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March 14, 2025

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: Hornbaker 230 kV Line Loop and Hornbaker Switching Station
Case No. PUR-2025-00046

Dear Mr. Logan:

Please find enclosed for electronic filing in the above-captioned proceeding the application for approval of electric transmission facilities on behalf of Virginia Electric and Power Company (the "Company"). This filing contains the Application, Appendix, Direct Testimony, DEQ Supplement, and Environmental Routing Study, 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 Prince William County, 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 March 12, 2025.

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

Before the State Corporation Commission of Virginia

Hornbaker 230 kV Line Loop and Hornbaker Switching Station

Application No. 349

Case No. PUR-2025-00046

Filed: March 14, 2025

Volume 1 of 3

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC TRANSMISSION FACILITIES

Hornbaker 230 kV Line Loop and Hornbaker Switching Station

Application No. 349

Case No. PUR-2025-00046

Filed: March 14, 2025

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY For approval and certification of electric transmission facilities: Hornbaker 230 kV Line Loop and Hornbaker Switching Station	))))))))	Case No. PUR-2025-00046

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY FOR APPROVAL AND CERTIFICATION OF ELECTRIC TRANSMISSION FACILITIES: HORNBAKER 230 KV LINE LOOP AND HORNBAKER SWITCHING STATION

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, at the request of the Northern Virginia Electric Cooperative ("NOVEC"), in order to provide service to its data center customer in Prince William County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company proposes in Prince William County, Virginia, to:

(1) Cut existing Line #2187 between Structures #2187/7 and #2187/8 north of the existing Wellington Substation and construct a new approximately 0.6-mile overhead 230 kilovolt ("kV") double circuit transmission line on new primarily 100-foot-wide right-of-way from the Wellington Substation cut-in location to the Pegasus Switching Station resulting in Line #2325 and Line #2423 ("Wellington – Pegasus Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(2) Construct a new approximately 1.9-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Pegasus Switching Station to the new proposed Hornbaker Switching Station resulting in Line #2187 and Line #2424 ("Pegasus – Hornbaker Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(3) Construct a new approximately 2.8-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Devlin Switching Station to the Pegasus Switching Station[1] resulting in Line #2419 and Line #2420 ("Devlin – Pegasus Route 2").[2] These proposed lines will be

[1] The Devlin and Pegasus Switching Stations are being constructed as part of separate projects.

[2] As part of the construction associated with Devlin – Pegasus Route 2, the Company will perform minor substation work at the Pegasus Switching Station. While a component of the Devlin – Pegasus Route 2 construction, the Company considers the substation-related work at Pegasus Switching Station, which is entirely within existing right-of-way and/or Company-owned property, 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,

constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.[3]

(4) Construct the new 230 kV Hornbaker Switching Station (the "Hornbaker Switching Station") on property to be obtained by the Company.

Together, Wellington – Pegasus Route 1, Pegasus – Hornbaker Route 1, and Devlin – Pegasus Route 2 are referred to herein as the "Hornbaker 230 kV Line Loop." The Hornbaker 230 kV Line Loop and Hornbaker Switching Station are collectively referred to as the "Project."[4]

4. The Project as proposed is needed to interconnect and serve NOVEC's Hornbaker delivery point ("DP") located in Prince William County, Virginia, and to maintain reliable service for the overall load growth in the Hornbaker Load Area, in compliance with mandatory NERC Reliability Standards. Specifically, as to the need to provide requested service, NOVEC initially submitted its DP request to serve its customer to Dominion Energy Virginia on December 30, 2021, and it included a projected peak of 95 megawatts ("MW") in 2026, 245 MW by 2035, and 300 MW at full build-out of NOVEC's customer's data center campus. NOVEC's latest load forecast projects 0 MW in 2026, 78.4 MW for 2027, and 300 MW at full build-out.

5. Additionally, the Hornbaker Load Area, largely within NOVEC's retail service territory in Prince William County, Virginia, is experiencing a high level of growth. NOVEC has

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does not require approval pursuant to Va. Code § 56-46.1 B or a certificate of public convenience and necessity ("CPCN") from the Commission. The costs associated with the substation-related work have not been included in the total substation-related conceptual costs but are described in Section II.C of the Appendix. Should the Commission determine that a CPCN is required for the work described herein, the Company requests that the Commission grant such CPCN as part of its final order in this proceeding.

[3] Apparent power, measured in megavolt amperes ("MVA"), is made up of real power (megawatt or "MW") and reactive power (megavolt ampere reactive or "MVAR"). The power factor ("pf") is the ratio of real power to apparent power. For loads with a high pf (approaching unity), real power will approach apparent power and the two can be used interchangeably. Load loss criteria specify real power (MW) units because that represents the real power that will be dropped; however, MVA is used to describe the equipment ratings to handle the apparent power, which includes the real and reactive load components.

[4] The Project as proposed by the Company is identified as Solution 1B in Section II of the Appendix and in the Environmental Routing Study included with this Application.

submitted three DP requests for locations within the Hornbaker Load Area totaling over 620 MW by full build-out of the campuses targeted for 2035. To support this load, Dominion Energy Virginia must provide 230 kV electric transmission sources to Hornbaker and Pegasus Switching Stations. For NOVEC's projection at full build-out, in combination with other load growth in the Hornbaker Load Area, a third source will be needed to be brought into the area from the west. The comprehensive electric planning review of this geographically constrained load area offers limited options for serving the identified emerging loads and regional load growth, resulting in potential solutions that are not electrically equivalent upon energization. The complexity of the need and routing in this area support segmented filings; specifically, solutions for the near-term NOVEC DP request are proposed in the Appendix, and the reliability project associated with the regional growth (*i.e.*, the anticipated third source) will be filed as part of a separate filing and proceeding. Constructing the proposed Project within this high potential growth area will allow the Company to continue to support economic growth in the area in a timely manner through the continued construction of facilities in the area. Accordingly, the proposed Project is needed to reliably serve NOVEC's data center customer, as well as emerging load in the Hornbaker Load Area.

6. The Company identified five route alternatives for this Project that combine for two electrical solutions that would serve the need for the Project. Solution 1 is an entirely overhead solution. Solution 2 is a hybrid solution (*i.e.*, it contains both overhead and underground lines). Within the two electrical solutions, the Company has identified two options, each a grouping of three route alternatives. The below table outlines the route options included in each solution.

Electrical Solution	Route Alternative	Summary
Solution 1 (Overhead)	Wellington – Pegasus Route 1	Overhead double circuit route from a cut-in on existing Lines #172/#2187, north of the existing Wellington Substation, to the proposed Pegasus Switching Station.

Electrical Solution	Route Alternative	Summary
	Pegasus – Hornbaker Route 1	Overhead double circuit route between the proposed Hornbaker Switching Station and the proposed Pegasus Switching Station. [a]
	Devlin – Pegasus Route 1 OR Devlin – Pegasus Route 2	Overhead double circuit route between the proposed Pegasus Switching Station and the proposed Devlin Switching Station. [a]
Solution 2 (Hybrid)	Hourglass – Hornbaker Hybrid Route	Hybrid underground and overhead double circuit route between a cut in on Dominion's existing Line #2196, adjacent to the existing Hourglass Substation, and the proposed Hornbaker Switching Station.
	Pegasus – Hornbaker Route 1	Overhead double circuit route between the proposed Hornbaker Switching Station and the proposed Pegasus Switching Station. [a]
	Devlin – Pegasus Route 1 OR Devlin – Pegasus Route 2	Overhead double circuit route between the proposed Pegasus Switching Station and the proposed Devlin Switching Station. [a]

[a] The Devlin and Pegasus Switching Stations have been proposed as part of other projects.

7. Accordingly, the two electrical solutions with the route options comprise the following solutions for the Project, all of which the Company is proposing for Commission consideration and notice:

- Solution 1A: Comprised of (1) Wellington – Pegasus Route 1; (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 1.
- Solution 1B (Proposed): Comprised of (1) Wellington – Pegasus Route 1; (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 2.
- Solution 2A: Comprised of (1) Hourglass – Hornbaker Route 1; (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 1.
- Solution 2B: Comprised of (1) Hourglass – Hornbaker Route 1; (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 2.

Other routes that the Company studied but ultimately rejected are provided in Section II of the Appendix and in the Environmental Routing Study included with the Application.

8. The Company selected Solution 1B as the Proposed Solution because it is the second shortest of the solutions and would require correspondingly the second least right-of-way acreage. Proposed Solution 1B would have the least number of residences within 100, 250, and 500 feet of its centerline (0, 8, and 40, respectively), which is significantly less than Alternative

Solutions 1A and 2A and the same as Alternative Solution 2B. Proposed Solution 1B would cross the fewest total wetlands acres of the four solutions, and the fewest impacts to forested wetlands. It also has the fewest parcels crossed and second fewest waterbodies crossed. The solution also has the second most collocation of any of the solutions.

9. The proposed Hornbaker Switching Station will be constructed with four 230 kV breakers in a breaker-and-half configuration utilizing two 230 kV line terminals and two 230 kV delivery points. The Hornbaker Switching Station will be designed to incorporate two additional 230 kV circuit breakers for future use, creating two additional 230 kV line terminal points. The total area required to build the Hornbaker Switching Station is approximately 2 acres. The point of demarcation between the Company and the NOVEC customer will be the 230 kV switch terminals inside the Hornbaker Switching Station. NOVEC will bring their bus to the switches located near the Hornbaker Switching Station fence line.

10. The desired in-service target date for the proposed Project is June 1, 2029. The Company estimates it will take approximately 42 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 December 12, 2025. Should the Commission issue a final order by December 12, 2025, to accommodate long-lead materials procurement, the Company estimates that construction should begin around February 1, 2027, and be completed by June 1, 2029. 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 for easements with property owners along the approved route without the need for additional litigation.

11. 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 is actively 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.

12. 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. USFWS 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.

13. Any adjustments to this Project schedule resulting from these or similar challenges could necessitate a minimum of a six- to twelve-month delay in the targeted in-service date.

Accordingly, for purposes of judicial economy, the Company requests that the Commission issue a final order approving both a desired in-service target date (*i.e.*, June 1, 2029) and an authorization sunset date (*i.e.*, June 1, 2030) for energization of the Project. [5]

14. The estimated conceptual cost of the Project utilizing the Proposed Solution is approximately $94.3 million which includes approximately $82.5 million for transmission-related work and approximately $11.8 million for substation-related work (2024 dollars).[6]

15. 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.

16. 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.

17. Section V of the Appendix provides a proposed route description for public notice

[5] The Company notes that this request is consistent with the Commission's findings in other recent proceedings. S*ee Application of Virginia Electric and Power Company for approval of electric transmission facilities: Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005*, Case No. PUR-2024-00105, Final Order (Feb. 28, 2025), approving an in-service date of January 1, 2027, and a CPCN sunset date of January 1, 2028, for energization of that project in Ordering Paragraph (8); *Application of Virginia Electric and Power Company for approval of electric transmission facilities: 500-230 kV Aspen Substation, 500 kV Aspen-Goose Creek Line #5002, 500 kV and 230 kV Aspen-Golden Lines #5001 and #2333, 500-230 kV Golden Substation, and Lines #2081/#2150 Loop*, Case No. PUR-2024-00032, Final Order (Feb. 6, 2025), approving an in-service date of June 1, 2028, and a CPCN sunset date of June 1, 2029, for energization of that project in Ordering Paragraph (8); and *Application of Virginia Electric and Power Company for approval of electric transmission facilities: 230 kV Apollo-Twin Creeks Lines, and Twin Creeks, Sycolin Creek, Starlight, Lunar, and Apollo Substations*, Case No. PUR-2024-00044, Final Order (Feb. 5, 2025), approving an in service date of September 30, 2028, and a CPCN sunset date of September 30, 2029, for energization of that project in Ordering Paragraph (8).

[6] These total Project costs are inclusive of projected real estate costs that the Company anticipates will be required to acquire the property rights for the Project.

purposes and a list of federal, state, and local agencies and officials that the Company has or will notify about the Application.

18. In addition to the information provided in the Appendix, the DEQ Supplement, and the Environmental Routing Study, this Application is supported by the pre-filed direct testimony of Company Witnesses Steven J. Schweiger, Cale B. Armstrong, Mohammad M. Othman, Nancy R. Reid, and Matt L. Teichert filed with this Application.

19. 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 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*___________
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Counsel for Applicant Virginia Electric and Power Company

March 14, 2025

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC TRANSMISSION FACILITIES

Hornbaker 230 kV Line Loop and Hornbaker Switching Station

Application No. 349

Appendix

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

Case No. PUR-2025-00046

Filed: March 14, 2025

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EXECUTIVE SUMMARY

At the request of the Northern Virginia Electric Cooperative ("NOVEC"), in order to provide service to its data center customer in Prince William County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") proposes in Prince William County, Virginia, to:

(1) Cut existing Line #2187 between Structures #2187/7 and #2187/8 north of the existing Wellington Substation and construct a new approximately 0.6-mile overhead 230 kilovolt ("kV") double circuit transmission line on new primarily 100-foot-wide right-of-way from the Wellington Substation cut-in location to the Pegasus Switching Station resulting in Line #2325 and Line #2423 ("Wellington – Pegasus Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(2) Construct a new approximately 1.9-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Pegasus Switching Station to the new proposed Hornbaker Switching Station resulting in Line #2187 and Line #2424 ("Pegasus – Hornbaker Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(3) Construct a new approximately 2.8-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Devlin Switching Station to the Pegasus Switching Station[1] resulting in Line #2419 and Line #2420 ("Devlin – Pegasus Route 2").[2] These proposed lines will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.[3]

[1] The Devlin and Pegasus Switching Stations are being constructed as part of separate projects.

[2] As part of the construction associated with Devlin – Pegasus Route 2, the Company will perform minor substation work at the Pegasus Switching Station. While a component of the Devlin – Pegasus Route 2 construction, the Company considers the substation-related work at Pegasus Switching Station, which is entirely within existing right-of-way and/or Company-owned property, 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 certificate of public convenience and necessity ("CPCN") from the Commission. The costs associated with the substation-related work have not been included in the total substation-related conceptual costs but are described in Section II.C of this Appendix. Should the Commission determine that a CPCN is required for the work described herein, the Company requests that the Commission grant such CPCN as part of its final order in this proceeding.

[3] Apparent power, measured in megavolt amperes ("MVA"), is made up of real power (megawatt or "MW") and reactive power (megavolt ampere reactive or "MVAR"). The power factor ("pf") is the ratio of real power to apparent

(4) Construct the new 230 kV Hornbaker Switching Station (the "Hornbaker Switching Station") on property to be obtained by the Company.

Together, Wellington – Pegasus Route 1, Pegasus – Hornbaker Route 1, and Devlin – Pegasus Route 2 are referred to herein as the "Hornbaker 230 kV Line Loop." The Hornbaker 230 kV Line Loop and Hornbaker Switching Station are collectively referred to as the "Hornbaker 230 kV Line Loop Project" or the "Project."[4]

The Northern Virginia data center market is spread across Loudoun, Fairfax, and Prince William Counties. The combination of competitive colocation/cloud environment, fiber connectivity, strategic geographic location, low risk of business disruptions, affordable and reliable power, and the business climate in Virginia, has created the largest market for data center capacity in the United States. This Project is in this concentrated area of Prince William County and is necessary to assure that Dominion Energy Virginia can maintain reliable electric transmission service to the load area.

As to the need to provide requested service, NOVEC initially submitted its delivery point ("DP") request to serve its customer to Dominion Energy Virginia on December 30, 2021. NOVEC's initial DP request projected a peak of 95 megawatts ("MW") in 2026, 245 MW by 2035, and 300 MW at full build-out of NOVEC's customer's data center campus. NOVEC's latest load forecast projects 0 MW in 2026, 78.4 MW for 2027, and 300 MW at full build-out. Constructing the proposed Project within this high potential growth area will allow the Company to continue to support economic growth in the area in a timely manner through the continued construction of facilities in the area. Accordingly, the proposed Project is needed to reliably serve NOVEC's data center customer, as well as emerging load in the Hornbaker Load Area, as described below.

The Hornbaker Load Area, largely within NOVEC's retail service territory in Prince William County, Virginia, is experiencing a high level of growth. NOVEC has submitted three DP requests for locations within the Hornbaker Load Area totaling over 620 MW by full build-out of the campuses targeted for 2035. To support this load, Dominion Energy Virginia must provide 230 kV electric transmission sources to Hornbaker and Pegasus Switching Stations. For NOVEC's projection at full build-out, in combination with other load growth in the Hornbaker Load Area, a third source will be needed to be brought into the area from the west. The comprehensive electric planning review of this geographically constrained load area offers limited options for serving the identified emerging loads and regional load growth, resulting in potential solutions that are not electrically equivalent upon energization. The complexity of the need and routing in this area support segmented filings; specifically, solutions for the near-term NOVEC DP request are proposed herein, and the reliability project associated with the regional growth (*i.e.*, the anticipated third source) will be filed as part of a separate filing and proceeding.

In other words, this relatively near-need NOVEC DP request, requiring a minimum of two

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power. For loads with a high pf (approaching unity), real power will approach apparent power and the two can be used interchangeably. Load loss criteria specify real power (MW) units because that represents the real power that will be dropped; however, MVA is used to describe the equipment ratings to handle the apparent power, which includes the real and reactive load components.

[4] The Project as proposed by the Company is identified as Solution 1B in Section II of this Appendix and in the Environmental Routing Study included with this Application.

double circuit 230 kV lines from separate sources, is located within a broader load region which requires a longer-term reliability solution in the form of a double circuit 230 kV line from a third source—regardless of the Project's DP request and solution. The complex electric planning for separate drivers with separate projected and requested in-service dates, and the routing constraints in this particular area, create separate sets of electrical solutions; namely, one set that wholly addresses the NOVEC DP request and another that addresses the immediate term need of the NOVEC DP request and partly addresses the longer-term need that will be addressed in a subsequent filing involving the Company's existing Nokesville Substation.

See Attachment I.A.2 for a high-level overview of the potential electric planning configurations, which at full build-out will address both the near-term NOVEC DP request and the longer-term reliability need for this region. Solution 1 depicts two sources at Pegasus Switching Station. One is from Line #172/#2187 tapped at Wellington Road, and the second is from Devlin Switching Station. This solution will require the later third source from the Company's existing Nokesville Substation to terminate at Hornbaker Switching Station to relieve the 300 MW reliability violation projected to occur during NOVEC's customer's build-out. Solution 2 identifies that terminating two sources at Hornbaker Switching Station—one from Devlin Switching Station and a second from Hourglass Switching Station—provides the opportunity for a new Nokesville double circuit 230 kV line to terminate at *either* Hornbaker Switching Station or Pegasus Switching Station.

Prudent planning demands the longer-term regional need be considered as part of serving the NOVEC DP request, even where routing analysis from Nokesville Substation cannot be completed on a timeline that supports the NOVEC DP. Because the ultimate need for the source from Nokesville Substation includes routing alternatives for the Project, and because the Project's approved solution will affect the Nokesville Substation's new 230 kV routing and electrical alternatives evaluation, the Company is including this discussion in its present Application for consideration. As depicted in Attachment I.A.3, both solutions for this Project include a new line between Devlin Switching Station and the Company's proposed Hornbaker Switching Station. For purposes of this Application, there are alternative electrical solutions and route alternatives. References to Alternative Solutions 1A, 2A, and 2B refer to the alternative electrical solutions.

There were five route alternatives considered for this Project that combine for the two electrical solutions that would serve the need for the Project. Solution 1 is an entirely overhead solution. Solution 2 is a hybrid solution (*i.e.*, it contains both overhead and underground lines). Within the two electrical solutions, the Company has identified two options, each a grouping of three route alternatives. The below table outlines the route options included in each solution.

Electrical Solution	Route Alternative	Summary
Solution 1 (Overhead)	Wellington – Pegasus Route 1	Overhead double circuit route from a cut-in on existing Lines #172/#2187, north of the existing Wellington Substation, to the proposed Pegasus Switching Station. [a]
	Pegasus – Hornbaker Route 1	Overhead double circuit route between the proposed Hornbaker Switching Station and the proposed Pegasus Switching Station. [a]
	Devlin – Pegasus Route 1 OR	Overhead double circuit route between the proposed Pegasus Switching Station and the proposed Devlin Switching Station. [a]

Electrical Solution	Route Alternative	Summary
	Devlin – Pegasus Route 2	
Solution 2 (Hybrid)	Hourglass – Hornbaker Route 1 (Hybrid)	Hybrid underground and overhead double circuit route between a cut in on Dominion's existing Line #2196, adjacent to the existing Hourglass Substation, and the proposed Hornbaker Switching Station.
	Pegasus – Hornbaker Route 1	Overhead double circuit route between the proposed Hornbaker Switching Station and the proposed Pegasus Switching Station. [a]
	Devlin – Pegasus Route 1 OR Devlin – Pegasus Route 2	Overhead double circuit route between the proposed Pegasus Switching Station and the proposed Devlin Switching Station. [a]

[a] The Devlin and Pegasus Switching Stations have been proposed as part of other projects.

Accordingly, the two electrical solutions with the route options comprise the following solutions for the Project:

- Solution 1A: Comprised of (1) Wellington – Pegasus Route 1; (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 1.
- Solution 1B (Proposed): Comprised of (1) Wellington – Pegasus Route 1; (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 2.
- Solution 2A: Comprised of (1) Hourglass – Hornbaker Route 1 (Hybrid); (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 1.
- Solution 2B: Comprised of (1) Hourglass – Hornbaker Route 1 (Hybrid); (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 2.

Solution 1B includes the Company's proposed electric solution and routes for the Project. The remaining alternative electrical solution and corresponding route alternatives are addressed in detail in the other applicable sections of the Appendix.

Proposed Solution 1B

Wellington – Pegasus Route 1

Wellington – Pegasus Route 1 is an approximately 0.6-mile overhead transmission line.

***Pegasus – Hornbaker Route* 1**

Pegasus – Hornbaker Route 1 is an approximately 1.9-mile overhead transmission line.

Devlin – Pegasus Route 2

Devlin – Pegasus Route 2 is an approximately 2.8-mile overhead transmission line.

<u>Alternative Solution 1A</u>

Wellington – Pegasus Route 1

Wellington – Pegasus Route 1 is an approximately 0.6-mile overhead transmission line.

***Pegasus – Hornbaker Route* 1**

Pegasus – Hornbaker Route 1 is an approximately 1.9-mile overhead transmission line.

Devlin – Pegasus Route 1

Devlin – Pegasus Route 1 is an approximately 2.4-mile overhead transmission line.

<u>Alternative Solution 2A</u>

Hourglass – Hornbaker Route 1 (Hybrid)

Hourglass – Hornbaker Route 1 is a combination of approximately 0.5 mile of overhead transmission line with approximately 0.8 mile of underground transmission line.

***Pegasus – Hornbaker Route* 1**

Pegasus – Hornbaker Route 1 is an approximately 1.9-mile overhead transmission line.

Devlin – Pegasus Route 1

Devlin – Pegasus Route 1 is an approximately 2.4-mile overhead transmission line.

<u>Alternative Solution 2B</u>

Hourglass – Hornbaker Route 1 (Hybrid)

Hourglass – Hornbaker Route 1 is a combination of approximately 0.5 mile of overhead transmission line with approximately 0.8 mile of underground transmission line.

***Pegasus – Hornbaker Route* 1**

Pegasus – Hornbaker Route 1 is an approximately 1.9-mile overhead transmission line.

Devlin – Pegasus Route 2

Devlin – Pegasus Route 2 is an approximately 2.8-mile overhead transmission line.

The Company proposes all Proposed and Alternative Solutions for Commission consideration and notice. Discussion of the Proposed and Alternative Solutions, as well as other overhead and underground routes that the Company studied but ultimately rejected, is provided in Section II of the Appendix and discussed in more detail in the Environmental Routing Study (or "Routing Study") included with the Application.

The new Hornbaker Switching Station will be constructed with four 230 kV breakers and two 230 kV lines, and it will be built to 4000 amp ("A") standards. The total area of the Hornbaker Switching Station is approximately 2.3 acres.

In addition to the substation-work described above, the Company currently anticipates performing relay resets at the Pegasus Switching Station.

The estimated conceptual cost of the Project utilizing the Proposed Solution is approximately $94.3 million which includes approximately $82.5 million for transmission-related work and approximately $11.8 million for substation-related work (2024 dollars).[5]

The desired in-service target date for the Project is June 1, 2029. The Company estimates it will take approximately 42 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 December 12, 2025. Should the Commission issue a final order by December 12, 2025, to accommodate long-lead materials procurement, the Company estimates that construction should begin around February 1, 2027, and be completed by June 1, 2029. 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 is also contingent upon the Company's ability to negotiate for easements with property owners along the approved routes without the need for additional litigation.

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 is actively 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

[5] These total Project costs are inclusive of projected real estate costs that the Company anticipates will be required to acquire the property rights for the Project.

rule to the Federal Register to list the TCB as endangered under the Endangered Species Act. USFWS 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.

Any adjustments to this Project schedule resulting from these or similar challenges could necessitate a minimum of a six- to twelve-month delay in the targeted in-service date. Accordingly, for purposes of judicial economy, the Company requests that the Commission issue a final order approving both a desired in-service target date (*i.e.*, June 1, 2029) and an authorization sunset date (*i.e.*, June 1, 2030) for energization of the Project. [6]

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[6] The Company notes that this request is consistent with the Commission's findings in other recent proceedings. S*ee Application of Virginia Electric and Power Company for approval of electric transmission facilities: Fentress-Yadkin 500 kV Line #588 Rebuild and New 500 kV Fentress-Yadkin Line #5005*, Case No. PUR-2024-00105, Final Order (Feb. 28, 2025), approving an in-service date of January 1, 2027, and a CPCN sunset date of January 1, 2028, for energization of that project in Ordering Paragraph (8); *Application of Virginia Electric and Power Company for approval of electric transmission facilities: 500-230 kV Aspen Substation, 500 kV Aspen-Goose Creek Line #5002, 500 kV and 230 kV Aspen-Golden Lines #5001 and #2333, 500-230 kV Golden Substation, and Lines #2081/#2150 Loop*, Case No. PUR-2024-00032, Final Order (Feb. 6, 2025), approving an in-service date of June 1, 2028, and a CPCN sunset date of June 1, 2029, for energization of that project in Ordering Paragraph (8); and *Application of Virginia Electric and Power Company for approval of electric transmission facilities: 230 kV Apollo-Twin Creeks Lines, and Twin Creeks, Sycolin Creek, Starlight, Lunar, and Apollo Substations*, Case No. PUR-2024-00044, Final Order (Feb. 5, 2025), approving an in service date of September 30, 2028, and a CPCN sunset date of September 30, 2029, for energization of that project in Ordering Paragraph (8).

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 is necessary to provide requested transmission service to NOVEC, for NOVEC to provide service to one of its data center customers in Prince William County, Virginia; to maintain reliable electric transmission service for the overall growth in the Project area, and to comply with mandatory NERC Reliability Standards. See Attachment I.A.1 for an overview map of the proposed Project, and Attachment I.A.2 for a high-level overview of the potential electric planning configurations which at full build-out will address both the near-term NOVEC DP request and the longer-term reliability need for this region.

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, NOVEC, Central Virginia Electric Cooperative, and Virginia Municipal Electric Association for redelivery to their retail customers in Virginia; and, (iii) to North Carolina Electric Membership Corporation and North Carolina Eastern Municipal Power Agency for redelivery to their customers in North Carolina (collectively, the "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 Interconnection, LLC ("PJM") regional transmission organization ("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 16, 2024, the DOM Zone set a record high of 23,127 MW for summer peak demand. On January 23, 2025, the DOM Zone set a preliminary winter and all-time record demand of 24,678 MW. Based on the 2025 PJM Load Forecast, the DOM Zone is expected to grow with average growth rates of 6.3% summer and 6.0% winter over the next 10 years compared to the PJM average of 3.1% and 3.8%

over the same period for the summer and winter, respectively.[7]

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

NERC has been designated by the Federal Energy Regulatory Commission ("FERC") as the electric reliability organization for the United States. Accordingly, NERC requires that the planning authority and transmission planner develop planning criteria to ensure compliance with NERC Reliability Standards. Mandatory NERC Reliability Standards require that a transmission owner ("TO") develop facility interconnection requirements that identify load and generation interconnection minimum requirements for a TO's transmission system, as well as the TO's reliability criteria.[8]

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.[9] 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.[10] 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").

[7] A copy of the 2025 PJM Load Report is available at the following: https://www.pjm.com/-/media/DotCom/library/reports-notices/load-forecast/2025-load-report.pdf. *See, in particular,* page 3 (PJM) and pages 6, 9, 34 (DOM Zone).

[8] *See* Facility Connection ("FAC") Standard FAC-001-4 (effective January 1, 2024), which can be found at https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-001-4.pdf.

[9] PJM Manual 14B (effective June 27, 2024) focuses on the RTEP process and can be found at https://www.pjm.com/-/media/documents/manuals/m14b.ashx.

[10] *See* PJM Manual 14B, Attachment D: PJM Reliability Planning Criteria. *See supra*, n. 9 for a link to the PJM Manual 14B.

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

NEED FOR THE PROJECT

The Project as proposed is needed to interconnect and serve NOVEC's Hornbaker DP located in Prince William County, Virginia, and to maintain reliable service for the overall load growth in the Hornbaker Load Area, in compliance with mandatory NERC Reliability Standards. See Attachment I.A.1 for an overview map of the proposed Project.

Customer Requested Service

In December 2021, NOVEC submitted a DP request to the Company's Transmission Planning group for construction of a new switching station (*i.e.*, the proposed Hornbaker Switching Station) to serve NOVEC's Hornbaker DP in Prince William County, Virginia. In the most recent loading projections provided to the Company by NOVEC in August 2024, the DP request projected a summer load of 0 MW in 2026, 78.4 MW for 2027, and 300 MW at full build-out, with a requested in-service date of January 2, 2025. Acknowledging that this requested in-service was not feasible, NOVEC is aware that the in-service date for completion of the Project is June 1, 2029.

See Section I.C for discussion as to existing infrastructure and why it is incapable of serving this need. See Section I.J for a discussion of the PJM process as it relates to this Project.

NERC Reliability Violation

In addition to providing the transmission service requested by NOVEC for NOVEC to provide service to one of its customers in Prince William County, Virginia, the Project is needed to maintain reliable transmission service for the overall growth in the Project area and to comply with mandatory NERC Reliability Standards. The Northern Virginia data center market is spread across Loudoun, Fairfax, and Prince William Counties. The combination of competitive colocation/cloud environment, fiber connectivity, strategic geographic location, low risk of business disruptions, affordable and reliable power, and the business climate in Virginia, has created the largest market for data center capacity in the United States. This Project is in this concentrated area of Prince William County.

In November 2022, the Company received another DP request from NOVEC to provide transmission service to one of its customers in Prince William County, Virginia. The Company presented the need for this site, Devlin Switching Station, to PJM at the March 7, 2023, TEAC Meeting, and the solution at the July 9, 2024, TEAC meeting. This project was classified as a supplemental project (DOM-2023-0013), pending supplemental ID assignment by PJM.

In load forecasts provided to the Company by NOVEC (See Section I.C), the combined loading of Dawkins Branch Switching Station and Devlin Switching Station is projected to exceed 300 MW by the Summer of 2029. Due to this, the Company's reliability analysis identified a 300 MW N-1-1 load drop violation under the following scenario: the combined loss of 230 kV Vint Hill – Devlin Line #2163 and 230 kV Dawkins Branch – Liberty Line #2246. The proposed Project will resolve this potential NERC reliability violation identified by the Company and PJM's reliability analysis of the Hornbaker Load Area by providing a new 230 kV source to the Devlin Switching Station via two 230 kV lines.

Moreover, there are other parcels within this area that have the potential to be developed as data centers, and there are many existing buildings within this load area that could be redeveloped into data centers. Constructing the proposed Project within this high potential growth area will allow the Company to continue to serve economic growth in the area in a timely manner through the continued construction of facilities in the area.

Accordingly, the proposed Project is needed to interconnect and serve NOVEC's Hornbaker DP and future load growth in the area.

THE PROPOSED PROJECT

The Company considered five route alternatives that can be combined into two electrical solutions that would serve the need for the Project. See Attachments I.A.3 and II.A.1. Within the two electrical solutions, the Company identified two options (each a grouping of three route alternatives) for each electrical solution. The two electrical solutions and the two identified options for each electrical solution are outlined below.

In the N-1-1 Thermal analysis of the 2029 RTEP model released in October 2024, there is an approximately 1% or less difference when comparing the highest loadings of the Proposed and Alternative Solutions. In consideration of thermal capacity within the vicinity of the Hornbaker Load Area, both the Proposed and Alternative Solutions appear to be electrically equivalent. As a result, the Proposed Solution was ultimately chosen for reasons of cost, schedule, impacts, and robustness in light of the continued development efforts by commercial customers within Prince William County.

<u>Proposed Solution 1B</u>

Wellington – Pegasus Route 1

Wellington – Pegasus Route 1 is an approximately 0.6-mile overhead transmission line that will require approximately 7.2 acres of right-of-way.

***Pegasus – Hornbaker Route* 1**

Pegasus-Hornbaker Route 1 is an approximately 1.9-mile overhead transmission line that will require approximately 24.8 acres of right-of-way, inclusive of the 2.3-acre Hornbaker Switching Station.

Devlin – Pegasus Route 2

Devlin-Pegasus Route 2 is an approximately 2.8-mile overhead transmission line that will require approximately 33.4 acres of right-of-way.

<u>Alternative Solution 1A</u>

Wellington – Pegasus Route 1

Wellington-Pegasus Route 1 is an approximately 0.6-mile overhead transmission line that will require approximately 7.2 acres of right-of-way.

***Pegasus – Hornbaker Route* 1**

Pegasus-Hornbaker Route 1 is an approximately 1.9-mile overhead transmission line that will require approximately 24.8 acres of right-of-way, inclusive of the 2.3-acre Hornbaker Switching Station.

Devlin – Pegasus Route 1

Devlin-Pegasus Route 1 is an approximately 2.4-mile overhead transmission line that will require approximately 28.6 acres of right-of-way.

<u>Alternative Solution 2A</u>

Hourglass - Hornbaker Route 1

Hourglass–Hornbaker Route 1 is a combination of approximately 0.5 mile of overhead transmission line with approximately 0.8 mile of underground transmission line and includes an approximately 3.1-acre transition station. The route would require a total of 17.1 acres of right-of-way, inclusive of the transition station.

***Pegasus – Hornbaker Route* 1**

Pegasus-Hornbaker Route 1 is an approximately 1.9-mile overhead transmission line that will require approximately 24.8 acres of right-of-way, inclusive of the 2.3-acre Hornbaker Switching Station.

Devlin – Pegasus Route 1

Devlin-Pegasus Route 1 is an approximately 2.4-mile overhead transmission line that will require approximately 28.6 acres of right-of-way.

Alternative Solution 2B

Hourglass-Hornbaker Route 1

Hourglass–Hornbaker Route 1 is a combination of approximately 0.5 mile of overhead transmission line with approximately 0.8 mile of underground transmission line and includes an approximately 3.1-acre transition station. The route would require a total of 17.1 acres of right-of-way, inclusive of the transition station.

***Pegasus – Hornbaker Route* 1**

Pegasus-Hornbaker Route 1 is an approximately 1.9-mile overhead transmission line that will require approximately 24.8 acres of right-of-way, inclusive of the 2.3-acre Hornbaker Switching Station.

Devlin – Pegasus Route 2

Devlin-Pegasus Route 2 is an approximately 2.8-mile overhead transmission line that will require approximately 33.4 acres of right-of-way.

Hornbaker Switching Station

The Company also proposes to construct the Hornbaker Switching Station. The new Hornbaker Switching Station will be constructed with four 230 kV breakers and two 230 kV lines, and it will be built to 4000 A standards. The total area of the Hornbaker Switching Station is approximately 2.3 acres.

Minor Substation-Related Work

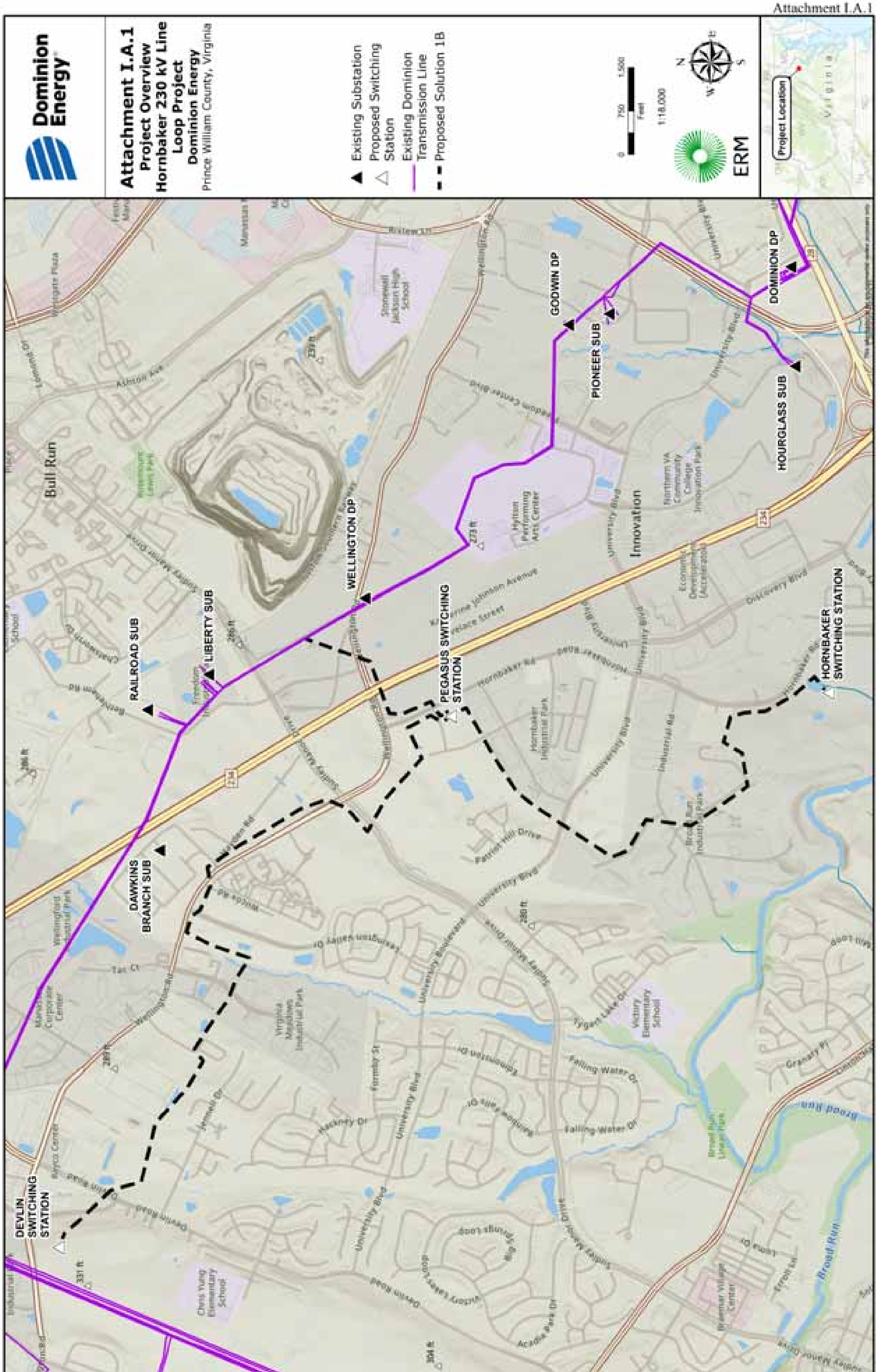
In addition to the substation-work described above, the Company currently anticipates performing relay resets at the Pegasus Switching Station.

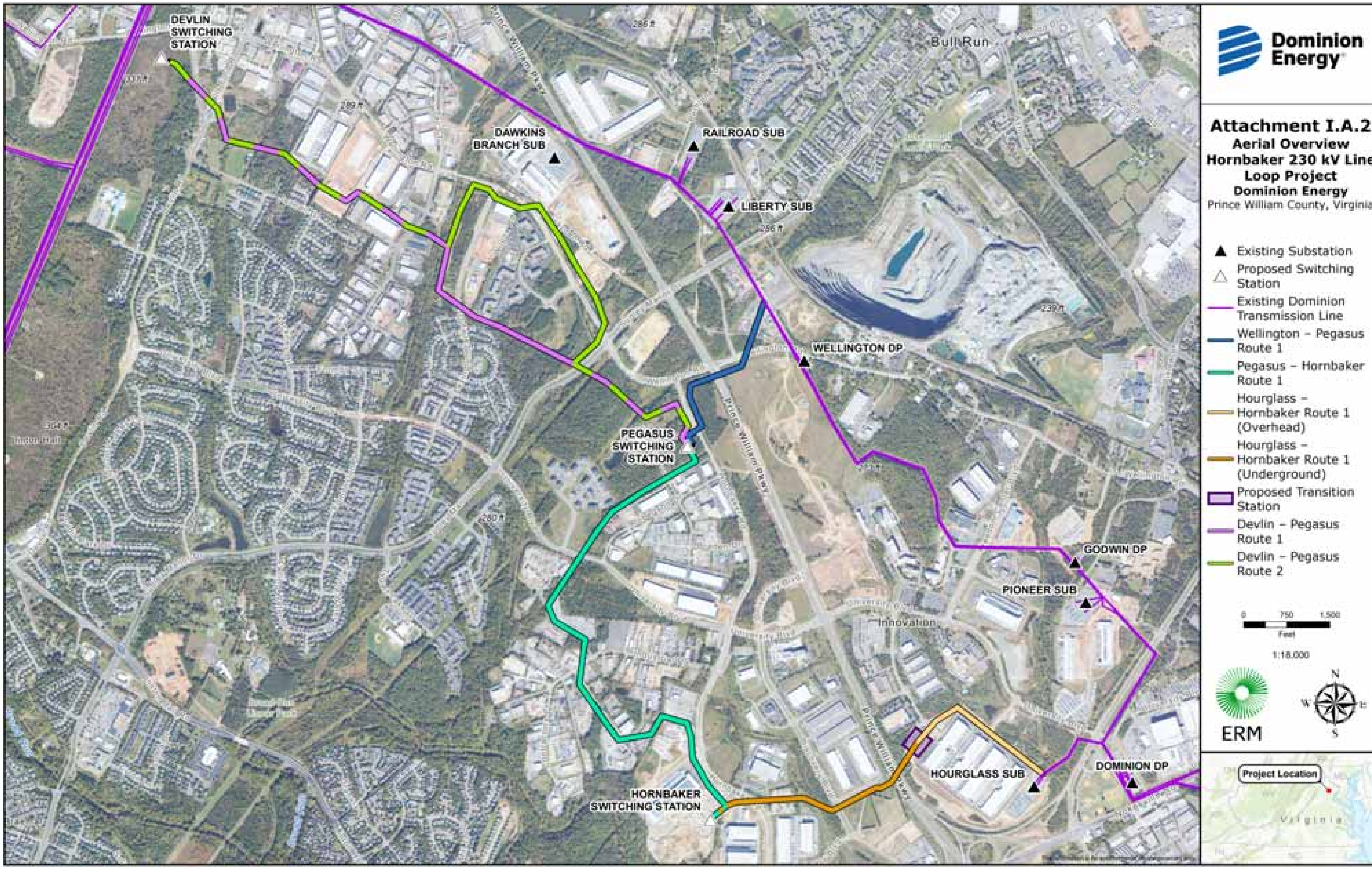
See Section II.A.9 for more details regarding the route selection process.

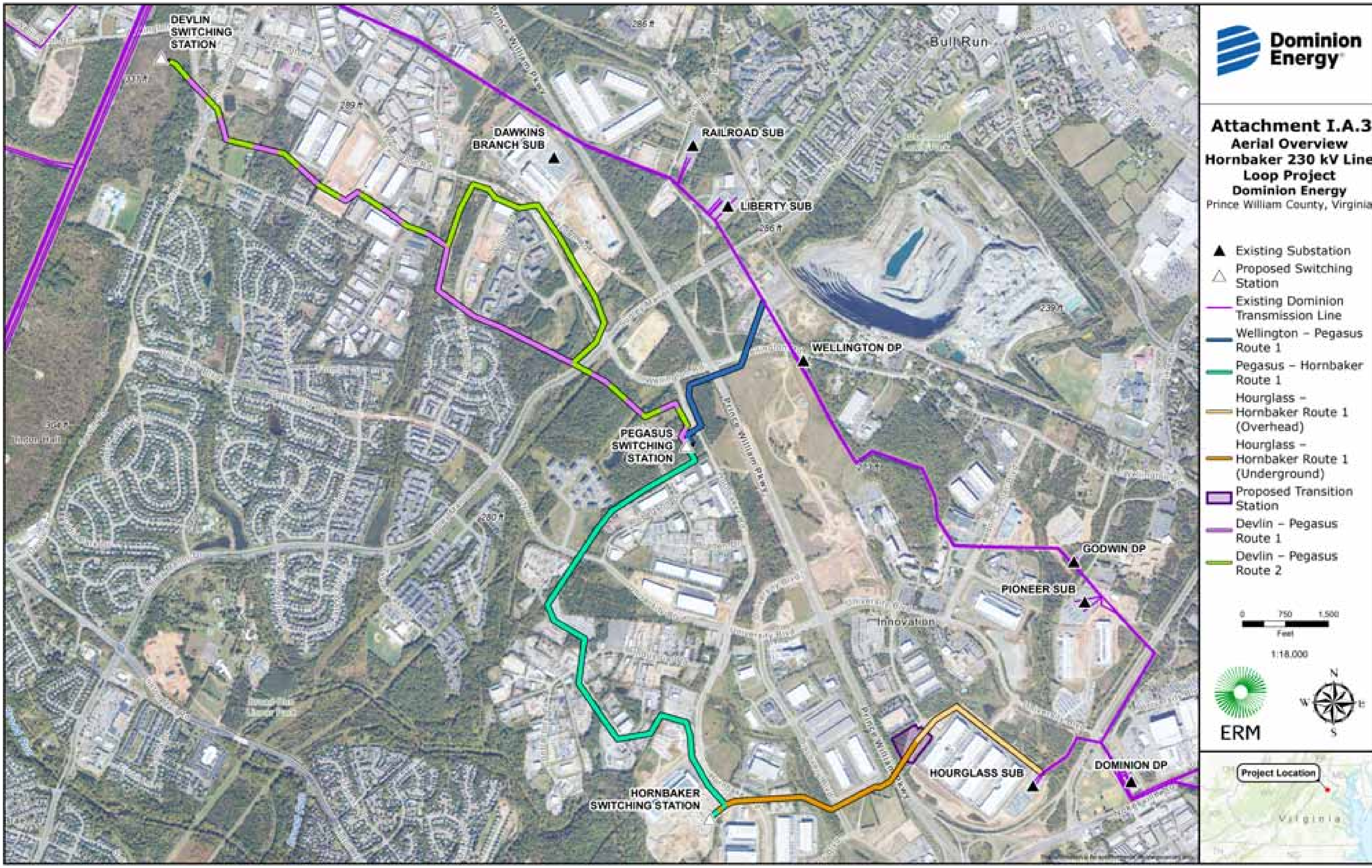
Attachment I.A.4 provides a one-line diagram of the existing transmission system in the Project Area. Attachment I.A.5 provides a one-line diagram of the transmission system in the Project Area with the proposed Project depicting the Company's Proposed Solution 1B, including future substations presented to PJM in the Project load area. Attachments I.A.6, I.A.7, and I.A.8 provide one-line diagrams of the transmission system in the Project Area with the proposed Project depicting Solutions 1A, 2A, and 2B respectively, including future substations presented to PJM in the Project load area.

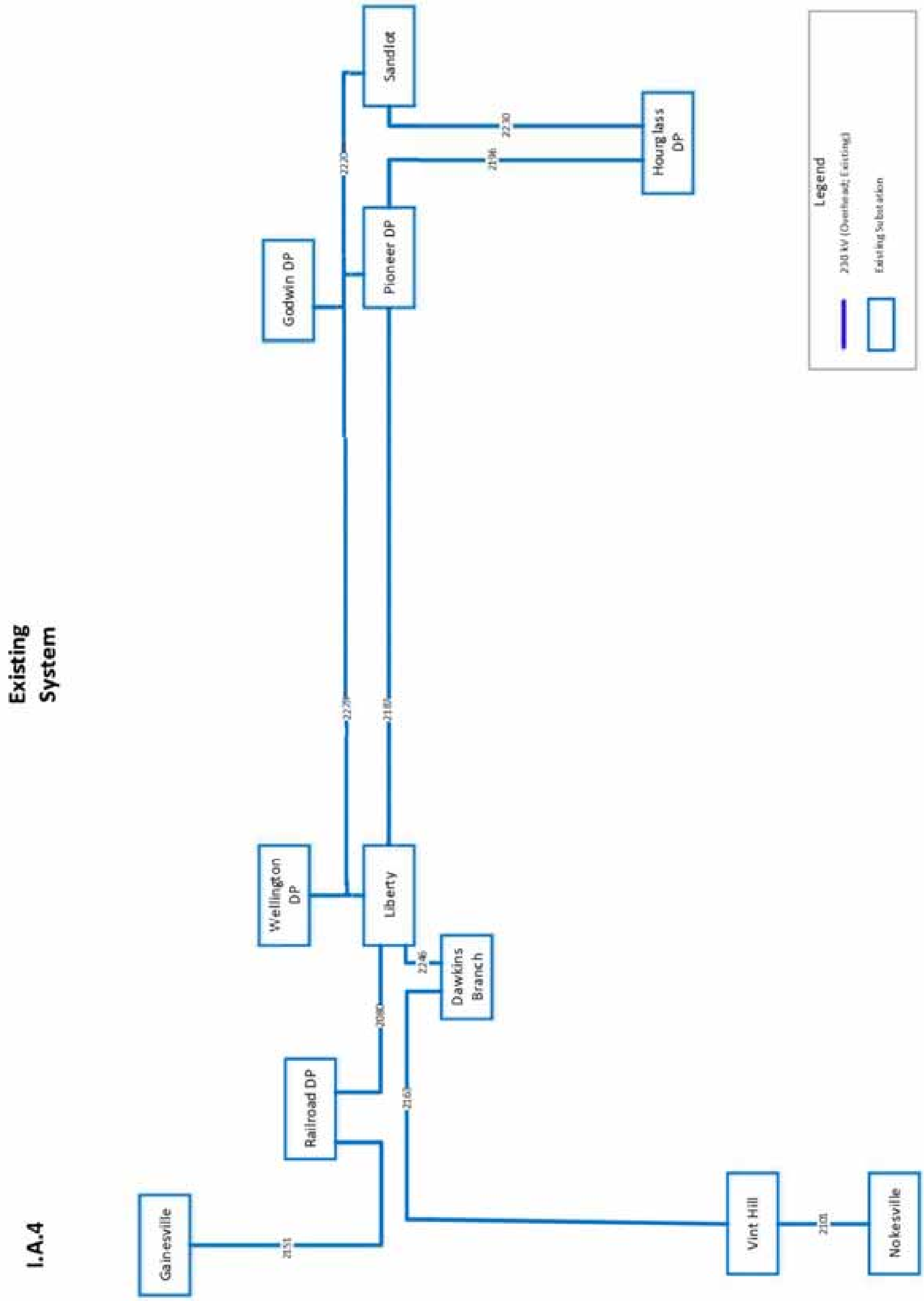
***

In summary, the proposed Project will provide service requested by NOVEC for its data center customer in Prince William County, Virginia, maintain reliable service for the overall growth in the Project area, and comply with mandatory NERC Reliability Standards.


Dominion Energy
Attachment I.A.1
Project Overview
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B
0
750
1,500
Feet
1:18,000
ERM
Project Location
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
DOMINION DP
HOURGLASS SUB
HORNBAKER SWITCHING STATION
Bull Run
Innovation

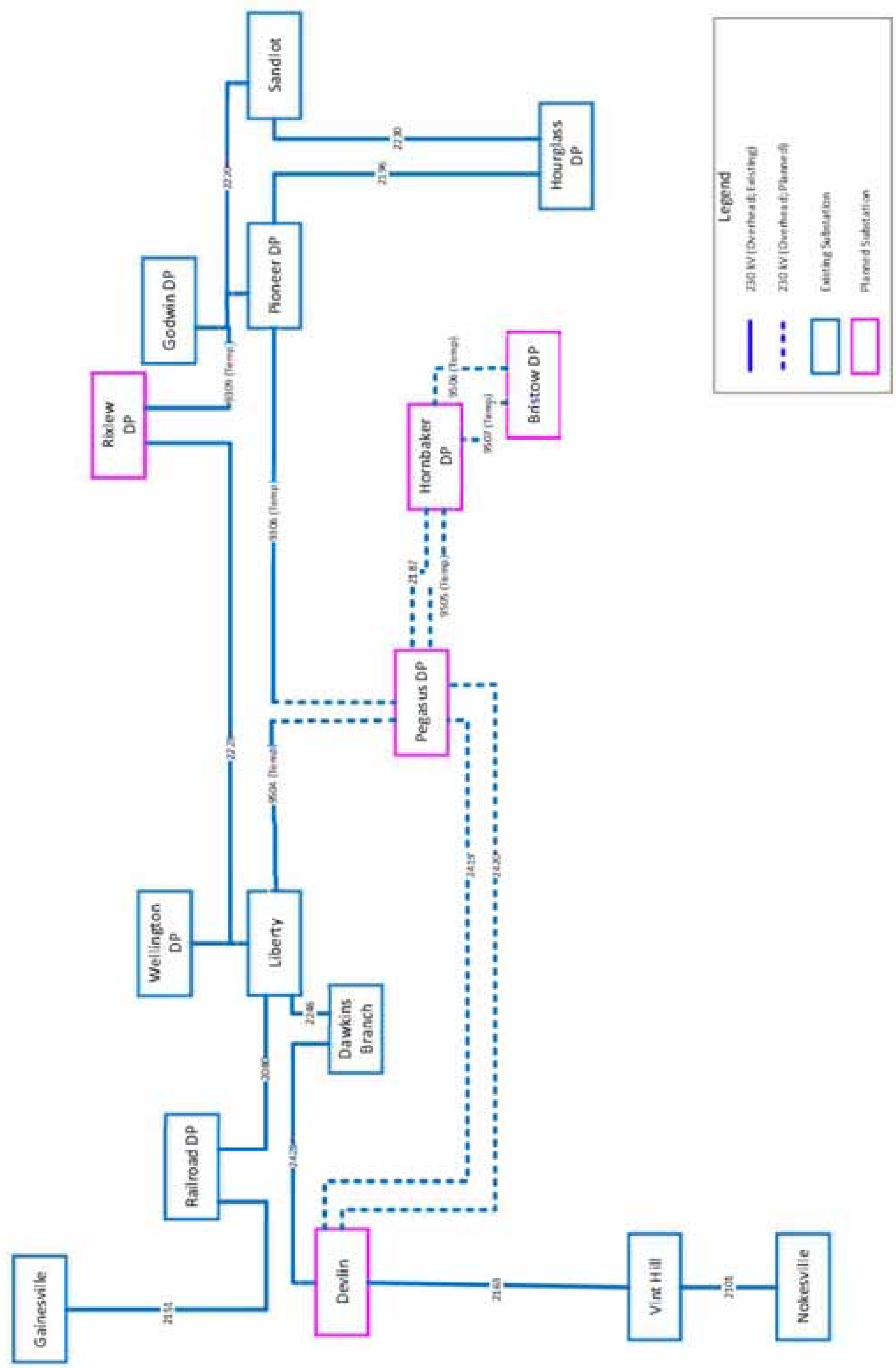

Dominion Energy
Attachment I.A.2
Aerial Overview
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Wellington – Pegasus Route 1
Pegasus – Hornbaker Route 1
Hourglass – Hornbaker Route 1 (Overhead)
Hourglass – Hornbaker Route 1 (Underground)
Proposed Transition Station
Devlin – Pegasus Route 1
Devlin – Pegasus Route 2
0 750 1,500
Feet
1:18,000
ERM
N
S
W
E
Project Location
Virginia
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
HORNBAKER SWITCHING STATION
HOURGLASS SUB
DOMINION DP
PIONEER SUB
GODWIN DP
Bull Run
Innovation
Prince William Pkwy


Dominion Energy
Attachment I.A.3
Aerial Overview
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Wellington – Pegasus Route 1
Pegasus – Hornbaker Route 1
Hourglass – Hornbaker Route 1 (Overhead)
Hourglass – Hornbaker Route 1 (Underground)
Proposed Transition Station
Devlin – Pegasus Route 1
Devlin – Pegasus Route 2
0 750 1,500
Feet
1:18,000
ERM
Project Location
Virginia
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
DOMINION DP
HORNBAKER SWITCHING STATION
Bull Run
Innovation
Prince William Pkwy

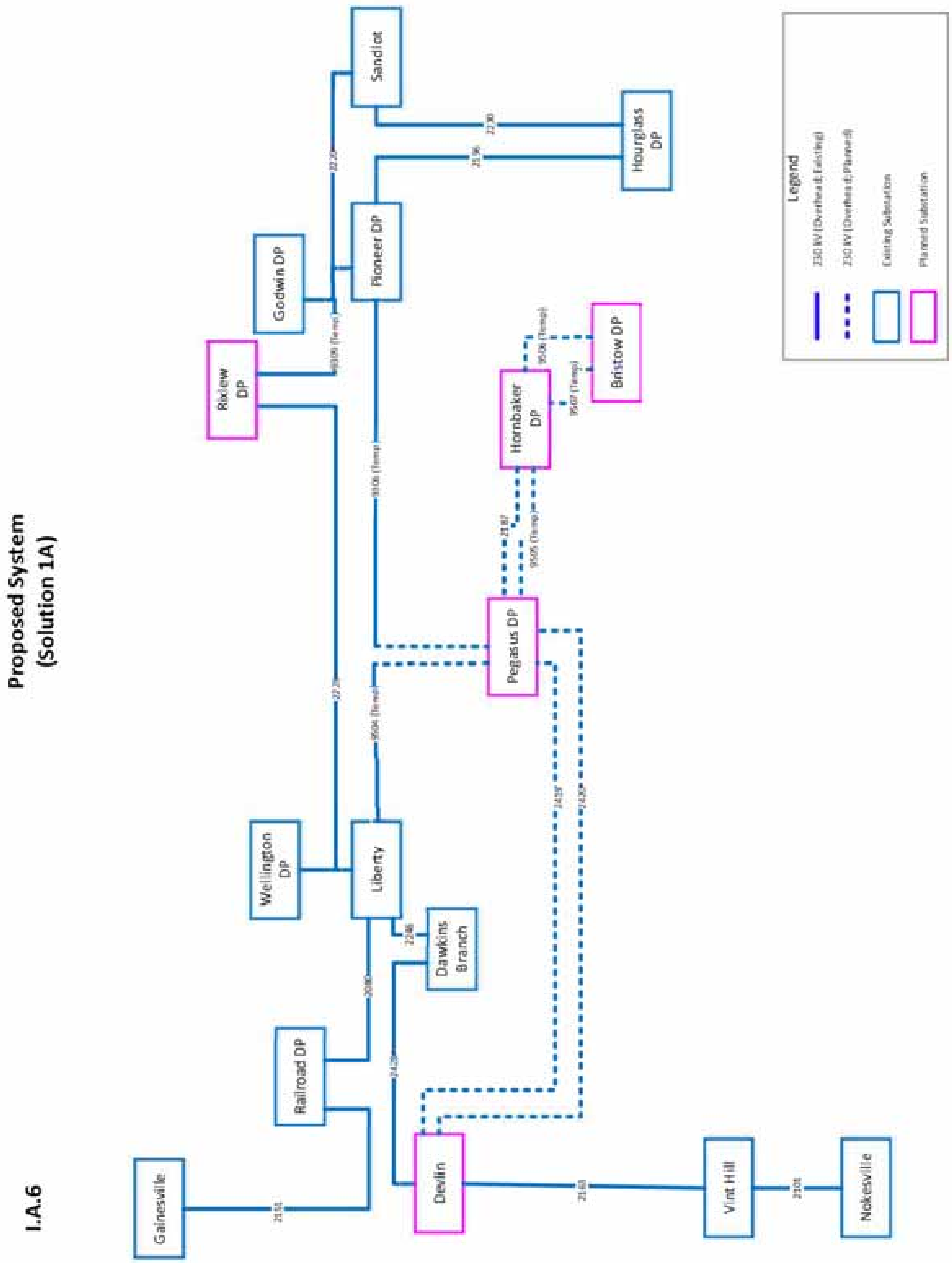

I.A.4
Existing System
Gainesville
Railroad DP
Wellington DP
Liberty
Dawkins Branch
Godwin DP
Pioneer DP
Sandlot
Hourglass DP
Vint Hill
Nokesville
Legend
230 kV (Overhead; Existing)
Existing Substation

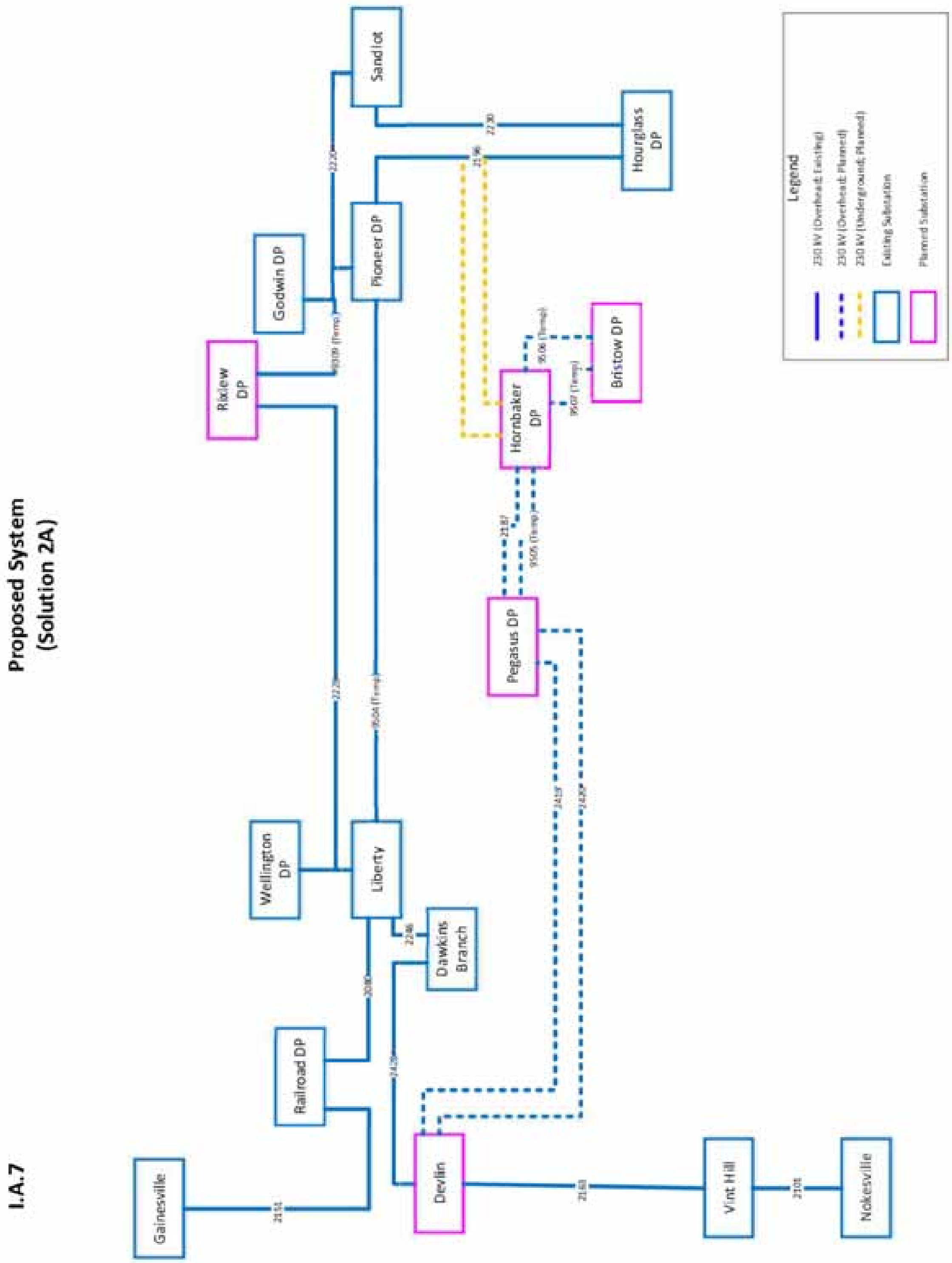
I.A.5

Proposed System
(Solution 1B)



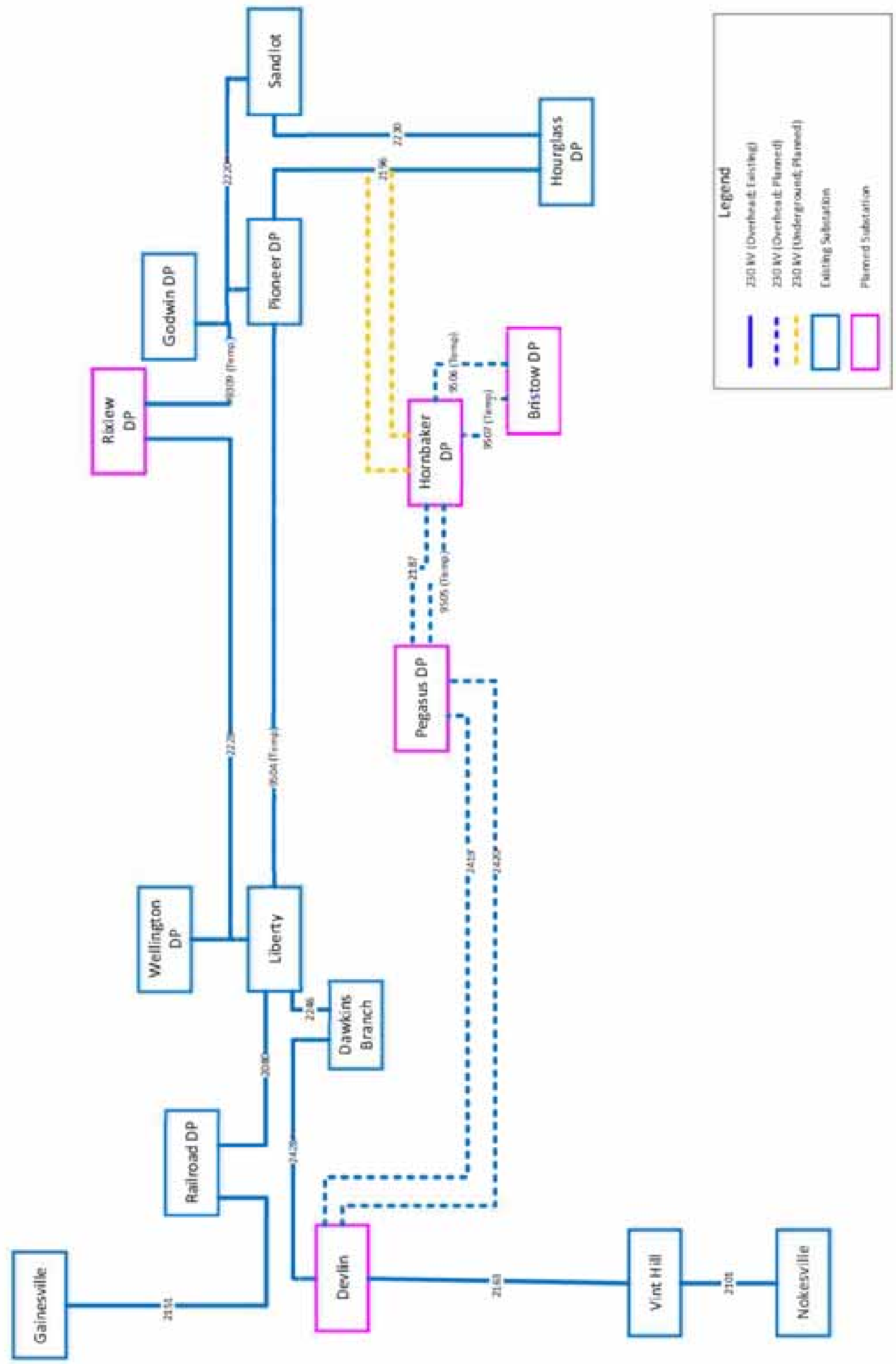
Attachment I.A.6




I.A.7
Proposed System
(Solution 2A)
Gainesville
Railroad DP
Wellington DP
Liberty
Dawkins Branch
Devlin
Vint Hill
Nokesville
Rixlew DP
Godwin DP
Pioneer DP
Sandlot
Hourglass DP
Hornbaker DP
Bristow DP
Pegasus DP
Legend
230 kV (Overhead; Existing)
230 kV (Overhead; Planned)
230 kV (Underground; Planned)
Existing Substation
Planned Substation

I.A.8

Proposed System (Solution 2B)



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

Response: **[1] Engineering Justification for Project**

See Section I.A of the Appendix.

[2] Known Future Projects

The proposed Project is needed to serve NOVEC's Hornbaker DP request related to its customer's new data center campus, and maintain reliable transmission service for overall load growth in the area, consistent with NERC Reliability Standards as described in Section I.A. See Attachment I.A.1 for existing and future electric transmission facilities in the affected load area, including the proposed Project, which will serve existing and future customers. While future Company projects are located generally within the same load area of the proposed Hornbaker Switching Station (as shown on Attachment I.A.1), each has its own unique load growth drivers, and as such, these future projects do not "require" the proposed Project to be constructed. These facilities include new substations that will be required to serve other load within the Project area, including parcels which may be developed as data centers.

In August 2024, the Company received a DP request from NOVEC for the Bristow Switching Station to provide transmission service to one of its customers in Prince William County, Virginia. The site proposed for this request is directly adjacent to the site of the proposed Hornbaker Switching Station. Based on the proposed location in relation to the nearest existing transmission infrastructure, the request requires two 230 kV lines to be extended from the proposed Hornbaker Switching Station to allow for a transmission interconnection compliant with PJM and Company transmission planning criteria. As a result, the Company presented the need for the Bristow Switching Station to PJM at the September 10, 2024, TEAC Meeting, and the solution at the December 3, 2024, TEAC meeting. This project was classified as a supplemental project (DOM-2024-0063), pending supplemental ID assignment by PJM.

[3] Planning Studies

Dominion Energy Virginia's Electric Transmission Planning group performs planning studies to ensure delivery of bulk power to a continuously changing customer demand under a wide variety of operating conditions. Studies are performed in coordination with the Company's RTO (*i.e.*, PJM) and in accordance with NERC Reliability Standards. In completing these studies, the Company considered all other known generation and transmission facilities impacting the affected load area.

In order to maintain reliable service to customers and to comply with mandatory NERC Reliability Standards, specifically Facility Connection ("FAC") standard FAC-001,[11] the Company's FIR document addresses the interconnection requirements of generation, transmission, and electricity end-user facilities. The purpose of the NERC FAC standards is to avoid adverse impacts on reliability by requiring that each TO establish facility connection and performance requirements in accordance with FAC-001, and the TOs and customers meet and adhere to the established facility connection and performance requirements in accordance with FAC-002.[12]

NERC Reliability Standards TPL-001 requirements R2, R5, and R6 require PJM, the Planning Coordinator and the TO, to have criteria. PJM's planning criteria outlined in Attachment D of Manual 14B requires the Company, as a TO, to follow NERC and Regional Planning Standards and criteria as well as the TO Standards filed in Dominion Energy Virginia's FERC 715 filings.[13] The Company's FERC 715 filing contains the Dominion Energy Virginia Transmission Planning Criteria in Exhibit A of the FIR document.

The four major criteria considered as part of this Project were:

1) Ring bus arrangement is required for load interconnections in excess of 100 MW (Company's FIR, Section 6.2);

2) The amount of direct-connected load at any substation is limited to 300 MW (Company's Transmission Planning Criteria Exhibit A, Section C.2.8);

3) N-1-1 contingencies load loss is limited to 300 MW (PJM Manual 14B Section 2.3.8, Attachment D, Attachment D-1, Attachment F); and

4) The minimum load levels within a 10-year planning horizon for the direct interconnection to existing transmission lines is 30 MW for a 230 kV

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

[12] *See* https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-002-2.pdf.

[13] For additional information related to FERC Form 715, *see* https://www.pjm.com/library/request-access/ferc-form-715.

delivery (Company's FAC-001 Section 6, Load Criteria – End User).

The Project is being constructed as a double circuit loop instead of a single circuit tap to comply with Section 6.2 of the Company's FIR, which requires a ring bus arrangement for load interconnections in excess of 100 MW.

The Project is electrically more robust than the electric alternatives described in Section I.E of this Appendix, as it allows Hornbaker Switching Station to be loaded to 300 MW and still meet all NERC Reliability Standards. See Section I.C of the Appendix for further discussion of the NERC Criteria regarding 300 MW total substation loading.

[4] Facilities List

See Attachment I.A.1 for existing and future transmission infrastructure for the Hornbaker Load Area, which includes all baseline and supplemental projects in the Project area that have been submitted to PJM as of the time of this filing. See Attachment I.G.1 for existing transmission lines and future transmission facilities in the Project area. See Attachment II.A.1 for a map depicting the Project, including the Proposed Routes.

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 peak demands and ten years of projected summer and 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).

Response: See Attachment I.G.1 for the portion of the Company's transmission facilities in the Project area. Attachment I.A.1 displays the concentrated load pocket defined as the Hornbaker Load Area, which is served by the Gainesville and Vint Hill Substations from the west, and Sandlot Substation from the east. As noted in Section I.A, loading forecasts provided by NOVEC for the Hornbaker Load Area project a combined loading of over 300 MW in 2029 for Devlin Switching Station and Dawkins Branch Substation. Without the Hornbaker Line Loop component of the Project, an N-1-1 scenario would exist in which an excess of 300 MW would be lost. See Attachment I.C.1.

As shown in Attachment I.C.1, the combined load in the Hornbaker Load Area is projected to increase from approximately 803 MW in 2025 to 2,043 MW in 2035. Adding this load to the existing transmission infrastructure in the Project area would result in overload conditions and NERC transmission system reliability criteria violations. Specifically, NOVEC's latest load forecast projects 0 MW in 2026, 78.4 MW for 2027, and 300 MW at full build-out.

Attachment I.C.1 shows the projected annual load ramp of the Project area and the projected loading at the proposed Hornbaker Switching Station. Note that Attachment I.C.1 includes only the normal feed circuits to the NOVEC customer's data center loads; they do not include any alternate feed loads.

The Company's FIR document (Section C.2.8) requires that the total load in any station not exceed 300 MW to ensure system reliability and to remain in compliance with NERC mandated reliability criteria.

To ensure reliability to its customers, the Company maintains a substation transformer contingency plan. Because of the negative impact to customers due to outage duration if a substation transformer were to fail, the Company creates a switching plan that allows customer load to be picked up on other equipment for loss of any substation transformer. There are various switching methods that can be used for these substation transformer contingency plans. If the contingency plan creates overloads in other equipment because of the switching, new substation capacity is necessary.

Attachment I.C.1

I.C.1

Historical and Forecasted MW Loads - Hornbaker Load Area

Summer	Historical					Projected										
Station/ Year	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Gainesville	130	103	59	47	56	79	80	81	82	84	85	86	86	87	87	87
Railroad	100	100	101	102	104	134	125	127	105	104	104	103	103	103	102	102
Devlin	N/A	N/A	N/A	N/A	N/A	N/A	6	43	104	146	165	173	177	178	179	179
Dawkins Branch	N/A	N/A	N/A	47	63	78	137	160	175	185	191	197	207	220	235	244
Liberty DP	50	50	55	55	55	59	68	56	56	56	56	56	56	56	56	56
Wellington	15	15	15	16	16	16	16	16	17	17	17	17	17	17	18	18
Pegasus	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25	52	87	119	136	144	147	149	149
Rixlew	N/A	N/A	N/A	N/A	N/A	N/A	37	96	137	157	166	171	176	179	183	185
Hornbaker	N/A	N/A	N/A	N/A	N/A	N/A	N/A	78	175	216	223	224	225	225	225	225
Bristow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	50	214	244	249	250	250	250	250
Godwin	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Pioneer	88	101	115	129	143	157	175	164	183	200	216	230	243	255	265	273
Hourglass	N/A	N/A	N/A	221	223	225	247	251	251	251	251	252	252	251	251	251
Sandlot	7	6	13	10	13	11	11	11	11	11	11	11	11	11	11	11
Vint Hill	45	46	45	46	45	44	33	1	3	5	7	8	9	9	9	10
TOTALS	**436**	**423**	**405**	**675**	**718**	**803**	**937**	**1110**	**1404**	**1734**	**1857**	**1916**	**1956**	**1991**	**2021**	**2043**

Winter	Historical					Projected										
Station/ Year	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Gainesville	104	95	89	39	36	63	64	65	66	67	68	69	69	69	69	70
Railroad	100	100	101	102	104	134	125	127	105	104	104	103	103	103	102	102
Devlin	N/A	N/A	N/A	N/A	N/A	N/A	6	43	104	146	165	173	177	178	179	179
Dawkins Branch	N/A	N/A	N/A	47	63	78	137	160	175	185	191	197	207	220	235	244
Liberty DP	34	34	37	37	37	59	68	56	56	56	56	56	56	56	56	56
Wellington	10	10	10	11	11	16	16	16	17	17	17	17	17	17	18	18
Pegasus	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25	52	87	119	136	144	147	149	149
Rixlew	N/A	N/A	N/A	N/A	N/A	N/A	37	96	137	157	166	171	176	179	183	185
Hornbaker	N/A	N/A	N/A	N/A	N/A	N/A	N/A	78	175	216	223	224	225	225	225	225
Bristow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	50	214	244	249	250	250	250	250
Godwin	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Pioneer	88	101	115	129	143	157	175	164	183	200	216	230	243	255	265	273
Hourglass	N/A	N/A	N/A	221	223	225	247	251	251	251	251	252	252	251	251	251
Sandlot	0	3	8	9	9	11	11	11	11	11	11	11	11	11	11	11
Vint Hill	43	44	43	44	43	44	33	1	3	5	7	8	9	9	9	10
TOTALS	**379**	**388**	**404**	**640**	**669**	**787**	**921**	**1094**	**1387**	**1717**	**1840**	**1899**	**1939**	**1974**	**2004**	**2025**

** Historical loads are coincident with the Company's system peak*

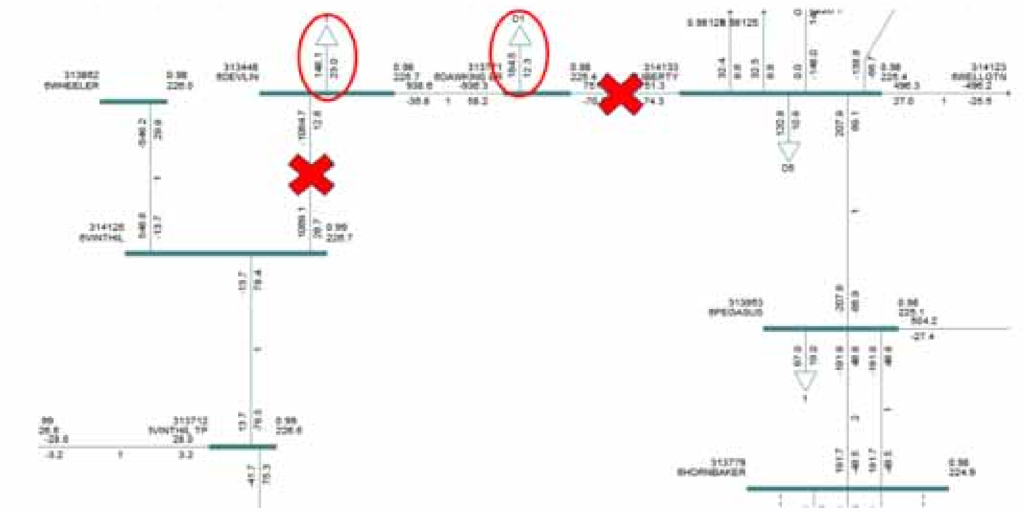
I. NECESSITY FOR THE PROPOSED PROJECT

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.

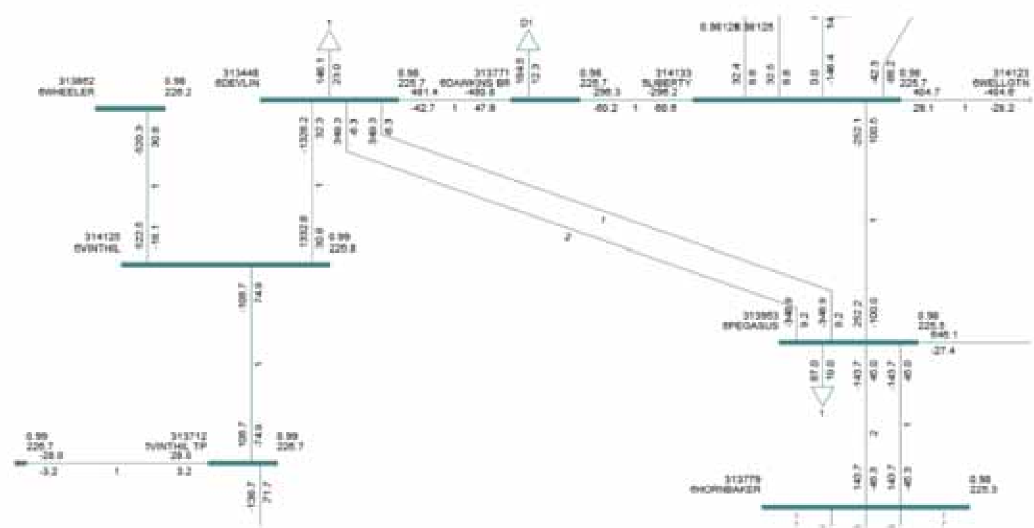
Response: For the Do No Harm ("DNH") study performed on the 2024 version of the 2029 RTEP model, the N-1-1 contingency and driver behind the Hornbaker Line Loop, *i.e.*, the loss of 230 kV Vint Hill – Devlin Line #2163 and 230 kV Dawkins Branch – Liberty Line #2246, was identified as causing a load loss in excess of 300 MW for the combined loss of load from Devlin Switching Station and Dawkins Branch Substation. The Company's FIR document (Section C.2.8) requires that the total load in any distribution substation not exceed 300 MW to ensure system reliability and to remain in compliance with NERC mandatory reliability criteria.

Upon presentation of the Hornbaker Line Loop to stakeholders during the December 3, 2024, TEAC meeting, the Project was included in the 2024 DNH 2029 RTEP model in which the aforementioned violation was resolved. The screenshots provided in Attachment I.D.1 were taken from the latest case released by PJM, the 2029 RTEP model released in October 2024, and provide the most current modeled loading forecasts.

RTEP Summer 2029 December Do-No-Harm Case: Violation Identified



RTEP Summer 2029 December Do-No-Harm Case: Violation Resolved



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: The Company identified the following transmission electrical alternatives to the Project. No distribution alternatives other than the proposed Project were considered, consistent with the overload conditions and violations described in Sections I.A and I.C.

Transmission Alternatives

Hornbaker Line Loop/ Mitigation of 300 MW Load Drop Violation

Alternative Option #1: *Cut-and-Loop 230 kV Line #2222 (Rollins Ford – Gainesville) into Devlin Switching Station*

This transmission alternative was analyzed for mitigation of the identified 300 MW load drop violation. It would consist of the termination of two 230 kV lines into Devlin Switching Station via the cut-and-extension of 230 kV Rollins Ford – Gainesville Line #2222, one of the existing 230 kV lines in the corridor adjacent to the switching station. With this alternative, Devlin Switching Station would require an additional two 230 kV breakers to be installed to accommodate the termination of the two 230 kV line segments.

Alternative Option #2: *Cut-and-Loop 230 kV Line #2151 (Gainesville – Railroad) into Dawkins Branch Substation*

This transmission alternative was also identified as a potential electrical solution of the identified 300 MW load drop violation, which would consist of the termination of two 230 kV lines into Dawkins Branch Switching Station via the cut-and-extension of 230 kV Gainesville – Railroad Line #2151. Similar to Alternative Option #1, Line #2151 is one of the existing 230 kV lines in the corridor adjacent to the switching station. Dawkins Branch Switching Station would require an expansion of the current configuration of a four-breaker ring bus to a six-breaker ring bus, thereby requiring an additional two 230 kV breakers to be installed to accommodate the termination of the two 230 kV line segments.

Alternative Options #1 and #2 were dismissed as insufficient for the following reasons. While both alternative options would mitigate the 300 MW load drop violation projected for the combined loss of Devlin and Dawkins Branch Switching Stations, the lack of an additional source into the Hornbaker Load Area would create multiple scenarios in which the combined loading of Pegasus, Hornbaker, and/or Bristow Switching Stations are lost, generating an additional 300 MW load drop violation for the area. Additionally, via the analysis of the 2024 PJM 2029 RTEP model, the latest model released by PJM in October 2024, several N-1-1 scenarios result in increased powerflow and thermal violations along the transmission corridor stemming from Dawkins Branch Switching Station. Thus, these alternative options result in the potential of expanding already existing capacity constraints outside of the Hornbaker Load Area.

Furthermore, there are other parcels within this region that have the potential to be developed as data centers, as well as existing buildings that could be redeveloped as data center campuses. In either case, an additional 230 kV source, such as the one being proposed by the Project, would be required for serving these potential loads.

In consideration of the continued load growth within the area, the cut-and-extension of existing 230 kV infrastructure would serve no effect on the mitigation and prevention of future capacity constraints in this corridor and accompanying Hornbaker Load Area as a standalone solution. From an electrical standpoint, it was determined that the substantial growth within the vicinity of the Hornbaker Load Area has deemed the extra capacity from the Project's two new 230 kV circuits between Devlin Switching Station and Pegasus Switching Station to be the most effective long-term solution.

Interconnection of Hornbaker 230 kV Switching Station

Alternative Option #1: *Cut and Tap 230 kV Line #2196 (Pioneer to Hourglass)*

This transmission alternative considers the interconnection of the Project by cutting existing 230 kV Hourglass – Pioneer Line #2196 and extending two 230 kV feeds to serve the Hornbaker Switching Station. Line #2196 currently contains an approximately 0.66-mile-long segment of 2-636 ACSR (24/7) 150-degree Celsius maximum operating temperature conductor limiting the entire line to a summer normal rating of 1,047 MVA. Line #2187, however, has an active PJM-approved supplemental project (Supplemental ID #s2608.2 and tentative in-service date of December 15, 2026) for a reconductor which will increase the summer normal rating of this line from 1,047 MVA to 1,572 MVA. In consideration of the currently active and PJM-approved reconductor projects between Liberty and Pioneer Substations, the decrease in the rating of Line #2196 would become a stress point in the corridor, acting as a bottleneck for powerflow within the Hornbaker Load Area without an additional supplemental project to reconductor the line, to be identified and approved by PJM.

Alternative Option #1 was dismissed for reasons beyond the reconductor project required. It was determined that routing constraints would require an underground portion of 230 kV transmission line, as well as a transition station for conversion back to overhead transmission to complete the termination of the two 230 kV line segments via Line #2196. Due to spatial constraints at the proposed site, as well as the need to accommodate two additional 230 kV line terminations for this option, Hornbaker Switching Station would also require a more expensive gas-insulated switchgear ("GIS") layout for this option, as opposed to the air-insulated arrangement proposed for the Project. Aside from the increase in cost, overhead transmission and air-insulated substation layouts are typically faster to construct when compared to underground transmission and GIS substations. Hornbaker Switching Station would not be able to meet the target in-service date if a GIS layout were required. This prolonged construction period also has the potential to create regional implications affecting the scheduling of the remaining DPs within the Hornbaker Load Pocket.

Furthermore, there is approximately 1.2 miles of straight-line distance between the proposed Hornbaker Switching Station and Hourglass Substation. If additional residential or commercial load in the future would seek to connect in the vicinity of this underground transmission corridor, the option to do so would be scarce given the inability to cut and tap underground transmission lines. Similarly, there is approximately 0.5 mile of straight-line distance between the 230 kV Liberty – Pioneer Line #2187/2228 corridor and the Pegasus Switching Station. If additional load of any kind materialized in the vicinity of this area, the cut-and-extension included in the proposed Project would be needed regardless.

Additionally, per NERC Reliability Standards and PJM Manual 14B, a load drop of more than 300 MW under an N-1 or N-1-1 scenario would be considered a violation, requiring an additional line extension to be brought into the area to provide relief. By interconnecting the Project between Pioneer and Hourglass Substations, the N-1-1 loss of Line #2196 from Pioneer Substation toward Hornbaker Switching Station, and Line #2230 from Hourglass Switching Station to Sandlot Substation would include the combined loading at Hornbaker, Hourglass, Pegasus, and Bristow Switching Stations for evaluation of the 300 MW load drop criteria before the 230 kV line extension between Devlin and Pegasus Switching Stations is completed. Aside from increased reliability, the interconnection of the Project via Line #2187 would avoid this potential of a combined 300 MW loading scenario since both Liberty and Pioneer Substations are networked with more than three 230 kV feeds already entering each substation. See Attachment I.A.4 and Attachment I.A.5.

Analysis of Demand-Side Resources

Pursuant to the Commission's November 26, 2013, Order entered in Case No. PUE-2012-00029,[14] and its November 1, 2018, Final Order entered in Case No. PUR-2018-00075,[15] 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

[14] *Application of Virginia Electric and Power Company d/b/a Dominion Virginia Power for approval and certification of electric facilities: Surry-Skiffes Creek 500 kV Transmission Line, Skiffes Creek-Whealton 230 kV Transmission Line, and Skiffes Creek 500 kV-230 kV-115 kV Switching Station*, Case No. PUR-2012-00029, Final Order (Nov. 26, 2023).

[15] *Application of Virginia Electric and Power Company for approval and certification of electric transmission facilities under Va. Code § 56-46.1 and the Utility Facilities Act, Va. Code § 56-265.1 et seq.*, Case No. PUR-2018-00075, Final Order (Nov. 1, 2018).

("DR").

In this case, the Company has identified a need for the Project in order to provide requested service and comply with mandatory NERC Reliability Standards, thereby enabling the Company to maintain the overall long-term reliability of its transmission system.[16] The Project is needed to serve NOVEC so that it can provide service to its customer's data center campus, with a projected total load of 300 MW at full build-out, and to resolve the NERC 300 MW load drop N-1-1 violation caused by the projected loading in the Hornbaker Load Area. 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 previously into PJM's capacity market is not a factor in this particular Application because of the identified need for the 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 discussed in Sections I.A. and I.C, the need is based in part on the Company's obligation to interconnect NOVEC's Hornbaker DP consistent with the FIR document and mandatory NERC Reliability Standards. As reflected in Sections I.A and I.C, the ultimate projected load at the Hornbaker Switching Station will be approximately 300 MW. By way of comparison, the Company achieved demand savings of 276.5 MW (net) / 350.0 MW (gross) from its DSM Programs in 2023.

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

I. NECESSITY FOR THE PROPOSED PROJECT

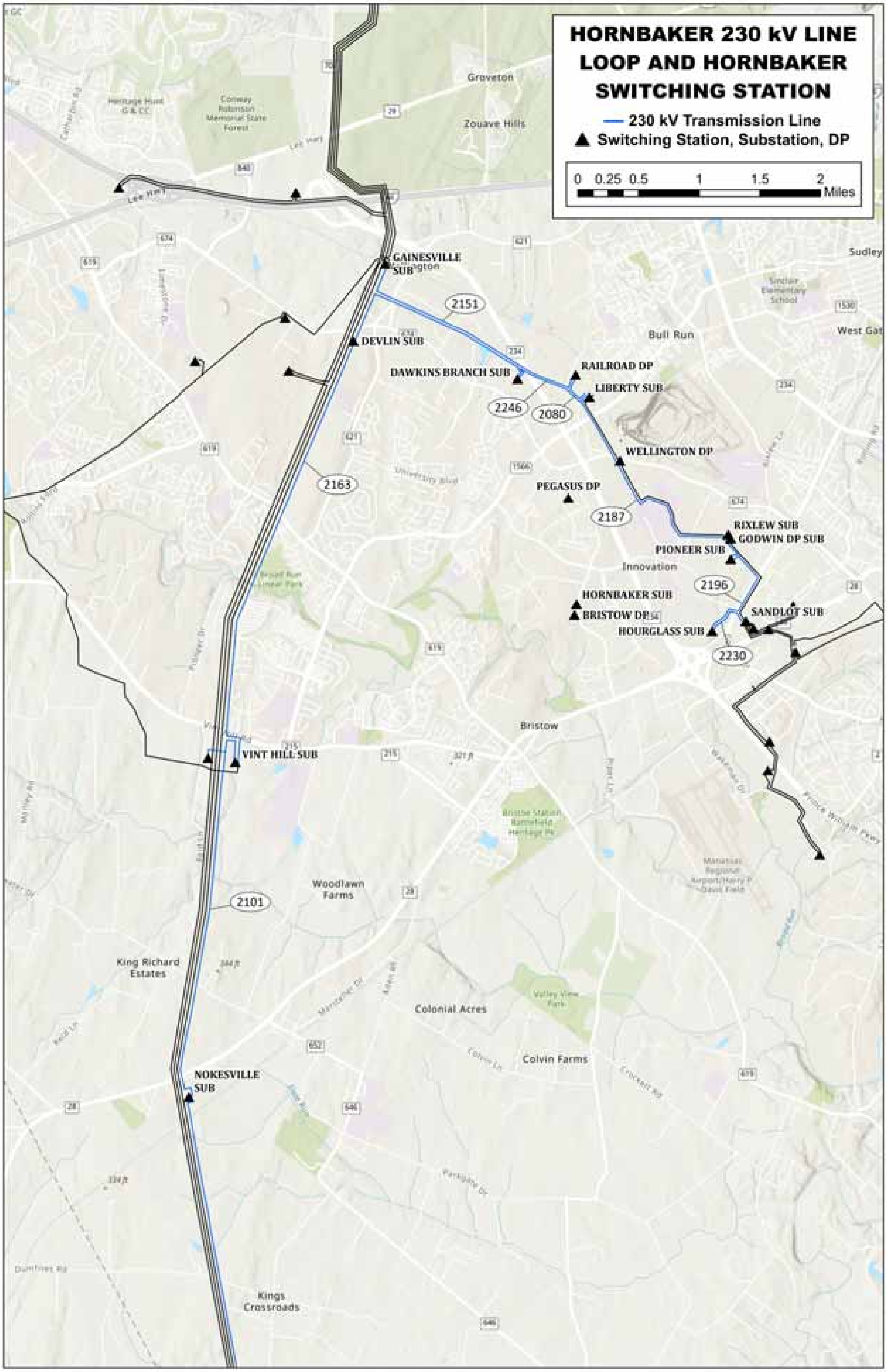
F. Describe any lines or facilities that will be removed, replaced, or taken out of service upon completion of the proposed project, including the number of circuits and normal and emergency ratings of the facilities.

Response: Not applicable.

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 <u>Attachment I.G.1</u>.


HORNBAKER 230 kV LINE LOOP AND HORNBAKER SWITCHING STATION
230 kV Transmission Line
Switching Station, Substation, DP
0 0.25 0.5 1 1.5 2 Miles
GAINESVILLE SUB
DEVLIN SUB
DAWKINS BRANCH SUB
RAILROAD DP
LIBERTY SUB
WELLINGTON DP
PEGASUS DP
RIXLEW SUB
GODWIN DP SUB
PIONEER SUB
HORNBAKER SUB
BRISTOW DP
HOURGLASS SUB
SANDLOT SUB
VINT HILL SUB
NOKESVILLE SUB
2151
2246
2080
2163
2187
2196
2230
2101
Groveton
Zouave Hills
Bull Run
Sudley
West Gat
Innovation
Bristow
Woodlawn Farms
King Richard Estates
Colonial Acres
Colvin Farms
Kings Crossroads

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 Project is June 1, 2029. The Company estimates it will take approximately 42 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 December 12, 2025. Should the Commission issue a final order by December 12, 2025, to accommodate long-lead materials procurement, the Company estimates that construction should begin around February 1, 2026, and be completed by June 1, 2029. 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 is also contingent upon the Company's ability to negotiate for easements with property owners along the approved routes without the need for additional litigation.

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; however, the interim guidance has been extended by USFWS until late summer 2024. The Company is actively 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 Endangered Species Act. USFWS 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.

Any adjustments to this Project schedule resulting from these or similar challenges could necessitate a minimum of a six- to twelve-month delay in the targeted in-service date. Accordingly, for purposes of judicial economy, the Company requests that the Commission issue a final order approving both a desired in-service target date (*i.e.*, June 1, 2029) and an authorization sunset date (*i.e.*, June 1, 2030) for energization of 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 estimated conceptual cost of the proposed Project utilizing Proposed Solution 1B is approximately $94.3 million, which includes approximately $82.5 million for transmission-related work and approximately $11.8 million for substation-related work (2024 dollars).

The estimated conceptual costs for the transmission-related work associated with the Alternative Solutions are provided in Section II.A.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: **Hornbaker 230 kV DP**

The Project is classified as a supplemental project (Supplemental Project DOM-2022-0045) initiated by the TO to interconnect new customer load. The need for the Project was submitted to PJM on July 12, 2022, and the solution slide was submitted to PJM on August 9, 2022. See Attachments I.J.1 and I.J.2, respectively. Additionally, the Project was assigned Supplemental ID #s3035.1 and included in the Company's 2024 Local Plan on February 21, 2024.

Pegasus 230 kV DP

The Project is classified as a supplemental project (Supplemental Project DOM-2024-0047) initiated by the TO to interconnect new customer load. The need for the Project was submitted to PJM on July 9, 2024, and the solution slide was submitted to PJM on December 3, 2024. See Attachments I.J.3 and I.J.4 respectively.

Hornbaker 230 kV Line Loop

The Project is classified as a supplemental Do-No-Harm ("DNH") project (Supplemental Project DOM-2023-0013-DNH) initiated by the TO to resolve a 300 MW load drop violation identified by PJM via the 2024 Do-No-Harm analysis. The solution for the Project was submitted to PJM on December 3, 2024. See Attachment I.J.5.

At the time of this filing, PJM is experiencing a backlog of several months in their DNH analysis and has not assigned Supplemental ID #s to any of the Solutions presented at the December 3, 2024, TEAC Meeting. Without Supplemental ID #s, these projects were not included in the Company's 2024 Local Plan. During a recent call with PJM, the Company was informed that PJM continues to experience internal delays to their Do-No-Harm process, with no anticipated target date as to when Supplemental ID #s will be provided or when projects will be accepted into the Local Plan. Given the information above, it is expected that, ultimately, the DNH analysis performed by PJM and this Project (DOM-2023-0013-DNH) will be included as part of the Local Plan. Regardless, as discussed in Section I.A, supplemental projects are not approved by the PJM Board and, as such, the Company believes it is more important to continue moving forward to interconnect customer load and address any harm created in a timely manner rather than to create constraints due to administrative backlog.

The Project is presently 100% cost allocated to DOM Zone.

Dominion Supplemental Projects

Transmission Expansion Advisory Committee
July 12, 2022

Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2022-0045

Process Stage: Need Meeting 07/12/2022

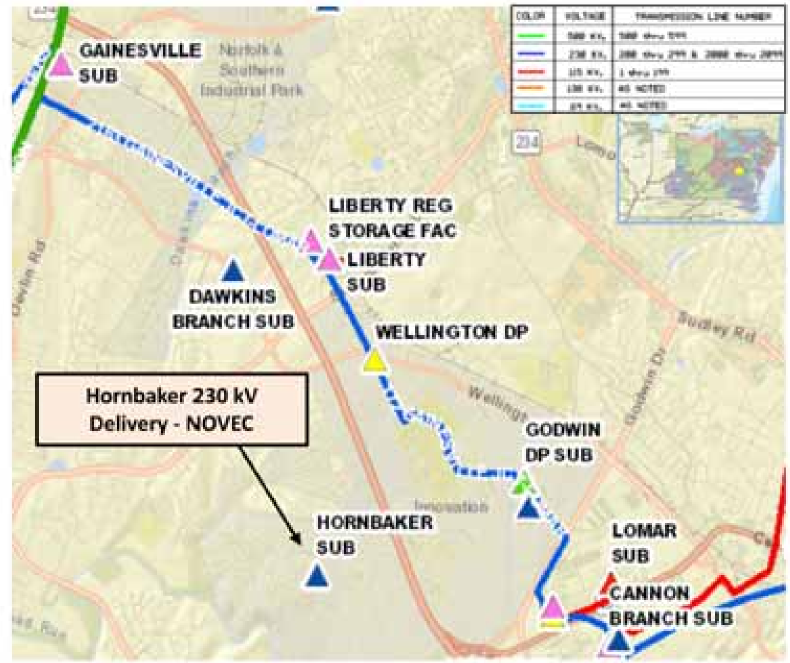
Project Driver: Customer Service

Specific Assumption References:
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:
NOVEC has submitted a DP Request for a new substation (Hornbaker) to serve a data center complex in Prince William County with a total load in excess of 100 MW.

Requested in-service date is 12/30/2025.

Initial In-Service Load	Projected 2027 Load
Winter: 60.0 MW	Winter: 150.0 MW



Dominion Supplemental Projects

Transmission Expansion Advisory
Committee
August 9, 2022

Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Dominion Transmission Zone: Supplemental Customer Load Request

Need Number: DOM-2022-0045
Process Stage: Solution Meeting 08/09/2022
Previously Presented: Need Meeting 07/12/2022
Project Driver: Customer Service

Specific Assumption References:
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

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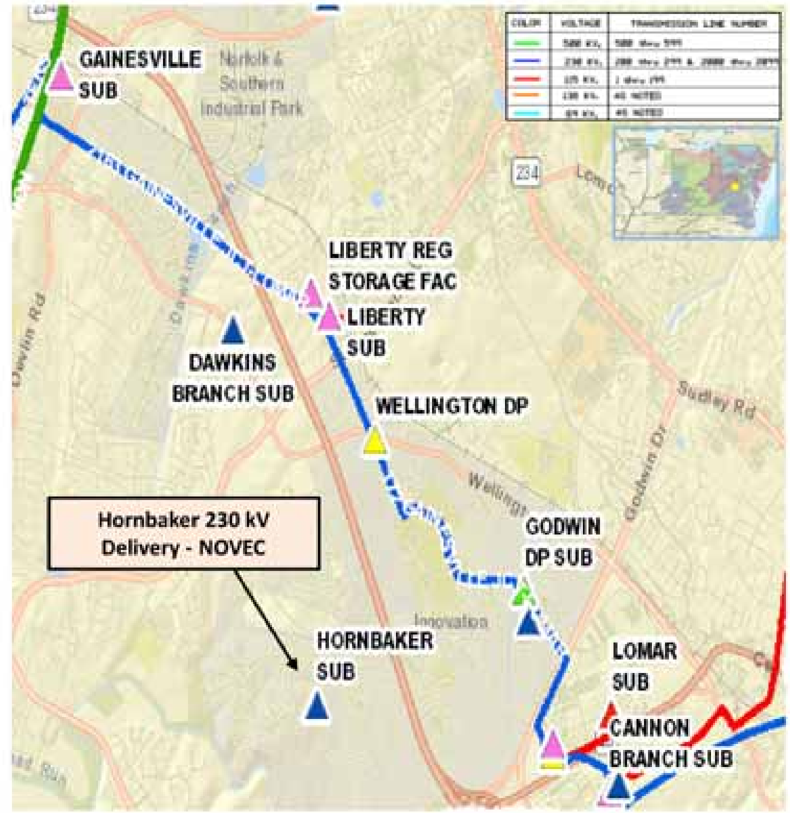
Problem Statement:
NOVEC has submitted a DP Request for a new substation (Hornbaker) to serve a data center complex in Prince William County with a total load in excess of 100 MW. Requested in-service date is 12/30/2025.

Initial In-Service Load	Projected 2027 Load
Winter: 60.0 MW	Winter: 150.0 MW



Dominion Transmission Zone: Supplemental Hornbaker 230kV Delivery - NOVEC

Need Number: DOM-2022-0045

Process Stage: Solutions Meeting 08/09/2022

Proposed Solution:
Interconnect the new substation by cutting and extending Line #2187 (Liberty - Pioneer) to the proposed Hornbaker Substation. Lines to terminate into a 230 kV four-breaker ring arrangement with an ultimate arrangement of a six-breaker ring.

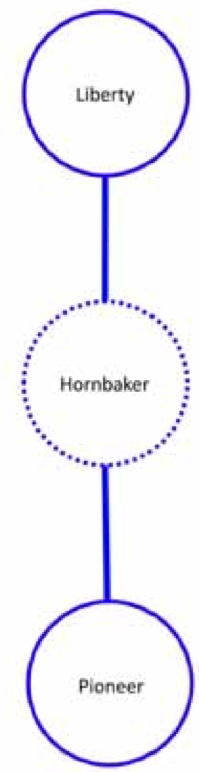
Estimated Project Cost: $45.0M (Total)
Transmission Line Cost: $8.0M
Real Estate Cost: $25.0M
Substation Cost: $12.0M

Alternatives Considered:
No feasible alternatives

Projected In-service Date: 12/30/2025

Project Status: Engineering

Model: 2025 RTEP



Dominion Supplemental Projects

Transmission Expansion Advisory Committee
July 9, 2024

Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Dominion Transmission Zone: Supplemental Customer Load Request

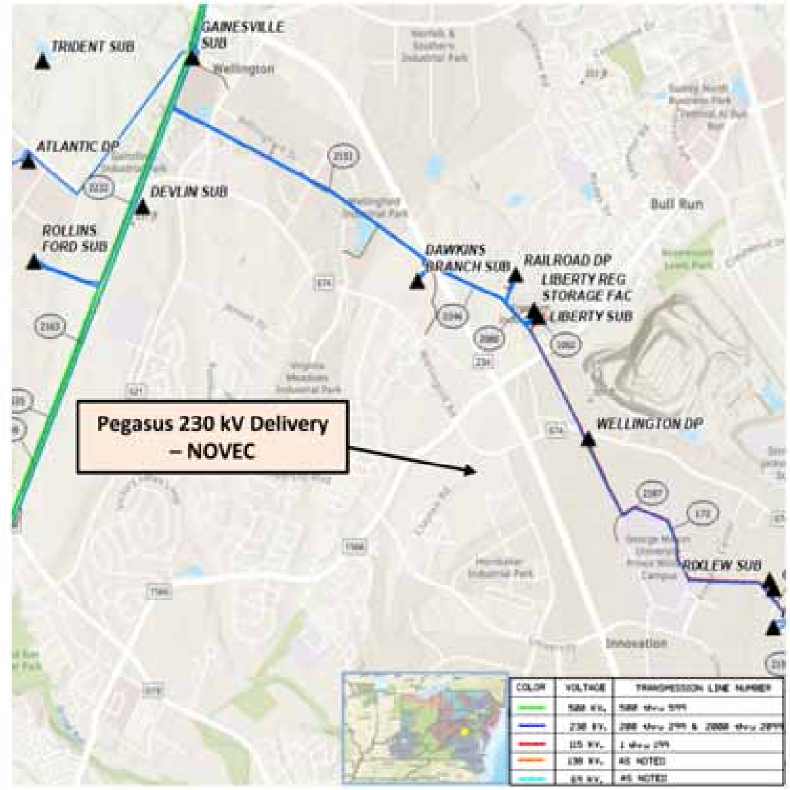
Need Number: DOM-2024-0047
Process Stage: Need Meeting 07/09/2024
Project Driver: Customer Service

Specific Assumption References:
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:
NOVEC has submitted a DP Request for a new substation (Pegasus) to serve a data center complex in Prince William County with a total load in excess of 100 MW.

Requested in-service date is 04/14/2027.

Initial In-Service Load	Projected 2029 Load
Summer: 22.8 MW Winter: 22.8 MW	Summer: 87.0 MW Winter: 87.0 MW



Dominion Supplemental Projects

Transmission Expansion Advisory Committee
December 03, 2024

Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Dominion Transmission Zone: Supplemental Customer Load Request

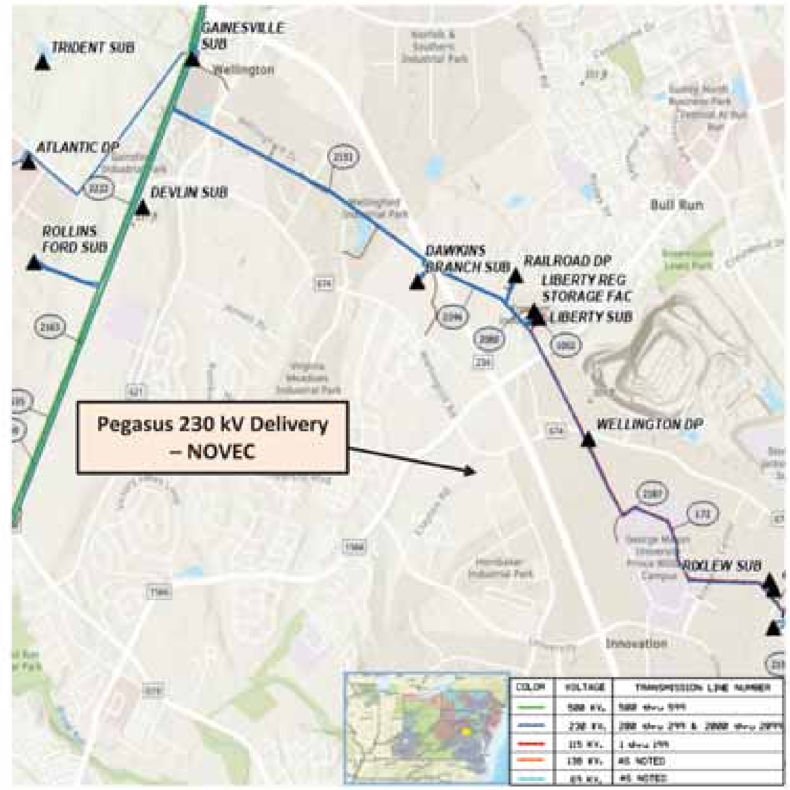
Need Number: DOM-2024-0047
Process Stage: Solution Meeting 12/03/2024
Previously Presented: Need Meeting 07/09/2024
Project Driver: Customer Service

Specific Assumption References:
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:
NOVEC has submitted a DP Request for a new substation (Pegasus) to serve a data center complex in Prince William County with a total load in excess of 100 MW.

Requested in-service date is 04/14/2027.

Initial In-Service Load	Projected 2029 Load
Summer: 22.8 MW Winter: 22.8 MW	Summer: 87.0 MW Winter: 87.0 MW



Dominion Energy

Dominion Transmission Zone: Supplemental Pegasus 230kV Delivery – NOVEC

Need Number: DOM-2024-0047

Process Stage: Solution Meeting 12/03/2024

Proposed Solution:

Interconnect the new substation by cutting and extending Line #2187 (Liberty – Hornbaker) and Line #9306 (Pioneer – Hornbaker) to the proposed site, terminating (2) 230 kV lines in-and-out of Pegasus Substation. Lines to terminate into a (6) breaker 230 kV breaker-and-a-half AIS configuration, expandable to an ultimate of (9) breakers.

Estimated Project Cost: $28.5M (Total)

Transmission Line Cost: $3.5M

Substation Cost: $25.0M

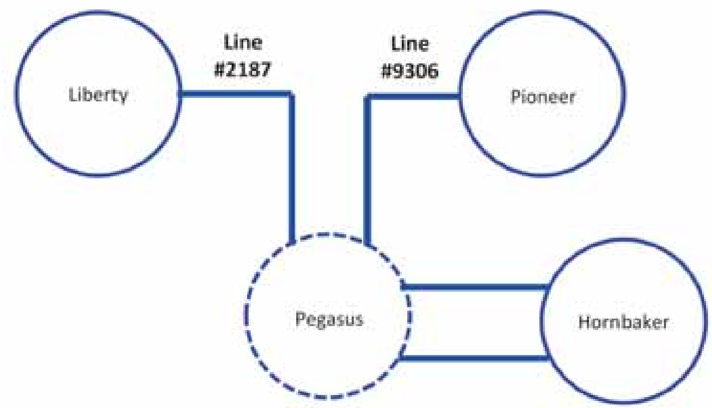
Alternatives Considered:

No feasible alternatives. The original cut and extension of Line #2187 to energize Hornbaker Substation passes within the vicinity of Pegasus Substation.

Projected In-service Date: 04/14/2027

Project Status: Engineering

Model: 2028 RTEP



Dominion Supplemental Projects

Transmission Expansion Advisory Committee
December 03, 2024

Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Dominion Transmission Zone: Supplemental Do No Harm Analysis

Need Number: DOM-2023-0013-DNH

Process Stage: Solution Meeting 12/03/2024

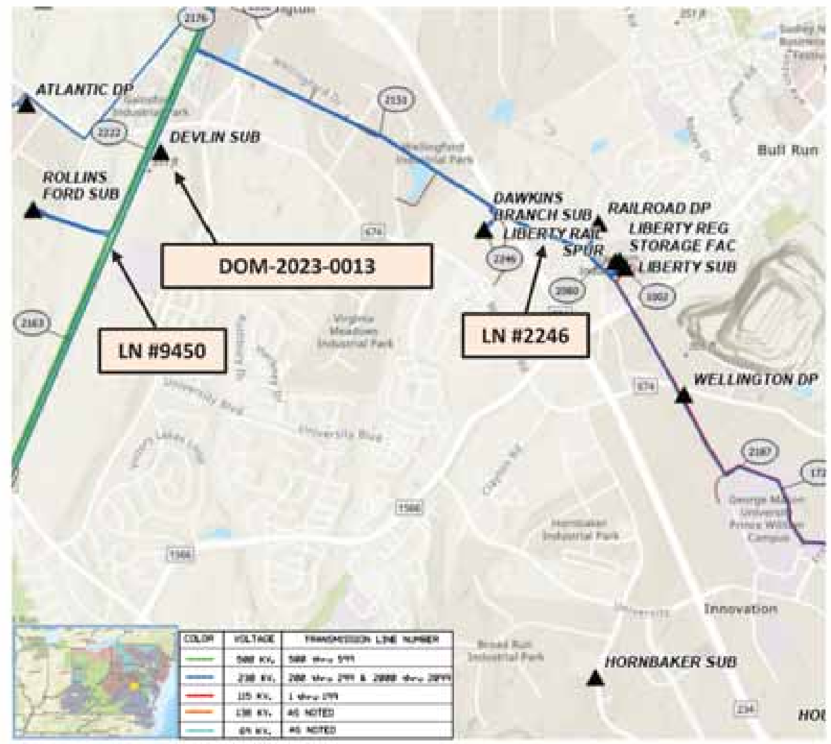
Project Driver: Do No Harm Analysis

Specific Assumption References:
Customer load request will be evaluated per Dominion's Facility Interconnection Requirements Document and Dominion's Transmission Planning Criteria.

Problem Statement:
PJM has identified a 300 MW load drop violation due to the loss of the following separate facilities in the 2024 Do-No-Harm analysis:

- Dawkins Branch and Devlin
  - N-1-1 Contingency Scenario: L/O DVP_P:1-2: LN 9450 (Vint Hill – Devlin 230 kV) and DVP_P:1-2: LN 2246 (Dawkins Branch – Liberty 230 kV)
  - The combined loading of the two Substations is projected to exceed 300 MW by Summer 2029.

The violations are caused by previously presented Supplemental Project DOM-2023-0013 in the Dominion Zone.



Dominion Transmission Zone: Supplemental Do No Harm Analysis

Need Number: DOM-2023-0013-DNH
Process Stage: Solution Meeting 12/03/2024
Proposed Solution:

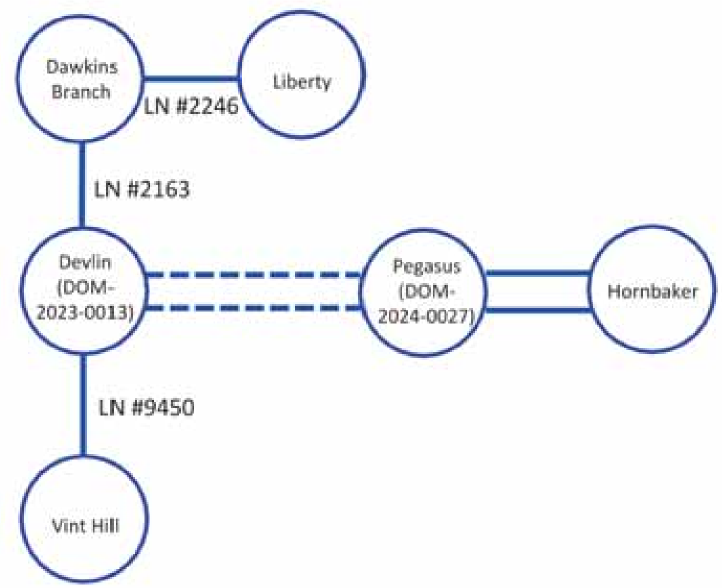
- Construct (2) 230 kV transmission lines on a shared tower structure for approximately 2.9 miles from Devlin to Pegasus Substation with a minimum summer normal conductor rating of 1572 MVA. Acquisition of new right-of-way will be required.
- Install 230 kV breakers and associated equipment (ie. switches, leads) at both Devlin and Pegasus Substations to accommodate the termination of the lines.

Estimated Project Cost: $88.0M (Total)
Transmission Line Cost: $33.0M
Real Estate Cost: $40.0M
Substation Cost: $15.0M

Alternatives Considered:

- Cut and extension of Line #2222 (Rollins Ford – Gainesville) into Devlin Substation or Line #2151 (Gainesville – Railroad) into Dawkins Branch Substation
  - Several N-1-1 scenarios result in increased powerflow and thermal violations along Lines #9450 (Vint Hill – Devlin), #2163 (Devlin – Dawkins Branch), and #2352 (Vint Hill – Rollins Ford). In consideration of continued load growth within the area, these alternatives were not chosen as the capacity constraints along the existing corridor would continue to persist.
- Extension of single-circuit 230 kV only from Devlin to Pegasus Substation
  - Not chosen due to avoidance of future thermal capacity constraints of a single conductor in consideration of continued load growth within the area.

Projected In-service Date: 06/15/2029
Project Status: Conceptual
Model: 2029 RTEP



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.

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: Not applicable.

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: The Hornbaker Switching Station will serve NOVEC in its service territory in Prince William County as described in Section I.C. See also Attachment I.A.1. The Project will also be used to support future load growth in the area.

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: **<u>Proposed Solution 1B</u>**

The total length of the Proposed Solution 1B is approximately 5.3 miles. The new 230 kV lines will be constructed overhead and entirely within a new 100-foot-wide right-of-way.

<u>Alternative Solution 1A</u>

The total length of the Alternative Solution 1A is approximately 4.9 miles. The new 230 kV lines will be constructed overhead and entirely within a new 100-foot-wide right-of-way.

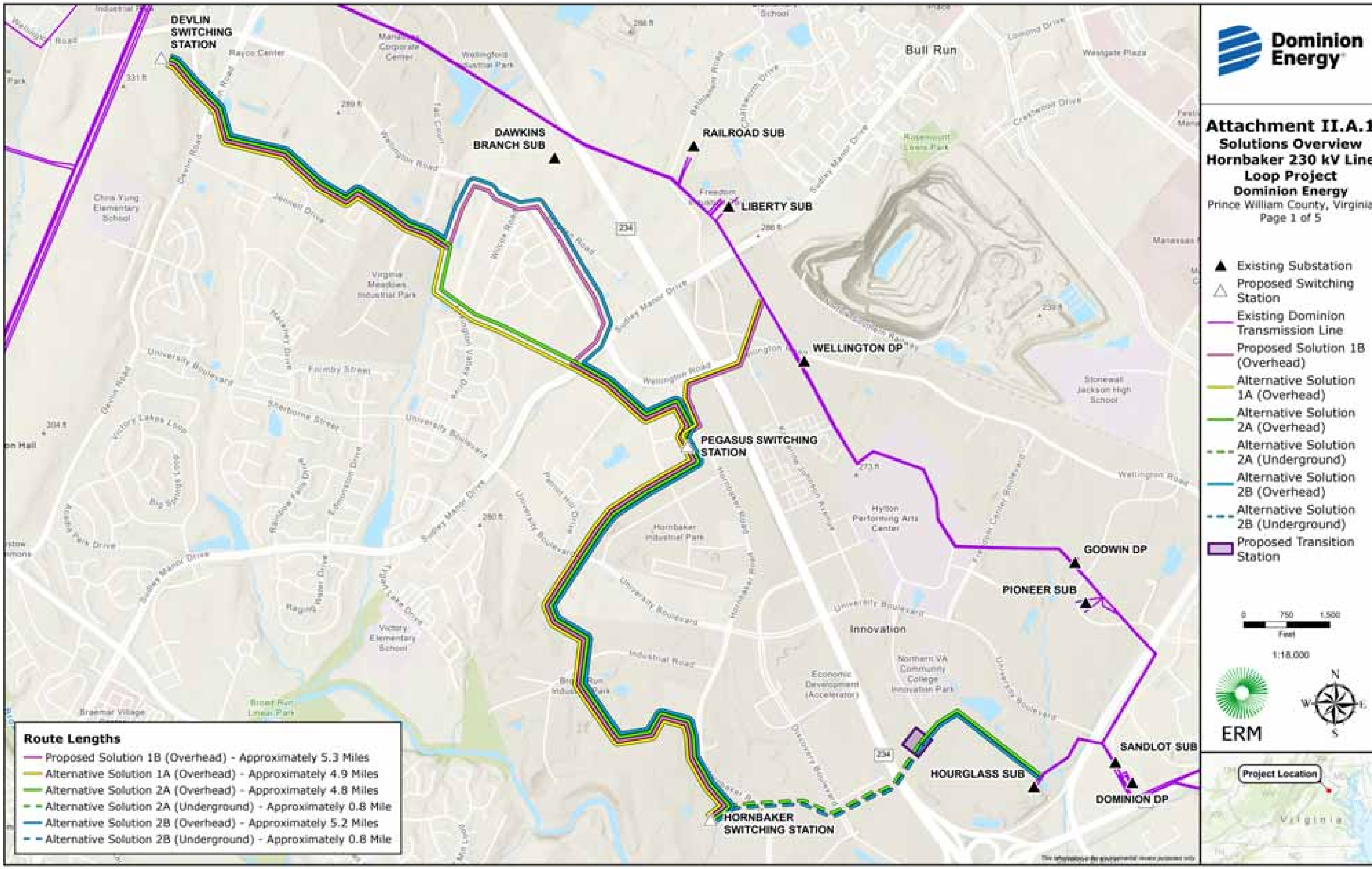
<u>Alternative Solution 2A</u>

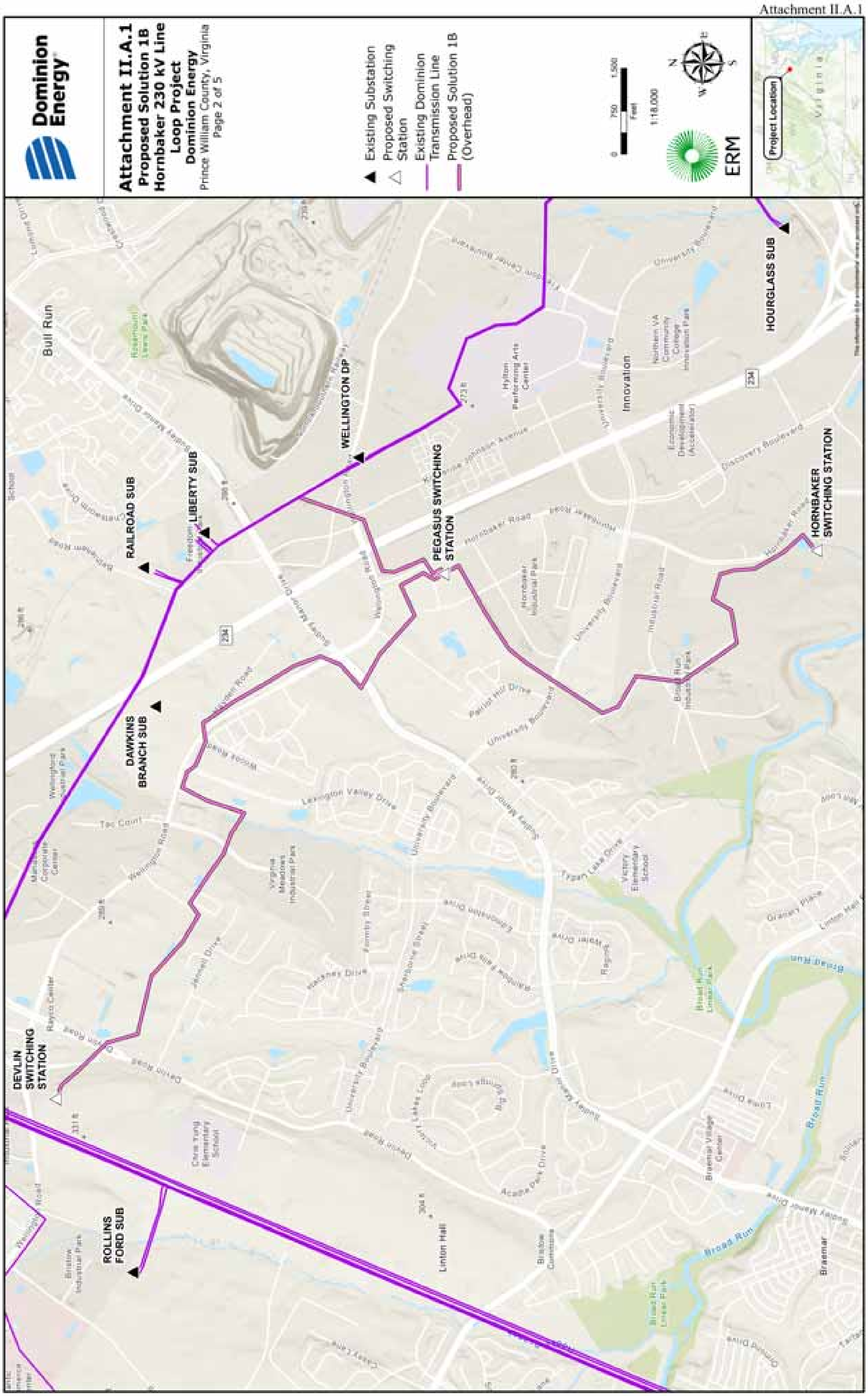
The total length of Alternative Solution 2A is approximately 5.6 miles (4.8 miles overhead and 0.8 mile underground). The new overhead 230 kV lines will be constructed entirely within a new 100-foot-wide right-of-way and the new underground 230 kV lines will be constructed entirely within a new 80-foot-wide right-of-way.

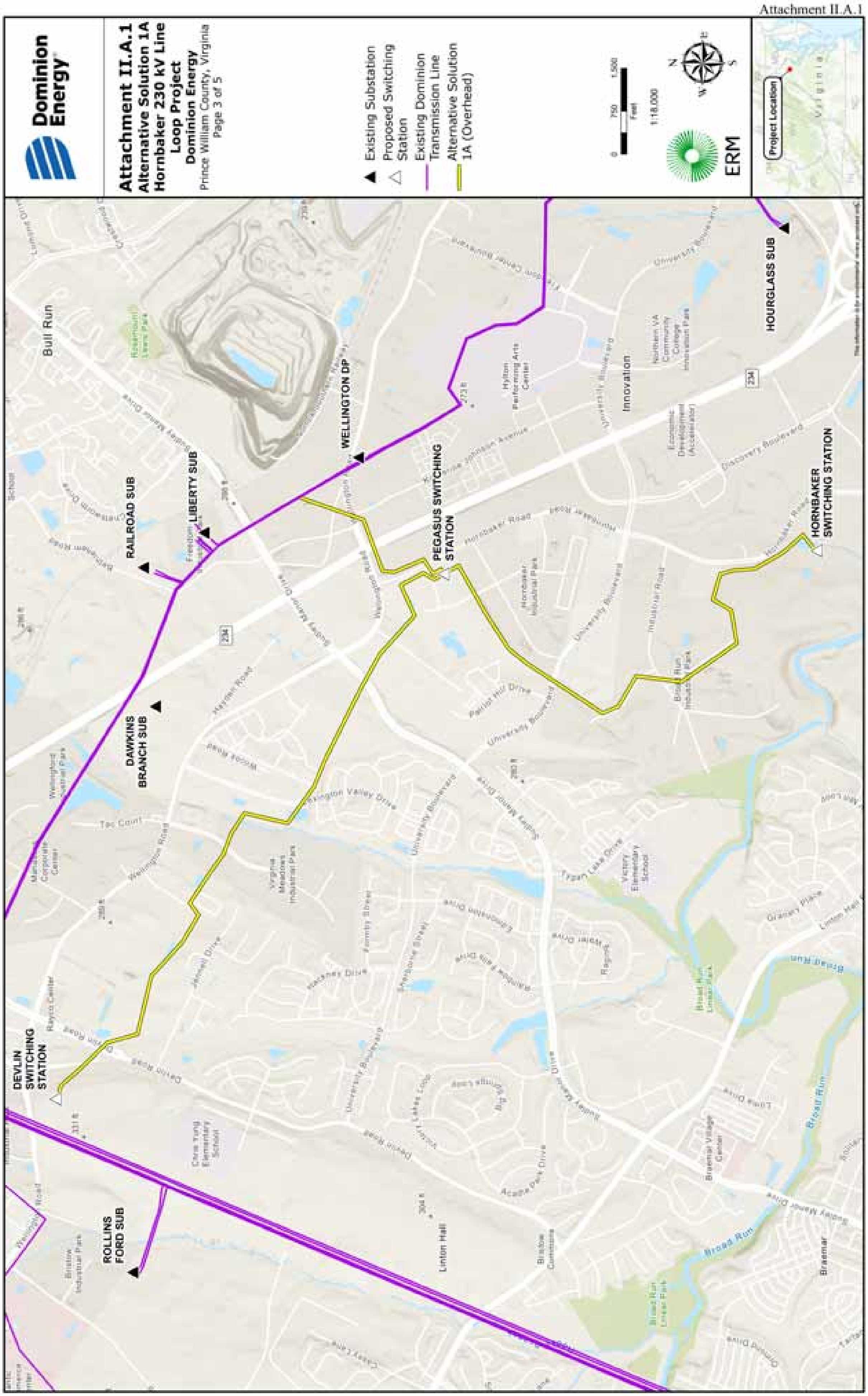
<u>Alternative Solution 2B</u>

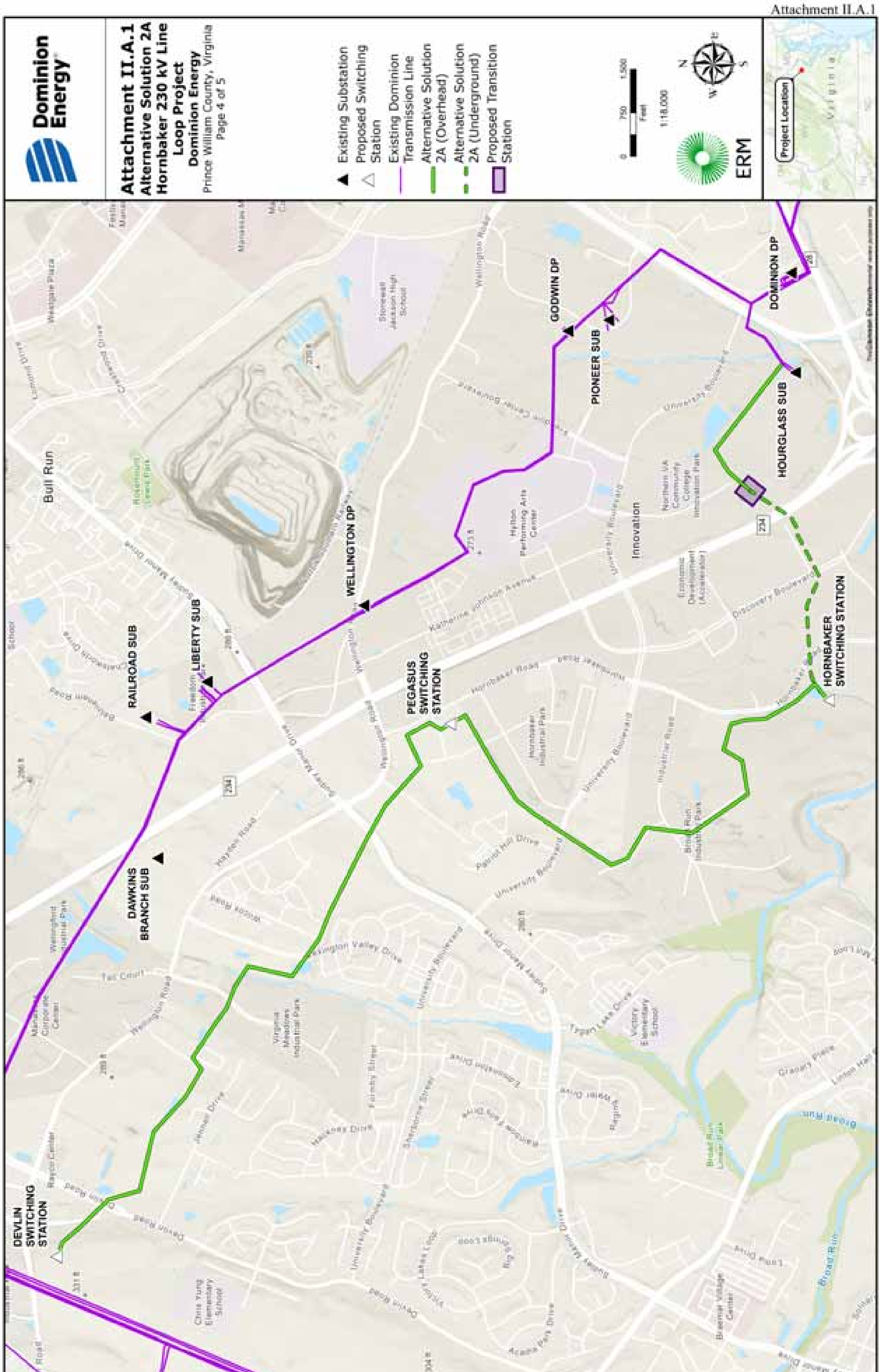
The total length of Alternative Solution 2B is approximately 6.0 miles (5.2 miles overhead and 0.8 mile underground). The new overhead 230 kV lines will be constructed entirely within a new 100-foot-wide right-of-way and the new underground 230 kV lines will be constructed entirely within a new 80-foot-wide right-of-way.

See <u>Attachment II.A.1</u>. See Section II.A.9 for an explanation of the Company's route selection process, as well as the Environmental Routing Study referenced therein.

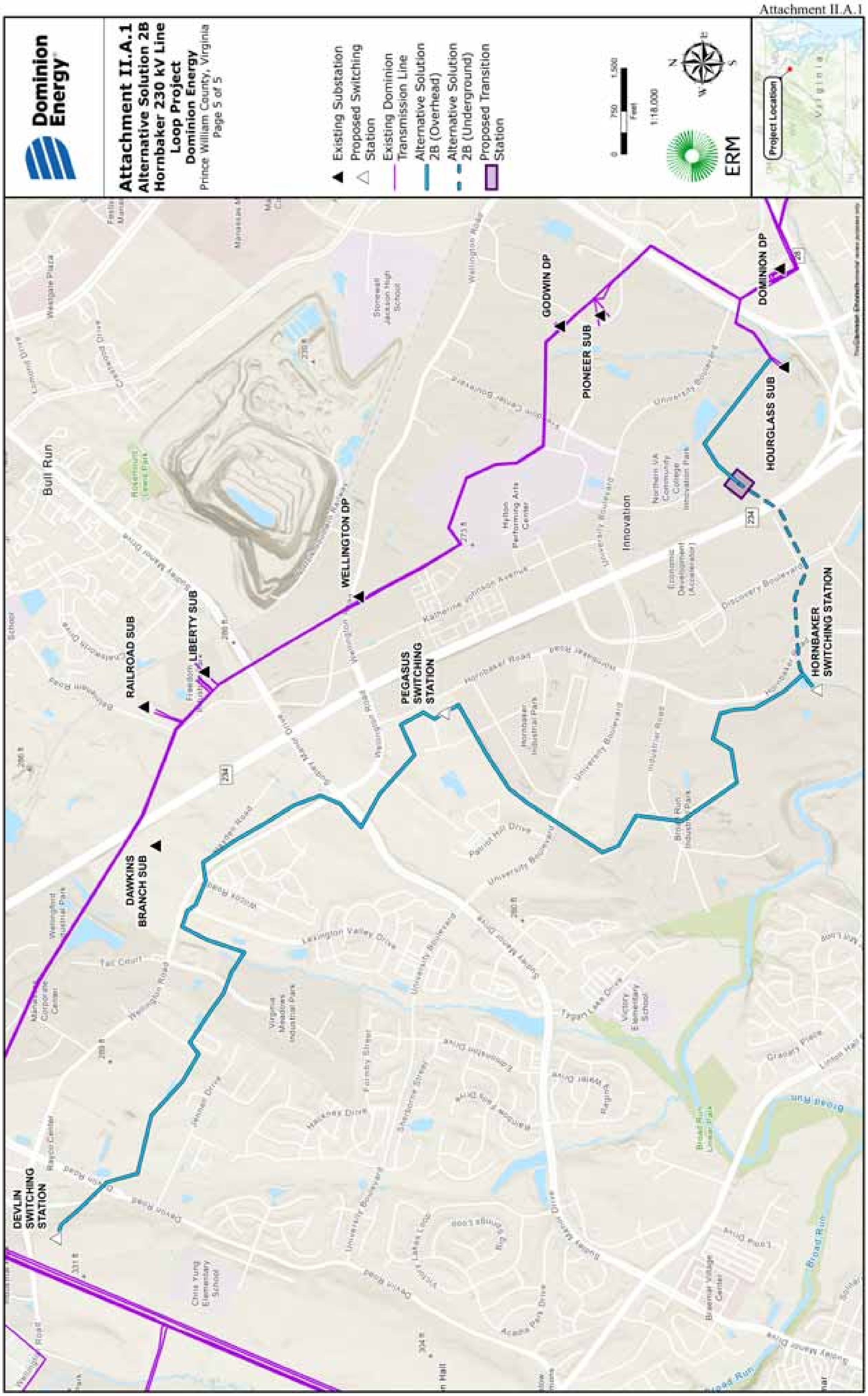

Dominion Energy
Attachment II.A.1
Solutions Overview
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 1 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
Alternative Solution 1A (Overhead)
Alternative Solution 2A (Overhead)
Alternative Solution 2A (Underground)
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Proposed Transition Station
0 750 1,500
Feet
1:18,000
N
S
E
W
ERM
Project Location
Virginia
Route Lengths
Proposed Solution 1B (Overhead) - Approximately 5.3 Miles
Alternative Solution 1A (Overhead) - Approximately 4.9 Miles
Alternative Solution 2A (Overhead) - Approximately 4.8 Miles
Alternative Solution 2A (Underground) - Approximately 0.8 Mile
Alternative Solution 2B (Overhead) - Approximately 5.2 Miles
Alternative Solution 2B (Underground) - Approximately 0.8 Mile
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
SANDLOT SUB
HOURGLASS SUB
DOMINION DP
HORNBAKER SWITCHING STATION
Bull Run
Innovation
234


Dominion Energy
Attachment II.A.1
Proposed Solution 1B
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 2 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
0 750 1,500
Feet
1:18,000
ERM
Project Location
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
HORNBAKER SWITCHING STATION
HOURGLASS SUB


Dominion Energy
Attachment II.A.1
Alternative Solution 1A
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 3 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 1A (Overhead)
0 750 1,500
Feet
1:18,000
ERM
Project Location
Virginia
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
HORNBAKER SWITCHING STATION
HOURGLASS SUB
Bull Run
Innovation
Linton Hall
Braemar
Broad Run
Hornbaker Road
University Boulevard
Wellington Road
Devlin Road
Sudley Manor Drive
Linton Hall Road
Discovery Boulevard
Hylton Performing Arts Center
Northern VA Community College Innovation Park
Victory Elementary School
Chris Yung Elementary School
Bristow Industrial Park
Broad Run Linear Park
234



Dominion Energy
Attachment II.A.1
Alternative Solution 2A
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 4 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2A (Overhead)
Alternative Solution 2A (Underground)
Proposed Transition Station
0
750
1,500
Feet
1:18,000
ERM
Project Location
Virginia
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
DOMINION DP
HORNBAKER SWITCHING STATION
Bull Run
Innovation
Hylton Performing Arts Center
Northern VA Community College Innovation Park
Economic Development (Accelerator)
Stonewall Jackson High School
Victory Elementary School
Chris Yung Elementary School
Broad Run Linear Park
Braemar Village Center
Virginia Meadows Industrial Park
Hornbaker Industrial Park
Broad Run Industrial Park
Wellingford Industrial Park
Manassas Corporate Center
Broad Run
234
28



Dominion Energy
Attachment II.A.1
Alternative Solution 2B
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 5 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Proposed Transition Station
0
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1,500
Feet
1:18,000
ERM
Project Location
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
DOMINION DP
HORNBAKER SWITCHING STATION
Bull Run
Innovation

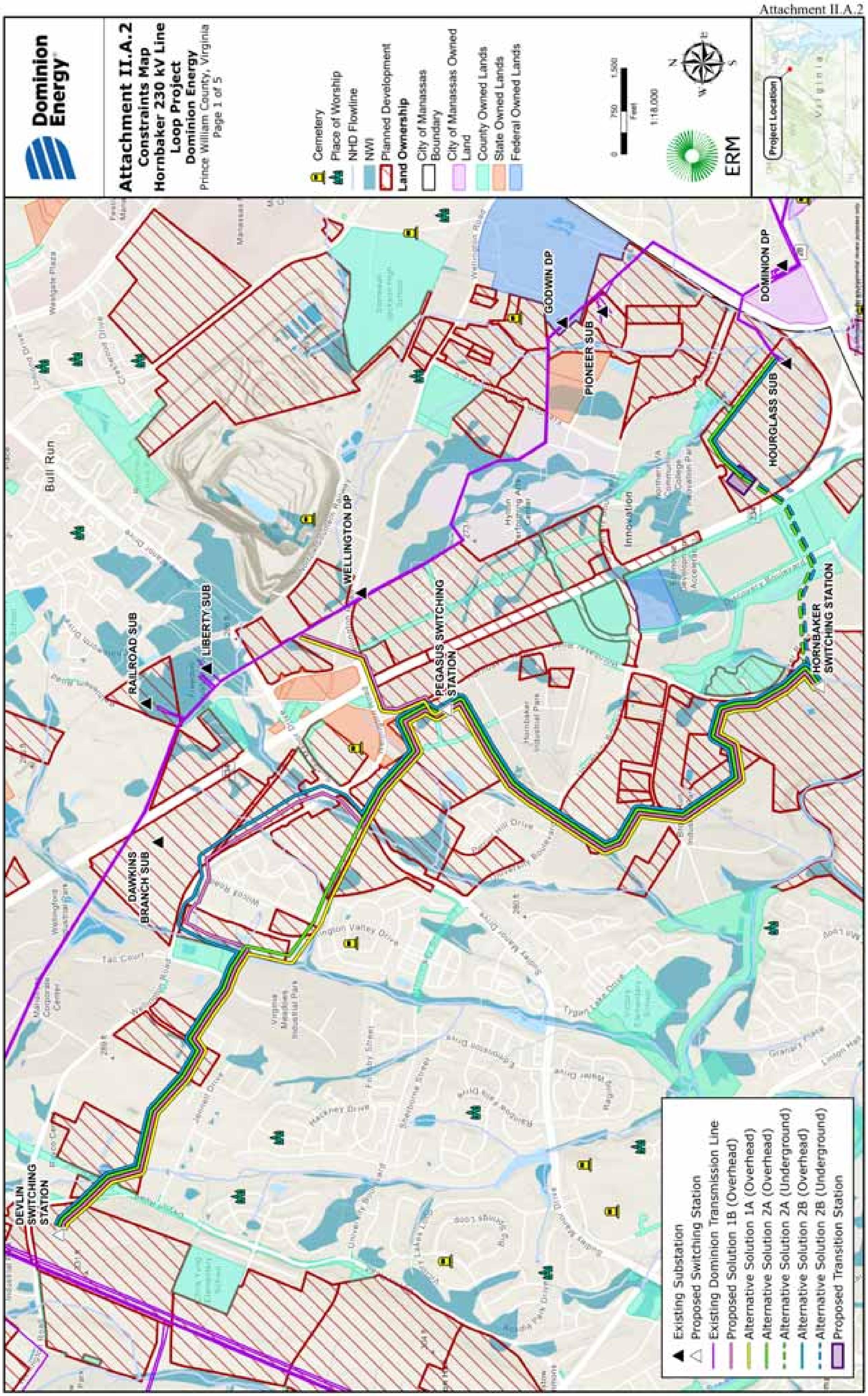
II. DESCRIPTION OF THE PROPOSED PROJECT

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 as part of the Project.

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.


Dominion Energy
Attachment II.A.2
Constraints Map
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 1 of 5
Cemetery
Place of Worship
NHD Flowline
NWI
Planned Development
Land Ownership
City of Manassas Boundary
City of Manassas Owned Land
County Owned Lands
State Owned Lands
Federal Owned Lands
0
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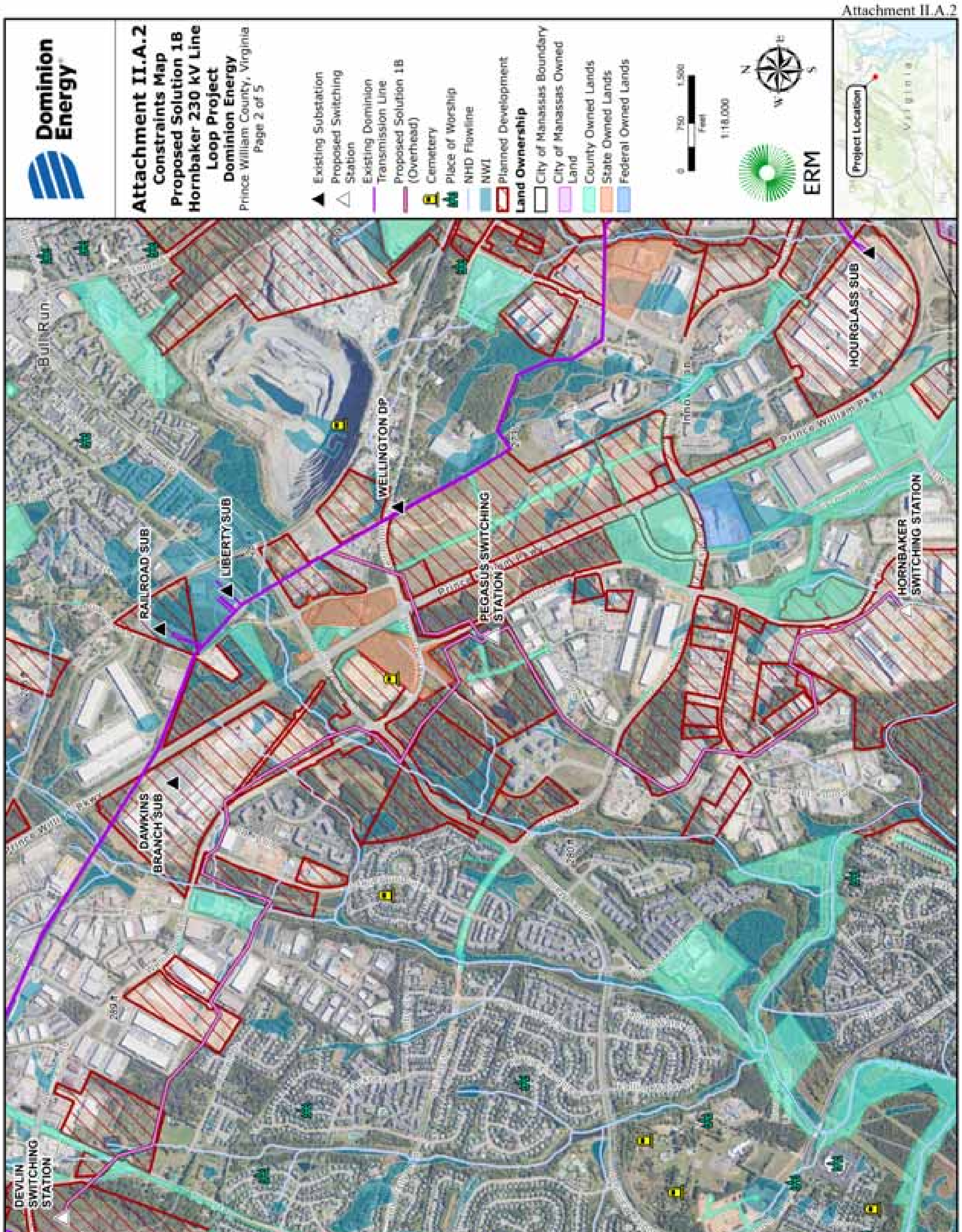
1,500
Feet
1:18,000
ERM
Project Location
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
Alternative Solution 1A (Overhead)
Alternative Solution 2A (Overhead)
Alternative Solution 2A (Underground)
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Proposed Transition Station
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
HORNBAKER SWITCHING STATION
HOURGLASS SUB
PIONEER SUB
GODWIN DP
DOMINION DP
Bull Run


Dominion Energy
Attachment II.A.2
Constraints Map
Proposed Solution 1B
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 2 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
Cemetery
Place of Worship
NHD Flowline
NWI
Planned Development
Land Ownership
City of Manassas Boundary
City of Manassas Owned Land
County Owned Lands
State Owned Lands
Federal Owned Lands
0
750
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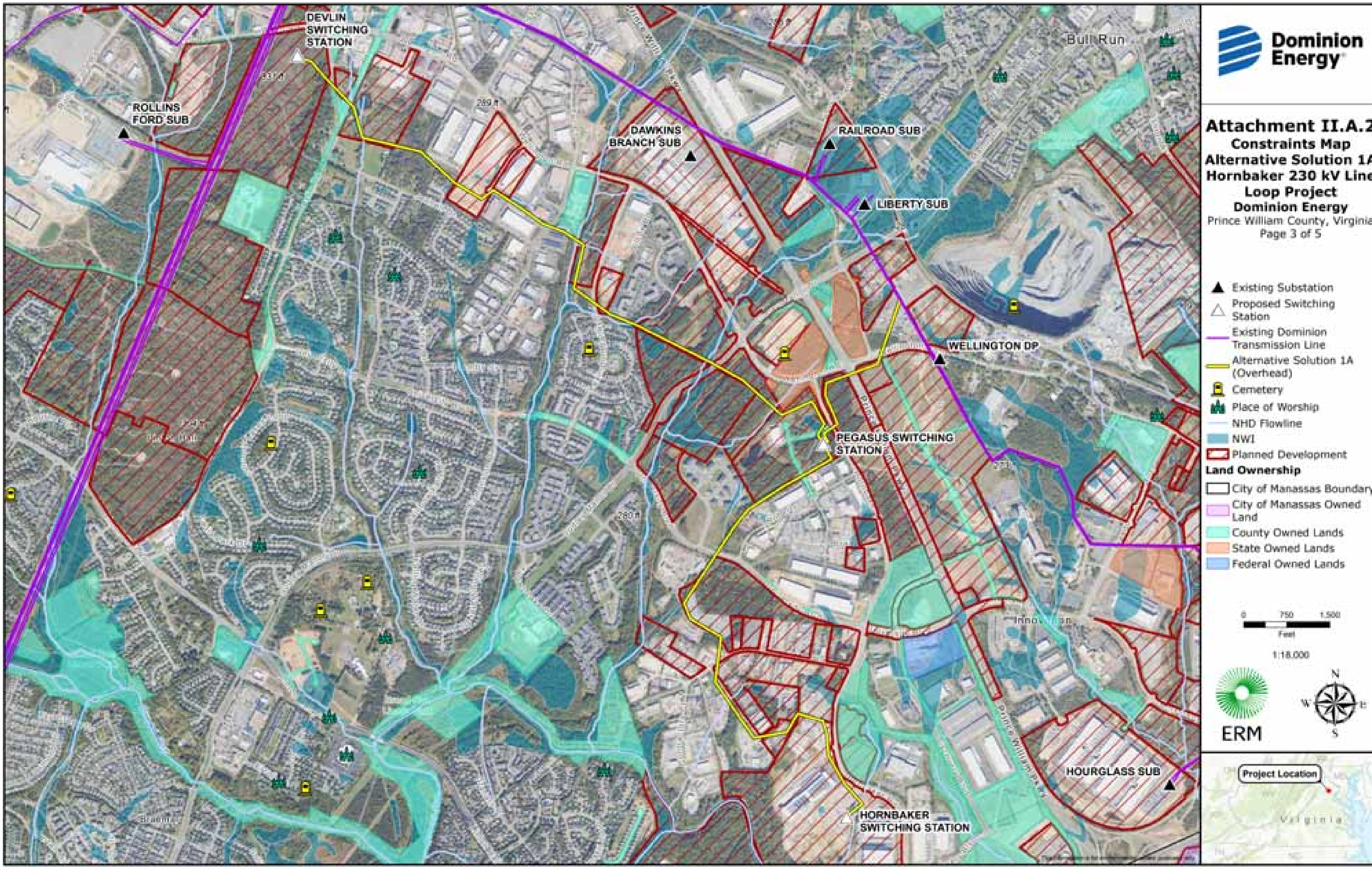
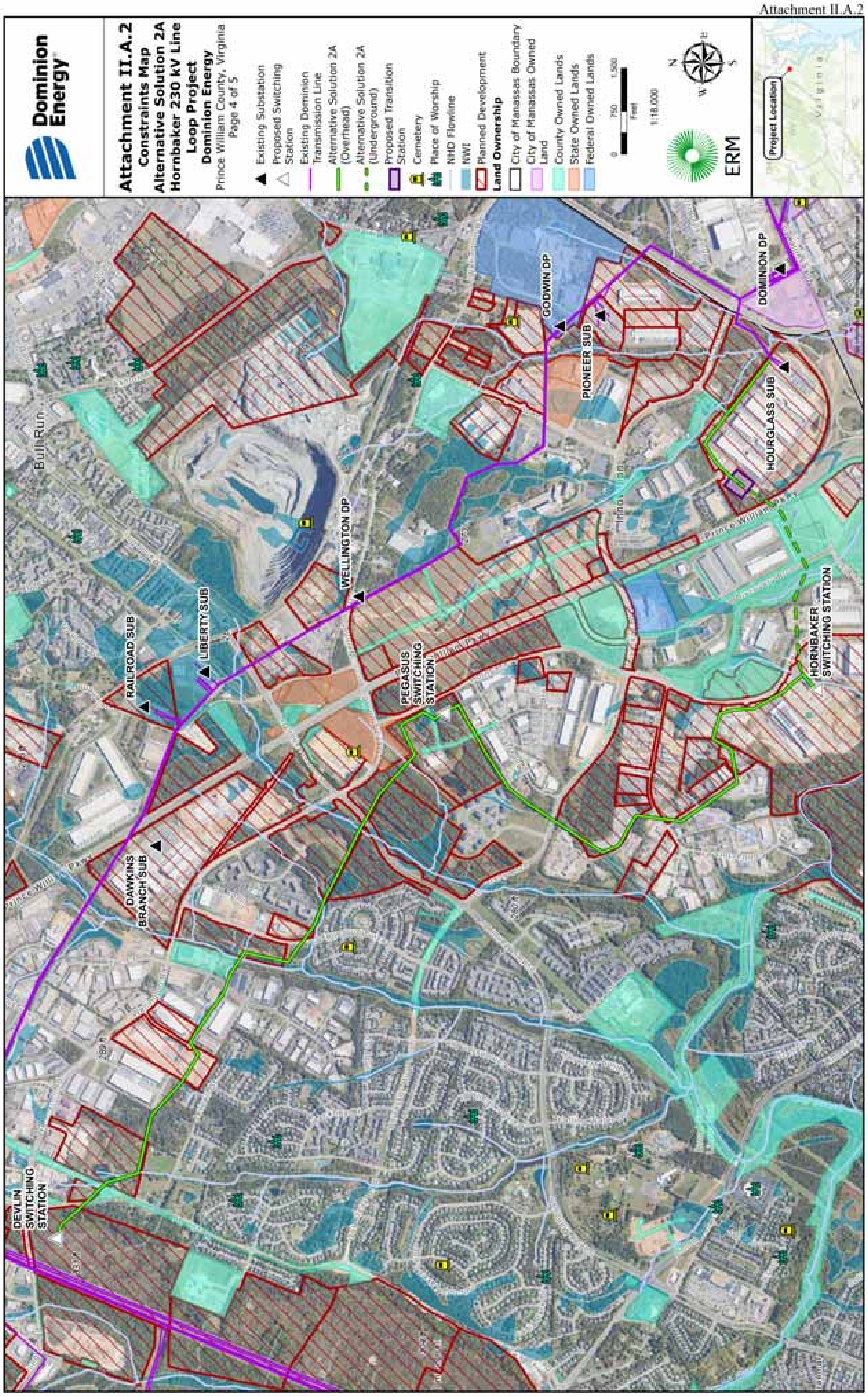
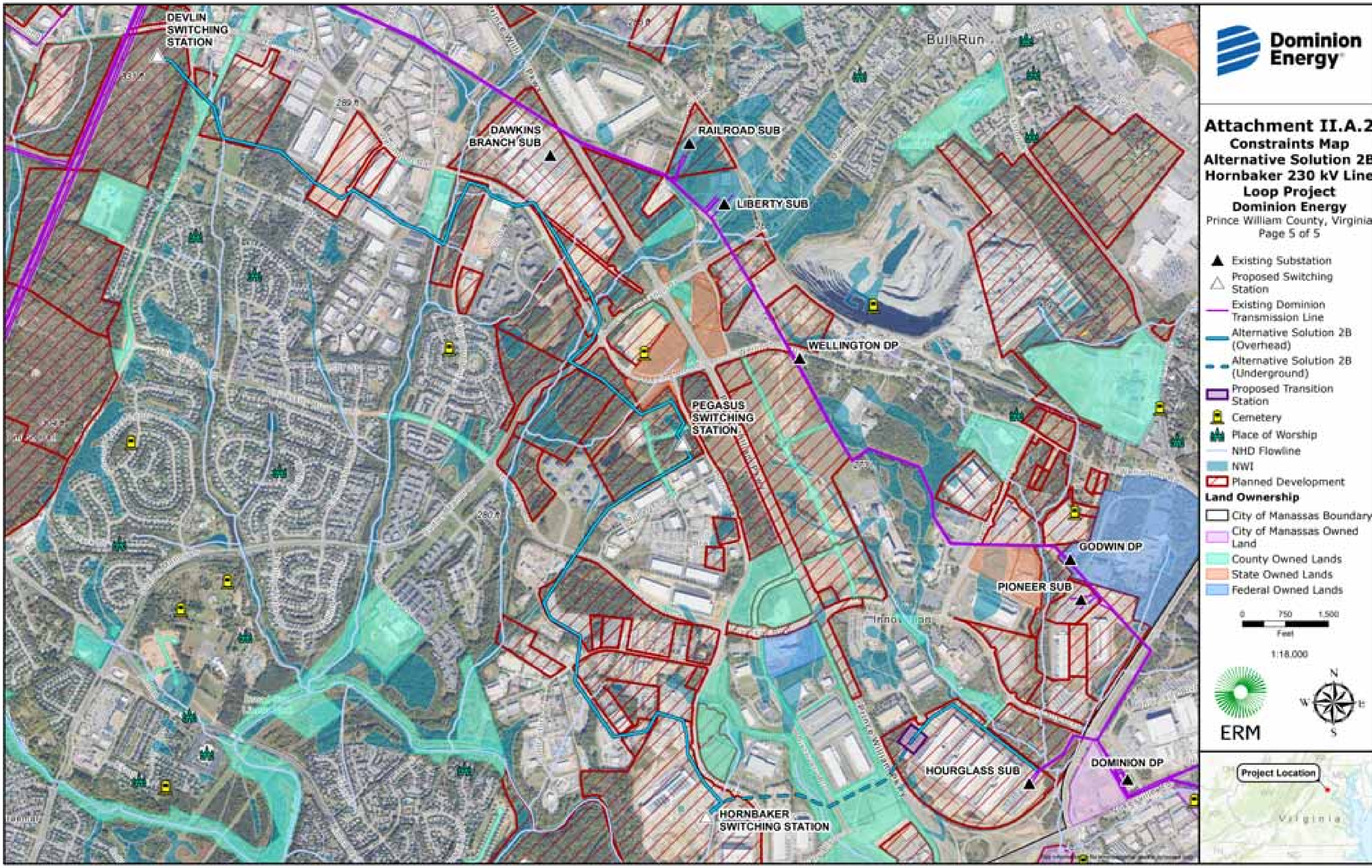
Feet
1:18,000
ERM
Project Location
Virginia
Bull Run
HOURGLASS SUB
WELLINGTON DP
LIBERTY SUB
RAILROAD SUB
PEGASUS SWITCHING STATION
HORNBAKER SWITCHING STATION
DAWKINS BRANCH SUB
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
Prince William Pkwy



Dominion Energy
Attachment II.A.2
Constraints Map
Alternative Solution 1A
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 3 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 1A (Overhead)
Cemetery
Place of Worship
NHD Flowline
NWI
Planned Development
Land Ownership
City of Manassas Boundary
City of Manassas Owned Land
County Owned Lands
State Owned Lands
Federal Owned Lands
0 750 1,500
Feet
1:18,000
ERM
N
W
E
S
Project Location
Virginia
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
HOURGLASS SUB
HORNBAKER SWITCHING STATION
Bull Run
Prince William Pkwy


Attachment II.A.2
Constraints Map
Alternative Solution 2A
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 4 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2A (Overhead)
Alternative Solution 2A (Underground)
Proposed Transition Station
Cemetery
Place of Worship
NHD Flowline
NWI
Planned Development
Land Ownership
City of Manassas Boundary
City of Manassas Owned Land
County Owned Lands
State Owned Lands
Federal Owned Lands
0 750 1,500
Feet
1:18,000
ERM
Project Location
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
DOMINION DP
HORNBAKER SWITCHING STATION
Bull Run



Dominion Energy
Attachment II.A.2
Constraints Map
Alternative Solution 2B
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 5 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Proposed Transition Station
Cemetery
Place of Worship
NHD Flowline
NWI
Planned Development
Land Ownership
City of Manassas Boundary
City of Manassas Owned Land
County Owned Lands
State Owned Lands
Federal Owned Lands
0 750 1,500
Feet
1:18,000
ERM
N
S
Project Location
Virginia
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
DOMINION DP
HORNBAKER SWITCHING STATION
Bull Run

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: There is no existing electric transmission right-of-way that serves NOVEC's DP located between the Devlin Switching Station and the Company's proposed Hornbaker Switching Station to accommodate the proposed Project. Additionally, there is no existing electric transmission right-of-way that serves NOVEC's DP located between the Company's existing Lines #2187/#172 and the Hornbaker Switching Station or the Pegasus Switching Station.

.

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

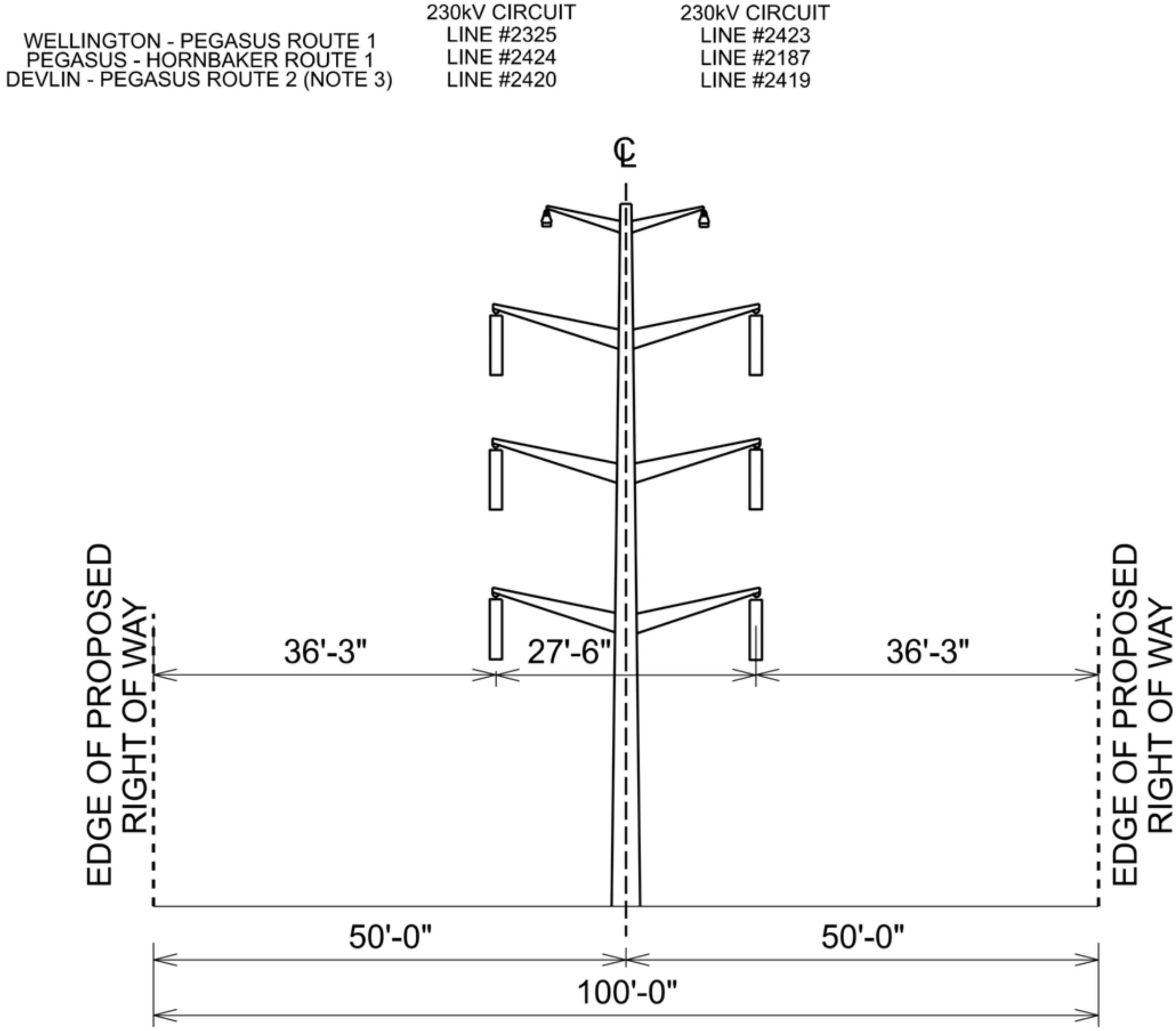
d. For lines being rebuilt in existing ROW, provide all of the above (i) as it currently exists, and (ii) as it will exist at the conclusion of the proposed project.

Response: See Attachment II.A.5.a-b.

For additional information on the structures, see Section II.B.3.

SOLUTION 1B - 100 FT WIDE ROW

LOOKING TOWARDS HORNBAKER SUB



NOTES:

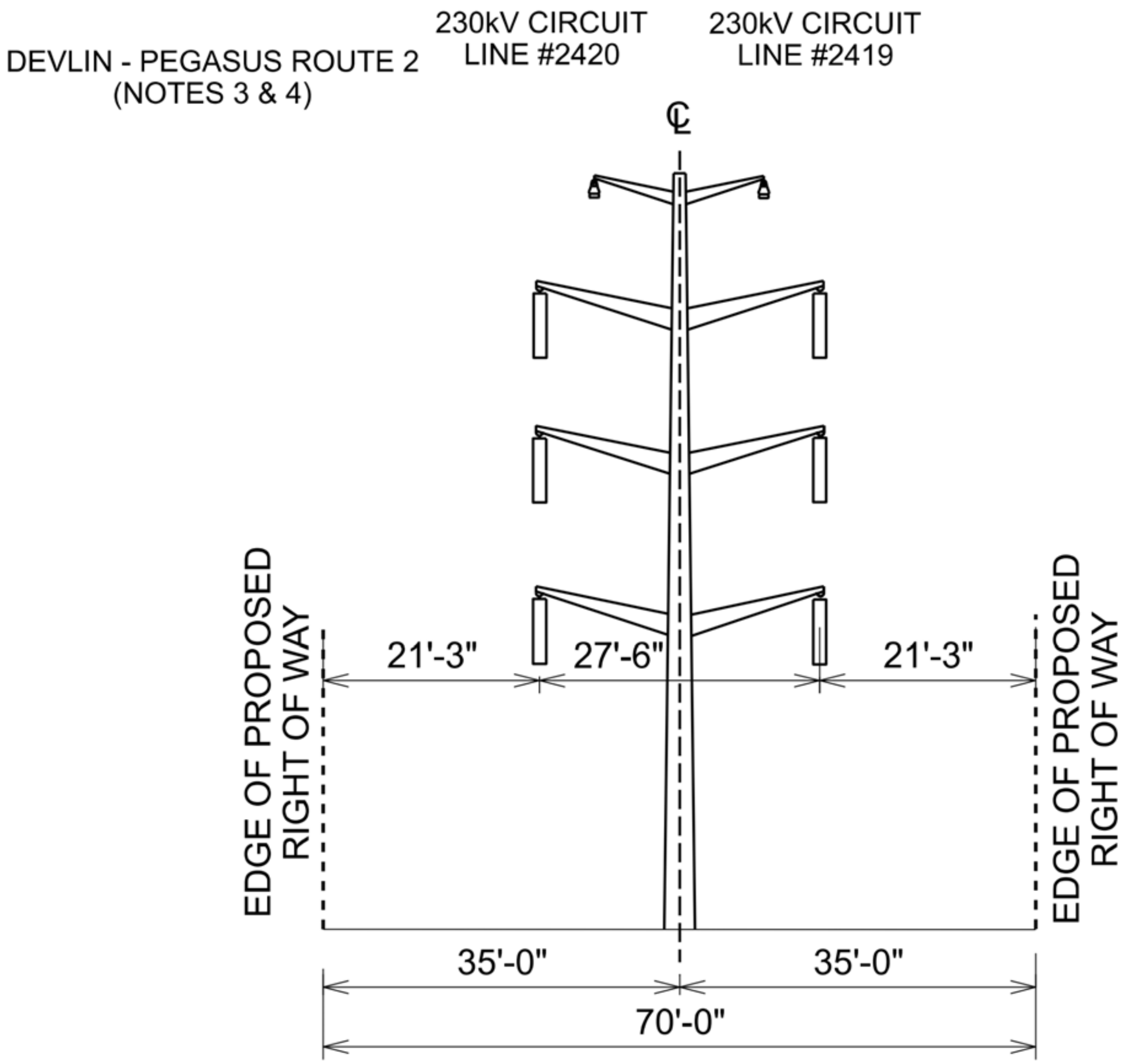
1. INFORMATION CONTAINED ON DRAWINGS IS CONSIDERED PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN.
2. DRAWING NOT TO SCALE.
3. SEE ATTACHMENT II.A.5.b FOR REDUCED ROW FROM STR. 2419/18 TO STR. 2419/19.

Transmission Construction	PROPOSED ROW CONFIGURATION (230KV/230KV) MONOPOLE AREAS - 100-FT WIDE ROW				
Dominion Energy — Dominion Energy, 5000 Dominion Blvd, Glen Allen, VA 23060		DRAWN	CHECKED	APPROVED	DATE	ATTACHMENT NO.
	STANDARD	CBW	TCG		12/30/24	II.A.5.a
	REVISION	71				CAD NO.

$SYTIME$ $DGNSPEC$ TESBORD1

SOLUTION 1B - 70 FT WIDE ROW

LOOKING TOWARDS HORNBAKER SUB



NOTES:

1. INFORMATION CONTAINED ON DRAWINGS IS CONSIDERED PRELIMINARY IN NATURE AND SUBJECT TO CHANGE BASED ON FINAL DESIGN.
2. DRAWING NOT TO SCALE.
3. CROSS-SECTION ONLY APPLIES TO THE SECTION OF ROW BETWEEN STR. 2419/18 AND STR. 2419/19.
4. FOR ALL ADDITIONAL ROW EXTENTS SEE ATTACHMENT II.A.5.a.

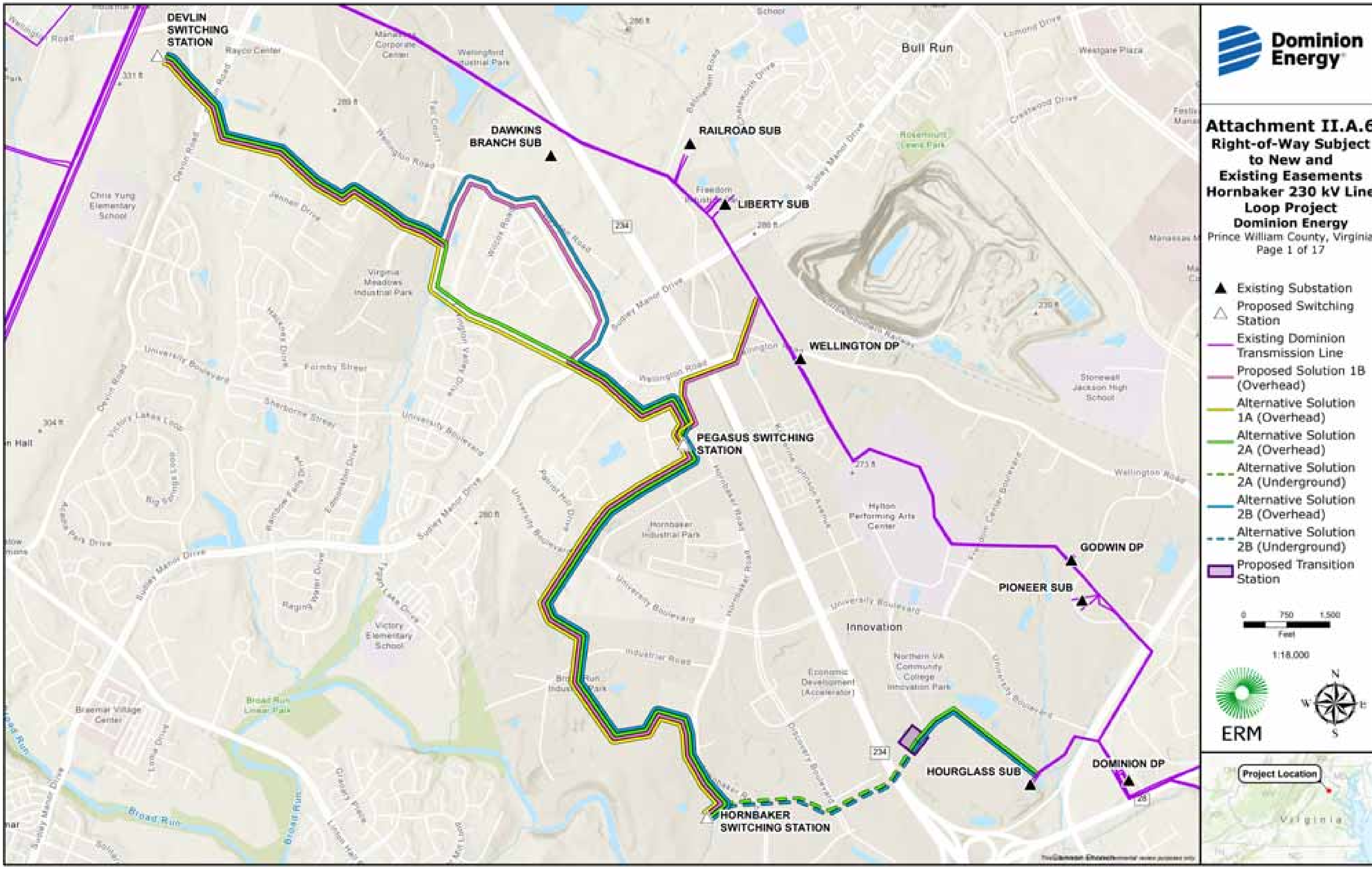
Transmission Construction	PROPOSED ROW CONFIGURATION (230KV/230KV) MONOPOLE AREAS - 70-FT WIDE ROW					
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN	CHECKED	APPROVED	DATE	ATTACHMENT NO.
	STANDARD	CBW	TCG		12/30/24	II.A.5.b
	REVISION	72				CAD NO.

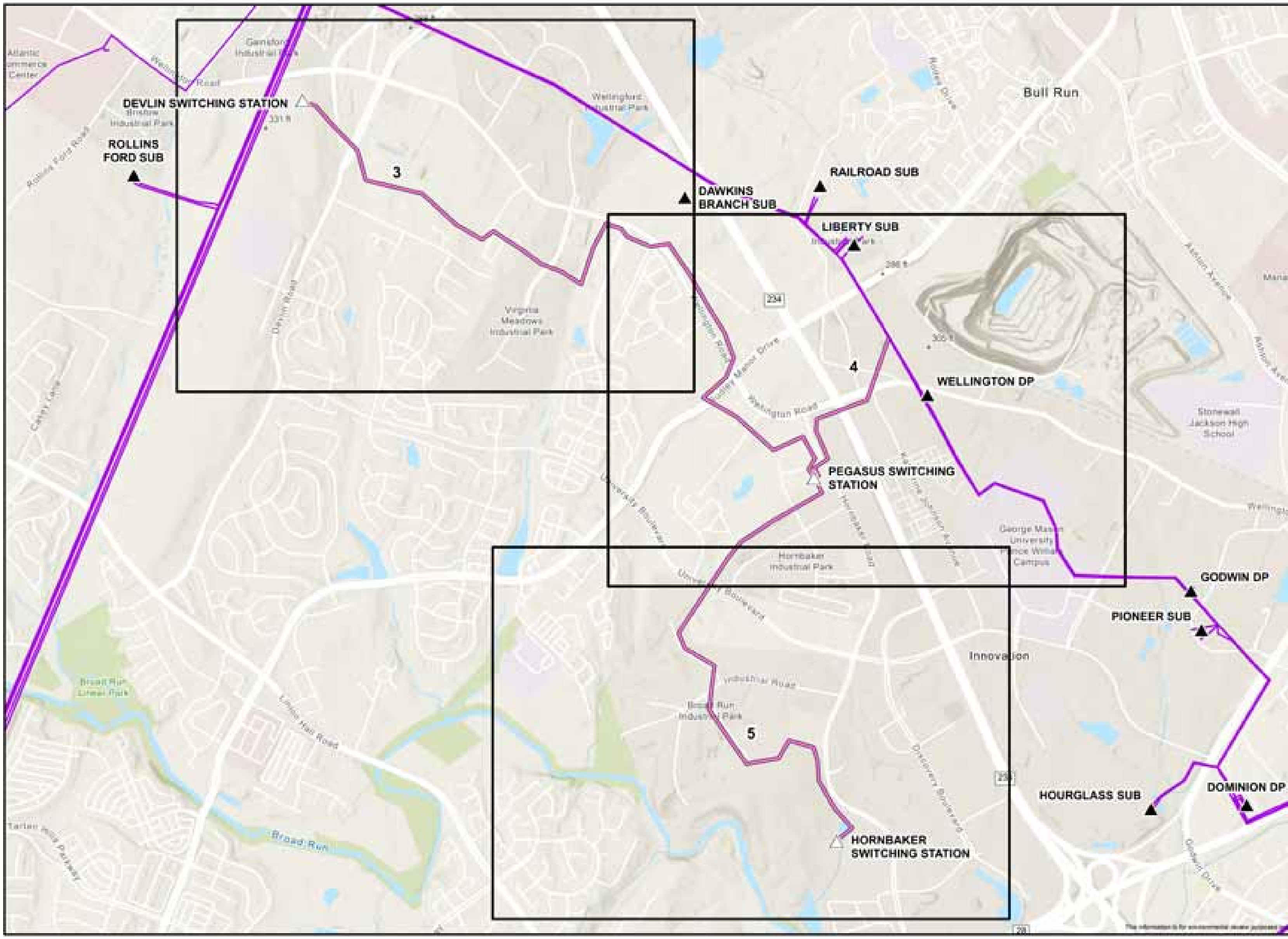
II. DESCRIPTION OF THE PROPOSED PROJECT

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: As discussed in Section II.A.4, there is no existing Company electric transmission right-of-way that serves NOVEC’s DP. Therefore, with the exception of approximately 0.06 mile of the route located within either the Hornbaker Switching Station or the existing Line #2187/172 right-of-way, the remaining right-of-way will require easements for a new-build transmission line. No overlap between existing easements and the proposed easements for the Project will occur. See Attachment II.A.6.


DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
DOMINION DP
HORNBAKER SWITCHING STATION
Bull Run
Innovation
Dominion Energy
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 1 of 17
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
Alternative Solution 1A (Overhead)
Alternative Solution 2A (Overhead)
Alternative Solution 2A (Underground)
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Proposed Transition Station
0 750 1,500
Feet
1:18,000
ERM
Project Location
Virginia



Dominion Energy

Attachment II.A.6
Right-of-Way Subject to New and Existing Easements Index Hornbaker 230 kV Line Loop Project

Dominion Energy

Prince William County, Virginia

Page 2 of 17

- ▲ Existing Substation
- △ Proposed Switching Station
- Existing Dominion Transmission Line
- Proposed Solution 1B (Overhead)
- Index Page

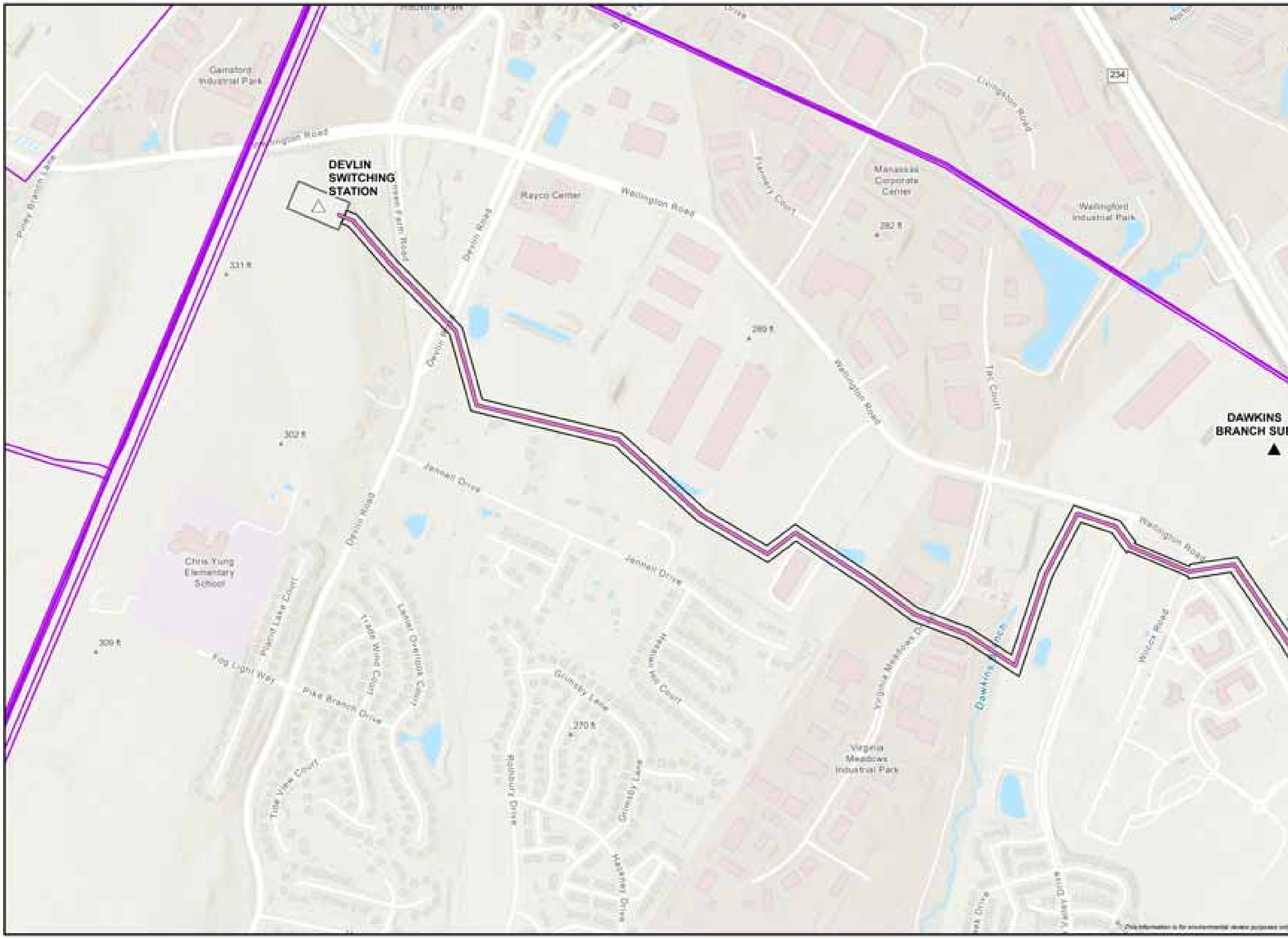
0 1,000 2,000 Feet

1:20,000

ERM

Project Location

Virginia



Dominion Energy

Attachment II.A.6

Right-of-Way Subject to New and Existing Easements Hornbaker 230 kV Line Loop Project

Dominion Energy

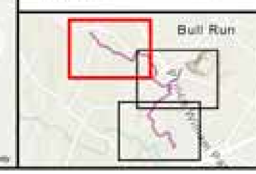
Prince William County, Virginia
Page 3 of 17

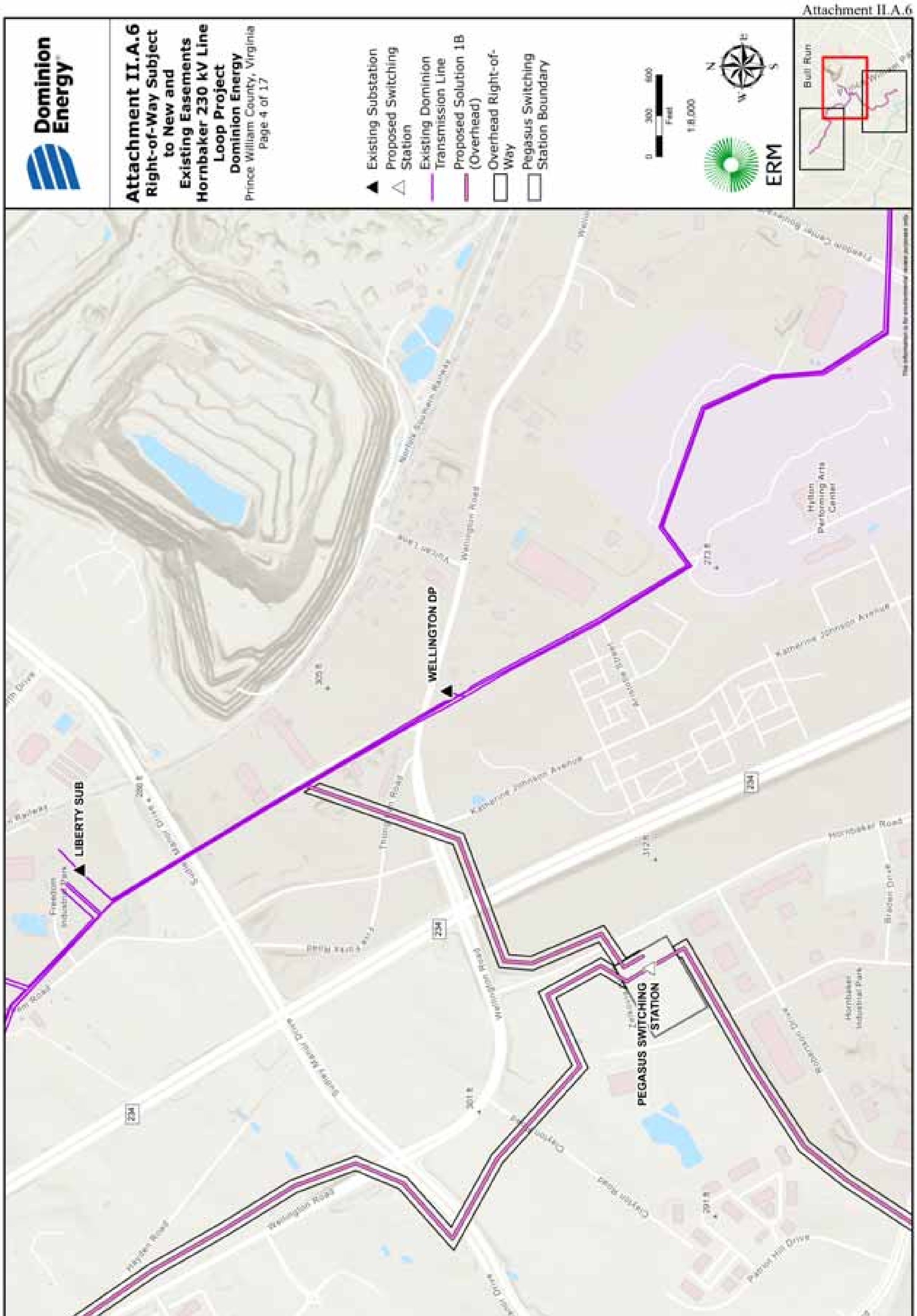
- Existing Substation
- Proposed Switching Station
- Existing Dominion Transmission Line
- Proposed Solution 1B (Overhead)
- Overhead Right-of-Way
- Devlin Switching Station Boundary

0 300 600
Feet
1:8,000

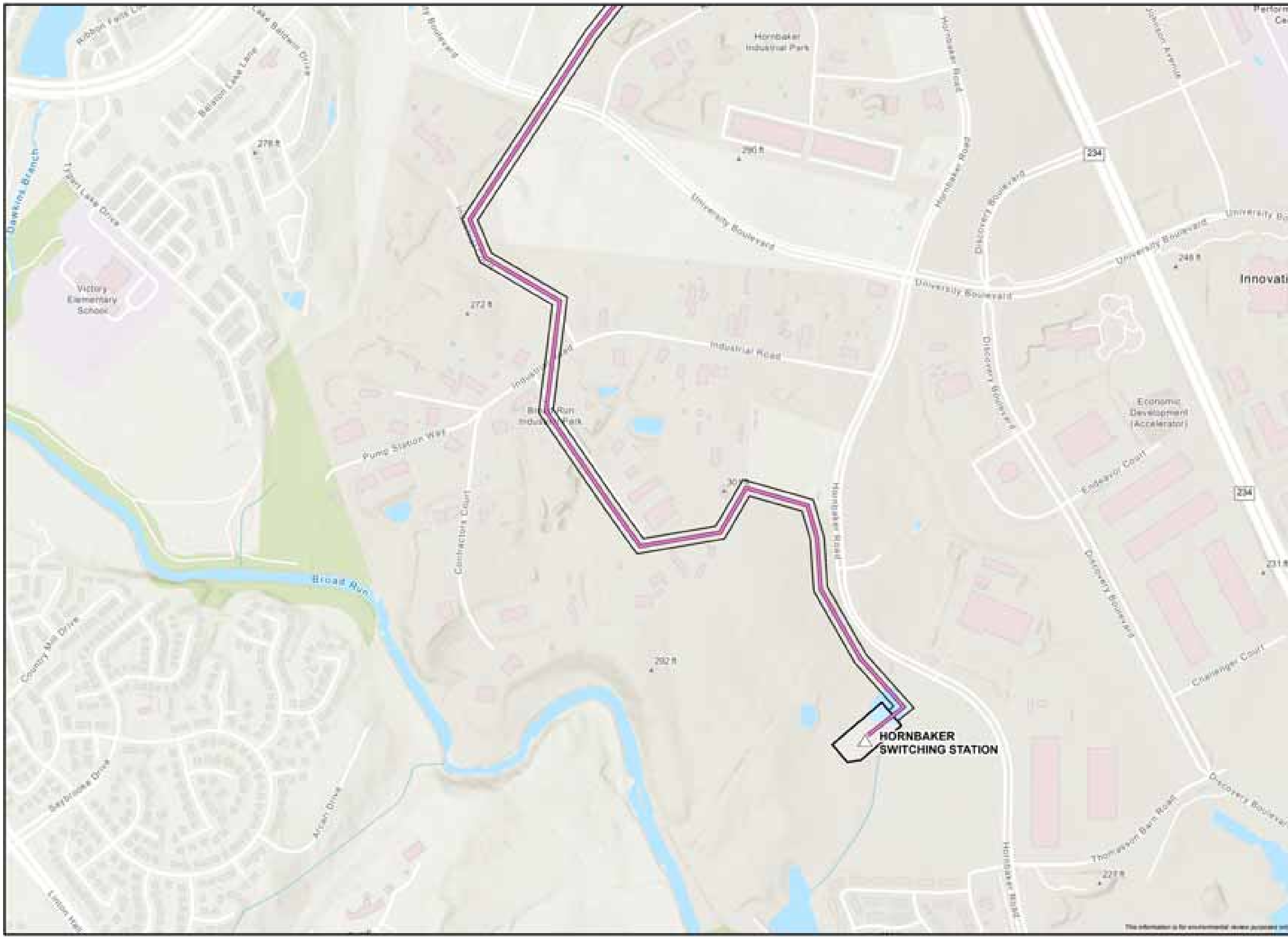
ERM

N W E S





Dominion Energy
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 4 of 17
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
Overhead Right-of-Way
Pegasus Switching Station Boundary
0
300
600
Feet
1:8,000
ERM
Bull Run
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
Hylton Performing Arts Center
Hornbaker Industrial Park
Freedom Industrial Park
Wellington Road
Sudley Manor Drive
Katherine Johnson Avenue
Hornbaker Road
Clayton Road
Patriot Hill Drive
University Boulevard
Hayden Road
Vulcan Lane
Norfolk Southern Railway
Freedom Center Boulevard
Hanson Grove Court
Robertson Drive
Bradley Drive
234



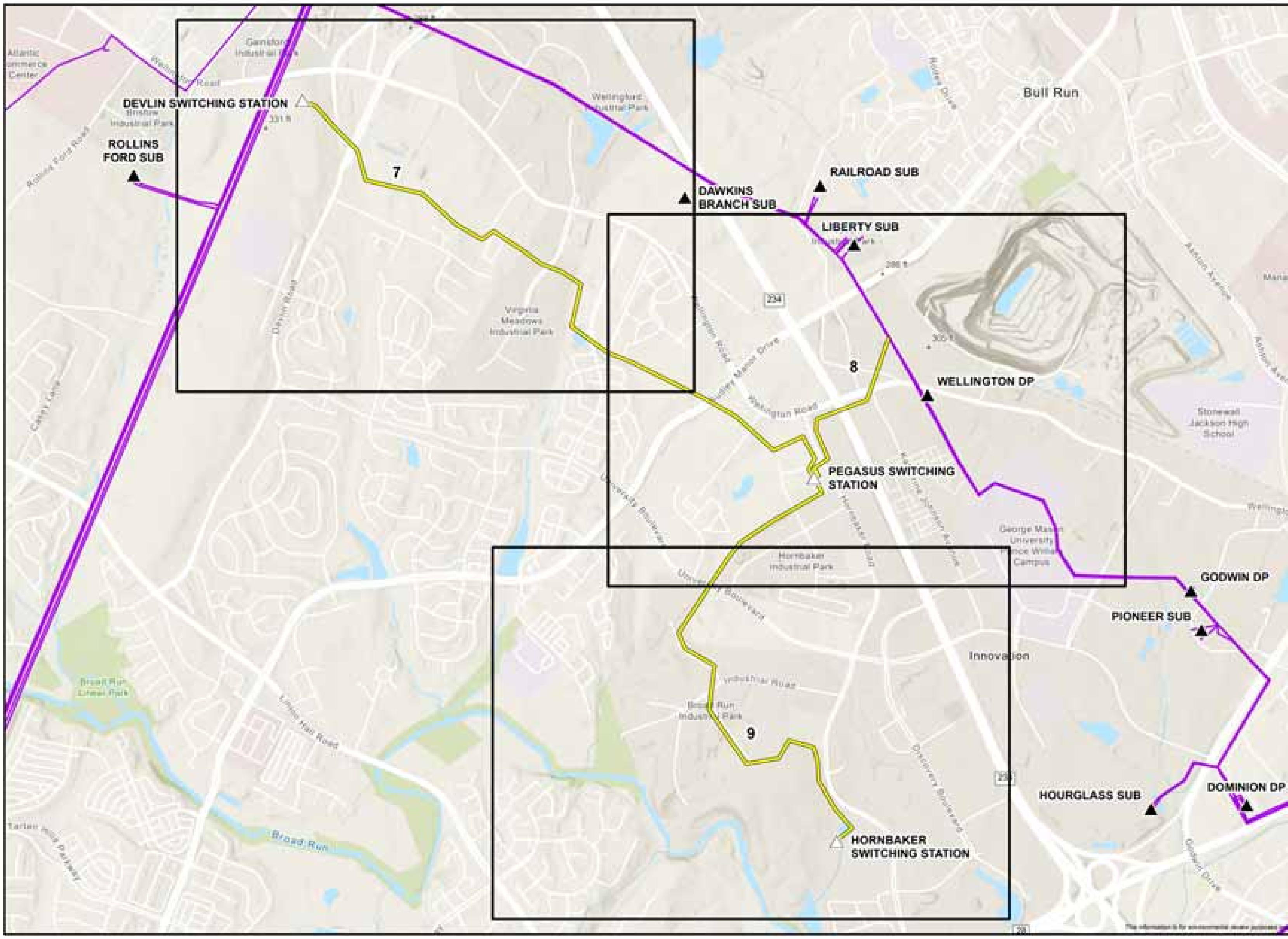
![Dominion Energy]

Attachment II.A.6
Right-of-Way Subject to New and Existing Easements Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 5 of 17

△ Proposed Switching Station
Proposed Solution 1B (Overhead)
Overhead Right-of-Way
Proposed Hornbaker Switching Station Boundary

0 300 600
Feet
1:8,000

ERM



Dominion Energy

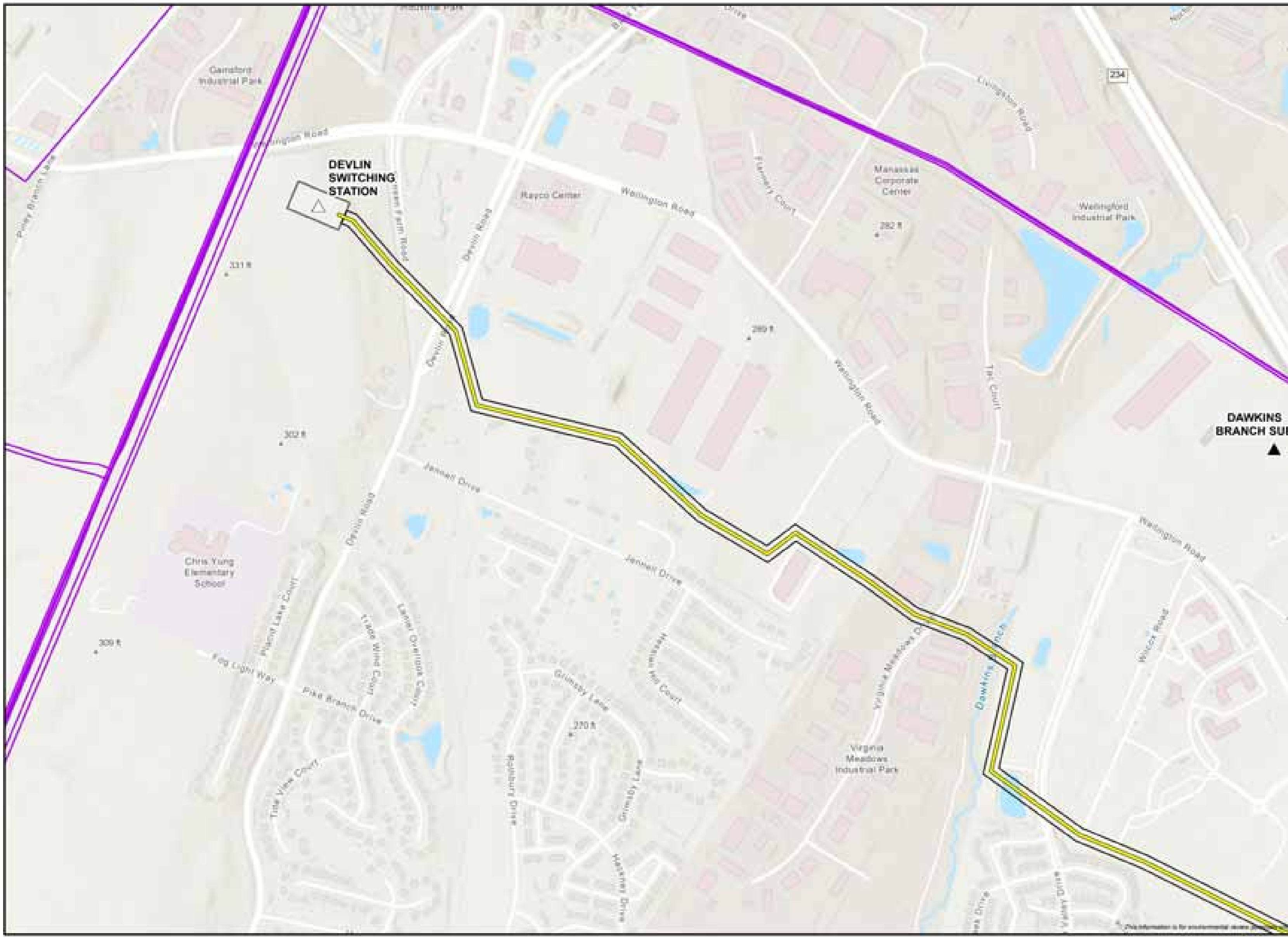
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements Index
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 6 of 17

▲ Existing Substation
△ Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 1A (Overhead)
Index Page

0 1,000 2,000
Feet
1:20,000

ERM

Project Location
Virginia



Attachment II.A.6

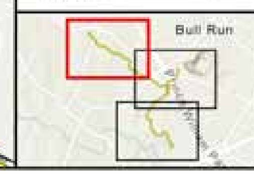
Right-of-Way Subject to New and Existing Easements
Devlin/Hornbaker 230 kV Lines Project
Dominion Energy
Prince William County, Virginia
Page 7 of 17

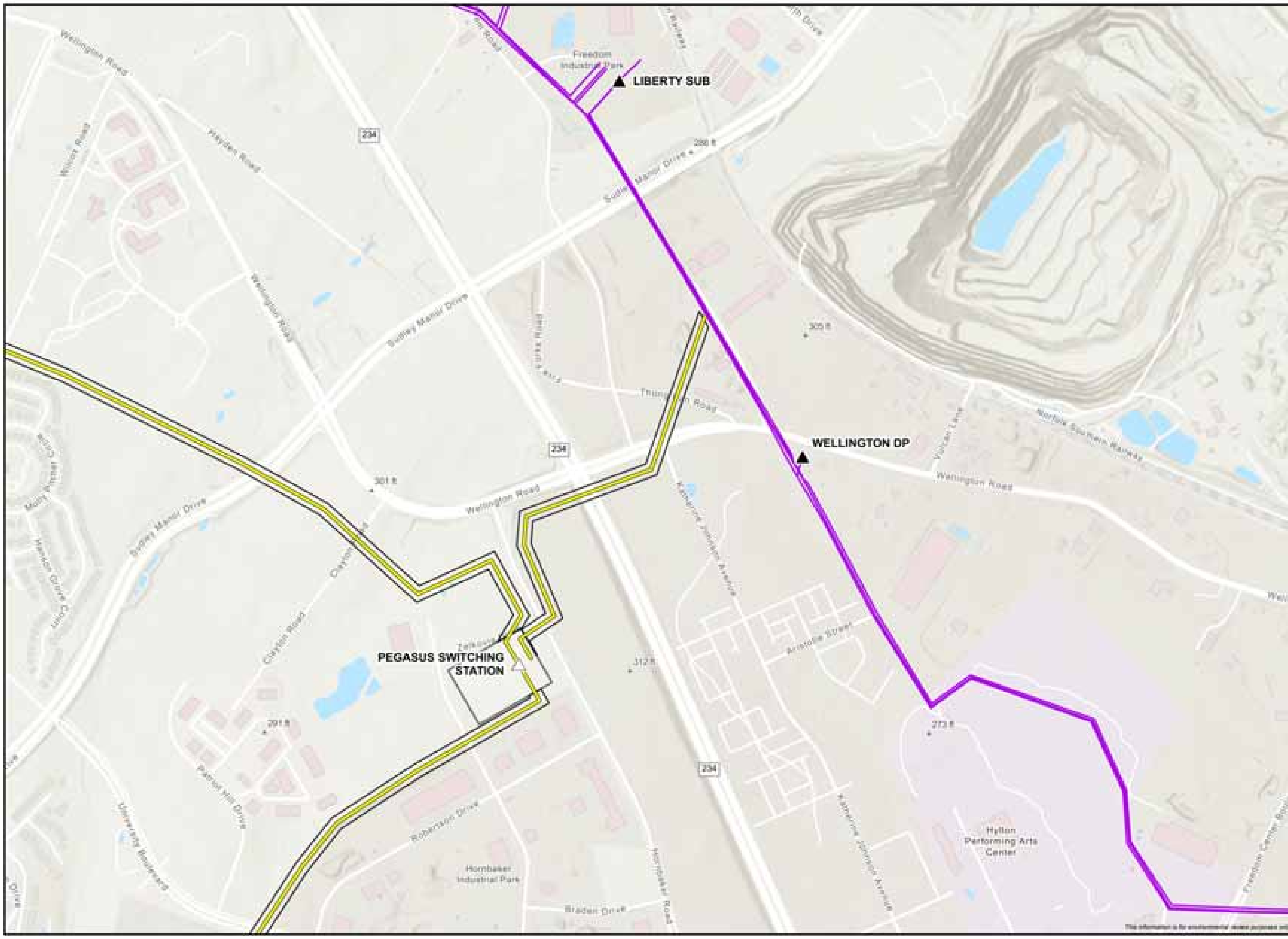
- ▲ Existing Substation
- △ Proposed Switching Station
- Existing Dominion Transmission Line
- Alternative Solution 1A (Overhead)
- Overhead Right-of-Way
- Devlin Switching Station Boundary

0 300 600
Feet
1:8,000

N S E W

ERM





Attachment II.A.6
Right-of-Way Subject to New and Existing Easements Devlin/Hornbaker 230 kV Lines Project

Dominion Energy

Prince William County, Virginia

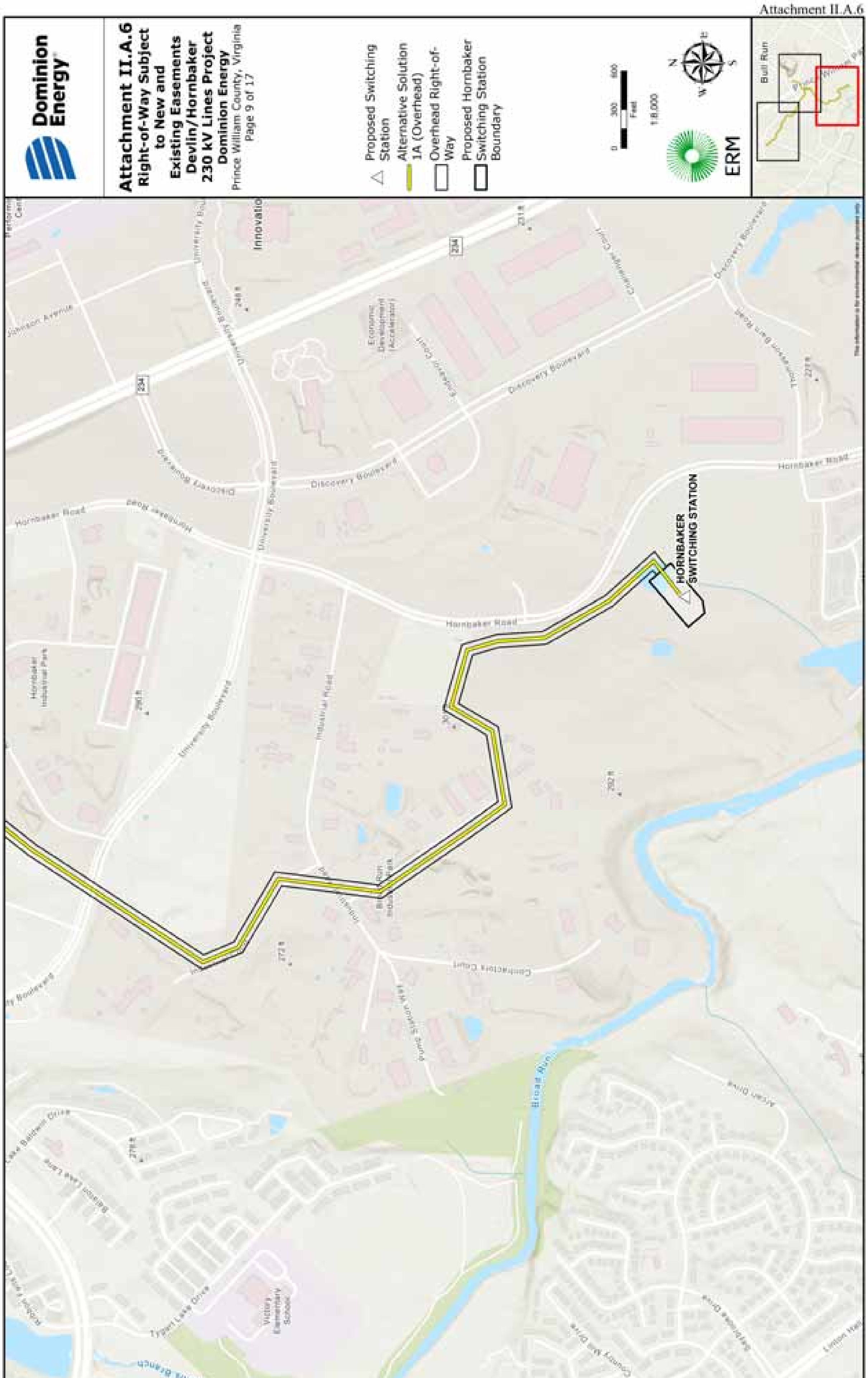
Page 8 of 17

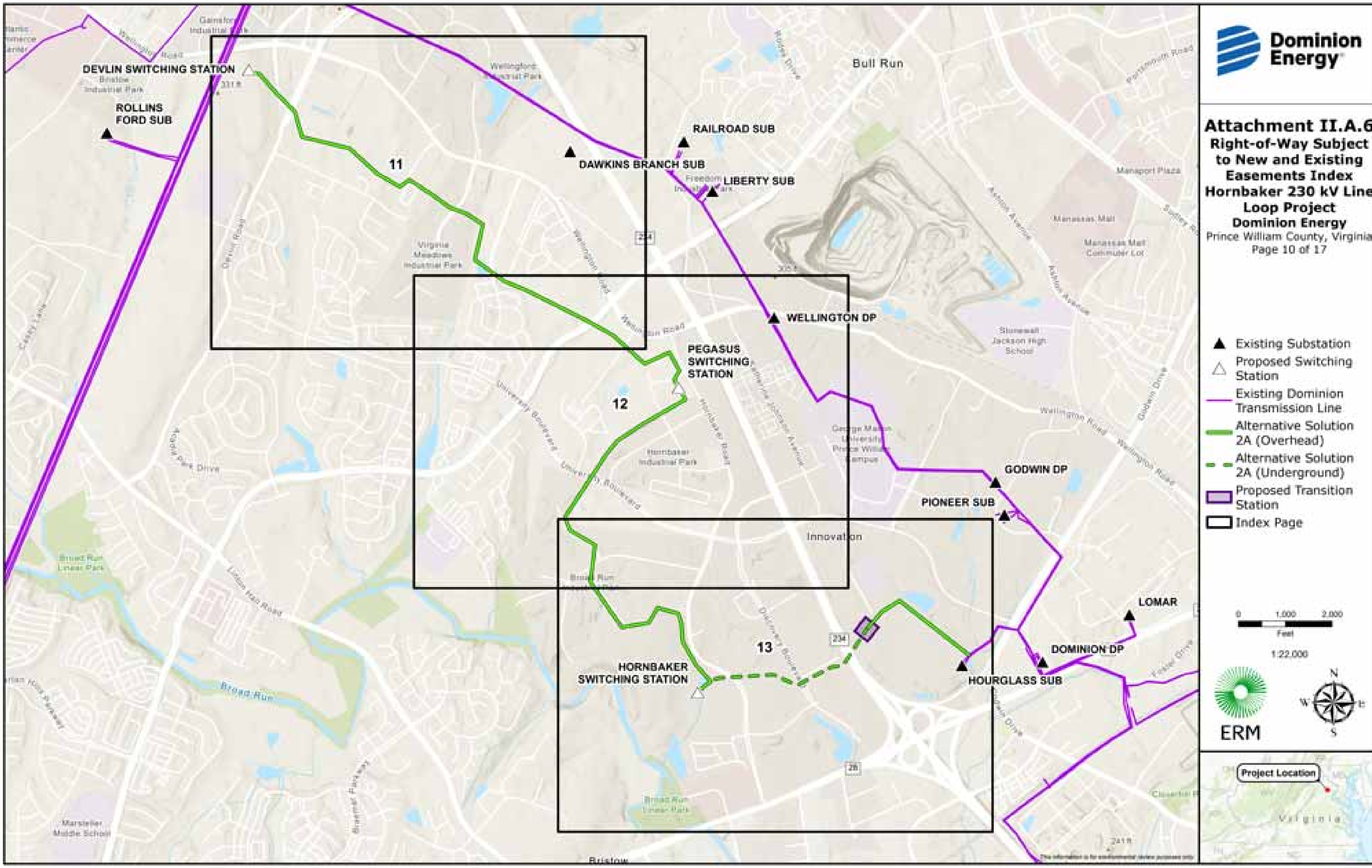
- ▲ Existing Substation
- △ Proposed Switching Station
- Existing Dominion Transmission Line
- Alternative Solution 1A (Overhead)
- Overhead Right-of-Way
- Pegasus Switching Station Boundary

0 300 600 Feet

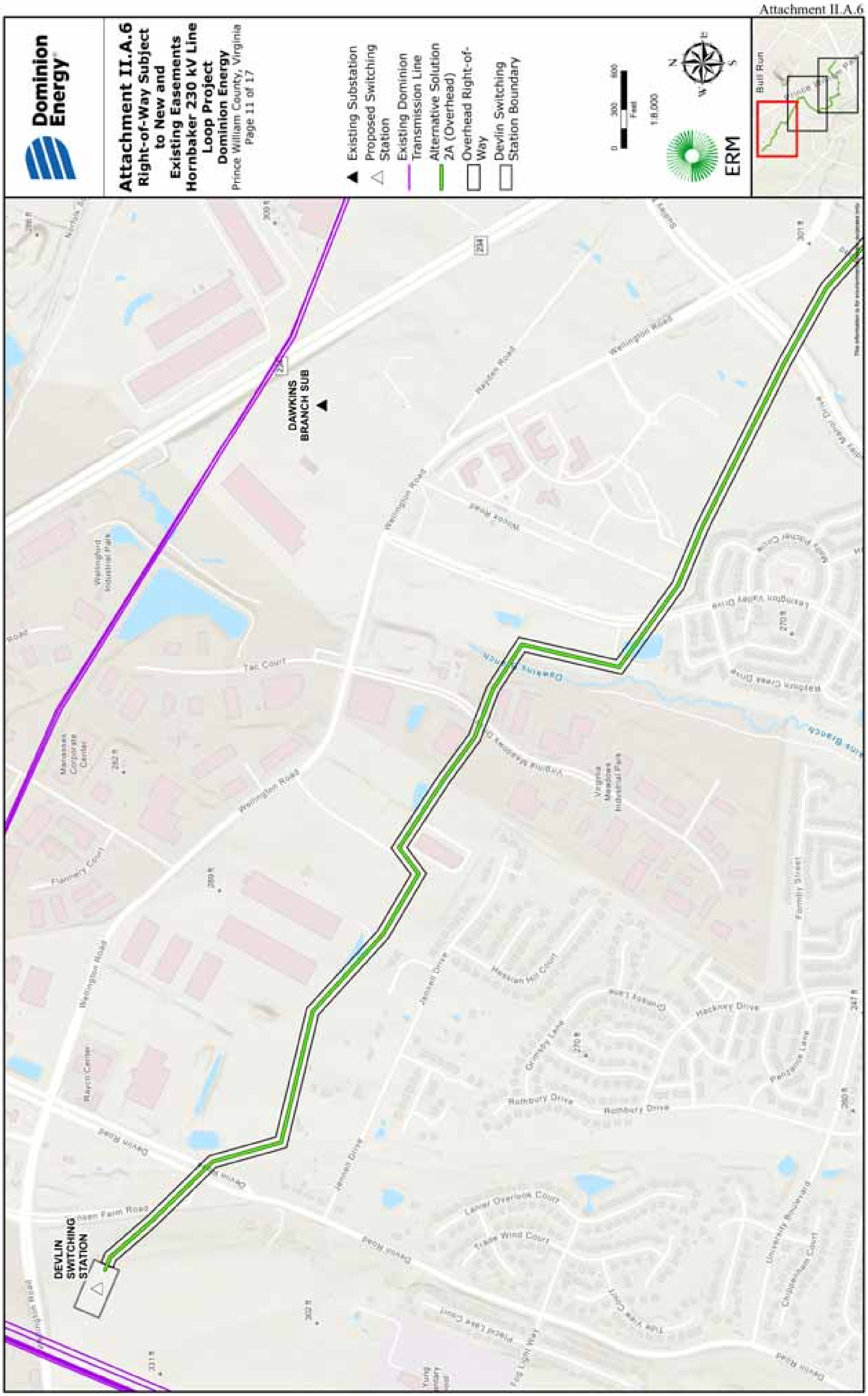
1:8,000

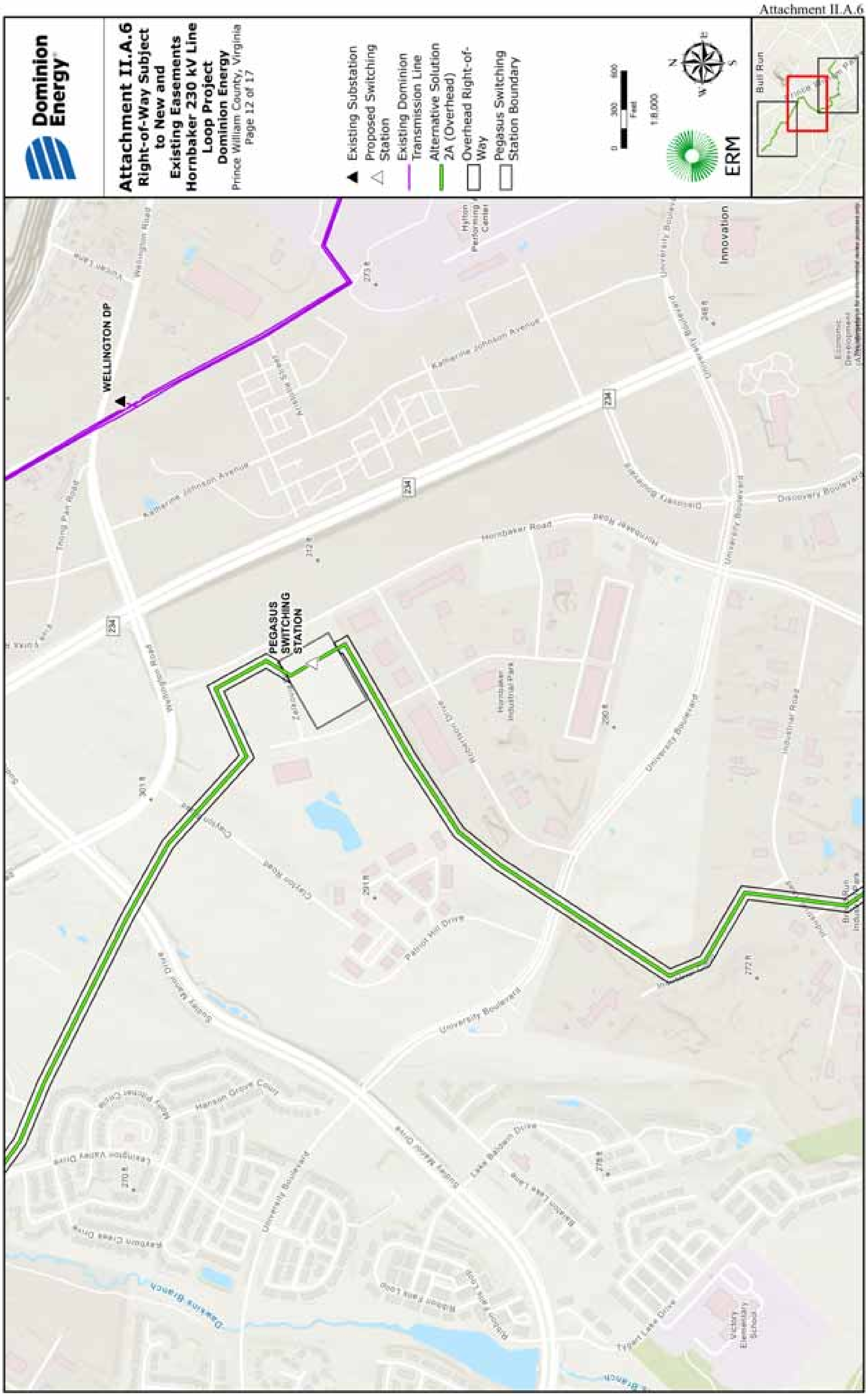
ERM

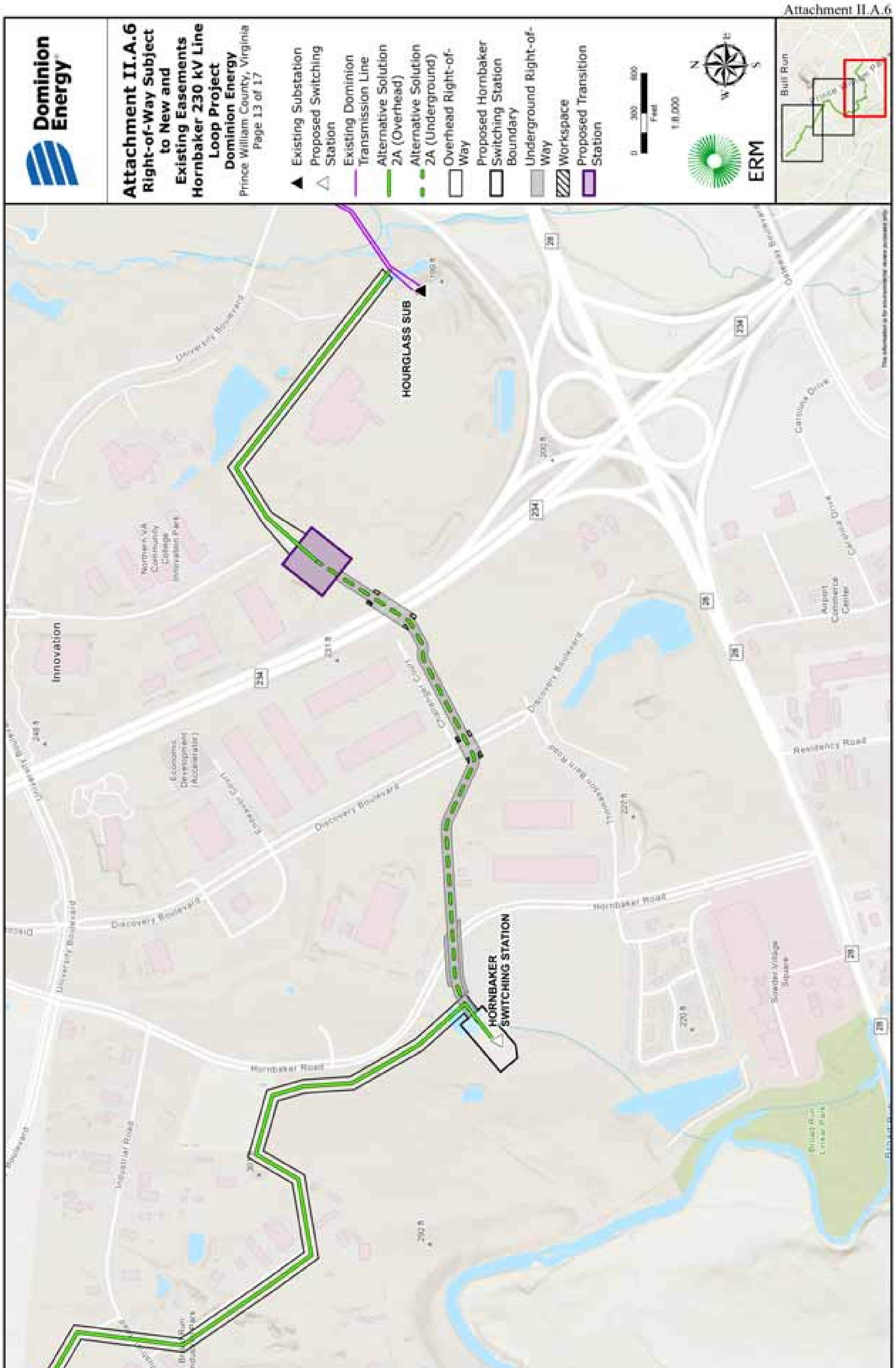

Dominion Energy
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements
Devlin/Hornbaker 230 kV Lines Project
Dominion Energy
Prince William County, Virginia
Page 9 of 17
Proposed Switching Station
Alternative Solution 1A (Overhead)
Overhead Right-of-Way
Proposed Hornbaker Switching Station Boundary
0 300 600
Feet
1:8,000
N
S
E
W
ERM
Bull Run
HORNBAKER SWITCHING STATION
Hornbaker Road
Discovery Boulevard
University Boulevard
Johnson Avenue
Innovation
234
Economic Development (Accelerator)
Endeavor Court
Challenger Court
Thomasson Barn Road
Hornbaker Industrial Park
Industrial Road
Bristow Run Industrial Park
Contractors Court
Prince William Parkway
Broad Run
Lake Baldwin Drive
Baldwin Lake Lane
Victory Elementary School
Tygart Lake Drive
Dawkins Branch
Country Mill Drive
Saybrooke Drive
Arran Drive
Linton Hall
Innovation Drive
Farm Court



Dominion Energy
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements Index
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 10 of 17
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2A (Overhead)
Alternative Solution 2A (Underground)
Proposed Transition Station
Index Page
0
1,000
2,000
Feet
1:22,000
ERM
Project Location
Virginia
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
RAILROAD SUB
DAWKINS BRANCH SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
LOMAR
DOMINION DP
HOURGLASS SUB
HORNBAKER SWITCHING STATION
11
12
13
Bull Run
Innovation
Bristow
Wellington Road
University Boulevard
Hornbaker Road
Linton Hall Road
Broad Run
Ashton Avenue
Godwin Drive
234
28


Dominion Energy
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 11 of 17
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2A (Overhead)
Overhead Right-of-Way
Devlin Switching Station Boundary
1:8,000
Feet
ERM
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
Wellington Road
Devlin Road
Tac Court
Virginia Meadows Industrial Park
Wellingford Industrial Park
Manassas Corporate Center
Rayco Center
Flannery Court
Hayden Road
Lexington Valley Drive
Dawkins Branch
Jennell Drive
Hessian Hill Court
Rothbury Drive
Hackney Drive
Formby Street
University Boulevard
Trade Wind Court
Fog Light Way
Bull Run


Dominion Energy
Attachment II.A.6
Right-of-Way Subject
to New and
Existing Easements
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 12 of 17
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2A (Overhead)
Overhead Right-of-Way
Pegasus Switching Station Boundary
0
300
600
Feet
1:8,000
ERM
WELLINGTON DP
PEGASUS SWITCHING STATION
Katherine Johnson Avenue
Hornbaker Road
Discovery Boulevard
University Boulevard
Wellington Road
Hornbaker Industrial Park
Robertson Drive
Industrial Road
Innovation
Hylton Performing Arts Center
Patriot Hill Drive
Clayton Road
Sudley Manor Drive
Lake Baldwin Drive
Lexington Valley Drive
Rayburn Creek Drive
Dawkins Branch
Victory Elementary School
Tygart Lake Drive
Ribbon Falls Loop
Hanson Grove Court
Tinity Parkway
234


Dominion Energy
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
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Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2A (Overhead)
Alternative Solution 2A (Underground)
Overhead Right-of-Way
Proposed Hornbaker Switching Station Boundary
Underground Right-of-Way
Workspace
Proposed Transition Station
0 300 600
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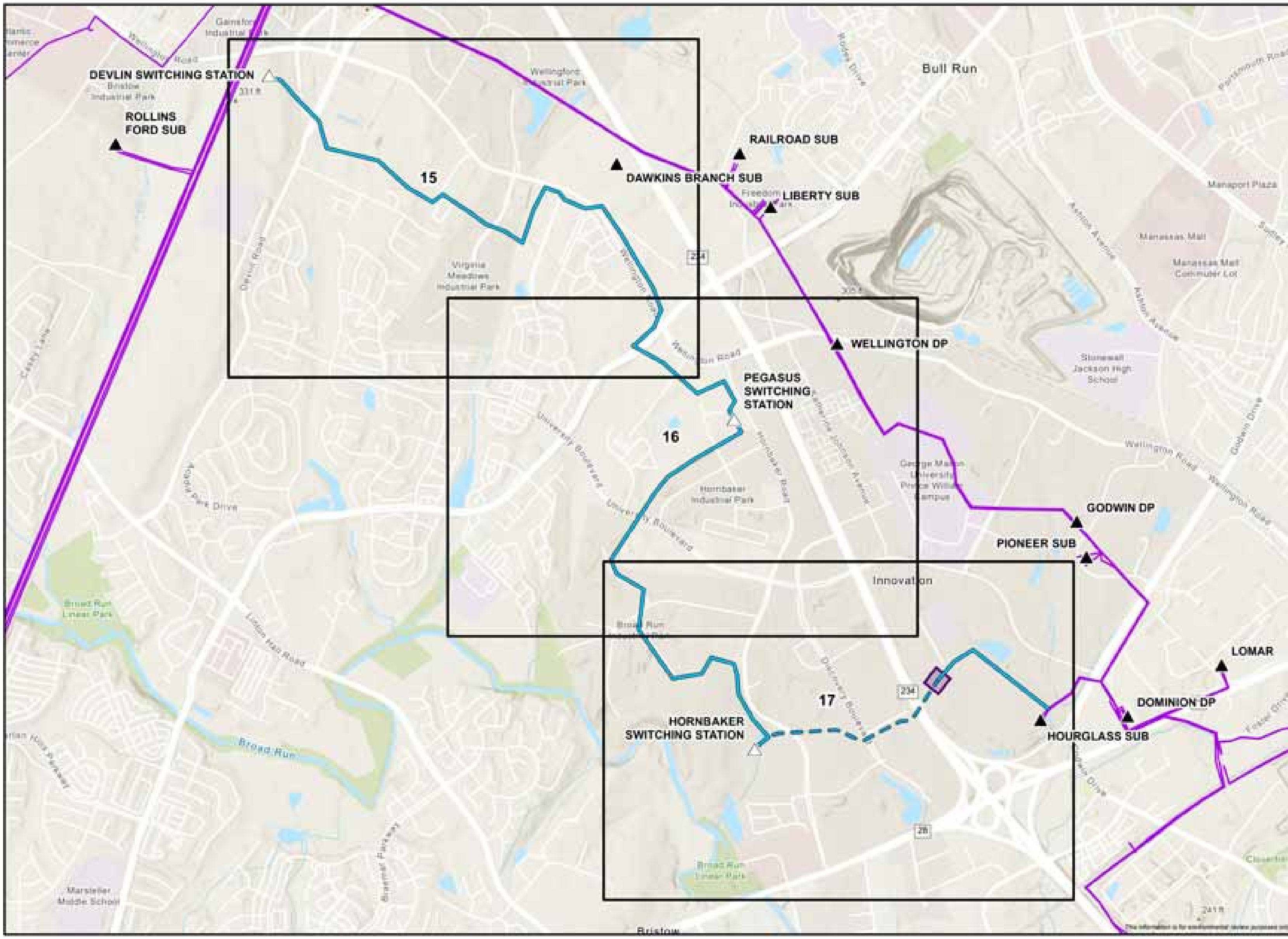
Bull Run
HOURGLASS SUB
HORNBAKER SWITCHING STATION
University Boulevard
Innovation
Northern VA Community College Innovation Park
Economic Development (Accelerator)
Discovery Boulevard
Hornbaker Road
Residency Road
Sowder Village Square
Airport Commerce Center
Carolina Drive
Gateway Boulevard
Industrial Road
Bull Run Linear Park
234
28



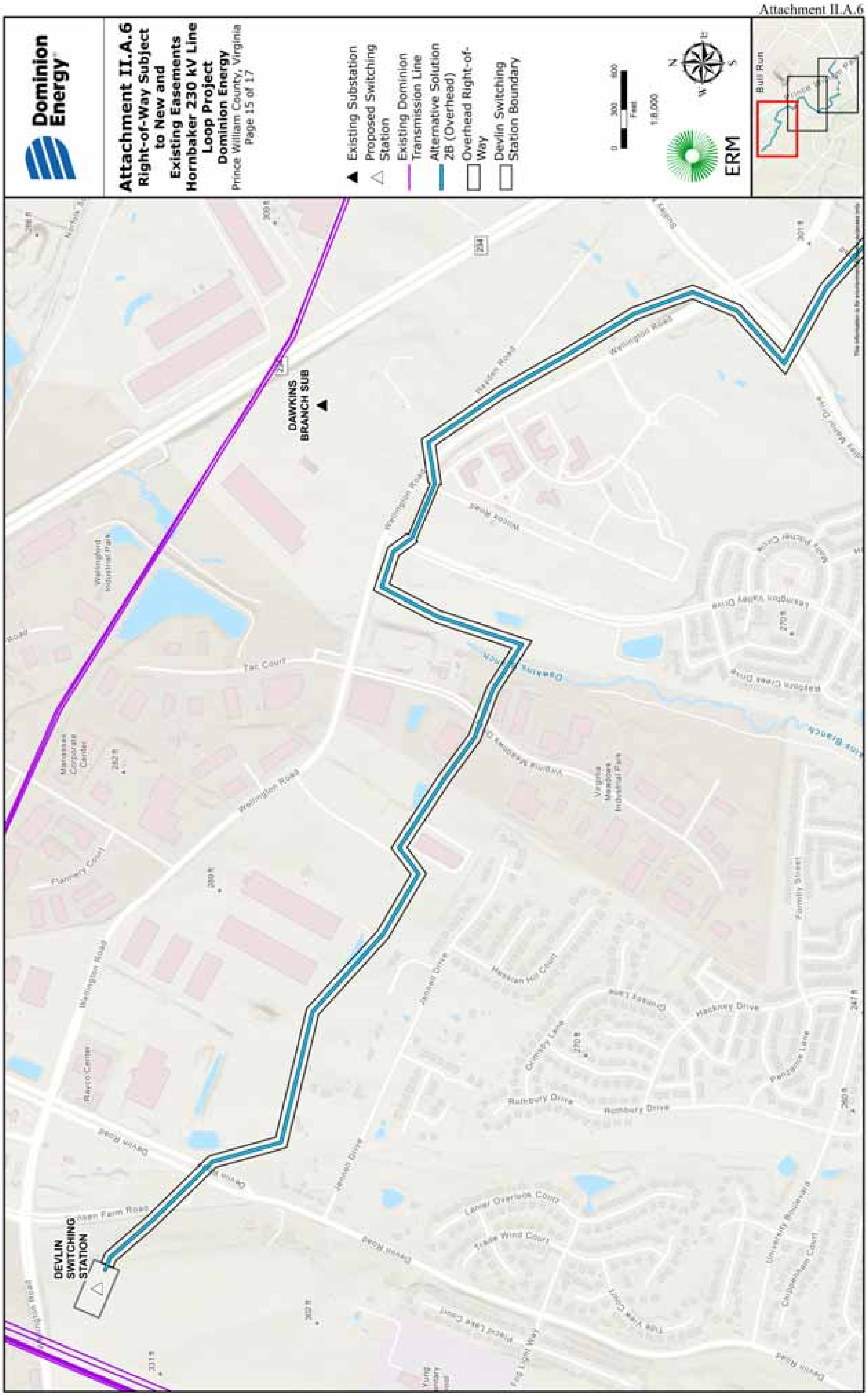
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements Index
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 14 of 17

- ▲ Existing Substation
- △ Proposed Switching Station
- Existing Dominion Transmission Line
- Alternative Solution 2B (Overhead)
- Alternative Solution 2B (Underground)
- Proposed Transition Station
- Index Page

0 1,000 2,000 Feet
1:22,000

ERM

Project Location
Virginia



Dominion Energy
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 15 of 17
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2B (Overhead)
Overhead Right-of-Way
Devlin Switching Station Boundary
0 300 600
Feet
1:8,000
N
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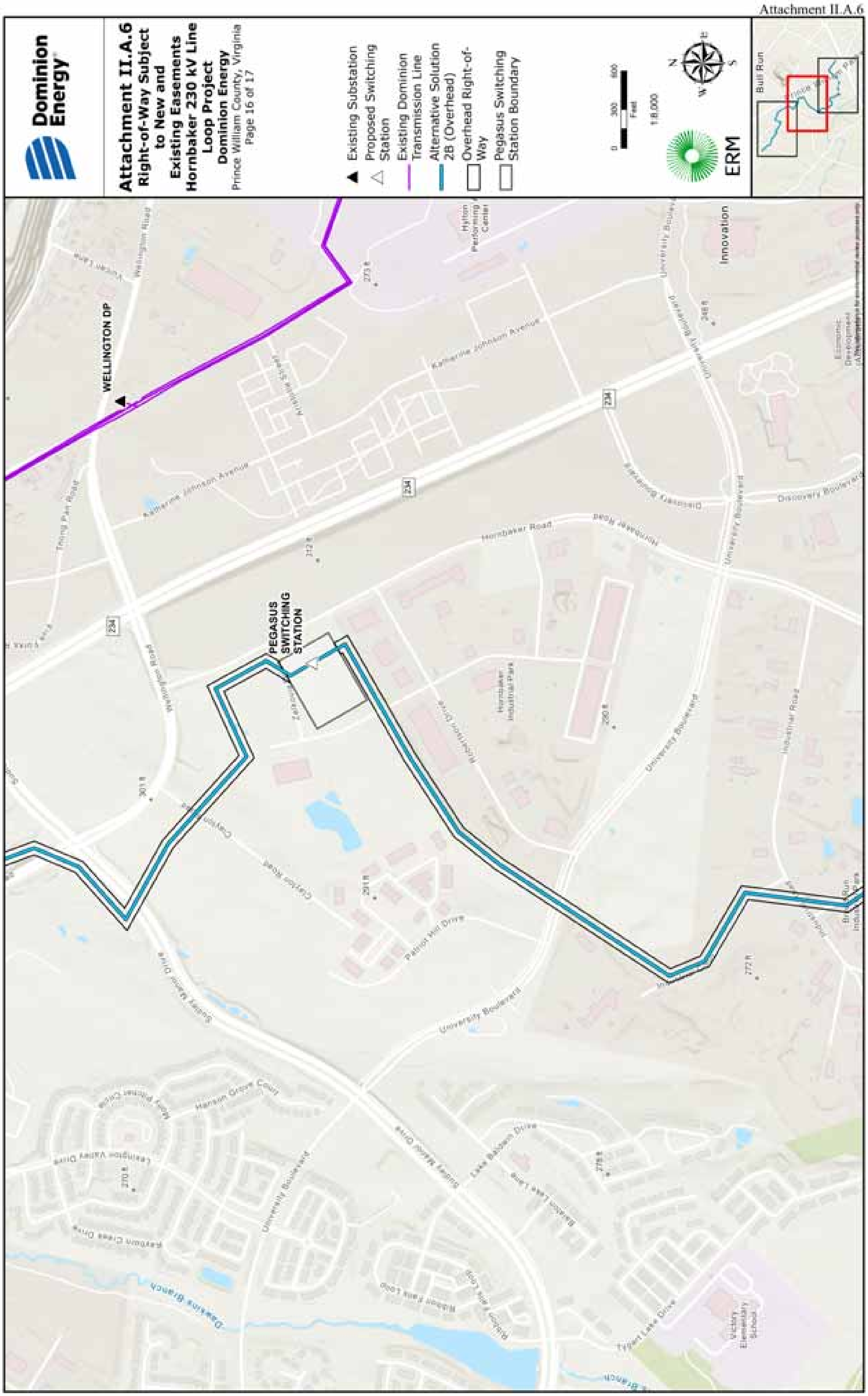
ERM
Bull Run
DAWKINS BRANCH SUB
DEVLIN SWITCHING STATION
Wellington Road
Hayden Road
Wood Road
Virginia Meadows Drive
Virginia Meadows Industrial Park
Wellingford Industrial Park
Manassas Corporate Center
Tac Court
Flannery Court
Rayco Center
Devlin Road
Jennell Drive
Hessian Hill Court
Grimsby Lane
Rothbury Drive
Hackney Drive
Penzance Lane
Formby Street
Lexington Valley Drive
Dawkins Branch
Sudley Manor Drive
University Boulevard
Chippenham Court
Lanier Overlook Court
Trade Wind Court
Tide View Court
Placid Lake Court
Fog Light Way
Bayfront Creek Drive
Mary Fischer Circle
234


Dominion Energy
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 16 of 17
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2B (Overhead)
Overhead Right-of-Way
Pegasus Switching Station Boundary
0 300 600
Feet
1:8,000
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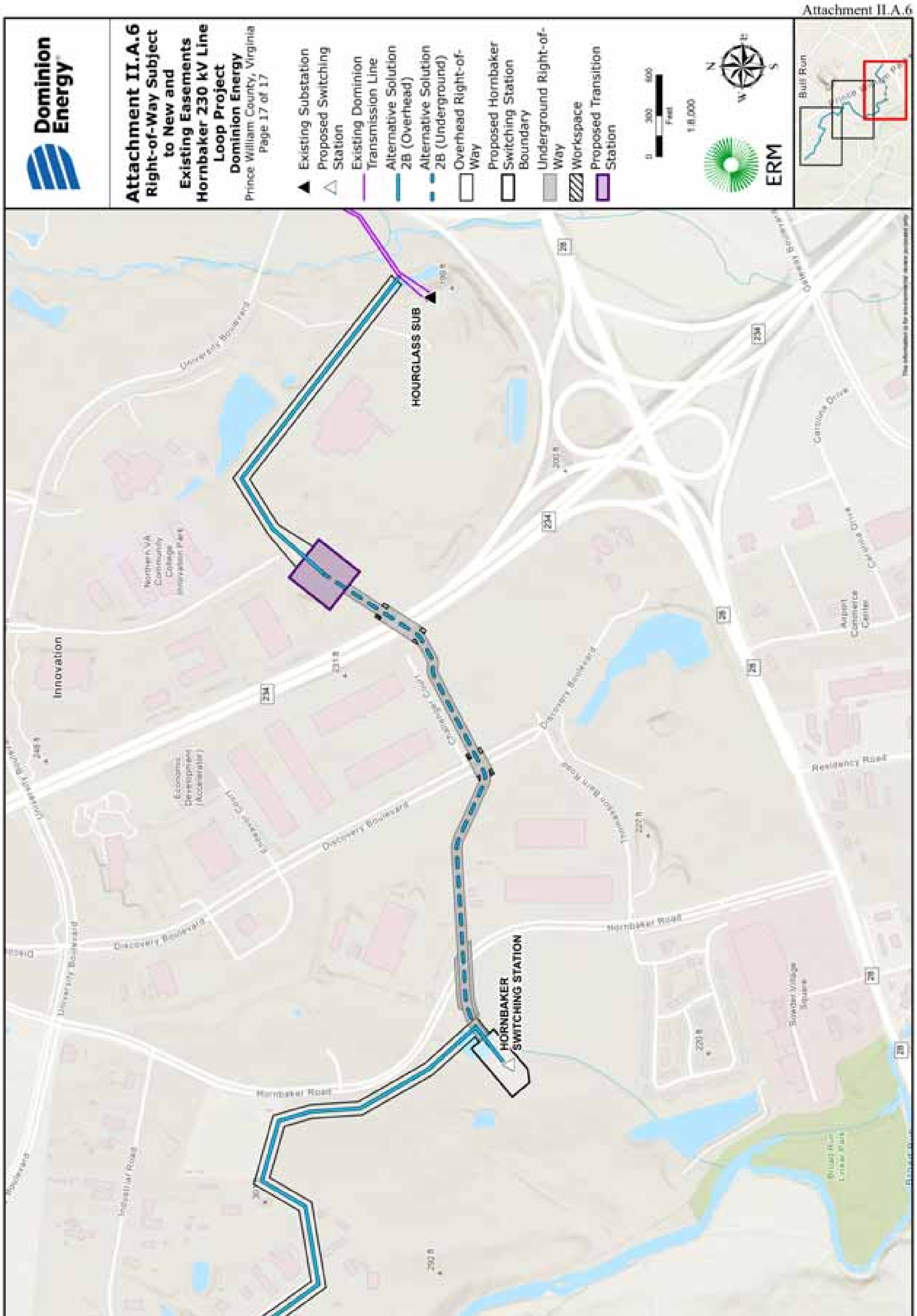
ERM
Bull Run
WELLINGTON DP
PEGASUS SWITCHING STATION
Hornbaker Industrial Park
Innovation
Hornbaker Road
Katherine Johnson Avenue
University Boulevard
Discovery Boulevard
Wellington Road
Sudley Manor Drive
Patriot Hill Drive
Clayton Road
Industrial Road
Robertson Drive
Lake Baldwin Drive
Lexington Valley Drive
Hanson Grove Court
Dawkins Branch
Victory Elementary School
Hylton Performing Arts Center
Tygart Lake Drive
Balaton Lake Lane
234



Dominion Energy
Attachment II.A.6
Right-of-Way Subject to New and Existing Easements
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 17 of 17
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Overhead Right-of-Way
Proposed Hornbaker Switching Station Boundary
Underground Right-of-Way
Workspace
Proposed Transition Station
1:8,000
Feet
ERM
HOURGLASS SUB
HORNBAKER SWITCHING STATION
Hornbaker Road
Discovery Boulevard
University Boulevard
Innovation
Northern VA Community College Innovation Park
Economic Development (Accelerator)
Residency Road
Carolina Drive
Airport Commerce Center
Sowder Village Square
Bull Run Linear Park
Industrial Road
Bull Run

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: The permanent right-of-way width for the Proposed Solution 1B is 100 feet. In general, the entire 100-foot-wide right-of-way will require clearing.

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 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 herbicide application.

Based on recommendations by the Virginia Department of Wildlife Resources ("DWR"), the Company will endeavor to adhere to the TOYRs for cutting trees and vegetations favorable to winged animals from March 15 – November 15. This includes further minimizing potential effects by avoiding trees favorable for bat maternity roosting locations nesting bird habitat, to the extent practicable.

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 a new transmission line typically begins with identification of the project "origin" and "termination" points provided by the Company's Transmission Planning Department. This is followed by the development of a study area for the project. The study area represents a circumscribed geographic area from which potential routes that may be suitable for a transmission line can be identified.

For this Project, the Company retained the services of Environmental Resources Management ("ERM") to help collect information within the study area, identify potential routes, perform a routing analysis comparing the route alternatives, and document the routing efforts in an Environmental Routing Study. A study area was developed that encompassed the areas surrounding the future Hornbaker, Devlin, and Pegasus Switching Stations, the existing Hourglass Substation, and existing Lines #2187/172. The Project study area encompasses approximately 11.9 square miles and lies within a mostly developed portion of Prince William County and the City of Manassas, consisting primarily of commercial and industrial land north of the Manassas Regional Airport.

The initial design of the Project only consisted of constructing a new overhead double circuit 230 kV transmission line from the Company's existing Lines #2187/#172 to the proposed Hornbaker Switching Station (then referred to as the "Hornbaker Project").

The Company announced the initial design of the Project in July 2023 via mail and held an initial open house for the Project on August 1, 2023. The Company initially proposed two routes at the open house. Approximately 48 community members attended the open house, including several members of the Prince William County Board of Supervisors. Most of the feedback received at the open house involved concerns over viewshed impacts of the routes on businesses in the area.

Following the open house, on August 8, 2023, the Company and ERM participated in a meeting at the Sweeney Barn in Manassas. The meeting was held by the Innovation Park developer and attended by business owners within Innovation Park, as well as Prince William County staff and elected officials. As was the case with the open house, the feedback offered was predominantly negative and related to the close proximity of the routes to several existing businesses in Innovation Park. The elected officials indicated during the meeting that they would not approve an easement for any overhead route that crossed county-owned land. This decision rendered both routes non-viable, since the routes crossed several parcels of land owned by the Prince William County Board of Supervisors.

Following the elimination of the initial routes for the Project, ERM and the Company next sought to develop other overhead route alternatives to serve the proposed Hornbaker Switching Station that did not cross county-owned land, as well as underground routes across county-owned land that would be acceptable to Prince William County, stakeholders, and the public.

Concurrent with the development of the Hornbaker Project, the Company also began reviewing route options for a separate project (then known as the "Devlin to Hornbaker Project"). The Devlin to Hornbaker Project would extend a double circuit 230 kV line from the proposed Devlin Switching Station, located near the intersection of Wellington Road and Hansen Farm Road, to the proposed Hornbaker Switching Station. As the Hornbaker Load Area projected demand continued to grow due to additional proposed data center developments in the area, it became apparent that both the original Hornbaker Project and the Devlin to Hornbaker Project needed to be constructed together to serve projected loads and maintain the reliability of the grid in the area. Therefore, as new route alternatives were being developed for the Hornbaker Project, the Company decided to combine the Hornbaker Project and the Devlin to Hornbaker Project (as defined at the time) into a single project, which became the Project proposed herein.

Through a detailed review of the routing challenges and the possible electrical solutions in the area, the Company determined that two potential electrical solutions could meet the Hornbaker Load Area's needs. The route development process for the Project is described in more detail in the Environmental Routing Study.

In developing the potential route alternatives for the Proposed and Alternative Solutions, ERM also studied multiple other routes that were subsequently rejected from further consideration. For the original Hornbaker Project, ERM originally identified 17 overhead routes (six Option 1 routes, four Option 2 routes, four Option 4 routes, and three Option 5 routes) and seven underground/hybrid routes (four Option 1 routes, one Option 3 route, and two Option 4 routes). These routes were rejected from further consideration and not noticed due to flaws in the routes identified during initial route development. For the Devlin – Hornbaker component of the Project, ERM originally identified 11 overhead routes and four underground/hybrid routes that were rejected from further consideration and not noticed due to flaws in the routes identified during initial route development. See

Section 4.6 of the Routing Study for more information on why these routes were rejected from further consideration.

The Proposed and Alternative Solutions are discussed below.

PROPOSED AND ALTERNATIVE SOLUTIONS

Proposed Solution 1B

Proposed Solution 1B involves the construction of an overhead double circuit 230 kV transmission line supported primarily by double circuit monopoles in a new 100-foot-wide right-of-way. The solution would be comprised of three route components: (1) Wellington – Pegasus Route 1; (2) Pegasus – Hornbaker Route 1; and (3) and Devlin – Pegasus Route 2. Proposed Solution 1B is approximately 5.3 miles in total length. As noted in Section I.I, the estimated conceptual cost of Proposed Solution 1B is approximately $94.3 million.

Wellington – Pegasus Route 1

Wellington – Pegasus Route 1 is an overhead route that taps the Company's existing Line #2187 approximately 0.2-mile north of the existing Wellington Substation. From the tap location, the route extends southwest for approximately 0.2 mile, crossing an industrial yard, Thong Pan Road, and Wellington Road, as well as a forested parcel bounded by these roads. The route then turns west, paralleling the south side of Wellington Road for approximately 0.2 mile (including a crossing of Prince William Parkway). The route turns south paralleling the west side of Hornbaker Road for approximately 0.1 mile before crossing the road and terminating at the proposed Pegasus Switching Station.

Pegasus – Hornbaker Route 1

Pegasus – Hornbaker Route 1 is an overhead route that begins at the proposed Pegasus Switching Station, extending southeast for approximately 0.1 mile and then turning southwest for approximately 0.7 mile. This segment crosses through forested land adjacent to industrial and commercial development and crosses University Boulevard. East of Industrial Court, the route turns generally southeast and collocates with the east side of the road for about 0.2 mile, crossing an industrial storage yard/parking lot. The route then turns south for about 0.1 mile, crossing Industrial Court and Industrial Road and another industrial storage yard, before turning southeast and paralleling the west side of Hawkins Drive for about 0.2 mile. At this point, the route turns east, crosses the most southern part of Hawkins Drive industrial storage yard for 0.1 mile. The route then turns north and then back east for 0.2 mile, following parcel lines. The route then turns to the south-southeast for about 0.3 mile (collocated with the west side of Hornbaker Road) before terminating at the proposed Hornbaker Switching Station.

Devlin – Pegasus Route 2

Starting at the future Devlin Switching Station, Devlin – Pegasus Route 2 heads generally southeast for approximately 0.3 mile, crossing Hansen Farm Road and Balls Ford Road. The route turns east/southeast for 0.5 mile, following vegetated/forested parcel boundaries before angling slightly to the east to pass south of a data center building currently under construction. The route then turns northeast for 0.1 mile to cross Buckey Timber Drive and then heads southeast for 0.4 mile, passing between industrial buildings and crossing Virginia Meadows Drive and Dawkins Branch. At this point, the route turns north-northeast, passing through forested land and paralleling the west side of Dawkins Branch for approximately 0.2 mile before turning east for approximately 0.2 mile, collocating with the south side of Wellington Road. The route then crosses Lexington Valley Drive and continues southeast, paralleling the north side of Wellington Road for approximately 0.5 mile. Just before Sudley Manor Drive, the route turns southwest and crosses back over Wellington Road, paralleling the north side of Sudley Manor Drive for approximately 0.2 mile. The route then turns southeast for 0.3 mile and crosses Sudley Manor Drive. After crossing an existing natural gas pipeline near MP 2.5, the route turns northeast for approximately 0.1 mile and then southeast for approximately 0.2 mile before terminating at the proposed Pegasus Switching Station.

Proposed Solution 1B has a total length of 5.3 miles, with a right-of-way of 68.8 acres, including the proposed Hornbaker Switching Station. A total of 71 parcels are crossed by the solution. Of these, 64 parcels are privately owned and seven are owned by Prince William County. All parcels owned by the county are existing or proposed road rights-of-way. Land use along the Proposed Solution rights-of-way consists of 21.9 acres of forested land, 22.9 acres of developed area, and 20.6 acres of open space. No agricultural or open water lands are crossed by Proposed Solution 1B. Where the route crosses open lands, impacts would be limited to structure placement and land use activities could resume post construction. There are 21.9 acres of forested land crossed that would be cleared, which is a similar amount of forest clearing required for all of the solutions.

Based on ERM's desktop wetland and waterbody analysis, the right-of-way of the Proposed Solution will encompass approximately 9.8% (6.4 acres) of land with a medium or higher probability of containing wetlands and waterbodies. Of these 6.4 acres, the majority (4.4 acres) consist of forested wetlands. The route has a total of 21 waterbody crossings: three are perennial stream crossings, 11 are intermittent stream crossings, four are perennial lake/pond crossings, and three are non-National Hydrography Dataset ("NHD") mapped waterbodies.

Proposed Solution 1B will collocate with existing routing opportunities for 2.5 miles, including 1.3 miles with existing roads, 1.0 mile with existing underground utilities and 0.2 mile with roads and existing underground utilities. No existing transmission lines are paralleled by the solution.

Proposed Solution 1B is the second shortest of the solutions and would require correspondingly the second least right-of-way acreage. Proposed Solution 1B would have the least number of residences within 100, 250, and 500 feet of its centerline (0, 8, and 40, respectively), which is significantly less than Alternative Solutions 1A and 2A and the same as Alternative Solution 2B. Proposed Solution 1B would cross the fewest total wetlands acres of the four solutions, and the fewest impacts to forested wetlands. It also has the fewest parcels crossed and second fewest waterbodies crossed. The solution also has the second most collocation of any of the solutions. For these reasons, the Company selected Solution 1B as the Proposed Solution for the Project.

Alternative Solution 1A

Alternative Solution 1A would involve the construction of an overhead double circuit 230 kV transmission line supported primarily by double circuit monopoles in a new 100-foot-wide right-of-way. The solution would be comprised of three route components: (1) Wellington – Pegasus Route 1; (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 1. Alternative Solution 1A is approximately 4.9 miles in total length. The estimated conceptual cost of Alternative Solution 1A is approximately $81.8 million.

Wellington-Pegasus Route 1

See Proposed Solution 1B for a description of Wellington – Pegasus Route 1.

Pegasus-Hornbaker Route 1

See Proposed Solution 1B for a description of Pegasus – Hornbaker Route 1.

Devlin-Pegasus Route 1

Devlin – Pegasus Route 1 is an overhead route that begins at the future Devlin Switching Station and follows the same alignment as Devlin – Pegasus Route 2 for the first 1.2 miles, diverging just east of Dawkins Branch. At this point, the route then turns south, paralleling the east side of Dawkins Branch for approximately 0.2 mile before turning southeast for approximately 0.5 mile. This segment crosses Lexington Valley Drive and passes between residential areas east of Lexington Valley Drive. The route then continues southeast and follows the same alignment as Devlin – Pegasus Route 2 for the remaining 0.6 mile to the proposed Pegasus Switching Station.

Alternative Solution 1A has a total length of 4.9 miles, with a right-of-way of 60.5 acres including the proposed Hornbaker Switching Station. A total of 71 parcel are crossed by the solution. Of these, 64 parcels are privately owned and seven are owned by Prince William County. All parcels owned by the county are existing or proposed road rights-of-way. Land use along Alternative Solution 1A rights-of-way consists of 19.4 acres of forested land, 21.1 acres of developed area, 17.1 acres of open space, and 0.4 acre of open water. No agricultural lands are crossed by

Alternative Solution 1A. Where the route crosses open lands, impacts would be limited to structure placement and land use activities could resume post construction. There are 19.4 acres of forested land crossed that would be cleared, which is a similar amount of forest clearing required for any of the solutions.

Based on ERM's desktop wetland and waterbody analysis, the right-of-way of Alternative Solution 1A will encompass approximately 11.4% (7.4 acres) of land with a medium or higher probability of containing wetlands and waterbodies. Of these 7.4 acres, the majority (5.0 acres) consist of forested wetlands. The route has a total of 20 waterbody crossings: three are perennial stream crossings, 10 are intermittent stream crossings, four are perennial lake/pond crossings, and three are non-NHD mapped waterbodies.

Alternative Solution 1A will collocate with existing linear routing opportunities for 2.0 miles, including 0.8 mile with existing roads, 1.1 miles with existing underground utilities, and 0.2 mile with roads and existing underground utilities. No existing transmission lines are paralleled by the solution.

Alternative Solution 1A is the shortest of the solutions and therefore would require the least right-of-way acreage. Alternative Solution 1A, however, would have the greatest number of residences within 100, 250 and 500 feet of its centerline (3, 26, and 98 respectively). This is significantly more than Proposed Solution 1B. Alternative Solution 1A would cross the second most total wetlands acres of the four solutions and is tied with Alternative Solution 2B for the second most impacts to forested wetlands. It also has the fewest waterbodies crossed, tied with Proposed Solution 1B for the fewest parcels crossed, and has the fewest forested areas crossed. The solution has the least collocation of any of the solutions. While acknowledging the impacts of Alternative Solution 1A, the Company proposes Alternative Solution 1A for notice and the Commission's consideration as a viable alternative to the Proposed Solution.

Alternative Solution 2A

Alternative Solution 2A would be a hybrid overhead/underground solution that would involve construction of 4.8 miles of overhead double circuit 230 kV transmission line supported primarily by double circuit monopoles in a new 100-foot-wide right-of-way, and 0.8 mile of underground double circuit 230 kV transmission line in a new 80-foot-wide right-of-way. The solution would be comprised of three route components: (1) Hourglass – Hornbaker Route 1 (Hybrid); (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 1. Alternative Solution 2A is approximately 5.6 miles in total length. The estimated conceptual cost of Alternative Solution 2A is approximately $290.1 million.

Hourglass – Hornbaker Route 1

Hourglass – Hornbaker Route 1 is a combination of approximately 0.5 mile of overhead transmission line combined with approximately 0.8 mile of underground transmission line and includes an approximately 3.1-acre transition station. Hourglass – Hornbaker Route 1 begins as an overhead line that taps the Company's existing Line #2196 just outside the Hourglass Switching Station. The route then extends approximately 0.4-mile northwest adjacent to an existing data center development. The route turns southwest for approximately 0.2 mile and enters the proposed transition station (currently an existing parking lot and adjacent forested area), where it transitions from overhead to an underground route. The route then continues out of the station to the southwest, including a trenchless crossing of Prince William Parkway. On the west side of Prince William Parkway, the route turns west for approximately 0.2 mile through county-owned property, parallel to and south of Challenger Court and across Discovery Boulevard. West of Discovery Boulevard, the route turns west for approximately 0.4 mile through forested lands and an industrial parcel and crosses Hornbaker Road before terminating at the proposed Hornbaker Switching Station.

Pegasus – Hornbaker Route 1

See Proposed Solution 1B for a description of Pegasus – Hornbaker Route 1.

Devlin – Pegasus Route 1

See Alternative Solution 1A for a description of Devlin – Pegasus Route 1.

Alternative Solution 2A has a total length of 5.6 miles (4.8 miles overhead and 0.8 mile underground) with a right-of-way of 70.2 acres, including the proposed Hornbaker Switching Station and the proposed transition station. A total of 78 parcels are crossed by the solution. Of these 68 parcels, 58 are privately owned and 10 are owned by Prince William County. Three of the 10 parcels are parcels managed by the county's Economic Development Authority and are planned to be developed in the future. The other seven county-owned parcels are existing or proposed road rights-of-way. Land use along Alternative Solution 2A rights-of-way consists of 19.1 acres of forested land, 30.9 acres of developed area, 19.9 acres of open space, and 0.4 acre of open water. No agricultural lands are crossed by Alternative Solution 2A. Where the overhead route segments cross open lands, impacts would be limited to structure placement and land use activities could resume post construction. During construction of the underground segment, open lands would be temporary impacted by the open trench construction method but could resume post construction. There are 19.1 acres of forested land crossed that would be cleared, which is a similar amount of forest clearing required for any of the solutions.

Based on ERM's desktop wetland and waterbody analysis, the right-of-way of the Alternative Solution 2A will encompass approximately 11.4% (8.0 acres) of land with a medium or higher probability of containing wetlands and waterbodies. Of these 8.0 acres, the majority (5.7 acres) consist of forested wetlands. Most wetlands likely can be spanned pending final engineering; however, 0.7 acres of wetlands would be crossed by the underground segment and would be temporarily impacted by the open trench construction method. The route has a total of 22 waterbody crossings: three are perennial stream crossings, 11 are intermittent stream crossings, five are perennial lake/pond crossings, and three are non-NHD mapped waterbodies. Most waterbodies will be spanned, pending final engineering. As noted above, however, one intermittent waterbody would be crossed by the underground segment and would be temporary impacted by the open trench construction method.

Alternative Solution 2A will collocate with existing routing opportunities for 2.1 miles, including 0.4 mile with existing roads, 1.4 miles with existing underground utilities, and 0.3 mile with roads and existing underground utilities. No existing transmission lines are paralleled by the solution.

Alternative Solution 2A is the second longest of the solutions and would require the second most right-of-way acreage. Alternative Solution 2A would have the greatest number of residences within 100, 250, and 500 feet of its centerline (3, 26, and 98 respectively). This is significantly more than Proposed Solution 1B. Alternative Solution 2A would cross the most total wetlands acres of the Proposed and Alternative Solutions and would have the most impacts to forested wetlands. It also has the second most waterbodies crossed and is tied with Alternative Route 2B for the most parcels crossed. The solution has the second least collocation of any of the solutions. While acknowledging the impacts of Alternative Solution 2A, the Company proposes Alternative Solution 2A for notice and the Commission's consideration as a viable alternative to the Proposed Solution.

Alternative Solution 2B

Alternative Solution 2B would be a hybrid solution that would involve the construction of 4.8 miles of overhead double circuit 230 kV transmission line supported primarily by double circuit monopoles in a new 100-foot-wide right-of-way, and 0.8 mile of underground double circuit 230 kV transmission line in a new 80-foot-wide right-of-way. The solution would be comprised of three route components: (1) Hourglass – Hornbaker Route 1 (Hybrid); (2) Pegasus – Hornbaker Route 1; and (3) Devlin – Pegasus Route 2. Alternative Solution 2B is approximately 6.0 miles in total length. The estimated conceptual cost of Alternative Solution 2B is approximately $302.5 million.

Hourglass – Hornbaker Route 1

See Alternative Solution 2A for a description of Hourglass – Hornbaker Route 1.

Pegasus-Hornbaker Route 1

See Proposed Solution 1B for a description of Pegasus – Hornbaker Route 1.

Devlin-Pegasus Route 2

See Proposed Solution 1B for a description of Devlin – Pegasus Route 2.

Alternative Solution 2B has a total length of 6.0 miles (5.2 miles overhead and 0.8 mile underground) with a right-of-way of 75.1 acres, including the proposed Hornbaker Switching Station and the proposed transition station. A total of 78 parcels are crossed by the solution. Of these, 68 parcels are privately owned and 10 are owned by Prince William County. Three of the 10 parcels are parcels managed by the county's Economic Development Authority and are planned to be developed in the future. The other seven county owned parcels are existing or proposed road rights-of-way. Land use along Alternative Solution 2B rights-of-way consists of 21.6 acres of forested land, 32.7 acres of developed area, and 20.8 acres of open space. No agricultural or open water lands are crossed by Alternative Solution 2B. Where the overhead route segments cross open lands, impacts would be limited to structure placement and land use activities could resume post construction. During construction of the underground segment, open lands would be temporarily impacted by the open trench construction method but could resume post construction. There are 21.6 acres of forested land crossed that would be cleared, which is a similar amount of forest clearing required for any of the solutions.

Based on ERM's desktop wetland and waterbody analysis, the right-of-way of the Alternative Solution 2B will encompass approximately 9.5% (7.1 acres) of land with a medium or higher probability of containing wetlands and waterbodies. Of these 7.1 acres, the majority (5.0 acres) consist of forested wetlands. Most wetlands likely can be spanned pending final engineering; however, 0.7 acres of wetlands would be crossed by the underground segment and would be temporarily impacted by the open trench construction method. The route has a total of 23 waterbody crossings: three are perennial stream crossings, 12 are intermittent stream crossings, five are perennial lake/pond crossings, and three are non-NHD mapped waterbodies. Most waterbodies will be spanned, pending final engineering. As explained above, however, one intermittent waterbody would be crossed by the underground segment and would be temporarily impacted by the open trench construction method.

Alternative Solution 2B will collocate with existing routing opportunities for 2.8 miles, including 1.0 mile with existing roads, 1.4 miles with existing underground utilities, and 0.4 mile with roads and existing underground utilities. No existing transmission lines are paralleled by the solution.

Alternative Solution 2B is the longest of the solutions and would require correspondingly the most right-of-way acreage. Alternative Solution 2A is tied with Proposed Solution 1B for the fewest number of residences within 100, 250, and 500 feet of its centerline (0, 8, and 40 respectively). Alternative Solution 2B would cross the second fewest total wetlands acres of the four solutions and would be tied with Alternative Solution 1A for the second most impacts to forested wetlands. It also has the most waterbodies crossed and is tied with Alternative

Solution 2A for the most parcels crossed. Alternative Solution 2B has the most collocation of any of the solutions. While acknowledging the impacts of Alternative Solution 2B, the Company proposes Alternative Solution 2B for notice and the Commission's consideration as a viable alternative to the Proposed Solution.

Summary of Route Analysis

Of the four solutions, Solution 1B is the second shortest and would be tied with Solution 1A for crossing the fewest parcels. Solution 1B has the fewest residences within 100 feet, 250 feet and 500 feet of its centerline (0, 8, 40 respectively). Solution 1A passes near more than three times as many residences as Solution 1B. Moreover, three residences are within 100 feet of the centerline of Solution 1A, compared to none for Solution 1B. Similarly, there are four dwellings within 60 feet of the rights-of-way for Solution 1A compared to none for Solution 1B. Solution 1B also has the fewest wetlands acres impacted as well as the fewest forested wetlands impacted. Solution 1B has the second fewest total waterbodies crossed and is tied with all other solutions with three perennial stream crossings. Solution 1B collocates with existing routing opportunities for 2.5 miles, including 1.3 miles with existing roads, 1.0 mile with existing underground utilities and 0.2 mile with roads and existing underground utilities. This is the second most of the four solutions. Moreover, the costs for Solutions 2A and 2B are approximately three times the cost of Solution 1B. For these reasons, the Company selected Solution 1B as the Proposed Solution for the Project.

See Sections 5 and 6 of the Environmental Routing Study for a discussion of resources and comparison of impacts by each route and solution.

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 new 230 kV transmission lines in a manner that minimizes outage time on existing substation and transmission lines. Assuming construction commences around February 2027, the cut-in of the lines going to Hornbaker Switching Station should start around March 2027. The cut-in process will require a PJM outage eDart ticket on the Pioneer-Liberty Line #2187. The line cut-in should only require a 21-day outage. Assuming a final order from the Commission by December 12, 2025, as requested in Section I.H. of this Appendix, the Company estimates that construction of the new Project will commence around February 2027, and be completed by June 1, 2029.

The Company will submit outages for this Project to Dominion Energy Virginia's System Operating System and request outages from PJM prior to the date of such outages. It is customary for PJM not to grant approval of outages until shortly before the outages are expected to occur (up until one week prior) and, therefore, it may be subject to change.

II. DESCRIPTION OF THE PROPOSED PROJECT

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

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

Response: Attachment 1 to these Guidelines provides a tool routinely used by the Company in routing its transmission line projects.

The Proposed Solution will avoid or minimize impacts to the maximum extent practicable on national historic places listed in the National Register of Historic Places ("NRHP"). Thus, it is consistent with Guideline #2 (where practical, rights of-way should avoid sites listed on the NRHP). A Stage I Pre-Application Analysis prepared by ERM on behalf of the Company is included with the Environmental Routing Study as Appendix G, which was submitted to the Virginia Department of Historic Resources ("VDHR") on March 13, 2025.

The Company utilized Guideline #1 (existing rights-of-way should be given priority when adding additional facilities) by siting portions of the route for the proposed Project along existing road corridors. Collocation numbers for the Proposed and Alternative Solutions are presented in Section III.D.

The Company utilized Guideline #3 (rights-of-ways should avoid prime or scenic timbered areas, steep slopes and proximity to main highways where practical) by siting the Proposed Solution away from main highways (*i.e.*, Prince William Parkway). Some crossing of highways was unavoidable; however, most crossings are at nearly perpendicular angles to reduce visual impacts.

The Company has communicated with local, state, and federal agencies and relevant private organizations 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). In particular, the Company has consulted with Prince William County, Virginia Department of Transportation ("VDOT"), Manassas Regional Airport, and George Mason University. See Section III.B of this Appendix.

The Company follows recommended construction methods in the Guidelines 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 clearing 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")

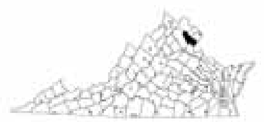
12. a. Detail counties and localities through which the line will pass. If any portion of the line will be located outside of the Applicant's certificated service area: (1) identify each electric utility affected; (2) state whether any affected electric utility objects to such construction; and (3) identify 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 traverses Prince William County for a total of 5.3 miles. The Project is located completely within NOVEC's service territory. The Company has confirmed that NOVEC does not object to the Project.

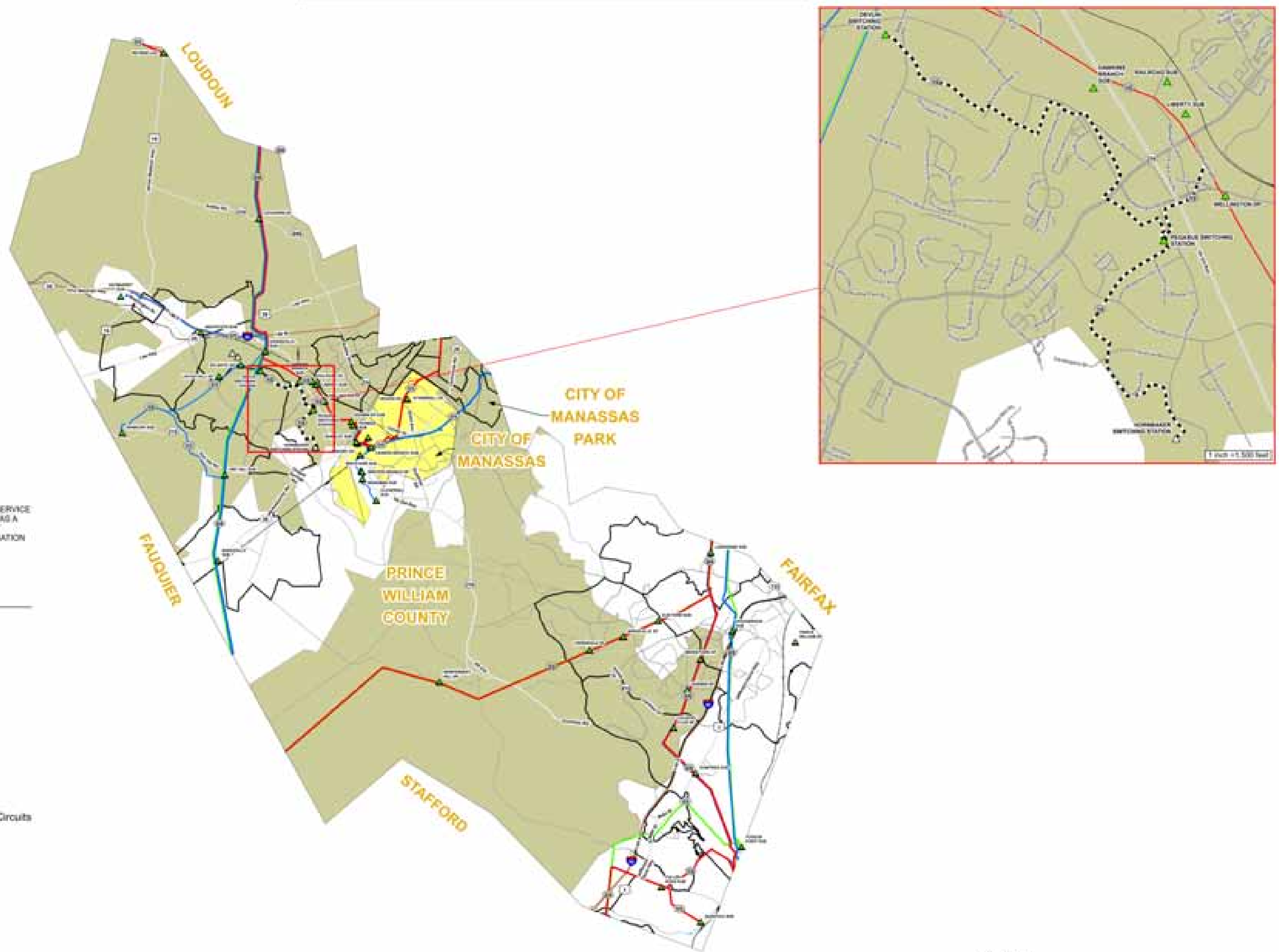
b. An electronic copy of the VDOT "General Highway Map" for Prince William County has been marked as required and submitted with the Application. A reduced copy of the map is provided as Attachment II.A.12.b.

Prince William County Road Map



This digital map depicts the Virginia Electric and Power Company ("Company") transmission facilities in this county as approved by the Virginia State Corporation Commission ("SCC"), and any proposed transmission facilities in this county, as of December 4, 2023. Other Company facilities previously authorized by the SCC may be depicted on prior SCC approved county maps.

Stream data from Esri. Road data from Esri and VDOT. Transmission line and electric service territory data from Department of Homeland Infrastructure. Rail data from VGIN.



NOVEC IS NOT OPPOSED TO SUCH CONSTRUCTION IN ITS SERVICE TERRITORY. HOWEVER, THIS SHOULD NOT BE CONSTRUED AS A UNILATERAL ACCEPTANCE BY NOVEC TO ANY SUBSEQUENT AGREEMENTS, INCLUDING NEEDED EASEMENTS, COMPENSATION FOR PROPERTIES, ETC.

SIGNATURE Thomas Pierpoint

NAME (PRINT) Thomas Pierpoint

DATE 3/11/2025 TITLE VP, Operations

Legend

- Proposed 230 kV Line
- Number of Lines of Structures/Number of Circuits
- Existing Substation
- Proposed Substation/Switching Station
- Existing 115 kV Line
- Existing 230 kV Line
- Existing 500 kV Line

Provider Service Territory

- Northern Virginia Electric Coorporation
- VEPCO
- City of Manassas (Va)

0 1.5 3 4.5 6 Miles

*Road data obtained from VDOT and Esri, current as of August 2022.

Prince William County

Attachment II.A.12.b

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 double circuit 230 kV lines will be designed and operated at 230 kV with no anticipated voltage upgrade and have a transfer capability of 1,5734 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 double circuit 230 kV lines will include 3-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductors arranged as shown in Attachment II.B.3.a through Attachment II.B.3.h, with two fiber optic shield wires. The twin-bundled 768.2 ACSS/TW/HS (20/7) conductors and fiber optic shield wire are a Company standard for new 230 kV construction.

II. DESCRIPTION OF THE PROPOSED PROJECT

B. Line Design and Operational Features

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

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

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

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

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

e. the foundation material;

f. the average width at cross arms;

g. the average width at the base;

h. the maximum, minimum and average structure heights;

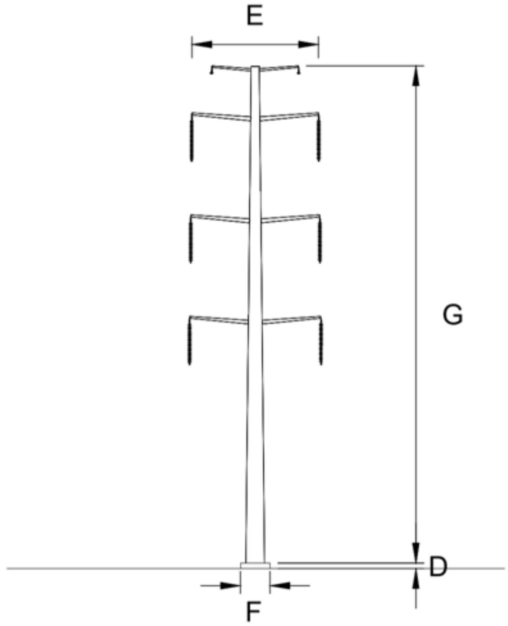
i. the average span length; and

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

Response: See Attachment II.B.3.a through Attachment II.B.3.h.

See Attachment II.B.3.i for a structure map responsive to subpart (a).

WELLINGTON TO PEGASUS ROUTE 1
SOLUTION 1B



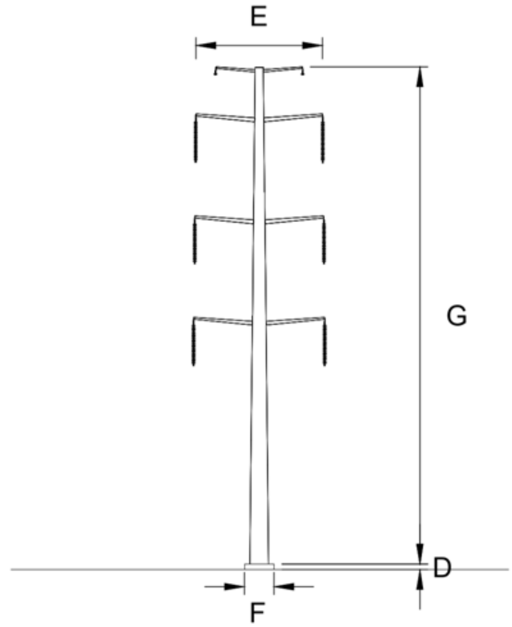
DOUBLE CIRCUIT DEADEND STEEL MONOPOLE STRUCTURE

A. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE TO MINIMIZE ROW ACQUISITION WHILE ACCOMMODATING TWO CIRCUITS
B. LENGTH OF R/W (STRUCTURE QUANTITY):	0.64 MILES (5 STRUCTURES)
C. STRUCTURE MATERIAL:	GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	GALVANIZED STEEL WAS SELECTED TO MATCH NEARBY EXISTING STRUCTURES.
D. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
E. AVERAGE WIDTH AT CROSSARM:	27.5'
F. AVERAGE WIDTH AT BASE:	7.5' - 10' DIAMETER FOUNDATION (SEE NOTE 1)
G. MINIMUM STRUCTURE HEIGHT:	100'
MAXIMUM STRUCTURE HEIGHT:	120'
AVERAGE STRUCTURE HEIGHT:	108'
H. AVERAGE SPAN LENGTH:	500'
I. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. MINIMUM FOUNDATION REVEAL SHALL BE 1.5', MAX REVEAL SUBJECT TO FINAL LOCATION AND TERRAIN
5. THE AVERAGE SPAN LENGTH LISTED IS BASED ON THE ENTIRE ROW LISTED IN LINE (B)

Electric Transmission	SOLUTION 1B DOUBLE CIRCUIT DEADEND STEEL MONOPOLE STRUCTURES	ATTACHMENT NO. II.B.3.a
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN BY: CBW

WELLINGTON TO PEGASUS ROUTE 1
SOLUTION 1B



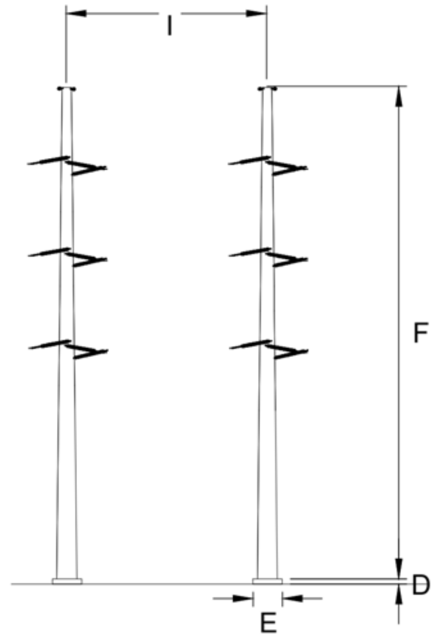
DOUBLE CIRCUIT SUSPENSION STEEL MONOPOLE STRUCTURE

A. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE TO MINIMIZE ROW ACQUISITION WHILE ACCOMMODATING TWO CIRCUITS
B. LENGTH OF R/W (STRUCTURE QUANTITY):	0.64 MILES (1 STRUCTURES)
C. STRUCTURE MATERIAL:	GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	GALVANIZED STEEL WAS SELECTED TO MATCH NEARBY EXISTING STRUCTURES.
D. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
E. AVERAGE WIDTH AT CROSSARM:	27.5'
F. AVERAGE WIDTH AT BASE:	6' DIAMETER FOUNDATION (SEE NOTE 1)
G. MINIMUM STRUCTURE HEIGHT:	135'
MAXIMUM STRUCTURE HEIGHT:	135'
AVERAGE STRUCTURE HEIGHT:	135'
H. AVERAGE SPAN LENGTH:	500'
I. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. MINIMUM FOUNDATION REVEAL SHALL BE 1.5', MAX REVEAL SUBJECT TO FINAL LOCATION AND TERRAIN
5. THE AVERAGE SPAN LENGTH LISTED IS BASED ON THE ENTIRE ROW LISTED IN LINE (B)

Electric Transmission Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060	SOLUTION 1B DOUBLE CIRCUIT SUSPENSION STEEL MONOPOLE STRUCTURES	ATTACHMENT NO. II.B.3.b DRAWN BY: CBW

WELLINGTON TO PEGASUS ROUTE 1
SOLUTION 1B



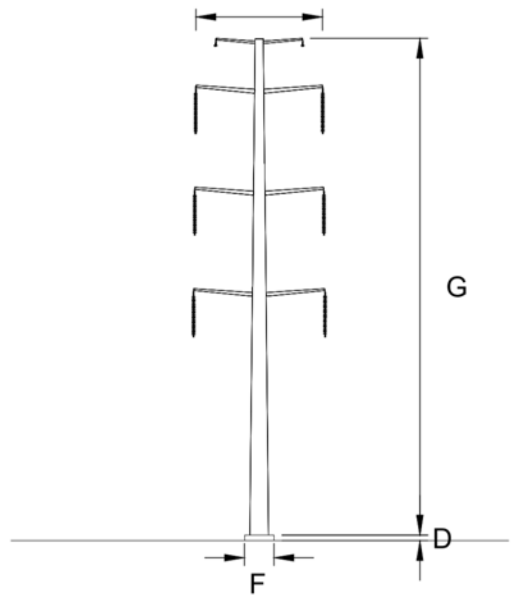
DOUBLE CIRCUIT DEADEND STEEL 2-POLE

A. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE USED FOR HEAVY ANGLES TO OPTIMIZE POLE AND FOUNDATION SIZE AND COSTS
B. LENGTH OF R/W (STRUCTURE QUANTITY):	0.64 MILES (1 STRUCTURES)
C. STRUCTURE MATERIAL:	GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	GALVANIZED STEEL WAS SELECTED TO MATCH NEARBY EXISTING STRUCTURES.
D. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
E. AVERAGE WIDTH AT BASE:	9.5' DIAMETER FOUNDATION (SEE NOTE 1)
F. MINIMUM STRUCTURE HEIGHT:	115'
MAXIMUM STRUCTURE HEIGHT:	115'
AVERAGE STRUCTURE HEIGHT:	115'
G. AVERAGE SPAN LENGTH:	500'
H. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)
I. AVERAGE DISTANCE BETWEEN POLES:	34'

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. THE AVERAGE SPAN LENGTH LISTED IS BASED ON THE ENTIRE ROW LISTED IN LINE (B)

Electric Transmission	SOLUTION 1B DOUBLE CIRCUIT DEADEND STEEL 2-POLE STRUCTURE	ATTACHMENT NO. II.B.3.c
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN BY: CBW

PEGASUS TO HORNBAKER ROUTE 1
SOLUTION 1B



DOUBLE CIRCUIT DEADEND STEEL MONOPOLE STRUCTURE

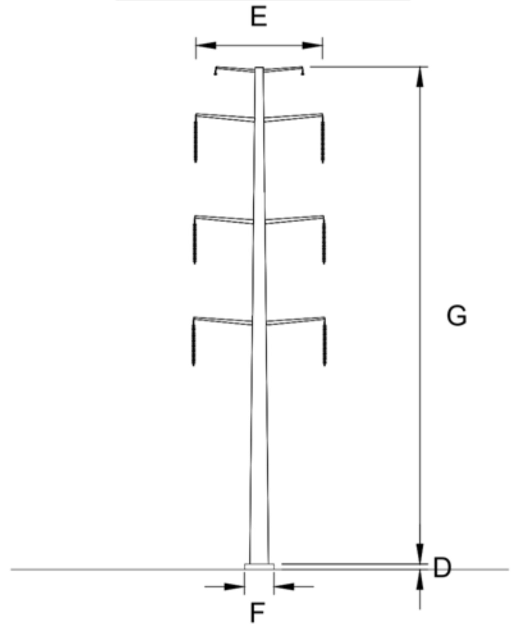
A. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE TO MINIMIZE ROW ACQUISITIONS WHILE ACCOMMODATING TWO CIRCUITS
B. LENGTH OF R/W (STRUCTURE QUANTITY):	1.94 MILES (15 STRUCTURES)
C. STRUCTURE MATERIAL:	GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	GALVANIZED STEEL WAS SELECTED TO MATCH NEARBY EXISTING STRUCTURES.
D. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
E. AVERAGE WIDTH AT CROSSARM:	27.5'
F. AVERAGE WIDTH AT BASE:	7.5' - 10' DIAMETER FOUNDATION (SEE NOTE 1)
G. MINIMUM STRUCTURE HEIGHT:	95'
MAXIMUM STRUCTURE HEIGHT:	115'
AVERAGE STRUCTURE HEIGHT:	107'
H. AVERAGE SPAN LENGTH:	475'
I. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES

1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. MINIMUM FOUNDATION REVEAL SHALL BE 1.5', MAX REVEAL SUBJECT TO FINAL LOCATION AND TERRAIN
5. THE AVERAGE SPAN LENGTH LISTED IS BASED ON THE ENTIRE ROW LISTED IN LINE (B)

Electric Transmission	SOLUTION 1B DOUBLE CIRCUIT DEADEND STEEL MONOPOLE STRUCTURES	ATTACHMENT NO. II.B.3.d
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN BY: CBW

PEGASUS TO HORNBAKER ROUTE 1
SOLUTION 1B



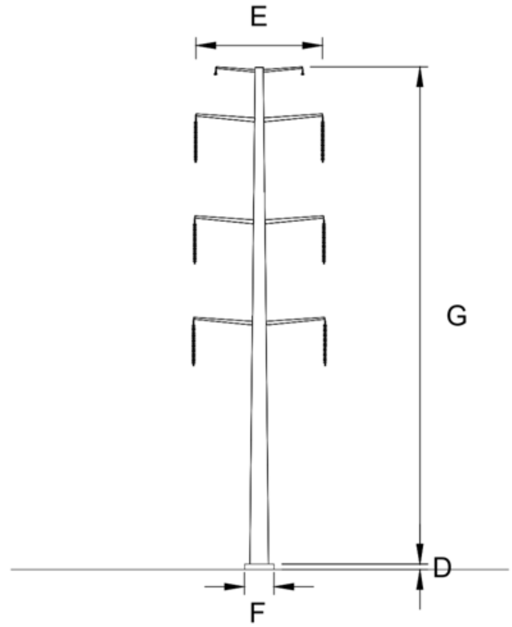
DOUBLE CIRCUIT SUSPENSION STEEL MONOPOLE STRUCTURE

A. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE TO MINIMIZE ROW ACQUISITIONS WHILE ACCOMMODATING TWO CIRCUITS
B. LENGTH OF R/W (STRUCTURE QUANTITY):	1.94 MILES (7 STRUCTURES)
C. STRUCTURE MATERIAL:	GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	GALVANIZED STEEL WAS SELECTED TO MATCH NEARBY EXISTING STRUCTURES.
D. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
E. AVERAGE WIDTH AT CROSSARM:	27.5'
F. AVERAGE WIDTH AT BASE:	5.5' - 6' DIAMETER FOUNDATION (SEE NOTE 1)
G. MINIMUM STRUCTURE HEIGHT:	100'
MAXIMUM STRUCTURE HEIGHT:	125'
AVERAGE STRUCTURE HEIGHT:	118'
H. AVERAGE SPAN LENGTH:	475'
I. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. MINIMUM FOUNDATION REVEAL SHALL BE 1.5', MAX REVEAL SUBJECT TO FINAL LOCATION AND TERRAIN
5. THE AVERAGE SPAN LENGTH LISTED IS BASED ON THE ENTIRE ROW LISTED IN LINE (B)

Electric Transmission	SOLUTION 1B DOUBLE CIRCUIT SUSPENSION STEEL MONOPOLE STRUCTURES	ATTACHMENT NO. II.B.3.e
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN BY: CBW

DEVLIN TO PEGASUS ROUTE 2
SOLUTION 1B



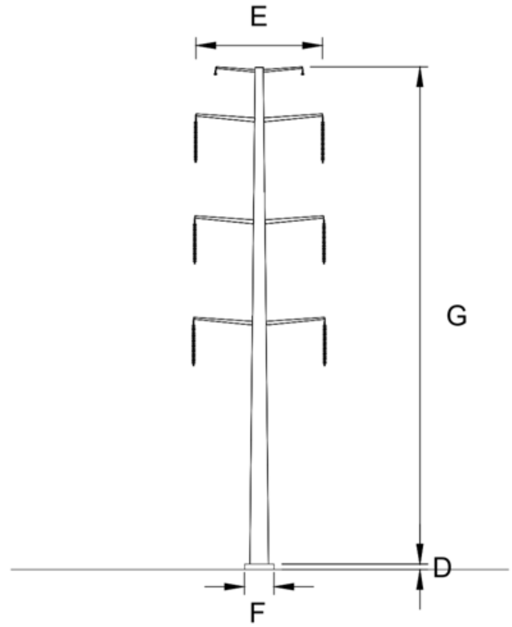
DOUBLE CIRCUIT DEADEND STEEL MONOPOLE STRUCTURE

A. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE TO MINIMIZE ROW ACQUISITIONS WHILE ACCOMMODATING TWO CIRCUITS
B. LENGTH OF R/W (STRUCTURE QUANTITY):	2.84 MILES (22 STRUCTURES)
C. STRUCTURE MATERIAL:	GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	GALVANIZED STEEL WAS SELECTED TO MATCH NEARBY EXISTING STRUCTURES.
D. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
E. AVERAGE WIDTH AT CROSSARM:	27.5'
F. AVERAGE WIDTH AT BASE:	7' - 9.5' DIAMETER FOUNDATION (SEE NOTE 1)
G. MINIMUM STRUCTURE HEIGHT:	90'
MAXIMUM STRUCTURE HEIGHT:	130'
AVERAGE STRUCTURE HEIGHT:	105'
H. AVERAGE SPAN LENGTH:	500'
I. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. MINIMUM FOUNDATION REVEAL SHALL BE 1.5', MAX REVEAL SUBJECT TO FINAL LOCATION AND TERRAIN
5. THE AVERAGE SPAN LENGTH LISTED IS BASED ON THE ENTIRE ROW LISTED IN LINE (B)

Electric Transmission Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060	SOLUTION 1B DOUBLE CIRCUIT DEADEND STEEL MONOPOLE STRUCTURES	ATTACHMENT NO. II.B.3.f DRAWN BY: CBW

DEVLIN TO PEGASUS ROUTE 2
SOLUTION 1B



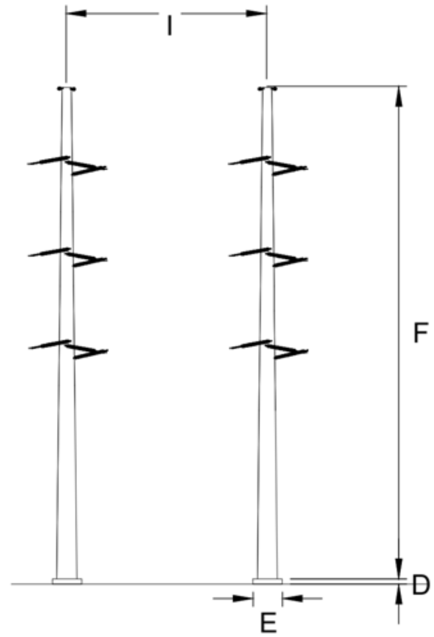
DOUBLE CIRCUIT SUSPENSION STEEL MONOPOLE STRUCTURE

A. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE TO MINIMIZE ROW ACQUISITIONS WHILE ACCOMMODATING TWO CIRCUITS
B. LENGTH OF R/W (STRUCTURE QUANTITY):	2.84 MILES (4 STRUCTURES)
C. STRUCTURE MATERIAL:	GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	GALVANIZED STEEL WAS SELECTED TO MATCH NEARBY EXISTING STRUCTURES.
D. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
E. AVERAGE WIDTH AT CROSSARM:	27.5'
F. AVERAGE WIDTH AT BASE:	5.5' - 6' DIAMETER FOUNDATION (SEE NOTE 1)
G. MINIMUM STRUCTURE HEIGHT:	110'
MAXIMUM STRUCTURE HEIGHT:	130'
AVERAGE STRUCTURE HEIGHT:	118'
H. AVERAGE SPAN LENGTH:	500'
I. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)

NOTES
1. INFORMATION ON DRAWING IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL ENGINEERING
2. INDIVIDUAL POLE HEIGHTS ABOVE GROUND MAY VARY SUBJECT TO FINAL LOCATION AND TERRAIN
3. STRUCTURE HEIGHTS ARE MEASURED FROM STRUCTURE CENTERLINE
4. MINIMUM FOUNDATION REVEAL SHALL BE 1.5', MAX REVEAL SUBJECT TO FINAL LOCATION AND TERRAIN
5. THE AVERAGE SPAN LENGTH LISTED IS BASED ON THE ENTIRE ROW LISTED IN LINE (B)

Electric Transmission	SOLUTION 1B DOUBLE CIRCUIT SUSPENSION STEEL MONOPOLE STRUCTURES	ATTACHMENT NO. II.B.3.g
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN BY: CBW

DEVLIN TO PEGASUS ROUTE 2
SOLUTION 1B

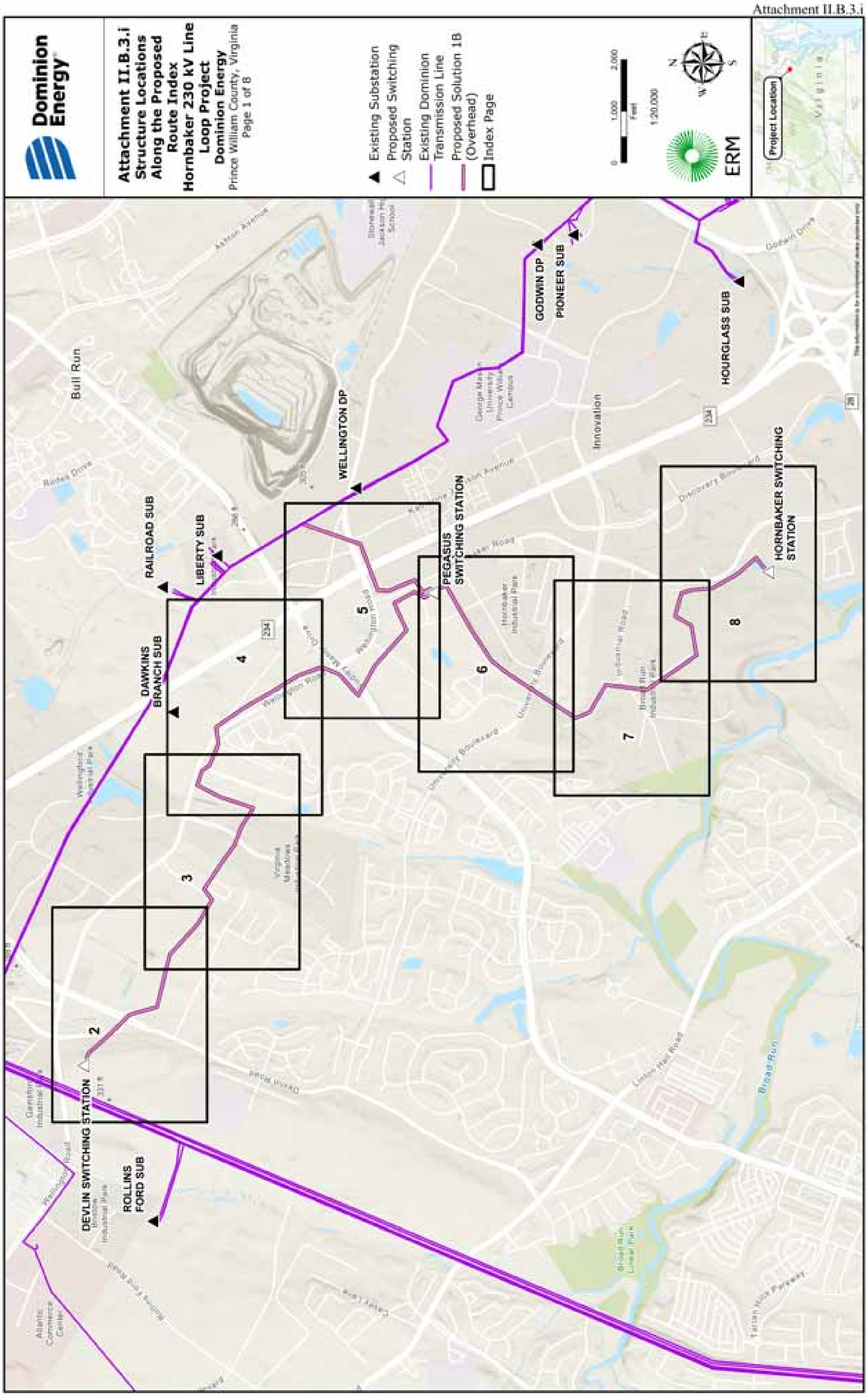


DOUBLE CIRCUIT DEADEND STEEL 2-POLE

A. RATIONALE FOR STRUCTURE TYPE:	STRUCTURES ARE USED FOR HEAVY ANGLES TO OPTIMIZE POLE AND FOUNDATION SIZE AND COSTS
B. LENGTH OF R/W (STRUCTURE QUANTITY):	2.84 MILES (4 STRUCTURES)
C. STRUCTURE MATERIAL:	GALVANIZED STEEL
RATIONALE FOR STRUCTURE MATERIAL:	GALVANIZED STEEL WAS SELECTED TO MATCH NEARBY EXISTING STRUCTURES.
D. FOUNDATION MATERIAL:	CONCRETE
AVERAGE FOUNDATION REVEAL:	SEE NOTE 4
E. AVERAGE WIDTH AT BASE:	7.5' - 9.5' DIAMETER FOUNDATION (SEE NOTE 1)
F. MINIMUM STRUCTURE HEIGHT:	95'
MAXIMUM STRUCTURE HEIGHT:	120'
AVERAGE STRUCTURE HEIGHT:	108'
G. AVERAGE SPAN LENGTH:	500'
H. MINIMUM CONDUCTOR-TO-GROUND:	22.5' (AT MAXIMUM OPERATING TEMPERATURE)
I. AVERAGE DISTANCE BETWEEN POLES:	34'

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. THE AVERAGE SPAN LENGTH LISTED IS BASED ON THE ENTIRE ROW LISTED IN LINE (B)

Electric Transmission	SOLUTION 1B DOUBLE CIRCUIT DEADEND STEEL 2-POLE STRUCTURE	ATTACHMENT NO. II.B.3.h
Dominion Energy Dominion Energy 5000 Dominion Blvd Glen Allen, VA 23060		DRAWN BY: CBW


Dominion Energy
Attachment II.B.3.i
Structure Locations
Along the Proposed
Route Index
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 1 of 8
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
Index Page
0
1,000
2,000
Feet
1:20,000
ERM
Project Location
Virginia
Bull Run
WELLINGTON DP
RAILROAD SUB
LIBERTY SUB
DAWKINS BRANCH SUB
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
HORNBAKER SWITCHING STATION
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
Innovation
George Mason University Prince William Campus
Hornbaker Industrial Park
Broad Run Industrial Park
Broad Run Linear Park
Broad Run
Wellington Road
University Boulevard
Discovery Boulevard
Godwin Drive
Ashton Avenue
Linton Hall Road
Rollins Ford Road
Devlin Road
Tartan Hills Parkway
Casey Lane
234
28
2
3
4
5
6
7
8

Structure Number	Elevation (ft)	Height (ft)
2419/1 (2420/1)	313.8	76.5
2419/2 (2420/2)	305.1	91.5
2419/3 (2420/3)	273.9	131.5
2419/4 (2420/4)	247.4	116.5
2419/5 (2420/5)	243.9	101.5
2419/6 (2420/6)	264	111.5
2419/7 (2420/7)	263.4	121.5
2419/8 (2420/8)	264.6	116.5

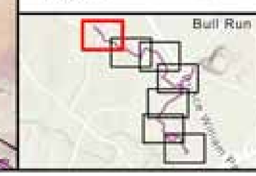
Dominion Energy

Attachment II.B.3.i
Structure Locations Along the Proposed Route
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 2 of 8

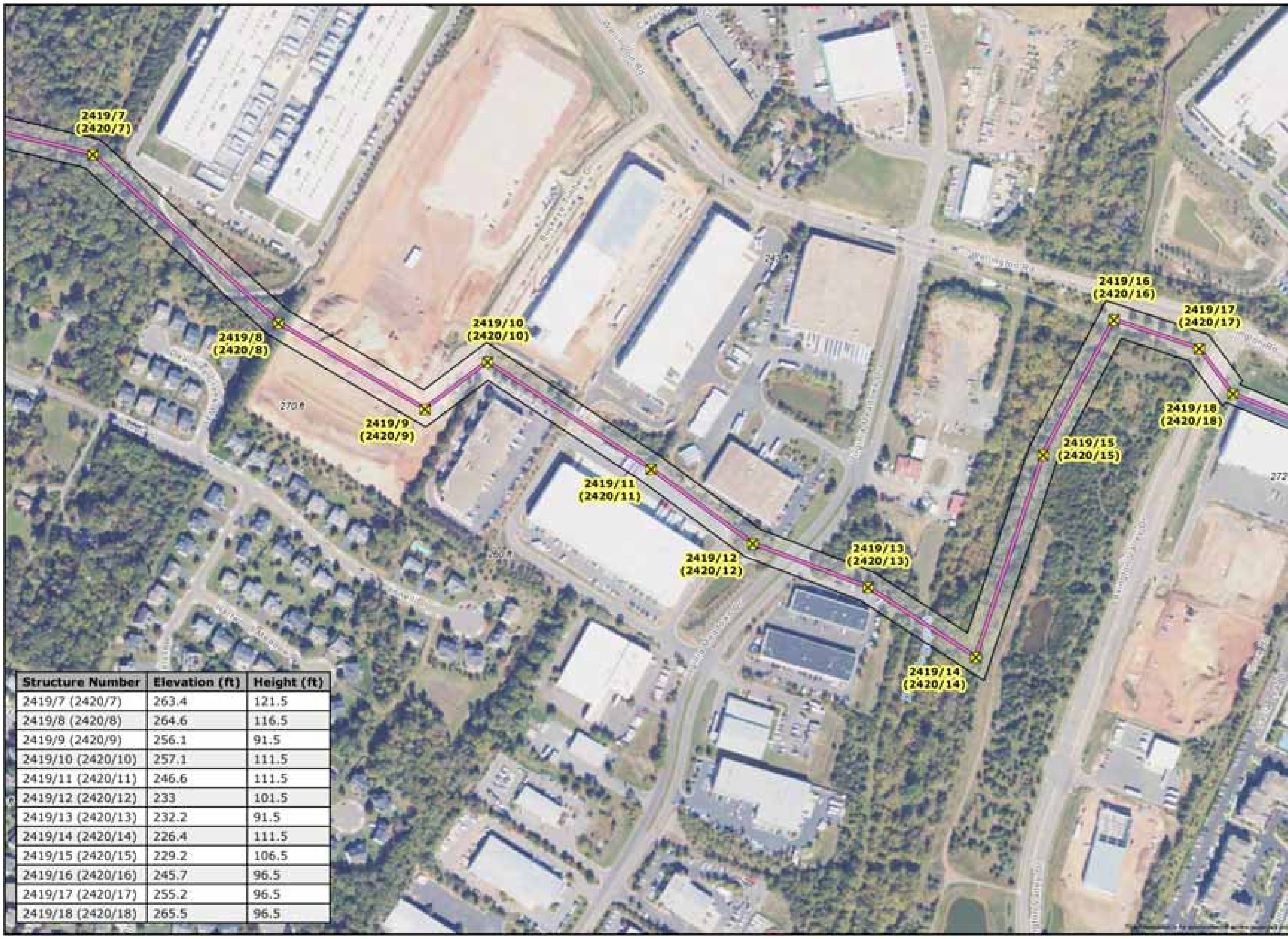
- Proposed Switching Station
- Existing Dominion Transmission Line
- Proposed Structure Location
- Proposed Solution 1B (Overhead)
- Overhead Right-of-Way
- Devlin Switching Station Boundary

0 150 300
Feet
1:3,600

ERM

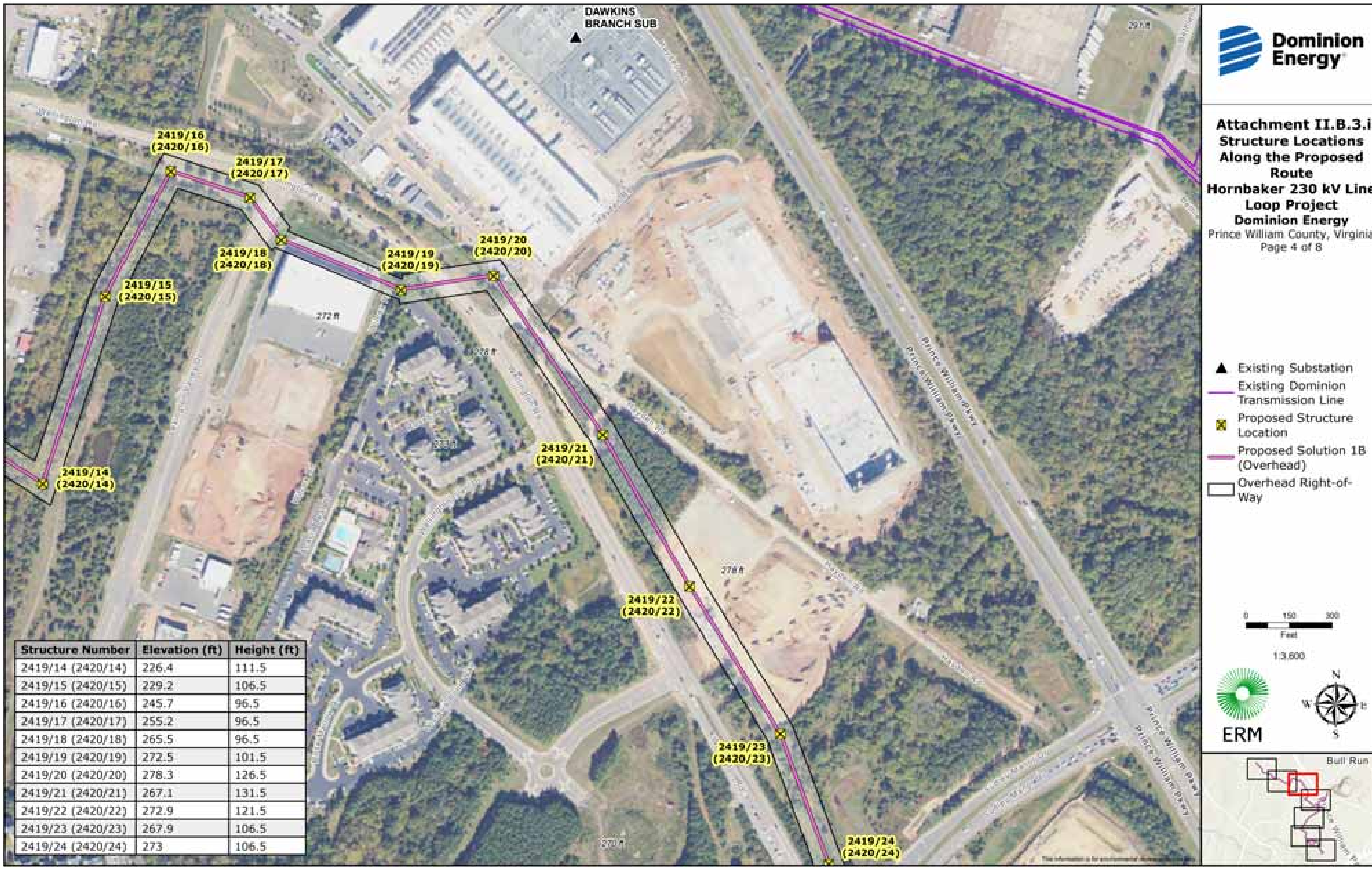


Attachment II.B.3.i
Structure Locations Along the Proposed Route
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 3 of 8

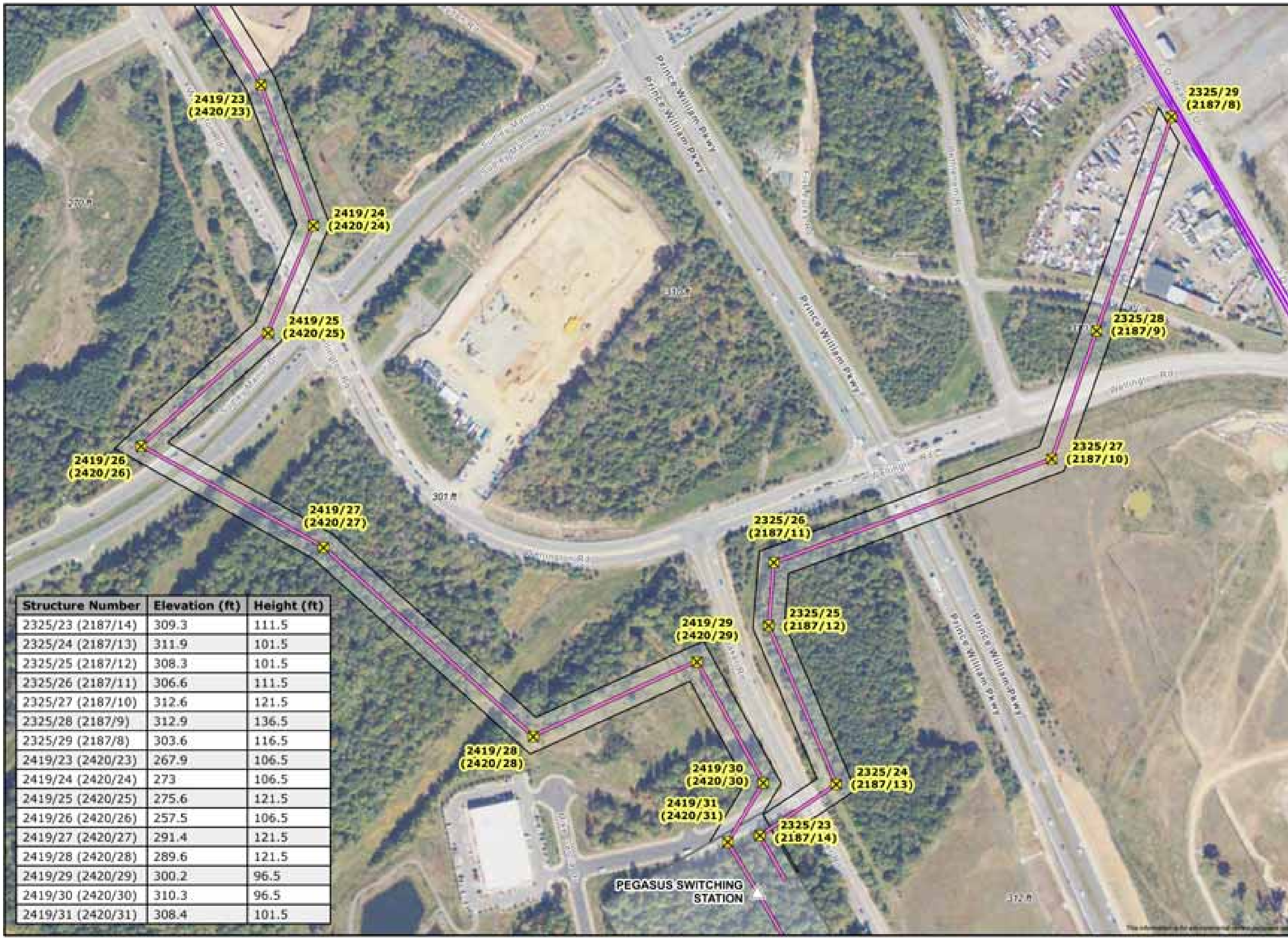


Structure Number	Elevation (ft)	Height (ft)
2419/7 (2420/7)	263.4	121.5
2419/8 (2420/8)	264.6	116.5
2419/9 (2420/9)	256.1	91.5
2419/10 (2420/10)	257.1	111.5
2419/11 (2420/11)	246.6	111.5
2419/12 (2420/12)	233	101.5
2419/13 (2420/13)	232.2	91.5
2419/14 (2420/14)	226.4	111.5
2419/15 (2420/15)	229.2	106.5
2419/16 (2420/16)	245.7	96.5
2419/17 (2420/17)	255.2	96.5
2419/18 (2420/18)	265.5	96.5

Attachment II.B.3.i
Structure Locations Along the Proposed Route
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 4 of 8



Structure Number	Elevation (ft)	Height (ft)
2419/14 (2420/14)	226.4	111.5
2419/15 (2420/15)	229.2	106.5
2419/16 (2420/16)	245.7	96.5
2419/17 (2420/17)	255.2	96.5
2419/18 (2420/18)	265.5	96.5
2419/19 (2420/19)	272.5	101.5
2419/20 (2420/20)	278.3	126.5
2419/21 (2420/21)	267.1	131.5
2419/22 (2420/22)	272.9	121.5
2419/23 (2420/23)	267.9	106.5
2419/24 (2420/24)	273	106.5



Structure Number	Elevation (ft)	Height (ft)
2325/23 (2187/14)	309.3	111.5
2325/24 (2187/13)	311.9	101.5
2325/25 (2187/12)	308.3	101.5
2325/26 (2187/11)	306.6	111.5
2325/27 (2187/10)	312.6	121.5
2325/28 (2187/9)	312.9	136.5
2325/29 (2187/8)	303.6	116.5
2419/23 (2420/23)	267.9	106.5
2419/24 (2420/24)	273	106.5
2419/25 (2420/25)	275.6	121.5
2419/26 (2420/26)	257.5	106.5
2419/27 (2420/27)	291.4	121.5
2419/28 (2420/28)	289.6	121.5
2419/29 (2420/29)	300.2	96.5
2419/30 (2420/30)	310.3	96.5
2419/31 (2420/31)	308.4	101.5

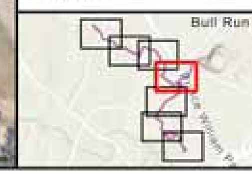
Dominion Energy

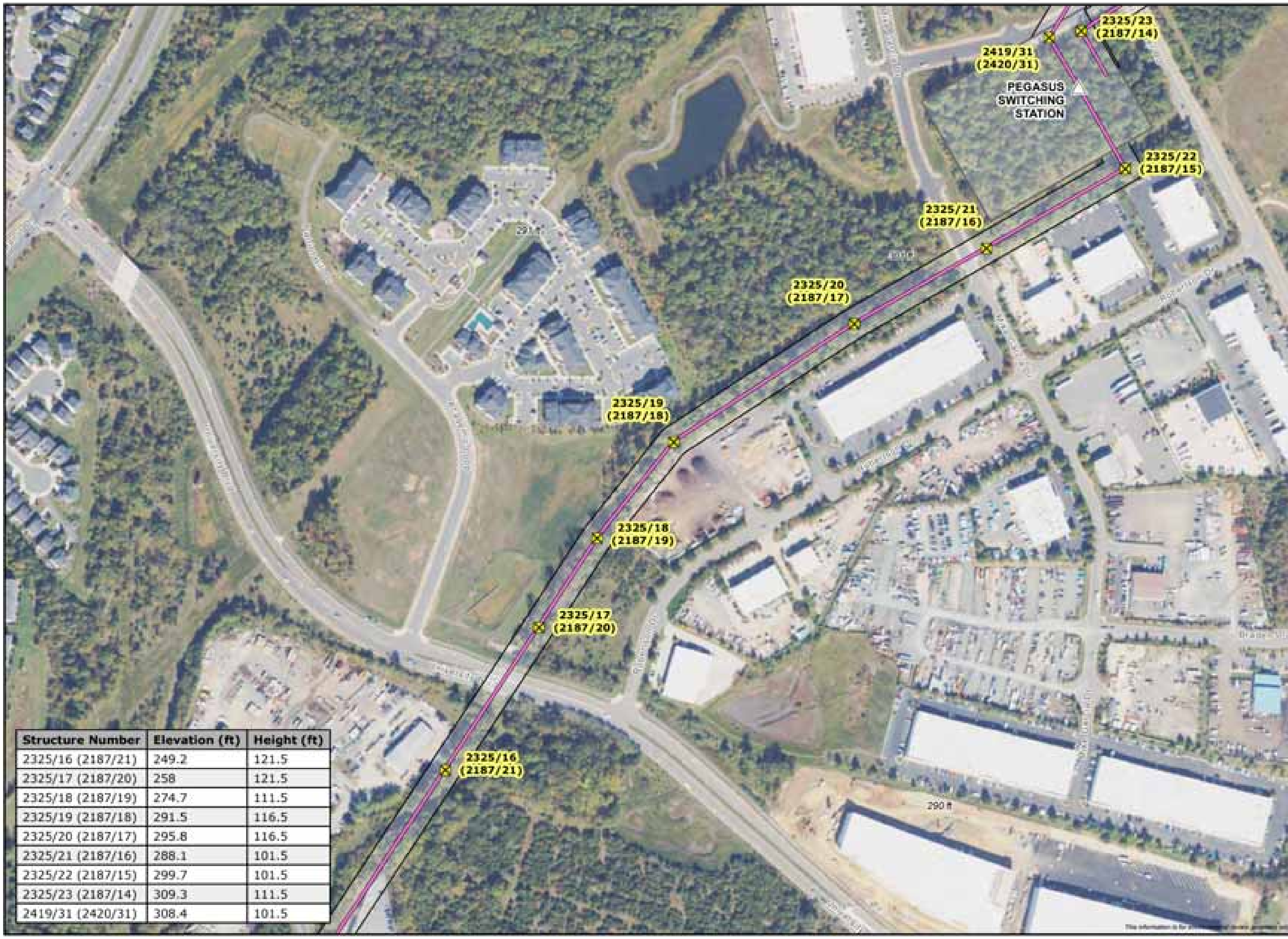
Attachment II.B.3.i
Structure Locations Along the Proposed Route
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 5 of 8

- Proposed Switching Station
- Existing Dominion Transmission Line
- Proposed Structure Location
- Proposed Solution 1B (Overhead)
- Overhead Right-of-Way
- Pegasus Switching Station Boundary

0 150 300
Feet
1:3,600

ERM





Structure Number	Elevation (ft)	Height (ft)
2325/16 (2187/21)	249.2	121.5
2325/17 (2187/20)	258	121.5
2325/18 (2187/19)	274.7	111.5
2325/19 (2187/18)	291.5	116.5
2325/20 (2187/17)	295.8	116.5
2325/21 (2187/16)	288.1	101.5
2325/22 (2187/15)	299.7	101.5
2325/23 (2187/14)	309.3	111.5
2419/31 (2420/31)	308.4	101.5

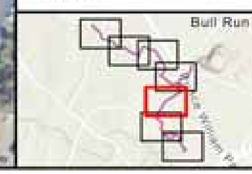
Dominion Energy

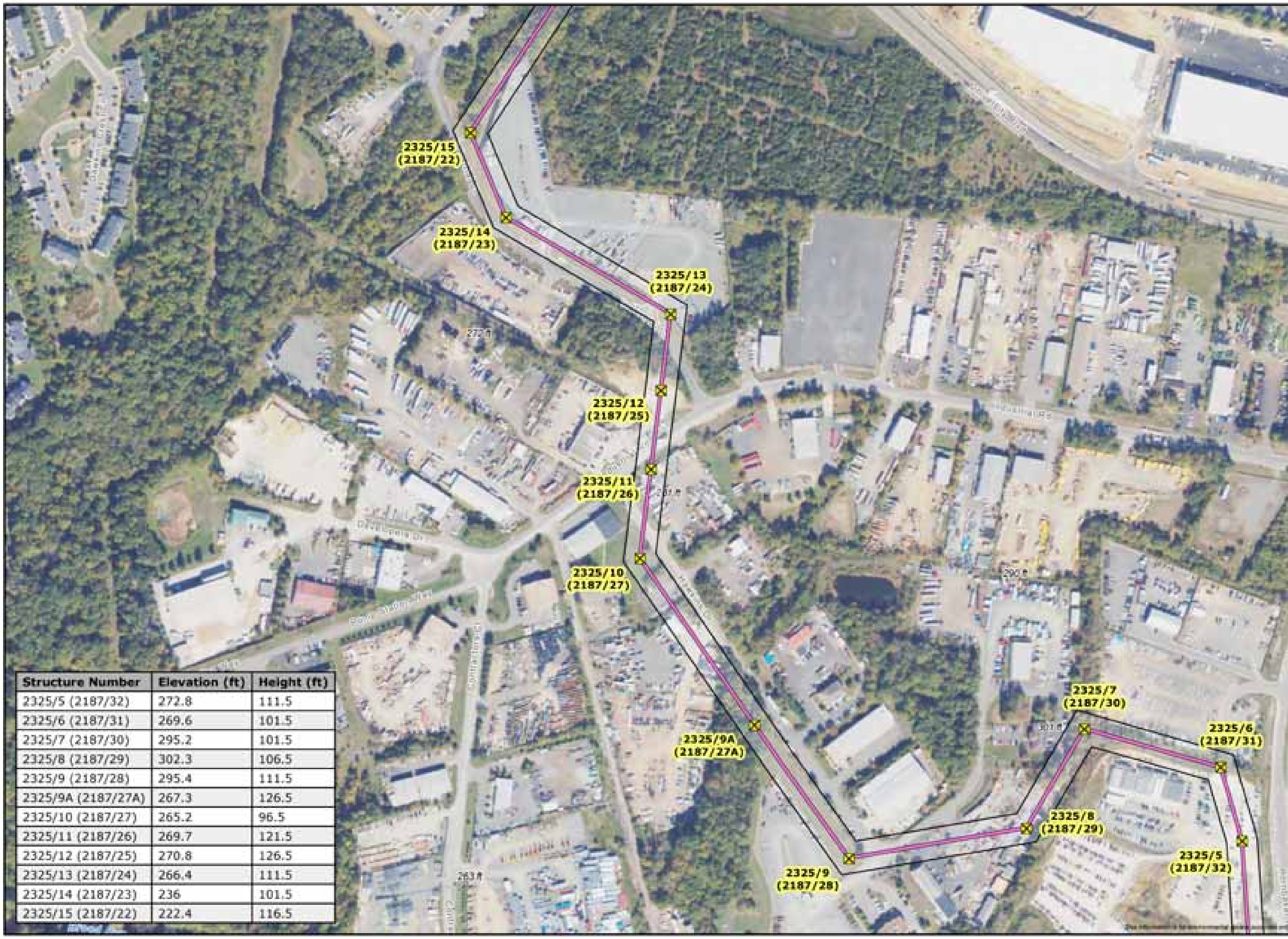
Attachment II.B.3.i
Structure Locations Along the Proposed Route
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 6 of 8

- Proposed Switching Station
- Proposed Structure Location
- Proposed Solution 1B (Overhead)
- Overhead Right-of-Way
- Pegasus Switching Station Boundary

0 150 300
Feet
1:3,600

ERM





Structure Number	Elevation (ft)	Height (ft)
2325/5 (2187/32)	272.8	111.5
2325/6 (2187/31)	269.6	101.5
2325/7 (2187/30)	295.2	101.5
2325/8 (2187/29)	302.3	106.5
2325/9 (2187/28)	295.4	111.5
2325/9A (2187/27A)	267.3	126.5
2325/10 (2187/27)	265.2	96.5
2325/11 (2187/26)	269.7	121.5
2325/12 (2187/25)	270.8	126.5
2325/13 (2187/24)	266.4	111.5
2325/14 (2187/23)	236	101.5
2325/15 (2187/22)	222.4	116.5

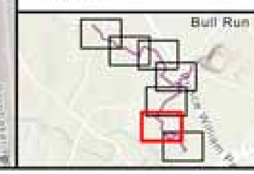
Dominion Energy

Attachment II.B.3.i
Structure Locations Along the Proposed Route
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 7 of 8

Proposed Structure Location
Proposed Solution 1B (Overhead)
Overhead Right-of-Way

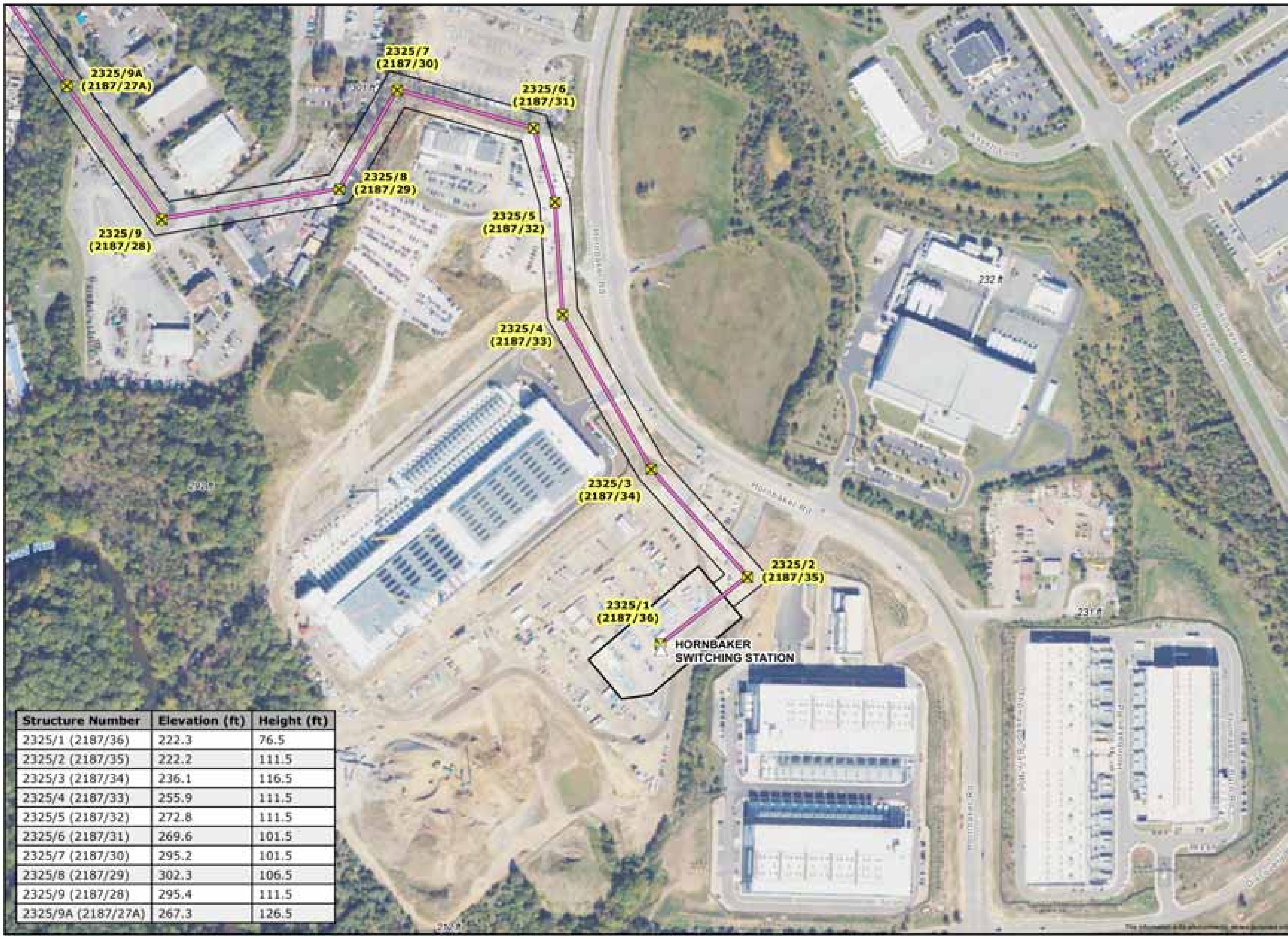
0 150 300
Feet
1:3,600

ERM



Dominion Energy

Attachment II.B.3.i
Structure Locations Along the Proposed Route
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 8 of 8



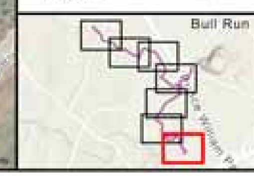
Structure Number	Elevation (ft)	Height (ft)
2325/1 (2187/36)	222.3	76.5
2325/2 (2187/35)	222.2	111.5
2325/3 (2187/34)	236.1	116.5
2325/4 (2187/33)	255.9	111.5
2325/5 (2187/32)	272.8	111.5
2325/6 (2187/31)	269.6	101.5
2325/7 (2187/30)	295.2	101.5
2325/8 (2187/29)	302.3	106.5
2325/9 (2187/28)	295.4	111.5
2325/9A (2187/27A)	267.3	126.5

- Proposed Switching Station
- Proposed Structure Location
- Proposed Solution 1B (Overhead)
- Overhead Right-of-Way
- Proposed Hornbaker Switching Station Boundary

0 150 300 Feet

1:3,600

ERM



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: The approximate structure heights along the Proposed and Alternative Solutions are provided in the table below, based on preliminary conceptual design, not including foundation reveal and subject to change based on final engineering design.

Solution	Minimum (ft.)	Maximum (ft.)	Average (ft.)
Solution 1A	90	135	110
Solution 1B (Proposed)	90	135	109
Solution 2A	90	130	109
Solution 2B	90	130	108

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: Not applicable.

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] Not applicable.

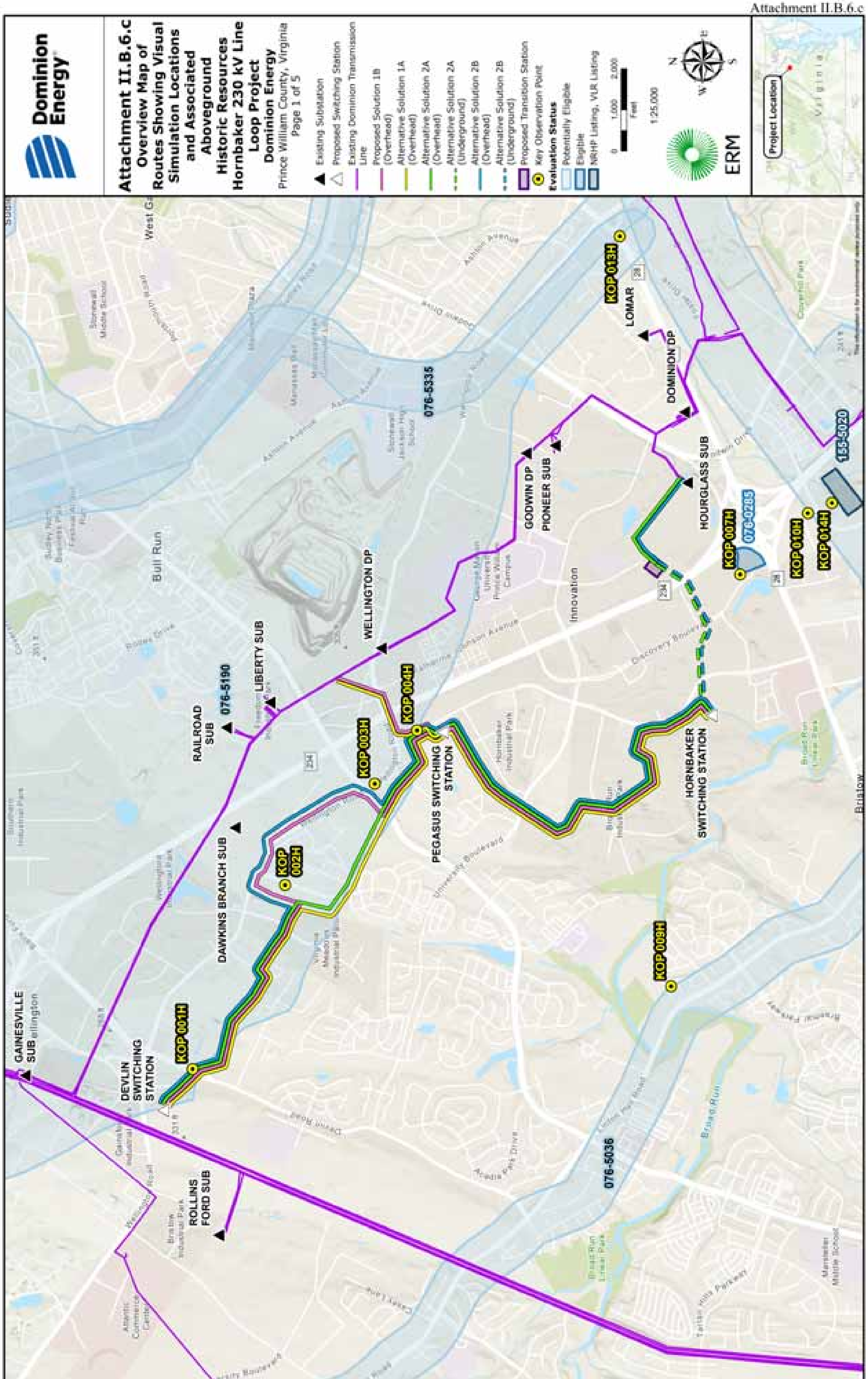
[b] See Attachment II.B.6.b.i through Attachment II.B.6.b.iii for representative photographs of the proposed structures.

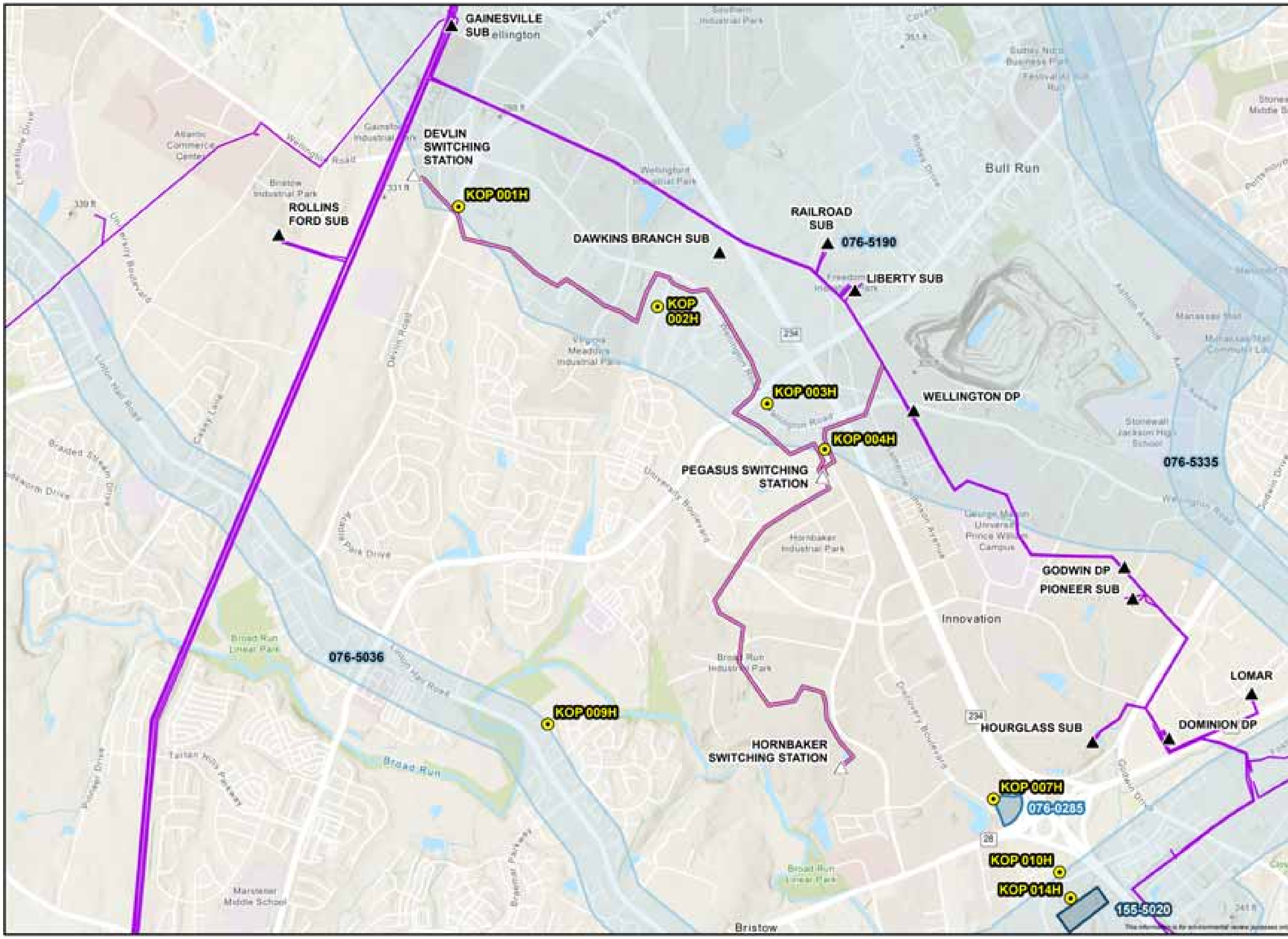
[c] Visual simulations showing the appearance of the proposed transmission structures at identified historic locations within 1.0 mile of the proposed Project centerline of the Proposed Route are provided. See Attachment II.B.6.c for maps depicting each of the simulation locations, the existing views at the historic properties, and simulated proposed views. These simulations were created using GIS 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 contained in Appendix G of the Environmental Routing Study.

Historic Property	Viewpoint	Comments
Thomasson Barn (VDHR ID# 076-0285)	KOP 007H	Alternative Solutions 2A and 2B (pertaining to the Hourglass-Hornbaker Route 1 (Hybrid)) would have no impact on 076-0285
Manassas Station Operations Battlefield (VDHR ID# 076-5036)	KOP 009H, & 010H	The Proposed Solution 1B and Alternative Solutions 1A, 2A and 2B (pertaining to the Hourglass-Hornbaker Route 1 (Hybrid) and Pegasus-Hornbaker Route 1) would have no impact on 076-5036
Second Battle of Manassas (VDHR ID# 076-5190)	KOP 001H, 002H, 003H, & 004H	The Proposed Solution 1B and Alternative Solutions 1A, 2A and 2B (pertaining to the Wellington-Pegasus Route 1, Devlin-Pegasus Route 1 and 2, and Pegasus-Hornbaker Route 1) would have a moderate impact on 076-5190
	KOP	The Alternative Solutions 2A and 2B (pertaining to the Hourglass-Hornbaker

Historic Property	Viewpoint	Comments
	013H	Route 1 (Hybrid)) would have no impact on 076-5190
First Battle of Manassas (VDHR ID# 076-5335)	KOP 013H	Alternative Solution 2A and 2B (pertaining to the Hourglass-Hornbaker Route 1 (Hybrid)) would have no impact on 076-5335
Cannon Branch Fort Site (VDHR ID# 155-5020)	KOP 014H	Alternative Solution 2A and 2B (pertaining to the Hourglass-Hornbaker Route 1 (Hybrid)) would have no impact on 155-5020

See Attachment III.B.5 for visual simulations and renderings of key locations evaluated.


Dominion Energy
Attachment II.B.6.c Overview Map of Routes Showing Visual Simulation Locations and Associated Aboveground Historic Resources Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 1 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
Alternative Solution 1A (Overhead)
Alternative Solution 2A (Overhead)
Alternative Solution 2A (Underground)
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Proposed Transition Station
Key Observation Point
Evaluation Status
Potentially Eligible
Eligible
NRHP Listing, VLR Listing
0 1,000 2,000
Feet
1:25,000
ERM
Project Location
GAINESVILLE SUB
DEVLIN SWITCHING STATION
KOP 001H
ROLLINS FORD SUB
DAWKINS BRANCH SUB
KOP 002H
RAILROAD SUB
076-5190
LIBERTY SUB
KOP 003H
KOP 004H
PEGASUS SWITCHING STATION
WELLINGTON DP
GODWIN DP
PIONEER SUB
HOURGLASS SUB
KOP 007H
076-0285
KOP 010H
KOP 014H
155-5020
DOMINION DP
LOMAR
KOP 013H
076-5335
HORNBAKER SWITCHING STATION
KOP 009H
076-5036
Bull Run
Innovation
Bristow



Dominion Energy

Attachment II.B.6.c
Proposed Solution 1B Overview Map of Routes Showing Visual Simulation Locations and Associated Aboveground Historic Resources
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 2 of 5

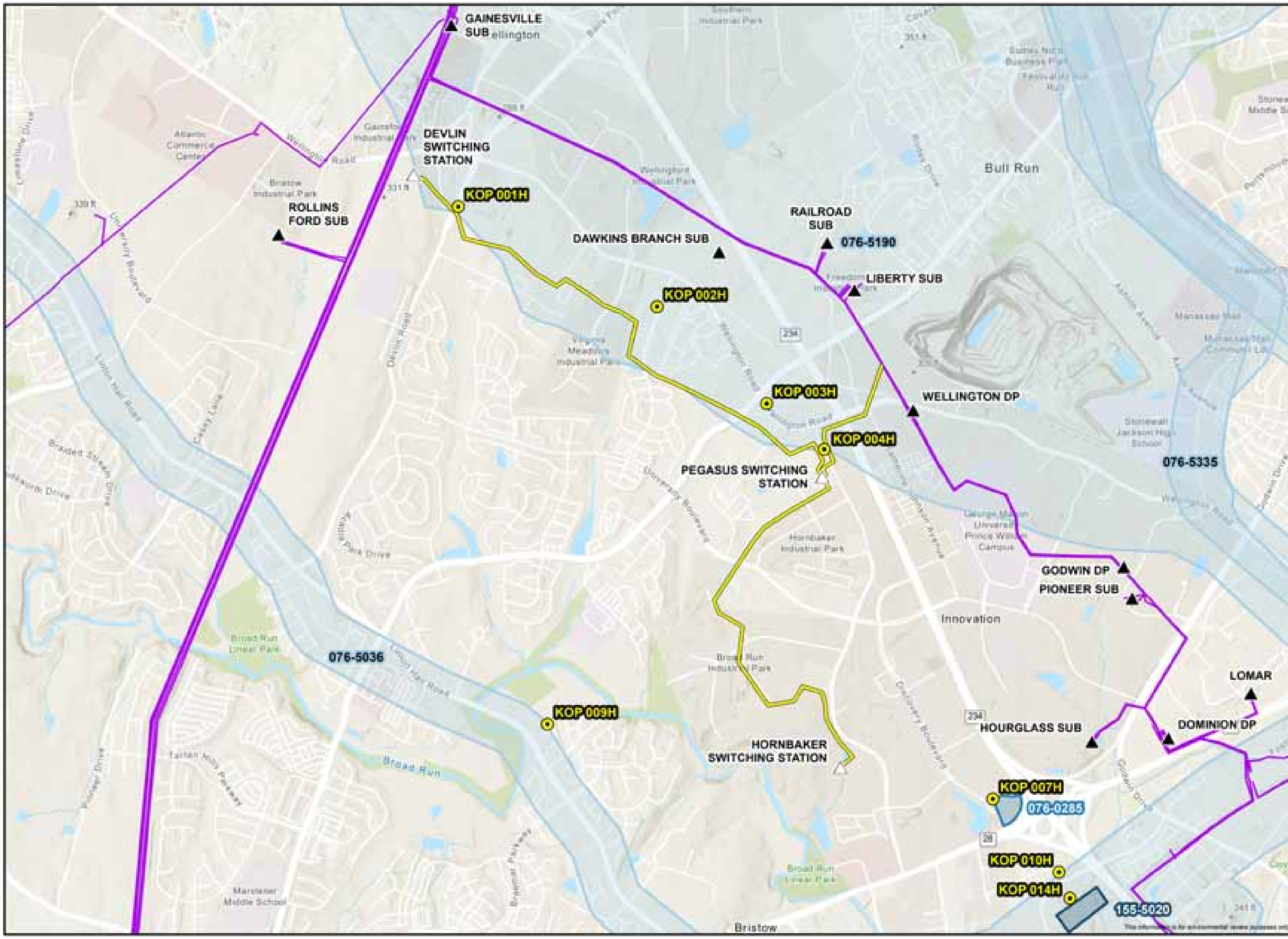
- Existing Substation
- Proposed Switching Station
- Existing Dominion Transmission Line
- Proposed Solution 1B (Overhead)
- Key Observation Point

Evaluation Status
- Potentially Eligible
- Eligible
- NRHP Listing, VLR Listing

0 1,000 2,000
Feet
1:25,000

ERM

Project Location



Dominion Energy

Attachment II.B.6.c
Alternative Solution 1A Overview Map of Routes Showing Visual Simulation Locations and Associated Aboveground Historic Resources
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 3 of 5

- Existing Substation
- Proposed Switching Station
- Existing Dominion Transmission Line
- Alternative Solution 1A (Overhead)
- Key Observation Point

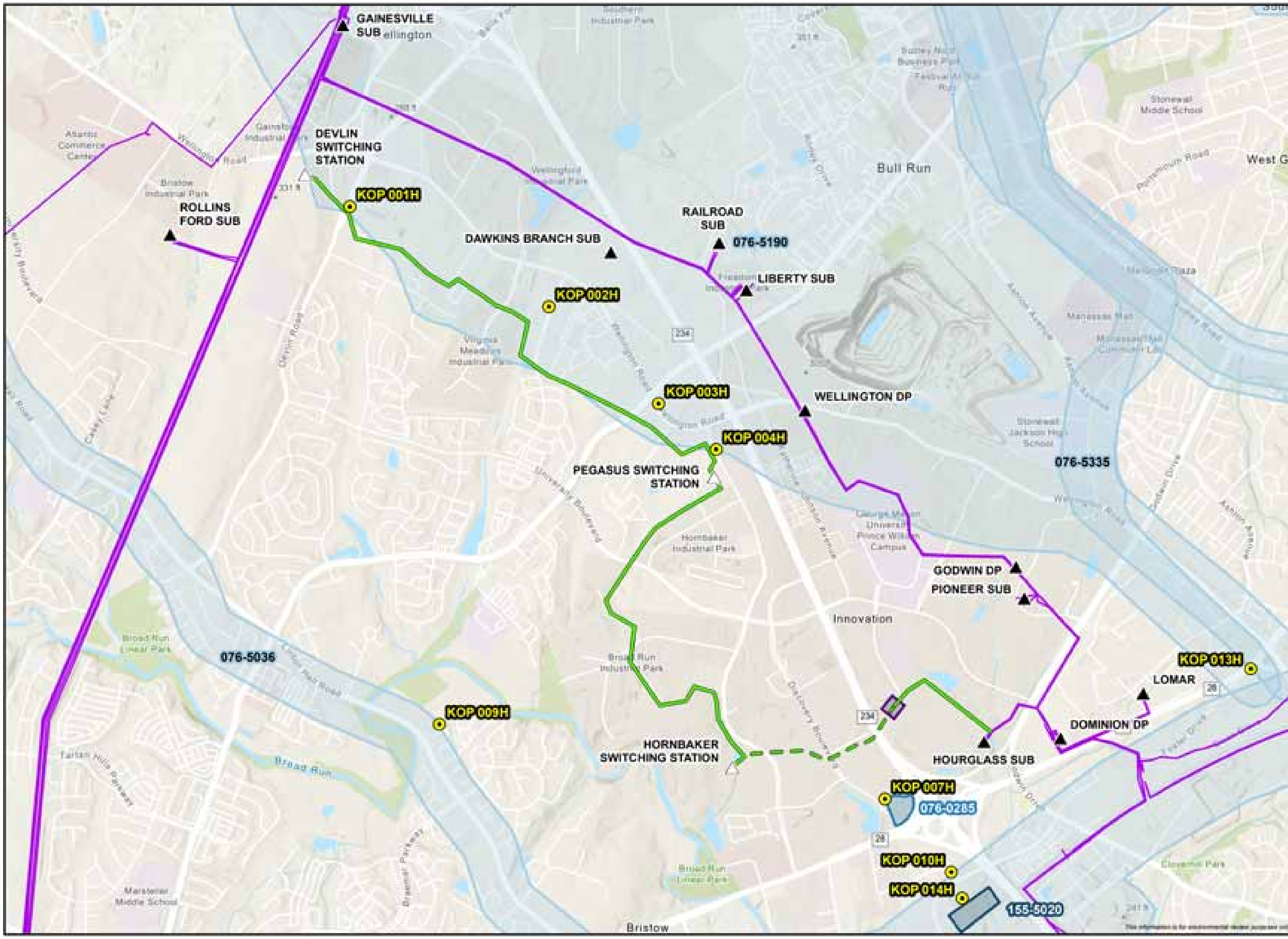
Evaluation Status

- Potentially Eligible
- Eligible
- NRHP Listing, VLR Listing

0 1,000 2,000
Feet
1:25,000

ERM

Project Location



Dominion Energy

Attachment II.B.6.c
Alternative Solution 2A Overview Map of Routes Showing Visual Simulation Locations and Associated Aboveground Historic Resources
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 4 of 5

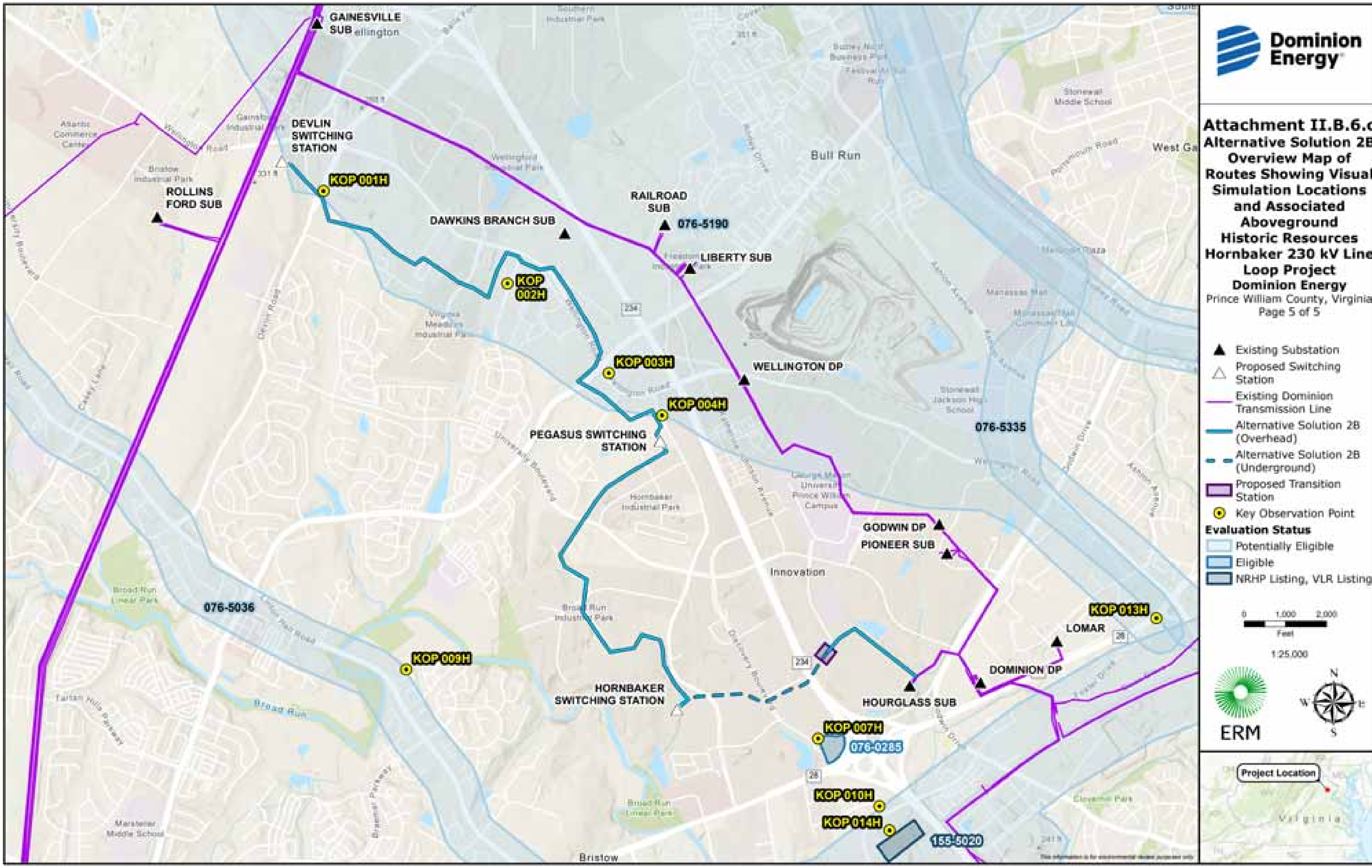
- Existing Substation
- Proposed Switching Station
- Existing Dominion Transmission Line
- Alternative Solution 2A (Overhead)
- Alternative Solution 2A (Underground)
- Proposed Transition Station
- Key Observation Point

Evaluation Status
- Potentially Eligible
- Eligible
- NRHP Listing, VLR Listing

0 1,000 2,000
Feet
1:25,000

ERM

Project Location
Virginia


Dominion Energy
Attachment II.B.6.c
Alternative Solution 2B
Overview Map of
Routes Showing Visual
Simulation Locations
and Associated
Aboveground
Historic Resources
Hornbaker 230 kV Line
Loop Project
Dominion Energy
Prince William County, Virginia
Page 5 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Proposed Transition Station
Key Observation Point
Evaluation Status
Potentially Eligible
Eligible
NRHP Listing, VLR Listing
0
1,000
2,000
Feet
1:25,000
N
S
E
W
ERM
Project Location
Virginia
GAINESVILLE SUB
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
KOP 001H
DAWKINS BRANCH SUB
KOP 002H
RAILROAD SUB
076-5190
LIBERTY SUB
KOP 003H
WELLINGTON DP
KOP 004H
PEGASUS SWITCHING STATION
076-5335
GODWIN DP
PIONEER SUB
Innovation
076-5036
KOP 009H
HORNBAKER SWITCHING STATION
KOP 013H
LOMAR
DOMINION DP
HOURGLASS SUB
KOP 007H
076-0285
KOP 010H
KOP 014H
155-5020
Bull Run
Bristow
West Ga
Stonewall Middle School
Broad Run
Broad Run Linear Park
Hornbaker Industrial Park
Broad Run Industrial Park
Virginia Meadows Industrial Park
Bristow Industrial Park
Atlantic Commerce Center
Marsteller Middle School
Stonewall Jackson High School
George Mason University Prince William Campus
Manassas Mall
Linton Hall Road
University Boulevard
Devlin Road
Wellington Road
Discovery Boulevard
Ashton Avenue
Godwin Drive
Portsmouth Road
Tartan Hills Parkway
Bramlet Parkway
Casey Lane
Cloverhill Park
234
28

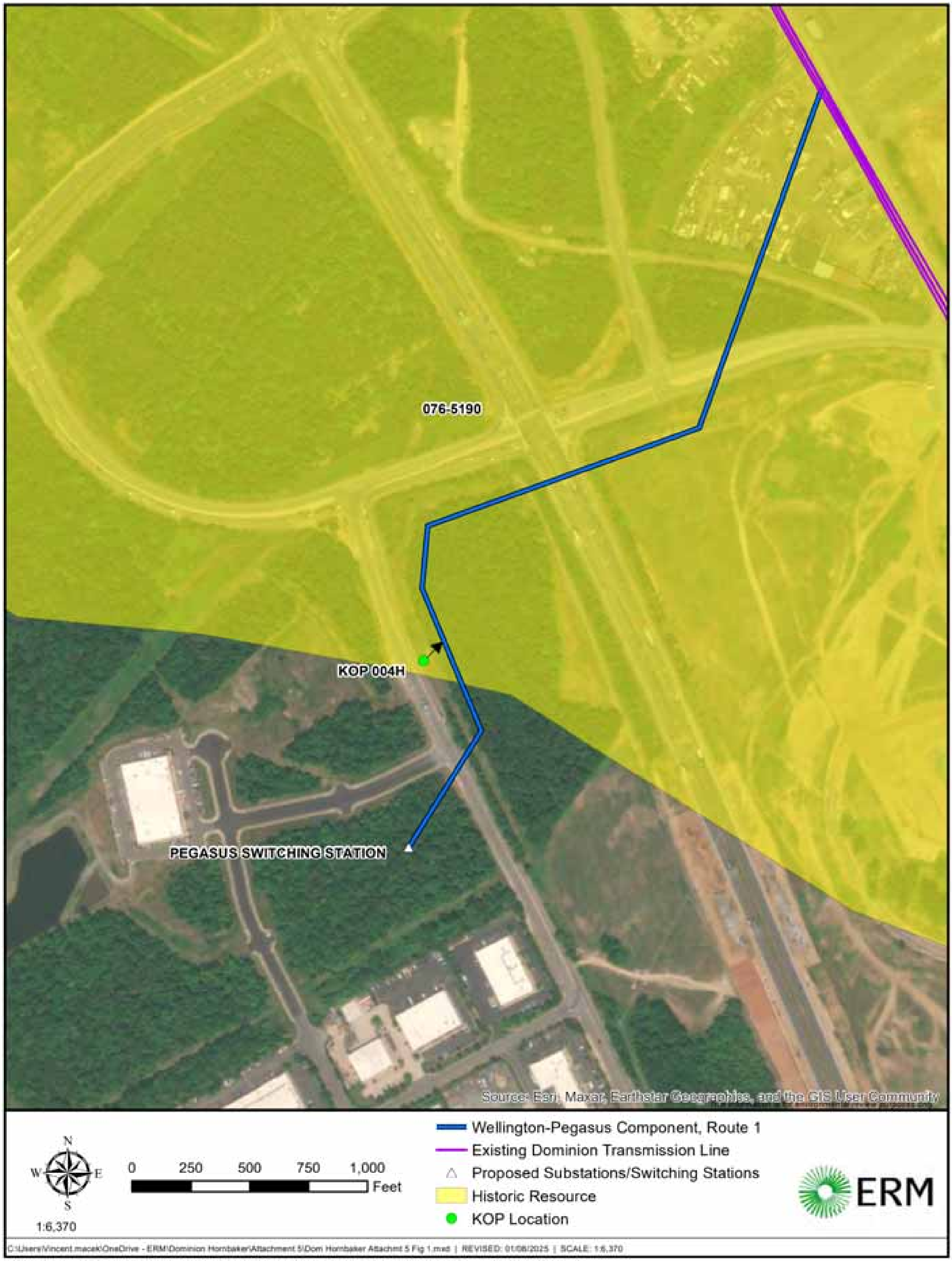


Figure 1. Aerial photograph depicting land use and photo view for 076-5190.

WELLINGTON-PEGASUS
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 004H

Hornbaker Rd

Figure 2
Date:09/25/2024
Time: 1:53 pm
Viewing Direction: North
Distance to closest feature: 0.02 miles

Legend

- Existing Dominion Transmission Lines
- Wellington-Pegasus Route 1
- KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

Figure 3. Aerial photograph depicting land use and photo view for 076-0285.

HOURGLASS-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 007H

Discovery Blvd

Figure 4
Date:09/25/2024
Time: 10:03 am
Viewing Direction: Northwest
Distance to closest feature: 0.25 miles

Legend

- Existing Dominion Transmission Lines
- Hourglass-Hornbaker Route 1
- Proposed Transition Station
- KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

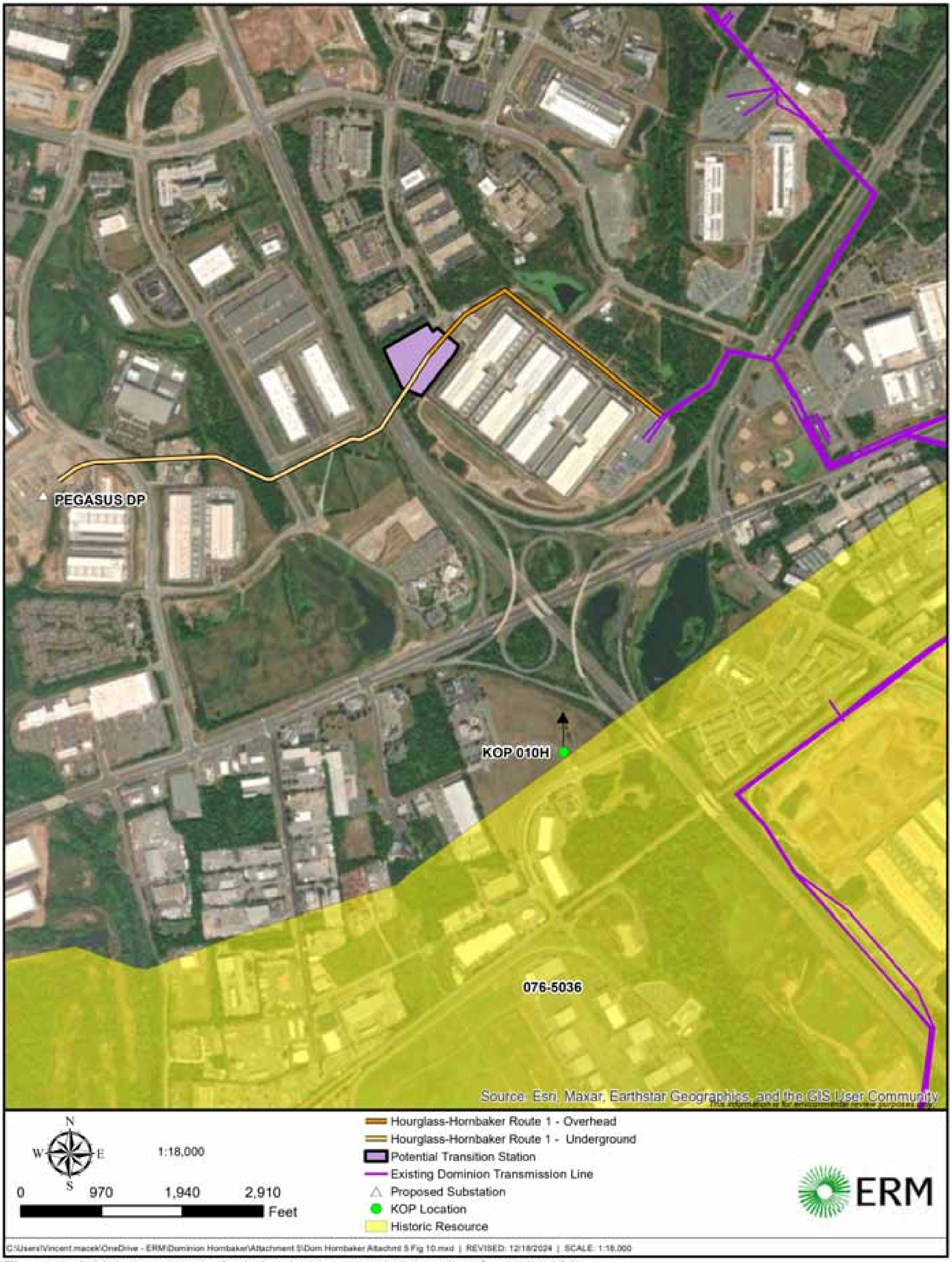


Figure 5. Aerial photograph depicting land use and photo view for 076-5036.

HOURGLASS-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 010H

Carolina Dr

Figure 6
Date:09/24/2024
Time: 1:38 pm
Viewing Direction: Northwest
Distance to closest feature: 0.66 miles

Legend

- Existing Dominion Transmission Lines
- Hourglass-Hornbaker Route 1
- KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

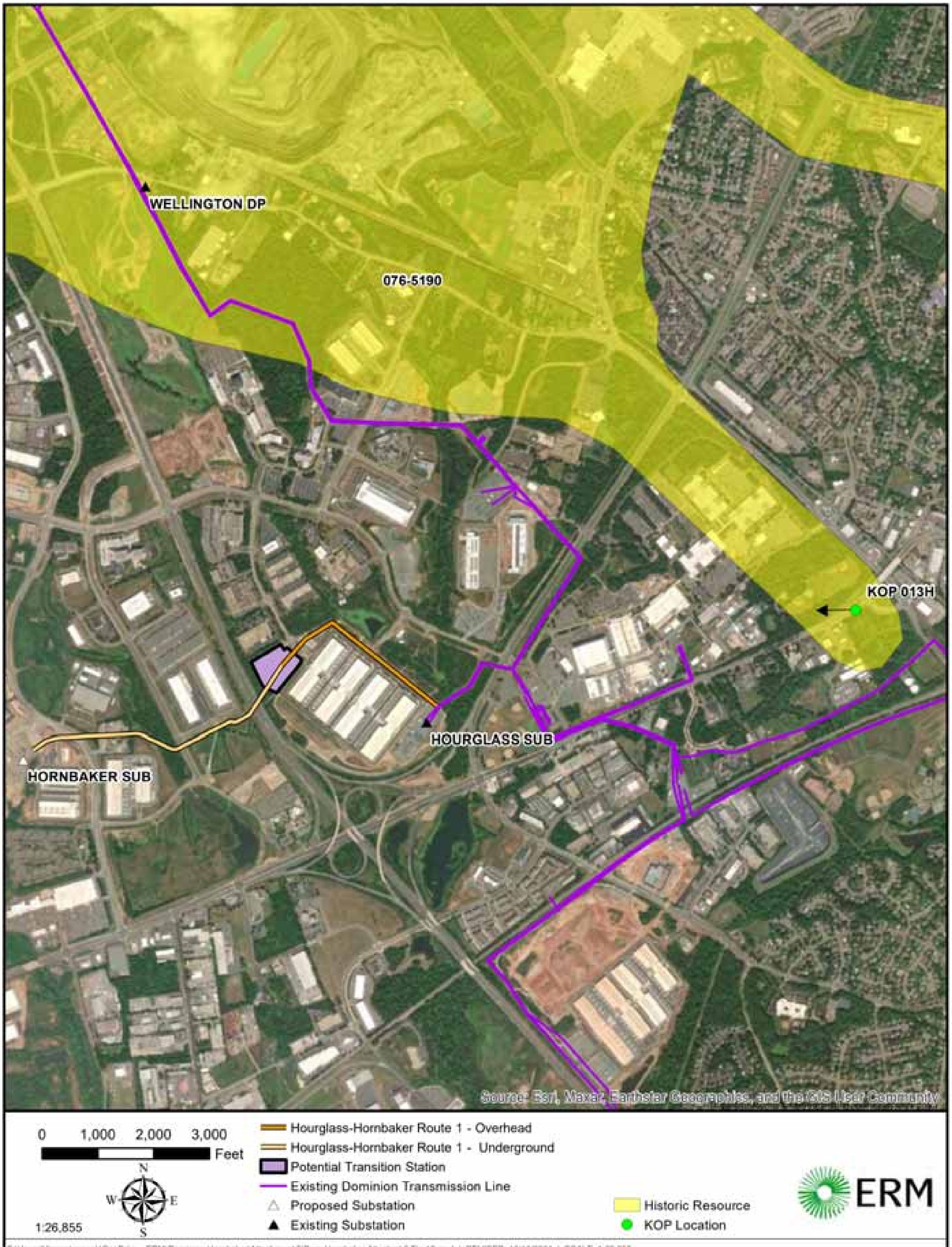


Figure 7. Aerial photograph depicting land use and photo view for 076-5190.

HOURGLASS-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 013H

Nokesville Rd

Figure 8
Date:09/24/2024
Time: 12:50 pm
Viewing Direction: West
Distance to closest feature: 1.14 miles

Legend

- Existing Dominion Transmission Lines
- Hourglass-Hornbaker Route 1
- KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

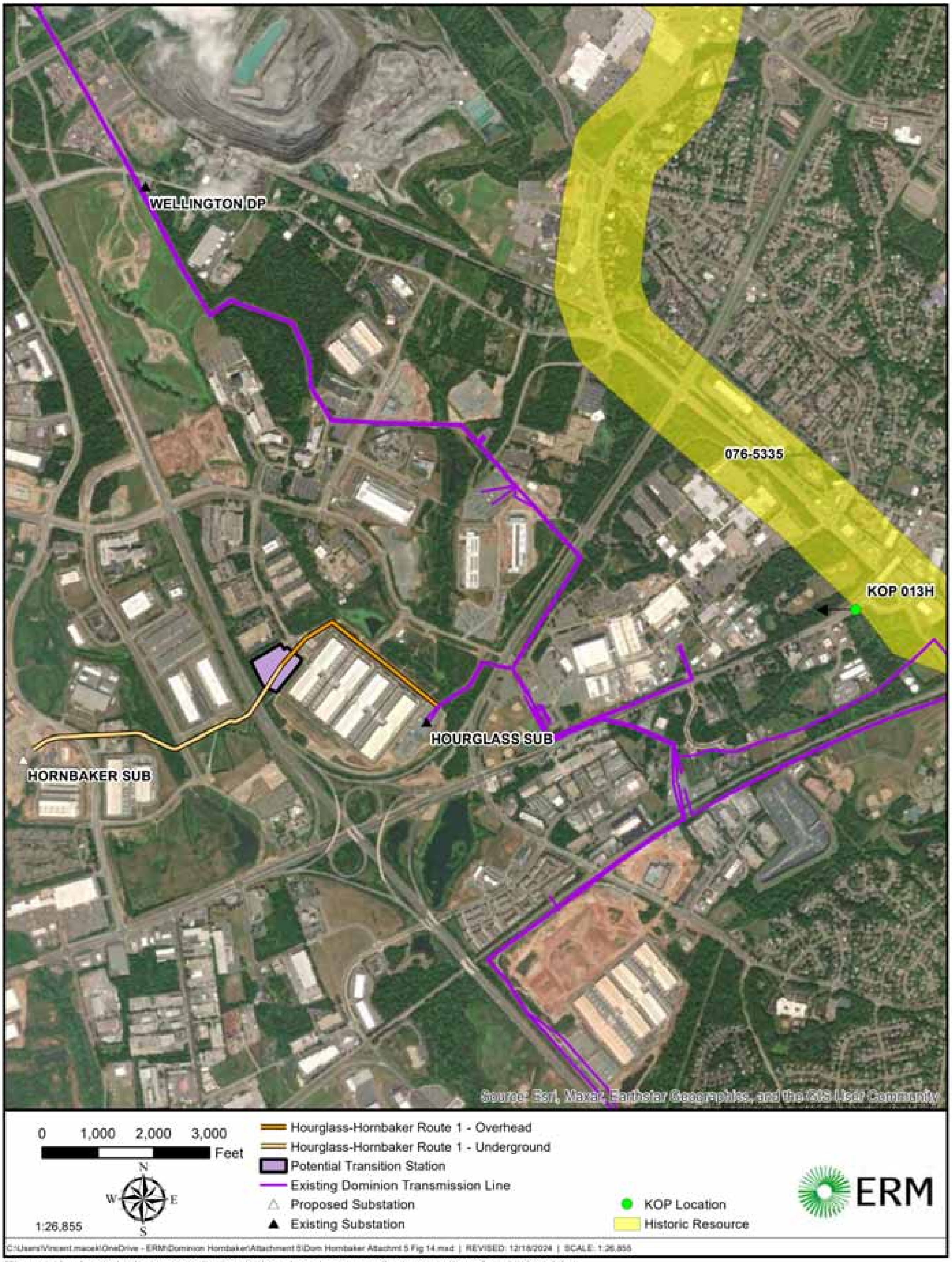


Figure 9. Aerial photograph depicting land use and photo view for 076-5335.

HOURGLASS-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 013H

Nokesville Rd

Figure 10
Date:09/24/2024
Time: 12:50 pm
Viewing Direction: West
Distance to closest feature: 1.14 miles

Legend

- Existing Dominion Transmission Lines
- Hourglass-Hornbaker Route 1
- KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

Figure 11. Aerial photograph depicting land use and photo view for 155-5020.

HOURGLASS-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 014H

Gateway Blvd

Figure 12
Date:09/24/2024
Time: 1:13 pm
Viewing Direction: Northwest
Distance to closest feature: 0.78 miles

Legend

- Existing Dominion Transmission Lines
- Hourglass-Hornbaker Route 1
- KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

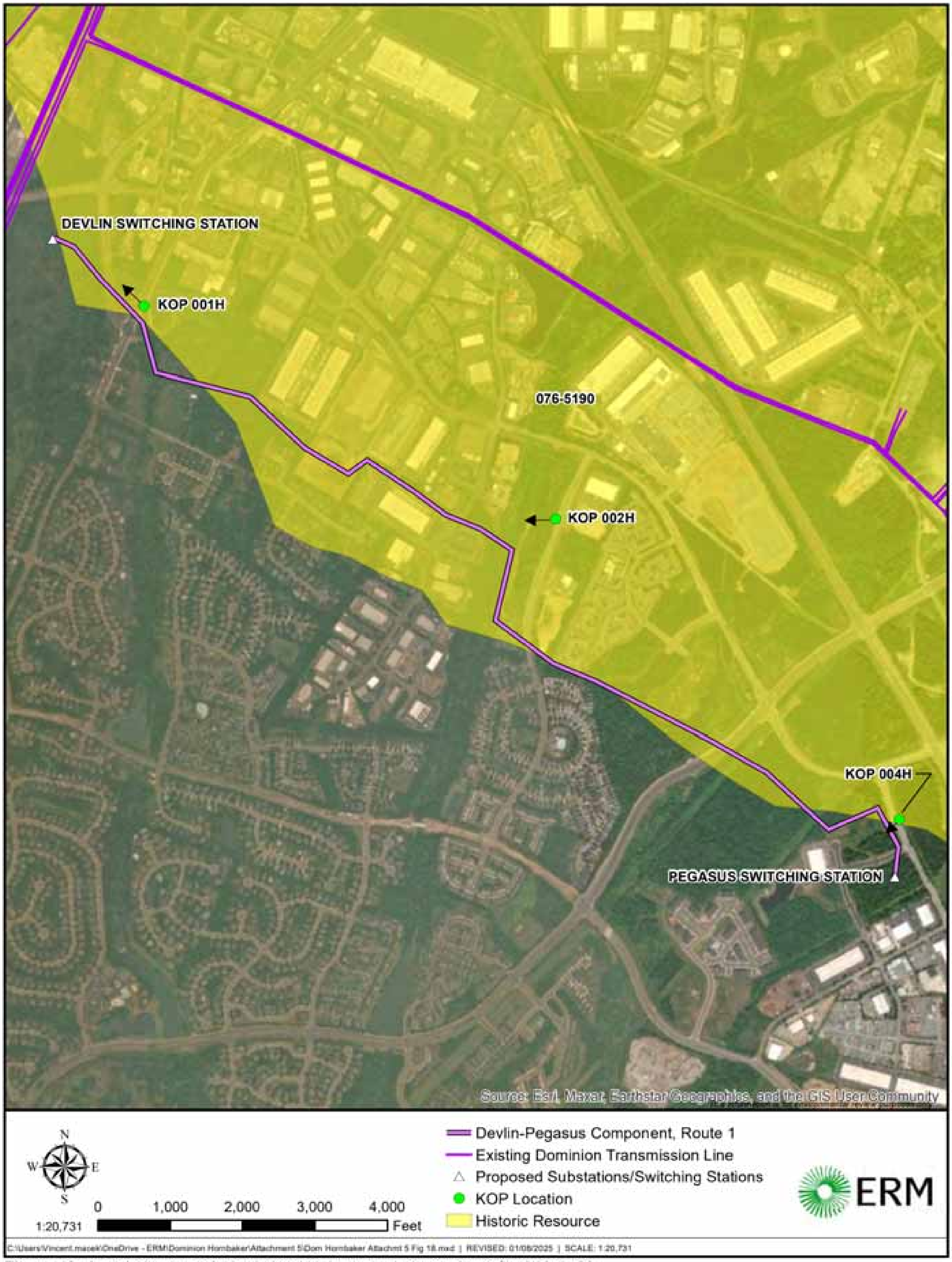


Figure 13. Aerial photograph depicting land use and photo views for 076-5190.

DEVLIN-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 001H

Balls Ford Rd

Figure 14
Route: 1
Date:09/25/2024
Time: 9:03 am
Viewing Direction: Northwest
Distance to closest feature: 0.03 miles

EXISTING CONDITIONS

PROPOSED CONDITIONS

Legend
- Existing Dominion Transmission Lines
- Devlin-Pegasus Route 1
- KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

DEVLIN-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 002H

Lexington Valley Dr

Figure 15
Route: 1
Date:09/25/2024
Time: 9:17 am
Viewing Direction: Southwest
Distance to closest feature: 0.11 miles

Legend

Existing Dominion Transmission Lines
Devlin-Pegasus Route 1
KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

EXISTING CONDITIONS

PROPOSED CONDITIONS

DEVLIN-PEGASUS
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 004H

Hornbaker Rd

Figure 16
Route: 1
Date:09/25/2024
Time: 1:53 pm
Viewing Direction: Southwest
Distance to closest feature: 0.03 miles

Legend

Existing Dominion Transmission Lines
Devlin-Pegasus Route 1
KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

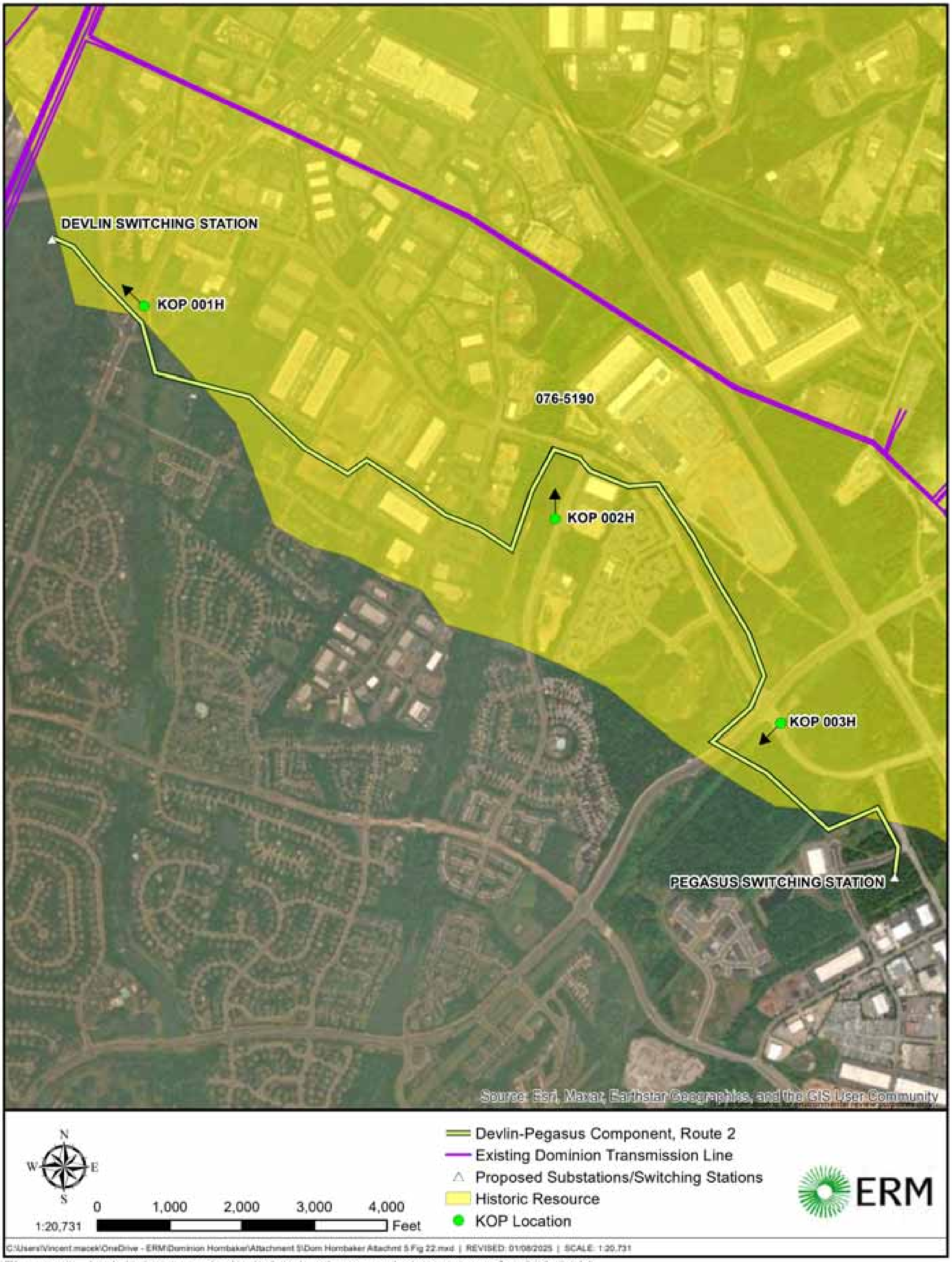


Figure 17. Aerial photograph depicting land use and photo views for 076-5190.

DEVLIN-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

KOP 001H

Balls Ford Rd

Figure 18
Route: 2
Date:09/25/2024
Time: 9:03 am
Viewing Direction: Northwest
Distance to closest feature: 0.03 miles


EXISTING CONDITIONS


PROPOSED CONDITIONS

Legend
Existing Dominion Transmission Lines
Devlin-Pegasus Route 2
KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

EXISTING CONDITIONS

PROPOSED CONDITIONS

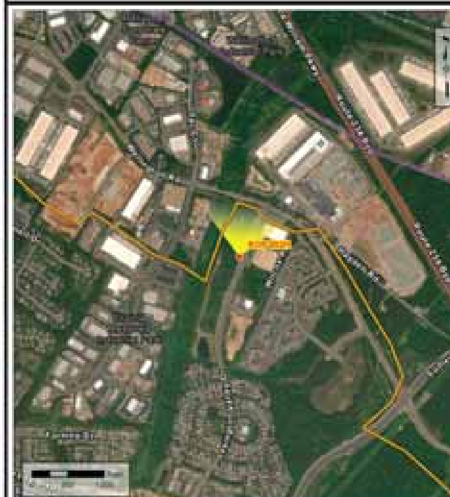
DEVLIN-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 002H

Lexington Valley Dr

Figure 19
Route: 2
Date:09/25/2024
Time: 9:17 am
Viewing Direction: North
Distance to closest feature: 0.11 miles



Legend

- Existing Dominion Transmission Lines
- Devlin-Pegasus Route 2
- KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

DEVLIN-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 003H

Wellington Rd

Figure 20
Route: 2
Date:09/25/2024
Time: 9:39 am
Viewing Direction: Southeast
Distance to closest feature: 0.10 miles

Legend

Existing Dominion Transmission Lines
Devlin-Pegasus Route 2
KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on the page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

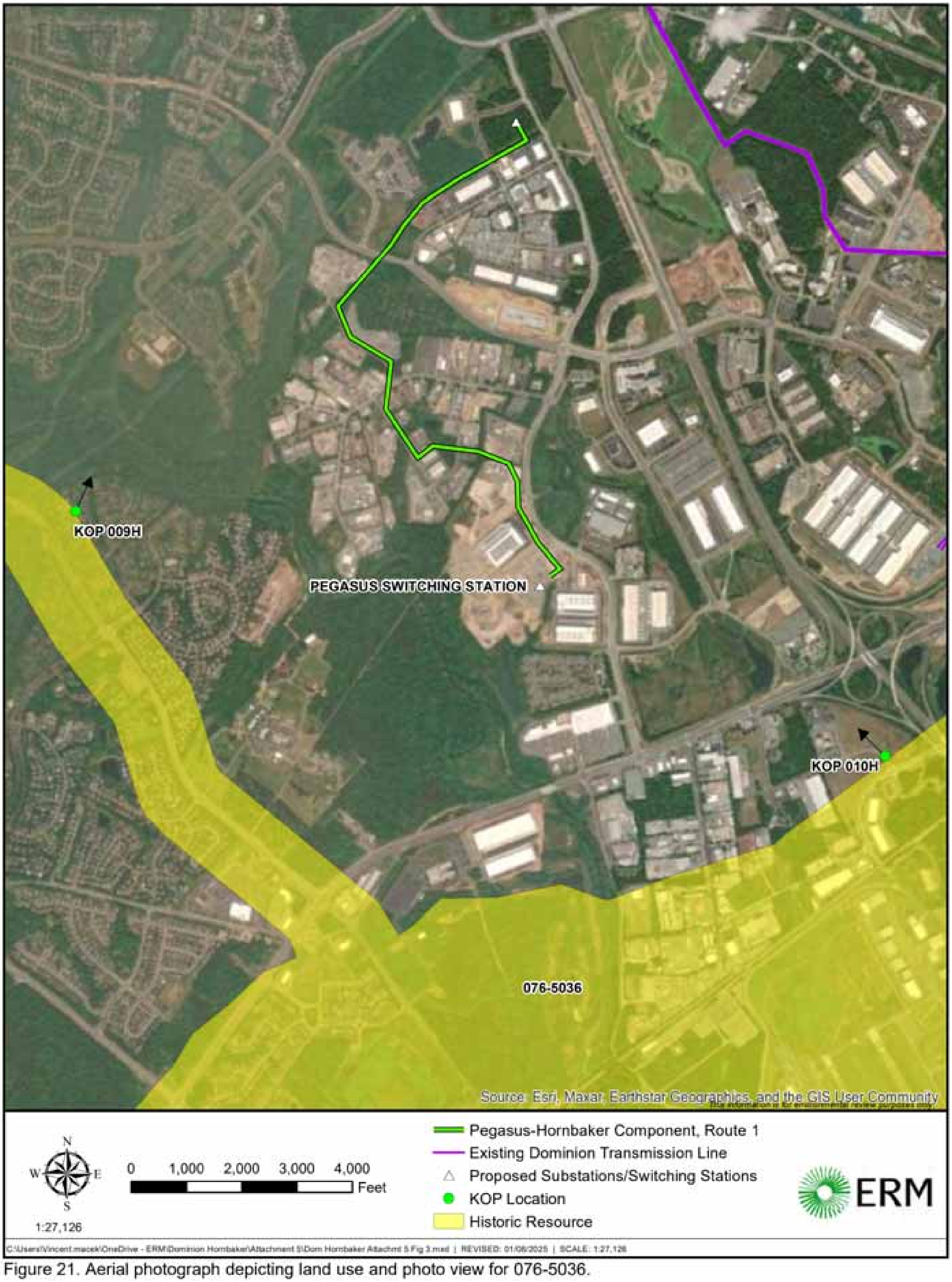


Figure 21. Aerial photograph depicting land use and photo view for 076-5036.

PEGASUS-HORNBAKER

230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 009H

Granary Pl

Figure 22
Date:09/25/2024
Time: 2:36 pm
Viewing Direction: West
Distance to closest feature: 0.85 miles

Legend

Pegasus-Hornbaker Route 1
KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

PEGASUS-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 010H

Carolina Dr

Figure 23
Date:09/24/2024
Time: 1:38 pm
Viewing Direction: Northwest
Distance to closest feature: 1.00 miles

Legend

- Pegasus-Hornbaker Route 1
- Bristow Switching Station
- Hornbaker Substation
- KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

Figure 24. Aerial photograph depicting land use and photo view for 076-5190.

PEGASUS-HORNBAKER
230 kV Electric Transmission Project
Dominion Energy Virginia
Prince William County, Virginia

Dominion Energy

KOP 004H

Hornbaker Rd

Figure 25
Date:09/25/2024
Time: 1:53 pm
Viewing Direction: Southwest
Distance to closest feature: 0.12 miles

Legend

Existing Dominion Transmission Lines
Pegasus-Hornbaker Route 1
KOP View Direction

Note: Project components illustrated are based on proposed preliminary designs.
The images contained on this page show the proposed project within a wider landscape context and are not representative of scale and distance when viewed from the actual view point.

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 proposed Project requires construction of the new 230-34.5 kV Hornbaker Switching Station in Prince William County, Virginia.

The proposed Hornbaker Switching Station will be constructed with four 230 kV breakers in a breaker-and-half configuration utilizing two 230 kV line terminals and two 230 kV delivery points. The Hornbaker Switching Station will be designed to incorporate two additional 230 kV circuit breakers for future use, creating two additional 230 kV line terminal points. The total area required to build the Hornbaker Switching Station is approximately 2 acres. The point of demarcation between the Company and the NOVEC customer will be the 230 kV switch terminals inside the Hornbaker Switching Station. NOVEC will bring their bus to the switches located near the Hornbaker Switching Station fence line.

The one-line and general arrangement diagrams for the proposed Hornbaker Switching Station are provided as Attachment II.C.1 and Attachment II.C.2, respectively.

Other Minor Substation-Related Work

In addition to the substation-related work described above, the Company will perform relay resents at the existing Pegasus Switching Station.

While this work is required in association with the Project, it is not a component of the Project as defined in Section I.A, and the costs associated with this minor substation-related work are not included in the total Project costs. The costs associated with this minor substation-related work is less than $20,000, and this cost estimate is being provided for reference purposes only.

Dominion Energy

PRELIMINARY ONE LINE DIAGRAM
HORNBAKER SWITCHING STATION

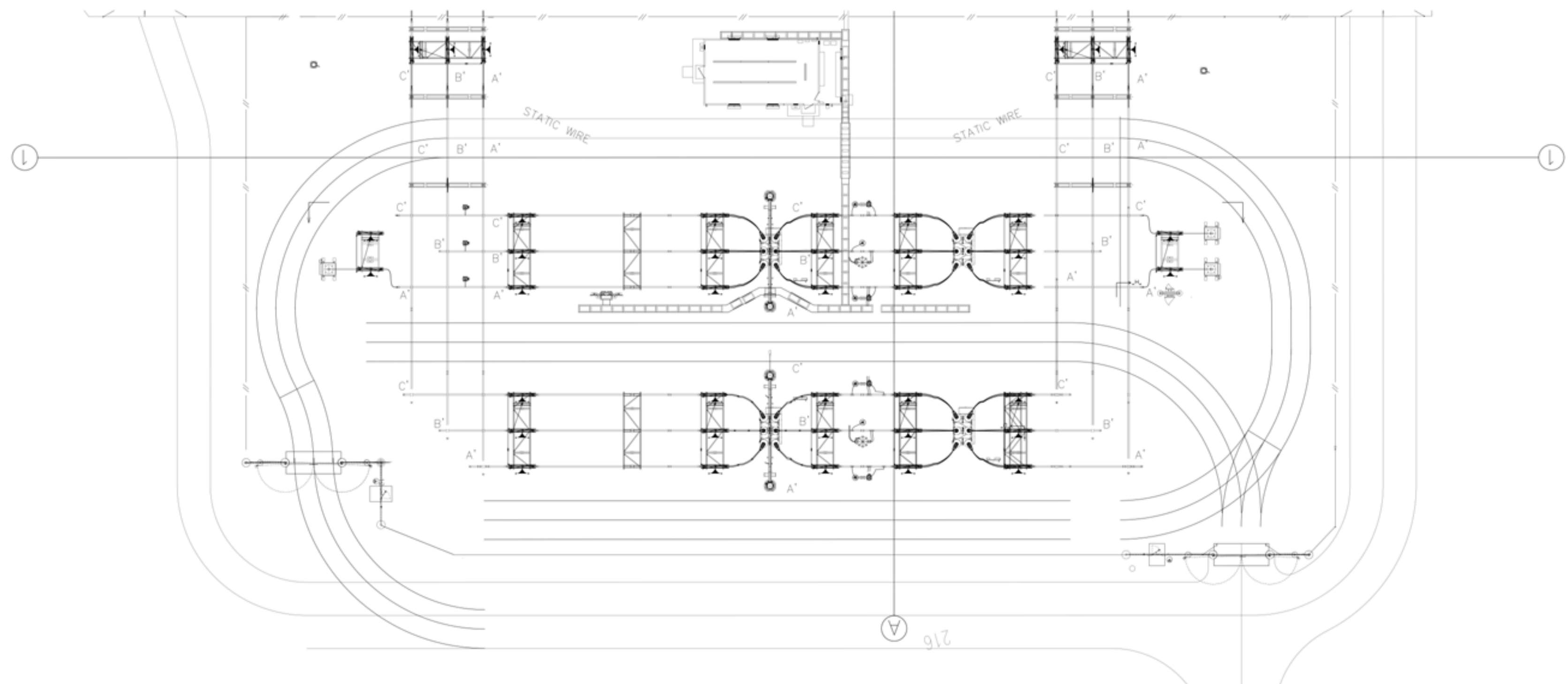
	Name	Date	Project No.	Sheet No.
Designed by:	MMO	02/15/23		
Approvals			Scale	of
Approvals				
		B/M No.	Revisions	

Cad File Name		Drawing No.
PLOTTED:	6/27/2023	II.C.1

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 (Pier) (Spread)	Steel Detail & Assembly

Revisions

No.	Date	By	Checked/Appr.	Description	Project Number	B/M



Dominion Energy

GENERAL ARRANGEMENT PLAN
HORNBAKER SWITCHING STATION
PRINCE WILLIAM COUNTY, VA

	Name	Date	Project No.	Sheet No.
[redacted]				
Designed by:				1 OF 1
Approvals			Scale	
Approvals				
		B/M No.	Revisions	

Cad File Name
PLOTTED: 6/27/2023
Drawing No. II.C.2

FILENAME:
PLOTTED: 6/27/2023
USER: mohammi6

No.	Date	By	Checked/Appr.	Description	Project Number	B/M

Revisions

USER: mohammi6

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 (Pier) (Spread)	Steel Detail & Assembly

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 and Alternative Solutions are all located in an area of Prince William County that is largely characterized by industrial and commercial development, undeveloped forested areas, open land planned for commercial development, and VDOT rights-of-way. The area is surrounded by existing data center developments and scattered light industrial and other business/commercial land use. The Proposed and Alternative Solutions are discussed in detail below.

For additional description of the character of the areas crossed by each solution and the associated impacts, see the DEQ Supplement, specifically as to land use, forest, and agricultural lands (Section 2.L), wetlands and waterbodies (Sections 2.B and 2.D), historic resources (Section 2.I), and wildlife (Sections 2.G and 2.K). See Attachment III.A.1 for a map of farmland within the rights-of-way. Descriptions of the lands crossed by the routes and number of structures within proximity of the routes are described below.

Proposed Solution 1B

Land Use

The approximately 5.3-mile length of Proposed Solution 1B crosses approximately equal amounts of developed, open, and forested land. The Wellington – Pegasus Route 1 component passes through mostly open space and forested land adjacent to Wellington Road and Hornbaker Road. The Pegasus – Hornbaker Route 1 component passes through almost entirely industrial development, with smaller amounts of forested land adjacent to industrial buildings. The Devlin – Pegasus Route 2 component of the solution crosses through forested and open space around Devlin Road before passing through developed, industrial buildings around Virginia Meadows Drive. The route turns to parallel and cross Dawkins Branch before collocating with Wellington Road adjacent to industrial buildings and then passes through mostly forested land.

Dwellings

According to Prince William County parcel data, zoning data, and aerial photo analysis, there are no residential dwellings within 60 feet of the right-of-way. There are no residential dwellings within 100 feet of the centerline, eight residential dwellings within 250 feet of the centerline, and 40 residential dwellings within 500 feet of the centerline. There are 130 non-residential (commercial and outbuilding) structures within 500 feet of the centerline of Proposed Solution 1B's right-of-way.

Alternative Solution 1A

Land Use

Alternative Solution 1A traverses approximately 4.9 miles through Prince William County, passing through the same land described above for the Wellington – Pegasus Route 1 and Pegasus – Hornbaker Route 1 components of the proposed solution. The Devlin – Pegasus Route 2 differs slightly from that described above, passing through more undeveloped forested and open land east of Virginia Meadows Drive and routing between two residential developments rather than collocating with Wellington Road.

Dwellings

According to Prince William County parcel data, zoning data, and aerial photo analysis, there are four residential dwellings within 60 feet of the right-of-way. There are three residential dwellings within 100 feet of the centerline, 26 residential dwellings within 250 feet of the centerline, and 98 residential dwellings within 500 feet of the centerline. There are 129 non-residential (commercial and outbuilding) structures within 500 feet of the centerline of Alternative Solution 1A's right-of-way.

Alternative Solution 2A

Land Use

Alternative Solution 2A traverses approximately 5.6 miles through Prince William County, with 4.8 miles of overhead transmission line and 0.8 mile of underground transmission line. This solution would pass through the same land described above (under Proposed Solution 1B) for Pegasus – Hornbaker Route 1 and Devlin – Pegasus Route 1. The overhead portion of Hourglass-Hornbaker Route 1 component would pass through developed land adjacent to industrial buildings, with the underground portion crossing through a mix of open and forested land with a small amount of development between Prince William Parkway and Hornbaker Road.

Dwellings

According to Prince William County parcel data, zoning data, and aerial photo analysis, there are four residential dwellings within 60 feet of the right-of-way. There are three residential dwellings within 100 feet of the centerline, 26 residential dwellings within 250 feet of the centerline, and 98 residential dwellings within 500 feet of the centerline. There are 131 non-residential (commercial and outbuilding) structures within 500 feet of the centerline of the Alternative Solution 2A's right-of-way.

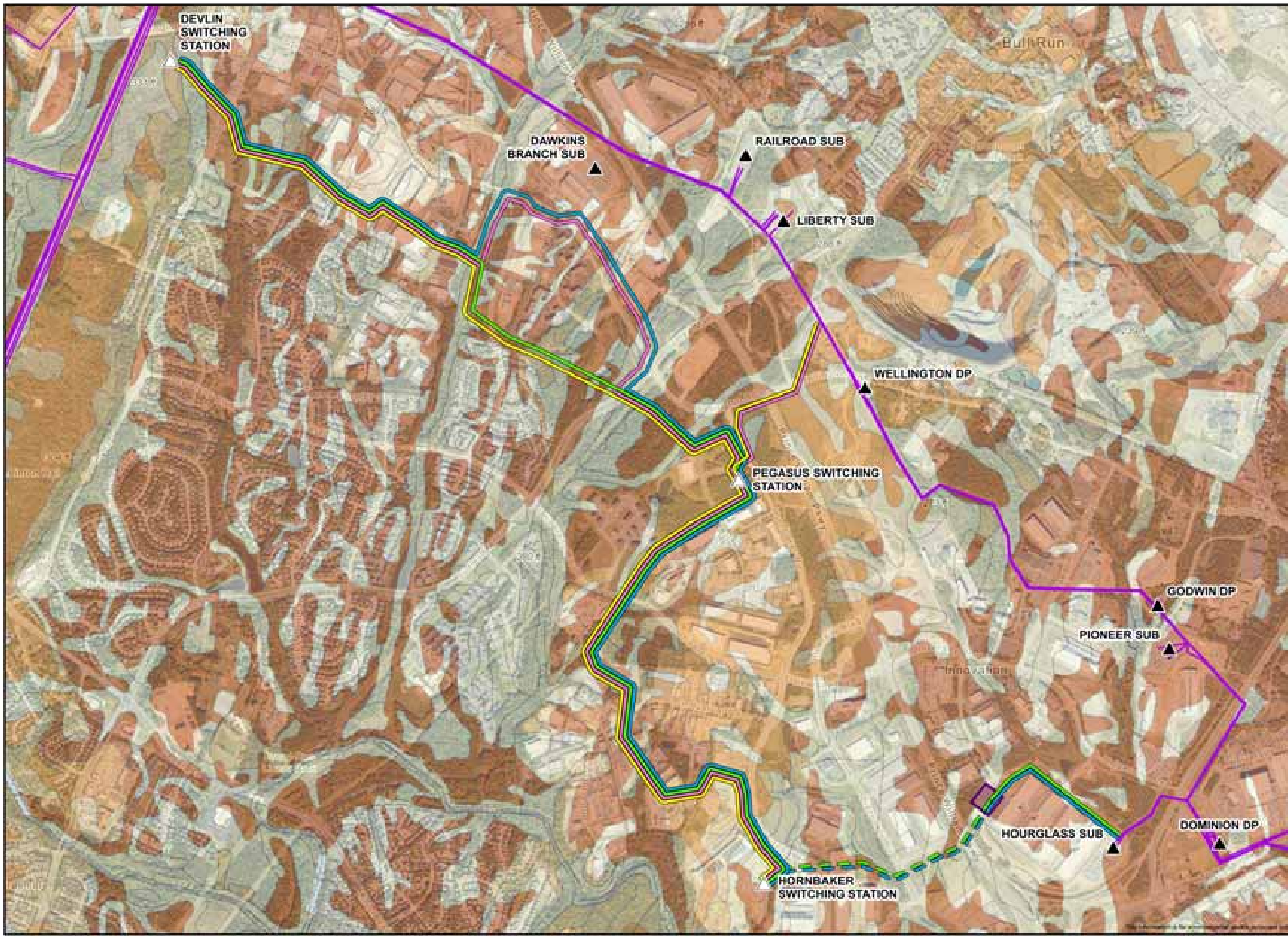
Alternative Solution 2B

Land Use

Alternative Solution 2B traverses approximately 6.0 miles through Prince William County, with 5.2 miles of overhead transmission line and 0.8 mile of underground transmission line. This solution would pass through the same land described above (under Proposed Solution 1B) for Pegasus – Hornbaker Route 1 and Devlin – Pegasus Route 2. The overhead portion of Hourglass – Hornbaker Route 1 component would pass through developed land adjacent to industrial buildings, with the underground portion crossing through a mix of open and forested land with a small amount of development between Prince William Parkway and Hornbaker Road.

Dwellings

According to Prince William County parcel data, zoning data, and aerial photo analysis, there are no residential dwellings within 60 feet of the right-of-way. There are no residential dwellings within 100 feet of the centerline, eight residential dwellings within 250 feet of the centerline, and 40 residential dwellings within 500 feet of the centerline. There are 132 non-residential (commercial and outbuilding) structures within 500 feet of the Alternative Solution 2B's right-of-way.



Dominion Energy

Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 1 of 17

- Existing Substation
- Proposed Switching Station
- Existing Dominion Transmission Line
- Proposed Solution 1B (Overhead)
- Alternative Solution 1A (Overhead)
- Alternative Solution 2A (Overhead)
- Alternative Solution 2A (Underground)
- Alternative Solution 2B (Overhead)
- Alternative Solution 2B (Underground)
- Proposed Transition Station

Farmland Class
- All areas are prime farmland
- Prime farmland if drained
- Farmland of statewide importance
- Not prime farmland

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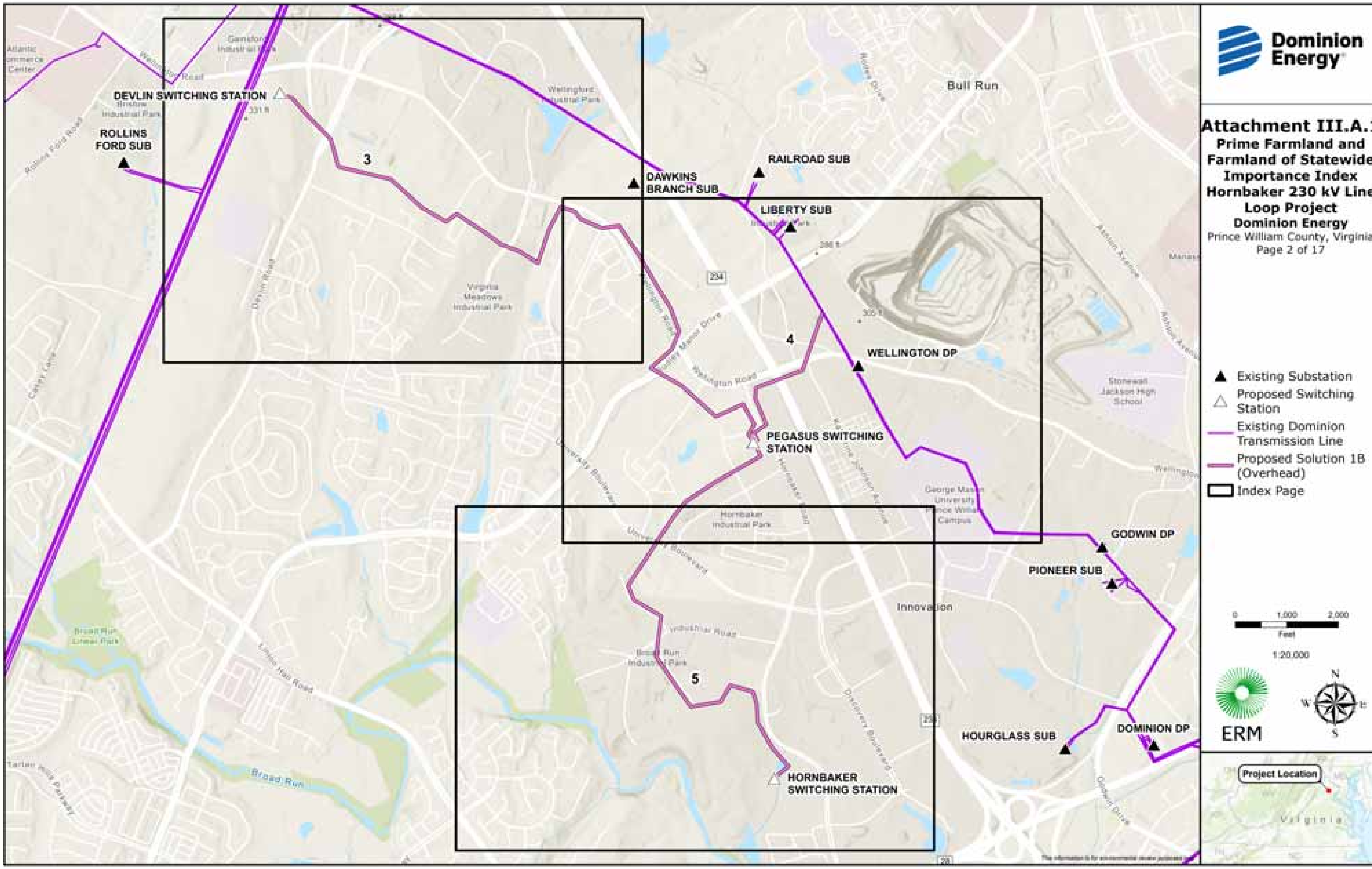
Dominion Energy
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Prime Farmland and Farmland of Statewide Importance Index
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
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Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
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Project Location
Virginia
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
DOMINION DP
HORNBAKER SWITCHING STATION
3
4
5
Bull Run
Innovation
Broad Run
Broad Run Linear Park
Virginia Meadows Industrial Park
Hornbaker Industrial Park
Broad Run Industrial Park
George Mason University Prince William Campus
Stonewall Jackson High School
Wellington Road
University Boulevard
Linton Hall Road
Devlin Road
Ashton Avenue
Discovery Boulevard
Hornbaker Road
Godwin Drive
Rollins Ford Road
Wellingford Industrial Park
Gainsford Industrial Park
Bristow Industrial Park
234
28


Dominion Energy
Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
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Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
Overhead Right-of-Way
Devlin Switching Station Boundary
Parcel Boundary
Farmland Class
All areas are prime farmland
Prime farmland if drained
Farmland of statewide importance
Not prime farmland
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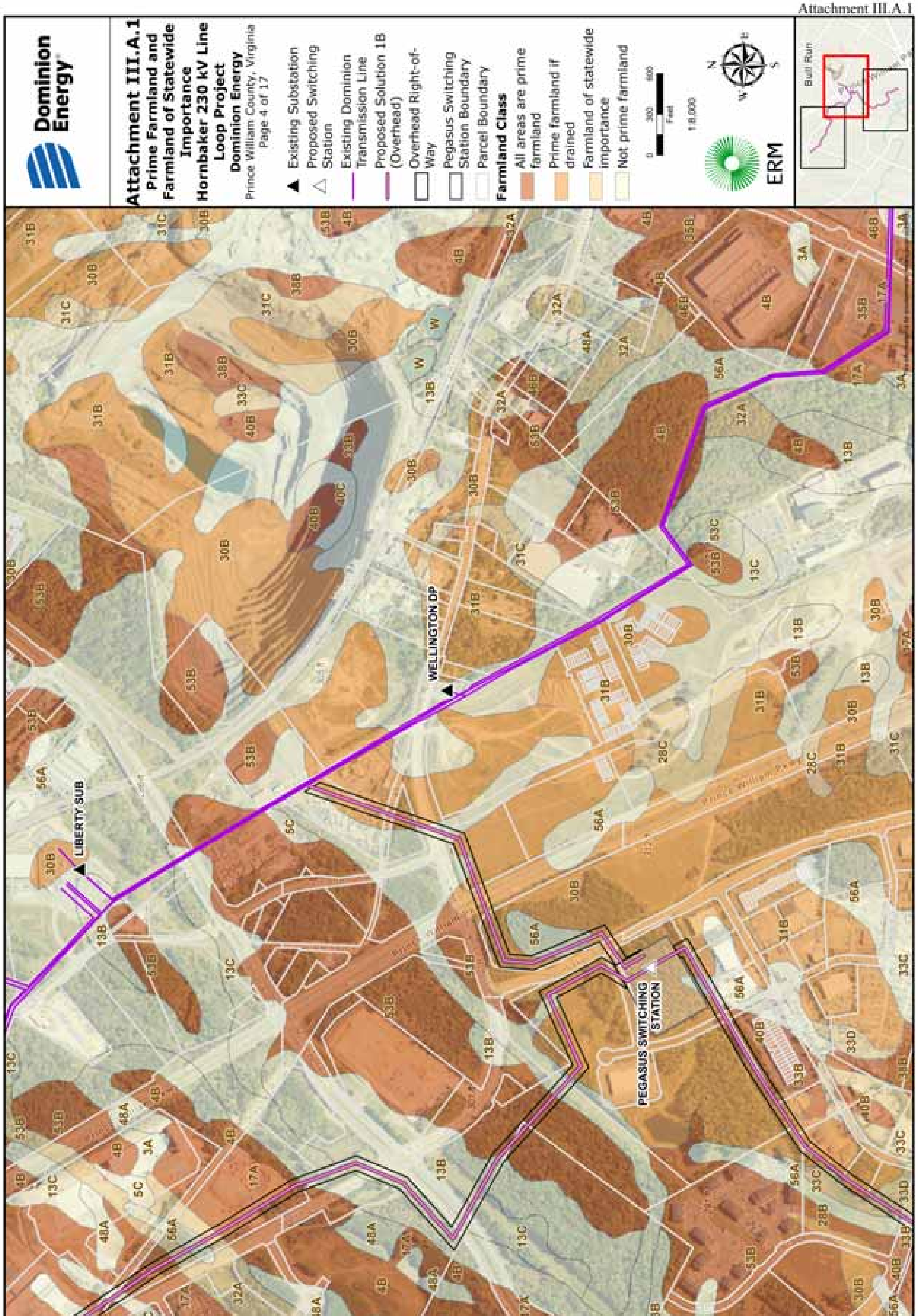
Bull Run
DAWKINS BRANCH SUB
DEVLIN SWITCHING STATION



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Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
Hornbaker 230 kV Line Loop Project
Dominion Energy
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Parcel Boundary
Farmland Class
All areas are prime farmland
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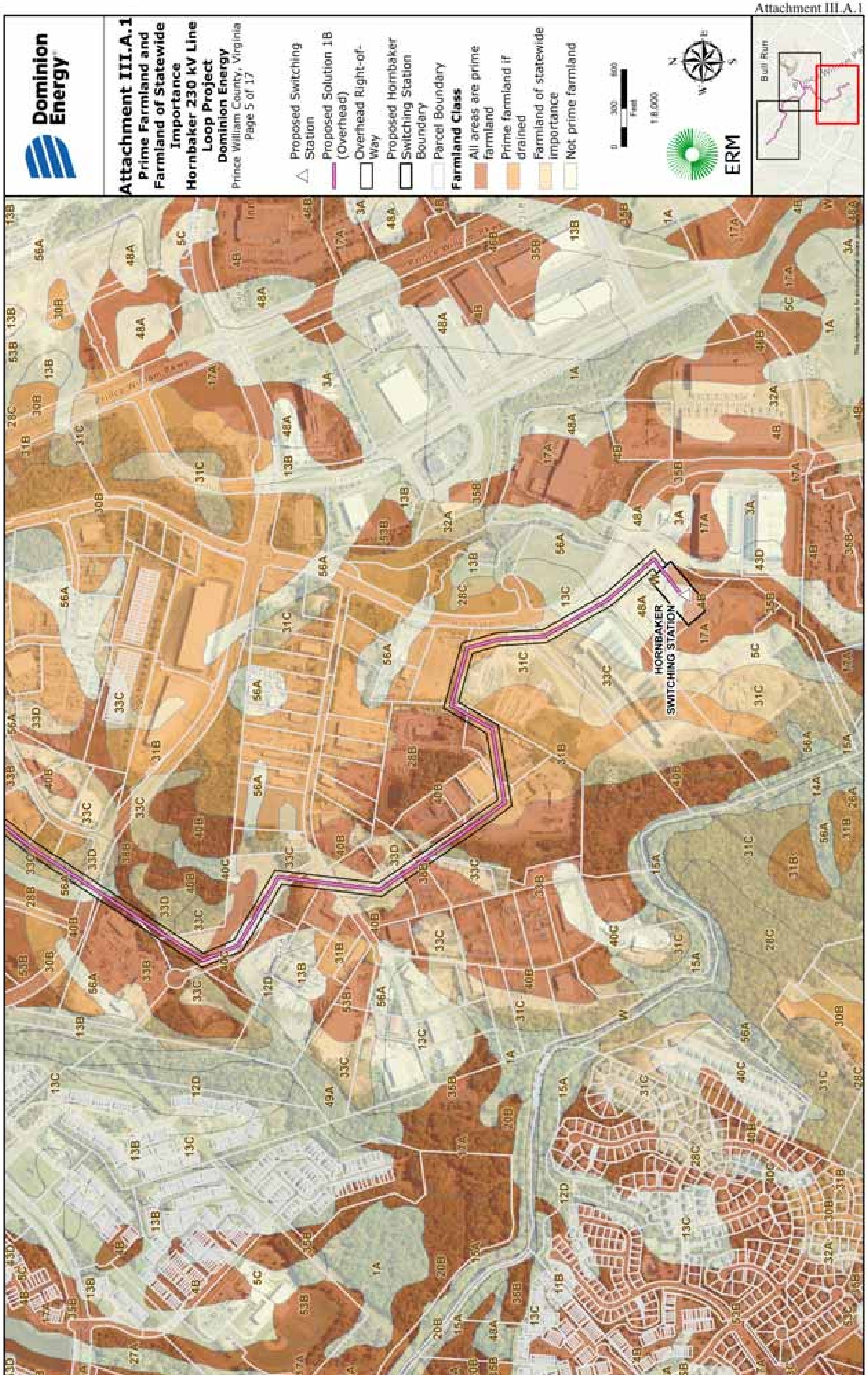
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
Bull Run



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Prime Farmland and Farmland of Statewide Importance
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Prince William County, Virginia
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Overhead Right-of-Way
Proposed Hornbaker Switching Station Boundary
Parcel Boundary
Farmland Class
All areas are prime farmland
Prime farmland if drained
Farmland of statewide importance
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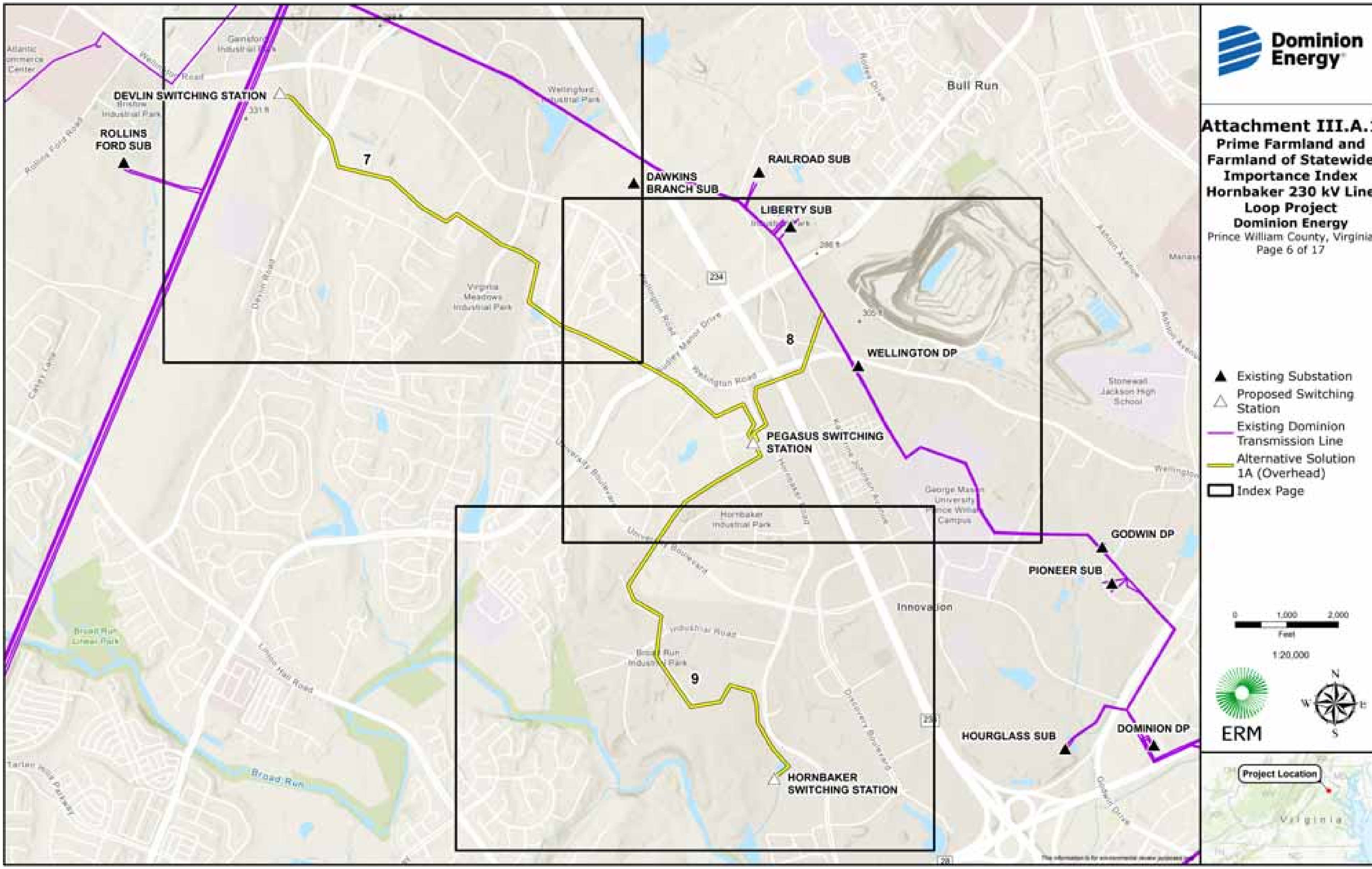
HORNBAKER SWITCHING STATION
Prince William Pkwy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Hornbaker 230 kV Line Loop Project
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Prince William County, Virginia
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Existing Dominion Transmission Line
Alternative Solution 1A (Overhead)
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Project Location
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ROLLINS FORD SUB
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
DOMINION DP
HORNBAKER SWITCHING STATION
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Bull Run
Innovation
Virginia Meadows Industrial Park
Hornbaker Industrial Park
Broad Run Industrial Park
Gainsford Industrial Park
Wellingford Industrial Park
Bristow Industrial Park
George Mason University Prince William Campus
Stonewall Jackson High School
Broad Run Linear Park
Broad Run
Wellington Road
Devlin Road
Rollins Ford Road
Linton Hall Road
University Boulevard
Hornbaker Road
Discovery Boulevard
Industrial Road
Ashton Avenue
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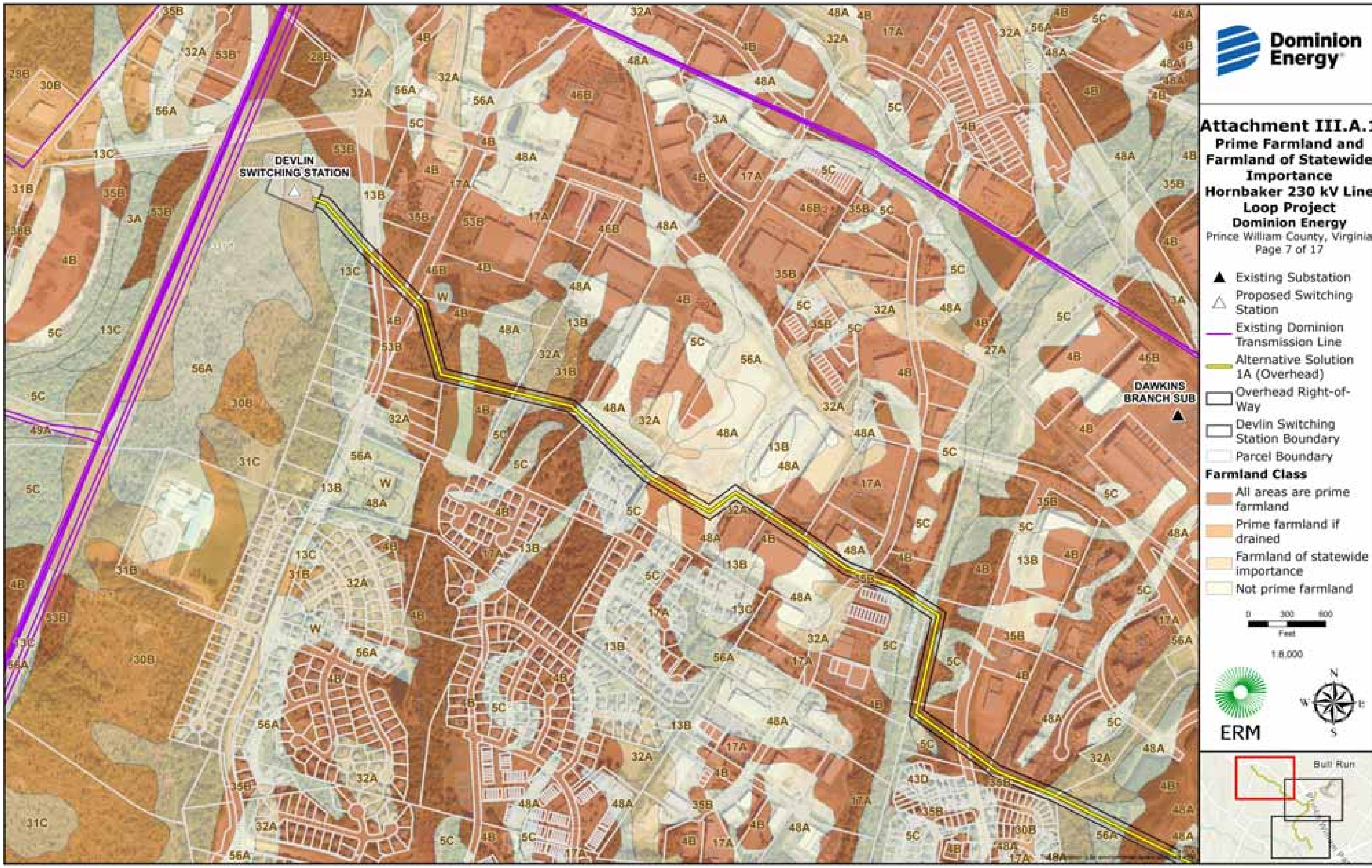
Rodes Drive
Sudley Manor Drive
Caney Lane
Tartan Hills Parkway
Atlantic Commerce Center
234
28
331 ft
286 ft
305 ft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Prime Farmland and Farmland of Statewide Importance
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Parcel Boundary
Farmland Class
All areas are prime farmland
Prime farmland if drained
Farmland of statewide importance
Not prime farmland
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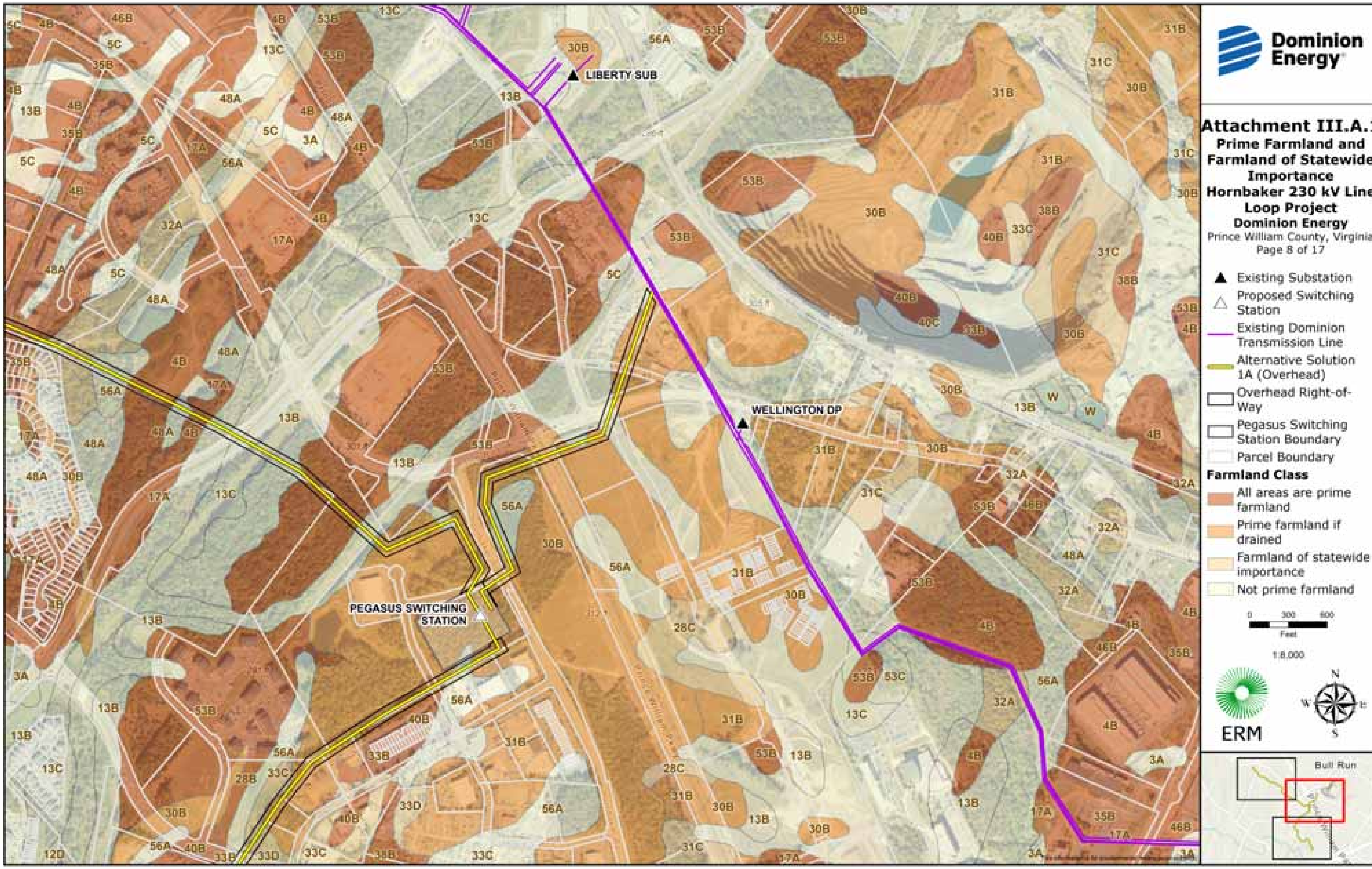
Bull Run
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB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Prime Farmland and Farmland of Statewide Importance
Hornbaker 230 kV Line Loop Project
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Prince William County, Virginia
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Parcel Boundary
Farmland Class
All areas are prime farmland
Prime farmland if drained
Farmland of statewide importance
Not prime farmland
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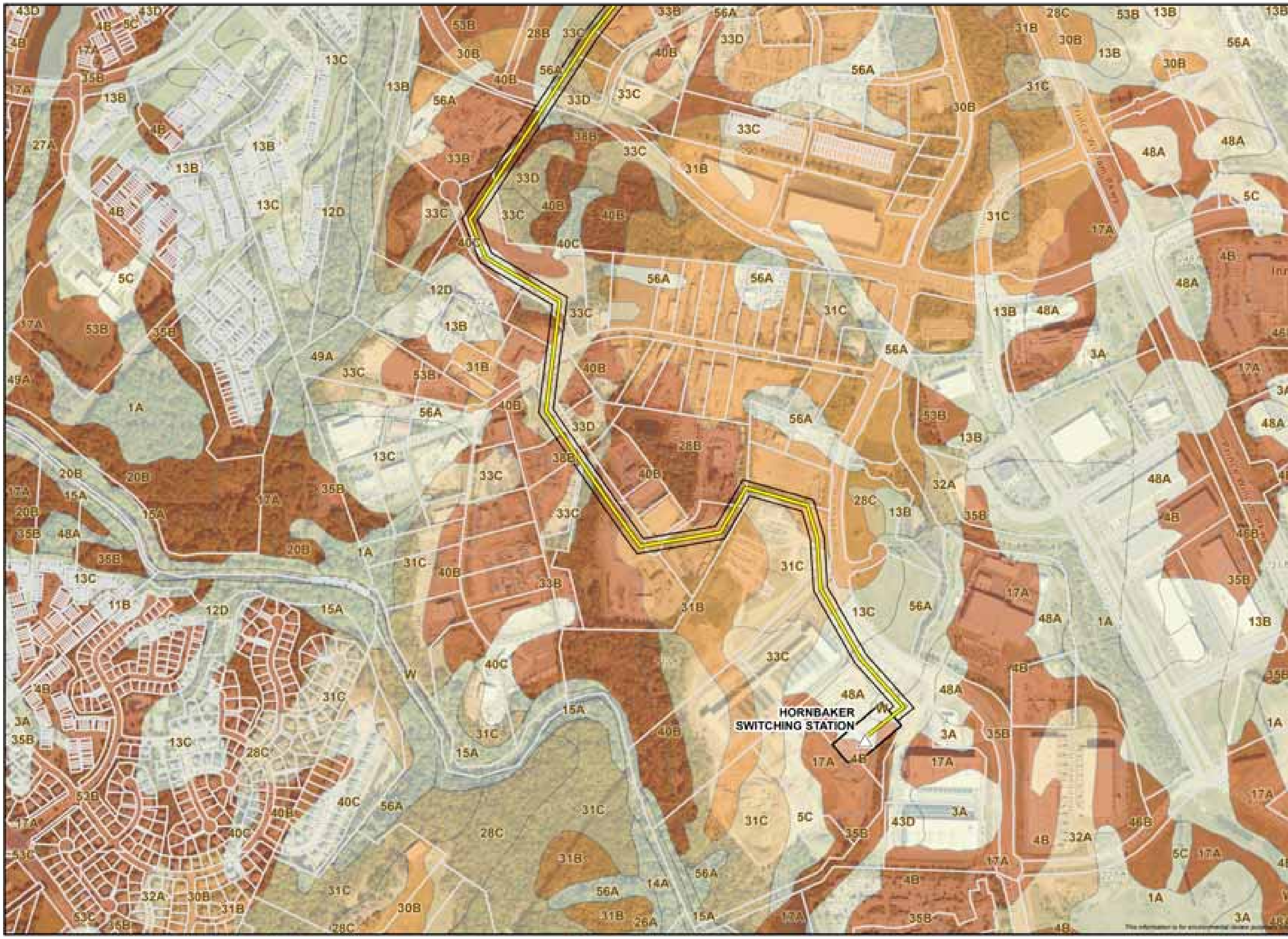
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION



Dominion Energy

Attachment III.A.1

Prime Farmland and Farmland of Statewide Importance
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
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- Proposed Switching Station
- Alternative Solution 1A (Overhead)
- Overhead Right-of-Way
- Proposed Hornbaker Switching Station Boundary
- Parcel Boundary

Farmland Class

- All areas are prime farmland
- Prime farmland if drained
- Farmland of statewide importance
- Not prime farmland

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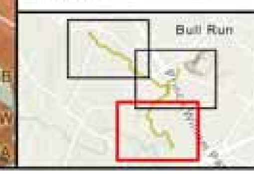

Dominion Energy

Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance Index
Hornbaker 230 kV Line Loop Project
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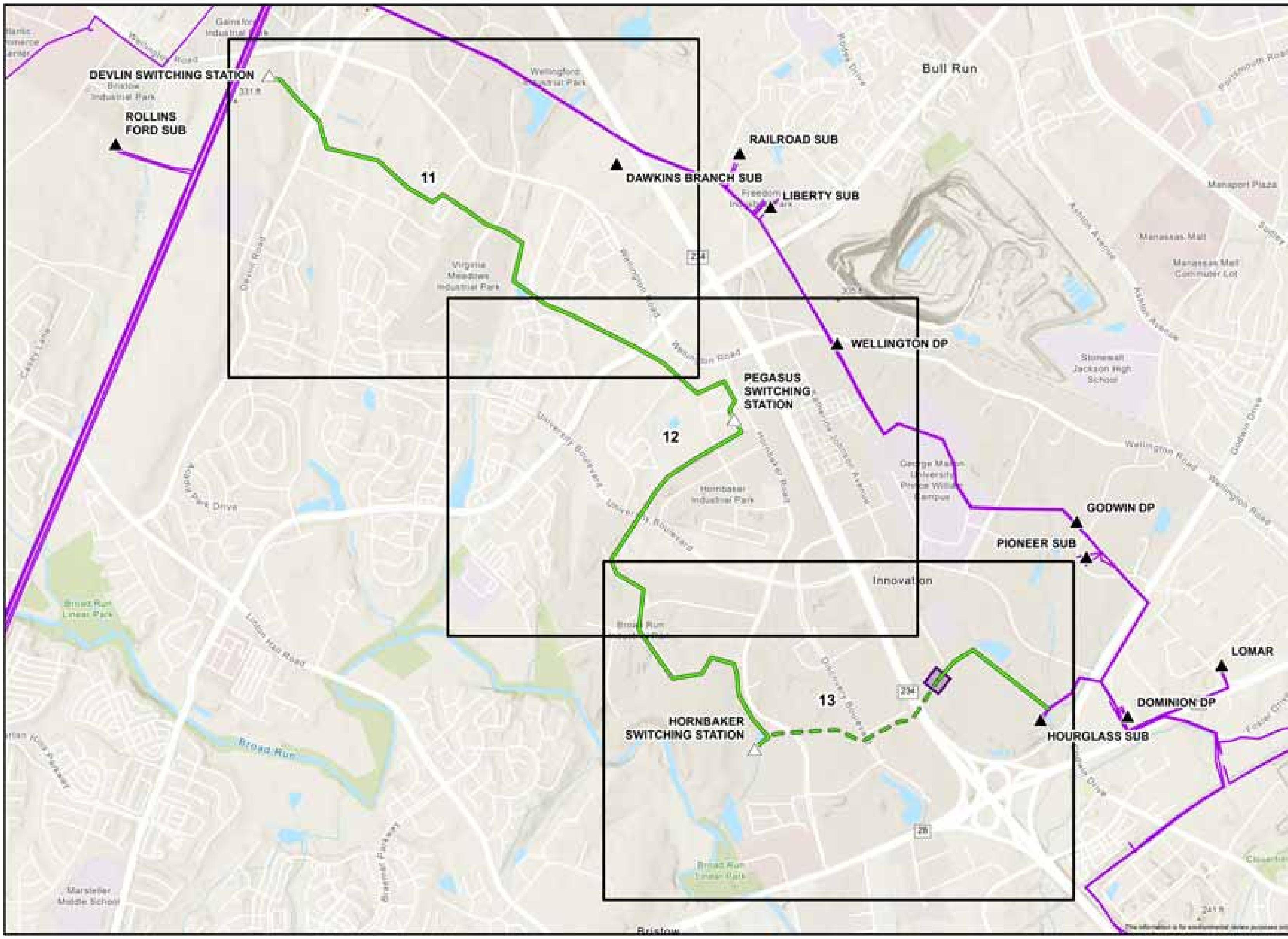

- ▲ Existing Substation
- △ Proposed Switching Station
- Existing Dominion Transmission Line
- Alternative Solution 2A (Overhead)
- Alternative Solution 2A (Underground)
- Proposed Transition Station
- Index Page

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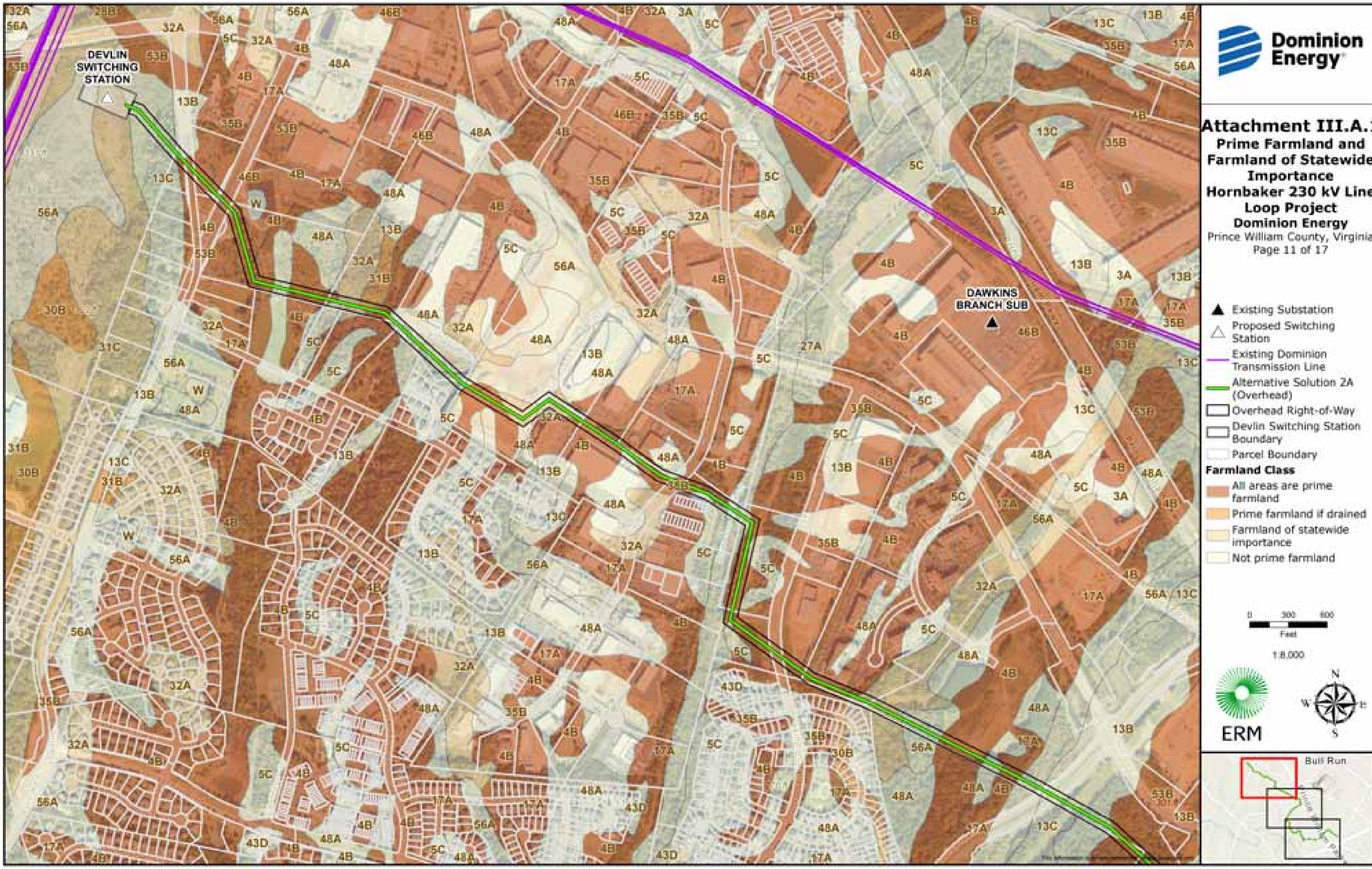
Dominion Energy
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Prime Farmland and Farmland of Statewide Importance
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Devlin Switching Station Boundary
Parcel Boundary
Farmland Class
All areas are prime farmland
Prime farmland if drained
Farmland of statewide importance
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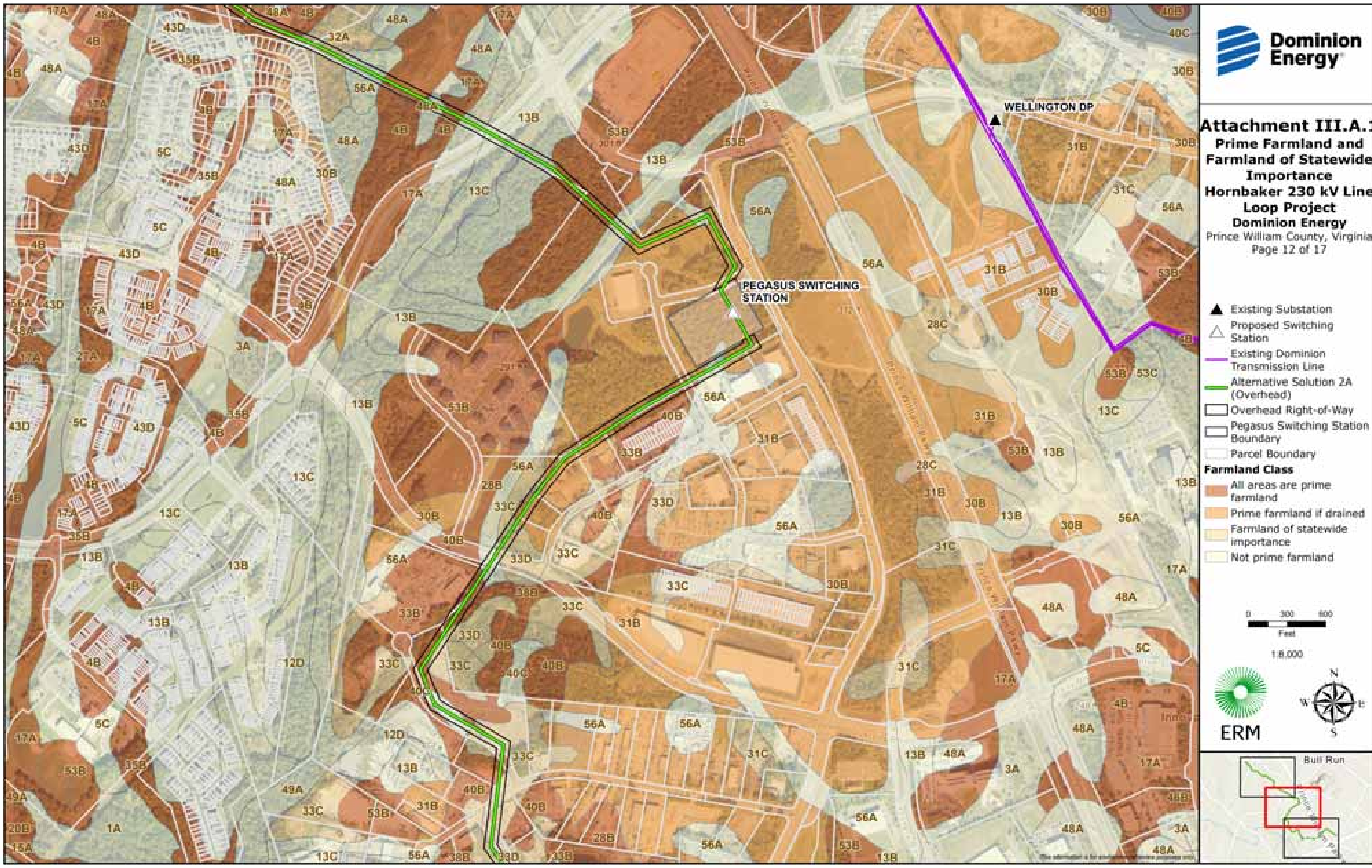
Bull Run
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB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Prime Farmland and Farmland of Statewide Importance
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Parcel Boundary
Farmland Class
All areas are prime farmland
Prime farmland if drained
Farmland of statewide importance
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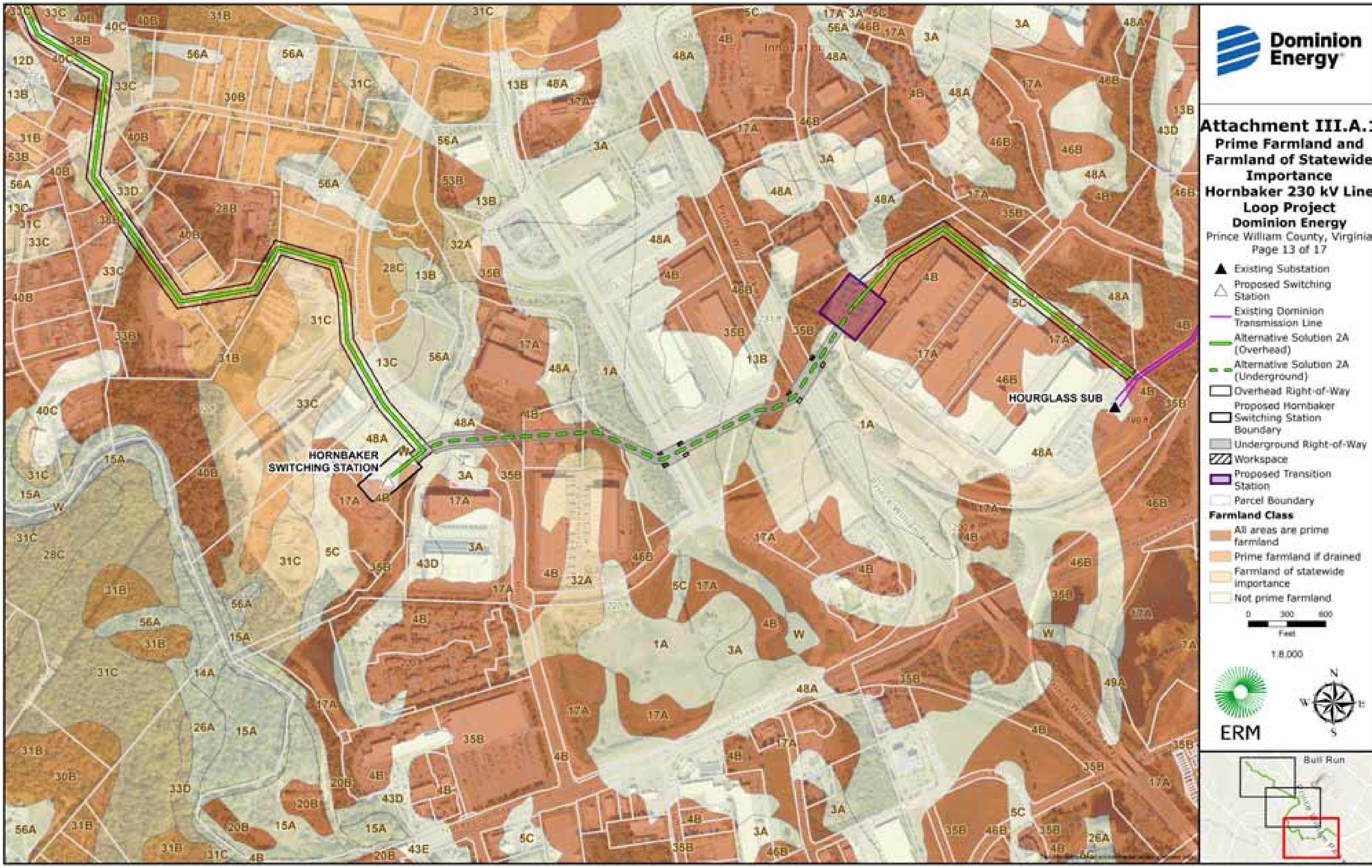
Bull Run
WELLINGTON DP
PEGASUS SWITCHING STATION



Dominion Energy
Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
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Underground Right-of-Way
Workspace
Proposed Transition Station
Parcel Boundary
Farmland Class
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Prime farmland if drained
Farmland of statewide importance
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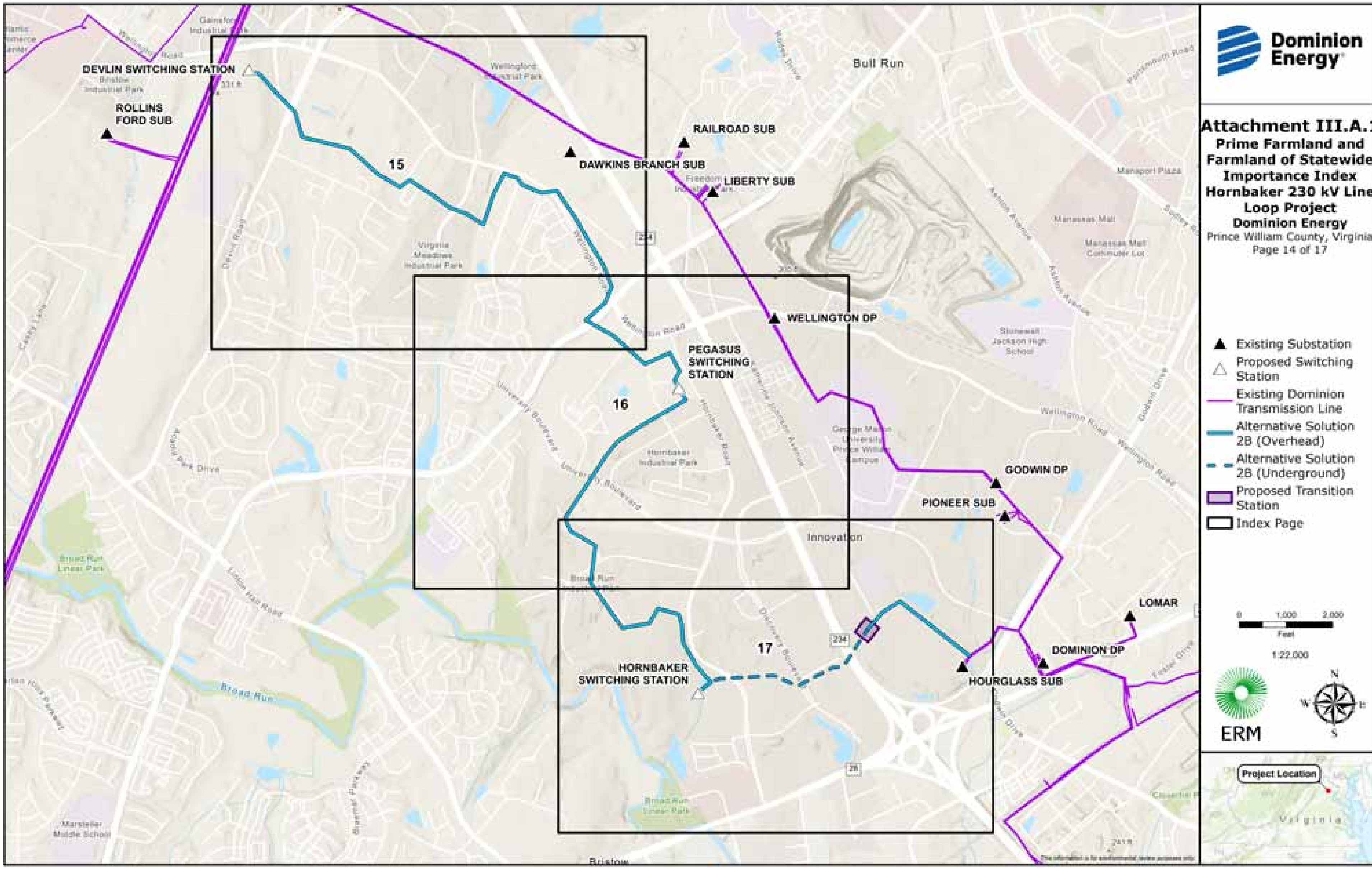
HOURGLASS SUB
HORNBAKER SWITCHING STATION
Bull Run



Dominion Energy
Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance Index
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Dominion Energy
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DEVLIN SWITCHING STATION
ROLLINS FORD SUB
RAILROAD SUB
DAWKINS BRANCH SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
LOMAR
DOMINION DP
HOURGLASS SUB
HORNBAKER SWITCHING STATION
15
16
17
Bull Run
Innovation
Bristow
Broad Run
Virginia Meadows Industrial Park
Hornbaker Industrial Park
Wellington Industrial Park
Stonewall Jackson High School
George Mason University Prince William Campus
Manassas Mall
Manassas Mall Commuter Lot
Manaport Plaza
Broad Run Linear Park
Marsteller Middle School
Wellington Road
Ashton Avenue
Godwin Drive
University Boulevard
Linton Hall Road
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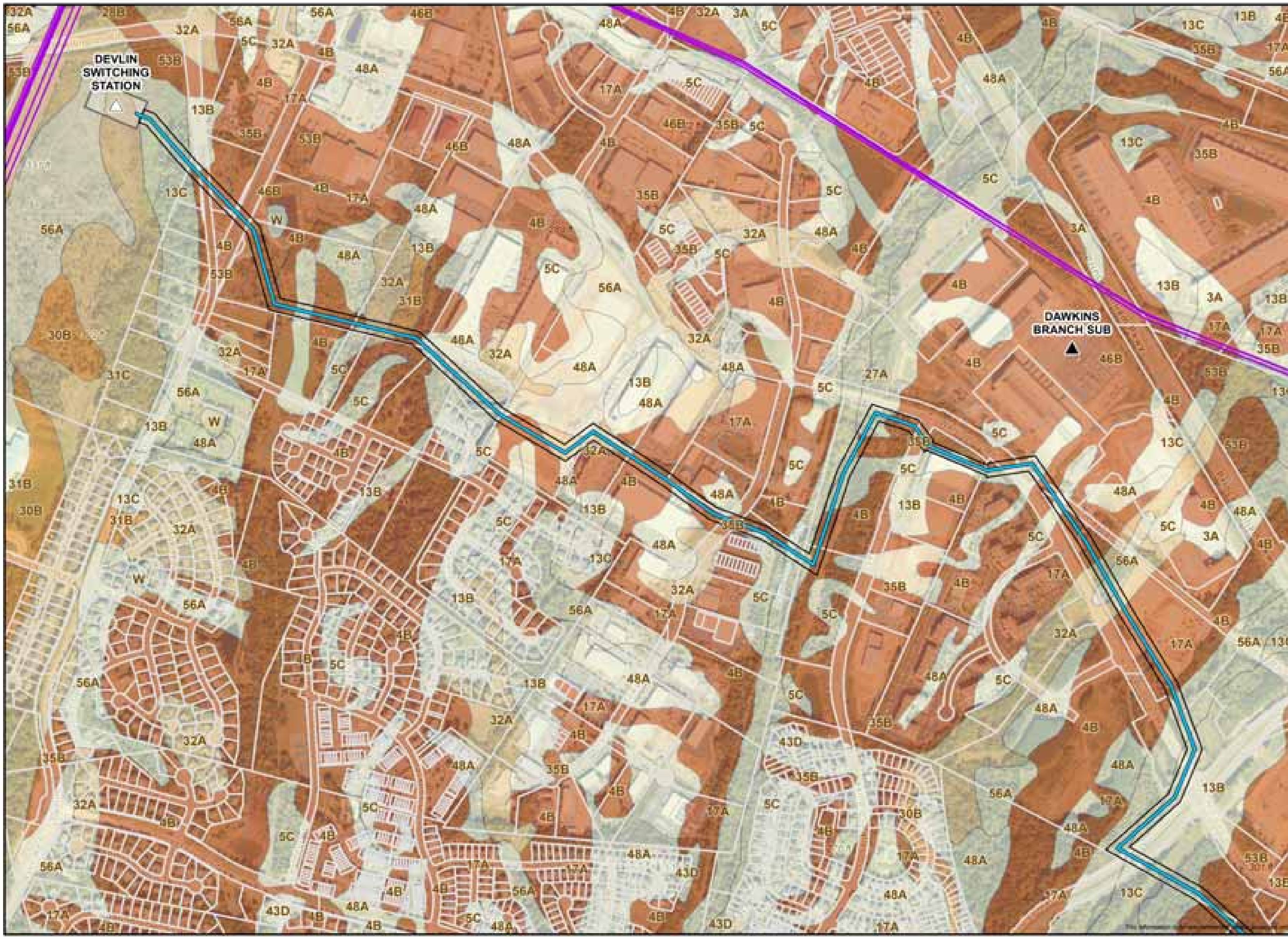
Devlin Road
Rodes Drive
Discovery Boulevard
Bremar Parkway
234
28



Dominion Energy

Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
Hornbaker 230 kV Line Loop Project
Dominion Energy

Prince William County, Virginia

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- Existing Substation
- Proposed Switching Station
- Existing Dominion Transmission Line
- Alternative Solution 2B (Overhead)
- Overhead Right-of-Way
- Devlin Switching Station Boundary
- Parcel Boundary

Farmland Class

- All areas are prime farmland
- Prime farmland if drained
- Farmland of statewide importance
- Not prime farmland

0 300 600
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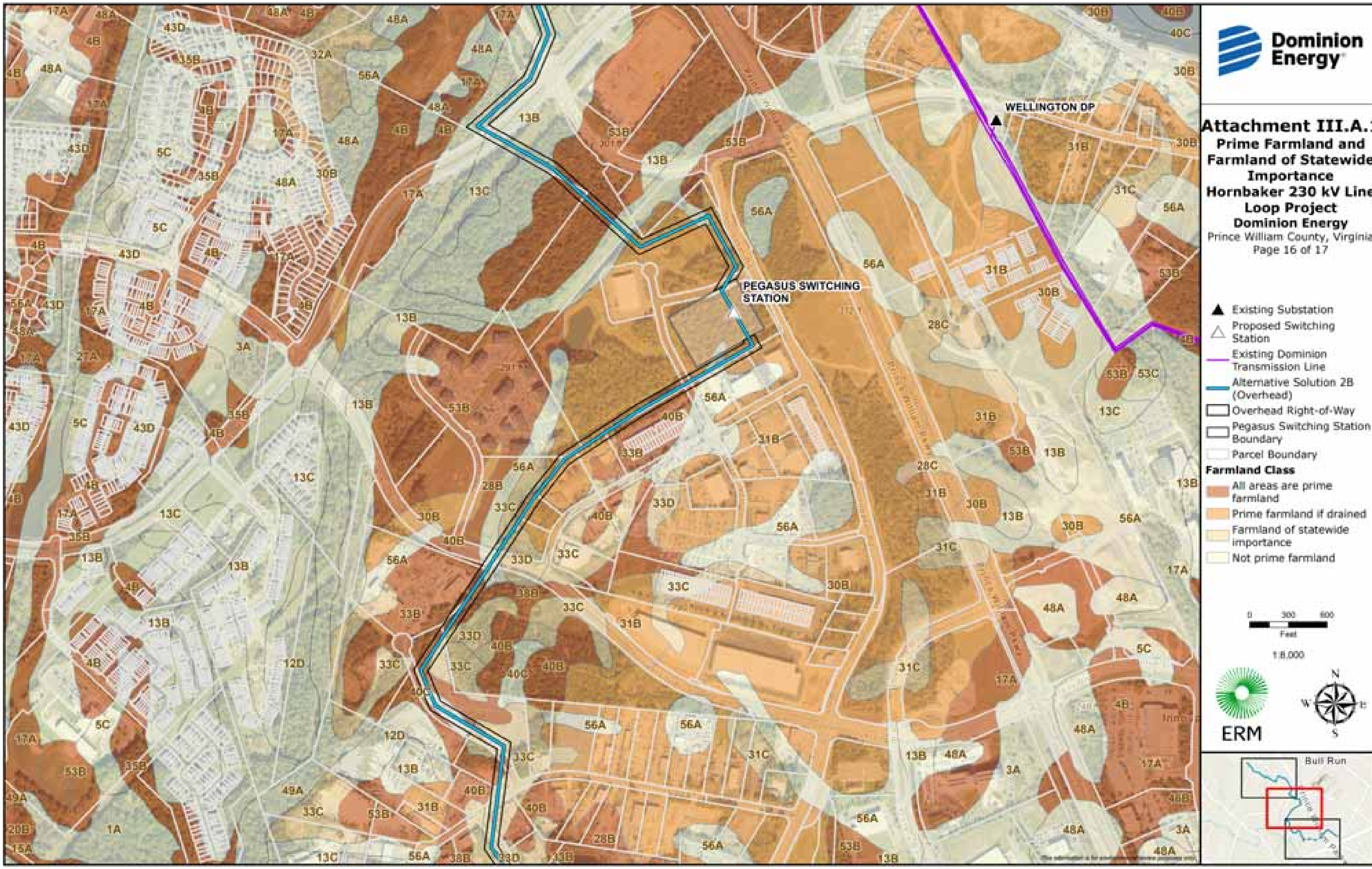
Bull Run


Dominion Energy
Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
Hornbaker 230 kV Line Loop Project
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Pegasus Switching Station Boundary
Parcel Boundary
Farmland Class
All areas are prime farmland
Prime farmland if drained
Farmland of statewide importance
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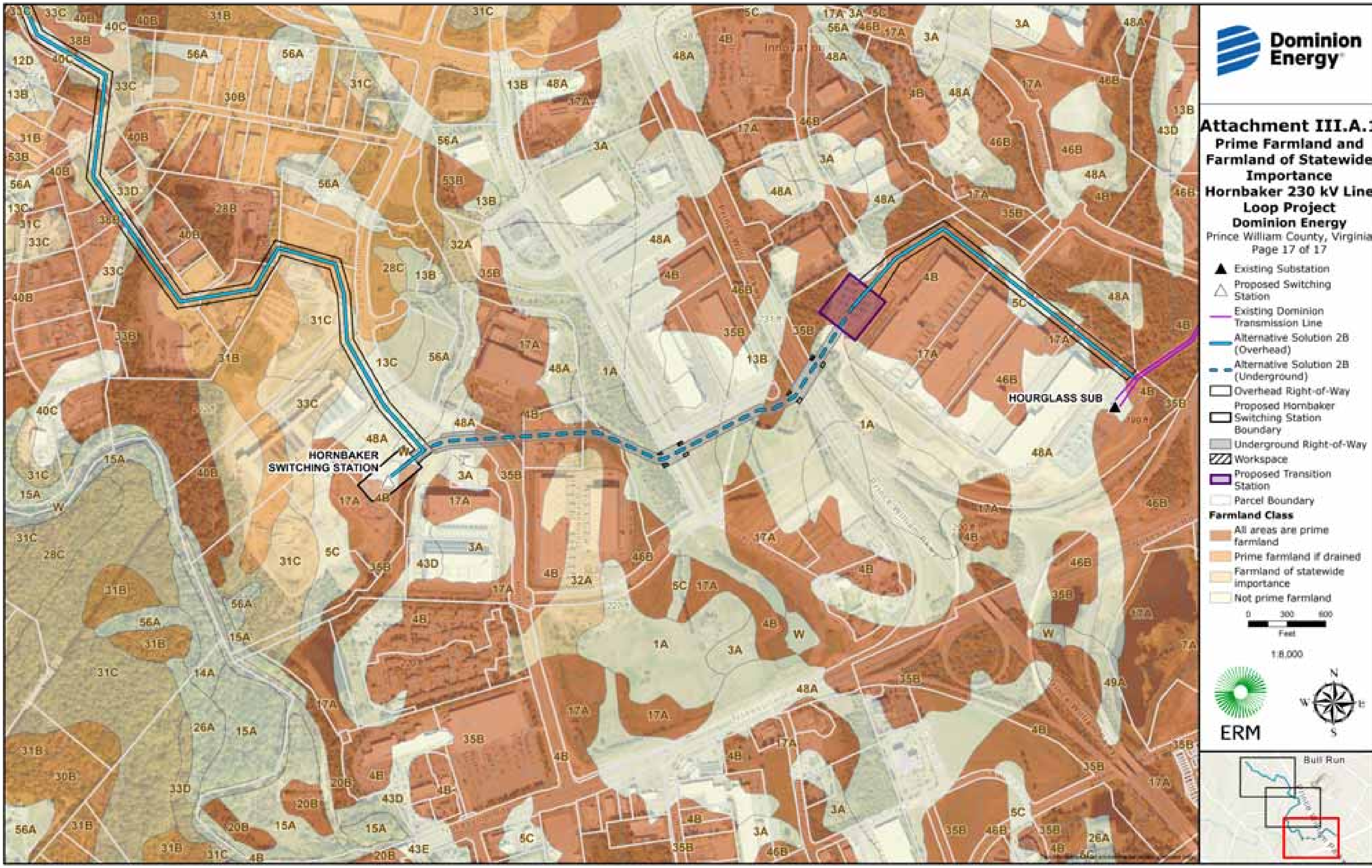
ERM
Bull Run
WELLINGTON DP
PEGASUS SWITCHING STATION


Dominion Energy
Attachment III.A.1
Prime Farmland and Farmland of Statewide Importance
Hornbaker 230 kV Line Loop Project
Dominion Energy
Prince William County, Virginia
Page 17 of 17
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Overhead Right-of-Way
Proposed Hornbaker Switching Station Boundary
Underground Right-of-Way
Workspace
Proposed Transition Station
Parcel Boundary
Farmland Class
All areas are prime farmland
Prime farmland if drained
Farmland of statewide importance
Not prime farmland
0 300 600
Feet
1:8,000
ERM
N
S
E
W
Bull Run
HORNBAKER SWITCHING STATION
HOURGLASS SUB

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

Since early 2023, the Project team has held dozens of meetings with community stakeholders and organizations to discuss the Project, obtain feedback, and review its progress. Stakeholders represented in these meetings include, but are not limited to, Prince William County elected officials and government staff, community leaders who volunteer to participate in Dominion Energy Virginia's Prince William Energy Engagement Group ("PWEEG"),[17] developers who own parcels of land along the routing options under evaluation, other property owners who have parcels already developed nearby evaluated routing options, and the general public. Given the lengthy duration of outreach for this Project, a condensed list of these stakeholder meetings is included as Attachment III.B.1.

In October 2024, the Company announced the proposed Project to the public with a postcard and launched an internet website dedicated to the proposed Project: www.dominionenergy.com/HornbakerDevlin. The website includes a description and benefits of the proposed Project, an explanation of need, route map, copies of letters mailed to the community, and information on the Commission review process.

The Company's October 2024 project announcement postcards were sent to 1,692 property owners and residents, within 1,000 feet of each edge of the Project's proposed routing right of way. The postcard included information about the need for the Project, an overview map, and an invitation to two public community meetings. In addition, the communication indicated that detailed materials would be posted to the dedicated Project website and how to contact the Project team to provide any feedback or questions. Templates of the postcards and map are included as Attachment III.B.2.

A newspaper print advertisement directing readers to the project website to learn more information and utilize the GeoVoice interactive mapping tool was placed in the Prince William Times, the Washington Post – Prince William Local Living, and

[17] The Prince William Energy Engagement Group, also known as the PWEEG, was formed by Dominion Energy Virginia to engage with community leaders who represent various constituencies across Prince William County. The intent is to present projects to members of the PWEEG and obtain feedback from them to identify transmission line routing considerations to bring refined routes to the broader public during community meetings/open houses. It is important to note that PWEEG members are volunteers and do not endorse project need, proposed transmission line routing/facility siting, or serve in any formal engineering capacity. Representative group interests which volunteer on the PWEEG include those with environmental, historical, real estate, business, local government, faith-based, environmental justice, and community engagement perspectives.

Inside Nova. It is included as Attachment III.B.3.

Additionally, from October 22, 2024, to October 30, 2024, the Company used paid digital and social media pre-event campaigns to drive awareness and educate the public regarding the Company's Project and the community meetings. From November 18, 2024, to November 25, 2024, the Company used paid digital and social media post-event campaigns to further ensure the public's awareness of the project and drive traffic to the project website. A copy of all of those digital advertisements are included as Attachment III.B.4. The event campaigns ran within Nextdoor, Facebook, and Instagram. All phases urged local residents to visit the www.dominionenergy.com/HornbakerDevlin website to learn more about the project. Campaign results, inclusive of both pre- and post-event advertising, include 920,400 Impressions Delivered, 1.73% Click Thru Rate, 15,968 Link Clicks and 77,676 ad engagements, including reactions, likes, comments, shares and saves.

Two community meetings were held on October 29, 2024, and October 30, 2024, and saw a combined total of 44 public attendees. At the community meetings, the Company made available details about the Project need, Project timing, and the Commission approval process. Traditional community meeting materials have been posted on the website for the proposed Project, including simulations of the proposed Project from key locations. The key location simulations are included as Attachment III.B.5.

Environmental Justice

As set forth in Section 5.5 of the Environmental Routing Study, the Company researched the demographics of the surrounding communities using data from the U.S. Census Bureau's American Community Survey 5-Year Estimates (2018-2022). This review revealed that twenty-seven Census Block Groups ("CBGs") are located within one mile of the Proposed and Alternative Solutions. A review of census data identified 23 CBGs, of the 27 CBGs, meet the Virginia Environmental Justice Act ("VEJA") thresholds for Environmental Justice Communities ("EJ Communities") (Va. Code §§ 2.2-234, 2.2-235). The Proposed and Alternative Solutions each contain environmental justice communities.

Seven CBGs are crossed by the Proposed and Alternative Solutions. The Proposed Solution is crossed by all seven CBGs. Of the seven CBGs, five contain environmental justice communities. Of the remaining two CBGs, one has no population and the other has 34 individuals of whom 88% are predominantly white.

As discussed above, the Company has engaged extensively all communities within the Project study area, including people in the identified EJ Community CGBs. 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 Solution 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 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 Attachments III.B.1 and III.B.2 for information regarding outreach. See Attachment III.B.6 for a copy of the Company's Environmental Justice Policy.

Hornbaker/Devlin Project - Stakeholder Meetings

- March 15, 2023 – Meeting with VDOT
  - Attendees - David Heironimus, Richard Burke, Bobby Shetley
- March 30, 2023 – Meeting with Manassas Regional Airport
  - Attendees - Juan Rivera, Richard Allabaugh
- April 20, 2023 – Meeting with George Mason University
  - Attendees - Ronald Carmichael, Franke Strike, Colby Grant
- April 21, 2023 – Meeting with City of Manassas
  - Matt Arcieri - Planning and Community Development Director
- May 1, 2023 – Meeting with PWC
  - Deputy County Executive Hugh Wade
  - David McGettigan from Planning
- May 25, 2023 – PWEEG
- June 26, 2023 – PWEEG
- July 14, 2023 – Meeting with Jeff Green (PWC ED)
- July 26, 2023 – PWEEG
- July 26, 2023 – Meeting with Planet Direct
  - Attendees - Ryan Gutman, Own Lawson
- August 1, 2023 – Open House
- August 4, 2023 – Meeting with Cloud HQ
  - Attendees - Brian O'Hara, Michael Lund, Robert Strachan, Chrystina Daniels, Andrew Tupper, Jeff Foster
- August 4, 2023 - Meeting with PWC Economic Development
  - Attendees - Wade Hugh, Christina Winn, Jeff Green, Tom Flynn, David McGettigan – PWC Planning
- August 8, 2023 – Innovation Park Owners Annual Meeting
- August 10, 2023 – Meeting with Peterson Companies
  - Attendees - Adam Cook
- August 17, 2023 – Meeting with Jeff Green (PWC ED)
- October 2, 2023 - PWEEG

- January 9, 2024 – Meeting with PWC
  - Attendees - Wade Hugh, Christina Winn
- February 26, 2024 - PWEEG
- February 27, 2024 – Meeting with PWC

  - Attendees - Wade Hugh, Christina Winn, Supervisor Gordy, Supervisor Weir
- March 22, 2024 – Meeting with STACK
  - Attendees – Steve Green, Cody Smith
- March 25, 2024 – Meeting with Supervisor Gordy
- March 25, 2024 - PWEEG
- April 4, 2024 – Meeting with NOVEC
- April 19, 2024 – Meeting with NOVEC
- May 7, 2024 – Meeting with Developer (Mortenson)
  - Attendees – Bob Solfelt, Mark Looney
- May 7 and 8, 2024 – Meeting with STACK
  - Attendees – Steve Green, Cody Smith
- May 9, 2024 – Meeting with Developer (TA Reality)
  - Attendees – David Buxbaum
- May 14, 2024 – Meeting with Developer (Amazon)
  - Attendees – Megan Baird, Mirabai Shamsabadi, La Guardia Myers
- May 15, 2024 – Meeting with Developer (Black Chamber Group)
  - Attendees – Michael Arm, David Falcone, Steve Grant
- May 15, 2024 – Meeting with Developer (SDC Capital Partners)
  - Attendees – Joe Livsey, David Fiedler, Ron Meyer
- May 16, 2024 – Meeting with STACK
  - Attendees – Steve Green, Cody Smith
- May 17, 2024 – Meeting with Developer (Iron Mountain)
  - Attendees – Joe Rogowicz, Kevin Walker, David Talley, JD Betty
- May 23, 2024 – Meeting with STACK
  - Attendees – Steve Green, Cody Smith
- June 4, 2024 – Meeting with STACK (on site)
  - Attendees – Steve Green, Cody Smith
- June 10, 2024 – Meeting with Supervisor Gordy
- June 10, 2024 - PWEEG
- June 27, 2024 – Meeting with Developer (Amazon)
  - Attendees – Megan Baird, Mirabai Shamsabadi, La Guardia Myers
- June 27, 2024 – Meeting with Developer (TA Reality)
  - Attendees – David Buxbaum
- July, 10, 2024 – Meeting with Manassas Regional Airport

  - Attendees - Juan Rivera, Richard Allabaugh
- July 10, 2024 – Meeting with Developer (Iron Mountain)
  - Attendees – Joe Rogowicz, Kevin Walker, David Talley, JD Betty
- July 10, 2024 – Meeting with Developer (Black Chamber Group)
  - Attendees – Michael Arm, David Falcone, Steve Grant
- July 30, 2024 – Meeting with VDOT
  - Attendees – Mark Comer, Richard Burke, David Heironimus, Bob Shetley
- August 22, 2024 – Meeting with Developer (TA Reality)
  - Attendees – David Buxbaum
- September 10, 2024 – Meeting with VDOT
  - Attendees – Mark Comer, Richard Burke, David Heironimus, Bob Shetley
- September 10, 2024 – Meeting with Supervisor Gordy and JK Holdings
  - Attendees – Supervisor Gordy, Chuck Kuhn, John Cox, Steve Kuhn, Clayton Tock
- September 11, 2024 – Meeting with Developer (JK Holdings)
  - Attendees – Chuck Kuhn, John Cox, Steve Kuhn, Clayton Tock
- September 12, 2024 – Meeting with Developer (Microsoft)
  - Attendees – Vincent Walton, Elizabeth Sobecke, Joleen Dimaggio
- September 16, 2024 - PWEEG
- September 23, 2024 – Meeting with PWC
  - Attendees - Wade Hugh, Christina Winn, Tanya Washington, Mandi Spina
- October 15, 2024 – Meeting with Developer (JK Holdings)
  - Attendees – Chuck Kuhn, John Cox, Steve Kuhn, Clayton Tock
- October 16, 2024 – Meeting with Developer (TA Reality)
  - Attendees – David Buxbaum
- October 17, 2024 – Meeting with Developer (Microsoft)
  - Attendees – Vincent Walton, Elizabeth Sobecke, Joleen Dimaggio
- October 23, 2024 – Meeting with STACK
  - Attendees – Steve Green, Cody Smith
- October 29 and 30, 2024 – Open Houses
- October 30, 2024 – Meeting with Developer (JK Holdings)
  - Attendees – Chuck Kuhn, John Cox, Steve Kuhn, Clayton Tock
- December 13, 2024 – Meeting with Developer (JK Holdings)
  - Attendees – Chuck Kuhn, John Cox, Steve Kuhn, Clayton Tock

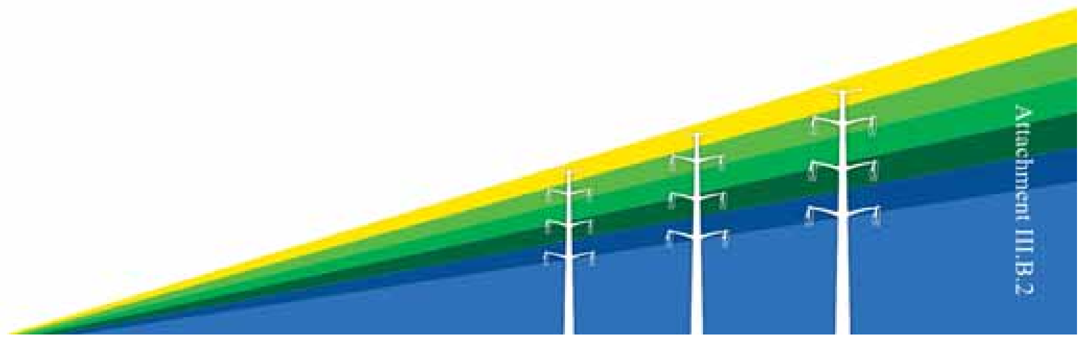
Dominion Energy image. Not project specific.

Dominion Energy

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

Learn more about a new transmission line project in Prince William County, Virginia.

SCAN HERE TO LEARN MORE



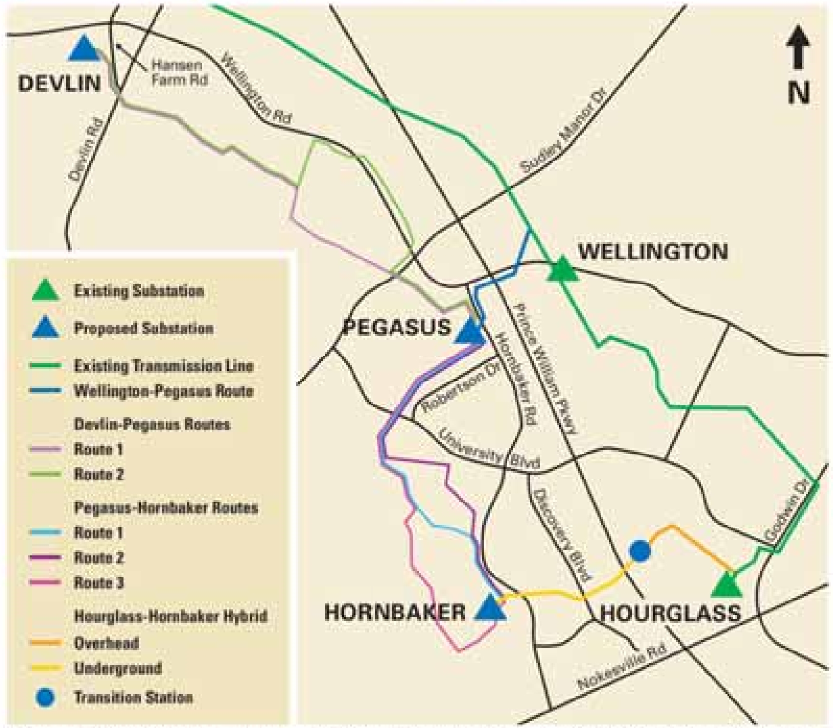
Join us at our Community Meeting

Hornbaker & Devlin Area 230 kV Electric Transmission Project

At Dominion Energy, we are committed to providing the reliable, affordable, and increasingly clean energy that powers our customers every day. To support data center growth and increased reliability in the Prince William County Innovation Park and southern Data Center Opportunity Zone Overlay District, we are planning the Hornbaker & Devlin Area 230 kV Electric Transmission Project. The project includes building new 230 kV transmission lines. This includes: a) tying in near the intersection of Wellington Road and Hansen Farm Road and running to an area northwest of the intersection of Hornbaker Road and Robertson Drive; b) routing from the Hornbaker Road and Robertson Drive area to the proposed Hornbaker substation, located west of Hornbaker Road, north of the intersection with Discovery Boulevard; and c) either a tie-in near the existing Wellington Substation to a future substation northwest of the intersection of Hornbaker Road and Robertson Drive OR a tie-in near the existing Hourglass Substation to the proposed Hornbaker substation.

SCAN HERE TO LEARN MORE

We are currently developing route options and are seeking your input to help shape the final proposal before we submit it to the Virginia State Corporation Commission (SCC) in 2025. Our team is committed to listening to your feedback and incorporating community perspective. We encourage you to attend the upcoming community meeting to provide input on the initial transmission line routing options.



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

MEETING DETAILS

Community Open House

Tuesday, October 29
at Beacon Hall Conference Center,
10900 University Blvd, Manassas

Wednesday, October 30
at Gainesville High School,
13510 University Blvd, Gainesville

5:00 pm – 7:00 pm

Potential routes | Save the date | Infrastructure upgrades

CONTACT US

Website: DominionEnergy.com/HornbakerDevlin
Email: powerline@dominionenergy.com
Phone: 888-291-0190

Attachment III.B.2


We're working to meet Prince William County and Virginia's growing energy needs.
Stay informed and share your insights on an upcoming electric transmission project in Prince William County. Visit our website and use our interactive map tool, GeoVoice.
Learn more at **DominionEnergy.com/HornbakerDevlin**
Use your phone's camera or QR reader app to visit the project page directly.
Dominion Energy
Powering Your Every Day.
Dominion Energy

Dominion Energy Electric Transmission Contact:
Steve Precker, stephen.s.precker@dominionenergy.com

Dominion Energy
Electric Transmission

Hornbaker Project

Pre-Event Display
English

charles ryan associates

Dominion Energy
Electric Transmission

Hornbaker Project

Pre-Event Display
Spanish

charles ryan associates

Dominion Energy
Electric Transmission

Hornbaker Project

Post-Event Display
English

charles ryan associates

Dominion Energy
Electric Transmission

Hornbaker Project

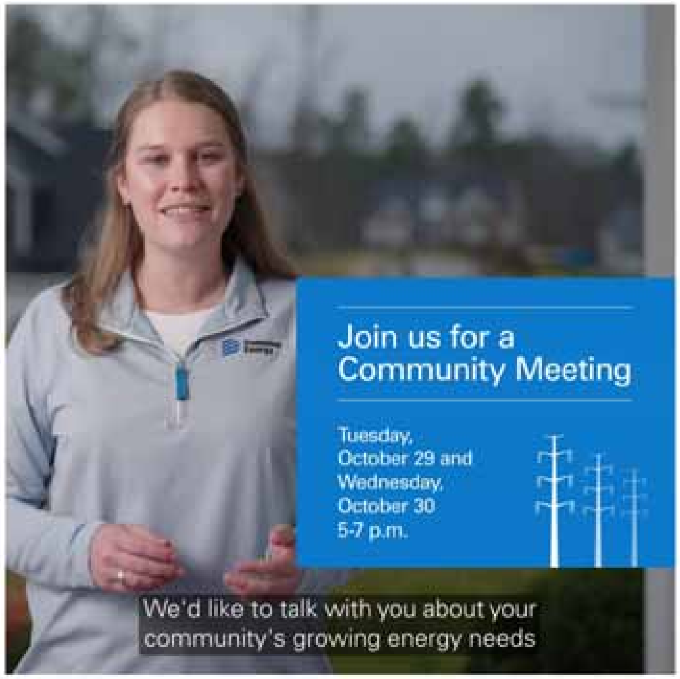
Post-Event Display
Spanish

Dominion Energy Electric Transmission

Hornbaker Project

Event Video

Pre-Event Video English (Click to Play)



Pre-Event Video Spanish (Click to Play)

Dominion Energy
Electric Transmission

Hornbaker Project

Event Video

Post-Event A Video English (Click to Play)

Post-Event A Video Spanish (Click to Play)

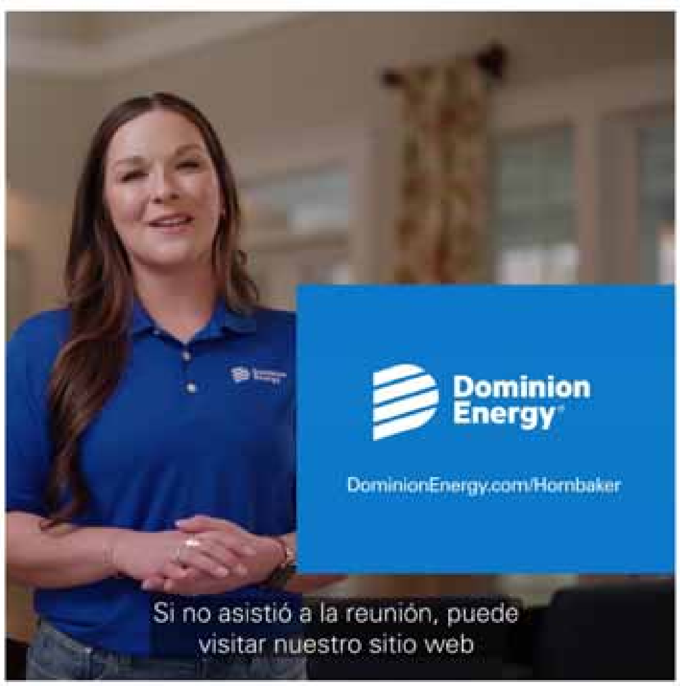
Dominion Energy
Electric Transmission

Hornbaker Project

Event Video

Post-Event B Video English (Click to Play)

Post-Event B Video Spanish (Click to Play)



Dominion Energy Electric Transmission

Hornbaker Project

Nextdoor and Responsive Social

Pre-Event Nextdoor 1200x628

Responsive 1200x627

Responsive 1200x1200

charles ryan associates

Dominion Energy Electric Transmission

Hornbaker Project

Nextdoor and Responsive Social

Post-Event Nextdoor 1200x628

Post-Event Responsive 1200x627

Post-Event Responsive 1200x1200

charles ryan associates

Dominion Energy Electric Transmission

Hornbaker Project

Post-Event Print Ad

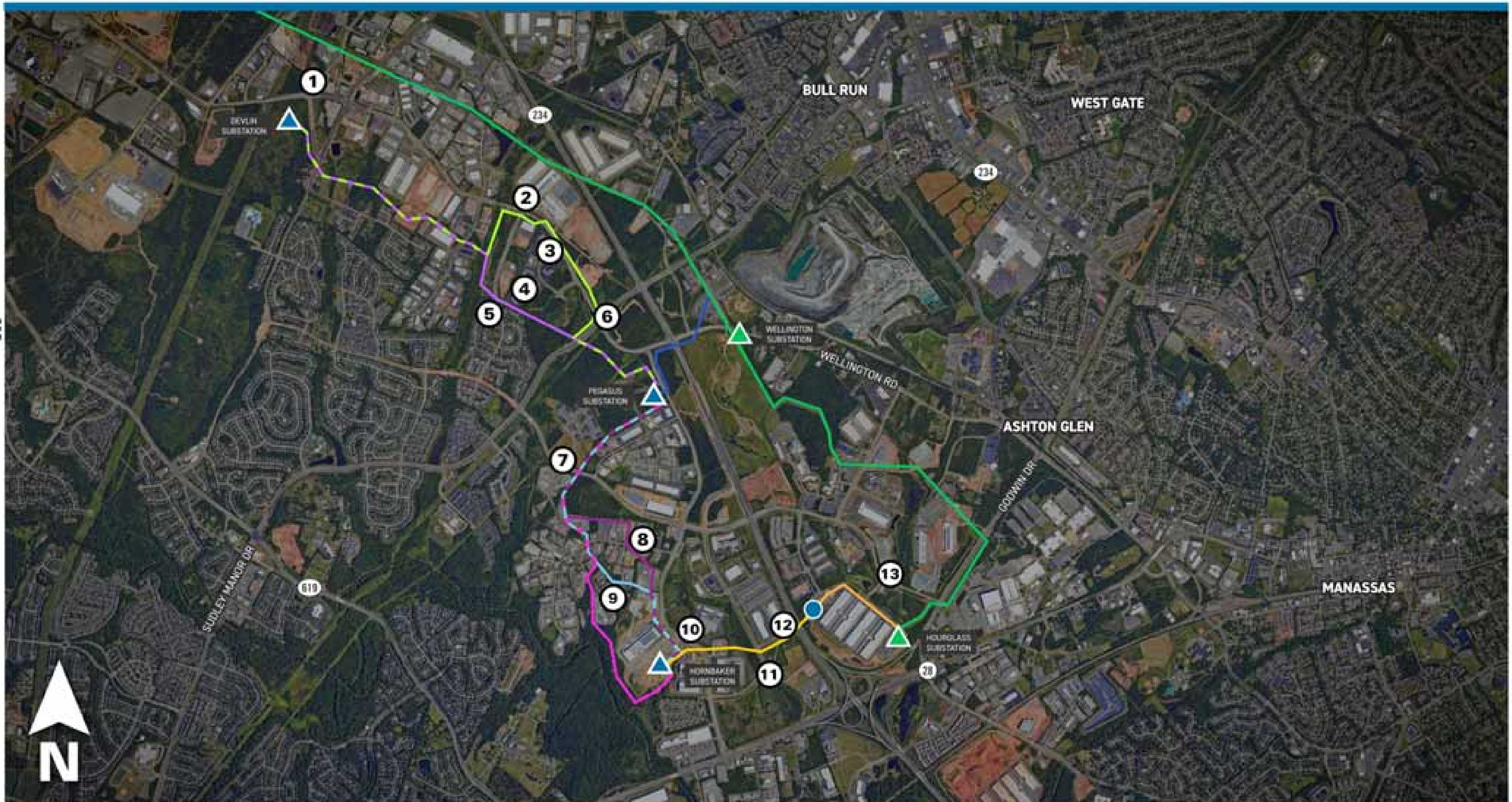
HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

PHOTO LOCATION MAP

- ① Viewpoint Location
- Existing Transmission Line
- Existing Substation
- Proposed Substation
- Wellington-Pegasus Route
- Pegasus-Hornbaker Route 1
- Pegasus-Hornbaker Route 2
- Pegasus-Hornbaker Route 3
- Devlin-Pegasus Route 1
- Devlin-Pegasus Route 2
- Hourglass-Hornbaker Overhead
- Hourglass-Hornbaker Underground
- Transition Station

Dominion Energy®



HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 1

Date: 08/21/2024 **Time:** 6:52 am **Viewing Direction:** South

- ① Viewpoint Location
- Existing Transmission Line
- Devlin-Pegasus Route 1
- Devlin-Pegasus Route 2
- ▲ Proposed Devlin Substation

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EXISTING CONDITIONS

PROPOSED CONDITIONS

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

HORNBAKER & DEVLIN AREA

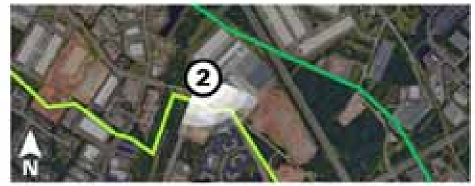
230 kV Electric Transmission Project

Viewpoint 2

Date: 08/21/2024 **Time:** 11:10 am **Viewing Direction:** Southeast

② Viewpoint Location — Existing Transmission Line

— Devlin-Pegasus Route 2



Dominion Energy

EXISTING CONDITIONS

PROPOSED CONDITIONS

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HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

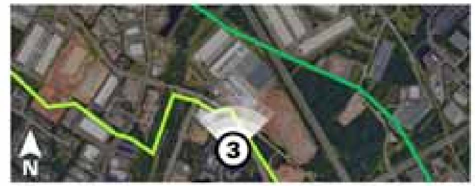
Viewpoint 3

Date: 08/21/2024 **Time:** 11:20 am **Viewing Direction:** North

③ Viewpoint Location

Existing Transmission Line

Devlin-Pegasus Route 2



Dominion Energy

EXISTING CONDITIONS

PROPOSED CONDITIONS

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HORNBAKER & DEVLIN AREA

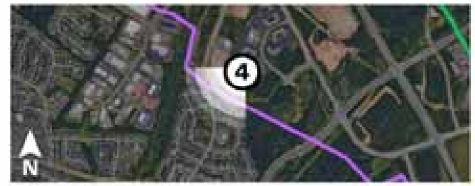
230 kV Electric Transmission Project

Viewpoint 4

Date: 08/21/2024 **Time:** 11:28 am **Viewing Direction:** Southwest

④ Viewpoint Location — Existing Transmission Line

— Devlin-Pegasus Route 1



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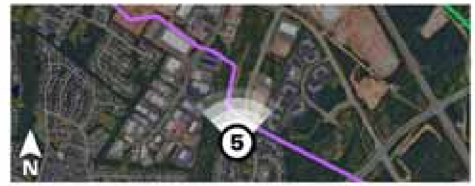
HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 5: Route 1

Date: 08/21/2024 **Time:** 11:45 am **Viewing Direction:** North

- Viewpoint Location
- Devlin-Pegasus Route 1
- Existing Transmission Line



Dominion Energy

EXISTING CONDITIONS

PROPOSED CONDITIONS

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HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 5: Route 2

Date: 08/21/2024 **Time:** 11:45 am **Viewing Direction:** North

- Viewpoint Location
- Devlin-Pegasus Route 2
- Existing Transmission Line

Dominion Energy

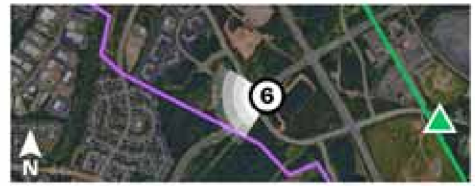
HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 6: Route 1

Date: 08/21/2024 **Time:** 7:39 am **Viewing Direction:** West

- Viewpoint Location
- Devlin-Pegasus Route 1
- Existing Transmission Line
- Existing Wellington Substation



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EXISTING CONDITIONS

PROPOSED CONDITIONS

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HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 6: Route 2

Date: 08/21/2024 **Time:** 7:39 am **Viewing Direction:** West

- Viewpoint Location
- Devlin-Pegasus Route 2
- Existing Transmission Line
- Existing Wellington Substation

EXISTING CONDITIONS

PROPOSED CONDITIONS

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HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 7

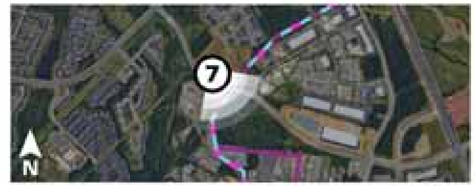
Date: 08/21/2024 **Time:** 12:21 pm **Viewing Direction:** Southeast

Viewpoint Location

Pegasus-Hornbaker Route 1

Pegasus-Hornbaker Route 2

Pegasus-Hornbaker Route 3



HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 8

Date: 08/21/2024 **Time:** 12:52 pm **Viewing Direction:** Southwest

⑧ Viewpoint Location — Pegasus-Hornbaker Route 2

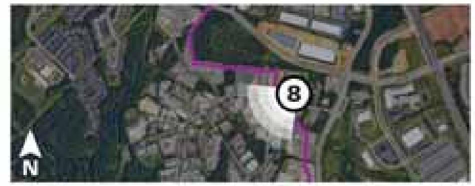


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Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 9

Date: 08/21/2024 **Time:** 1:41 pm **Viewing Direction:** Southwest

Viewpoint Location

Proposed Hornbaker Substation

Pegasus-Hornbaker Route 3

Dominion Energy

EXISTING CONDITIONS

PROPOSED CONDITIONS

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

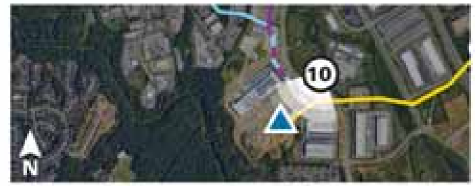
HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 10: Route 1 & 2

Date: 08/21/2024 **Time:** 3:13 pm **Viewing Direction:** South

- Viewpoint Location
- Pegasus-Hornbaker Route 1
- Proposed Hornbaker Substation
- Pegasus-Hornbaker Route 2
- Hourglass-Hornbaker Underground



Dominion Energy

EXISTING CONDITIONS

PROPOSED CONDITIONS

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 10: Route 3

Date: 08/21/2024 **Time:** 3:13 pm **Viewing Direction:** South

- Viewpoint Location
- Pegasus-Hornbaker Route 3
- Hourglass-Hornbaker Underground
- Proposed Hornbaker Substation

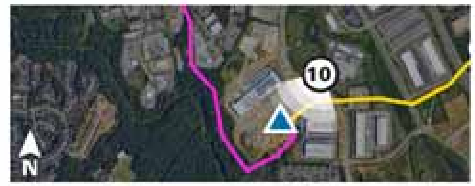


Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 11

Date: 08/21/2024 **Time:** 2:34 pm **Viewing Direction:** North

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 12

Date: 08/21/2024 **Time:** 2:27 pm **Viewing Direction:** Northeast

- Viewpoint Location
- Existing Transmission Line
- Hourglass-Hornbaker Overhead
- Transition Station
- Existing Hourglass Substation
- Hourglass-Hornbaker Underground

Dominion Energy®

EXISTING CONDITIONS

PROPOSED CONDITIONS

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

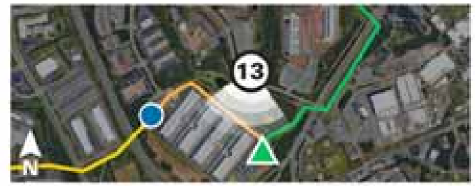
HORNBAKER & DEVLIN AREA

230 kV Electric Transmission Project

Viewpoint 13

Date: 08/21/2024 **Time:** 8:11 am **Viewing Direction:** South

- Viewpoint Location
- Existing Transmission Line
- Hourglass-Hornbaker Overhead
- Transition Station
- Existing Hourglass Substation
- Hourglass-Hornbaker Underground



Dominion Energy

EXISTING CONDITIONS

PROPOSED CONDITIONS

Photo simulations are for discussion purposes only. Final design is subject to change pending public, engineering, and regulatory review.

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: No buildings would have to be demolished or relocated to construct the proposed Project along the Proposed or Alternative Solutions.

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: Portions of the Proposed and Alternative Solutions of the Project parallel existing physical facilities, as identified in the table below.

Exiting Facility Feature (Mi)	Proposed Solution 1B	Alternative Solution 1A	Alternative Solution 2A	Alternative Solution 2B
Existing electric transmission right-of-way	0.0	0.0	0.0	0.0
Roadway	1.5	1.0	0.7	1.4

The Proposed Solution 1B parallels Wellington Road, Hornbaker Road, Industrial Court, and Hawkins Drive for a collective total of 1.5 miles.

Alternative Solution 1A parallels Wellington Road, Hornbaker Road, Industrial Court, and Hawkins Drive for a collective total of 1.0 mile.

Alternative Solution 2A parallels Challenger Court, Wellington Road, Hornbaker Road, Industrial Court, and Hawkins Drive for a collective total of 0.7 mile.

Alternative Solution 2B parallels Challenger Court, Wellington Road, Hornbaker Road, Industrial Court, and Hawkins Drive for a collective total of 1.4 miles.

Both Wellington Road and Hornbaker Road are divided roads that are paved with grassy shoulders and ditches. Industrial Court, Hawkins Drive, and Challenger Court are paved roads with grassy shoulders and ditches.

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: Section 15.2-2223 of the Code of Virginia details the requirement for every territory in the Commonwealth to develop and implement a comprehensive plan. It is upon the local planning commissions to adopt a comprehensive plan for its jurisdiction that provides guidance for physical development that considers existing and future land uses, anticipates development trends, and makes recommendations for guiding long-term planning-based decisions. A review of the comprehensive plan is required, at a minimum of every five years, to ensure continuity with current community goals and rate of development.

Prince William County has an adopted a comprehensive plan and zoning ordinance within its jurisdiction. The Prince William County Comprehensive Plan (the "Comprehensive Plan") was adopted in 2017 with a major update approved by Board of County Supervisors on December 12, 2022. The City of Manassas also has adopted a zoning ordinance and comprehensive plan. The Manassas 2040 Comprehensive Plan was adopted by the Manassas City Council on February 24, 2020. These documents were reviewed to evaluate the potential effect the Proposed and Alternative Solutions could have on future development.

The 2022 updates to the Electrical Utility Services Plan within the Prince William County Comprehensive Plan provide guidance on siting and design of new infrastructure and acknowledges the growing need for electrical facilities to support ongoing and future development in areas with limited available land. Planned land use in the study area is predominately industrial and mixed-use development. The Comprehensive Plan identifies activity centers as areas predicted to provide supplemental future growth and help achieve the goals outlined in the Comprehensive Plan.

Prince William County's Data Center Opportunity Zone ("DCOZ") Overlay District occurs within the Project area. Approved unanimously in May 2016 by the Prince William County Board of County Supervisors, the DCOZ Overlay District was established to locate future data center development near available utility infrastructure. Substantially all—92% (4.9 miles)—of Proposed Solution 1B is located within the DCOZ.

Dominion Energy Virginia obtained information on planned developments through publicly available data on county websites and consultations with county planning officials and other stakeholders, including Prince William County Economic Development staff, the City of Manassas, VDOT, George Mason University, NOVEC, and various developers along the routes to discuss the Project and determine if there were any constraints present that would conflict with existing or proposed land uses.

Due to the developed nature of the Project area, the Proposed and Alternative Solutions cross a number of existing and planned developments; however, to the extent practicable based on available information, the solutions have been routed to minimize impacts to the developments. Existing developments and, depending on when they are built, planned developments crossed by the Project could experience temporary impacts such as noise, dust, and traffic during the construction period, as well as visual impacts during operations. The Company will coordinate with property owners and agencies as needed to address impacts from construction activities and typical Project operations.

There may be minor impacts on easements and buffering requirements. The Company will coordinate with the property owners on vegetation that can be planted within the operational right-of-way of the transmission line. No permanent impacts on existing or planned developments are anticipated to occur. See sections 5.1.3 and 5.1.5 of the Environmental Routing Study for additional information on existing and planned developments.

ERM reviewed the Transportation Plan section of the Comprehensive Plan, the Prince William County Department of Transportation Current Mobility Projects website and webmap, and the VDOT Northern Virginia District project website, for upcoming and active transportation projects to determine the impact of the Proposed and Alternative Solutions on future road projects. There are multiple VDOT road projects within the study area that are crossed by or near the Proposed and Alternative Solutions, including the Prince William Parkway Expansion, University Boulevard Interchange Project, Sudley Manor Drive Interchange project, and the Wellington Road Expansion project. See Section 5.1.9 of the Environmental Routing Study for details on these projects and any potential impacts due to the crossings by the Proposed and Alternative Solutions.

Dominion Energy Virginia will continue to coordinate with Prince William County and VDOT to mitigate impacts on planned road projects and temporary impacts on roads (*i.e.*, access limitations, closures, and increased traffic) during Project construction. The Company would minimize impacts on road projects by installing transmission structures for the Proposed or Alternative Solutions outside of existing and planned road rights-of-way. None of the solutions cross any existing or planned railroads.

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) Through consultation with Prince William County, the Company has determined that no land within the study area is designated as important farmlands.

(2) Not applicable.

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

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

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

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

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

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

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

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

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

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

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

10. **Any state scenic river;**

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

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

Response: 1. No National Register-listed properties are within one mile of Proposed Solution 1B or Alternative Solution 1A. One NRHP listed property, Cannon Branch Fort (155-5020), is located within the one-mile study tier of Alternative Solution 2A and 2B (Hourglass – Hornbaker Route 1 (Hybrid)). The site is located south of Nokesville Road. Due to the segments of Alternative Solutions 2A and 2B being underground in this area, as well as existing residential and commercial buildings, intervening vegetation, and the distance from Alternative Solutions 2A and 2B, there would be no visibility of the Project infrastructure from the resource.

2. The known listed, eligible, or potentially eligible for listing on the NRHP sites that are crossed or adjacent to the Proposed and Alternative Solutions for the Project are summarized in the table below. The Second Battle of Manassas (076-5190) transects all solutions. Proposed structures for all solutions would be highly visible from certain vantage points. The new transmission lines would add additional, obstructive modern infrastructure to the viewshed. The setting of the resource, however, has already been compromised by existing transmission lines, in addition to modern development which has altered the landscape. Although the resource has already been altered, all solutions would add more modern elements within the boundaries of the resource's southern portion. Thus, ERM recommends that there would be a Moderate Impact on this resource for all solutions.

Solution	Historic Property	Description	NRHP Status
Crossed by the Proposed Solution (pertaining to the Wellington – Pegasus Route 1 and Devlin – Pegasus Route 2 components)	076-5190	Second Battle of Manassas	Potentially Eligible (battlefield)
Crossed by Alternative Solution 1A (pertaining to the Wellington – Pegasus Route 1 and Devlin – Pegasus Route 1 components)			
Crossed by Alternative Solution 2A (pertaining to the Hourglass – Hornbaker Route 1 and Devlin – Pegasus Route 1 components)			
Crossed by Alternative Solution 2B (pertaining to the Hourglass – Hornbaker Route 1 and Devlin – Pegasus Route 2 components)			

3. None.

4. Known archaeological sites crossed by the right-of-way for the Proposed and Alternative Solutions are summarized in the table below. Of the five resources located within the rights-of-way of the Proposed and Alternative Solutions, all five are unevaluated. None of the previously recorded archaeological sites are cemeteries. One is a lithic scatter, two are trash scatters, and two are lithic workshops.

Route Alternative	Site Number	Description	NRHP Status
Alternative Solution 2A and 2B (Hourglass – Hornbaker Route 1 (Hybrid))	44PW1208	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), Lithic workshop	Unevaluated
Proposed Solution 1B and Alternative 2B (Devlin – Pegasus Route 2 component)	44PW1454	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), Lithic scatter, 19th Century: 2nd half (1850 - 1899), 20th Century (1900 - 1999), Trash scatter	Unevaluated
	44PW1455	20th Century (1900 - 1999); Trash scatter	Unevaluated
	44PW1456	19th Century (1800 - 1899), 20th Century (1900 - 1999), Trash scatter	Unevaluated
Proposed Solution 1B and Alternative Solutions 1A, 2A, and 2B (Pegasus – Hornbaker Route 1 component)	44PW1221	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), Lithic workshop	Unevaluated

5. None.

6. None.

7. None.

8. None.

9. A permanent conservation area was identified near the intersection of Industrial Road and Industrial Court. The property title (GPIN 7595-59-7124) includes a "permanent conservation area" granted in December 2020 for the northern and southern extents of the parcel by a deed of easement and vacation (recorded as Instrument No. 202012090118633 and Instrument No. 202012090118634). This easement prohibits the development or use of the permanent conservation area without specific authorization from the Prince William County Department of Public Works. Pegasus – Hornbaker Route 1 (a component of all Proposed and Alternative Solutions) would be adjacent (at MP 0.9) to the permanent conservation area near the intersection of Industrial Road and Industrial Court (described above) but does not cross it. No other conservation easements are within 0.25 mile of any of the Proposed and Alternative Solutions.

10. None.

11. County-owned lands in the study area include several undeveloped parcels owned by the Prince William County Board of Supervisors and is concentrated near the intersections of University Boulevard/Discovery Boulevard and Prince William Parkway. Proposed Solution 1B and Alternative Solution 1A would

each cross nine county-owned parcels, and Alternative Solutions 2A and 2B would each cross 11 county-owned parcels. All solutions will cross two county-owned parcels containing the road right-of-way of Mike Garcia Drive, west of Hornbaker Road near the proposed Pegasus Switching Station, four county-owned parcels associated with the Hansen Farm Road and Balls Ford Road rights-of-way near the future Devlin Switching Station, and one parcel associated with the Zelkovia Drive right-of-way, located west of Hornbaker Road near the proposed Pegasus Switching Station.

Proposed Solution 1B and Alternative Solution 1A will also both cross a county-owned parcel associated with a proposed road right-of-way on the south side of Wellington Road, east of Prince William Parkway and a second crossing of the county-owned parcel associated with the Zelkovia Drive right-of-way.

Alternative Solutions 2A and 2B will both also cross a county-owned parcel associated with the Innovation Drive right-of-way (via overhead transmission line) and three parcels west of Prince William Parkway, on both sides of Discovery Boulevard (via underground transmission line).

12. There are multiple existing and planned recreational facilities within or adjacent to the Proposed and Alternative Solutions. The table below summarizes these facilities. See Section 5.1.6 of the Environmental Routing Study for detailed crossing locations.

Recreational Resource	Recreational Type and Description	Status	Approximate Distance to Project Facilities*
Dawkins Branch Trail Linear Park	Planned 1.6-mile multi-surface trail from Wellington Road to just south of Sudley Manor Drive, terminating near Victory Elementary School	Planned	• Crossed by all Solutions (D-P1 and D-P2)
Devlin Road shared use path	A 1.1-mile mixed-use asphalt trail along Devlin Road south of Wellington Road to University Boulevard	Active	• Crossed by all Solutions (D-P1 and D-P2)
Hornbaker Road shared use path	Planned 2.1-mile asphalt mixed-use trail along Hornbaker Road from Wellington Road to Rt. 28. A portion of the path south of Discovery Boulevard is complete	Active, Planned	• Adjacent to all Solutions (WP, PH) • Crossed by Alternative Solutions 2A and 2B (HH)
Industrial Road paved shoulder	Paved shoulder for on-road cycling and other recreational use along 0.6 mile of Industrial Road, west of Hornbaker Road and east of Pump Station Way	Planned	• Crossed by all Solutions (PH)

Recreational Resource	Recreational Type and Description	Status	Approximate Distance to Project Facilities*
Innovation Park Recreational Trail	Planned multi-surface trail network associated with the Innovation Park development (see Section 5.1.5) south of University Boulevard, west of Discovery Boulevard, and north of Rt. 28	Planned	• Crossed by all Solutions (PH and HH)
Prince William Parkway shared use path	Planned mixed-use trail on the eastern side of Prince William Parkway from Balls Ford Road to 0.5 mile south of University Boulevard	Planned	• Crossed by Proposed Solution 1B and Alternative Solution 1A (WP)
Sudley Manor Drive shared use path	4.4-mile mixed-use trail along Sudley Manor Drive from Chatsworth Drive to Vint Hill Road	Active	• Crossed by all Solutions (D-P1 and D-P2)
University Boulevard shared use path	1.0-mile mixed-use path along University Boulevard between Sudley Manor Drive and Hornbaker Road	Active	• Crossed by all Solutions (PH)
Wellington Road shared use path	Planned asphalt mixed-use path along Wellington Road, including 3.1 miles through the study area	Planned	• Adjacent to Proposed Solution 1B and Alternative Solution 1A (WP) • Crossed by all Solutions (D-P2 twice)

* D-P1 = Devlin – Pegasus Route 1; D-P2 = Devlin – Pegasus Route 2; HH = Hourglass – Hornbaker Route 1 (Hybrid); MP = milepost; PH = Pegasus – Hornbaker Route 1; WP = Wellington – Pegasus Route 1

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[18] to identify airports/heliports within 10 nautical miles of the proposed Project. Based on this review, the following FAA-restricted airports are located within 10.0 nautical miles ("nm") of the Project:

Airport Name	Approximate Distance and Direction from Proposed Project (nautical miles (approx.))	Use
Building 250 Heliport	o 0.8 nm northeast of HH (MP 0.1)	Private
LM Building 110 Heliport	o 0.9 nm northeast of HH (MP 0.1)	Private
Manassas Regional Airport (Harry P Davis Field)	o 1.1 nm south of HH (MP 0.9) o 1.3 nm south of PH (MP 1.8) and Hornbaker Switching Station o 2.3 nm south of WP (MP 0.6) o 2.3 nm south of D-P1 (MP 2.4) and DP2 (MP 2.8)	Public
UVA Health/ Prince William Medical Center Heliport	o 1.7 nm northeast of HH (MP 0.0)	Private
Rychlk Heliport	o 3.2 nm southeast of D-P1 (MP 0.3)	Private
Skyview Airport	o 4.8 nm southwest of PH (MP 1.2)	Private
Breeden Airport	o 8.3 nm south of PH (MP 1.8) and Hornbaker Switching Station	Private
Maples Field Airport	o 8.4 nm south of PH (MP 1.8) and Hornbaker Switching Station	Private
Fairfax County Police Heliport	o 8.9 nm northeast of WP (MP 0.0)	Private
Stonesprings Heliport	o 9.6 nm north of D-P1 (MP 0.0)	Private
Glascock Heliport	o 9.8 nm north of D-P1 (MP 0.0)	Private

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

Airport Name	Approximate Distance and Direction from Proposed Project (nautical miles (approx.))	Use
Inova Fair Oaks Hospital Heliport	○ 9.9 nm northeast of WP (MP 0.0)	Private

D-P1 = Devlin – Pegasus Route 1; D-P2 = Devlin – Pegasus Route 2; FAA = Federal Aviation Administration; HH = Hourglass – Hornbaker Route 1 (Hybrid); ID = identification; MP = milepost; NA = not applicable; nm = nautical mile; PH = Pegasus – Hornbaker Route 1; WP = Wellington – Pegasus Route 1.

[a] Includes only overhead transmission route alternatives.

ERM reviewed the height limitations associated with FAA-defined imaginary surveys for all runways associated with the Manassas Regional Airport to determine whether any of the towers planned to be installed for the Project would penetrate any of the relevant runway flight surfaces. Due to the Project area being at a higher ground elevation than the Manassas Regional Airport, the Company and ERM identified early in the process that multiple structures associated with the route alternatives would likely penetrate the various imaginary surfaces (approach surface, horizontal surface and conical surface). The Company and ERM met with representatives from Manassas Regional Airport in July 2024 to discuss the Project. During the discussion, airport representatives recommended the Company coordinate structure locations and heights with the FAA, as the FAA is solely responsible for conducting obstruction analysis and determining if airport flight surface would require alteration due to the proposed Project. The Company then prepared and submitted a Form 7460-1 (notice of proposed construction or alteration) with the FAA, based on the structure locations and heights known at the time. C-2 Surveys were not conducted prior to the filing with the FAA.

Based on the determination letters received from the FAA, several structures along the routes were anticipated to penetrate imaginary surfaces and Terminal Instrument Procedures ("TERPs") surfaces. The most restrictive TERPs surface is a horizontal plane located 200 feet above the established airport elevation and extends out 3.0 nautical miles from the established reference point at the airport. This surface is located at 392.2 Above Mean Sea Level (AMSL) and extends out to a point just south of the intersection of Wellington Road and Sudley Manor Drive. It is anticipated that all structures located within this surface would be constructed at or below this height. Due to the penetration of other imaginary surfaces referenced above, it is likely that some of the structures for the Project will require lighting and marker balls to receive a no effect to air navigation determination from the FAA. The Company will continue to coordinate with the FAA on required structure heights and lighting/marking requirements as the Project progresses to final engineering.

Since the FAA manages air traffic in the United States, it will evaluate any physical objects that may affect the safety of aeronautical operations through an obstruction evaluation. Dominion Energy Virginia will re-submit an FAA Form 7460-1 Notice pursuant to 14 CFR Part 77 for any tower locations that meet the review criteria.

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 the Project study area. Perpendicular road crossings, which are preferred by VDOT and Prince William County, will be utilized at other road crossings where possible to mitigate impacts. Due to existing development in the Project area, perpendicular crossings are not feasible in all road crossing locations.

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

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

Response: The Company solicited feedback from Prince William County regarding the proposed Project. Below is a list of coordination that has occurred with municipal, state, and federal agencies:

- Coordination with the U.S. Army Corps of Engineers, DEQ, VMRC, and VDOT will take place as appropriate to obtain necessary approvals for the Project.

- A letter dated January 13, 2025, was submitted to Prince William County to describe the Project and request comments. See Section V.D.

- A Stage I Pre-Application Analysis has been prepared and was submitted to VDHR on March 13, 2025. See Attachment 2.I.1 to the DEQ Supplement.

- In December 2024, the Company solicited comments via letter from several federally recognized Native American tribes, including:

Name	Tribe
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
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
Assistant Chief	Rappahannock Tribe
Chief W. Frank Adams	Upper Mattaponi Indian Tribe
Leigh Mitchell	Upper Mattaponi Indian Tribe

Name	Tribe
Kathy Harris	Haliwa-Saponi Indian Tribe
Dr. Ogletree Richardson	Haliwa-Saponi Indian Tribe
Jonathan Caudill, Jr.	Meherrin Indian Tribe
Dante Desiderio	Sappony
Otis K. Martin	Sappony
Vickie Jeffries	Occaneechi Band of the Saponi Nation
W.A. "Tony" Hayes	Occaneechi Band of the Saponi Nation

A copy of the letter template and map is included as Attachment III.J.1.

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

Dominion Energy Virginia
Electric Transmission
P.O. Box 26666, Richmond, VA 23261
DominionEnergy.com

Dominion Energy

December 6, 2024

Electric Transmission Needs in Prince William County – Hornbaker and Devlin Area 230 kV Transmission Project

Dear [redacted],

At Dominion Energy, we are dedicated to maintaining reliable and secure electric service in the communities we serve. As a valued stakeholder with a vested interest in the community, we invite your continued participation in the development of an upcoming electric transmission project in Prince William County, Virginia.

In July 2023, we wrote to you about the Hornbaker 230 kilovolt (kV) transmission line and switching station project. Prince William County continues to diversify its economic prospects with the data center industry across the county. Since our original communication, the project scope has expanded to include transmission line routing from the Wellington Road, Hansen Farm Road, and Devlin Road area as well. In total, we are required to construct two new double-circuit 230 kV transmission lines, each with an estimated 100-foot right of way, to support load growth and switching stations driven by data center development in the area. To support this, we are currently evaluating:

- Transmission line routing near the intersection of Wellington Road and Hansen Farm Road and running to an area northwest of the intersection of Hornbaker Road and Robertson Drive;
- Routing from the Hornbaker Road and Robertson Drive area to the proposed Hornbaker Substation, located west of Hornbaker Road, north of the intersection with Discovery Boulevard; and,
- Either a tie-in near the existing Wellington Substation to a future substation northwest of the intersection of Hornbaker Road and Robertson Drive OR a tie-in near the existing Hourglass Substation to the proposed Hornbaker Substation.

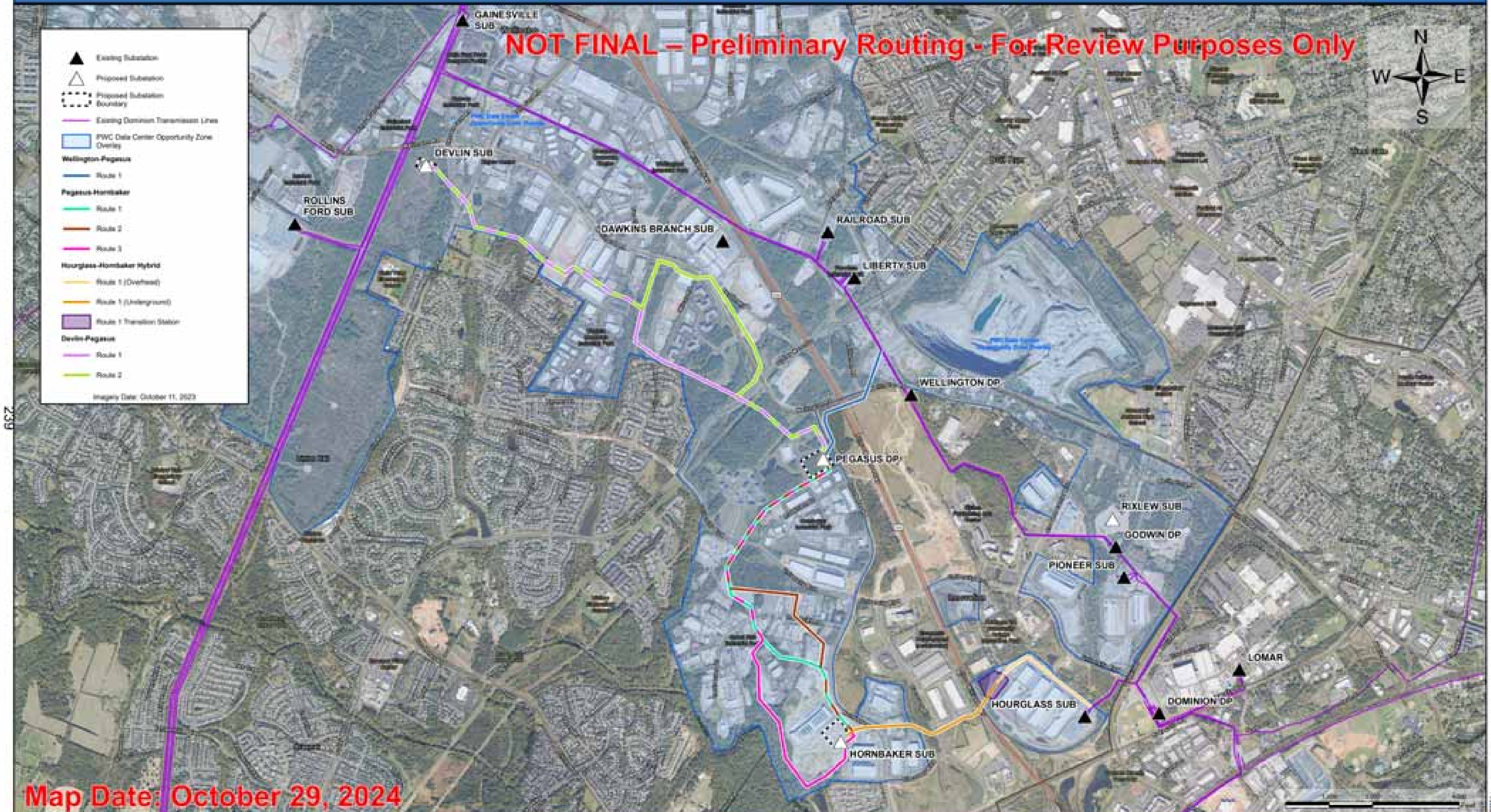
Please refer to the enclosed transmission line routing map which showcases the options we are considering. We are currently in the conceptual phase and are seeking input prior to submitting an application with the Virginia State Corporation Commission (SCC) in the first quarter of 2025. Doing so allows us to hear any concerns you may have as we work to meet the project's needs. Enclosed is a project overview map to help in your review. You may also follow project updates and progress, view visual simulations, and other maps online at www.dominionenergy.com/hornbakerdevlin. Please feel free to notify other relevant organizations that may have an interest in the project area.

If you would like to meet to discuss, we are happy to do so and of course, if you have any initial questions, please do not hesitate to contact us by contacting Ken Custalow, Tribal Relations Manager at ken.custalow@dominionenergy.com or Stephen Precker, Electric Transmission Communications Manager at Stephen.S.Precker@dominionenergy.com.
Sincerely,

Stephen Precker
Manager, Electric Transmission Communications
The Electric Transmission Project Team

[Enclosure: Project Overview Map]

Project Routes – Overview



Hornbaker & Devlin Area 230 kV Electric Transmission Project

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

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

Response: In December 2024 the Company solicited comments via letter from the community leaders, environmental groups, and business groups identified below. A copy of the letter template is included as Attachment III.K.1.

Name	Organization
Ms. Elizabeth S. Kostelny	Preservation Virginia
Mr. Steven Williams	Colonial National Historical Park
Ms. Eleanor Breen	Council of Virginia Archaeologists
Ms. Leighton Powell	Scenic Virginia
Ms. Elaine Chang	National Trust for Historic Preservation
Mr. John McCarthy	Piedmont Environmental Council
Mr. Thomas Gilmore	American Battlefield Trust
Mr. Jim Campi	American Battlefield Trust
Mr. Max Hokit	American Battlefield Trust
Ms. Julie Bolthouse	Piedmont Environmental Council
Mr. Alexander Macaulay	Attorney, Macaulay and Jamerson
Dr. Cassandra Newby-Alexander	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 and Associates, LLC

Dominion Energy Virginia
Electric Transmission
P.O. Box 26666, Richmond, VA 23261
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Dominion Energy

December 6, 2024

Electric Transmission Needs in Prince William County – Hornbaker and Devlin Area 230 kV Transmission Project

Dear [redacted]

At Dominion Energy, we are dedicated to maintaining reliable and secure electric service in the communities we serve. As a valued stakeholder with a vested interest in the community, we invite your continued participation in the development of an upcoming electric transmission project in Prince William County, Virginia.

In July 2023, we wrote to you about the Hornbaker 230 kilovolt (kV) transmission line and switching station project. Prince William County continues to diversify its economic prospects with the data center industry across the county. Since our original communication, the project scope has expanded to include transmission line routing from the Wellington Road, Hansen Farm Road, and Devlin Road area as well. In total, we are required to construct two new double-circuit 230 kV transmission lines, each with an estimated 100-foot right of way, to support load growth and switching stations driven by data center development in the area. To support this, we are currently evaluating:

- Transmission line routing near the intersection of Wellington Road and Hansen Farm Road and running to an area northwest of the intersection of Hornbaker Road and Robertson Drive;
- Routing from the Hornbaker Road and Robertson Drive area to the proposed Hornbaker Substation, located west of Hornbaker Road, north of the intersection with Discovery Boulevard; and,
- Either a tie-in near the existing Wellington Substation to a future substation northwest of the intersection of Hornbaker Road and Robertson Drive OR a tie-in near the existing Hourglass Substation to the proposed Hornbaker Substation.

Please refer to the enclosed transmission line routing map which showcases the options we are considering. We are currently in the conceptual phase and are seeking input prior to submitting an application with the Virginia State Corporation Commission (SCC) in the first quarter of 2025. Doing so allows us to hear any concerns you may have as we work to meet the project's needs. Enclosed is a project overview map to help in your review. You may also follow project updates and progress, view visual simulations, and other maps online at www.dominionenergy.com/hornbakerdevlin. Please feel free to notify other relevant organizations that may have an interest in the project area.

If you would like to meet to discuss, we are happy to do so and of course, if you have any initial questions, please do not hesitate to contact us by contacting Stephen Precker, Communications Consultant at Stephen.S.Precker@dominionenergy.com.

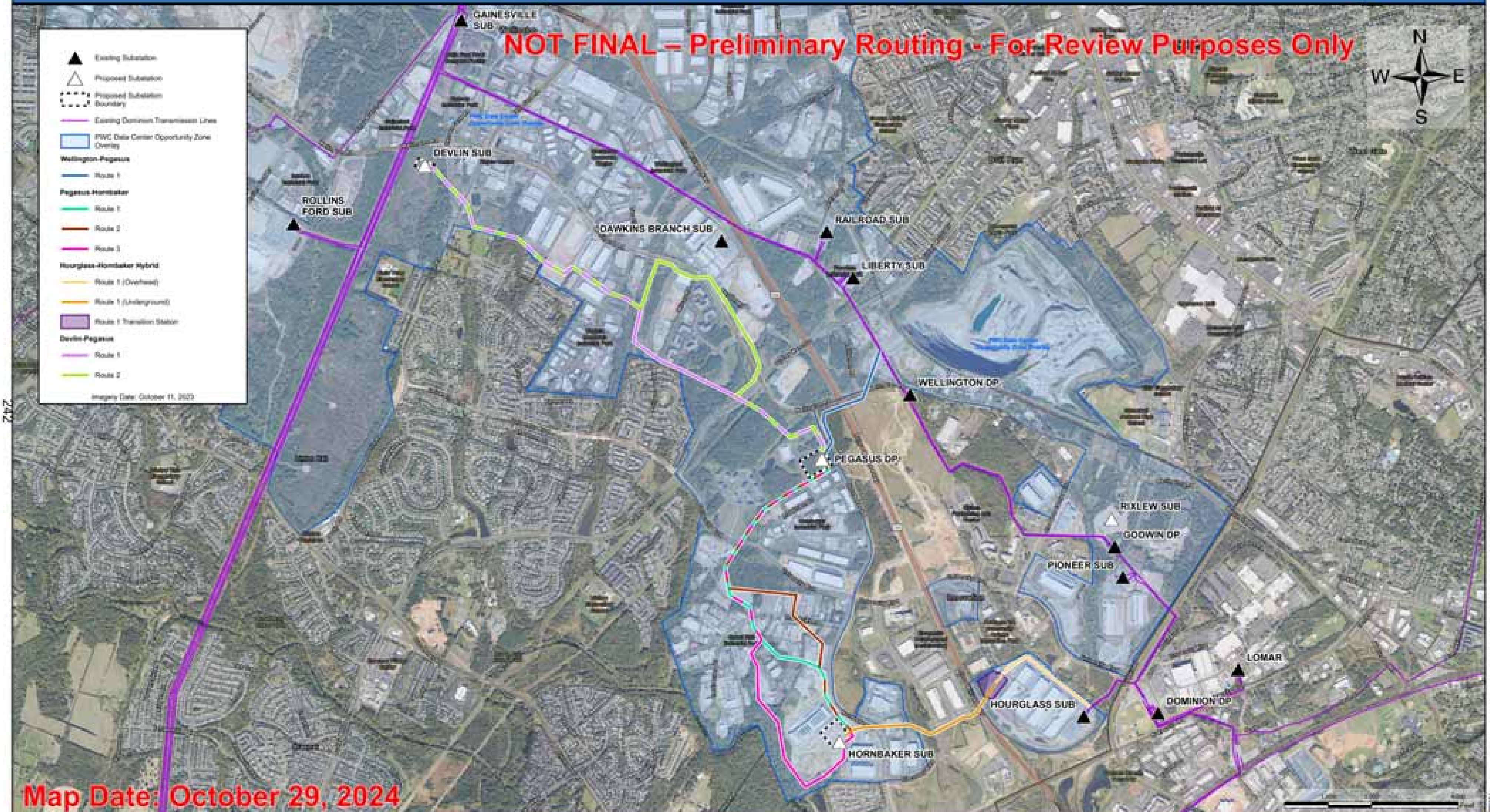
Sincerely,

Stephen Precker

Stephen Precker
Communications Consultant
The Electric Transmission Project Team

[Enclosure: Project Overview Map]

Project Routes – Overview



Hornbaker & Devlin Area 230 kV Electric Transmission Project

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 Project are listed below.

Potential Permits

Activity	Potential Permit	Agency/Organization
Impacts to wetlands and other waters of the U.S.	Nationwide Permit 57	U.S. Army Corps of Engineers
Impacts to wetlands and other waters of the U.S.	Virginia Water Protection Permit	Virginia Department of Environmental Quality
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
Airspace obstruction evaluation	FAA 7460-1	Manassas Regional Airport

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.

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

This section describes the levels of EMF associated with the proposed transmission lines. EMF levels are provided for future (2029) annual average and maximum (peak) loading conditions.

Proposed Project – Projected Average Loading in 2029

EMF levels were calculated for the proposed Project, consisting of all routes included in Solution 1B, at the ***projected average*** load condition (790.4 amps for Line #2420, 1234.3 amps for Line #2423) and at a maximum operating voltage of 241.5 kV when supported on the proposed Project structures. 230 kV Lines #2420 and #2423 were utilized for these calculations due to having the highest projected average loads of the associated project 230 kV lines for the left and right sides of the structures, respectively. See Attachments II.A.5.a. and II.A.5.b.

These field levels were calculated at mid-span where the conductors are closest to the ground at a projected average load operating temperature. Values were calculated for both route options under the assumption that the current travels in the same direction for the 230 kV lines.

EMF levels at the edge of the rights-of-way for the proposed Project at the projected average peak loading for a typical span:

Proposed Lines - Projected Average Loading					
		Looking Towards Hornbaker Switching Station			
		Left Edge of R/W		Right Edge of R/W	
Attachment	Solution	Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.a	Proposed	0.521	100.440	0.518	117.751
II.A.5.b	Proposed	2.224	134.427	2.231	160.958

Proposed Project – Projected Peak Loading in 2029

EMF levels were calculated for the proposed Project, consisting of all routes included in Solution 1B, at the ***projected peak*** load condition (1317.3 amps for Line #2420, 2057.2 amps for Line #2423) and at a maximum operating voltage of 241.5 kV when supported on the proposed Project structures. 230 kV Lines #2420 and #2423 were utilized for these calculations due to having the highest projected peak loads of the associated project 230 kV lines for the left and right sides of the structures, respectively. See Attachments II.A.5.a. and II.A.5.b.

These field levels were calculated at mid-span where the conductors are closest to the ground at a projected peak load operating temperature. Values were calculated for both route options under the assumption that the current travels in the same direction for the 230kV lines.

EMF levels at the edge of the rights-of-way for the proposed Project at the projected peak loading for a typical span:

Proposed Lines - Projected Peak Loading					
		Looking Towards Hornbaker Switching Station			
Attachment	Solution	Left Edge of R/W		Right Edge of R/W	
		Electric Field (kV/m)	Magnetic Field (mG)	Electric Field (kV/m)	Magnetic Field (mG)
II.A.5.a	Proposed	0.514	167.928	0.505	197.729
II.A.5.b	Proposed	2.222	226.418	2.242	275.666

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."[19]

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

[19] *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 leukemia" (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[20] 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

[20] 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 overhead Proposed and Alternative Solutions for the proposed Project is provided in Attachment V.A. A written description of the Proposed and Alternative Solutions is as follows:

Proposed Solution 1B

Proposed Solution 1B is comprised of the following route segments. For Proposed Solution 1B, the minimum structure height is 90 feet, the maximum structure height is 135 feet, and the average structure height is 109 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Wellington – Pegasus Route 1

Wellington-Pegasus Route 1 is an overhead route that taps the Wellington to Liberty existing transmission Line #2187 approximately 0.2-mile north of the existing Wellington Substation. From the tap location, the route extends southwest crossing Thong Pan Road and Wellington Road. The route then turns west, paralleling the south side of Wellington Road (including a crossing of Prince William Parkway). The route turns south paralleling the west side of Hornbaker Road before crossing the road and terminating at the proposed Pegasus Switching Station.

***Pegasus – Hornbaker Route* 1**

Pegasus – Hornbaker Route 1 is an overhead route that begins at the proposed Pegasus Switching Station and extends southwest, crossing University Boulevard. East of Industrial Court, the route turns generally southeast and collocates with the east side of the road, before crossing Industrial Court and Industrial Road and paralleling the east side of Hawkins Drive to the south. At this point, the route turns east, crosses the most southern part of Hawkins Drive and an industrial storage yard for 0.1 mile. The route then turns north and then back east for 0.2 mile, following parcel lines. The route then turns to the south-southeast, collocated with the west side of Hornbaker Road, before terminating at the proposed Hornbaker Switching Station.

Devlin – Pegasus Route 2

Devlin – Pegasus Route 2 begins at the future Devlin Switching Station and heads generally southeast/east, crossing Hansen Farm Road, Balls Ford Road and

Buckeye Timber Drive. The route then continues southeast/east passing between industrial buildings and crossing Virginia Meadows Drive and Dawkins Branch. At this point, the route turns north-northeast, paralleling the west side of Dawkins Branch, before turning east and collocating with the south side of Wellington Road. The route then crosses Lexington Valley Drive and Wellington Road and parallels the north side of Wellington Road. Just before Sudley Manor Drive, the route turns southwest and crosses back over Wellington Road, paralleling the north side of Sudley Manor Drive. The route then turns southeast, crosses Sudley Manor Drive and wraps around a planned development before terminating at the proposed Pegasus Switching Station.

Alternative Solution 1A

Alternative Solution 1A is comprised of the following route segments. For Alternative Solution 1A, the minimum structure height is 90 feet, the maximum structure height is 135 feet, and the average structure height is 110 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design

Wellington – Pegasus Route 1

See Proposed Solution 1B for a description of this route.

***Pegasus – Hornbaker Route* 1**

See Proposed Solution 1B for a description of this route.

Devlin – Pegasus Route 1

Devlin – Pegasus Route 1 begins at the proposed Devlin Switching Station and follows the same alignment as Devlin – Pegasus Route 2 for the first 1.2 miles, diverging just east of Dawkins Branch. At that point, the route then turns south, paralleling the east side of Dawkins Branch before turning southeast for approximately 0.5 mile. This segment crosses Lexington Valley Drive and passes between residential areas east of Lexington Valley Drive. At this point, the route continues southeast and follows the same alignment as Devlin-Pegasus Route 2 for the remaining 0.6 mile to the proposed Pegasus Switching Station.

Alternative Solution 2A

Alternative Solution 2A is comprised of the following route segments. For Alternative Solution 2A, the minimum structure height is 90 feet, the maximum structure height is 130 feet, and the average structure height is 109 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design

Hornbaker – Hourglass Route 1 (Hybrid)

Hourglass – Hornbaker Route 1 is a combination of approximately 0.5 mile of overhead transmission line with approximately 0.8 mile of underground transmission line and includes an approximately 3.1-acre transition station. Hourglass – Hornbaker Route 1 begins as an overhead line that taps the Company's existing transmission line just outside the Hourglass Switching Station. The route then extends northwest adjacent to an existing data center development. The route then turns southwest for 0.1 mile and enters the proposed transition station, where it transitions from overhead to an underground route. The route then continues out of the station to the southwest, including a trenchless crossing of Prince William Parkway. On the west side of Prince William Parkway, the route turns west and parallels the south side of Challenger Court, before crossing Discovery Boulevard. West of Discovery Boulevard, the route turns west, crosses Hornbaker Road, and terminates at the proposed Hornbaker Switching Station.

***Pegasus – Hornbaker Route* 1**

See Proposed Solution 1B for a description of this route.

Devlin – Pegasus Route 1

See Alternative Solution 1A for a description of this route.

<u>Alternative Solution 2B</u>

Alternative Solution 2B is comprised of the following route segments. For Alternative Solution 2B, the minimum structure height is 90 feet, the maximum structure height is 130 feet, and the average structure height is 108 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design

Hornbaker – Hourglass Route 1 (Hybrid)

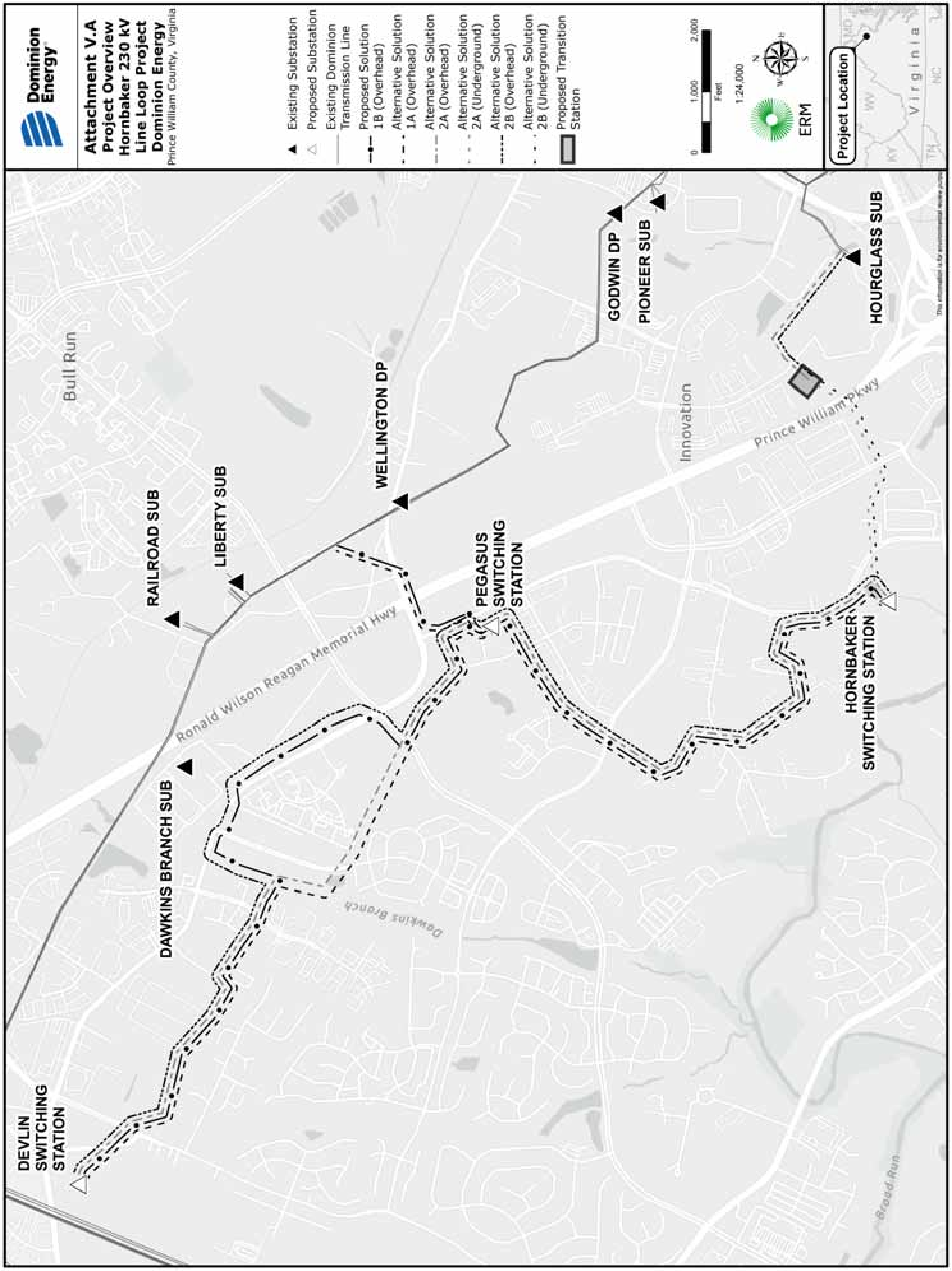
See Alternative Solution 2A for a description of this route

***Pegasus – Hornbaker Route* 1**

See Proposed Solution 1B for a description of this route.

Devlin – Pegasus Route 2

See Proposed Solution 1B for a description of this route.


Dominion Energy
Attachment V.A
Project Overview
Hornbaker 230 kV
Line Loop Project
Dominion Energy
Prince William County, Virginia
Existing Substation
Proposed Substation
Existing Dominion Transmission Line
Proposed Solution 1B (Overhead)
Alternative Solution 1A (Overhead)
Alternative Solution 2A (Overhead)
Alternative Solution 2A (Underground)
Alternative Solution 2B (Overhead)
Alternative Solution 2B (Underground)
Proposed Transition Station
0
1,000
2,000
Feet
1:24,000
ERM
Project Location
Virginia
DEVLIN SWITCHING STATION
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
HOURGLASS SUB
HORNBAKER SWITCHING STATION
Bull Run
Ronald Wilson Reagan Memorial Hwy
Prince William Pkwy
Innovation
Dawkins Branch
Broad Run

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: The Application will be made available electronically for public inspection at: www.dominionenergy.com/HornbakerDevlin.

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 Program
600 East Main Street, Suite 1400
Richmond, Virginia 23219

Environmental Reviewer
Virginia Department of Conservation and Recreation
Planning & Recreation Bureau
600 East Main Street, 17th Floor
Richmond, Virginia 23219

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 Services
102 Governor Street
Richmond, Virginia 23219

Mr. Karl Didier, PhD
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
US Fish and Wildlife Service
Virginia Field Office, Ecological Services
6669 Short Lane
Gloucester, Virginia 23061

Mr. Keith Goodwin
US Army Corps of Engineers
WRDA Dominion Energy VA Liason
803 Front Street
Norfolk, Virginia 23510

Mr. Phil Skorupa
Virginia Department of Mine, Minerals, and Energy
1100 Bank Street
Washington Building, 8th Floor
Richmond, Virginia 23219

Ms. Arlene F. Warren
Virginia Department of Health
Office of Drinking Water
109 Governor Street, 6th Floor
Richmond, VA 23219

Mike Helvey
Obstruction Evaluation Group Manager
Federal Aviation Administration, FAA Eastern Regional Office
800 Independence Ave, SW, Room 400 East
Washington, DC 20591

Sunil Rabindranath
Project Manager, Engineering Division
Metropolitan Washington Airports Authority
P.O. Box 17045, MA-224
Washington, DC 20041

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

John D. Lynch
Northern Virginia District Engineer
Virginia Department of Transportation, Northern Virginia District Office
4975 Alliance Drive
Fairfax, Virginia 22030

Kamal Suliman
Regional Operations Director
Virginia Department of Transportation, Northern Virginia District Office
4975 Alliance Drive
Fairfax, Virginia 22030

Tim Hemstreet
Loudoun County Administrator
PO Box 7000
Leesburg, Virginia 20177

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, a letter dated January 13, 2025, was sent to Christopher Shorter, County Executive in Prince William County, where the Project is located. The letter stated the Company's intention to file this Application and invited the County to consult with the Company about the Project. This letter is included as Attachment V.D.1.

Dominion Energy Virginia
Electric Transmission
P.O. Box 26666 Richmond, VA 23261.6666

January 13, 2025

Mr. Christopher Shorter
County Executive, Prince William County
1 County Complex
Prince William, VA 22192

RE: Dominion Energy Virginia's Hornbaker 230 kV Line Loop and Hornbaker Switching Station Project

Notice Pursuant to Va. Code § 15.2-2202 E

Mr. Shorter,

In order to ensure that Dominion Energy Virginia (the "Company") can provide service requested by Northern Virginia Electric Cooperative ("NOVEC"); for NOVEC to provide service to its data center customer in Prince William County, Virginia; to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation Reliability Standards, the Company is proposing to construct the Hornbaker 230 kV Line Loop and Hornbaker Switching Station Project, which includes new 230 kV transmission lines (the Hornbaker 230 kV Line Loop) and a new 230 kV switching station (Hornbaker Switching Station). The Project will require new right-of-way.

The Company is preparing to file an application for a Certificate of Public Convenience and Necessity ("CPCN") with the Commission. Pursuant to § 15.2-2202 of the Code of Virginia, the Company is writing to notify Prince William County of the proposed Project in advance of the CPCN application filing and respectfully requests that you submit any comments or additional information you feel would have bearing on the proposed Project within 30 days of the date of this letter.

Attached are the Project Overview Maps depicting the Project's route alternatives, as well as the general location of the Project. All final materials, including maps, will be available in the Company's CPCN application filing to the Commission.

Dominion Energy Virginia

If you would like to receive GIS shapefiles of the route alternatives to assist in your Project review or if you have any questions, please do not hesitate to contact me directly at 434.532.7579 or nancy.r.reid@dominionenergy.com.

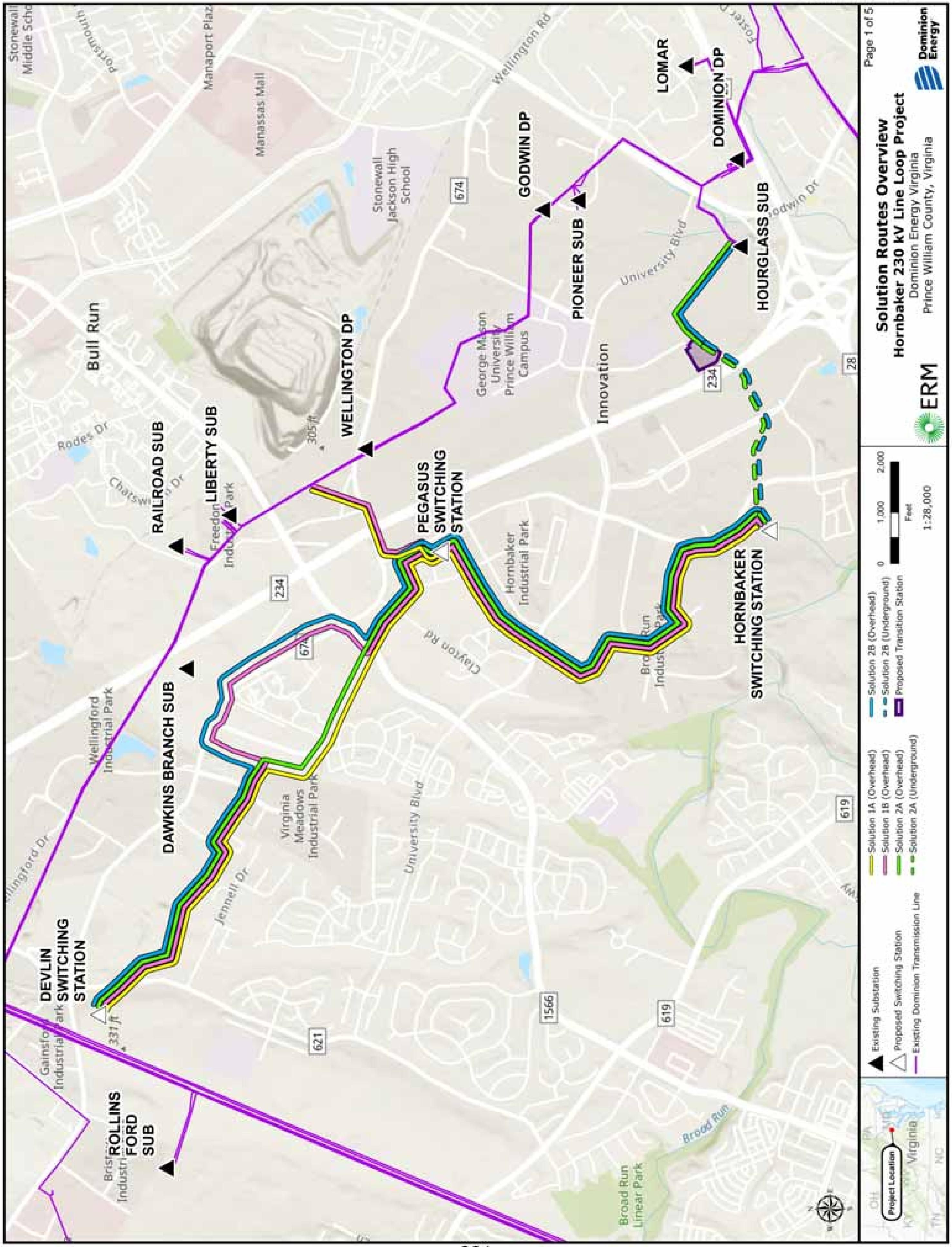
The Company appreciates your assistance with the review of this Project and looks forward to any additional information you may have to offer.

Respectfully,

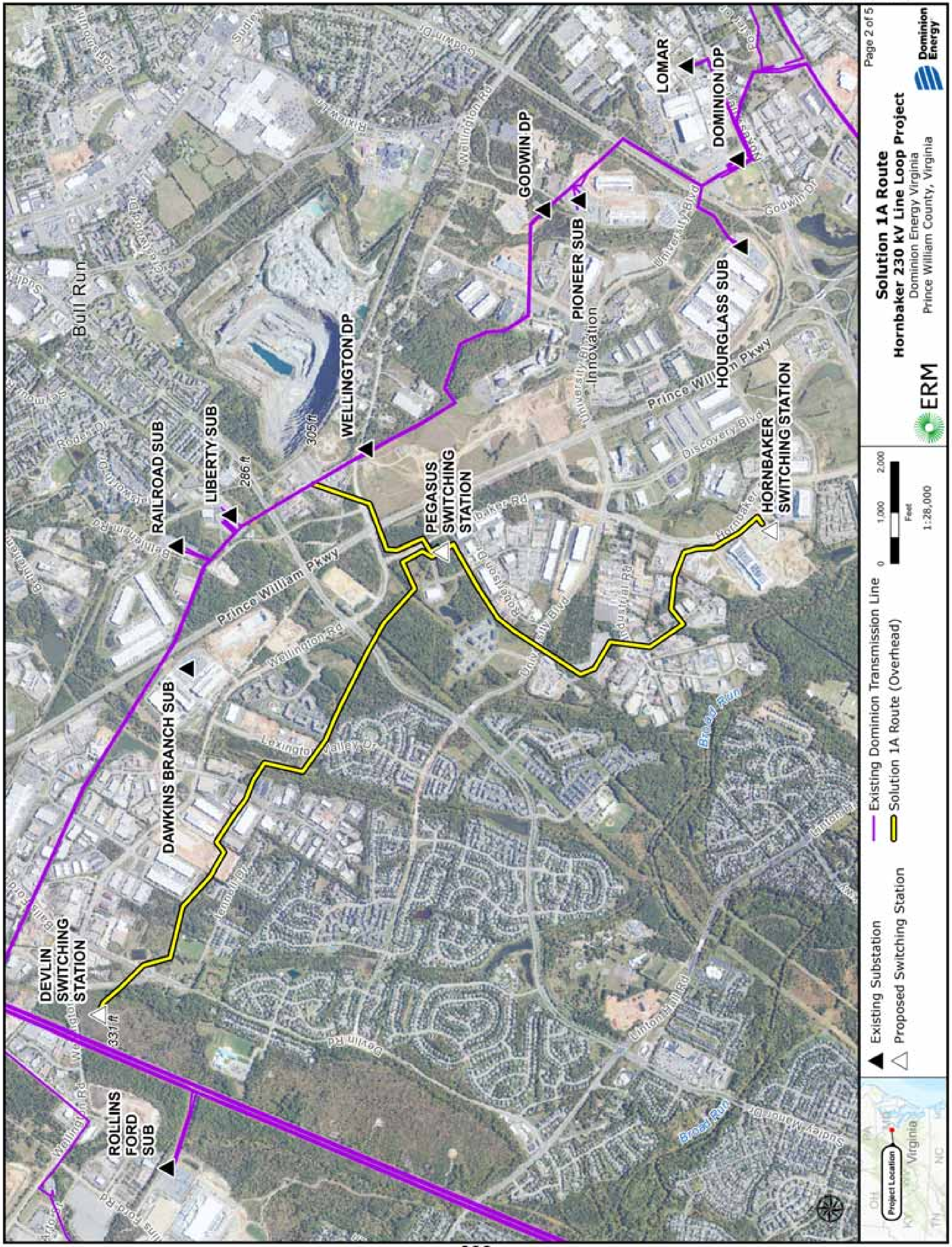
Nancy R Reid

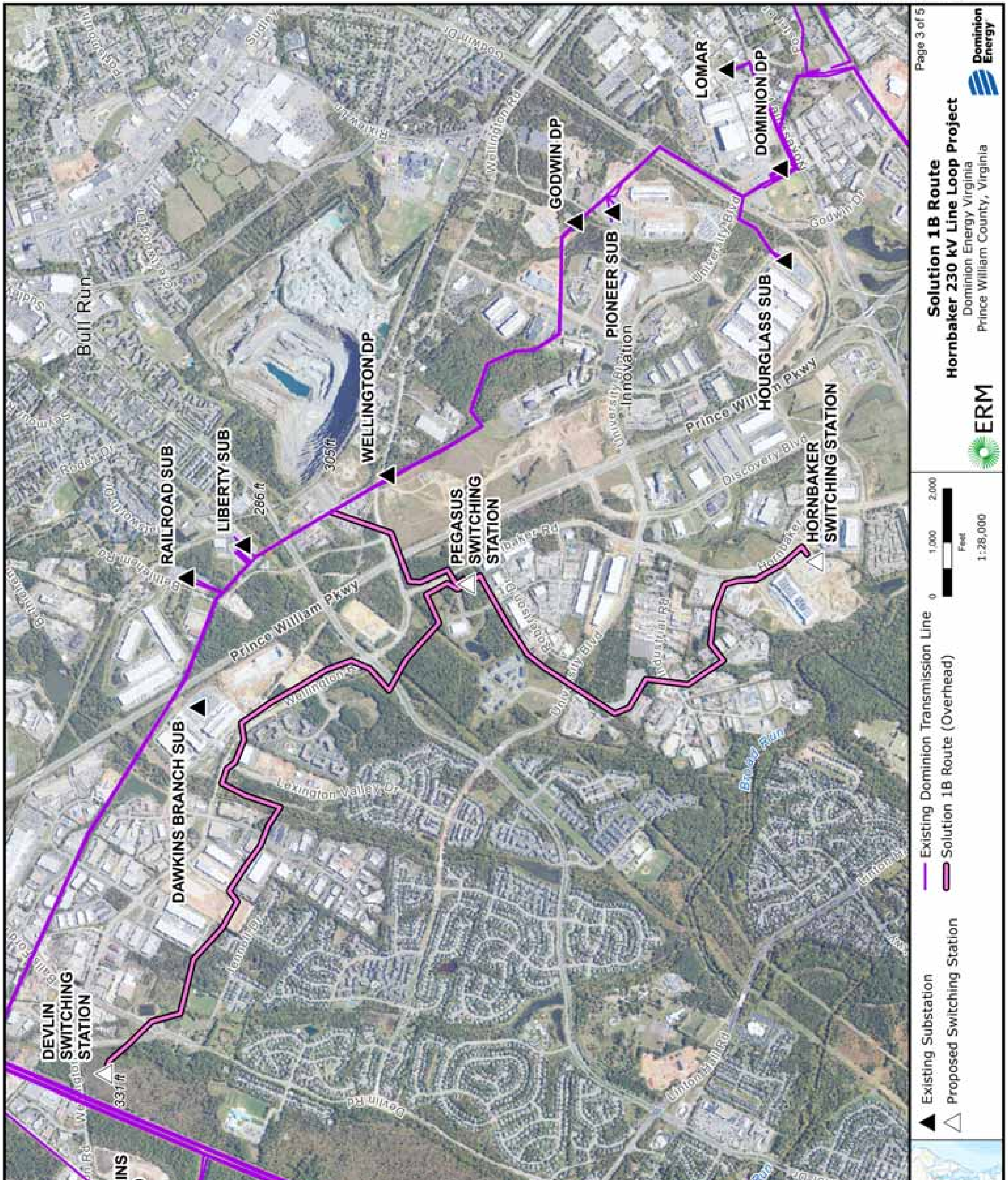
Nancy R. Reid
Senior Siting and Permitting Specialist
Electric Transmission
5000 Dominion Boulevard, 3N
Glen Allen, VA 23060

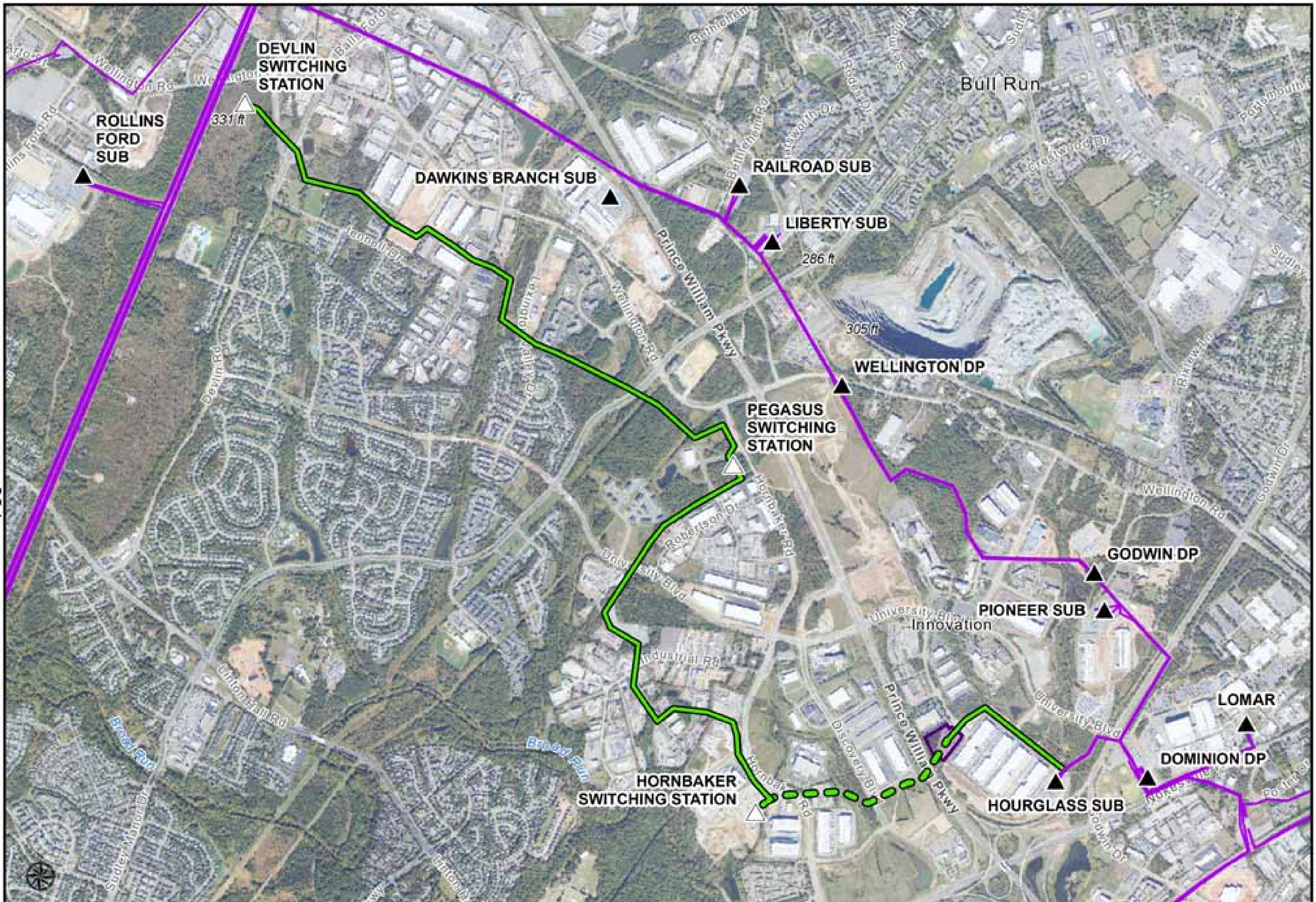
Attachments: Project Overview Maps



Solution Routes Overview
Hornbaker 230 kV Line Loop Project
Dominion Energy Virginia
Prince William County, Virginia
Page 1 of 5
ERM
Dominion Energy
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Solution 1A (Overhead)
Solution 1B (Overhead)
Solution 2A (Overhead)
Solution 2A (Underground)
Solution 2B (Overhead)
Solution 2B (Underground)
Proposed Transition Station
0
1,000
2,000
Feet
1:28,000
Project Location
Virginia
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
WELLINGTON DP
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
LOMAR
DOMINION DP
HOURGLASS SUB
HORNBAKER SWITCHING STATION
Bull Run
Manassas Mall
Manaport Plaza
Stonewall Jackson High School
George Mason University Prince William Campus
Innovation
Hornbaker Industrial Park
Broad Run Industrial Park
Virginia Meadows Industrial Park
Wellingford Industrial Park
Gainsford Industrial Park
Broad Run Linear Park
Broad Run
Wellington Rd
University Blvd
Godwin Dr
Clayton Rd
Jennell Dr
Rodes Dr
234
674
28
619
621
1566
305 ft
331 ft

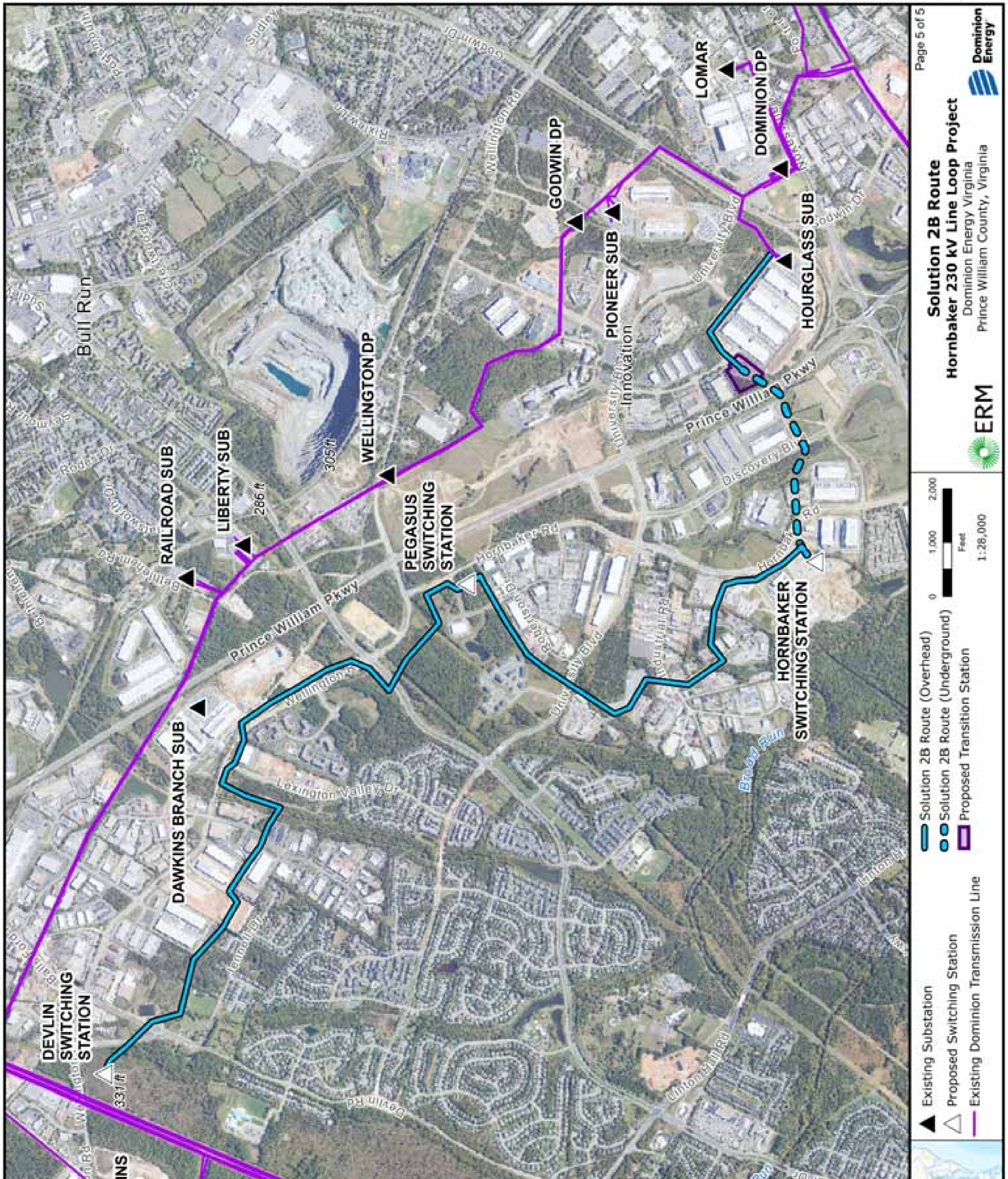

Solution 1A Route
Hornbaker 230 kV Line Loop Project
Dominion Energy Virginia
Prince William County, Virginia
Page 2 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Solution 1A Route (Overhead)
0 1,000 2,000
Feet
1:28,000
ERM
Dominion Energy
Project Location
Virginia
DEVLIN SWITCHING STATION
ROLLINS FORD SUB
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
PEGASUS SWITCHING STATION
WELLINGTON DP
HORNBAKER SWITCHING STATION
HOURGLASS SUB
PIONEER SUB
GODWIN DP
DOMINION DP
LOMAR
331 ft
286 ft
305 ft
Bull Run
Innovation
Prince William Pkwy
Wellington Rd
Lexington Valley Dr
University Blvd
Discovery Blvd
Godwin Dr
Devlin Rd
Linton Hall Rd
Broad Run
Sudley Manor Dr
Industrial Rd


Solution 1B Route
Hornbaker 230 kV Line Loop Project
Dominion Energy Virginia
Prince William County, Virginia
Page 3 of 5
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Solution 1B Route (Overhead)
0
1,000
2,000
Feet
1:28,000
ERM
Dominion Energy
Project Location
Virginia
ROLLINS FORD SUB
DEVLIN SWITCHING STATION
331 ft
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
286 ft
305 ft
WELLINGTON DP
PEGASUS SWITCHING STATION
HORNBAKER SWITCHING STATION
HOURGLASS SUB
PIONEER SUB
GODWIN DP
DOMINION DP
LOMAR
Bull Run
Innovation
Prince William Pkwy
Wellington Rd
Godwin Dr
University Blvd
Discovery Blvd
Hornbaker Rd
Lexington Valley Dr
Linton Hall Rd
Devlin Rd
Broad Run
Sudley Manor Dr



Page 4 of 5

Solution 2A Route
Hornbaker 230 kV Line Loop Project
Dominion Energy Virginia
Prince William County, Virginia


Solution 2B Route
Hornbaker 230 kV Line Loop Project
Dominion Energy Virginia
Prince William County, Virginia
Page 5 of 5
ERM
Dominion Energy
Existing Substation
Proposed Switching Station
Existing Dominion Transmission Line
Solution 2B Route (Overhead)
Solution 2B Route (Underground)
Proposed Transition Station
0
1,000
2,000
Feet
1:28,000
Project Location
Virginia
DEVLIN SWITCHING STATION
331 ft
ROLLINS FORD SUB
DAWKINS BRANCH SUB
RAILROAD SUB
LIBERTY SUB
286 ft
WELLINGTON DP
305 ft
PEGASUS SWITCHING STATION
GODWIN DP
PIONEER SUB
LOMAR
DOMINION DP
HOURGLASS SUB
HORNBAKER SWITCHING STATION
Bull Run
Broad Run
Prince William Pkwy
Hornbaker Rd
University Blvd
Innovation
Discovery Blvd
Godwin Dr
Wellington Rd
Lexington Valley Dr
Linton Hall Rd
Devlin Rd
Sudley Manor Dr
Industrial Rd

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF VIRGINIA ELECTRIC AND POWER COMPANY For approval and certification of electric transmission facilities: Hornbaker 230 kV Line Loop and Hornbaker Switching Station	)))))))	Case No. PUR-2025-00046

IDENTIFICATION, SUMMARIES, AND TESTIMONY OF DIRECT WITNESSES OF VIRGINIA ELECTRIC AND POWER COMPANY

Steven J. Schweiger

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Cale B. Armstrong

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

Nancy R. Reid

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

Matt L. Teichert

Witness Direct Testimony Summary
Direct Testimony
Appendix A: Background and Qualifications

<u>WITNESS DIRECT TESTIMONY SUMMARY</u>

<u>Witness</u>: Steven J. Schweiger

<u>Title</u>: Area Planning Engineer

<u>Summary</u>:

Company Witness Steven J. Schweiger 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:

- <u>Section I.B</u>: This section details the engineering justifications for the proposed Project.
- <u>Section I.C</u>: This section describes the present system and details how the proposed Project will effectively satisfy present and projected future load demand requirements.
- <u>Section I.D</u>: This section describes critical contingencies and associated violations due to the inadequacy of the existing system.
- <u>Section I.E</u>: This section explains feasible project alternatives, when applicable.
- <u>Section I.G</u>: This section provides a system map of the affected area.
- <u>Section I.H</u>: This section provides the desired in-service date of the proposed Project and the estimated construction time.
- <u>Section I.J</u>: This section provides information about the project if approved by the RTO.
- <u>Section I.K</u>: 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.
- <u>Section I.M</u>: Although not applicable to the proposed Project, this section, when applicable, contains information for transmission lines interconnecting a non-utility generator.
- <u>Section I.N</u>: 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.
- <u>Section II.A.3</u>: This section provides color maps of existing or proposed rights-of-way in the vicinity of the proposed Project.
- <u>Section II.A.10</u>: This section provides details of the construction plans for the proposed Project, including requested line outage schedules.

Additionally, Company Witness Schweiger co-sponsors the following portions of the Appendix:

- <u>Section I.A (co-sponsored with Company Witnesses Cale B. Armstrong, Mohammad M. Othman, Nancy R. Reid, and Matt L. Teichert)</u>: This section details the primary justifications for the proposed Project.
- <u>Section I.L (co-sponsored with Company Witness Cale B. Armstrong)</u>: Although not applicable to the proposed Project, this section, when applicable, provides details on the deterioration of structures and associated equipment.

A statement of Mr. Schweiger's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
STEVEN J. SCHWEIGER
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2025-00046

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 Steven J. Schweiger, and I am an Area Planning Engineer in the Electric Transmission Planning Department for the Company. My business address is 10900 Nuckols Road, 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. At the request of the Northern Virginia Electric Cooperative ("NOVEC"), in order to provide service to its data center customer in Prince William County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company proposes in Prince William County, Virginia, to:

(1) Cut existing Line #2187 between Structures #2187/7 and #2187/8 north of the existing Wellington Substation and construct a new approximately 0.6-mile overhead 230 kilovolt ("kV") double circuit transmission line on new primarily 100-foot-wide right-of-way from the Wellington Substation cut-in location to the Pegasus Switching Station resulting in Line #2325 and Line #2423 ("Wellington – Pegasus Route 1"). The proposed line will be constructed

primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(2) Construct a new approximately 1.9-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Pegasus Switching Station to the new proposed Hornbaker Switching Station resulting in Line #2187 and Line #2424 ("Pegasus – Hornbaker Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(3) Construct a new approximately 2.8-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Devlin Switching Station to the Pegasus Switching Station resulting in Line #2419 and Line #2420 ("Devlin – Pegasus Route 2"). These proposed lines will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(4) Construct the new 230 kV Hornbaker Switching Station (the "Hornbaker Switching Station") on property to be obtained by the Company.

Together, Wellington – Pegasus Route 1, Pegasus – Hornbaker Route 1, and Devlin – Pegasus Route 2 are referred to herein as the "Hornbaker 230 kV Line Loop." The Hornbaker 230 kV Line Loop and Hornbaker Switching Station are collectively referred to as the "Project."

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, II.A.3, and II.A.10 of the Appendix. Additionally, I co-sponsor the Executive Summary and Sections I.A with Company Witnesses Cale B. Armstrong, Mohammad M. Othman, Nancy R. Reid, and Matt L. Teichert; and Section I.L with Company Witness Cale B. Armstrong.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
STEVEN J. SCHWEIGER

Steven J. Schweiger received a Bachelor of Science degree in Electrical Engineering from Hofstra University in Hempstead, New York. Before joining Dominion Energy Virginia in 2021, Mr. Schweiger worked with multiple electric utility companies in the Northeast, Midwest, and Southern regions from 2017 to 2021 as a Transmission Planning Consultant for Burns & McDonnell.

Mr. Schweiger has previously submitted pre-filed testified to the State Corporation Commission of Virginia.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Cale B. Armstrong

Title: Senior Transmission Line Engineer – Overhead Transmission Group

Summary:

Company Witness Cale B. Armstrong 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 I.F: This section describes any lines or facilities that will be removed, replaced, or taken out of service upon completion of the proposed Project.
- 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 Armstrong co-sponsors the following portions of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Steven J. Schweiger, Mohammad M. Othman, Nancy R. Reid, and Matt L. Teichert): This section details the primary justifications for 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 Steven J. Schweiger): 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 Nancy R. Reid): These sections, when applicable, provide supporting structure details along the proposed and alternative routes.
- Section II.B.6 (co-sponsored with Company Witnesses Nancy R. Reid and Matt L. Teichert): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section V.A (co-sponsored with Company Witnesses Nancy R. Reid, and Matt L. Teichert): This section provides the proposed route description and structure heights for notice purposes.

A statement of Mr. Armstrong's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
CALE B. ARMSTRONG
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2025-00046

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 Cale B. Armstrong, and I am a Senior Transmission Line Engineer in the Overhead Transmission Group at Burns & McDonnell providing testimony on behalf of Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"). My business address is 9300 Ward Parkway, Kansas City, Missouri 64114. 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. At the request of the Northern Virginia Electric Cooperative ("NOVEC"), in order to provide service to its data center customer in Prince William County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company proposes in Prince William County, Virginia, to:

(1) Cut existing Line #2187 between Structures #2187/7 and #2187/8 north of the existing Wellington Substation and construct a new approximately 0.6-mile overhead 230 kilovolt ("kV") double circuit transmission line on new primarily 100-foot-wide right-of-way from the Wellington Substation cut-in location to

the Pegasus Switching Station resulting in Line #2325 and Line #2423 ("Wellington – Pegasus Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(2) Construct a new approximately 1.9-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Pegasus Switching Station to the new proposed Hornbaker Switching Station resulting in Line #2187 and Line #2424 ("Pegasus – Hornbaker Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(3) Construct a new approximately 2.8-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Devlin Switching Station to the Pegasus Switching Station resulting in Line #2419 and Line #2420 ("Devlin – Pegasus Route 2"). These proposed lines will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(4) Construct the new 230 kV Hornbaker Switching Station (the "Hornbaker Switching Station") on property to be obtained by the Company.

Together, Wellington – Pegasus Route 1, Pegasus – Hornbaker Route 1, and Devlin – Pegasus Route 2 are referred to herein as the "Hornbaker 230 kV Line Loop." The Hornbaker 230 kV Line Loop and Hornbaker Switching Station are collectively referred to as the "Project."

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 levels. I sponsor Sections I.F, II.A.5, II.B.1, II.B.2, and IV of the Appendix. Additionally, I co-sponsor the Executive Summary and Sections I.A with Company Witnesses Steven J. Schweiger, Mohammad M. Othman, Nancy R. Reid, and Matt L. Teichert; Section I.I with Company Witness Mohammad M. Othman; Section I.L with Company Witness

Steven J. Schweiger; Sections II.B.3 to II.B.5 with Company Witness Nancy R. Reid; Sections II.B.6 and V.A with Company Witnesses Nancy R. Reid and Matt L. Teichert.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
CALE B. ARMSTRONG

Cale B. Armstrong graduated from Kansas State University with a Bachelor of Science in Civil Engineering (2014) and a Master of Science in Civil Engineering (2016). He has approximately 8 years of experience working in the transmission line industry for Burns & McDonnell. Mr. Armstrong is a licensed engineer in the Commonwealth of Virginia.

<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 Steven J. Schweiger, Cale B. Armstrong, Nancy R. Reid, and Matt L. Teichert)</u>: This section details the primary justifications for the proposed Project.

- <u>Section I.I (co-sponsored with Company Witness Cale B. Armstrong)</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-2025-00046

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 O. Othman. I am an Engineer III in the Substation Engineering section of the Electric Transmission group with the Company. My business address is 2400 Grayland Avenue, Richmond, Virginia 23220. 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 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. At the request of the Northern Virginia Electric Cooperative ("NOVEC"), in order to provide service to its data center customer in Prince William County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company proposes in Prince William County, Virginia, to:

(1) Cut existing Line #2187 between Structures #2187/7 and #2187/8 north of the existing Wellington Substation and construct a new approximately 0.6-mile overhead 230 kilovolt ("kV") double circuit transmission line on new primarily 100-foot-wide right-of-way from the Wellington Substation cut-in location to

the Pegasus Switching Station resulting in Line #2325 and Line #2423 ("Wellington – Pegasus Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(2) Construct a new approximately 1.9-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Pegasus Switching Station to the new proposed Hornbaker Switching Station resulting in Line #2187 and Line #2424 ("Pegasus – Hornbaker Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(3) Construct a new approximately 2.8-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Devlin Switching Station to the Pegasus Switching Station resulting in Line #2419 and Line #2420 ("Devlin – Pegasus Route 2"). These proposed lines will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(4) Construct the new 230 kV Hornbaker Switching Station (the "Hornbaker Switching Station") on property to be obtained by the Company.

Together, Wellington – Pegasus Route 1, Pegasus – Hornbaker Route 1, and Devlin – Pegasus Route 2 are referred to herein as the "Hornbaker 230 kV Line Loop." The Hornbaker 230 kV Line Loop and Hornbaker Switching Station are collectively referred to as the "Project."

The purpose of my testimony, which I am submitting on behalf of Dominion Energy Virginia, 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 Steven J. Schweiger, Cale B. Armstrong, Nancy R. Reid, and Matt L. Teichert; and Section I.I of the Appendix with Company Witness Cale B. Armstrong.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

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.

<u>WITNESS DIRECT TESTIMONY SUMMARY</u>

<u>Witness</u>: Nancy R. Reid
<u>Title</u>: Siting and Permitting Specialist
<u>Summary</u>:

Company Witness Nancy R. Reid 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:

- <u>Section II.A.12</u>: This section identifies the counties and localities through which the proposed Project will pass and provides General Highway Maps for these localities.
- <u>Sections V.B-D</u>: These sections provide information related to public notice of the proposed Project.

Additionally, Ms. Reid co-sponsors the following section of the Appendix:

- <u>Section I.A (co-sponsored with Company Witnesses Steven J. Schweiger, Cale B. Armstrong, Mohammad M. Othman, and Matt L. Teichert)</u>: This section details the primary justifications for the proposed Project.
- <u>Section II.A.1 (co-sponsored with Company Witness Matt L. Teichert)</u>: This section provides the length of the proposed corridor and viable alternatives to the proposed Project.
- <u>Section II.A.2 (co-sponsored with Company Witness Matt L. Teichert)</u>: This section provides a map showing the route of the proposed Project in relation to notable points close to the proposed Project.
- <u>Section II.A.4 (co-sponsored with Company Witness Matt L. Teichert)</u>: This section explains why the existing right-of-way is not adequate to serve the need.
- <u>Sections II.A.6 to II.A.8 (co-sponsored with Company Witness Matt L. Teichert)</u>: These sections provide detail regarding the right-of-way for the proposed Project.
- <u>Section II.A.9 (co-sponsored with Company Witness Matt L. Teichert)</u>: This section describes the proposed route selection procedures and details alternative routes considered.
- <u>Section II.A.11 (co-sponsored with Company Witness Matt L. Teichert)</u>: This section details how the construction of the proposed Project follows the provisions discussed in Attachment 1 of the Transmission Appendix Guidelines.
- <u>Sections II.B.3 to II.B.5 (co-sponsored with Company Witness Cale B. Armstrong)</u>: These sections, when applicable, provide supporting structure details along the proposed and alternative routes.
- <u>Section II.B.6 (co-sponsored with Company Witnesses Cale B. Armstrong and Matt L. Teichert)</u>: This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- <u>Section III (co-sponsored with Company Witness Matt L. Teichert)</u>: This section details the impact of the proposed project on scenic, environmental, and historic features.
- <u>Section V.A (co-sponsored with Company Witnesses Cale B. Armstrong and Matt L. Teichert)</u>: This section provides the proposed route description and structure heights for notice purposes.

Finally, Ms. Reid co-sponsors the DEQ Supplement filed with the Application with Company Witness Matt L. Teichert. A statement of Ms. Reid's background and qualifications is attached to her testimony as Appendix A.

DIRECT TESTIMONY
OF
NANCY R. REID
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2025-00046

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 Nancy R. Reid, and I am a Siting and Permitting Specialist for the Company. My business address is 10900 Nuckols Road, 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. At the request of the Northern Virginia Electric Cooperative ("NOVEC"), in order to provide service to its data center customer in Prince William County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company proposes in Prince William County, Virginia, to:

(1) Cut existing Line #2187 between Structures #2187/7 and #2187/8 north of the existing Wellington Substation and construct a new approximately 0.6-mile overhead 230 kilovolt ("kV") double circuit transmission line on new primarily 100-foot-wide right-of-way from the Wellington Substation cut-in location to the Pegasus Switching Station resulting in Line #2325 and Line #2423 ("Wellington – Pegasus Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(2) Construct a new approximately 1.9-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Pegasus Switching Station to the new proposed Hornbaker Switching Station resulting in Line #2187 and Line #2424 ("Pegasus – Hornbaker Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(3) Construct a new approximately 2.8-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Devlin Switching Station to the Pegasus Switching Station resulting in Line #2419 and Line #2420 ("Devlin – Pegasus Route 2"). These proposed lines will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(4) Construct the new 230 kV Hornbaker Switching Station (the "Hornbaker Switching Station") on property to be obtained by the Company.

Together, Wellington – Pegasus Route 1, Pegasus – Hornbaker Route 1, and Devlin – Pegasus Route 2 are referred to herein as the "Hornbaker 230 kV Line Loop." The Hornbaker 230 kV Line Loop and Hornbaker Switching Station are collectively referred to as the "Project."

The purpose of my testimony is to provide an overview of the route and permitting for the proposed Project. I sponsor Sections II.A.12 and V.B to V.D of the Appendix. Additionally, I co-sponsor the Executive Summary and Section I.A with Company Witnesses Steven J. Schweiger, Cale B. Armstrong, Mohammad M. Othman, and Matt L. Teichert; Sections II.A.1, II.A.2, II.A.4, II.A.6 to II.A.9, II.A.11, and III with Company

Witness Matt L. Teichert; Sections II.B.3 to II.B.5 with Company Witness Cale B. Armstrong; and Section II.B.6 and V.A with Company Witnesses Cale B. Armstrong and Matt L. Teichert. Finally, I co-sponsor the DEQ Supplement with Company Witness Matt L. Teichert.

Q. Has the Company complied with Va. Code § 15.2-2202 E?

A. Yes. In accordance with Va. Code § 15.2-2202 E, a letter dated January 13, 2025, was delivered to Mr. Christopher Shorter, County Executive, Prince William County, where the Project is located. The letter stated the Company's intention to file this Application and invited the County to consult with the Company about the proposed Project. A copy of this letter 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
NANCY R. REID

Nancy R. Reid earned her Bachelor's degree from Christopher Newport University in environmental biology with a minor in chemistry and her Master's degree in Safety and Environmental Management from Columbia Southern University. Her past work experience includes working for the City of Franklin and Southampton County as the Environmental Specialist where she developed the area's stormwater management and permitting programs. Ms. Reid joined Dominion Energy in 2017 as an Environmental Compliance Coordinator where she assisted in developing the environmental program for the most efficient combined-cycle gas plant in the country and is now a Sitting and Permitting Specialist for Electric Transmission.

Ms. Reid has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.

WITNESS REBUTTAL TESTIMONY SUMMARY

Witness: Matt L. Teichert

Title: Principal Consultant, Environmental Resource Management

Summary:

Company Witness Matt L. Teichert sponsors the Environmental Routing Study provided as part of the Company's Application.

Additionally, Mr. Teichert co-sponsors the following portion of the Appendix:

- Section I.A (co-sponsored with Company Witnesses Steven J. Schweiger, Cale B. Armstrong, Mohammad M. Othman, and Nancy R. Reid): This section details the primary justifications for the proposed Project.
- Section II.A.1 (co-sponsored with Company Witness Nancy R. Reid): This section provides the length of the proposed corridor and viable alternatives to the proposed Project.
- Section II.A.2 (co-sponsored with Company Witness Nancy R. Reid): 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 (co-sponsored with Company Witness Nancy R. Reid): This section explains why the existing right-of-way is not adequate to serve the need.
- Sections II.A.6 to II.A.8 (co-sponsored with Company Witness Nancy R. Reid): These sections provide detail regarding the right-of-way for the proposed Project.
- Section II.A.9 (co-sponsored with Company Witness Nancy R. Reid): This section describes the proposed route selection procedures and details alternative routes considered.
- Section II.A.11 (co-sponsored with Company Witness Nancy R. Reid): This section details how the construction of the proposed project follows the provisions discussed in Attachment 1 of the Transmission Appendix Guidelines.
- Section II.B.6 (co-sponsored with Company Witnesses Cale B. Armstrong and Nancy R. Reid): This section provides photographs of existing facilities, representations of proposed facilities, and visual simulations.
- Section III (co-sponsored with Company Witness Nancy R. Reid): This section details the impact of the proposed Project on scenic, environmental, and historic features.
- Section V.A (co-sponsored with Company Witnesses Cale B. Armstrong and Nancy R. Reid): This section provides the proposed route description and structure heights for notice purposes.

Finally, Mr. Teichert co-sponsors the DEQ Supplement filed with this Application with Company Witness Nancy R. Reid.

A statement of Mr. Teichert's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
MATT L. TEICHERT
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2025-00046

Q. Please state your name, position and place of employment and business address.

A. My name is Matt L. Teichert. I am employed as an Associate Partner with Environmental Resource Management ("ERM"). My business address is 222 South 9th Street, Suite 2900, Minneapolis, Minnesota 55402. A statement of my qualifications and background is provided as Appendix A.

Q. What professional experience does ERM have with the routing of linear energy transportation facilities?

A. ERM has extensive experience in the routing, feasibility assessments, and permitting of energy infrastructure projects. It has assisted its clients in the identification, evaluation and development of linear energy facilities for the past 30 years. During this time, it has developed a consistent approach for linear facility routing and route selection based on the identification, mapping and comparative evaluation of routing constraints and opportunities within defined study areas. ERM uses data-intensive Geographic Information System spatial and dimensional analysis and the most current and refined data layers and aerial photography resources available for the identification, evaluation and selection of transmission line routes.

In addition to Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), its clients include some of the largest energy companies in the United

States, Canada, and the world, including ExxonMobil, TC Energy, Shell, NextEra Energy, Phillips 66, Kinder Morgan, British Petroleum, Enbridge Energy, and others. ERM also routinely assists the staff of the Federal Energy Regulatory Commission, United States Army Corps of Engineers, and the U.S. Forest Service in the identification and/or evaluation of linear energy routes to support federal National Environmental Policy Act evaluations. ERM works on both small and large energy projects and has assisted in or conducted the routing and route evaluation of some of the largest electric transmission line and pipeline facilities in North America.

In Virginia, ERM served as routing consultant to Dominion Energy Virginia for many projects over the last 15 years, including:

- Cannon Branch-Cloverhill 230 kV transmission line project in the City of Manassas and Prince William County (Case No. PUE-2011-00011);
- Dahlgren 230 kV double circuit transmission line project in King George County (Case No. PUE-2011-00113);
- Surry-Skiffes Creek-Whealton 500 and 230 kV transmission lines (Case No. PUE-2012-00029);
- Remington CT-Warrenton 230 kV double circuit transmission line (Case No. PUE-2014-00025);
- Haymarket 230 kV Line and Substation Project (Case No. PUE-2015-00107);
- Remington-Gordonsville Electric Transmission Project (Case No. PUE-2015-00117);
- Norris Bridge (Case No. PUE-2016-00021);
- Idylwood-Tysons 230 kV single circuit underground transmission line, Tysons Substation rebuild, and related transmission facilities (Case No. PUR-2017-00143);
- Lockridge 230 kV Line Loop and Substation (Case No. PUR-2019-00215);
- Coastal Virginia Offshore Wind Commercial Project (Case No. PUR-2021-00142);
- DTC 230 kV Line Loop and DTC Substation (Case No. PUR-2021-00280);

- Aviator 230 kV Line Loop and Substation (Case. No. PUR-2022-00012);
- Nimbus Substation and 230 Farmwell-Nimbus Transmission Line (Case No. PUR-2022-00027);
- 500-230 kV Wishing Star Substation, 500 kV and 230 kV Mars-Wishing Star Lines, 500-230 kV Mars Substation, and Mars 230 kV Loop (Case No. PUR-2022-00183);
- 500-230 kV Unity Switching Station, 230 kV Tunstall-Unity Lines #2259 and #2262, 230-36.5 kV Tunstall, Evans Creek, Raines Substations, and 230 kV Substation Interconnect Lines (Case No. PUR-2022-00167);
- Butler Farm to Clover 230 kV Line and Butler Farm to Finneywood 230 kV Line (Case No. PUR-2022-00175);
- 230 kV Altair Loop and Altair Switching Station (Case No. PUR-2022-00197);
- 230 kV Finneywood-Jeffress Lines and Jeffress Switching Station Conversion (Case No. PUR-2023-00088);
- 230 kV White Oak Lines and White Oak Substation Expansion (Case No. PUR-2023-00110);
- 230 kV Germanna Lines and Germanna Substation (Case No. PUR-2023-00206); and
- Daves Store 230 kV Line Extension (Case No. PUR 2024-00021).

Most recently, ERM served as the routing consultant for the Company's the Aspen-Golden 500-230 kV Electric Transmission Project, in Case No. PUR-2024-00032; the Apollo-Twin Creeks Electric Transmission Project, in Case No. PUR-2024-00044; the Line #588 Rebuild & Fentress-Yadkin Line #5005, in Case No. PUR-2024-00105; 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation, in Case No. PUR-2024-00131; and Centreport 230 kV Electric Transmission Project, in Case No. PUR-2024-00170.

ERM's role as routing consultant for each of these transmission line projects included preparation of an Environmental Routing Study for the project and submission of testimony sponsoring it.

Q. What were you asked to do in connection with this case?

A. At the request of the Northern Virginia Electric Cooperative ("NOVEC"), in order to provide service to its data center customer in Prince William County, Virginia, to maintain reliable service for the overall load growth in the area, and to comply with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, the Company proposes in Prince William County, Virginia, to:

(1) Cut existing Line #2187 between Structures #2187/7 and #2187/8 north of the existing Wellington Substation and construct a new approximately 0.6-mile overhead 230 kilovolt ("kV") double circuit transmission line on new primarily 100-foot-wide right-of-way from the Wellington Substation cut-in location to the Pegasus Switching Station resulting in Line #2325 and Line #2423 ("Wellington – Pegasus Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(2) Construct a new approximately 1.9-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Pegasus Switching Station to the new proposed Hornbaker Switching Station resulting in Line #2187 and Line #2424 ("Pegasus – Hornbaker Route 1"). The proposed line will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(3) Construct a new approximately 2.8-mile overhead 230 kV double circuit transmission line on new primarily 100-foot-wide right-of-way from the Devlin Switching Station to the Pegasus Switching Station resulting in Line #2419 and Line #2420 ("Devlin – Pegasus Route 2"). These proposed lines will be constructed primarily with double circuit galvanized steel monopole structures, utilizing two circuits of three-phase twin-bundled 768.2 ACSS/TW/HS (20/7) conductor with a summer transfer capability of 1,573 MVA.

(4) Construct the new 230 kV Hornbaker Switching Station (the "Hornbaker Switching Station") on property to be obtained by the Company.

Together, Wellington – Pegasus Route 1, Pegasus – Hornbaker Route 1, and Devlin – Pegasus Route 2 are referred to herein as the "Hornbaker 230 kV Line Loop." The Hornbaker 230 kV Line Loop and Hornbaker Switching Station are collectively referred to as the "Project."

ERM was engaged on behalf of the Company to assist it in the identification and evaluation of route alternatives to resolve the identified electrical need that would meet the applicable criteria of Virginia law and the Company's operating needs.

The purpose of my testimony is to introduce and sponsor the Environmental Routing Study, which is included as part of the Application filed by the Company in this proceeding. Additionally, I co-sponsor the Executive Summary and Section I.A with Company Witnesses Steven J. Schweiger, Cale B. Armstrong, Mohammad M. Othman, and Nancy R. Reid; Sections II.A.1, II.A.2, II.A.4, II.A.6 to II.A.9, II.A.11, and III with Company Witness Nancy R. Reid; and Sections II.B.6 and V.A with Company Witnesses Cale B. Armstrong and Nancy R. Reid. Lastly, I co-sponsor the DEQ Supplement with Company Witness Nancy R. Reid.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

BACKGROUND AND QUALIFICATIONS OF MATT L. TEICHERT

Matt L. Teichert earned a Bachelor of Arts degree from University of Minnesota-Duluth. He has approximately 15 years of experience working in the energy-related consulting field, specializing in the siting and regulatory permitting of major linear energy facilities, including both interstate and intrastate electric transmission lines and gas and oil pipelines throughout the United States. During this time, he was employed for 3 years with Natural Resource Group and 14 years with ERM, a privately-owned consulting company specializing in the siting, licensing and environmental construction compliance of large, multi-state energy transportation facilities.

Mr. Teichert's professional experience related to electric transmission line projects includes the direct management of field studies, impact assessments, and agency consultations associated with the routing and licensing of multiple transmission line projects in the mid-Atlantic region, including the management and/or supervision of the routing and permitting. Work on these projects included studies to identify and delineate routing constraints and options; identification and evaluation of route alternatives, and the direction of field studies to inventory wetlands, stream crossings, cultural resources, and sensitive habitats and land uses. Within the last several years he has managed the identification and evaluation of over 75 miles of 230 kV and 500 kV transmission line route alternatives in the Commonwealth for Virginia Electric and Power Company.

Mr. Teichert has previously submitted pre-filed testimony to the State Corporation Commission of Virginia.