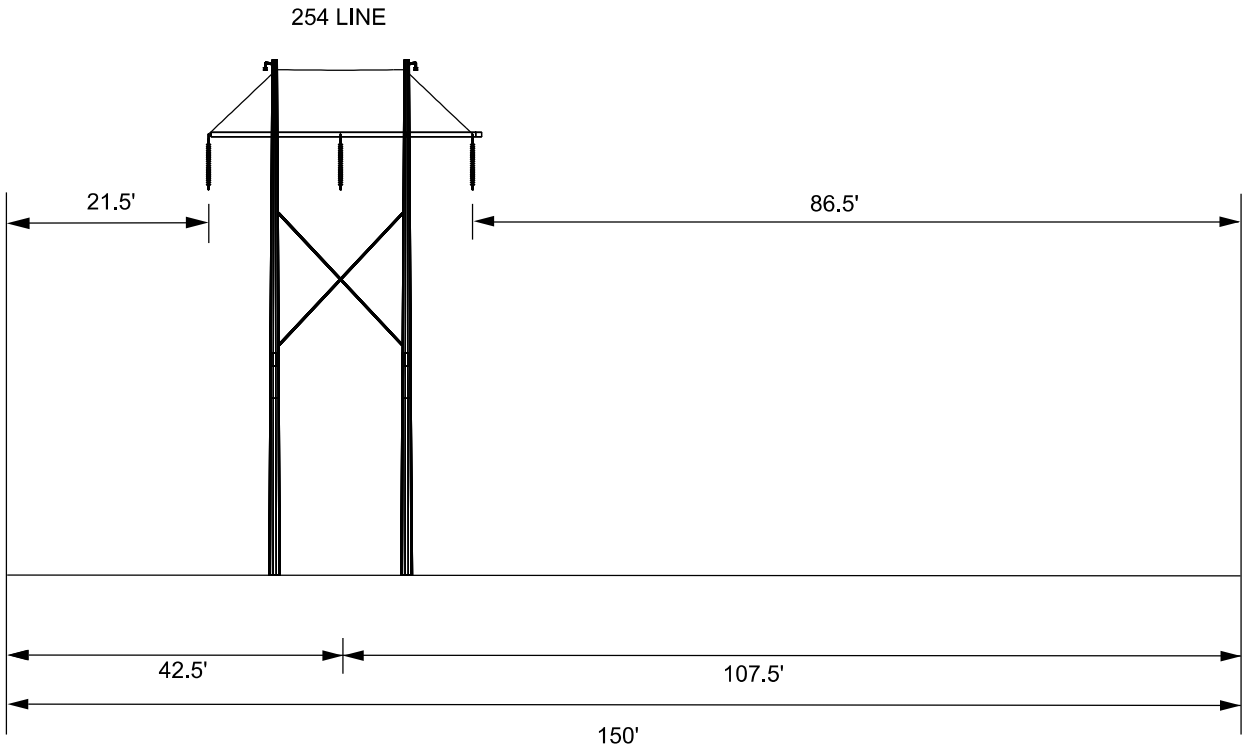
APPROVED				
DATE				

SECTION 6: PROPOSED



Dominion Energy

Dominion Energy
10900 Nuckols Road
Glen Allen, VA 23060

STR. 254/25-254/113

LOOKING TOWARDS LAKEVIEW SUBSTATION

	ORIG.	REV.	REV.	DRAWING NO.
DRAWN	ALS			ATTACHMENT II.A.5.I
CHECKED				
APPROVED				
DATE				

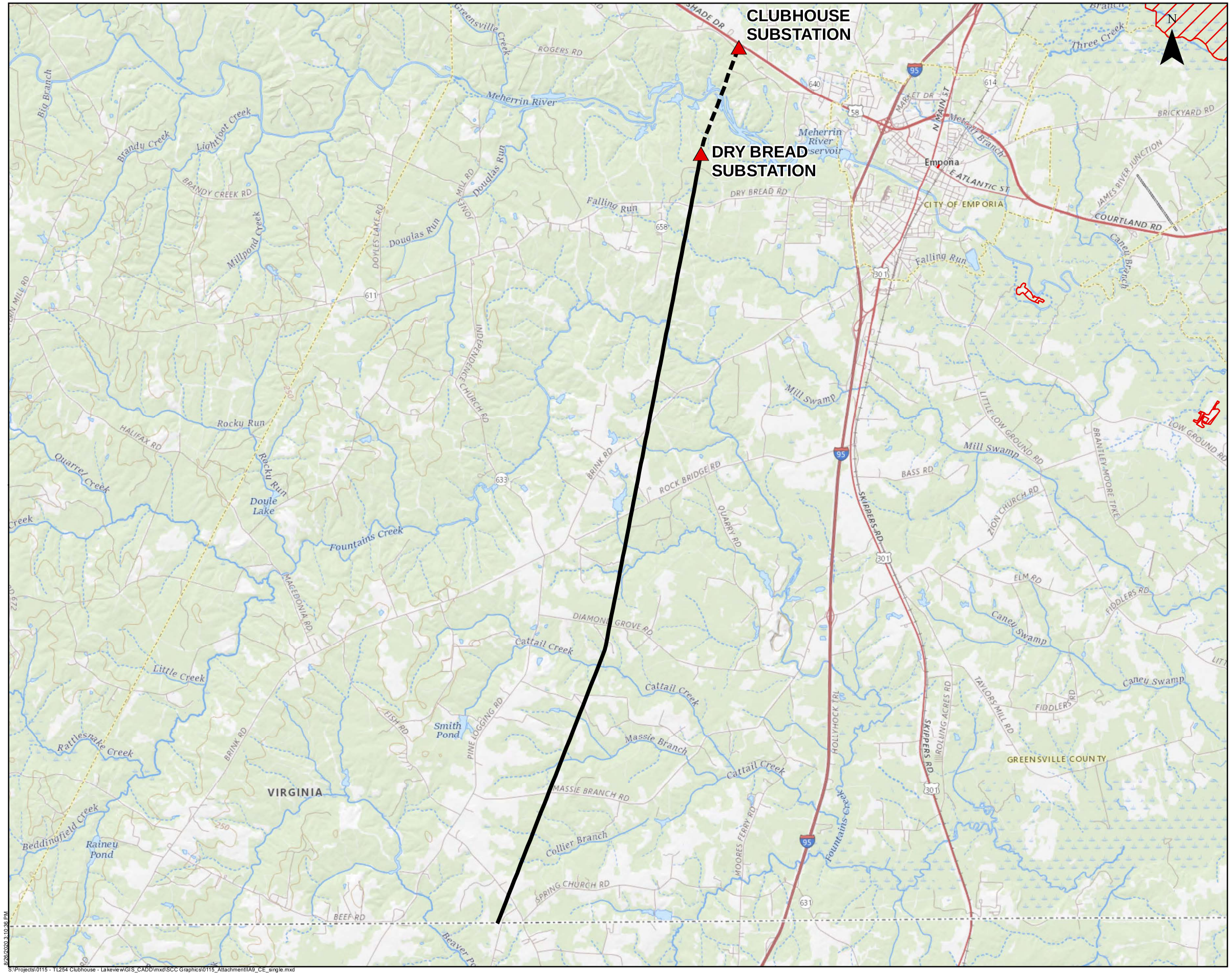
NOTE: INFORMATION CONTAINED ON DRAWING IS CONSIDERED
PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

6. Detail what portions of the ROW are subject to existing easements and over what portions new easements will be needed.

Response: The Virginia Rebuild Project's entire 12.5-mile long transmission line corridor in Greensville County, Virginia, is an existing transmission line right-of-way currently containing Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254. The first approximately 0.3 mile of the existing right-of-way from the Clubhouse Substation to Structure #2201/3, which also contains Line #71 and Line #1029, is 150 feet wide. At Structure #2201/3, the existing right-of-way remains 150 feet wide for the remaining approximately 12.2 miles to the Virginia state line (Structure #254/113). The easement for this right-of-way was acquired in 1930. The rebuilt structures will be located entirely within the existing right-of-way. The Company does not anticipate that new easements will be required for the Virginia Rebuild Project. The Virginia Rebuild Project is not subject to any easements, nor are there any conservation lands located within 1.0 mile of the Virginia Rebuild Project. See Attachment II.A.6.a.



ATTACHMENT II.A.6

CONSERVATION EASEMENTS MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	09/04/20

0 0.5 1 2 Miles

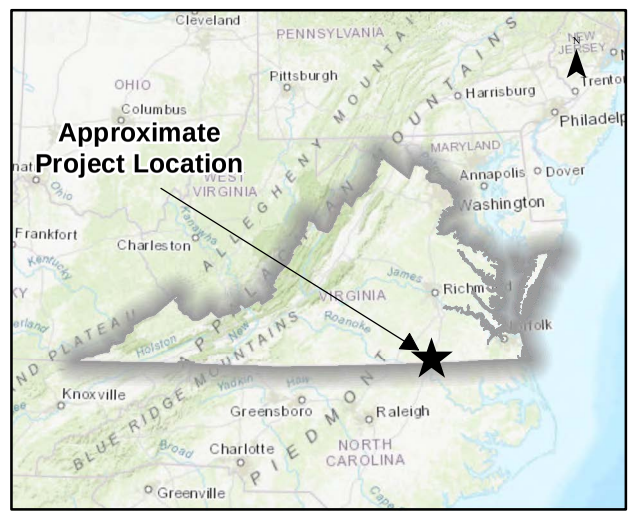
Scale is 1 IN = 1 MI when printed at original size of 11x17

SITE DATA

- Line #2201
- Line #254
- Existing Substation
- Virginia Outdoor Foundation Easement
- Federal Conservation Lands
- Local Conservation Lands
- Private Conservation Lands
- State Conservation Lands

***No conservation lands found within 1 mile of the project**

Notes:
1. Basemap Source: Esri, HERE, Garmin, Intermap, increment P Corp., GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, Meti, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; USGS National Map: National Boundaries
2. Data Source: VDCR



ENVIRONMENTAL

Dominion Energy®

S:\Projects\0115 - TL254 Clubhouse - Lakeview\GIS_CADD\mxd\SCC Graphics\0115_AttachmentIIA9_CE_single.mxd

9/26/2020 3:10:38 PM

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

7. Detail the proposed ROW clearing methods to be used and the ROW restoration and maintenance practices planned for the proposed project.

Response: The entire width of the existing transmission line right-of-way of the Virginia Rebuild Project is currently maintained for operation of the existing transmission facilities. Trimming of tree limbs along the edge of the right-of-way may be conducted to support construction activities for the Virginia Rebuild Project. For any such minimal clearing within the right-of-way, trees will be cut to no more than three inches above ground level. Trees located outside of the right-of-way that are tall enough to potentially impact the transmission facilities, commonly referred to as "danger trees," may also need to be cut. Danger trees will be cut to be no more than three inches above ground level, limbed, and will remain where felled. Debris that is adjacent to homes will be disposed of by chipping or removal. In other areas, debris may be mulched or chipped as practicable. Danger tree removal will be accomplished by hand in wetland areas and within 100 feet of streams, if applicable. Care will be taken not to leave debris in streams or wetland areas. Matting will be used for heavy equipment in these areas. Erosion control devices will be used on an ongoing basis during all clearing and construction activities accompanied by weekly Virginia Stormwater Management Program inspections.

Erosion control will be maintained and temporary stabilization for all soil disturbing activities will be used until the right-of-way has been restored. Upon completion of the Virginia Rebuild Project, the Company will restore the right-of-way utilizing site rehabilitation procedures outlined in the Company's *Standards & Specifications for Erosion & Sediment Control and Stormwater Management for Construction and Maintenance of Linear Electric Transmission Facilities* that was approved by the Virginia Department of Environmental Quality ("DEQ"). Time of year and weather conditions may affect when permanent stabilization takes place.

This right-of-way will continue to be maintained on a regular cycle to prevent interruptions to electric service and provide ready access to the right-of-way in order to patrol and make emergency repairs. Periodic maintenance to control woody growth will consist of hand cutting, machine mowing and herbicide application.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

8. Indicate the permitted uses of the proposed ROW by the easement landowner and the Applicant.

Response: Any non-transmission use will be permitted that:

- Is in accordance with the terms of the easement agreement for the right-of-way;
- Is consistent with the safe maintenance and operation of the transmission lines;
- Will not restrict future line design flexibility; and
- Will not permanently interfere with future construction.

Subject to the terms of the easement, examples of typical permitted uses include but are not limited to:

- Agriculture
- Hiking Trails
- Fences
- Perpendicular Road Crossings
- Perpendicular Utility Crossings
- Residential Driveways
- Wildlife / Pollinator Habitat

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

9. Describe the Applicant's route selection procedures. Detail the feasible alternative routes considered. For each such route, provide the estimated cost and identify and describe the cost classification (e.g. "conceptual cost," "detailed cost," etc.). Describe the Applicant's efforts in considering these feasible alternatives. Detail why the proposed route was selected and other feasible alternatives were rejected. In the event that the proposed route crosses, or one of the feasible routes was rejected in part due to the need to cross, land managed by federal, state, or local agencies or conservation easements or open space easements qualifying under §§ 10.1-1009 – 1016 or §§ 10.1-1700 – 1705 of the Code (or a comparable prior or subsequent provision of the Code), describe the Applicant's efforts to secure the necessary ROW.

Response: The Company's route selection for transmission line rebuild projects begins with a review of existing rights-of-way. This approach generally minimizes impacts on the natural and human environments. This approach also is consistent with Attachment 1 to these Guidelines, which provides a tool routinely used by the Company in routing its transmission line projects. Specifically, this approach is consistent with Guideline #1, which states that existing rights-of-way should be given priority when adding new transmission facilities, and §§ 56-46.1 and 56-259 of the Code of Virginia ("Va. Code"), which promote the use of existing rights-of-way for new transmission facilities. For the proposed Virginia Rebuild Project, the existing right-of-way and the Company-owned property that currently contains Lines #2201 and #254 is adequate.

Because the existing right-of-way and Company-owned property is adequate to construct the proposed Virginia Rebuild Project, new right-of-way is not necessary. Given the availability of existing right-of-way and the statutory preference given to the use of existing rights-of-way, and because additional costs and environmental impacts would be associated with the acquisition of and construction on new right-of-way, the Company did not consider any alternate routes requiring new right-of-way for this Virginia Rebuild Project.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

10. Describe the Applicant's construction plans for the project, including how the Applicant will minimize service disruption to the affected load area. Include requested and approved line outage schedules for affected lines as appropriate.

Response: To limit service disruption to the affected load area, the Company plans to take segments of Lines #254 and #2201 out of service in two separate, sequential outages during the construction portion of the Virginia Rebuild Project. Assuming the final order is received by September 1, 2021, as requested in Section I.H, the current plan is to start construction on February 1, 2022, and to complete construction by October 15, 2023.

The first outage is expected to be taken between Clubhouse Substation and Dry Bread Substation on Line # 2201 beginning in Winter/Spring 2022. During this time, Dry Bread Substation will be fed from Lakeview Substation.

The second outage is expected to be taken between Dry Bread Substation and Lakeview Substation on Line # 254 beginning in Spring/Summer 2022. During this time, Dry Bread Substation will be fed from Clubhouse Substation.

The Company will request line outages from PJM prior to the date of such outages. It is customary for PJM to not grant approval of the outages until shortly before the outages are expected to occur and, therefore, they may be subject to change.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

11. Indicate how the construction of this transmission line follows the provisions discussed in Attachment 1 of these Guidelines.

Response: As noted in Section II.A.9, Attachment 1 of these Guidelines provides a tool routinely used by the Company in routing its transmission line projects.

The Company utilized Guideline #1 (existing rights-of-way should be given priority when adding additional facilities) by siting the proposed Virginia Rebuild Project within the existing transmission corridor, as discussed in Section II.A.9.

By utilizing the existing transmission corridor, the proposed Virginia Rebuild Project will minimize impact to any site listed on the National Register of Historic Places ("NRHP"). Thus, the proposed Virginia Rebuild Project is consistent with Guideline #2 (where practical, rights-of-way should avoid sites listed on the NRHP). See Section III.A for a description of the resources identified in the Stage I Pre-Application Analysis prepared by Dutton & Associates ("Dutton") on behalf of the Company, which is included with the DEQ Supplement as Attachment 2.H.1. Consistent with its customary practice, the Company will coordinate with the Virginia Department of Historic Resources ("VDHR") regarding the findings of the Stage I Pre-Application Analysis.

The Company has communicated with a number of local, state, and federal agencies prior to filing this application consistent with Guideline #4 (where government land is involved the Company should contact the agencies early in the planning process). See Sections III.B, III.J, and the DEQ Supplement.

The Company follows recommended construction methods on a site-specific basis for typical construction projects (Guidelines ##8, 10, 11, 15, 16, 18 and 22).

The Company also utilizes recommended guidelines in the clearing of right-of-way, constructing facilities and maintaining rights-of-way after construction. Moreover, secondary uses of right-of-way that are consistent with the safe maintenance and operation of facilities are permitted.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Right-of-way ("ROW")

12. a. Detail counties and localities through which the line will pass. If any portion of the line will be located outside of the Applicant's certificated service area: (1) identify each electric utility affected; (2) state whether any affected electric utility objects to such construction; and (3) identify the length of line(s) proposed to be located in the service area of an electric utility other than the Applicant; and

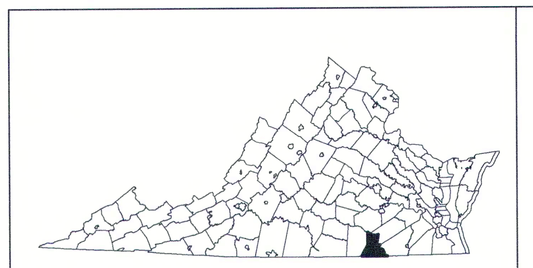
b. Provide three (3) color copies of the Virginia Department of Transportation "General Highway Map" for each county and city through which the line will pass. On the maps show the proposed line and all previously approved and certificated facilities of the Applicant. Also, where the line will be located outside of the Applicant's certificated service area, show the boundaries between the Applicant and each affected electric utility. On each map where the proposed line would be outside of the Applicant's certificated service area, the map must include a signature of an appropriate representative of the affected electric utility indicating that the affected utility is not opposed to the proposed construction within its service area.

Response:

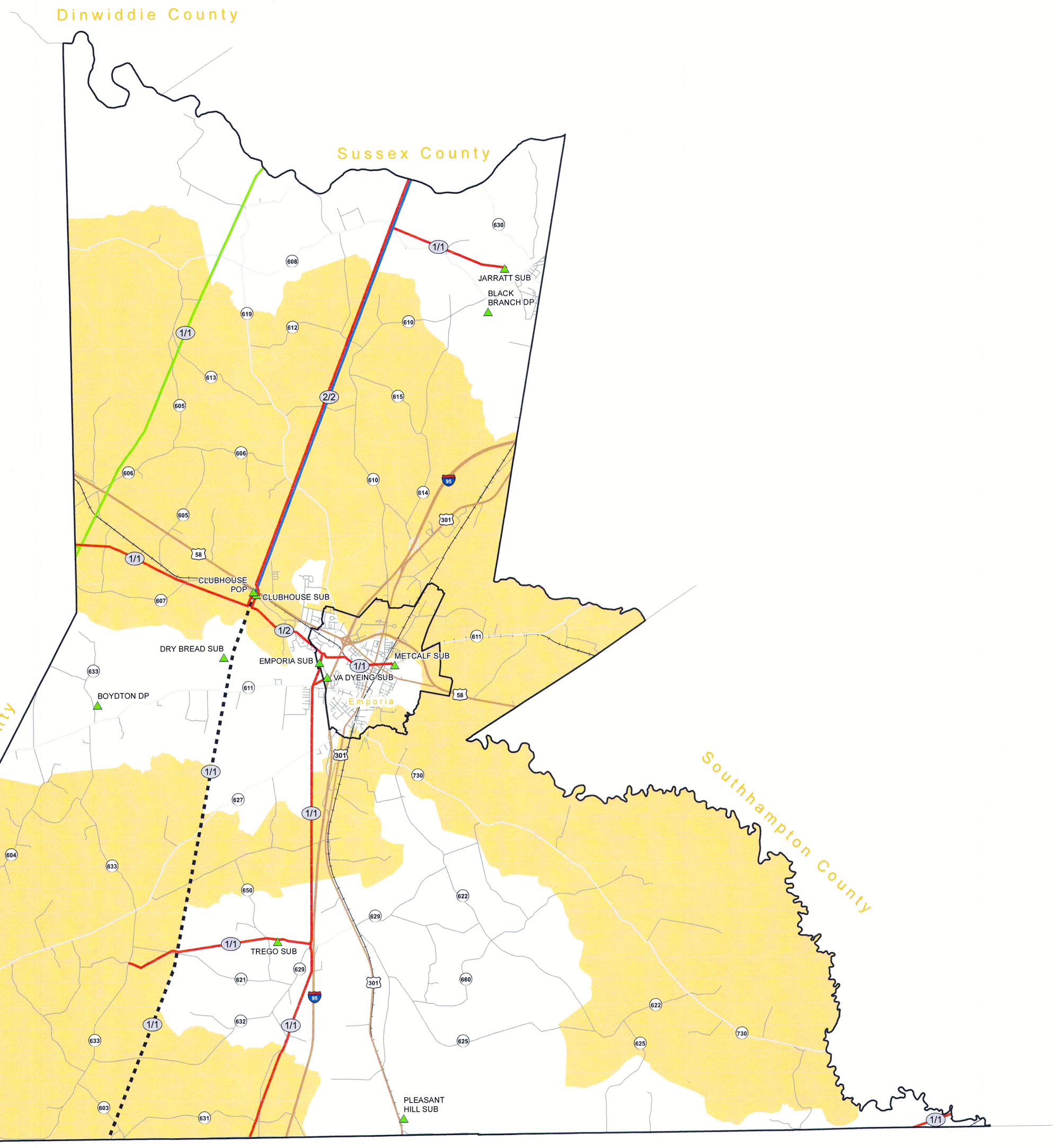
a. The proposed Virginia Rebuild Project traverses Greensville County, Virginia, for a total of approximately 12.5 miles. The Virginia Rebuild Project is entirely located within the Mecklenburg Electric Cooperative ("MEC") service territory. The Company has confirmed that MEC does not object to the Virginia Rebuild Project.

b. Three copies of the Virginia Department of Transportation ("VDOT") "General Highway Map" for Greensville County is marked as required and filed with the Application. A reduced copy of the map is provided as Attachment II.A.12.b.1.

Greensville County Road Map



This digital map depicts the Virginia Electric and Power Company ("Company") transmission facilities in this county as approved by the Virginia State Corporation Commission ("SCC"), and any proposed transmission facilities in this county, as of 09.23.2020
Other Company facilities previously authorized by the SCC may be depicted on prior SCC approved county maps.



VIRGINIA ELECTRIC AND POWER COMPANY
PLANS TO BUILD TRANSMISSION LINES AND SUBSTATIONS AS SHOWN IN BLACK DASHES ON THIS MAP.

MECKLENBURG ELECTRIC COOPERATIVE
IS NOT OPPOSED TO SUCH CONSTRUCTION IN ITS SERVICE TERRITORY.

SIGNATURE B. J. Lanier

DATE 10/26/2020 TITLE VP OF ENG & OPS

Legend

- Proposed 230 kV Single Circuit Line Rebuild
- (1/1) Number of Lines of Structures/Number of Circuits
- △ Proposed Substation
- ▲ Existing Substation
- 115 kV
- 230 kV
- 500 kV

Provider Service Territory

- MEC
- VEPCO

*VDOT and other road data obtained from Navteq and County data, current as of September 2011.

Attachment II.A.12.b.1

Greensville

82

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

1. Detail the number of circuits and their design voltage, initial operational voltage, any anticipated voltage upgrade, and transfer capabilities.

Response: The single circuit 230 kV Lines #2201 and #254 will be designed and operated at 230 kV with no anticipated voltage upgrade. The 3-phase twin-bundled 636 ACSR conductors will have a transfer capability of 1047 MVA.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

2. Detail the number, size(s), type(s), coating and typical configurations of conductors. Provide the rationale for the type(s) of conductor(s) to be used.

Response: The single circuit 230 kV Lines #2201 and #254 will have 3-phase twin-bundled 636 ACSR conductors arranged with two fiber optic shield wires as shown in Attachment II.B.3.a-g. The twin-bundled 636 ACSR conductors are the Company's standard for new 230 kV construction.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

3. With regard to the proposed supporting structures over each portion of the ROW for the preferred route, provide diagrams (including foundation reveal) and descriptions of all the structure types, to include:

a. mapping that identifies each portion of the preferred route;

b. the rationale for the selection of the structure type;

c. the number of each type of structure and the length of each portion of the ROW;

d. the structure material and rationale for the selection of such material;

e. the foundation material;

f. the average width at cross arms;

g. the average width at the base;

h. the maximum, minimum and average structure heights;

i. the average span length; and

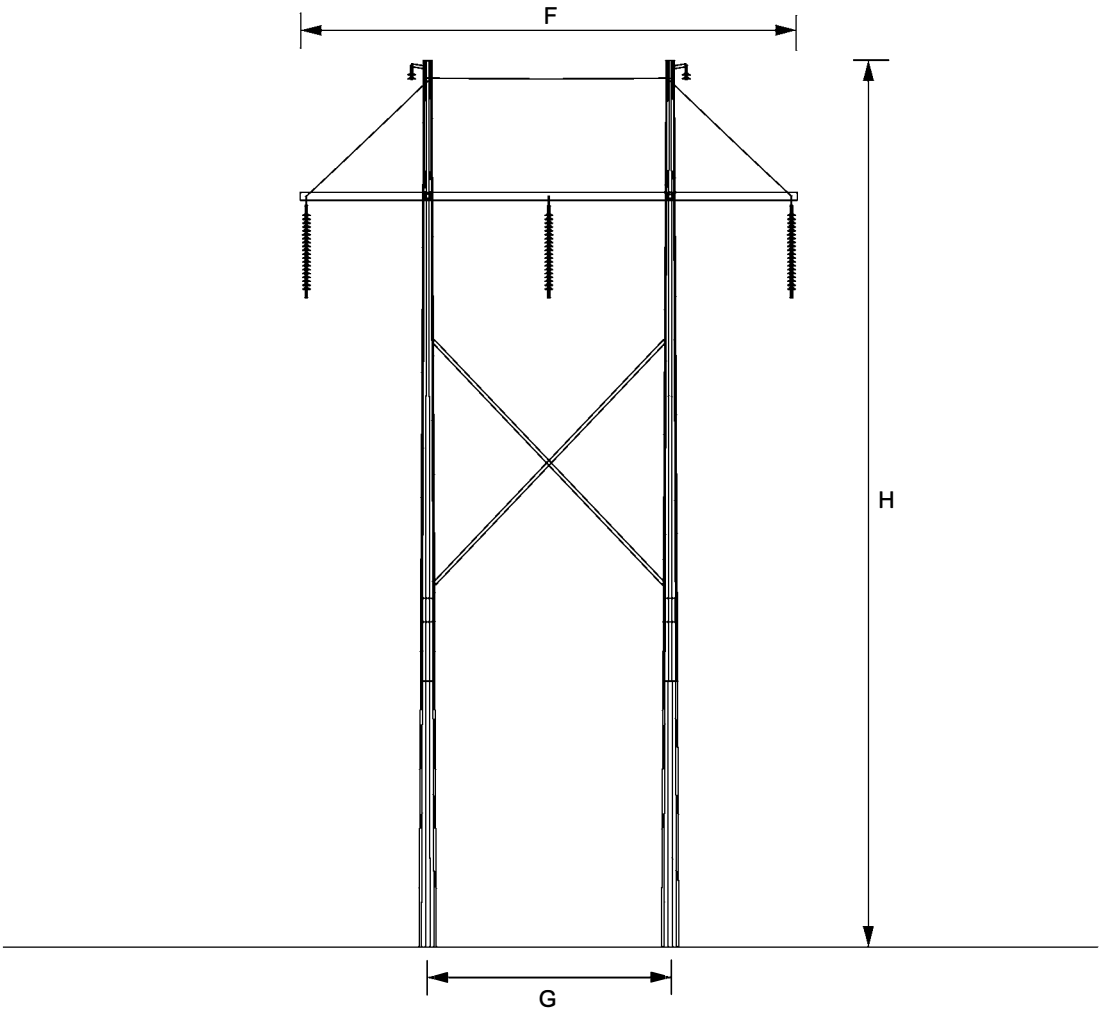
j. the minimum conductor-to-ground clearances under maximum operating conditions.

Response: (a) For mapping that identifies each portion of the preferred route, see Attachment II.B.5.a.

(b)-(j) See Attachments II.B.3.a through II.B.3.g.

$SYTIME$

SECTION 1



SINGLE CIRCUIT H-FRAME SUSPENSION STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	CLOSELY RESEMBLES GEOMETRY OF EXISTING STRUCTURES
C. LENGTH OF R/W (STRUCTURE QUANTITY):	0.29 MILES (3 STRUCTURES)
D. STRUCTURE MATERIAL:	WEATHERING STEEL POLES AND GALVANIZED STEEL CROSS ARMS & CROSS BRACING
RATIONALE FOR STRUCTURE MATERIAL:	THE COMPANY'S STANDARD FOR DIRECT EMBED H-FRAME CONSTRUCTION IS WEATHERING STEEL
E. FOUNDATION MATERIAL: AVERAGE FOUNDATION REVEAL:	N/A - DIRECT EMBED (SEE NOTE 4) N/A - DIRECT EMBED
F. AVERAGE WIDTH AT CROSSARM:	42'
G. AVERAGE WIDTH AT BASE:	20.5'
H. MINIMUM STRUCTURE HEIGHT: MAXIMUM STRUCTURE HEIGHT: AVERAGE STRUCTURE HEIGHT:	61' 79' 73'
I. AVERAGE SPAN LENGTH:	566.9'
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. IN WETLAND OR SWAMP AREAS - DIRECT EMBED INTO STEEL PIPE PILES

$DGNSPEC$

Electric Transmission

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SECTION 1:

STRUCTURES 2201/1-2201/3

86

DRAWING NO.

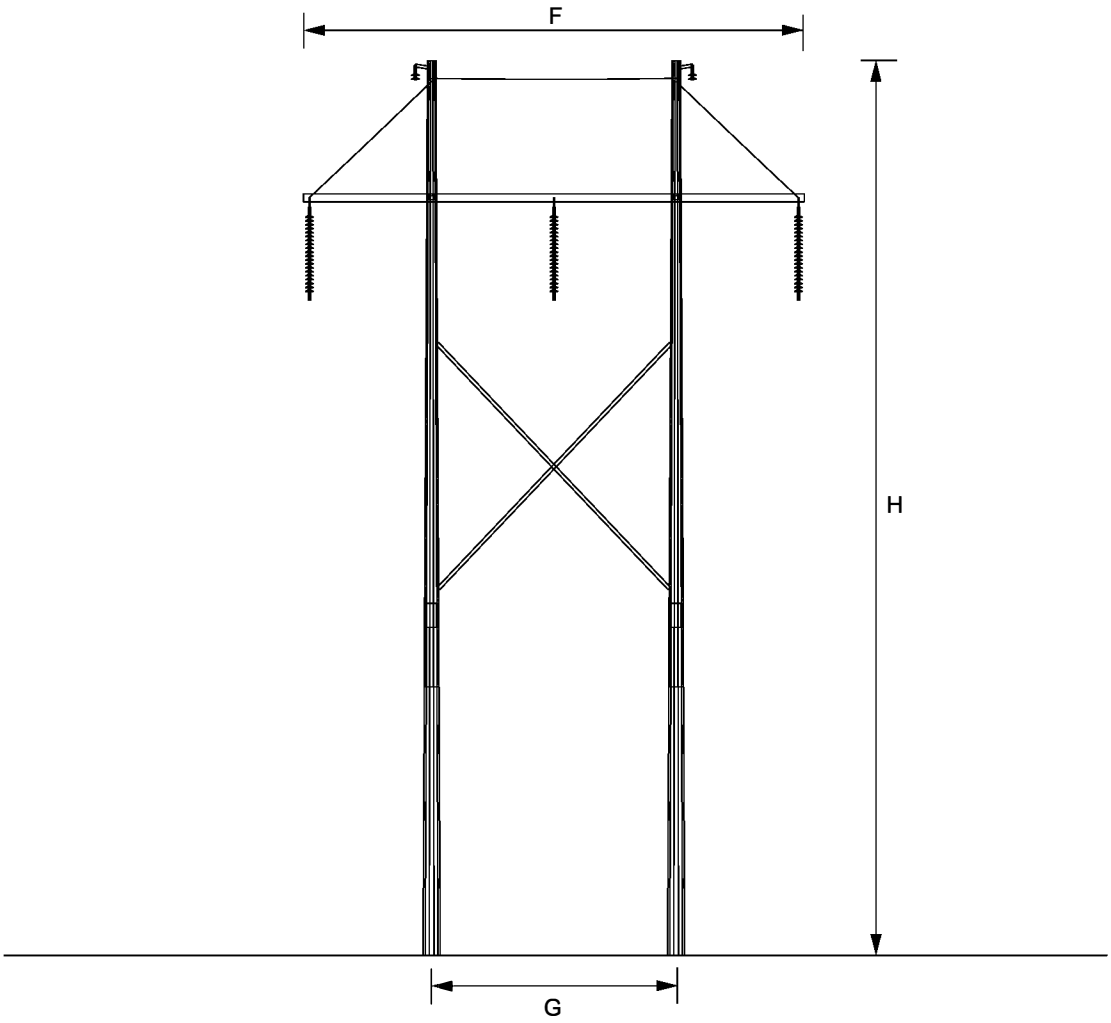
ATTACHMENT II.B.3.a

DRAWN ALS

TESBORD1

$SYTIME$

SECTION 2



SINGLE CIRCUIT H-FRAME SUSPENSION STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	CLOSELY RESEMBLES GEOMETRY OF EXISTING STRUCTURES
C. LENGTH OF R/W (STRUCTURE QUANTITY):	0.23 MILES (1 STRUCTURES)
D. STRUCTURE MATERIAL:	WEATHERING STEEL POLES AND GALVANIZED STEEL CROSS ARMS & CROSS BRACING
RATIONALE FOR STRUCTURE MATERIAL:	THE COMPANY'S STANDARD FOR DIRECT EMBED H-FRAME CONSTRUCTION IS WEATHERING STEEL
E. FOUNDATION MATERIAL: AVERAGE FOUNDATION REVEAL:	N/A - DIRECT EMBED (SEE NOTE 4) N/A - DIRECT EMBED
F. AVERAGE WIDTH AT CROSSARM:	42'
G. AVERAGE WIDTH AT BASE:	20.5'
H. MINIMUM STRUCTURE HEIGHT: MAXIMUM STRUCTURE HEIGHT: AVERAGE STRUCTURE HEIGHT:	70' 70' 70'
I. AVERAGE SPAN LENGTH:	785.4'
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. IN WETLAND OR SWAMP AREAS - DIRECT EMBED INTO STEEL PIPE PILES

Electric Transmission

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Glen Allen, VA 23060

SECTION 2:

STRUCTURE 2201/4

DRAWING NO.

ATTACHMENT II.B.3.b

DRAWN ALS

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TESBORD1

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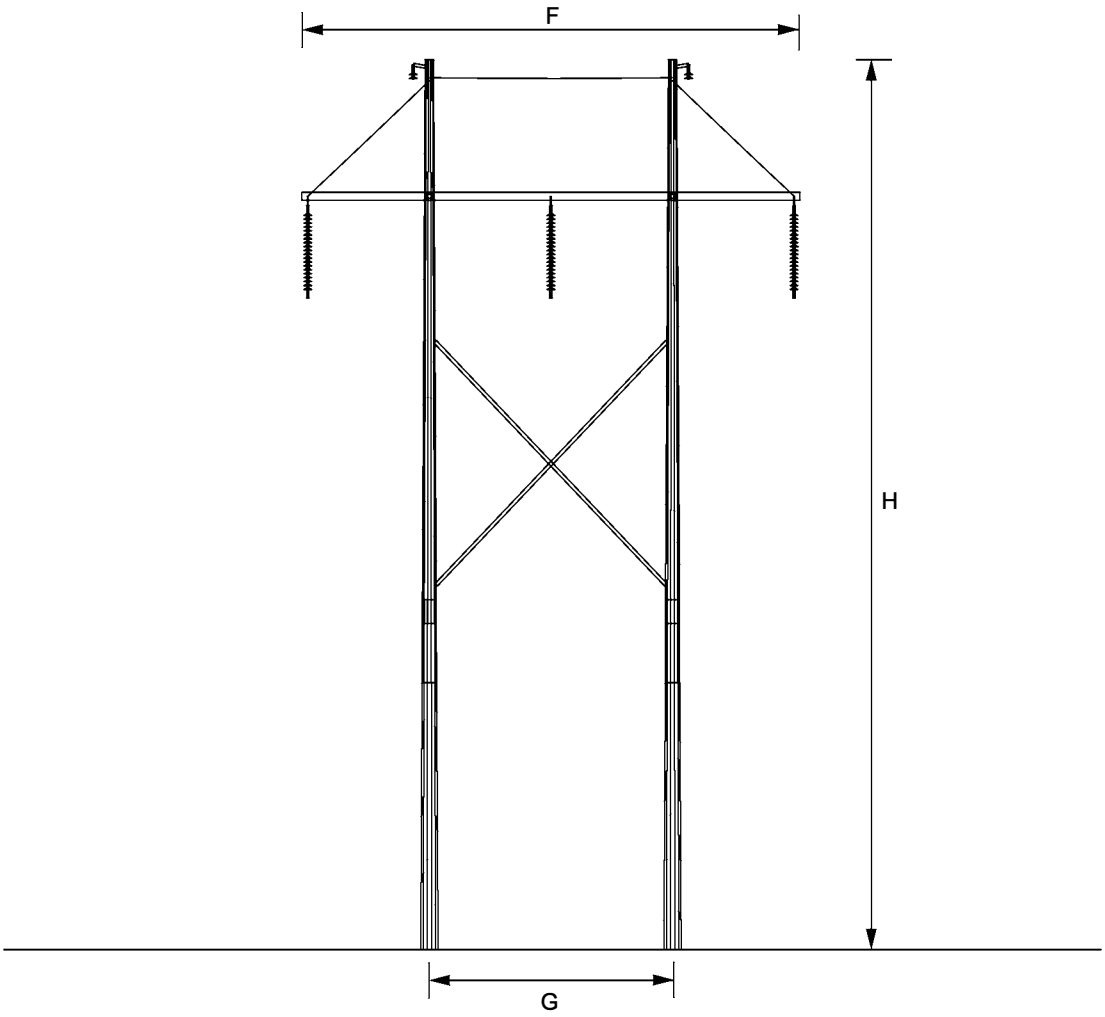
SECTION 3



SINGLE CIRCUIT H-FRAME SUSPENSION STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	CLOSELY RESEMBLES GEOMETRY OF EXISTING STRUCTURES
C. LENGTH OF R/W (STRUCTURE QUANTITY):	0.81 MILES (7 STRUCTURES)
D. STRUCTURE MATERIAL:	WEATHERING STEEL POLES AND GALVANIZED STEEL CROSS ARMS & CROSS BRACING
RATIONALE FOR STRUCTURE MATERIAL:	THE COMPANY'S STANDARD FOR DIRECT EMBED H-FRAME CONSTRUCTION IS WEATHERING STEEL
E. FOUNDATION MATERIAL:	N/A - DIRECT EMBED (SEE NOTE 4)
AVERAGE FOUNDATION REVEAL:	N/A - DIRECT EMBED
F. AVERAGE WIDTH AT CROSSARM:	42'
G. AVERAGE WIDTH AT BASE:	20.5'
H. MINIMUM STRUCTURE HEIGHT:	66'
MAXIMUM STRUCTURE HEIGHT:	97'
AVERAGE STRUCTURE HEIGHT:	77'
I. AVERAGE SPAN LENGTH:	589.6'
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. IN WETLAND OR SWAMP AREAS - DIRECT EMBED INTO STEEL PIPE PILES

$DGNSPEC$

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Dominion Energy
Dominion Energy
10900 Nuckols Road
Glen Allen, VA 23060

SECTION 3:

STRUCTURES 2201/5-2201/12

DRAWING NO.

ATTACHMENT II.B.3.c

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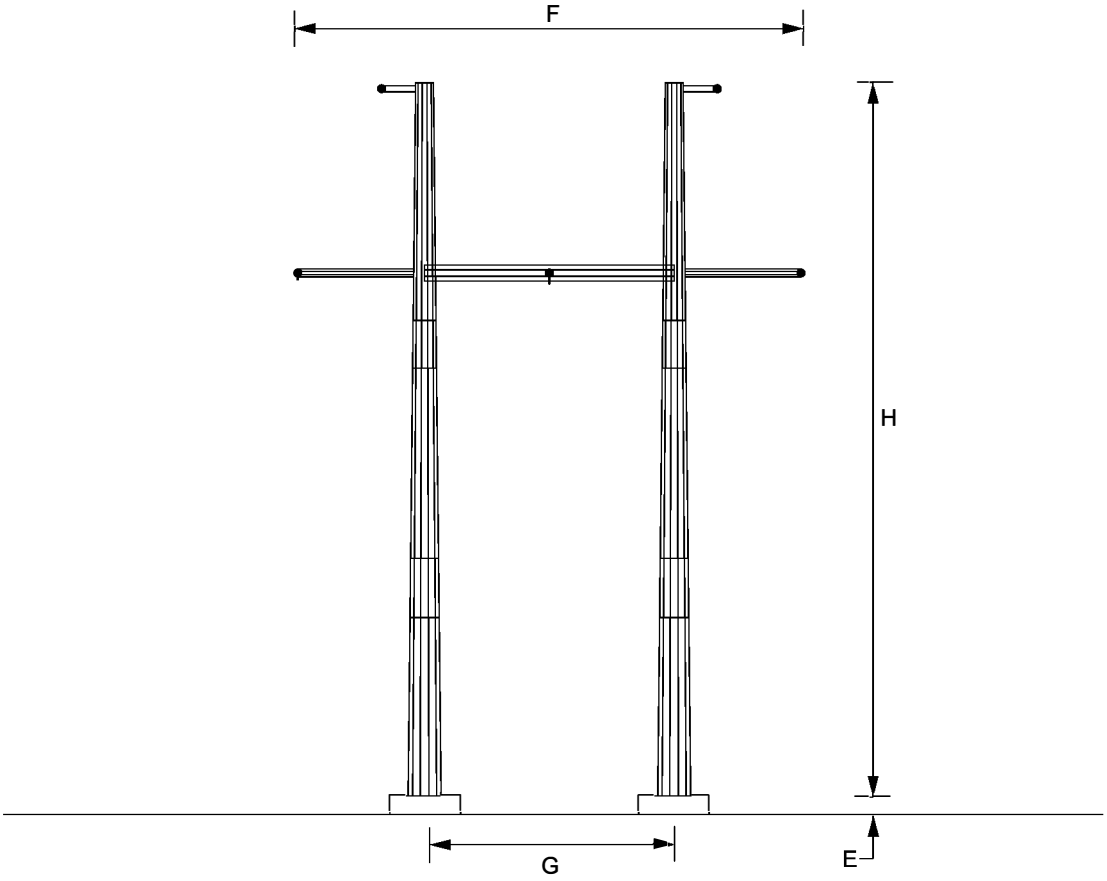
SECTION 3



SINGLE CIRCUIT H-FRAME DOUBLE DEAD-END STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	CLOSELY RESEMBLES GEOMETRY OF EXISTING STRUCTURES
C. LENGTH OF R/W (STRUCTURE QUANTITY):	0.81 MILES (1 STRUCTURE)
D. STRUCTURE MATERIAL:	WEATHERING STEEL
RATIONALE FOR STRUCTURE MATERIAL:	TO MATCH THE MATERIAL SELECTED FOR THE TYPICAL H-FRAME SUSPENSION STRUCTURES
E. FOUNDATION MATERIAL: AVERAGE FOUNDATION REVEAL:	CONCRETE SEE NOTE 4
F. AVERAGE WIDTH AT CROSSARM:	47'
G. AVERAGE WIDTH AT BASE:	23.5'
H. MINIMUM STRUCTURE HEIGHT: MAXIMUM STRUCTURE HEIGHT: AVERAGE STRUCTURE HEIGHT:	65' 65' 65'
I. AVERAGE SPAN LENGTH:	589.6'
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. MINIMUM FOUNDATION REVEAL SHALL BE 1.5', MAX REVEAL SUBJECT TO FINAL LOCATION AND TERRAIN

$DGNSPEC$

Electric Transmission

Dominion Energy
Dominion Energy
10900 Nuckols Road
Glen Allen, VA 23060

SECTION 3:

STRUCTURES 2201/5-2201/12

DRAWING NO.

ATTACHMENT II.B.3.d

DRAWN ALS

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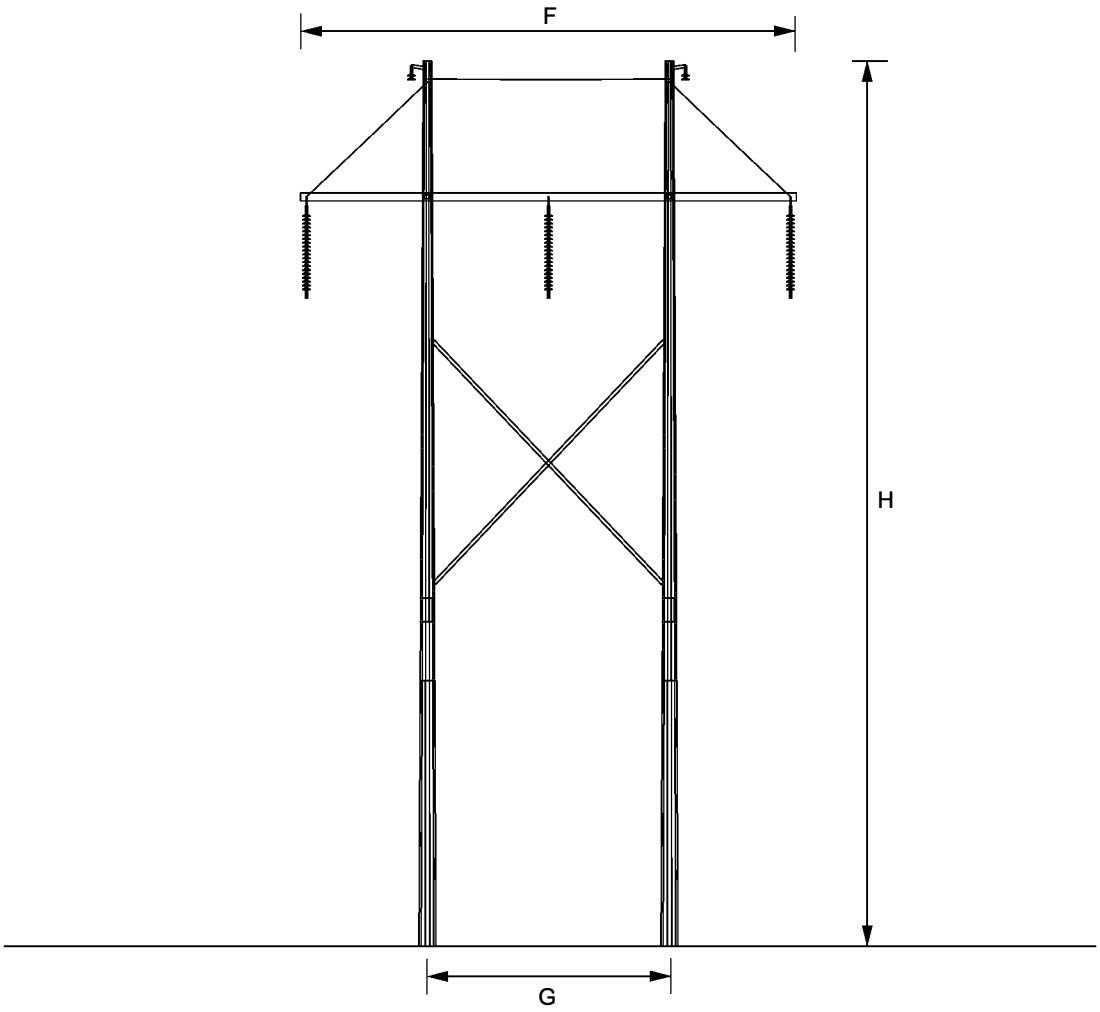
SECTION 5



SINGLE CIRCUIT H-FRAME SUSPENSION STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	CLOSELY RESEMBLES GEOMETRY OF EXISTING STRUCTURES
C. LENGTH OF R/W (STRUCTURE QUANTITY):	0.91 MILES (10 STRUCTURES)
D. STRUCTURE MATERIAL:	WEATHERING STEEL POLES AND GALVANIZED STEEL CROSS ARMS & CROSS BRACING
RATIONALE FOR STRUCTURE MATERIAL:	THE COMPANY'S STANDARD FOR DIRECT EMBED H-FRAME CONSTRUCTION IS WEATHERING STEEL
E. FOUNDATION MATERIAL: AVERAGE FOUNDATION REVEAL:	N/A - DIRECT EMBED (SEE NOTE 4) N/A - DIRECT EMBED
F. AVERAGE WIDTH AT CROSSARM:	42'
G. AVERAGE WIDTH AT BASE:	20.5'
H. MINIMUM STRUCTURE HEIGHT: MAXIMUM STRUCTURE HEIGHT: AVERAGE STRUCTURE HEIGHT:	61' 72' 65'
I. AVERAGE SPAN LENGTH:	559.6'
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. IN WETLAND OR SWAMP AREAS - DIRECT EMBED INTO STEEL PIPE PILES

Electric Transmission

Dominion Energy
Dominion Energy
10900 Nuckols Road
Glen Allen, VA 23060

SECTION 5:

STRUCTURES 254/15-254/24

DRAWING NO.

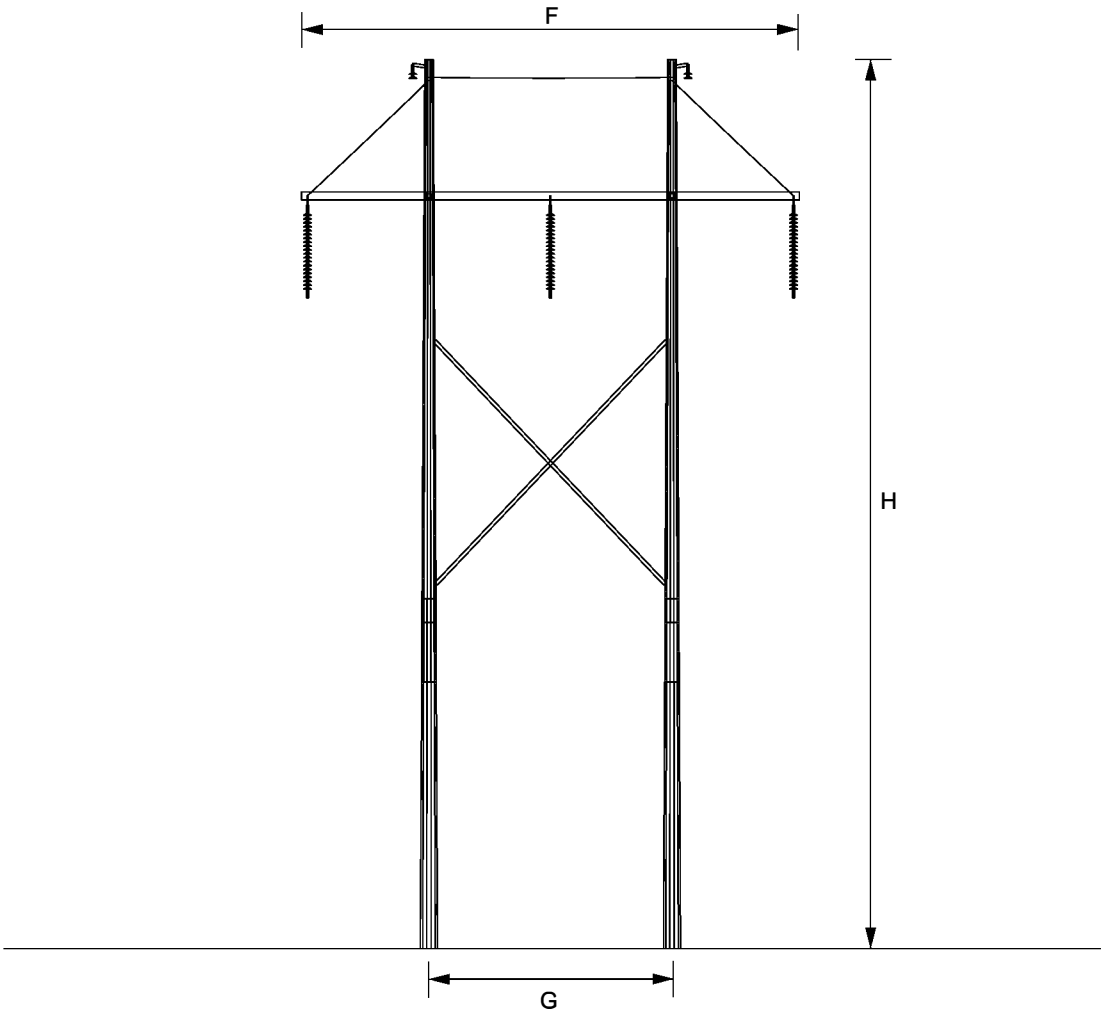
ATTACHMENT II.B.3.e

DRAWN ALS

TESBORD1 $DGNSPEC$

$SYTIME$

SECTION 6



SINGLE CIRCUIT H-FRAME SUSPENSION STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	CLOSELY RESEMBLES GEOMETRY OF EXISTING STRUCTURES
C. LENGTH OF R/W (STRUCTURE QUANTITY):	9.9 MILES (81 STRUCTURES)
D. STRUCTURE MATERIAL:	WEATHERING STEEL POLES AND GALVANIZED STEEL CROSS ARMS & CROSS BRACING
RATIONALE FOR STRUCTURE MATERIAL:	THE COMPANY'S STANDARD FOR DIRECT EMBED H-FRAME CONSTRUCTION IS WEATHERING STEEL
E. FOUNDATION MATERIAL: AVERAGE FOUNDATION REVEAL:	N/A - DIRECT EMBED (SEE NOTE 4) N/A - DIRECT EMBED
F. AVERAGE WIDTH AT CROSSARM:	42'
G. AVERAGE WIDTH AT BASE:	20.5'
H. MINIMUM STRUCTURE HEIGHT: MAXIMUM STRUCTURE HEIGHT: AVERAGE STRUCTURE HEIGHT:	57' 84' 69'
I. AVERAGE SPAN LENGTH:	586.1'
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. IN WETLAND OR SWAMP AREAS - DIRECT EMBED INTO STEEL PIPE PILES

$DGNSPEC$

Electric Transmission

Dominion Energy

Dominion Energy
10900 Nuckols Road
Glen Allen, VA 23060

SECTION 6:

STRUCTURES 254/25-254/113

DRAWING NO.

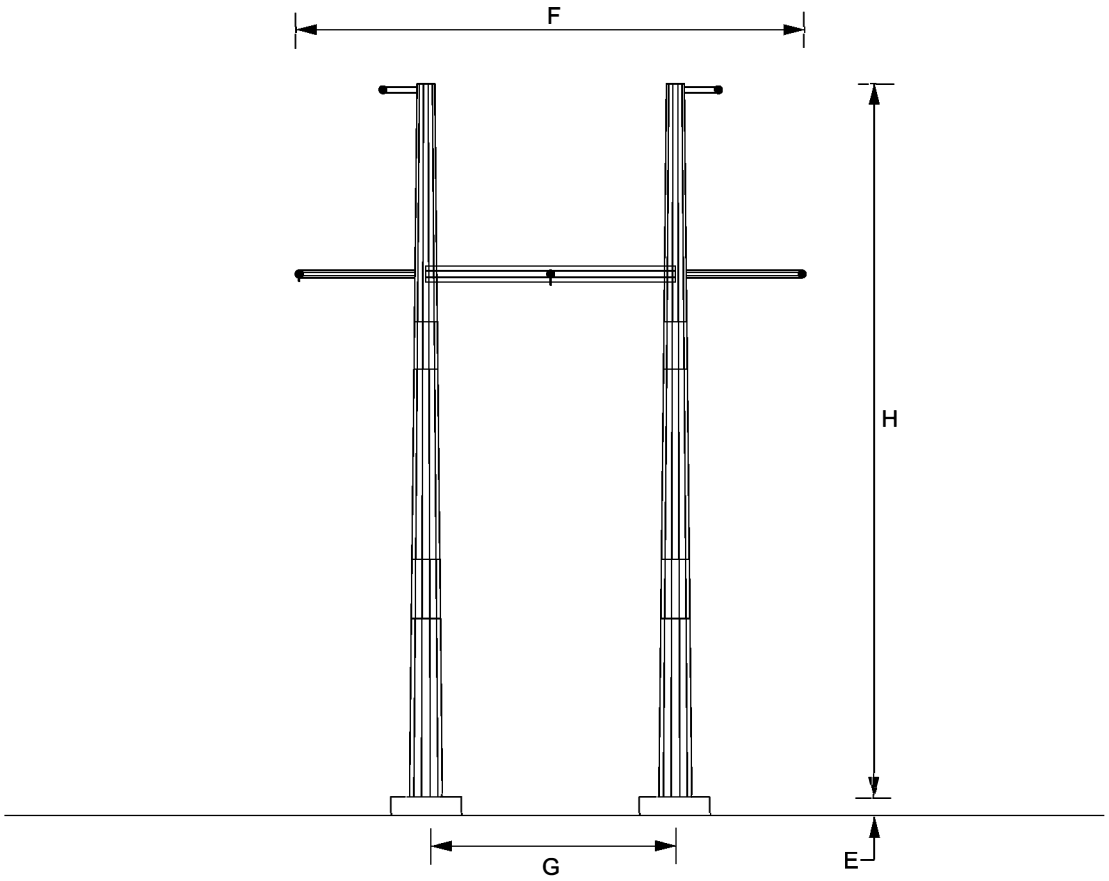
ATTACHMENT II.B.3.f

DRAWN ALS

TESBORDI

$SYTIME$

SECTION 6



SINGLE CIRCUIT H-FRAME DOUBLE DEAD-END STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	CLOSELY RESEMBLES GEOMETRY OF EXISTING STRUCTURES
C. LENGTH OF R/W (STRUCTURE QUANTITY):	9.9 MILES (1 STRUCTURES)
D. STRUCTURE MATERIAL:	WEATHERING STEEL
RATIONALE FOR STRUCTURE MATERIAL:	TO MATCH THE MATERIAL SELECTED FOR THE TYPICAL H-FRAME SUSPENSION STRUCTURES
E. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
F. AVERAGE WIDTH AT CROSSARM:	47'
G. AVERAGE WIDTH AT BASE:	23.5'
H. MINIMUM STRUCTURE HEIGHT:	65'
MAXIMUM STRUCTURE HEIGHT:	65'
AVERAGE STRUCTURE HEIGHT:	65'
I. AVERAGE SPAN LENGTH:	586.1'
J. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. MINIMUM FOUNDATION REVEAL SHALL BE 1.5', MAX REVEAL SUBJECT TO FINAL LOCATION AND TERRAIN

Electric Transmission

Dominion Energy
Dominion Energy
10900 Nuckols Road
Glen Allen, VA 23060

SECTION 6:

STRUCTURES 254/25-254/113

92

DRAWING NO.

ATTACHMENT II.B.3.g

DRAWN ALS

$DGNSPEC$

TESBORD1

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

4. With regard to the proposed supporting structures for all feasible alternate routes, provide the maximum, minimum and average structure heights with respect to the whole route.

Response: Not applicable.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

5. For lines being rebuilt, provide mapping showing existing and proposed structure heights for each individual structure within the ROW, as proposed in the application.

Response: See Attachment II.B.5.a for structure details and mapping.

The table below provides the existing and proposed structure heights. The proposed approximate structure heights are from the conceptual design created to estimate the cost of the Virginia Rebuild Project and are subject to change based on final engineering design. The approximate structure heights do not include the proposed foundation reveal (to the extent applicable).

Structure Number	Existing Structure Height (ft.)	Proposed Structure Height (ft.)	Attachment II.B.3 Structure Type
2201/1A *	80	80	N/A
2201/1	59	61	II.B.3.a
2201/2	69	79	II.B.3.a
2201/3	67	79	II.B.3.a
2201/4	58	70	II.B.3.b
2201/5	76	84	II.B.3.c
2201/6	82	97	II.B.3.c
2201/7	80	79	II.B.3.c
2201/8	57	70	II.B.3.c
2201/9	59	66	II.B.3.c
2201/10	62	70	II.B.3.c
2201/11	71	75	II.B.3.c
2201/12	61	65	II.B.3.d
2201/13 *	61	61	N/A
2201/14,	75	75	N/A
254/15 *	61	61	N/A
254/16 *	66	66	N/A
254/17	58	61	II.B.3.e
254/18	57	66	II.B.3.e
254/19	55	66	II.B.3.e
254/20	63	66	II.B.3.e
254/21	57	66	II.B.3.e
254/22	55	61	II.B.3.e
254/23 *	66	66	N/A
254/24	57	61	II.B.3.e
254/25	66	75	II.B.3.f
254/26	55	70	II.B.3.f

Structure Number	Existing Structure Height (ft.)	Proposed Structure Height (ft.)	Attachment II.B.3 Structure Type
254/27	65	75	II.B.3.f
254/28	57	66	II.B.3.f
254/29	57	66	II.B.3.f
254/30	67	70	II.B.3.f
254/31	63	66	II.B.3.f
254/32	61	70	II.B.3.f
254/33	55	66	II.B.3.f
254/34	67	75	II.B.3.f
254/35	63	70	II.B.3.f
254/36 *	66	66	N/A
254/37	57	70	II.B.3.f
254/38 *	66	66	N/A
254/39	57	61	II.B.3.f
254/40	66	75	II.B.3.f
254/41	61	70	II.B.3.f
254/42 *	61	61	N/A
254/43	56	70	II.B.3.f
254/44	63	70	II.B.3.f
254/45	62	70	II.B.3.f
254/46	58	75	II.B.3.f
254/47	67	75	II.B.3.f
254/48	67	75	II.B.3.f
254/49 *	75	75	N/A
254/50	61	70	II.B.3.f
254/51 *	70	70	N/A
254/52	56	61	II.B.3.f
254/53	56	66	II.B.3.f
254/54	62	70	II.B.3.f
254/55	59	66	II.B.3.f
254/56	56	66	II.B.3.f
254/57	62	66	II.B.3.f
254/58	57	61	II.B.3.f
254/59	62	70	II.B.3.f
254/60	62	66	II.B.3.f
254/61 *	66	66	N/A
254/62 *	66	66	N/A
254/63	72	79	II.B.3.f
254/64 *	70	70	N/A
254/65	57	57	II.B.3.f
254/66	62	70	II.B.3.f
254/67 *	75	75	N/A
254/68	56	61	II.B.3.f

Structure Number	Existing Structure Height (ft.)	Proposed Structure Height (ft.)	Attachment II.B.3 Structure Type
254/69 *	61	61	N/A
254/70	61	66	II.B.3.f
254/71	56	66	II.B.3.f
254/72	56	66	II.B.3.f
254/73 *	66	66	N/A
254/74	62	75	II.B.3.f
254/75	62	66	II.B.3.f
254/76	61	66	II.B.3.f
254/77	61	66	II.B.3.f
254/78	62	65	II.B.3.g
254/79	68	70	II.B.3.f
254/80	53	57	II.B.3.f
254/81	58	66	II.B.3.f
254/82	63	70	II.B.3.f
254/83	62	70	II.B.3.f
254/84	61	66	II.B.3.f
254/85	61	70	II.B.3.f
254/86	56	66	II.B.3.f
254/87	64	75	II.B.3.f
254/88	66	75	II.B.3.f
254/89	58	66	II.B.3.f
254/90	62	70	II.B.3.f
254/91 *	75	75	N/A
254/92	62	84	II.B.3.f
254/93 *	66	66	N/A
254/94	62	70	II.B.3.f
254/95 *	66	66	N/A
254/96	61	70	II.B.3.f
254/97	56	66	II.B.3.f
254/98	55	66	II.B.3.f
254/99	62	75	II.B.3.f
254/100	66	70	II.B.3.f
254/101	65	79	II.B.3.f
254/102	62	70	II.B.3.f
254/103	62	66	II.B.3.f
254/104	62	70	II.B.3.f
254/105	56	66	II.B.3.f
254/106	62	70	II.B.3.f
254/107	62	66	II.B.3.f
254/108	66	70	II.B.3.f
254/109	60	66	II.B.3.f
254/110	55	61	II.B.3.f

Structure Number	Existing Structure Height (ft.)	Proposed Structure Height (ft.)	Attachment II.B.3 Structure Type
254/111	59	66	II.B.3.f
254/112	63	75	II.B.3.f
254/113	56	66	II.B.3.f
Minimum	53	57	
Maximum	82	97	
Average	62	69	

* Existing Structure not replaced

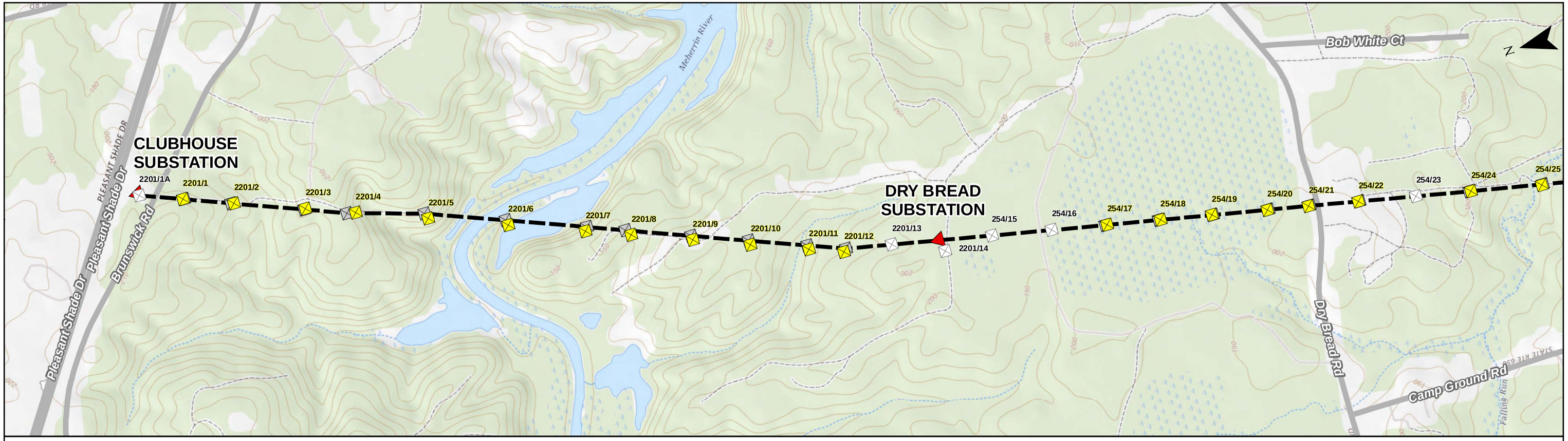
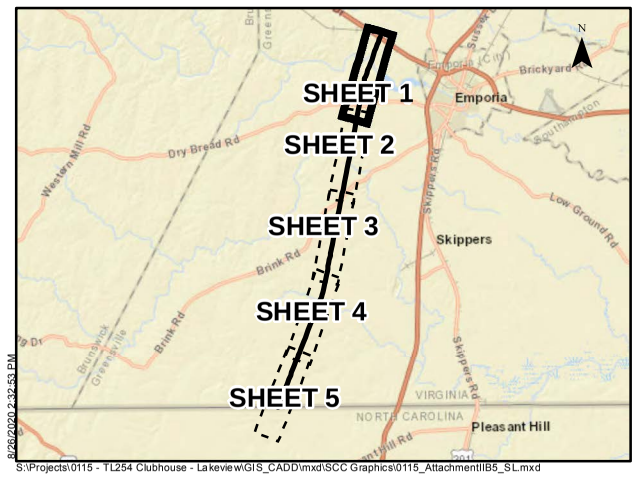


TABLE II.B.5

Structure Number	2201/1A	2201/1	2201/2	2201/3	2201/4	2201/5	2201/6	2201/7	2201/8	2201/9	2201/10	2201/11	2201/12	2201/13	2201/14	254/15	254/16
Existing Structure Height (Feet)	80	59	69	67	58	76	82	80	57	59	62	71	61	61	75	61	66
Proposed Structure Height (Feet)	N/A	61	79	79	70	84	97	79	70	66	70	75	65	N/A	N/A	N/A	N/A

Structure Number	254/17	254/18	254/19	254/20	254/21	254/22	254/23	254/24	254/25
Existing Structure Height (Feet)	58	57	55	63	57	55	66	57	66
Proposed Structure Height (Feet)	61	66	66	66	66	61	N/A	61	75



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SITE DATA

- VA Project Centerline
- NC Project Centerline
- Structure To Be Replaced
- Structure To Remain
- Structure To Be Removed
- Proposed Structure
- Existing Substation

Notes:
1. Basemap Source: USGS National Map: National Boundaries; ESRI, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, ESRI Japan, METI, ESRI China (Hong Kong), ESRI Korea, ESRI (Thailand), NGCC, (c) OpenStreetmap contributors, and the GIS User Community
2. Structure locations and heights provided by Dominion Energy Virginia and subject to final engineering. Structure heights do not include foundation reveal.

0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

ENVIRONMENTAL

Dominion Energy®

ATTACHMENT II.B.5
STRUCTURE LOCATIONS MAP
Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project
Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

SHEET 1 OF 5

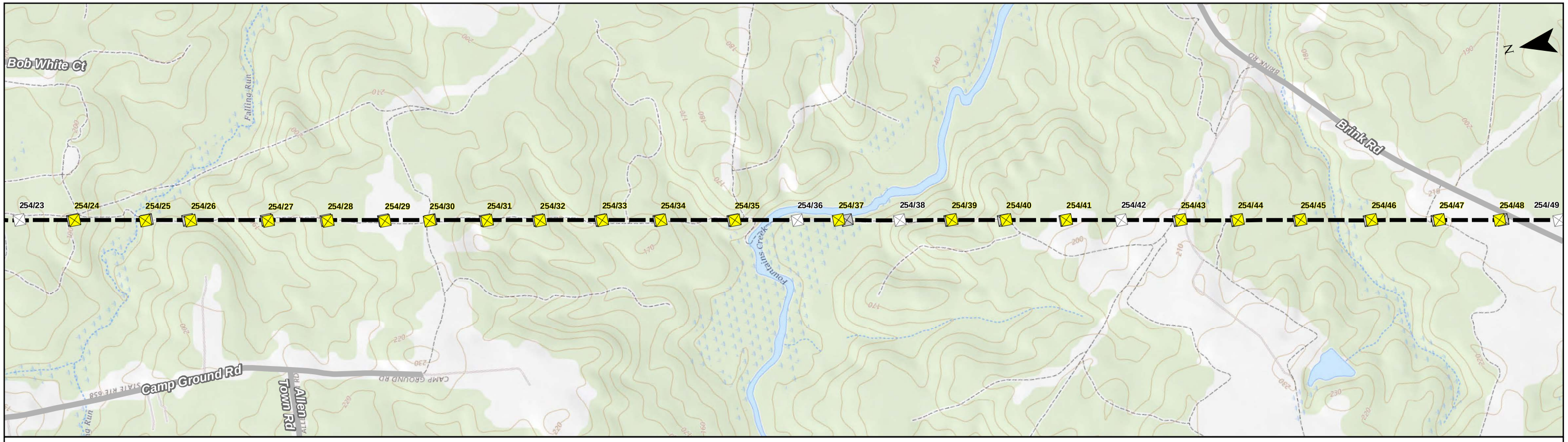
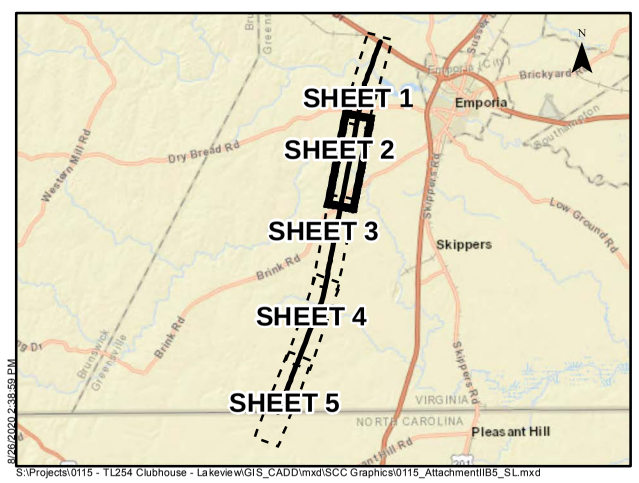


TABLE II.B.5

Structure Number	254/23	254/24	254/25	254/26	254/27	254/28	254/29	254/30	254/31	254/32	254/33	254/34	254/35	254/36	254/37	254/38	254/39
Existing Structure Height (Feet)	66	57	66	55	65	57	57	67	63	61	55	67	63	66	57	66	57
Proposed Structure Height (Feet)	N/A	61	75	70	75	66	66	70	66	70	65.5	74.5	70	N/A	70	N/A	61

Structure Number	254/40	254/41	254/42	254/43	254/44	254/45	254/46	254/47	254/48	254/49
Existing Structure Height (Feet)	66	61	61	56	63	62	58	67	67	75
Proposed Structure Height (Feet)	75	70	N/A	70	70	70	75	75	75	N/A



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SITE DATA

- VA Project Centerline
- NC Project Centerline
- Structure To Be Replaced
- Structure To Remain
- Structure To Be Removed
- Proposed Structure
- Existing Substation

Notes:
1. Basemap Source: USGS National Map: National Boundaries; ESRI, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, ESRI Japan, METI, ESRI China (Hong Kong), ESRI Korea, ESRI (Thailand), NGCC, (c) OpenStreetmap contributors, and the GIS User Community
2. Structure locations and heights provided by Dominion Energy Virginia and subject to final engineering. Structure heights do not include foundation reveal.

0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

ATTACHMENT II.B.5
STRUCTURE LOCATIONS MAP
Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project
Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

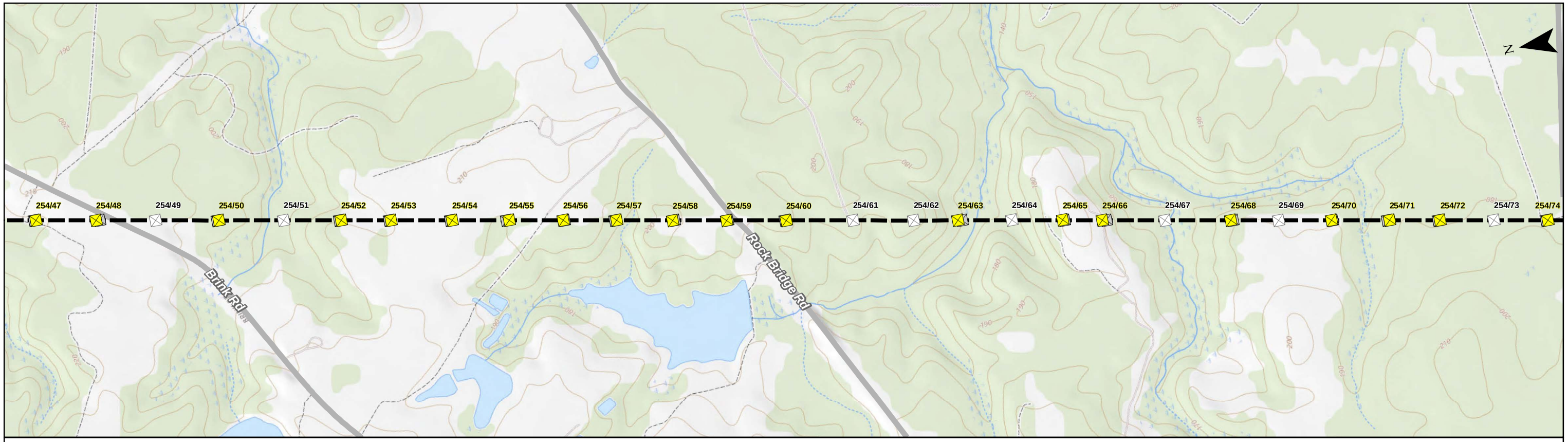
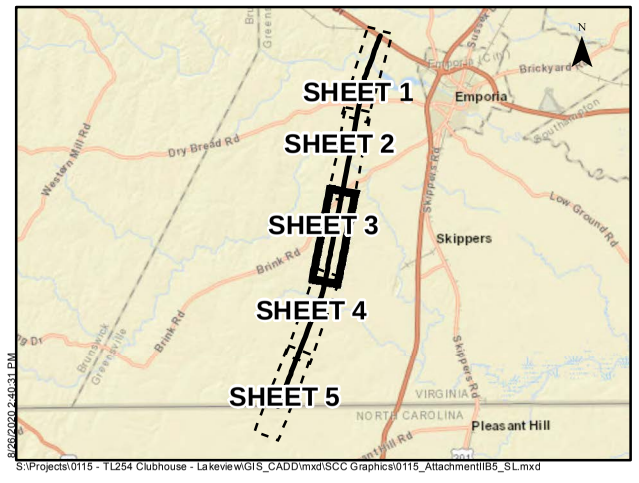


TABLE II.B.5

Structure Number	254/47	254/48	254/49	254/50	254/51	254/52	254/53	254/54	254/55	254/56	254/57	254/58	254/59	254/60	254/61	254/62	254/63
Existing Structure Height (Feet)	67	67	75	61	70	56	56	62	59	56	62	57	62	62	66	66	72
Proposed Structure Height (Feet)	75	75	N/A	70	N/A	61	66	70	66	66	66	61	70	66	N/A	N/A	79

Structure Number	254/64	254/65	254/66	254/67	254/68	254/69	254/70	254/71	254/72	254/73	254/74
Existing Structure Height (Feet)	70	57	62	75	56	61	61	56	56	66	62
Proposed Structure Height (Feet)	N/A	57	70	N/A	61	N/A	66	66	66	N/A	75



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SITE DATA

- VA Project Centerline
- NC Project Centerline
- Structure To Be Replaced
- Structure To Remain
- Structure To Be Removed
- Proposed Structure
- Existing Substation

Notes:
1. Basemap Source: USGS National Map: National Boundaries; ESRI, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, ESRI Japan, METI, ESRI China (Hong Kong), ESRI Korea, ESRI (Thailand), NGCC, (c) OpenStreetmap contributors, and the GIS User Community
2. Structure locations and heights provided by Dominion Energy Virginia and subject to final engineering. Structure heights do not include foundation reveal.

0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

ENVIRONMENTAL

Dominion Energy®

ATTACHMENT II.B.5
STRUCTURE LOCATIONS MAP
Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project
Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

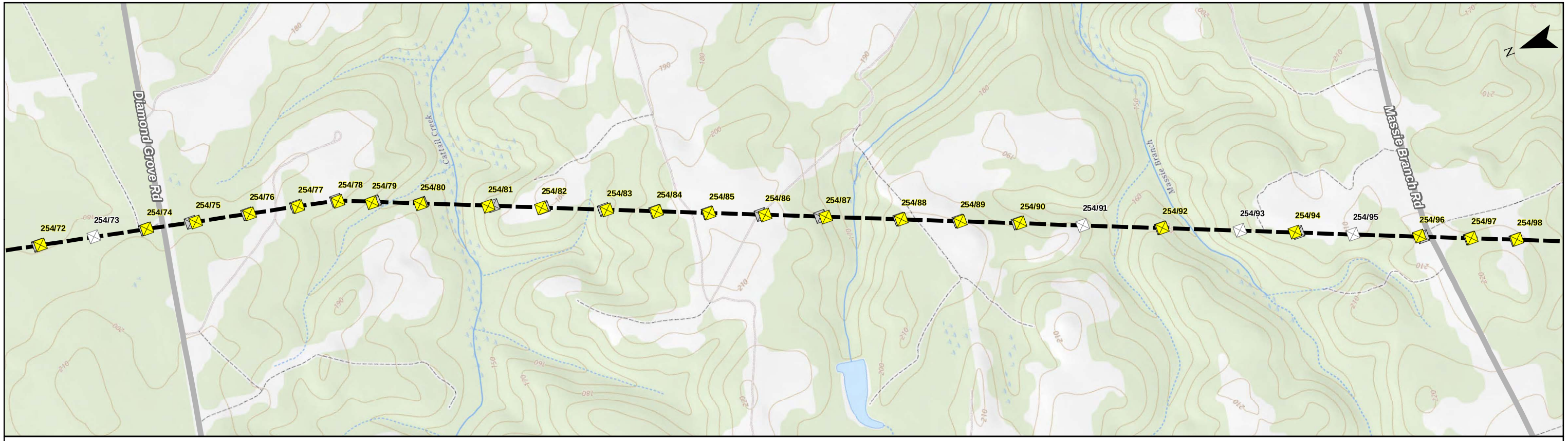
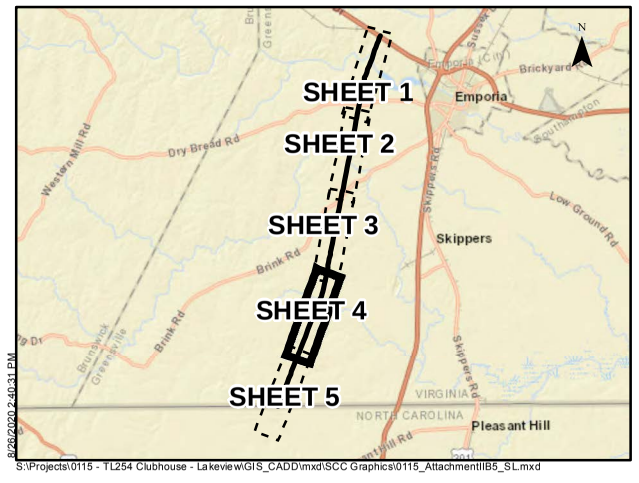


TABLE II.B.5

Structure Number	254/72	254/73	254/74	254/75	254/76	254/77	254/78	254/79	254/80	254/81	254/82	254/83	254/84	254/85	254/86	254/87	254/88
Existing Structure Height (Feet)	56	66	62	62	61	61	62	68	53	58	63	62	61	61	56	64	66
Proposed Structure Height (Feet)	66	N/A	75	66	66	66	65	70	57	66	70	70	66	70	66	75	75

Structure Number	254/89	254/90	254/91	254/92	254/93	254/94	254/95	254/96	254/97	254/98
Existing Structure Height (Feet)	58	62	75	62	66	62	66	61	56	55
Proposed Structure Height (Feet)	66	70	N/A	84	N/A	70	N/A	70	66	66



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SITE DATA

- VA Project Centerline
- NC Project Centerline
- Structure To Be Replaced
- Structure To Remain
- Structure To Be Removed
- Proposed Structure
- Existing Substation

Notes:
1. Basemap Source: USGS National Map: National Boundaries; ESRI, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, ESRI Japan, METI, ESRI China (Hong Kong), ESRI Korea, ESRI (Thailand), NGCC, (c) OpenStreetmap contributors, and the GIS User Community
2. Structure locations and heights provided by Dominion Energy Virginia and subject to final engineering. Structure heights do not include foundation reveal.

0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

ENVIRONMENTAL

Dominion Energy®

ATTACHMENT II.B.5
STRUCTURE LOCATIONS MAP
Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project
Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

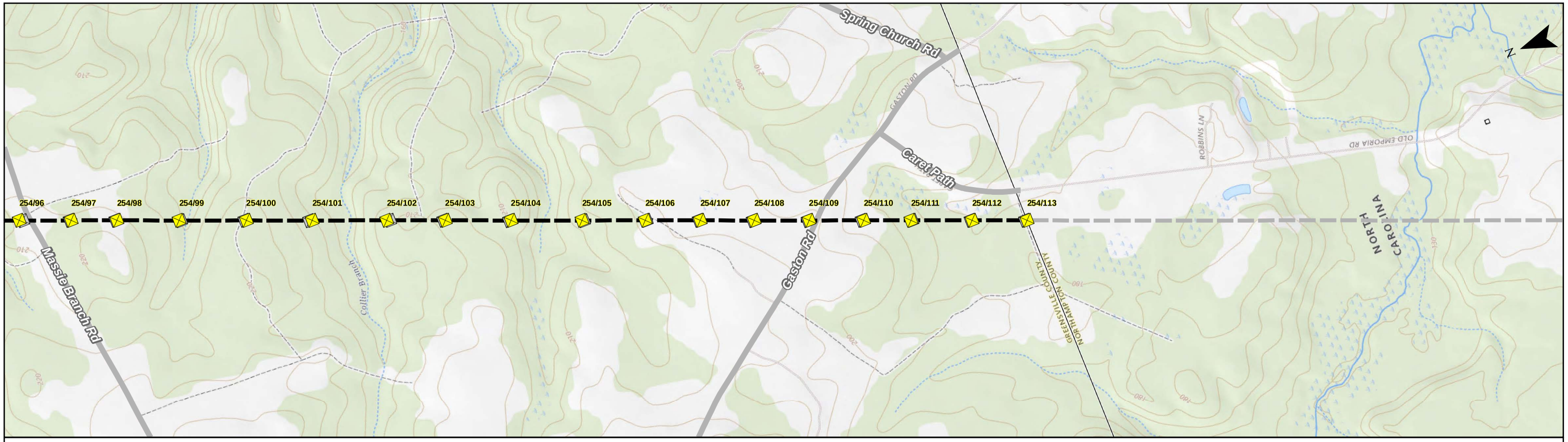
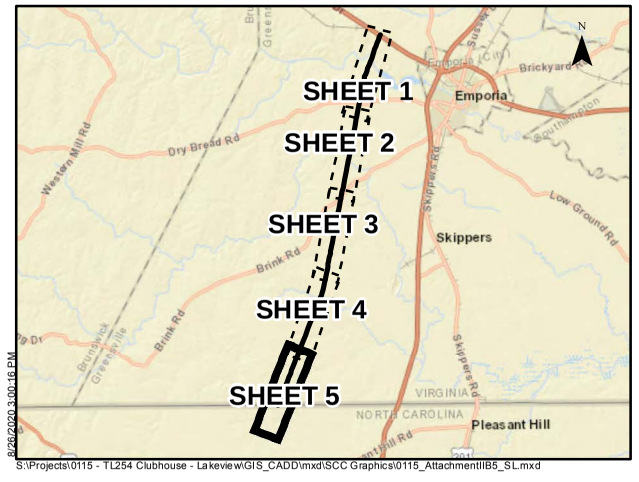


TABLE II.B.5

Structure Number	254/96	254/97	254/98	254/99	254/100	254/101	254/102	254/103	254/104	254/105	254/106	254/107	254/108	254/109	254/110	254/111	254/112
Existing Structure Height (Feet)	61	56	55	62	66	65	62	62	62	56	62	62	66	60	55	59	63
Proposed Structure Height (Feet)	70	66	66	75	70	79	70	66	70	66	70	66	70	66	61	66	75

Structure Number	254/113
Existing Structure Height (Feet)	56
Proposed Structure Height (Feet)	66



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SITE DATA

- VA Project Centerline
- NC Project Centerline
- Structure To Be Replaced
- Structure To Remain
- Structure To Be Removed
- Proposed Structure
- Existing Substation

Notes:
1. Basemap Source: USGS National Map: National Boundaries; ESRI, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, ESRI Japan, METI, ESRI China (Hong Kong), ESRI Korea, ESRI (Thailand), NGCC, (c) OpenStreetmap contributors, and the GIS User Community
2. Structure locations and heights provided by Dominion Energy Virginia and subject to final engineering. Structure heights do not include foundation reveal.

0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

ENVIRONMENTAL

Dominion Energy®

ATTACHMENT II.B.5
STRUCTURE LOCATIONS MAP
Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project
Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

SHEET 5 OF 5

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

6. Provide photographs for typical existing facilities to be removed, comparable photographs or representations for proposed structures, and visual simulations showing the appearance of all planned transmission structures at identified historic locations within one mile of the proposed centerline and in key locations identified by the Applicant.

Response: *(a) Photographs for typical existing facilities to be removed*

See Attachment II.B.6.a for representative photographs of the existing structures.

(b) Comparable photographs or representations for proposed structures

See Attachment II.B.6.b for representative photographs of the structures proposed for the Virginia Rebuild Project.

(c) Visual simulations from historic locations within one mile of the proposed centerline

Visual simulations showing the appearance of proposed transmission structures are provided for historic properties where the Virginia Rebuild Project will be visible. Attachment II.B.6.c was created using GIS modeling to depict whether the existing and proposed structures are or will be visible from historic properties. Observation points ("OPs") used for the simulations are indicated on the maps. Attachment II.B.6.c includes existing photographs and simulations of the proposed structures from the selected OPs. The below table identifies historic properties.

Historic Property	OP	Comments*	Distance to Centerline (miles)
Chambliss House (Historic), Woodview (Historic/Current) (040-0010) (NRHP Eligible)	1	No visibility of proposed structures; no change in existing viewshed	0.1
Brink Polling House (Current), Voting House, Brink Road (Function/Location) (040-0047) (NRHP Eligible)	2	No visibility of proposed structures; no change in existing viewshed (visible existing structures are not part of the proposed Virginia Rebuild Project)	1.0

*Per VDHR *Guidelines for Assessing Impacts of Proposed Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (2008)*, photosimulations are recommended for inclusion in a Stage I Pre-Application if there is a potential for changes in visibility from a historic property. Therefore, photosimulations are not required for these resources as part of the Stage I Pre-Application. However, they are included herein as identified historic locations within one miles of the proposed centerline of the Virginia Rebuild Project in accordance with this section.

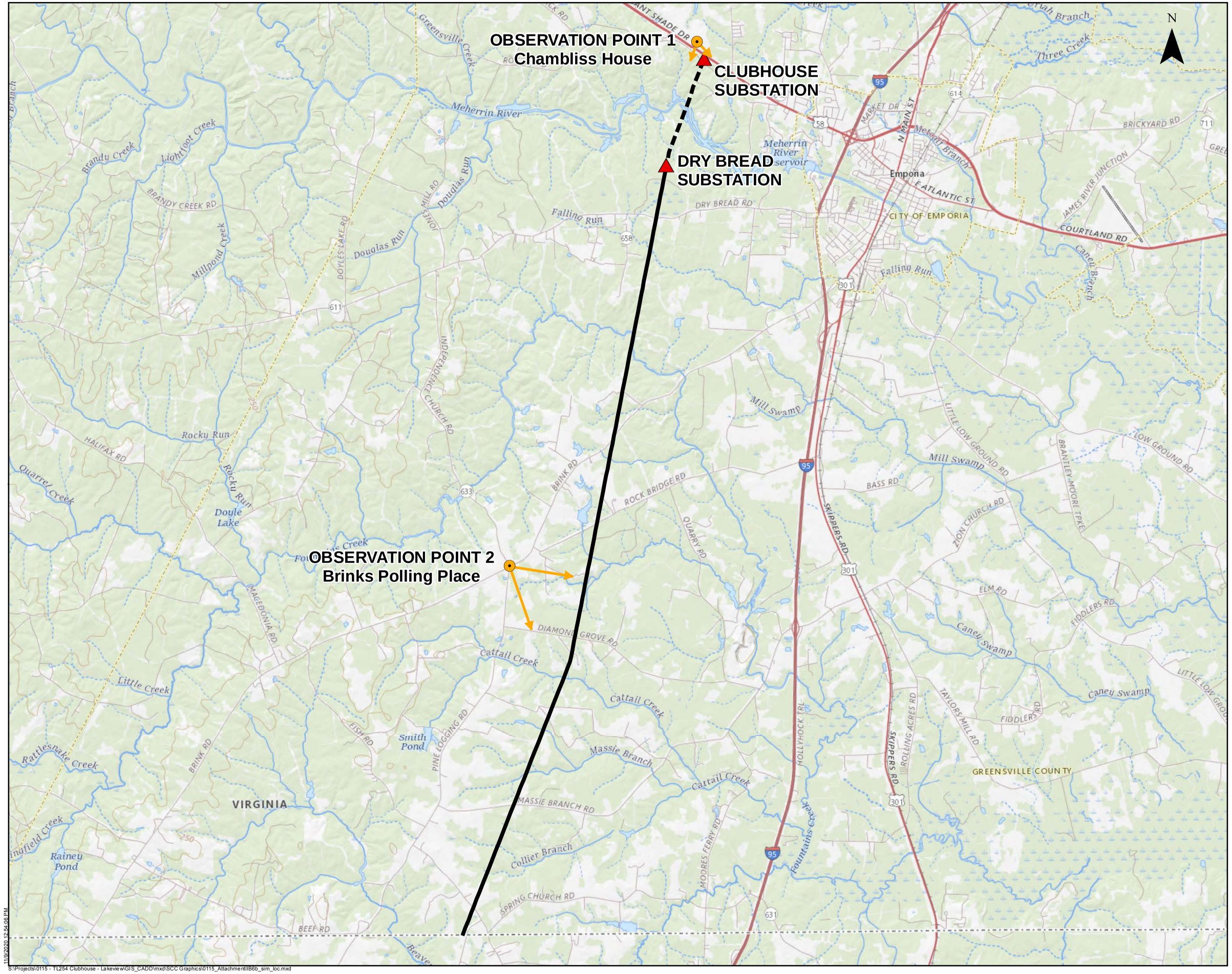
See Attachment III.B.4 for visual simulations of key locations evaluated.

Existing Suspension Structure Type For Lines #2201 and #254: Wooden H-Frame

Existing Running Angle Structure Type For Lines #2201 and #254: Wooden 3-Pole

Proposed Suspension Structure Type For Lines #2201 and #254: Weathering Steel H-Frame

Proposed Double-Deadend Structure Type For Lines #2201 and #254: Weathering Steel H-Frame



ATTACHMENT II.B.6.C
OBSERVATION POINTS
Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project
Greensville County, Virginia

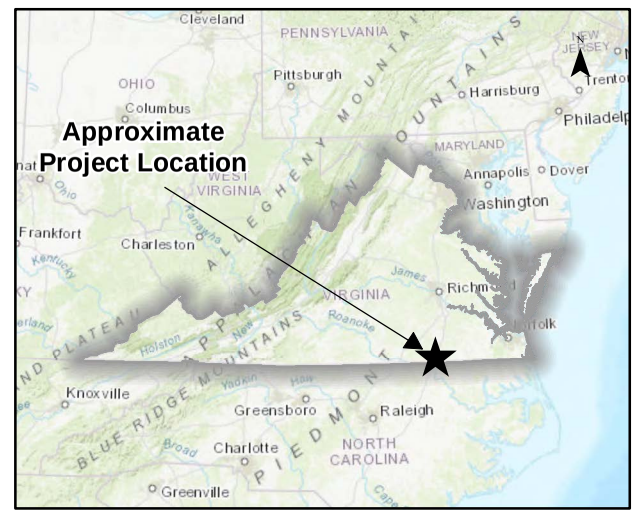
Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	11/06/20

0 0.5 1 2 Miles
Scale is 1 IN = 1 MI when printed at original size of 11x17

SITE DATA
- Line #2201
- Line #254
- Existing Substation
- Observation Point

Notes:
1. Basemap Source: Esri, HERE, Garmin, Intermap, increment P Corp., GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, Meti, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community; USGS National Map: National Boundaries



ENVIRONMENTAL

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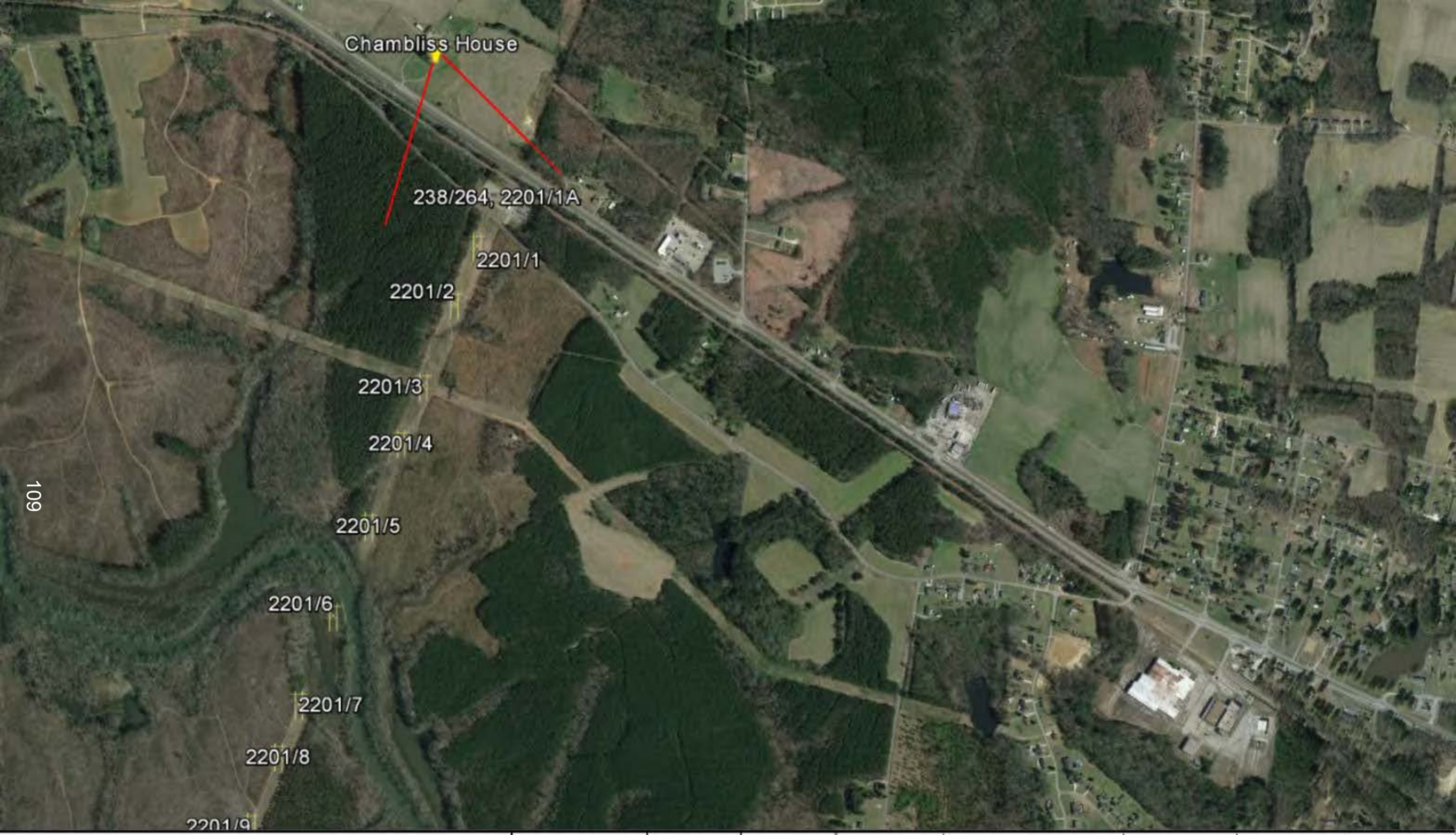


Photo location: Chambliss House	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	2201/1	61.0	1646	2201/4	70.0	3168	2201/7	79.0	5558
Project: Dominion Energy Emporia	2201/2	79.0	2068	2201/5	83.5	3936	2201/8	70.0	5940
	2201/3	79.0	2754	2201/6	97.0	4746	2201/9	65.5	6605

Dominion Energy: Emporia

Chambliss House **Existing View**

Photo simulations prepared by:
GTTE LLC
email:
info@gttellc.com
703 447 1350

Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.

0" 1" 2" 3" 4"

This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.

11

Dominion Energy: Emporia

Chambliss House **Proposed View**

Photo simulations prepared by:
GTTE LLC
email:
info@gttellc.com
703 447 1350

Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.

0" 1" 2" 3" 4"

This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Photo location: Brinks Polling Place	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft	Structure Name	Height ft	Distance ft
Photo simulations prepared by: GTTE LLC email: info@gttellc.com	254/67	75.00	5586	254/71	65.50	6057	254/75	65.50	7123
Project: Dominion Energy Emporia	254/68	61.00	5630	254/72	65.50	6274	254/76	65.50	7493
	254/69	61.00	5724	254/73	66.00	6552	254/77	65.50	7839
	254/70	65.50	5855	254/74	74.50	6841	254/78	65.00	8137

Dominion Energy: Emporia

Brinks Polling Place **Existing View**

Photo simulations prepared by:
GTTE LLC
email:
info@gttellc.com
703 447 1350

Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.

0" 1" 2" 3" 4"

This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.

114

Dominion Energy: Emporia

Brinks Polling Place **Proposed View**

Photo simulations prepared by:
GTTE LLC
email:
info@gttellc.com
703 447 1350

Photo simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.

0" 1" 2" 3" 4"

This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 20" from the screen the image will have the same scale as if the viewer were standing at the camera location.

II. DESCRIPTION OF THE PROPOSED PROJECT

C. Describe and furnish plan drawings of all new substations, switching stations, and other ground facilities associated with the proposed project. Include size, acreage, and bus configurations. Describe substation expansion capability and plans. Provide one-line diagrams for each.

Response: As part of the Virginia Rebuild Project, the Company proposes the following substation-related work. No substation expansion is required as part of the Virginia Rebuild Project.

At Clubhouse Substation, the riser conductors from the bus to the rebuilt line will be replaced with new 2-1590 AAC conductors. Two disconnect switches will be replaced to support the new line ratings. The fibers on the rebuilt Line #2201 OPGW will be brought from the substation backbone to the control enclosure. A system protection coordination study of Line #2201 will be conducted and relay resets will be performed at the substation.

At Dry Bread Substation, no new equipment will added or replaced in the Substation. A system protection coordination study of Lines #2201 and #254 will be conducted and relay resets will be performed at the substation.

The conceptual one-line and general arrangement diagrams for the Clubhouse Substation terminal equipment upgrades are provided as Attachments II.C.1 and II.C.2, respectively. No modification is required on the one-line or general arrangement diagrams for the work described at Dry Bread Substation.

ATTACHMENT II.C.1

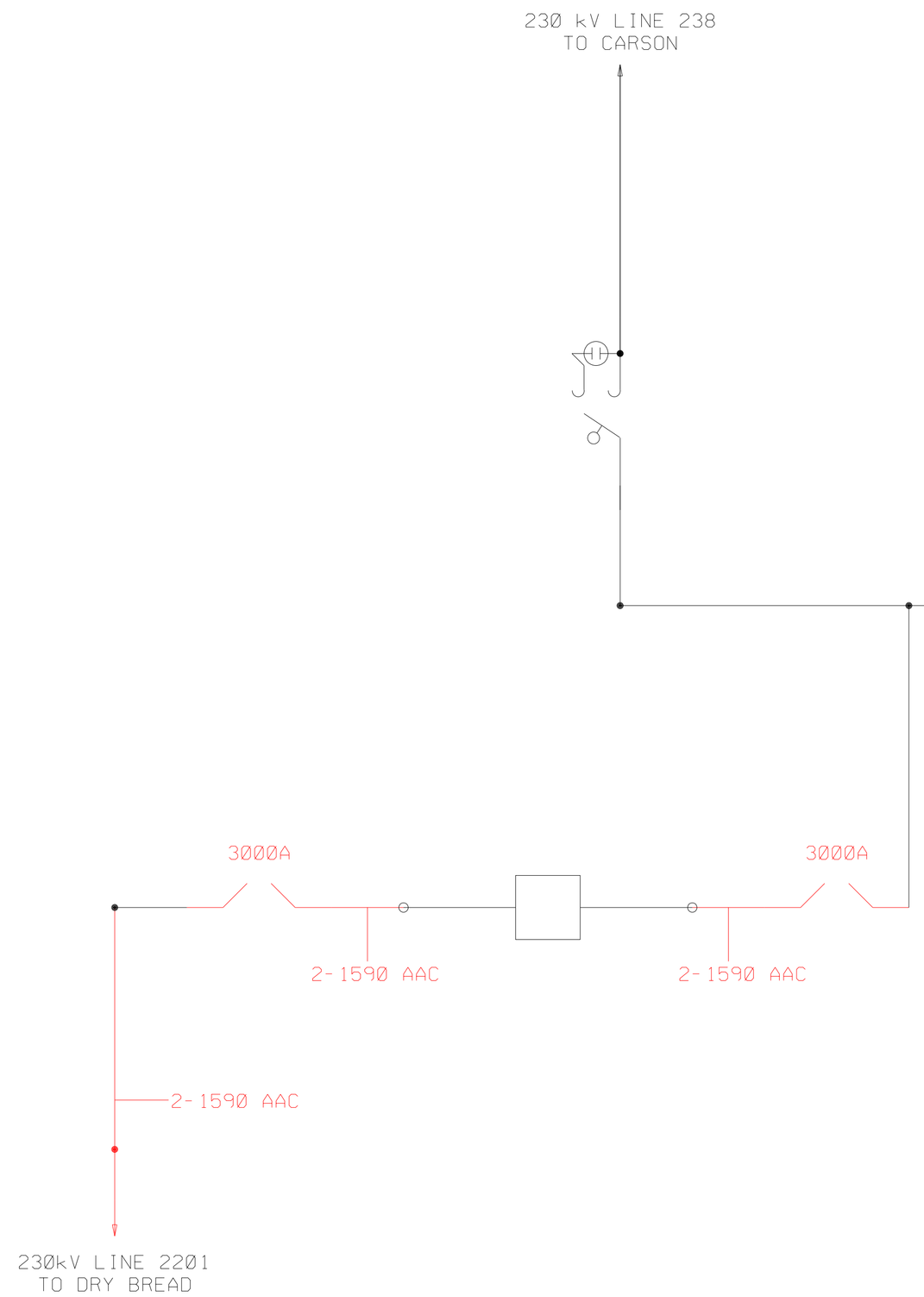
LEGEND:

CIRCUIT BREAKER

DISCONNECT SWITCH (CENTER- BREAK)

DISCONNECT SWITCH (VERTICAL- BREAK, W/MOTOR OPERATOR)

DISCONNECT SWITCH (VERTICAL- BREAK, W/MOTOR OPERATOR & INTERRUPTERS)



PRELIMINARY
NOT FOR CONSTRUCTION

SB 08-25-20 992765 PRELIMINARY LINE 2201 TERMINAL UPGRADE

By:	Approval
Date:	
Project No.	
BM No.	
Description	

Revisions

Dominion Energy

Construction One Line Diagram

Drawn By:	Date	Substation	CLUBHOUSE
Approval	Date	Drawing No.	1283000Z

8/26/2020

USER: santos5

Attachment II.C.1

Attachment II.C.2

Dominion Energy

GENERAL ARRANGEMENT PLAN
CLUBHOUSE SUBSTATION
GREENSVILLE COUNTY, VIRGINIA

	Name	Date
Designed by:		
Approvals		
Approvals		

Project No.

Scale 1"=40'-0"

B/M No.

Revisions

1

Sheet No. 1 OF 1

Drawing No. 1283-003

Cad File Name 1283003a.dgn

PLOTTED: 11/17/2020

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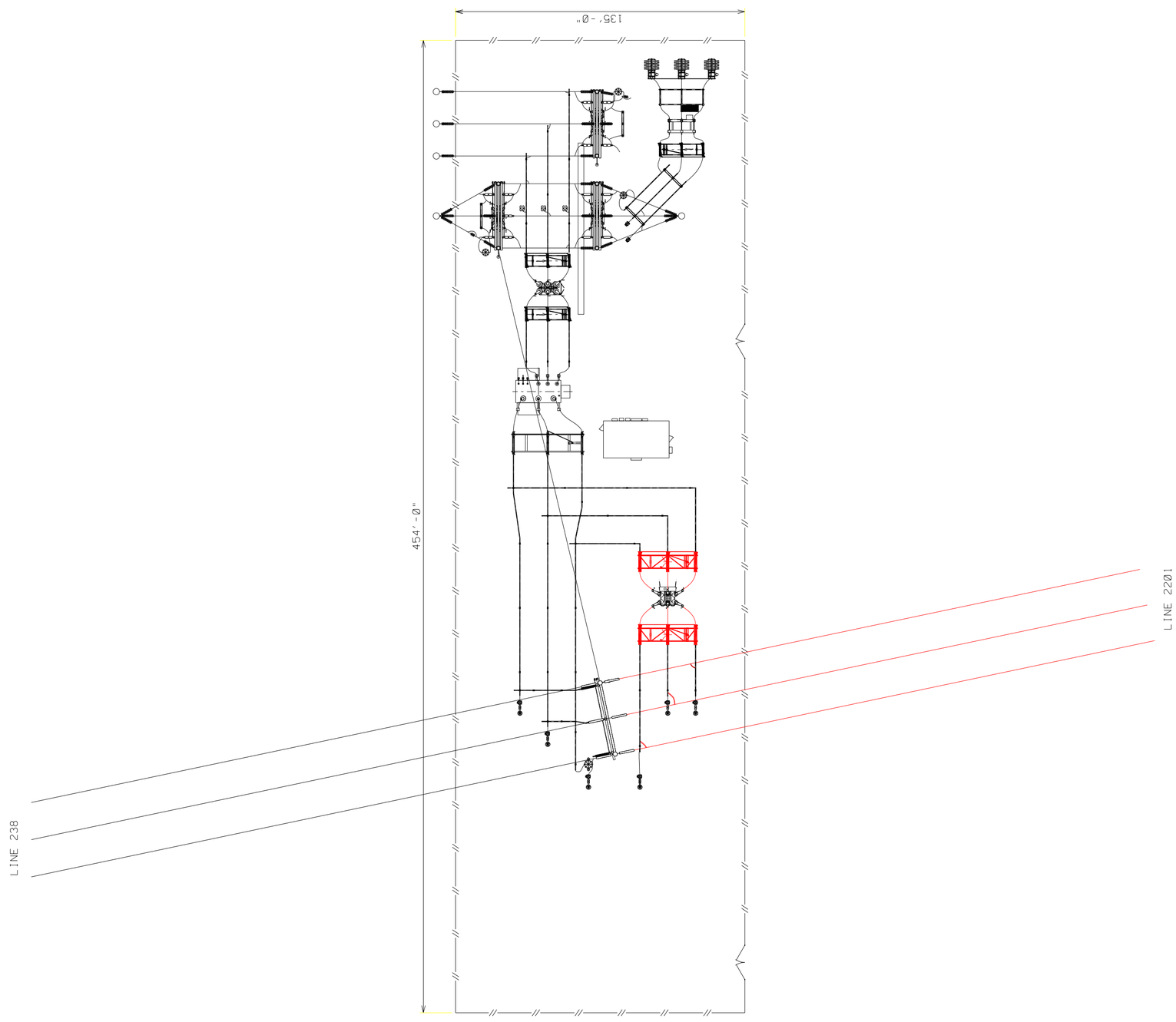
PLOTTED: 11/17/2020
USER: santos5



PRELIMINARY
NOT FOR CONSTRUCTION

ATTACHMENT II.C.2

No.	Date	By	Checked/Appr.	Revisions	Project Number	B/M
2	08-25-2020	SB		LINE 2201 TERMINAL UPGRADE PRELIMINARY	992765	

Typical Drawing Information

Library Location | Cell Name | B/M Assembly

Foundation Cells for Other Typical Structures (Pier) (Spread) | Steel Detail & Assembly

Pipe Stand Foundation Cells (Spread)

Pipe Stand Foundation Cells (Pier)

USER: santos5

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

A. Describe the character of the area that will be traversed by this line, including land use, wetlands, etc. Provide the number of dwellings within 500 feet, 250 feet and 100 feet of the centerline, and within the ROW for each route considered. Provide the estimated amount of farmland and forestland within the ROW that the proposed project would impact.

Response: **Land Use**

The general character of the Virginia Rebuild Project area is predominantly rural. The Virginia Rebuild Project is located entirely within Greensville County, Virginia.

Farmlands/Forests

According to the Natural Resources Conservation Service Data ("NRCS"), approximately 94.0 acres of prime farmland and 42.7 acres of farmland of statewide importance are located within the right-of-way. Prime farmland is an NRCS designation based on soil composition and is defined by the U.S. Department of Agriculture as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is available for these uses. Farmland of statewide importance includes land that nearly meets the criteria for prime farmland and has been designated by the Virginia Department of Agriculture and Consumer Services and Virginia Department of Conservation and Recreation ("DCR") as important for the production of food, feed, forage, fiber, and oilseed crops and that economically produces high yields of crops when treated and managed according to acceptable farming methods. Farmland classifications are not based on current land use. As the right-of-way has been in use since the early 1960s, it is not expected that the Virginia Rebuild Project will permanently impact farmland, as most farming uses are able to co-exist with the transmission line.

Prime farmlands and farmlands of statewide importance within the Virginia Rebuild Project area are depicted in Attachment III.A.1.

Wetlands

The Virginia Rebuild Project is located within the Meherrin watershed, Hydrologic Unit Code 03010204. According to the U.S. Geological Survey ("USGS") topographic quadrangles (Emporia [1963, rev 2019], Skippers [1963, rev 2019], and Barley [1963, rev 2019]), the existing transmission line crosses six named perennial streams and rivers, including: Meherrin River, Falling Run, Fontaine Creek, Cattail Creek, Massie Branch, and Collier Branch.

Within the Virginia Rebuild Project right-of-way, the Company delineated wetlands and other waters of the United States using the *Routine Determination Method* as outlined in the *1987 Corps of Engineers Wetland Delineation Manual* and methods described in the *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Region* (Version 2.0). The Company submitted the results of this delineation to the Army Corps of Engineers (the "Corps") on October 26, 2020, for confirmation. Total jurisdictional resources within the proposed Virginia Rebuild Project right-of-way is provided in the table below.

Jurisdictional resources within the Virginia Rebuild Project Right-of-Way

Resource	Area (±)
Palustrine Forested Wetland	6.3 AC
Palustrine Emergent Wetland	39.0 AC
Palustrine Scrub Shrub	1.8 AC
Open Waters (Palustrine Unconsolidated Bottom)	0.5 AC
Upper Perennial Stream	0.6 AC (3,071 LF)
Lower Perennial Stream	1.0 AC (243 LF)
Intermittent Stream	0.3 AC (1,919 LF)
Jurisdictional Ditches	0.003 AC (21 LF)

Prior to construction, the Company will obtain any necessary permits to impact jurisdictional resources.

Historic Features

In accordance with the *Guidelines for Assessing Impacts of Proposed Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (2008)*, a Stage I Pre-Application Analysis was conducted by Dutton. This report was forwarded to VDHR in November 2020, and is included as Attachment 2.H.1 to the DEQ Supplement. In addition, the Virginia Cultural Resource Information System ("VCRIS") inventory was rechecked in October 2020, which confirmed the accuracy of the data submitted in the Stage I Pre-Application Analysis.

The background archival research identified no National Historic Landmarks ("NHL")-listed resources within the 1.5-mile buffer. One architectural resource determined eligible for listing on the NRHP is located within the one-mile buffer, and one resource that is determined eligible for listing on the NRHP is located within the 0.5-mile buffer, as shown in the table below. There are no battlefields within 1.5 miles of the Virginia Rebuild Project centerline. There are no eligible or potentially eligible archaeological sites located within the right-of-way.

The NRHP-listed and NRHP-eligible properties that are within or adjacent to the Virginia Rebuild Project are presented in the tables below.

Architectural Resources Within or Adjacent to the Virginia Rebuild Project Right-of-Way

Resource ID#	Resource Name	National Register Status	Impact	Distance to Centerline (miles)
040-0010	Chambliss House (Historic), Woodview (Historic/Current)	NRHP Eligible	Minimal	0.1
040-0047	Brink Polling House (Current), Voting House, Brink Road (Function/Location)	NRHP Eligible	N/A*	1.0

*Per VDHR *Guidelines for Assessing Impacts of Proposed Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (2008)*, impacts to NRHP eligible properties outside of the 0.5-mile buffer are not required to be evaluated. As such, no impact determination is provided for this resource. However, based on the distance to the resource and lack of visibility, the Virginia Rebuild Project will not impact this resource.

Archaeological Resources Within or Adjacent to the Virginia Rebuild Project Right-of-Way*

Resource ID#	Resource Name	NRHP Status	Distance to Right-of-Way
44GV0095	Archaeological Site	Not Evaluated	Within right-of-way
44GV0104	Archaeological Site	Not Evaluated	Within right-of-way
44GV0106	Archaeological Site	Not Evaluated	Within right-of-way
44GV0107	Archaeological Site	Not Evaluated	Within right-of-way
44GV0108	Archaeological Site	Not Evaluated	Within right-of-way
44GV0128	Archaeological Site	Not Evaluated	Within right-of-way
44GV0153	Archaeological Site	Not Evaluated	Within right-of-way
44GV0154	Archaeological Site	Not Evaluated	Within right-of-way
44GV0159	Archaeological Site	Not Evaluated	Within right-of-way
44GV0161	Archaeological Site	Not Evaluated	Within right-of-way
44GV0162	Archaeological Site	Not Evaluated	Within right-of-way
44GV0163	Archaeological Site	Not Evaluated	Within right-of-way
44GV0262	Archaeological Site	Not Evaluated	Within right-of-way
44GV0263	Archaeological Site	Not Evaluated	Within right-of-way
44GV0264	Archaeological Site	Not Evaluated	Within right-of-way
44GV0265	Archaeological Site	Not Evaluated	Within right-of-way
44GV0423	Archaeological Site	Not Eligible	Within right-of-way
44GV0454	Archaeological Site	Not Eligible	Within right-of-way

* No archaeological fieldwork was conducted as part of this effort, and previously recorded sites within or adjacent to the project were not assessed at this time. No impacts to any archaeological resources are anticipated at this time. Resources will be assessed for existing conditions and to confirm avoidance of impacts as project planning progresses.

Wildlife

Online database searches for threatened and endangered species in the vicinity of the Virginia Rebuild Project, including the U.S. Fish and Wildlife ("USFWS") Information, Planning, and Conservation ("IPaC") system, the Virginia Department of Wildlife Resources ("DWR") Virginia Fish and Wildlife Information Service ("VAFWIS"), DCR, Natural Heritage Data Explorer ("NHDE"), and the Center for Conservation Biology ("CCB") Bald Eagle Nest Locator, were conducted, which identified several federal- and state-listed species that have the potential to occur within the Virginia Rebuild Project area. These resources are identified in the report included as Attachment 2.F.1 to the DEQ Supplement. The Company intends to reasonably minimize any impact on these resources and coordinate with pertinent agencies, as appropriate.

Dwellings

According to Greensville County GIS data, there are 14 dwellings located within 500 feet of the centerline of the Virginia Rebuild Project, five dwellings located within 250 feet of the centerline, and two dwellings located within 100 feet of the centerline.

ATTACHMENT III.A.1

PRIME FARMLAND MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

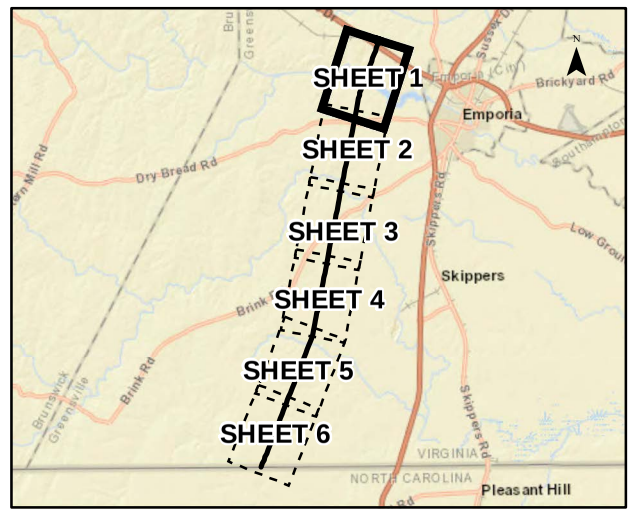
0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

SITE DATA

- Project Area
- Existing Substation
- All Areas are Prime Farmland (+/- 94.00 AC)
- Farmland of Statewide Importance (+/- 42.70 AC)

Notes:
1. Basemap Source: USGS National Map: Orthoimagery; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: NRCS SSURGO



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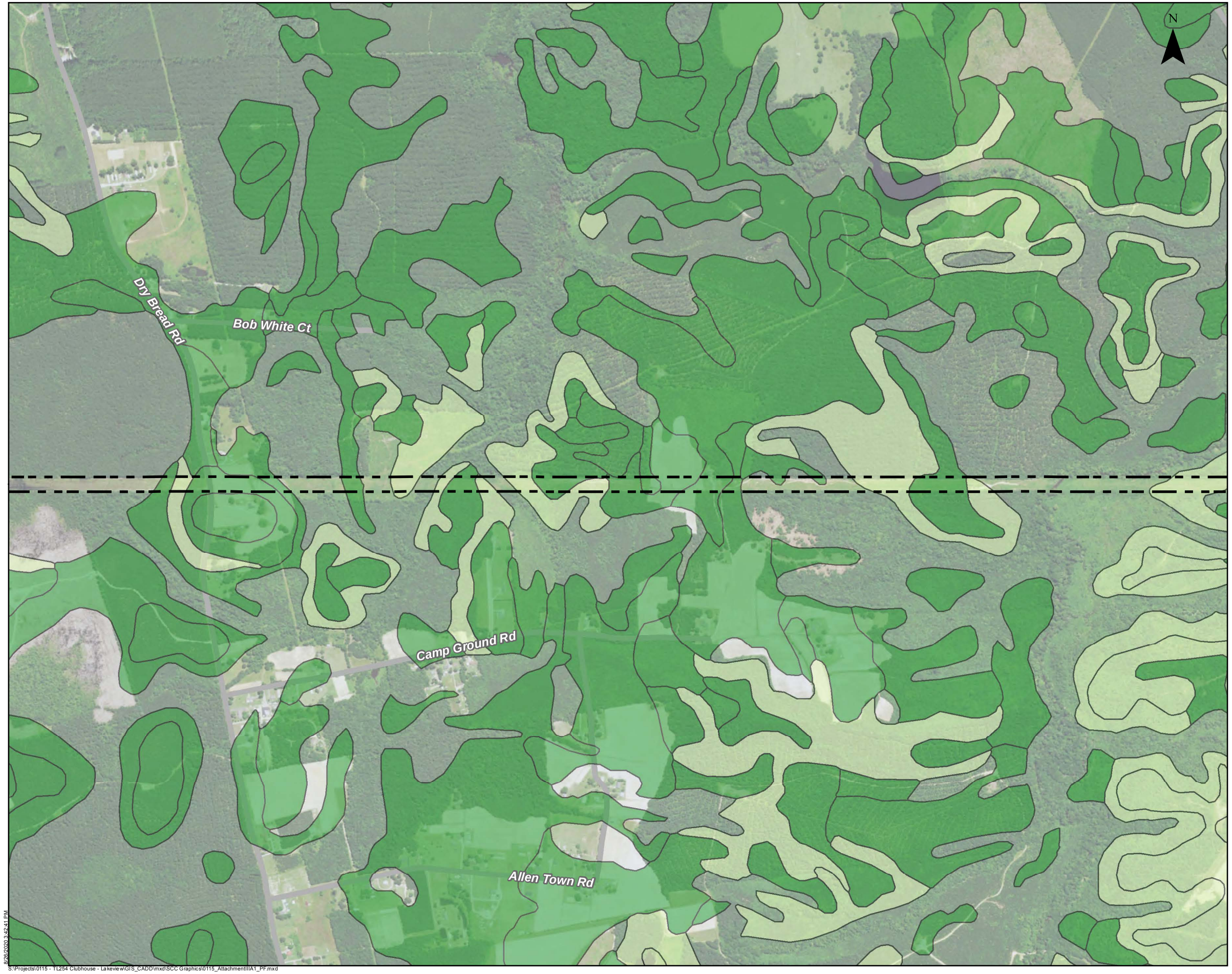

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ATTACHMENT III.A.1

PRIME FARMLAND MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

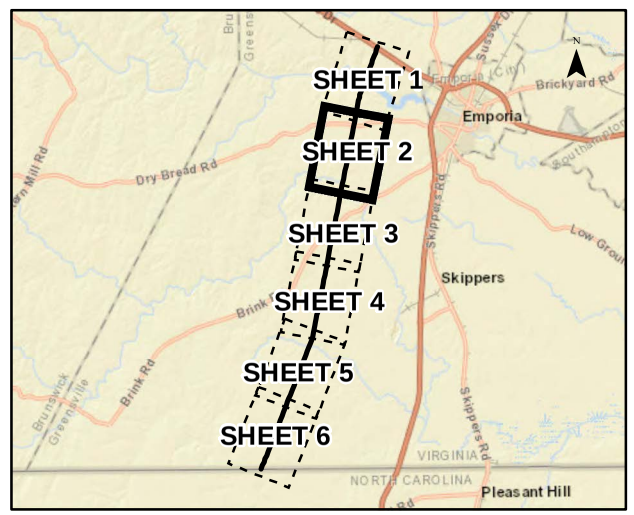
0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

SITE DATA

- Project Area
- Existing Substation
- All Areas are Prime Farmland (+/- 94.00 AC)
- Farmland of Statewide Importance (+/- 42.70 AC)

Notes:
1. Basemap Source: USGS National Map: Orthoimagery; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: NRCS SSURGO



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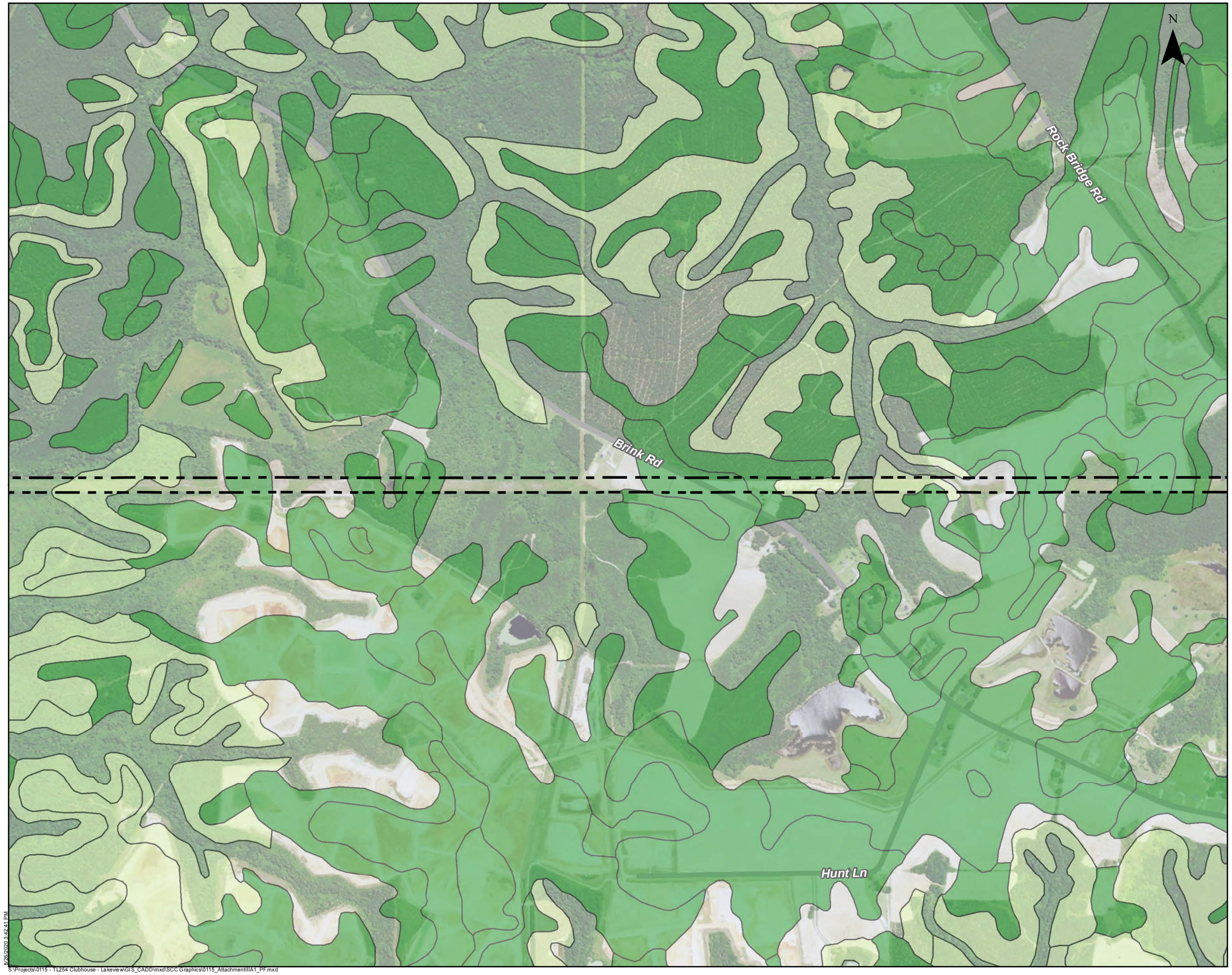

ATTACHMENT III.A.1

PRIME FARMLAND MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

SITE DATA

- Project Area
- Existing Substation
- All Areas are Prime Farmland (+/- 94.00 AC)
- Farmland of Statewide Importance (+/- 42.70 AC)

Notes:
1. Basemap Source: USGS National Map: Orthoimagery; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
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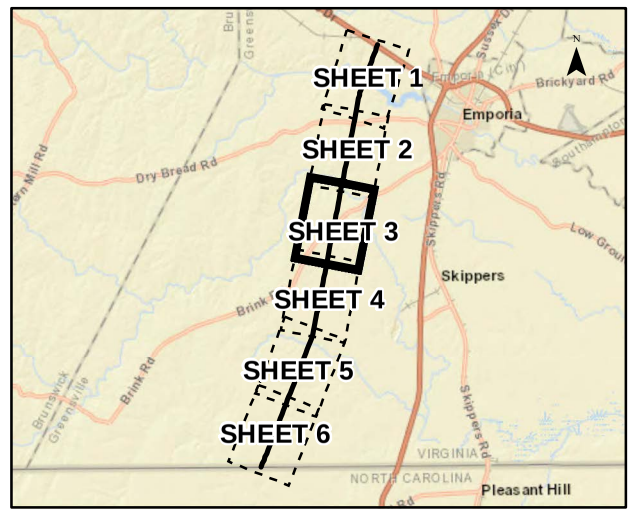

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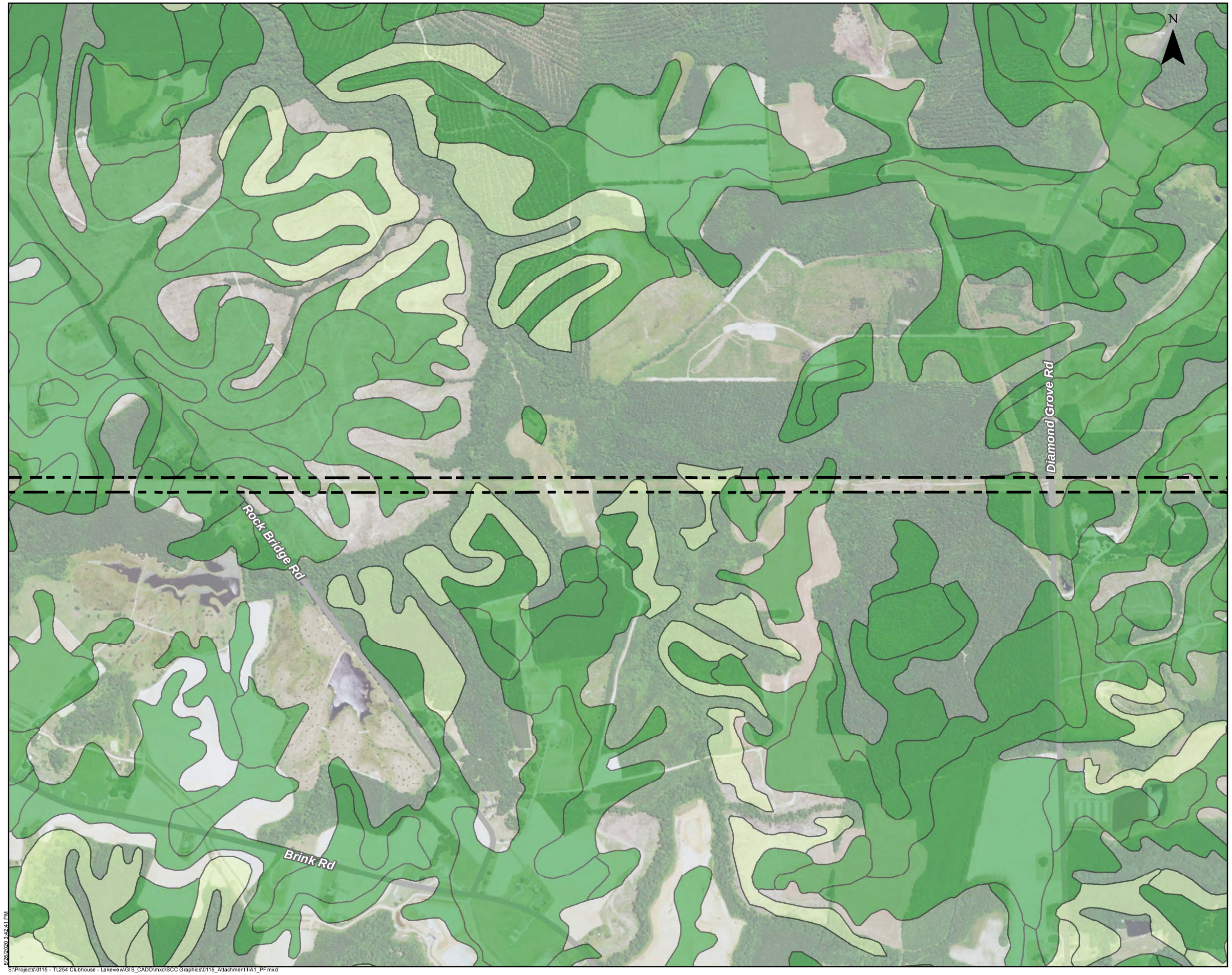

ATTACHMENT III.A.1

PRIME FARMLAND MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

SITE DATA

- Project Area
- Existing Substation
- All Areas are Prime Farmland (+/- 94.00 AC)
- Farmland of Statewide Importance (+/- 42.70 AC)

Notes:
1. Basemap Source: USGS National Map: Orthoimagery; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
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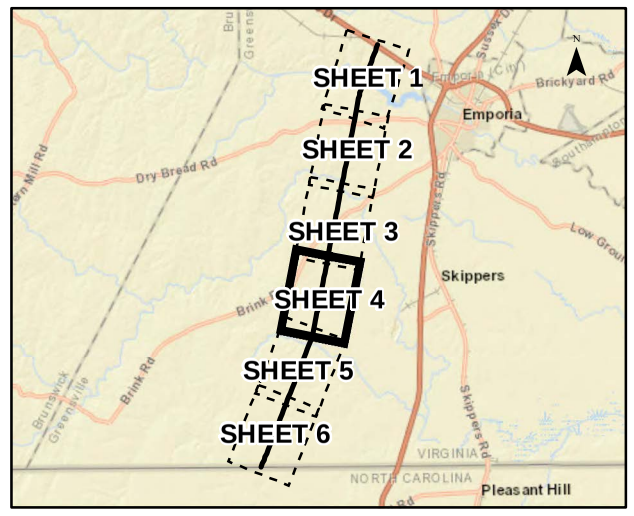

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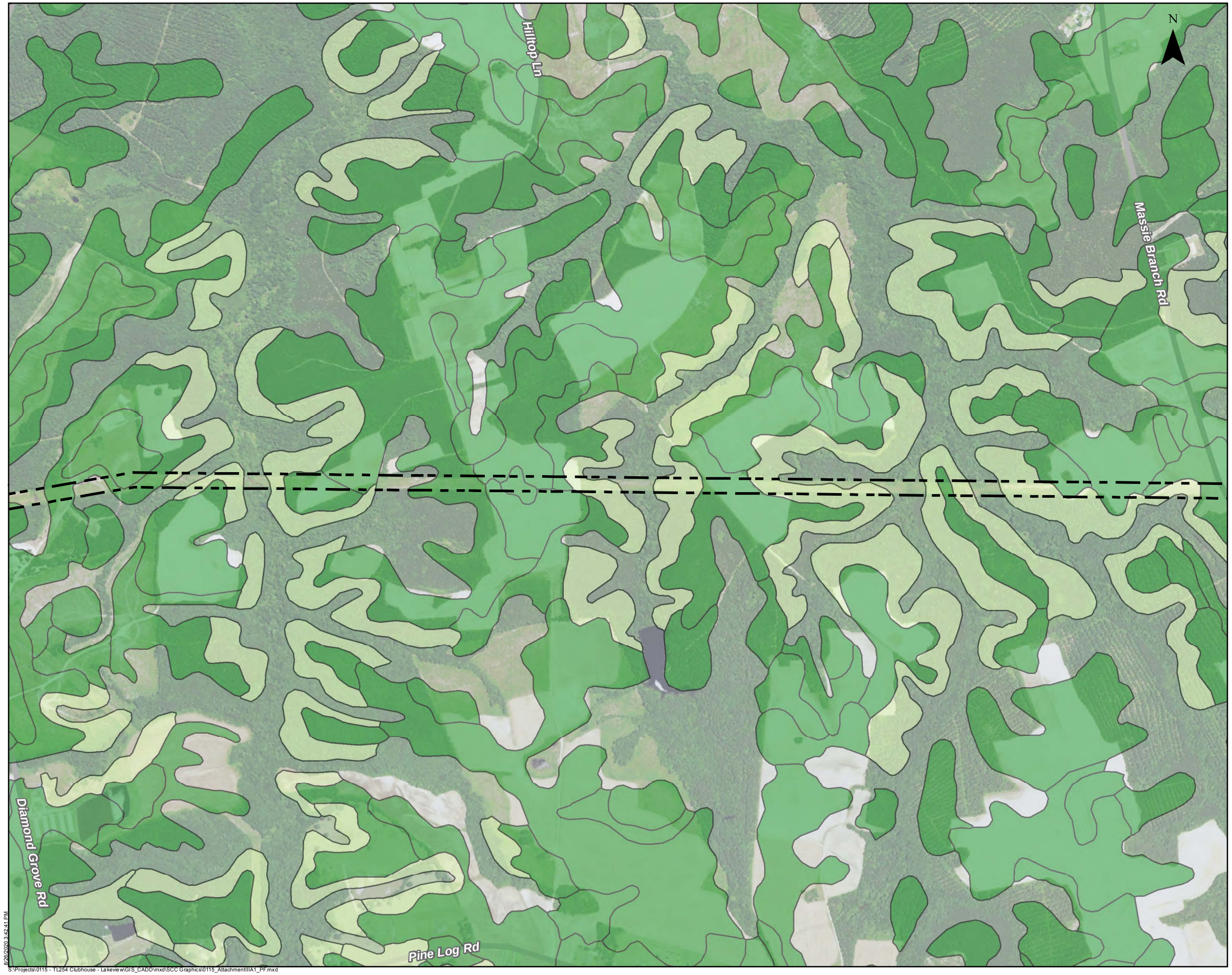


ATTACHMENT III.A.1

PRIME FARMLAND MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/ Applicant:		
Dominion Energy Virginia		
C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

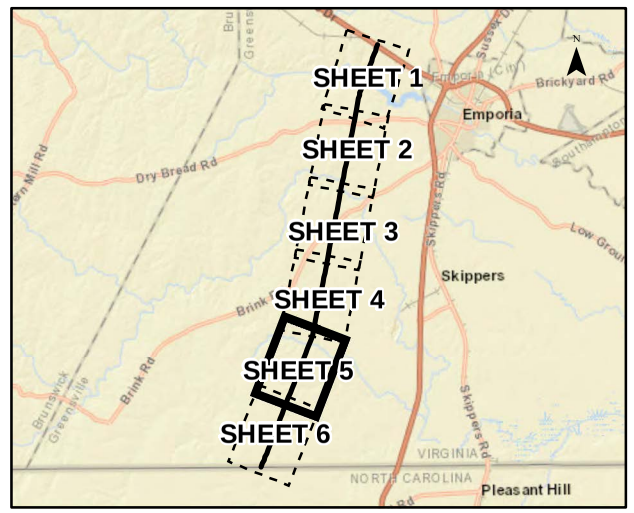
0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

SITE DATA

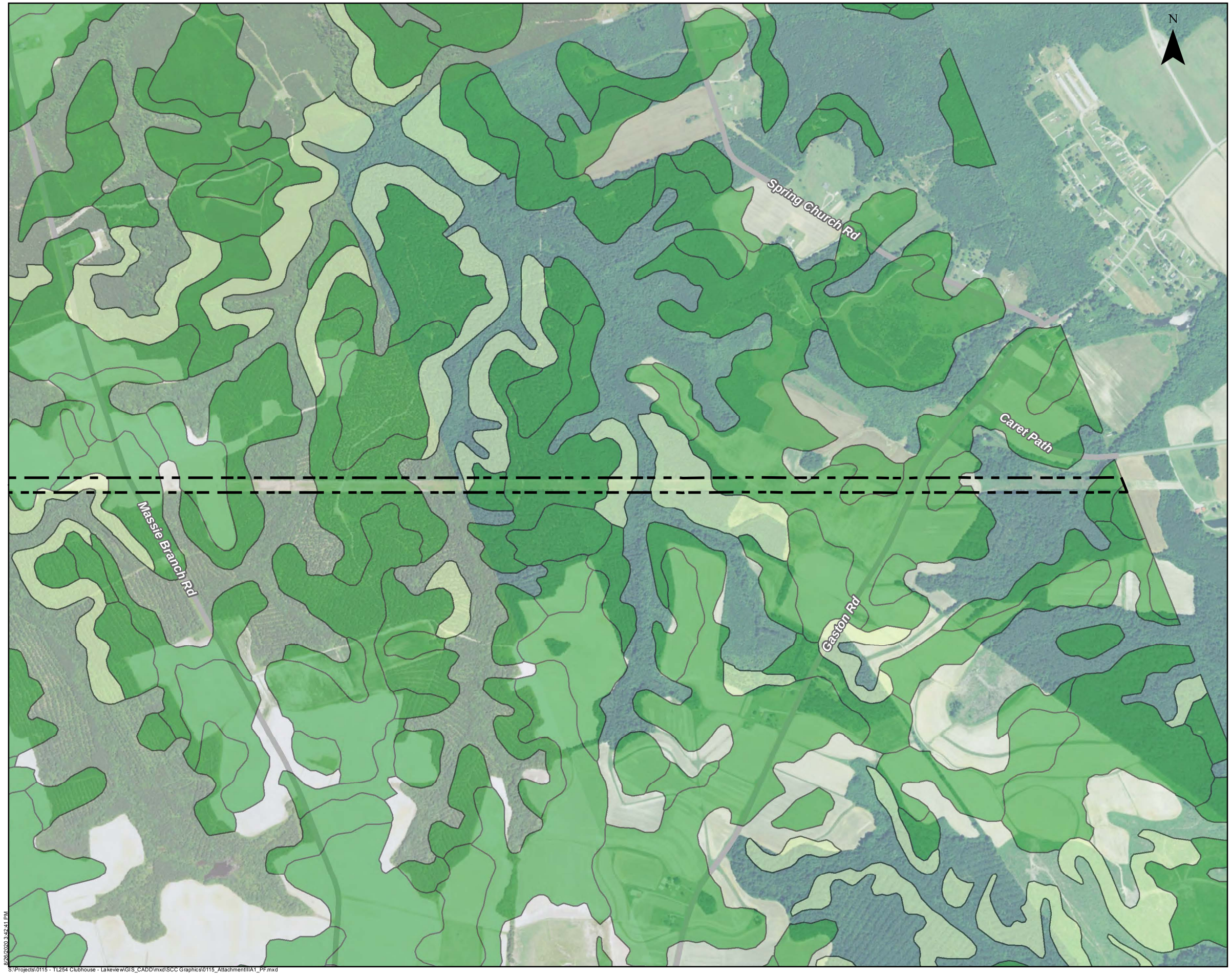
- Project Area
- Existing Substation
- All Areas are Prime Farmland (+/- 94.00 AC)
- Farmland of Statewide Importance (+/- 42.70 AC)

Notes:
1. Basemap Source: USGS National Map: Orthoimagery; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: NRCS SSURGO



ENVIRONMENTAL

Dominion Energy®



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ATTACHMENT III.A.1

PRIME FARMLAND MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/ Applicant:		
Dominion Energy Virginia		
C2 Env Project:	Prepared By:	Date:
0115	NCG	08/27/20

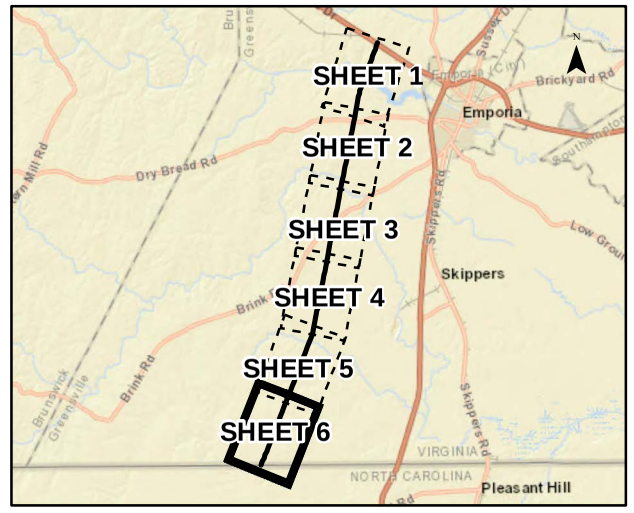
0 500 1,000 2,000 Feet

Scale is 1 IN = 1,000 FT when printed at original size of 11x17

SITE DATA

- Project Area
- Existing Substation
- All Areas are Prime Farmland (+/- 94.00 AC)
- Farmland of Statewide Importance (+/- 42.70 AC)

Notes:
1. Basemap Source: USGS National Map: Orthoimagery; Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: NRCS SSURGO



ENVIRONMENTAL

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SHEET 6 OF 6

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

B. Describe any public meetings the Applicant has had with neighborhood associations and/or officials of local, state or federal governments that would have an interest or responsibility with respect to the affected area or areas.

Response: Save the date postcards were sent to more than 120 property owners inviting them to attend a virtual community meeting event to hear specific details relating to the Virginia Rebuild Project and to provide any feedback on the scope and potential impacts of the Virginia Rebuild Project. Examples of the postcard are included as Attachment III.B.1. The postcard was sent to 122 property owners and outlined the scope of the Virginia Rebuild Project, provided an overview map, and invited recipients to visit the website for more information regarding the Virginia Rebuild Project. The postcard also offered a dedicated phone number and email address for community members to provide comment on or to ask any questions about the Virginia Rebuild Project. The virtual community meeting event was held on October 8, 2020, from 5 p.m. to 6 p.m. utilizing WebEx Events software. At the virtual community meeting, the Company provided details about construction, project timing, and the Commission approval process. Nine people attended the virtual community meeting.

In addition to the postcards, advertisements for the open houses were placed in the Daily Herald and Independent Messenger newspapers on Sunday, October 4, 2020, prior to the event. A copy of the advertisement placed in the Daily Herald newspaper is included as Attachment III.B.2; the same advertisement was placed in the other publications targeting residents in Greensville County, Virginia. Paid digital and social media campaigns that ran from October 1-23, 2020, were also used to drive awareness of the Company's Virginia Rebuild Project and the virtual community meeting, as well as to educate the public. A copy of those digital advertisements is included as Attachment III.B.3. The event campaigns ran in Google AdWords, Google Display, Google Video, Facebook and Twitter. All phases urged local residents to visit www.dominionenergy.com/line254 to learn more about the meeting and to participate virtually. Campaign results include 296,590 Impressions Delivered, 3,176 Clicks on Ads, 1.07% Click Thru Rate, 1,397 Link Clicks, 17,435 Video Views.

All of the open house materials, including simulations of the proposed Virginia Rebuild Project from key locations, have been posted on the website. The visual simulations from key locations are included as Attachment III.B.4.

The internet website dedicated to the Virginia Rebuild Project can be found at www.dominionenergy.com/line254. The website includes a route map, an explanation of need, a description of the Project and its benefits, and information on the Commission review process.

As part of preparing for this project, the Company researched the demographics of the surrounding communities using 2020 U.S. Census data. This information revealed that there are 11 Census Block Groups within the Virginia Rebuild Project area that fall within a mile of the existing transmission line to be rebuilt. A review of ethnicity, income, age, and education census data identified populations within the study area that meet the U.S. Environmental Protection Agency threshold to be defined as Environmental Justice communities ("EJ Communities").

Pursuant to Va. Code §§ 56-46.1 C and 56-259 C and Attachment 1 to these Guidelines, there is a strong preference for the use of existing utility rights-of-way whenever feasible. The VA-NC Rebuild Project is within the existing right-of-way and will not require any of the following: additional permanent or temporary right-of-way, the construction of a temporary line, an increase in operating voltage, or an over 20% average increase in structure heights. Based on the analysis of the Virginia Rebuild Project, the Company does not anticipate disproportionately high or adverse impacts to the surrounding community and the EJ Communities located within the study area, consistent with the VA-NC Rebuild Project design to reasonably minimize impacts.

In addition to its evaluation of impacts, the Company has and will continue to engage the EJ Communities and others affected by the Virginia Rebuild Project in a manner that allows them to meaningfully participate in the project development and approval process so that their views and input can be taken into consideration.

Dominion Energy image. Not project specific.

Electric Transmission
P.O. Box 26666
Richmond, VA 23261

Dominion Energy®

YOU'RE INVITED TO A VIRTUAL COMMUNITY MEETING

DETAILS ENCLOSED

IMPORTANT

Local Power Line Project Project Information

Use your iPhone camera or the QR reader app on other smartphones to visit the project page on our website.

Line 254 Clubhouse-Lakeview 230 kV Electric Transmission Rebuild Project — Virtual Community Meeting

AT DOMINION ENERGY, we are committed to staying connected with our neighbors and providing the latest information on work being done in the communities we serve.

You are receiving this postcard because we would like to invite you to our virtual community meeting for the Line 254 Clubhouse-Lakeview Electric Transmission Line Rebuild Project.

You can ask questions and interact with our project team as they present important information about the project, including a construction timeline, visual simulations, and the project's impact on your community. You can access our meeting for free using a mobile device, tablet, computer, or you can simply dial-in with your telephone. For details on how to access the virtual community meeting, please visit DominionEnergy.com/line254.

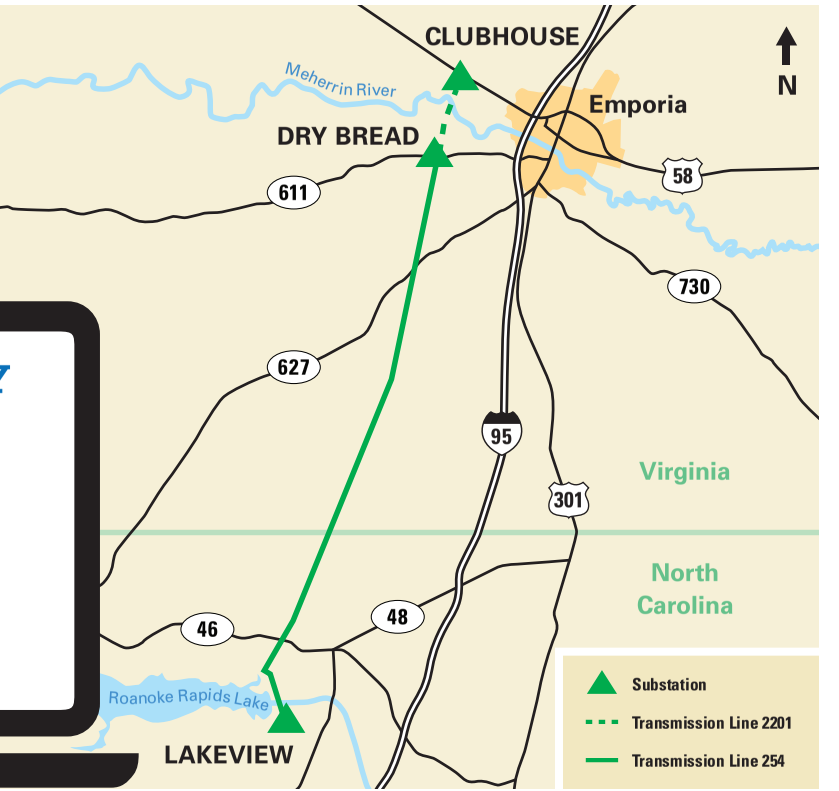
In addition, we want to inform you that in the wake of ongoing public health concerns from the spread of the coronavirus, we are mindful of our activities and maintaining property owner interactions with the appropriate social distancing. The work we do is integral to maintaining grid reliability and our crews will continue to perform work as needed to provide reliable energy.

VIRTUAL COMMUNITY MEETING

Oct. 8, 2020
5 – 6 p.m.

First 20 minutes will be a project overview presentation.

Visit DominionEnergy.com/line 254 for more information.

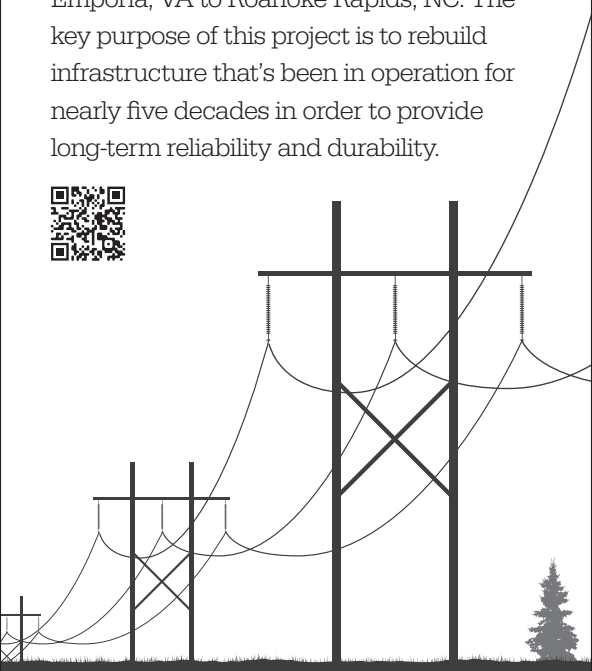


CONTACT US

Visit our website at DominionEnergy.com/line254 for project updates. Or contact us by sending an email to powerline@dominionenergy.com or calling 888-291-0190.

You are invited to our Virtual Community Meeting

Hear from Dominion Energy experts regarding upcoming work on the Clubhouse-Lakeview Transmission Line Rebuild Project. This line runs from Emporia, VA to Roanoke Rapids, NC. The key purpose of this project is to rebuild infrastructure that's been in operation for nearly five decades in order to provide long-term reliability and durability.



Join us live online on
Thursday, October 8 at 5 p.m.

You can find event details and learn more about the project at
DominionEnergy.com/Line254

Dominion Energy®

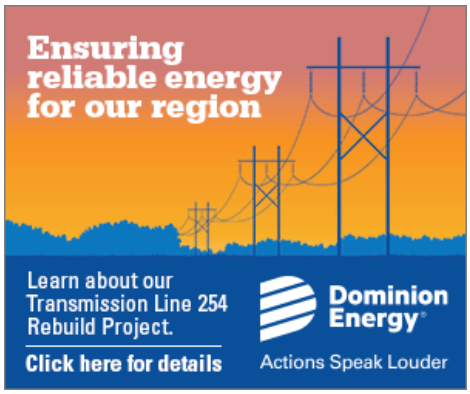
Actions Speak Louder

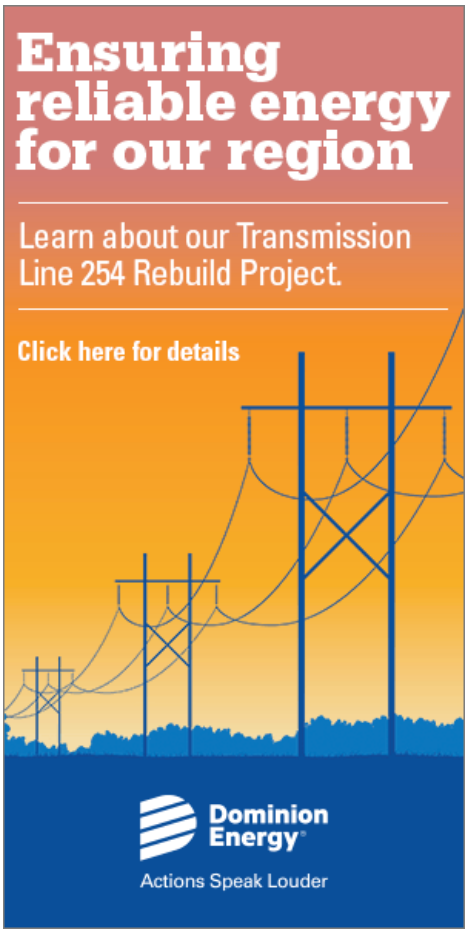
charles ryan associates

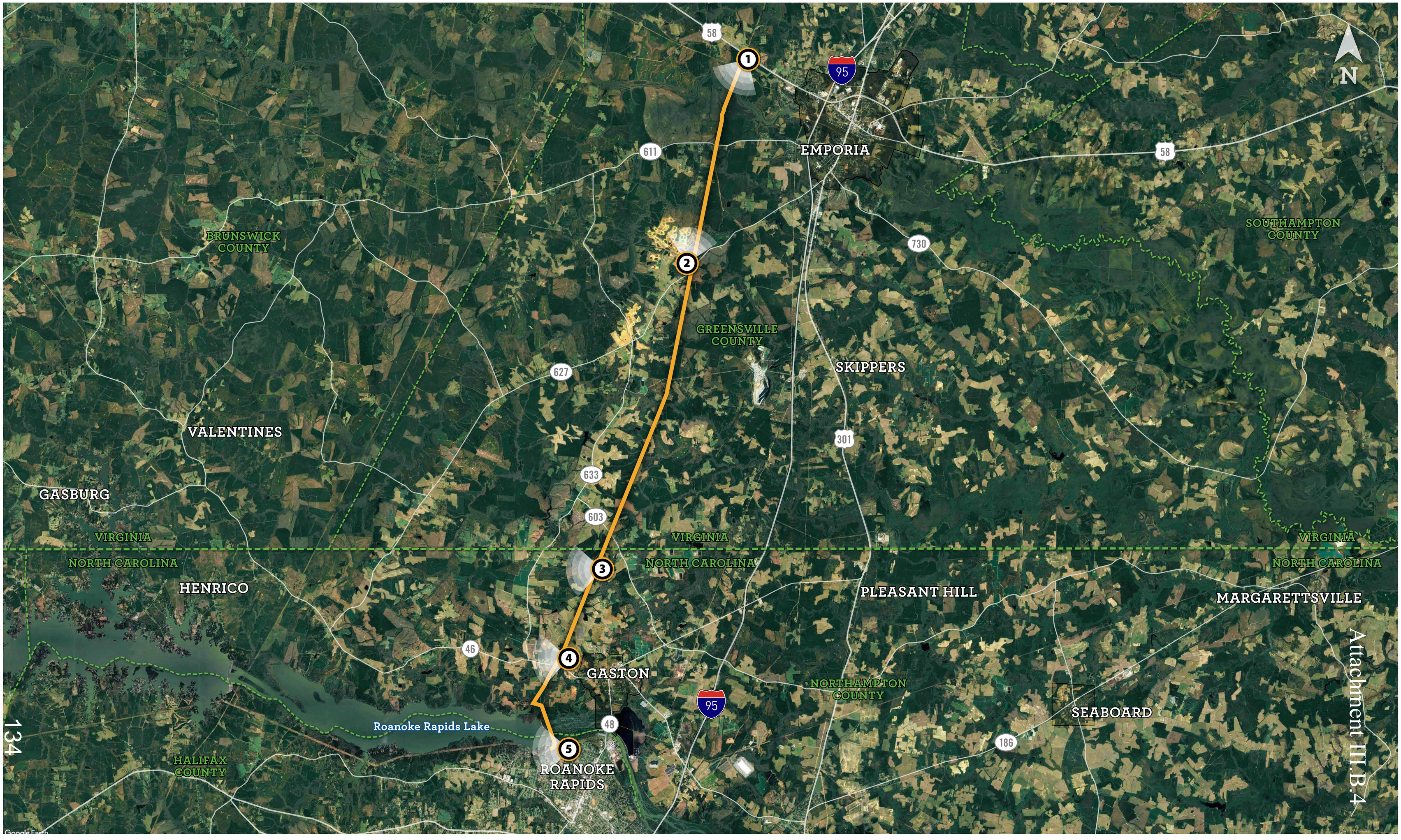
Dominion Energy
Electric Transmission

Line 254 Creative

Awareness Display:







CLUBHOUSE TO LAKEVIEW

TRANSMISSION REBUILD PROJECT

PHOTO LOCATION MAP

① PHOTO LOCATION

TRANSMISSION LINE TO BE REBUILT

Dominion Energy®

PHOTO SIMULATION IS FOR VISUALIZATION PURPOSES ONLY. DESIGN IS SUBJECT TO FINAL ENGINEERING.

CLUBHOUSE TO LAKEVIEW

TRANSMISSION REBUILD PROJECT

PHOTO VIEWPOINT LOCATION 1

DATE:
06/01/2020

TIME:
6:31 PM

DIRECTION:
SOUTHWEST

1 PHOTO LOCATION

TRANSMISSION LINE TO BE REBUILT

Dominion Energy®

CLUBHOUSE TO LAKEVIEW

TRANSMISSION REBUILD PROJECT

PHOTO VIEWPOINT LOCATION 2

DATE:
06/02/2020

TIME:
9:58 AM

DIRECTION:
NORTH

2 PHOTO LOCATION

TRANSMISSION LINE TO BE REBUILT

Dominion Energy®

CLUBHOUSE TO LAKEVIEW

TRANSMISSION REBUILD PROJECT

PHOTO VIEWPOINT LOCATION 3

DATE:
06/02/2020

TIME:
11:36 AM

DIRECTION:
WEST

3 PHOTO LOCATION

TRANSMISSION LINE TO BE REBUILT

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

PHOTO SIMULATION IS FOR VISUALIZATION PURPOSES ONLY. DESIGN IS SUBJECT TO FINAL ENGINEERING.

CLUBHOUSE TO LAKEVIEW

TRANSMISSION REBUILD PROJECT

PHOTO VIEWPOINT LOCATION 4

DATE:
06/02/2020

TIME:
12:16 PM

DIRECTION:
WEST

4 PHOTO LOCATION

TRANSMISSION LINE TO BE REBUILT

Dominion Energy®

CLUBHOUSE TO LAKEVIEW

TRANSMISSION REBUILD PROJECT

PHOTO VIEWPOINT LOCATION 5

DATE:
06/02/2020

TIME:
12:34 PM

DIRECTION:
WEST

5 PHOTO LOCATION

TRANSMISSION LINE TO BE REBUILT

Dominion Energy®

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

C. Detail the nature, location, and ownership of each building that would have to be demolished or relocated if the project is built as proposed.

Response: During the Company's review of the existing corridor, it identified two properties with unauthorized encroachments within the Virginia Rebuild Project right-of-way. The encroachments will need to be addressed with the respective property owners as the Company continues to investigate the right-of-way.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

D. Identify existing physical facilities that the line will parallel, if any, such as existing transmission lines, railroad tracks, highways, pipelines, etc. Describe the current use and physical appearance and characteristics of the existing ROW that would be paralleled, as well as the length of time the transmission ROW has been in use.

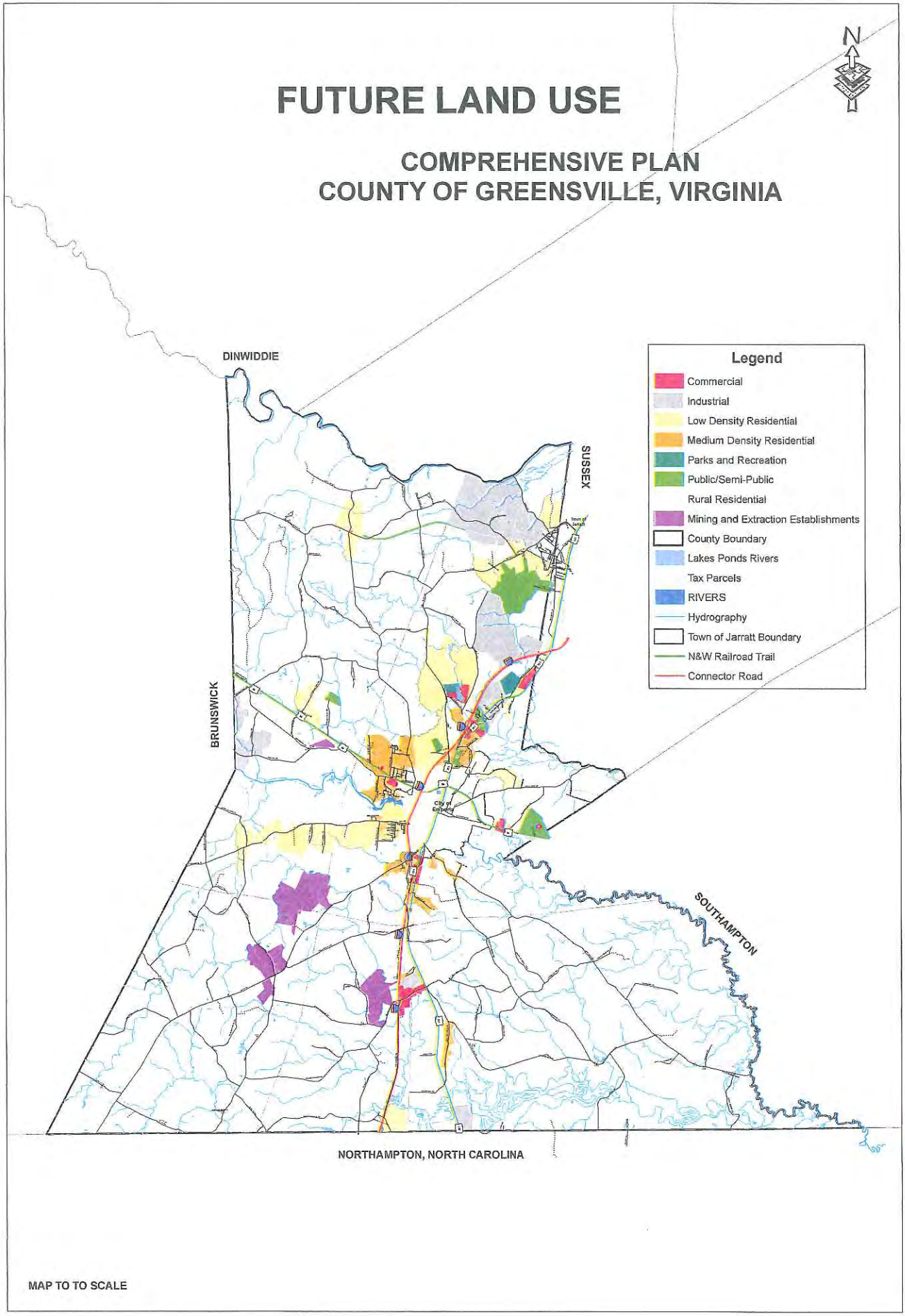
Response: Construction of Lines #2201 and #254 was completed in 1962 and the right-of-way has been in continuous use since that time. The proposed Virginia Rebuild Project shares the existing transmission corridor right-of-way with Line #71 and Line #1029 for approximately 0.3 mile from Structure #2201/1A within the Clubhouse Substation to Structure #2201/3. A gas line parallels and is co-located in the Virginia Rebuild Project right-of-way for approximately 1.4 miles from the Clubhouse Substation to Structure #254/24. Line #1043 crosses the Line #254 right-of-way at Structure #254/74 and a gas line easement crosses the right-of-way between Structures #254/46 and #254/47. The Virginia Rebuild Project does not otherwise parallel any other existing physical facilities.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

E. Indicate whether the Applicant has investigated land use plans in the areas of the proposed route and indicate how the building of the proposed line would affect any proposed land use.

Response: The Company reviewed the *Greensville County Comprehensive Plan* to evaluate the potential effect the Virginia Rebuild Project could have on future development. The placement and construction of electric transmission lines is not addressed within the plan. The Virginia Rebuild Project is located entirely within existing right-of-way or on Company-owned property and is not expected to affect land use. The Virginia Rebuild Project is not expected to impact the character of these localities as the transmission corridor has been in use for at least 58 years.

See Attachment III.E.1 for the County Land Use Map.


FUTURE LAND USE
COMPREHENSIVE PLAN
COUNTY OF GREENSVILLE, VIRGINIA
N
DINWIDDIE
SUSSEX
BRUNSWICK
SOUTHAMPTON
NORTHAMPTON, NORTH CAROLINA
Legend
Commercial
Industrial
Low Density Residential
Medium Density Residential
Parks and Recreation
Public/Semi-Public
Rural Residential
Mining and Extraction Establishments
County Boundary
Lakes Ponds Rivers
Tax Parcels
RIVERS
Hydrography
Town of Jarratt Boundary
N&W Railroad Trail
Connector Road
MAP TO TO SCALE

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

F. Government Bodies

1. Indicate if the Applicant determined from the governing bodies of each county, city and town in which the proposed facilities will be located whether those bodies have designated the important farmlands within their jurisdictions, as required by § 3.2-205 B of the Code.

2. If so, and if any portion of the proposed facilities will be located on any such important farmland:

a. Include maps and other evidence showing the nature and extent of the impact on such farmlands;

b. Describe what alternatives exist to locating the proposed facilities on the affected farmlands, and why those alternatives are not suitable; and

c. Describe the Applicant's proposals to minimize the impact of the facilities on the affected farmland.

Response:

1. The *Greensville County Comprehensive Plan* and *Greensville County Zoning Ordinance* were reviewed to determine whether the governing body of Greensville County has designated important farmlands within their jurisdiction under Va. Code § 3.2-205 B. No designations were identified. The proposed Virginia Rebuild Project is not expected to impact current land uses in Greensville County, Virginia, as the Virginia Rebuild Project is being reconstructed within the existing corridor that has been in use since 1962.

2. Not applicable.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

G. Identify the following that lie within or adjacent to the proposed ROW:

1. **Any district, site, building, structure, or other object included in the National Register of Historic Places maintained by the U.S. Secretary of the Interior;**

2. **Any historic architectural, archeological, and cultural resources, such as historic landmarks, battlefields, sites, buildings, structures, districts or objects listed or determined eligible by the Virginia Department of Historic Resources ("DHR");**

3. **Any historic district designated by the governing body of any city or county;**

4. **Any state archaeological site or zone designated by the Director of the DHR, or its predecessor, and any site designated by a local archaeological commission, or similar body;**

5. **Any underwater historic assets designated by the DHR, or predecessor agency or board;**

6. **Any National Natural Landmark designated by the U.S. Secretary of the Interior;**

7. **Any area or feature included in the Virginia Registry of Natural Areas maintained by the Virginia Department of Conservation and Recreation ("DCR");**

8. **Any area accepted by the Director of the DCR for the Virginia Natural Area Preserves System;**

9. **Any conservation easement or open space easement qualifying under §§ 10.1-1009 – 1016, or §§ 10.1-1700 – 1705, of the Code (or a comparable prior or subsequent provision of the Code);**

10. **Any state scenic river;**

11. **Any lands owned by a municipality or school district; and**

12. **Any federal, state or local battlefield, park, forest, game or wildlife preserve, recreational area, or similar facility. Features, sites, and the like listed in 1 through 11 above need not be identified again.**

Response:

1. None.
2. There are two architectural resources within 1.0-mile of the right-of-way that are determined eligible for listing on the NRHP. See Section III.A.
3. None.
4. None.
5. None.
6. None.
7. None.
8. None.
9. None.
10. The Meherrin River, which is crossed by the Virginia Rebuild Project, is designated as a Potential Scenic River.
11. Two parcels owned by Greensville County or its school district are documented within 1.0 mile of the Virginia Rebuild Project.
12. None.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

H. List any registered aeronautical facilities (airports, helipads) where the proposed route would place a structure or conductor within the federally-defined airspace of the facilities. Advise of contacts, and results of contacts, made with appropriate officials regarding the effect on the facilities' operations.

Response: The Federal Aviation Administration ("FAA") is responsible for overseeing air transportation in the United States. The FAA manages air traffic in the United States and evaluates physical objects that may affect the safety of aeronautical operations through an obstruction evaluation. The prime objective of the FAA in conducting an obstruction evaluation is to ensure the safety of air navigation and the efficient utilization of navigable airspace by aircraft.

The Company reviewed the FAA's website[9] to identify airports within 10 nautical miles of the proposed Virginia Rebuild Project. Based on this review, one FAA-restricted airport was identified:

- Emporia-Greensville Regional Airport, approximately 5.5 miles east of the Clubhouse Substation.

In a letter dated October 15, 2020, the Virginia Department of Aviation ("DOAv") stated that there are no public airports within 20,000 linear feet of the Virginia Rebuild Project. Unless support structures or temporary cranes will reach a height of 200 feet above ground level, no airspace case would be required by the FAA. However, if any structure heights change drastically before construction or a crane over 200 feet in height is used for structure installation, the FAA will be notified through Form 7460. See Section 2.N of the DEQ Supplement.

[9] *See* https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

I. Advise of any scenic byways that are in close proximity to or that will be crossed by the proposed transmission line and describe what steps will be taken to mitigate any visual impacts on such byways. Describe typical mitigation techniques for other highways' crossings.

Response: The existing right-of-way to be used for the Virginia Rebuild Project does not cross any scenic Virginia byways. Use of the existing right-of-way minimizes or eliminates permanent incremental impacts at road crossings.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

J. Identify coordination with appropriate municipal, state, and federal agencies.

Response: As described in Section V.D, the Company solicited feedback from Greensville County regarding the proposed Virginia Rebuild Project. Below is a list of coordination that has occurred with other municipal, state and federal agencies:

- A Wetland and Waters Review has been completed and sent to DEQ's Office of Wetlands and Stream Protection to initiate the wetlands impact consultation. See Attachment 2.D.1 of the DEQ Supplement. DEQ provided comments via letter, which is included as Attachment 2.D.2 of the DEQ Supplement.
- A Stage I Pre-Application Analysis has been prepared and submitted to VDHR. See Attachment 2.H.1 of the DEQ Supplement.
- The Company solicited comments from the Virginia Marine Resources Commission ("VMRC") and the Corps regarding the proposed Virginia Rebuild Project. See Attachment 2 of the DEQ Supplement.
- The Company requested comments from the USFWS, DWR, and DCR regarding the proposed Virginia Rebuild Project. See Attachment 2 of the DEQ Supplement.
- The Company solicited the Greensville County Public Works Department for comments on the proposed Virginia Rebuild Project. See Attachment 2 of the DEQ Supplement.
- The Company solicited comments from the FAA and DOAv regarding the proposed Virginia Rebuild Project. See Attachment 2 of the DEQ Supplement. DOAv provided comments via letter, which is included as Attachment 2.N.1 of the DEQ Supplement
- Letters were submitted to the agencies listed in Section V.C in October 2020 describing the Virginia Rebuild Project and requesting comment.
- As noted above, letters were submitted to Greensville County pursuant to Va. Code § 15.2-2202 E to describe the Virginia Rebuild Project and request comment. See Section V.D of this Appendix.
- In October 2020, the Company sent letters to the VDHR.
- In September 2020, the Company solicited comments via letter from several federally-recognized Native American tribes, provided as Attachment III.J.1, including:

  Cheroenhaka (Nottoway) Indian Tribe
  Chickahominy Tribe – Eastern Division
  Chickahominy Indians Eastern Division
  Mattaponi Tribe

Monacan Nation
Nansemond Indian Tribal Association
Nottoway Indian Tribe of Virginia
Pamunkey Nation
Patawomeck Indian Tribe of Virginia
Rappahannock Tribe
The Upper Mattaponi Indian Tribe

In September 2020, the Company solicited comments via email from the Sappony Indian Tribe, based in North Carolina.

See also Sections III.B, III.K and V.D of this Appendix, and the DEQ Supplement.

Sept. 22, 2020

Proposed Line 254 Clubhouse-Lakeview 230 kV Electric Transmission Rebuild Project

Dear:

At Dominion Energy, we are dedicated to finding the best solution for our long-term needs in the communities we serve. As a valued stakeholder with a vested interest in the community, we invite you to participate in the development of an electric transmission partial rebuild project along an existing transmission corridor.

After more than five decades of operation, wooden H-frame structures between our Clubhouse and Lakeview substations located in Greensville County, Virginia and Roanoke Rapids, North Carolina, need to be replaced in order to maintain reliability for our customers and bring facilities up to current standards. The 18-mile 230 kilovolt (kV) line is positioned within an existing corridor and requires no additional rights of way.

We are currently in the conceptual phase and are seeking input prior to submitting an application with the Virginia State Corporation Commission (SCC) in November 2020. Doing so allows us to hear any concerns you may have as we work to meet the project's needs. Enclosed is a project overview map to help in your review.

Please provide your comments by Oct.15, 2020, so we have adequate time to review and consider your comments in our project design and as part of our SCC application. We appreciate your assistance as we move through the planning process.

Due to the ongoing public health concerns resulting from the spread of the coronavirus, we do not plan to host formal community open house events at this time. In lieu of our traditional in-person meetings, we will host a virtual community meeting Oct. 8, 2020 from 5 – 6 p.m. We encourage you to visit the project's dedicated webpage at DominionEnergy.com/line254 for meeting information. On this page, you will also find details on the need for the project, maps, and information on structural changes.

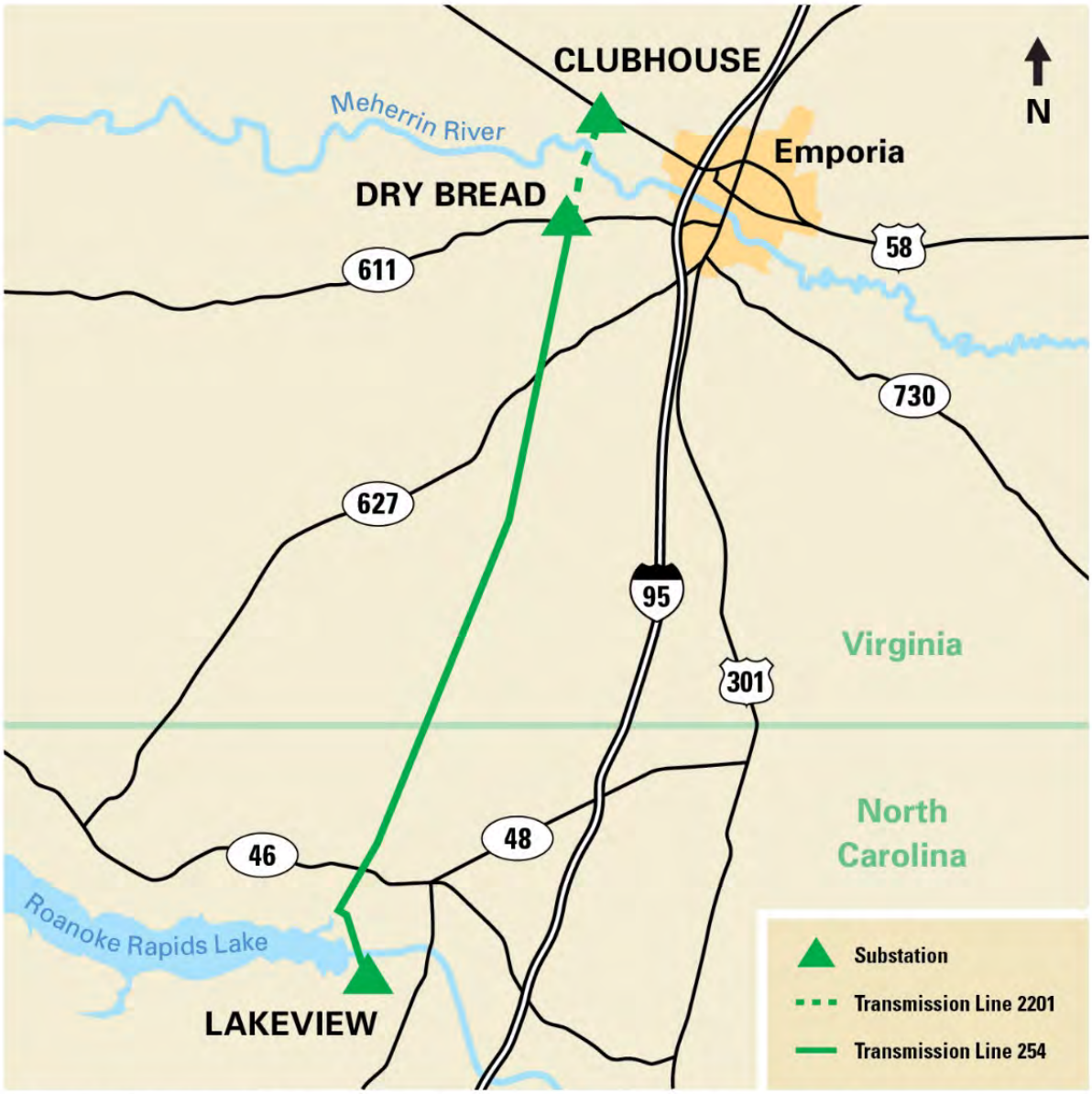
If you would like any additional information, have any questions or would like to set up a meeting to discuss the project, please do not hesitate to contact Ken Custalow, our Tribal Liaison. He can be reached by sending an email to ken.custalow@dominionenergy.com or by calling 804-837-2067.

Sincerely,

Robert E. Richardson

Robert Richardson
Communications Consultant
The Electric Transmission Project Team

Enclosure: Project Overview Map



This map is intended to serve as a representation of the project area and is not intended for detailed engineering purposes.

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

K. Identify coordination with any non-governmental organizations or private citizen groups.

Response: On September 18, 2020, the Company solicited comments via letter from the non-governmental organizations and private citizen groups identified below. A copy of the letter template is included as Attachment III.K.1.

Name	Organization
Ms. Elizabeth S. Kostelny	Preservation Virginia
Mr. Thomas Gilmore	Civil War Trust
Mr. Jim Campi	Civil War Trust
Mr. Adam Gillenwater	Civil War Trust
Ms. Kym Hall	Colonial National Historical Park
Mr. Jack Gary	Council of Virginia Archeologists
Ms. Leighton Powell	Scenic Virginia
Mr. Alexander Macaulay	Macaulay & Jamerson
Ms. Sharee Williamson	National Trust for Historic Preservation
Dr. Newby- Alexander	Norfolk State University
Mary Frances Wilkerson	Nottoway Indian Tribe
Mr. Dan Holmes	Piedmont Environmental Council

Sept. 18, 2020

Clubhouse-Lakeview 230 kV Electric Transmission Line Rebuild Project

Dear:

At Dominion Energy, we are dedicated to finding the best solution for our long-term needs in the communities we serve. As a valued stakeholder with a vested interest in the community**,** we invite you to participate in the development of an 18-mile, 230 kilovolt (kV) electric transmission line rebuild project that begins in Greensville County, Virginia and crosses into Roanoke Rapids and Halifax County, North Carolina.

After nearly five decades of service, the structures and related components are at the end of their service life and need to be replaced to maintain reliability. Our initial plan includes replacing wooden H-frame structures with a new single-circuit, weathering steel monopole. The new steel structures will average 70 feet in height and be placed in or near the same location as existing structures.

We are currently in the conceptual phase and are seeking input as we prepare to submit an application with the Virginia State Corporation Commission (SCC) in November 2020. Doing so allows us to hear any concerns you may have as we work to meet the project's needs.

To see a project overview map and photo simulations of the project, go to **DominionEnergy.com/line254**.

Please feel free to notify other relevant organizations that may have an interest in the project area. For reference, recipients of this letter include other county and statewide historic, cultural and scenic organizations and Native American tribes.

Due to the ongoing public health concerns resulting from the spread of the coronavirus, we do not plan to host formal community open house events at this time. In lieu of our traditional in-person meetings, we will hold a virtual community meeting Oct. 8, 2020 from 5-6 p.m. You can find meeting details, as well as project information, on our project webpage.

If you would like any additional information, have questions, or would like to set up a meeting to discuss the project, please contact me by sending an email to Robert.E.Richardson@dominionenergy.com or calling 888-291-0190.

Thank you for your willingness to join us in our commitment to serving the community.

Sincerely,

Robert E. Richardson

Rob Richardson
Communications Consultant
The Electric Transmission Project Team

III. IMPACT OF LINE ON SCENIC, ENVIRONMENTAL AND HISTORIC FEATURES

L. Identify any environmental permits or special permissions anticipated to be needed.

Response: See table below for potential permits anticipated for the proposed Virginia Rebuild Project.

Potential Permits

Activity	Permit	Agency
Impacts to wetlands and waters of the U.S.	Nationwide Permit 12	U.S. Army Corps of Engineers
Impacts to wetlands and waters of the U.S.	Virginia Water Protection Permit	Virginia Department of Environmental Quality
Work within, over or under state subaqueous bottom	Subaqueous Encroachment Permit	Virginia Marine Resources Commission
Discharges of Stormwater from Construction Activities	Construction General Permit	Virginia Department of Environmental Quality
Work within VDOT right-of-way	Land Use Permit	Virginia Department of Transportation

IV. HEALTH ASPECTS OF ELECTROMAGNETIC FIELDS ("EMF")

A. Provide the calculated maximum electric and magnetic field levels that are expected to occur at the edge of the ROW. If the new transmission line is to be constructed on an existing electric transmission line ROW, provide the present levels as well as the maximum levels calculated at the edge of ROW after the new line is operational.

Response: Public exposure to magnetic fields is best estimated by field levels from power lines calculated at annual average loading. For any day of the year, the EMF levels associated with average conditions provide the best estimate of potential exposure. Maximum (peak) values are less relevant as they may occur for only a few minutes or hours each year.

This section describes the levels of EMF associated with the existing and proposed transmission line within Virginia. EMF levels are provided for both historical (2019) and future (2025) annual average and maximum (peak) loading conditions.

Existing lines – Historical average loading

EMF levels were calculated for the existing line at the ***historical average*** load condition of 417 amps for Lines #2201 and #254, 204 amps for Line #71, and 128 amps for Line #1029. Lines #2201 and #254 both have a maximum operating voltage of 241.5 kV and Lines #71 and #1029 both have a maximum operating voltage of 120.75 kV when supported on the existing structures. Note that Lines #71 and #1029 are only used in calculations for Attachment II.A.5.a. See Attachments II.A.5.a, c, e, g, i, and k.

These field levels were calculated at mid-span where the conductors are closest to the ground at an historical average load operating temperature. The EMF levels at the edge of the rights-of-way for the existing lines at the historical average loading:

Attachment	East Edge		West Edge	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.a	0.142	14.115	1.608	35.087
II.A.5.c	0.186	8.031	1.520	34.534
II.A.5.e	1.951	41.724	0.162	7.311
II.A.5.g	3.225	25.195	0.258	4.311
II.A.5.i	1.950	41.709	0.162	7.311
II.A.5.k	1.950	41.717	0.162	7.311

Existing lines – Historical peak loading

EMF levels were calculated for the existing line at the ***historical peak*** load condition of 950 amps for Lines #2201 and #254, 397 amps for Line #71, and 355 amps for Line #1029. Lines #2201 and #254 both have a maximum operating voltage of 241.5 kV and Lines #71 and #1029 both have a maximum operating voltage of 120.75 kV when supported on the existing structures. Note that Lines #71 and #1029 are only used in calculations for Attachment II.A.5.a. See Attachments II.A.5.a, c, e, g, i, and k.

These field levels were calculated at mid-span where the conductors are closest to the ground at an historical average load operating temperature. The EMF levels at the edge of the rights-of-way for the existing lines at the historical peak loading:

Attachment	East Edge		West Edge	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.a	0.142	36.135	1.608	80.125
II.A.5.c	0.186	18.300	1.520	78.759
II.A.5.e	1.951	95.110	0.161	16.658
II.A.5.g	3.225	57.390	0.258	9.822
II.A.5.i	1.952	95.183	0.161	16.660
II.A.5.k	1.951	95.055	0.162	16.657

Proposed Virginia Rebuild Project – Historical average loading

EMF levels were calculated for the proposed Virginia Rebuild Project at the ***historical average*** load condition of 417 amps for Lines #2201 and #254, 204 amps for Line #71, and 128 amps for Line #1029. Lines #2201 and #254 both have a maximum operating voltage of 241.5 kV and Lines #71 and #1029 both have a maximum operating voltage of 120.75 kV when supported on the existing structures. Note that Lines #71 and #1029 are only used in calculations for Attachment II.A.5.b. See Attachments II.A.5.b, d, f, h, j, and l.

These field levels were calculated at mid-span where the conductors are closest to the ground at an historical average load operating temperature. The EMF levels at the edge of the rights-of-way for the proposed Virginia Rebuild Project at the historical average loading:

Attachment	East Edge		West Edge	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.b	0.146	11.410	2.606	21.456
II.A.5.d	0.699	8.469	0.785	9.162
II.A.5.f	1.876	16.830	0.355	5.347
II.A.5.h	3.225	25.195	0.258	4.311
II.A.5.j	3.224	25.185	0.258	4.311
II.A.5.l	3.223	25.171	0.258	4.311

Proposed Virginia Rebuild Project – Historical peak loading

EMF levels were calculated for the proposed Virginia Rebuild Project at the ***historical peak*** load condition of 950 amps for Lines #2201 and #254, 397 amps for Line #71, and 355 amps for Line #1029. Lines #2201 and #254 both have a maximum operating voltage of 241.5 kV and Lines #71 and #1029 both have a maximum operating voltage of 120.75 kV when supported on the existing structures. Note that Lines #71 and #1029 are only used in calculations for Attachment II.A.5.b. See Attachments II.A.5.b, d, f, h, j, and l.

These field levels were calculated at mid-span where the conductors are closest to the ground at an historical average load operating temperature. The EMF levels at the edge of the rights-of-way for the proposed Virginia Rebuild Project at the historical peak loading:

Attachment	East Edge		West Edge	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.b	0.146	30.449	2.606	49.108
II.A.5.d	0.699	19.300	0.784	20.878
II.A.5.f	1.876	38.337	0.355	12.180
II.A.5.h	3.225	57.390	0.258	9.822
II.A.5.j	3.226	57.420	0.258	9.823
II.A.5.l	3.226	57.412	0.258	9.822

Proposed Virginia Rebuild Project – Projected average loading in 2021

EMF levels were calculated for the proposed Virginia Rebuild Project at the ***projected average*** load condition of 153 amps for Lines #2201 and #254, 40 amps for Line #71, and 53 amps for Line #1029. Lines #2201 and #254 both have a maximum operating voltage of 241.5 kV and Lines #71 and #1029 both have a maximum operating voltage of 120.75 kV when supported on the existing

structures. Note that Lines #71 and #1029 are only used in calculations for Attachment II.A.5.b. See Attachments II.A.5.b, d, f, h, j, and l.

These field levels were calculated at mid-span where the conductors are closest to the ground at an historical average load operating temperature. The EMF levels at the edge of the rights-of-way for the proposed Virginia Rebuild Project at the projected average loading:

Attachment	East Edge		West Edge	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.b	0.146	4.712	2.606	7.881
II.A.5.d	0.699	3.108	0.784	3.362
II.A.5.f	1.876	6.174	0.355	1.962
II.A.5.h	3.224	9.237	0.258	1.582
II.A.5.j	3.224	9.241	0.258	1.582
II.A.5.l	3.224	9.239	0.258	1.582

Proposed Virginia Rebuild Project – Projected Peak loading in 2021

EMF levels were calculated for the proposed Virginia Rebuild Project at the ***projected peak*** load condition of 347 amps for Lines #2201 and #254, 83 amps for Line #71, and 180 amps for Line #1029. Lines #2201 and #254 both have a maximum operating voltage of 241.5 kV and Lines #71 and #1029 both have a maximum operating voltage of 120.75 kV when supported on the existing structures. Note that Lines #71 and #1029 are only used in calculations for Attachment II.A.5.b. See Attachments II.A.5.b, d, f, h, j, and l.

These field levels were calculated at mid-span where the conductors are closest to the ground at an historical average load operating temperature. The EMF levels at the edge of the rights-of-way for the proposed Virginia Rebuild Project at the projected peak loading:

Attachment	East Edge		West Edge	
	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.b	0.146	15.074	2.606	18.151
II.A.5.d	0.699	7.047	0.785	7.624
II.A.5.f	1.876	14.005	0.355	4.449
II.A.5.h	3.223	20.947	0.258	3.587
II.A.5.j	3.224	20.950	0.258	3.587
II.A.5.l	3.223	20.946	0.258	3.587

IV. HEALTH ASPECTS OF ELECTROMAGNETIC FIELDS ("EMF")

B. If the Applicant is of the opinion that no significant health effects will result from the construction and operation of the line, describe in detail the reasons for that opinion and provide references or citations to supporting documentation.

Response: The conclusions of multidisciplinary scientific review panels assembled by national and international scientific agencies during the past two decades are the foundation of the Company's opinion that no adverse health effects will result from the operation of the proposed Virginia Rebuild Project. Each of these panels has evaluated the scientific research related to health and power-frequency EMF and provided conclusions that form the basis of guidance to governments and industries. The Company regularly monitors the recommendations of these expert panels to guide their approach to EMF.

Research on EMF and human health varies widely in approach. Some studies evaluate the effects of high, short-term EMF exposures not typically found in people's day-to-day lives on biological responses, while others evaluate the effects of common, lower EMF exposures found throughout communities. Studies also have evaluated the possibility of effects (e.g., cancer, neurodegenerative diseases, reproductive effects) of long-term exposure. Altogether, this research includes well over a hundred epidemiologic studies of people in their natural environment and many more laboratory studies of animals (*in vivo*) and isolated cells and tissues (*in vitro*). Standard scientific procedures, such as weight-of-evidence methods, were used by the expert panels assembled by agencies to identify, review, and summarize the results of this large and diverse research.

The reviews of EMF biological and health research have been conducted by numerous scientific and health agencies, including the European Health Risk Assessment Network on Electromagnetic Fields Exposure ("EFHRAN"), the International Commission on Non-Ionizing Radiation Protection ("ICNIRP"), the World Health Organization ("WHO"), the International Committee on Electromagnetic Safety ("ICES"), the Scientific Committee on Emerging and Newly Identified Health Risks ("SCENIHR") of the European Commission, and the Swedish Radiation Safety Authority ("SSM") [formerly the Swedish Radiation Protection Authority ("SSI")] (EFHRAN, 2010, 2012; ICNIRP, 2010; WHO, 2007; SCENIHR, 2009, 2015; SSM, 2015, 2016, 2018, 2019; ICES, 2019). The general scientific consensus of the agencies that have reviewed this research, relying on generally accepted scientific methods, is that the scientific evidence does not show that common sources of EMF in the environment, including transmission lines and other parts of the electric system, appliances, etc., are a cause of any adverse health effects. The WHO, for example, states on their website: "Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields" (WHO, 2020).

The most recent reviews on this topic include the 2015 report by SCENIHR and annual reviews published by SSM (e.g., for the years 2015, 2016, 2018, and 2019). These reports, similar to previous reviews, found that the scientific evidence does not confirm the existence of any adverse health effects caused by environmental or community exposure to EMF.

The WHO has recommended that countries adopt recognized international standards published the International Commission on Non-ionizing Radiation (ICNIRP) and the IEEE's International Committee on Electromagnetic Safety (ICES). Typical levels of EMF from Dominion's power lines outside its property and rights-of-way are far below the screening reference levels of EMF recommended for the general public and still lower than exposures equivalent to restrictions to limits on fields within the body (ICNIRP, 2010; ICES, 2019).

Thus, based on the conclusions of scientific reviews and the levels of EMF associated with the proposed Virginia Rebuild Project, the Company has determined that no adverse health effects are anticipated to result from the operation of the proposed Virginia Rebuild Project.

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IV. HEALTH ASPECTS OF ELECTROMAGNETIC FIELDS ("EMF")

C. Describe and cite any research studies on EMF the Applicant is aware of that meet the following criteria:

1. Became available for consideration since the completion of the Virginia Department of Health's most recent review of studies on EMF and its subsequent report to the Virginia General Assembly in compliance with 1985 Senate Joint Resolution No. 126;

2. Include findings regarding EMF that have not been reported previously and/or provide substantial additional insight into findings; and

3. Have been subjected to peer review.

Response: The Virginia Department of Health ("VDH") conducted its most recent review and issued its report on the scientific evidence on potential health effects of extremely low frequency ("ELF") EMF in 2000: "[T]he Virginia Department of Health is of the opinion that there is no conclusive and convincing evidence that exposure to extremely low frequency EMF emanated from nearby high voltage transmission lines is causally associated with an increased incidence of cancer or other detrimental health effects in humans."[10]

The continuing scientific research on EMF exposure and health has resulted in many peer-reviewed publications since 2000. The accumulating research results have been regularly and repeatedly reviewed and evaluated by national and international health, scientific, and government agencies. One of the most comprehensive and detailed reviews of the relevant scientific peer-reviewed literature was published by the WHO in 2007. The conclusion of the WHO, as currently expressed on its website, is consistent with the earlier VDH conclusions: "Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields."[11]

Research published in the peer-reviewed literature subsequent to the WHO report has been reviewed by several scientific organizations, including most notably:

- SCENIHR, a committee of the European Commission, that published its assessments in 2009 and 2015;

- The Swedish Radiation Safety Authority ("SSM"), formerly the Swedish Radiation Protection Authority ("SSI"), that has published annual reviews of the relevant peer-reviewed scientific literature since 2003, with its most recent

[10] *See* http://www.vdh.virginia.gov/content/uploads/sites/12/2016/02/highfinal.pdf.
[11] *See* http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html.

review published in 2019; and,

- EFHRAN, that published its reviews in 2010 and 2012.

The above reviews provide detailed analyses and summaries of relevant recent peer-reviewed scientific publications. The conclusions of these reviews that the evidence overall does not confirm the existence of any adverse health effects due to exposure to EMF are consistent with the conclusions of the VDH and the WHO reports. With respect to the statistical association observed in some of the childhood leukemia epidemiologic studies, the most recent comprehensive review of the literature by SCENIHR, published in 2015, concluded that "no mechanisms have been identified and no support is existing [*sic*] from experimental studies that could explain these findings, which, together with shortcomings of the epidemiological studies prevent a causal interpretation" (SCENIHR, 2015, p. 16).

While research is continuing on multiple aspects of EMF exposure and health, many of the recent publications have focused on an epidemiologic assessment of the relationship between EMF exposure and childhood leukemia and neurodegenerative diseases. Of these, the following recent publications, published following the inclusion date (June 2014) for the SCENIHR (2015) report, provided additional evidence and contributed to clarification of previous findings. Overall, new research studies have not provided evidence to alter the previous conclusions of scientific and health organizations, including the WHO and SCENIHR.

Recent epidemiologic studies of EMF and childhood leukemia include:

- Bunch et al. (2015) assessed the potential association between residential proximity to high-voltage underground cables and development of childhood cancer in the United Kingdom largely using the same epidemiologic data as in a previously published study on overhead transmission lines (Bunch et al., 2014). No statistically significant associations or trends were reported with either distance to underground cables or calculated magnetic fields from underground cables for any type of childhood cancers.

- Pedersen et al. (2015) published a case-control study that investigated the potential association between residential proximity to power lines and childhood cancer in Denmark. The study included all cases of leukemia (n=1,536), central nervous system tumor, and malignant lymphoma (n=417) diagnosed before the age of 15 between 1968 and 2003 in Denmark, along with 9,129 healthy control children matched on sex and year of birth. Considering the entire study period, no statistically significant increases were reported for any of the childhood cancer types.

- Salvan et al. (2015) compared measured magnetic-field levels in the bedroom for 412 cases of childhood leukemia under the age of 10 and 587 healthy control children in Italy. Although the statistical power of the study was limited because of the small number of highly exposed subjects, no consistent statistical

associations or trends were reported between measured magnetic-field levels and the occurrence of leukemia among children in the study.

- Bunch et al. (2016) and Swanson and Bunch (2018) published additional analyses using data from an earlier study (Bunch et al., 2014). Bunch et al. (2016) reported that the association with distance to power lines observed in earlier years was linked to calendar year of birth or year of cancer diagnosis, rather than the age of the power lines. Swanson and Bunch (2018) re-analyzed data using finer exposure categories (e.g., cut-points of every 50-meter distance) and broader groupings of diagnosis date (e.g., 1960-1979, 1980-1999, and 2000-on) and reported no overall associations between exposure categories and childhood leukemia for the later time periods (1980 and on), and consistent pattern for time periods prior to 1980.

- Crespi et al. (2016) conducted a case-control epidemiologic study of childhood cancers and residential proximity to high-voltage power lines (60 kilovolts ["kV"] to 500 kV) in California. Childhood cancer cases, including 5,788 cases of leukemia and 3,308 cases of brain tumor, diagnosed under the age of 16 between 1986 and 2008, were identified from the California Cancer Registry. Controls, matched on age and sex, were selected from the California Birth Registry. Overall, no consistent statistically significant associations for leukemia or brain tumor and residential distance to power lines were reported .

- Kheifets et al. (2017) assessed the relationship between calculated magnetic-field levels from power lines and development of childhood leukemia within the same study population evaluated in Crespi et al. (2016). In the main analyses, which included 4,824 cases of leukemia and 4,782 controls matched on age and sex, the authors reported no consistent patterns, or statistically significant associations between calculated magnetic-field levels and childhood leukemia development. Similar results were reported in subgroup and sensitivity analyses. In two subsequent studies (Amoon et al., 2018a, 2019), the potential impact of residential mobility (i.e., moving residences between birth and diagnosis) on the associations reported in Crespi et al. (2016) and Kheifets et al. (2017) were examined. Amoon et al. (2019) concluded that while uncontrolled confounding by residential mobility had some impact on the association between EMF exposure and childhood leukemia, it was unlikely to be the primary driving force behind the previously reported associations.

- Amoon et al. (2018b) conducted a pooled analysis of 29,049 cases and 68,231 controls from 11 epidemiologic studies of childhood leukemia and residential distance from high-voltage power lines. The authors reported no statistically-significant association between childhood leukemia and proximity to transmission lines of any voltage. Among subgroup analyses, the reported associations were slightly stronger for leukemia cases diagnosed before 5 years of age and in study periods prior to 1980. Adjustment for various potential confounders (e.g., socioeconomic status, dwelling type, residential mobility) had little effect on the estimated associations.

- Kyriakopoulou et al. (2018) assessed the association between childhood acute leukemia and parental occupational exposure to social contacts, chemicals, and electromagnetic fields. The study was conducted at a major pediatric hospital in Greece and included 108 cases and 108 controls matched for age, gender, and ethnicity. Statistically non-significant associations were observed between paternal exposure to magnetic fields and childhood acute leukemia for any of the exposure periods examined (1 year before conception; during pregnancy; during breastfeeding; and from birth until diagnosis); maternal exposure was not assessed due to the limited sample size. No associations were observed between childhood acute leukemia and exposure to social contacts or chemicals.

- Auger et al. (2019) examined the relationship between exposure to EMF during pregnancy and risk of childhood cancer in a cohort of 784,000 children born in Quebéc. Exposure was defined using residential distance to the nearest high-voltage transmission line or transformer station. The authors reported statistically non-significant associations between proximity to transformer stations and any cancer, hematopoietic cancer, or solid tumors. No associations were reported with distance to transmission lines.

- Crespi et al. (2019) investigated the relationship between childhood leukemia and distance from high-voltage lines and calculated magnetic-field exposure, separately and combined, within the California study population previously analyzed in Crespi et al. (2016) and Kheifets et al. (2017). The authors reported that neither close proximity to high-voltage lines nor exposure to calculated magnetic fields alone were associated with childhood leukemia; an association was observed only for those participants who were both close to high-voltage lines (< 50 meters) and had high calculated magnetic fields (≥ 0.4 microtesla [i.e., 4 milligauss]). No associations were observed with low-voltage power lines (< 200 kV).

- Talibov et al. (2019) conducted a pooled analysis of 9,723 cases and 17,099 controls from 11 epidemiologic studies to examine the relationship between parental occupational exposure to magnetic fields and childhood leukemia. No statistically significant association was found between either paternal or maternal exposure and leukemia (overall or by subtype). No associations were observed in the meta-analyses.

Recent epidemiologic studies of EMF and neurodegenerative diseases include:

- Seelen et al. (2014) conducted a population-based case-control study in the Netherlands and included 1,139 cases diagnosed with amyotrophic lateral sclerosis ("ALS") between 2006 and 2013 and 2,864 frequency-matched controls. The shortest distance from the case' and control residences to the nearest high-voltage power line (50 kV to 380 kV) was determined by geocoding. No statistically significant associations between residential proximity to power lines with voltages of either 50 to 150 kV or 220 to 380 kV and ALS were reported.

- Sorahan and Mohammed (2014) analyzed mortality from neurodegenerative diseases in a cohort of approximately 73,000 electricity supply workers in the United Kingdom. Cumulative occupational exposure to magnetic-fields was calculated for each worker in the cohort based on their job titles and job locations. Death certificates were used to identify deaths from neurodegenerative diseases. No associations or trends for any of the included neurodegenerative diseases (Alzheimer's disease, Parkinson's disease, and ALS) were observed with various measures of calculated magnetic fields.

- Koeman et al. (2015, 2017) analyzed data from the Netherlands Cohort Study of approximately 120,000 men and women who were enrolled in the cohort in 1986 and followed up until 2003. Lifetime occupational history, obtained through questionnaires, and job-exposure matrices on ELF magnetic fields and other occupational exposures were used to assign exposure to study subjects. Based on 1,552 deaths from vascular dementia, the researchers reported a statistically not significant association of vascular dementia with estimated exposure to metals, chlorinated solvents, and ELF magnetic fields. However, because no exposure-response relationship for cumulative exposure was observed and because magnetic fields and solvent exposures were highly correlated with exposure to metals, the authors attributed the association with ELF magnetic fields and solvents to confounding by exposure to metals (Koeman et al., 2015). Based on a total of 136 deaths from ALS among the cohort members, the authors reported a statistically significant, approximately two-fold association with ELF magnetic fields in the highest exposure category. This association, however, was no longer statistically significant when adjusted for exposure to insecticides (Koeman et al., 2017).

- Fischer et al. (2015) conducted a population-based case-control study that included 4,709 cases of ALS diagnosed between 1990 and 2010 in Sweden and 23,335 controls matched to cases on year of birth and sex. The study subjects' occupational exposures to ELF magnetic fields and electric shocks were classified based on their occupations, as recorded in the censuses and corresponding job-exposure matrices. Overall, neither magnetic fields nor electric shocks were related to ALS.

- Vergara et al. (2015) conducted a mortality case-control study of occupational exposure to electric shock and magnetic fields and ALS. They analyzed data on 5,886 deaths due to ALS and over 58,000 deaths from other causes in the

United States between 1991 and 1999. Information on occupation was obtained from death certificates and job-exposure matrices were used to categorize exposure to electric shocks and magnetic fields. Occupations classified as "electric occupations" were moderately associated with ALS. The authors reported no consistent associations for ALS, however, with either electric shocks or magnetic fields, and they concluded that their findings did not support the hypothesis that exposure to either electric shocks or magnetic fields explained the observed association of ALS with "electric occupations."

- Pedersen et al. (2017) investigated the occurrence of central nervous system diseases among approximately 32,000 male Danish electric power company workers. Cases were identified through the national patient registry between 1982 and 2010. Exposure to ELF magnetic fields was determined for each worker based on their job titles and area of work. A statistically significant increase was reported for dementia in the high exposure category when compared to the general population, but no exposure-response pattern was identified, and no similar increase was reported in the internal comparisons among the workers. No other statistically significant increases among workers were reported for the incidence of Alzheimer's disease, Parkinson's disease, motor neuron disease, multiple sclerosis, or epilepsy, when compared to the general population, or when incidence among workers was analyzed across estimated exposure levels.

- Vinceti et al. (2017) examined the association between ALS and calculated magnetic-field levels from high-voltage power lines in Italy. The authors included 703 ALS cases and 2,737 controls; exposure was assessed based on residential proximity to high-voltage power lines. No statistically significant associations were reported and no exposure-response trend was observed. Similar results were reported in subgroup analyses by age, calendar period of disease diagnosis, and study area.

- Checkoway et al. (2018) investigated the association between Parkinsonism[12] and occupational exposure to magnetic fields and several other agents (endotoxins, solvents, shift work) among 800 female textile workers in Shanghai. Exposure to magnetic fields was assessed based on the participants' work histories. The authors reported no statistically significant associations between Parkinsonism and occupational exposure to any of the agents under study, including magnetic fields.

[12] Parkinsonism is defined by Checkoway et al. (2018) as "*a syndrome whose cardinal clinical features are bradykinesia, rest tremor, muscle rigidity, and postural instability. Parkinson disease is the most common neurodegenerative form of [parkinsonism]"* (p. 887).

- Jalilian et al. (2018) conducted a meta-analysis of 20 epidemiologic studies of occupational exposure to magnetic fields and Alzheimer's disease. The authors reported a moderate, statistically significant overall association; however, they noted substantial heterogeneity among studies and evidence for publication bias.

- Gervasi et al. (2019) assessed the relationship between residential distance to overhead power lines in Italy and risk of Alzheimer's dementia and Parkinson's disease. The authors included 9,835 cases of Alzheimer's dementia and 6,810 cases of Parkinson's disease; controls were matched by sex, year of birth, and municipality of residence. A weak, statistically non-significant association was observed between residences within 50 meters of overhead power lines and both Alzheimer's dementia and Parkinson's disease, compared to distances of over 600 meters.

- Peters et al. (2019) examined the relationship between ALS and occupational exposure to both magnetic fields and electric shock in a pooled study of data from three European countries. The study included 1,323 ALS cases and 2,704 controls matched for sex, age, and geographic location; exposure was assessed based on occupational title and defined as low (background), medium, or high. Statistically significant associations were observed between ALS and ever having been exposed above background levels to either magnetic fields or electric shocks; however, no clear exposure-response trends were observed with exposure duration or cumulative exposure. The authors also noted significant heterogeneity in risk by study location.

- Huss et al. (2018) conducted a meta-analysis of 20 epidemiologic studies of ALS and occupational exposure to magnetic fields. The authors reported a weak overall association; a slightly stronger association was observed in a subset analysis of six studies with full occupational histories available. The authors noted substantial heterogeneity among studies, evidence for publication bias, and a lack of a clear exposure-response relationship between exposure and ALS.

- Röösli and Jalilian (2018) performed a meta-analysis using data from five epidemiologic studies examining residential exposure to magnetic fields and ALS. A statistically non-significant negative association was reported between ALS and the highest exposed group, where exposure was defined based on distance from power lines or calculated magnetic-field level.

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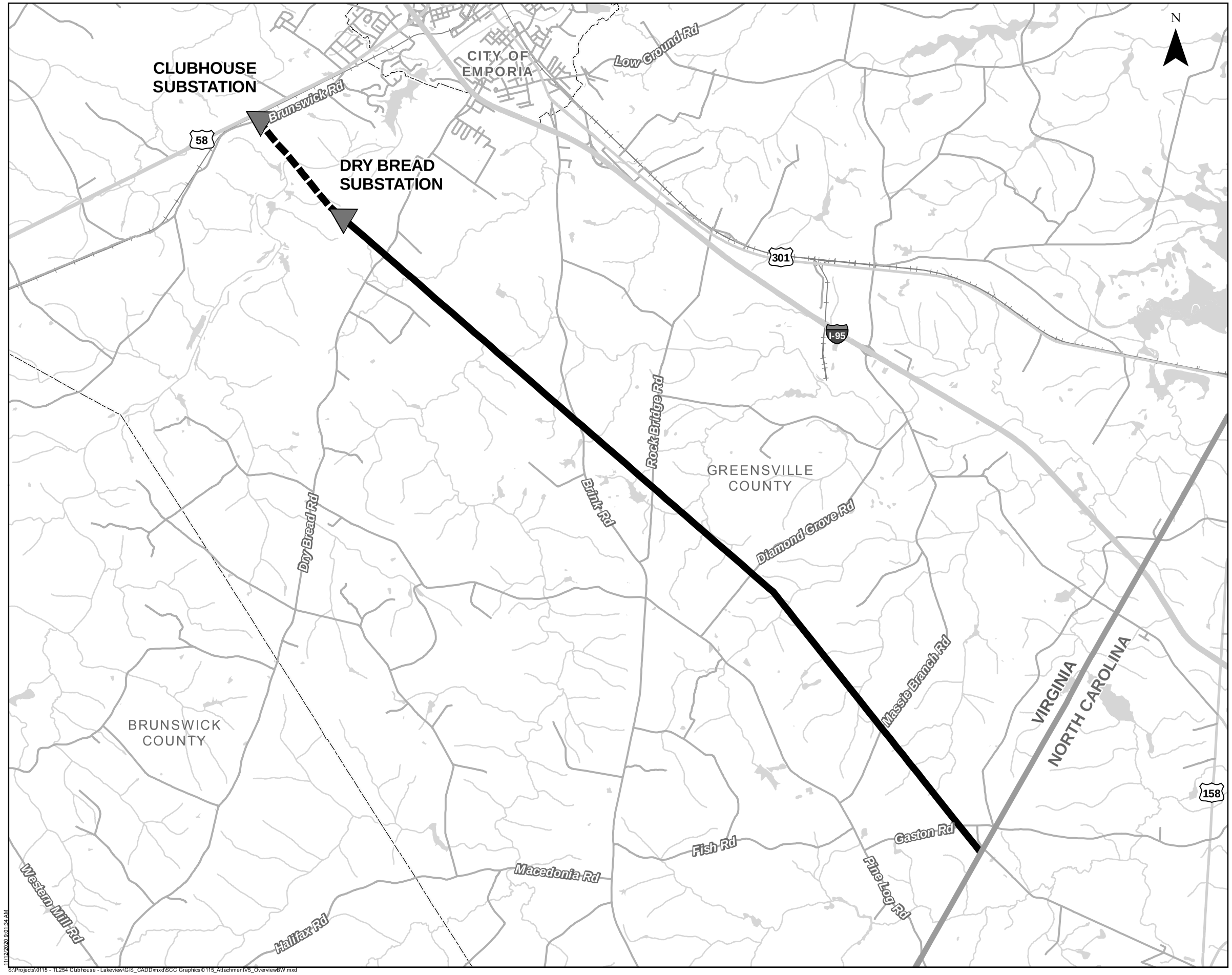
V. NOTICE

A. Furnish a proposed route description to be used for public notice purposes. Provide a map of suitable scale showing the route of the proposed project. For all routes that the Applicant proposed to be noticed, provide minimum, maximum and average structure heights.

Response: A map showing the existing route to be used for the Virginia Rebuild Project is provided as Attachment V.A. A written description of the route is as follows:

The proposed route for the Virginia Rebuild Project is located within an approximately 12.5-mile right-of-way currently occupied by an existing transmission corridor containing both 115 kV and 230 kV lines. The existing transmission corridor right-of-way for the proposed route originates at Structure #2201/1A within the Company's existing Clubhouse Substation in Greensville County, Virginia, and heads generally south for approximately 1.6 miles to Structure #2201/14 / #254/14 within the Company's existing Dry Bread Substation. The proposed route continues generally south for approximately 10.9 miles from the Dry Bread Substation to Structure #254/113 at the Virginia state line.

For the proposed Virginia Rebuild Project, ninety-two 230 kV wood/wood pole equivalent H-frame structures and two 230 kV wood/wood pole equivalent three-pole structures supporting Lines #2201 and #254 will be replaced with ninety-four 230 kV weathering steel H-frame structures. The minimum proposed structure height is approximately 57 feet, the maximum proposed structure height is approximately 97 feet, and the average proposed structure height is approximately 69 feet, based on preliminary conceptual design, not including foundation reveal and subject to change based on final engineering design.



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ATTACHMENT V.A

PROJECT NOTICE MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/Applicant:		
Dominion Energy Virginia		
C2 Env Project:	Prepared By:	Date:
0115	NCG	11/11/20

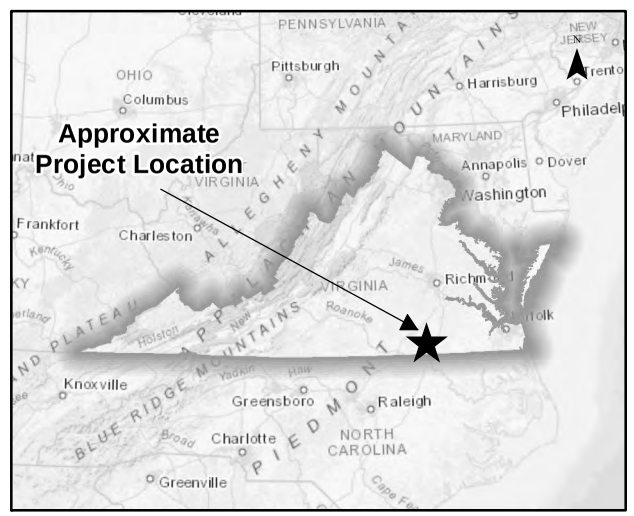
0 0.5 1 2 Miles

Scale is 1 IN = 1 MI when printed at original size of 11x17

SITE DATA

- Line #2201
- Line #254
- Existing Substation
- Limited Access Highways
- US and VA Primary Highways
- Local and Main Roads
- Railroad
- Virginia Border
- County Boundary
- NHD Flowline
- NHD Waterbody

Notes:
1. Basemap Source: Esri, HERE, Garmin, Intermap, increment P Corp., GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, Meti, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
2. Data Source: NHD, VGIN, and the GIS User Community



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V. NOTICE

B. List Applicant offices where members of the public may inspect the application. If applicable, provide a link to website(s) where the application may be found.

Response: Due to the ongoing public health crisis, the application is available for public inspection electronically at the following website:

www.dominionenergy.com/line254.

V. NOTICE

C. List all federal, state, and local agencies and/or officials that may reasonably be expected to have an interest in the proposed construction and to whom the Applicant has furnished or will furnish a copy of the application.

Response: The following agency representatives may reasonably be expected to have an interest in the Virginia Rebuild Project. Instead of furnishing a copy of the Application to these parties, the Company has sent a letter noting the availability of the Application for the Virginia Rebuild Project on the Company's website.

Ms. Bettina Rayfield
Manager Environmental Impact Review and Long Range Priorities Program
Office of Environmental Impact Review
Department of Environmental Quality
PO Box 1105
Richmond, Virginia 23218

Ms. Michelle Henicheck
Office of Wetlands and Streams
Department of Environmental Quality
1111 East Main Street, Suite 1400
Richmond, Virginia 23219

Mr. Jaime Robb
Department of Environmental Quality
VWP Permit Manager, Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060

Ms. Rene Hypes
Virginia Department of Conservation and Recreation
Environmental Review Coordinator, Natural Heritage Program
600 East Main Street, Suite 1400
Richmond, Virginia 23219

Ms. Robbie Rhur
Planning Bureau
Department of Conservation and Recreation
600 East Main Street, 17th Floor
Richmond, Virginia 23219

Mr. Roger Kirchen
Review and Compliance Division
Department of Historic Resources
2801 Kensington Avenue
Richmond, Virginia 23221

Ms. Amy M. Ewing
Virginia Department of Wildlife Resources
P.O. Box 90778
Henrico, Virginia 23228

Mr. Keith Tignor
Endangered Plant and Insect Species Program
Virginia Department of Agriculture and Consumer Affairs
102 Governor Street
Richmond, Virginia 23219

Mr. Terry Lasher
Forestland Conservation Division
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville, Virginia 22903

Mr. Tony Watkinson
Habitat Management Division
Virginia Marine Resources Commission
Building 96, 380 Fenwick Road
Fort Monroe, Virginia 23651

Mr. Troy Andersen
US Fish and Wildlife Service
Ecological Services Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061

Mr. Peter Kube
US Army Corps of Engineers
Norfolk District, Eastern Section
803 Front Street
Norfolk, Virginia 23510

Ms. Martha Little
Virginia Outdoors Foundation
600 East Main Street, Suite 402
Richmond, Virginia 23219

Mr. Michael Dowd
Department of Environmental Quality
Air Division
P.O. Box 1105
Richmond, Virginia 23218

Mr. Robert Alexander
Obstruction Evaluation Specialist
Federal Aviation Administration
FAA Eastern Regional Office
159-30 Rockaway Blvd
Jamaica, New York 11434

Mr. Scott Denny
Airport Services Division
Virginia Department of Aviation
5702 Gulfstream Road
Richmond, Virginia 23250

Mr. Christopher G. Hall, P.E.
District Engineer
Virginia Department of Transportation
Hampton Roads District Office
7511 Burbage Drive
Suffolk, Virginia 23435

Ms. Brenda N. Parson
County Administrator
Greensville County
1781 Greensville County Circle
Emporia, VA 23847

Mr. Linwood E. Pope, Jr
Planning Director
Greensville County
1781 Greensville County Circle
Emporia, VA 23847

V. NOTICE

D. If the application is for a transmission line with a voltage of 138 kV or greater, provide a statement and any associated correspondence indicating that prior to the filing of the application with the SCC the Applicant has notified the chief administrative officer of every locality in which it plans to undertake construction of the proposed line of its intention to file such an application, and that the Applicant gave the locality a reasonable opportunity for consultation about the proposed line (similar to the requirements of § 15.2-2202 of the Code for electric transmission lines of 150 kV or more).

Response: In accordance with Va. Code § 15.2-2202 E, letters dated August 27, 2020 were delivered to Ms. Brenda N. Parson, County Administrator, and Mr. Linwood E. Pope, Jr, Planning Director, in Greensville County, Virginia, where the Virginia Rebuild Project is located. The letters stated the Company's intention to file this Application and inviting the County to consult with the Company about the Virginia Rebuild Project. Copies of these letters are included as Attachment V.D.1 and Attachment V.D.2.

Dominion Energy Virginia
10900 Nuckols Rd, 4th Floor
Glen Allen, VA 23060
DominionEnergy.com

August 27, 2020

Ms. Brenda N. Parson
County Administrator, Greensville County
1781 Greensville County Circle
Emporia, VA 23847

Reference: **Dominion Energy Virginia's Proposed Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project**
Greensville County, Virginia
Notice Pursuant to Va. Code §15.2-2202 E

Dear Ms. Parson,

Dominion Energy Virginia is proposing the Clubhouse-Dry Bread Line #2201 and Dry Bread-Lakeview Line #254 230 kV Virginia Rebuild Project which would rebuild existing overhead transmission lines located in Greensville County, Virginia. The approximate 12.5-mile Rebuild Project is located entirely within existing transmission line right-of-way or on Company-owned property and no additional right-of-way is necessary. The Rebuild Project will replace aging infrastructure that is at the end of its service live, thereby continuing to enable the Company to maintain safe and reliable electric transmission service to its customers.

The Company is preparing an application for Certificate of Public Convenience and Necessity ("CPCN") from the Virginia State Corporation Commission ("SCC"). Pursuant to Va. Code §15.2-2202, the Company is writing to notify you of the proposed Rebuild Project in advance of this SCC filing. We respectfully request that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter. Enclosed is a Project Overview Map depicting the rebuild route and project location.

If you would like to receive a GIS shapefile of the rebuild route to assist in your project review or if you have any questions, please do not hesitate to contact me directly at (434)532-7579 or Nancy.R.Reid@Dominionenergy.com. We appreciate your assistance with this project review and look forward to any additional information you may have to offer.

Regards,

Nancy Reid

Nancy R. Reid
Siting and Permitting Specialist

Attachment: Project Overview Map

CLUBHOUSE SUBSTATION

DRY BREAD SUBSTATION

CITY OF EMPORIA

GREENSVILLE COUNTY

BRUNSWICK COUNTY

VIRGINIA

NORTH CAROLINA

Brunswick Rd

Low Ground Rd

Rock Bridge Rd

Brink Rd

Dry Bread Rd

Diamond Grove Rd

Massie Branch Rd

Gaston Rd

Pine Log Rd

Fish Rd

Macedonia Rd

Western Mill Rd

Halifax Rd

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ATTACHMENT I.A.1

PROJECT OVERVIEW MAP

Clubhouse - Dry Bread Line #2201
and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0115	NCG	09/04/20

0 0.5 1 2 Miles

Scale is 1 IN = 1 MI when printed at original size of 11x17

SITE DATA

- Line #2201
- Line #254
- Existing Substation
- Limited Access Highways
- US and VA Primary Highways
- Local and Main Roads
- Railroad
- Virginia Border
- County Boundary
- NHD Flowline
- NHD Waterbody

Notes:
1. Basemap Source: Esri, HERE, Garmin, Intermap, increment P Corp., GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, Meti, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
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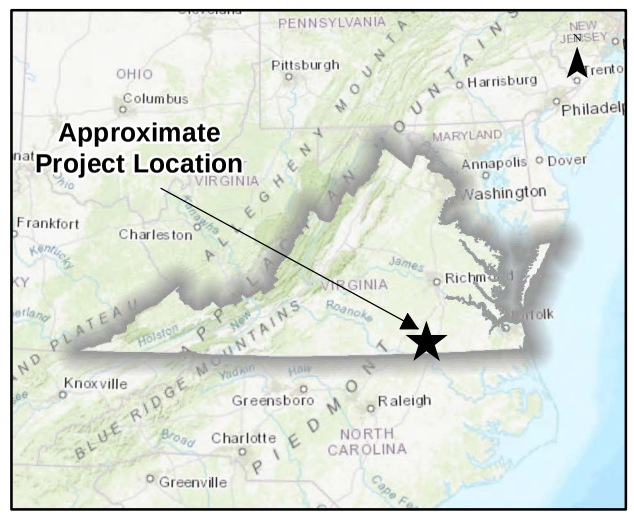

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Dominion Energy Virginia
10900 Nuckols Rd, 4th Floor
Glen Allen, VA 23060
DominionEnergy.com

August 27, 2020

Mr. Linwood E. Pope, Jr
Planning Director, Greensville County
1781 Greensville County Circle
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Notice Pursuant to Va. Code §15.2-2202 E

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Regards,

Nancy Reid

Nancy R. Reid
Siting and Permitting Specialist

Attachment: Project Overview Map

CLUBHOUSE SUBSTATION

DRY BREAD SUBSTATION

CITY OF EMPORIA

GREENSVILLE COUNTY

BRUNSWICK COUNTY

VIRGINIA

NORTH CAROLINA

Brunswick Rd

Low Ground Rd

Rock Bridge Rd

Brink Rd

Diamond Grove Rd

Massie Branch Rd

Dry Bread Rd

Western Mill Rd

Halifax Rd

Macedonia Rd

Fish Rd

Gaston Rd

Pine Log Rd

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ATTACHMENT I.A.1

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and Dry Bread - Lakeview Line #254
230 kV Virginia Rebuild Project

Greensville County, Virginia

Owner/Applicant:
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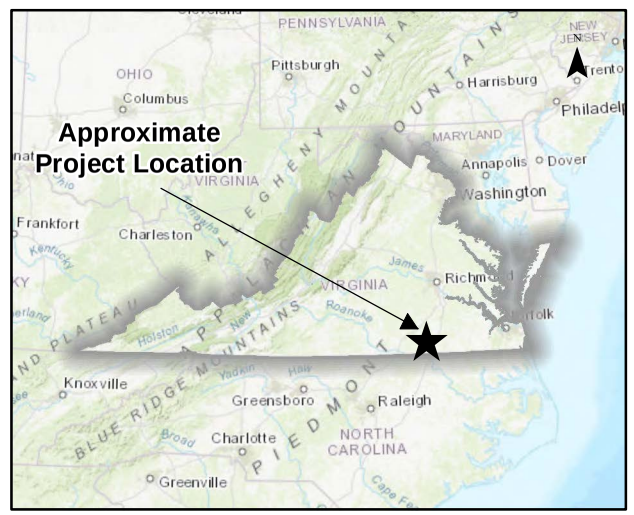

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