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June 13, 2024

BY ELECTRONIC FILING

Mr. Bernard Logan, 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: Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005
Case No. PUR-2024-00105

Dear Mr. Logan:

Please find enclosed for electronic filing in the above-captioned proceeding the application for approval of electric 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, an electronic copy of the map of the Virginia Department of Transportation "General Highway Map" for the City of Chesapeake, as well as 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, were provided via an e-room to the Commission's Division of Public Utility Regulation on June 11, 2024.

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

Highest regards,

Vishwa B. Link

Enclosures

cc: William H. Chambliss, Esq.
Mr. David Essah (without enclosures)

Mr. Neil Joshipura (without enclosures)
Mr. Michael A. Cizenski (without enclosures)
David J. DePippo, Esq.
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Annie C. Larson, Esq.
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Application, Appendix, DEQ Supplement, Direct Testimony and Exhibits of Virginia Electric and Power Company

Before the State Corporation Commission of Virginia

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

Application No. 336

Case No. PUR-2024-00105

Filed: June 13, 2024

Volume 1 of 2

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC TRANSMISSION FACILITIES

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

Application No. 336

Case No. PUR-2024-00105

Filed: June 13, 2024

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY For approval and certification of electric transmission facilities: Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005	)))))))	Case No. PUR-2024-00105

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY FOR APPROVAL AND CERTIFICATION OF ELECTRIC TRANSMISSION FACILITIES: FENTRESS-YADKIN 500 KV LINE #588 REBUILD AND NEW 500 KV FENTRESS-YADKIN LINE #5005

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 transmission facilities (the "Application"). In support of its Application, Dominion Energy Virginia respectfully states 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. The electric facilities proposed in this Application are necessary so that Dominion Energy Virginia can continue to provide reliable electric service to its customers, consistent with applicable reliability standards.

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, and to help reliably and successfully integrate the Coastal Virginia Offshore Wind Commercial Project ("CVOW project" or "CVOW")[1] with the transmission system as requested by the Company's Generation Construction Group ("Dominion Generation" or the "Customer"),[2] the Company proposes in the City of Chesapeake, Virginia,

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[1] On November 5, 2021, the Company filed an application with the State Corporation Commission ("Commission") requesting approval and certification of the Virginia Facilities component of the CVOW project—a proposed 2,587 megawatt ("MW") (combined nominal capacity) wind generation facility 27 miles off the coast of Virginia Beach, Virginia, and associated interconnection facilities in and around Virginia Beach, Virginia—as well as certain approvals and rider recovery. On August 5, 2022, the Commission issued a certificate of public convenience and necessity ("CPCN") for the Virginia Facilities, which are comprised of the minimal amount of electric transmission facilities initially identified by PJM Interconnection, L.L.C. ("PJM") as required to interconnect the CVOW project reliably with the existing transmission system, including, among other things, a new Harpers Switching Station, about 14 miles of three new overhead 230 kV transmission circuits between the new Harpers Switching Station and the Fentress Substation, the rebuild of about 8 miles of two existing 230 kV overhead lines, and an expansion of the Fentress Substation. Additionally, the approved transmission facilities included network upgrades identified based on the PJM Interconnection Analysis completed in September 2020, when the System Impact Study Reports were issued for AF1-123, AF1-124, and AF1-125 (Dominion Generation's three interconnection queue requests to PJM that comprise the CVOW project), meaning that those upgrades were considered initial and subject to change. Nevertheless, the network upgrades identified in these studies were considered the most up to date and best information at that time. *See Application of Virginia Electric and Power Company for the approval and certification of the Coastal Virginia Offshore Wind Commercial Project and Rider Offshore Wind, pursuant to § 56-585.1:11, § 56-46.1, § 56-265.1 et seq., and § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00142, Final Order (Aug. 5, 2022) (the "CVOW Proceeding"). PJM issued its Phase I Study Results for AF1-123, AF1-124 and AF1-125 on May 20, 2024. *See infra*, n. 2.

[2] "Dominion Generation" refers to Dominion Energy Virginia's Generation Construction Group, *i.e.*, the interconnection customer. For the CVOW project, Dominion Generation entered into an Interim Interconnection Services Agreement ("ISA") and Interconnection Construction Services Agreement ("ICSA") with Dominion Energy Virginia as the Transmission Owner ("TO" or "Dominion Electric Transmission") and PJM as the Transmission Provider. These initial interim agreements were executed and filed at the Federal Energy Regulatory Commission ("FERC") in June 2023. As the TO, the Company interfaces with generators (such as Dominion Generation and Avangrid, Inc.) and PJM in the Interconnection Process. In this role, the Company as the TO is obligated to act reasonably in preparing the information needed by PJM to undertake any required interconnection studies for a generation customer and, once an ISA is signed, to act reasonably in doing the work needed to interconnect the generator to the system. It is the TO's obligation to determine the costs and perform the work on its system to allow

predominantly within existing rights-of-way, to:

(i) Rebuild the Company's existing overhead single circuit 500 kV Fentress-Yadkin Line #588 to address the condition of Line #588, which is approaching its end of service life. Specifically, as proposed, rebuild the approximately 13.5-mile-long Line #588, which currently is supported primarily by single circuit 500 kV weathering steel (COR-TEN®[3]) lattice structures, with primarily single circuit 500 kV dulled galvanized steel monopole structures entirely within the existing right-of-way, which is currently maintained at 150 feet wide,[4] or on Company-owned property. Additionally, replace the existing three-phase twin-bundled 2500 Aluminum Conductor Alloy Reinforced ("ACAR") conductors with three-phase triple-bundled 1351.5 Aluminum Conductor Steel Reinforced ("ACSR") conductors with a summer transfer capability of 4,357 MVA[5] for the entire 13.5 miles. Collectively, this work is referred to as the Line #588 Rebuild.

(ii) Construct a new overhead single circuit 500 kV transmission line originating at the Company's existing Fentress Substation and continuing approximately 13.5 miles to terminate at the existing Yadkin Substation, resulting in 500 kV Fentress-Yadkin Line #5005.[6] Specifically, as proposed, the new Line #5005 will be installed with the rebuilt

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a generator to interconnect and to treat the generator in a non-discriminatory fashion. It is not the TO's role to select the transmission facilities identified through PJM's Interconnection Process.

[3] Registered trademark of the United States Steel Corporation.

[4] For approximately 5.7 miles from the existing Fentress Substation to Structure #588/223, the existing Line #588 right-of-way is 235 feet wide. For the remaining 7.8 miles to the existing Yadkin Substation, the existing Line #588 right-of-way is 150 feet wide. The entire 13.5-mile existing transmission corridor containing Line #588 currently is cleared and maintained at 150 feet wide. As proposed, the Project is not anticipated to require clearing of any of the additional 85 feet of existing right-of-way for the rebuilt Line #588 or for the proposed new Line #5005, as described herein. *But see*, Section I.F of the Appendix as to a Constraint Design Segment that would utilize the entire 235-foot-wide existing right-of-way for approximately 1.6 miles of the 13.5-mile right-of-way corridor, as defined and discussed therein.

[5] Apparent power, measured in megavolt amperes ("MVA"), is made up of real power (MW) and reactive power (megavolt ampere reactive or "MVAR").

[6] In order to accommodate termination of proposed Line #5005 into the Yadkin Substation, the Company will shift two spans of existing Line #565 where it exits from the Yadkin Substation before reconnecting with the existing Line #565 right-of-way corridor. Specifically, the Company will replace one existing tower structure with one new 3-pole structure within Company-owned property and will replace one existing tower structure with an H-frame structure within the existing right-of-way corridor. The shifted conductor will be covered by permit within an existing Virginia Department of Transportation ("VDOT") easement. Both of the proposed Line #565 structures are estimated to be within 20% of the existing structure heights. While this work is required by the proposed Project, the Company considers the removal of two existing structures and installation of two new structures (two total structure replacements) entirely within existing Company-owned property or by permit within an existing VDOT easement, to qualify as an "ordinary extension[] or improvement[] in the usual course of business" (*i.e.*, "ordinary course") pursuant to § 56-265.2 A 1 of the Code of Virginia ("Va. Code") and, therefore, does not require approval pursuant to Va. Code § 56-46.1 B or a CPCN from the Commission. This is consistent with the Commission Staff's July 6, 2017 guidance (available at https://scc.virginia.gov/getdoc/7f6ec0f6-7d14-4ca9-bd8a-9bd2511c5cdb/StaffGuidanceOrdvsNonOrd.pdf), as only two structures are being replaced on Line #565 and the proposed structures are estimated to be within 20% of the existing structure heights. Further, the shift of Line #565 will result in a more perpendicular road crossing, which is favored by VDOT. As this work is required by the proposed Project, the costs associated with this Line #565 work have been included in the total transmission-related conceptual

Line #588 entirely within the existing right-of-way, which is currently maintained at 150 feet wide,[7] or on Company-owned property, supported primarily by single circuit 500 kV dulled galvanized steel monopole structures. Additionally, the proposed Line #5005 will utilize three-phase triple-bundled 1351.5 ACSR conductors with a summer transfer capability of 4,357 MVA. Collectively, this work is referred to as the proposed Line #5005.

(iii) Perform substation-related work at the Company's existing Fentress Substation and Yadkin Substation.

The Line #588 Rebuild, the proposed Fentress-Yadkin Line #5005, and the substation-related work at the Fentress and Yadkin Substations are collectively referred to as the "Project."

4. The proposed Project will address the condition of Line #588, which is approaching its end of service life, by rebuilding existing infrastructure in accordance with mandatory Planning Criteria and will help allow the CVOW project to reliably and successfully integrate with the transmission system, thereby allowing the Company to maintain the overall long-term reliability of the transmission system for its customers.

5. The total length of the existing right-of-way, which is currently maintained at 150 feet in width,[8] and Company-owned property to be used for the Project, as proposed, is approximately 13.5 miles (the "Proposed Route"). Because the existing right-of-way and Company-owned property are adequate for the proposed Project, no new right-of-way is required. Given the availability of existing right-of-way and the statutory preference given to the use of existing right-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

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costs. Should the Commission determine that a CPCN is required for this Line #565 work as described herein, the Company requests that the Commission grant such CPCN as part of its final order in this proceeding.

[7] *See supra,* n. 4; *see also* Section I.F of the Appendix.

[8] *See supra,* n. 4; *see also* Section I.F of the Appendix. While the approximately 1.6-mile Constraint Design Segment would utilize an additional 85 feet of existing unmaintained right-of-way (235 feet total) in order to install a limited structure design segment option, as defined and discussed in Section I.F of the Appendix, it is important to note that the existing right-of-way in that 1.6-mile segment (235 feet) is adequate.

consider any alternate routes requiring new right-of-way for the Project. Instead, the Company presents the Proposed Route for the Commission's consideration and notice.

6. The total estimated conceptual cost of the proposed Project utilizing the Proposed Route is approximately $202.2 million, which includes approximately $167.9 million for transmission-related work and approximately $34.3 million for substation-related work (2024 dollars).[9]

7. The desired in-service target date for the proposed Project is January 1, 2027. The Company estimates it will take approximately 22 months for detailed engineering, materials procurement, permitting, real estate, and construction after a final order from the Commission. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by March 1, 2025. Should the Commission issue a final order by March 1, 2025, the Company estimates that construction should begin in March 2025 and be completed by January 2027. This schedule is contingent upon obtaining the necessary permits and outages, the latter of which may be particularly challenging due to the amount of new load growth, rebuilds, and new builds scheduled to occur in this load area. Dates may need to be adjusted based on permitting delays or design modifications to comply with additional agency requirements identified during the permitting application process, as well as the ability to schedule outages, and unpredictable delays due to labor shortages or materials/supply issues. This schedule also is contingent upon the Company's ability to negotiate land rights. In addition, the Company is actively monitoring regulatory changes and requirements associated with the Northern long-eared bat ("NLEB") and how they could potentially impact construction timing associated with time of

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[9] The total Project costs include estimated conceptual costs for the work associated with Line #565 (*see supra*, n. 6).

year restrictions ("TOYRs"). The U.S. Fish and Wildlife Service ("USFWS") previously indicated that it planned to issue final NLEB guidance to replace the interim guidance by April 1, 2024; however, the interim guidance has been extended by USFWS until late summer 2024. The Company actively is tracking updates from the USFWS with respect to the final guidance. Once issued, the Company plans to review and follow the final guidance to the extent it applies to the Company's projects. Until the final guidance is issued, the Company will continue following the interim guidance. For projects that may require additional coordination, the Company will coordinate with the USFWS. The Company is also monitoring potential regulatory changes associated with the potential up-listing of the Tricolored bat ("TCB"). On September 14, 2022, the USFWS published the proposed rule to the Federal Register to list the TCB as endangered under the Endangered Species Act ("ESA"). USFWS recently extended its Final Rule issuance target from September 2023 to September 2024. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on Company projects' permitting, construction, and in-service dates, including electric transmission projects.

8. In conformance with recent submittals and for purposes of judicial economy, the Company requests that the Commission issue a final order approving both the in-service date of January 1, 2027, and CPCN sunset date of January 1, 2028, for the Project.

9. 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.

10. 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.

11. 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.

12. In addition to the information provided in the Appendix and the DEQ Supplement, this Application is supported by the pre-filed direct testimony of Company Witnesses Peter Nedwick, Daniel J. Cabonor, Mohammad M. Othman, and Lane Carr filed with this Application.

13. Finally, Dominion Energy Virginia requests that, to the extent the Commission modifies the deadline for responses to interrogatories and requests for production of documents in 5 VAC 5-20-260, the Commission grant Staff and the parties seven calendar days in order to afford the Company adequate time to provide comprehensive responses to discovery.

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 Project; and,

(c) grant a certificate of public convenience and necessity for the 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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June 13, 2024

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC TRANSMISSION FACILITIES

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

Application No. 336

Appendix

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

Case No. PUR-2024-00105

Filed: June 13, 2024

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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, and to help reliably and successfully integrate the Coastal Virginia Offshore Wind Commercial Project ("CVOW project" or "CVOW")[1] with the transmission system as requested by Virginia Electric and Power Company's ("Dominion Energy Virginia" or the "Company") Generation Construction Group ("Dominion Generation" or the "Customer"),[2] the Company proposes in the City of Chesapeake, Virginia, predominantly within existing rights-of-way, to:

(i) Rebuild the Company's existing overhead single circuit 500 kV Fentress-Yadkin Line #588 to address the condition of Line #588, which is approaching its end of service life. Specifically, as proposed, rebuild the approximately 13.5-mile-long Line #588, which currently is supported primarily by single circuit 500 kV weathering steel (COR-TEN®[3]) lattice structures, with primarily single circuit 500 kV dulled galvanized steel monopole structures entirely within the existing right-of-way, which is currently

[1] On November 5, 2021, the Company filed an application with the State Corporation Commission ("Commission") requesting approval and certification of the Virginia Facilities component of the CVOW project—a proposed 2,587 megawatt ("MW") (combined nominal capacity) wind generation facility 27 miles off the coast of Virginia Beach, Virginia, and associated interconnection facilities in and around Virginia Beach, Virginia—as well as certain approvals and rider recovery. On August 5, 2022, the Commission issued a certificate of public convenience and necessity ("CPCN") for the Virginia Facilities, which are comprised of the minimal amount of electric transmission facilities initially identified by PJM Interconnection, L.L.C. ("PJM") as required to interconnect the CVOW project reliably with the existing transmission system, including, among other things, a new Harpers Switching Station, about 14 miles of three new overhead 230 kV transmission circuits between the new Harpers Switching Station and the Fentress Substation, the rebuild of about 8 miles of two existing 230 kV overhead lines, and an expansion of the Fentress Substation. Additionally, the approved transmission facilities included network upgrades identified based on the PJM Interconnection Analysis completed in September 2020, when the System Impact Study Reports were issued for AF1-123, AF1-124, and AF1-125 (Dominion Generation's three interconnection queue requests to PJM that comprise the CVOW project), meaning that those upgrades were considered initial and subject to change. Nevertheless, the network upgrades identified in these studies were considered the most up to date and best information at that time. *See Application of Virginia Electric and Power Company for the approval and certification of the Coastal Virginia Offshore Wind Commercial Project and Rider Offshore Wind, pursuant to § 56-585.1:11, § 56-46.1, § 56-265.1 et seq., and § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00142, Final Order (Aug. 5, 2022) (the "CVOW Proceeding"). PJM issued its Phase I Study Results for AF1-123, AF1-124 and AF1-125 on May 20, 2024. *See* Section I.D; *see also infra*, n. 2 and n. 15.

[2] "Dominion Generation" refers to Dominion Energy Virginia's Generation Construction Group, *i.e.*, the interconnection customer. For the CVOW project, Dominion Generation entered into an Interim Interconnection Services Agreement ("ISA") and Interconnection Construction Services Agreement ("ICSA") with Dominion Energy Virginia as the Transmission Owner ("TO" or "Dominion Electric Transmission") and PJM as the Transmission Provider. These initial interim agreements were executed and filed at the Federal Energy Regulatory Commission ("FERC") in June 2023. As the TO, the Company interfaces with generators (such as Dominion Generation and Avangrid, Inc.) and PJM in the Interconnection Process. In this role, the Company as the TO is obligated to act reasonably in preparing the information needed by PJM to undertake any required interconnection studies for a generation customer and, once an ISA is signed, to act reasonably in doing the work needed to interconnect the generator to the system. It is the TO's obligation to determine the costs and perform the work on its system to allow a generator to interconnect and to treat the generator in a non-discriminatory fashion. It is not the TO's role to select the transmission facilities identified through PJM's Interconnection Process. *See infra*, n. 15.

[3] Registered trademark of the United States Steel Corporation.

maintained at 150 feet wide,[4] or on Company-owned property. Additionally, replace the existing three-phase twin-bundled 2500 Aluminum Conductor Alloy Reinforced ("ACAR") conductors with three-phase triple-bundled 1351.5 Aluminum Conductor Steel Reinforced ("ACSR") conductors with a summer transfer capability of 4,357 MVA[5] for the entire 13.5 miles. Collectively, this work is referred to as the Line #588 Rebuild.

(ii) Construct a new overhead single circuit 500 kV transmission line originating at the Company's existing Fentress Substation and continuing approximately 13.5 miles to terminate at the existing Yadkin Substation, resulting in 500 kV Fentress-Yadkin Line #5005.[6] Specifically, as proposed, the new Line #5005 will be installed with the rebuilt Line #588 entirely within the existing right-of-way, which is currently maintained at 150 feet wide,[7] or on Company-owned property, supported primarily by single circuit 500 kV dulled galvanized steel monopole structures. Additionally, the proposed Line #5005 will utilize three-phase triple-bundled 1351.5 ACSR conductors with a summer transfer capability of 4,357 MVA. Collectively, this work is referred to as the proposed Line #5005.

(iii) Perform substation-related work at the Company's existing Fentress Substation and Yadkin Substation.

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[4] For approximately 5.7 miles from the existing Fentress Substation to Structure #588/223, the existing Line #588 right-of-way is 235 feet wide. For the remaining 7.8 miles to the existing Yadkin Substation, the existing Line #588 right-of-way is 150 feet wide. The entire 13.5-mile existing transmission corridor containing Line #588 currently is cleared and maintained at 150 feet wide. As proposed, the Project is not anticipated to require clearing of any of the additional 85 feet of existing right-of-way for the rebuilt Line #588 or for the proposed new Line #5005, as described herein. *But see*, Section I.F as to a Constraint Design Segment that would utilize the entire 235-foot-wide existing right-of-way for approximately 1.6 miles of the 13.5-mile right-of-way corridor, as defined and discussed therein.

[5] Apparent power, measured in megavolt amperes ("MVA"), is made up of real power (MW) and reactive power (megavolt ampere reactive or "MVAR").

[6] In order to accommodate termination of proposed Line #5005 into the Yadkin Substation, the Company will shift two spans of existing Line #565 where it exits from the Yadkin Substation before reconnecting with the existing Line #565 right-of-way corridor. Specifically, the Company will replace one existing tower structure with one new 3-pole structure within Company-owned property and will replace one existing tower structure with an H-frame structure within the existing right-of-way corridor. The shifted conductor will be covered by permit within an existing Virginia Department of Transportation ("VDOT") easement. Both of the proposed Line #565 structures are estimated to be within 20% of the existing structure heights. While this work is required by the proposed Project, the Company considers the removal of two existing structures and installation of two new structures (two total structure replacements) entirely within existing Company-owned property or by permit within an existing VDOT easement, to qualify as an "ordinary extension[] or improvement[] in the usual course of business" (*i.e.*, "ordinary course") pursuant to § 56-265.2 A 1 of the Code of Virginia ("Va. Code") and, therefore, does not require approval pursuant to Va. Code § 56-46.1 B or a CPCN from the Commission. This is consistent with the Commission Staff's July 6, 2017 guidance (available at https://scc.virginia.gov/getdoc/7f6ec0f6-7d14-4ca9-bd8a-9bd2511c5cdb/StaffGuidanceOrdvsNonOrd.pdf), as only two structures are being replaced on Line #565 and the proposed structures are estimated to be within 20% of the existing structure heights. Further, the shift of Line #565 will result in a more perpendicular road crossing, which is favored by VDOT. As this work is required by the proposed Project, the costs associated with this Line #565 work have been included in the total transmission-related conceptual costs. Should the Commission determine that a CPCN is required for this Line #565 work as described herein, the Company requests that the Commission grant such CPCN as part of its final order in this proceeding.

[7] *See supra*, n. 4; *see also* Section I.F.

The Line #588 Rebuild, the proposed Fentress-Yadkin Line #5005, and the substation-related work at the Fentress and Yadkin Substations are collectively referred to as the "Project."

The proposed Project is needed for two primary reasons, which will allow the Company to maintain the overall long-term reliability of the transmission system for its customers.

The first is to replace an existing aging transmission line (*i.e.*, Fentress-Yadkin Line #588), which is approaching the end of its service life, with a newly rebuilt line. The Company regularly replaces infrastructure approaching the end of its service life to maintain the reliability of the transmission system and to comply with the requirements and standards set by NERC. While energy generated by the CVOW project will utilize rebuilt Line #588, this portion of the Project serves the critical and independent purpose of maintaining the reliability of the regional transmission system in the Virginia Beach and Chesapeake areas, among others.

The second is to provide additional transmission infrastructure recently determined to be necessary to remove one of the most limiting system constraints to the CVOW project's deliverability. The Company and PJM, which, as the regional transmission organization ("RTO"), operates the regional transmission system and ensures compliance with NERC system reliability criteria, continue to evaluate the impact of generators seeking interconnection on the regional transmission system, like the CVOW project. Importantly, the evaluation of generators seeking to interconnect to the grid is done in concert with other projects, and, as such, identified network upgrades benefit all such generators, as well as the other users of a reliable grid. PJM's Phase I Study Reports—which are solely load flow results for the generation queue projects included in Transition Cycle #1—were made public on May 20, 2024. PJM's Phase II Study Reports—which will include the results of stability, short circuit and updated load flow analysis—are scheduled to be publicly released in December 2024. Phase III Study Reports—which are updated Phase II Study Reports and provide the final cost estimates for projects—are scheduled to be publicly released in June 2025. Regarding the proposed Project in particular, the Company is proposing to build new Line #5005 to reliably connect the CVOW project to the transmission system.

The total length of the existing right-of-way, which is currently maintained at 150 feet in width,[8] and Company-owned property to be used for the Project, as proposed, is approximately 13.5 miles (the "Proposed Route"). Because the existing right-of-way and Company-owned property are adequate for the proposed Project, no new right-of-way is required. Given the availability of existing right-of-way and the statutory preference given to the use of existing right-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 the Project. Instead, the Company presents the Proposed Route for the Commission's consideration and notice.

[8] *See supra*, n. 4; *see also* Section I.F. While the approximately 1.6-mile Constraint Design Segment would utilize an additional 85 feet of existing unmaintained right-of-way (235 feet total) in order to install a limited structure design segment option, as defined and discussed in Section I.F, it is important to note that the existing right-of-way in that 1.6-mile segment (235 feet) is adequate.

The total estimated conceptual cost of the proposed Project is approximately $202.2 million, which includes approximately $167.9 million for transmission-related work and approximately $34.3 million for substation-related work (2024 dollars).[9]

The desired in-service target date for the proposed Project is January 1, 2027. The Company estimates it will take approximately 22 months for detailed engineering, materials procurement, permitting, real estate, and construction after a final order from the Commission. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by March 1, 2025. Should the Commission issue a final order by March 1, 2025, the Company estimates that construction should begin in March 2025 and be completed by January 2027. This schedule is contingent upon obtaining the necessary permits and outages, the latter of which may be particularly challenging due to the amount of new load growth, rebuilds, and new builds scheduled to occur in this load area. Dates may need to be adjusted based on permitting delays or design modifications to comply with additional agency requirements identified during the permitting application process, as well as the ability to schedule outages, and unpredictable delays due to labor shortages or materials/supply issues. This schedule also is contingent upon the Company's ability to negotiate land rights.

In addition, the Company is actively monitoring regulatory changes and requirements associated with the Northern long-eared bat ("NLEB") and how they could potentially impact construction timing associated with time of year restrictions ("TOYRs"). The U.S. Fish and Wildlife Service ("USFWS") previously indicated that it planned to issue final NLEB guidance to replace the interim guidance by April 1, 2024; however, the interim guidance has been extended by USFWS until late summer 2024. The Company actively is tracking updates from the USFWS with respect to the final guidance. Once issued, the Company plans to review and follow the final guidance to the extent it applies to the Company's projects. Until the final guidance is issued, the Company will continue following the interim guidance. For projects that may require additional coordination, the Company will coordinate with the USFWS. The Company is also monitoring potential regulatory changes associated with the potential up-listing of the Tricolored bat ("TCB"). On September 14, 2022, the USFWS published the proposed rule to the Federal Register to list the TCB as endangered under the Endangered Species Act ("ESA"). USFWS recently extended its Final Rule issuance target from September 2023 to September 2024. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on Company projects' permitting, construction, and in-service dates, including electric transmission projects.

In conformance with recent submittals and for purposes of judicial economy, the Company requests that the Commission issue a final order approving both the in-service date of January 1, 2027, and CPCN sunset date of January 1, 2028, for the Project.

[9] The total Project costs include estimated conceptual costs for the work associated with Line #565 (*see supra*, n. 6).

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 Project to optimize the existing 13.5-mile transmission corridor is necessary to address the condition of Line #588, which is approaching its end of life, and to help resolve identified NERC Reliability Standard contingency conditions related to CVOW integrating with the transmission system with the addition of new Line #5005, thereby allowing the Company to maintain the structural integrity and reliability of the transmission system. See Attachment I.A.1 for an overview map of the overall Project area.

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, 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 "DOM Zone"). The Company needs to be able to maintain the overall, long-term reliability of its transmission system to meet its customers' evolving power needs in the future.

Dominion Energy Virginia is part of the PJM RTO, which provides service to a large portion of the eastern United States. PJM is currently responsible for ensuring the reliability 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 2, 2006, set a record high of 165,563 MW for summer peak demand, of which Dominion Energy Virginia's load portion was approximately 19,256 MW. On July 28, 2023, the Company set a record high of 21,993 MW for summer peak demand. On December 24, 2022, the Company set a winter and all-time record demand of 22,189 MW. Based on the 2024 PJM Load Forecast, the DOM Zone is expected to grow with average growth rates of 5.6% summer and 5.1% winter over the next 10 years compared to the PJM average of 1.7% and 2.0% over the same period for the summer and winter, respectively.[10]

Dominion Energy Virginia is also part of the Eastern Interconnection transmission grid, meaning its transmission system is interconnected, directly or indirectly, with

[10] A copy of the 2024 PJM Load Report is available at the following: https://www.pjm.com/-/media/library/reports-notices/load-forecast/2024-load-report.ashx. *See, in particular,* page 3 (PJM) and 28, 35, 39 (DOM Zone).

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 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 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.[11]

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 must follow these NERC Reliability Standards and imposes fines on utilities found to be in noncompliance up to $1.3 million a 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.[12] 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.[13] 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, which is then presented for approval to 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, Reliability First, SERC Reliability Corporation, PJM, and TOs; (ii) network upgrades are new or upgraded facilities required primarily to eliminate reliability criteria violations caused by

[11] The Company's mandatory electric transmission planning criteria ("Planning Criteria") can be found in Attachment 1 of the Company's Facility Interconnection Requirements ("FIR") document (effective January 1, 2024pursuant to Facility Connection ("FAC") Standard FAC-001-3 (R1, R3), which is available online at https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/parallel-generation/facility-connection-requirements.pdf?la=en&rev=f280781e90cf47f69ea526c944c9c347&hash=82DD2567D0B033C47536134B8C4D5C5E.

[12] PJM Manual 14B (effective December 20, 2023) focuses on the RTEP process and can be found at https://www.pjm.com/-/media/documents/manuals/m14b.ashx.

[13] *See* PJM Manual 14B, Attachment D: PJM Reliability Planning Criteria. *See supra*, n. 12 for a link to PJM Manual 14B.

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.

The Line #588 Rebuild is an end-of-life rebuild project that is classified as a PJM baseline project. See Section I.J. Proposed Line #5005 is a network upgrade project that will help integrate the CVOW project with the existing transmission system. A discussion of the need driving the Line #588 Rebuild and proposed Line #5005 is as follows.

NEED FOR THE PROJECT

As outlined in additional detail below, the Project is needed for two primary reasons. The first is to replace an existing aging transmission line, which is approaching the end of its service life, with a newly rebuilt line. The Company regularly replaces infrastructure approaching the end of its service life to maintain the reliability of the transmission system and to comply with the requirements and standards set by NERC. While energy generated by the CVOW project will utilize rebuilt Line #588, this portion of the Project serves the critical and independent purpose of maintaining the reliability of the regional transmission system in the Virginia Beach and Chesapeake areas, among others.

The second is to provide additional transmission infrastructure recently determined to be necessary to remove one of the most limiting system constraints to the CVOW project's deliverability. The Company and PJM, which, as the RTO, operates the regional transmission system and ensures compliance with NERC system reliability criteria, continue to evaluate the impact of generators seeking interconnection on the regional transmission system, like the CVOW project. Importantly, the evaluation of generators seeking to interconnect to the grid is done in concert with other projects, and, as such, identified network upgrades benefit all such generators, as well as the other users of a reliable grid. PJM's Phase I Study Reports—which are solely load flow results for the generation queue projects included in Transition Cycle #1—were made public on May 20, 2024. PJM's Phase II Study Reports—which will include the results of stability and short circuit analysis and updated load flow analysis—are scheduled to be publicly released in December 2024. Phase III Study Reports—which are updated Phase II Study Reports and provide the final cost estimates for projects—are scheduled to be publicly released in June 2025. Regarding the proposed Project in particular, the Company is proposing to build new Line #5005 to reliably connect the CVOW project to the transmission system.

Line #588 Rebuild

The Company has developed a proactive plan to rebuild transmission lines that are comprised of weathering steel (COR-TEN®) towers. The proposed Line #588 Rebuild is necessary to address the condition of Line #588, which is approaching its end of service life, by rebuilding approximately 13.5 miles of existing infrastructure, in compliance with the Company's mandatory Planning Criteria, thereby enabling the Company to maintain the overall long-term reliability of its transmission system.

Specifically, the approximately 13.5-mile Line #588 has been identified for rebuild. Line #588 was constructed in 1975—meaning its structures are currently 49 years old and approaching their expected life span—primarily on COR-TEN® steel lattice towers. These COR-TEN® towers have been identified for rebuild based on the Company's assessment in accordance with the Company's mandatory Planning Criteria, thereby enabling the Company to maintain the overall long-term reliability of its transmission system. The Company hired a third-party company, Quanta Technology, LLC ("Quanta"), to evaluate the condition of its COR-TEN® towers, including those supporting Line #588. In its November 1, 2016 report entitled "230kV & 500kV COR-TEN Lines Review" (the "2016 Quanta Report"), Quanta confirmed the need to rebuild the Line #588 COR-TEN® towers.

Section C.2.9 of the Planning Criteria addresses electric transmission infrastructure approaching its end of life:[14]

> 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*

[14] *See supra*, n. 11.

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

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

In regard to the first metric of the Company's Planning Criteria addressing end of life, the structures on Line #588 are primarily COR-TEN® steel lattice towers that were erected in 1975, as noted above. COR-TEN® steel is now known to be problematic when used for lattice-type structures. Utility companies have been monitoring the material since the 1970s, and the problems are well documented. As noted in the 2016 Quanta's Report, the weathering steel lattice towers supporting Line #588 have design features that enable significant deterioration in the connections of these towers.

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

PJM presented at its April 30, 2024 TEAC Meeting (First Read) based on Metric #1 (Facility is already nearing, or has already passed, its useful life) that, if Line #588 were removed from service and not replaced with a rebuilt 500 kV line, it would negatively impact the operation of the transmission system since a third-party assessment had determined the towers were at the end of their useful life and therefore subject to failure. Accordingly, PJM determined there was a need for the baseline project and did not require any additional reliability studies in support of the need for the proposed Line #588 Rebuild. See Attachment I.J.1. The Second Read was presented at the June 4, 2024 TEAC Meeting. See Attachment I.J.2.

Proposed Line #5005

The Company anticipates that PJM's Interconnection Process[15] will identify network upgrades required for the CVOW project and other generation queue projects.[16] As noted by the Company and Staff during the CVOW Proceeding, the identification of network upgrades necessary to reliably interconnect a proposed generation facility like the CVOW project is not unique.[17] Generally, PJM's Interconnection Process identifies three basic components for a generator to successfully interconnect with the transmission system,[18] as described below:

[15] Customers are dependent on the development of generation resources, transmission facilities, and distribution facilities to satisfy their electrical needs. Therefore, it is important that proposed generation facilities be interconnected with the transmission system in accordance with NERC Reliability Criteria, in a manner that promotes overall system reliability. The Company is a member of the PJM RTO and as such, any generator (including Dominion Generation) wishing to construct a new generation facility, or modify an existing generation facility interconnected to the transmission system, must file an interconnection request as part of the PJM generation queue process pursuant to the terms and conditions of PJM's FERC-approved Open Access Transmission Tariff ("OATT"), which can be found at https://www.dominionenergy.com/our-company/moving-energy/electric-transmission-access. Part IV (Sections 212 and 212.6) of the PJM OATT requires that an ISA and ICSA be executed among the interconnection customer, the Company (as the TO), and the RTO (as the Transmission Provider) before the customer can interconnect and energize its generation facilities. The ISA and ICSA generally provide that any actions taken by the TO must comply with its obligations, responsibilities and representations set forth in those agreements, including a duty of the TO to use "reasonable efforts" in good faith to achieve the objectives of the agreements (*i.e.*, getting the generator interconnected with the transmission system subject to PJM's required conditions and actions). *See supra*, n. 2.

[16] *See supra*, n. 1. As noted in the CVOW Proceeding, the proposed transmission facilities included network upgrades identified based on the PJM Interconnection Analysis completed in September 2020, when the System Impact Study Reports were issued for AF1-123, AF1-124, and AF1-125, meaning that those upgrades were considered initial and subject to change. *See, e.g.*, CVOW Proceeding at Ex. 2, Generation Appendix (Vol. 2) at 161-163; Ex. 20, Curtis Direct (Vol. 3) at 5-6; Ex. 2, Transmission Appendix (Vol. 3) at 2-3.

[17] *See* CVOW Proceeding at Ex. 2, Generation Appendix (Vol. 2) at 161-163; at Ex. 57, Nedwick Rebuttal at 2-3; *see also* Ex. 45, Staff Report (Vol. 3, Joshipura) at 7-8.

[18] Terminology as defined by PJM in its Phase I Study Results. *See, e.g.*, https://www.pjm.com/pub/planning/project-queues/TC1/PHASE_1/AF1-123/AF1-123_imp_PHASE_1.htm#general.

Transmission Owner Interconnection Facilities: Facilities that are owned, controlled, operated and maintained by the Transmission Owner on the Transmission Owner's side of the point of change of ownership to the point of interconnection, including any modifications, additions or upgrades made to such facilities and equipment, that are necessary to physically and electrically interconnect the generating facility with the transmission system or interconnected distribution facilities.

Stand Alone Network Upgrades: Network Upgrades, which are not part of an affected system, which a Project Developer may construct without affecting day-to-day operations *(e.g.*, taking a transmission outage) of the transmission system during their construction.

Network Upgrades: Modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider's overall transmission system for the general benefit of all users of such transmission system. Network Upgrades have no impact or potential impact on the transmission system until the final tie-in is complete.

A complete description of the PJM Interconnection Process can be found in PJM Manuals 14A and 14H.[19] Specifically, Manual 14A describes the new services request process, and Manual 14H describes the various components and study process for PJM's New Cluster Study Process. The CVOW project is being studied under PJM's New Cluster Study Process and is included in the Transition Cycle #1 Study Process. In general, proposed generators are evaluated for compliance with NERC P0, P1, P2, P4, P5 and P7 contingencies conditions.[20] The outcome of the Interconnection Process is to ensure that the requested capacity component of the generation project can be delivered reliably to the transmission system under normal operational conditions, such that for the NERC Contingency Conditions

[19] Part VI of the OATT (*see supra*, n. 15) contains the PJM procedures, terms, and conditions governing administration of the New Services Queue, System Impact Studies and Facilities Studies of Interconnection Requests, as well as the agreements related to such studies and Interconnection Service (*i.e.*, ISAs and ICSAs). During the Phase I System Impact Study analysis, PJM studies new customer interconnect requests on a summer peak, winter peak, and light load RTEP base case. PJM also performs load flow analysis during Phase I. The Phase I Study Results of the CVOW project (AF1-123, AF1-124, and AF1-125) were made publicly available on May 20, 2024. *See* Section I.D. Once the Phase I Study is complete, Phase II System Impact Study begins. During the Phase II System Impact Study, PJM conducts any required voltage analyses and performs short circuit and stability analyses, as required, and retools load flow results from the Phase I Study based on decisions made by the generator. Because the proposed Line #5005 is required for stability reasons as discussed in Sections I.B and I.D, the Company fully expects that proposed Line #5005 will be identified as a network upgrade required by the CVOW project (AF1-123, AF1-124, and AF1-125) in PJM's Phase II Study Results, which the Company anticipates will be available in December 2024. *See* https://www.pjm.com/-/media/documents/manuals/m14a.ashx for PJM Manual 14A: New Services Request Process (effective July 26, 2023) and https://www.pjm.com/-/media/documents/manuals/archive/m14h/m14hv0-new-service-requests-cycle-process-07-26-2023.ashx for PJM Manual 14H: New Service Requests Cycle Process (effective July 26, 2023).

[20] See the Generator Deliverability Section of PJM Manual 14B, the link to which is provided in n. 12, *supra*.

described above, the generator will remain synchronized with the transmission system and there will be no thermal or voltage violations.

As to the proposed Fentress-Yadkin Line #5005, this new 500 kV line is needed to help integrate the CVOW project reliably with the transmission system. Mitsubishi Electric Power Products, Inc. ("MEPPI")), a third party company with experience in studying offshore wind projects, was hired to support Dominion Electric Transmission's evaluation of the two offshore wind projects in the PJM Generation Queue that are seeking to interconnect to the transmission system in the Virginia Beach vicinity—namely, Avangrid's Kitty Hawk wind project and the Customer's CVOW project. Specifically, MEPPI's scope of work includes providing Owner's Engineering ("OE") support and performing Technical Due Diligence analytical work on behalf of Dominion Electric Transmission, to capture aspects of performance, coordination, and potential interaction beyond that which is presently captured through traditional facility studies. With the novelty, electrical vicinity, and scale of these offshore wind farms for the PJM system, MEPPI proposed these tasks in response to the request to support Dominion Electric Transmission's objective of evaluating the relative projects' impacts on the system to which they interconnect, focused on those aspects not captured in traditional facility studies.

MEPPI and the Company determined that proposed Line #5005 would likely be required by the PJM Interconnection Process to reliably interconnect the CVOW Project with the transmission system.[21]

If not relieved by new Line #5005 and any other upgrades identified in PJM's final interconnection study analysis, the projected reliability violations will severely impact the Company's ability to timely integrate the CVOW project with the transmission system, which will, in turn, restrict the CVOW project's ability to provide reliable capacity and associated energy for the benefit of the Company's customers. For this reason, the Customer has chosen to proceed with funding the construction of Line #5005 and ultimately will be responsible for the cost to construct Line #5005. The Interim ISA and ICSA associated with the CVOW project (AF1-123, 124 and 125) were modified by all parties in April 2024 to include the construction of Line #5005. These Interim Agreements were filed with FERC on May 3, 2024.

As noted above and by the Company during the CVOW Proceeding, it is not unique that network upgrades are required to ensure timely deliverability of the CVOW project.[22] Indeed, the scenario is common, and PJM has a process to address it, which, as the process and studies progress, may result in certain network upgrades

[21] *See, e.g.*, Section D. Transmission Planning, System Stability Criteria of Attachment 1 to the Company's FIR document, the link to which is provided in n. 11, *supra*; the PJM OATT, specifically Part VI Section 205.2.2.3 (Stability and Dynamic Criteria Violations), the link to which is provided in n. 15, *supra*; and PJM Manual 14B, Attachment G: PJM Stability, Short Circuit and Special RTEP Practices and Procedures, the link to which is provided in n. 12, *supra*.

[22] *See supra*, n. 17.

changing or no longer being needed, therefore necessitating updates to the costs and cost allocations for the identified network upgrades.[23] As such, it was not unexpected that MEPPI's study of the transmission facilities required to timely, reliably, and successfully integrate the CVOW project with the transmission system resulted in the identification of the need for Line #5005. Ultimately, the results from MEPPI's study will be incorporated into the results of the PJM Interconnection Analysis for the CVOW project and any identified requirements will become part of the mandatory network requirements to reliably integrate the CVOW project with the transmission system.

Existing and Future Transmission System – Fentress Substation

Attachment I.A.2 provides a one-line diagram of the Fentress Substation as proposed in the CVOW Proceeding. Attachment I.A.3 provides a one-line diagram of the Fentress Substation once the proposed Project is energized. See Attachment I.G.1 for an overview map of the existing transmission system, which also includes the proposed Project.

DESCRIPTION OF THE PROJECT

Line #588 Rebuild

As part of the Project, the Company proposes to rebuild the existing overhead single circuit 500 kV Fentress-Yadkin Line #588 to address the condition of Line #588, which is approaching its end of service life. Specifically, as proposed, the Company will rebuild the approximately 13.5-mile-long Line #588, which currently is supported primarily by single circuit 500 kV COR-TEN® lattice structures, with primarily single circuit 500 kV dulled galvanized steel monopole structures entirely within the existing right-of-way, which is currently maintained at 150 feet wide,[24] or on Company-owned property. Additionally, the Company proposes to replace the existing three-phase twin-bundled 2500 ACAR conductors with three-phase triple-bundled 1351.5 ACSR conductors with a summer transfer capability of 4,357 MVA for the entire 13.5 miles.

The Company plans to rebuild Line #588 in two phases.

For the first phase of construction, the Company plans to wreck and rebuild approximately 8.4 miles of Line #588 from Structure #588/186A—which is located one span outside of the Company's existing Yadkin Substation—to Structure #588/226. The Company anticipates that the first phase of construction will begin on March 1, 2025, and be completed by December 31, 2025. The Company is

[23] *See* CVOW Proceeding at Ex. 2, Generation Appendix (Vol. 2) at 161-163; Ex. 20, Curtis Direct (Vol. 3) at 7; Ex. 2, Transmission Appendix (Vol. 3) at 2-3; Ex. 57, Nedwick Rebuttal at 2-3; *see also* Ex. 45, Staff Report (Vol. 3, Joshipura) at 7-8.

[24] *See supra*, n. 4. *See also* Section I.F as to a Constraint Design Segment that would utilize the entire 235-foot-wide existing right-of-way for approximately 1.6 miles of the 13.5-mile right-of-way corridor, as defined and discussed therein.

planning to construct the proposed Line #5005 simultaneously with the first phase of the Line #588 Rebuild, from Structure #5005/2 to Structure #5005/43.

For the second phase of construction, the Company plans to wreck and rebuild approximately 5.1 miles of Line #588 from Structure #588/226 to Structure #588/254—which is located one span outside of the Fentress Substation. The Company anticipates that the second phase of construction will begin on March 1, 2026, and be completed by December 31, 2026. The Company is planning to construct the proposed Line #5005 simultaneously with the second phase of the Line #588 Rebuild, from Structure #5005/43 to Structure #5005/72.

The total length of the existing right-of-way, which is currently maintained at 150 feet in width,[25] and Company-owned property to be used for the Project, as proposed, is approximately 13.5 miles (*i.e.*, the Proposed Route). Because the existing right-of-way and Company-owned property are adequate for the proposed Project, no new right-of-way is required. Given the availability of existing right-of-way and the statutory preference given to the use of existing right-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 the Project. Instead, the Company presents the Proposed Route for the Commission's consideration and notice.

Proposed Line #5005

Also as part of the Project, the Company proposes to construct the new overhead single circuit 500 kV Fentress-Yadkin Line #5005 originating at the Company's existing Fentress Substation and continuing approximately 13.5 miles to terminate at the existing Yadkin Substation.[26] Specifically, as proposed, the new Line #5005 will be installed with the rebuilt Line #588 entirely within the existing right-of-way, which is currently maintained at 150 feet wide,[27] or on Company-owned property, supported primarily by single circuit 500 kV dulled galvanized steel monopole structures. Additionally, the proposed Line #5005 will utilize three-phase triple-bundled 1351.5 ACSR conductors with a summer transfer capability of 4,357 MVA.

The Company is planning to construct proposed Line #5005 simultaneously with the Line #588 Rebuild and along the same Proposed Route, as discussed above.

Substation-Related Work

The Company will perform substation-related work at the Company's existing

[25] *See supra*, n. 8.

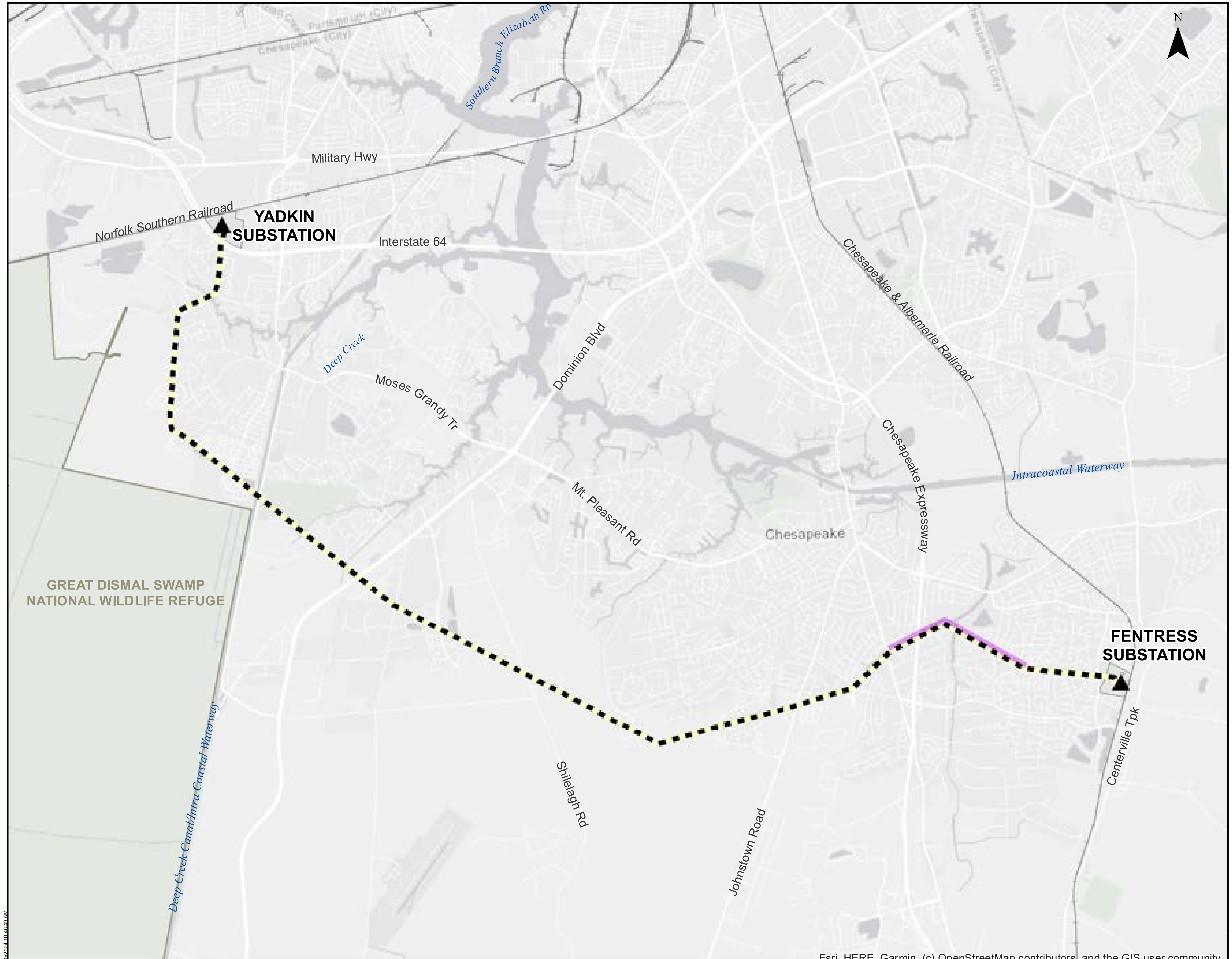
[26] *See supra*, n. 6.

[27] *See supra*, n. 4; *see also* Section I.F.

Fentress and Yadkin Substations as described in Section II.C.

***

In summary, the proposed Project will address the condition of Line #588, which is approaching its end of service life, by rebuilding existing infrastructure in accordance with mandatory Planning Criteria and will help allow the CVOW project to reliably and successfully integrate with the transmission system, thereby allowing the Company to maintain the overall long-term reliability of the transmission system for its customers.



ATTACHMENT I.A.1
PROJECT OVERVIEW MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

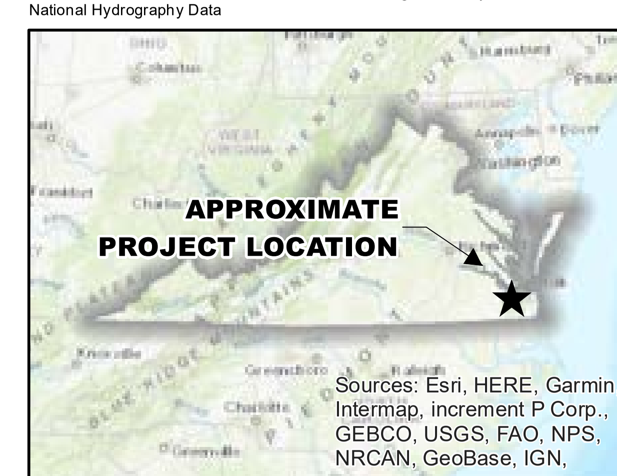
C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 0.5 1 2 Miles

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

- Existing Line #588 Right-of-Way
- Constraint Design Segment
- Existing Substation
- Dominion Owned Substation Parcel

Notes:
1. Basemap from ESRI World Topographic Map
2. Project Right-of-Way and centerline provided by Dominion Energy Virginia
3. Parcels, Roads and railroads from Virginia Geographic Information Network
4. Streams, rivers, and waterbodies from U.S. Geological Survey National Hydrography Data



C2 ENVIRONMENTAL

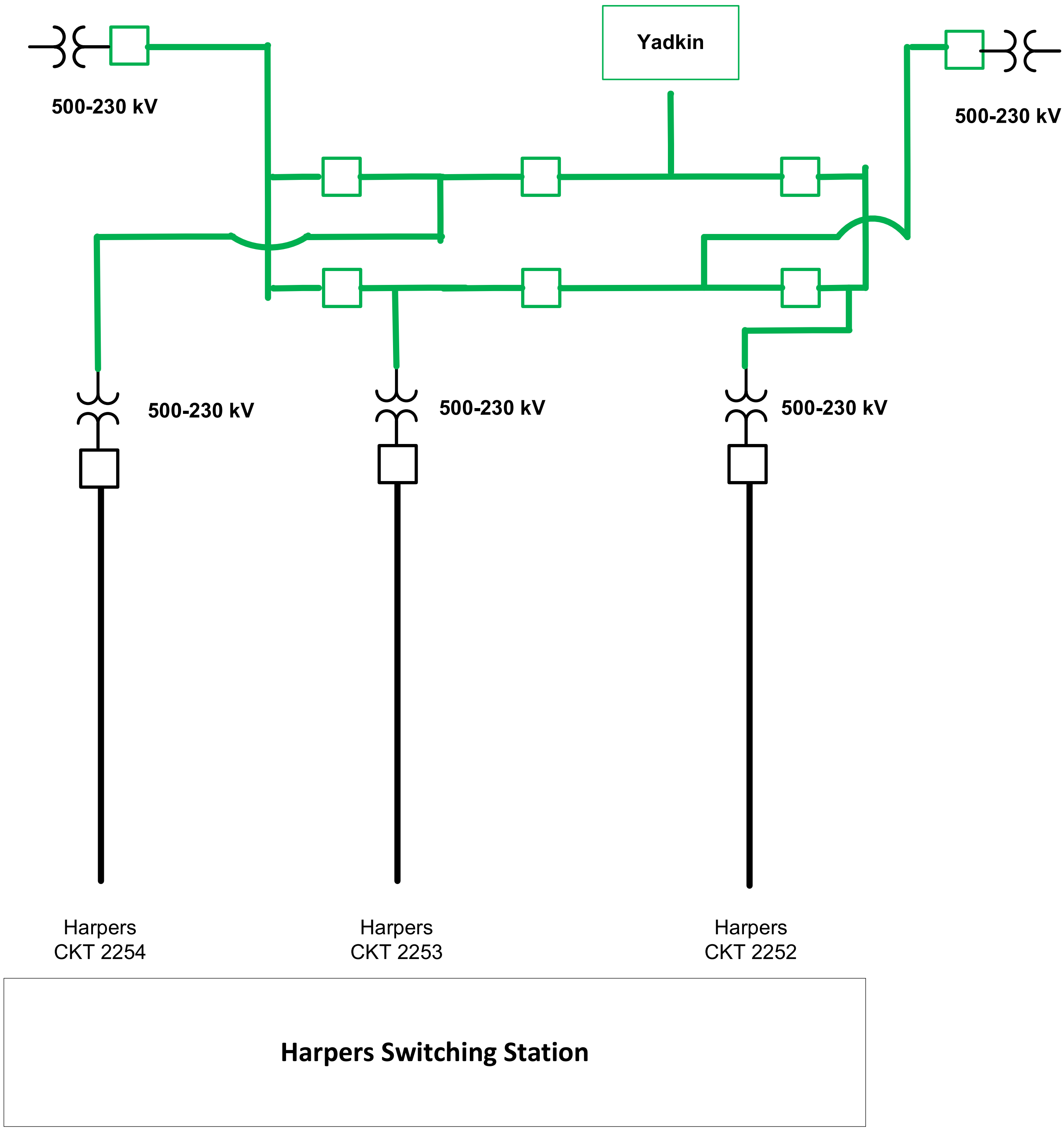
Dominion Energy

SHEET 1 OF 1

S:\Projects\0326 - TL588 Fentress-Yadkin 500 kV Rebuild\GIS_CADD\mxd\SCC\0326_Attachment_IA1_Overview_rev.mxd

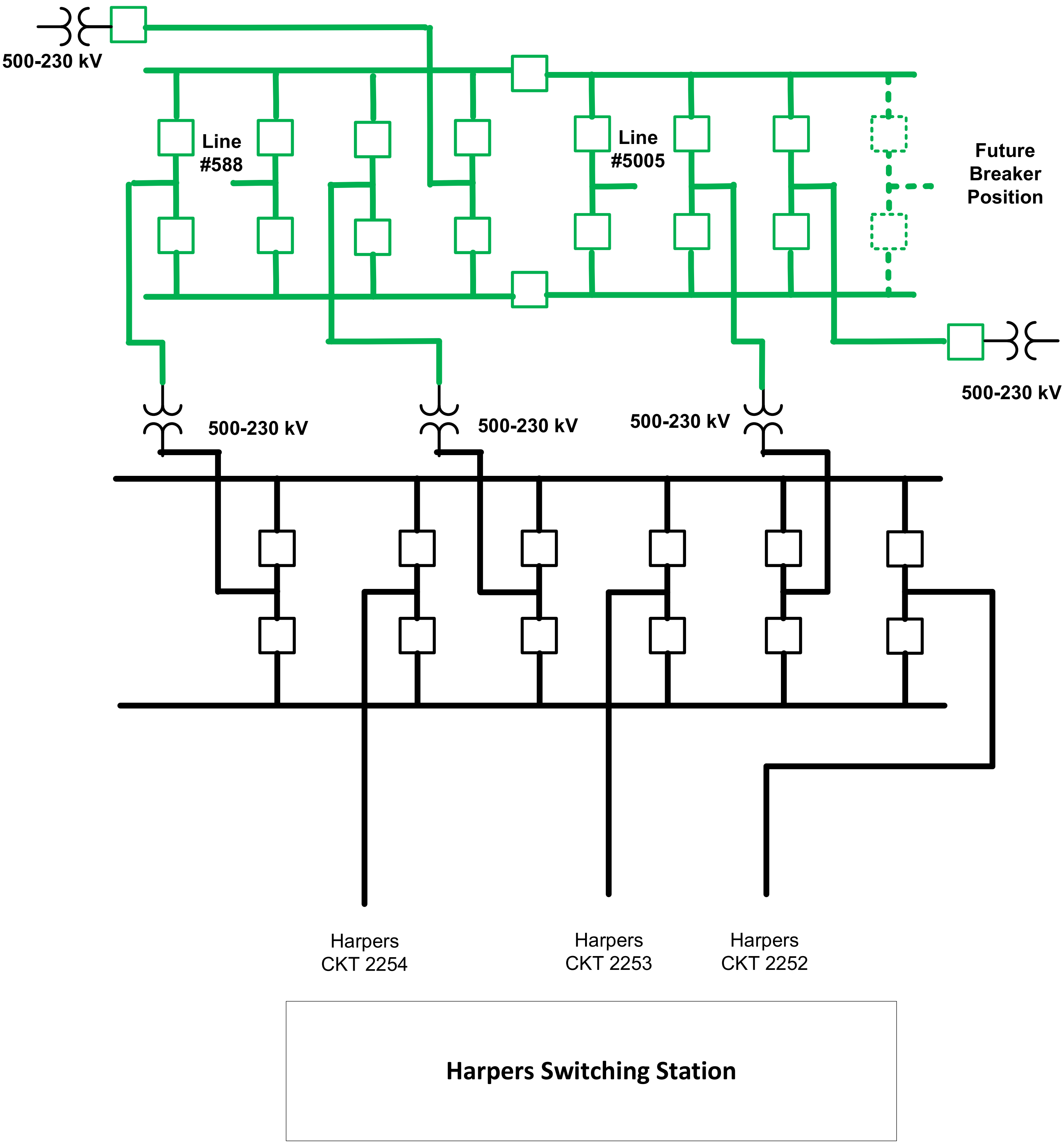
Attachment I.A.2

CVOW Project
Fentress Substation
(as originally proposed)



Attachment I.A.3

Proposed Project Arrangement
Fentress Substation



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] Engineering Justification for Project**

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.).

See Section I.A of the Appendix.

[2] Known Future Projects

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.

The Project is necessary to address the condition of Line #588 by rebuilding the existing infrastructure, which is approaching its end of life, as well as resolve potential violations of NERC Reliability Standards with the installation of proposed Line #5005, which will help allow the CVOW project to reliably and successfully integrate with the transmission system, as discussed in Section I.A. There are no other future projects that require the proposed Project to be constructed.

[3] Planning Studies

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.

As part of any RTEP cycle, PJM along with the member TOs run baseline reliability analysis to identify if any potential violations exist based on projected network topology and loading. A portion of Manual 14B Section 1.4.1.1 describes the process from a high level:

PJM Manual 14B – 1.4.1.1 Baseline reliability analyses

> The PJM Transmission System ("PJM System") provides the means for delivering the output of interconnected generators to the load centers in the PJM energy and capacity markets. Baseline reliability analyses ensure the security and adequacy of the Transmission System to serve all existing and projected long term firm transmission use including existing and projected native load growth as well as long term firm transmission service. RTEP baseline analyses include system voltage and thermal analysis, and stability, load deliverability, and generator deliverability testing. These tests variously entail single and multiple contingency testing for violations of established NERC reliability criteria regarding stability, thermal line loadings and voltage limits. [28]

Any thermal, voltage, or generation deliverability violations will require a baseline network upgrade. Typically, during the RTEP cycle, PJM is focused on a case that is five years out in time. The open window for this Project, which was based on the 2023 RTEP Open Window #2 (01-18-2024) and subsequently tested on the 2023 RTEP 2028 Summer Case, demonstrated that Line #588 is needed to maintain reliable service to the Company's customers.

Additionally, the results of PJM's Transition Cycle #1 Analysis Summer 2027 Light Load, Summer 2027 Light Load Energy, and Summer 2027 Peak Energy Analyses indicate that without Line #588 in service, the following are overloaded: Landstown-Pocaty Line #271, Fentress-Pocaty Line #2240, Fentress-Thrasher Line #2128, Thrasher-Yadkin Line #2105, Fentress 500-230 kV TX #1, Fentress 500-230 kV TX #2, and Elizabeth River-Yadkin Line #2070. See the AF1-123, AF1-124 and AF1-125 Phase I Study Results, which are available at the following:

- AF1-123: https://www.pjm.com/pub/planning/project-queues/TC1/PHASE_1/AF1-123/AF1-123_imp_PHASE_1.htm#general
- AF1-124: https://www.pjm.com/pub/planning/project-queues/TC1/PHASE_1/AF1-124/AF1-124_imp_PHASE_1.htm#
- AF1-125: https://www.pjm.com/pub/planning/project-queues/TC1/PHASE_1/AF1-125/AF1-125_imp_PHASE_1.htm#

[4] Facilities List

Provide a list of those facilities that are not yet in service.

The CVOW project is not yet in service.

[28] *See supra*, n. 12.

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 transmission system in the area of the proposed Project. The existing Line #588 is part of the Company's 500 kV system, which supports the transfer of bulk power from generating resources to major load centers.

The tables in Attachment I.C.1 provide the historic summer and winter loads from 2014-2023 and the projected summer and winter peak loads from 2024-2034 for the DOM Zone.

Line #588 Rebuild

The existing Line #588 cannot continue to adequately serve the needs of the Company and its customers due to the condition of its aging infrastructure, as discussed in Section I.A. The Company has created a proactive plan to rebuild transmission lines that are comprised of weathering steel (COR-TEN®) towers, 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 in-service date for the proposed Project (January 1, 2027) also supports the conclusions reflected in the 2016 Quanta Report balanced against the timeline for permitting, construction, and obtaining necessary outages.

Completing the proposed Line #588 Rebuild will support Dominion Energy Virginia's ability to continue to provide reliable electric service to retail and wholesale customers and will support the future overall growth and system generation capability in the area. See Section I.A.

Proposed Line #5005

The proposed Fentress-Yadkin Line #5005 is needed to help allow for the successful delivery of energy from the CVOW project to the larger grid in a manner that ensures the reliability of the regional transmission system. Line #5005, however, is not solely to serve the CVOW project—it is a networked transmission line that can be tapped, thus once in-service, all existing and future customers benefit from Line #5005 being placed in-service.

Historical Load (MW)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Dominion Zone - Summer	**18,692**	**18,980**	**19,538**	**18,902**	**18,924**	**19,607**	**20,087**	**20,409**	**21,156**	**21,993**
Growth (%)	(0.38%)	1.54%	2.94%	(3.25%)	0.1%	3.6%	2.4%	1.6%	3.6%	3.9%
Date	7/02/2014	6/23/2015	7/25/2016	7/14/2017	08/29/2018	07/20/2019	07/20/2020	08/12/2021	08/09/2022	07/28/2023
Dominion Zone - Winter	**19,785**	**21,651**	**18,948**	**19,661**	**21,232**	**19,930**	**17,544**	**17,867**	**22,189**	**19,531**
Growth (%)	12.27%	9.43%	(12.48)%	3.76%	8.0%	(6.1%)	(12.0%)	1.8%	24.1%	(12.0%)
Date	1/30/2014	2/20/2015	1/19/2016	1/9/2017	1/7/2018	1/31/2019	1/21/2020	129/2021	12/24/2022	2/4/2023

Projected Load (MW)*

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Dominion Zone - Summer	**22,781**	**23,691**	**25,627**	**27,487**	**29,800**	**31,776**	**33,472**	**34,911**	**36,288**	**37,673**	**39,019**
Growth (%)	--	4.0%	8.2%	7.3%	8.4%	6.6%	5.3%	4.3%	3.9%	3.8%	3.6%
Dominion Zone - Winter	**22,525**	**23,211**	**24,627**	**26,355**	**28,360**	**30,176**	**31,860**	**33,324**	**34,676**	**35,820**	**36,851**
Growth (%)	--	3.0%	6.1.%	7.0%	7.6%	6.4%	5.6%	4.6%	4.1%	3.3%	2.9%

* PJM 2024 Load Forecast (includes losses)

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: Line #588 Rebuild

Not applicable.

Proposed Line #5005

The table below provides a summary of MEPPI's worst-case stability limits for the CVOW project, as designed, and with the proposed Line #5005 in-service. The table also includes the current estimated incremental conceptual cost estimates. As discussed, earlier stability results will not be included into PJM's reports until the Phase II Study Reports are completed, which currently is estimated to be December 2024. The Customer has chosen to incorporate the currently known stability requirements into its Interim ISA/ICSA with PJM and Dominion Electric Transmission and assume 100% cost responsibility for those requirements. In these agreements, PJM has assigned the proposed Line #5005 with the following Network Upgrade Numbers:

1. PJM Network Upgrade #n8492: Construct one overhead 500 kV transmission line that will start at the existing Fentress Substation and terminate at the existing Yadkin Substation.
2. PJM Network Upgrade #n8492.1: Add one new 500 kV breaker position and associated equipment at the Fentress 500 kV Substation to terminate the new Fentress-Yadkin 500 kV line (n8492).
3. PJM Network Upgrade #n8492.2: Add one new 500 kV breaker position and associated equipment at the Yadkin Substation and relocate existing Suffolk-Yadkin Line #565[29] as necessary to accommodate the construction of new Fentress-Yadkin 500 kV Line (n8492).

The Customer has chosen to do this to reliably connect the CVOW project to the transmission system.

[29] *See supra*, n. 6.

Option	CVOW Project (as designed)	Proposed Line #5005
Critical Contingency	NERC P4 outage of Line #588 & Fentress 500-230 kV Tx#3 or an outage of Line #588 & Fentress 500-230 kV Tx#4	NERC P1 (N-1) outage of Line #2253 or Line #2254 or Line #2255 or CVOW 500-230 kV TXs
Fentress Substation Cost Estimate (includes n8482.1)	$154.5 M	$288.5 M
Yadkin Substation Cost Estimate (n8492.2)	$0 M	$16.0 M
Line #5005 Cost Estimate (n8492)	$0 M	$82.8 M
Total Cost	$154.5 M	$387.3 M
Net Cost Increase	$0	$232.8 M

PJM's Phase I Study Results for AF1-123, AF1-124 and AF1-125 became publicly available on May 20, 2024. [30] See Section I.B for links to the results.

Note that PJM's Phase I Study Results only include PJM's load flow analysis results. As previously discussed, PJM's Phase II Study Results also will include stability, short circuit, and updated load flow results. The Company fully expects that proposed Line #5005 will be identified as a network upgrade in PJM's Phase II Study Results, which are anticipated to be publicly available in December 2024.

[30] PJM continues to refine the Network Cost Allocation Numbers; however, it is the Company's understanding that PJM is not planning to add them to the previously published Phase I Reports.

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: Line #588 Rebuild

No feasible electrical alternatives have been submitted to PJM since the driver of the Line #588 Rebuild is the need to replace aging infrastructure approaching the end of its service life in compliance with the Company's mandatory Planning Criteria. See Section I.A. Alternatives that would require acquisition of new right-of-way were not given serious consideration for this Project because the existing corridor is adequate to construct the proposed Line #588 Rebuild. PJM did not require the Company to consider alternatives that would require new right-of-way to be built.

Proposed Line #5005

No feasible electrical alternatives to Line #5005 were identified, as any alternative would require acquisition of new right-of-way and the existing corridor is adequate to construct the proposed Line #5005 with the rebuilt Line #588, as discussed in Section I.A.[31]

Analysis of Demand-Side Resources

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, 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 to rebuild Line #588 based on aging infrastructure that is at the end of its service life. Further, the Company has determined that proposed Line #5005 is necessary to maintain the overall long-term reliability of the transmission system by allowing the reliable and successful integration of the CVOW project, and to resolve potential violations of Dominion Energy Virginia's Planning Criteria.[32] Notwithstanding, when performing an analysis based on PJM's 50/50 load forecast, there is no adjustment in load for DR programs 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 capacity market is not a factor in this particular application because of the identified need for the

[31] *See supra*, n. 8.

[32] 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.

Project. Based on these considerations, the evaluation of the Project demonstrated that despite accounting for DSM consistent with PJM's methods, the Project is necessary.

Incremental DSM also will not eliminate the need for the Project. As noted previously, Line #588 is an end-of-life project and not dependent on future load growth, and proposed Line #5005 is necessary to reliably and successfully integrate the CVOW project with the transmission system.

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: Proposed Project

For construction of the Line #588 Rebuild and proposed Line #5005, the Company plans to remove all the existing single circuit 500 kV structures supporting Line #588 from Structure #588/186A to Structure #588/254, which are primarily weathering steel (COR-TEN®) lattice structures. As proposed in Section I.A, the Company plans to replace the removed structures with two side-by-side single circuit 500 kV structures, which primarily will be dulled galvanized steel monopole structures, in order to support the rebuilt Line #588 and proposed Line #5005 for approximately 13.5 miles entirely within the existing right-of-way, which is currently maintained at 150 feet wide,[33] or on Company-owned property.

Additionally, the Line #588 Rebuild includes replacing the existing three-phase twin-bundled 2500 ACAR conductors with three-phase triple-bundled 1351.5 ACSR conductors. The existing Line #588 2500 ACAR conductors have a normal/emergency transfer capability of 3,426 MVA. The proposed Line #588 1351.5 ACSR conductors have a normal/emergency transfer capability of 4,357 MVA.

Constraint Design Segment

The Company currently is coordinating with landowners along an approximately 1.6-mile segment of the existing Line #588 right-of-way corridor where there are easement constraints limiting the heights of the proposed Line #588 and Line #5005 structures to 150 feet. In the event the Company is unable to successfully remove these constraints, the Company has identified a limited structure design segment option solely for this approximately 1.6-mile segment of the existing transmission right-of-way corridor ("Constraint Design Segment"). Specifically, if necessary, the Company would replace the removed Line #588 structures within the approximately 1.6-mile Constraint Design Segment with two side-by-side single circuit 500 kV dulled galvanized steel monopoles in a delta configuration (*i.e.*, arms on both sides of the structures). The structures within the Constraint Design Segment that would be replaced with monopoles in a delta configuration are existing Structure #588/240 through existing Structure #588/249.[34] The same conductors as proposed for the Project would be utilized along this segment.

---

[33] *See supra*, n. 4.

[34] To be clear, the Constraint Design Segment begins mid-span between Structures #588/239 and #588/240 and then ends mid-span between Structures #588/249 and #588/250. However, only Structures #588/240-249 would be replaced with monopoles in a delta configuration under the Constraint Design Segment.

While a delta configuration would maintain the structures heights within the existing easement limitations along this approximately 1.6-mile segment, the Constraint Design Segment will require clearing and utilization of the entire 235-foot-width of the Company's existing right-of-way, which is currently maintained at 150 feet.[35] This would require approximately 8.8 acres of additional tree clearing compared to the proposed Project.

The Constraint Design Segment is in an area characterized by residential development. In order to accommodate the delta configured monopoles, the centerline of the Constraint Design Segment will shift within the existing 235-foot-wide right-of-way approximately 40 feet to the north, bringing proposed Line #588 closer to residences, compared to the Proposed Route, which uses the maintained 150-foot-wide right-of-way. This shift increases the number of dwellings within 500 feet of the centerline by 27, within 250 feet by 22, and within 100 feet by 5.

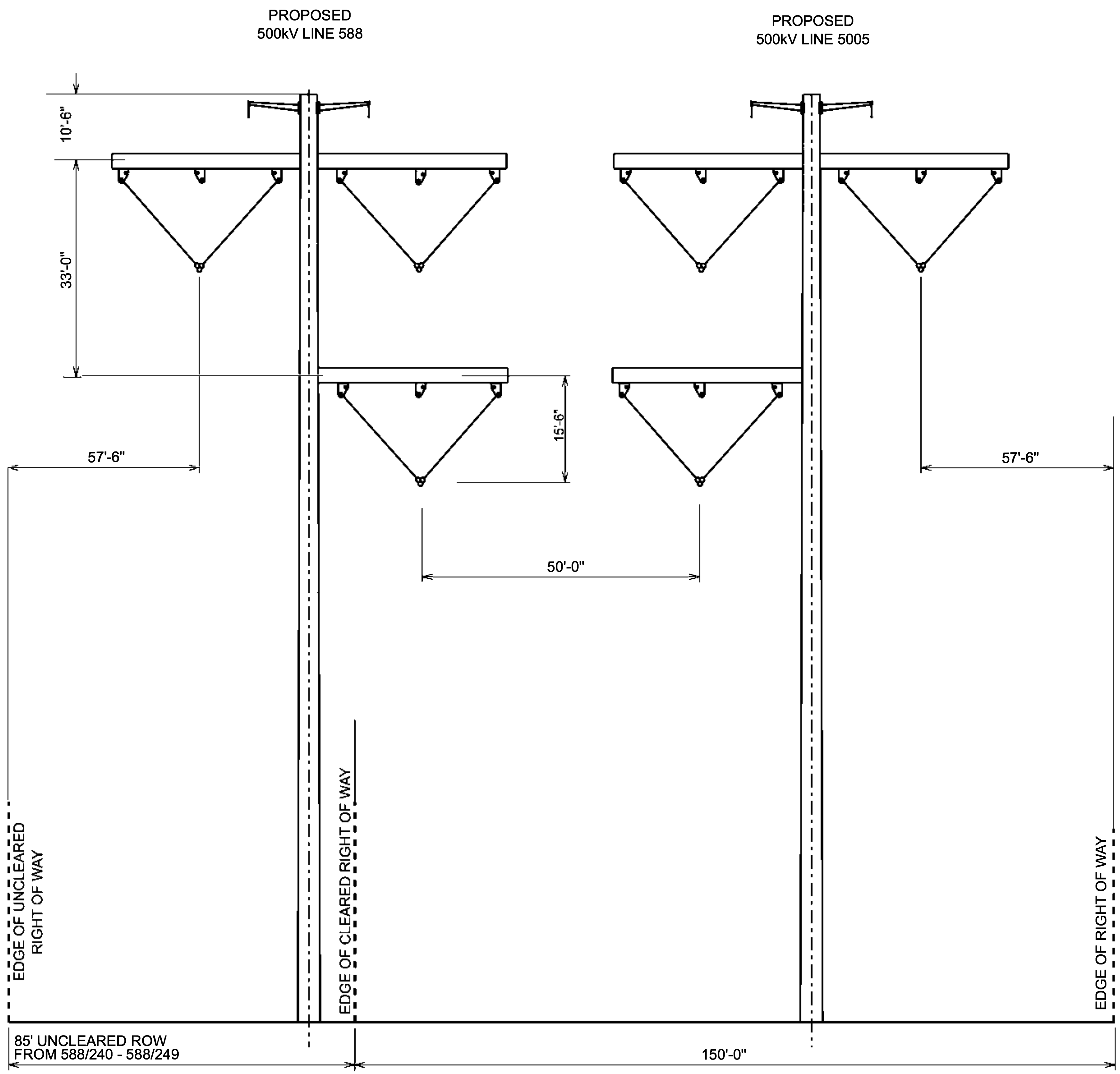
Due to the additional tree clearing and increased proximity to residences that will result from the Constraint Design Segment compared to the proposed Project along the same 1.6-mile segment, the Company supports the Project as proposed, and has identified this design option solely in the event the Company is unable to remove the easement constraints along this segment of the Company's existing right-of-way corridor. To the extent the Company is able to remove the constraints from all or a significant portion of this 1.6-mile segment, the Company will withdraw or submit a revised[36] Constraint Design Segment at the appropriate time.

See Attachment I.A.1 for a map depicting the location of the Constraint Design Segment; Attachment I.F.1 for a typical cross-section drawing of the Constraint Design Segment; Attachment I.F.2 and Attachment I.F.3 for the structures within the Constraint Design Segment; and Attachment I.F.4 and Attachment I.F.5 for representative photographs of the structures within the Constraint Design Segment. The Constraint Design Segment structures have a minimum height of 145 feet, a maximum height of 150 feet, and an average height of 147 feet, subject to final engineering design.

---

[35] As noted previously, for approximately 5.7 miles from the existing Fentress Substation to Structure #588/223, the existing Line #588 right-of-way is 235 feet wide, but is only cleared and maintained at 150 feet. The Constraint Design Segment, which is within the 5.7-mile segment of the Company's existing 235-foot-wide right-of-way, would require clearing of an additional 85 feet of the Company's existing right-of-way for construction, operation, and maintenance of the Constraint Design Segment. To be clear, the Project *as proposed* would not require clearing of the additional 85 feet of existing right-of-way. *See supra*, n. 4.

[36] For example, if constraints were removed from a contiguous 1.0-mile portion of the Constraint Design Segment, the Company would submit an updated map similar to Attachment I.A.1 that would identify the approximately 0.6-mile Constraint Design Segment.



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

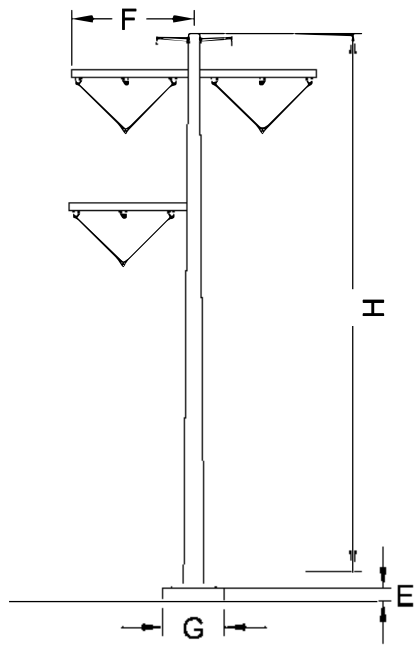
TYPICAL PROPOSED RIGHT OF WAY LOOKING TOWARDS FENTRESS SUBSTATION

Dominion Energy®

Dominion Energy
5000 Dominion Blvd
Glen Allen, VA 23060

	ORIGINAL	REVISION	DRAWING NO.
DRAWN	KEG		ATTACHMENT I.F.1
CHECKED	KJS		
APPROVED	CBA		
DATE	5/7/24		

$SYTIME$ $DGNSPEC$ TES11X17

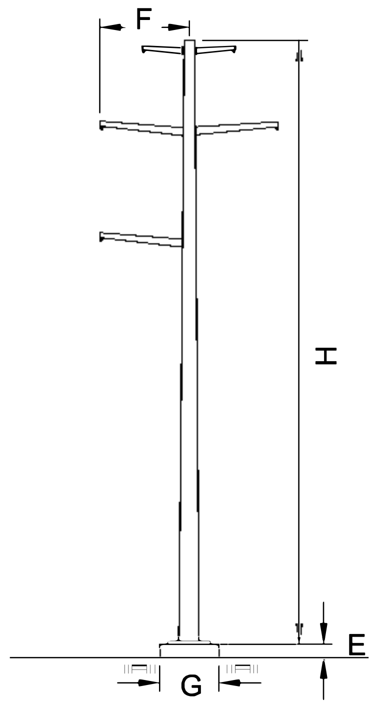


DOUBLE CIRCUIT SUSPENSION DELTA MONOPOLE STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE TO ACCOMMODATE LINE 588 AND 5005 (SEPARATE STRUCTURES) AT HEIGHTS CONSISTENT WITH EXISTING EASEMENT CONSTRAINTS.
C. LENGTH OF R/W (STRUCTURE QUANTITY):	1.61 MILES (10 STRUCTURES)
D. STRUCTURE MATERIAL:	DULLED GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	FINISH DETERMINED BY SOLICITING FEEDBACK FROM LAND OWNERS.
E. FOUNDATION MATERIAL:	VARIES - SEE NOTE 5
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
F. AVERAGE WIDTH AT CROSSARM:	38'-8"
G. AVERAGE WIDTH AT BASE:	8.5'
H. MINIMUM STRUCTURE HEIGHT:	145'
MAXIMUM STRUCTURE HEIGHT:	150'
AVERAGE STRUCTURE HEIGHT:	147'
I. AVERAGE SPAN LENGTH:	925'
J. MINIMUM CONDUCTOR-TO-GROUND:	30.9' (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
5. FOUNDATION DIAMETER AND TYPE SHALL BE BASED ON GEOTECHNICAL FINDINGS DURING FINAL ENGINEERING

Electric Transmission	STRUCTURES 5005/58-59, 5005/63-65, 588/241-242, 588/246-248	DRAWING NO. Attachment I.F.2
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN KJS



SINGLE CIRCUIT DOUBLE DEADEND MONOPOLE STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE TO ACCOMMODATE LINE 588 AND 5005 (SEPARATE STRUCTURES) AT HEIGHTS CONSISTENT WITH EXISTING EASEMENT CONSTRAINTS.
C. LENGTH OF R/W (STRUCTURE QUANTITY):	1.61 MILES (8 STRUCTURES)
D. STRUCTURE MATERIAL:	DULLED GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	FINISH DETERMINED BY SOLICITING FEEDBACK FROM LAND OWNERS.
E. FOUNDATION MATERIAL:	VARIES - SEE NOTE 5
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
F. AVERAGE WIDTH AT CROSSARM:	18'-0"
G. AVERAGE WIDTH AT BASE:	VARIES - SEE NOTE 5
H. MINIMUM STRUCTURE HEIGHT:	145'
MAXIMUM STRUCTURE HEIGHT:	145'
AVERAGE STRUCTURE HEIGHT:	145'
I. AVERAGE SPAN LENGTH:	945'
J. MINIMUM CONDUCTOR-TO-GROUND:	30.9' (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
5. FOUNDATION DIAMETER AND TYPE SHALL BE BASED ON GEOTECHNICAL FINDINGS DURING FINAL ENGINEERING

Electric Transmission	STRUCTURES 5005/57, 5005/60-62, 588/240, 588/243-245	DRAWING NO. Attachment I.F.3
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN KJS

Photograph provided by Dominion Energy

Dominion Energy®

Proposed Structure Type:
500 kV Single Circuit Galvanized Steel Suspension Pole
Design Constraint Segment, Delta Configuration
***each lower arm would be on the inside of the structure**

provided by Dominion Energy

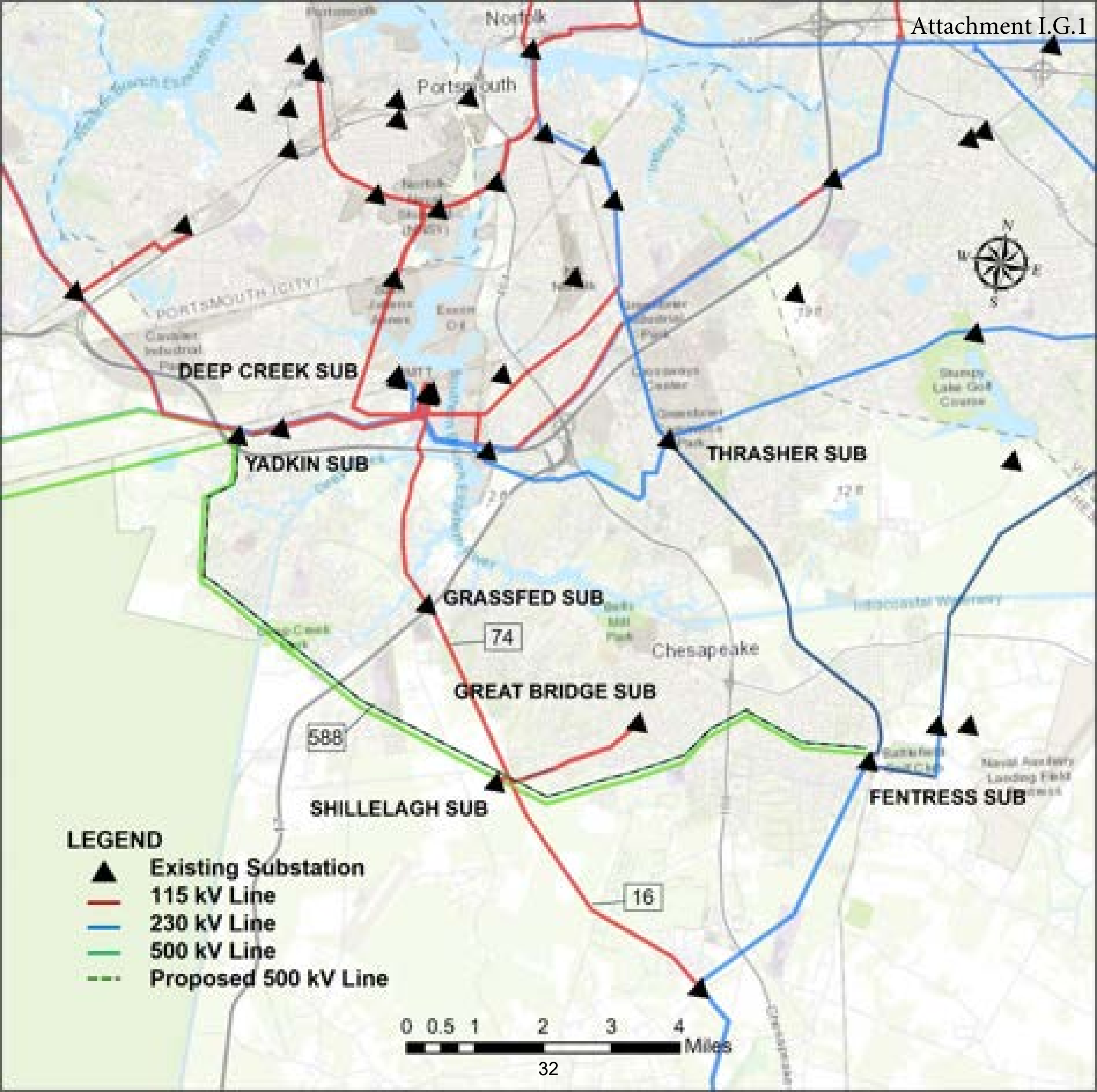
Dominion Energy

Proposed Structure Type:
500 kV Single Circuit Galvanized Steel Double Dead End Pole
Design Constraint Segment, Delta Configuration
***structure would have two arms on top and one on bottom**

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.



Norfolk
Portsmouth
PORTSMOUTH (CITY)
DEEP CREEK SUB
YADKIN SUB
THRASHER SUB
GRASSFED SUB
74
Chesapeake
GREAT BRIDGE SUB
588
SHILLELAGH SUB
FENTRESS SUB
16
Intracoastal Waterway
N
S
E
W
LEGEND
Existing Substation
115 kV Line
230 kV Line
500 kV Line
Proposed 500 kV Line
0 0.5 1 2 3 4
Miles

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 target date for the proposed Project is January 1, 2027.

The Company estimates it will take approximately 22 months for detailed engineering, materials procurement, permitting, real estate, and construction after a final order from the Commission. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by March 1, 2025. Should the Commission issue a final order by March 1, 2025, the Company estimates that construction should begin in March 2025 and be completed by January 2027. This schedule is contingent upon obtaining the necessary permits and outages, the latter of which may be particularly challenging due to the amount of new load growth, rebuilds, and new builds scheduled to occur in this load area. Dates may need to be adjusted based on permitting delays or design modifications to comply with additional agency requirements identified during the permitting application process, as well as the ability to schedule outages, and unpredictable delays due to labor shortages or materials/supply issues. This schedule also is contingent upon the Company's ability to negotiate land rights.

In addition, the Company is actively monitoring regulatory changes and requirements associated with the NLEB and how they could potentially impact construction timing associated with TOYRs. The USFWS previously indicated that it planned to issue final NLEB guidance to replace the interim guidance by April 1, 2024; the interim guidance has been extended by USFWS until late summer 2024. The Company actively is tracking updates from the USFWS with respect to the final guidance. Once issued, the Company plans to review and follow the final guidance to the extent it applies to the Company's projects. Until the final guidance is issued, the Company will continue following the interim guidance. For projects that may require additional coordination, the Company will coordinate with the USFWS.

The Company is also monitoring potential regulatory changes associated with the potential up-listing of the TCB. On September 14, 2022, the USFWS published the proposed rule to the Federal Register to list the TCB as endangered under the ESA. USFWS recently extended its Final Rule issuance target from September 2023 to September 2024. The Company is actively tracking this ruling and evaluating the effects of potential outcomes on Company projects' permitting, construction, and in-service dates, including electric transmission projects.

In conformance with recent submittals and for purposes of judicial economy, the Company requests that the Commission issue a final order approving both the in-service target date of January 1, 2027, and a CPCN sunset date of January 1, 2028, for the 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 proposed Project along the Proposed Route is approximately $202.2 million, which includes approximately $167.9 million for transmission-related work and approximately $34.3 million for substation-related work (2024 dollars).[37]

The following is a breakdown of transmission- and substation-related conceptual costs by Project component.

<u>Estimated Transmission-Related Conceptual Costs</u>:

- Line #588 Rebuild: $85.0 million
- Line #5005: $82.9 million

<u>Estimated Substation-Related Conceptual Costs</u>:

- Yadkin Substation: $17.2 million
    - Line #588 Rebuild: $1.2 million
    - Line #5005: $16.0 million
- Fentress Substation: $17.1 million
    - Line #588 Rebuild: $0.1 million
    - Line #5005: $17.0 million

[37] *See supra*, n. 9.

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: **Line #588 Rebuild**

The Line #588 Rebuild was presented to PJM (First Read) as part of the 2023 RTEP Open Window #2 Updates at the April 30, 2024 TEAC Meeting as a baseline reliability project. See Attachment I.J.1. The Second Read was presented at the June 4, 2024 TEAC Meeting. See Attachment I.J.2. PJM has assigned Baseline ID b3850 to the Line #588 Rebuild. The Line #588 Rebuild is presently allocated 100% to the DOM Zone. On August 3, 2018, however, the U.S. Court of Appeals for the District of Columbia held that FERC's approval of PJM's cost allocation method as applied to two other 500 kV rebuild projects, which are similar to the proposed Line #588 Rebuild, was arbitrary and capricious. Specifically, the decision set aside the two FERC orders that approved PJM's cost allocation method and remanded them to FERC for further proceedings. Since PJM's current cost allocation for the proposed Line #588 Rebuild was based on this now set aside allocation method, the Company would expect that the cost allocation for the proposed Line #588 Rebuild likely will change.

Proposed Line #5005

The Company anticipates that PJM will identify additional network upgrades required for the CVOW project, which will include the proposed Line #5005, to successfully integrate the CVOW project with the transmission system.

The Customer has requested that Dominion Electric Transmission begin the permitting, engineering and construction of the proposed Line #5005 under an Interim Agreement. By proceeding under the Interim ISA/ICSA, the Customer has agreed to accept 100% Cost Responsibility for the proposed Line #5005, regardless of potential cost allocation possibilities. PJM has assigned Network ID n8492 to Line #5005.

As noted in Section I.A, ultimately, the results from MEPPI's study will be incorporated into the results of the PJM Interconnection Analysis for the CVOW project and any identified requirements will become part of the mandatory network requirements to reliably integrate the CVOW project with the transmission system.

Reliability Analysis Update

Sami Abdulsalam, Director
PJM Transmission Planning

Transmission Expansion Advisory Committee
April 30, 2024

2023 RTEP Window 2 Updates

Baseline Reliability Projects

2023 RTEP Window 2 – Background

2023 Window 2 opened on March 6 and closed on April 5

Window to address the following needs:		
▪ AEP forecasted load growth in the Columbus, Ohio area.	▪ Thermal issues in PSEG around Hinchmans area	▪ 500kV line #588 Fentress -Yadkin End of Life (EOL) in Dominion

- 2022 Window 3 selected solutions are included in the base cases.

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PJM received 21 proposals from six entities (15 Upgrades and 6 Greenfield)

Three non-incumbents:		
AEP Footprint: 3 x proposing entities	PSEG Footprint: 2 x proposing entities	Dominion Footprint (EOL): No competing proposals
Proposal costs range from $0.449M to $229.3M		

Five proposals with cost containment

2023 RTEP Window 2 First Review

Baseline Reliability Projects

Dominion Transmission Zone: Baseline 500kV Line #588 Rebuild (End of Life Criteria)

Process Stage: First Review

Criteria: Dominion's FERC 715 Planning Criteria (C.2.9 – End of Life Criteria)

Assumption Reference: FERC 715 Planning Criteria

Model Used for Analysis: 2023 Series 2028 RTEP cases

Problem Statement:

- Line #588 is approximately 13.66 miles of 500kV single circuit transmission line from Yadkin to Fentress. It was built on series 5 Corten towers that have been problematic for many years and fallen into a pattern where Dominion can expect to return for future maintenance if the line is not rebuilt by the requested target date. These structures were installed in 1975 and are approaching the end of service life.
- Third party assessment has determined that the towers have corroded to a point where they exhibit pre-mature thinning of structure members and pack-out at joints. If left unaddressed these issues could result in failure of structures and potentially the collapse of the line. (DOM-O1)

Existing Facility Rating: 3397/3426 MVA Summer (Normal/Emergency)

3984/4018 MVA Winter (Normal/Emergency)

Proposed Facility Rating: 4357/4357 MVA Summer (Normal/Emergency)

5155/5155 MVA Winter (Normal/Emergency)

Continued on next slide....

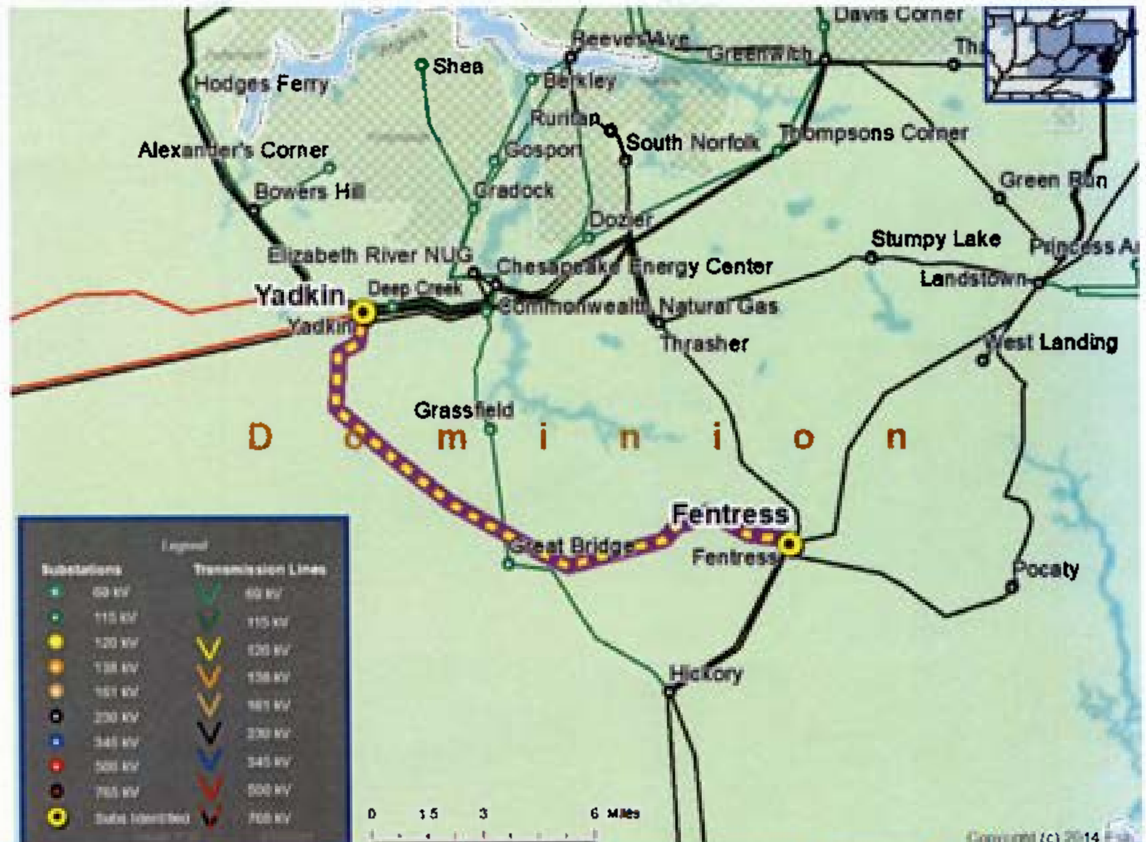
Dominion Transmission Zone: Baseline 500kV Line #588 Rebuild (End of Life Criteria)

Proposed Solution: Proposal 2023-W2-367:

- Rebuild approximately 13.51 miles of 500 kV line #588 from structure 588/184 inside Yadkin substation to structure 588/254 outside of Fentress substation.
- Line #588 terminal equipment at Yadkin substation will be upgraded to a rating of 5000A. Since the new 500kV line will be using fiber, the wave trap will be removed and the line protection scheme will be updated.
- At Fentress substation, since the new 500kV line will be using fiber, the wave trap will be removed and the line protection scheme will be updated.

Estimated Cost: $79.7 M

Required In-Service: 6/1/2028



Reliability Analysis Update

Sami Abdulsalam, Director
PJM Transmission Planning

Transmission Expansion Advisory Committee
June 4, 2024

2024 RTEP Window 1 Updates

Baseline Reliability Projects

Dominion Transmission Zone: Baseline 500kV Line #588 Rebuild (End of Life Criteria)

Process Stage: First Review

Criteria: Dominion's FERC 715 Planning Criteria (C.2.9 – End of Life Criteria)

Assumption Reference: FERC 715 Planning Criteria

Model Used for Analysis: 2023 Series 2028 RTEP cases

Problem Statement:

- Line #588 is approximately 13.66 miles of 500kV single circuit transmission line from Yadkin to Fentress. It was built on series 5 Corten towers that have been problematic for many years and fallen into a pattern where Dominion can expect to return for future maintenance if the line is not rebuilt by the requested target date. These structures were installed in 1975 and are approaching the end of service life.
- Third party assessment has determined that the towers have corroded to a point where they exhibit pre-mature thinning of structure members and pack-out at joints. If left unaddressed these issues could result in failure of structures and potentially the collapse of the line. (DOM-O1)

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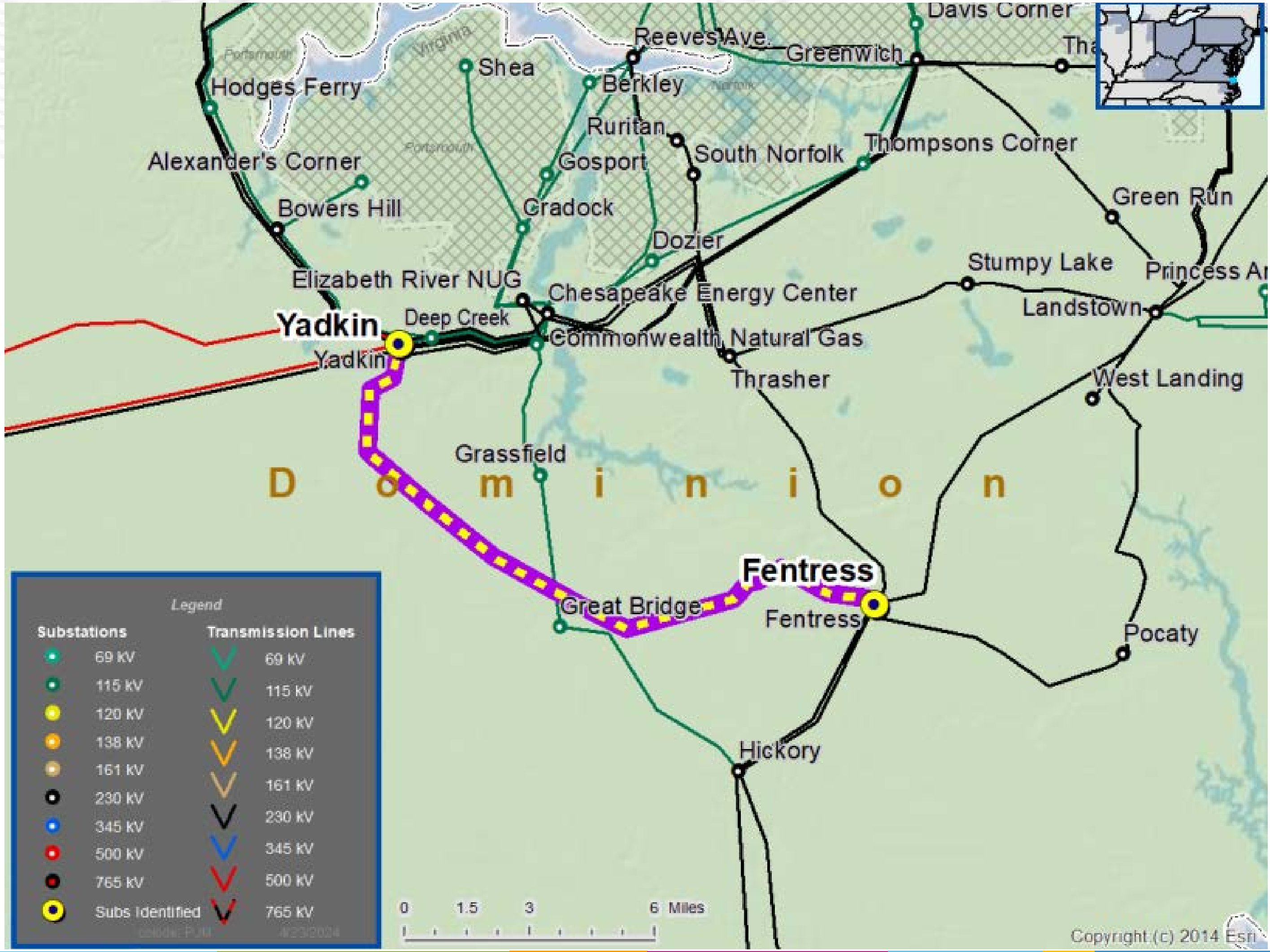
Existing Facility Rating: 3397/3426 MVA Summer (Normal/Emergency)

3984/4018 MVA Winter (Normal/Emergency)

Proposed Facility Rating: 4357/4357 MVA Summer (Normal/Emergency)

5155/5155 MVA Winter (Normal/Emergency)

Continued on next slide….



Dominion Transmission Zone: Baseline 500kV Line #588 Rebuild (End of Life Criteria)

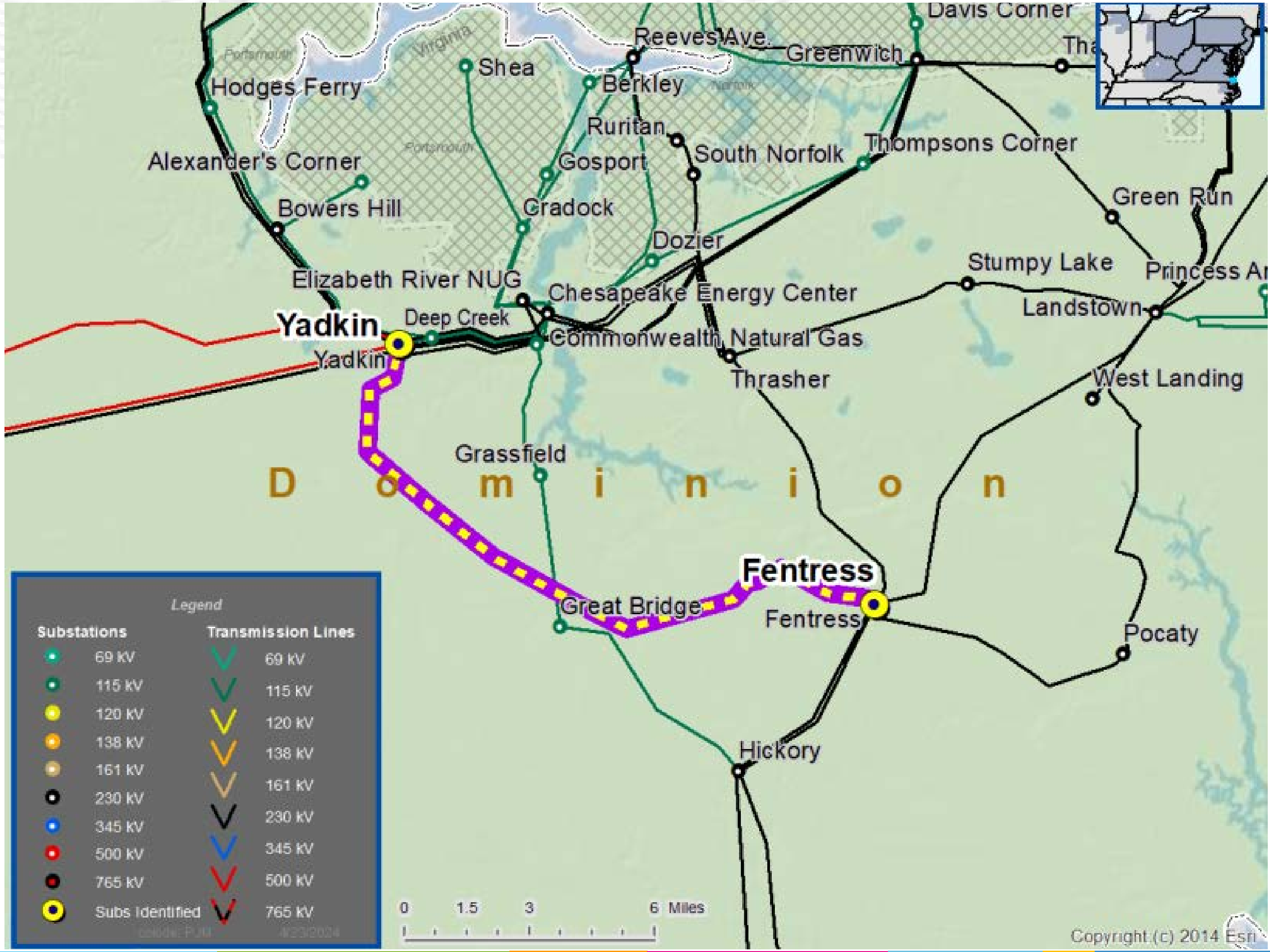
PJM Recommended Solution: Proposal 2023-W2-367:

- Rebuild approximately 13.51 miles of 500 kV line #588 from structure 588/184 inside Yadkin substation to structure 588/254 outside of Fentress substation. **(b3850.1)**
- Line #588 terminal equipment at Yadkin substation will be upgraded to a rating of 5000A. Since the new 500kV line will be using fiber, the wave trap will be removed and the line protection scheme will be updated. **(b3850.2)**
- At Fentress substation, since the new 500kV line will be using fiber, the wave trap will be removed and the line protection scheme will be updated. **(b3850.3)**

46

Estimated Cost: $79.7 M

Required In-Service: 6/1/2028



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: Not applicable. 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: The proposed Line #588 Rebuild will replace aging infrastructure that is approaching the end of its service life. See Attachment I.L.1 for an overview of the rebuild, representative pictures of the deterioration of structures supporting Line #588, and non-structural related outstanding notifications. See also Attachment I.L.2 for the Transmission Specification Book containing the COR-TEN® Tower Monitoring Program for Line #588 Yadkin to Fentress and Attachment I.L.3 for Weathering Steel Tower Inspection/Rehabilitation Data Sheets.

Fentress-Yadkin Line #588

TL588 Summary:

Located between Fentress and Yadkin Substations, Line #588 is at its end of service life. Originally constructed in 1975, TL588 was installed on weathering (COR-TEN®) steel lattice towers. Industry guidelines indicate TL588 towers are at its end of serviceable life. Rebuild project 993107 has been initiated to assure Dominion Energy Virginia can maintain and improve reliable electric service to customers served by TL588. The proposed Rebuild Project will remove aging infrastructure, which the Company has determined is no longer cost-effective to continue to repair and replace on an individual basis and replace it with current 500 kV construction standards.

EOL Project:

Currently, rebuild project 993107 is established and has a target completion date of January 1, 2027.

Right-of-ways:

Portions of Line #588 passes through densely populated residential areas and crosses three major roadways. Crossings include: VA State Route 168 (Chesapeake Expressway), Route 17 (George Washington Hwy), and Interstate 64 (Hampton Roads Beltway). Right-of-way width varies from 150 feet to 235 feet in various locations.

TL588
~195' ROW between Strs. 185-197
~150' ROW between Strs. 197-223
~235' ROW between Strs. 223-256

Operation History:

Line #588 has experienced 2-line operations in the past 15 yrs. One being avian disturbance and the other being a weather-related event.

Short Desc.	# Events	Long Desc.
Avian Disturbance	1	Bird Streamer/Bird Contact
Weather	1	1 Lightning

Summary of 15 yr. Operational History

TL588 Maintenance Activity:

Extensive rehab was conducted in 2021 under project 58408v71. Rehabbing COR-TEN® lines on a 12 year cycle. Currently there are a total of twelve (12) structure-related open notifications (approximately %17 of structures).

Severe Packout to Leg Members
(Strs. 186, 192, 193, 197, 198, 202, 203, 205, 207, 216, 217, 218, 220, 226)

Bent Members
(Strs. 196, 237)

Foundation Rehab
(Str. 195)

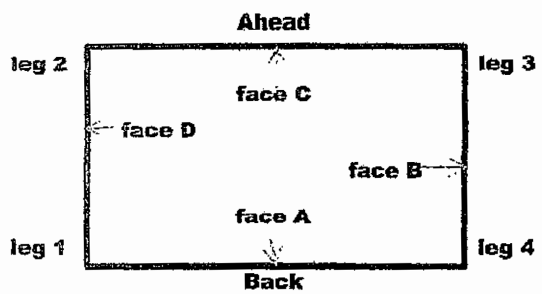
Corrosion and Member Thinning
(Strs. 197, 222, 227, 229, 237)

Non Structural Related Outstanding Notifications

OUTSTANDING NOTIFICATIONS - LINE 588			
LINE/STR	**CAUSE GROUP**	**CAUSE CODE**	**CAUSE TEXT**
588/185	Insulator Conductor	Cotter Key-BO=Backed Out, M=Mi	BO. 100 ft bucket
588/204	Insulator Conductor	Cond Insulator- Other=	Chipped on v string
588/205	Insulator Conductor	Cond Insulator- Other=	Chipped on v string
588/209	Insulator Conductor	Contaminated	Insulator contamination right
588/209	Insulator Conductor	Wire Position L,M,R,T,B	R
588/213	Insulator Static	Broken- L=Leave, R=Replace	Right static chip
588/213	Insulator Static	Wire Position L,M,R,T,B	R
588/229	Right of Way	Encroachment:	Trailer under structure
588/230	Insulator Conductor	Broken- L=Leave, R=Replace	Broken insulator center phase
588/230	Insulator Conductor	Wire Position L,M,R,T,B	M
588/232	Insulator Conductor	Broken- L=Leave, R=Replace	Chip left
588/232	Insulator Conductor	Wire Position L,M,R,T,B	L
588/244	Insulator Static	Flashed	Flash left static
588/244	Insulator Static	Wire Position L,M,R,T,B	L
588/253	Structure	Leg Number= 1,2,3,or4	Asset tag incorrect
588/256	Conductor	Conductor Other =	Bolt possibly missing from connection.

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 186

Structure Type: LA + 30' LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 03-22-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 46

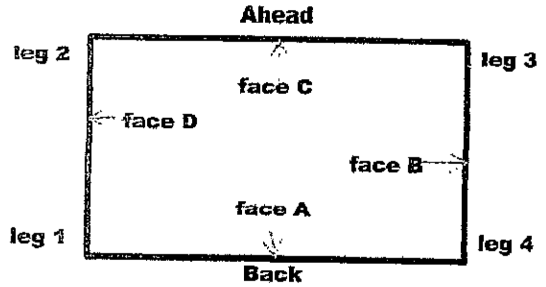
	Damage	Face	Member	Corrective Action	Remark
1	P	AC	760 x 4	R	BP - GW - NB
2	P	Bd	770 x 4	R	
3	P	C	757 x 1	R	
4	MB	B	767 x 1	R	
5	C	d	768 x 1	RP	
6	P	d	311 x 1	R	
7	C	d	312 x 1	RP	
8	P	Bd	311 x 2	R	
9	P	B	313 x 1	R	
10	C	d	313 x 1	RP	
11	C	d	315 x 1	RP	
12	C	A	307 x 1	RP	
13	C	Bd	231L x 2	RP	
14	C	Bd	231R x 2	RP	
15	P	Bd	68 x 2	R	
16	P	Bd	67 x 2	R	
17	C	Bd	45R x 2	RP	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2/15/21 Foreman: GREG VIA Company: LEMYRS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588
Structure No: 187
Structure Type: 5LT+35'
Back Substation: Yadkin
Ahead Substation: Fentress

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 03-23-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	2	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 48

	Damage	Face	Member	Corrective Action	Remark
1	C	A	661x1	RP	BP - GW - NB
2	C	d	671x1	RP	
3	Tm	ABcd	220x8	RP	
4	P	AC	673x4	R	
5	P	Bd	674x4	R	
6	P	AC	219x4	R	
7	P	Bd	236x4	R	
8	P	d	222x1	R	
9	C	B	222x1	RP	
10	P	AC	38x4	R	
11	P	Bd	10x2	R	
12	P	Bd	11x2	R	
13	Tm	d	NS	RP	
14					
15					Climbing Inspection
16					Complete
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3/15/21 Foreman: Greg Via Company: Lemyrs

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2	face C	leg 3
face D		face B
	face A	
leg 1		leg 4

Back

Line Number: 388

Structure No: 188

Structure Type: 5MA+25'

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	↓	↓	P
Leg 2		✓	↓	↓	P
Leg 3		✓	↓	↓	P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Foreman: A. Rundgren		Date: 01-19-21
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 44

	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	342x2	R	BP - GW - NB
2	P	Bd	1338x2	R	
3	P	d	1333x1	R	
4	P	d	337x1	R	
5	P	AC	341x2	R	
6	P	AC	331x3	R	
7	P	C	330x1	R	
8	C	C	1308x1	RP	
9	C	C	1307x1	RP	
10	P	A	1308x1	R	
11	P	A	1307x1	R	
12	P	A	1306x1	R	
13	P	B	1303x1	R	
14	C	d	1310x1	RP	
15	MB	A	1213x1	RP	
16	P	AC	1613x4	R	
17	P	Bd	1720x4	R	
18	C	B	718x1	RP	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
P: Packout O: Other			

1/11/21 GREG VIA LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 188

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	C	Bd	1711X2	RP	BP - GW - NB
2	P	A	1701X1	R	
3	C	d	13X2X1	RP	
4	Tm	d	NS	RP	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					Climbing Inspection
30					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation: Complete Climbing Inspection

Ahead

leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4

Back

Line Number: 588
Structure No: 189
Structure Type: 5HA+30'LE
Back Substation: YADKIN
Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection

Date: 01-19-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 24

	Damage	Face	Member	Corrective Action	Remark
1	C	AD	638X2	RP-BP-NB-GW	
2	C	AB	635X2	RP-BP-NB-GW	
3	C	BD	633X2	RP-BP-NB-GW	
4			632X		
5	C	D	207X1	RP-BP-NB-GW	
6	P	D	207X1	BP-NB-GW	
7	CR	ABCD	208RX3	RP-BP-NB-GW	
8	CR	ABCD	208LX4	RP-BP-NB-GW	
9	CR	BD	142X3	RP-BP-NB-GW	
10	CR	AC	129X4	RP-BP-NB-GW	
11	CR	AC	128X2	RP-BP-NB-GW	
12	CR	A	127X2	RP-NB-BP-GW	
13	P	C	127X2	BP-NB-GW	
14	P	A	126X1	BP-NB-GW	
15	C	C	122X2	RP-NB-BP-GW	
16	P	D	41X1	BP-NB-GW	
17	MB	C	66X1	R-NB	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped/Straightened Plates
O: Other			

Date: 1-18-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 189

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	BD	102X2	BP-NB-GW	
2	P	B	111X1	BP-NB-GW	
3	P	B	118X1	BP-NB-GW	
4	MB	D	16X1	R-NB	
5	P	B	140X1	BP-NB-GW	
6	MB	B	154AX1	R-NB	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation
Ahead

Complete Climbing Inspection

leg 2	face C	leg 3
← face D		face B →
leg 1	face A	leg 4
	Back	

Line Number: 588
Structure No: 190
Structure Type: 5LT+20'BE+40'LE
Back Substation: YADKIN
Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection

Date: 04-27-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ______ No Quantity: 66

	Damage	Face	Member	Corrective Action	Remark
1	MB	B	63X1	R-NB	
2	P	A	36NEARX1	BP-NB-GW	
3	P	A	37NEARX1	BP-NB-GW	
4	P	C	37FARX1	BP-NB-GW	
5	P	C	36FARX1	BP-NB-GW	
6	P	C	82RX1	BP-NB-GW	
7	P	BD	10X2	BP-NB-GW	
8	P	BD	11X2	BP-NB-GW	
9	P	BD	222X2	BP-NB-GW	
10	P	AC	219X4	BP-NB-GW	
11	TM-B	ABCD	220X24	RP-BP-NB-GW	
12	C	C	217X1	RP-BP-NB-GW	
13	P	A	217X1	BP-NB-GW	
14	C	B	235X1	RP-BP-NB-GW	
15	P	BD	277X4	BP-NB-GW	
16	P	AC	274X4	BP-NB-GW	
17	P	C	259X1	BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: ________ Foreman: Michael Davis Company: L.E. MYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 190

Page 2 **of** 2

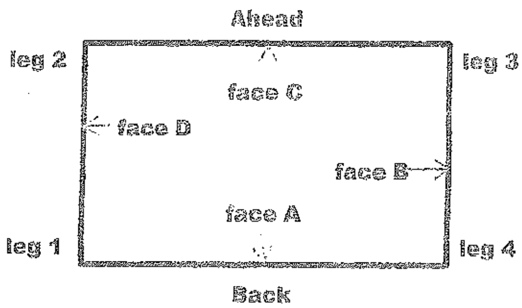
Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	TM	AC	256RX2	RP-BP-NB-GW	
2	TM	AC	256LX2	RP-BP-NB-GW	
3	C	B	267LX1	RP-BP-NB-GW	
4	P	D	270X1	BP-NB-GW	
5	P	B	273X1	BP-NB-GW	
6	P	BD	755X4	BP-NB-GW	
7	P	AC	752X4	BP-NB-GW	
8	P	BD	756X4	BP-NB-GW	
9	P	AC	753X4	BP-NB-GW	
10	P	BD	757X4	BP-NB-GW	
11	P	AC	754X4	BP-NB-GW	
12	C	D	776X1	RP-BP-NB-GW	
13	P	BD	777X2	BP-NB-GW	
14	P	A	764X1	BP-NB-GW	
15	C	C	764X1	RP-BP-NB-GW	
16	C	BD	782X2	RP-BP-NB-GW	
17	TM	A	279X1	RP-BP-NB-GW	
18	P	C	279X1	BP-NB-GW	
19	O	A	Leg 4 Ground	G	
20	O	ABCD	High Voltage Signs	N.S.	
21	O	B	Structure Signs	NS	
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 191

Structure Type: 5DE+20'

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	↓	↓	P
Leg 2		✓			P
Leg 3		✓	↓	↓	P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Foreman: A. Rundgren		Date: 02-03-21
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	2	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 15

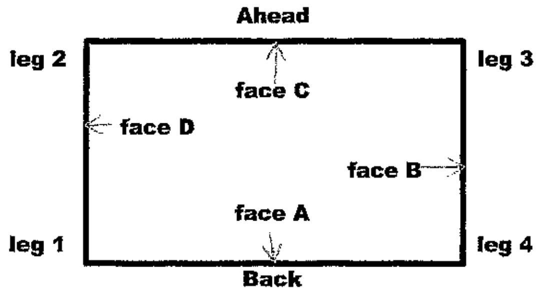
	Damage	Face	Member	Corrective Action	Remark
1	C	C	118x2	RP	BP - GW - NB
2	P	Bd	132x3	R	
3	P	d	134x1	R	
4	C	C	115x2	RP	
5	C	C	113x1	RP	
6	P	Bd	133x2	R	
7	C	d	133x1	RP	
8	C	B	134x1	RP	
9	C	Bd	527x2	RP	
10	C	A	529x1	RP	
11	C	AB	530x2	RP	
12	C	d	287A x1	RP	
13	C	d	151x1	RP	
14	C	d	127A x1	RP	
15	C	d	127x1	RP	
16	C	d	24M x1	RP	
17	C	d	19A x1	RP	
18	C	d	19x1	RP	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
P: Packout O: Other			

1/12/21 GREG VIA LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 192

Structure Type: 5LT+ 35' LE

Back Substation: YAdKiN

Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 04-27-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	2	FR
	2	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 46

	Damage	Face	Member	Corrective Action	Remark
1	MB	A	65L X 1	RP	BP - GW - NB
2	P	Bd	10 X 2	R	
3	P	Bd	11 X 2	R	
4	P	A	64L X 1	R	
5	P	Bd	222 X 2	R	
6	P	AC	38 X 4	R	
7	P	AC	219 X 4	R	
8	P	Bd	236 X 4	R	
9	P	AC	733 X 4	R	
10	P	Bd	734 X 4	R	
11	P	AC	704 X 2	R	
12	P	Bd	707 X 2	R	
13	C	AC	712 X 2	RP	
14	C	d	724 X 1	RP	
15	C	A	718 X 2	RP	
16	P	A	714 X 1	R	
17	P	C	713 X 1	R	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3/31/21 **Foreman:** GREG VIA **Company:** LEMYRÉS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 192

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	C	d	729X1	RP	BP - GW - NB
2	Tm	ABCd	220x16	RP	
3	Tm	d	NS	RP	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					Climbing Inspection
30					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

	Ahead	
leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4
	Back	

Line Number: 588
Structure No: 193
Structure Type: 5LT+35'LE
Back Substation: Yadkin
Ahead Substation: Fentress

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 04-27-21
Foreman:

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	2	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ___ No Quantity: 53

	Damage	Face	Member	Corrective Action	Remark
1	P	ABcd	704x4	R	BP - GW - NB
2	P	Bd	10x2	R	
3	P	Bd	11x2	R	
4	P	AC	38x4	R	
5	P	AC	219x4	R	
6	P	Bd	236x4	R	
7	P	Bd	222x2	R	
8	C	Bd	224x2	RP	
9	C	d	723x1	RP	
10	P	AC	733x4	R	
11	P	Bd	734x4	R	
12	Tm	d	NS	RP	
13					
14					
15					
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/1/21 **Foreman:** Greg Via **Company:** Lemyres

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation Complete Climbing Inspection

Ahead

leg 2 | face C | leg 3
face D | face B
leg 1 | face A | leg 4
Back

Line Number: 588
Structure No: 194
Structure Type: 5LT+25'LE
Back Substation: YADKIN
Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1	✓		0.19785	0.16935	B P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection

Date: 03-02-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 53

	Damage	Face	Member	Corrective Action	Remark
1	TM	A	601X1	RP-BP-NB-GW	
2	P	AC	601X3	BP-NB-GW	
3	P	BD	602X4	BP-NB-GW	
4	P	BD	624X4	BP-NB-GW	
5	P	AC	623X4	BP-NB-GW	
6	C	D	235X1	RP-BP-NB-GW	
7	C	A	215X1	RP-BP-NB-GW	
8	P	D	233LX2	BP-NB-GW	
9	P	D	233RX1	BP-NB-GW	
10	P	BD	222X2	BP-NB-GW	
11	TM-B	ABCD	220X8	RP-BP-NB-GW	
12	PO	AC	219X3	BP-NB-GW	
13	P	BD	236X4	BP-NB-GW	
14	P	A	36NEARX1	BP-NB-GW	
15	P	C	37FARX1	BP-NB-GW	
16	P	A	37NEARX1	BP-NB-GW	
17	P	C	36FARX1	BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2-17-2021 Foreman: Michael Davis Company: L.E. MYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 194

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	C	82LX1		
2	O	ABCD	High Voltage Sighns	NS	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2 — face C — leg 3

face D — face B

leg 1 — face A — leg 4

Back

Complete Climbing Inspection

Line Number: 588

Structure No: 195

Structure Type: 5LT+40'LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection		
Date: 03-04-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 52

	Damage	Face	Member	Corrective Action	Remark
1	MB	C	67LX1	R-NB	
2	P	A	40NEARX1	BP-NB-GW	
3	P	C	39FARX1	BP-NB-GW	
4	P	A	36NEARX1	BP-NB-GW	
5	P	C	37FARX1	BP-NB-GW	
6	P	A	37NEARX1	BP-NB-GW	
7	P	C	36FARX1	BP-NB-GW	
8	MB	D	63X1	R-NB	
9	P	BD	10X2	BP-NB-GW	
10	P	BD	11X2	BP-NB-GW	
11	P	BD	222X2	BP-NB-GW	
12	P	AC	219X4	BP-NB-GW	
13	TM-B	ABCD	220X16	RP-BP-NB-GW	
14	C	D	235X1	RP-BP-NB-GW	
15	P	BD	236X4	BP-NB-GW	
16	C	BD	776X2	RP-BP-NB-GW	
17	P	D	777X1	BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2-17-2021 Foreman: Michael Davis Company: L.E. MYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 195

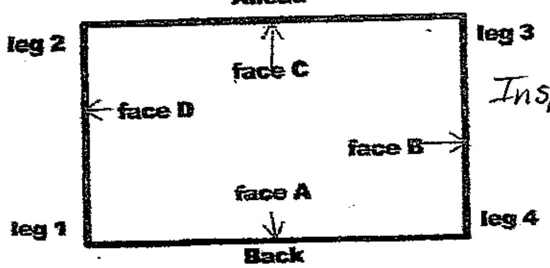
Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	C	764X1	BP-NB-GW	
2	C	A	770X1	RP-BP-NB-GW	
3	P	AC	752x4	BP-NB-GW	
4	P	AC	753X4	BP-NB-GW	
5	P	BD	755X4	BP-NB-GW	
6	P	BD	756X4	BP-NB-GW	
7	P	AC	754X4	BP-NB-GW	
8	P	BD	757X4	BP-NB-GW	
9	P	AC	787X4	BP-NB-GW	
10	P	BD	788X4	BP-NB-GW	
11	O	A	BRoKeN ground	G	
12	O	ABCD	HighVoltage Signs	NS	
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation Complete Climbing Inspection



Line Number: 588
Structure No: 196
Structure Type: 5LA+15'LE
Back Substation: YADKin
Ahead Substation: FENTRESS

Foundation Inspection

Date: 03-10-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	2	FR
	1	FR
	1	FR
	1	FR

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 34

	Damage	Face	Member	Corrective Action	Remark
1	P	D	49X1	BP-NB-GW	
2	TM	B	18X1	RP-BP-NB-GW	
3	TM	B	72LINSX1	RP-BP-NB-GW	
4	TM	B	72RINSX1	RP-BP-NB-GW	
5	P	D	310X1	BP-NB-GW	
6	C	B	310X1	RP-NB-BP-NB	
7	P	B	103RFARX1	BP-NB-GW	
8	P	B	103LNEARX1	BP-NB-GW	
9	P	B	54X1	BP-NB-GW	
10	P	B	55X1	BP-NB-GW	
11	P	B	311AX1	BP-NB-GW	
12	C	D	311AX1	RP-BP-NB-GW	
13	C	B	311X1	RP-BP-NB-GW	
14	P	D	313X1	BP-NB-GW	
15	C	B	313X2	RP-BP-NB-GW	
16	P	D	314X1	BP-NB-GW	
17	C	D	315AX1	RP-BP-NB	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3-3-2021 **Foreman:** Michael Davis **Company:** L.E. MYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 196

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	BD	335X3	BP-NB-GW	
2	C	BD	333X2	RP-BP-NB-GW	
3	P	AC	328X3	BP-NB-GW	
4	P	AC	341X2	BP-NB-GW	
5	P	B	336X1	BP-NB-GW	
6	TM	BD	339X2	RP-BP-NB-GW	
7	P	BD	657X4	BP-NB-GW	
8	P	AC	651X4	BP-NB-GW	
9	P	BD	662X4	BP-NB-GW	
10	P	AC	656X4	BP-NB-GW	
11	B	C	650X1	R-NB-GW	Scabed PER Engeneer
12	P	AC	655X3	BP-NB-GW	
13	P	BD	661X3	BP-NB-GW	
14	C	A	330X1	RP-BP-NB-GW	
15	O	ABCD	High Voltage Sighns	NS	
16	O	B	Structure Sighn	NS	
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation: Complete Climbing Inspection

Ahead

leg 2 | face C | leg 3
face D | face B
leg 1 | face A | leg 4

Back

Line Number: 588
Structure No: 197
Structure Type: HA
Back Substation: YADKin
Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection

Date: 04-14-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 11

	Damage	Face	Member	Corrective Action	Remark
1	C	BD	112X2	RP-BP-NB-GW	
2	C	B	113x1	RP-BP-NB-GW	
3	MB	B	40X1	R-NB	
4	C	B	10X1	RP-NB-BP-GW	
5	TM	B	27X1	RP-NB-BP-GW	
6	C	C	106X2	RP-BP-NB-GW	
7	P	B	41X1	BP-NB-GW	
8	P	B	101X1	BP-NB-GW	
9	MB	C	68RX1	R-NB	
10	C	C	122X1	RP-BP-NB-GW	
11	P	AC	126X4	BP-NB-GW	
12	P	C	128X2	BP-NB-GW	
13	P	AC	127X4	BP-NB-GW	
14	C	AC	130X2	RP-BP-NB-GW	
15	P	C	130X1	BP-NB-GW	
16	P	B	140X1	BP-NB-GW	
17	P	B	141X1	BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4-5-2021 Foreman: Michael S Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 197

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	D	142x1	BP-NB-GW	
2	P	C	208RX1	BP-NB-GW	
3	P	BD	208LX2	BP-NB-GW	
4	P	C	206LX1	BP-NB-GW	
5	P	C	206RX1	BP-NB-GW	
6	TM	C	526Lx1	RP-BP-NB-GW	
7	TM	BC	526Rx2	RP-BP-NB-GW	
8	P	ABD	526Lx3	BP-NB-GW	
9	P	AD	526Rx2	BP-NB-GW	
10	P	ABCD	213x5	BP-NB-GW	
11	P	ABCD	214X16	BP-NB-GW	
12	P	B	48x1	BP-NB-GW	
13	P	B	102X4	BP-NB-GW	
14	O	B	structure sighn	NS	
15	O	ACBD	High Voltage Sighns	NS	
16	TM	AD	213X3	BP-NB-GW	weilded inside
17	TM	BD	101x4	BP-NB-GW	weilded inside
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

	Ahead	
leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4
	Back	

Line Number: 588
Structure No: 198
Structure Type: LA + 40' LE
Back Substation: YAdKiN
Ahead Substation: FENtRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 05-03-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 54

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	883x4	R	BP - GW - NB
2	P	Bd	884x4	R	
3	P	A	864x1	R	
4	P	A	854x1	R	
5	P	AC	868xx2	R	
6	P	AC	886x2	R	
7	C	AC	332x2	RP	
8	C	d	333x1	RP	
9	P	A	330x1	R	
10	P	A	328x2	R	
11	P	d	333x2	R	
12	P	B	311Ax1	R	
13	P	d	312x1	R	
14	C	C	307Px1	RP	
15	C	C	306x1	RP	
16	P	Bd	68x2	R	Climbing Inspection
17	Tm	d	NS	RP	Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/19/21 **Foreman:** GREG ViA **Company:** LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 198

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	TM	AB	851x2	LF	Per engineer
2	TM	CD	851x2	LF	Per engineer
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation: Ahead

Complete Climbing Inspection

leg 2 — face C — leg 3
face D — face B
leg 1 — face A — leg 4
Back

Line Number: 588
Structure No: 199
Structure Type: 5LT+40'LE
Back Substation: YADKIN
Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1	✓		0.23687	0.24748	BP
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection

Date: 05-04-21
Foreman:

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ______ No Quantity: 56

	Damage	Face	Member	Corrective Action	Remark
1	C	BD	785X2	RP-BP-NB-GW	
2	C	A	771X1	RP-BP-NB-GW	
3	C	C	768X1	RP-BP-NB-GW	
4	P	A	763X2	BP-NB-GW	
5	P	B	777X1	BP-NB-GW	
6	C	C	762X1	RP-BP-NB-GW	
7	P	B	755X2	BP-NB-GW	
8	P	B	756X2	BP-NB-GW	
9	P	A	752X2	BP-NB-GW	
10	P	A	753X2	BP-NB-GW	
11	P	AC	787X4	BP-NB-GW	
12	P	BD	788X3	BP-NB-GW	
13	C	BD	235X2	RP-BP-NB-GW	
14	P	D	236X1	BP-NB-GW	
15	P	AC	219X4	BP-NB-GW	
16	P	D	233RX1	BP-NB-GW	
17	C	A	217X1	RP-BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3-11-2021 Foreman: Michael Davis Company: L.E. MYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 199

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	TM	D	788X1	RP-BP-NB-GW	
2	P	C	210X1	BP-NB-GW	
3	P	B	222X1	BP-NB-GW	
4	TM-B	ABCD	220X16	RP-BP-NB-GW	
5	P	C	206X1	BP-NB-GW	
6	P	C	221X1	BP-NB-GW	
7	P	BD	10X2	BP-NB-GW	
8	P	BD	11X2	BP-NB-GW	
9	P	AC	39FARX2	BP-NB-GW	
10	P	BD	40NEARX2	BP-NB-GW	
11	P	A	36NEARX1	BP-NB-GW	
12	P	A	37NEARX1	BP-NB-GW	
13	P	C	36FARX1	BP-NB-GW	
14	O	ABCD	High Voltage Signs	NS	
15	C	AC	776X2	RP-BP-NB-GW	
16	C	BD	784X2	RP-BP-NB-GW	
17	O	C	751X1	R-GW	Leg was peeling NEXT TO Heel outside ground off peeling GREY waxed
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	**R:** Repaired	**G:** Grounded Str	**RS:** Removed Lower Step Bolts
B: Bent	**RP:** Replaced	**BP:** Beat Packout	**NS:** New Danger/Aerial/Number Signs
C: Cracked	**LF:** Left as Found	**GW:** Applied Greywax	**IP:** Installed Package Per Specs
TM: Thin Member		**NB:** New Bolts	**FP:** Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Complete Climbing Inspection

Ahead

leg 2 | face C | leg 3

face D | face B

face A

leg 1 | leg 4

Back

Line Number: 588

Structure No: 200

Structure Type: 5LT+35'LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Foundation Inspection		
Date: 02-02-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

FR: Foundation Repaired

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 51

	Damage	Face	Member	Corrective Action	Remark
1	TM	A	217X1	RP-BP-NB-GW	
2	P	AC	219X4	BP-NB-GW	
3	P	BD	236X4	BP-NB-GW	
4	O	A	215X1	R-NB-GW	insAiled in WRong Place Packout
5	TM-R	ABCD	220X16	RP-BP-NB-GW	
6	P	D	233X1	BP-NB-GW	
7	C	D	730X1	RP-BP-NB-GW	
8	C	B	725X1	RP-BP-NB-GW	
9	C	B	728X1	RP-BP-NB-GW	
10	P	D	724X1	BP-NB-GW	
11	P	AC	733X4	BP-NB-GW	
12	P	BD	734X4	BP-NB-GW	
13	P	BD	706X4	BP-NB-GW	
14	P	AC	703X4	BP-NB-GW	
15	P	BD	10X2	BP-NB-GW	
16	P	BD	11X2	BP-NB-GW	
17	P	A	43L NEAR X1	BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 1-12-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 200

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	A	43RNEARx1	BP-NB-GW	
2	P	C	43LFARX1	BP-NB-GW	
3	P	A	36NEARX1	BP-NB-GW	
4	P	A	37NEARX1	BP-NB-GW	
5	P	C	36FARx1	BP-NB-GW	
6	P	B	235x1	BP-NB-GW	
7					
8					
9					
10					
11					
12					
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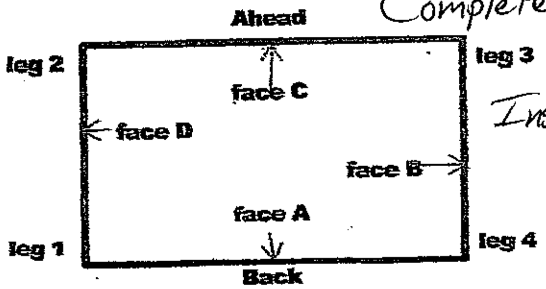
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Complete Climbing Inspection



Line Number: 588

Structure No: 201

Structure Type: SLT+20'BE+30'LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection

Date: 02-02-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 58

	Damage	Face	Member	Corrective Action	Remark
1	P	A	40NEARX2	BP-NB-GW	
2	P	C	39FARX1	BP-NB-GW	
3	MB	A	90X1	RP-BP-NB-GW	
4	MB	A	91LX1	RP-BP-NB-GW	
5	C	D	222X1	RP-BP-NB-GW	
6	MB	C	81RX1	RP-BP-NB-GW	
7	MB	C	208X1	RP-BP-NB-GW	
8	P	AC	219X4	BP-NB-GW	
9	TM	A	217X1	RP-BP-NB-GW	
10	TM-B	ABCD	220X16	RP-BP-NB-GW	
11	C	BD	235X2	RP-BP-NB-GW	
12	P	A	256LX2	BP-NB-GW	
13	C	C	256RX1	RP-BP-NB-GW	
14	P	A	256RX1	BP-NB-GW	
15	P	AC	274X4	BP-NB-GW	
16	P	BD	277X4	BP-NB-GW	
17	MB	A	262X1	R-NB	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 1-12-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 201

Page 2 **of** 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	D	233RX1	BP-NB-GW	
2	C	A	258X1	RP-BP-NB-GW	
3	P	A	259X1	BP-NB-GW	
4	P	B	270X1	BP-NB-GW	
5	P	AC	673X2	BP-NB-GW	
6	P	BD	674X2	BP-NB-GW	
7	P	BD	236X4	BP-NB-GW	
8	O	B	667X1	RP-NB-GW	Piece was missing
9	MB	A	36NEARX1	R-NB	
10	MB	A	37NEARX1	R-NB	
11	MB	C	37FARX1	R-NB	
12	MB	C	36FARX1	R-NB	
13	MB	A	207X1	R-NB	
14					
15					
16					
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18					
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23					
24					
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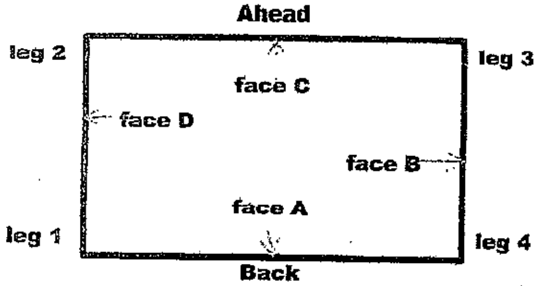
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588
Structure No: 203
Structure Type: 5LT+35'LE+40'BE
Back Substation: YadKin
Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1	✓		0.247	0.279	B P
Leg 2		✓	Good	VG	P
Leg 3	✓		0.236	0.2135	B P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 03-17-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 78

	Damage	Face	Member	Corrective Action	Remark
1	C	AC	718 x 2	RP	BP - GW - NB
2	P	AC	718 x 2	R	
3	C	d	730 x 2	RP	
4	P	B	930 x 2	R	
5	Tm	ABcd	220 x 24	RP	
6	P	AC	713 x 4	R	
7	P	Bd	725 x 4	R	
8	C	Bd	724 x 3	RP	
9	C	B	706 x 1	R	
10	P	AC	712 x 2	R	
11	P	AC	321 x 4	R	
12	C	AC	312L x 2	RP	
13	C	AC	312R x 2	RP	
14	P	AC	319 x 4	R	
15	P	Bd	341 x 4	R	
16	P	B	330 x 1	R	
17	P	AC	219 x 4	R	

Damage Code		Corrective Action Code	Remark Code:	
MB:	Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B:	Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C:	Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM:	Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O:	Other			

Date: 3/4/21 **Foreman:** GREG VIA **Company:** [illegible] LEMYRES

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 589

Structure No: 203

Page 2 of 2

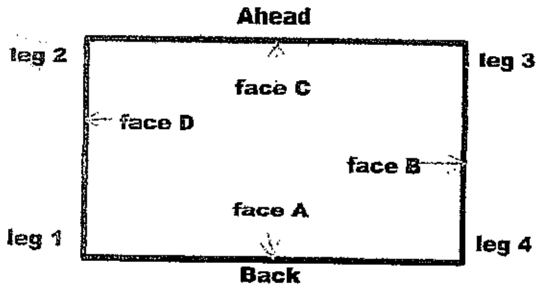
Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	336 x 4	R	BP - GW - NB
2	P	Bd	10x2	R	
3	P	Bd	11 x 2	R	
4	P	Bd	222x2	R	
5	P	AC	38 x 4	R	
6	Tm	d	NS	RP	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					Climbing Inspection
29					Complete
30					

Damage Code		Corrective Action Code		Remark Code:	
MB:	Missing Bolt	R:	Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B:	Bent	RP:	Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C:	Cracked	LF:	Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM:	Thin Member			NB: New Bolts	FP: Flipped /Straightened Plates
O:	Other				

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 204

Structure Type: 5LT+35 LE 20' BE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	↓	↓	P
Leg 2		✓			P
Leg 3		✓	↓	↓	P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 03-17-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 58

	Damage	Face	Member	Corrective Action	Remark
1	P	A	669 x 1	R	BP - GW - NB
2	C	AC	256^L x 2	RP	
3	C	AC	256^R x 2	RP	
4	P	AC	259 x 4	R	
5	Tm	ABcd	220 x 8	RP	
6	P	AC	275 x 4	R	
7	P	Bd	275^A x 4	R	
8	P	AC	219 x 4	R	
9	P	Bd	236 x 4	R	
10	C	B	235 x 1	RP	
11	C	C	208 x 1	RP	
12	C	C	210 x 1	RP	
13	P	Bd	232 x 2	R	
14	P	AC	38 x 4	R	
15	P	Bd	10 x 2	R	
16	P	Bd	11 x 2	R	
17	P	AC	733 x 4	R	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2/25/21 Foreman: GREG VIA Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 204

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	734 x 4	R	
2	Tm	d	N S	RP	
3	P	AC	94^L x 2	R	
4	P	AC	94^R x 2	R	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					climbing Ispection
30					ComplETE

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2 | face C | leg 3

face D | face B

leg 1 | face A | leg 4

Back

Line Number: 588

Structure No: 205

Structure Type: 5LT+ 30' LE

Back Substation:

Ahead Substation:

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1	✓		0.356	0.194	P
Leg 2		✓	↓	↓	P
Leg 3		✓	↓	↓	P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 03-17-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 48

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	673x4	R	BP - GW - NB
2	P	Bd	674x4	R	↓
3	P	B	672x1	R	
4	P	B	671x1	R	
5	P	d	670x1	R	
6	P	d	664x1	R	
7	P	A	654x1	R	
8	C	Bd	235x2	RP	
9	C	d	233^Rx1	RP	
10	P	B	233^Lx1	R	
11	P	AC	219x4	R	
12	P	Bd	236x4	R	
13	C	B	227x1	RP	
14	P	B	233^Rx1	R	
15	P	Bd	10x2	R	
16	P	Bd	11x2	R	
17	P	Bd	222x2	R	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: ____________ Foreman: ____________________ Company: ____________________

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 205

Page 2 of 2

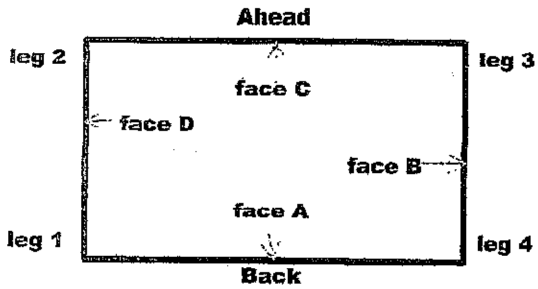
Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	38 x 4	R	BP - GW - NB
2	P	C	out side 95 x 1	R	|
3	Tm	d	NS	RP	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					Climbing Inspection
30					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588
Structure No: 206
Structure Type: 5LT+30' LE
Back Substation: Yadkin
Ahead Substation: Fentress

Groundline Inspection					
Severe Corrosion		Steel Measurements			
	Yes / No	Reading 1	Reading 2	Action Code
Leg 1	✓ (No)	↓	↓	P
Leg 2	✓ (No)	↓	↓	P
Leg 3	✓ (No)	↓	↓	P
Leg 4	✓ (No)	Good	VG	P

Foundation Inspection		
Date: 03-01-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	2	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 48

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	219x4	R	BP - GW - NB
2	P	Bd	236x4	R	
3	C	B	235x1	RP	
4	P	Bd	233L x 2	R	
5	P	C	215x1	R	
6	P	d	671x1	R	
7	P	Bd	10x2	R	
8	P	Bd	11x2	R	
9	C	A	96 x1 Inside	RP	
10	P	Bd	222x2	R	
11	P	AC	673x4	R	
12	P	Bd	674x4	R	
13	Tm	d	NS	RP	
14					
15					
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2/23/21 Foreman: Greg Via Company: LeMyers

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

	Ahead	
leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4
	Back	

Line Number: 588

Structure No: 207

Structure Type: LT+ 30' LE

Back Substation: Yadkin

Ahead Substation: Fentress

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	Good	VG	P
Leg 2	✓		0.168	0.214	B P
Leg 3		✓	Good	VG	P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 02-25-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 50

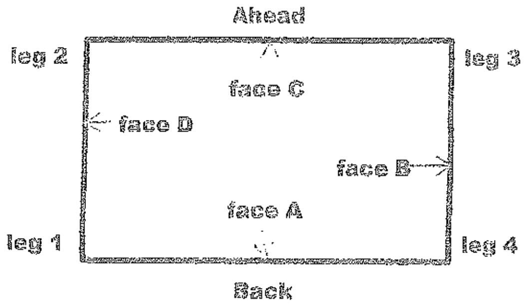
	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	10X2	R	BP - GW - NB
2	P	Bd	11X2	R	
3	P	Ac	673X4	R	
4	P	Bd	674X4	R	
5	P	d	668X1	R	
6	P	d	675X1	R	
7	P	d	671X1	R	
8	P	A	660X1	R	
9	P	AC	219X4	R	
10	P	Bd	236X4	R	
11	Tm	ABcd	220X8	RP	
12	C	B	222X1	RP	
13	P	d	222X1	R	
14	P	AC	38X4	R	
15	C	A	96X1 outside	RP	
16	C	C	95X1 outside	RP	
17	Tm	d	NS	RP	Climbing Inspection Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2/17/21 Foreman: Greg Via Company: Lemyrs

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 208

Structure Type: 5LT+40'

Groundline Inspection						Foundation Inspection		
	Severe Corrosion		Steel Measurements			Foreman: A Rundgren	Date: 02-01-21	
	Yes	No	Reading 1	Reading 2	Action Code	See spec book for explanation of foundation codes	Fnd Code	Action Code
Leg 1	✓		0.185	0.211	B P		1	FR
Leg 2		✓	Good	VG	P		1	FR
Leg 3		✓	Good	VG	P		1	FR
Leg 4	✓		0.153	0.106	B P		1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 53

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	787x4	R	BP - GW - NB
2	P	Bd	788x4	R	
3	C	AC	770x3	RP	
4	C	Bd	784x3	RP	
5	C	B	780x1	RP	
6	Tm	ABcd	220x16	RP	
7	P	Bd	757x4	R	
8	P	AC	754x4	R	
9	P	AC	219x4	R	
10	P	Bd	236x4	R	
11	P	B	222x1	R	
12	P	Bd	10x2	R	
13	P	Bd	11x2	R	
14	C	d	776x1	RP	
15	C	d	755x1	RP	
16	O	d	CARTER	KEY missing in	NEW Sign
17				static shoe	Climbing Inspection
18				REPAIRED	Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
P: Packout O: Other			

1/21/21 GREG VIA LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation Complete Climbing Inspection

Ahead

leg 2 — face C — leg 3

face D — face B

leg 1 — face A — leg 4

Back

Line Number: 588

Structure No: 209

Structure Type: 5LT+20'LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1	✓		0.17630	0.20130	B P
Leg 2		✓	VG	VG	P
Leg 3	✓		0.18880		B P
Leg 4	✓		0.21695		B P

Foundation Inspection		
Date: 01-21-21		
Foreman: Allen Rundglen		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 40

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	576X3	BP-NB-GW	
2	B	A	576X1	RP-BP-NB-GW	
3	P	BD	577X4	BP-NB-GW	
4	P	AC	594X4	BP-NB-GW	
5	TM	A	217X1	RP-BP-NB-GW	
6	P	AC	219X4	BP-NB-GW	
7	MB	D	228X1	R-NB	
8	P	BD	10X2	BP-NB-GW	
9	P	BD	11X2	BP-NB-GW	
10	P	A	40NEARX1	BP-NB-GW	
11	P	C	39FARX1	BP-NB-GW	
12	P	A	36NEARX1	BP-NB-GW	
13	P	C	37FARX1	BP-NB-GW	
14	P	D	222X1	BP-NB-GW	
15	B	B	111X1	RP-BP-NB-GW	
16	P	D	227X1	BP-NB-GW	
17	P	A	37NEARX1	BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 1-20-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 209

Page 2 **of** 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	C	36FARX1	BP-NB-GW	
2	MB	C	41LX1	R-NB	
3	O	B	Structure Sign	NS	
4	P	BD	595X4	BP-NB-GW	
5	O	B	Leg3	G	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation Complete Climbing Inspection

Ahead

leg 2 | face C | leg 3
face D | face B
face A
leg 1 | Back | leg 4

Line Number: 588
Structure No: 210
Structure Type: SLT+35'LE
Back Substation: YADKIN
Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection

Date: 01-20-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	2	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 51

	Damage	Face	Member	Corrective Action	Remark
1	C	DB	730x3	RP-BP-NB-GW	
2	P	C	718X1	BP-NB-GW	
3	P	AC	704x4	BP-NB-GW	
4	P	AC	702x4	BP-NB-GW	
5	P	AC	703x4	BP-NB-GW	
6	P	D	726X1	BP-NB-GW	
7	C	B	724X1	RP-BP-NB-GW	
8	P	A-C	219X3	BP-NB-GW	
9	TM-B	ABCD	220X16	RP-BP-NB-GW	
10	TM-C	A	217X1	RP-BP-NB-GW	
11	MB	D	234X1	R-NB	
12	P	BD	236X1	BP-NB-GW	
13	P	BD	222x2	BP-NB-GW	
14	P	BD	10x2	BP-NB-GW	
15	P	BD	11x2	BP-NB-GW	
16	MB.	C	64LX1	R-NB	
17	P	C	40NEARX1	BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 1-19-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 210

Page 2 of 2

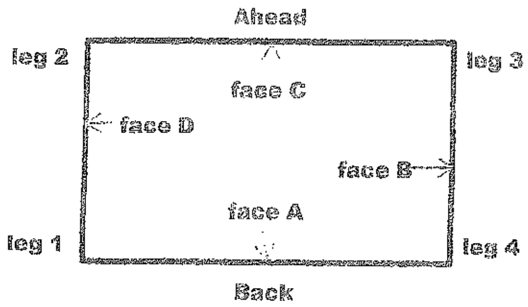
Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	A	39FARX1	BP-NB-GW	
2	P	A	36NEARX1	BP-NB-GW	
3	P	A	37FARX1	BP-NB-GW	
4	C	B	728X1	RP-BP-NB-GW	
5	P	C	733X1	BP-NB-GW	
6	P	D	734X1	BP-NB-GW	
7	O	B	structure Sighn	NS	
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 211

Structure Type: LA + 35'

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Foreman: A. Rundgren		Date: 01-27-21
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 48

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	815 X 4	R	BP - GW - NB
2	P	Bd	829 x 4	R	
3	C	AC	813 x 2	RP	
4	P	C	813 x 1	R	
5	C	Bd	827 x 2	RP	
6	P	Bd	827 x 2	R	
7	P	AC	804 x 4	R	
8	P	Bd	818 x 4	R	
9	P	AC	341 x 2	R	
10	P	AC	332 x 2	R	
11	P	Bd	343 x 2	R	
12	P	Bd	339 x 2	R	
13	C	Bd	333 x 2	RP	
14	P	C	326 x 1	R	
15	P	Bd	314 x 2	R	
16	C	d	311 x 1	RP	
17	C	d	312 x 1	RP	
18	C	d	313 x 1	RP	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
P: Packout O: Other			

1/13/21 GREG V.A LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 211

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	C	A	307X1	RP	BP - GW - NB
2	P	B	311X1	R	
3	P	B	312X1	R	
4	P	B	313X1	R	
5	C	B	817X1	RP	
6	Tm	d	NS	RP	
7	C	B	231LX1	RP	
8	C	B	231RX1	RP	
9	C	B	241LX1	RP	
10	C	B	241RX1	RP	
11	Tm	d	NS	RP	
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					Climbing Inspection
30					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

leg 2	Ahead / face C	leg 3
face D		face B
leg 1	face A / Back	leg 4

Line Number: 588

Structure No: 212

Structure Type: 5LT+ 30'LE

Back Substation: Yadkin

Ahead Substation: Fentress

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	Good	VG	P
Leg 2	✓		0.203	0.225	B P
Leg 3	✓		0.238	0.245	B P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 05-05-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 43

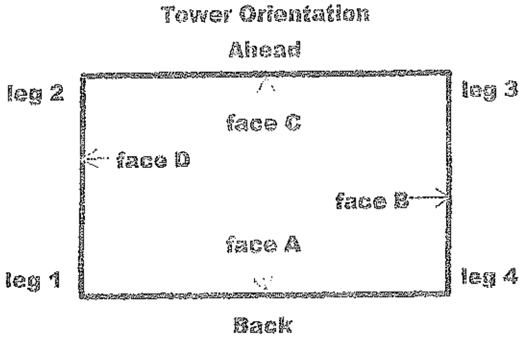
	Damage	Face	Member	Corrective Action	Remark
1	P	AC	673x4	R	BP - GW - NB
2	P	Bd	674x4	R	
3	P	AC	219x4	R	
4	P	Bd	236x4	R	
5	P	d	233Rx1	R	
6	P	A	235x1	R	
7	P	A	237x1	R	
8	P	Bd	222x2	R	
9	P	AC	96x2	R	
10	P	AC	95x2	R	
11	P	AC	38x4	R	
12	P	Bd	10x2	R	
13	P	Bd	11x2	R	
14	TM	ABcd	220x8	RP	
15	TM	d	NS	RP	
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/21/21 **Foreman:** Greg Via **Company:** Lemyers

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 213

Structure Type: SLT+ 35'

Groundline Inspection						Foundation Inspection		
Severe Corrosion			Steel Measurements			Foreman: A. Rundgren	Date: 01-27-21	
	Yes	No	Reading 1	Reading 2	Action Code	See spec book for explanation of foundation codes	Fnd Code	Action Code
Leg 1		✓	Good	VG	P		1	FR
Leg 2	✓		0.186	0.2015	B P		1	FR
Leg 3		✓	Good	VG	P		1	FR
Leg 4	✓		0.204	0.1475	B P		1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 51

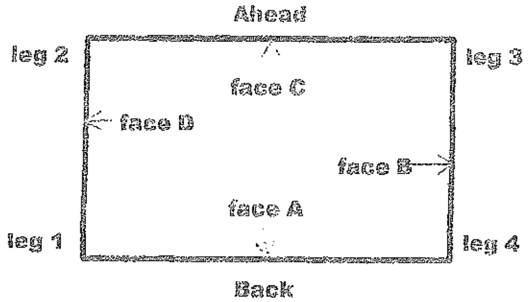
	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	11 x 2	R	BP - GW - NB
2	P	Bd	10 x 2	R	
3	P	AC	219 x 4	R	
4	P	Bd	236 x 4	R	
5	P	Bd	222 x 2	R	
6	P	AC	733 x 4	R	
7	P	Bd	734 x 4	R	
8	P	d	233 x 1	R	
9	Tm	d	NS	RP	
10	O	d	Cotter	Pin missing in	
11				static shoe	
12				Replaced	
13					
14					
15					
16					Climbing Inspection
17					Complete
18					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
P: Packout O: Other			

1/18/21 GREG V.A LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 214

Structure Type: 5LT+25

Groundline Inspection						Foundation Inspection		
	Severe Corrosion		Steel Measurements			Foreman: A. Bundgren		Date: 01-26-21
	Yes	No	Reading 1	Reading 2	Action Code	See spec book for explanation of foundation codes	Fnd Code	Action Code
Leg 1		✓	Good	VG	P		1	FR
Leg 2	✓		0.202	0.172	BP		1	FR
Leg 3		✓	Good	VG	P		1	FR
Leg 4	✓		0.208	0.113	BP		1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ______ No Quantity: 43

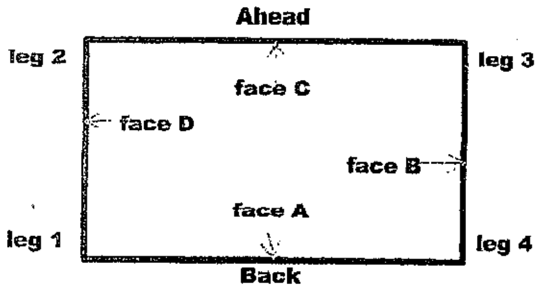
	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	10x2	R	BP - GW - NB
2	P	Bd	11x2	R	
3	P	AC	219x4	R	
4	P	Bd	236x4	R	
5	C	d	227x1	RP	
6	C	Bd	235x2	RP	
7	P	AC	623x4	R	
8	P	Bd	624x4	R	
9	P	Bd	222x2	R	
10	Tm	d	NS	RP	
11					
12					
13					
14					
15					
16					
17					Climbing Inspection
18					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
P: Packout O: Other			

1/18/21 GREG VIA LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588
Structure No: 215
Structure Type: 5LT+35'
Back Substation: YAdKiN
Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			**Steel Measurements**		
	Yes	**No**	**Reading 1**	**Reading 2**	**Action Code**
Leg 1	✓		0.236	0.198	BP
Leg 2		✓	Good	VG	P
Leg 3	✓		0.238	0.150S	BP
Leg 4	✓		0.341	0.2785	BP

Foundation Inspection

Date: 02-10-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 44

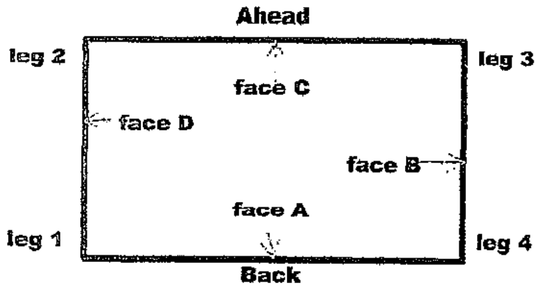
	Damage	Face	Member	Corrective Action	Remark
1	P	AC	704X4	R	BP - GW - NB
2	P	AC	707X4	R	
3	C	B	730X1	RP	
4	P	Bd	10X2	R	
5	P	Bd	11X2	R	
6	C	B	235X1	RP	
7	P	Bd	236X3	R	
8	P	AC	219X4	R	
9	Tm	B	236X1	RP	
10	Tm	d	NS	RP	
11					
12					
13					
14					
15					
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2/3/21 **Foreman:** GREG VIA **Company:** LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 216

Structure Type: 5LT+ 30' LE

Back Substation: Yadkin

Ahead Substation: Fentress

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1	✓		0.1705	0.289	B P
Leg 2	✓		0.2085	0.1085	B P
Leg 3	✓		0.1615	0.1275	B P
Leg 4	✓		0.1025	0.124	B P

Foundation Inspection

Date: 04-20-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 48

	Damage	Face	Member	Corrective Action	Remark
1	P	C	660x1	R	BP - GW - NB
2	P	d	670x1	R	
3	P	d	233A x1	R	
4	P	B	233c x1	R	
5	P	AC	219x4	R	
6	P	Bd	236x2	R	
7	C	C	210x1	RP	
8	C	B	224x1	RP	
9	C	A	210x1	RP	
10	P	C	208x1	R	
11	P	C	205x1	R	
12	P	Bd	222x2	R	
13	P	Bd	10x2	R	
14	P	Bd	11x2	R	
15	P	A	38x1	R	
16	P	d	236x1	R	
17	P	A	Inside 95x1	R	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3/9/21 **Foreman:** Greg V.A. **Company:** Lemyres

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 216

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	O	1Eg3	Ground	Broke Repaired	
2	Tm	d	NS	RP	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					Climbing Inspection
29					Complete
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2 | face C | leg 3

face D | face B

leg 1 | face A | leg 4

Back

Line Number: 588

Structure No: 217

Structure Type: 5LT + 35' LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Foundation Inspection		
Date: 04-20-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	2	FR
	1	FR

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1	✓		0.324	0.1555	B P
Leg 2	✓		0.241	0.307	B P
Leg 3		✓	Good	VG	P
Leg 4	✓		0.1795	0.188	B P

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ____Yes ____No **Quantity:** ____

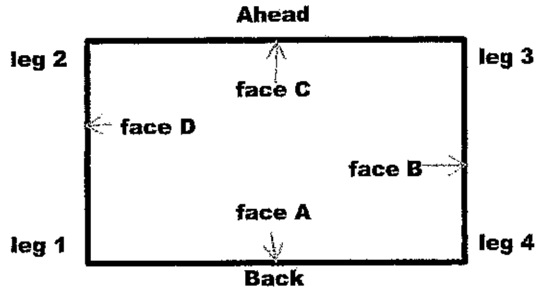
	Damage	Face	Member	Corrective Action	Remark
1	P	B	707x1	R	BP - GW - NB
2	C	Bd	723x2	RP	
3	P	Bd	236x4	R	
4	P	AC	219x4	R	
5	P	C	233x1	R	
6	P	Bd	222x2	R	
7	P	AC	38x4	R	
8	P	A	205x1	R	
9	P	Bd	10x2	R	
10	P	Bd	11x2	R	
11	P	AC	733x3	R	
12	Tm	A	733x1	RP	
13	P	Bd	734x4	R	
14	Tm	d	NS	RP	
15					
16					
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3/11/21 **Foreman:** GREG VIA **Company:** LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 218

Structure Type: SLTF 30' LF

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			**Steel Measurements**		
	Yes	**No**	**Reading 1**	**Reading 2**	**Action Code**
Leg 1		✓	Good	VG	P
Leg 2	✓		0.165	0.2165	B P
Leg 3		✓	Good	VG	P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 04-21-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: **P:** Applied A-120 **B:** Baseshoe Replaced **LF:** Left as Found **FP:** Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 48

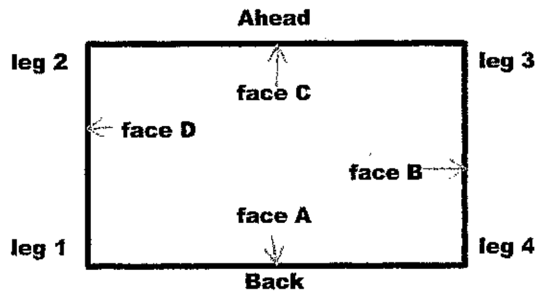
	Damage	Face	Member	Corrective Action	Remark
1	P	AC	673x4	R	BP - GW - NB
2	P	Bd	674x4	R	
3	Tm	ABcd	220x8	RP	
4	P	AC	219x4	R	
5	P	Bd	236x4	R	
6	P	C	211x1	R	
7	P	C	210x1	R	
8	P	C	657x1	R	
9	P	C	658x1	R	
10	P	A	661x1	R	
11	P	AC	38x4	R	
12	P	Bd	10x2	R	
13	P	Bd	11x2	R	
14	P	B	215x2	R	
15	Tm	d	NS	RP	
16					Climbing Inspection
17					Complete

Damage Code		Corrective Action Code		Remark Code:	
MB:	**Missing Bolt**	**R:**	**Repaired**	**G: Grounded Str**	**RS: Removed Lower Step Bolts**
B:	**Bent**	**RP:**	**Replaced**	**BP: Beat Packout**	**NS: New Danger/Aerial/Number Signs**
C:	**Cracked**	**LF:**	**Left as Found**	**GW: Applied Greywax**	**IP: Installed Package Per Specs**
TM:	**Thin Member**			**NB: New Bolts**	**FP: Flipped /Straightened Plates**
O:	**Other**				

Date: 3/15/21 **Foreman:** GREG VIA **Company:** LEMYRES

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588
Structure No: 219
Structure Type: 5LT+ 35'LE
Back Substation: YAKIN
Ahead Substation: FENTRESS

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 03-24-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: **P: Applied A-120** **B: Baseshoe Replaced** **LF: Left as Found** **FP: Foundation Repaired**
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 49

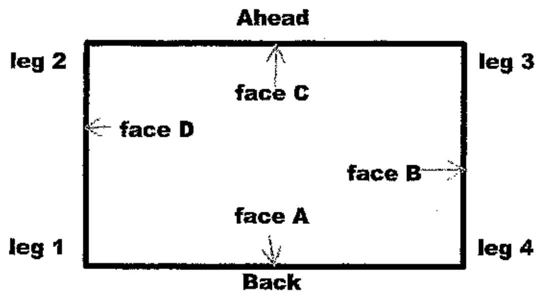
	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	236x4	R	BP - GW - NB
2	P	AC	219x4	R	
3	C	A	207x1	RP	
4	Tm	ABCd	220x16	RP	
5	P	AC	733x4	R	
6	P	Bd	734x4	R	
7	P	C	704x1	R	
8	P	Bd	732x3	R	
9	P	d	723x1	R	
10	C	C	703x1	RP	
11	P	Bd	10x2	R	
12	P	Bd	11x2	R	
13	P	AC	38x4	R	
14	Tm	d	NS	RP	
15					
16					Climbing INspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3/17/21 **Foreman:** GREG VIA **Company:** LEMYRES

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 220

Structure Type: 5LT+20LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1	✓		0.1525	0.268	B P
Leg 2	✓		0.191	0.2205	B P
Leg 3		✓	Good	VG	P
Leg 4	✓		0.176	0.184	B P

Foundation Inspection

Date: 03-30-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	2	FR
	1	FR
	1	FR

Action Code: **P:** Applied A-120 **B:** Baseshoe Replaced **LF:** Left as Found **FP:** Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 39

	Damage	Face	Member	Corrective Action	Remark
1	Tm	ABcd	220x8	RP	BP - GW - NB
2	P	AC	219x4	R	
3	P	Bd	236x3	R	
4	Tm	B	236x1	RP	
5	P	Bd	10x2	R	
6	P	Bd	11x2	R	
7	P	AC	38x4	R	
8	C	B	231L x1	RP	
9	P	AC	594x4	R	
10	P	Bd	595x4	R	
11	P	Bd	577x2	R	
12	P	Bd	222x2	R	
13	MB	A	67L x1	R	
14	Tm	d	NS	RP	
15					
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	**R:** Repaired	**G:** Grounded Str	**RS:** Removed Lower Step Bolts
B: Bent	**RP:** Replaced	**BP:** Beat Packout	**NS:** New Danger/Aerial/Number Signs
C: Cracked	**LF:** Left as Found	**GW:** Applied Greywax	**IP:** Installed Package Per Specs
TM: Thin Member		**NB:** New Bolts	**FP:** Flipped /Straightened Plates
O: Other			

Date: 3/22/21 **Foreman:** GREg ViA **Company:** LEMYRE

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation Complete Climbing Inspection

Ahead

leg 2 | face C | leg 3
face D | face B
leg 1 | face A | leg 4

Back

Line Number: 588
Structure No: 221
Structure Type: 5LT
Back Substation: YADKIN
Ahead Substation: FENTRESS

Foundation Inspection

Date: 02-23-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 51

	Damage	Face	Member	Corrective Action	Remark
1	P	A	36NEARX1	BP-NB-GW	
2	P	A	37NEARX1	BP-NB-GW	
3	P	C	37FARX1	BP-NB-GW	
4	P	C	36FARX1	BP-NB-GW	
5	P	A	40NEARX1	BP-NB-GW	
6	P	C	39FARX1	BP-NB-GW	
7	P	BD	222X2	BP-NB-GW	
8	P	AC	219X4	BP-NB-GW	
9	P	AC	704X3	BP-NB-GW	
10	P	BD	707X2	BP-NB-GW	
11	P	BD	706X4	BP-NB-GW	
12	P	AC	703X4	BP-NB-GW	
13	P	BD	734X4	BP-NB-GW	
14	P	AC	733X4	BP-NB-GW	
15	O	B	structure sign	NS	
16					
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2-2-2020 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation Complete Climbing Inspection

Ahead

leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4

Back

Line Number: 588

Structure No: 222

Structure Type: 5LT+20'LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1	✓		0.15085	0.21585	B P
Leg 2	✓		0.08305	0.16580	B P
Leg 3	✓		0.18835	0.19905	B P
Leg 4	✓		0.07215	0.17125	B P

Foundation Inspection

Date: 02-23-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 40

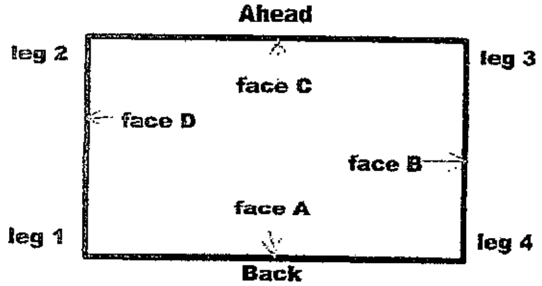
	Damage	Face	Member	Corrective Action	Remark
1	P	C	39FARX2	BP-NB-GW	
2	P	A	40NEARX1	BP-NB-GW	
3	P	B D	10X2	BP-NB-GW	
4	P	B D	11X2	BP-NB-GW	
5	MB	A C	82LX2	R-NB	
6	MB	A	210X1	R-NB	
7	P	AC	219X4	BP-NB-GW	
8	P	C	215X1	BP-NB-GW	
9	P	D	233RX1	BP-NB-GW	
10	P	BD	233LX2	BP-NB-GW	
11	C	D	235X1	RP-BP-NB-GW	
12					
13					
14					
15					
16					
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2-1-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 223

Structure Type: 5LT+20'BE+30'LE

Back Substation: Yadkin

Ahead Substation: FENTRESS

Groundline Inspection						
Severe Corrosion			Steel Measurements			
	Yes	No	Reading 1	Reading 2	Action Code	
Leg 1		✓	↓	↓	*see LF	
Leg 2		✓			note LF	
Leg 3		✓			LF	
Leg 4		✓	Good	VG	LF	

Foundation Inspection		
	Date:	05-05-21
	Foreman:	Allen Rundgren
See spec book for explanation of foundation codes	Fnd Code	Action Code
	*	See note LF
		LF
		LF
		LF

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ______ No Quantity: 56

	Damage	Face	Member	Corrective Action	Remark
1	P	A	664X1	R	BP - GW - NB
2	P	Bd	280X2	R	
3	P	B	273X1	R	
4	C	AC	256L X2	RP	
5	C	AC	256X2	RP	
6	Tm	AC	275X4	RP	
7	Tm	Bd	275A X4	RP	
8	O	B	269R X1	RP	missing NEVER Installed
9	O	B	264X1	RP	
10	Tm	ABdc	220X8	RP	
11	P	AC	219X4	R	
12	P	Bd	236X4	R	
13	P	Bd	222X2	R	
14	Tm	d	NS	RP	
15					
16	* ground	line +	concrete	foundation	Climbing Inspection
17	Coated	with	Line-X		Complete

Damage Code		Corrective Action Code		Remark Code:			
MB:	Missing Bolt	R:	Repaired	G:	Grounded Str	RS:	Removed Lower Step Bolts
B:	Bent	RP:	Replaced	BP:	Beat Packout	NS:	New Danger/Aerial/Number Signs
C:	Cracked	LF:	Left as Found	GW:	Applied Greywax	IP:	Installed Package Per Specs
TM:	Thin Member			NB:	New Bolts	FP:	Flipped /Straightened Plates
O:	Other						

Date: 2/8/21 **Foreman:** GREG VIA **Company:** LEMYRS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4

Back

Line Number: 588

Structure No: 224

Structure Type: SLT+ 15'

Back Substation: YAdKiN

Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 05-10-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 38

	Damage	Face	Member	Corrective Action	Remark
1	C	d	525 x 1	RP	BP - GW - NB
2	P	Bd	10 x 2	R	
3	P	Bd	11 x 2	R	
4	P	C	39 NEAR x 1	R	
5	C	d	222 x 1	RP	
6	P	B	222 x 1	R	
7	Tm	Bd	236 x 3	RP	
8	C	d	235 x 1	RP	
9	Tm	d	NS	RP	
10					
11					
12					
13					
14					
15					
16					climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2/9/21 Foreman: GREG VIA Company: LEMYR'S

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2 | face C | leg 3

face D | face B

leg 1 | face A | leg 4

Back

Line Number: 588

Structure No: 225

Structure Type: 5LT+20'LE

Back Substation: YAdKiN

Ahead Substation: FENtRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓	↓	↓	P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 05-11-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 39

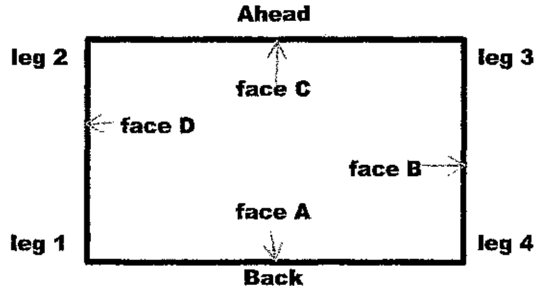
	Damage	Face	Member	Corrective Action	Remark
1	P	AC	595x4	R	BP - NB - GW
2	P	Bd	594x4	R	
3	Tm	ABcd	220x8	RP	
4	P	d	233x1	R	
5	P	AC	219x4	R	
6	P	Bd	236x4	R	
7	Tm	d	236x1	RP	
8	Tm	B	236x1	RP	
9	C	d	222x1	RP	
10	P	B	222x1	RP	
11	P	Bd	10x2	R	
12	P	Bd	11x2	R	
13	P	AC	38x4	R	
14	Tm	d	NS	RP	
15					climbing Inspection
16					Complete
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/26/21 **Foreman:** GREg ViA **Company:** LEMYER'S

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588
Structure No: 226
Structure Type: HA + 5' LE
Back Substation: YADKIN
Ahead Substation: FENTRESS

Foundation Inspection		
Date: 05-19-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	2	FR
	1	FR

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Action Code: **P: Applied A-120** **B: Baseshoe Replaced** **LF: Left as Found** **FP: Foundation Repaired**

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 4

	Damage	Face	Member	Corrective Action	Remark
1	MB	C	78L x 1	RP	BP - NB - GW
2	MB	C	79R x 1	RP	
3	C	AC	106 x 3	RP	
4	TM	A	501L x 1	RP	
5	TM	dB	501R x 2	RP	
6	TM	dB	501R x 2	RP	
7	C	B	112 x 1	RP	
8	P	d	112 x 1	R	
9	P	AC	101 x 2	R	
10	C	C	130 x 1	RP	
11	P	A	130 x 1	R	
12	P	A	129 x 1	R	
13	C	AC	128 x 2	RP	
14	P	A	126 x 2	R	
15	P	AC	123 x 2	R	
16	P	Bd	140 x 2	R	
17	P	Bd	140 x 2	R	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 5/12/21 **Foreman:** GREG VIA **Company:** LEMYR'S

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 226

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	142x2	R	BP - NB - GW
2	C	B	143x1	RP	|
3	Tm	d	NS	RP	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					climbing Inspection
30					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation: Complete Climbing Inspection

Ahead

leg 2 — face C — leg 3

face D — face B

leg 1 — face A — leg 4

Back

Line Number: 588

Structure No: 228

Structure Type: 5LT+35'LE

Back Substation: YADKin

Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3	✓		0.21725	0.16220	BP
Leg 4	✓		0.23125	0.21255	BP

Foundation Inspection

Date: 05-19-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating · B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 51

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	38X3	BP-NB-GW	
2	P	A	36NEARX1	BP-NB-GW	
3	P	C	37FARX1	BP-NB-GW	
4	P	BD	10X2	BP-NB-GW	
5	P	BD	11X2	BP-NB-GW	
6	B	D	111X1	RP-BP-NB-GW	
7	P	BD	222X2	BP-NB-GW	
8	P	AC	219X3	BP-NB-GW	
9	P	B	236X1	BP-NB-GW	
10	P	AC	217X2	BP-NB-GW	
11	P	AC	221X2	BP-NB-GW	
12	P	BD	235X2	BP-NB-GW	
13	P	D	233LX1	BP-NB-GW	
14	C	D	233LX1	RP-BP-NB-GW	
15	P	B	233RX1	BP-NB-GW	
16	P	BD	705X4	BP-NB	
17	P	BD	706X4	BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 5-5-2021 Foreman: Michael Davis Company: LE MYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 228

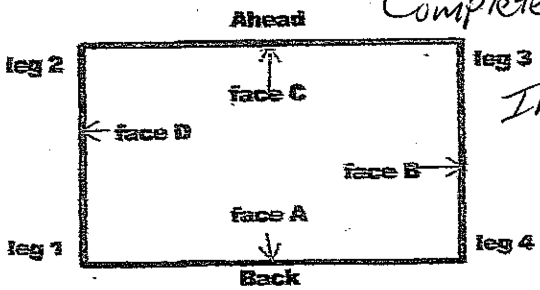
Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	BD	707x4	BP-NB-GW	
2	P	AC	702x3	BP-NB-GW	
3	P	AC	703x3	BP-NB-GW	
4	P	AC	704x3	BP-NB-GW	
5	P	C	709x1	BP-NB-GW	
6	C	B	730X2	RP-BP-NB-GW	
7	P	D	730x2	BP-NB-GW	
8	P	C	718X1	BP-NB-GW	
9	P	AC	733x2	BP-NB-GW	
10	P	BD	734x2	BP-NB-GW	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation Complete Climbing Inspection



Line Number: 588

Structure No: 229

Structure Type: 5L4 +35' LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion		Steel Measurements			
	Yes / No	Reading 1	Reading 2	Action Code	
Leg 1	✓	0.15715	0.10195	B P	
Leg 2	✓	0.22940	0.22770	B P	
Leg 3	✓	0.21230	0.26605	B P	
Leg 4	✓	0.15155	0.22680	B P	

Foundation Inspection		
Date: 05-20-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 52

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	718X2	BP-NB-GW	
2	P	AC	717X2	BP-NB-GW	
3	P	BD	730X3	BP-NB-GW	
4	C	D	730X1	RP-BP-NB-GW	
5	P	BD	729X3	BP-NB-GW	
6	C	B	706X1	RP-BP-NB-GW	
7	P	BD	706X3	BP-NB-GW	
8	P	BD	703X4	BP-NB-GW	
9	P	BD	704X4	BP-NB-GW	
10	P	AC	706X4	BP-NB-GW	
11	P	AC	705X4	BP-NB-GW	
12	P	AC	707X4	BP-NB-GW	
13	P	B	726X1	BP-NB-GW	
14	P	B	725X2	BP-NB-GW	
15	P	AC	713X3	BP-NB-GW	
16	P	B	723X1	BP-NB-GW	
17	P	B	721X1	BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 5-11-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 229

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	C	709X1	BP-NB-GW	
2	P	AC	217X2	BP-NB-GW	
3	P	AC	219X4	BP-NB-GW	
4	P	B	233LX1	BP-NB-GW	
5	P	B	233RX1	BP-NB-GW	
6	P	BD	222X2	BP-NB-GW	
7	P	BD	10X2	BPNB-GW	
8	P	BD	11X2	BP-NB-GW	
9	P	C	65RX1	BP-NB-GW	
10	P	A	66LX1	BP-NB-GW	
11	P	C	39FARX1	BP-NB-GW	
12	P	A	40NEARX1	BP-NB-GW	
13	P	A	37NEARX1	BP-NB-GW	
14	P	D	82LX1	BP-NB-GW	
15	MB	A	82LX1	R-NB	
16	TM-B	ABCD	220X8	RP-BP-NB-GW	
17	P	BD	734X2	BP-NB-GW	
18	TM	BD	734X2	RP-BP-NB-GW	
19	TM	AC	733X2	RP-BP-NB-GW	
20	P	AC	733X2	BP-NB-GW	
21	C	D	724X1	RP-BP-NB-GW	
22	O	ABCD	High Voltage Signs	NS	
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation
Ahead

Complete Climbing Inspection

leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4
	Back	

Line Number: 588

Structure No: 230

Structure Type: 5LA+

Back Substation: YADKIN

Ahead Substation: FENTRESS

Foundation Inspection

Date: 05-25-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

FR: Foundation Repaired

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 36

	Damage	Face	Member	Corrective Action	Remark
1	P	BD	662X4	BP-NB-GW	
2	P	AC	656X4	BP-NB-GW	
3	P	AC	651X4	BP-NB-GW	
4	C	BD	231LX2	RP-BP-NB-GW	
5	C	BD	231RX2	RP-BP-NB-GW	
6	C	BD	45LX2	RP-BP-NB-GW	
7	C	BD	45RX2	RP-BP-NB-GW	
8	P	A	38R NEAR X1	BP-NB-GW	
9	P	C	38L FAR	BP-NB-GW	
10	P	A	136R NEAR X1	BP-NB-GW	
11	P	C	136L FAR X1	BP-NB-GW	
12	P	AC	8X2	BP-NB-GW	
13	B	B	205X1	RP-BP-NB-GW	
14	P	BD	310X2	BP-NB-GW	
15	P	B	224X1	BP-NB-GW	
16	P	B	312X1	BP-NB-GW	
17	C	B	314X1	RP-BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 5-4-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 230

Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	C	AC	307X2	RP-BP-NB-GW	
2	P	BD	337X3	BP-NB-GW	
3	P	AC	328X3	BP-NB-GW	
4	P	B	333X1	BP-NB-GW	
5	P	C	330X1	BP-NB-GW	
6	MB	D	54X1	R-NB	
7	MB	D	55X1	R-NB	
8	TM	A	326X1	RP-BP-NB-GW	
9	O	ABCD	High Voltage Sighns	NS	
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4

Back

Line Number: 588
Structure No: 231
Structure Type: 5LT+25'LE
Back Substation: YADKIN
Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 05-25-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 43

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	219X4	R	BP - NB - GW
2	P	Bd	236x4	R	
3	P	Bd	10x2	R	
4	P	Bd	11X2	R	
5	P	AC	38x4	R	
6	P	Bd	222X2	R	
7	Tm	AC	601X4	RP	
8	P	AC	623x4	R	
9	P	Bd	624X4	R	
10	Tm	d	NS	RP	
11					
12					
13					
14					
15					
16					
17					Climbing Inspection Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/22/21 Foreman: GREG VIA Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Complete Climbing Inspection

Ahead

leg 2 | face C | leg 3

face D | face B

face A

leg 1 | Back | leg 4

Line Number: 588
Structure No: 232
Structure Type: 5LT+15'LE
Back Substation: YADKin
Ahead Substation: FENTRESS

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection		
Date: 05-26-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 36

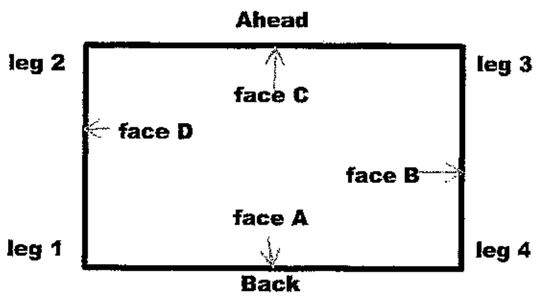
	Damage	Face	Member	Corrective Action	Remark
1	P	A	36NEARX1	BP-NB-GW	
2	P	A	37NEARX1	BP-NB-GW	
3	P	C	37FARX1	BP-NB-GW	
4	P	C	36-FARX1	BP-NB-GW	
5	P	A	40NEARX1	BP-NB-GW	
6	P	C	39FARX1	BP-NB-GW	
7	P	BD	10X2	BP-NB-GW	
8	P	BD	11X2	BP-NB-GW	
9	P	BD	222X2	BP-NB-GW	
10	C	D	235X1	RP-BP-NB-GW	
11	P	BD	236X2	BP-NB-GW	
12	P	A	565X1	BP-NB-GW	
13	P	B	566X1	BP-NB-GW	
14	O	ABCD	High Voltage Signs	NS	
15					
16					
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3-17-2021 **Foreman:** Michael Davis **Company:** L.E. MYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 233

Structure Type: LA + 25' LE

Back Substation: YAdKiN

Ahead Substation: FENtRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 05-12-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 34

	Damage	Face	Member	Corrective Action	Remark
1	P	C	651 x 1	R	BP - GW - NB
2	P	AC	656 x 4	R	
3	P	Bd	662 x 4	R	
4	P	AC	532 x 2	R	
5	P	C	327 x 1	R	
6	P	A	329 x 1	R	
7	P	d	337 x 1	R	
8	P	B	322 x 1	R	
9	P	B	315 x 1	R	
10	C	Bd	313 x 2	RP	
11	C	Bd	312 x 2	RP	
12	P	B	311 x 1	R	
13	P	B	310 x 1	P	
14	C	d	310 x 1	RP	
15	C	AC	306 x 2	RP	
16	C	C	307 x 1	RP	
17	C	Bd	45L x 2	RP	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/7/21 **Foreman:** GREg ViA **Company:** LEMYER'S

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 233

Page 2 of 2

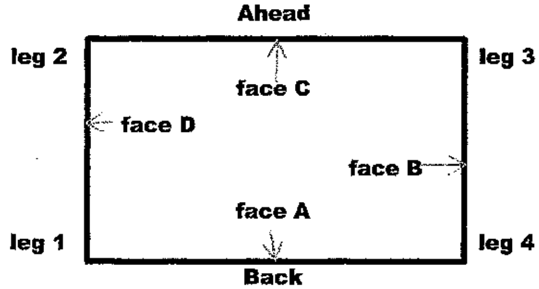
Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	C	Bd	45^R x 2	RP	BP - NB - GW
2	P	Bd	68 x 2	R	
3	P	Bd	67 x 2	R	
4	C	Bd	231^L x 2	RP	
5	C	Bd	231^R x 2	RP	
6	Tm	d	NS	RP	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					Climbing Inspection
30					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 234

Structure Type: 5LT+ 15' LE

Back Substation: Yadkin

Ahead Substation: Fentress

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 05-11-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 37

	Damage	Face	Member	Corrective Action	Remark
1	MB	A	215x1	RP	BP - GW - NB
2	P	AC	219x4	R	
3	P	Bd	236x4	R	
4	P	Bd	235x2	R	
5	P	Bd	237x2	R	
6	P	Bd	11x2	R	
7	P	Bd	10x2	R	
8	P	d	224x1	R	
9	P	Bd	222x2	R	
10	P	AC	38x4	R	
11	P	AC	18x4	R	
12	P	B	577x1	R	
13	P	AC	565x4	R	
14	P	Bd	566x4	R	
15	TM	d	NS	RP	
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/5/21 **Foreman:** Greg Via **Company:** LE Myers

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation
Ahead

Complete Climbing Inspection

leg 2 | face C | leg 3
face D | face B
face A
leg 1 | Back | leg 4

Line Number: 588
Structure No: 235
Structure Type: 5LT+40'LE
Back Substation:
Ahead Substation:

Foundation Inspection

Date: 04-28-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 56

	Damage	Face	Member	Corrective Action	Remark
1	P	BD	10x2	BP-NB-GW	
2	P	BD	11x2	BP-NB-GW	
3	P	BD	222x2	BP-NB-GW	
4	P	C	205x1	BP-NB-GW	
5	P	BD	236x4	BP-NB-GW	
6	P	AC	219x4	BP-NB-GW	
7	TM	A	217x1	RP-BP-NB-GW	
8	P	B	233Lx1	BP-NB-GW	
9	P	D	231Lx1	BP-NB-GW	
10	P	C	763x1	BP-NB-GW	
11	P	A C	754x3	BP-NB-GW	
12	P	A	770x1	BP-NB-GW	
13	C	B	776x1	RP-BP-NB-GW	
14	P	D	757x1	BP-NB-GW	
15	C	C	768x1	RP-BP-NB-GW	
16	C	D	782x2	RP-BP-NB-GW	
17	TM	D	784x1	RP-BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4-28-2021 **Foreman:** Michael Davis **Company:** LE MYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 235

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Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	BD	788X4	BP-NB-GW	
2	P	AC	787X4	BP-NB-GW	
3	O	B	structure Sighn	NS	
4	O	ABCD	High Voltage Sighn	NS	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation: Complete Climbing Inspection

Ahead

leg 2 — face C — leg 3

face D — face B

leg 1 — face A — leg 4

Back

Line Number: 588

Structure No: 236

Structure Type: 5LT+40'LE

Back Substation: YADKin

Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection		
Date: 04-28-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 56

	Damage	Face	Member	Corrective Action	Remark
1	P	C	39FARX1	BP-NB-GW	
2	P	C	37FARX1	BP-NB-GW	
3	P	A	36NEARX1	BP-NB-GW	
4	C	B	113X1	RP-BP-NB-GW	
5	P	BD	10x2	BP-NB-GW	
6	P	BD	11x2	BP-NB-GW	
7	P	BD	222x2	BP-NB-GW	
8	C	B	230X1	RP-BP-NB-GW	
9	P	BD	236x4	BP-NB-GW	
10	C	D	233LX1	RP-BP-NB-GW	
11	P	B	233LX1	BP-NB-GW	
12	P	D	233RX1	BP-NB-GW	
13	P	AC	219x3	BP-NB-GW	
14	TM	C	219X1	RP-BP-NB-GW	
15	C	C	215X1	RP-BP-NB-GW	
16	C	C	214X1	RP-BP-NB-GW	
17	C	D	231X1	RP-BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4-27-2021 Foreman: Michael S Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 236

Page 2 **of** 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	C	217X2		
2	P	C	759X1		
3	P	C	758X1		
4	C	AC	762X3		
5	C	A	763X1		
6	C	C	768X1		
7	C	A	769X1		
8	C	A	770X1		
9	C	B	783X1		
10	C	B	784X1		
11	P	D	784X1		
12	C	B	782X1		
13	TM-B	ABCD	220X4		
14	P	BD	755X2		
15	P	BD	756X2		
16	P	BD	757X2		
17	P	A	221X1		
18	C	B	776X1		
19	P	C	39FARX2		
20	O	B	Structure Sign	NS	
21	O	ABCD	High Voltage Signs	NS	
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2 | face C | leg 3

face D | face B

face A

leg 1 | leg 4

Back

Line Number: 588

Structure No: 238

Structure Type: 5LT+20' LE

Back Substation: YAdKiN

Ahead Substation: FENtRESS

Groundline Inspection					
	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 05-27-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 42

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	594x2	R	BP - GW - NB
2	P	Bd	595x2	R	
3	B	A	581x1	RP	
4	P	AC	38x4	R	
5	P	Bd	10x2	R	
6	P	Bd	11x2	R	
7	Tm	AC	220x2	RP	
8	Tm	B	220x2	RP	
9	P	d	591x1	R	
10	P	Bd	236x4	R	
11	mB	A	67²x1	RP	
12	C	B	235x1	RP	
13	Tm	d	NS	RP	
14					
15					
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3/25/21 **Foreman:** GREg ViA **Company:** LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2 — leg 3

face C

face D — face B

face A

leg 1 — leg 4

Back

Line Number: 588

Structure No: 239

Structure Type: 5LT+35LE

Back Substation: YAdKiN

Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	↓	↓	P
Leg 2		✓	↓	↓	P
Leg 3		✓	Good	VG	P
Leg 4	✓		0.209	0.225	B P

Foundation Inspection

Date: 06-02-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: **P:** Applied A-120 **B:** Baseshoe Replaced **LF:** Left as Found **FP:** Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 51

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	733X2	R	BP - NB - GW
2	P	Bd	734X2	R	
3	P	Bd	730X2	R	
4	P	Bd	729X2	R	
5	P	d	726X2	R	
6	P	Bd	708X2	R	
7	P	AC	219X4	R	
8	P	Bd	236X4	R	
9	P	d	222X1	R	
10	C	B	222X1	RP	
11	P	Bd	10X2	R	
12	P	Bd	11X2	R	
13	MB	A	82LX1	RP	
14	P	AC	38X4	R	
15	Tm	d	NS	RP	
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	**R:** Repaired	**G:** Grounded Str	**RS:** Removed Lower Step Bolts
B: Bent	**RP:** Replaced	**BP:** Beat Packout	**NS:** New Danger/Aerial/Number Signs
C: Cracked	**LF:** Left as Found	**GW:** Applied Greywax	**IP:** Installed Package Per Specs
TM: Thin Member		**NB:** New Bolts	**FP:** Flipped /Straightened Plates
O: Other			

Date: 4/29/21 **Foreman:** GREg V.A **Company:** LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2 | face C | leg 3

face D | face B

face A

leg 1 | Back | leg 4

Line Number: 588

Structure No: 240

Structure Type: 5MA+20'BE+30'LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Foundation Inspection

Date: 03-24-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	Good	VG	P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓			P

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 61

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	423 x 4	R	BP - GW - NB
2	P	AC	409 x 2	R	
3	P	AC	409 x 2	R	
4	C	A	404 x 1	RP	
5	P	AC	404 x 2	R	
6	C	A	409 x 1	RP	
7	P	Bd	436 x 3	R	
8	P	Bd	439 x 2	R	
9	C	d	315 x 1	RP	
10	C	d	1313 x 1	RP	
11	C	d	1312 x 1	RP	
12	P	Bd	311 x 2	R	
13	P	A	1306 x 1	R	
14	P	Bd	1238 x 2	R	
15	P	Bd	1310 x 2	R	
16	P	Bd	1770 x 4	R	
17	P	AC	1760 x 4	R	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 1/26/21 **Foreman:** GREG VIA **Company:** LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 240

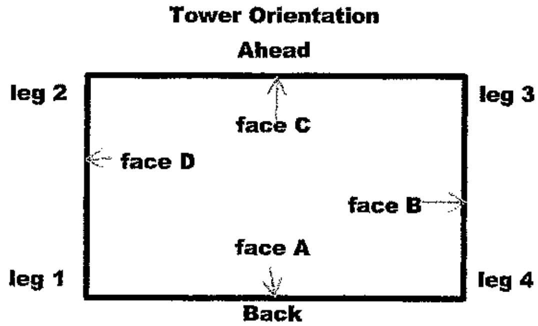
Page 2 of 2

Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	TM	d	NS	RP	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					Climbing Inspection
29					Complete
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet



Line Number: 588

Structure No: 241

Structure Type: 5LT+ 35' LE

Back Substation: YAdKiN

Ahead Substation: FENtRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1	✓		0.2425	0.355	B P
Leg 2		✓	↓	↓	P
Leg 3		✓	↓	↓	P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 03-24-21		
Foreman:		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 52

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	38 x 4	R	BP - GW - NB
2	P	Bd	10 x 2	R	|
3	P	Bd	11 x 2	R	|
4	P	Bd	222 x 2	R	|
5	P	AC	219 x 4	R	|
6	P	Bd	236 x 4	R	|
7	C	B	706 x 1	RP	|
8	C	C	713 x 1	RP	|
9	P	d	728 x 1	R	|
10	P	C	716 x 1	R	|
11	P	A	733 x 1	R	|
12	P	d	734 x 1	R	|
13	C	B	231 x 1	RP	|
14	Tm	d	NS	RP	
15					
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3/24/21 Foreman: GREg ViA Company: LEMyERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

Complete Climbing Inspection

leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4

Back

Line Number: 588

Structure No: 242

Structure Type: 5LT-30'LE

Back Substation: YADKin

Ahead Substation: FENTRESS

Foundation Inspection

Date: 02-10-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 51

	Damage	Face	Member	Corrective Action	Remark
1	P	A	36NEARX1	BP-NB-GW	
2	P	C	37FARX1	BP-NB-GW	
3	P	C	36FARX1	BP-NB-GW	
4	P	BD	222X2	BP-NB-GW	
5	B	D	111X2	RP-BP-NB-GW	
6	B	D	112X2	RP-BP-NB-GW	
7	B	D	113X2	RP-BP-NB-GW	
8	TM	B	236X1	RP-BP-NB-GW	
9	P	D	233LX1	BP-NB-GW	
10	B-TM	ABCD	220X8	RP-BP-NB-GW	
11	TM	C	221X1	RP-BP-NB-GW	
12	P	AC	219X1	BP-NB-GW	
13	C	B	235X1	RP-BP-NB-GW	
14	O	B	Structure Sign	NS	
15	O	ABCD	High Voltage Signs	NS	
16					
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2-3-2021 Foreman: Michael Davis Company: L.E. MYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation: Complete Climbing Inspection

Ahead

leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4

Back

Line Number: 588

Structure No: 243

Structure Type: 5LT+5LE

Back Substation: YADKIN

Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1	✓		0.20680	0.24790	BP
Leg 2		✓	VG	VG	P
Leg 3	✓		0.22885	0.25505	B
Leg 4		✓	VG	VG	P

Foundation Inspection

Date: 02-10-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating B: Baseshoe Replaced LF: Left as Found FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ______ No Quantity: 31

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	40NEARX2	BP-NB-GW	
2	P	AC	39FARX2	BP-NB-GW	
3	P	A	36NEARX1	BP-NB-GW	
4	P	A	37NEARX1	BP-NB-GW	
5	P	C	36FARX1	BP-NB-GW	
6	P	C	37FARX1	BP-NB-GW	
7	P	BD	10X2	BP-NB-GW	
8	P	BD	11X2	BP-NB-GW	
9	C	D	222X1	RP-BP-NB-GW	
10	TM	AC	219X4	RP-BP-NB-GW	
11	TM	BD	236X4	RP-BP-NB-GW	
12	TM	D	235X1	RP-BP-NB-GW	
13	P	AC	501X2	RP-BP-NB-GW	
14	P	BD	502X2	BP-NB-GW	
15	O	AC	High Voltage Signs	NS	
16	O	B	Structure Sign	NS	
17	TM	C	503X1	RP-BP-NB-GW	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2-5-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 243

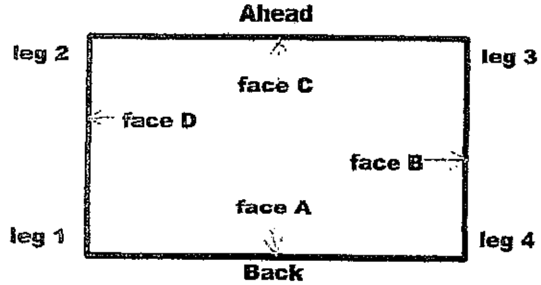
Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	TM	B	504X1	RP-BP-NB-GW	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588
Structure No: 245
Structure Type: MT+40LE
Back Substation: YADKIN
Ahead Substation: FENTRESS

Groundline Inspection					
Severe Corrosion			**Steel Measurements**		
	Yes	**No**	**Reading 1**	**Reading 2**	**Action Code**
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 06-02-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: **P:** Applied A-120 **B:** Baseshoe Replaced **LF:** Left as Found **FP:** Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 54

	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	1010 x 2	R	BP - GW - NB
2	P	Bd	1011 x 2	R	
3	C	B	1240 x 1	RP	
4	C	B	1240A x 1	RP	
5	C	Bd	1222 x 2	RP	
6	C	B	1229A x 1	RP	
7	P	B	1227 x 1	R	
8	C	B	1226 x 1	RP	
9	C	B	1225 x 1	RP	
10	P	B	1223 x 1	R	
11	P	d	1227 x 1	R	
12	C	d	1226 x 1	RP	
13	P	d	1225 x 1	R	
14	P	d	1240 x 1	R	
15	P	d	1240A x 1	R	
16	P	Bd	1236 x 4	R	
17	P	AC	217 x 2	R	

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	**R:** Repaired	**G:** Grounded Str	**RS:** Removed Lower Step Bolts
B: Bent	**RP:** Replaced	**BP:** Beat Packout	**NS:** New Danger/Aerial/Number Signs
C: Cracked	**LF:** Left as Found	**GW:** Applied Greywax	**IP:** Installed Package Per Specs
TM: Thin Member		**NB:** New Bolts	**FP:** Flipped /Straightened Plates
O: Other			

Date: 5/5/21 **Foreman:** GREG VIA **Company:** LEMYRES

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Line Number: 588

Structure No: 245

Page 2 **of** 2

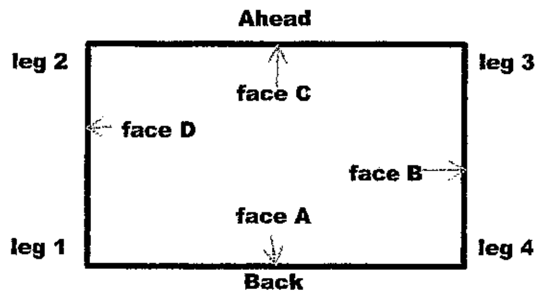
Tower Inspection

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	1219 x 4	R	BP - GW - NB
2	P	AC	1210 x 2	R	
3	P	AC	1208 x 2	R	
4	P	Bd	1236 x 4	R	
5	P	Bd	1787 x 4	R	
6	P	Bd	1788 x 4	R	
7	P	A	759 x 1	R	
8	P	d	733 x 1	R	
9	P	A	760 x 1	R	
10	P	d	744/ x 1	R	
11	P	AC	762 x 2	R	
12	P	A	754 x 1	R	
13	P	d	757 x 1	R	
14	Tm	d	NS	RP	
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					Climbing Inspection
30					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 246

Structure Type: 5LT+ 30' LE

Back Substation: Yadkin

Ahead Substation: Fentress

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 06-02-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	2	FR
	1	FR
	1	FR

Action Code: **P: Applied A-120** **B: Baseshoe Replaced** **LF: Left as Found** **FP: Foundation Repaired**

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 43

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	673x4	R	BP - GW - NB
2	P	Bd	674x4	R	
3	C	AC	217x2	RP	
4	P	A	221x1	R	
5	P	AC	219x4	R	
6	P	Bd	236x4	R	
7	P	d	602x1	R	
8	Tm	ABcd	220x3	RP	
9	P	AC	38x4	R	
10	P	Bd	10x2	R	
11	P	Bd	11x2	R	
12	P	Bd	222x2	R	
13	P	AC	43^Rx2	R	
14	P	AC	43^Lx2	R	
15	Tm	d	NS	RP	
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/12/21 **Foreman:** Greg Via **Company:** Lemyers

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

	Ahead	
leg 2	face C	leg 3
	face D / face B	
	face A	
leg 1	Back	leg 4

Line Number: 588
Structure No: 247
Structure Type: 5LT+30LE
Back Substation: YAdKiN
Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1		✓	↓	↓	P
Leg 2		✓	Good	VG	P
Leg 3	✓		0.225	0.232	B P
Leg 4	✓		0.242	0.228	B P

Foundation Inspection

Date: 06-08-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 43

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	673x4	R	BP - GW - NB
2	P	AC	219x4	R	
3	P	Bd	674x4	R	
4	Tm	ABCd	220x8	RP	
5	P	Bd	236x4	R	
6	P	C	217x1	R	
7	P	C	210x1	R	
8	P	C	207x1	R	
9	P	Bd	222x2	R	
10	P	AC	38x4	R	
11	P	Bd	10x2	R	
12	P	Bd	11x2	R	
13	P	A	65^Lx1	R	
14	P	AC	43^Lx2	R	
15	P	AC	43^Rx2	R	
16	Tm	d	NS	RP	climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/14/21 **Foreman:** GREG VIA **Company:** LEMYRÉS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4

Back

Line Number: 588

Structure No: 248

Structure Type: 5LT+ 15'LE

Back Substation: Yadkin

Ahead Substation: Fentress

Foundation Inspection

Date: 06-09-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 38

	Damage	Face	Member	Corrective Action	Remark
1	M	d	27x1	RP	BP - GW - NB
2	P	AC	38x4	R	
3	P	Bd	11x2	R	
4	P	Bd	10x2	R	
5	P	Bd	222x2	R	
6	P	AC	219x4	R	
7	P	Bd	236x4	R	
8	P	d	593x1	R	
9	P	A	565x1	R	
10	P	d	566x1	R	
11	P	C	235x1	R	
12	Tm	d	NS	RP	
13					
14					
15					
16					
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3/22/21 Foreman: Greg Via Company: Lemyres

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

	Ahead	
leg 2	face C	leg 3
face D		face B
leg 1	face A	leg 4
	Back	

Line Number: 588

Structure No: 249

Structure Type: MA + 25' LE

Back Substation: YadKin

Ahead Substation: FENTRESS

Foundation Inspection

Date: 06-14-21

Foreman: Allen Rundgren

Groundline Inspection

	Severe Corrosion		Steel Measurements			Foundation Inspection	
	Yes	No	Reading 1	Reading 2	Action Code	Fnd Code	Action Code
Leg 1		✓			P	1	FR
Leg 2		✓			P	1	FR
Leg 3		✓			P	1	FR
Leg 4		✓	Good	VG	P	1	FR

See spec book for explanation of foundation codes

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ___ No **Quantity:** 43

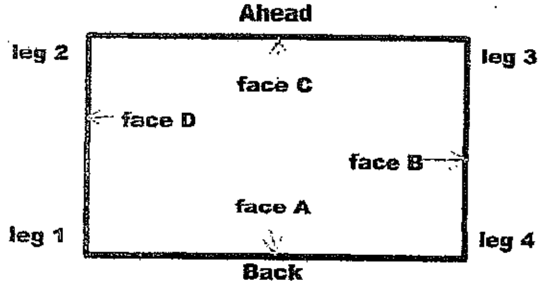
	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	1310 x 2	R	BP - GW - NB
2	P	A	1222^R x 1	R	
3	P	A	1189 x 1	R	
4	P	A	1005^A x 1	R	
5	P	A	1261 x 1	R	
6	P	AC	1028 x 2	R	
7	P	Bd	1238 x 2	R	
8	P	Bd	1239 x 2	R	
9	Tm	Bd	1711 x 2	RP	
10	P	AC	1304 x 2	R	
11	C	B	1314 x 1	RP	
12	P	B	1312 x 1	R	
13	P	B	311 x 1	R	
14	P	AC	1306 x 2	R	
15	P	AC	1309 x 2	R	
16	P	AC	1710 x 4	R	Climbing Inspection
17	Tm	d	NS	RP	Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 3/29/21 **Foreman:** GREg ViA **Company:** LEMYRE'S

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation



Line Number: 588

Structure No: 250

Structure Type: 5LT+ 30LE

Back Substation: YAdKiN

Ahead Substation: FENtRESS

Groundline Inspection					
Severe Corrosion			Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection		
Date: 06-09-21		
Foreman: Allen Rundgren		
See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 47

	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	10x2	R	BP - GW - NB
2	P	Bd	11x2	R	
3	P	AC	38x4	R	
4	P	AC	219x4	R	
5	P	Bd	236x4	R	
6	P	d	235x1	R	
7	C	B	235x1	RP	
8	P	AC	673x4	R	
9	P	Bd	674x4	R	
10	Tm	d	NS	RP	
11					
12					
13					
14					
15					Climbing Inspection
16					Complete
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 5/3/21 Foreman: GREg ViA Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2 — face C — leg 3

face D — face B

leg 1 — face A — leg 4

Back

Line Number: 588

Structure No: 251

Structure Type: 5LT+ 20' LE

Back Substation: YAdKiN

Ahead Substation: FENtRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 06-14-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No **Quantity:** 40

	Damage	Face	Member	Corrective Action	Remark
1	P	AC	594 x 2	R	BP - GW - NB
2	P	Bd	595 x 2	R	
3	P	d	235 x 1	R	
4	P	d	237 x 1	R	
5	P	d	233 x 1	R	
6	P	AC	219 x 4	R	
7	P	Bd	236 x 4	R	
8	P	AC	38 x 4	R	
9	P	Bd	10 x 2	R	
10	P	Bd	11 x 2	R	
11	B	A	114 x 1	RP	
12	TM	d	N [illegible] 5	RP	
13					
14					
15					Climbing Inspection
16					Complete
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 4/27/21 **Foreman:** GREg ViA **Company:** LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

Ahead

leg 2 | face C | leg 3

face D | face B

face A

leg 1 | leg 4

Back

Line Number: 588

Structure No: 252

Structure Type: 5LT+35'LE

Back Substation: YAdKiN

Ahead Substation: FENtRESS

Groundline Inspection

	Severe Corrosion		Steel Measurements		
	Yes	No	Reading 1	Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 06-14-21

Foreman: Allen Ringdyren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	1	FR
	1	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 51

	Damage	Face	Member	Corrective Action	Remark
1	P	Bd	10x2	R	BP - GW - NB
2	P	Bd	11x2	R	
3	P	AC	38x4	R	
4	P	AC	219x4	R	
5	P	Bd	236x4	R	
6	C	d	222x1	RP	
7	P	B	222x1	R	
8	P	Bd	734x4	R	
9	P	AC	733x4	R	
10	P	AC	704x2	R	
11	P	B	707x1	R	
12	P	d	722x1	R	
13	Tm	d	NS	RP	
14					
15					
16					
17					Climbing Inspection Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 5/4/21 Foreman: GREg ViA Company: LEmyRES

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation: Complete Climbing Inspection

Ahead

leg 2 | face C | leg 3

face D | face B

leg 1 | face A | leg 4

Back

Line Number: 588

Structure No: 253

Structure Type: 5LT+20'LE

Back Substation: YADYIN

Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1		✓	VG	VG	P
Leg 2		✓	VG	VG	P
Leg 3		✓	VG	VG	P
Leg 4		✓	VG	VG	P

Foundation Inspection

Date: 02-08-21

Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	2	FR
	1	FR
	1	FR

Action Code: P: Applied Leg Coating · B: Baseshoe Replaced · LF: Left as Found · FR: Foundation Repaired

In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 40

	Damage	Face	Member	Corrective Action	Remark
1	P	C	37FARX1	BP-NB-GW	
2	P	BD	10X2	BP-NB-GW	
3	P	BD	11X2	BP-NB-GW	
4	P	AC	219X4	BP-NB-GW	
5	P	BD	236X3	BP-NB-GW	
6	TM	B	236X1	RP-BP-NB-GW	
7	TM-B	ABCD	220X8	RP-BP-NB-GW	
8	P	A	217X1	BP-NB-GW	
9	P	BD	595X3	BP-NB-GW	
10	P	AC	594X3	BP-NB-GW	
11	P	AC	576X3	BP-NB-GW	
12	P	BD	577X3	BP-NB-GW	
13	O	AC	High Voltage Signs	NS	
14	O	B	Structure Sign	NS	
15					
16					
17					

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 1-26-2021 Foreman: Michael Davis Company: LEMYERS

Weathering Steel Tower Inspection/Rehabilitation Data Sheet

Tower Orientation

leg 2	Ahead / face C	leg 3
face D		face B
leg 1	face A / Back	leg 4

Line Number: 588
Structure No: 254
Structure Type: 5DE + 20' LE
Back Substation: YADKIN
Ahead Substation: FENTRESS

Groundline Inspection

	Severe Corrosion Yes	Severe Corrosion No	Steel Measurements Reading 1	Steel Measurements Reading 2	Action Code
Leg 1		✓			P
Leg 2		✓			P
Leg 3		✓			P
Leg 4		✓	Good	VG	P

Foundation Inspection

Date: 02-08-21
Foreman: Allen Rundgren

See spec book for explanation of foundation codes	Fnd Code	Action Code
	1	FR
	2	FR
	2	FR
	1	FR

Action Code: P: Applied A-120 B: Baseshoe Replaced LF: Left as Found FP: Foundation Repaired
In Lieu of Measurements - VG: Visually Inspected - Good

Tower Inspection

Step Bolt Clips Added: ✓ Yes ____ No Quantity: 14

	Damage	Face	Member	Corrective Action	Remark
1	C	ABcd	529 x 5	RP	BP - GW - NB
2	C	ACd	530 x 3	RP	
3	C	ACd	531 x 3	RP	
4	P	Bd	132 x 2	R	
5	C	d	128A x 1	RP	
6	C	d	128 x 1	RP	
7	P	B	128A x 1	R	
8	C	C	113 x 1	RP	
9	P	A	113 x 1	R	
10	Tm	d	NS	RP	
11					
12					
13					
14					
15					
16					Climbing Inspection
17					Complete

Damage Code	Corrective Action Code	Remark Code:	
MB: Missing Bolt	R: Repaired	G: Grounded Str	RS: Removed Lower Step Bolts
B: Bent	RP: Replaced	BP: Beat Packout	NS: New Danger/Aerial/Number Signs
C: Cracked	LF: Left as Found	GW: Applied Greywax	IP: Installed Package Per Specs
TM: Thin Member		NB: New Bolts	FP: Flipped /Straightened Plates
O: Other			

Date: 2/3/21 Foreman: GREG VIA Company: LEMYERS

Dominion℠

Transmission Specification Book

TRANSMISSION PROJECTS

701 E Cary street, Richmond, VA 23219

CORTEN TOWER MONITORING PROGRAM

LINE 588 YADKIN TO FENTRESS

PROJECT ENGINEER:
CHRIS N. HOULIHAN
(804) 771-6742
(804) 761-4491

ALTERNATE CONTACT:
MARK WILSON
(804) 771-4408
(804) 370-4678

DESIGN VERIFICATION

______________________ DATE 1/26/17
(PROJECT ENGINEER)

______________________ DATE ______
(STRUCTURAL ENGINEER)

Work Summary
Corten Lattice Monitoring Program
Line 588

The purpose of this work is to monitor the overall condition of, and record the thickness of, specified corten transmission tower members of Line 588 in Chesapeake, Virginia. Four structures on this transmission line have been pre-selected for observations. Refer to the included structure location sheets for the selected structures.

The specification for this work will be the *Corten Study & Analysis Process Specification,* included herein. The crews performing the work shall be thoroughly familiar with the specification. Any questions regarding the processes described herein should be directed to Chris Houlihan (804-771-6742) or Mark Wilson (804-771-4408) in the Electric Transmission Engineering Department.

Upon completion of the work, all recording sheets and checklists shall be submitted back to Dominion Transmission Engineering for analysis and record keeping.

CORTEN STUDY & ANALYSIS
PROCESS SPECIFICATION

1.0 Scope of Work

1.1 This specification includes the general specifications for measuring the thickness of corten transmission tower structural members, as well as conducting a visual evaluation of the tower.

1.2 It is the intent of this specification to cover the entire process related to measuring the thickness of select structural members to determine current corrosion level and rate of corrosion over time.

1.3 The location of the specific work is identified on the included structure location sheet.

1.4 Items necessary to perform the task:

1.4.1 Worksheets for recording measurements and specifications describing the work.
1.4.2 Brass tags for marking measured members (Stock Item #76751000), and galvanized wire for attaching
1.4.3 Ultrasonic Thickness Gage (NDT Systems)
1.4.4 Digital Calipers
1.4.5 Wire brush

2.0 Measuring Process

2.1 The equipment used for measuring the thickness of members shall be an Ultrasonic Thickness Gage. Refer to the operating manual for usage details, and note the following:

2.1.1 The gage shall be zeroed at the start of each working day in accordance with the manufacturer directions.

2.1.2 After zeroing, the gage shall be calibrated at least once per day. Calibration shall be completed by using the *Calibration by Thickness Scrolling* method detailed in the operating manual. The "material of known thickness" for this method shall be a section of corten steel that has been measured using a digital caliper. This calibration process may need to be completed more frequently if there are significant changes in the weather conditions over the course of the day.

2.2 Refer to the structure location sheets for specific structures to be measured. Structures shown in bold are the specified structures for this monitoring program.

Structures should not be skipped or substituted without consulting the Transmission Engineer: see name on front of specification book.

2.3 Each designated structure has eight (8) members that have been pre-selected for measuring as indicated on the associated drawings. Of these members, **measurements are only to be conducted if the identified members have not been previously replaced or otherwise rehabilitated.** Rehabilitated members should be readily identifiable against original structural members by noting some of the following:

2.3.1 Rehabilitated members may show a lesser degree of patina, or less pitting than original members.

2.3.2 All rehabilitated members would have had "greywax" placed between the rehabilitated member and the original member, at the connections.

If a member is identified as having been previously rehabilitated, write "REHABBED" on the measurement recording sheet and otherwise leave blank.

2.4 Members to be measured shall be lightly wire brushed to remove any debris or loose rust that may interfere with the measuring process. Do not grind away any patina.

2.5 Conduct measurements in accordance with directions provided in the operating manual for the Ultrasonic Thickness Gage, and record the results on the measurement sheets provided in the specification book.

2.6 Using brass tags, mark measured members to aid in identifying the measured members in the future, for re-measuring.

3.0 Visual Evaluation

3.1 Included with the measurement sheets is a coversheet with a visual evaluation checklist. This checklist is intended to be used by the crews for a subjective evaluation of the tower. The crews should record the degree of any issues by circling what they feel is the appropriate number, and making additional notes as they feel is appropriate.

4.0 Record Keeping

4.1 All measurement and visual evaluation sheets shall be submitted back to the Transmission Engineer for analysis and record-keeping.

Structure Number	Tower Type	Structure Height	Notes
Yadkin Substation			
588/1	Backbone		
588/2	5LA + 30'LE		
588/3	**5LT + 25'LE**	111'	
588/4	5MA + 25'LE		
588/5	5HA + 30'LE		
588/6	5LT + 20'BE + 40'LE		
588/7	5DE + 20'LE		
588/8	5LT + 35'LE		
588/9	5LT + 35'LE		
588/10	5LT + 25'LE		
588/11	5LT + 40'LE		
588/12	5LA + 15'LE		
588/13	5HA + 10'LE		
588/14	5LA + 40'LE		
588/15	5LT + 40'LE		
588/16	5LT + 35'LE		
588/17	5LT + 20'BE + 30'LE		
588/18	5LT + 40'BE + 35'LE		
588/19	5LT + 40'BE + 35'LE		
588/20	5LT + 20'BE + 30'LE		
588/21	5LT + 30'LE		
588/22	5LT + 30'LE		
588/23	5LT + 30'LE		
588/24	5LT + 40'LE		
588/25	5LT + 20'LE		
588/26	5LT + 35'LE		
588/27	5LA + 35'LE		
~~**588/28**~~	**5LT + 25'LE**	111'	
588/29	5LT + 35'LE		
588/30	5LT + 25'LE		
588/31	5LT + 35'LE		
588/32	5LT + 30'LE		
588/33	5LT + 35'LE		
588/34	5LT + 30'LE		
588/35	5LT + 35'LE		
588/36	5LT + 20'LE		
588/37	5LT + 35'LE		

185
186
187
188

* Need to contact owner. Tower in horse pasture. Owner upset last time. "Glass eye"

Line 579 - Yadkin to Fentress
Page 1 of 2

	Structure Number	Tower Type	Structure Height	Notes
	588/38	5LT + 20'LE		
	588/39	5LT + 20'BE + 30'LE		
	588/40	5LT + 15'LE		
	588/41	5LT + 20'LE		
	588/42	5HA + 5'LE		
	588/43	5LT + 35'LE		
	588/44	5LT + 35'LE		
	588/45	5LT + 35'LE		
	588/46	5LA + 15'LE		
231	**588/47**	**5LT + 25'LE**	111'	
	588/48	5LT + 15'LE		
	588/49	5LA + 15'LE		
	588/50	5LT + 15'LE		
	588/51	5LT + 40'LE		
	588/52	5LT + 40'LE		
	588/53	5MA + 20'LE		
	588/54	5LT + 15'LE		
	588/55	5LT + 35'LE		
	588/56	5MA + 20'BE + 30'LE		
	588/57	5LT + 35'LE		
	588/58	5LT + 30'LE		
	588/59	5LT + 5'LE		
	588/60	5DE + 15'LE		
	588/61	5MT + 40'LE		
	588/62	5LT + 25'LE		
247	**588/63**	**5LT + 25'LE**	111'	
	588/64	5LT + 15'LE		
	588/65	5MA + 20'LE		
	588/66	5LT + 30'LE		
	588/67	5LT + 20'LE		
	588/68	5LT + 35'LE		
	588/69	5LT + 20'LE		
	588/70	5DE + 20'LE		
	588/71	H-frame		
256	588/72	Backbone		
	Fentress Substation			

Line 579 - Yadkin to Fentress
Page 2 of 2

VISUAL EVALUATION

STR. # 588/~~3~~187

Are there missing bolts, or bolts where the bolt head has popped off?

1 2 3 4 5 (1 = None, 5 = Many Missing/Damaged Bolts)

Are there loose members/members with play in the bolted connections?

1 2 3 4 5 (1 = None, 5 = Significant # of Loose Members)

Are there cracked, bent and/or missing structural members?

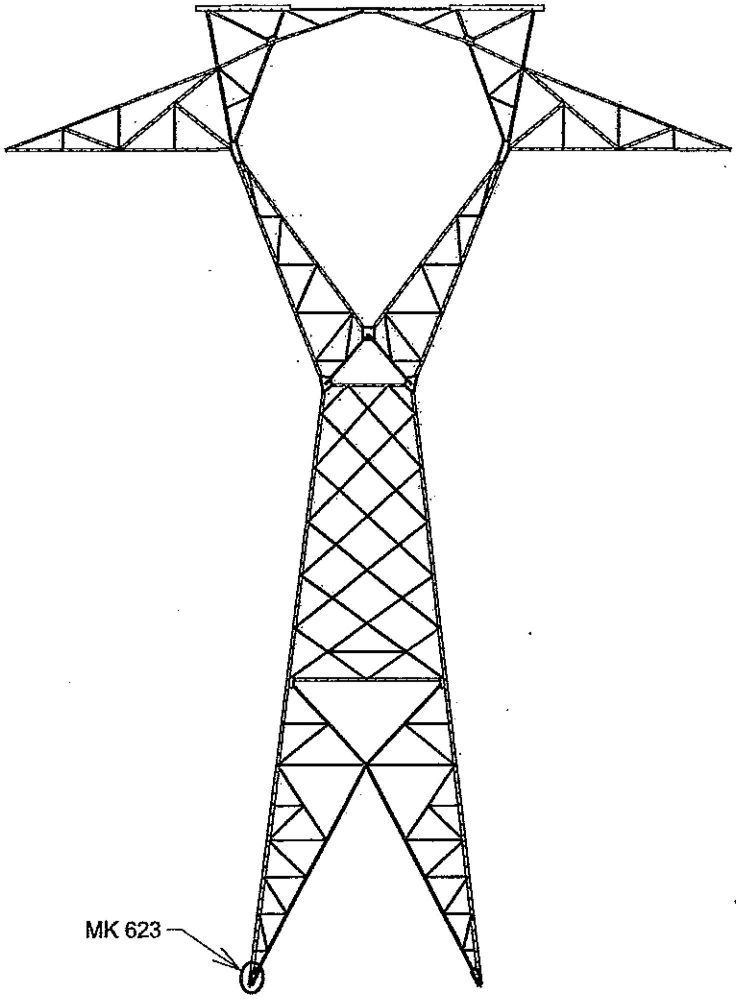
1 2 3 4 5 (1 = None, 5 = Severe Damage)

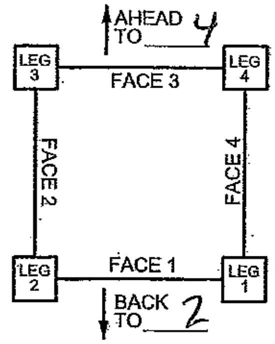
Is there extensive joint packout?

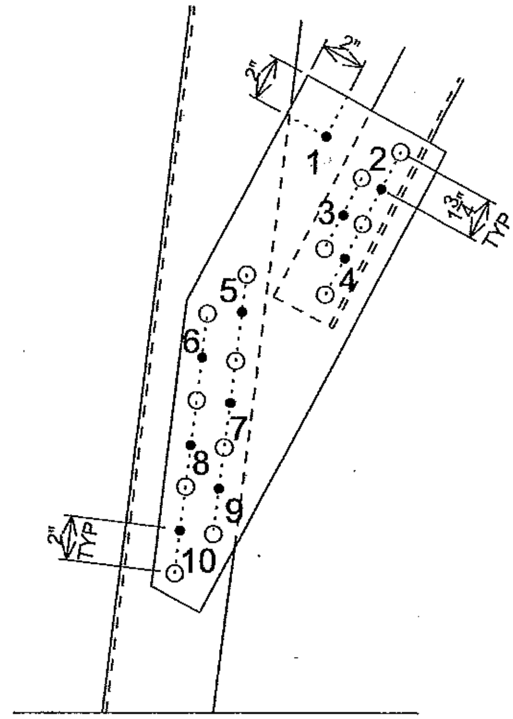
1 2 3 4 5 (1 = None, 5 = Severe Packout)

Is there notable foundation damage?

1 2 3 4 5 (1 = None, 5 = Severe Damage)







LEG EXT. 25'

STR NO. 588/3187 FACE NO. 1

MARK NO 623 ORIG THICK ¼" LEG NO. 2

.459 .335 .466 .433 .492 .492 .446 .488 .443 .45

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.260~~	~~.264~~	~~.276~~	~~.265~~	~~.280~~	~~.258~~	~~.275~~	~~.300~~	~~.273~~	~~.264~~

MEASUREMENT GUIDELINES:

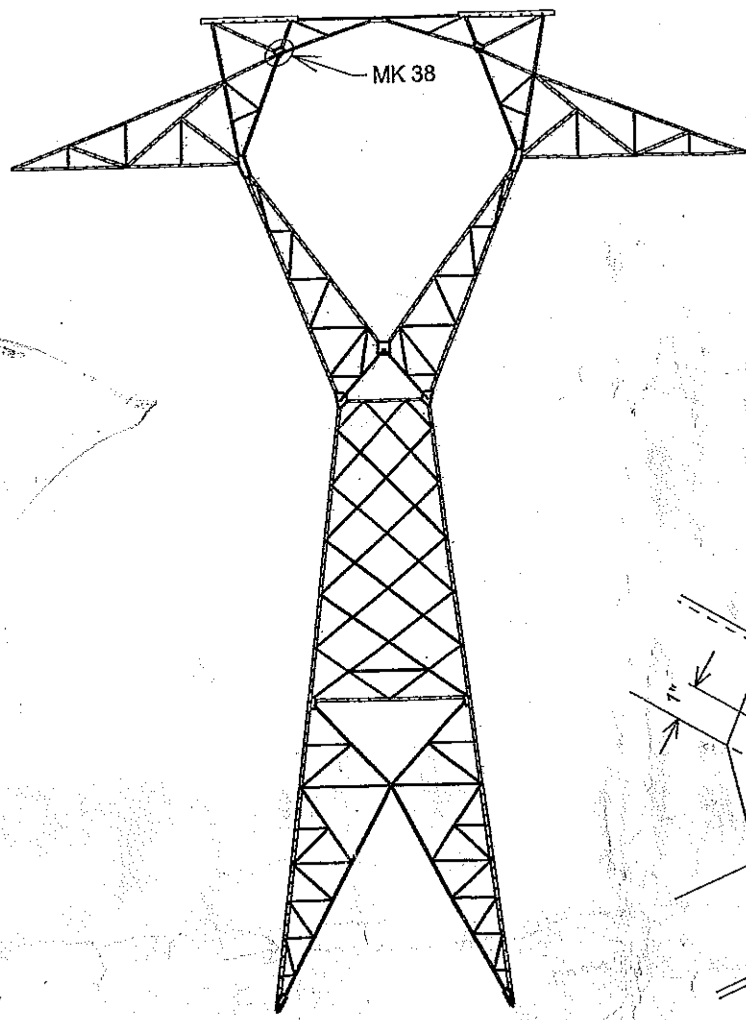
1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

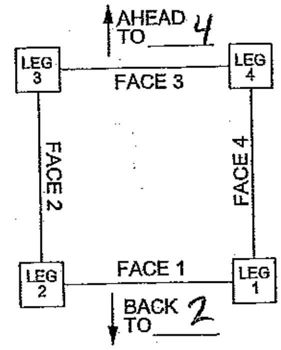
2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

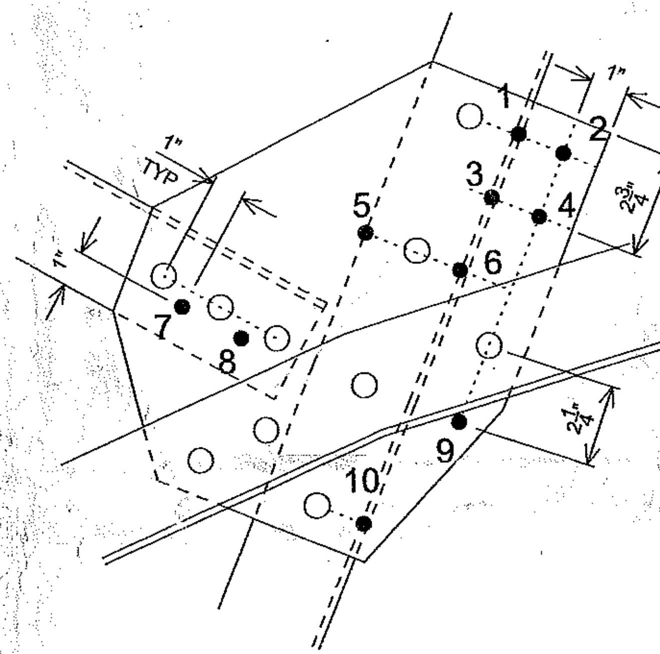
3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

TESBORD1 SPEC$







STR NO. 588/~~3~~187 FACE NO. 1

MARK NO 38 ORIG THICK ¼" LEG NO. ______

.213 .248 .221 .251 .271 .211 .225 .220 .250 .235

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.225~~	~~.227~~	~~.234~~	~~.198~~	~~.191~~	~~.214~~	~~.237~~	~~.206~~	~~.218~~	~~.200~~

MEASUREMENT GUIDELINES:

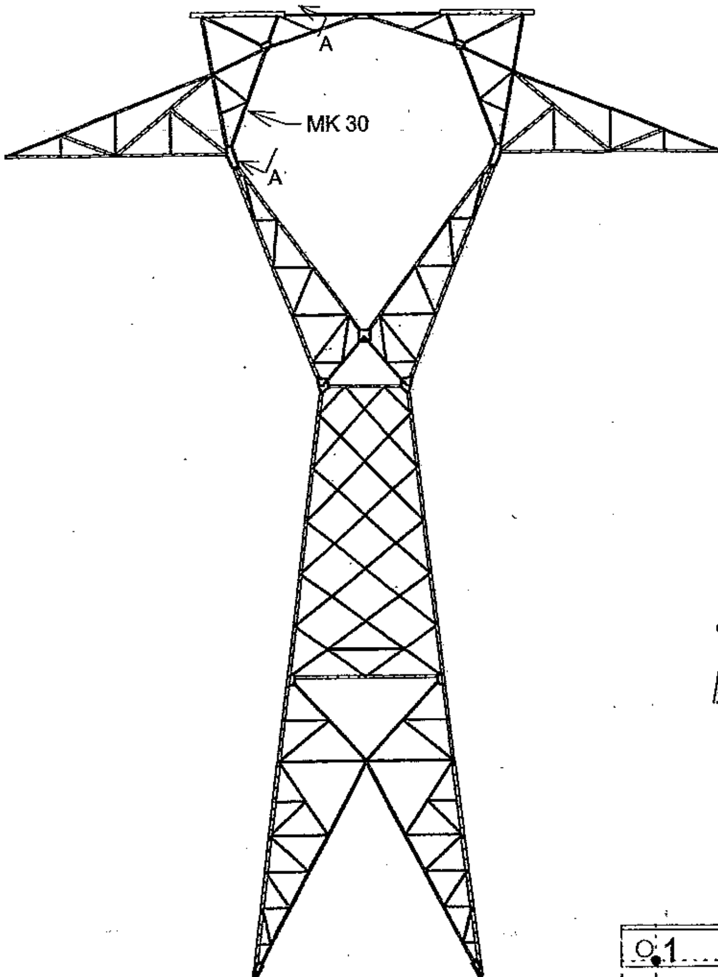
1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

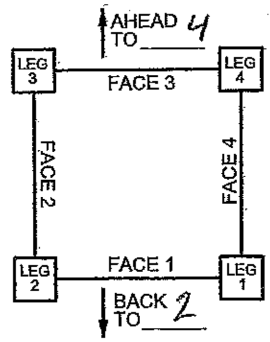
2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

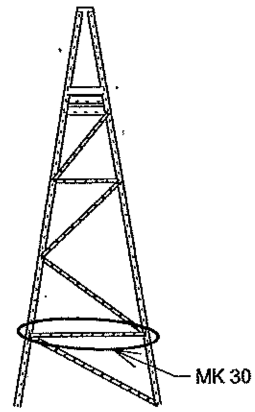
3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

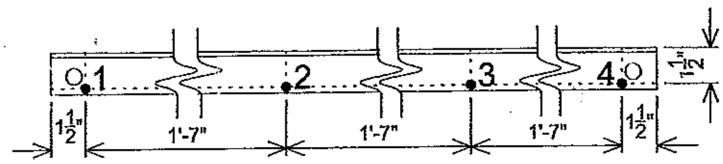
$SYTIME$ $SPEC$ TESBORD1







Section A-A



STR NO. 588/3187 FACE NO. 2

MARK NO 30 ORIG THICK 3/16" LEG NO. ________

MEASUREMENT LOCATION	1	2	3	4
THICKNESS	~~.147~~ .244	~~.186~~ .240	~~.156~~ .208	~~.186~~ .230

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

SPEC$

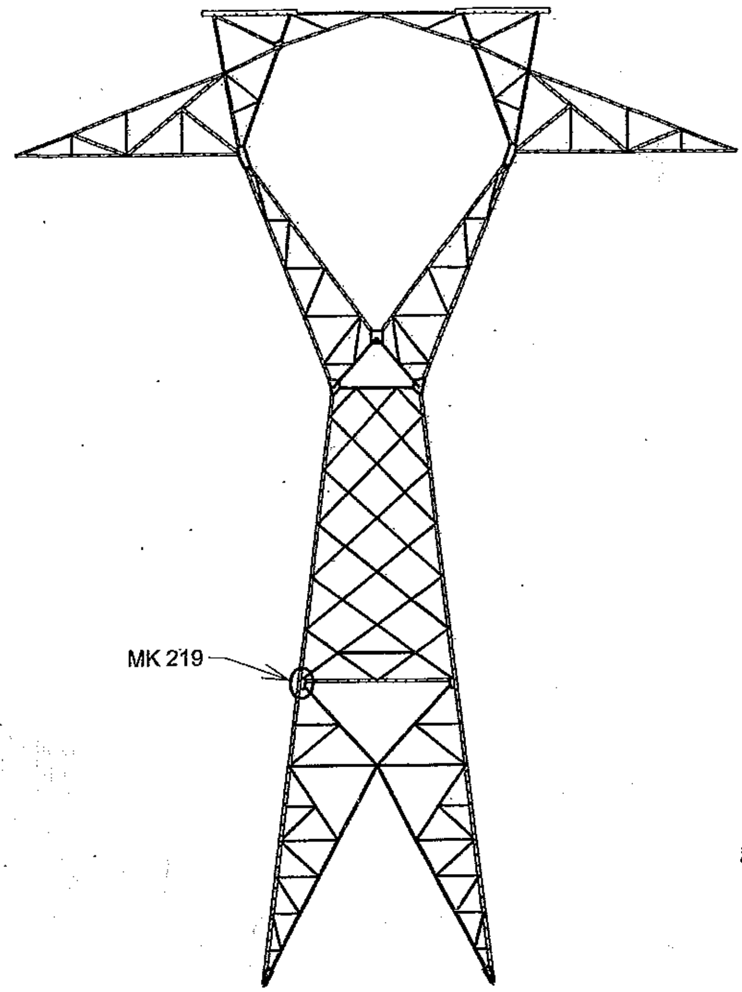
Transmission Construction

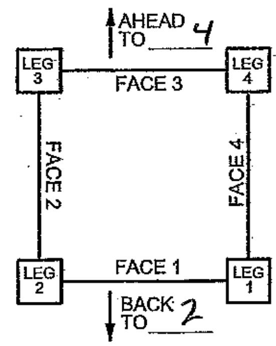
CORTEN MONITORING WORKSHEET

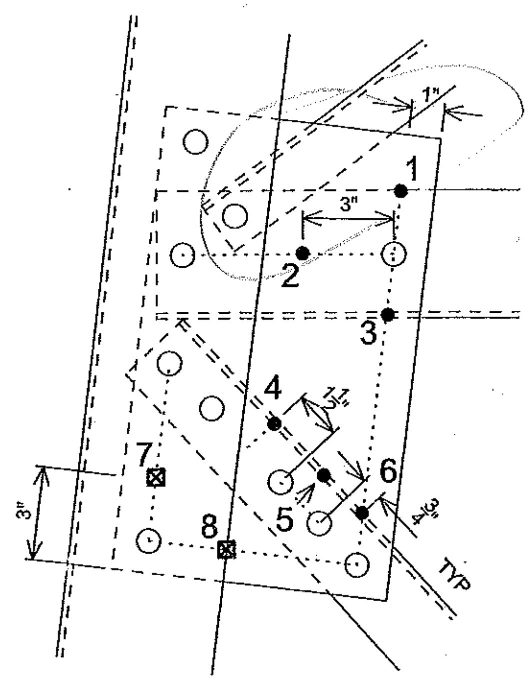
TESBORD1

Dominion
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL					
REVISION					CAD NO.







● DENOTES TO MEASURE ON THE "FRONT FACE"

☒ DENOTES TO MEASURE ON THE "BACKSIDE"

STR NO. 588/3 FACE NO. 1

MARK NO 219 ORIG THICK ¼" LEG NO. 2

	.405	407	415	455	.482	.519	.524	.470
MEASUREMENT LOCATION	1	2	3	4	5	6	7	8
THICKNESS	~~.286~~	~~.245~~	~~.262~~	~~.397~~	~~.385~~	~~.316~~	~~.244~~	~~.288~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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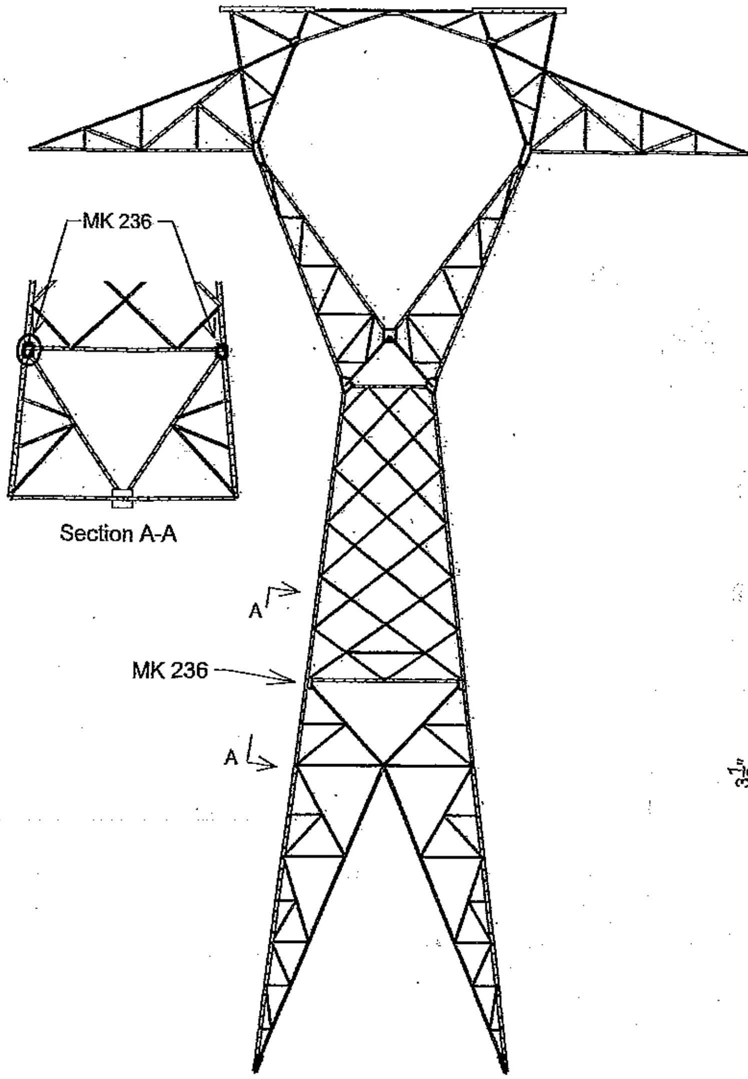
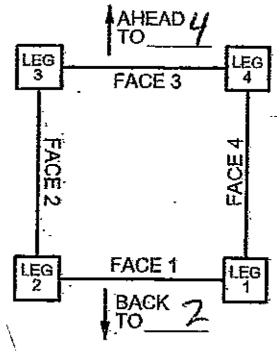
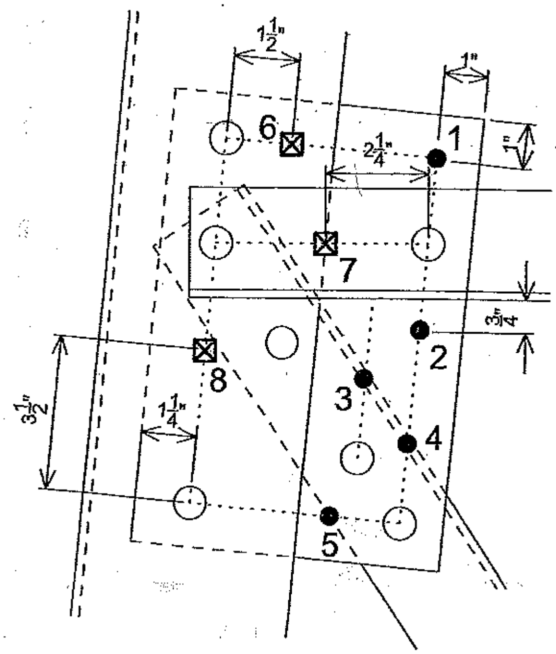
Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

TESBORD1 $ ECS$







● DENOTES TO MEASURE ON THE "FRONT FACE"

⊠ DENOTES TO MEASURE ON THE "BACKSIDE"

STR NO. 588/3,87 FACE NO. 2

MARK NO 236 ORIG THICK ¼" LEG NO. 3

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8
	.471	.343	.452	.530	.520	.483	.346	.438
THICKNESS	~~.237~~	~~.221~~	~~.222~~	~~.284~~	~~.305~~	~~.211~~	~~.210~~	~~.246~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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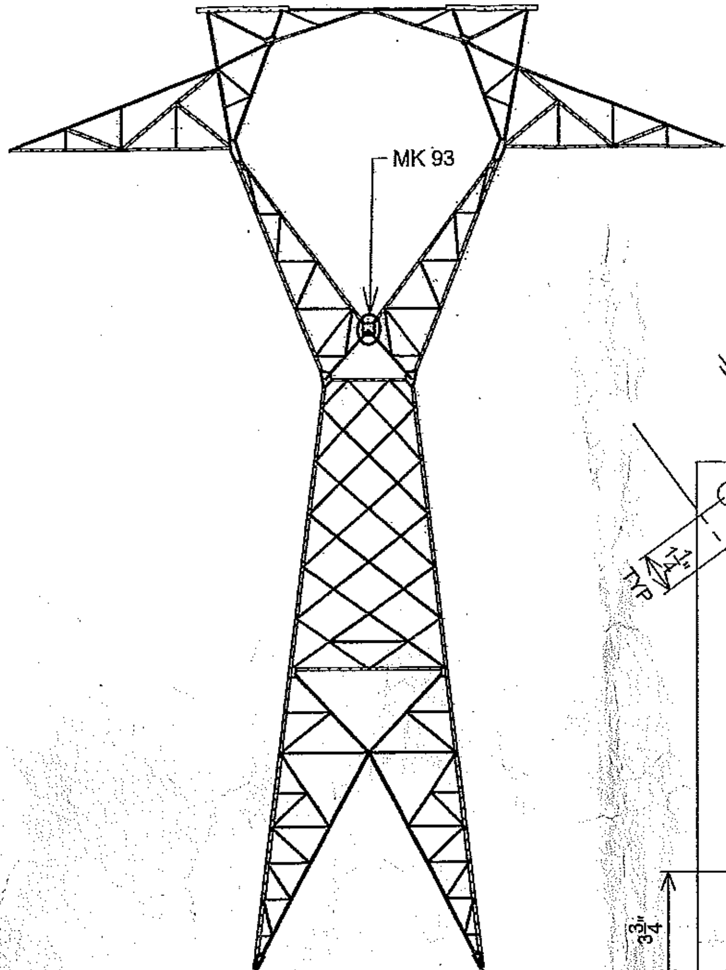
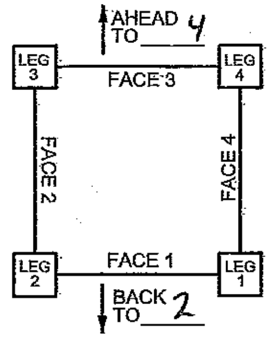
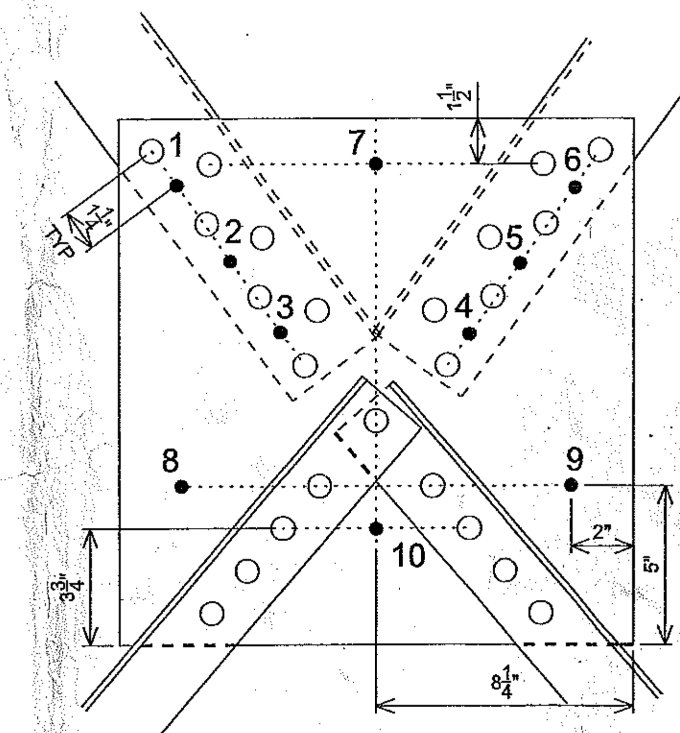
Transmission Construction	CORTEN MONITORING WORKSHEET					
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

TESBORD1 ...NSPEC$







STR NO. 588/3187 FACE NO. 1

MARK NO 93 ORIG THICK 5/16" LEG NO. ______

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
	.366	.350	.391	.240	.297	.356	.354	.390	.383	.353
THICKNESS	~~.301~~ ~~.1[illegible]~~	~~.237~~	~~.225~~	~~.145~~	~~.183~~	~~.154~~	~~.265~~	~~.175~~	~~.247~~	~~.178~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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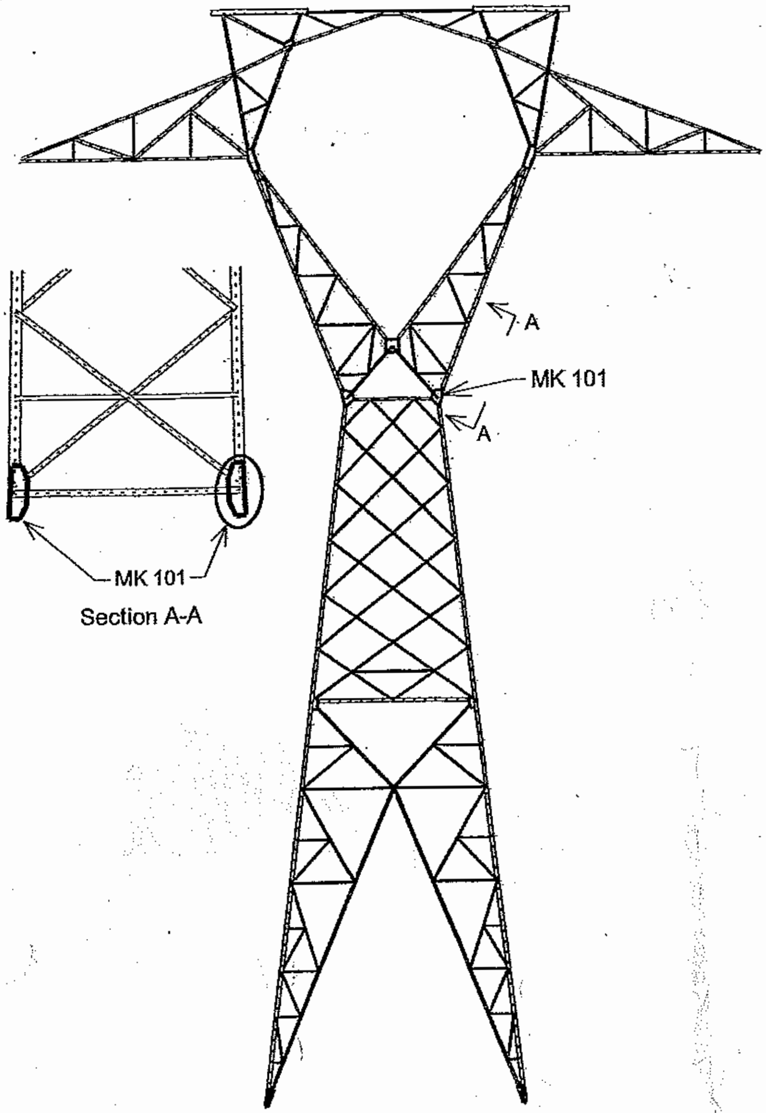
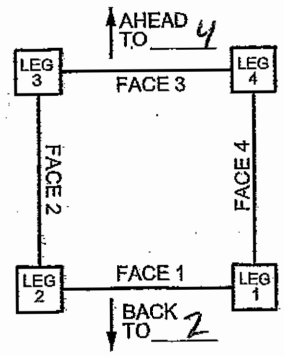
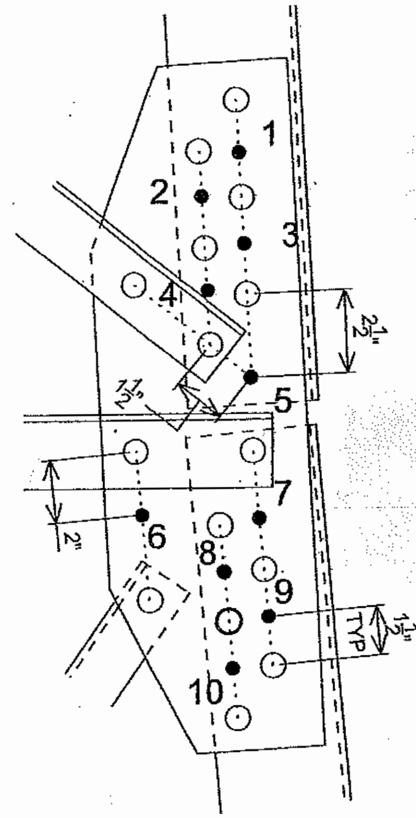
Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.







STR NO. 588/~~3~~187 FACE NO. 4

MARK NO 101 ORIG THICK 3/8" LEG NO. 4

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
	.460	.493	.468	.328	.453	.474	.452	.481	.464	.475
THICKNESS	~~.163~~	~~.162~~	~~.203~~	~~.156~~	~~.260~~	~~.137~~	~~.180~~	~~.189~~	~~.188~~	~~.195~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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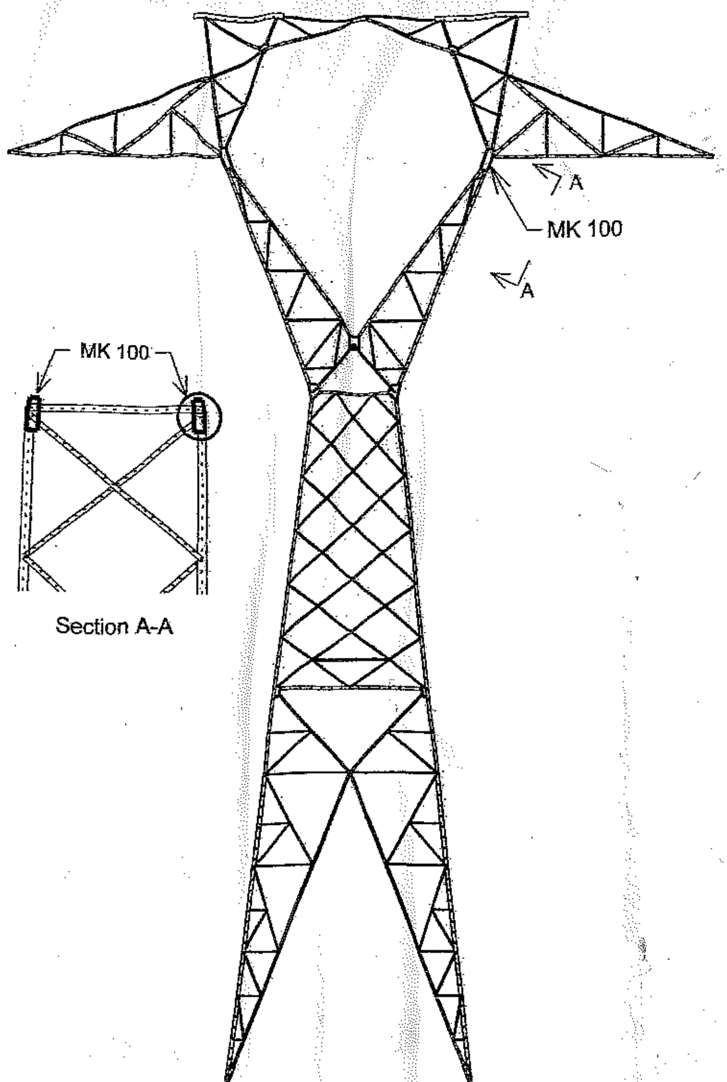
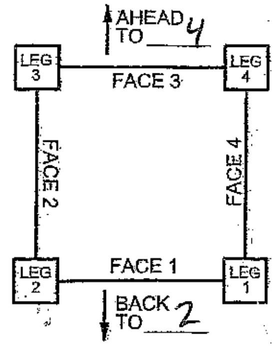
Transmission Construction

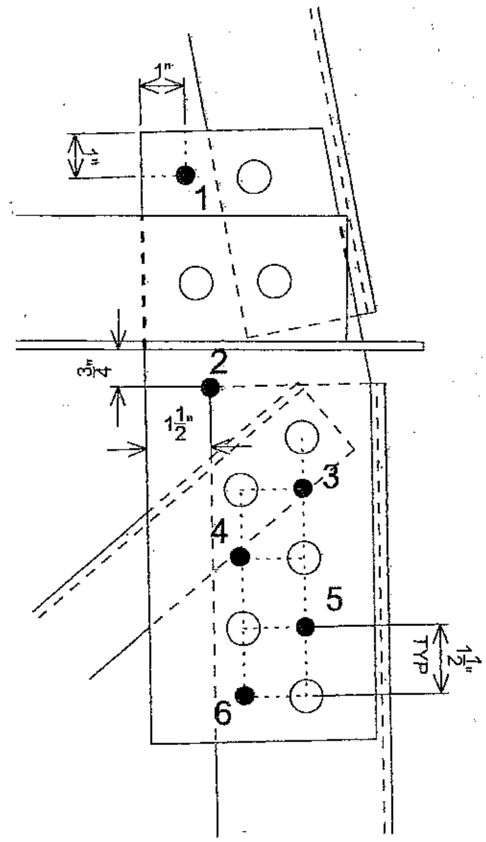
CORTEN MONITORING WORKSHEET

Dominion
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL					
REVISION	163				CAD NO.







STR NO. 580/3187 FACE NO. 4

MARK NO 100 ORIG. THICK 5/16" LEG NO. 4

.277 .262 .351 .375 .369 .381

MEASUREMENT LOCATION	1	2	3	4	5	6
THICKNESS	~~[illegible]~~	~~[illegible]~~	~~.378~~	~~.363~~	~~.370~~	~~.346~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

TESBORD1 $DGNSPEC$

VISUAL EVALUATION **STR. #** 588/~~28~~ 213

Are there missing bolts, or bolts where the bolt head has popped off?

1 2 3 4 5 (1 = None, 5 = Many Missing/Damaged Bolts)

Are there loose members/members with play in the bolted connections?

1 2 3 4 5 (1 = None, 5 = Significant # of Loose Members)

Are there cracked, bent and/or missing structural members?

1 2 3 4 5 (1 = None, 5 = Severe Damage)

Is there extensive joint packout?

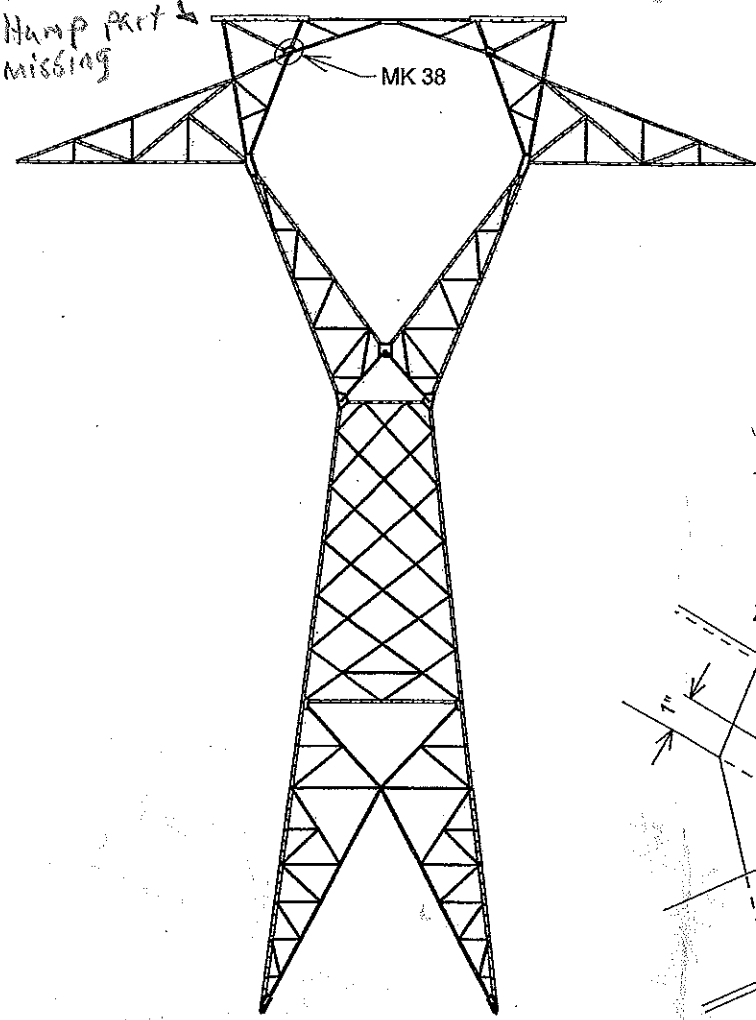
1 2 3 4 5 (1 = None, 5 = Severe Packout)

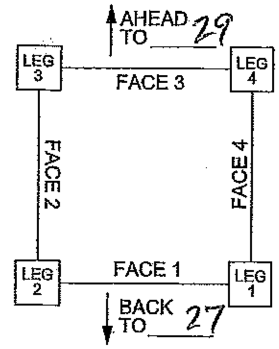
Is there notable foundation damage?

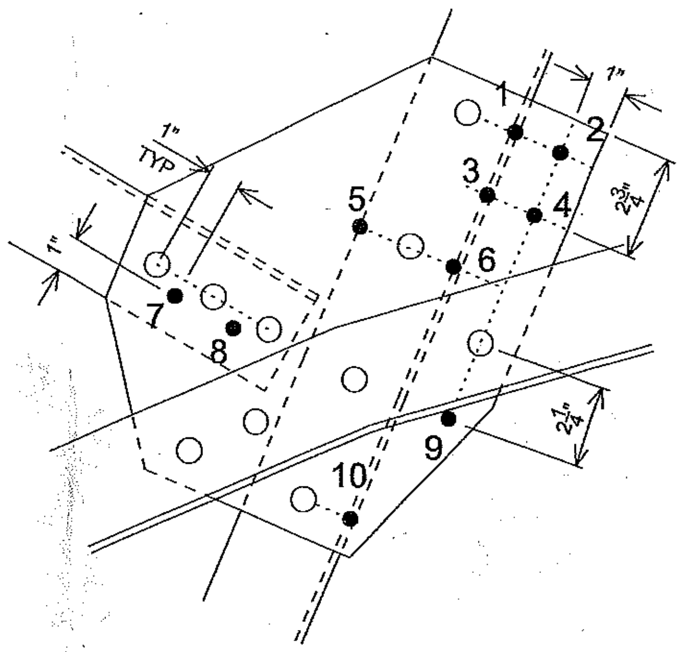
1 2 3 4 5 (1 = None, 5 = Severe Damage)

Broken cotter Key left side static insulator.

Broke cotter Key Shackle Pin Wearing in Middle
Hamp part & missing







STR NO. 508/~~28~~29 213 FACE NO. 1

MARK NO 38 ORIG THICK ¼" .250 LEG NO. ______

	.208	.251	.193	.247	.183	.245	.271	.218	.213	.203
MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.183~~	~~.181~~	~~.199~~	~~.207~~	~~.203~~	~~.215~~	~~.231~~	~~.200~~	~~.247~~	~~.232~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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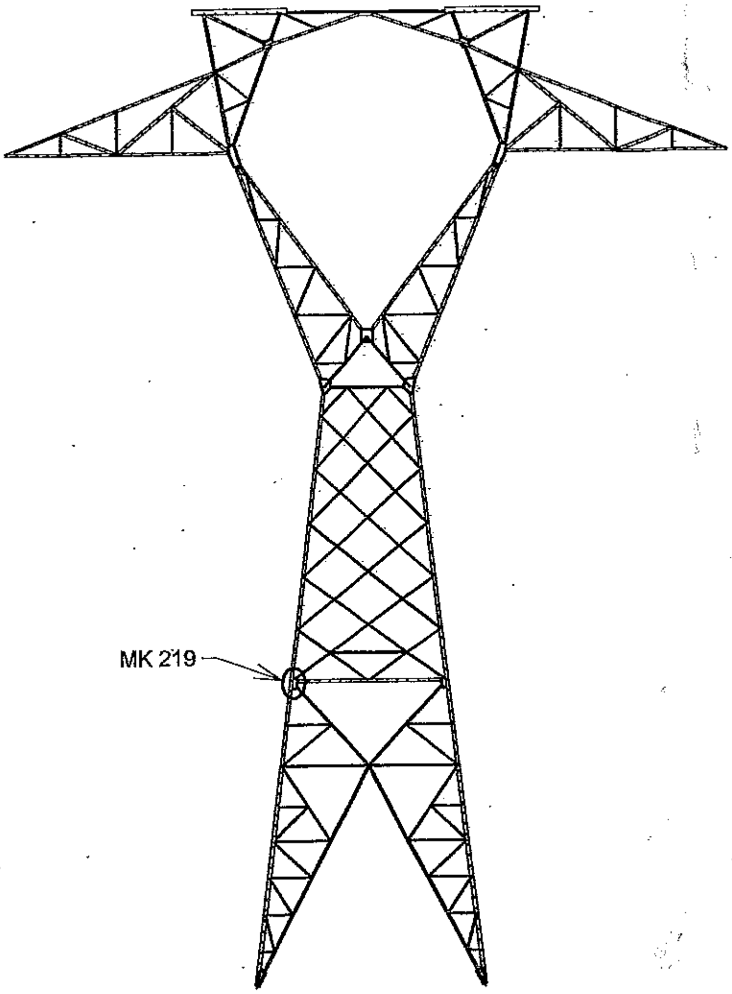
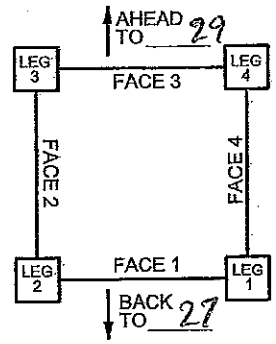
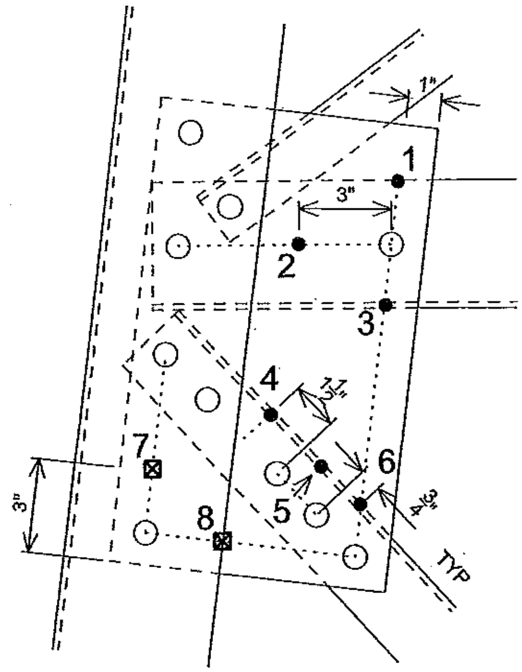
Transmission Construction	CORTEN MONITORING WORKSHEET					
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

$SYTIME$ EC TESBORD1







● DENOTES TO MEASURE ON THE "FRONT FACE"

☒ DENOTES TO MEASURE ON THE "BACKSIDE"

STR NO. 588/~~28~~213 FACE NO. 1

MARK NO 219 ORIG THICK ¼" .250 LEG NO. 2

.265 .245 .252 .230 .218 .247 .270 .257

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8
THICKNESS	~~.266~~	~~.213~~	~~.222~~	~~.177~~	~~.155~~	~~.185~~	~~.160~~	~~.146~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

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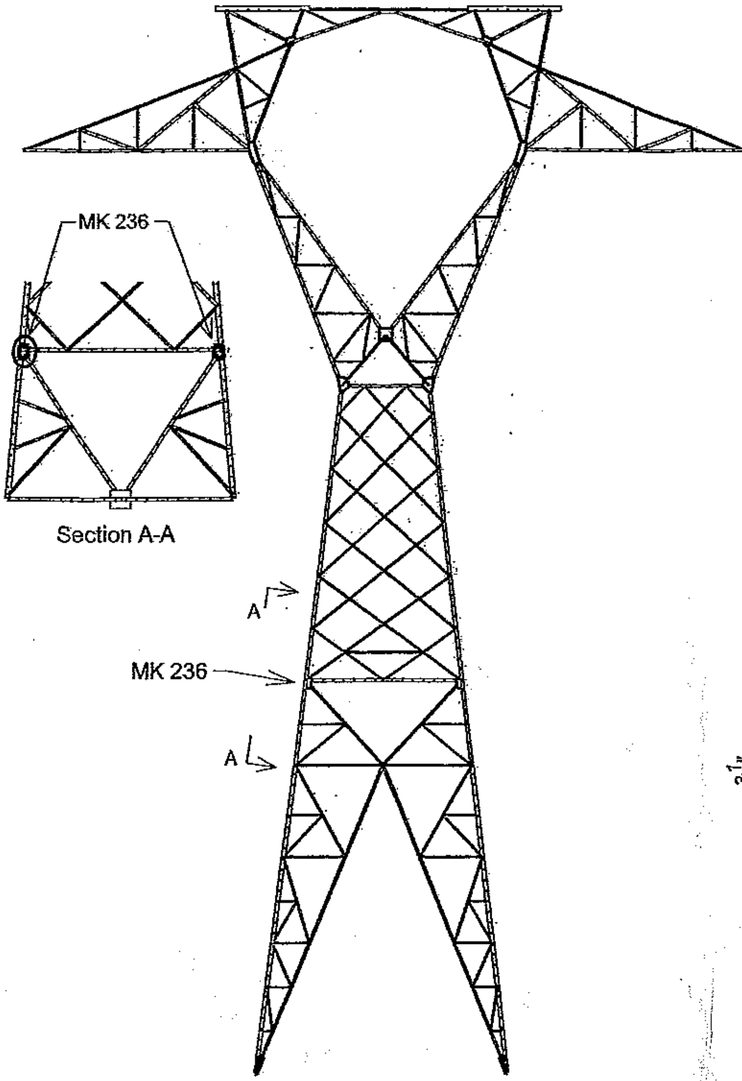
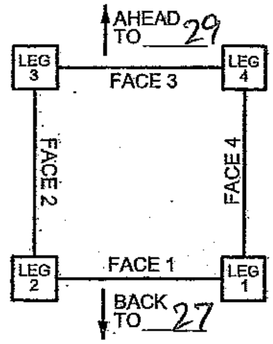
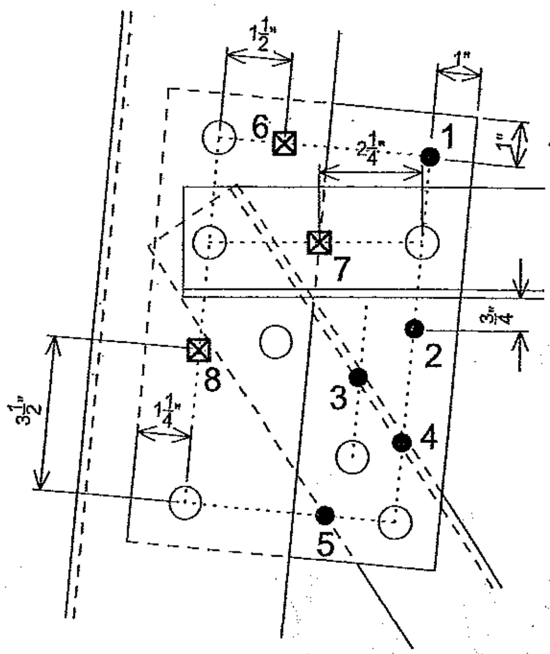


Section A-A





● DENOTES TO MEASURE ON THE "FRONT FACE"

☒ DENOTES TO MEASURE ON THE "BACKSIDE"

STR NO. 588/28213 FACE NO. 2

MARK NO 236 ORIG THICK ¼" .250 LEG NO. 3

.263 .266 .274 .297 .346 .270 .305 .278

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8
THICKNESS	~~.185~~	~~.242~~	~~.162~~	~~.171~~	~~.158~~	~~.208~~	~~.150~~	~~.172~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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Transmission Construction	CORTEN MONITORING WORKSHEET					
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

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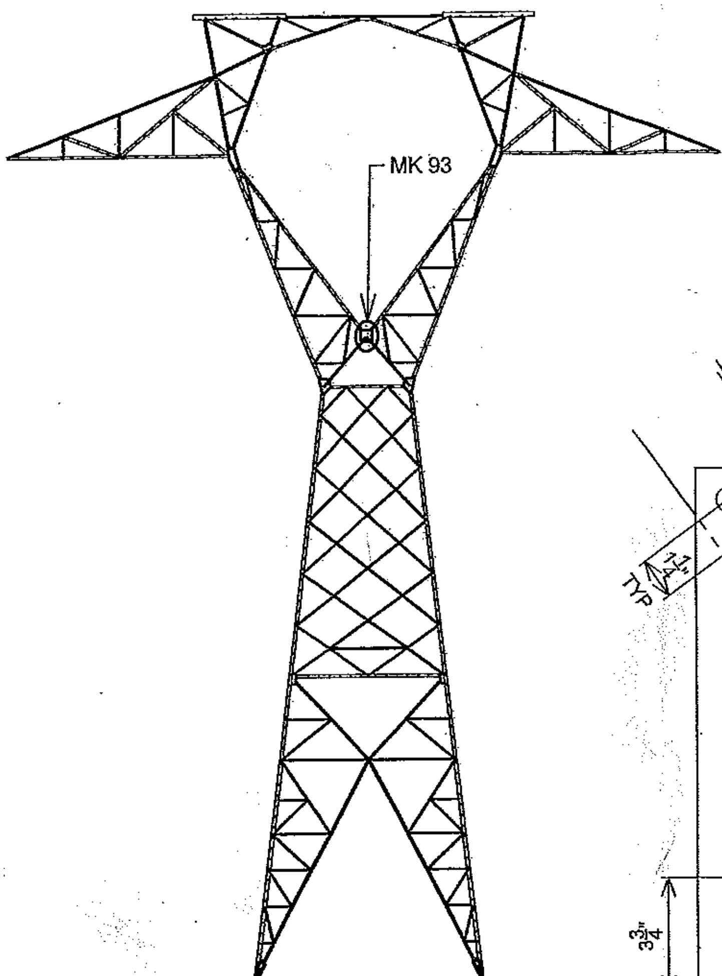

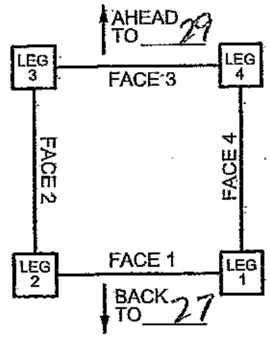

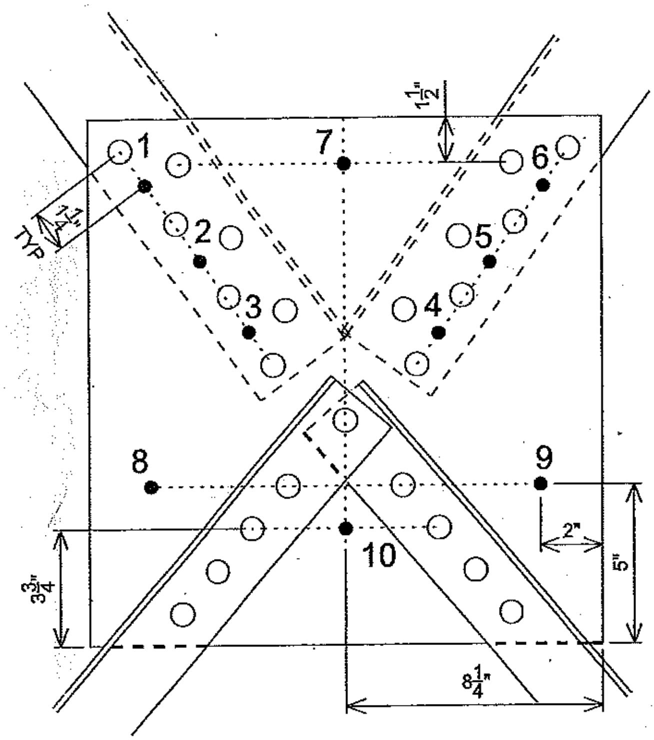

STR NO. 588/~~28~~213 FACE NO. 1

MARK NO 93 ORIG THICK 5/16", .312 LEG NO. ______

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
	.243	.297	.229	.316	.373	.378	.375	.372	.350	.335
THICKNESS	~~.225~~	~~.177~~	~~.199~~	~~.280~~	~~.206~~	~~.163~~	~~.141~~	~~.260~~	~~.316~~	~~.332~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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Transmission Construction	CORTEN MONITORING WORKSHEET					
		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
Dominion 701 E. Cary Street Richmond, VA 23219	ORIGINAL					
	REVISION					CAD NO.

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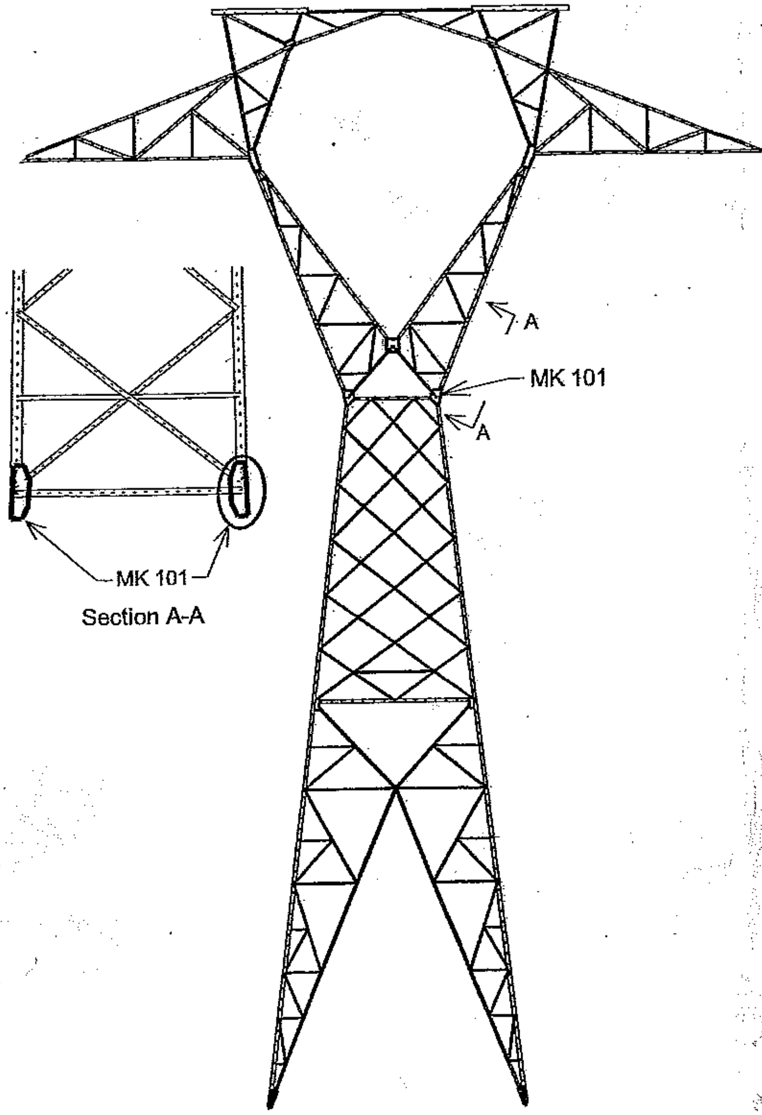

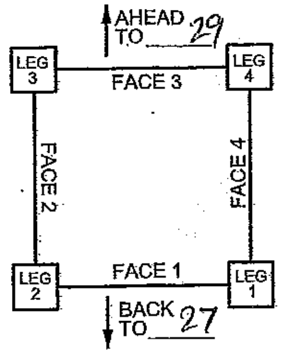

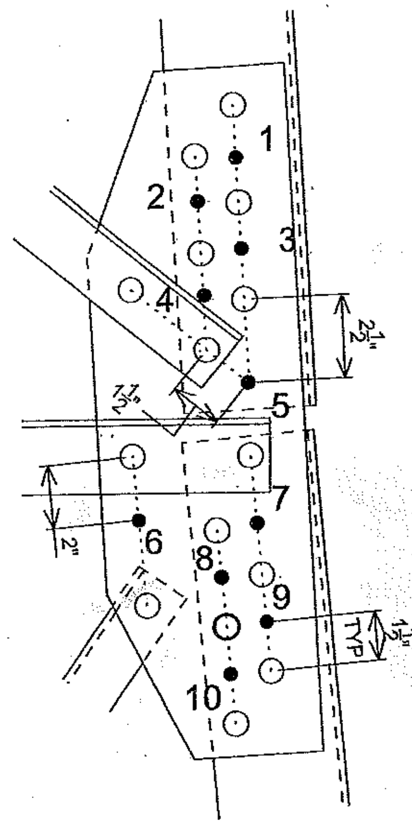

STR NO. 588/~~2829~~213 FACE NO. 4

MARK NO 101 ORIG THICK 3/8" .375 LEG NO. 4

	.428	.424	.458	.456	.434	.451	.375	.429	.446	.446
MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.380~~	~~.371~~	~~.400~~	~~.390~~	~~.363~~	~~.294~~	~~.397~~	~~.389~~	~~.402~~	~~.382~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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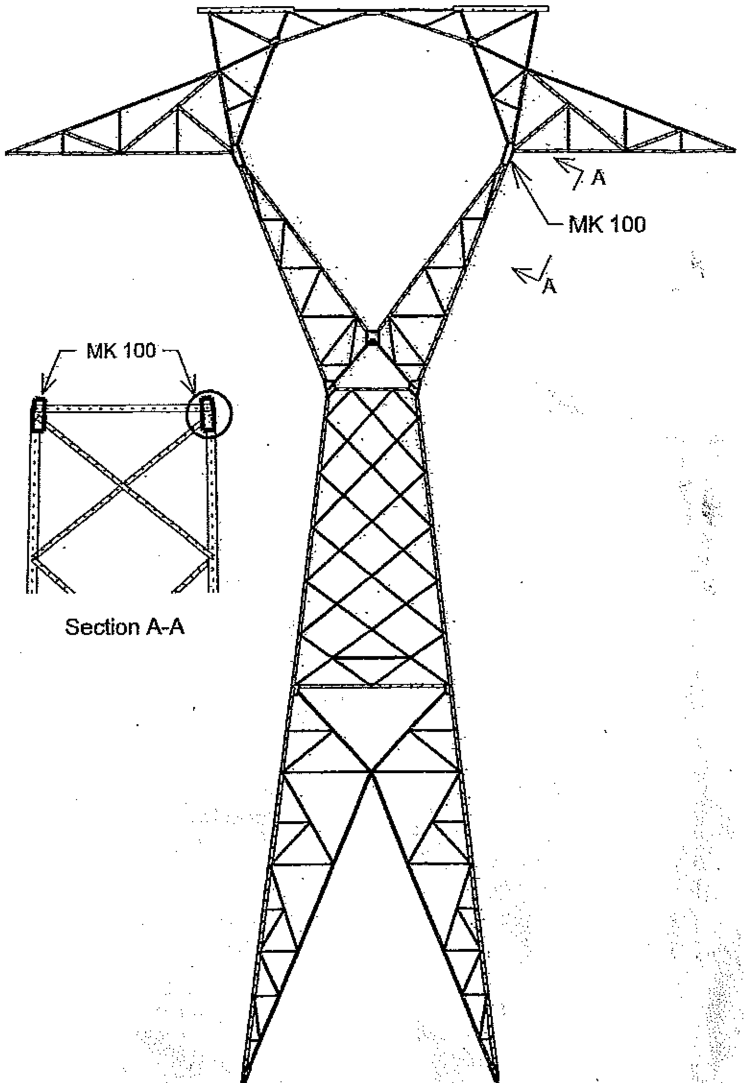
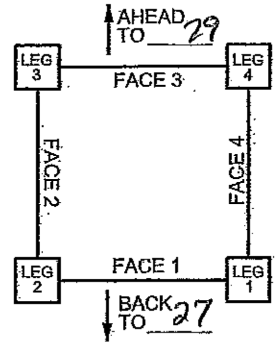
Transmission Construction

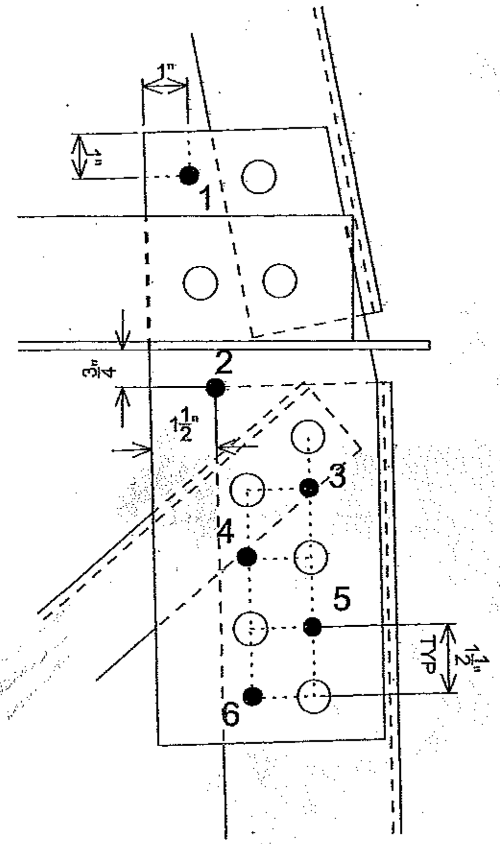
CORTEN MONITORING WORKSHEET

Dominion
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL					
REVISION	170				CAD NO.







STR NO. 588/~~28~~213 FACE NO. 4

MARK NO 100 ORIG. THICK 5/16" LEG NO. 4

.218 .375 .340 .355 .332 .330

MEASUREMENT LOCATION	1	2	3	4	5	6
THICKNESS	~~.171~~	~~.183~~	~~.198~~	~~.149~~	~~.184~~	~~.122~~

MEASUREMENT GUIDELINES:

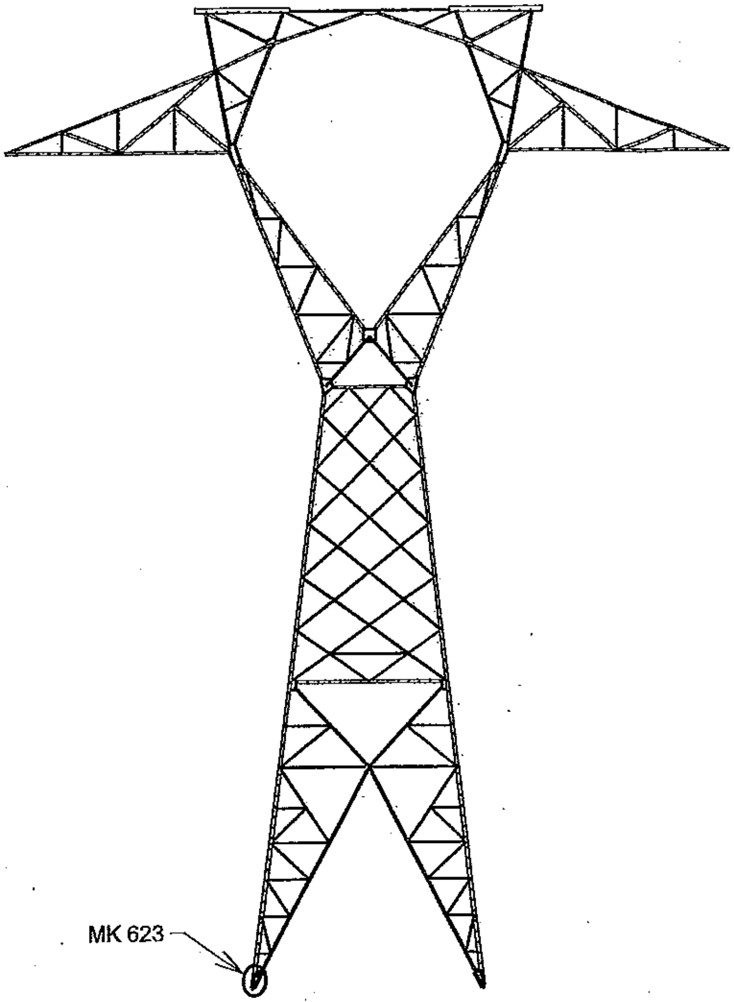
1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

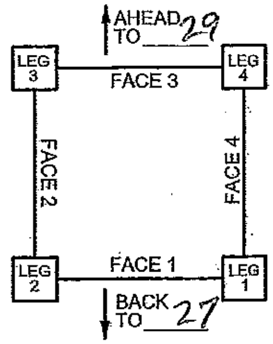
2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

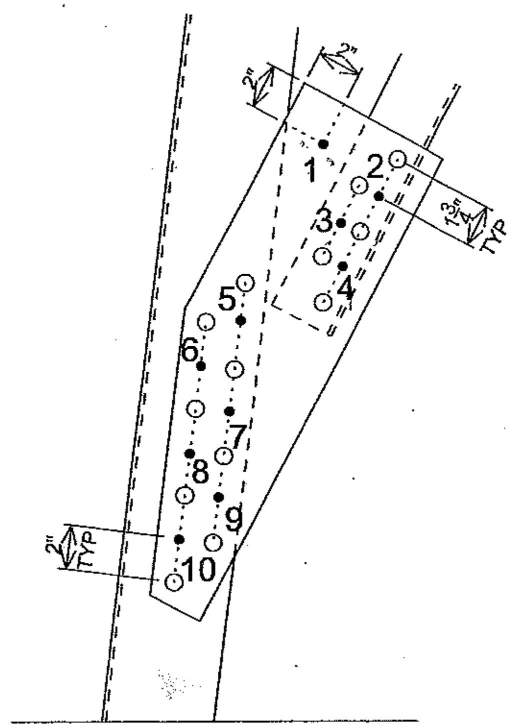
3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

Transmission Construction	CORTEN MONITORING WORKSHEET					
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

TESBORD1 $FORMSPECS$







LEG EXT. 25'

STR NO. 588/~~28~~213 FACE NO. 1

MARK NO 623 ORIG THICK ¼" .250 LEG NO. 2

.264 .261 .255 .257 .262 .258 .253 .256 .256 .254

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.235~~	~~.247~~	~~.236~~	~~.245~~	~~.238~~	~~.236~~	~~.231~~	~~.235~~	~~.233~~	~~.239~~

MEASUREMENT GUIDELINES:

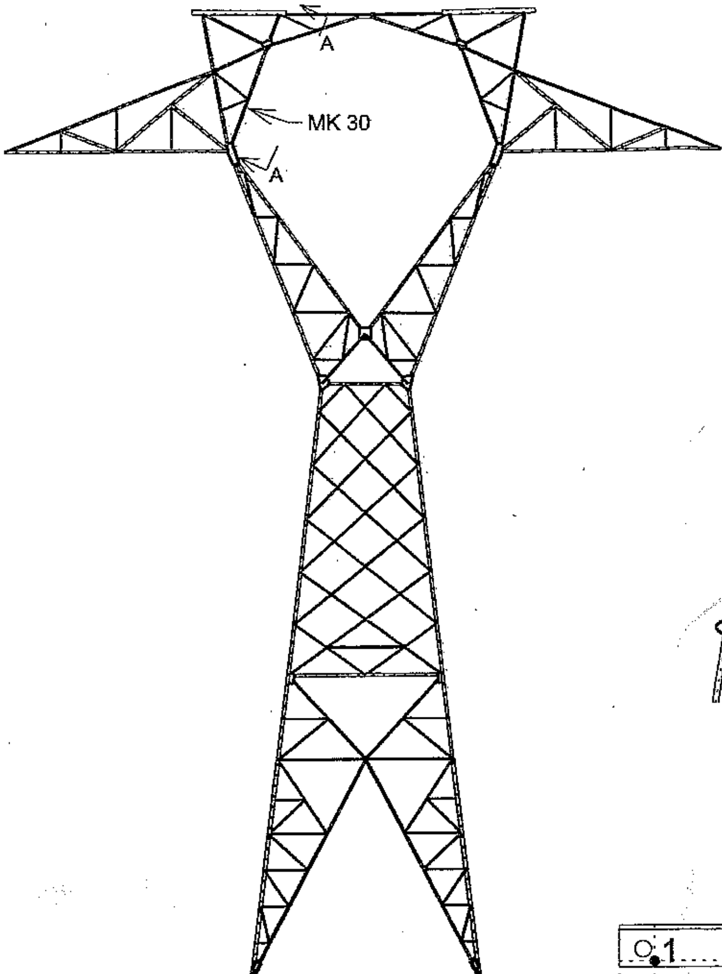
1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

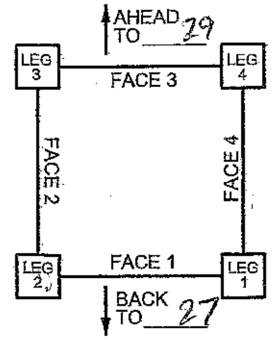
2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

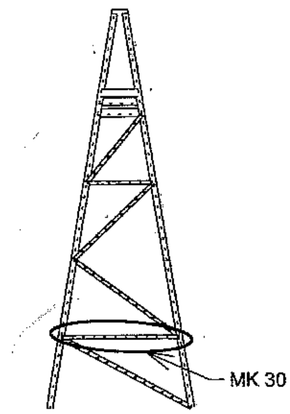
3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

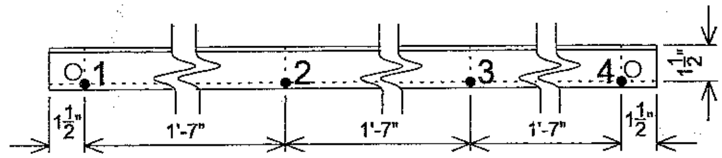
TESBORD1 SPEC$







Section A-A



STR NO. 508/~~20~~213   FACE NO. 2

MARK NO 30   ORIG THICK 3⁄16" .187   LEG NO. ______

.199 .201 .205 .194

MEASUREMENT LOCATION	1	2	3	4
THICKNESS	~~.181~~	~~.204~~	~~.130~~	~~.187~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

Transmission Construction	CORTEN MONITORING WORKSHEET				
		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
Dominion 701 E. Cary Street Richmond, VA 23219	ORIGINAL					
	REVISION					CAD NO.

SPEC$ TESBORD1

VISUAL EVALUATION

STR. # 588/47231

Are there missing bolts, or bolts where the bolt head has popped off?

1 2 3 4 5 (1 = None, 5 = Many Missing/Damaged Bolts)

Are there loose members/members with play in the bolted connections?

1 2 3 4 5 (1 = None, 5 = Significant # of Loose Members)

Are there cracked, bent and/or missing structural members?

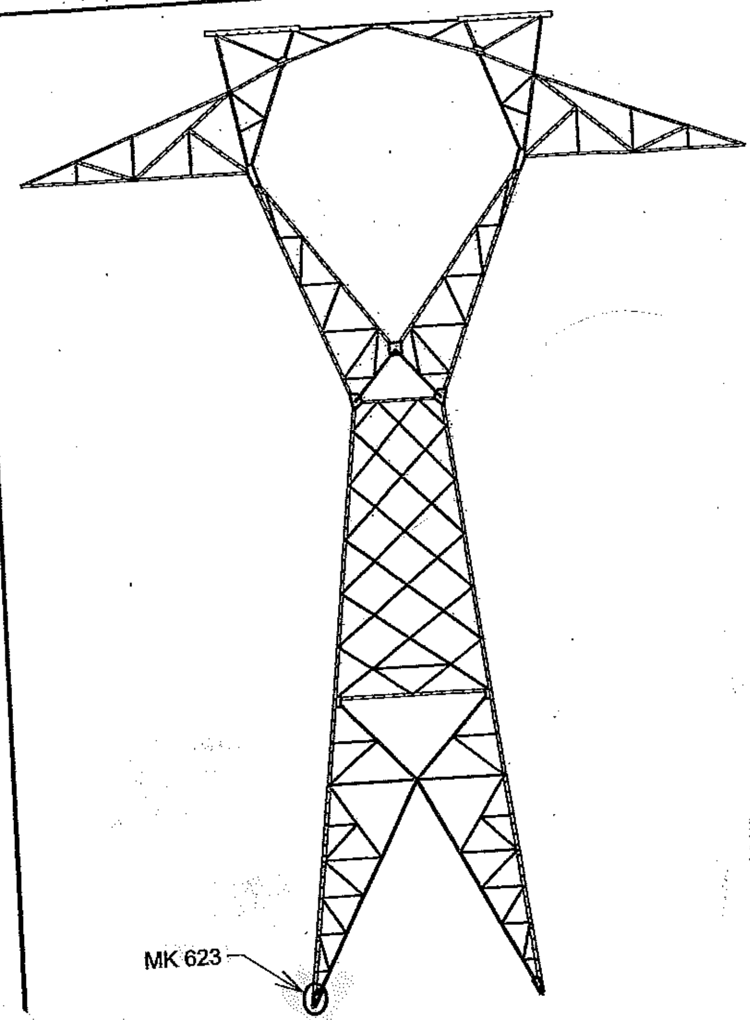
1 2 3 4 5 (1 = None, 5 = Severe Damage)

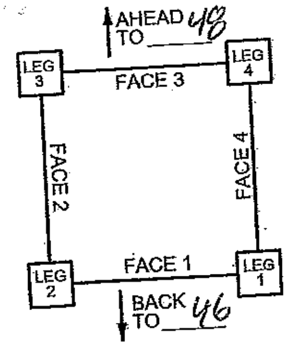
Is there extensive joint packout?

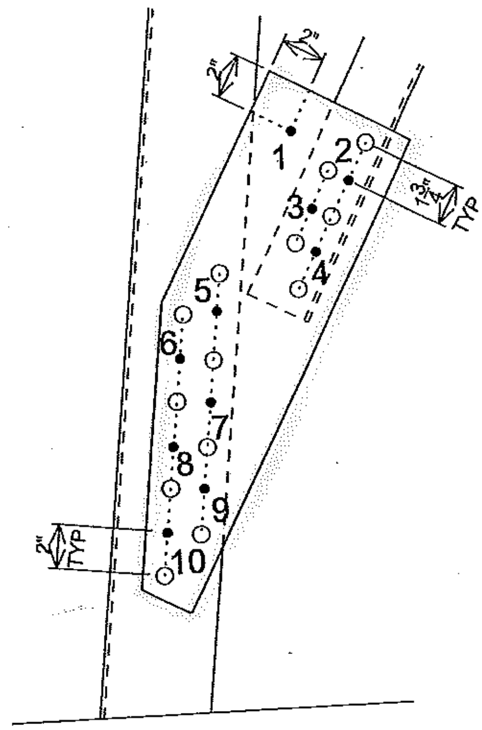
1 2 3 4 5 (1 = None, 5 = Severe Packout)

Is there notable foundation damage?

1 2 3 4 5 (1 = None, 5 = Severe Damage)







LEG EXT. 25'

STR NO. 588/47231 FACE NO. 1

MARK NO 623 ORIG THICK ¼" .250 LEG NO. 2

.288 .278 .284 .277 .270 .290 .286 .291 .282 .288

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.172~~	~~.236~~	~~.279~~	~~.172~~	~~.287~~	~~.321~~	~~.235~~	~~.276~~	~~.237~~	~~.142~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

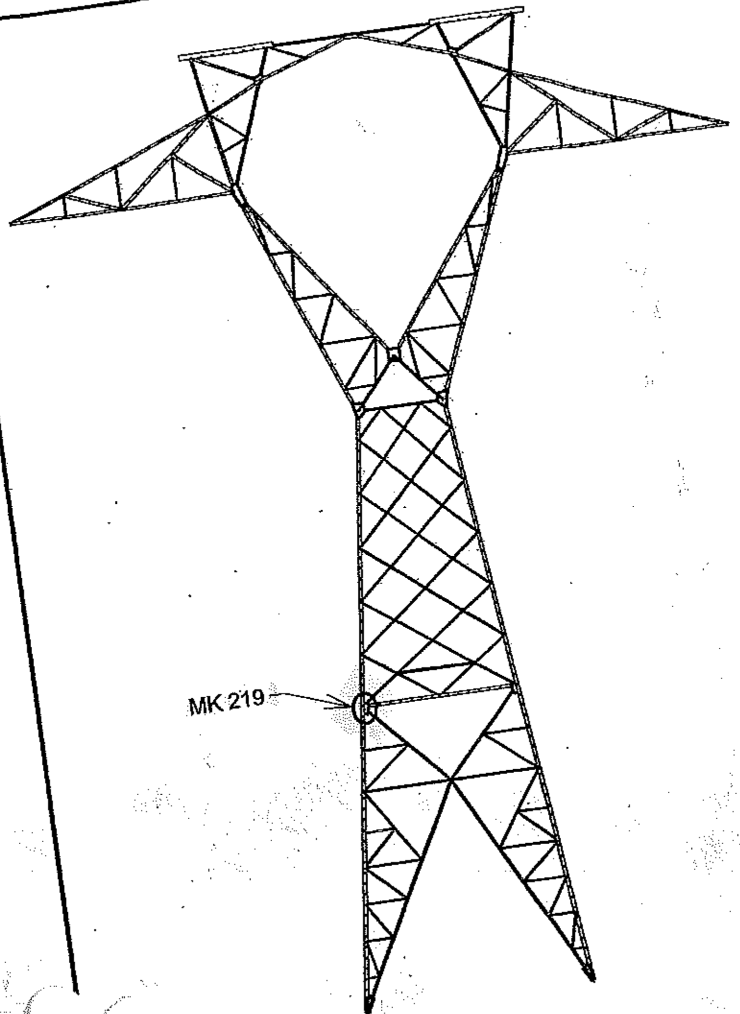
2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

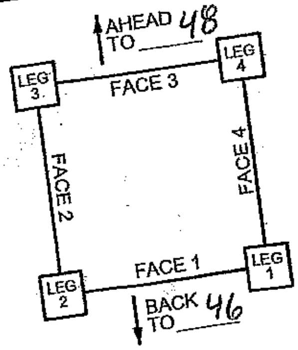
3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

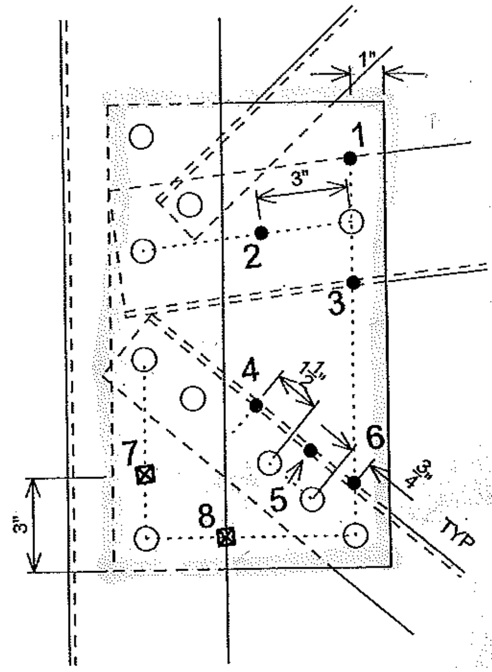
SPEC$

Transmission Construction	CORTEN MONITORING WORKSHEET				DRAWING NO.
		DRAWN	CHECKED	APPROVED	DATE
Dominion 701 E. Cary Street Richmond, VA 23219	ORIGINAL				CAD NO.
	REVISION				

TESBORD1







● DENOTES TO MEASURE ON THE "FRONT FACE"

⊠ DENOTES TO MEASURE ON THE "BACKSIDE"

STR NO. 588/~~47231~~ FACE NO. 1 LEG NO. 2

ORIG THICK ¼" .250

MARK NO 219

.239 .273 .174 .305 .218 .266 .261 .251

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8
THICKNESS	~~.250~~	~~.285~~	~~.174~~	~~.291~~	~~.274~~	~~.315~~	~~.171~~	~~.281~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

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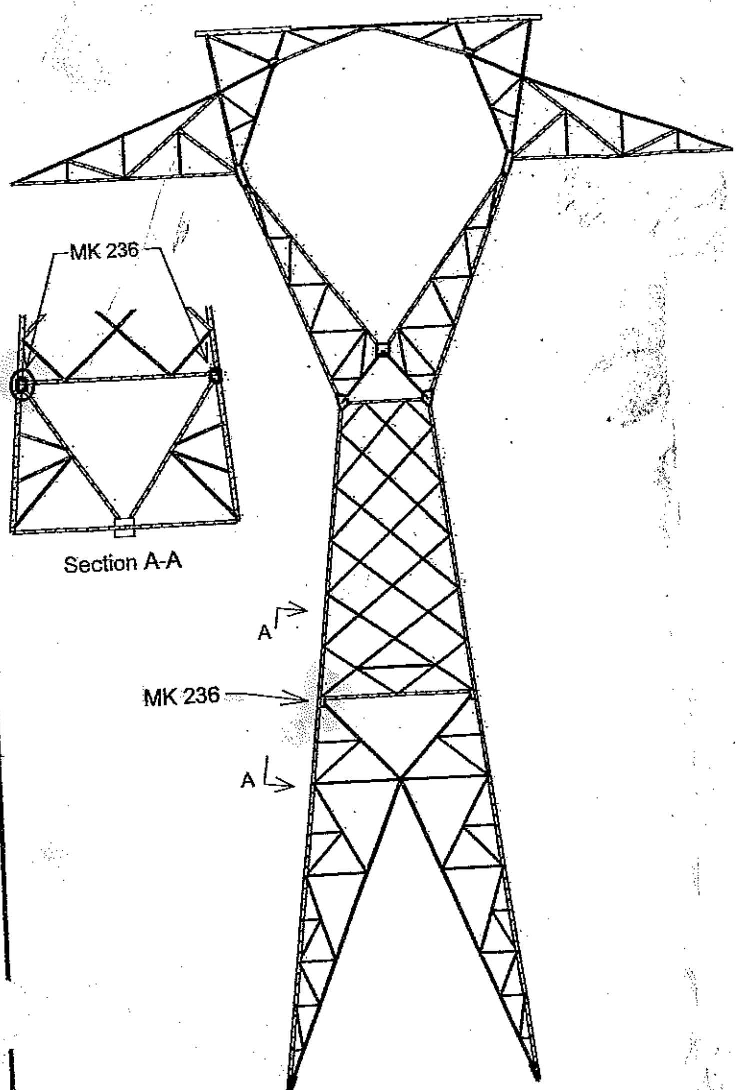
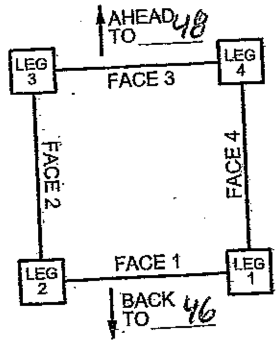
Transmission Construction

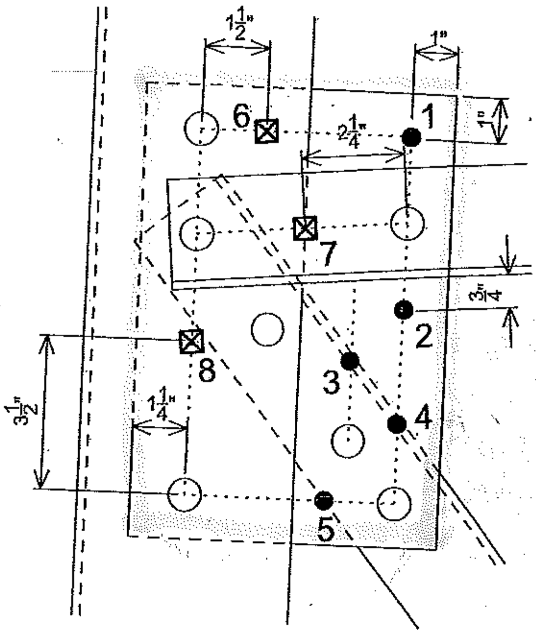
CORTEN MONITORING WORKSHEET

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
					CAD NO.
ORIGINAL					
REVISION					

Dominion
701 E. Cary Street
Richmond, VA 23219







● DENOTES TO MEASURE ON THE "FRONT FACE"

☒ DENOTES TO MEASURE ON THE "BACKSIDE"

STR NO. 588/47231 FACE NO. 2

MARK NO 236 ORIG THICK ¼" .250 LEG NO. 3

.268 .168 .290 .310 .198 .267 .244 .208

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8
THICKNESS	~~.287~~	~~.277~~	~~.253~~	~~.193~~	~~.252~~	~~.255~~	~~.344~~	~~.270~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

Transmission Construction	CORTEN MONITORING WORKSHEET					
		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
Dominion 701 E. Cary Street Richmond, VA 23219	ORIGINAL					
	REVISION					CAD NO.

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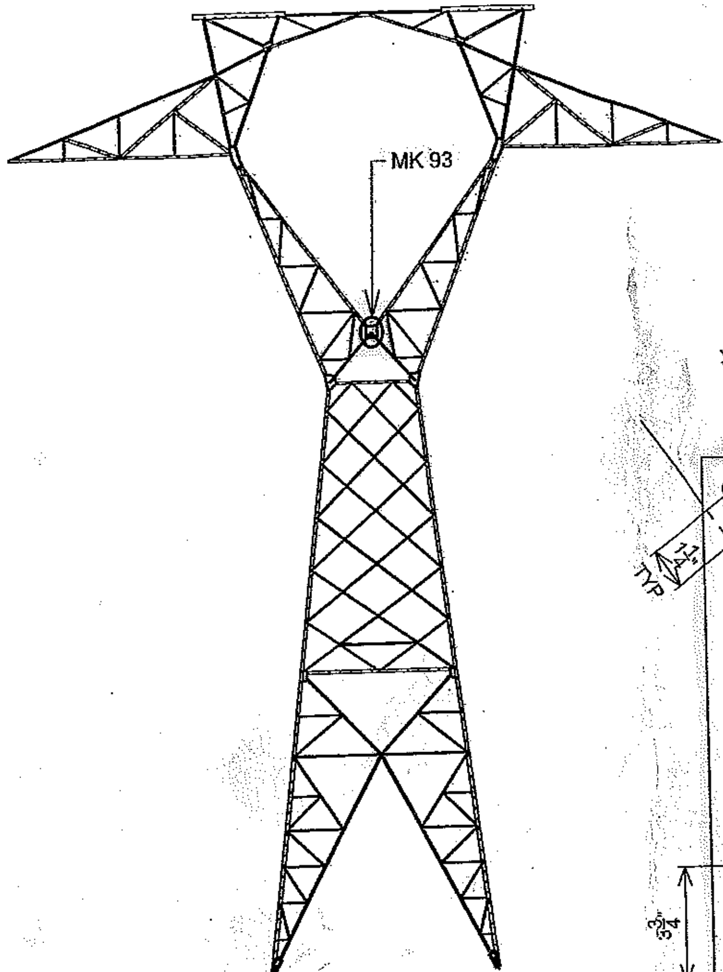

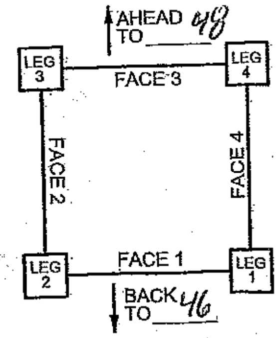

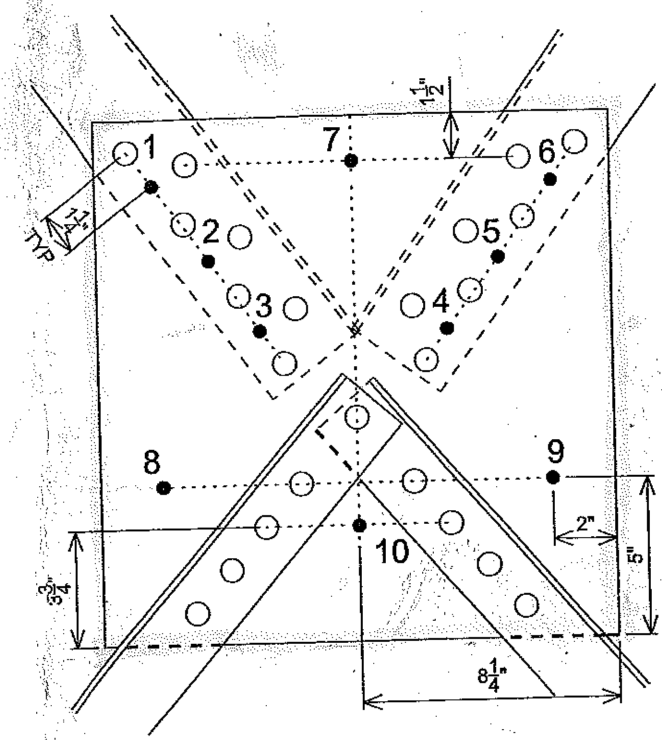

STR NO. 588/47231 FACE NO. 1

MARK NO 93 ORIG THICK 5/16" .312 LEG NO. ______

.212 .195 .207 .158 .232 .225 .265 .219 .207 .218

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.208~~	~~.173~~	~~.344~~	~~.2[illegible]~~	~~.136~~	~~.137~~	~~.160~~	~~.177~~	~~.[illegible]25~~	~~.260~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

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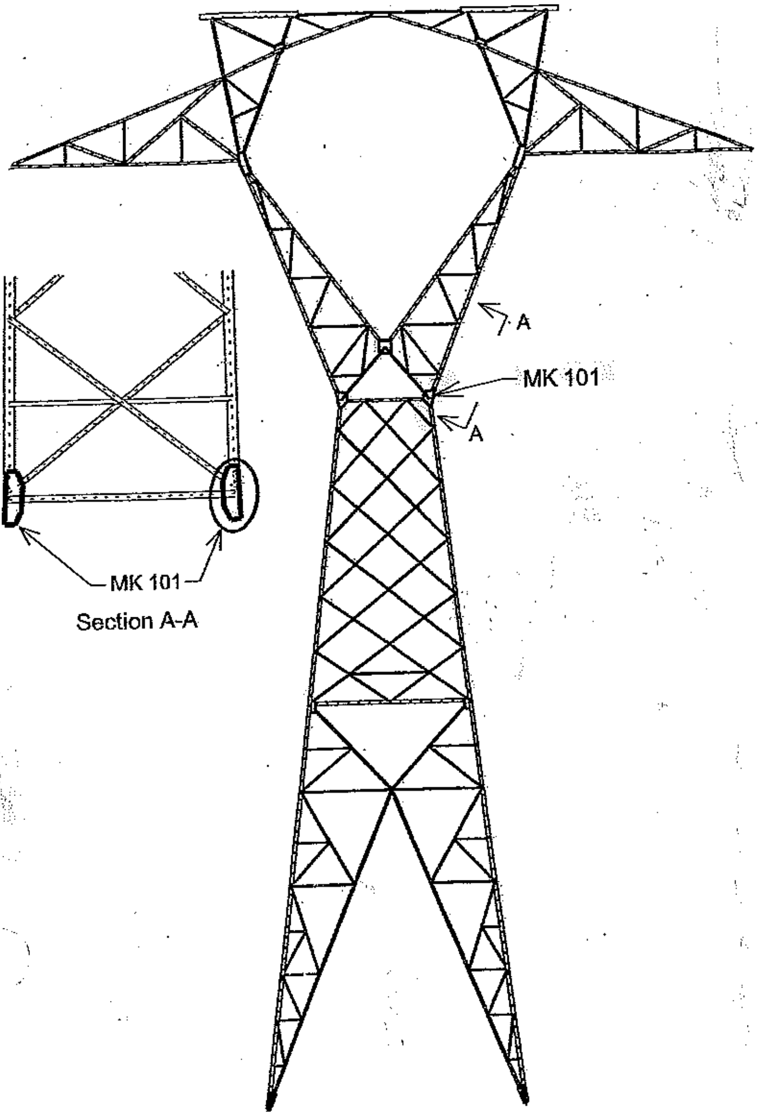
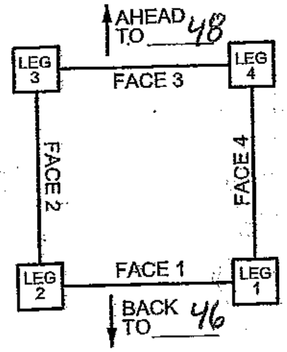
Transmission Construction

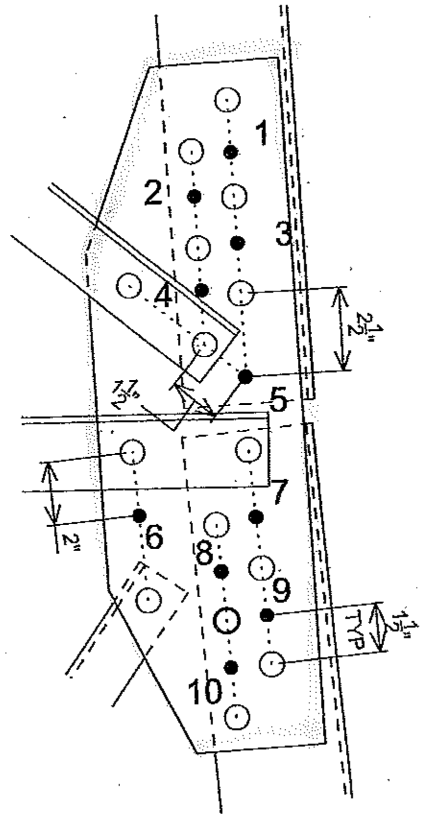
CORTEN MONITORING WORKSHEET

Dominion
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL					
REVISION					CAD NO.







STR NO. 588/47231 FACE NO. 4

MARK NO 101 ORIG THICK 3/8" .375 LEG NO. 4

.454 .452 .454 .455 .465 .429 .434 .433 .485 .475

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.300~~	~~.415~~	~~.229~~	~~.200~~	~~.189~~	~~.426~~	~~.460~~	~~.282~~	~~.260~~	~~.285~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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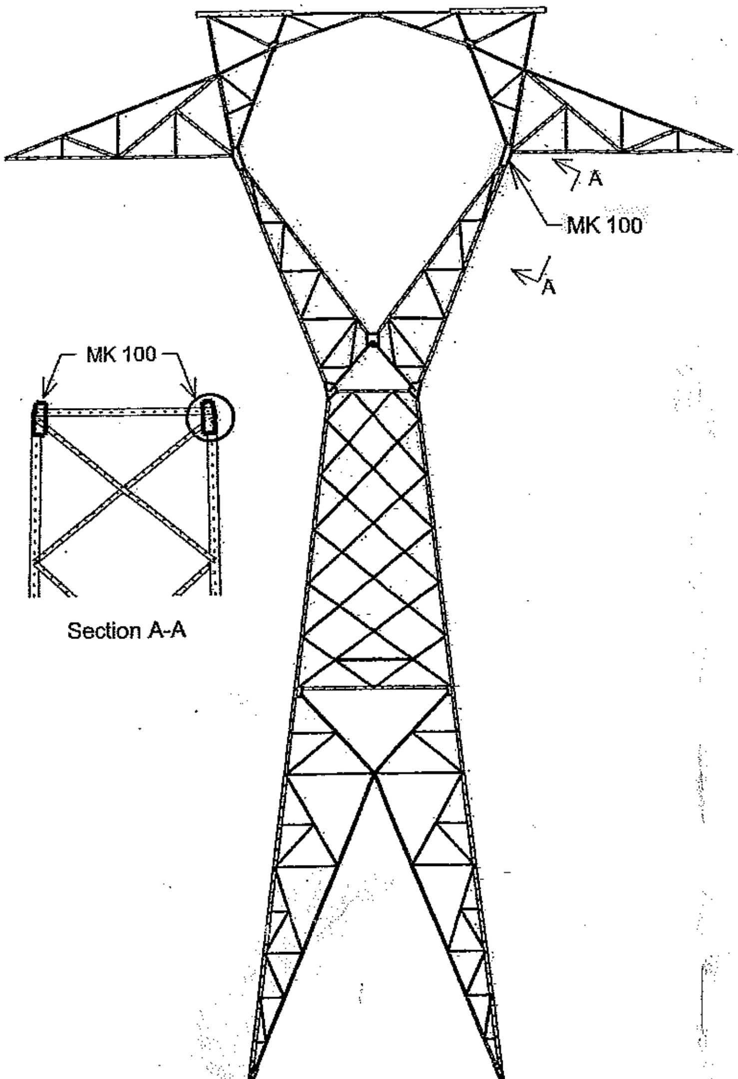
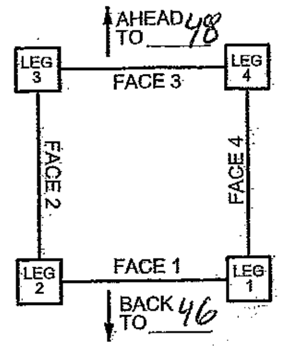
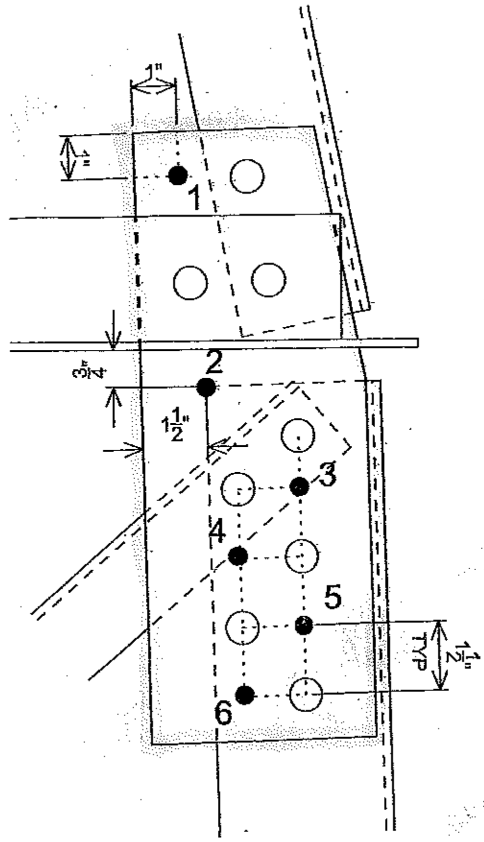
Transmission Construction	CORTEN MONITORING WORKSHEET				
		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
Dominion 701 E. Cary Street Richmond, VA 23219	ORIGINAL					
	REVISION	179				CAD NO.



Section A-A





STR NO. 589/47231 FACE NO. 4

MARK NO 100 ORIG. THICK 5/16" .312 LEG NO. 4

MEASUREMENT LOCATION	1	2	3	4	5	6
	.350	.227	.365	.352	.347	.348
THICKNESS	~~.339~~	~~.221~~	~~.273~~	~~.205~~	~~.345~~	~~.291~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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Transmission Construction

CORTEN MONITORING WORKSHEET

Dominion
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL					
REVISION					CAD NO.

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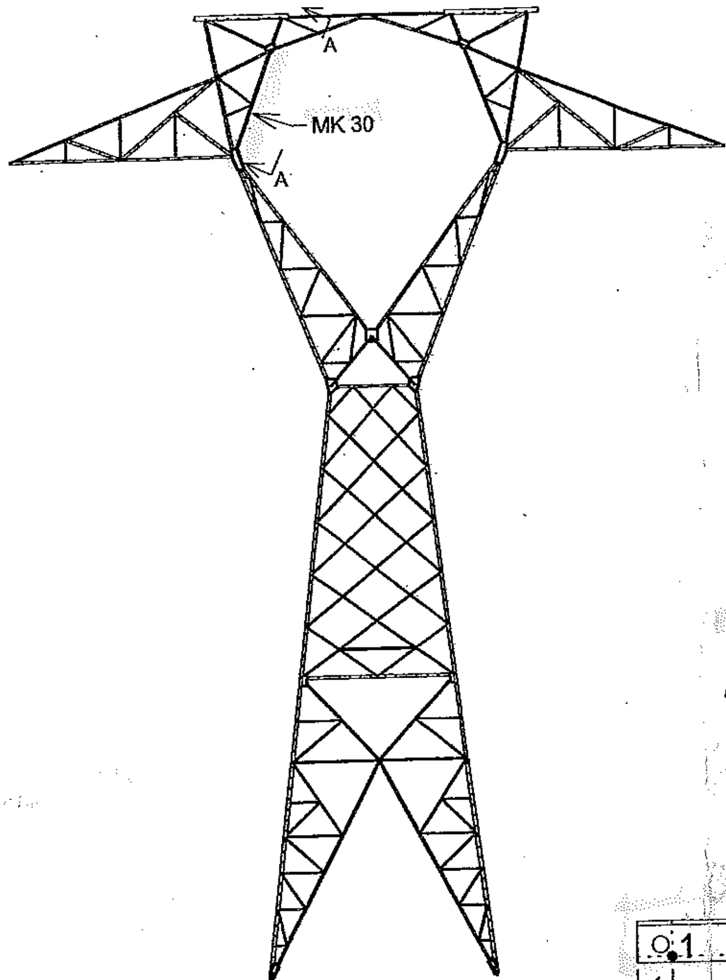
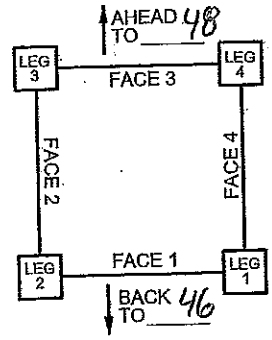
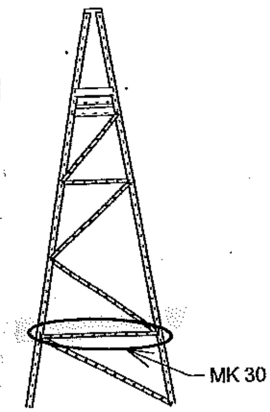
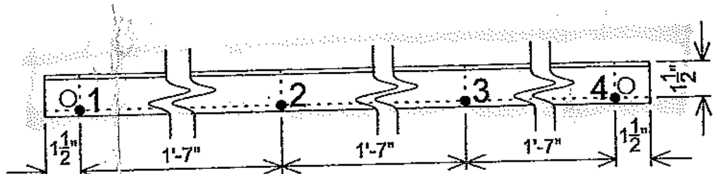






Section A-A



STR NO. 588/47-251 FACE NO. 2

MARK NO 30 ORIG THICK 3/16" .187 LEG NO. ________

.214 .178 .173 .160

MEASUREMENT LOCATION	1	2	3	4
THICKNESS	~~.176~~	~~.177~~	~~.180~~	~~.173~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

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Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

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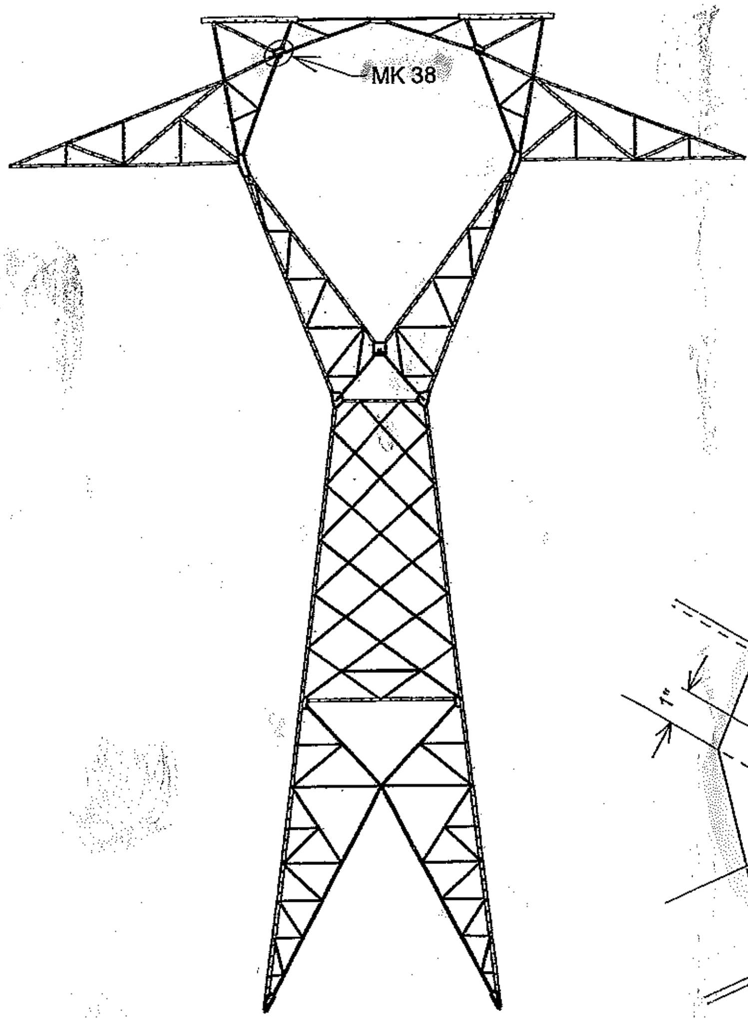

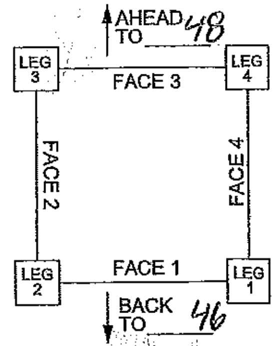

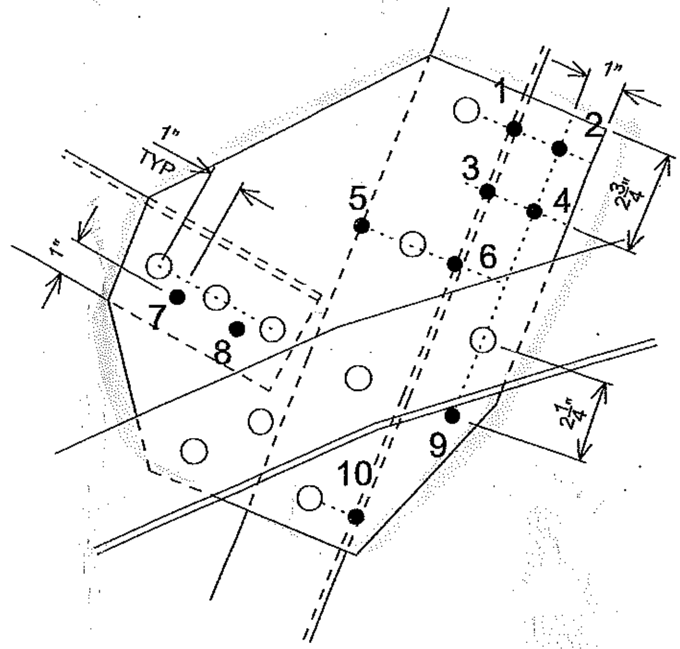

STR NO. 588/47231 FACE NO. 1

MARK NO 38 ORIG THICK ¼" .250 LEG NO. ______

.224 .263 .210 .239 .258 .297 .206 .207 .283 .292

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.190~~	~~.189~~	~~.248~~	~~.206~~	~~.253~~	~~.202~~	~~.214~~	~~.240~~	~~.179~~	~~.208~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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Transmission Construction	CORTEN MONITORING WORKSHEET					
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

$f EC$

TESBORD1

VISUAL EVALUATION **STR. # 588/~~63~~247**

Are there missing bolts, or bolts where the bolt head has popped off?

1 2 3 4 5 (1 = None, 5 = Many Missing/Damaged Bolts)

Are there loose members/members with play in the bolted connections?

1 2 3 4 5 (1 = None, 5 = Significant # of Loose Members)

Are there cracked, bent and/or missing structural members?

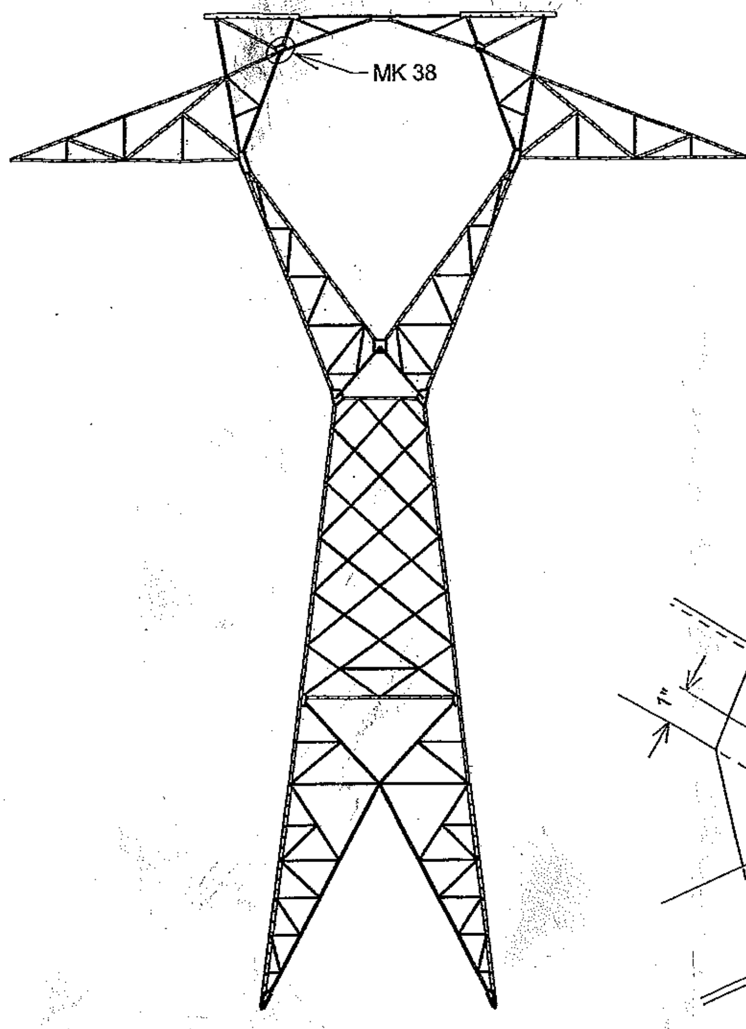
1 2 3 4 5 (1 = None, 5 = Severe Damage)

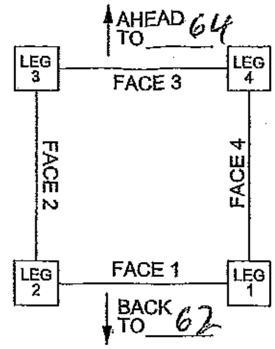
Is there extensive joint packout?

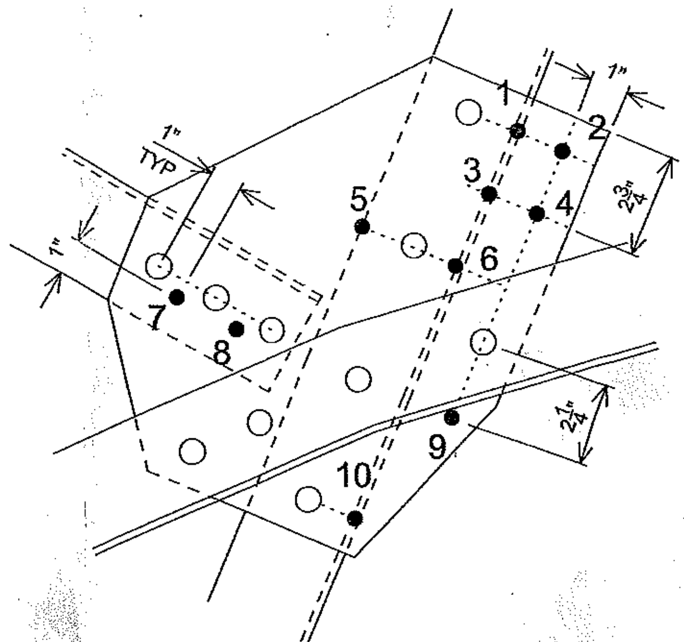
1 2 3 4 5 (1 = None, 5 = Severe Packout)

Is there notable foundation damage?

1 2 3 4 5 (1 = None, 5 = Severe Damage)







STR NO. 588/63 247 FACE NO. 1

MARK NO 38 ORIG THICK ¼" .250 LEG NO. ______

.200 .245 .205 .228 .243 .240 .218 .215 .247 .219

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.197~~	~~.157~~	~~.186~~	~~.156~~	~~.245~~	~~.224~~	~~.191~~	~~.198~~	~~.226~~	~~.192~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

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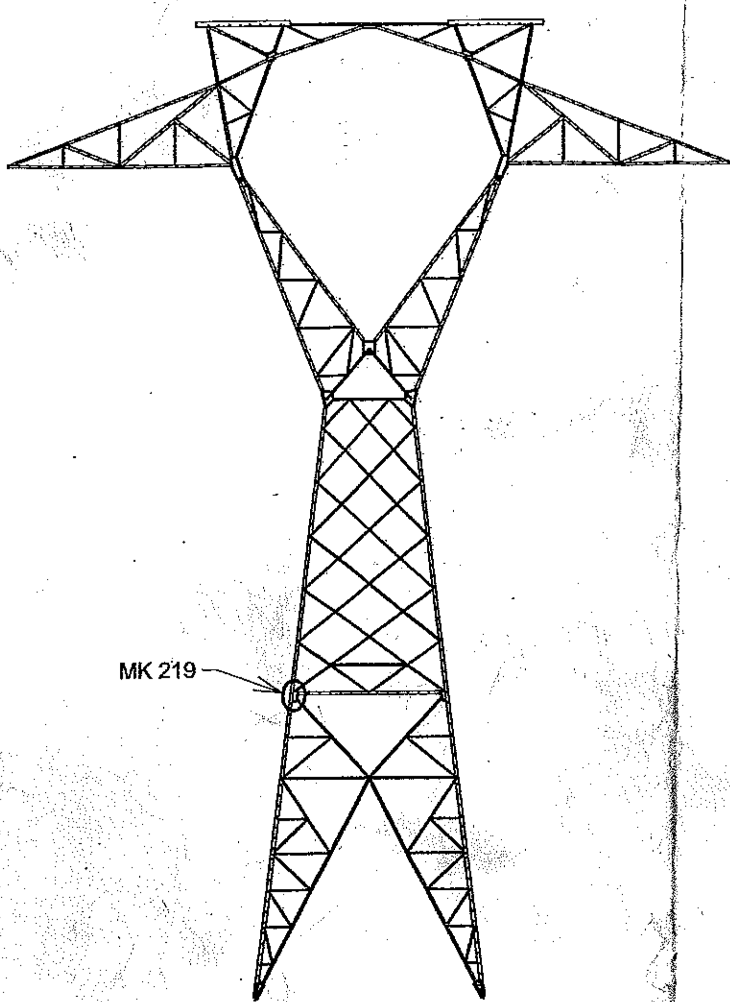

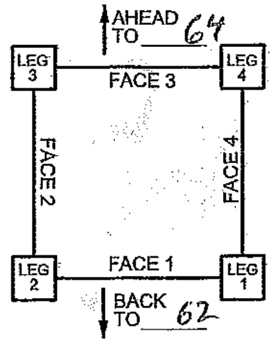

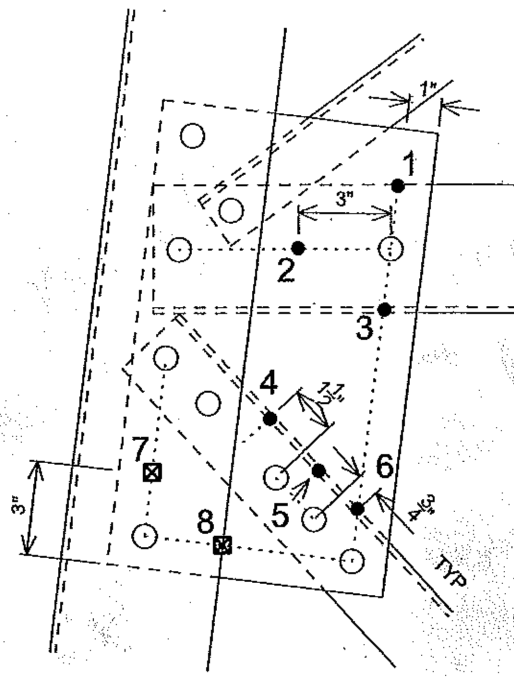

● DENOTES TO MEASURE ON THE "FRONT FACE"

⊠ DENOTES TO MEASURE ON THE "BACKSIDE"

STR NO. 588/63 247 FACE NO. 1

MARK NO 219 ORIG THICK ¼" .250 LEG NO. 2

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8
	,224	,242	,251	,273	,256	,235	,291	,273
THICKNESS	~~,153~~	~~,149~~	~~,172~~	~~,208~~	~~,202~~	~~,217~~	~~,236~~	~~,203~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

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	ORIGINAL					
	REVISION					CAD NO.

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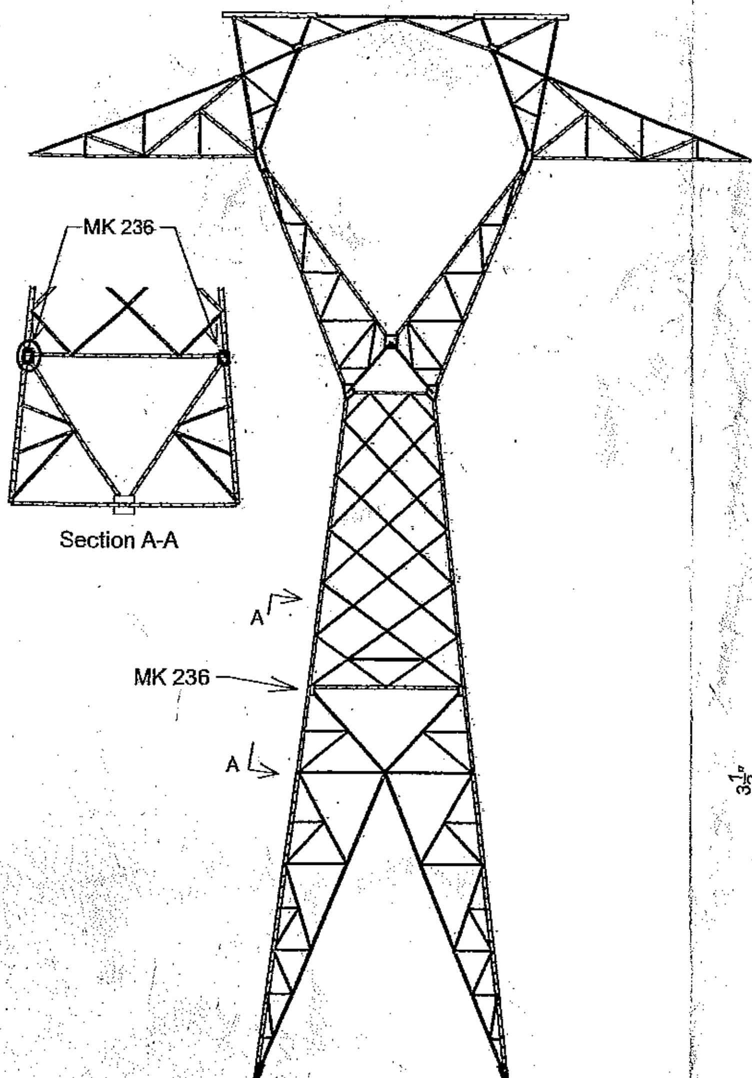

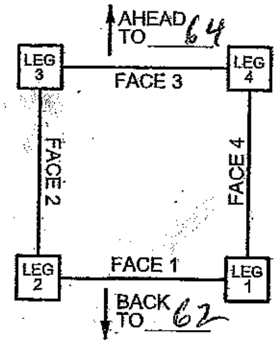

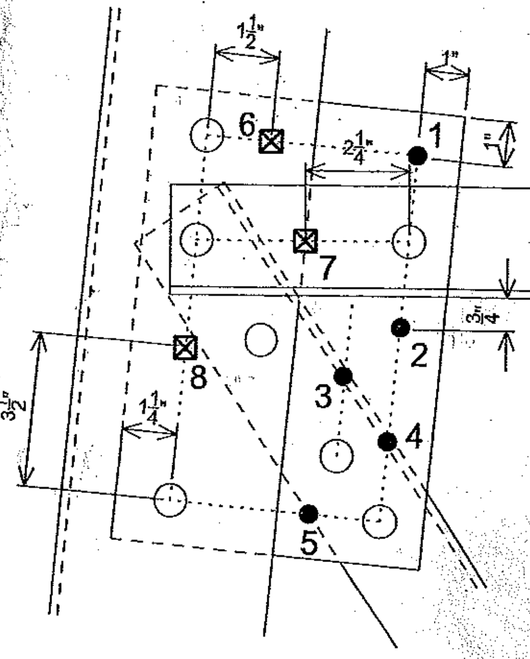

● DENOTES TO MEASURE ON THE "FRONT FACE"

☒ DENOTES TO MEASURE ON THE "BACKSIDE"

STR NO. 588/63 2H7 FACE NO. 2

MARK NO 236 ORIG THICK ¼" .250 LEG NO. 3

	.289	.323	.396	.290	.342	.342	.320	.296
MEASUREMENT LOCATION	1	2	3	4	5	6	7	8
THICKNESS	~~.242~~	~~.241~~	~~.242~~	~~.245~~	~~.257 .241~~	~~.187~~	~~.169~~	~~.253~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

NSPEC$

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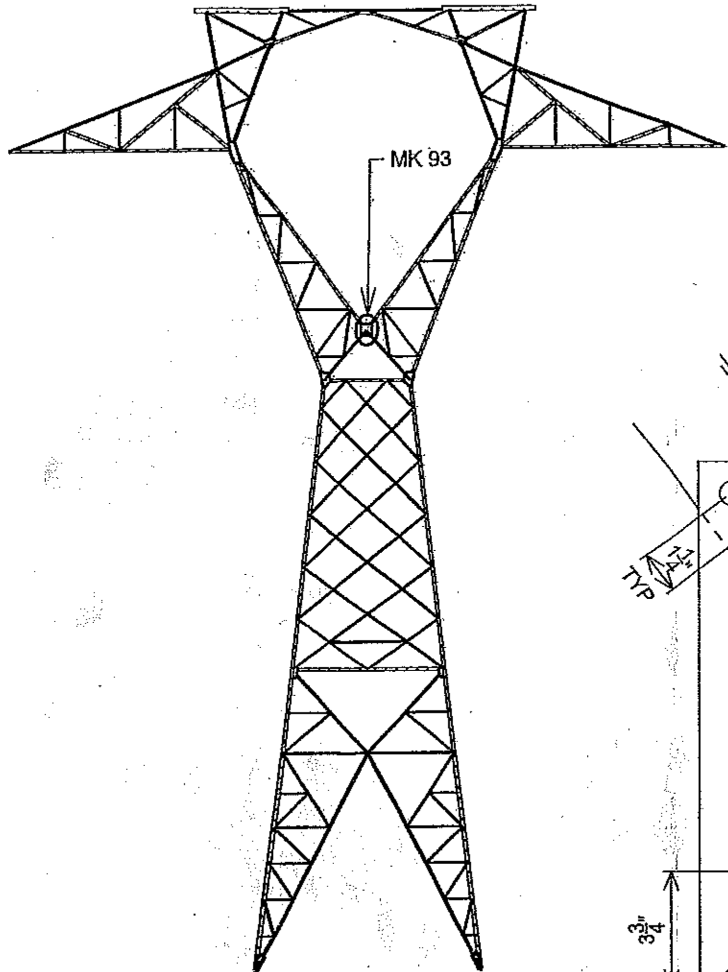
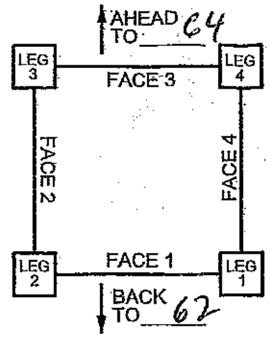
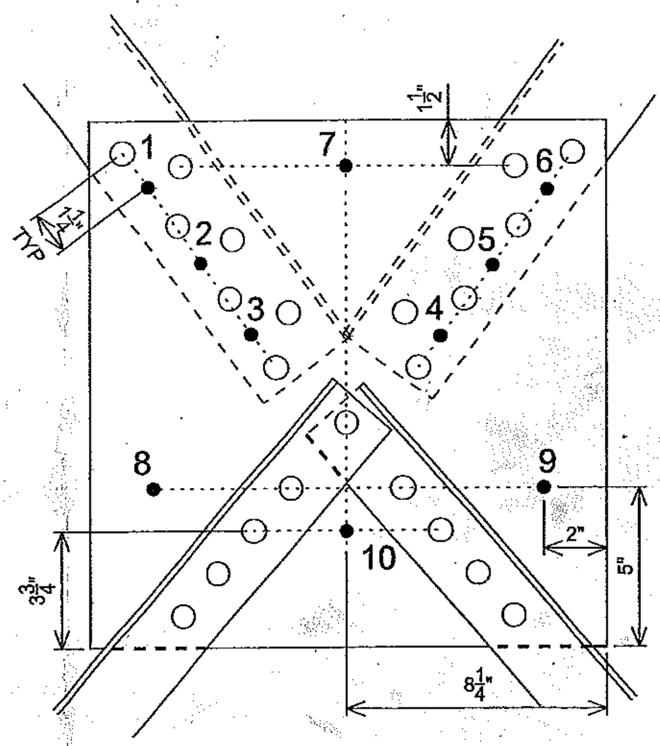
Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

$SYTIME$







STR NO. 588/63 247 FACE NO. 1

MARK NO 93 ORIG THICK 5/16" .312 LEG NO. ______

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
	.359	.351	.340	.341	.351	.350	.361	.378	.291	.370
THICKNESS	~~.268~~	~~.221~~	~~.190~~	~~.268~~	~~.267~~	~~.175~~	~~.170~~	~~.297~~	~~.165~~	~~.168~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

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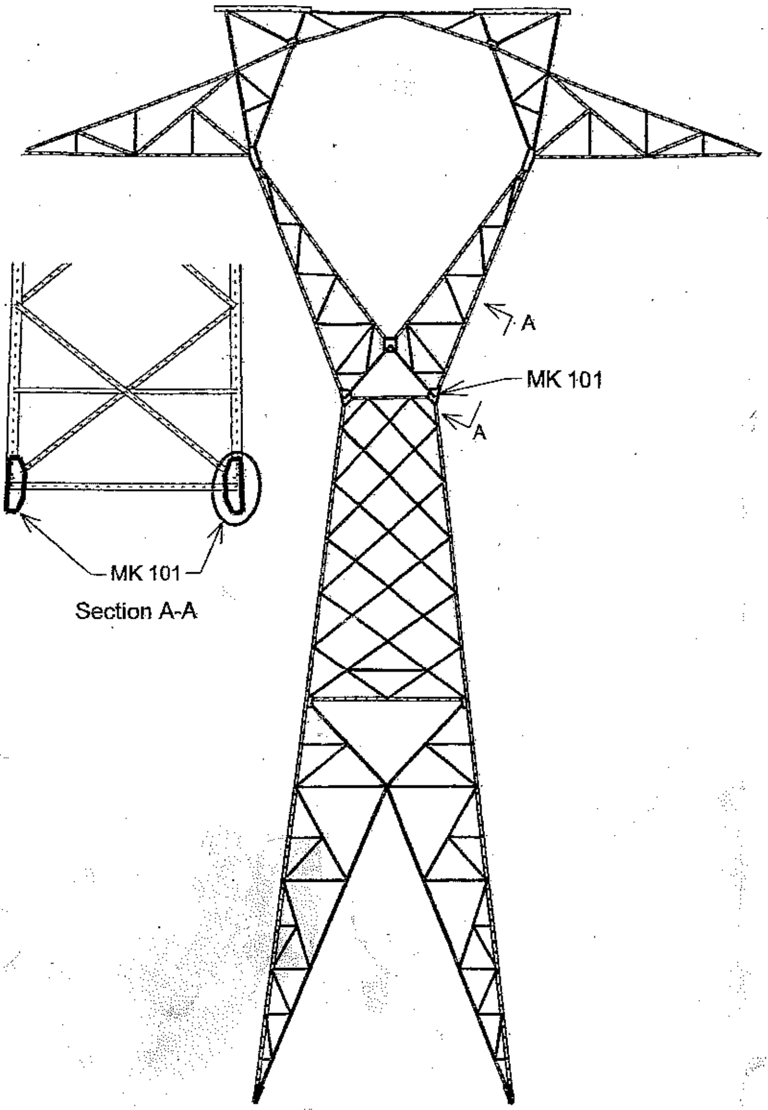
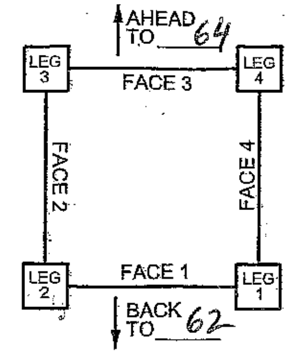
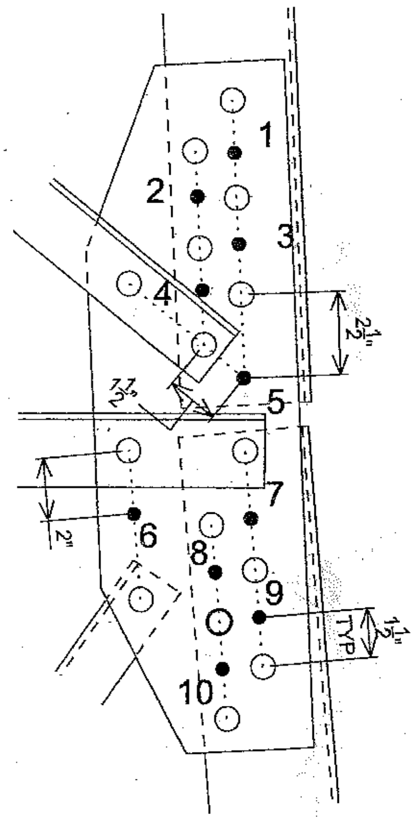
Transmission Construction	CORTEN MONITORING WORKSHEET					
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.



Section A-A





STR NO. 588/~~63~~247 FACE NO. 4

MARK NO 101 ORIG THICK ⅜" .375 LEG NO. 4

MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
	.439	.450	.452	.448	.446	.449	.416	.420	.414	.422
THICKNESS	~~.388~~	~~.350~~	~~.388~~	~~.410~~	~~.[illegible]8~~	~~.378~~	~~.373~~	~~.382~~	~~.381~~	~~.387~~

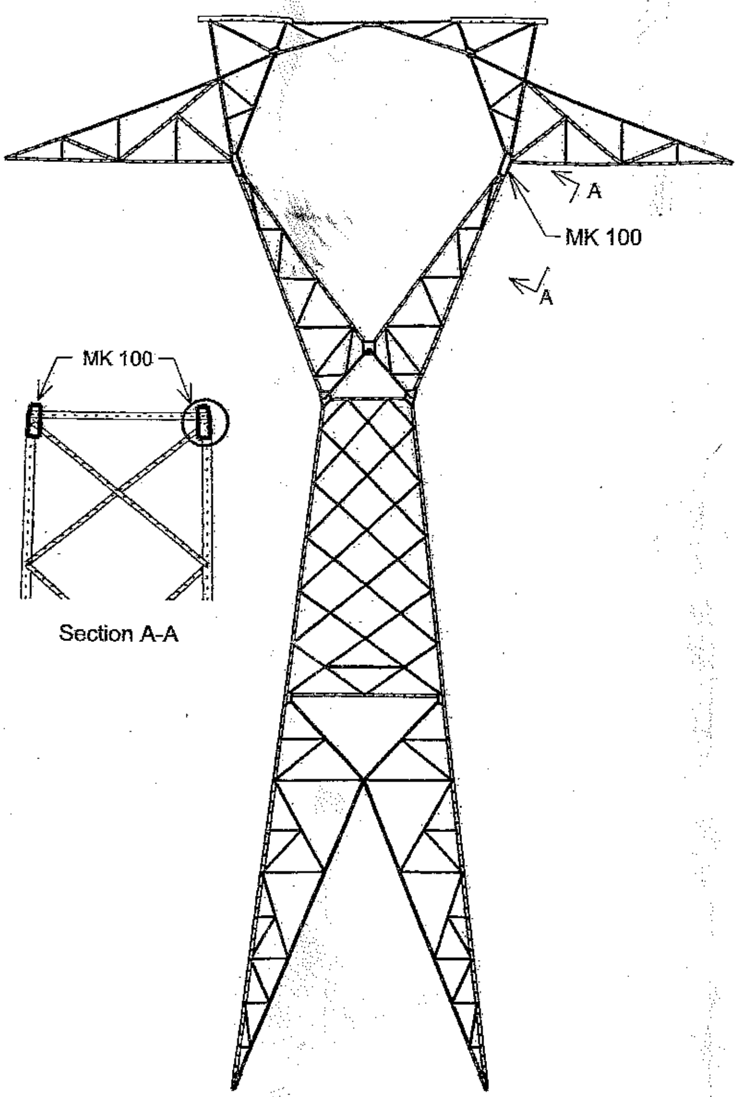
MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

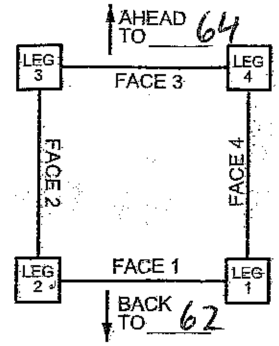
2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

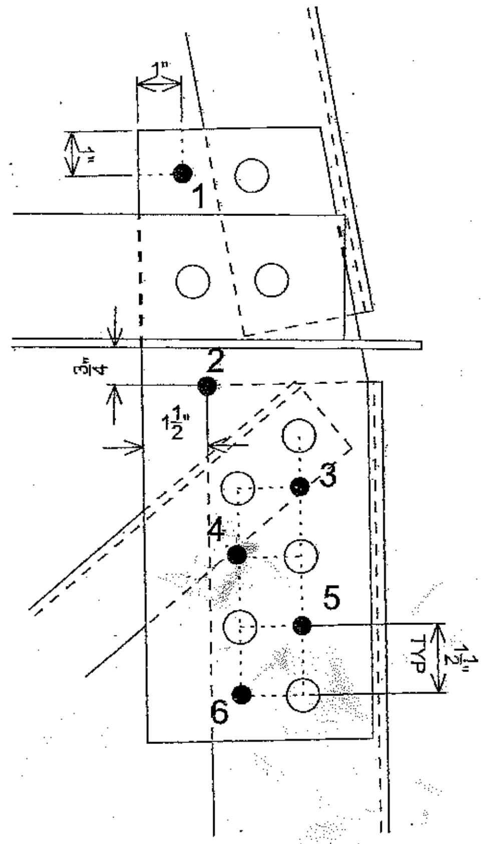
3. ALL MEASUREMENTS ARE TO BE RECORDED IN THE TABLE AND SUBMITTED TO DOMINION TRANSMISSION ENGINEERING FOR ARCHIVING AND SCHEDULING OF FOLLOW-UP MEASUREMENTS.

Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION	188				CAD NO.



Section A-A





STR NO. 588/63 ~~247~~ FACE NO. 4

MARK NO 100 ORIG. THICK 5/16" .312 LEG NO. 4

.350 .341 .344 .349 .349 .341

MEASUREMENT LOCATION	1	2	3	4	5	6
THICKNESS	~~.346~~	~~.337~~	~~.340~~	~~.340~~	~~.340~~	~~.319~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

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Transmission Construction	CORTEN MONITORING WORKSHEET				
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE
	ORIGINAL				
	REVISION				

DRAWING NO.

CAD NO.

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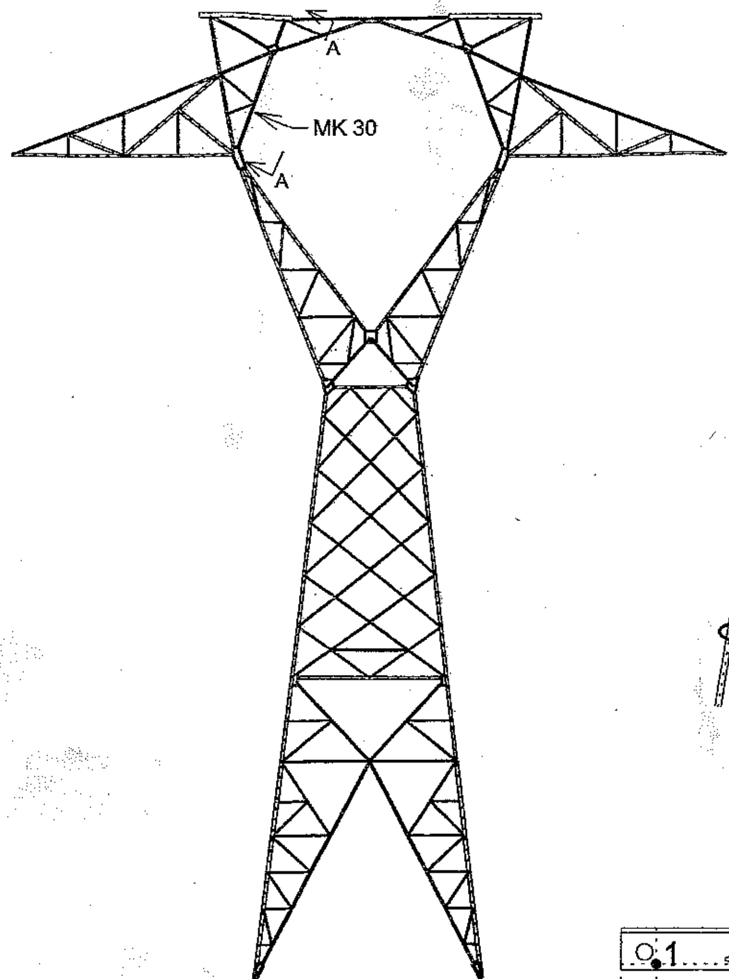
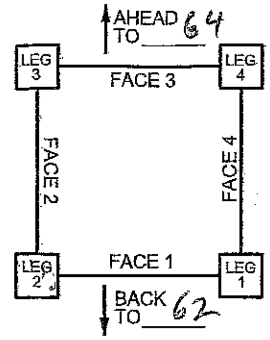
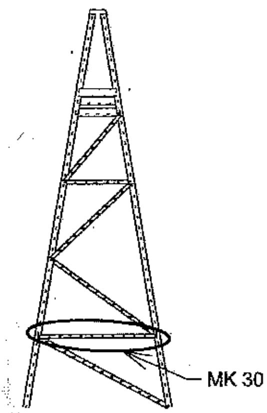
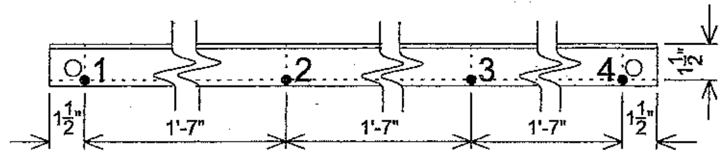






Section A-A



STR NO. 588/~~63~~247 FACE NO. 2

MARK NO 30 ORIG THICK 3/16" .187 LEG NO. ________

	.229	.206	.193	.195
MEASUREMENT LOCATION	1	2	3	4
THICKNESS	~~.170~~	~~.174~~	~~.170~~	~~.174~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

2. MEASUREMENTS SHALL BE CONDUCTED UTILIZING AN ULTRASONIC THICKNESS GAGE PER THE PROJECT SPECIFICATIONS INCLUDED IN THIS SPECIFICATION.

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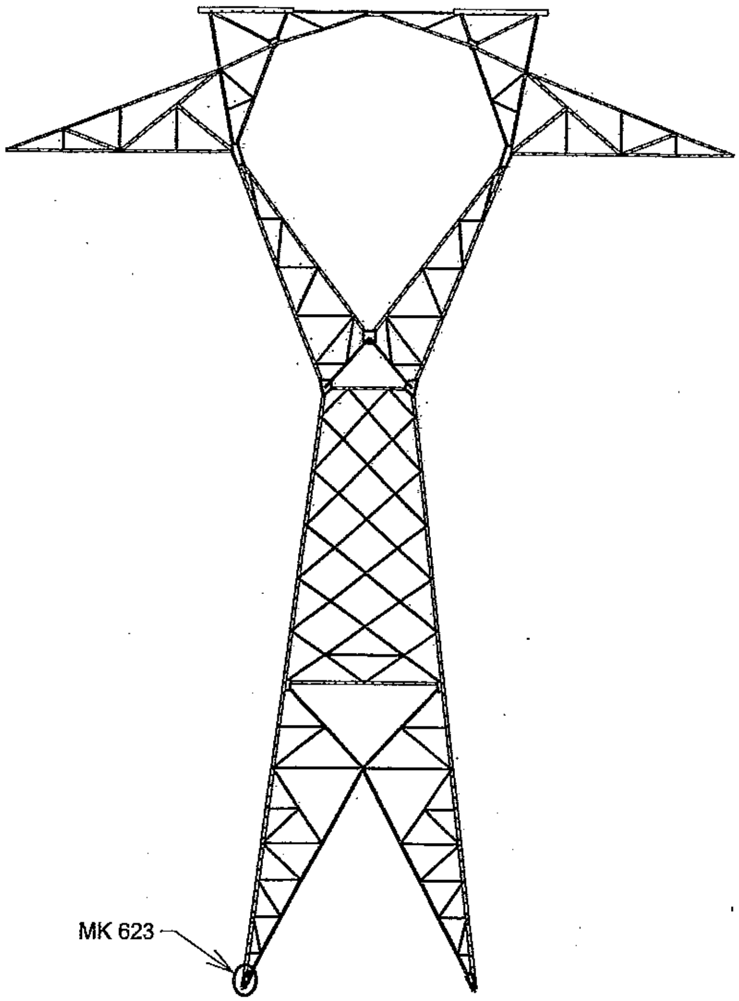
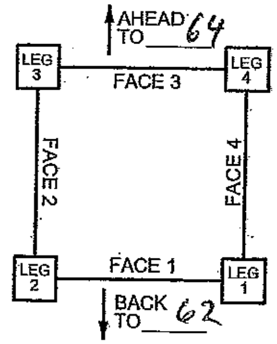
Transmission Construction CORTEN MONITORING WORKSHEET

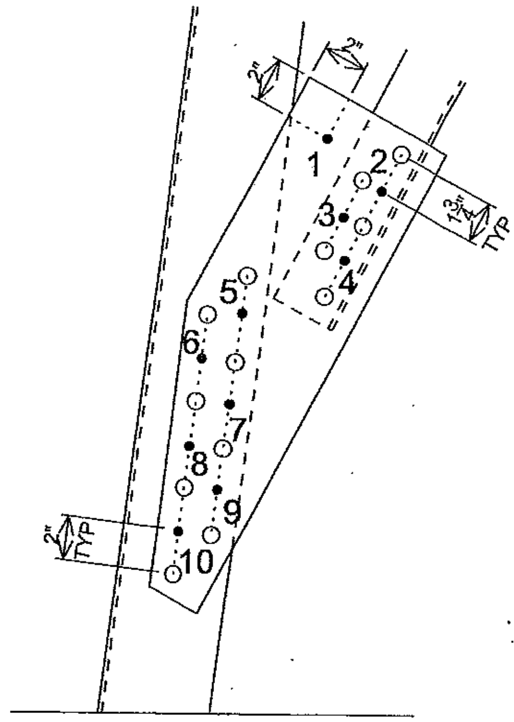
TESBORD1

Dominion
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL					
REVISION					CAD NO.







LEG EXT. 25'

STR NO. 588/~~63~~ 247 FACE NO. 1

MARK NO 623 ORIG THICK ¼" .250 LEG NO. 2

	.493	.461	.460	.437	.411	.468	.445	.458	.456	.440
MEASUREMENT LOCATION	1	2	3	4	5	6	7	8	9	10
THICKNESS	~~.185~~	~~.217~~	~~.216~~	~~.202~~	~~.211~~	~~.203~~	~~.216~~	~~.211~~	~~.215~~	~~.217~~

MEASUREMENT GUIDELINES:

1. THICKNESS MEASUREMENTS SHALL BE TAKEN AT THE POINTS INDICATED ON SELECTED MEMBERS (SEE FIGURE 1). A WIRE BRUSH SHALL BE UTILIZED TO REMOVE ANY LOOSE DEBRIS FROM THE MEASUREMENT SITES PRIOR TO MEASUREING.

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Transmission Construction	CORTEN MONITORING WORKSHEET					
Dominion 701 E. Cary Street Richmond, VA 23219		DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
	ORIGINAL					
	REVISION					CAD NO.

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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 Proposed Route for the Project includes the approximately 13.5-mile-long existing right-of-way corridor currently maintained at 150 feet in width for rebuilt Line #588 and proposed Line #5005.[38] No alternative routes are proposed for the Project. See Section II.A.9.

[38] Note that the Proposed Route is 13.5 miles long located entirely within existing right-of-way or on Company-owned property, regardless of whether the Project is constructed as proposed, or utilizing the 1.6-mile Constraint Design Segment.

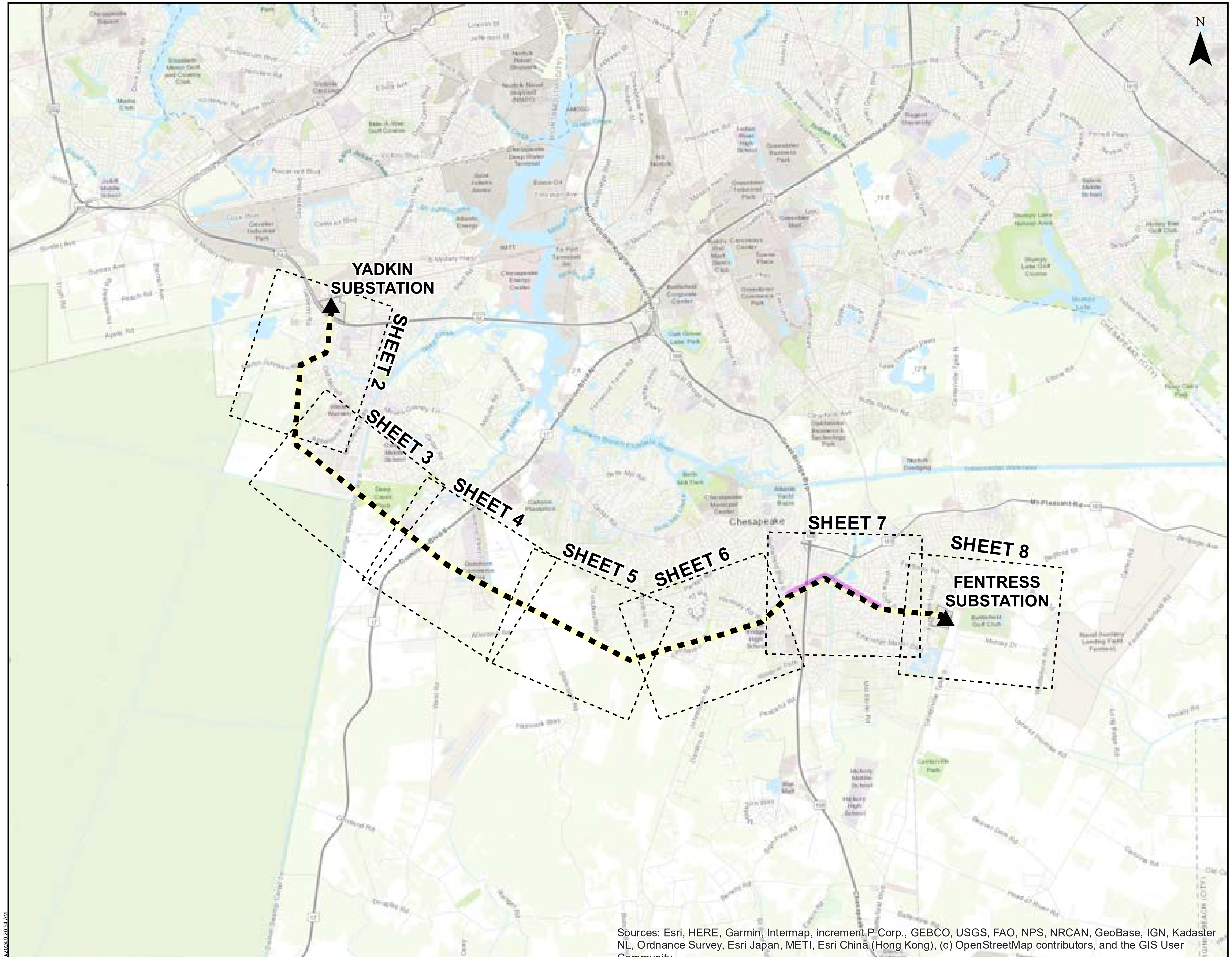
II. DESCRIPTION OF THE PROPOSED PROJECT

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. No portion of the right-of-way is proposed to be quitclaimed or relinquished.

Dominion Energy Virginia will make the digital Geographic Information Systems shape file available to interested persons upon request to the Company's legal counsel as listed in the Project Application.



ATTACHMENT II.A.2
ENVIRONMENTAL CONSTRAINTS MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

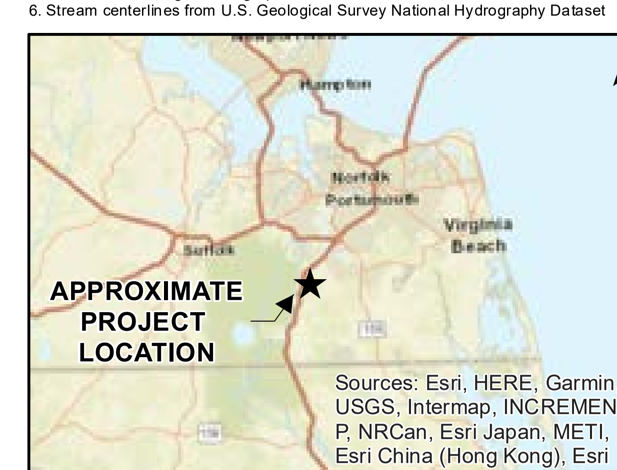
Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 0.75 1.5 3 Miles
Scale is 1 IN = 1.5 MI when printed at original size of 11x17

- Existing Line #588 Right-of-Way
- Constraint Design Segment
- Existing Substation
- Dominion Owned Substation Parcel

Notes:
1. Basemap from ESRI Topographic and World Street Map
2. Project centerline provided by Dominion Energy Virginia
3. Conservation lands, easements, and local lands from Virginia Department of Conservation and Recreation, U.S. Geological Survey Protected Areas Database of the U.S., and Department of Historic Resources Virginia Cultural Resources Information System
4. Places digitized from Google Earth
5. Railroads from Virginia Geographic Information Network
6. Stream centerlines from U.S. Geological Survey National Hydrography Dataset



C2 ENVIRONMENTAL
Dominion Energy

SHEET 1 OF 8

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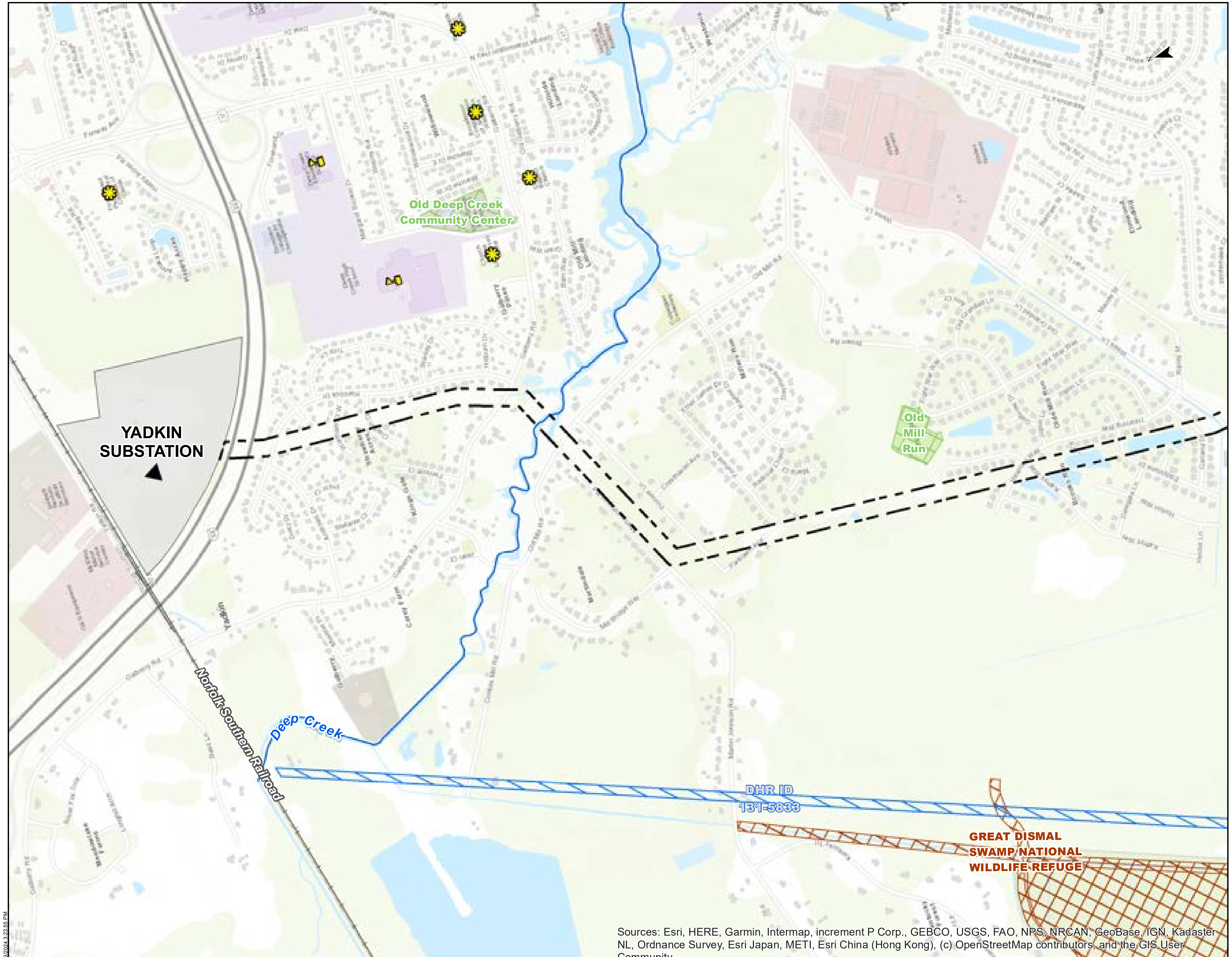


ATTACHMENT II.A.2

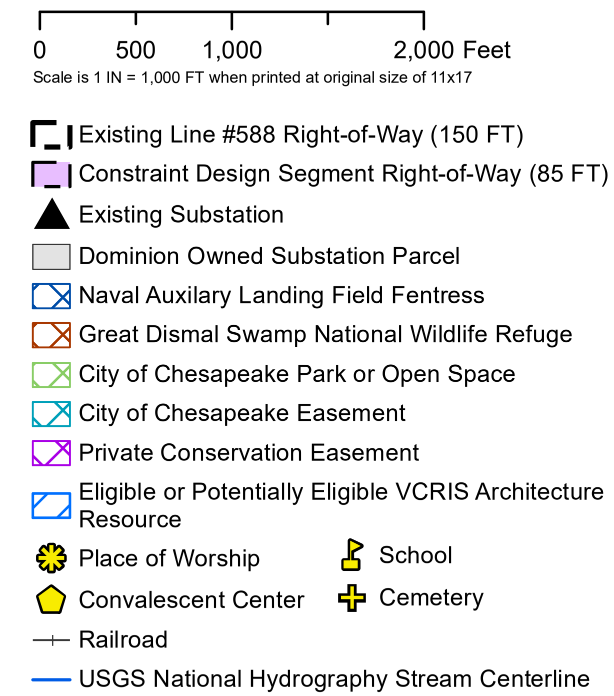
ENVIRONMENTAL CONSTRAINTS MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24



SHEET 2 OF 8

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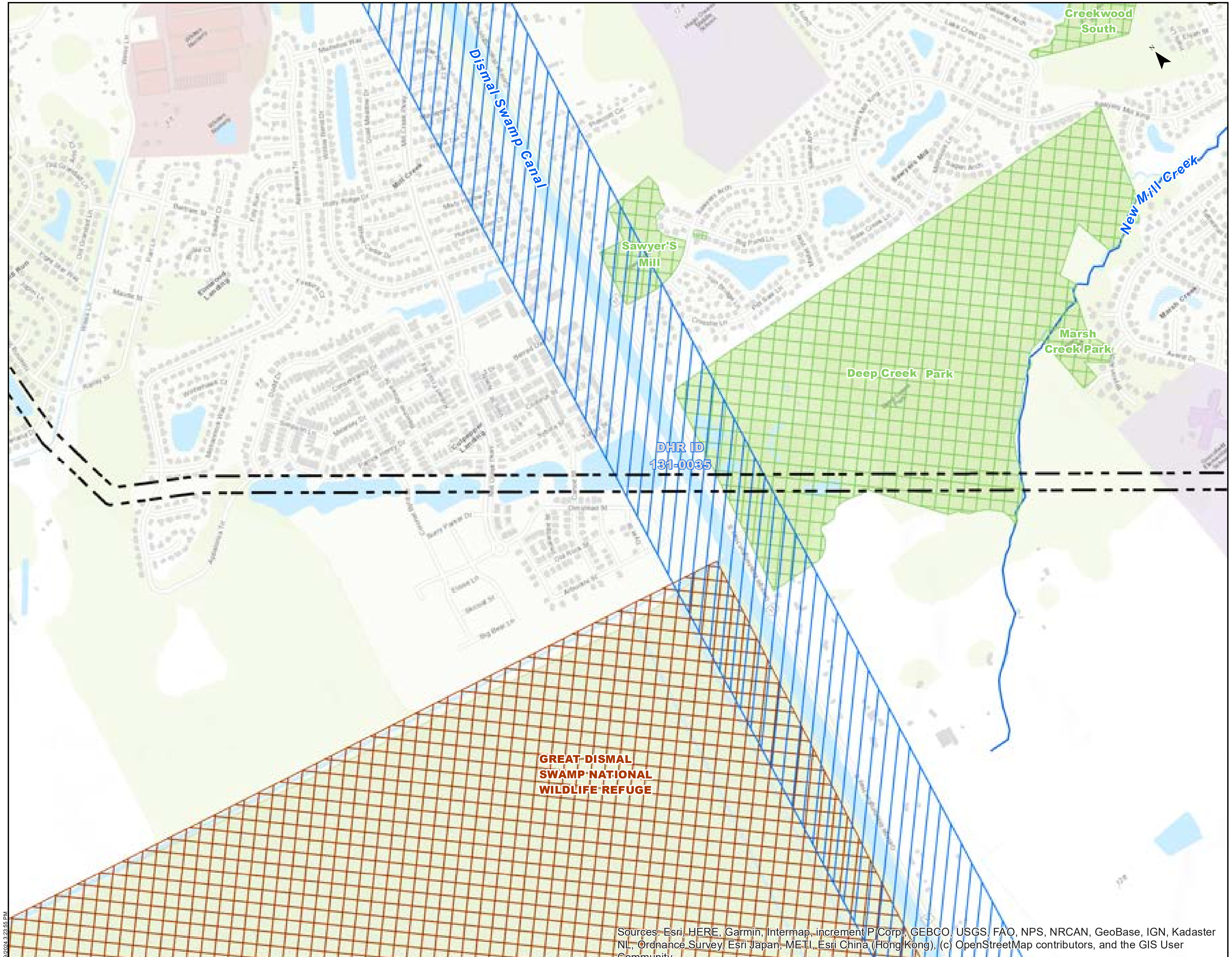


ATTACHMENT II.A.2
ENVIRONMENTAL CONSTRAINTS MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

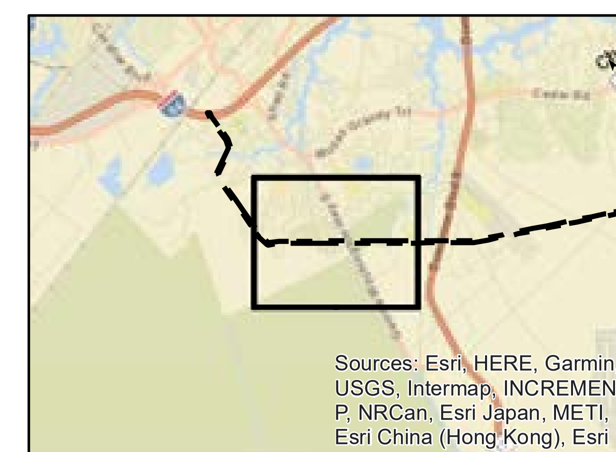
City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet
Scale is 1 IN = 1,000 FT when printed at original size of 11x17

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- Naval Auxilary Landing Field Fentress
- Great Dismal Swamp National Wildlife Refuge
- City of Chesapeake Park or Open Space
- City of Chesapeake Easement
- Private Conservation Easement
- Eligible or Potentially Eligible VCRIS Architecture Resource
- Place of Worship
- School
- Convalescent Center
- Cemetery
- Railroad
- USGS National Hydrography Stream Centerline



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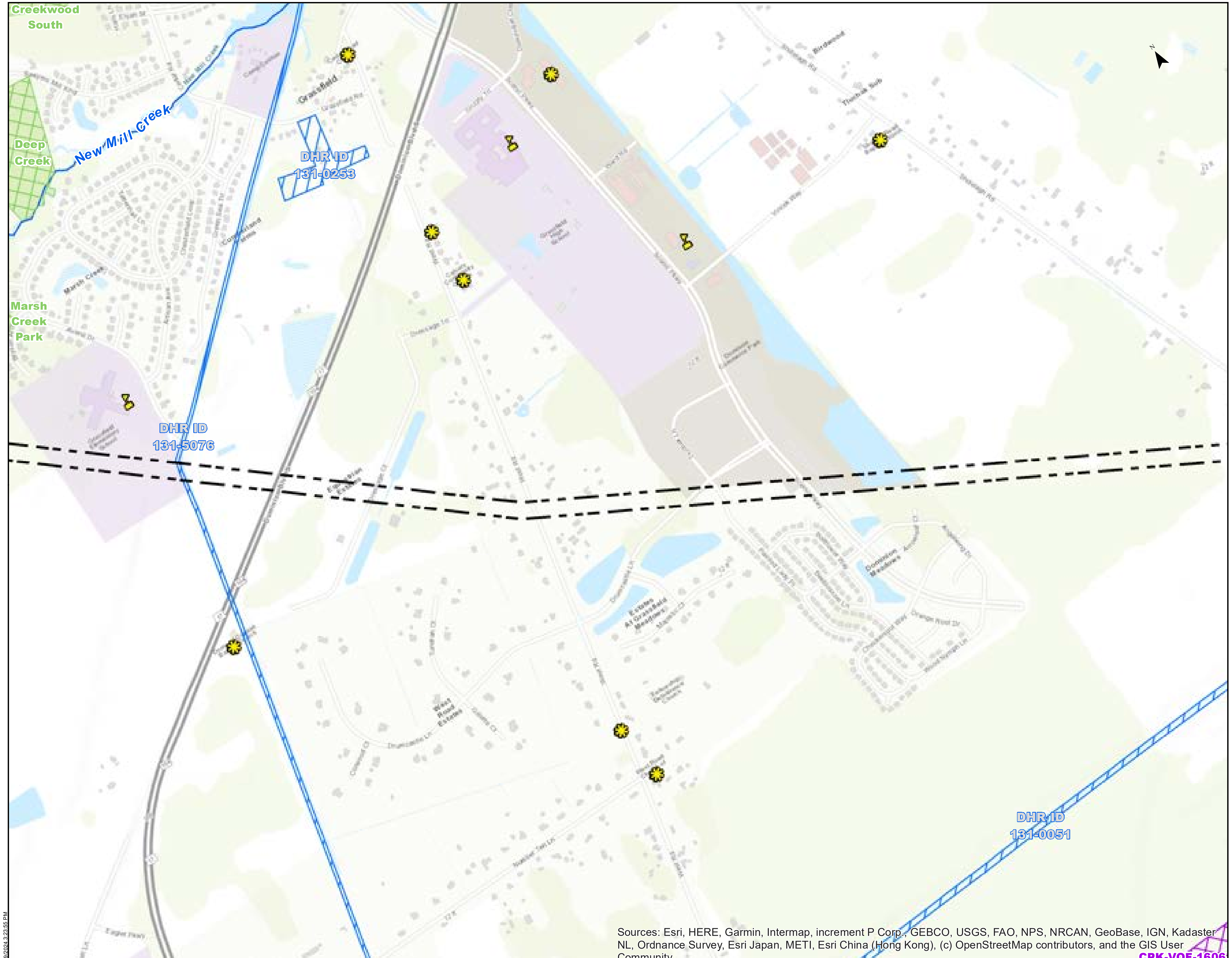


ATTACHMENT II.A.2
ENVIRONMENTAL CONSTRAINTS MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

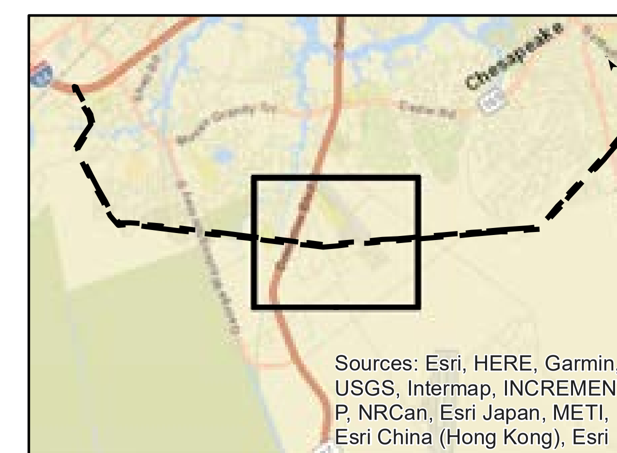
City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet
Scale is 1 IN = 1,000 FT when printed at original size of 11x17

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- Naval Auxilary Landing Field Fentress
- Great Dismal Swamp National Wildlife Refuge
- City of Chesapeake Park or Open Space
- City of Chesapeake Easement
- Private Conservation Easement
- Eligible or Potentially Eligible VCRIS Architecture Resource
- Place of Worship
- School
- Convalescent Center
- Cemetery
- Railroad
- USGS National Hydrography Stream Centerline



C2 ENVIRONMENTAL
Dominion Energy

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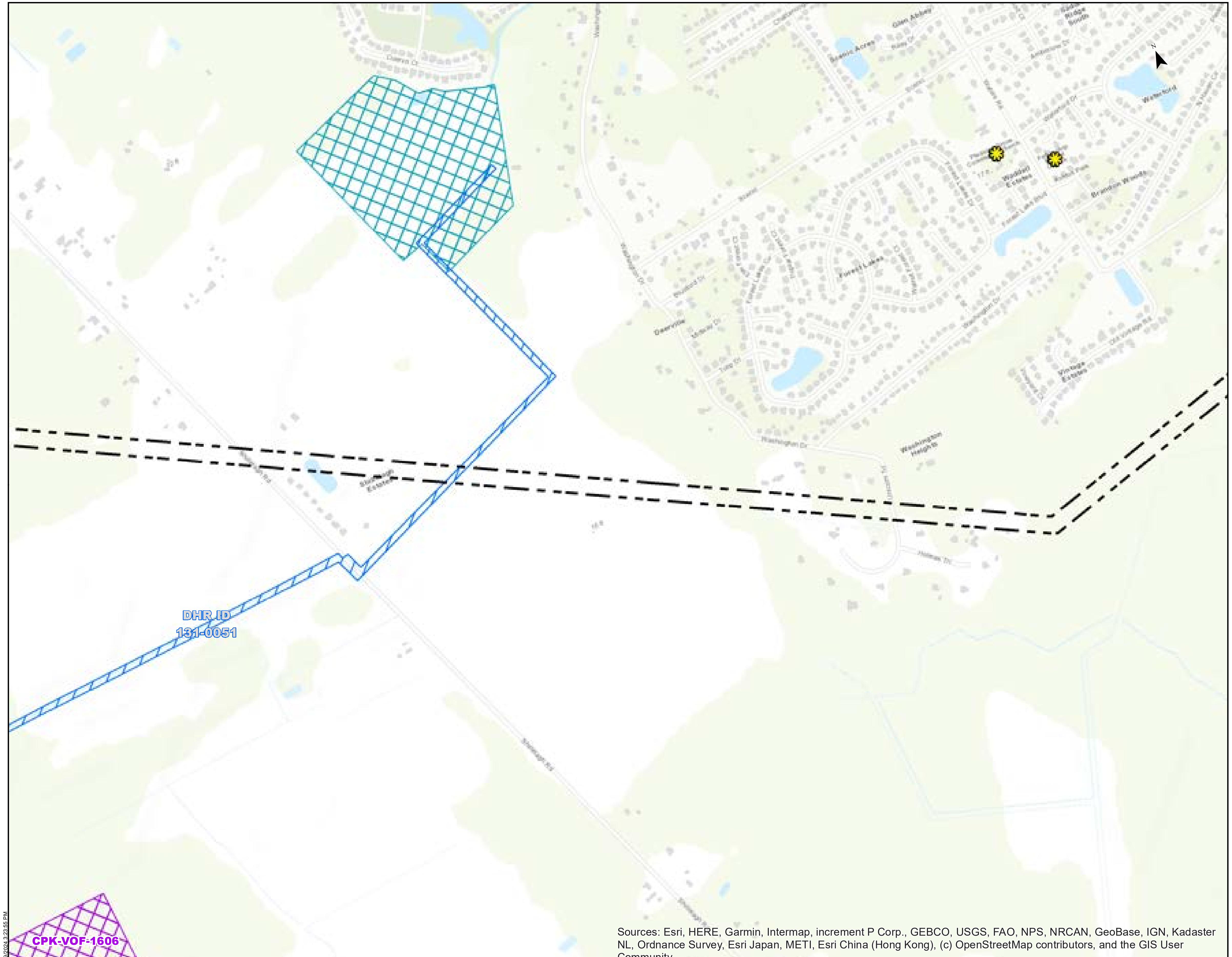

ATTACHMENT II.A.2
ENVIRONMENTAL CONSTRAINTS MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

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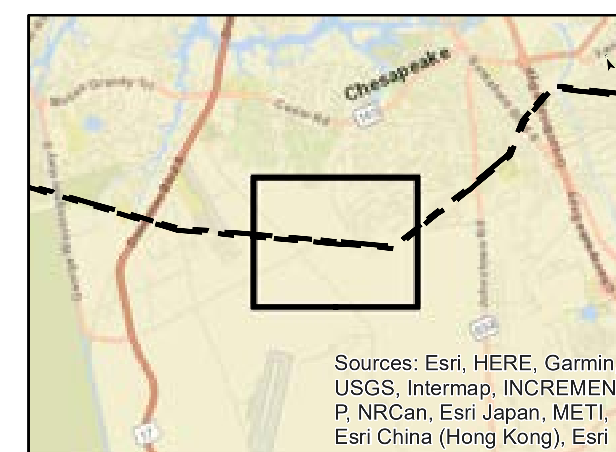

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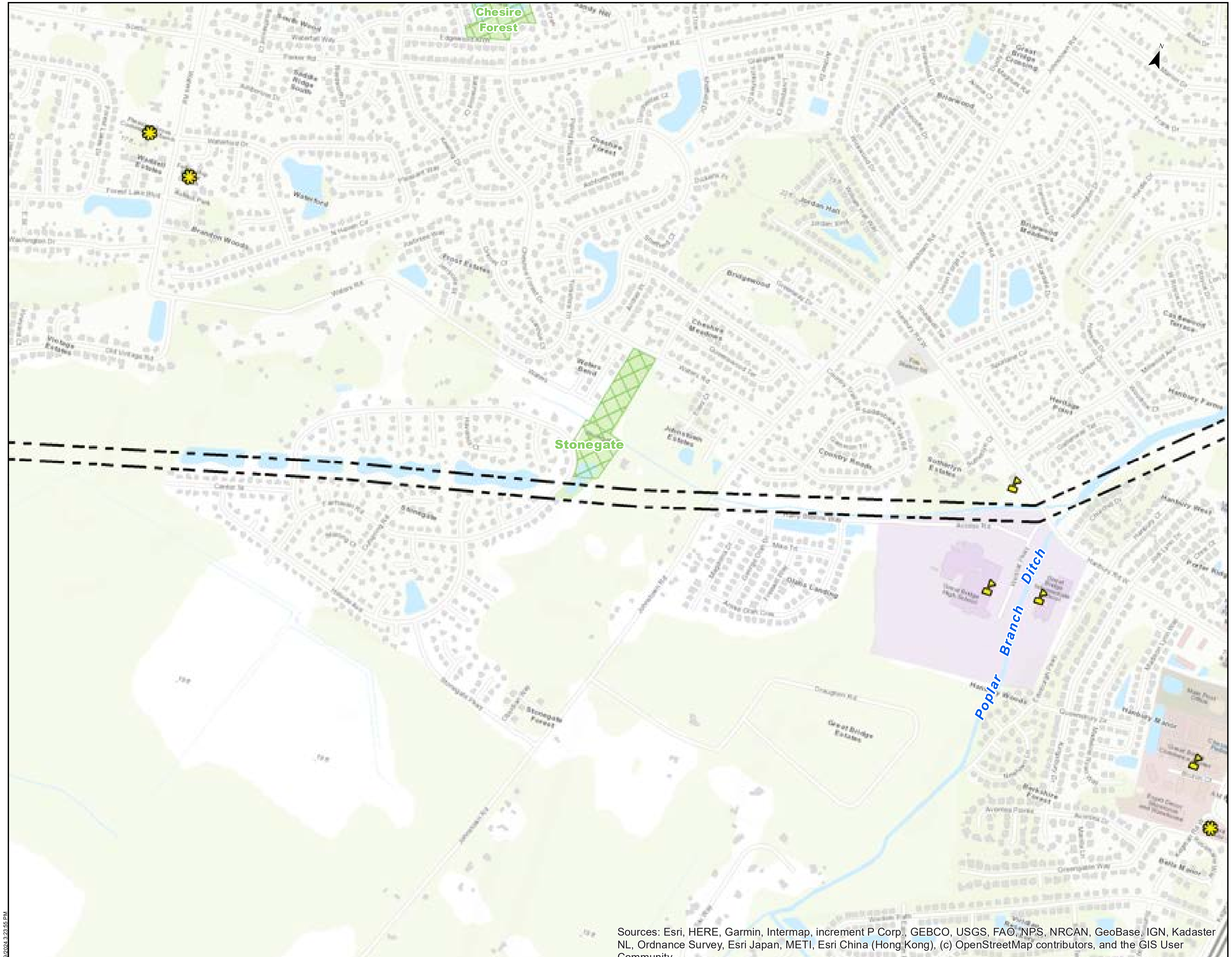

ATTACHMENT II.A.2

ENVIRONMENTAL CONSTRAINTS MAP

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City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

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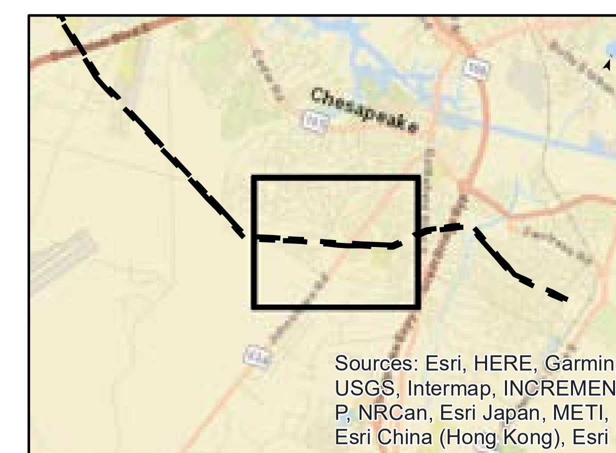

C2 ENVIRONMENTAL

Dominion Energy

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ATTACHMENT II.A.2
ENVIRONMENTAL CONSTRAINTS MAP

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City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

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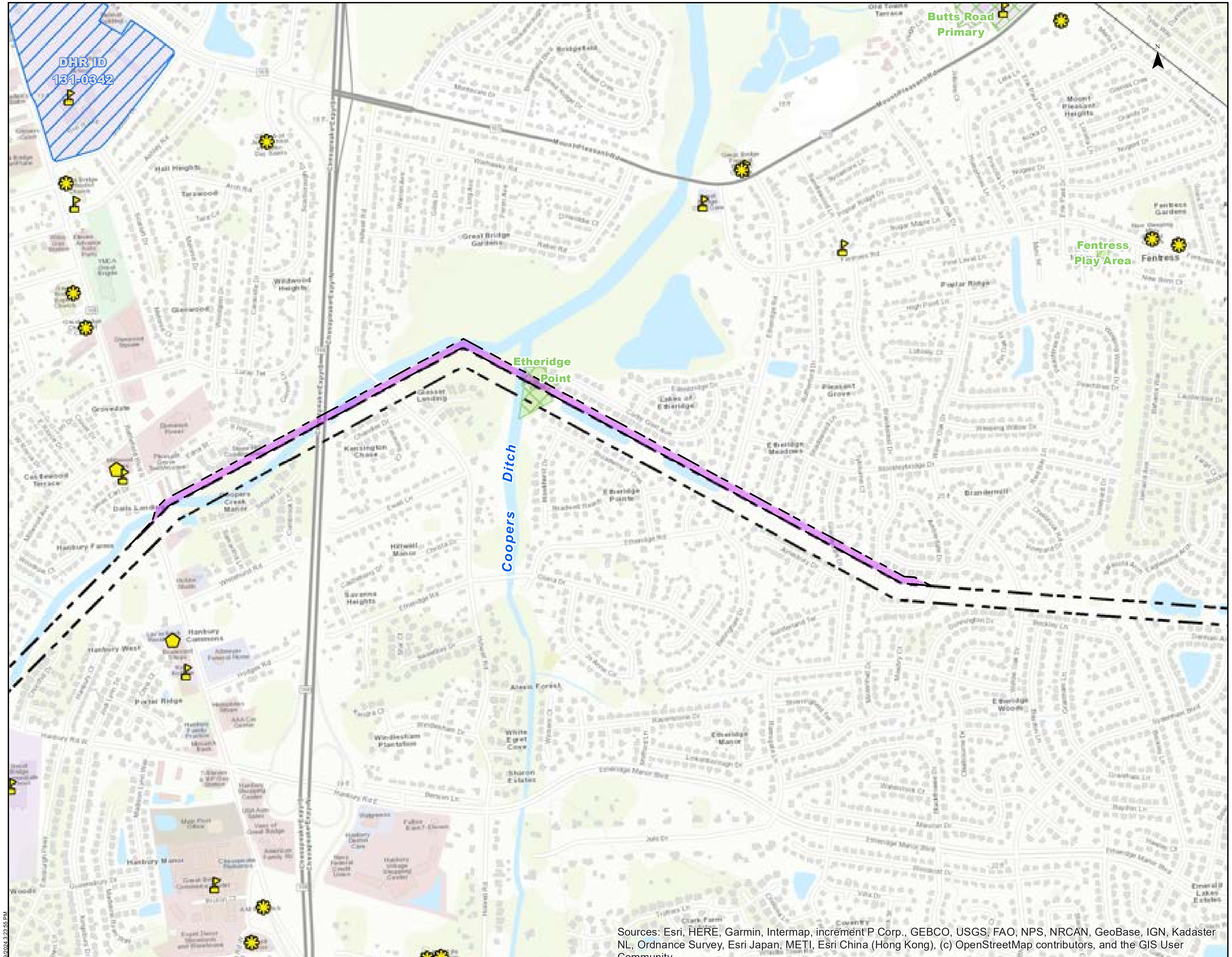
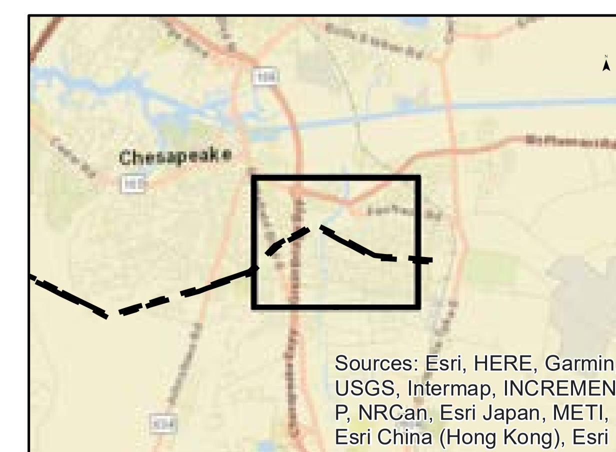


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri

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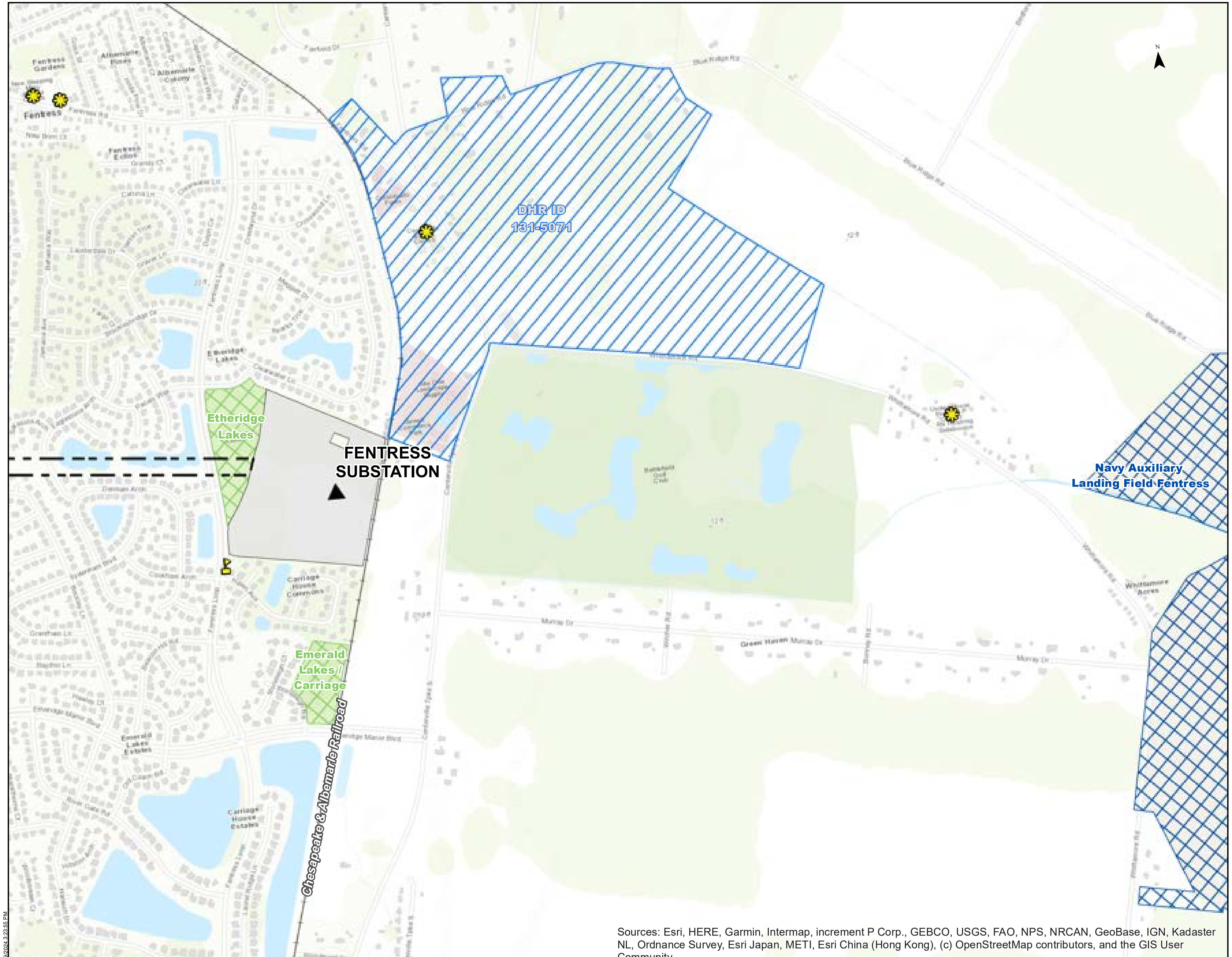

ATTACHMENT II.A.2

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City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

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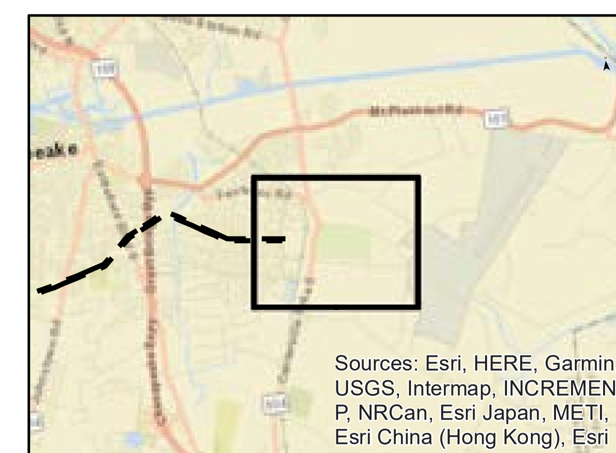

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II. DESCRIPTION OF THE PROPOSED PROJECT

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.[39]

[39] *See supra*, n. 38.

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-b.[40]

For additional information on the proposed structures, see Section II.B.3.

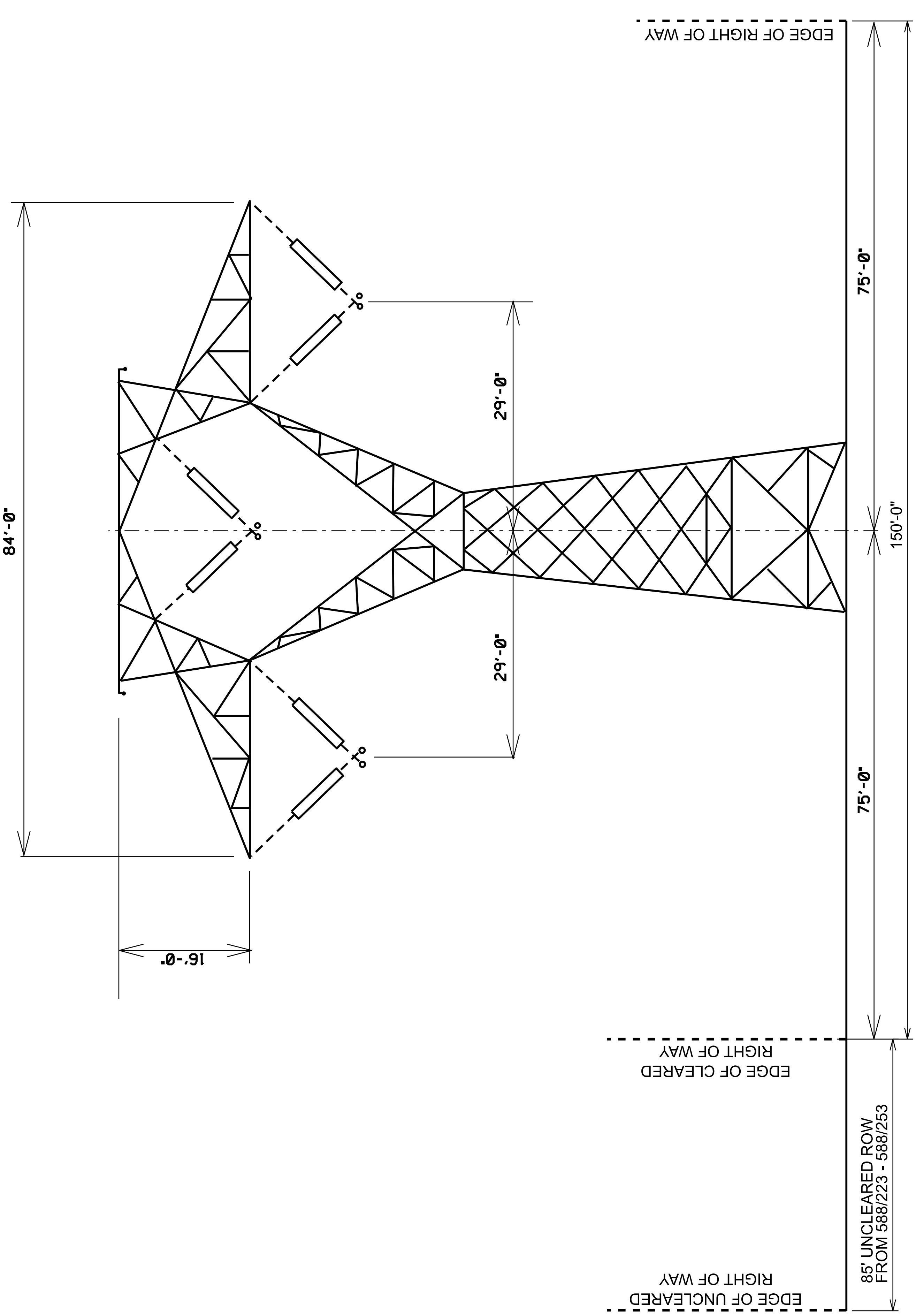
[40] *See* Section I.F and Attachment I.F.1 for the Constraint Design Segment.

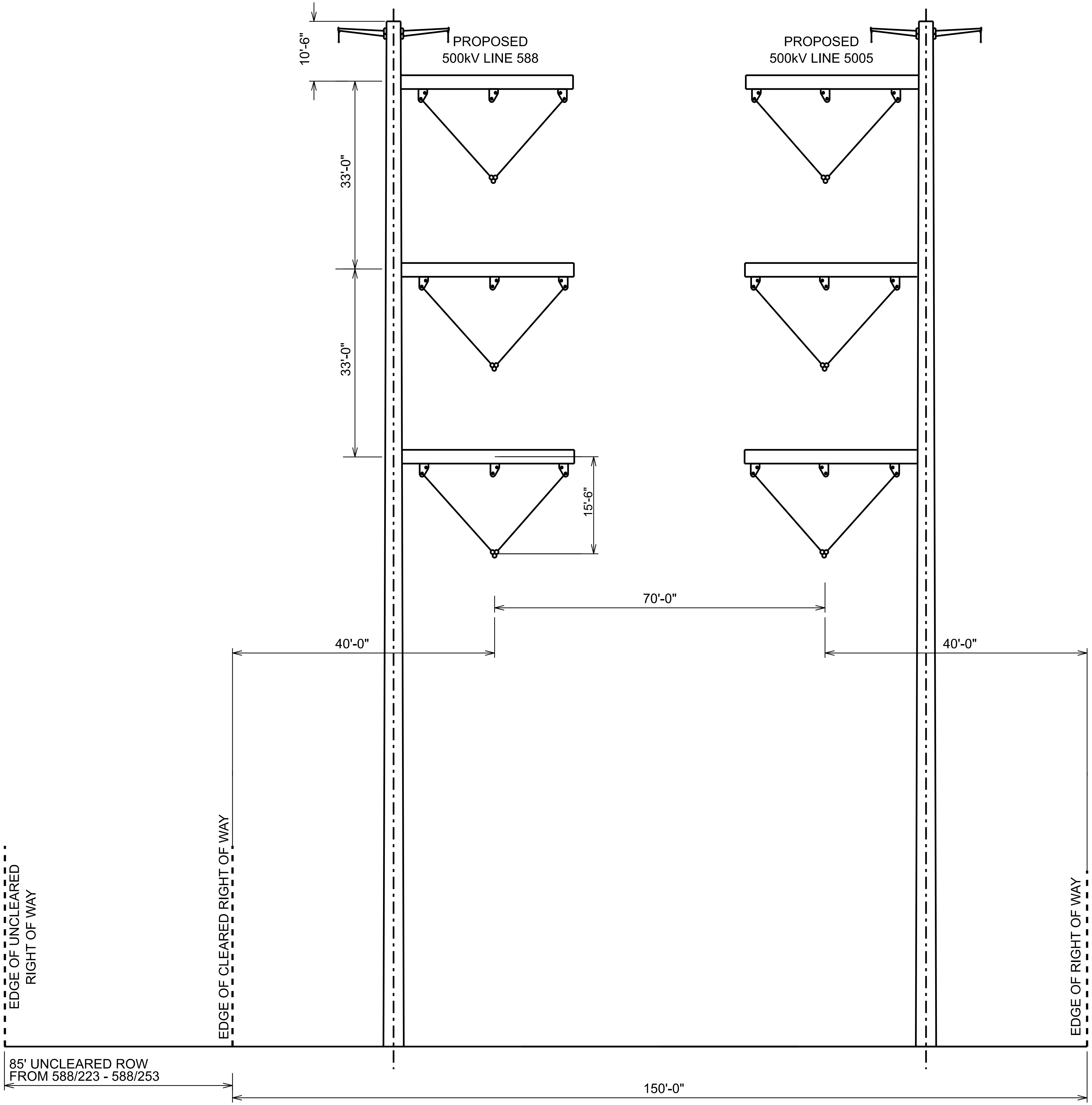
TYPICAL EXISTING RIGHT OF WAY
LOOKING TOWARDS FENTRESS
SUBSTATION

Dominion Energy

Dominion Energy
5000 Dominion Blvd
Glen Allen, VA 23060

	ORIGINAL	REVISION	DRAWING NO.
DRAWN	KEG		ATTACHMENT II.A.5.a
CHECKED	RAJ		
APPROVED	CBA		
DATE	4/9/24		





NOTE:

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

TYPICAL PROPOSED RIGHT OF WAY
LOOKING TOWARDS FENTRESS
SUBSTATION

Dominion Energy

Dominion Energy
5000 Dominion Blvd
Glen Allen, VA 23060

	ORIGINAL	REVISION	DRAWING NO.
DRAWN	KEG		ATTACHMENT II.A.5.b
CHECKED	RAJ		
APPROVED	CBA		
DATE	4/9/24		

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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 Company obtained easements along the existing right-of-way of the Fentress-Yadkin transmission corridor in the late 1960s and early 1970s, including the 5.7-mile section of 235-foot-wide right-of-way between Fentress Substation and Structure #588/223. See Section II.A.4.

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: For purposes of the Project as proposed, the existing Line #588 transmission right-of-way corridor is currently maintained at 150 feet wide.[41]

Trimming of tree limbs along the edge of the right-of-way also may be conducted to support construction activities for the 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 where applicable 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 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 to patrol and make emergency repairs. Periodic maintenance to control woody growth will consist of hand cutting, machine mowing and/or herbicide application.

[41] *See supra*, n. 4. *See* Section I.F as to the Constraint Design Segment.

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")

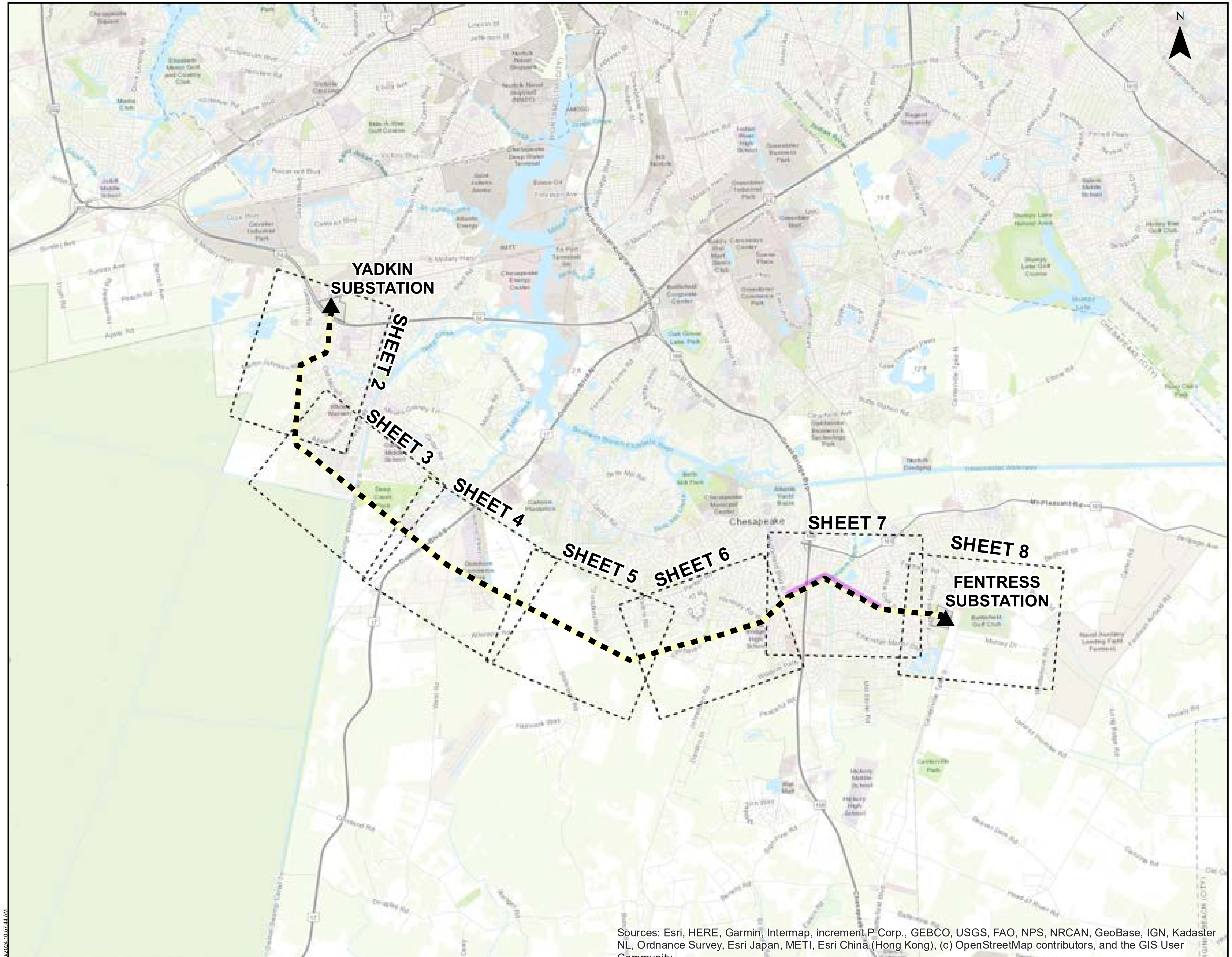
9. Describe the Applicant's route selection procedures. Detail the feasible alternative routes considered. For each such route, provide the estimated cost and identify and describe the cost classification (e.g. "conceptual cost," "detailed cost," etc.). Describe the Applicant's efforts in considering 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 rebuilds 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 of 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 Va. Code §§ 56-46.1 and 56-259, which promote the use of existing rights-of-way for new transmission facilities. For the proposed Project, the existing transmission corridor right-of-way that currently contains Line #588 is adequate.[42]

Because the existing right-of-way and Company-owned property is adequate to construct the proposed 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 proposed Project.

See Attachment II.A.9.a for conservation easements crossed by the proposed Project.

[42] *See supra*, n. 38.



ATTACHMENT II.A.9.a
CONSERVATION EASEMENTS MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

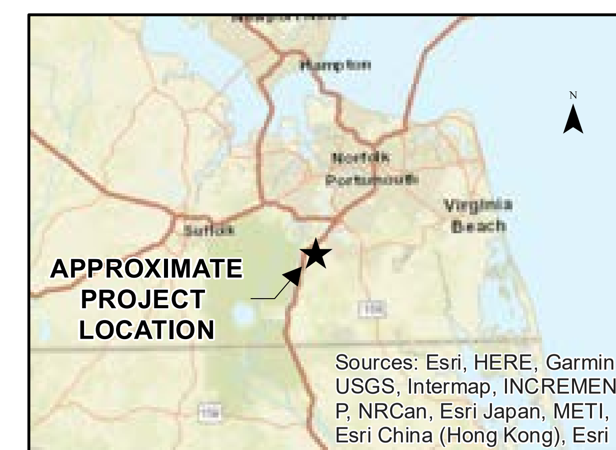
Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 0.75 1.5 3 Miles
Scale is 1 IN = 1.5 MI when printed at original size of 11x17

- Existing Line #588 Right-of-Way
- Constraint Design Segment
- Existing Substation
- Dominion Owned Substation Parcel

Notes:
1. Basemap from ESRI Topographic and World Street Map
2. Project centerline provided by Dominion Energy Virginia
3. Conservation lands, easements, and local lands from Virginia Department of Conservation and Recreation, U.S. Geological Survey Protected Areas Database of the U.S., and Department of Historic Resources Virginia Cultural Resources Information System
5. Railroads from Virginia Geographic Information Network



C2 ENVIRONMENTAL
Dominion Energy

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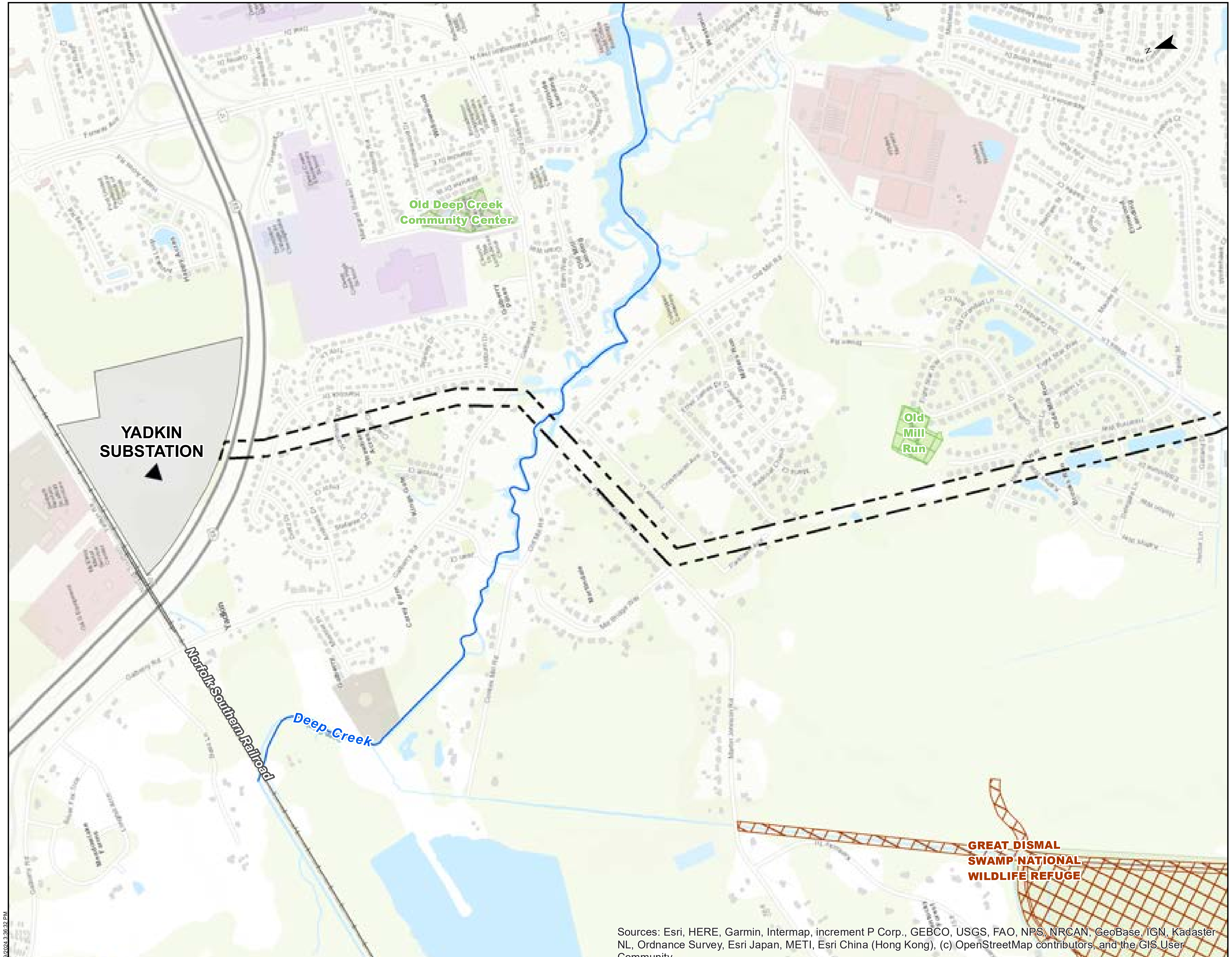

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0326	JRC	05/29/24

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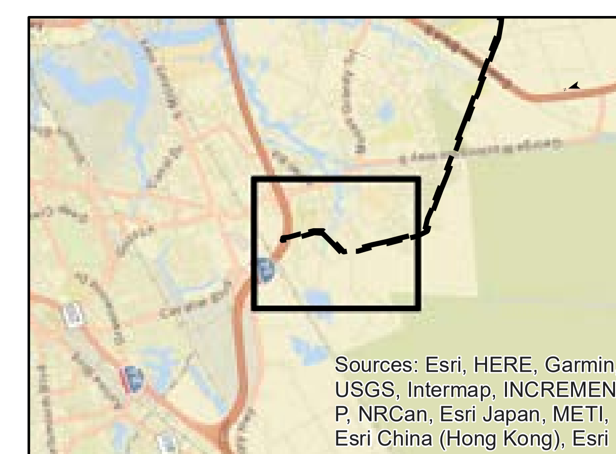

C2 ENVIRONMENTAL

Dominion Energy

SHEET 2 OF 8

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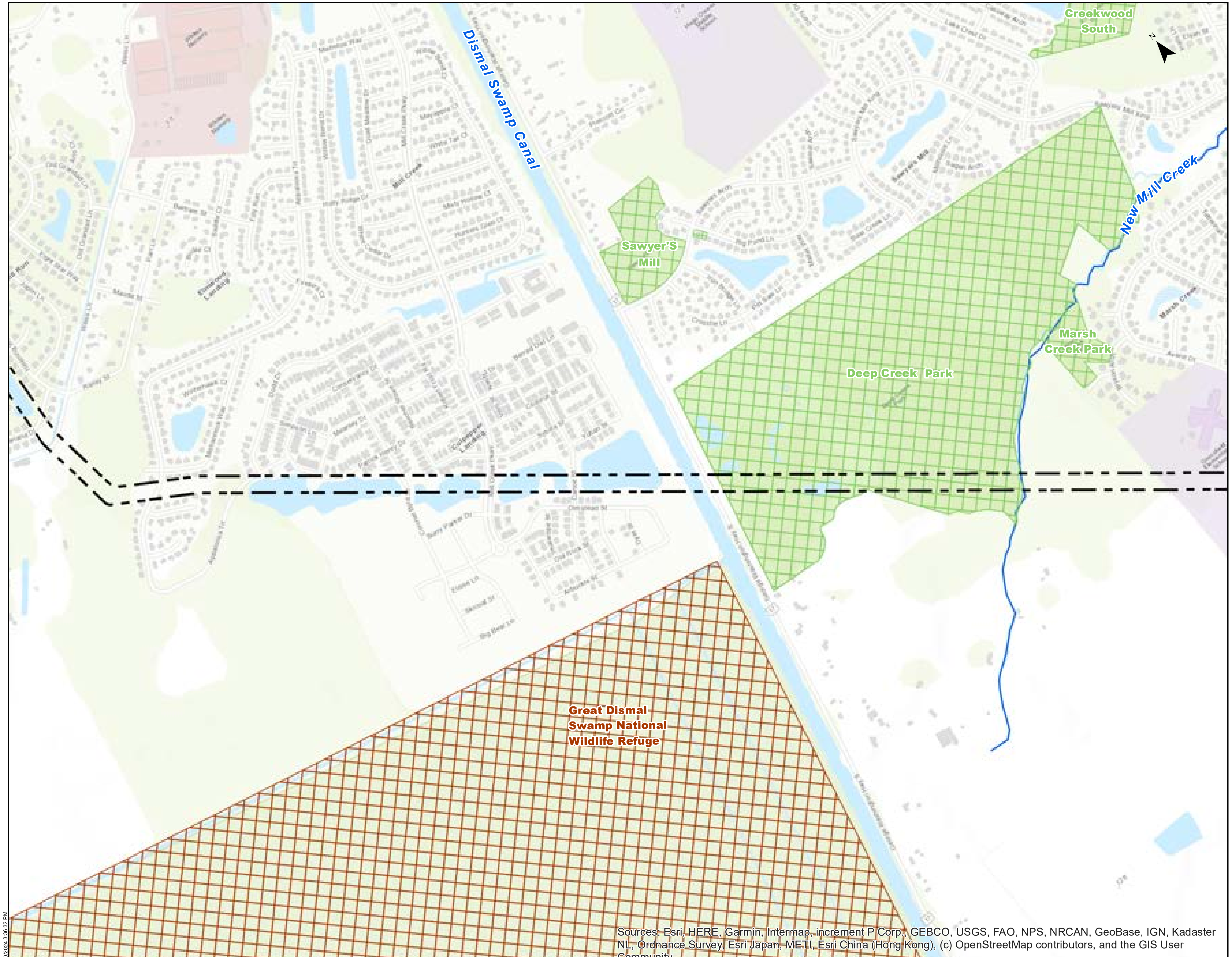

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CONSERVATION EASEMENTS MAP

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City of Chesapeake, Virginia

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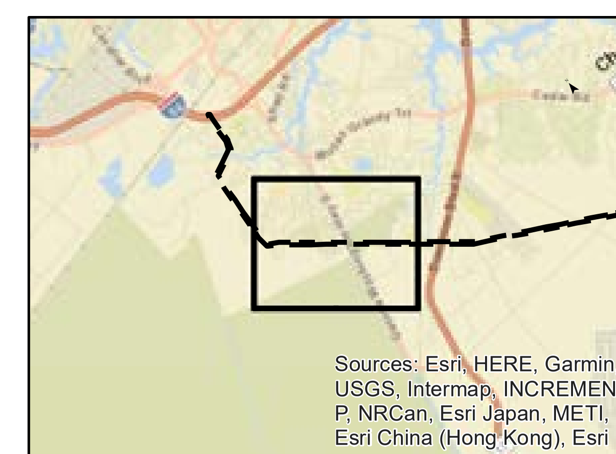

C2 ENVIRONMENTAL
Dominion Energy

SHEET 3 OF 8

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ATTACHMENT II.A.9.a

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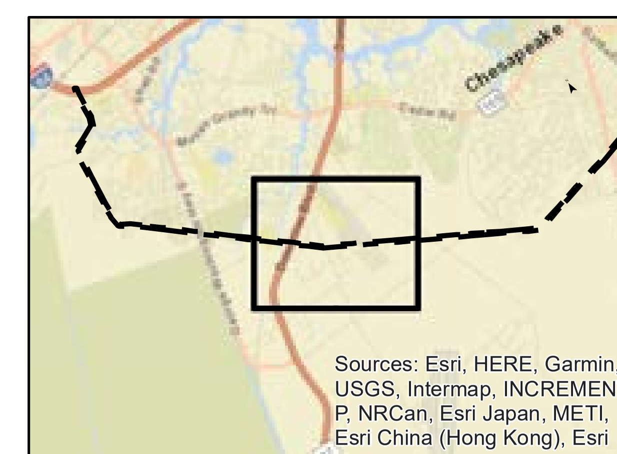

ENVIRONMENTAL

Dominion Energy

SHEET 4 OF 8

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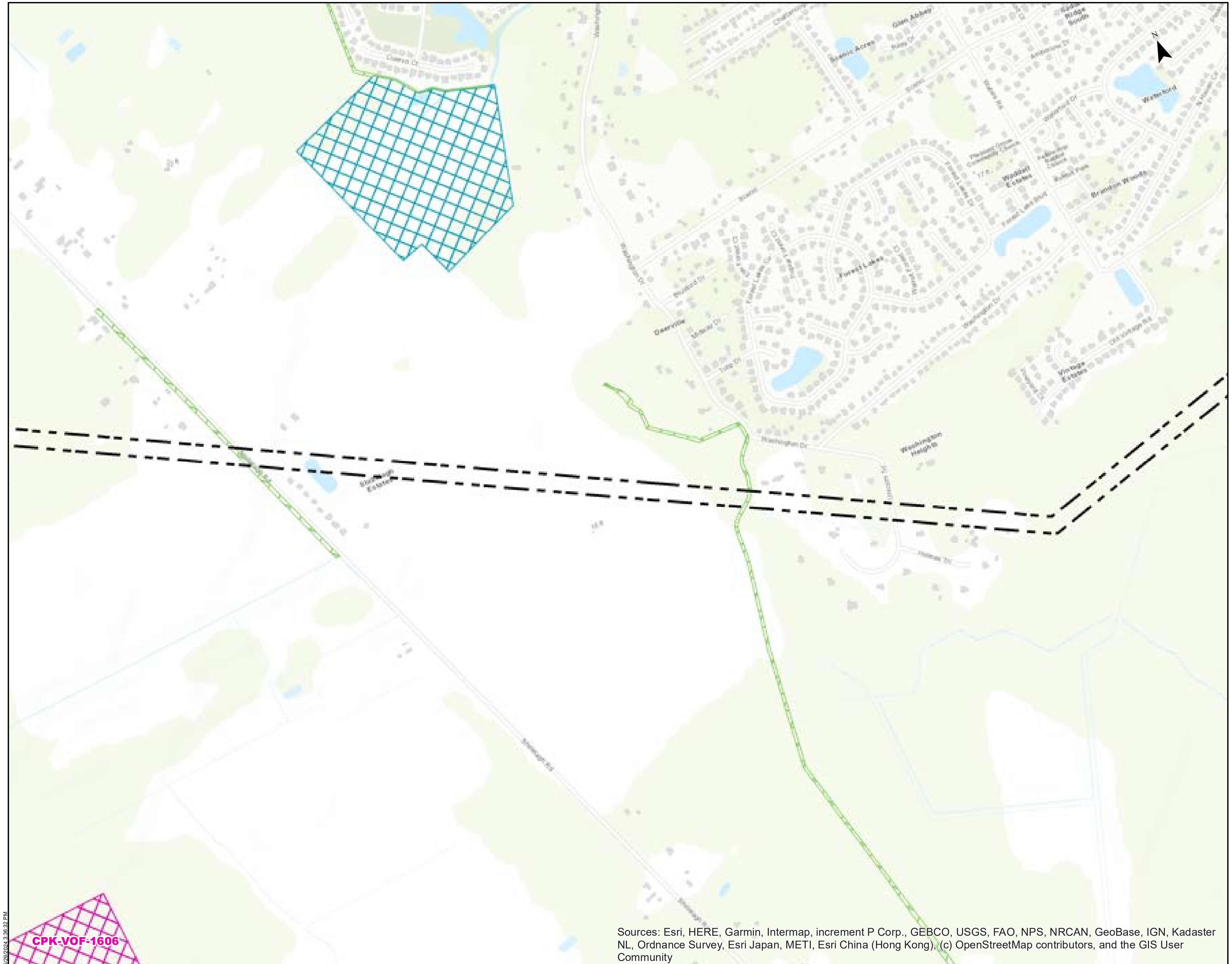

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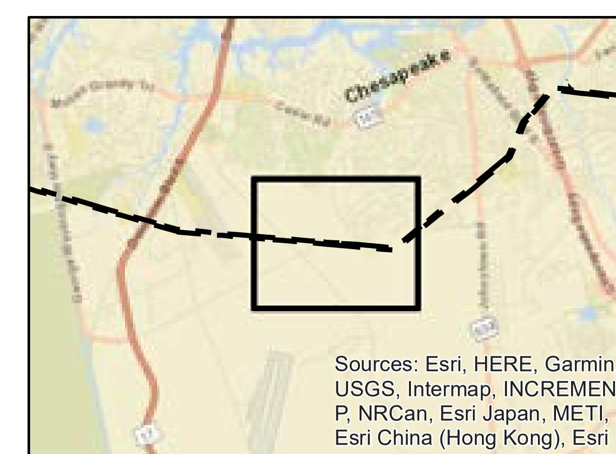
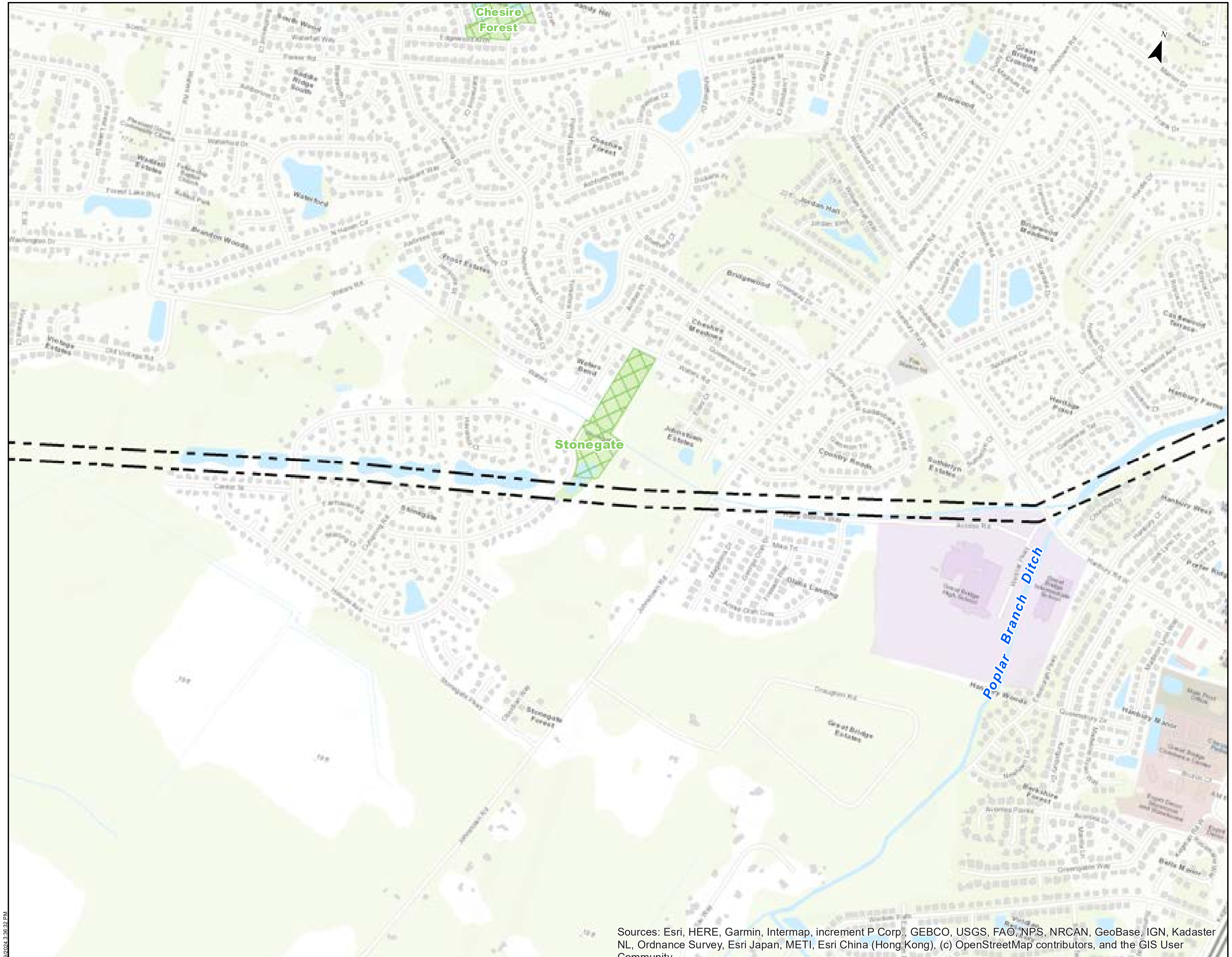


C2 ENVIRONMENTAL
Dominion Energy

SHEET 5 OF 8



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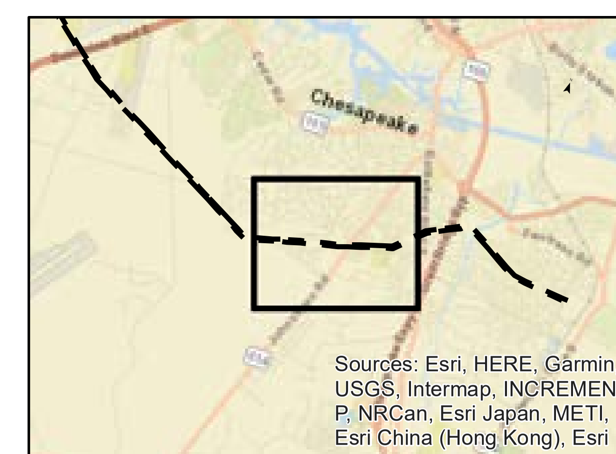
City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet
Scale is 1 IN = 1,000 FT when printed at original size of 11x17

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- City of Chesapeake Owned Land
- City of Chesapeake Easement
- Federally Owned Land
- The Nature Conservancy Preserve
- Virginia Outdoors Foundation Easement
- USGS National Hydrography Stream Centerline



C2 ENVIRONMENTAL
Dominion Energy

SHEET 6 OF 8

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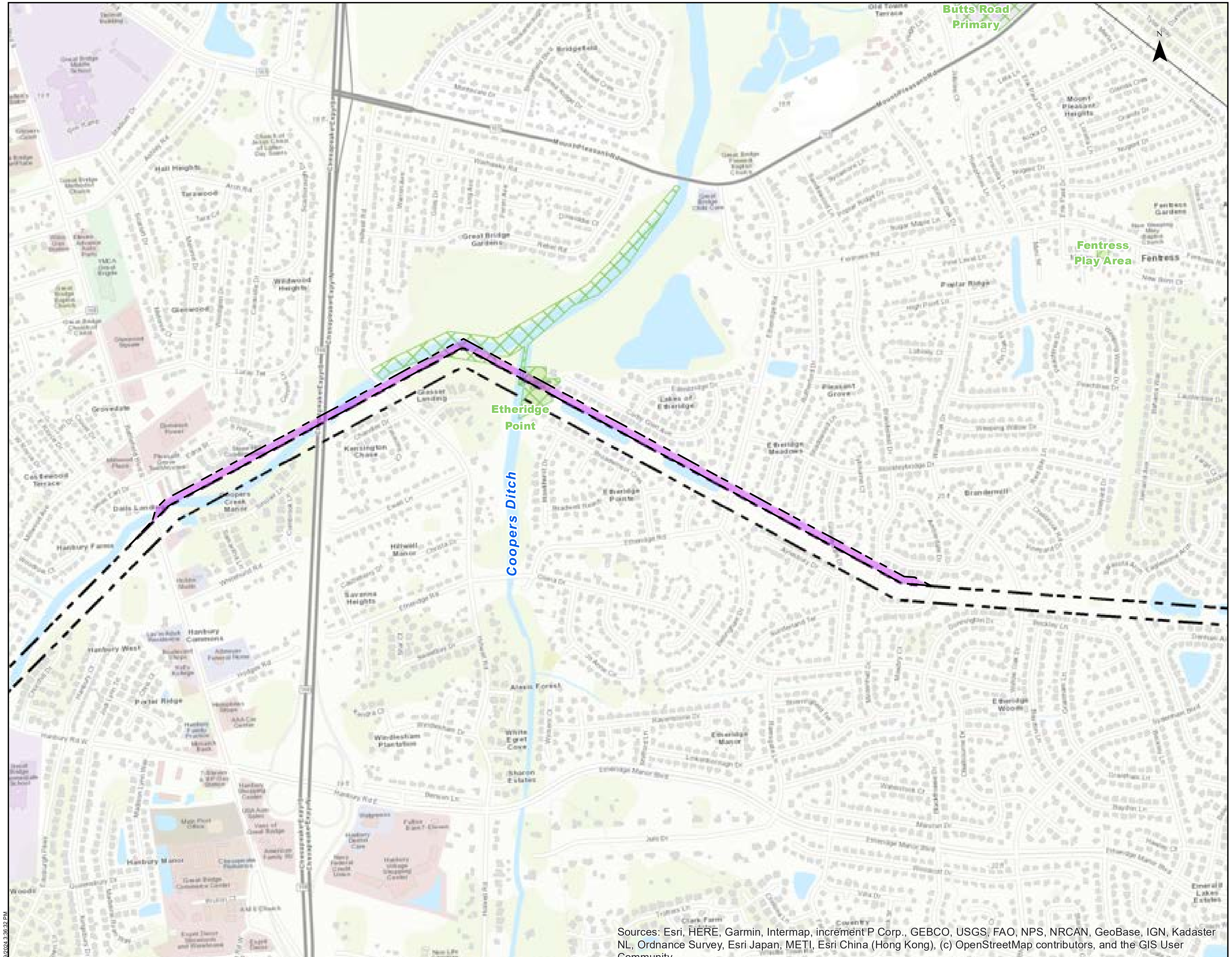

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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ATTACHMENT II.A.9.a

CONSERVATION EASEMENTS MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet

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

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
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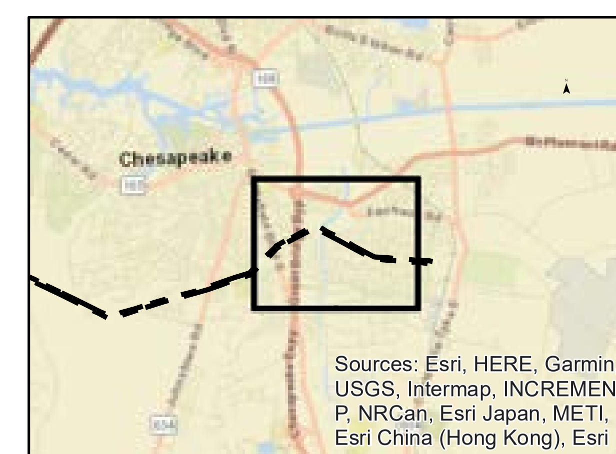
- City of Chesapeake Easement
- Federally Owned Land
- The Nature Conservancy Preserve
- Virginia Outdoors Foundation Easement
- USGS National Hydrography Stream Centerline

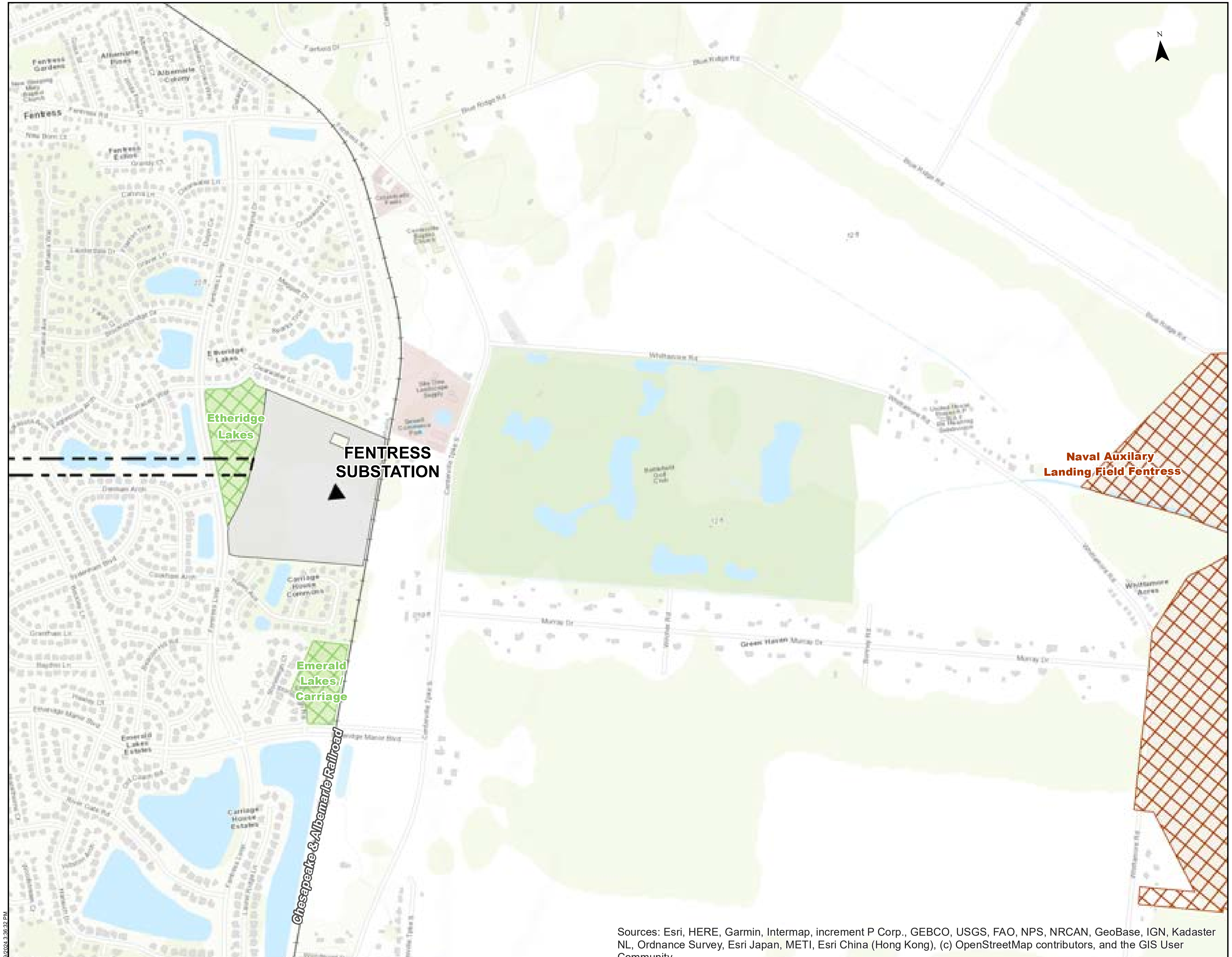


Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri

C2 ENVIRONMENTAL

Dominion Energy

SHEET 7 OF 8



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, 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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ATTACHMENT II.A.9.a
CONSERVATION EASEMENTS MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet
Scale is 1 IN = 1,000 FT when printed at original size of 11x17

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
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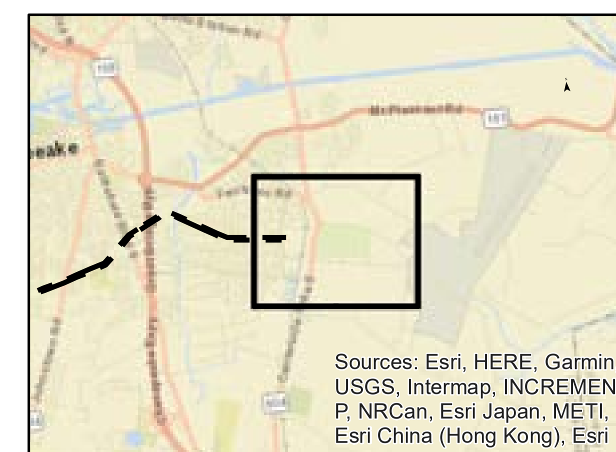
- City of Chesapeake Owned Land
- City of Chesapeake Easement
- Federally Owned Land
- The Nature Conservancy Preserve
- Virginia Outdoors Foundation Easement
- USGS National Hydrography Stream Centerline



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri

C2 ENVIRONMENTAL

Dominion Energy

SHEET 8 OF 8

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: The Company plans to construct the Project in a manner that minimizes outage time, as described below. Assuming a final order from the Commission by March 1, 2025, as requested in Section I.H of this Appendix, the Company estimates that the proposed Project construction will commence in March 2025 and be completed by January 2027, which will require two outages on Line #588 (beginning in spring 2025 and beginning in spring 2026), and one outage on Line #565[43] (beginning in winter 2026).

The Company intends to complete this work during requested outage windows. However, as with all outage scheduling, these outages may change depending on whether PJM approves the outages and other relevant considerations allow for it. It is customary for PJM to hold requests for outages and approve only shortly before the outages are expected to occur and, therefore, the requested outages are subject to change. Therefore, the Company will not have clarity on whether this work will be done as requested until very close in time to the requested outages. If PJM approves different outage dates, the Company will continue to diligently pursue timely completion of this work.

[43] *See supra*, n. 6.

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, the Company routinely uses Attachment 1 to these Guidelines 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 Route within the existing transmission corridor as discussed in Section II.A.9.

By utilizing the existing transmission corridor, the proposed Project will minimize impact to any site listed on the National Register of Historic Places ("NRHP"). Thus, the Project is consistent with Guideline #2 (where practical, rights-of-way should avoid sites listed on the National Register of Historic Places). 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.I.1. The Stage I Pre-Application Analysis was submitted to the Virginia Department of Historic Resources ("VDHR") on June 12, 2024.

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 applicant should contact the agencies early in the planning process). See Sections III.J and V.D of this Appendix 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")

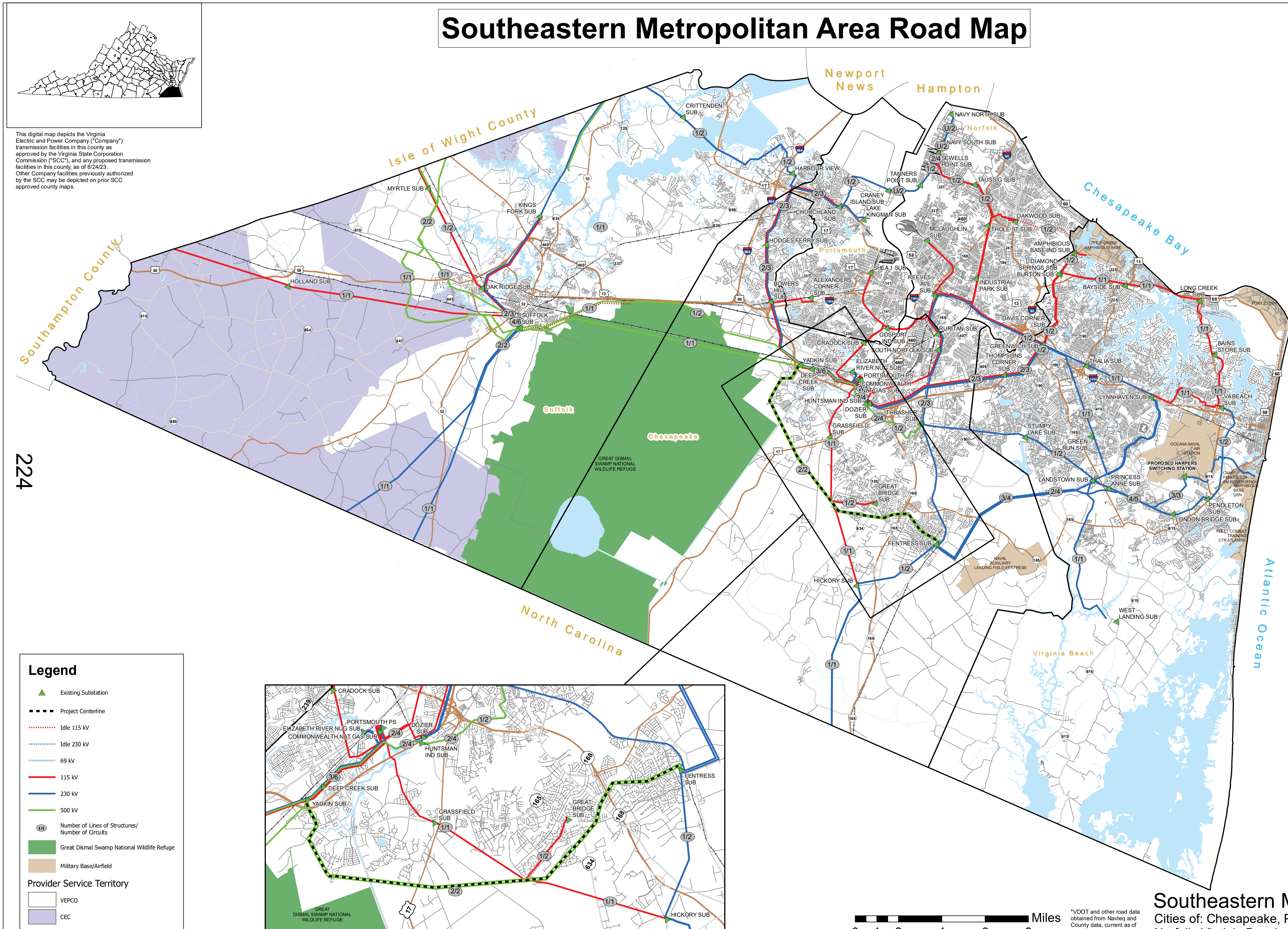
12. a. Detail counties and localities through which the line will pass. If any portion of the line will be located outside of the Applicant's certificated service area: (1) identify each electric utility affected; (2) state whether any affected electric utility objects to such construction; and (3) identify 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 Project crosses the City of Chesapeake for approximately 13.5 miles. The Project is located entirely within Dominion Energy Virginia's service territory.

b. An electronic copy of the VDOT "General Highway Map" for the City of Chesapeake (Southeastern Metropolitan Area Road Map) has been marked as required and submitted with the Application. A reduced copy of the map is provided as Attachment II.A.12.b.

Southeastern Metropolitan Area 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 8/24/23. Other Company facilities previously authorized by the SCC may be depicted on prior SCC approved county maps.

Legend

- Existing Substation
- Project Centerline
- Idle 115 kV
- Idle 230 kV
- 69 kV
- 115 kV
- 230 kV
- 500 kV
- Number of Lines of Structures/ Number of Circuits
- Great Dismal Swamp National Wildlife Refuge
- Military Base/Airfield

Provider Service Territory

- VEPCO
- CEC

0 1 2 4 6 8 Miles

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

Southeastern Metropolitan Area

Cities of: Chesapeake, Portsmouth Norfolk, Virginia Beach, and Suffolk

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 proposed 500 kV lines will be designed and operated at 500 kV with no anticipated voltage upgrade and have a transfer capability of 4,357 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 proposed 500 kV lines will include three-phase triple-bundled 1351.5 ACSR conductors arranged as shown in Attachments II.B.3.a-c.[44] The three-phase triple-bundled 1351.5 ACSR conductors are a Company standard for new 500 kV construction.

[44] *See* Section I.F and Attachments I.F.2 and I.F.3 for the Constraint Design Segment.

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

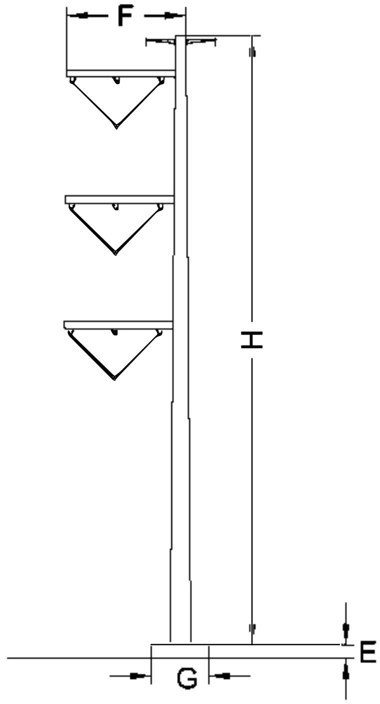
j. the minimum conductor-to-ground clearances under maximum operating conditions.

Response: For subparts (b)-(j), see Attachments II.B.3.a-c.[45]

For subpart (a), see Attachment II.B.3.d, which provides approximate mapping of the proposed structures along Line #588 and Line #5005, which are subject to change during final engineering.

---

[45] *See* Section I.F and Attachments I.F.2 and I.F.3 for the Constraint Design Segment.



SINGLE CIRCUIT SUSPENSION MONOPOLE STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE: STRUCTURES ARE TO ACCOMMODATE LINE 588 AND 5005 (SEPARATE STRUCTURES)

C. LENGTH OF R/W (STRUCTURE QUANTITY): 13.45 MILES (92 STRUCTURES)

D. STRUCTURE MATERIAL: DULLED GALVANIZED STEEL

RATIONALE FOR STRUCTURE MATERIAL: FINISH DETERMINED BY SOLICITING FEEDBACK FROM LAND OWNERS.

E. FOUNDATION MATERIAL: VARIES - SEE NOTE 5
AVERAGE FOUNDATION REVEAL: SEE NOTE 4

F. AVERAGE WIDTH AT CROSSARM: 38'-8"

G. AVERAGE WIDTH AT BASE: 8.5'

H. MINIMUM STRUCTURE HEIGHT: 175'
MAXIMUM STRUCTURE HEIGHT: 195'
AVERAGE STRUCTURE HEIGHT: 185'

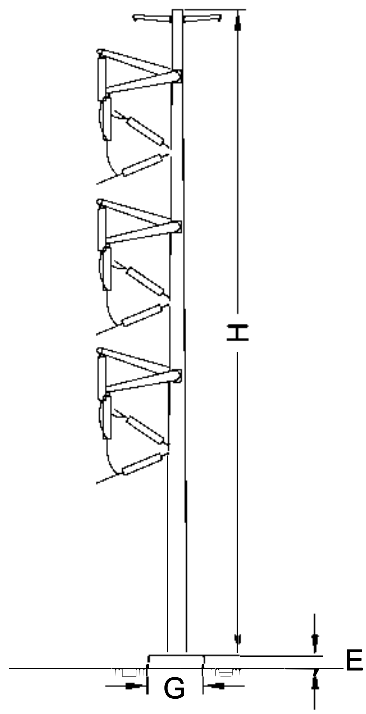
I. AVERAGE SPAN LENGTH: 1065'

J. MINIMUM CONDUCTOR-TO-GROUND: 30.9' (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
5. FOUNDATION DIAMETER AND TYPE SHALL BE BASED ON GEOTECHNICAL FINDINGS DURING FINAL ENGINEERING

Electric Transmission	STRUCTURES 5005/4, 5005/10-12, 5005/16-21, 5005/23-27, 5005/29-36, 5005/38-41, 5005/45-53, 5005/55-56, 5005/58-59, 5005/63-65, 5005/67-69, 588/187, 588/193-195, 588/199-204, 588/206-210, 588/212-219, 588/221-224, 588/228-236, 588/238-239, 588/241-242, 588/246-248, 588/250-252	DRAWING NO. Attachment II.B.3.a
Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN KEG

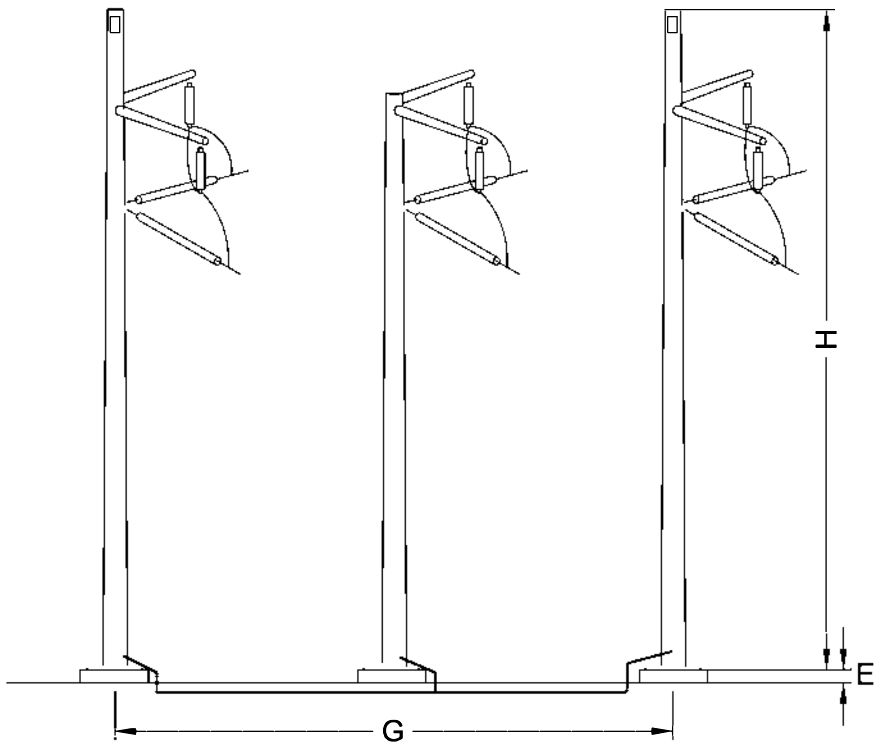


SINGLE CIRCUIT DOUBLE DEADEND MONOPOLE STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE TO ACCOMMODATE LINE 588 AND 5005 (SEPARATE STRUCTURES)
C. LENGTH OF R/W (STRUCTURE QUANTITY):	13.45 MILES (47 STRUCTURES)
D. STRUCTURE MATERIAL:	DULLED GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	FINISH DETERMINED BY SOLICITING FEEDBACK FROM LAND OWNERS.
E. FOUNDATION MATERIAL:	VARIES - SEE NOTE 5
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
F. AVERAGE WIDTH AT CROSSARM:	N/A
G. AVERAGE WIDTH AT BASE:	VARIES - SEE NOTE 5
H. MINIMUM STRUCTURE HEIGHT:	150'
MAXIMUM STRUCTURE HEIGHT:	195'
AVERAGE STRUCTURE HEIGHT:	182'
I. AVERAGE SPAN LENGTH:	950'
J. MINIMUM CONDUCTOR-TO-GROUND:	30.9' (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
5. FOUNDATION DIAMETER AND TYPE SHALL BE BASED ON GEOTECHNICAL FINDINGS DURING FINAL ENGINEERING

Electric Transmission	STRUCTURES 5005/2-3, 5005/5-9, 5005/13-15, 5005/22, 5005/28, 5005/37, 5005/42-44, 5005/54, 5005/57, 5005/60-62, 5005/66, 5005/69A-70, 588/186A-186, 588/188-192, 588/196-198, 588/205, 588/211, 588/220, 588/225-227, 588/237, 588/240, 588/243-245, 588/249, 588/253	DRAWING NO. Attachment II.B.3.b
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN KEG

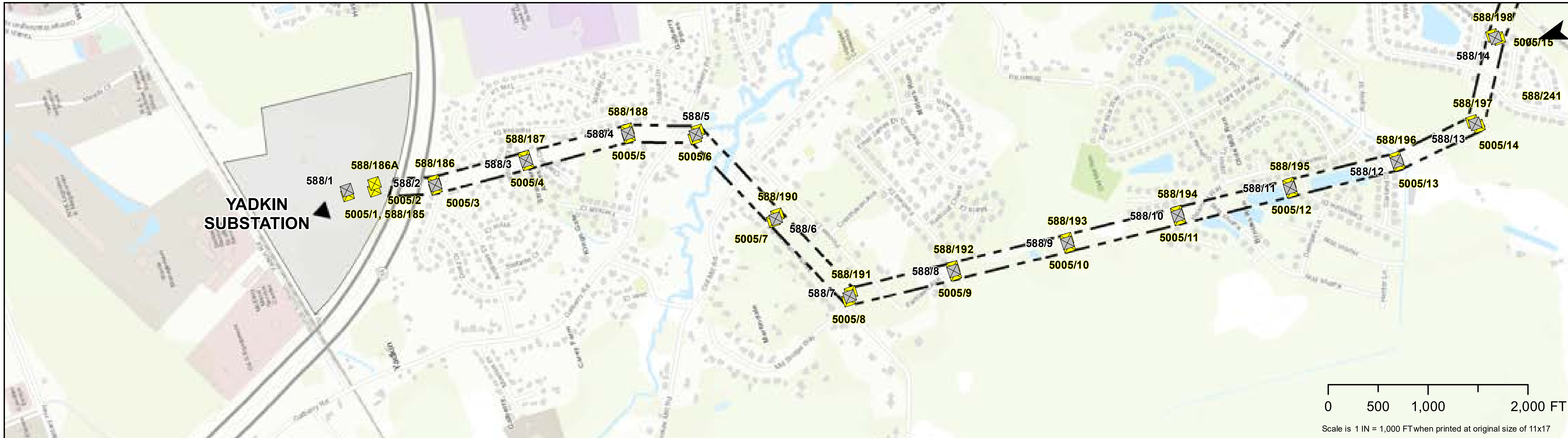


SINGLE CIRCUIT DOUBLE DEADEND 3-POLE STRUCTURE

B. RATIONALE FOR STRUCTURE TYPE:	565 STRUCTURES ARE FOR RELOCATING LINE TO MAKE ROOM FOR 5005. 5005 STRUCTURE IS TO ROLL HORIZONTAL PRIOR TO SUBSTATION ENTRY.
C. LENGTH OF R/W (STRUCTURE QUANTITY):	0.22 MILES (3 STRUCTURES)
D. STRUCTURE MATERIAL:	DULLED GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	FINISH DETERMINED BY SOLICITING FEEDBACK FROM LAND OWNERS.
E. FOUNDATION MATERIAL: AVERAGE FOUNDATION REVEAL:	VARIES - SEE NOTE 5 SEE NOTE 4
F. AVERAGE WIDTH AT CROSSARM:	N/A
G. AVERAGE WIDTH AT BASE:	69'
H. MINIMUM STRUCTURE HEIGHT: MAXIMUM STRUCTURE HEIGHT: AVERAGE STRUCTURE HEIGHT:	110' 135' 120'
I. AVERAGE SPAN LENGTH:	390'
J. MINIMUM CONDUCTOR-TO-GROUND:	30.9' (AT MAXIMUM OPERATING TEMPERATURE)

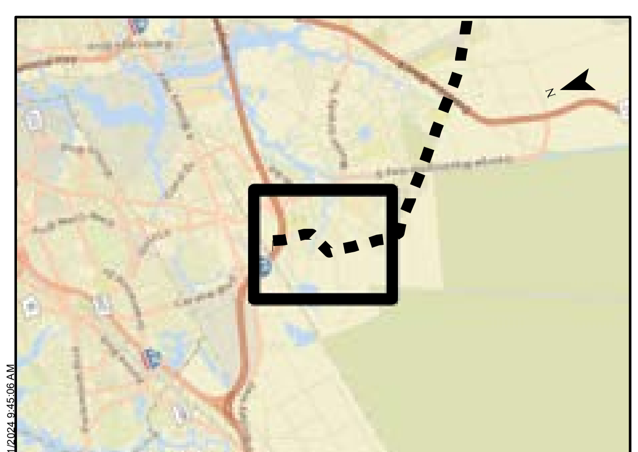
NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. MINIMUM FOUNDATION REVEAL SHALL BE 1.5', MAX REVEAL SUBJECT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

Electric Transmission	STRUCTURES 565/253-254, 5005/71	DRAWING NO. Attachment II.B.3.c
Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN KEG



Existing Line #588 Structure Number			588/1	588/2	588/3	588/4	588/5	588/6	588/7	588/8	588/9	588/10	588/11	588/12	588/13	588/14
Existing Height (FT)			122	116	111	112	118	146	101	121	121	111	124	99	91	126
Proposed Line #588 Structure Number	588/184	588/185	588/186A	588/186	588/187	588/188	588/189	588/190	588/191	588/192	588/193	588/194	588/195	588/196	588/197	588/198
Proposed Height (FT)	N/A	122	175	172	182	182	197	198	182	198	192	192	187	182	177	192
Proposed Line #5005 Structure Number		5005/1	5005/2	5005/3	5005/4	5005/5	5005/6	5005/7	5005/8	5005/9	5005/10	5005/11	5005/12	5005/13	5005/14	5005/15
Proposed Height		N/A	177	172	182	187	197	198	187	198	192	192	187	187	177	187

Notes:
1. Structure locations and heights provided by Dominion Energy Virginia.
2. Project and structures are subject to change based on final engineering design. The proposed structure heights are above ground level, and exclude foundation reveal.
3. Basemap from ESRI Topographic and World Street Map.



Existing Line #588 Right-of-Way (150 FT)
Constraint Design Segment Right-of-Way (85 FT)
Existing Structure
Proposed Structure
Existing Substation
Dominion Owned Substation Parcel

ATTACHMENT II.B.3.d
STRUCTURE LOCATION MAP
Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005
City of Chesapeake, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/2024

SHEET 1 OF 6

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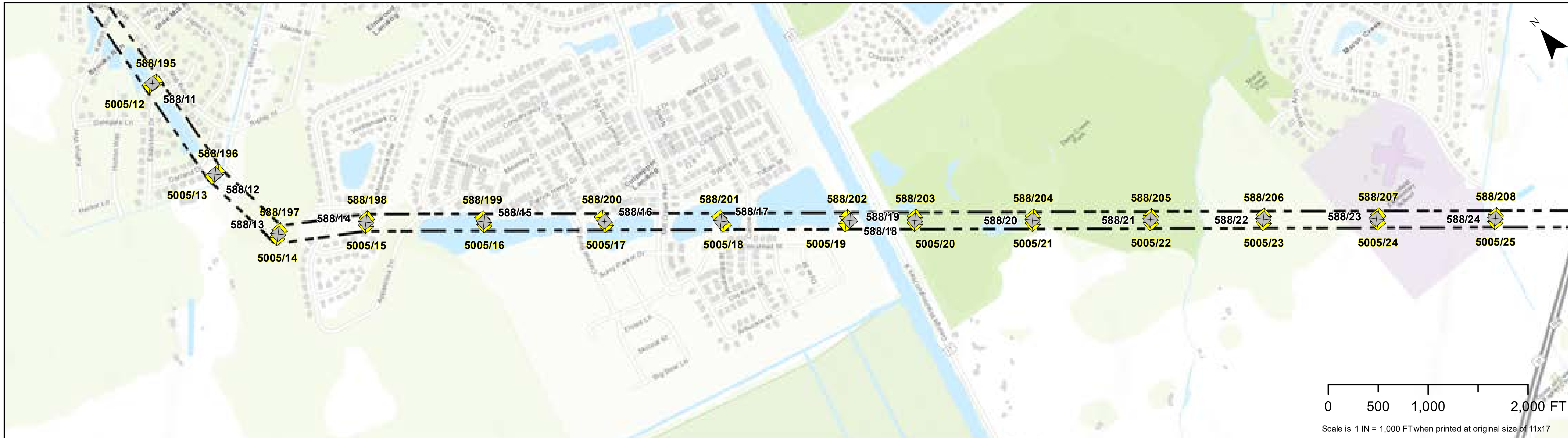
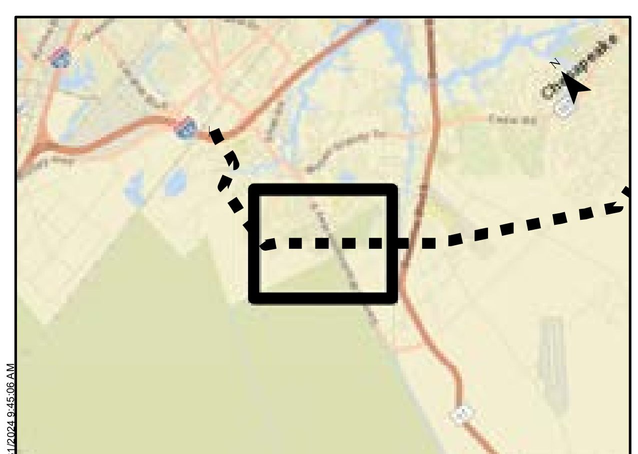


Existing Line #588 Structure Number	588/11	588/12	588/13	588/14	588/15	588/16	588/17	588/18	588/19	588/20	588/21	588/22	588/23	588/24
Existing Height (FT)	124	99	91	126	126	121	136	161	161	136	116	116	116	127
Proposed Line #588 Structure Number	588/195	588/196	588/197	588/198	588/199	588/200	588/201	588/202	588/203	588/204	588/205	588/206	588/207	588/208
Proposed Height (FT)	187	182	177	192	197	192	197	192	192	197	187	187	192	187
Proposed Line #5005 Structure Number	5005/12	5005/13	5005/14	5005/15	5005/16	5005/17	5005/18	5005/19	5005/20	5005/21	5005/22	5005/23	5005/24	5005/25
Proposed Height	187	187	177	187	197	192	197	192	192	197	187	187	192	187

Notes:
1. Structure locations and heights provided by Dominion Energy Virginia.
2. Project and structures are subject to change based on final engineering design. The proposed structure heights are above ground level, and exclude foundation reveal.
3. Basemap from ESRI Topographic and World Street Map.



Existing Line #588 Right-of-Way (150 FT)
Constraint Design Segment Right-of-Way (85 FT)
Existing Structure
Proposed Structure
Existing Substation
Dominion Owned Substation Parcel

C2 ENVIRONMENTAL

Dominion Energy

ATTACHMENT II.B.3.d
STRUCTURE LOCATION MAP
Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005
City of Chesapeake, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/2024

SHEET 2 OF 6

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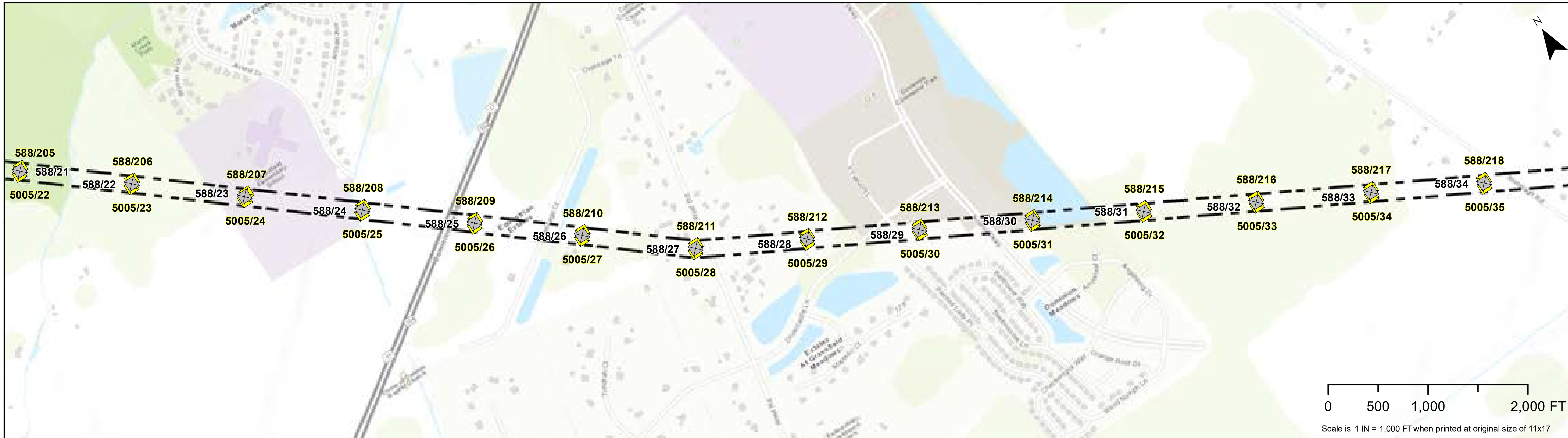
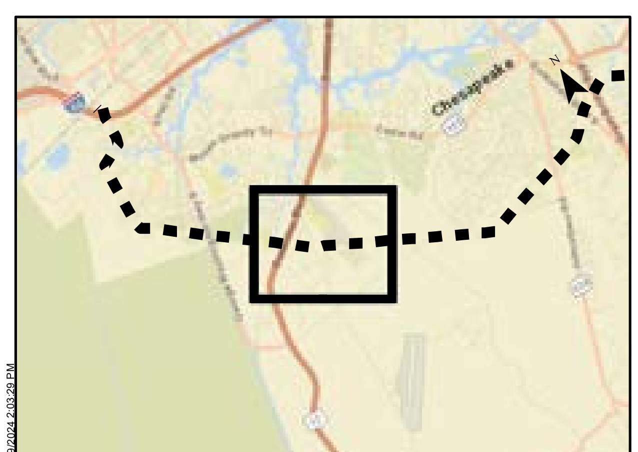


Existing Line #588 Structure Number	588/21	588/22	588/23	588/24	588/25	588/26	588/27	588/28	588/29	588/30	588/31	588/32	588/33	588/34
Existing Height (FT)	116	116	116	127	106	121	121	111	121	111	121	116	121	116
Proposed Line #588 Structure Number	588/205	588/206	588/207	588/208	588/209	588/210	588/211	588/212	588/213	588/214	588/215	588/216	588/217	588/218
Proposed Height (FT)	187	187	192	187	187	192	182	197	197	187	187	187	187	187
Proposed Line #5005 Structure Number	5005/22	5005/23	5005/24	5005/25	5005/26	5005/27	5005/28	5005/29	5005/30	5005/31	5005/32	5005/33	5005/34	5005/35
Proposed Height	187	187	192	187	187	192	182	197	197	187	187	187	192	187

Notes:
1. Structure locations and heights provided by Dominion Energy Virginia.
2. Project and structures are subject to change based on final engineering design. The proposed structure heights are above ground level, and exclude foundation reveal.
3. Basemap from ESRI Topographic and World Street Map.



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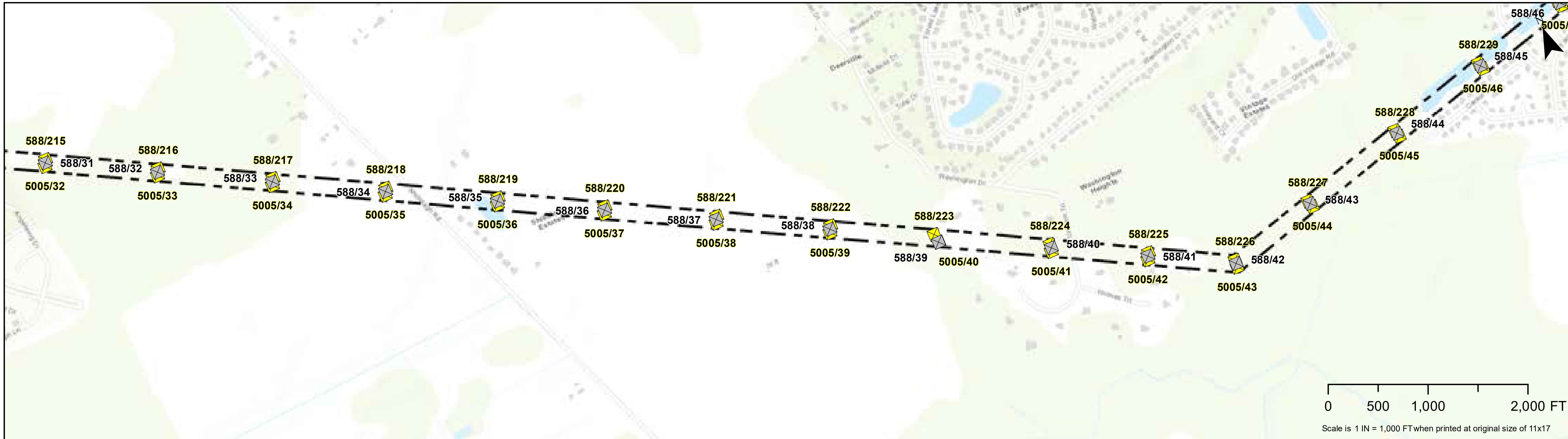
- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Structure
- Proposed Structure
- Existing Substation
- Dominion Owned Substation Parcel

ATTACHMENT II.B.3.d
STRUCTURE LOCATION MAP
Fentress-Yadkin 500 kV Line #588 Rebuild
and New 500 kV Fentress-Yadkin Line #5005
City of Chesapeake, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/2024

SHEET 3 OF 6



Existing Line #588 Structure Number	588/31	588/32	588/33	588/34	588/35	588/36	588/37	588/38	588/39	588/40	588/41	588/42	588/43	588/44	588/45
Existing Height (FT)	121	116	121	116	121	105	121	106	134	100	106	87	121	121	121
Proposed Line #588 Structure Number	588/215	588/216	588/217	588/218	588/219	588/220	588/221	588/222	588/223	588/224	588/225	588/226	588/227	588/228	588/229
Proposed Height (FT)	187	187	187	187	187	187	187	192	192	192	192	172	197	192	182
Proposed Line #5005 Structure Number	5005/32	5005/33	5005/34	5005/35	5005/36	5005/37	5005/38	5005/39	5005/40	5005/41	5005/42	5005/43	5005/44	5005/45	5005/46
Proposed Height	187	187	192	187	187	187	187	192	192	192	192	172	197	192	177

Notes:
1. Structure locations and heights provided by Dominion Energy Virginia.
2. Project and structures are subject to change based on final engineering design. The proposed structure heights are above ground level, and exclude foundation reveal.
3. Basemap from ESRI Topographic and World Street Map.

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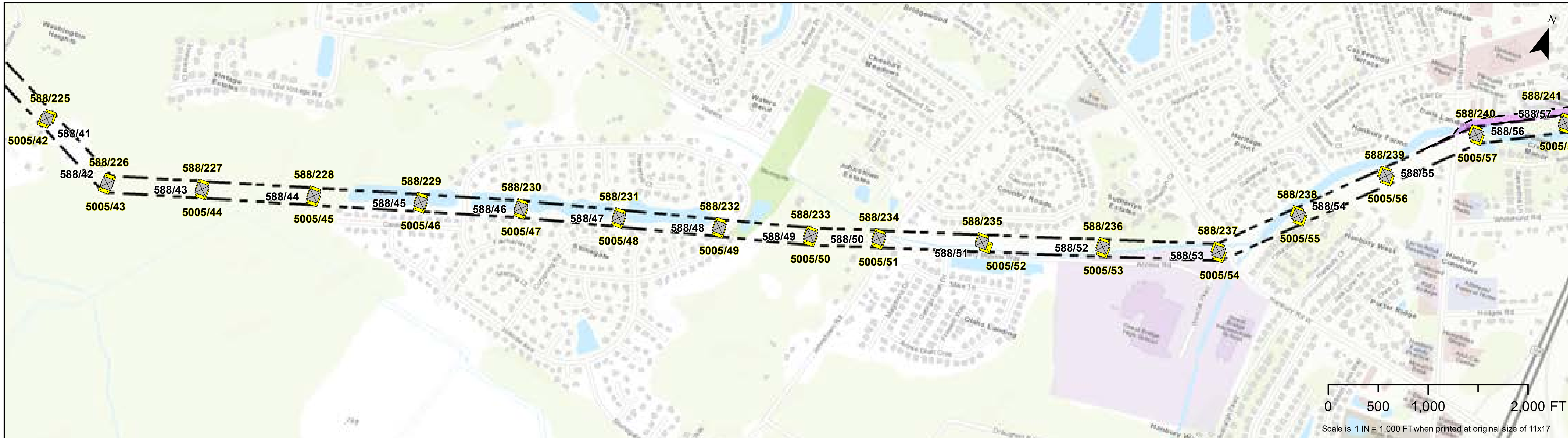
Existing Line #588 Right-of-Way (150 FT)
Constraint Design Segment Right-of-Way (85 FT)
Existing Structure
Proposed Structure
Existing Substation
Dominion Owned Substation Parcel

ATTACHMENT II.B.3.d
STRUCTURE LOCATION MAP
Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005
City of Chesapeake, Virginia

Owner/ Applicant:
Dominion Energy Virginia

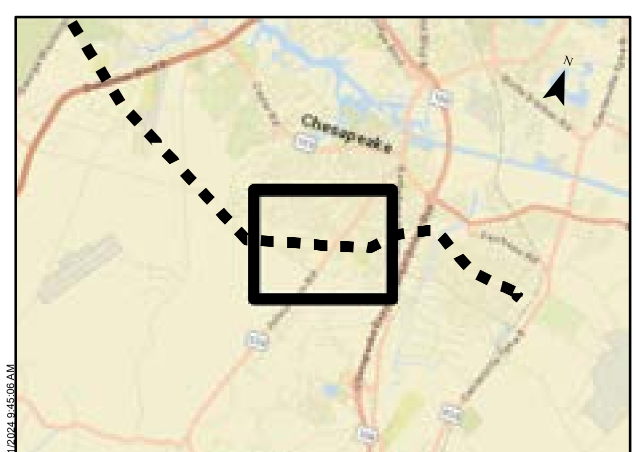
C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/2024

SHEET 4 OF 6



Existing Line #588 Structure Number	588/41	588/42	588/43	588/44	588/45	588/46	588/47	588/48	588/49	588/50	588/51	588/52	588/53	588/54	588/55	588/56	588/57
Existing Height (FT)	106	87	121	121	121	101	111	101	101	101	126	125	107	101	121	136	121
Proposed Line #588 Structure Number	588/225	588/226	588/227	588/228	588/229	588/230	588/231	588/232	588/233	588/234	588/235	588/236	588/237	588/238	588/239	588/240	588/241
Proposed Height (FT)	192	172	197	192	182	177	177	177	177	177	192	192	182	177	192	177	182
Proposed Line #5005 Structure Number	5005/42	5005/43	5005/44	5005/45	5005/46	5005/47	5005/48	5005/49	5005/50	5005/51	5005/52	5005/53	5005/54	5005/55	5005/56	5005/57	5005/58
Proposed Height	192	172	197	192	177	182	177	177	177	177	192	197	182	177	187	187	182

Notes:
1. Structure locations and heights provided by Dominion Energy Virginia.
2. Project and structures are subject to change based on final engineering design. The proposed structure heights are above ground level, and exclude foundation reveal.
3. Basemap from ESRI Topographic and World Street Map.



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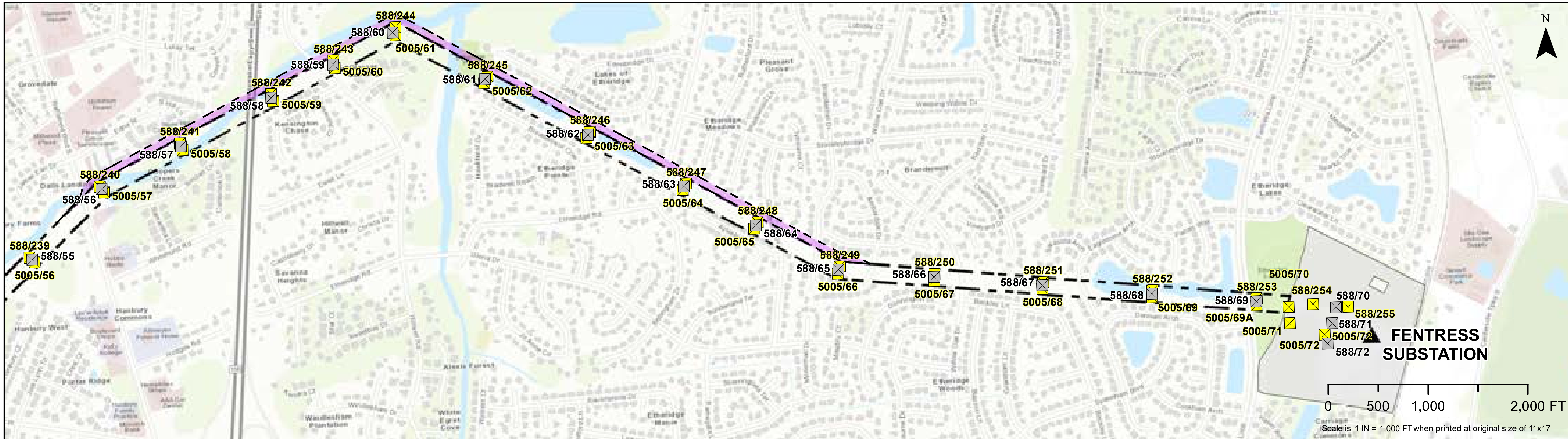
Existing Line #588 Right-of-Way (150 FT)
Constraint Design Segment Right-of-Way (85 FT)
Existing Structure
Proposed Structure
Existing Substation
Dominion Owned Substation Parcel

ATTACHMENT II.B.3.d
STRUCTURE LOCATION MAP
Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005
City of Chesapeake, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/2024

SHEET 5 OF 6



Existing Line #588 Structure Number	588/55	588/56	588/57	588/58	588/59	588/60	588/61	588/62	588/63	588/64	588/65	588/66	588/67	588/68	588/69	588/70	588/71	588/72
Existing Height (FT)	121	136	121	116	90	97	127	111	110	100	107	116	106	120	106	N/A	N/A	N/A
Proposed Line #588 Structure Number	588/239	588/240	588/241	588/242	588/243	588/244	588/245	588/246	588/247	588/248	588/249	588/250	588/251	588/252	588/253			
Proposed Height (FT)	192	177	182	182	182	172	197	177	177	177	172	187	187	182	172			
Proposed Line #5005 Structure Number	5005/56	5005/57	5005/58	5005/59	5005/60	5005/61	5005/62	5005/63	5005/64	5005/65	5005/66	5005/67	5005/68	5005/69	5005/69A	5005/70	5005/71	5005/72
Proposed Height	187	187	182	187	177	182	192	192	177	177	177	187	187	192	182	152	116.5	115

Notes:
1. Structure locations and heights provided by Dominion Energy Virginia.
2. Project and structures are subject to change based on final engineering design. The proposed structure heights are above ground level, and exclude foundation reveal.
3. Basemap from ESRI Topographic and World Street Map.

Existing Line #588 Right-of-Way (150 FT)
Constraint Design Segment Right-of-Way (85 FT)
Existing Structure
Proposed Structure
Existing Substation
Dominion Owned Substation Parcel

C2 ENVIRONMENTAL

Dominion Energy

ATTACHMENT II.B.3.d
STRUCTURE LOCATION MAP
Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005
City of Chesapeake, Virginia

Owner/ Applicant:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/2024

SHEET 6 OF 6

5/29/2024 2:18:49 PM
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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.[46]

[46] *But see* Section I.F as to the Constraint Design Segment.

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.3.d for approximate structure locations and existing and proposed structure heights for the proposed Project. The proposed approximate structure heights are from the conceptual design created to estimate the cost of the proposed Project and are subject to change based on final engineering design. The approximate structure heights do not include foundation reveal.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

6. Provide photographs for [a] typical existing facilities to be removed, [b] comparable photographs or representations for proposed structures, and [c] 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] See Attachment II.B.6.a.i-iii for photographs of typical existing facilities to be removed.

[b] See Attachment II.B.6.b.i-iii for representative photographs of the proposed structures.[47] Note that the proposed Project will utilize dulled galvanized steel.

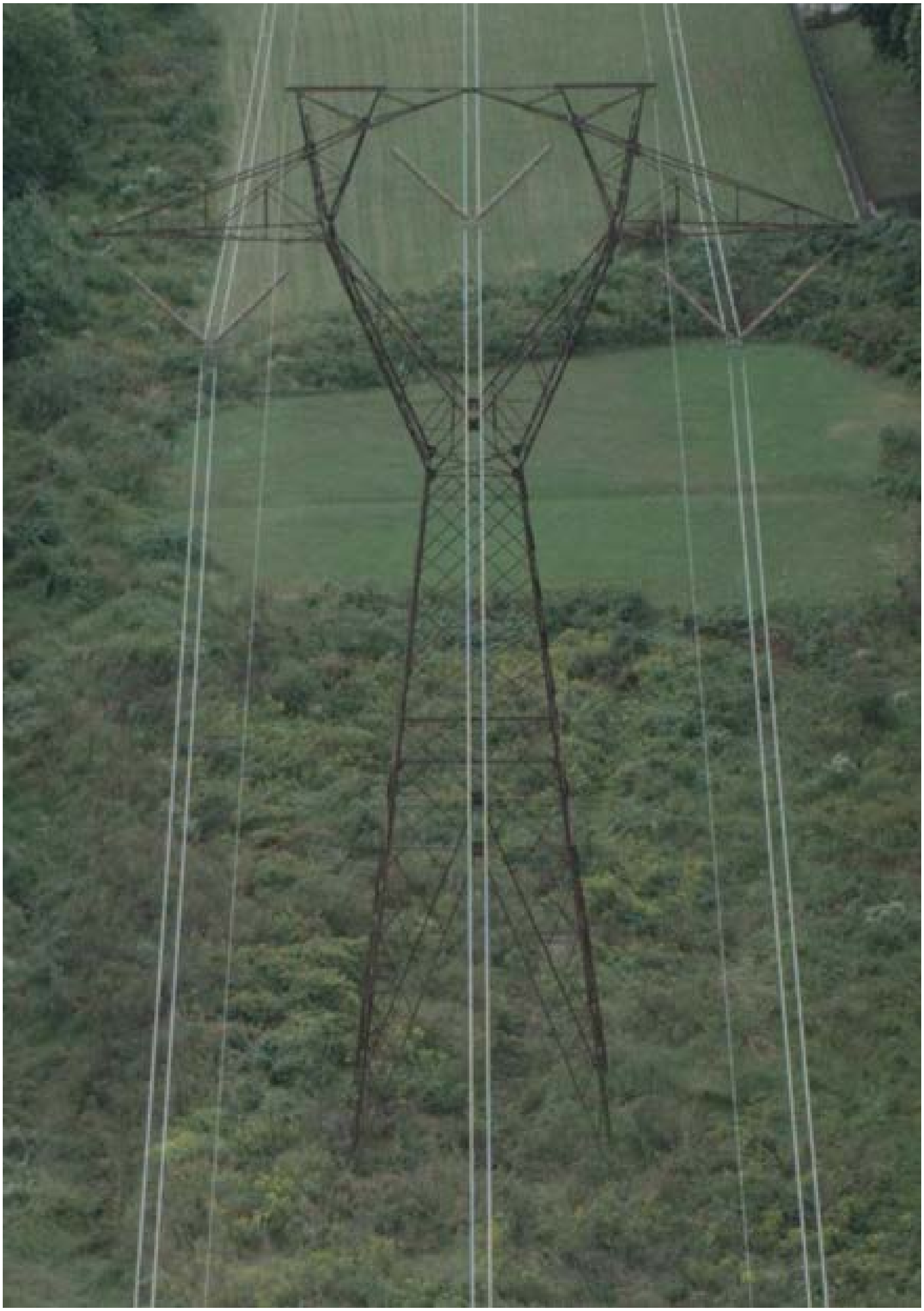
[c] Visual simulations showing the appearance of the proposed transmission structures at identified historic locations within 1.0 mile of the Proposed Route are provided. See Attachment II.B.6.c for a map of the simulation locations and the existing views at the historic properties. These simulations were created using Geographic Information Systems modeling to depict whether the proposed structures will be visible from the identified historic property. The historic properties evaluated are described below. See also the Stage I Pre-Application Analysis Report provided as Attachment 2.I.1 of the DEQ Supplement.

Historic Property	Viewpoint	Comments
Dismal Swamp Canal (131-0035)	1 & 2	This resource is directly crossed by the Proposed Route. Minimal impact to the resource is expected since the existing Line #588 structures are located within the viewshed of the canal in both directions and the existing Line #588 is highly visible in the immediate vicinity where the Proposed Route crosses the canal.
Portsmouth Ditch (131-5833)	3	This resource is approximately 0.4 mile from the nearest part of the Proposed Route, where the existing Line #588 structures are not visible. Despite the increase in proposed structure height, it is anticipated that there will remain no visibility of any of the proposed structures from public vantage along the ditch due to the intervening vegetation that will continue to screen views.
Lindsay Canal (131-5076)	4 & 5	This resource is directly crossed by the Proposed Route. Minimal impact is expected since the existing Line #588 structures are located within the viewshed of the canal. Despite the increase in height, it is anticipated that there will not be a substantial change in visibility.

[47] The representative photos are of the Company's existing Loudoun-Meadow Brook Line #535, which was installed in 2011. *See also* Section I.F and Attachments I.F.4 and I.F.5 for the Constraint Design Segment.

Historic Property	Viewpoint	Comments
Great Bridge School (131-0342)	6	This resource is approximately one mile from the nearest part of the Proposed Route. Existing Line #588 is not visible from this location. No impact to this resource is expected due to the distance and location of the existing right-of-way corridor. The Proposed Route is not expected to be visible due to intervening vegetation and development as shown by the simulation.
Centerville-Fentress Historic District (131-5071)	7 & 8	This resource is approximately 0.2 mile from the nearest part of the Proposed Route. Existing transmission lines, including some structures along Line #588 and those at Fentress Substation, are currently visible. The resource is also being encroached upon by modern residential development from the north, south and west. Despite the increase in structure height, it is anticipated that there will not be a substantial change in visibility and therefore, minimal impact is expected to this resource.
Herring Canal (131-0051)	9	This resource is directly crossed by the Proposed Route. Minimal impact to this resource is expected since existing Line #588 is openly visible within the viewshed of the canal and despite the increase in height, it is anticipated that there will not be a substantial change in visibility.
Lisle A. Lindsay III House (131-0253)	10	This resource is approximately 0.6 mile from the nearest part of the Proposed Route. Minimal to no impact to this resource is expected due to the distance and location of the existing right-of-way corridor. The Proposed Route is screened by intervening vegetation as shown by the simulation.

See Attachment III.B.6 for visual simulations of other key locations evaluated.

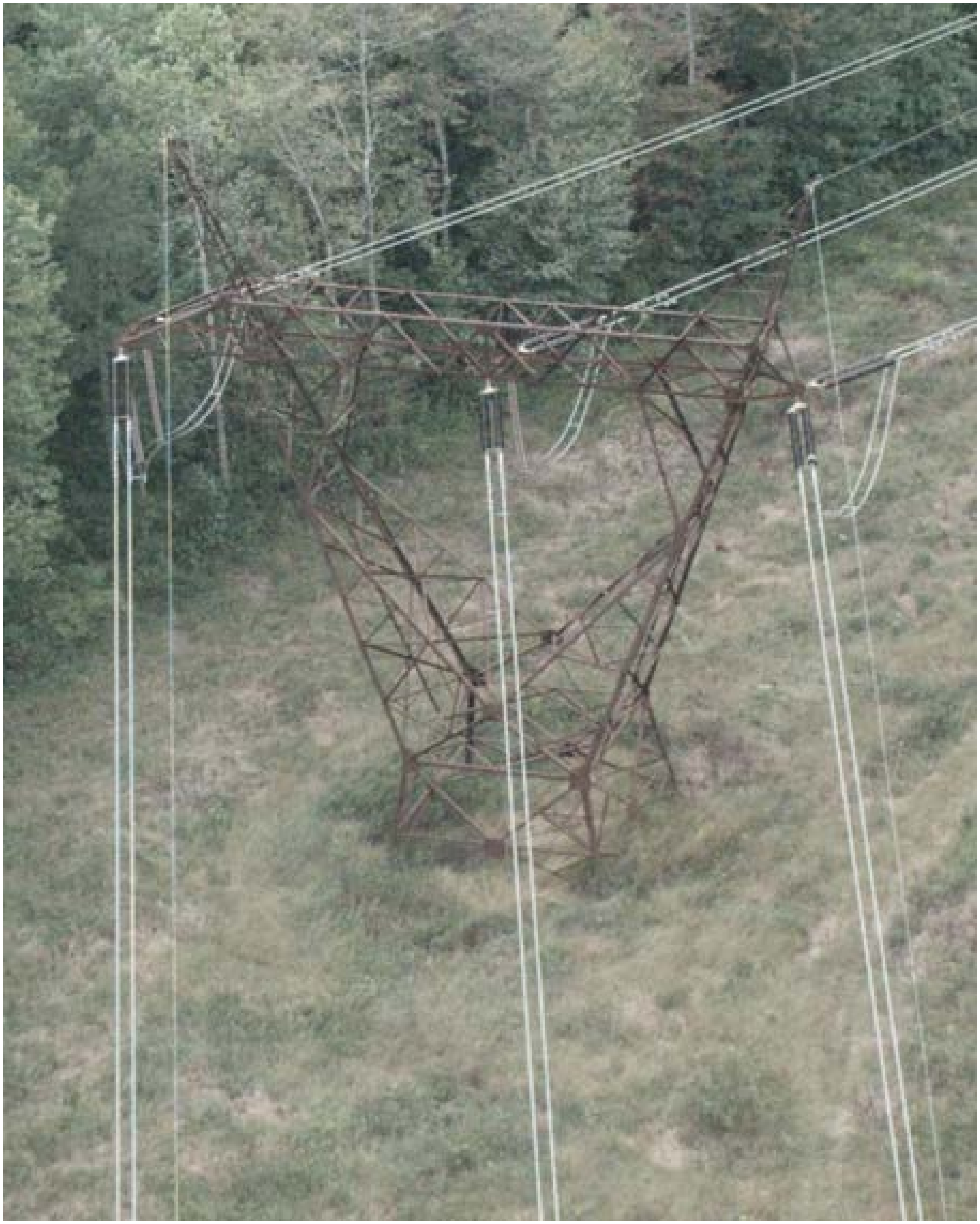


Photograph provided by Dominion Energy

Dominion Energy

Existing Structure Type:
500 kV Single Circuit Weathering Steel Suspension Tower

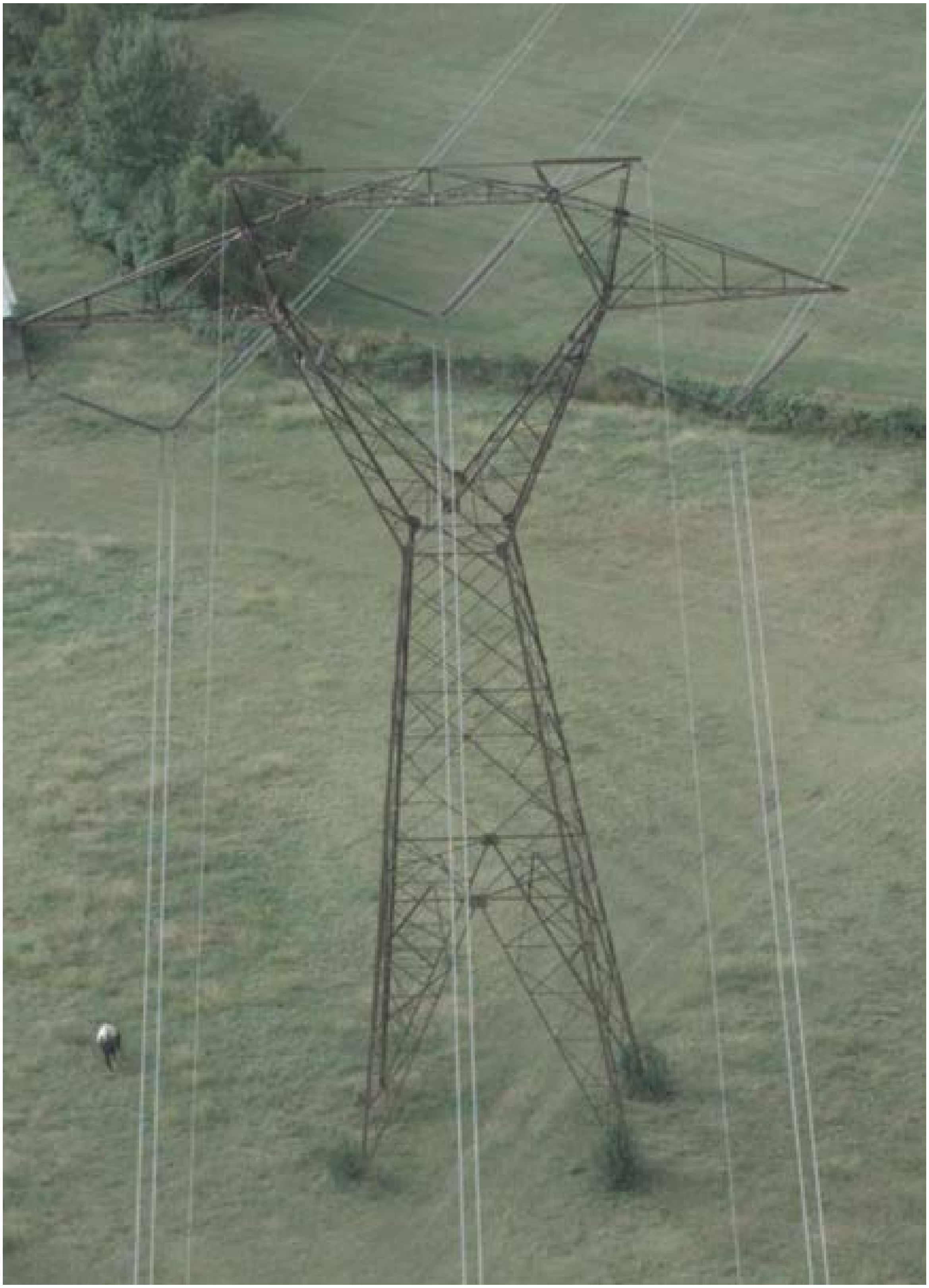
Attachment II.B.6.a.i



Existing Structure Type:
500 kV Single Circuit Weathering Steel Tower (Double Deadend)

Photograph provided by Dominion Energy

Dominion Energy®



Photograph provided by Dominion Energy

Existing Structure Type:
500 kV Single Circuit Weathering Steel Running Angle Tower

Attachment II.B.6.a.iii

Photograph provided by Dominion Energy

Proposed Structure Type:
500 kV Single Circuit Galvanized Steel Suspension Pole

Attachment II.B.6.b.i

Photograph provided by Dominion Energy

Dominion Energy

Proposed Structure Type:
500 kV Single Circuit Galvanized Steel Double Deadend Pole

Attachment II.B.6.b.ii

Photograph provided by Dominion Energy

Proposed Structure Type:
500 kV Single Circuit Galvanized Steel Deadend 3 Pole

Attachment II.B.6.b.iii

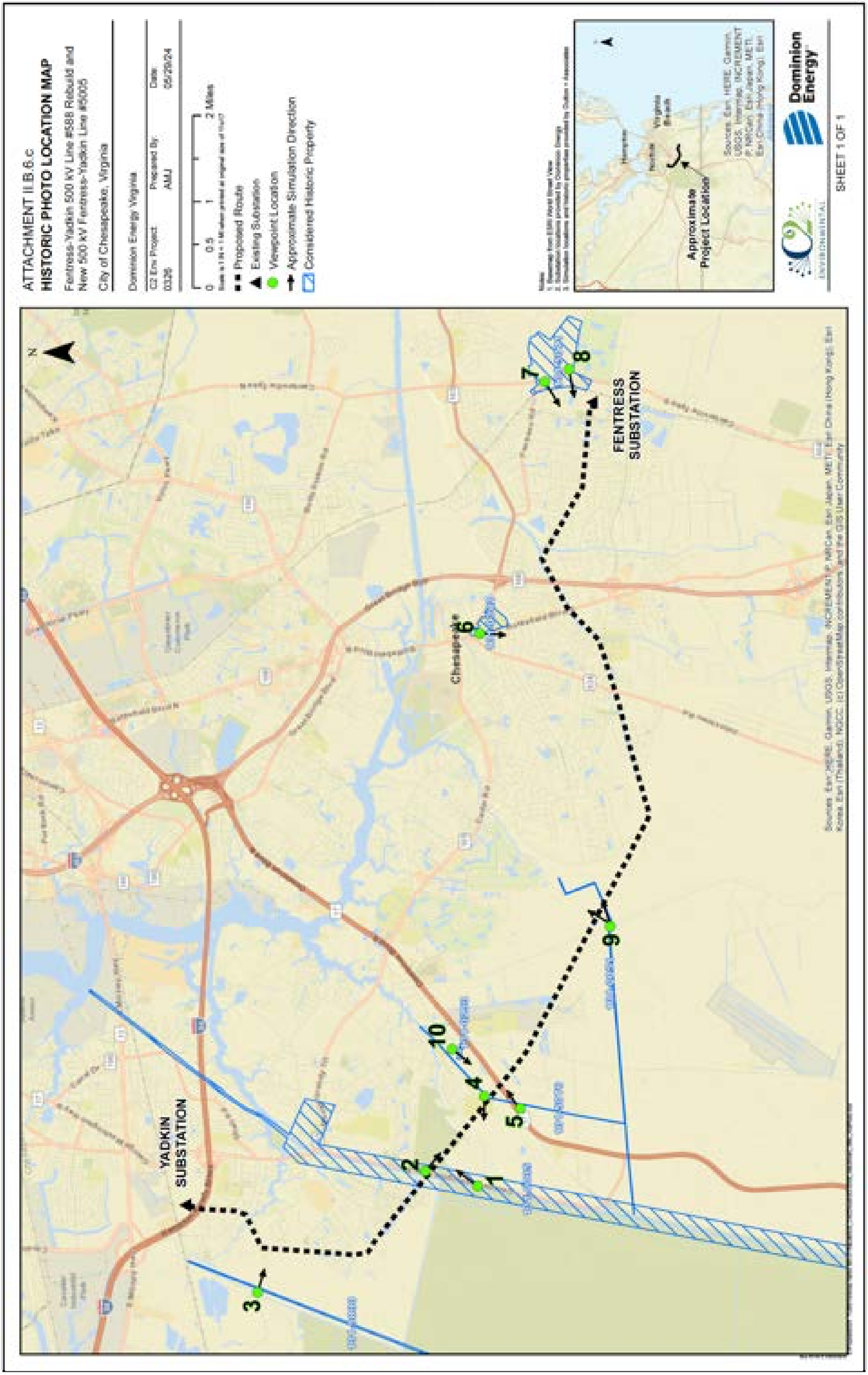

ATTACHMENT II.B.6.c
HISTORIC PHOTO LOCATION MAP
Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005
City of Chesapeake, Virginia
Dominion Energy Virginia
C2 Env Project: 0326
Prepared By: AMJ
Date: 05/29/24
0 0.5 1 2 Miles
Proposed Route
Existing Substation
Viewpoint Location
Approximate Simulation Direction
Considered Historic Property
YADKIN SUBSTATION
FENTRESS SUBSTATION
Chesapeake
1
2
3
4
5
6
7
8
9
10
N
Approximate Project Location
Hampton
Norfolk
Virginia Beach
Sources: 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
Dominion Energy
C2 ENVIRONMENTAL
SHEET 1 OF 1

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

Viewpoint 1:
Dismal Swamp Canal

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

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

Fentress - Yadkin TL Rebuild	Viewpoint 1 Dismal Swamp Canal	Existing View

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	Viewpoint 1 Dismal Swamp Canal	Proposed View (Location of towers not visible are overlaid with yellow tower icon)	
	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.		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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	

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

Viewpoint 2
Dismal Swamp Canal

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	**Viewpoint 2 Dismal Swamp Canal**	**Existing View**	
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.		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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	

253

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

Fentress-Yadkin 500kV Line #588 Rebuild
& New 500kV Fentress-Yadkin Line #5005

Viewpoint 2
Dismal Swamp Canal

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

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

Viewpoint 3:
Portsmouth Ditch

Fentress-Yadkin 500kV Line #588 Rebuild
& New 500kV Fentress-Yadkin Line #5005

Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	Viewpoint 3 Portsmouth Ditch	Existing View	
	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.		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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Viewpoint 3
Portsmouth Ditch

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

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

Viewpoint 4
Lindsay Canal

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	Viewpoint 4 Lindsay Canal	Existing View	
	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.		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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Viewpoint 4
Lindsay Canal

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

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

Viewpoint 5: Lindsay Canal

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

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

Fentress-Yadkin 500kV Line #588 Rebuild
& New 500kV Fentress-Yadkin Line #5005

Viewpoint 5
Lindsay Canal

Existing View

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Viewpoint 5
Lindsay Canal

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

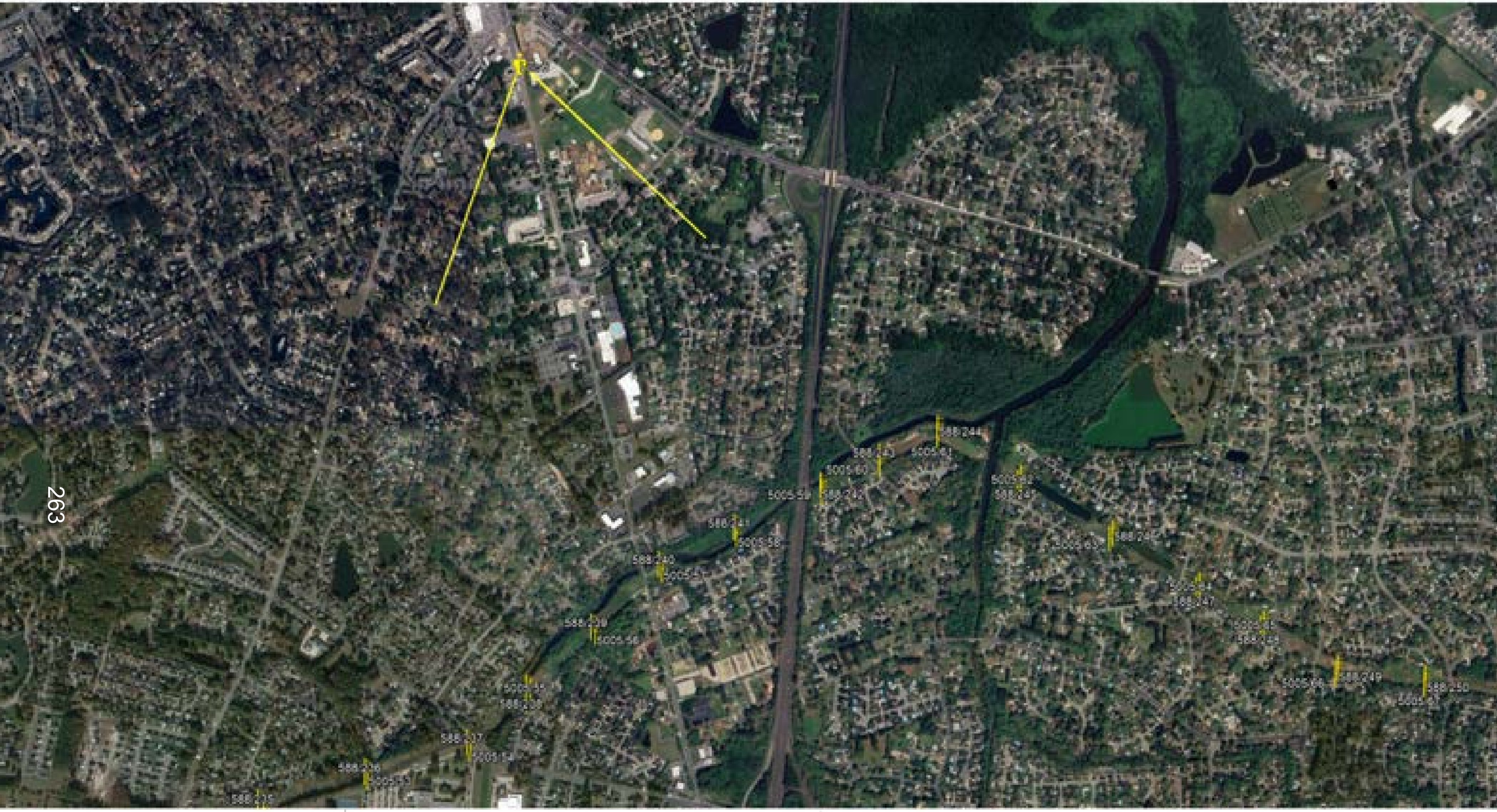


Photo simulations
prepared by:
GTTE LLC
email:
info@gttellc.com
703 447 1350

Viewpoint 6: Great Bridge School

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

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

Fentress-Yadkin 500kV Line #588 Rebuild
& New 500kV Fentress-Yadkin Line #5005

Viewpoint 6
Great Bridge School

Existing View

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Viewpoint 6
Great Bridge School

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

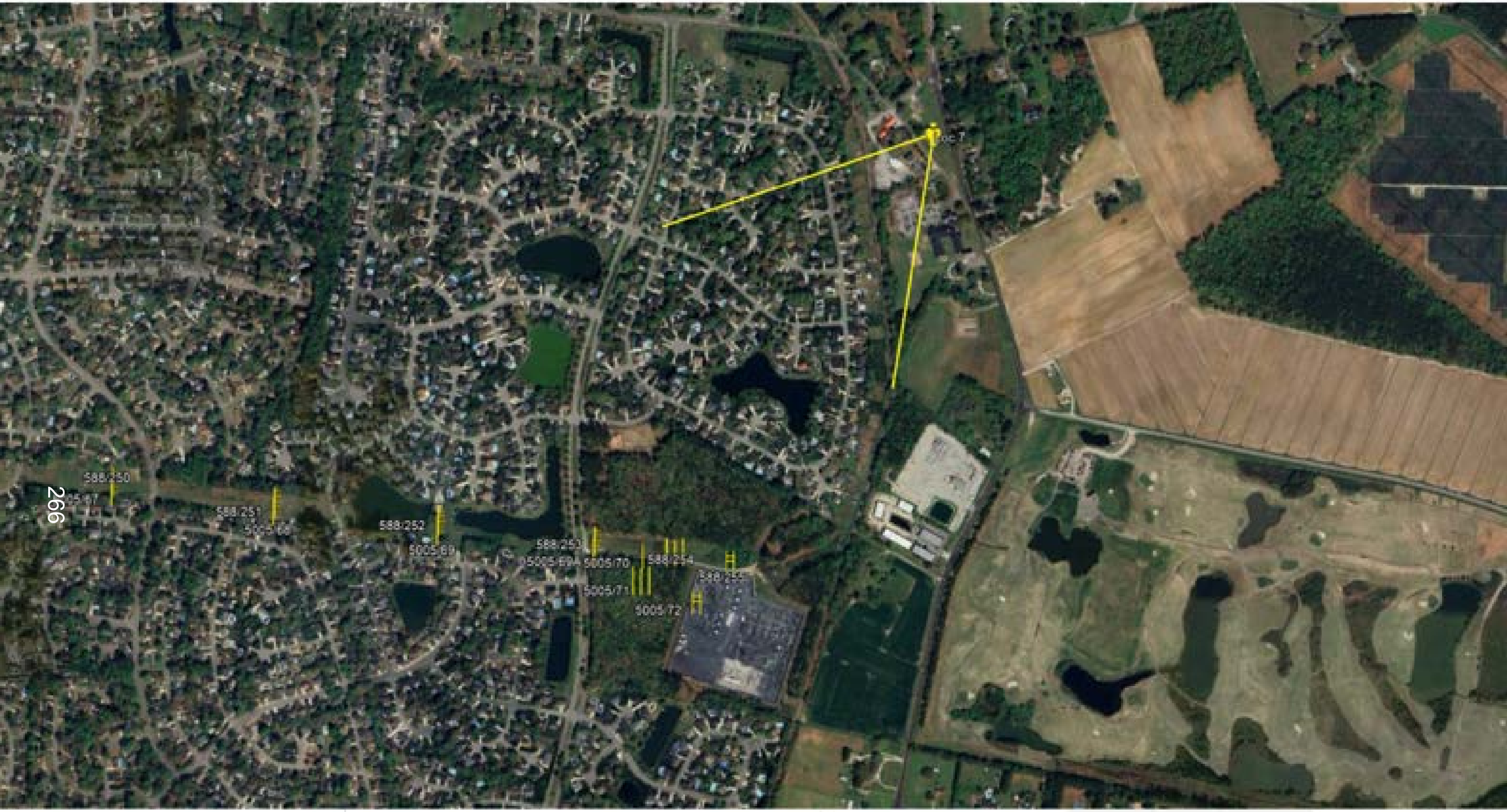


Photo simulations
prepared by:
GTTE LLC
email:
info@gttellc.com
703 447 1350

Viewpoint 7
Centerville-Fentress Historic District

Fentress-Yadkin 500kV Line #588 Rebuild
& New 500kV Fentress-Yadkin Line #5005

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	Viewpoint 7 Centerville-Fentress Historic District	Existing View	

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Viewpoint 7
Centerville-Fentress Historic District

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

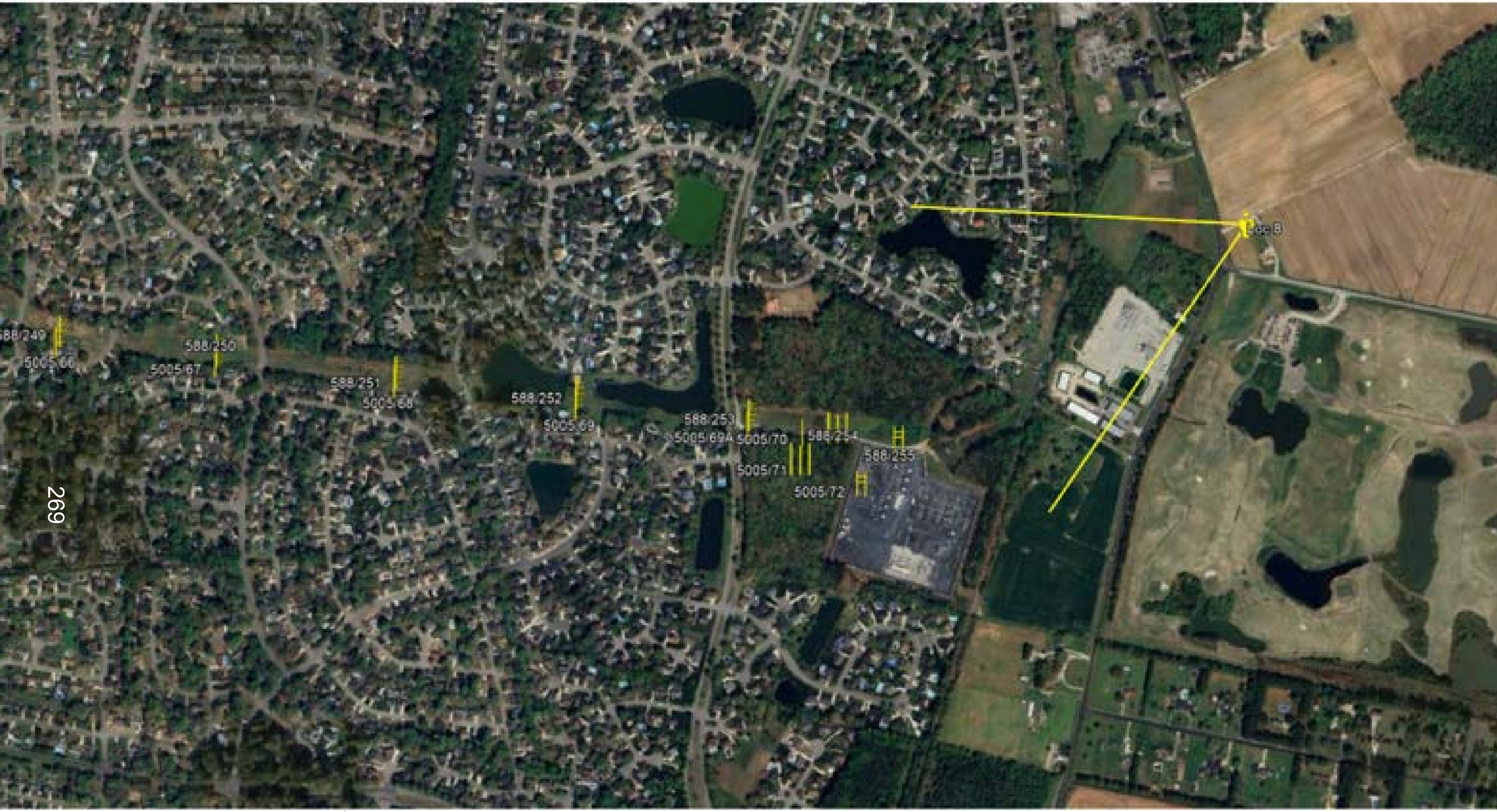


Photo simulations
prepared by:
GTTE LLC
email:
info@gttellc.com
703 447 1350

Viewpoint 8
Centerville-Fentress Historic District

Fentress-Yadkin 500kV Line #588 Rebuild
& New 500kV Fentress-Yadkin Line #5005

Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	Viewpoint 8 Centerville-Fentress Historic District	Existing View	
	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.		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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	

Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	Viewpoint 8 Centerville-Fentress Historic District	**Proposed View** (Location of towers not visible are overlaid with yellow tower icon)	
	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.		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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	

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

Viewpoint 9A
Herring Canal

Fentress-Yadkin 500kV Line #588 Rebuild
& New 500kV Fentress-Yadkin Line #5005

Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	Viewpoint 9A Herring Canal	Existing View
	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.		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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

Photo simulations prepared by: GTTE LLC

email: info@gttellc.com
703 447 1350

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Viewpoint 9A
Herring Canal

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

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

Viewpoint 9B
Herring Canal

Fentress-Yadkin 500kV Line #588 Rebuild
& New 500kV Fentress-Yadkin Line #5005

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Viewpoint 9B
Herring Canal

Existing View

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Viewpoint 9B
Herring Canal

Proposed View
(Location of towers not visible are overlaid with yellow tower icon)

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.

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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.

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

Viewpoint 10:
Lisle A. Lindsay House

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005

Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	Viewpoint 10 Lisle A. Lindsay House	Existing View	
	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.		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 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	

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

Fentress-Yadkin 500kV Line #588 Rebuild & New 500kV Fentress-Yadkin Line #5005	Viewpoint 10 Lisle A. Lindsay House	Proposed View (Location of towers not visible are overlaid with yellow tower icon)

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.

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 31" 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: The Line #588 Rebuild will require substation-related work at the existing Fentress and Yadkin Substations, as described below. The proposed Line #5005 will require installation of additional substation equipment at the existing Fentress Substation, and installation of additional substation equipment and expansion of the Yadkin Substation, as described below.

Fentress Substation

Line #588 Rebuild: The Line #588 Rebuild requires riser upgrades at Fentress Substation.

Line #5005: Proposed new Line #5005 requires installation of two 500 kV gas-insulated substation ("GIS") breakers, four 500 kV switches, three coupling capacity voltage transformers ("CCVTs"), and three arresters at Fentress Substation. A new backbone structure will support proposed Line #5005.

All the new substation equipment required for this Project will be installed inside the existing Fentress Substation footprint, which is approximately 21 acres.

The conceptual one-line diagram and general arrangement for the Fentress Substation are provided as Attachment II.C.1 and Attachment II.C.2.

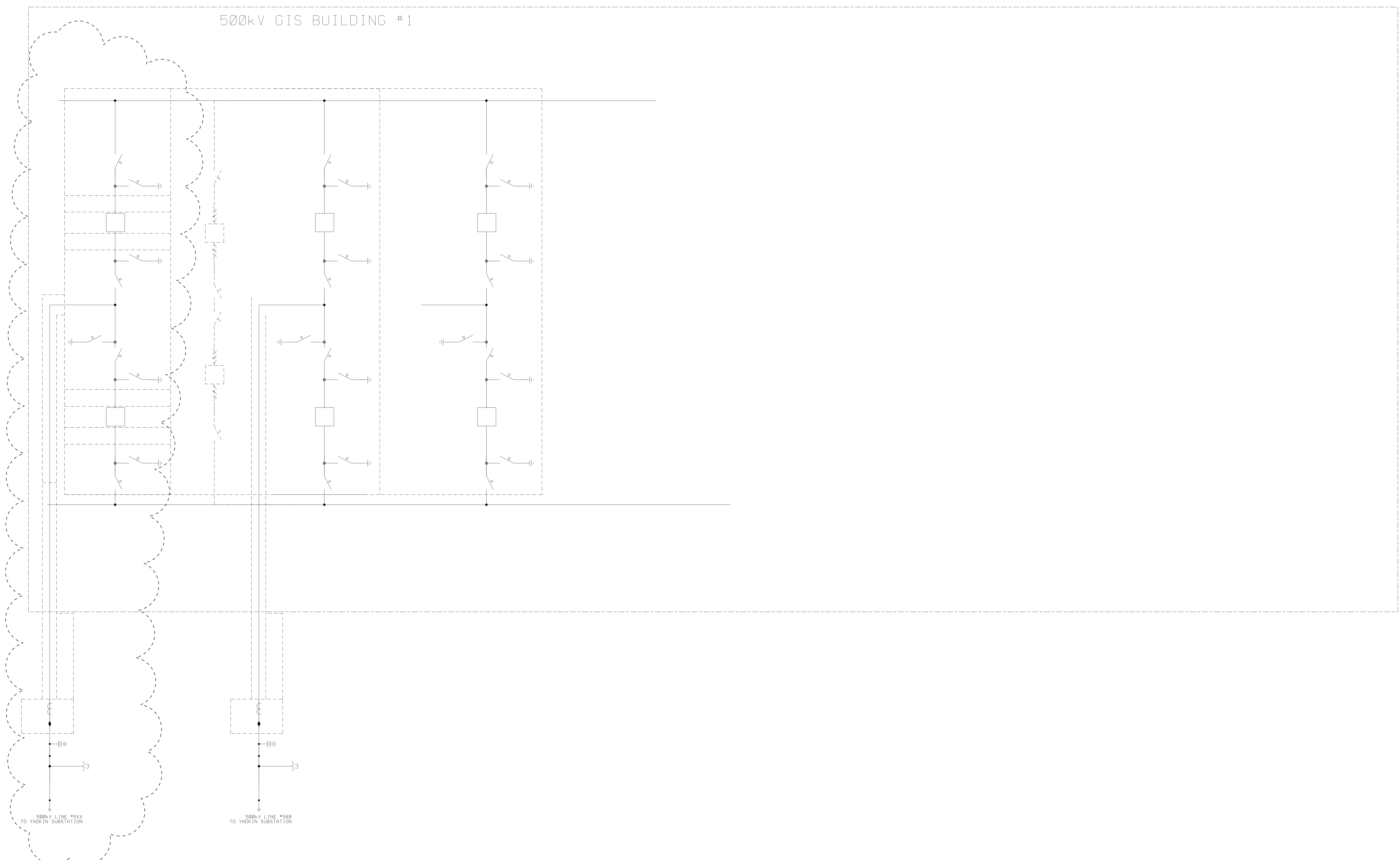
Yadkin Substation

Line #588 Rebuild: The Line #588 Rebuild requires risers, CCVTs and arrester upgrades at Yadkin Substation.

Line #5005: Proposed new Line #5005 requires the expansion of the existing 500 kV bus and the installation of a 500 kV circuit breaker, two 500 kV switches, three arresters, one wave trap, and three CCVTs to create a line position for the proposed Line #5005 at the Yadkin Substation.[48] Additionally, the existing Yadkin Substation footprint will be expanded approximately 2.5 acres within Company-owned property to accommodate the new equipment (total of 25 acres).

The conceptual one-line diagram and general arrangement for the Yadkin Substation are provided as Attachment II.C.3 and Attachment II.C.4.

[48] *See supra*, n. 6. Existing Line #565 will be shifted within the Yadkin Substation to a new backbone so that proposed Line #5005 is able to terminate on the current Line #565 position and avoid transmission line crossings outside of the substation.



PRELIMINARY
NOT FOR CONSTRUCTION

Dominion Energy

CONSTRUCTION ONE LINE DIAGRAM

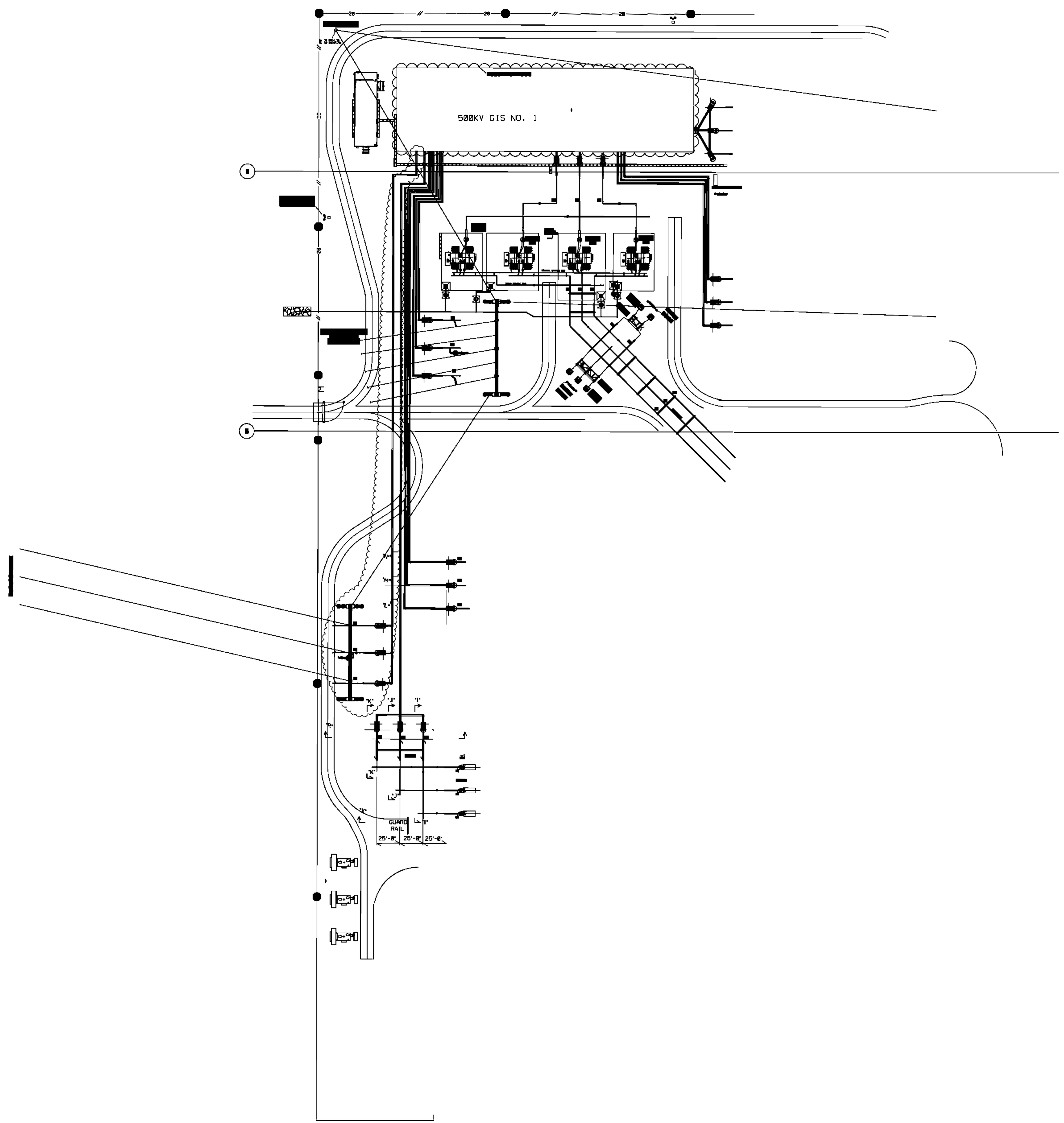
Drawn By:	Date	Substation	FENTRESS
Approval	Date	Drawing No.	II.C.1

4/30/2024

Revisions: By: | Approval | Date: | Project No. | Network No. | BM No. | Description

USER: mohamm6

00 S DEMARCATION INDICATOR - SEE SUB. OL.
99 T DEMARCATION INDICATOR - SEE TLIN. OL.
98 D DEMARCATION INDICATOR - SEE DIST. OL.
97 C DEMARCATION INDICATOR - SEE CUST. DOC.



PRELIMINARY
NOT FOR CONSTRUCTION

Dominion Energy

FENTRESS

PROJECT DESIGNER	NAME	DATE	SCALE	SHEET NUMBER OF
PROJECT APPROVALS	NAME	DATE	TYPICAL REVISIONS	
BM NUMBER	PROJECT No.		DRAWING NUMBER II.C.2	

$FILENAME$
PLOTTED: 4/30/2024
USER: mohamm6

ACTIVE TYPICAL NUMBER
LEGACY TYPICAL NUMBER

PLEASE NOTE:
IF THE TYPICAL IS MODIFIED
REFER TO CLOUDED AREAS FOR REVISIONS

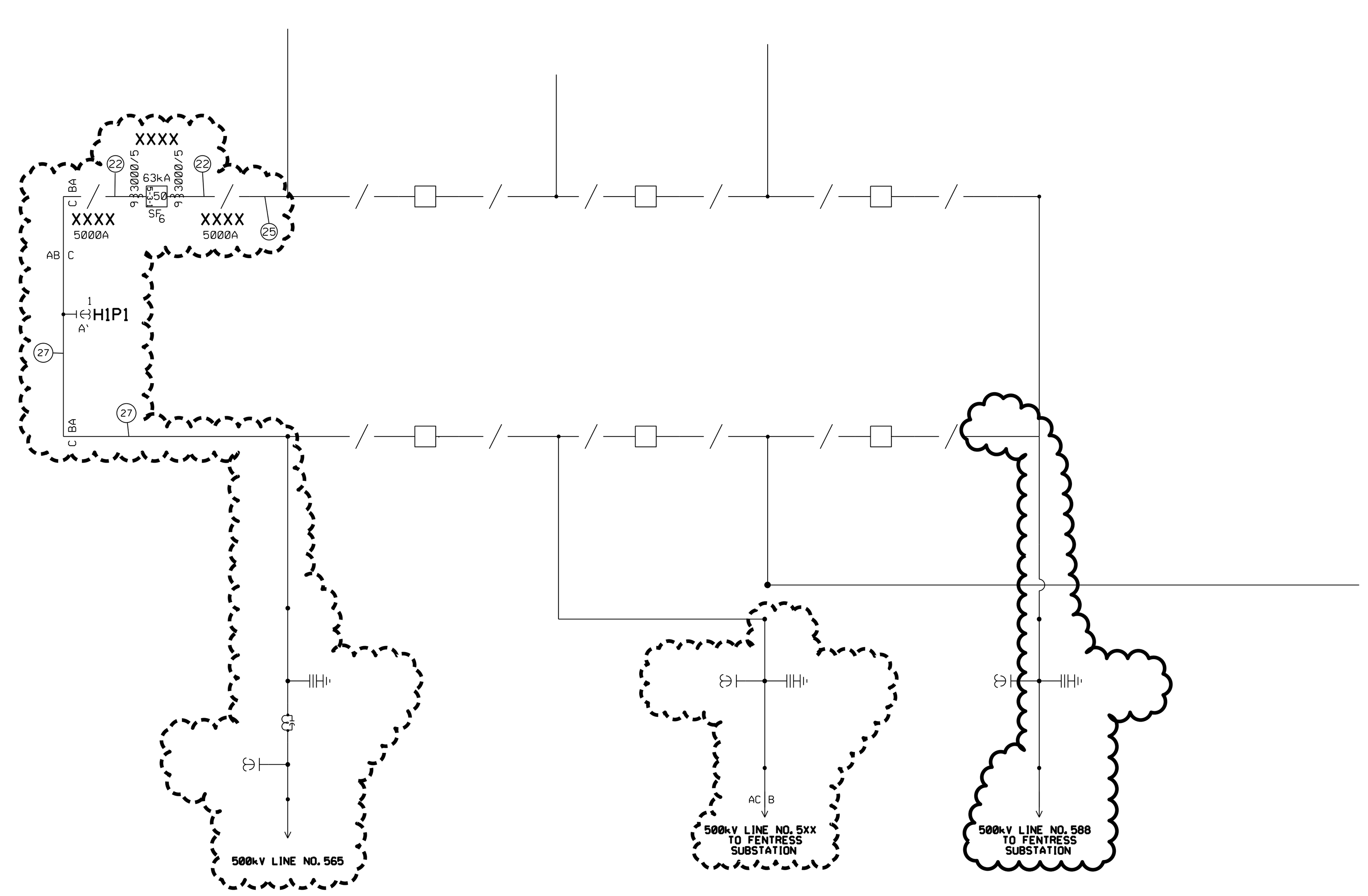
EQUIPMENT FOUNDATION	LIBRARY LOCATION	CELL NAME	BM ASSEMBLY	PIPE STAND FOUNDATION CELL (PIER)	PIPE STAND FOUNDATION CELL (SPREAD)	FOUNDATION CELLS FOR OTHER TYPICAL STRUCTURES (PIER) (SPREAD)	STEEL DETAIL & ASSEMBLY	PR - NUMBER	STRUCTURAL ENGINEER	PEER REVIEWER	ASSIGNED TO

TYPICAL HISTORY

NO.	DATE	DESIGNER	STR. & ENG. APPROVALS	DESCRIPTION	PR NUMBER	TYPICAL REVISION

SEED FILE USED: StandardsSeed.dgn

PRELIMINARY
NOT FOR CONSTRUCTION



00 S DEMARCATION INDICATOR - SEE SUB. OL.	99 T DEMARCATION INDICATOR - SEE TLIN. OL.	98 D DEMARCATION INDICATOR - SEE DIST. OL.	97 C DEMARCATION INDICATOR - SEE CUST. DOC.

Revisions

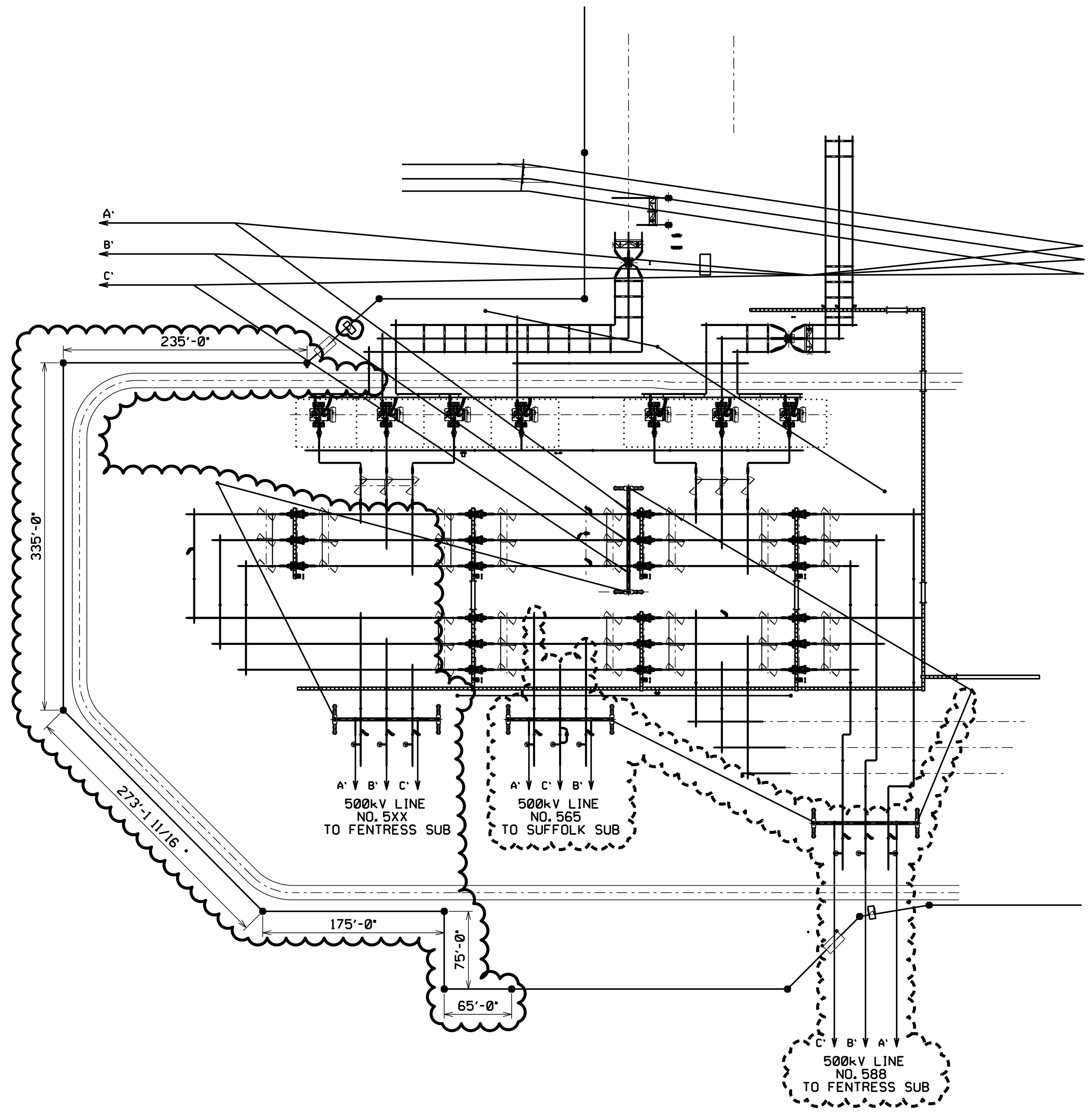
By:	Date:	Project No.	Network No.	BM No.	Description	Approval

#USERNAME#

Dominion Energy

Construction One Line Diagram

Drawn By: MRH	Date 9-15-95	Substation YADKIN
Approval	Date	Drawing No. II.C.3



PRELIMINARY
NOT FOR CONSTRUCTION

Dominion Energy

GENERAL ARRANGEMENT PLAN
YADKIN 500/230 KV SUBSTATION
CHESAPEAKE, VIRGINIA

	Name	Date	Project No.	Sheet No.
Designed by:				
Approvals			Scale	OF
Approvals				
		B/M No.	Revisions	

Cad File Name
PLOTTED: $$$$$$$$$$$SYTIME

Drawing No.
II.C.4

No.	Date	By	Checked/Appr.	Description	Project Number	B/M

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures	Steel Detail & Assembly
						(Pier) (Spread)	

$USERNAME$

$FILENAME$
PLOTTED: $$$$$$$$$$$SYTIME
$USERNAME$

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: The Proposed Route extends approximately 13.5 miles from the existing Fentress Substation to the existing Yadkin Substation in the City of Chesapeake, Virginia. The northern and eastern termini of the Project in the vicinity of the substations feature dense residential development. The central portion of the Proposed Route, east of Route 17 Business/George Washington Highway and west of Johnstown Road, is less densely developed. This area is more generally characterized by agricultural lands and undeveloped land, with interspersed residences and small neighborhoods.

According to City of Chesapeake parcel data, zoning data, and aerial photo analysis, there are 1,758 dwellings within 500 feet, 822 dwellings within 250 feet, and 432 dwellings within 100 feet of the centerline of the existing transmission corridor for the Proposed Route.

See Attachment III.A.1 for a map depicting prime farmland and farmland of statewide importance, and Section 2.L of the DEQ Supplement for the estimated amount of farmland crossed by the Proposed Route.

For additional description of the character of the area that will be traversed by the Proposed Route and the related impacts, see the DEQ Supplement, specifically as to land use (Sections 2.G and 2.L), wetlands (Section 2.D), forests (Section 2.L), agricultural lands (Section 2.L), historic resources (Section 2.I), and wildlife (Sections 2.G and 2.K).[49]

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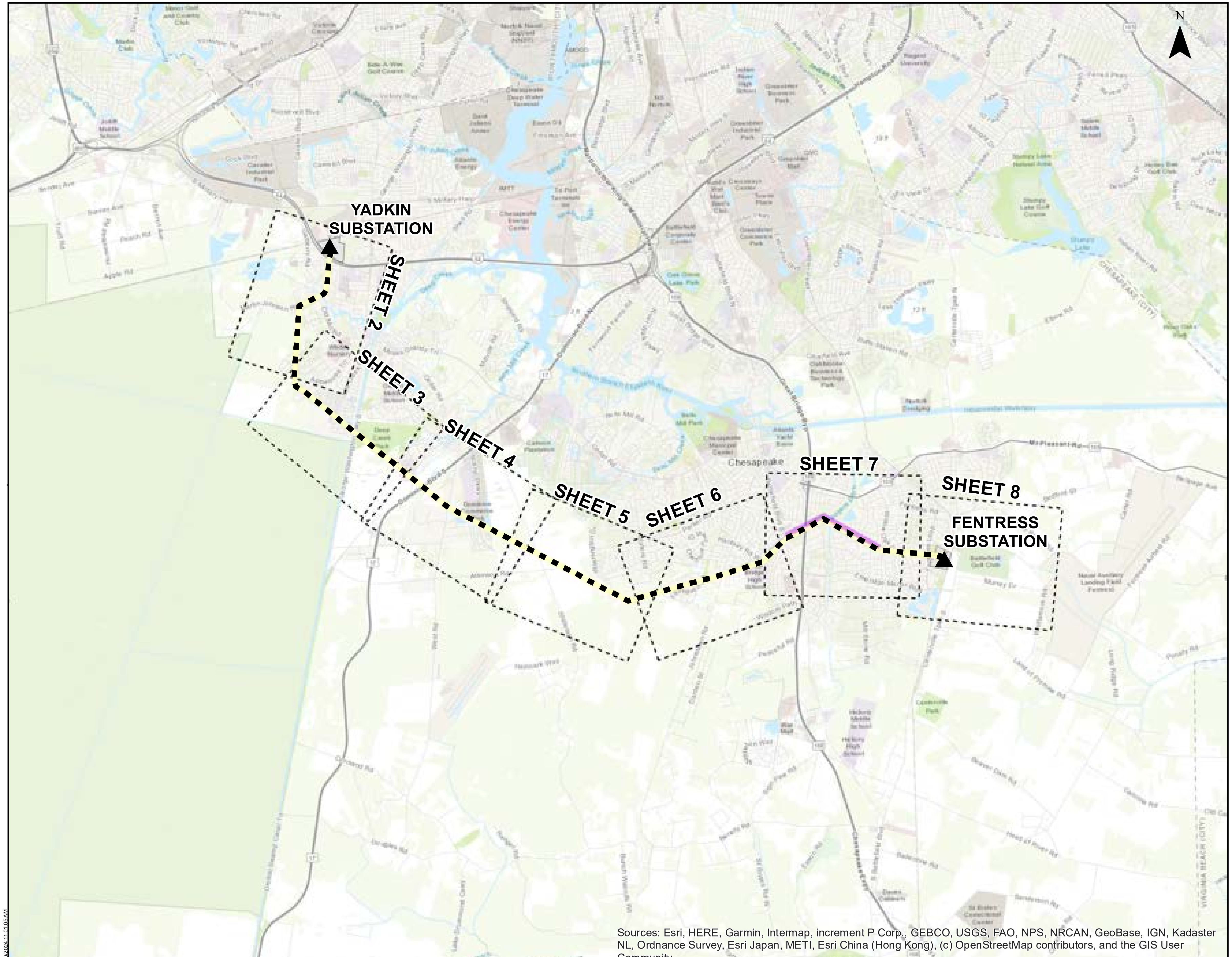
[49] The Constraint Design Segment also is depicted on Attachment III.A.1 and is discussed in the referenced sections of the DEQ Supplement.



ATTACHMENT III.A.1
PRIME FARMLAND MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

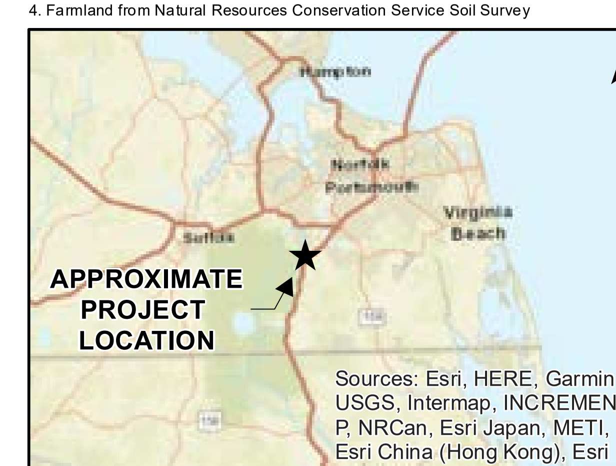
Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 0.75 1.5 3 Miles
Scale is 1 IN = 1.5 MI when printed at original size of 11x17

- Existing Line #588 Right-of-Way
- Constraint Design Segment
- Existing Substation
- Dominion Owned Substation Parcel

Notes:
1. Basemap from ESRI World Imagery and World Street Map
2. Project centerline provided by Dominion Energy Virginia
3. Parcels and roads from Virginia Geographic Information Network
4. Farmland from Natural Resources Conservation Service Soil Survey



C2 ENVIRONMENTAL

Dominion Energy

SHEET 1 OF 8

ATTACHMENT III.A.1

PRIME FARMLAND MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet

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

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- Prime Farmland
- Farmland of Statewide Importance
- USGS National Hydrography Stream Centerline

SHEET 2 OF 8

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ATTACHMENT III.A.1
PRIME FARMLAND MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and
New 500 kV Fentress-Yadkin Line #5005

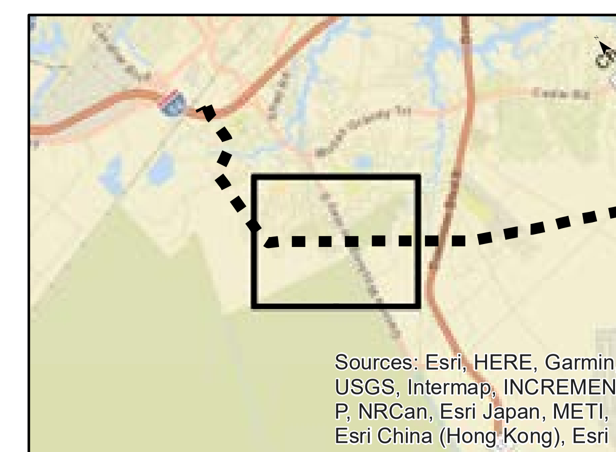
City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet
Scale is 1 IN = 1,000 FT when printed at original size of 11x17

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- Prime Farmland
- Farmland of Statewide Importance
- USGS National Hydrography Stream Centerline



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri

SHEET 3 OF 8

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ATTACHMENT III.A.1
PRIME FARMLAND MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet
Scale is 1 IN = 1,000 FT when printed at original size of 11x17

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- Prime Farmland
- Farmland of Statewide Importance
- USGS National Hydrography Stream Centerline

C2 ENVIRONMENTAL
Dominion Energy

SHEET 4 OF 8

ATTACHMENT III.A.1

PRIME FARMLAND MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

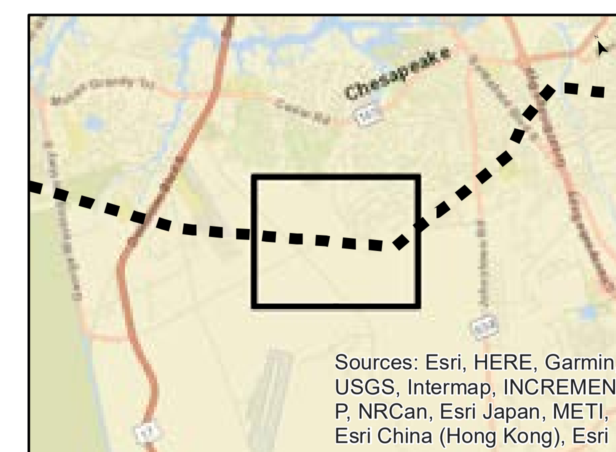
City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet
Scale is 1 IN = 1,000 FT when printed at original size of 11x17

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- Prime Farmland
- Farmland of Statewide Importance
- USGS National Hydrography Stream Centerline



C2 ENVIRONMENTAL

Dominion Energy

SHEET 5 OF 8

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ATTACHMENT III.A.1

PRIME FARMLAND MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

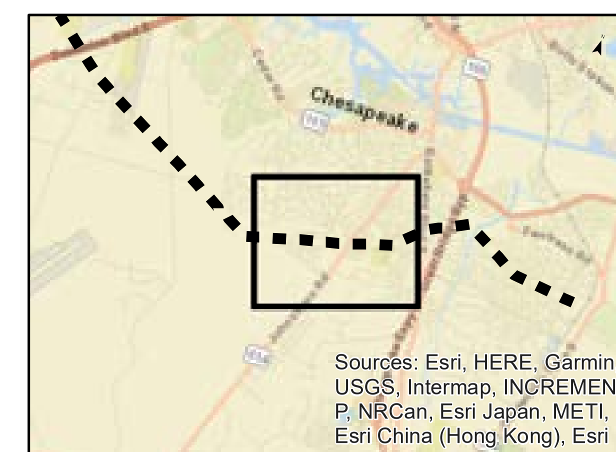
Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet

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

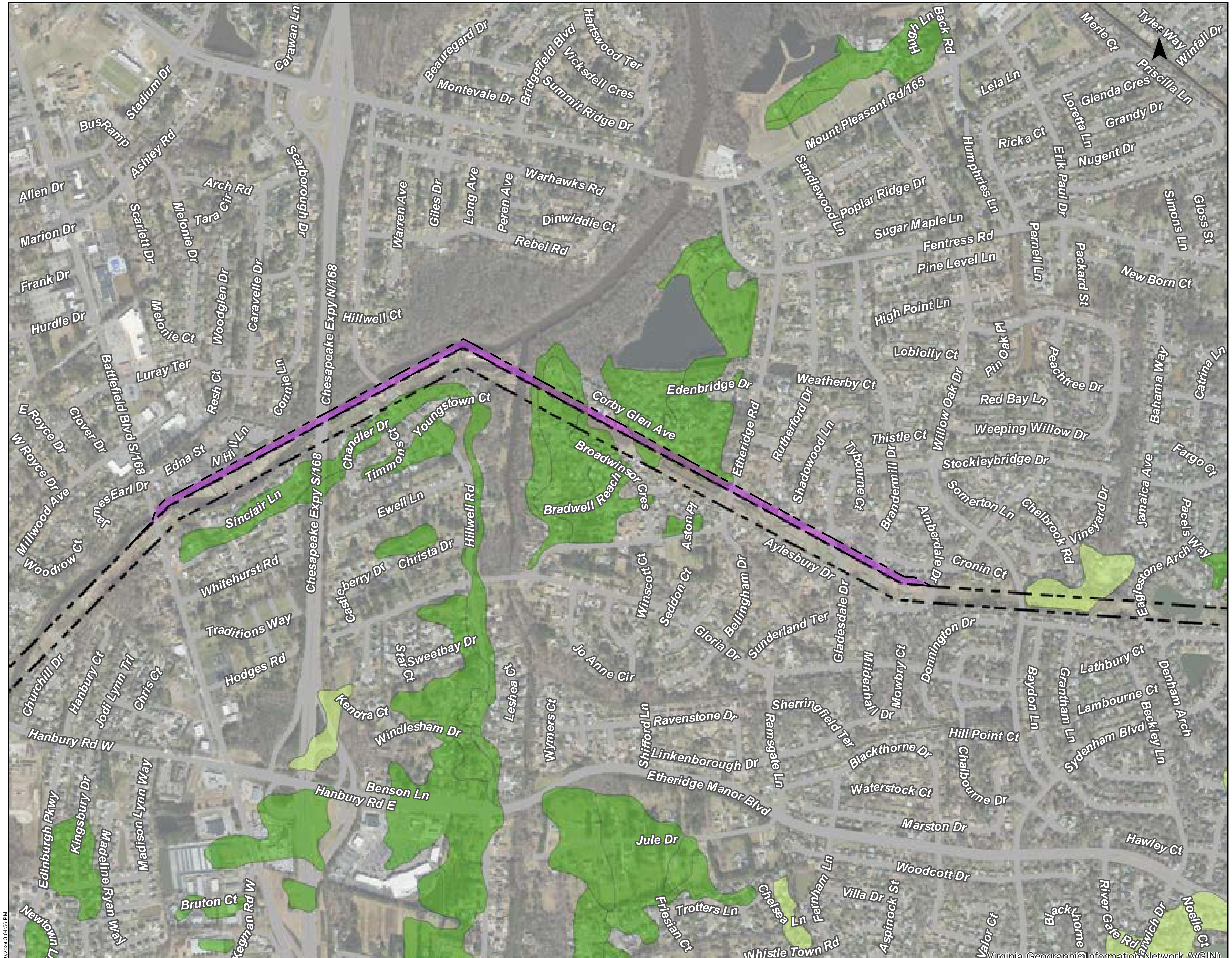
- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- Prime Farmland
- Farmland of Statewide Importance
- USGS National Hydrography Stream Centerline



ENVIRONMENTAL

Dominion Energy

SHEET 6 OF 8



ATTACHMENT III.A.1
PRIME FARMLAND MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet
Scale is 1 IN = 1,000 FT when printed at original size of 11x17

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- Prime Farmland
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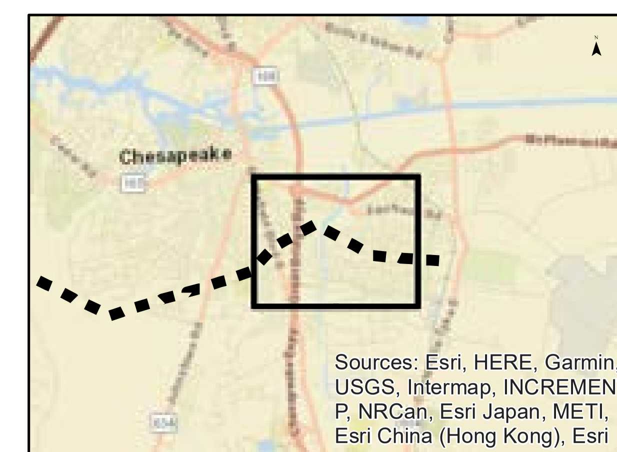

C2 ENVIRONMENTAL | Dominion Energy

SHEET 7 OF 8

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ATTACHMENT III.A.1

PRIME FARMLAND MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and
New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

C2 Env Project:	Prepared By:	Date:
0326	JRC	05/29/24

0 500 1,000 2,000 Feet

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

- Existing Line #588 Right-of-Way (150 FT)
- Constraint Design Segment Right-of-Way (85 FT)
- Existing Substation
- Dominion Owned Substation Parcel
- Prime Farmland
- Farmland of Statewide Importance
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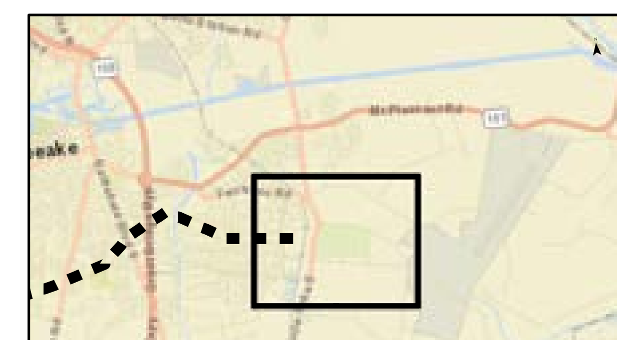


Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri

SHEET 8 OF 8

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: Stakeholder Engagement

At Dominion Energy Virginia, the Company believes stakeholder engagement and meaningful public involvement is a critical component to the success of this Project.

Feedback is critical as the Company considers all potential benefits and impacts of the Project. Dominion Energy Virginia has and will continue to engage with a broad range of stakeholders that have interests across the Project components. Stakeholder engagement includes both a statewide and regional approach in the following segments: cultural and historic resource stewardship organizations; the business community and workforce organizations; the environmental community; and organizations that represent the needs of underrepresented communities. The Company also met with individual property owners and community members.

In December 2023, the Company launched an internet website dedicated to the Project: www.dominionenergy.com/yadkin-fentress. Specific details about the Project were added to the website beginning in January 2024. The website includes a description of the proposed Project, an explanation of the need, an interactive structure comparison tool, photo renderings and simulations, and information on the Commission review process.

Beginning in January 2024, the Company commenced coordinated community and stakeholder engagement with the City of Chesapeake regarding the proposed transmission lines project, as follows.

- On January 24, 2024, a postcard was mailed to 5,427 residences and business within approximately 1,000 feet of the Project. See Attachment III.B.1. A "saturation" mailing list was provided by the U. S. Postal Service to include renters of multi-family dwellings, like apartment buildings. The postcard announced the upcoming Project, provided a brief overview, and included information of upcoming surveying work within the existing right-of-way corridor between the Yadkin and Fentress Substations. The postcard also included a Project map.

- On February 26, 2024, a second mailing to 5,420 residences provided more Project information and details regarding existing and proposed structure type and height. See Attachment III.B.2. Both height and structure type were illustrated on the postcard. This mailing included an attached tear-away survey card ("Survey Card") requesting feedback from recipients on their preferred finish color of the proposed structures. The Survey Card included illustrated images of the proposed structures in three finish colors: galvanized; dull galvanized; and weathering steel (otherwise known as COR-TEN® steel). The postage to return the Survey Card portion of the postcard was prepaid by the Company.

- On March 13, 2024, a third mailing to 5,420 residences included details of the April 9, 2024 in-person community meeting and a Project map of the transmission line corridor. See Attachment III.B.3. Copies of the postcards and community meeting information have been available on www.dominionenergy.com/yadkin-fentress since prior to the April community meeting.

- The digital advertising campaign promoting this meeting ran from March 26, 2024, through April 19, 2024. The campaign targeted audiences in the City of Chesapeake. Pre-event digital ads generated 584,757 impressions and 5,715 clicks. There were over 50,000 video views with a 43.26% average video completion rate and a .98% click thru rate. See Attachment III.B.4.

- On March 28, 2024, a fourth mailing to 5,420 residences included a reminder to attend the April 9, 2024 in-person community meeting and provided detailed information on how to view and use the interactive structure comparison tool. See Attachment III.B.5. The Company deployed an online interactive structure comparison tool on March 28, 2024 (embedded at https://geovoice.powereng.com/beta/dominion/Yadkin-Fentress/#close within the Project website), which allows users to review the existing route corridor, existing structure location and typical proposed structure drawings and photo simulations and renderings, which are included as Attachment III.B.6. Users do not need to register before viewing the routing details.

- On April 9, 2024, the Company hosted an in-person community meeting at the Chesapeake Conference Center from 5:00 p.m.-7:00 p.m. The Project team also attended this in-person community meeting to share information and simulations regarding the Project with the public. The community meeting was conducted in an exhibition format and the layout included several Project-specific stations, such as renderings of the proposed electric transmission line structures, key location photo simulation, as well as related informational boards. A sign-in table with two team members was located at the main entrance. A fact sheet with Project information and a QR code linking to the Project website were available as handouts. See Attachment III.B.7. Attendees were also given the option to vote on structure finish color at the meeting. Physical samples of each structure material and color were available for attendees to view. Out of the 55 attendees, 11 provided votes for the structure finish color at the in-person community meeting.

In addition to postcards and traditional project materials available on the Project website, the Company met with property owners to address inquiries about the Project.

The Company's communications process to solicit community feedback generally, including the use of Survey Cards in this proceeding, is to evaluate public opinion. The use of the Survey Cards and associated collateral material to explain the proposed alternatives was the Company's attempt to present an impartial view of advantages and potential limitations of each finish color option. Neither Survey Cards nor any one method should serve as the sole proxy for understanding the community's viewpoints. Depending on a property owner's preferences, structure finish can help mitigate the visual change of the structures and inform an opinion on what they feel is best for their community. The results of the Survey Cards, which yielded a 5% response rate, showed 58% preferred a muted color finish, either dulled galvanized or weathering steel (COR-TEN®) finish, while 42% preferred the non-dulled galvanized steel. The Company confirmed the community preference for dulled or galvanized steel in person at the April 9, 2024 open house by exhibiting metal samples instead of renderings or photographs. All but one open house attendee preferred the dulled galvanized finish over either weathering steel or galvanized.

Environmental Justice

As part of preparing for the Project, the Company researched the demographics of the surrounding communities using census data from the U.S. Census Bureau's American Community Survey 5-Year Estimates (2018-2022). This review revealed that 40 Census Block Groups ("CBGs") are located within one mile of the Proposed Route. A review of census data for several demographic characteristics identified populations within the Project study area that meet the Virginia Environmental Justice Act ("VEJA") thresholds for Environmental Justice Communities ("EJ Communities") (Va. Code § 2.2-234, 2.2-235).

Of the 40 CBGs within the study area, 13 CBGs are crossed by the Project's Proposed Route. Of these, 11 are communities of color and one meets the low-income threshold.

The Company has engaged extensively with all communities within the Project study area, including people in the EJ Community CGBs discussed herein. The Company believes that 1) its work has allowed for the fair treatment and meaningful involvement of all interested people, regardless of race, color, national origin, income, faith, or disability, and 2) the Project's Proposed Route minimizes potential impacts to EJ Communities and other populations, and will not result in a disproportionate impact on EJ Communities.

In addition to its evaluation of impacts, the Company has and will continue to engage the EJ Communities in a manner that allows them to meaningfully participate in the Project development and approval process so that the Company can take their views and input into consideration. See Attachment III.B.8 for a copy of the Company's Environmental Justice Policy.

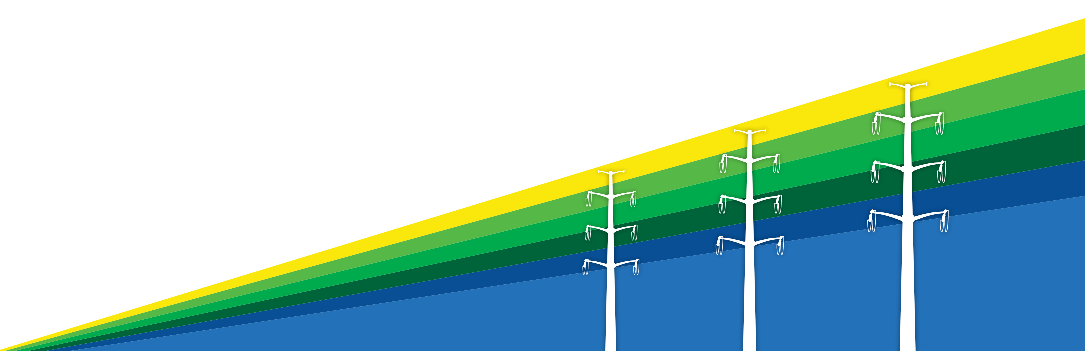
Dominion Energy image. Not project specific.

Dominion Energy®

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

Learn more about a local power line project in Chesapeake, Virginia

SCAN HERE TO LEARN MORE



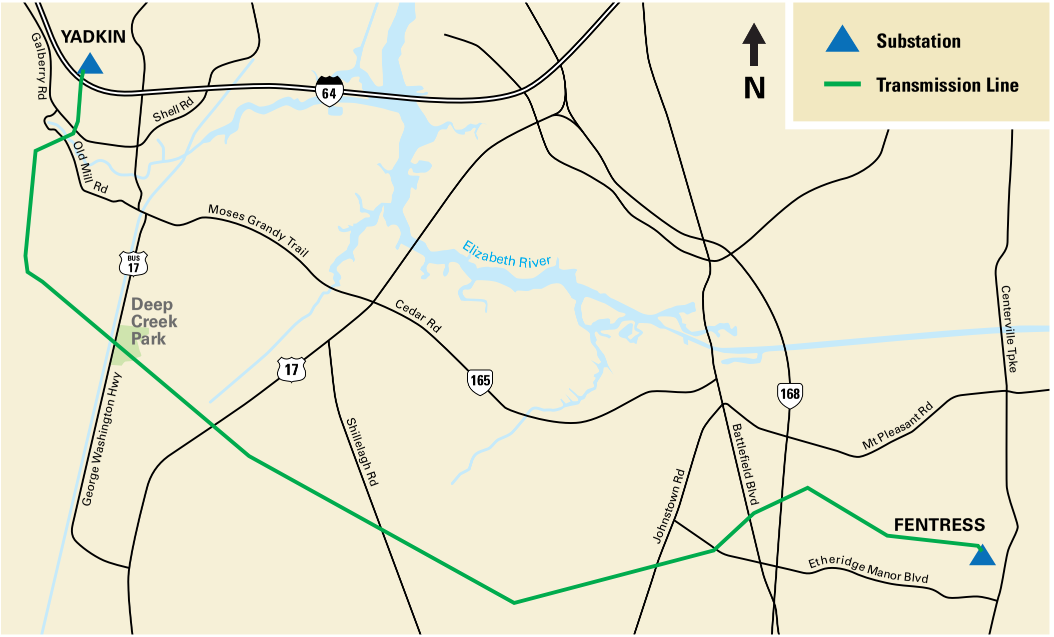
Crews Will Be In Your Area

Yadkin – Fentress Surveying Along Transmission Line Right of Way

At Dominion Energy, we are committed to keeping neighbors informed about projects in the communities we serve. You are receiving this postcard because we are proposing to rebuild an electric transmission corridor between our Yadkin and Fentress substations located in the City of Chesapeake, Virginia. Starting in February, crews will be in the right of way surveying and gathering information in preparation for this project. As such, you may notice an increase in foot or light-duty truck activity in the right of way.

SCAN HERE TO LEARN MORE

More details will be provided to you as activities progress. Thank you for your patience and understanding during this time.



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

Protecting the grid against natural and man-made acts is a top priority. You can learn more about our commitment to safety at powerlines101.dominionenergy.com.

SURVEYING ACTIVITIES

FEBRUARY 2024

Crews will survey and inspect right of way

Crews in your area

CONTACT US

Website: powerlines101@dominionenergy.com
Phone: 888-291-0190
Email: powerline@dominionenergy.com

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 694 RICHMOND VA

POSTAGE WILL BE PAID BY ADDRESSEE

LOUDOUN - OX PARTIAL REBUILD PROJECT
ATTN: TAYLOR WATERS
DOMINION ENERGY VIRGINIA
10900 NUCKOLS RD STE 400
GLEN ALLEN VA 23060-9822

Electric Transmission
P.O. Box 26666
Richmond, VA 23286-8881

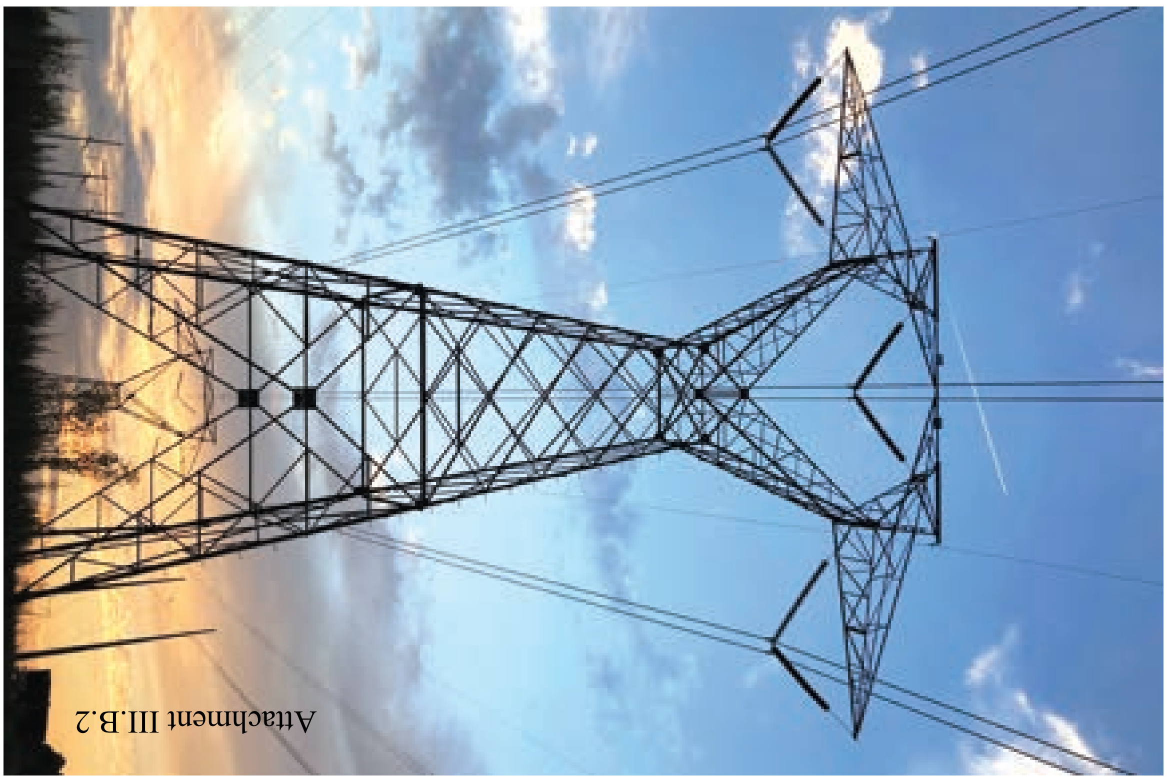
Dominion Energy®

URGENT

Yadkin – Fentress Electric Transmission Line

PROJECT INFORMATION
AND SURVEY CARD —
WE WANT TO HEAR FROM YOU!

Recipient Name
Address Line 1
Address Line 2
City, VA 12345



Attachment III.B.2

Dominion Energy®

Yadkin – Fentress Electric Transmission Project

PROJECT INFORMATION AND SURVEY CARD

AT DOMINION ENERGY, we are dedicated to maintaining reliable and secure electric service in the communities we serve. As a follow-up to our postcard in January, we have a project near you to rebuild the existing 500 kilovolt (kV) transmission line. This project is needed to replace aging transmission structures to maintain the reliable operation of the transmission system, and to add additional infrastructure to deliver the renewable energy generated by the Coastal Virginia Offshore Wind (CVOW) project.

Currently, there is a 500 kV transmission line in the right-of-way corridor that runs approximately 14 miles between our Yadkin and Fentress substations located in the central part of the City of Chesapeake, Virginia. We are proposing to wreck the existing, aging 500 kV line, currently on lattice structures (see image on upper right) and build two 500 kV transmission lines on separate monopole structures (see image on lower right). The approach is to maximize the use of the existing transmission corridor by not rebuilding the current lattice-type structures, and instead utilize two independent transmission lines. This will allow the project to be built without requiring new or expanded right-of-way, thereby minimizing impacts to property owners' land.

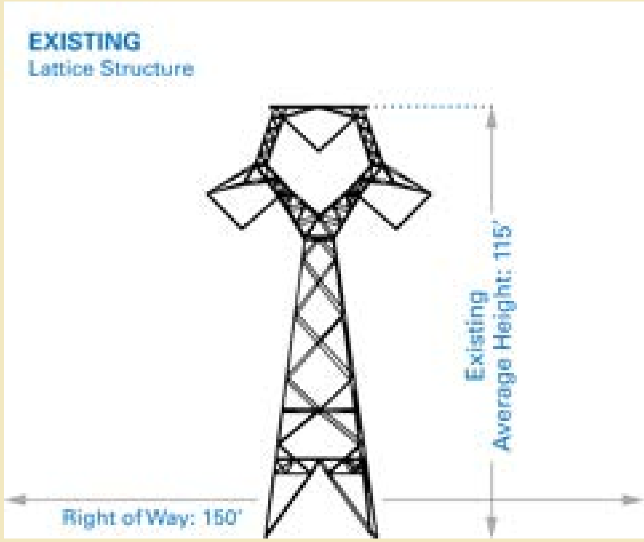
In order to avoid new right-of-way and still maintain safety and operational clearances, the proposed monopole structure will be an average of 65 feet taller than the existing lattice structures. This plan also allows for the placement of the new structures in similar locations as the existing structures.

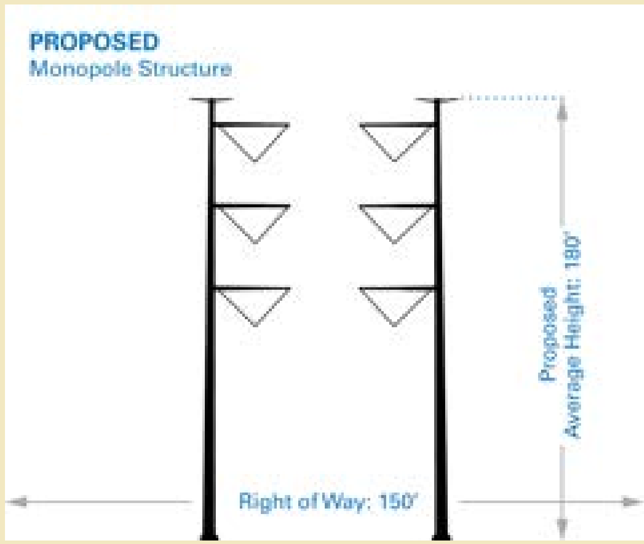
We are dedicated to finding the best solution for the long-term needs in the communities we proudly serve. This project will require review by the Virginia State Corporation Commission, and we would like to gain your feedback before our filing. We will host a community meeting in spring 2024 to share more information about this project, and for you to speak with project team members. Details regarding the meeting will be shared once finalized.

In the meantime, we want to hear from you. Depending on a person's preferences, structure finish can help mitigate the unavoidable visual change, and you may have an opinion on what is best for your community.

Please share your structure color preference by filing out and mailing back the attached survey card (which provides simulations of different structure finishes) by Wednesday, March 20, 2024. Postage is prepaid.

PLEASE RETURN THE PREPAID POSTAGE REPLY CARD BY MARCH 20, 2024





SCAN HERE TO LEARN MORE

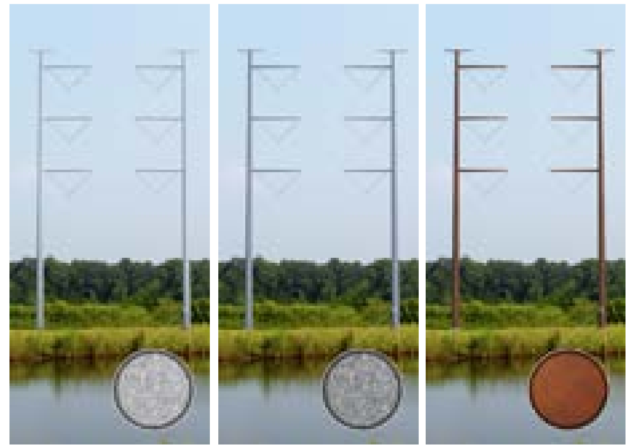
Dominion Energy®

Yadkin – Fentress Electric Transmission Project

SURVEY CARD

BASED ON THE INFORMATION IN THIS MAILER AND THE STRUCTURE FINISH COMPARISON, PLEASE RANK YOUR PREFERENCE*:

☐ **Galvanized** ☐ **Dull Galvanized** ☐ **Corten**



All structures and finish color depicted are for representation only.

PLEASE COMPLETE THE FOLLOWING:

NAME

ADDRESS

CITY / STATE / ZIP

PHONE

EMAIL

* Results of this survey responses will be taken into consideration during the company's final review but do not limit the company's ultimate decision or presenting a preferred option as required by the Virginia State Corporation Commission

Dominion Energy image. Not project specific.

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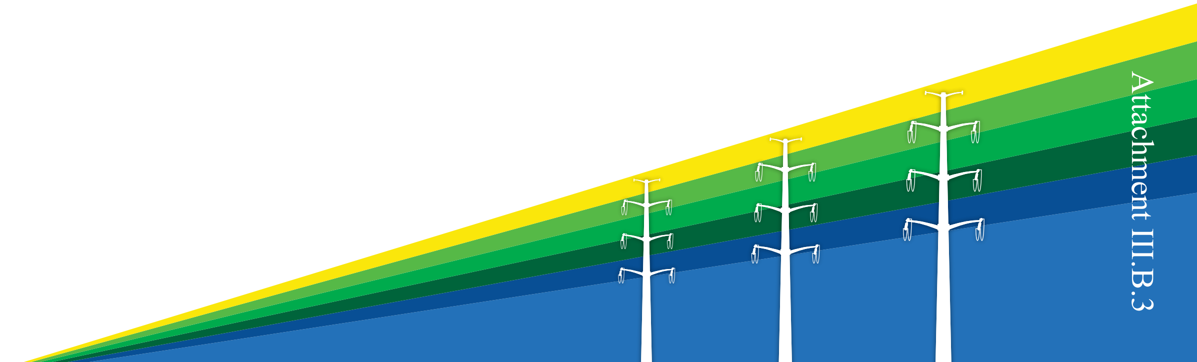
P.O. Box 26666
Richmond, VA 23261

YOU'RE INVITED TO A COMMUNITY MEETING!
INFORMATION ENCLOSED

SCAN HERE
TO LEARN
MORE



Join us at our Community Meeting

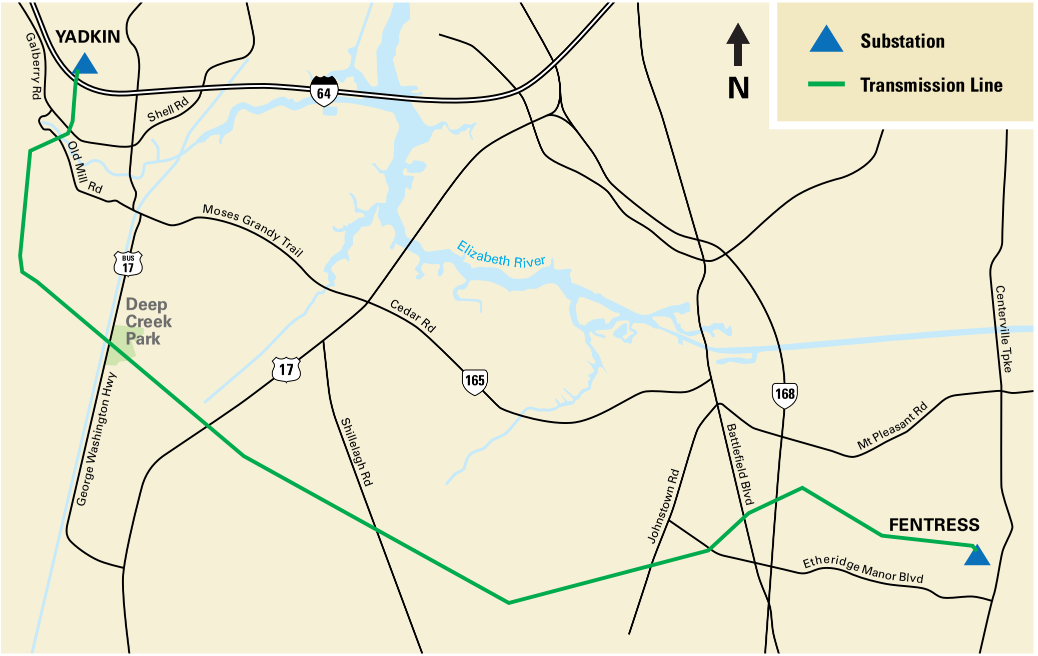
Yadkin – Fentress 500 kV Electric Transmission Project

At Dominion Energy, we are committed to providing safe, reliable, and secure energy to the communities we serve. We are planning to rebuild 14 miles of existing 500 kilovolt (kV) transmission lines that run between our Yadkin and Fentress substations in the City of Chesapeake, Virginia. We will submit the project to the Virginia State Corporation Commission (SCC) in summer of 2024.

SCAN HERE TO LEARN MORE

This project is needed to replace aging transmission structures to maintain the reliable operation of the transmission system, and to add additional infrastructure to deliver the renewable energy generated by the Coastal Virginia Offshore Wind (CVOW) project.

Consider joining us to learn more at our Community Meeting on Tuesday, April 9, 2024. During the meeting you can speak to project team members and ask them detailed questions about the project. There will not be a formal presentation, so please feel free to stop by at your leisure between 5:00 p.m. and 7:00 p.m. Your continued involvement, participation, and input are important in developing this project.



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Protecting the grid against natural and man-made acts is a top priority. You can learn more about our commitment to safety at powerlines101.dominionenergy.com.

COMMUNITY MEETING DETAILS

Tuesday, April 9, 2024
5 – 7 p.m.

There is no formal presentation; stop by anytime during the meeting.

Chesapeake Conference Center
700 Conference Drive
Chesapeake, VA 23330

Save the date | Infrastructure upgrades | In person meeting

CONTACT US

Website: DominionEnergy.com/Yadkin-Fentress
Phone: 888-291-0190
Email: powerline@dominionenergy.com

DE Transmission

Yadkin-Fentress

Report Date: March 26, 2024 – April 19, 2024

DET | Yadkin-Fentress | 3/26/24 – 4/19/24 | Overall Report

The Yadkin-Fentress campaign ran on Facebook, Google and Nextdoor through 4/19/24. These campaigns were targeted at customers over the age of 25 who resided in and around the project areas in Chesapeake, Virginia.

1,054,477 impressions

of ads were delivered to target audiences.

10,832 clicks

have taken audiences to the landing pages.

101,521 video views with an average 40.35% VCR.

1.03% CTR

Most CTRs near or above benchmarks.

64,320 ad engagements

such as reactions, likes, comments, shares and saves have been made on the ads.

Notable Creative

The DET Yadkin-Fentress Facebook Pre-Event ad had the highest CTR at 2.99%, which is 232% higher than the 0.90% Facebook benchmark.

Notable Insights

- Facebook ads had a CTR of 2.60% and 29,090 completed video views for a 48.10% VCR.
- Nextdoor ads performed well with a CTR of 0.39%, which is 160% above benchmark.
- Google Video ads had 11,879 completed video views for a 28.94% VCR, which is 93% above the 15% Google VCR benchmark.
- Ads were engaging with females aged 25-34 on Google Display and females 55-65+ on Facebook.

Facebook CTR Benchmark: 0.90% | Twitter CTR Benchmark: 1.11% | Google Search CTR Benchmark: 3.17% | Google Display CTR Benchmark: 0.50% | Google Video Benchmark: 15%| Nextdoor CTR Benchmark: 0.15%

DET | Yadkin-Fentress | 3/26/24 – 4/19/24 | Pre-Event Results

The Yadkin-Fentress Pre-Event campaign ran on Facebook, Google and Nextdoor from 3/26/25 through 4/9/24. These campaigns were targeted at customers over the age of 25 who resided in and around the project areas in Chesapeake, Virginia.

584,757 impressions

of ads were delivered to target audiences.

5,715 clicks

have taken audiences to the landing pages.

52,158 video views with an average 43.26% VCR.

0.98% CTR

Most CTRs near or above benchmarks.

33,754 ad engagements

such as reactions, likes, comments, shares and saves have been made on the ads.

Notable Creative

The DET Yadkin-Fentress Facebook ad had the highest CTR at 2.99%, which is 232% higher than the 0.90% Facebook benchmark.

Notable Insights

- Facebook ads had a CTR of 2.93% and 16,821 completed video views for a 52.90% VCR.
- Nextdoor ads performed well with a CTR of 0.40%, which is 167% above the 0.15% benchmark.
- Ads were engaging with females aged 25-44 on Google Display and females aged 55-65+ on Facebook.

Facebook CTR Benchmark: 0.90% | Twitter CTR Benchmark: 1.11% | Google Search CTR Benchmark: 3.17% | Google Display CTR Benchmark: 0.50% | Google Video Benchmark: 15%| Nextdoor CTR Benchmark: 0.15%

charles ryan associates

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DET | Yadkin-Fentress | 3/26/24 – 4/19/24 | Post-Event Results

The Yadkin-Fentress Post-Event campaign ran on Facebook, Google and Nextdoor from 4/10/26 through 4/19/24. These campaigns were targeted at customers over the age of 25 who resided in and around the project areas in Chesapeake, Virginia.

469,720 impressions

of ads were delivered to target audiences.

5,117 clicks

have taken audiences to the landing pages.

49,363 video views with an average 37.28% VCR.

1.09% CTR

Most CTRs near or above benchmarks.

30,566 ad engagements

such as reactions, likes, comments, shares and saves have been made on the ads.

Notable Creative

The DET Yadkin-Fentress Facebook ad had the highest CTR at 2.45%, which is 172% higher than the 0.90% Facebook benchmark.

Notable Insights

- Facebook ads had a CTR of 2.40% and 12,269 completed video views for a 42.79% VCR.
- Nextdoor ads performed well with a CTR of 0.39%, which is 160% above the 0.15% benchmark.
- Ads were engaging with females aged 25-44 on Google Display and females aged 65+ on Facebook.

Facebook CTR Benchmark: 0.90% | Twitter CTR Benchmark: 1.11% | Google Search CTR Benchmark: 3.17% | Google Display CTR Benchmark: 0.50% | Google Video Benchmark: 15%| Nextdoor CTR Benchmark: 0.15%

Summary:

- The Yadkin-Fentress Pre-Event Display 300x600 ad was the highest-performing Display ad with a CTR of 5.72%.
- Females aged 55-65+ were the top engagers on Facebook. Females aged 25-44 were the top engagers on Video and Display.
- Nextdoor was the top-performing platform for the campaign and ended with a CTR 160% over the 0.15% Nextdoor benchmark.
- Video ads performed well with 101,521 video views. There were 40,969 completed video views across the platforms for a total VCR of 40.35%.
- The home & garden, business services, and media & entertainment audience segments had the highest CTRs on Google.

May 28, 2024

Platform Benchmarks:
Facebook CTR Benchmark: 0.90% | Twitter CTR Benchmark: 1.11% |
LinkedIn CTR Benchmark: 0.26%

Dominion Energy image. Not project specific.

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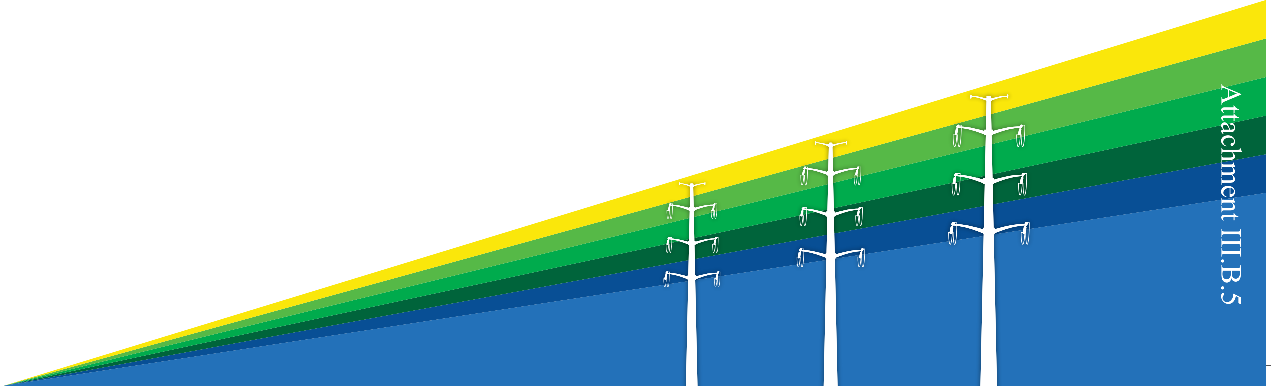
Electric Transmission
P.O. Box 26666
Richmond, VA 23261

REMINDER:
YOU'RE INVITED TO A COMMUNITY MEETING!

SCAN HERE TO LEARN MORE



DON'T FORGET to join us at our Community Meeting

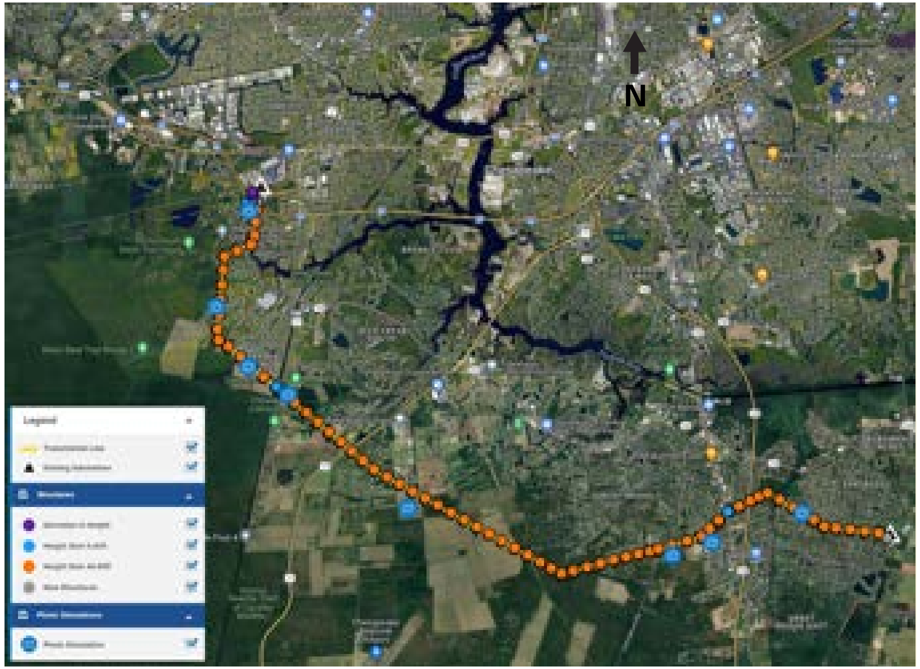
Yadkin – Fentress 500 kV Electric Transmission Project

At Dominion Energy, we are committed to providing safe, reliable, and secure energy to the communities we serve. As previously announced, we are planning to rebuild 14 miles of existing 500 kilovolt (kV) transmission lines that run between our Yadkin and Fentress substations in the City of Chesapeake, Virginia. We will submit the project to the Virginia State Corporation Commission (SCC) in summer of 2024. **To learn more about the Yadkin-Fentress 500 kV Electric Transmission Project, you are invited to our Community Meeting on Tuesday, April 9, 2024.** During the meeting you can speak to project team members and ask them detailed questions about the project. There will not be a formal presentation, so please feel free to stop by at your leisure between 5:00 p.m. and 7:00 p.m.

SCAN HERE TO LEARN MORE

Also, we welcome you to explore our interactive structure comparison tool. Please follow the QR Code to view. This tool allows you to:

- Use the address search to see structure locations in your area.
- View details about individual structures by clicking on a structure location marker to see the name, existing and proposed heights, structure types, and locations.
- View simulations of existing and proposed structures, including height and color options.



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COMMUNITY MEETING DETAILS

Tuesday, April 9, 2024
5 – 7 p.m.

There is no formal presentation; stop by anytime during the meeting.

Chesapeake Conference Center
700 Conference Drive
Chesapeake, VA 23330

Save the date | Infrastructure upgrades | In person meeting

CONTACT US

Website: DominionEnergy.com/Yadkin-Fentress
Phone: 888-291-0190
Email: powerline@dominionenergy.com

Yadkin-Fentress REMINDER OH Postcard_NW993107VCP_Mar2024.indd 2 3/28/24 10:25 AM

YADKIN TO FENTRESS
Transmission Line Project

Photo Location Map

1 Viewpoint Location — Transmission Line ▲ Existing Substation

Dominion Energy®

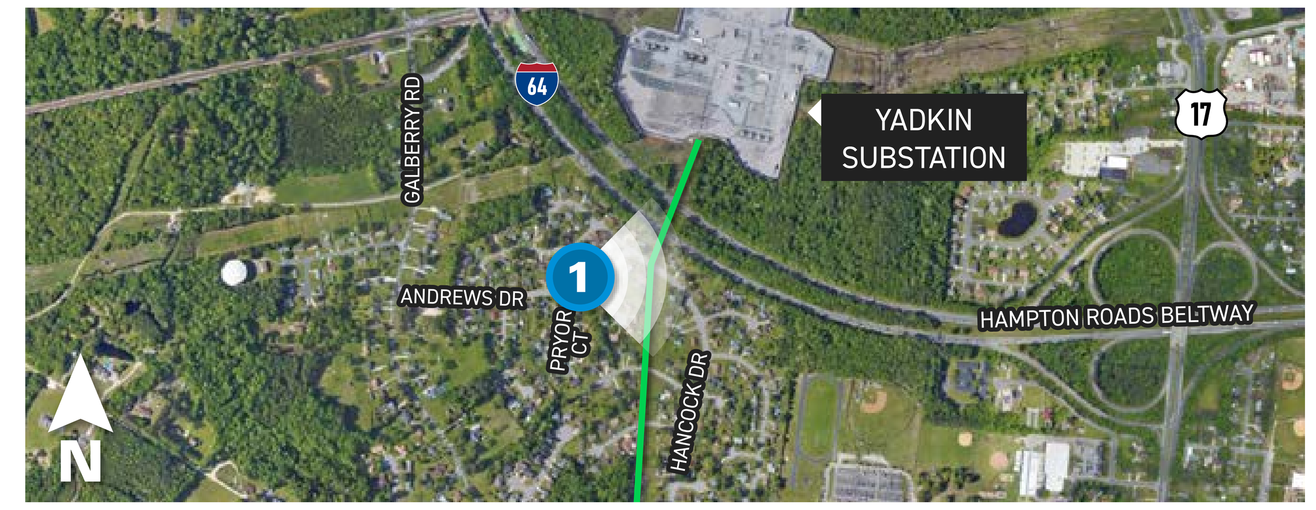
Attachment III.B.6

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 1

Date: 6/29/2023 **Time:** 4:55 pm **Viewing Direction:** East

1 Viewpoint Location — Transmission Line



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EXISTING CONDITIONS

PROPOSED CONDITIONS

Corten

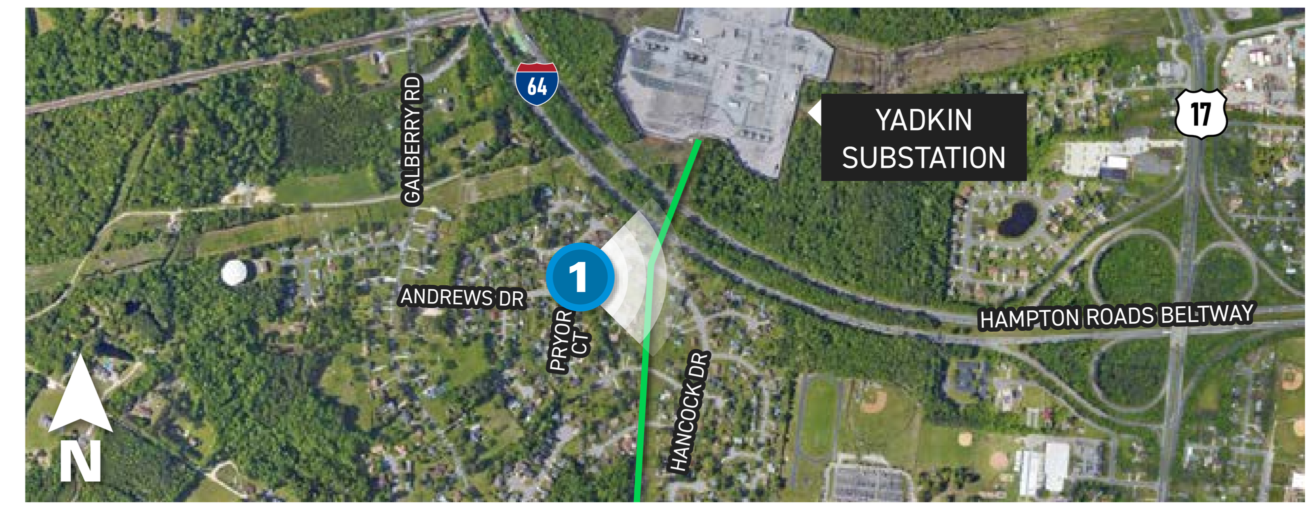
Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 1

Date: 6/29/2023 **Time:** 4:55 pm **Viewing Direction:** East

1 Viewpoint Location — Transmission Line



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EXISTING CONDITIONS

PROPOSED CONDITIONS

Pre-Dulled Galvanized Steel

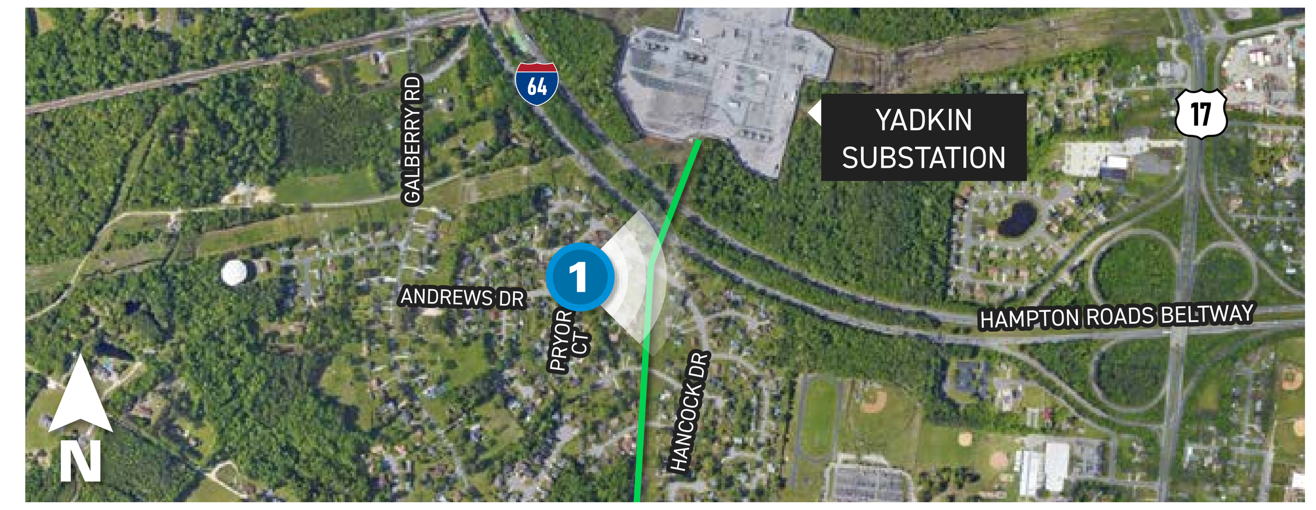
Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 1

Date: 6/29/2023 **Time:** 4:55 pm **Viewing Direction:** East

1 Viewpoint Location — Transmission Line



Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Galvanized Steel

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 2

Date: 6/29/2023 **Time:** 4:34 pm **Viewing Direction:** Southeast

2 Viewpoint Location — Transmission Line

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Corten

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 2

Date: 6/29/2023 **Time:** 4:34 pm **Viewing Direction:** Southeast

2 Viewpoint Location — Transmission Line

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Pre-Dulled Galvanized Steel

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 2

Date: 6/29/2023 **Time:** 4:34 pm **Viewing Direction:** Southeast

2 Viewpoint Location — Transmission Line

Dominion Energy®

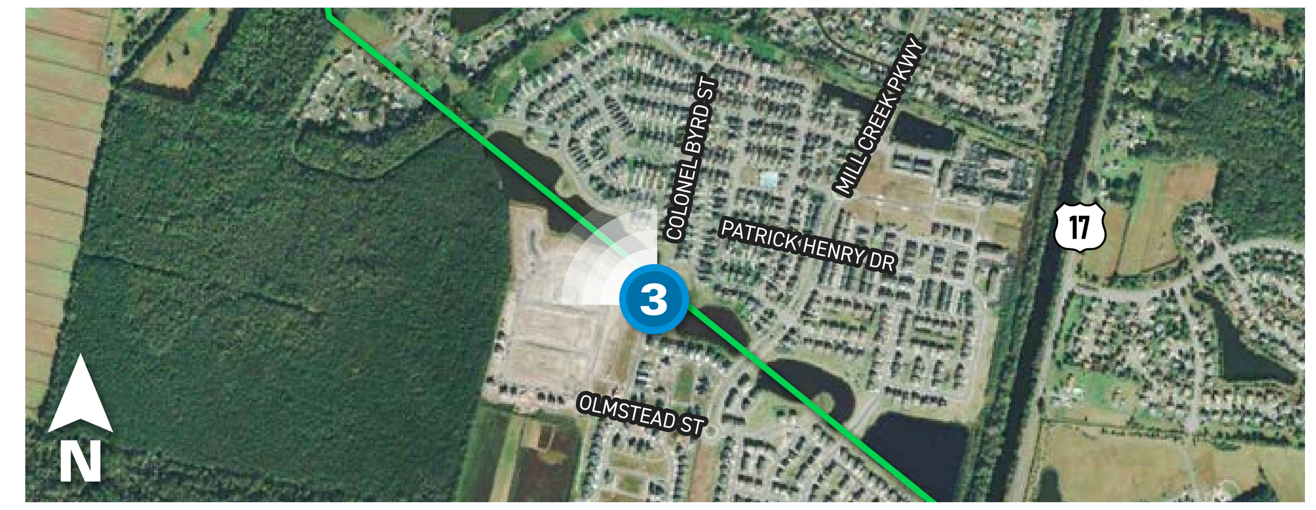
Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 3

Date: 6/29/2023 **Time:** 4:15 pm **Viewing Direction:** Northwest

3 Viewpoint Location — Transmission Line



YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 3

Date: 6/29/2023 **Time:** 4:15 pm **Viewing Direction:** Northwest

3 Viewpoint Location — Transmission Line

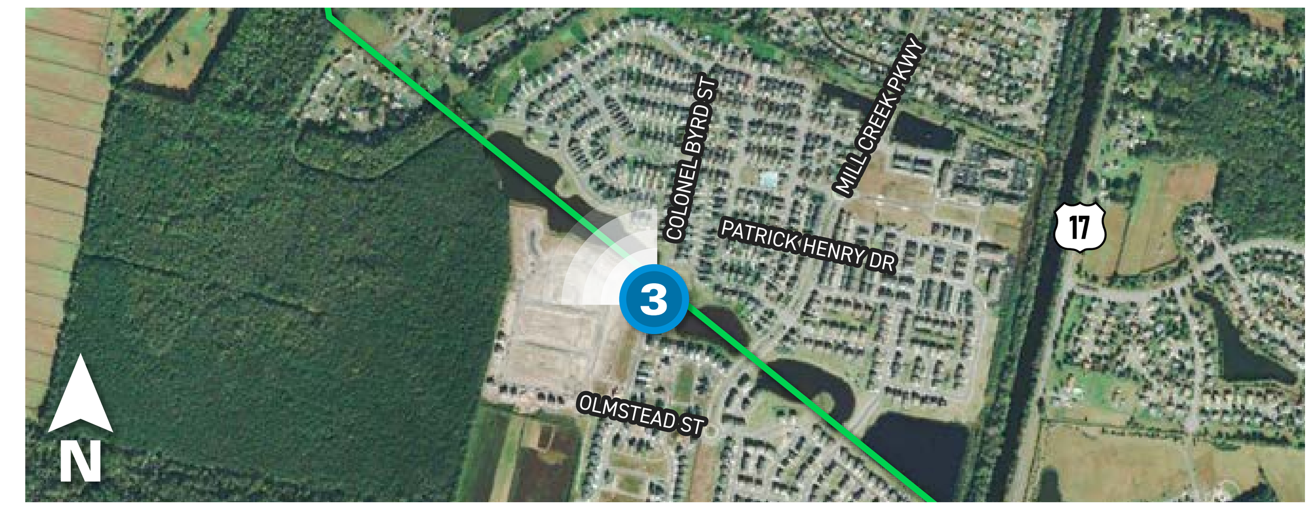


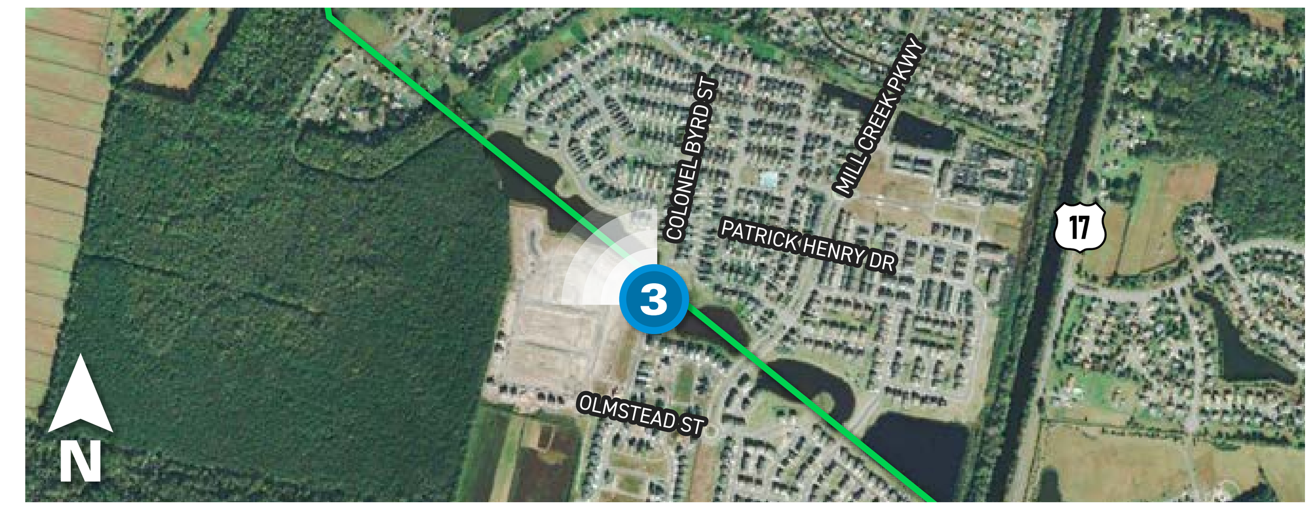
Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 3

Date: 6/29/2023 **Time:** 4:15 pm **Viewing Direction:** Northwest

3 Viewpoint Location — Transmission Line



Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Galvanized Steel

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 4

Date: 6/29/2023 **Time:** 10:13 am **Viewing Direction:** Southeast

4 Viewpoint Location — Transmission Line

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 4

Date: 6/29/2023 **Time:** 10:13 am **Viewing Direction:** Southeast

4 Viewpoint Location — Transmission Line

Dominion Energy®

322

EXISTING CONDITIONS

PROPOSED CONDITIONS

Pre-Dulled Galvanized Steel

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 4

Date: 6/29/2023 **Time:** 10:13 am **Viewing Direction:** Southeast

4 Viewpoint Location — Transmission Line

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Galvanized Steel

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 5

Date: 6/29/2023 **Time:** 12:17 pm **Viewing Direction:** North

5 Viewpoint Location — Transmission Line

Dominion Energy®

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 5

Date: 6/29/2023 **Time:** 12:17 pm **Viewing Direction:** North

5 Viewpoint Location — Transmission Line

EXISTING CONDITIONS

PROPOSED CONDITIONS

Pre-Dulled Galvanized Steel

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 5

Date: 6/29/2023 **Time:** 12:17 pm **Viewing Direction:** North

5 Viewpoint Location — Transmission Line

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 6

Date: 6/29/2023 **Time:** 2:10 pm **Viewing Direction:** North

6 Viewpoint Location — Transmission Line

EXISTING CONDITIONS

PROPOSED CONDITIONS

Corten

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 6

Date: 6/29/2023 **Time:** 2:10 pm **Viewing Direction:** North

6 Viewpoint Location — Transmission Line

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS **Pre-Dulled Galvanized Steel**

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 6

Date: 6/29/2023 **Time:** 2:10 pm **Viewing Direction:** North

6 Viewpoint Location — Transmission Line

Dominion Energy®

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 7

Date: 6/30/2023 **Time:** 10:14 am **Viewing Direction:** Northwest

7 Viewpoint Location — Transmission Line

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Corten

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 7

Date: 6/30/2023 **Time:** 10:14 am **Viewing Direction:** Northwest

7 Viewpoint Location — Transmission Line

EXISTING CONDITIONS

PROPOSED CONDITIONS

Pre-Dulled Galvanized Steel

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 7

Date: 6/30/2023 **Time:** 10:14 am **Viewing Direction:** Northwest

7 Viewpoint Location — Transmission Line

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Galvanized Steel

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 8

Date: 6/30/2023 **Time:** 9:05 am **Viewing Direction:** Southeast

8 Viewpoint Location — Transmission Line

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 8

Date: 6/30/2023 **Time:** 9:05 am **Viewing Direction:** Southeast

8 Viewpoint Location — Transmission Line

EXISTING CONDITIONS

PROPOSED CONDITIONS

Pre-Dulled Galvanized Steel

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

YADKIN TO FENTRESS
Transmission Line Project

Viewpoint 8

Date: 6/30/2023 **Time:** 9:05 am **Viewing Direction:** Southeast

8 Viewpoint Location — Transmission Line

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

Yadkin - Fentress 500 kV Electric Transmission Rebuild Project

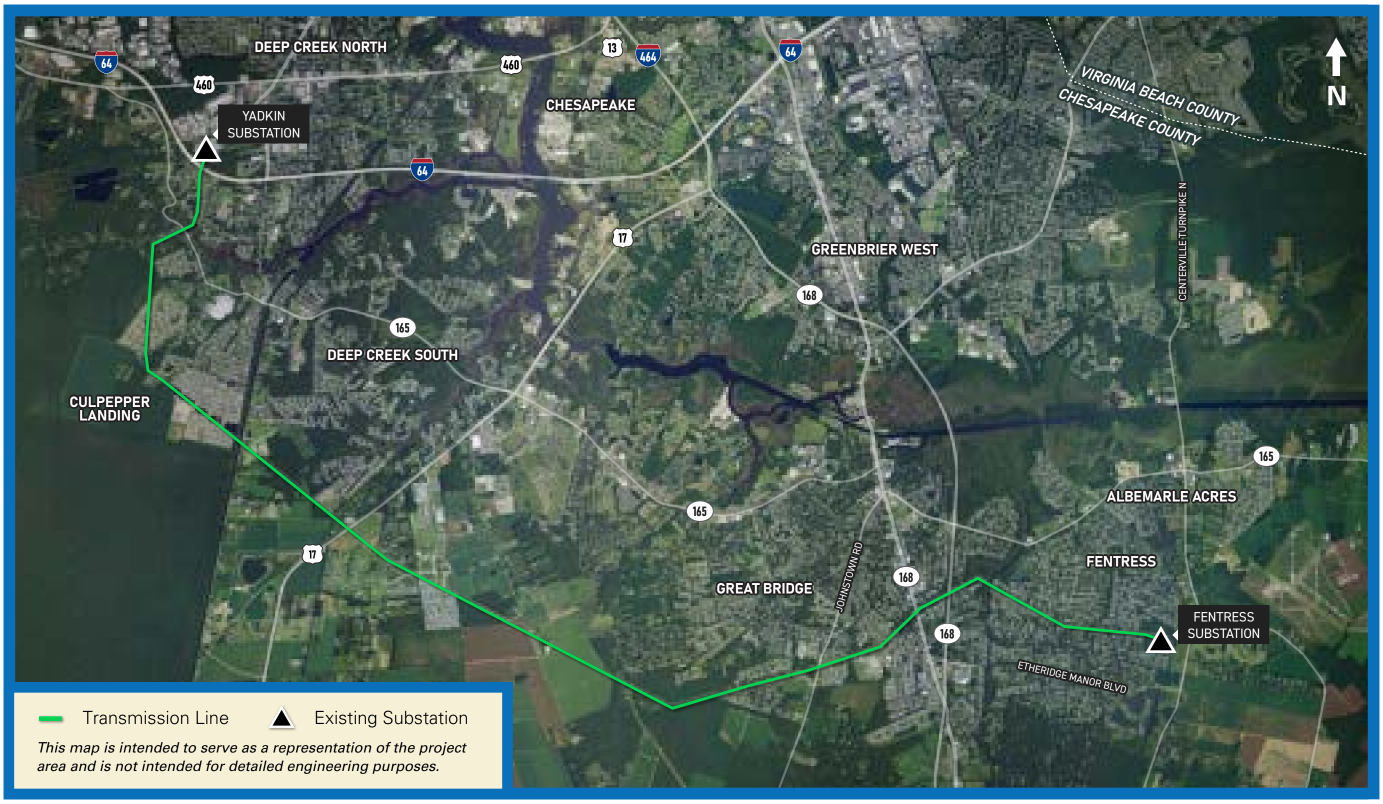
CITY OF CHESAPEAKE, VIRGINIA

AT DOMINION ENERGY, we are committed to providing safe, reliable, and affordable electric service to the communities we proudly serve. The Yadkin-Fentress 500 kilovolt (kV) Electric Transmission Line Project proposes to rebuild the existing 500 kV transmission line that runs between our Yadkin Substation and Fentress Substation.

SCAN HERE to learn more and to explore the **Structure Comparison Tool**!

This project is needed to replace aging transmission structures to maintain reliability and to add additional infrastructure to deliver the renewable energy generated by the Coastal Virginia Offshore Wind (CVOW) project.

We are proposing to wreck the existing, aging 500 kV line, currently on lattice structures and build two 500 kV transmission lines on separate monopole structures. Changing the current lattice-type structures to taller monopoles will allow two independent transmission lines to be built without requiring new or expanded right of way. To maintain safety and operational clearances, the proposed monopole structure will increase in height by an average of 65 feet. This height increase also allows us to place the new structures in the same or similar locations as the old structures.

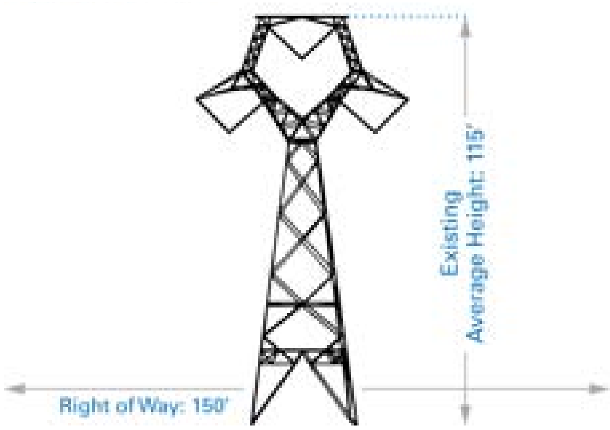


CONTINUED ON BACK

Yadkin - Fentress 500 kV Electric Transmission Rebuild Project CONTINUED

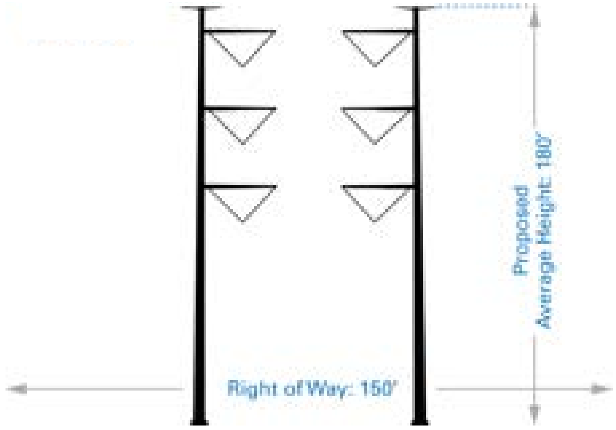
STRUCTURE TYPE

EXISTING
Lattice Structure



Weathering steel lattice structures
Average structure height: 115 feet
Right of Way: 150 feet

PROPOSED
Monopole Structure

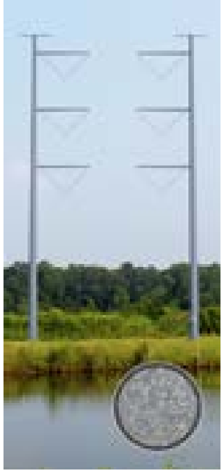


Single Circuit Monopoles
Proposed average structure height: 180 feet
Average Height Increase: 65 feet

NOTE: New structures will be located in close proximity to existing structures.
Proposed structure heights are based on preliminary engineering calculations and are subject to change with final engineering design.
View each individual structure change using the structure comparison tool on our website.

PROPOSED STRUCTURE COLOR OPTIONS

Galvanized



Dull Galvanized

Corten

All structures and finish color depicted are for representation only.

- **We surveyed the community to learn more about their preferences for structure finish.**
- **The finish can help mitigate the unavoidable visual change of the monopole structures.**
- **The results of this survey will be taken into consideration. However, Dominion Energy may present a preferred option as required by the Virginia State Corporation Commission (SCC).**

PROJECT SCHEDULE SUBJECT TO CHANGE

DATE	ACTIVITY
January 2024	Project announcement
March 2024	Community meeting
Summer 2024	File application with the Virginia State Corporation Commission (SCC)
Early 2025	Anticipated SCC ruling
Spring 2025	Construction to begin
End of 2026	Construction complete, restoration begins

FOR MORE INFORMATION

Visit our website at
DominionEnergy.com/YadkinFentress.
You may also contact us by sending
an email to powerline@dominionenergy.com
or calling 888-291-0190.

Environmental Justice: Ongoing Commitment to Our Communities

At Dominion Energy, we are committed to providing reliable, affordable, clean energy in accordance with our values of safety, ethics, excellence, embrace change and team work. This includes listening to and learning all we can from the communities we are privileged to serve.

Our values also recognize that environmental justice considerations must be part of our everyday decisions, community outreach and evaluations as we move forward with projects to modernize the generation and delivery of energy.

To that end, communities should have a meaningful voice in our planning and development process, regardless of race, color, national origin, or income. Our neighbors should have early and continuing opportunities to work with us. We pledge to undertake collaborative efforts to work to resolve issues. We will advance purposeful inclusion to ensure a diversity of views in our public engagement processes.

Dominion Energy will be guided in meeting environmental justice expectations of fair treatment and sincere involvement by being inclusive, understanding, dedicated to finding solutions, and effectively communicating with our customers and our neighbors. We pledge to be a positive catalyst in our communities.

November 2018

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 transmission line corridor, 170 unauthorized encroachments were identified within the Company's existing right-of-way between the Yadkin and Fentress Substations. This includes the approximately 5.7-mile section of 235-foot-wide right-of-way between Fentress Substation and Structure #588/223. The majority of these encroachments are sheds in the easement. However, the Company identified three dwellings within the existing right-of-way corridor. The encroachments will need to be addressed with the respective property owners as the Company continues to investigate the right-of-way.

In support of the Project, the Company will continue to review the entire corridor width prior to construction and address unauthorized encroachments and easement violations as appropriate.

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: Line #588 was completed in 1975, and 150 feet of the transmission line right-of-way has been maintained and in continuous use since that time. The Proposed Route utilizes the existing Line #588 corridor and does not parallel any other existing linear features or utilities.

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 City of Chesapeake Comprehensive Plan was adopted in 2014 and amended in 2016 and 2018 (the "Plan").[50] The Plan focuses on responsible growth management, community preservation and development, and the preservation and access of natural amenities for the future of the City to 2035. The City of Chesapeake is committed to working with energy providers to plan for high-capacity transmission lines to minimize impacts on residences and businesses.

The Company engaged with the City of Chesapeake for feedback on the proposed Project and to understand any concerns or comments on the Project. See Section V.D. The proposed Project is not expected to interfere with future land use planning in the City of Chesapeake.

[50] *See* https://resources.cityofchesapeake.net/comp-plan-2035/#page=1.

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) Based on the City of Chesapeake's 2035 Land Use Plan, the Company determined that the City of Chesapeake has not specifically designated important farmlands within its jurisdiction under Va. Code § 3.2.205 B.

(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: A Stage 1 Pre-Application Analysis was prepared by Dutton in accordance with VDHR's *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia*. That report is included as Attachment 2.I.1 to the DEQ Supplement and addresses the potential impacts from the Proposed Route to historic resources identified by VDHR's tiered survey guidance.[51]

1. The NRHP-listed Dismal Swamp Canal is crossed by the Project and the NRHP-listed Centerville-Fentress Historic District is located within a half mile of the Project.
2. The Herring Canal and Lindsey Canal, both of which have been determined potentially eligible for listing in the NRHP, are crossed by the Project.
3. None.
4. There are four previously recorded archaeological sites located within or immediately adjacent to the Project: 44CS0033, 44CS0267 44CS0295, and 44CS0294. Site 44CS0295, Dismal Swamp Railroad, is eligible for listing on the NRHP.
5. None.
6. The Great Dismal Swamp is designated as a National Natural Landmark and is adjacent to the Project.
7. None.
8. None.
9. None.
10. None.
11. The existing right-of-way proposed for use by the Proposed Route crosses 12 parcels owned by the City of Chesapeake.[52]
12. The Project does not cross any battlefields, federal or state forests, or game or wildlife preserves. The Project is located adjacent to the Great Dismal Swamp National Wildlife Refuge, managed by the USFWS. Municipal parks and other private recreational facilities crossed by the Project are illustrated on <u>Attachment II.A.2</u> and addressed in Section 2.L of the DEQ Supplement.[53]

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[51] The Constraint Design Segment does not cross any of the sites or resources noted in Items 1-10.

[52] The City-owned parcel at Etheridge Point green space is also crossed by the Constraint Design Segment.

[53] The Constraint Design Segment does not cross any battlefields, federal or state forests, or game or wildlife preserves. Municipal parks and other private recreational facilities crossed by the Project or Constraint Design Segment are illustrated on <u>Attachment II.A.2</u> and addressed in Section 2.L of the DEQ Supplement.

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 has reviewed the FAA's website[54] to identify airports/heliports within 10.0 nautical miles of the proposed Project. Based on this review, the FAA-restricted airports/heliports listed below are located within 10.0 nautical miles of the Project.[55]

Airport Name	Approximate Distance and Direction from Proposed Project (nautical miles)	Use
Hampton Roads Executive Airport (PVG)	• 4.75 miles northwest	Public
Chesapeake Regional Airport (CPK)	• 1.95 miles southwest	Public
Fentress Naval Auxiliary Landing Field (NEF)	• 2.66 miles east	Private

In correspondence dated May 14, 2024, the Virginia Department of Aviation ("DOAv") stated that it appears as though the Project is within 20,000 linear feet of Chesapeake Regional Airport and the Fentress Naval Airfield, and a Part 1 Notification/Form 7460 will need to be submitted to the FAA to review for potential hazards to air navigation. See Section 2.O of the DEQ Supplement.

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[54] *See* https://oeaaa.faa.gov/oeaaa/external/portal.jsp and https://adip.faa.gov/agis/public/#/public.

[55] The Constraint Design Segment does not change this search in a meaningful way given its proximity to the 150-foot-wide maintained right-of-way.

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: No scenic byways are in close proximity to or would be crossed by the proposed Project.[56] Further, use of the existing transmission right-of-way minimizes or eliminates permanent incremental impacts at road crossings.

[56] No scenic byways are in close proximity to or would be crossed by the Constraint Design Segment.

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 of the Appendix, the Company solicited feedback from City of Chesapeake regarding the proposed Project. Below is a list of coordination that has occurred with municipal, state, and federal agencies:

- Coordination with the Corps, DEQ, the City of Chesapeake, and VDOT will take place as appropriate to obtain necessary approvals for the Project.
- A letter was submitted to the agencies listed in Section V.C on May 14, 2024, describing the Project and requesting comment. See Attachment 2 to the DEQ Supplement.
- A Stage I Pre-Application Analysis has been prepared and was submitted to VDHR on June 12, 2024. See Attachment 2.I.1 to the DEQ Supplement.
- A Desktop Wetland Review was submitted to DEQ's Office of Wetlands and Stream Protection on May 15, 2024, to initiate the wetlands impact consultation. See Attachment 2.D.1 of the DEQ Supplement.
- On April 2, 2024, the Company solicited comments via letter from several state-recognized Native American tribes, including:

Chief Walt "Red Hawk" Brown	Cheroenhaka (Nottoway) Indian Tribe
Mary Frances Wilkerson	Cheroenhaka (Nottoway) Indian Tribe
Chief Stephen Adkins	Chickahominy Indian Tribe
Assistant Chief Reginald Stewart	Chickahominy Indian Tribe
Chief Gerald A Stewart	Chickahominy Indian Tribe Eastern Division
Jessica Phillips	Chickahominy Indian Tribe Eastern Division
Dana Adkins	Chickahominy Tribe
Chief Mark Custalow	Mattaponi Tribe
Chief Diane Shields	Monacan Indian Nation
Chief Keith Anderson	Nansemond Indian Nation
Chief Lynette Allston	Nottoway Indian Tribe of Virginia
SUB: Ms. Beth Roach	Nottoway Indian Tribe of Virginia
Chief Robert Gray	Pamunkey Indian Tribe
Kendall Stevens	Pamunkey Indian Tribal Resource Office
Chief Charles (Bootsie) Bullock	Patawomeck Indian Tribe of Virginia

Chief G. Anne Richardson	Rappahannock Tribe
SUB: Assistant Chief	Rappahannock Tribe
Chief W. Frank Adams	Upper Mattaponi Indian Tribe
Leigh Mitchell	Upper Mattaponi Indian Tribe

And federally recognized Native American Tribes, including:

President Deborah Dotson	Delaware Nation, Oklahoma
Katelyn Lucas	Delaware Nation, Oklahoma
Chief Keith Anderson	Nansemond Indian Nation
Chief Robert Gray	Pamunkey Indian Tribe

A template of the letter is included as Attachment III.J.1.

Dominion Energy Virginia
Dominion Energy North Carolina
Electric Transmission
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

April 2, 2024

[recipient address]

Yadkin to Fentress 500 kV Electric Transmission Line Rebuild Project

Dear [recipient salutation]:

Dominion Energy is dedicated to maintaining safe, reliable, and affordable electric service in the communities we serve. You are receiving this project announcement letter as part of our efforts to proactively communicate early with Tribal Nations who may have an interest in this area. With your unique perspective, you can help us better plan projects in their earliest stages. Please note, this letter is not a notification of formal government-to-government consultation from any state or federal agency. Dominion Energy has been and continues to be committed to creating and maintaining strong, open, supportive, and mutually beneficial relationships with Tribal Nations.

We are reaching out to you as we have an upcoming project in the City of Chesapeake. We are planning to rebuild 14 miles of existing 500 kilovolt (kV) electric transmission line between the Yadkin and Fentress Substations. This project is needed to replace aging equipment and to add additional infrastructure to deliver the renewable energy generated by the Coastal Virginia Offshore Wind (CVOW) project. We are proposing to wreck the existing, aging 500 kV line, currently on lattice structures, and build two 500kV transmission lines on separate monopole structures. To maintain safety and operational clearances, the proposed monopole structures will be an average of 65 feet taller than the existing lattice structures. This plan allows the project to be built without requiring new or expanded right-of-way and for the placement of the new structures to remain in similar locations as the old structures.

This project requires review by the Virginia State Corporation Commission (SCC). We are still in the conceptual phase of the project and more details will be provided as activities progress. Enclosed is a project map for your reference. Providing your input now allows us to consider any concerns you may have as we work to meet the project's needs. Please feel free to notify other relevant organizations that may have an interest in the project area. For reference, other recipients of this letter include county and state historic, cultural, and scenic organizations.

If you have questions or would like to set up a meeting to discuss the project, contact me by calling 804-944-5313 or sending an email to Janae.p.johnson@dominionenergy.com. You may also contact Tribal Relations Manager Ken Custalow by sending an email to Ken.Custalow@dominionenergy.com or calling 804-837-2067.

Sincerely,

Janae' Johnson

Janae Johnson
Communications Consultant
The Electric Transmission Project Team

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 April 2, 2024, the Company solicited comments via letter from the nongovernmental organizations and private citizen groups identified below. A template of the letter is provided as Attachment III.K.1.

Name	Organization
Ms. Elizabeth S. Kostelny	Preservation Virginia
Mr. Thomas Gilmore	American Battlefield Trust
Mr. Jim Campi	American Battlefield Trust
Mr. Max Hokit	American Battlefield Trust
Mr. Steven Williams	Colonial National Historical Park
Ms. Eleanor Breen, PhD, RPA	Council of Virginia Archaeologists
Ms. Leighton Powell	Scenic Virginia
Ms. Elaine Chang	National Trust for Historic Preservation
Ms. Julie Bolthouse	Piedmont Environmental Council
Mr. John McCarthy	Piedmont Environmental Council
Dr. Cassandra Newby-Alexander, Dean	Norfolk State University
Mr. Roger Kirchen, Archaeologist	Virginia Department of Historic Resources
Ms. Adrienne Birge-Wilson	Virginia Department of Historic Resources
Mr. Dave Dutton	Dutton + Associates, LLC

Dominion Energy Virginia
Dominion Energy North Carolina
Electric Transmission
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

April 2, 2024

[recipient address]

Yadkin to Fentress 500 kV Electric Transmission Line Rebuild Project

Dear [recipient],

Dominion Energy is dedicated to maintaining safe, reliable, and affordable electric service in the communities we serve. As a valued stakeholder with a unique perspective, you can help us meet these objectives as we plan necessary electric infrastructure projects. We are reaching out to you as we have an upcoming project in Chesapeake, VA, and you may have an interest in this area.

We are planning to rebuild 14 miles of existing 500 kilovolt (kV) electric transmission line between the Yadkin and Fentress Substations. This project is needed to replace aging equipment and to add additional infrastructure to deliver the renewable energy generated by the Coastal Virginia Offshore Wind (CVOW) project. We are proposing to wreck the existing, aging 500 kV line, currently on lattice structures, and build two 500kV transmission lines on separate monopole structures. To maintain safety and operational clearances, the proposed monopole structures will be an average of 65 feet taller than the existing lattice structures. This plan allows the project to be built without requiring new or expanded right-of-way and for the placement of the new structures to remain in similar locations as the old structures.

Enclosed is a project overview map for your reference. This project requires review by the Virginia State Corporation Commission. Providing your input now allows us to consider any concerns you may have as we work to meet the project's needs. Please feel free to notify other relevant organizations that may have an interest in the project area. For reference, other recipients of this letter include county and state historic, cultural, and scenic organizations, as well as Tribal Nations.

We will host an in-person community meeting prior to submitting the SCC application on **April 9, 2024, at the Chesapeake Conference Center, 700 Conference Drive, from 5-7 p.m.** Please visit the project webpage at DominionEnergy.com/Yadkin-Fentress for meeting updates and more project information.

If you have questions or would like to set up a meeting to discuss the project, contact me by calling 804-944-5313 or sending an email to Janae.p.johnson@dominionenergy.com.

Sincerely,

Janae Johnson
Communications Consultant
The Electric Transmission Project Team

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

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

Response: The permits or special permissions that are likely to be required for the Proposed Route are listed below.

Potential Permits

Activity	Potential Permit	Agency/Organization
Impacts to wetlands and other waters of the U.S. under Section 404 and aerial crossings of Section 10 waters	Nationwide Permit 57	U.S. Army Corps of Engineers
Construction access beyond Army Corps easement boundaries	Temporary Construction License	U.S. Army Corps of Engineers
Aerial crossings of state-owned subaqueous bottom	VGP – Utility Crossing General Permit	Virginia Marine Resource Commission
Impacts to wetlands and other waters under Section 404 and 401	Virginia Water Protection Permit	Virginia Department of Environmental Quality
Work within tidal wetlands	Tidal Wetlands Permit	Virginia Marine Resources Commission
Discharge of stormwater from construction	Construction General Permit	Virginia Department of Environmental Quality
Work within VDOT rights-of-way	Land Use Permit	Virginia Department of Transportation
Work within City of Chesapeake rights-of-way	Franchised Utility Permit	City of Chesapeake
Airspace obstruction evaluation	FAA 7460-1	Federal Aviation Administration

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 associated with high voltage power lines is best estimated by field levels calculated at annual average loading. For any day of the year, the electromagnetic field ("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 proposed transmission lines. EMF levels are provided for future (2027) annual average and maximum (peak) loading conditions.

Existing Line #588– Historical Average Loading

EMF levels were calculated for the existing lines at the ***historical average*** load condition of 356.0 amps for Line #588. Line #588 has a maximum operating voltage of 500 kV. See Attachment II.A.5.a.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a historical average load operating temperature.

EMF levels at the edge of the right-of-way for the existing line at the historical average loading:

Existing Lines – Historic *Average* Loading				
	Left Edge Looking towards Fentress Substation		**Right Edge Looking towards Fentress Substation**	
Attachment	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.a	6.787	12.464	6.787	12.464

Existing Line #588 – Historical Peak Loading

EMF levels were calculated for the existing lines at the ***historical peak*** load condition of 838.0 amps for Line #588. Line #588 has a maximum operating voltage of 500 kV. See Attachment II.A.5.a.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a historical peak load operating temperature.

EMF levels at the edge of the right-of-way for the existing line at the historical peak loading:

Existing Lines – Historic *Peak* Loading				
	Left Edge Looking towards Fentress Substation		**Right Edge Looking towards Fentress Substation**	
Attachment	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.a	6.804	29.419	6.804	29.419

Proposed Project – Projected average loading in 2027

EMF levels were calculated for the rebuilt Line #588 and the proposed Line #5005 at the ***projected average*** load condition of 356 amps for Line #588 and 452 amps for Line #5005. Lines #588 and #5005 have a maximum operating voltage of 500 kV. See Attachment II.A.5.b.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a projected average load operating temperature.

EMF levels at the edge of the rights-of-way for the rebuilt Line #588 and the proposed Line #5005 at the projected average loading:

Proposed Lines – Projected *Average* Loading				
	Left Edge Looking towards Fentress Substation		**Right Edge Looking towards Fentress Substation**	
Attachment	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.b	2.140	13.362	2.140	13.358

Proposed Project – Projected peak loading in 2027

EMF levels were calculated for the rebuilt Line #588 and the proposed Line #5005 at the ***projected peak*** load condition of 838 amps for Line #588 and 1643 amps for Line #5005. Lines #588 and #5005 have a maximum operating voltage of 500 kV. See Attachment II.A.5.b.

These field levels were calculated at mid-span where the conductors are closest to the ground and the conductors are at a projected peak load operating temperature.

EMF levels at the edge of the rights-of-way for the rebuilt Line #588 and the proposed Line #5005 at the projected peak loading:

Proposed Lines - Projected *Peak* Loading				
	Left Edge Looking towards Fentress Substation		**Right Edge Looking towards Fentress Substation**	
Attachment	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.b	2.125	48.945	2.126	48.917

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 few decades are the foundation of the Company's opinion that no adverse health effects are anticipated to result from the operation of the proposed Project. Each of these panels has evaluated the scientific research related to health and extremely low frequency ("ELF") EMF, also referred to as power-frequency (50/60 Hertz ("Hz")) 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 on biological responses of high, short-term EMF exposure not typically found in people's day-to-day lives, while others evaluate the effects of common, low EMF exposures found throughout communities. Studies also have evaluated the possibility of effects (*e.g.*, cancer, neurodegenerative diseases, and reproductive effects) of long-term exposure. Altogether, this research includes well over 100 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 scientific agencies to identify, review, and summarize the results of this large and diverse research.

The reviews of ELF EMF-related biological and health research have been conducted by numerous scientific and health agencies, including, for example, 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 IEEE's International Committee on Electromagnetic Safety ("ICES"), the Scientific Committee on Health, Environmental and Emerging Risks ("SCHEER") (formerly 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"]) (WHO, 2007; SCENIHR, 2009, 2015; EFHRAN, 2010, 2012; ICNIRP, 2010; SSM, 2015, 2016, 2018, 2019, 2020, 2021, 2022; ICES, 2019; SCHEER, 2023). 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 confirm 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 most recent reviews on this topic include the 2015 and 2023 reports by SCENIHR and SCHEER, respectively, and annual reviews published by SSM (i.e., for the years 2015 through 2022). 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.

WHO has recommended that countries adopt recognized international standards published by ICNIRP and ICES. Typical levels of EMF from Dominion Energy Virginia's high voltage 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 Project, the Company has determined that no adverse health effects are anticipated to result from the operation of the proposed 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."[57]

The continuing scientific research on ELF 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, including most notably:

- WHO, which published one of the most comprehensive and detailed reviews of the relevant scientific peer-reviewed literature in 2007;
- SCHEER (formerly SCENIHR), a committee of the European Commission, which published its assessments in 2009, 2015 and 2023;
- The SSM, which has published annual reviews of the relevant peer-reviewed scientific literature since 2003, with its most recent review published in 2022; and,
- EFHRAN, which 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 below scientifically established guideline values are consistent with the conclusions of the VDH report. With respect to the statistical association observed in some of the childhood leukemia epidemiologic studies, the most recent

[57] *See* http://www.vdh.virginia.gov/content/uploads/sites/12/2016/02/highfinal.pdf.

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). In their 2023 Preliminary Opinion providing an update on the potential health effects of exposure to electromagnetic fields in the 1 Hz to 100 kilohertz ("kHz") range, SCHEER concluded that "overall, there is weak evidence concerning the association of ELF-MF [magnetic field] exposure with childhood leukaemia" (SCHEER 2023, p. 2).

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 EMF exposure and neurodegenerative diseases. Of these, the following recent publications, published following the inclusion date (June 2014) for the SCENIHR (2015) report through March 2024, provide additional evidence and contribute to clarification of previous findings. Overall, new research studies have not provided evidence to alter the previous conclusions of scientific and health organizations, including WHO and SCENIHR.

Epidemiologic studies of EMF and childhood leukemia published during the above referenced period 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 tumors, 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 and after) and reported no overall associations between exposure categories and childhood leukemia for the later periods (1980 and after), and consistent pattern for the 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 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) examined 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). Amoon et al. (2018a) concluded that changing residences was not associated with either calculated magnetic-field levels or proximity to the power lines, while 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 in Crespi et al. (2016) and Kheifets et al. (2017).

- 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 Quebec. 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 exposure to high calculated magnetic fields (≥ 0.4 microtesla ["μT"]) (i.e., ≥ 4 milligauss ["mG"]). No associations were observed with low-voltage power lines (< 200 kV). In a subsequent study, Amoon et al. (2020) examined the potential impact of dwelling type on the associations reported in Crespi et al. (2019). Amoon et al. (2020) concluded that while the type of dwelling at which a child resides (*e.g.*, single-family home, apartment, duplex, mobile home) was associated with socioeconomic status and race or ethnicity, it was not associated with childhood leukemia and did not appear to be a potential confounder in the relationship between childhood leukemia and magnetic-field exposure in this study population.

- Swanson et al. (2019) conducted a meta-analysis of 41 epidemiologic studies of childhood leukemia and magnetic-field exposure published between 1979 and 2017 to examine trends in childhood leukemia development over time. The authors reported that while the estimated risk of childhood leukemia initially increased during the earlier period, a statistically non-significant decline in estimated risk has been observed from the mid-1990s until the present (i.e., 2019).

- 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.

- Núñez-Enríquez et al. (2020) assessed the relationship between residential magnetic-field exposure and B-lineage acute lymphoblastic leukemia ("B-ALL") in children under 16 years of age in Mexico. The study included 290 cases and 407 controls matched on age, gender, and health institution; magnetic-field exposure was assessed through the collection of 24-hour measurements in the participants' bedrooms. While the authors reported some statistically significant associations between elevated magnetic-field levels and development of B-ALL, the results were dependent on the chosen cut-points.

- Seomun et al. (2021) performed a meta-analysis based on 33 previously published epidemiologic studies investigating the potential relationship between magnetic-field exposure and childhood cancers, including leukemia and brain cancer. For childhood leukemia, the authors reported statistically significant associations with some, but not all, of the chosen cut-points for magnetic-field exposure. The associations between magnetic-field exposure and childhood brain cancer were statistically non-significant. The study provided limited new insight as most of the studies included in the current meta-analysis, were included in previously conducted meta- and pooled analyses.

- Amoon et al. (2022) conducted a pooled analysis of four studies of residential exposure to magnetic fields and childhood leukemia published following a 2010 pooled analysis by Kheifets et al. (2010). The study by Amoon et al. (2022) compared the exposures of 24,994 children with leukemia to the exposures of 30,769 controls without leukemia in California, Denmark, Italy, and the United Kingdom. Exposure was assessed by measured or calculated magnetic fields at their residences. The exposure of these two groups to magnetic fields were found not to significantly differ. A decrease in the combined effect estimates in epidemiologic studies was observed over time, and the authors concluded that their findings, based on the most recent studies, were "not in line" with previous pooled analyses that reported an increased risk of childhood leukemia.

- Brabant et al. (2022) performed a literature review and meta-analysis of studies of childhood leukemia and magnetic-field exposure. The overall analysis included 21 epidemiologic studies published from 1979 to 2020. The authors reported a statistically significant association, which they noted was "mainly explained by the studies conducted before 2000." The authors reported a statistically significant association between childhood leukemia and measured or calculated magnetic-field exposures > 0.4 μT (4 mG); no statistically significant overall associations were reported between childhood leukemia and lower magnetic-field exposure (< 0.4 μT [4 mG]), residential distance from power lines, or wire coding configuration. An association between childhood leukemia and electric blanket use was also reported. The overall results were likely influenced by the inclusion of a large number of earlier studies; 10 of the 21 studies in the main analysis were published prior to 2000. Studies published prior to 2000 included fewer studies deemed to be of higher study quality, as determined by the authors, compared to studies published after 2000.

- Nguyen et al. (2022) investigated whether potential pesticide exposure from living in close proximity to commercial plant nurseries confounds the association between magnetic-field exposure and childhood leukemia development reported within the California study population previously analyzed in Crespi et al. (2016) and Kheifets et al. (2017). The authors in Nguyen et al. (2022) noted that while the association between childhood leukemia and magnetic-field exposure was "slightly attenuated" after adjusting for nursery proximity or when restricting to subjects living > 300 meters from nurseries, their results "do not support plant nurseries as an explanation for observed childhood leukemia risks." The authors further noted that close residential proximity to nurseries may be an independent risk factor for childhood leukemia.

- Guo et al. (2023) reported conducting a systematic review and meta-analysis of studies published from 2015 to 2022 that evaluated associations between magnetic-field exposure and childhood leukemia development. Three meta-analyses were conducted to evaluate the relationship using different exposure metrics. In the first meta-analysis, magnetic-field levels ranging from 0.4 μT (4 mG) to 0.2 μT (2 mG) were associated with a statistically significant reduced risk of childhood leukemia development (i.e., a protective association). In the second meta-analysis, exposure was based on wiring configuration codes, and the reported pooled relative risk estimates demonstrated a statistically significant increased association with childhood leukemia. In the third meta-analysis, exposure was categorized into groupings of magnetic-field strength; no statistically significant associations with childhood leukemia were reported for any of the groupings, including for magnetic-field levels ≥ 0.4 μT (4 mG). There are significant limitations of this study that prevent meaningful interpretations of the results. Most of the analyses of magnetic fields did not state whether measurements and calculations were included, and the authors provided no description of the methods used for their analyses, no data tables to support their findings, and no references to the number and type of studies included. In fact, much of the article's introduction discusses ionized radiation. The authors also do not report relevant metrics for evaluating meta-analyses such as study heterogeneity.

- Malagoli et al. (2023) examined associations between exposure to magnetic fields from high voltage power lines (≥ 132 kV) and childhood leukemia development in a case-control study of children in Italy. The study included 182 cases diagnosed with childhood leukemia between 1998 and 2019 and 726 controls matched based on age, sex, and Italian province. The authors assessed magnetic-field exposure by calculating the distance from each participant's residence to the nearest high voltage power line and classifying that distance into one of three exposed categories (participants living < 100 meters, 100 to < 200 meters, or 200 to < 400 meters from the power lines) or as unexposed (participants living ≥ 400 meters from the power lines). The authors reported a non-statistically significant association between childhood leukemia and a residence distance of <100 meters; no statistically significant associations were reported for any distance, including when stratifying by age (< 5 or ≥ 5 years) or when restricting to acute lymphoblastic leukemia (ALL).

- Nguyen et al. (2023) extended their previous investigation (Nguyen et al., 2022) into whether pesticide exposure was an independent risk factor or confounder for childhood leukemia in the presence of magnetic-field exposure from high voltage power lines by examining the potential impact of specific pesticide exposure factors (*e.g.*, intended use, chemical class, active ingredient). The authors found no statistically significant associations between distance to high voltage power lines or magnetic-field exposure and childhood leukemia, including when adjusting for pesticide exposures. Several of the examined pesticides were determined by the authors to be potential independent risk factors for childhood leukemia.

- Zagar et al. (2023) examined the relationship between magnetic fields and childhood cancers, including childhood leukemia, in Slovenia. Cancer cases, including 194 cases of leukemia, were identified from the Slovenian Cancer Registry; cases were then classified into one of five calculated magnetic-field exposure levels (ranging from < 0.1 µT [< 1 mG] to ≥ 0.4 µT [≥ 4 mG]) based on residential distance to high voltage (*e.g.*, 110-kV, 220-kV, and 400-kV) power lines. The authors reported that less than 1% of Slovenian children and adolescents lived in an area near high voltage power lines. No differences in the development of childhood cancers, including leukemia, brain tumors, or all cancers combined, were reported across the five exposure categories.

- Crespi et al. (2024) assessed the association between residential proximity to electricity transformers in multi-story residential buildings and childhood leukemia development in the International Transformer Exposure study. Participants were required to live in an apartment building that contained a built-in transformer; exposure was estimated using the participants' apartment location relative to the transformer and categorized as high exposure (located above or adjacent to the transformer), intermediate exposure (located on the same floor as apartments in the high exposure category), or unexposed (all other apartments). In the pooled analyses of five countries' data, a total of 74 cases and 20,443 controls were included; 18 of the 74 cases were identified in the intermediate or high exposure categories. No significant associations were reported between proximity to residential transformers and childhood leukemia. Sensitivity analyses performed using the data from one of the five countries (Finland) where a cohort study design was used, also reported no significant associations. The authors concluded that the evidence for an elevated risk of childhood leukemia from proximity to residential transformers was "weak."

- Duarte-Rodríguez et al. (2024) conducted a population-based case-control study to examine the geographical distribution of childhood ALL cases in Mexico City, Mexico. Cases and controls were geolocated using the most recent residential address, and a spatial scan statistic was used to detect spatial clusters of cancer cases. The authors identified eight spatial clusters of cases, representing nearly 40% of all cases included in the study (n=1,054 cases). The authors noted that six of the eight spatial clusters were located in proximity to high voltage power lines and high voltage electric installations (distances not specified), and that the remaining two clusters were located near former petrochemical industrial facility sites. Since the study did not directly assess magnetic-field exposure and made no conclusions about magnetic-field exposure and cancer development, this study adds little value to the existing literature regarding a potential association between exposure to ELF EMF and childhood leukemia development.

- Malavolti et al. (2024) examined the association between magnetic-field exposure from transformer stations and childhood leukemia in the same Italian study population as Malagoli et al. (2023). Magnetic-field exposure was estimated based on residential distance to the nearest transformer station, and participants were then categorized as exposed or unexposed using two different distance cut-points: residing within a radius of 15 or 25 meters from the transformer station (exposed); residing ≥ 15 meters or ≥ 25 meters from the transformer station (unexposed). No significant associations were reported for all leukemias, or ALL specifically, when either distance cut-point was used, and in fact no association at all (an odds ratio = 1.0) was observed when the more stringent cut-point of 15 meters was used. In sub-analyses that stratified by participant age (< 5 years vs. ≥ 5 years), no significant associations were reported for either age category.

Epidemiologic studies of EMF and neurodegenerative diseases published during the above referenced period 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 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[58] 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.

- Gunnarsson and Bodin (2018) conducted a meta-analysis of occupational risk factors for ALS. The authors reported a statistically significant association between occupational exposures to EMF, estimated using a job-exposure matrix, and ALS among the 11 studies included. Statistically significant associations were also reported between ALS and jobs that involve working with electricity, heavy physical work, exposure to metals (including lead) and chemicals (including pesticides), and working as a nurse or physician. The authors reported some evidence for publication bias. In a subsequent publication, Gunnarsson and Bodin (2019) updated their previous meta-analysis to also include Parkinson's disease and Alzheimer's disease. A slight, statistically significant association was reported between occupational exposure to EMF and Alzheimer's disease; no association was observed for Parkinson's disease.

- 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

[58] 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).

bias, and a lack of a clear exposure-response relationship between exposure and ALS.

- 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.

- 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.

- 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.

- Filippini et al. (2020) investigated the associations between ALS and several environmental and occupational exposures, including electromagnetic fields, within a case-control study in Italy. The study included 95 cases and 135 controls matched on age, gender, and residential province; exposure to electromagnetic fields was assessed using the participants' responses to questions related to occupational use of electric and electronic equipment, occupational EMF exposure, and residential distance to overhead power lines. The authors reported a statistically significant association between ALS and residential proximity to overhead power lines and a statistically non-significant association between ALS and occupational exposure to EMF; occupational use of electric and electronic equipment was associated with a statistically non-significant decrease in ALS development.

- Huang et al. (2020) conducted a meta-analysis of 43 epidemiologic studies examining potential occupational risk factors for dementia or mild cognitive impairment. The authors included five cohort studies and seven case-control studies related to magnetic-field exposure. For both study types, the authors reported positive associations between dementia and work-related magnetic-field exposures. The paper, however, provided no information on the occupations held by the study participants, their magnetic-field exposure levels, or how magnetic-field levels were assessed; therefore, the results are difficult to interpret. The authors also reported a high level of heterogeneity among studies. Thus, this analysis adds little, if any, to the overall weight of evidence on a potential association between dementia and magnetic fields.

- Jalilian et al. (2020) conducted a meta-analysis of ALS and occupational exposure to both magnetic fields and electric shocks within 27 studies from Europe, the United States, and New Zealand. A weak, statistically significant association was reported between magnetic-field exposure and ALS; however, the authors noted evidence of study heterogeneity and publication bias. No association was observed between ALS and electric shocks.

- Chen et al. (2021) conducted a case-control study to examine the association between occupational exposure to electric shocks, magnetic fields, and motor neuron disease ("MND") in New Zealand. The study included 319 cases with a MND diagnosis (including ALS) and 604 controls, matched on age and gender; exposure was assessed using the participants' occupational history questionnaire responses and previously developed job-exposure matrices for electric shocks and magnetic fields. The authors reported no associations between MND and exposure to magnetic fields; positive associations were reported between MND and working at a job with the potential for electric shock exposure.

- Grebeneva et al. (2021) evaluated disease rates among electric power company workers in the Republic of Kazakhstan. The authors included three groups of "exposed" workers who "were in contact with equipment generating [industrial frequency EMF]" (a total of 161 workers), as well as 114 controls "who were not associated with exposure to electromagnetic fields." Disease rates were assessed "based on analyzing the sick leaves of employees" from 2010 to 2014 and expressed as "incidence rate per 100 employees." The authors reported a higher "incidence rate" of "diseases of the nervous system" in two of the exposed categories compared to the non-exposed group. No meaningful conclusions from the study could be drawn, however, because no specific diagnoses within "diseases of the nervous system" were identified in the paper and no clear description was provided on how the authors defined and calculated "incidence rate" for the evaluated conditions. In addition, no measured or calculated magnetic-field levels were presented by the authors.

- Filippini et al. (2021) conducted a meta-analysis to assess the dose-response relationship between residential exposure to magnetic fields and ALS. The authors identified six ALS epidemiologic studies, published between 2009 and 2020, that assessed exposure to residential magnetic fields by either distance from overhead power lines or magnetic-field modeling. They reported a decrease in risk of ALS in the highest exposure categories for both distance-based and modeling-based exposure estimates. The authors also reported that their dose-response analyses "showed little association between distance from power lines and ALS"; the data were too sparse to conduct a dose-response analysis for modeled magnetic-field estimates. The authors noted that their study was limited by small sample size, "imprecise" exposure categories, the potential for residual confounding, and by "some publication bias."

- Jalilian et al. (2021) conducted a meta-analysis of occupational exposure to ELF magnetic fields and electric shocks and development of ALS. The authors included 27 studies from Europe, the United States, and New Zealand that were published between 1983 and 2019. A weak, statistically significant association was reported between magnetic-field exposure and ALS, and no association was observed between electric shocks and ALS. Indications of publication bias and "moderate to high" heterogeneity were identified for the studies of magnetic-field exposure and ALS, and the authors noted that "the results should be interpreted with caution."

- Goutman et al. (2022) examined occupational exposures, including "electromagnetic radiation" exposure, and associations with ALS in a case-control study of Michigan workers across various industries. The study included 381 cases diagnosed with ALS, all patients at the University of Michigan's Pranger ALS clinic, and 272 controls recruited from an online database for the University of Michigan. Participants were enrolled from 2010 to 2020 and completed a written survey of their work history and occupational exposures to nine exposure categories, including electromagnetic fields, particulate matter (PM), and pesticides. Exposure to electromagnetic fields was ascertained with a binary question asking whether they were "[e]xposed to power lines, transformation [*sic*] stations or other EM [electromagnetic radiation]?" The analysis was adjusted for age, sex, and military service. No association was observed between electromagnetic field exposure and ALS, while exposure to PM, pesticides, and metals, among others, were determined by the authors to be "associated with an increased ALS risk in this cohort."

- Sorahan and Nichols (2022) investigated magnetic-field exposure and mortality from MND in a large cohort of employees of the former Central Electricity Generating Board of England and Wales. The study included nearly 38,000 employees first hired between 1942 and 1982 and still employed in 1987. Estimates of exposure magnitude, frequency, and duration were calculated using data from the power stations and the employees' job histories, and were described in detail in a previous publication (Renew et al., 2003). Mortality from MND in the total cohort was observed to be similar to national rates. No statistically significant dose-response trends were observed with lifetime, recent, or distant magnetic-field exposure; statistically significant associations were observed for some categories of recent exposure, but not for the highest exposure category.

- Duan et al. (2023) conducted a meta-summary of ALS and exposure to magnetic fields, which was 1 of 22 non-genetic risk factors evaluated across 67 studies for its association with ALS. Six of the 67 studies examined magnetic-field exposure and associations with ALS; of the six studies identified, the authors included four case-control studies and one cohort study in their meta-analysis. Pooling results from these studies resulted in significant increased odds of ALS among individuals with higher (but undefined) exposure to magnetic fields. However, this pooled odds ratio for magnetic-field exposure (1.22) was below the minimum odds ratio threshold of 1.3 set by the authors as the criterion for defining an exposure as an ALS risk factor. In addition, the authors identified "substantial" heterogeneity between studies evaluating magnetic-field exposure and ALS.

- In a subsequent publication of the same study as Goutman et al. (2022), Goutman et al. (2023) assessed the potential for the same nine exposure categories, including "electromagnetic radiation" exposure, to be risk factors for ALS progression, including survival and onset segment (bulbar, cervical, lumbar). Electromagnetic field exposure was not significantly associated with ALS survival or with bulbar onset compared to lumbar, but was significantly associated with cervical onset compared to lumbar. It is worth noting that an association with cervical onset compared to lumbar was observed in the majority (7/9) of the exposure categories. The authors make no concluding statements on electromagnetic field exposure and ALS and instead emphasize that occupational pesticide exposure and working in military operations were significantly associated with worse ALS survival.

- Saucier et al. (2023) carried out three systematic reviews of studies that evaluated relationships between urbanization, air pollution, and water pollution, and ALS development. The authors identified five studies that assessed whether electromagnetic fields (of varying frequencies) and high voltage infrastructure were significant urbanization risk factors for ALS, but make no conclusion about magnetic-field exposure and ALS development based on these studies, therefore adding little value to the existing literature.

- Vasta et al. (2023) examined the relationship between residential distance to power lines and ALS development in a cohort study of 1,098 participants in Italy. The authors reported no differences in the age of ALS onset or ALS progression rate between low-exposed and high-exposed participants based on residential distance to power lines at the time of the participants' diagnosis. Similarly, no differences were observed when exposure was based on residential distance to repeater antennas.

- Vitturi et al. (2023) conducted a systematic review and meta-analysis of case-control studies examining potential occupational risk factors related to multiple sclerosis, including solvents, mercury, pesticides, and low-frequency magnetic fields. The authors included 24 studies in their review, but only one of the included studies investigated exposure to magnetic fields (Pedersen et al., 2017, discussed above), thereby adding little new information to the existing body of research.

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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.

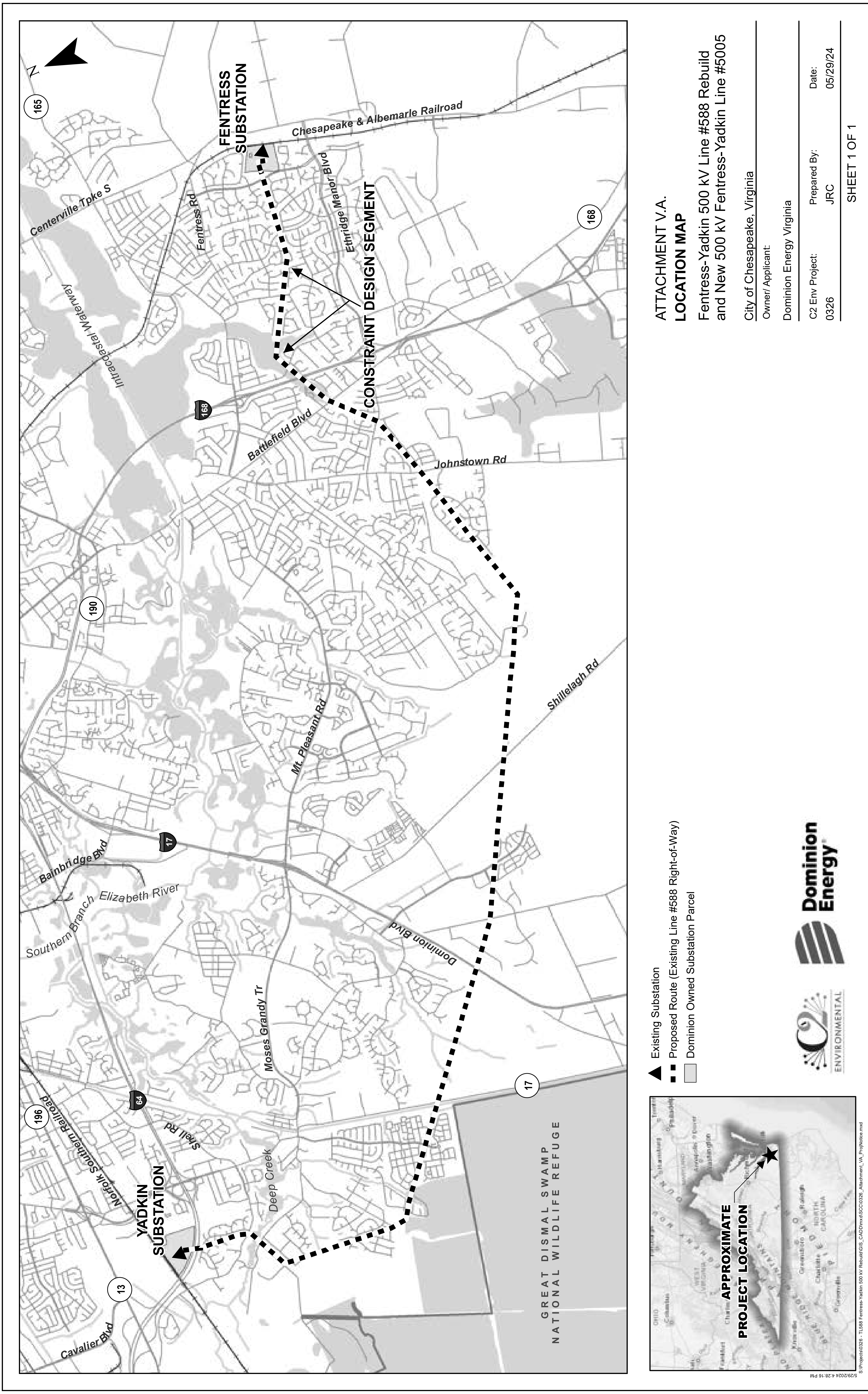
Response: A map showing the approximately 13.5-mile Proposed Route to be used for the proposed Project is provided as Attachment V.A. The map depicts the existing transmission corridor that includes the existing Fentress-Yadkin Line #588, which is proposed for rebuild, and the proposed new 500 kV Fentress-Yadkin Line #5005. The map also depicts the approximately 1.6-mile Constraint Design Segment within the approximately 13.5-mile Proposed Route. A written description of the Proposed Route is as follows:

Proposed Route – Line #588 and Line #5005

The Proposed Route for rebuilt Line #588 and proposed Line #5005 begins at the Fentress Substation located east of Fentress Loop and west of Chesapeake & Albemarle Railroad. The Proposed Route exits the Fentress Substation within the existing right-of-way corridor, which is currently cleared and maintained at a width of 150 feet. The Proposed Route then crosses Fentress Loop and continues west through the Etheridge Woods, Brandermill, and Etheridge Meadows developments. It then crosses Chesapeake Expressway/Route 168. From there, the Proposed Route continues southwest, crossing Battlefield Boulevard, Hanbury Road and Johnstown Road. The Proposed Route then turns northwest and continues towards the Great Dismal Swamp National Wildlife Refuge, passing north of Chesapeake Regional Airport and crossing Route 17/Dominion Boulevard and Deep Creek Park. The Proposed Route next crosses the Deep Creek Canal/Intracoastal Waterway and passes northeast of the Great Dismal Swamp National Wildlife Refuge before crossing the Culpepper Landing and Elmwood Landing developments. From here, the Proposed Route generally trends north before terminating at the existing Yadkin Substation, located on Yadkin Road north and east of Interstate 64 and south of Norfolk Southern Railroad.

For the proposed Project, the existing weathering steel lattice towers supporting Line #588 are proposed to be replaced with new single circuit dulled galvanized steel monopoles. In addition, new single circuit dulled galvanized steel structures, which are primarily monopoles, will be installed within the same corridor to support the proposed new Line #5005. The proposed structures supporting rebuilt Line #588 and proposed Line #5005 will be constructed side-by-side entirely within the existing corridor, which is cleared and maintained at a width of 150 feet, or on Company-owned property. The side-by-side structures will have a minimum structure height of approximately 170 feet, a maximum structure height of approximately 195 feet, and an average structure height of approximately 185 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design. Note that these approximate structure heights exclude one approximately 115-foot-tall 3-pole structure supporting Line #5005 that will be installed on Company-owned property, as it would create a downward bias in the overall average structure height along the Proposed Route for the Project.

To the extent needed, the Company may propose to replace the removed Line #588 structures within an approximately 1.6-mile Constraint Design Segment that includes two side-by-side single circuit 500 kV dulled galvanized steel monopoles in a delta configuration (*i.e.*, arms on both sides of the structures) supporting rebuilt Line #588 and proposed Line #5005. The Constraint Design Segment would require the Company to clear and utilize the entire 235-foot-width of the Company's existing right-of-way, which is currently maintained at 150 feet, for approximately 1.6 miles. The side-by-side delta configured monopole structures along the approximately 1.6-mile Constraint Design Segment would have a minimum structure height of approximately 145 feet, a maximum structure height of approximately 150 feet, and an average structure height of approximately 147 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.


ATTACHMENT V.A.
LOCATION MAP
Fentress-Yadkin 500 kV Line #588 Rebuild
and New 500 kV Fentress-Yadkin Line #5005
City of Chesapeake, Virginia
Owner/ Applicant:
Dominion Energy Virginia
C2 Env Project:
0326
Prepared By:
JRC
Date:
05/29/24
SHEET 1 OF 1
Existing Substation
Proposed Route (Existing Line #588 Right-of-Way)
Dominion Owned Substation Parcel
APPROXIMATE
PROJECT LOCATION
ENVIRONMENTAL
Dominion
Energy
FENTRESS
SUBSTATION
YADKIN
SUBSTATION
CONSTRAINT DESIGN SEGMENT
Chesapeake & Albemarle Railroad
Centerville Tpke S
Fentress Rd
Ethridge Manor Blvd
Intracoastal Waterway
Battlefield Blvd
Johnstown Rd
Mt. Pleasant Rd
Shillelagh Rd
Bainbridge Blvd
Southern Branch Elizabeth River
Dominion Blvd
Moses Grandy Tr
Norfolk Southern Railroad
Shell Rd
Deep Creek
Cavalier Blvd
GREAT DISMAL SWAMP
NATIONAL WILDLIFE REFUGE
165
168
190
17
64
196
13
N

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: Shortly after filing, the Application will be made available electronically for public inspection at: www.dominionenergy.com/yadkin-fentress.

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:

Ms. Bettina Rayfield
Virginia Department of Environmental Quality
Office of Environmental Impact Review
1111 East Main Street, Suite 1400
Richmond, Virginia 23219

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

Ms. S. Rene Hypes
Virginia Department of Conservation and Recreation
Division of Natural Heritage
600 East Main Street, 24^{th} Floor
Richmond, Virginia 23219

Environmental Reviewer
Virginia Department of Conservation and Recreation
Planning & Recreation Bureau
600 East Main Street, 17th Floor
Richmond, Virginia 23219

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

Ms. Amy Martin
Virginia Department of Wildlife Resources
Wildlife Information and Environmental Services
7870 Villa Park, Suite 400
Henrico, Virginia 23228

Mr. Keith Tignor
Virginia Department of Agriculture and Consumer Affairs
Office of Plant Industry Services
102 Governor Street
Richmond, Virginia 23219

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

Scoping at VMRC
Virginia Marine Resources Commission
Habitat Management Division
Building 96, 380 Fenwick Road
Ft. Monroe, Virginia 23651

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

Ms. Regena Bronson
U.S. Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510

Ms. Arlene F. Warren
Virginia Department of Health
Office of Drinking Water
109 Governor Street, 6th Floor
Richmond, VA 23219

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

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

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

Mr. Christopher M. Price
City of Chesapeake, City Manager
306 Cedar Road, 6th Floor
Chesapeake, VA 23322

Mayor Richard W. 'Rick' West
City of Chesapeake
306 Cedar Road
Chesapeake, Virginia 23322

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 May 14, 2024, were delivered to Mr. Christopher M. Price, City Manager for the City of Chesapeake and Mr. Richard West, Mayor for the City of Chesapeake, where the Project is located. The letters stated the Company's intention to file this Application and invited the City to consult with the Company about the Project. These letters are included as Attachment V.D.1.

Dominion Energy Services, Inc.
5000 Dominion Boulevard, 3rd Floor
Glen Allen, VA 23060
DominionEnergy.com

Mr. Christopher M. Price
City of Chesapeake, City Manager
306 Cedar Road, 6th Floor
Chesapeake, Virginia 23322

May 14, 2024

RE: Dominion Energy Virginia's Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

Notice Pursuant to Va. Code § 15.2-2202 E

Dear Mr. Price:

Dominion Energy Virginia (the "Company") is proposing to rebuild the existing 500 kV Fentress-Yadkin Line #588 (the "Line #588 Rebuild") and construct a new overhead single circuit 500 kV transmission line (the "proposed Line #5005") almost entirely within the Company's existing Line #588 transmission right-of-way corridor (collectively, the "Project"). The Project is located in the City of Chesapeake, Virginia, and will include substation-related work at the Company's expanded Fentress Substation and existing Yadkin Substation as well as new right-of-way required for a minor shift of existing Line #565 at Yadkin and for Line #5005 at Fentress, both of which are still under consideration. The Project is necessary to maintain the overall long-term reliability of its transmission system.

The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") with the State Corporation Commission of Virginia (the "Commission"). In advance of filing an application for a CPCN from the Commission, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter.

Enclosed is a Project Overview Map depicting the alignment of the proposed Project, as well as the general Project location. All final materials, including maps, will be available in the Company's application filing to the Commission.

If you would like to receive a GIS shapefile of the proposed Project to assist in the project review or if you have any questions, please do not hesitate to contact me directly at 804-310-9658 or lane.e.carr@dominionenergy.com. The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

Regards,

Lane Carr

Lane Carr
Siting and Permitting Specialist, Electric Transmission

Attachment: Project Overview Map

Dominion Energy Services, Inc.
5000 Dominion Boulevard, 3rd Floor
Glen Allen, VA 23060
DominionEnergy.com

Mayor Richard W. 'Rick' West
City of Chesapeake
306 Cedar Road
Chesapeake, Virginia 23322

May 14, 2024

RE: Dominion Energy Virginia's Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

Notice Pursuant to Va. Code § 15.2-2202 E

Dear Mr. West:

Dominion Energy Virginia (the "Company") is proposing to rebuild the existing 500 kV Fentress-Yadkin Line #588 (the "Line #588 Rebuild") and construct a new overhead single circuit 500 kV transmission line (the "proposed Line #5005") almost entirely within the Company's existing Line #588 transmission right-of-way corridor (collectively, the "Project"). The Project is located in the City of Chesapeake, Virginia, and will include substation-related work at the Company's expanded Fentress Substation and existing Yadkin Substation as well as new right-of-way required for a minor shift of existing Line #565 at Yadkin and for Line #5005 at Fentress, both of which are still under consideration. The Project is necessary to maintain the overall long-term reliability of its transmission system.

The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") with the State Corporation Commission of Virginia (the "Commission"). In advance of filing an application for a CPCN from the Commission, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter.

Enclosed is a Project Overview Map depicting the alignment of the proposed Project, as well as the general Project location. All final materials, including maps, will be available in the Company's application filing to the Commission.

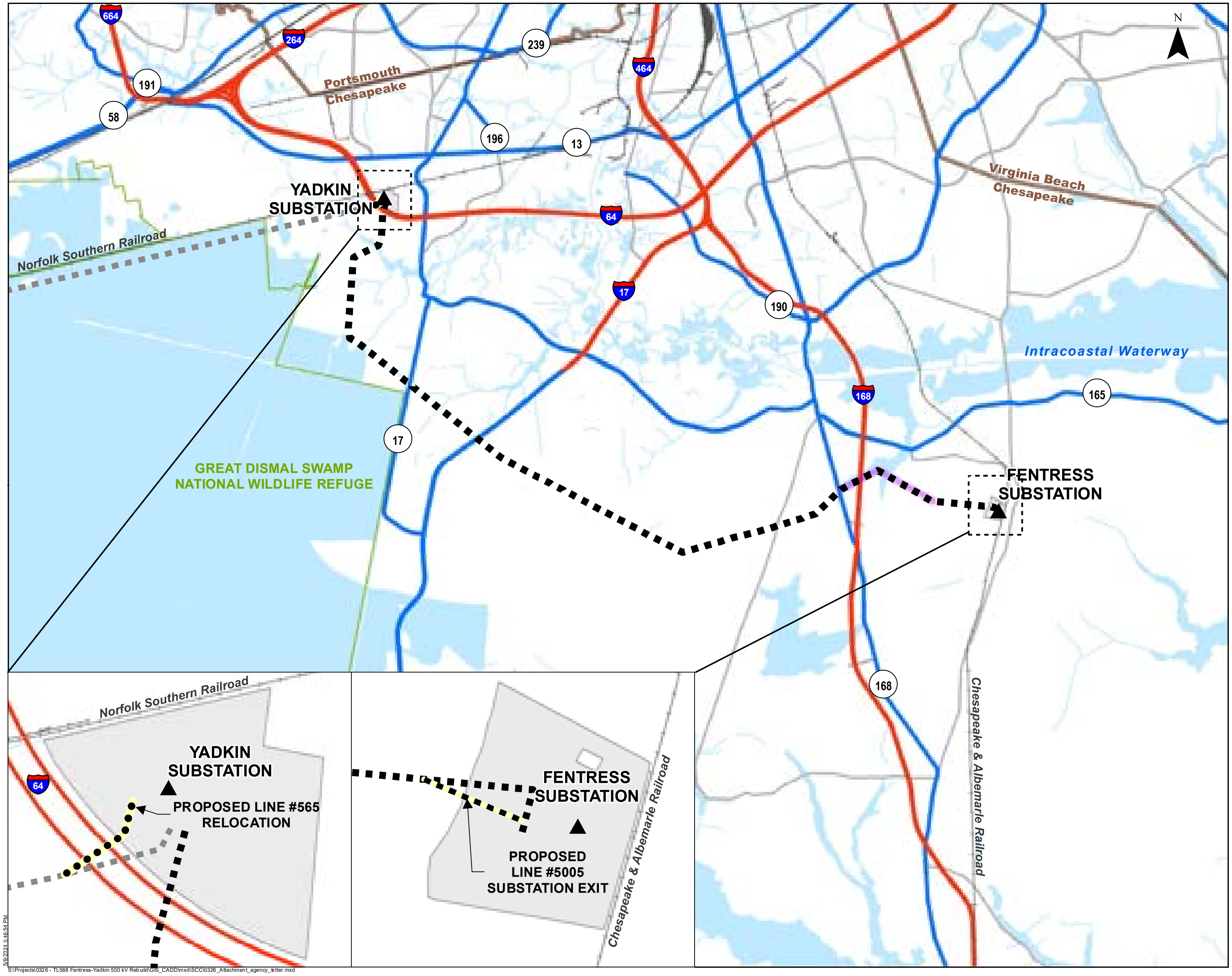
If you would like to receive a GIS shapefile of the proposed Project to assist in the project review or if you have any questions, please do not hesitate to contact me directly at 804-310-9658 or lane.e.carr@dominionenergy.com. The Company appreciates your assistance with this project review and looks forward to any additional information you may have to offer.

Regards,

Lane Carr

Lane Carr
Siting and Permitting Specialist, Electric Transmission

Attachment: Project Overview Map



PROJECT OVERVIEW MAP

Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005

City of Chesapeake, Virginia

Client:
Dominion Energy Virginia

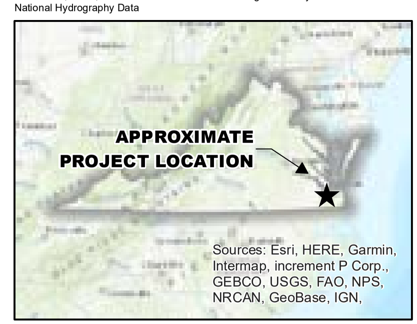
C2 Env Project:	Prepared By:	Date:
0326	JRC	05/09/24

0 0.75 1.5 3 Miles

Scale is 1 IN = 1.5 MI when printed at original size of 11x17

- Existing Line #588 Right-of-Way
- Constraint Design Segment
- Existing Line #565 Centerline
- Proposed Line #565 Relocation
- Proposed Line #5005 Substation Exit
- Existing Substation
- Dominion Owned Substation Parcel
- Limited Access
- US or VA Primary Highway
- Local Main Road
- County Boundary
- NHD Stream/River
- NHD Waterbody

Notes:
1. Basemap from ESRI World Topographic Map
2. Project Right-of-Way and centerline provided by Dominion Energy Virginia
3. Parcels, Roads and railroads from Virginia Geographic Information Network
4. Streams, rivers, and waterbodies from U.S. Geological Survey National Hydrography Data



SHEET 1 OF 1

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA ELECTRIC AND POWER COMPANY	)	Case No. PUR-2024-00105
	)	
For approval and certification of electric transmission	)	
facilities: Fentress-Yadkin 500 kV Line #588 Rebuild	)	
and New 500 kV Fentress-Yadkin Line #5005	)	

IDENTIFICATION, SUMMARIES, AND TESTIMONY OF DIRECT WITNESSES OF VIRGINIA ELECTRIC AND POWER COMPANY

Peter Nedwick

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Daniel J. Cabonor

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Mohammad M. Othman

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Lane E. Carr

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Peter Nedwick

Title: Senior Strategic Advisor – Electric Transmission Planning

Summary:

Company Witness Peter Nedwick sponsors those portions of the Appendix describing the Company's electric transmission system and the need for, and benefits of, the proposed Project, as follows:

- Section I.B: This section details the engineering justifications for the proposed Project.
- Section I.C: This section describes the present system and details how the proposed project will effectively satisfy present and projected future load demand requirements.
- Section I.D: This section describes critical contingencies and associated violations due to the inadequacy of the existing system.
- Section I.E: This section explains feasible project alternatives, when applicable.
- Section I.G: This section provides a system map of the affected area.
- Section I.H: This section provides the desired in-service date of the proposed project and the estimated construction time.
- Section I.J: This section provides information about the project if approved by the RTO.
- Section I.K: Although not applicable to the proposed project, this section, when applicable, provides outage history and maintenance history for existing transmission lines if the proposed project is a rebuild and is due in part to reliability issues.
- Section I.M: Although not applicable to the proposed project, this section, when applicable, contains information for transmission lines interconnecting a non-utility generator.
- Section I.N: Although not applicable to the proposed project, this section provides 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.
- Section II.A.10: This section provides details of the construction plans for the proposed project, including requested line outage schedules.

Additionally, Company Witness Nedwick co-sponsors the following portions of the Appendix:

- Section I.A (co-sponsored with Company Witnesses, Daniel J. Cabonor, Mohammad M. Othman, and Lane E. Carr): This section details the primary justifications for the proposed project.
- Section I.F (co-sponsored with Company Witness Daniel J. Cabonor): This section describes 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.
- Section I.L (co-sponsored with Company Witness Daniel J. Cabonor): This section provides details on the deterioration of structures and associated equipment.
- Section II.A.3 (co-sponsored with Company Witness Lane E. Carr): This section provides color maps of existing or proposed rights-of-way in the vicinity of the proposed project.

A statement of Mr. Nedwick's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
PETER NEDWICK
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2024-00105

Q. Please state your name, position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), and business address.

A. My name is Peter Nedwick, and I am Senior Strategic Advisor – Electric Transmission Planning for the Company. My business address is 5000 Dominion Blvd., Glen Allen, Virginia, 23060. A statement of my qualifications and background is provided as Appendix A.

Q. Please describe your areas of responsibility with the Company.

A. I am responsible for planning the Company's electric transmission system for voltages of 69 kilovolt ("kV") through 500 kV.

Q. What is the purpose of your testimony in this proceeding?

A. 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, and to help reliably and successfully integrate the Coastal Virginia Offshore Wind Commercial Project ("CVOW project" or "CVOW") with the transmission system as requested by Company's Generation Construction Group ("Dominion Generation" or the "Customer"), the Company proposes in the City of Chesapeake, Virginia, predominantly within existing rights-of-way, to:

(i) Rebuild the Company's existing overhead single circuit 500 kV Fentress-Yadkin Line #588 to address the condition of Line #588, which is approaching its end of service life. Specifically, as proposed, rebuild the approximately 13.5-mile-long Line #588, which currently is supported primarily by single circuit 500 kV weathering steel (COR-TEN®) lattice structures, with primarily single circuit 500 kV dulled galvanized steel monopole structures entirely within the existing right-of-way, which is currently maintained at 150 feet wide, or on Company-owned property. Additionally, replace the existing three-phase twin-bundled 2500 Aluminum Conductor Alloy Reinforced ("ACAR") conductors with three-phase triple-bundled 1351.5 Aluminum Conductor Steel Reinforced ("ACSR") conductors with a summer transfer capability of 4,357 MVA for the entire 13.5 miles. Collectively, this work is referred to as the Line #588 Rebuild.

(ii) Construct a new overhead single circuit 500 kV transmission line originating at the Company's existing Fentress Substation and continuing approximately 13.5 miles to terminate at the existing Yadkin Substation, resulting in 500 kV Fentress-Yadkin Line #5005. Specifically, as proposed, the new Line #5005 will be installed with the rebuilt Line #588 entirely within the existing right-of-way, which is currently maintained at 150 feet wide, or on Company-owned property, supported primarily by single circuit 500 kV dulled galvanized steel monopole structures. Additionally, the proposed Line #5005 will utilize three-phase triple-bundled 1351.5 ACSR conductors with a summer transfer capability of 4,357 MVA. Collectively, this work is referred to as the proposed Line #5005.

(iii) Perform substation-related work at the Company's existing Fentress Substation and Yadkin Substation.

The Line #588 Rebuild, the proposed Fentress-Yadkin Line #5005, and the substation-related work at the Fentress and Yadkin Substations are collectively referred to as the "Project."

The proposed Project will address the condition of Line #588, which is approaching its end of service life by rebuilding existing infrastructure in accordance with mandatory Planning Criteria and will help allow the CVOW project to reliably and successfully integrate with the transmission system, thereby allowing the Company to maintain the overall long-term reliability of the transmission system for its customers.

The purpose of my testimony is to describe the Company's electric transmission system and the need for, and benefits of, the proposed Project. I sponsor Sections I.B, I.C, I.D, I.E, I.G, I.H, I.J, I.K, I.M, I.N, and II.A.10 of the Appendix. Additionally, I co-sponsor the Executive Summary and Section I.A with Company Witnesses Daniel J. Cabonor, Mohammad M. Othman, and Lane E. Carr; Sections I.F and I.L with Company Witness Daniel J. Cabonor; and Section II.A.3 with Company Witness Lane E. Carr.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
PETER NEDWICK

Peter Nedwick graduated from the Pennsylvania State University with a Bachelor's Degree in Electrical Engineering. He is also Registered Professional Engineer with the Commonwealth of Virginia (No. 0402 019479).

Mr. Nedwick's experience with the Company includes System Protection, Distribution Planning, and Transmission Planning. He joined the Company in 1984 as an Associate Engineer in the System Protection Group. In 1986, he joined the Company's Transmission Planning Group, where he was promoted to Engineer in 1987 and to Senior Engineer in 1991. While in the Transmission Planning Group, Mr. Nedwick was responsible for special operating studies and for planning the Company's electric transmission system for eastern Virginia and North Carolina.

In 1997, Mr. Nedwick was promoted to Staff Engineer and joined the Company's Distribution Planning Department, where he served as that department's technical expert. While in the Distribution Planning Department, Mr. Nedwick was promoted to Consulting Engineer in 2000. In 2002, Mr. Nedwick joined the Company's Electric Transmission Planning Group and was promoted to Principal Engineer in 2017. In July 2023, Mr. Nedwick was promoted to his current position, Senior Strategic Advisor.

Mr. Nedwick has previously testified before the Virginia State Corporation Commission.

<u>Witness Direct Testimony Summary</u>

Witness: Daniel J. Cabonor

Title: Engineer III – Electric Transmission Line Engineering

Summary:

Company Witness Daniel J. Cabonor sponsors those portions of the Appendix providing an overview of the design characteristics of the transmission facilities for the proposed Project, and discussing electric and magnetic field levels, as follows:

- Section II.A.5: This section provides drawings of the right-of-way cross section showing typical transmission lines structure placements.
- Section II.B.1 to II.B.2: These sections provide the line design and operational features of the proposed project, as applicable.
- Section IV: This section provides analysis on the health aspects of electric and magnetic field levels.

Additionally, Company Witness Cabonor co-sponsors the following portions of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Peter Nedwick, Mohammad M. Othman, and Lane E. Carr): This section details the primary justifications for the proposed project.
- Section I.F (co-sponsored with Company Witness Peter Nedwick: This section describes any lines or facilities that will be removed, replaced, or taken out of service upon completion of the proposed project.
- Section I.I (co-sponsored with Company Witness Mohammad M. Othman): This section provides the estimated total cost of the proposed project.
- Section I.L (co-sponsored with Company Witness Peter Nedwick): This section, when applicable, provides details on the deterioration of structures and associated equipment.
- Sections II.B.3 to II.B.5 (co-sponsored with Company Witness Lane E. Carr): These sections, when applicable, provide supporting structure details along the proposed and alternative routes.
- Section II.B.6 (co-sponsored with Company Witness Lane E. Carr): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section V.A (co-sponsored with Company Witness Lane E. Carr): This section provides the proposed route description and structure heights for notice purposes.

A statement of Mr. Cabonor’s background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
DANIEL J. CABONOR
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2024-00105

Q. Please state your name, position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), and business address.

A. My name is Daniel J. Cabonor, and I am an Electric Transmission Line Engineer III in the Electric Transmission Line Engineering Department of the Company. My business address is 5000 Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my qualifications and background is provided as Appendix A.

Q. Please describe your areas of responsibility with the Company.

A. I am responsible for the estimating, conceptual, and final design of high voltage transmission line projects from 69 kilovolt ("kV") to 500 kV.

Q. What is the purpose of your testimony in this proceeding?

A. 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, and to help reliably and successfully integrate the Coastal Virginia Offshore Wind Commercial Project ("CVOW project" or "CVOW") with the transmission system as requested by Company's Generation Construction Group ("Dominion Generation" or the "Customer"), the Company proposes in the City of Chesapeake, Virginia, predominantly within existing rights-of-way, to:

(i) Rebuild the Company's existing overhead single circuit 500 kV Fentress-Yadkin Line #588 to address the condition of Line #588, which is approaching its end of service life. Specifically, as proposed, rebuild the approximately 13.5-mile-long Line #588, which currently is supported primarily by single circuit 500 kV weathering steel (COR-TEN®) lattice structures, with primarily single circuit 500 kV dulled galvanized steel monopole structures entirely within the existing right-of-way, which is currently maintained at 150 feet wide, or on Company-owned property. Additionally, replace the existing three-phase twin-bundled 2500 Aluminum Conductor Alloy Reinforced ("ACAR") conductors with three-phase triple-bundled 1351.5 Aluminum Conductor Steel Reinforced ("ACSR") conductors with a summer transfer capability of 4,357 MVA for the entire 13.5 miles. Collectively, this work is referred to as the Line #588 Rebuild.

(ii) Construct a new overhead single circuit 500 kV transmission line originating at the Company's existing Fentress Substation and continuing approximately 13.5 miles to terminate at the existing Yadkin Substation, resulting in 500 kV Fentress-Yadkin Line #5005. Specifically, as proposed, the new Line #5005 will be installed with the rebuilt Line #588 entirely within the existing right-of-way, which is currently maintained at 150 feet wide, or on Company-owned property, supported primarily by single circuit 500 kV dulled galvanized steel monopole structures. Additionally, the proposed Line #5005 will utilize three-phase triple-bundled 1351.5 ACSR conductors with a summer transfer capability of 4,357 MVA. Collectively, this work is referred to as the proposed Line #5005.

(iii) Perform substation-related work at the Company's existing Fentress Substation and Yadkin Substation.

The Line #588 Rebuild, the proposed Fentress-Yadkin Line #5005, and the substation-related work at the Fentress and Yadkin Substations are collectively referred to as the "Project."

The proposed Project will address the condition of Line #588, which is approaching its end of service life by rebuilding existing infrastructure in accordance with mandatory Planning Criteria and will help allow the CVOW project to reliably and successfully integrate with the transmission system, thereby allowing the Company to maintain the overall long-term reliability of the transmission system for its customers.

The purpose of my testimony is to describe the design characteristics of the transmission facilities for the proposed Project, and also to discuss electric and magnetic field

("EMF") levels. I sponsor Sections II.A.5, II.B.1, II.B.2, and IV of the Appendix. Additionally, I co-sponsor the Executive Summary and Section I.A with Company Witnesses Peter Nedwick, Mohammad M. Othman, and Lane E. Carr; Sections I.F and I.L with Company Witness Peter Nedwick; Section I.I with Company Witness Mohammad M. Othman; Sections II.B.3 to II.B.6 and V.A with Company Witness Lane E. Carr.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
DANIEL J. CABONOR

Daniel J. Cabonor graduated from North Carolina State University in 2004 with a Bachelor of Science in Civil Engineering. He joined the Company in 2008 and has held various engineering titles with the Civil Design Department of the Nuclear Business Unit. He has occupied a position in the Electric Transmission Engineering department with the Company since 2018, where he currently works as an Engineer III.

<u>WITNESS DIRECT TESTIMONY SUMMARY</u>

<u>Witness</u>: Mohammad M. Othman

<u>Title</u>: Engineer III – Substation Engineering

<u>Summary</u>:

Company Witness Mohammad M. Othman sponsors or co-sponsors the following sections of the Appendix describing the substation work to be performed for the proposed project as follows:

- <u>Section I.A (co-sponsored with Company Witnesses Peter Nedwick, Daniel J. Cabonor, and Lane E. Carr)</u>: This section details the primary justifications for the proposed project.

- <u>Section I.I (co-sponsored with Company Witness Daniel J. Cabonor)</u>: This section provides the estimated total cost of the proposed project.

- <u>Section II.C</u>: This section describes and furnishes a one-line diagram of the substation associated with the proposed project.

A statement of Mr. Othman's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
MOHAMMAD M. OTHMAN
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2024-00105

Q. Please state your name, position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), and business address.

A. My name is Mohammad M. Othman, and I am an Engineer III in the Substation Engineering section of the Electric Transmission group of the Company. My business address is 5000 Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my qualifications and background is provided as Appendix A.

Q. Please describe your area of responsibility with the Company.

A. I am responsible for evaluation of the substation project requirements, feasibility studies, conceptual physical design, scope development, preliminary engineering and cost estimating for high voltage transmission and distribution substations.

Q. What is the purpose of your testimony in this proceeding?

A. 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, and to help reliably and successfully integrate the Coastal Virginia Offshore Wind Commercial Project ("CVOW project" or "CVOW") with the transmission system as requested by Company's Generation Construction Group ("Dominion Generation" or the "Customer"), the Company proposes in the City of Chesapeake, Virginia, predominantly within existing rights-of-way, to:

(i) Rebuild the Company's existing overhead single circuit 500 kV Fentress-Yadkin Line #588 to address the condition of Line #588, which is approaching its end of service life. Specifically, as proposed, rebuild the approximately 13.5-mile-long Line #588, which currently is supported primarily by single circuit 500 kV weathering steel (COR-TEN®) lattice structures, with primarily single circuit 500 kV dulled galvanized steel monopole structures entirely within the existing right-of-way, which is currently maintained at 150 feet wide, or on Company-owned property. Additionally, replace the existing three-phase twin-bundled 2500 Aluminum Conductor Alloy Reinforced ("ACAR") conductors with three-phase triple-bundled 1351.5 Aluminum Conductor Steel Reinforced ("ACSR") conductors with a summer transfer capability of 4,357 MVA for the entire 13.5 miles. Collectively, this work is referred to as the Line #588 Rebuild.

(ii) Construct a new overhead single circuit 500 kV transmission line originating at the Company's existing Fentress Substation and continuing approximately 13.5 miles to terminate at the existing Yadkin Substation, resulting in 500 kV Fentress-Yadkin Line #5005. Specifically, as proposed, the new Line #5005 will be installed with the rebuilt Line #588 entirely within the existing right-of-way, which is currently maintained at 150 feet wide, or on Company-owned property, supported primarily by single circuit 500 kV dulled galvanized steel monopole structures. Additionally, the proposed Line #5005 will utilize three-phase triple-bundled 1351.5 ACSR conductors with a summer transfer capability of 4,357 MVA. Collectively, this work is referred to as the proposed Line #5005.

(iii) Perform substation-related work at the Company's existing Fentress Substation and Yadkin Substation.

The Line #588 Rebuild, the proposed Fentress-Yadkin Line #5005, and the substation-related work at the Fentress and Yadkin Substations are collectively referred to as the "Project."

The proposed Project will address the condition of Line #588, which is approaching its end of service life by rebuilding existing infrastructure in accordance with mandatory Planning Criteria and will help allow the CVOW project to reliably and successfully integrate with the transmission system, thereby allowing the Company to maintain the overall long-term reliability of the transmission system for its customers.

The purpose of my testimony is to describe the work to be performed as part of the Project. As it pertains to station work, I sponsor Section II.C of the Appendix. Additionally, I co-sponsor the Executive Summary and Section I.A with Company Witnesses Peter Nedwick, Daniel J. Cabonor, and Lane E. Carr; and Section I.I of the Appendix with Company Witness Daniel J. Cabonor, specifically, as it pertains to substation work.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

BACKGROUND AND QUALIFICATIONS
OF
MOHAMMAD M. OTHMAN

Mohammad M. Othman received a Bachelor of Science degree in Electrical Engineering from Virginia Commonwealth University in 2008. Mr. Othman's responsibilities include the evaluation of the substation project requirements, development of scope documents and schedules, preparation of estimates and proposals, preparation of specifications and bid documents, material procurement, design substation physical layout, development of detailed physical drawings, bill of materials, electrical schematics and wiring diagrams. Mr. Othman joined the Dominion Energy Virginia Substation Engineering department in 2010 as an Engineer II and was later promoted to Engineer III, the title he currently holds.

Mr. Othman has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Lane E. Carr
Title: Local Permitting Consultant
Summary:
Company Witness Lane E. Carr will sponsor those portions of the Appendix providing an overview of the design of the route for the proposed Project, and related permitting, as follows:

- Section II.A.1: This section provides the length of the proposed corridor and viable alternatives to the proposed project.
- Section II.A.2: This section provides a map showing the route of the proposed project in relation to notable points close to the proposed project.
- Section II.A.4: This section, when applicable, explains why the existing right-of-way is not adequate to serve the need.
- Sections II.A.6 to II.A.8: These sections provide detail regarding the right-of-way for the proposed project.
- Section II.A.9: This section describes the proposed route selection procedures and, where applicable, details alternative routes considered.
- Section II.A.11: This section details how the construction of the proposed project follows the provisions discussed in Attachment 1 of the Transmission Appendix Guidelines.
- Section II.A.12: This section identifies the counties and localities through which the proposed project will pass and provides General Highway Maps for these localities.
- Section III: This section details the impact of the proposed project on scenic, environmental, and historic features.
- Sections V.B-D: These sections provide information related to public notice of the proposed project.

Additionally, Ms. Carr co-sponsors the following section of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Peter Nedwick, Daniel J. Cabonor, and Mohammad M. Othman): This section details the primary justifications for the proposed project.
- Section II.A.3 (co-sponsored with Company Witness Peter Nedwick): This section provides color maps of existing or proposed rights-of-way in the vicinity of the proposed project.
- Sections II.B.3 to II.B.5 (co-sponsored with Company Witness Daniel J. Cabonor): These sections, when applicable, provide supporting structure details along the proposed and alternative routes.
- Section II.B.6 (co-sponsored with Company Witness Daniel J. Cabonor): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section V.A (co-sponsored with Company Witness Daniel J. Cabonor): This section provides the proposed route description and structure heights for notice purposes.

Finally, Ms. Carr sponsors the DEQ Supplement filed with the Application. A statement of Ms. Carr's background and qualifications is attached to her testimony as Appendix A.

DIRECT TESTIMONY
OF
LANE E. CARR
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2024-00105

Q. Please state your name, position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), and business address.

A. My name is Lane E. Carr, and I am a Local Permitting Consultant in the Electric Transmission group of the Company. My business address is 5000 Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my qualifications and background is provided as Appendix A.

Q. Please describe your areas of responsibility with the Company.

A. I am responsible for identifying appropriate routes for transmission lines and obtaining necessary federal, state, and local approvals and environmental permits for those facilities. In this position, I work closely with government officials, permitting agencies, property owners, and other interested parties, as well as with other Company personnel, to develop facilities needed by the public so as to reasonably minimize environmental and other impacts on the public in a reliable, cost-effective manner.

Q. What is the purpose of your testimony in this proceeding?

A. 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, and to help reliably and successfully integrate the Coastal Virginia Offshore Wind Commercial Project ("CVOW project" or "CVOW") with the transmission system as requested by Company's Generation Construction Group ("Dominion Generation" or the "Customer"), the Company proposes in the City of Chesapeake, Virginia, predominantly within existing rights-of-way, to:

(i) Rebuild the Company's existing overhead single circuit 500 kV Fentress-Yadkin Line #588 to address the condition of Line #588, which is approaching its end of service life. Specifically, as proposed, rebuild the approximately 13.5-mile-long Line #588, which currently is supported primarily by single circuit 500 kV weathering steel (COR-TEN®) lattice structures, with primarily single circuit 500 kV dulled galvanized steel monopole structures entirely within the existing right-of-way, which is currently maintained at 150 feet wide, or on Company-owned property. Additionally, replace the existing three-phase twin-bundled 2500 Aluminum Conductor Alloy Reinforced ("ACAR") conductors with three-phase triple-bundled 1351.5 Aluminum Conductor Steel Reinforced ("ACSR") conductors with a summer transfer capability of 4,357 MVA for the entire 13.5 miles. Collectively, this work is referred to as the Line #588 Rebuild.

(ii) Construct a new overhead single circuit 500 kV transmission line originating at the Company's existing Fentress Substation and continuing approximately 13.5 miles to terminate at the existing Yadkin Substation, resulting in 500 kV Fentress-Yadkin Line #5005. Specifically, as proposed, the new Line #5005 will be installed with the rebuilt Line #588 entirely within the existing right-of-way, which is currently maintained at 150 feet wide, or on Company-owned property, supported primarily by single circuit 500 kV dulled galvanized steel monopole structures. Additionally, the proposed Line #5005 will utilize three-phase triple-bundled 1351.5 ACSR conductors with a summer transfer capability of 4,357 MVA. Collectively, this work is referred to as the proposed Line #5005.

(iii) Perform substation-related work at the Company's existing Fentress Substation and Yadkin Substation.

The Line #588 Rebuild, the proposed Fentress-Yadkin Line #5005, and the substation-related work at the Fentress and Yadkin Substations are collectively referred to as the "Project."

The proposed Project will address the condition of Line #588, which is approaching its end of service life by rebuilding existing infrastructure in accordance with mandatory Planning Criteria and will help allow the CVOW project to reliably and successfully integrate with the transmission system, thereby allowing the Company to maintain the overall long-term reliability of the transmission system for its customers.

The purpose of my testimony is to provide an overview of the route and permitting for the proposed Project. I sponsor Sections II.A.1, II.A.2, II.A.4, II.A.6 to II.A.9, II.A.11, II.A.12, III, and V.B to V.D of the Appendix. Additionally, I co-sponsor the Executive Summary and Section I.A with Company Witnesses Peter Nedwick, Daniel J. Cabonor, and Mohammad M. Othman; Section II.A.3 with Company Witness Peter Nedwick; and Sections II.B.3 to II.B.5, II.B.6, and V.A with Company Witness Daniel J. Cabonor. Finally, I sponsor the DEQ Supplement.

Q. Has the Company complied with Va. Code § 15.2-2202 E?

A. Yes. In accordance with Va. Code § 15.2-2202 E, letters dated May 14, 2024, were delivered to Mr. Christopher M. Price, City Manager for the City of Chesapeake and Mr. Richard West, Mayor for the City of Chesapeake, where the Project is located. The letters stated the Company's intention to file this Application and invited the City to consult with the Company about the proposed Project. A copy of the letters is included as Attachment V.D.1 to the Appendix.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

**BACKGROUND AND QUALIFICATIONS
OF
LANE E. CARR**

Lane E. Carr graduated from California Polytechnic State University in 1992 with a Bachelor of Science in Agricultural Business. She also obtained a Master of Science from California Polytechnic State University, San Luis Obispo in 1997. Ms. Carr joined the Company's Transmission Right-of-Way group in January 2019 as a Siting and Permitting Specialist, and her current position is Local Permitting Consultant. Prior to working for the Company, Ms. Carr worked as an Environmental Inspector for the County of Henrico.

Ms. Carr has previously submitted pre-filed testimony to the Virginia State Corporation Commission.