Dominion Energy®

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

Before the State Corporation Commission of Virginia

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Application No. 337

Case No. PUR-2024-00131

Filed: July 17, 2024

Volume 2 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

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Based on consultations with the Department of Environmental Quality ("DEQ"), Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") has developed this DEQ Supplement to facilitate review and analysis of the proposed Project by the DEQ and other relevant agencies.

1. Project Description

In order to relieve identified violations of mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, to provide service requested by a data center customer (the "Customer") of Dominion Energy Virginia, and to maintain the structural integrity and reliability of its transmission system, the Company proposes in the Counties of Fairfax and Loudoun, Virginia, to:

(1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines by cutting the Company's existing 230 kV Lincoln Park-Loudoun Line #2008 and existing 230 kV Bull Run-Sully Line #265, which are collocated within an existing variable 100- to 120-foot-wide right-of-way. As proposed, existing Lincoln Park-Loudoun Line #2008 will be cut at a location between Structures #2008/66 and #2008/67, and existing Bull Run-Sully Line #265 will be cut at a location between Structures #265/88 and #265/89. The two new double circuit lines will extend approximately 0.3 mile from the respective cut-in locations before terminating at a new proposed 230-34.5 kV substation located in Fairfax County, Virginia ("Takeoff Substation") on property to be owned by the Company (the "Takeoff Loop"). The cut-ins ultimately will result in (i) 230 kV Loudoun-Takeoff Line #2008, (ii) 230 kV Lincoln Park-Takeoff Line #2356, (iii) 230 kV Bear Run-Takeoff Line #2285 and (iv) 230 kV Sully-Takeoff Line #2357.[1] At the cut-in between Structures #2008/66 and #2008/67, the Company will install two new monopole structures to provide a network connection to the Takeoff Substation. Similarly, at the cut-in between Structures #265/88 and #265/89, the Company will install two new monopole structures to provide a network connection to the Takeoff Substation. These network connections will allow the Takeoff Substation to connect to other existing substations for increased reliability. While the structures installed at the proposed cut-in locations are within the existing right-of-way, the proposed 0.3-mile Takeoff Loop will be constructed in a new 160-foot-wide right-of-way supported primarily by double circuit weathering steel 2-pole structures and utilizing three-phase twin-bundled 768.2 thousand circular mils ("kcmil") 20/7 Aluminum Conductor Steel Supported/Trapezoidal Wire/High Strength ("ACSS/TW/HS") type conductor with a summer transfer capability of 1,573 MVA, with one new Design Number ("DNO")-11410 shield wire over each circuit. Collectively, this proposed work is referred to as the "Takeoff Loop and Substation."

(2) Partially reconductor and rebuild Sully-Takeoff Line #2357 entirely within existing right-of-way in Fairfax County, Virginia ("Sully-Takeoff Partial Reconductor/Rebuild"). As discussed above, Sully-Takeoff Line #2357 will result

[1] To be clear, as defined herein, the proposed Takeoff Loop only includes the approximately 0.3 mile of new right-of-way between the proposed Takeoff Substation and the proposed cut-in locations on the existing Lincoln Park-Loudoun Line #2008 and existing Bull Run-Sully Line #265. *See* Attachment I.A.1.

from cutting existing Bull Run-Sully Line #265 between Structures #265/88 and #265/89 (the "Sully-Takeoff Cut-in") and extending 0.3 mile of new double circuit lines to the proposed Takeoff Substation. Accordingly, the resulting approximately 2.2-mile Sully-Takeoff Line #2357 will consist of the new 0.3-mile segment from the Takeoff Substation to the Sully-Takeoff Cut-in, and the existing 1.9-mile segment from the Sully-Takeoff Cut-in to the Sully Substation. Hence, only a "partial" reconductor and rebuild of Sully-Takeoff Line #2357—namely, within the 1.9-mile existing segment—is required, as follows.

a. Sully-Takeoff Partial Reconductor: reconductor the existing 1.9-mile segment of Sully-Takeoff Line #2357 between the Sully-Takeoff Cut-in and the existing Sully Substation by uprating the existing conductors from three-phase 1590 kcmil 45/7 Aluminum Conductor Steel Reinforced ("ACSR") type conductor and 1534 Aluminum Conductor Alloy Reinforced ("ACAR") 42 EC/19 type conductor to three-phase twin-bundled 768.2 kcmil 20/7 ACSS/TW/HS with a summer transfer capability of 1,573 MVA.

b. Sully-Takeoff Partial Rebuild: rebuild five of the existing painted steel double circuit monopole structures supporting Line #2357 (*i.e.*, supporting the existing Bull Run-Sully Line #265) and existing Discovery-Sully Line #2107 (existing Structures #265/98 / #2107/72, #265/99 / #2107/71, #265/102 / #2107/68, #265/104 / #2107/66, and #265/107 / #2107/63) in order to maintain proper clearances. The five structures proposed for rebuild are located within an existing 0.9-mile segment between existing Structure #265/98 / #2107/72 and Sully Substation (the "Sully-Takeoff Partial Rebuild Segment"). The five removed structures will be replaced with five double circuit dulled galvanized steel monopole structures.

(3) Construct a new overhead double circuit 230 kV transmission line beginning at the Company's future Aviator Substation[2] located in Loudoun County, Virginia, and extending approximately 3.2 miles to terminate at the Company's new proposed Takeoff Substation located in Fairfax County, Virginia, resulting in (i) 230 kV Aviator-Takeoff Line #2358, and (ii) 230 kV Aviator-Takeoff Line #2359 (the "Aviator-Takeoff Lines"). While the proposed Aviator-Takeoff Lines will commence and terminate on Company-owned or to-be-owned property (from Structure #2358/25 / #2359/25 at Aviator Substation to Structure #2358/1 / #2359/1 at Takeoff Substation), the proposed Aviator-Takeoff Lines will be constructed in new 100-foot-wide right-of-way supported primarily by double circuit dulled

[2] The Aviator Substation was approved by Final Order of the Commission on November 28, 2022, in Case No. PUR-2022-00012, with an in-service date of September 30, 2024. *See Application of Virginia Electric and Power Company for approval and certification of electric transmission facilities: Aviator 230 kV Line Loop and Aviator Substation*, Case No. PUR-2022-00012, Final Order (Nov. 28, 2022) at Ordering Paragraph (6). *See also* Attachment I.A.3.

galvanized steel monopole structures and will utilize three-phase twin-bundled 768.2 kcmil 20/7 ACSS/TW/HS type conductors with a summer transfer capability of 1,573 MVA, with one new DNO-11410 shield wire over each new circuit.

(4) Perform minor substation-related work at the Company's future Aviator Substation.

The Takeoff Loop and Substation, the Sully-Takeoff Partial Reconductor/Rebuild, the Aviator-Takeoff Lines, and minor substation-related work are collectively referred to as the "230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation" or the "Project."

The Project is necessary to relieve identified violations of NERC Reliability Standards in order to maintain and improve reliable electric service to customers in the load area extending generally southeast from the future Aviator Substation in Fairfax and Loudoun Counties (the "Aviator Load Area") and to ensure that Dominion Energy Virginia can provide service requested by its Customer in Fairfax County, Virginia.

For the Takeoff Loop, the Company identified an approximately 0.3-mile overhead proposed route with two double circuit lines in an approximately 160-foot-wide right-of-way ("Takeoff Loop Proposed Route" or "Takeoff Loop Route 1") as well as an approximately 0.3-mile overhead alternative route with one double circuit line in an approximately 100-foot-wide right-of-way ("Takeoff Loop Alternative Route 2").

For the Sully-Takeoff Partial Reconductor/Rebuild, the total length of the existing right-of-way is approximately 1.9 miles. Because the existing right-of-way and Company-owned property is adequate for the Sully-Takeoff Partial Reconductor/Rebuild, no new right-of-way is required. Accordingly, the existing right-of-way for the Sully-Takeoff Partial Reconductor/Rebuild has been identified as the proposed route ("Reconductor/Rebuild Proposed Route"). Given the availability of existing right-of-way and the statutory preference given to use of existing rights-of-way, and because additional costs and environmental impacts would be associated with the acquisition of and construction on new right-of-way, the Company did not consider any alternative routes requiring new right-of-way for the Sully-Takeoff Partial Reconductor/Rebuild.

For the Aviator-Takeoff Lines, the Company identified an approximately 3.2-mile overhead proposed route ("Aviator-Takeoff Proposed Route" or "Aviator-Takeoff Route 1"), as well as an approximately 3.3-mile overhead alternative route ("Aviator-Takeoff Alternative Route 2" or "Aviator-Takeoff Route 2") and an approximately 3.1-mile overhead alternative route ("Aviator-Takeoff Alternative Route 3" or "Aviator-Takeoff Route 3").

The Company is proposing all of these Proposed and Alternative Routes for Commission consideration and notice. Discussion of these Proposed and Alternative Routes, as well as other overhead 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 Takeoff Substation will be constructed with three 112 MVA 230-34.5 kV transformers, two 84 MVA 230-34.5 kV transformers, and nine 230 kV breakers arranged in a breaker-and-a-half configuration. The total area of the Takeoff Substation is approximately 4.3 acres.

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 description of the Proposed Route and Alternative Routes is as follows.

Takeoff Loop and Substation

Takeoff Substation

The Takeoff Substation will be sited on approximately 4.1 acres and located immediately northeast of the intersection of Avion Parkway and Route 50. Impacts associated with the substation footprint are included in the impacts for each route alternative.

Takeoff Loop Proposed Route (Route 1)

The Takeoff Loop Proposed Route (Route 1) originates at cut-in locations on the Company's existing 230 kV Lincoln Park-Loudoun Line #2008 (between Structures #2008/66 and #2008/67) and Bull Run-Sully Line #265 (between Structures #265/88 and #265/89). From the cut-in locations, the route crosses Lower Perimeter Road and heads northwest through MWAA property along the north side of Lower Perimeter Road for about 0.1 mile. It then crosses Airplane Road and Downwind Road as it continues to collocate with Lower Perimeter Road for approximately 0.1 mile. It then crosses Airplane Road and Downwind Road as it continues to collocate with Lower Perimeter Road for approximately 0.1 mile. Continuing through MWAA property, Takeoff Loop Proposed Route turns north and then northwest for about 0.1 mile, where it terminates at the proposed Takeoff Substation. In total, the Takeoff Loop Proposed Route measures approximately 0.3 mile in length.

The Takeoff Loop Proposed Route crosses two parcels affecting approximately 9.1 acres of land, which includes approximately 4.1 acres for the proposed Takeoff Substation footprint. The route will be primarily supported by double circuit monopoles and 2-pole angle structures. For the Takeoff Loop Proposed Route, the minimum structure height is 100 feet, the maximum structure height is 110 feet, and the average structure height is 103 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Takeoff Loop Alternative Route 2

The Takeoff Loop Alternative Route 2 originates at a cut-in location on the Company's existing Lincoln Park-Loudoun Line #2008 between Structures #2008/65 and #2008/66. From the cut-in location, the route heads northwest for about 0.2 mile as it collocates along the south side of Route 50, crossing Lee Road and developed commercial and industrial parcels. The route then turns north, crosses Route 50, and continues for about 0.1 mile through forested land along, but outside of, the western boundary of MWAA property, where it terminates at the proposed Takeoff Substation. In total, Takeoff Loop Alternative Route 2 measures approximately 0.3 mile in length.

The Takeoff Loop Route 2 will be constructed on a new 100-foot-wide right-of-way encompassing approximately 7.4 acres of land, which includes approximately 4.1 acres of proposed Takeoff Substation footprint. The route will be primarily supported by double circuit monopoles and 2-pole angle structures. For the Takeoff Loop Route 2, the minimum structure height is 95 feet, the maximum structure height is 125 feet, and the average structure height is 106 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Sully-Takeoff Partial Reconductor/Rebuild

The Company proposes to partially reconductor and rebuild the Sully-Takeoff Line (which was previously Line #265 but will be renumbered to Line #2357 after networking the Takeoff Substation) entirely within existing right-of-way in Fairfax County, Virginia (i.e., the Sully-Takeoff Partial Reconductor/Rebuild). The Sully-Takeoff Line #2357 will result from cutting existing Bull Run-Sully Line #265 right-of-way north of Route 50 and east of Airplane Road, and continues approximately 2.2 miles east and southeast between Sully-Takeoff Cut-in (i.e., Structures #265/88-89) and the existing Sully Substation. The five rebuild structures are location within a 0.9-mile segment between Centerville Road and the existing Sully Substation.

For purposes of calculating impacts of the Sully-Takeoff Partial Reconductor/Rebuild in the Appendix and DEQ Supplement, such impacts are limited to the 0.9-mile segment where five structures are proposed for rebuild, as described herein (*i.e.*, the 0.9-mile Sully-Takeoff Partial Rebuild Segment).[3] As only reconductoring and no structure replacements are proposed for the remaining 1.0-mile segment, there will be no impacts to that segment of the Sully-Takeoff Partial Reconductor/Rebuild. Further, any impacts associated with the 0.3-mile segment of new right-of-way from the proposed Takeoff Substation to the Sully-Takeoff Cut-in will be described in the context of the Takeoff Loop.

[3] Impacts of the 0.9-mile Sully-Takeoff Partial Rebuild are evaluated in Section 6 of the Environmental Routing Study.

Aviator-Takeoff Lines

Aviator-Takeoff Proposed Route (Route 1)

The Aviator-Takeoff Proposed Route (Route 1) originates at the future Aviator Substation, approximately 0.1 mile south of the intersection of South Perimeter Road and Willard Road in Loudoun County. From there, the route heads north for about 0.1 mile before turning east for approximately 0.2 mile. It then turns to the southeast as it enters MWAA property, collocates with South Perimeter Road, and continues east along the southern boundary of the parcel through forested land for about 1.3 miles. The route next continues generally east for approximately 0.7 mile along MWAA property, then crosses through a forested area on the Fairfax County Police Training Facility for about 0.1 mile. It next turns and heads south for approximately 0.8 mile as it enters a primarily forested area on MWAA property between the National Air and Space Museum Udvar-Hazy Center to the east and commercial and industrial developments to the west. Aviator-Takeoff Route 1 then turns northeast for about 0.1 mile before terminating at the proposed Takeoff Substation. In total, the Aviator-Takeoff Proposed Route measures approximately 3.2 miles in length.

The Proposed Route will be constructed on new 100-foot-wide right-of-way encompassing about 37.8 acres, primarily supported double circuit monopole structures and 2-pole angle structures. For the Aviator-Takeoff Proposed Route, the minimum structure height is 95 feet, the maximum structure height is 140 feet, and the average structure height is 114 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Aviator-Takeoff Alternative Route 2

Aviator-Takeoff Alternative Route 2 originates at the future Aviator Substation, approximately 0.1 mile south of the intersection of South Perimeter Road and Willard Road. From the future Aviator Substation, Aviator-Takeoff Alternative Route 2 heads initially north for about 0.1 mile before turning generally southeast within a parcel cleared for a future data center, then follows the southern boundary of a forested area for approximately 0.6 mile. The route next heads east and southeast for about 0.6 mile, crossing industrial parcels and surface parking/storage lots, a portion of a proposed data center development, and Pleasant Valley Road, then continues along forested land and a parking lot, where the route enters Fairfax County. It then continues south for approximately 0.5 mile along the western boundary of the Cub Run RPA, adjacent to existing and proposed industrial developments. Aviator-Takeoff Alternative Route 2 next heads southeast, collocating with an existing water mainline for approximately 0.4 mile through the Cub Run RPA and across Cub Run. From there, the route continues east for approximately 0.4 mile, crossing forested land, Avion Park Court, Stonecroft Boulevard, and a pond. It then continues southeast for about 0.5 mile, following Virginia Mallory Drive and crossing Avion Parkway and a forested area. The route next turns south for approximately 0.2 mile before terminating at the proposed Takeoff Substation. In total, Aviator-Takeoff Alternative Route 2 measures approximately 3.3 miles in length.

Aviator-Takeoff Alternative Route 2 will be constructed on a new 100-foot-wide right-of-way encompassing about 38.5 acres, primarily supported by double circuit monopole structures and 2-pole angle structures. For Aviator-Takeoff Alternative Route 2, the minimum structure height is 100 feet, the maximum structure height is 135 feet, and the average structure height is 115 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Aviator-Takeoff Alternative Route 3

Aviator-Takeoff Alternative Route 3 originates at the future Aviator Substation, approximately 0.1 mile south of the intersection of South Perimeter Road and Willard Road in Loudoun County. From the future Aviator Substation, Aviator-Takeoff Alternative Route 3 heads north for about 0.1 mile before turning generally southeast for approximately 0.6 mile along the northern boundary of an area recently cleared for a future data center. The route then continues southeast for about 0.6 mile crossing a pond and passing through both industrial parcels and forested land. Aviator-Takeoff Alternative Route 3 then exits Loudoun County and enters Fairfax County and the Cub Run RPA. From there, it continues south for approximately 0.2 mile along the western boundary of the RPA, then heads east across the RPA for about 0.2 mile along an existing 15-foot-wide buried utility (waterline) easement. The route then heads south for approximately 0.2 mile along the eastern boundary of the RPA, before continuing east for about 0.5 mile crossing two ponds, forested land, Avion Park Court, and Stonecroft Boulevard. Aviator-Takeoff Alternative Route 3 then continues southeast for approximately 0.5 mile, following Virginia Mallory Drive, and crossing Avion Parkway and a forested area. It then turns south for approximately 0.2 mile before entering and terminating at the proposed Takeoff Substation. In total, Aviator-Takeoff Alternative Route 3 measures approximately 3.1 miles in length.

Aviator-Takeoff Alternative Route 3 of the Aviator-Takeoff Lines will be constructed on a new 100-foot-wide right-of-way encompassing about 35.8 acres, primarily supported by double circuit monopole structures and 2-pole angle structures. For Aviator-Takeoff Alternative Route 3, the minimum structure height is 100 feet, the maximum structure height is 140 feet, and the average structure height is 114 feet, based on preliminary conceptual design, not including foundation reveal, and subject to change based on final engineering design.

Minor Related Substation Work

As part of the Project, the Company also proposes to perform minor substation-related work at the Company's future Aviator Substation.

2. Environmental Analysis

The Company solicited comments from all relevant state and local agencies about the proposed Project in letters sent on June 17, 2024. Copies of these letters are included as Attachment 2. The DEQ responded to the Company's request regarding the proposed

Project in an email dated July 1, 2024, attaching the agency's Scoping Response (see Attachment 2.1).

The environmental analysis considers the impacts of: (1) the approximately 0.3-mile-long Takeoff Loop Proposed Route and one route alternative, inclusive of the Takeoff Substation; (2) the 0.9-mile Sully-Takeoff Rebuild Segment of the Reconductor/Rebuild Proposed Route; and (3) the approximately 3.2-mile-long Aviator-Takeoff Proposed Route and two other route alternatives. In the discussions below, potential impacts from construction and operation of the Takeoff Substation are included with those of the Takeoff Loop, unless otherwise noted.

A. Air Quality

For the Project, the Company will control fugitive dust during construction in accordance with DEQ regulations. If the weather is dry for an extended period, there will be airborne particles from the use of vehicles and equipment within the right-of-way. However, minimal earth disturbance will take place and vehicle speed, which is often a factor in airborne particulate, will be kept to a minimum. Erosion and sedimentation control is addressed below in Section 2.H of this Supplement. Equipment and vehicles that are powered by gasoline or diesel motors will be used during the construction of the line so there will be exhaust from those motors. Exhaust from the motors will result in minimal air pollution.

Tree clearing within the new rights-of-way will be required for parts of the Project. The Company does not expect to burn cleared material, but if burning is necessary, it will coordinate with the responsible locality to obtain permits, comply with any conditions set forth by the locality, or take actions as otherwise set forth in the Company's right-of-way easements. The Company's tree clearing methods are described in Section 2.L.

B. Water Source

No water source is required for transmission lines. This discussion focuses on waterbodies that will be crossed by the proposed transmission lines.

On behalf of the Company, ERM identified and mapped waterbodies in the vicinity of the routes using publicly available geographic information system ("GIS") databases, U.S. Geological Survey ("USGS") National Hydrography Dataset Plus High Resolution ("NHD"), ESRI World Elevation Terrain Data (2.0-foot contours), Fairfax County LiDAR data (1.0-foot contour intervals), and recent (2022 and 2023) and historic digital aerial photography (Planet Imagery, VGIN Most Recent Imagery, Loudoun and Fairfax County aerial imagery, and Google Earth).

All route alternatives utilize an overhead configuration that would span waterbodies. No transmission structures for the Project are planned to be placed within waterbodies, though tree clearing will be required within the right-of-way in forested riparian areas at waterbody crossings. The removal of forested riparian areas adjacent to waterbodies could reduce

erosion control, stormwater filtration, and shading at these locations. Impacts to surface waters and riparian habitat will be reduced by minimizing rights-of-way at crossings to the extent practicable, leaving roots and stumps in place, and implementing erosion control best management practices during construction.

No waterbodies were identified within the Takeoff Loop Routes or the Takeoff Substation footprint. The Proposed and Alternative Routes for the Aviator-Takeoff Lines cross perennial and intermittent waterbodies, including Sand Branch, Dead Run, Cub Run, and Cain Branch, several unnamed, intermittent tributaries to these waterbodies, and multiple open waterbody features (stormwater ponds and impoundments).

Waterbodies in the vicinity of the Proposed Route and route alternatives, inclusive of the proposed substation, are shown on Attachment 2 of the Wetland and Waterbody Desktop Summary for the Project, which is included in Attachment 2.D.1.

Takeoff Loop and Substation

Takeoff Loop Proposed Route (Route 1)

No waterbodies were identified within the Takeoff Loop Route 1 right-of-way.

Takeoff Loop Alternative Route 2

No waterbodies were identified within the Takeoff Loop Alternative Route 2 right-of-way.

Sully-Takeoff Partial Rebuild Segment

The 0.9-mile Sully-Takeoff Partial Rebuild Segment is entirely within existing, maintained transmission line right-of-way, and it will have no new or only negligible impacts on natural resources. The five replacement structures within the 0.9-mile Sully-Takeoff Partial Rebuild Segment will have a total permanent impact of less than 200 square feet (less than 0.01 acre), and no new right-of-way or permanent access roads will be obtained or constructed. Two non-NHD-mapped ponds are within the existing 0.9-mile right-of-way; however, no structures will be placed in the waterbodies. As such, the Sully-Takeoff Partial Rebuild Segment will have no impact on wetlands or waterbodies.

Aviator-Takeoff Lines

Aviator-Takeoff Proposed Route (Route 1)

The Aviator-Takeoff Proposed Route would have a total of nine waterbody crossings. Of these, six are NHD-mapped waterbody crossings, including three perennial streams (Cub Run, Dead Run, and Cain Branch) and three intermittent streams (an intermittent segment of Sand Branch and unnamed, intermittent

tributaries to Dead Run and Cub Run). There are unmapped open waterbody features identified within the right-of-way using aerial imagery.

Aviator-Takeoff Alternative Route 2

Aviator-Takeoff Alternative Route 2 would have a total of 15 waterbody crossings. Of these, eight are NHD-mapped waterbody crossings, including three perennial streams (Sand Branch, Cub Run, and Cain Branch), three intermittent streams (including an intermittent segment of Sand Branch and unnamed, intermittent tributaries to Cub Run), and two lake/ponds within the right-of-way. Seven are unmapped open waterbody features are identified within the right-of-way using aerial imagery.

Aviator-Takeoff Alternative Route 3

Aviator-Takeoff Alternative Route 3 would have a total of 14 waterbody crossings. Of these, nine are NHD-mapped waterbody crossings, including four perennial streams (Sand Branch (two crossings), Cub Run, and Cain Branch), three intermittent streams (unnamed, intermittent tributaries to Sand Branch and Cub Run), and two lake/ponds. Five are unmapped open waterbody features identified within the right-of-way using aerial imagery.

Impacts to waterbodies will be limited to the conversion of riparian buffer habitat maintained as a shrub/open meadow habitat within the right-of-way. No direct impacts are anticipated to occur within the waterbodies.

Tree removal adjacent to waterbodies could potentially reduce riparian buffer functions such as stream bank stabilization and erosion control, nutrient and sediment filtration, floodwater storage and peak flow reduction, and would increase thermal impacts to riparian corridors due to loss of shading. The right-of-way will be maintained with a land cover type of herbaceous vegetation consistent with an open meadow during operations, which will provide some filtration and stabilization to protect waterbodies from runoff.

During construction, waterbodies will be maintained for proper drainage using culverts or other crossing devices, as needed, according to the Company's standard policies. Where clearing of trees and/or woody shrubs is required, clearing within 100 feet of a stream will be conducted by hand. Vegetation will be cut at or slightly above ground level, and stumps will not be grubbed. To protect waterways from soil erosion and sedimentation during construction, the Company will use sediment barriers along waterways and steep slopes. If a section of line cannot be accessed from existing roads, the Company may need to install a culvert or temporary bridge to cross small streams. In such cases, temporary fill material may be required that would be placed on erosion control fabric and removed when work is completed, returning the surface to original contours.

The Company solicited comments from the U.S. Army Corps of Engineers ("Corps") and the VMRC regarding the proposed Project on June 17, 2024.

C. Discharge of Cooling Waters

No discharge of cooling waters is associated with the Project.

D. Tidal and Non-tidal Wetlands

No tidal wetlands were identified within the Project study area. Non-tidal wetlands are summarized below.

On behalf of the Company, ERM identified potential wetlands along the Project using GIS and remote sensing data sources to conduct an offsite desktop wetland delineation. Sources for this study include the U.S. Fish and Wildlife Service ("USFWS") National Wetland Inventory ("NWI"), the USGS NHD, the U.S. Department of Agriculture-Natural Resources Conservation Service Soil Survey Geographic database, ESRI World Elevation Terrain Data, National Agricultural Imagery Program Digital Ortho-Rectified Natural Color and Infrared Images, and recent (2022 and 2023) and historic digital aerial photography (Planet Imagery, VGIN Most Recent Imagery, Loudoun and Fairfax County aerial imagery, and Google Earth). A copy of ERM's Wetland and Waterbody Desktop Summary for the Project is included in Attachment 2.D.1.

ERM did not field delineate wetlands along the Project routes. A field wetland delineation will be completed after the Company receives a final order on the Project.

ERM used a stepwise process to identify probable wetland and waterbody areas along the Project routes as follows:

1. Infrared and natural color aerial photography was used in conjunction with topographic maps, soils maps, and other data sources to identify potential wetland areas. Boundaries were assigned to the areas that appeared to exhibit wetland signatures based on this review (referred to here as "Interpreted Wetlands"). A cover type was assigned based on aerial photo interpretation.

2. To further determine the probability of a wetland occurring within a given location, polygon shapefiles for Interpreted Wetlands were digitally layered with NWI and NHD mapping and hydric soils information from the NRCS soil survey database.

3. ERM assigned a probability of wetland occurrence ranging from very low to high based on the number of overlapping data layers (*i.e.*, indicators of potential wetland presence) in any given area (Table D-1).

Table D-1 Wetland Probability Criteria	
Probability Class	**Criteria**
High	Areas where layers of hydric soils, Interpreted Wetlands, and NWI data overlap
Medium/High	Areas where NWI data overlaps hydric soils; or NWI data overlaps Interpreted Wetlands with or without partially hydric soils; or hydric soils overlap Interpreted Wetlands
Medium	Interpreted Wetlands with or without overlap by partially hydric soils
Medium/Low	Hydric soils only; or NWI data with or without overlap by partially hydric soils
Low	Partially hydric soils only
Very Low	Non-hydric soils only

Using the above criteria, wetland and waterbody occurrence probabilities ranging from very low to high were identified for each Project route, with acres of affected wetland calculated by probability class and cover type. The probability of wetland and waterbody occurrence increases as multiple indicators overlap toward the "high" end of the probability spectrum as shown in Table D-1. The medium to high probability categories were selected as the most reliable representation of in-situ conditions due to overlapping data sets. Results for the wetland probability analysis are summarized below.

Takeoff Loop and Substation

Takeoff Loop Proposed Route (Route 1)

No wetlands were identified within Takeoff Loop Route 1.

Takeoff Loop Alternative Route 2

No wetlands were identified within Takeoff Loop Alternative Route 2.

Sully-Takeoff Partial Rebuild Segment

Based on the wetland desktop delineation method described above, there is approximately 0.3 acre of wetlands within the existing 0.9-mile Sully-Takeoff Partial Rebuild Segment right-of-way. Of this 0.3 acre, approximately 0.1 acre consists of palustrine forested ("PFO") wetlands, <0.1 acre consists of palustrine emergent ("PEM") wetlands, <0.1 acre consists of palustrine unconsolidated bottom ("PUB") wetlands, and <0.1 acre consists of riverine/stream ("RVR") wetlands. No new structures will be placed in wetlands, and wetlands that will be spanned by the line are in existing right-of-way; therefore, no permanent impacts are anticipated.

Aviator-Takeoff Lines

Aviator-Takeoff Proposed Route (Route 1)

Based on the wetland desktop delineation method described above, there are approximately 5.1 acres of wetlands within the Aviator-Takeoff Proposed Route right-of-way. Of these, approximately 4.3 acres consist of PFO wetlands, 0.3 acre consists of PEM wetlands, and 0.5 acre consists of RVR wetlands.

Aviator-Takeoff Alternative Route 2

Based on the wetland desktop delineation method described above, there are approximately 6.6 acres of wetlands within the Aviator-Takeoff Alternative Route 2 right-of-way. Of these, approximately 3.8 acres consist of PFO wetlands, 1.3 acres consist of PEM wetlands, 1.1 acres consist of PUB wetlands, and 0.4 acre consists of RVR wetlands.

Aviator-Takeoff Alternative Route 3

Based on the wetland desktop delineation method described above, there are approximately 6.8 acres of wetlands within the Aviator-Takeoff Alternative Route 3 right-of-way. Of these, approximately 3.6 acres consist of PFO wetlands, 0.4 acre consists of PEM wetlands, 2.3 acres consist of PUB wetlands, and 0.5 acre consists of RVR wetlands.

All wetlands will require protective matting to be installed to support construction vehicles, equipment, and materials during construction. Most wetlands are anticipated to be spanned with impacts limited to clearing. Permanent impacts include any necessary structure placement within wetlands.

Prior to construction, the Company will delineate wetlands and other waters of the United States along the Proposed Route and within the substation site using the *Routine Determination Method*, as outlined in the *1987 Corps of Engineers Wetland Delineation Manual,* and methods described in the *2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Version 2.0). The Company will obtain all necessary permits for activities that will impact jurisdictional resources.

The Company solicited comments from the Corps and the DEQ Office of Wetlands and Stream Protection ("OWSP") on June 17, 2024. Dominion Energy Virginia received a response from DEQ-OWSP on July 8, 2024, and that response is included as Attachment 2.D.2.

E. Floodplains

As depicted on the Federal Emergency Management Agency's ("FEMA") online Flood Insurance Rate Maps #51059C0115E and #51107C0390E (effective dates 9/17/2010 and 2/17/2017), the Project study area contains Zone A, areas of a 1% annual chance flood hazard (around Cub Run, Dead Run, and Cain Branch), and Zone X, areas of minimal flood hazard (around Sand Branch and its intermittent tributaries). The Company will coordinate with the local floodplain coordinators as required.

F. Solid and Hazardous Waste

ERM identified environmentally regulated sites that use and/or store hazardous materials or waste-producing facilities operating under regulatory permits in the study area using publicly available GIS databases obtained from the U.S. Environmental Protection Agency ("EPA") and the DEQ. These databases provide information about facilities, sites, or places subject to environmental regulation or of environmental interest. These include sites that use and/or store hazardous materials; waste producing facilities operating under permits from the EPA or other regulatory authorities; Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA" or "Superfund") sites; Resource Conservation and Recovery Act ("RCRA") sites; Brownfield sites; petroleum storage and petroleum release sites; Pollution Response Programs ("PREP sites"); and solid waste sites. The identification of a site in the databases does not mean that the site necessarily has contaminated soil or groundwater.

Sites regulated by the EPA under the Clean Air Act ("CAA") Compliance Monitoring Program, Toxic Release Inventory ("TRI"), National Pollutant Discharge Elimination System ("NPDES"), and RCRA, and sites regulated by the DEQ under the Air, Solid Waste, Virginia Pollutant Discharge Elimination System ("VPDES"), Voluntary Response Program ("VRP"), and Registered Petroleum Tank Facilities programs not associated with a petroleum leak, site assessment, remediation, corrective action or emergency response case are anticipated to have no effect on, and will not be affected by the Project. These sites are not discussed further.

A summary of the information from the EPA and DEQ databases within a 0.5-mile buffer of the centerlines of the Proposed and Alternative Routes is provided in Table F-1 below. The locations of the sites are depicted in Attachment 2.F.1.

TABLE F-1
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation [a]

Environmental Regulated Facilities and Hazardous Waste/Petroleum Release Sites within 0.5 - Mile

Database	Takeoff Loop Proposed Route (Route 1)	Takeoff Loop Alternative Route 2	Sully-Takeoff Partial Rebuild Segment	Aviator-Takeoff Proposed Route (Route 1)	Aviator-Takeoff Alternative Route 2	Aviator-Takeoff Alternative Route 3
Waste	10	10	18	19	27	25
Toxics	0	0	0	3	4	3
Land	6	6	9	11	13	13
Air	12	11	20	38	45	27
Water	4	4	1	28	34	34
Solid Waste Facilities	0	0	0	1	1	1
Petroleum Facilities	2	2	9	18	20	20
Petroleum Releases	4	5	13	17	21	21
Total [b]	**38**	**38**	**70**	**135**	**165**	**144**

[a] The Takeoff Substation is included in the route analysis.

[b] Note that a single facility may be associated with multiple environmental permits; as such, the total number reflects the number of permits and releases within the specified distance from the Project.

Notes

Waste (Active and Inactive RCRA Facilities that handle or generate hazardous wastes)
Toxics (TRI Regulated facilities that handle and release toxic substances to the environment)
Land (Site cleanup under Superfund, RCRA or Brownfield programs, and/or DEQ VRP or Pollution Response program)
Air (EPA and DEQ regulated facilities with a release of pollutants to the air)
Water (EPA and DEQ regulated facilities that discharge or process water to surface water)
Solid Waste Facilities (Former and existing landfills)
Petroleum Facilities (Regulated petroleum storage facilities)
Petroleum Releases (Typically associated with storage tank releases)

To evaluate the potential impact to the routes, ERM further assessed the sites within 1,000 feet of the Project's Proposed Routes and Alternative Routes (Table F-2).

TABLE F-2
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation [a]

Environmental Regulated Facilities and Hazardous Waste/Petroleum Release Sites within 1,000 Feet

Database	Takeoff Loop Proposed Route (Route 1)	Takeoff Loop Alternative Route 2	Sully-Takeoff Partial Rebuild Segment	Aviator-Takeoff Proposed Route (Route 1)	Aviator-Takeoff Alternative Route 2	Aviator-Takeoff Alternative Route 3
Waste	1	6	4	6	9	10
Toxics	0	0	0	0	1	1
Land	2	2	6	3	5	5
Air	1	2	1	10	14	17
Water	0	2	0	7	16	16
Solid Waste Facilities	0	0	0	1	1	0
Petroleum Facilities	0	0	2	5	8	8
Petroleum Releases	1	1	2	5	7	5
Total [b]	**5**	**13**	**15**	**37**	**61**	**62**

[a] The Takeoff Substation is included in the route analysis.

[b] Note that a single facility may be associated with multiple environmental permits; as such, the total number reflects the number of permits and releases within the specified distance from the Project.

Notes

Waste (Active and Inactive RCRA Facilities that handle or generate hazardous wastes)
Toxics (TRI Regulated facilities that handle and release toxic substances to the environment)
Land (Site cleanup under Superfund, RCRA or Brownfield programs, and/or DEQ VRP or Pollution Response program)
Air (EPA and DEQ regulated facilities with a release of pollutants to the air)
Water (EPA and DEQ regulated facilities that discharge or process water to surface water)
Solid Waste Facilities (Former and existing landfills)
Petroleum Facilities (Regulated petroleum storage facilities)
Petroleum Releases (Typically associated with storage tank releases)

ERM conducted a desktop review of regulated facilities and remediation sites as summarized in Tables F-1 and F-2. Sites regulated by the DEQ under the Air, Solid Waste, VPDES, and Registered Petroleum Tank Facilities programs that were not associated with a petroleum leak, site assessment, remediation, corrective action, or emergency response case are anticipated to have no effect on and will not be affected by the Project.

Sites regulated by the EPA under the CAA Compliance Monitoring Program, RCRA, Superfund, Brownfield, TRI, and NPDES within 1.0 mile of the Project were evaluated for potential impacts. Sites regulated by the DEQ as Petroleum Release, VRP, and PREP sites within 200 feet of the Project were also evaluated for potential impacts. Additional information on these sites is summarized below.

EPA Regulated Sites

Based on desktop review of the most recently available data in the EPA's "Cleanups in My Community" database, no Brownfield or Superfund sites are located within 0.5 mile of the Project. Thirty-four active RCRA sites are within 0.5 mile of the Project; however, none of the sites are located within 200 feet of the Project, none are designated as a RCRA Corrective Action or Emergency Response site, and none are designated as a Large Quantity Generator of hazardous waste. The Superior Concrete site is associated with two EPA-regulated CAA sites, two NPDES sites, and one TRI site, all of which are within 200 feet of the Project. Additional information on these sites is summarized below.

DEQ Regulated Sites

ERM reviewed DEQ Petroleum Release, VRP, and PREP databases to identify sites within 1,000 feet of the routes. Five VRP sites are located within 1,000 feet of the 0.9-mile Sully-Takeoff Partial Rebuild Segment. PREP cases located within 1,000 feet of the Project include three for the Aviator-Takeoff Proposed Route, five for the Aviator-Takeoff Alternative Routes 2 and 3, two for the Takeoff Loop Routes 1 and 2, and one for the 0.9-mile Sully-Takeoff Partial Rebuild Segment of the Reconductor/Rebuild Proposed Route. Based on available DEQ case files, all PREP sites, but one set [DuBrook Concrete (IR Numbers 262264, 262344, 262872)], were determined to be related to minor, nonhazardous spills and discharges (*e.g.*, a small oil spill in a parking lot, sediment laden discharge to a wetland, etc.), or are located at a distance greater than 200 feet from the routes. Additionally, it was determined each VRP site was located at a distance greater than 200 feet from the routes and would be unlikely to have impacted soil and/or groundwater in the Project vicinity. As such, no further review of VRP sites was conducted.

Petroleum Release cases within 1,000 feet of the routes are summarized in Table F-2. ERM identified five cases within 200 feet of the Project's routes. Case files were obtained via Freedom of Information Act ("FOIA") requests to the DEQ for further review. Refer to Table F-3 and the case summaries below for additional information.

EPA and DEQ Regulated Sites Within 200 Feet of the Proposed Route

Of the regulated facilities and hazardous waste / petroleum release sites identified within 1,000 feet of the Project, thirty-one sites are within 200 feet. Based on review of EPA and DEQ files, eighteen of the thirty-one identified sites within 200 feet of the Project are considered unlikely to have contaminated soil and/or groundwater in the Project area and therefore, do not require further investigation. These sites include a permitted Toxic Substance Control Act site, two permitted Community Emissions Data System sites, three Occupational Safety and Health Administration Information System sites, two Registered Petroleum Tank Facilities, eight CAA sites, eight NPDES or VPDES sites, and one PREP site. The remaining thirteen sites located within 200 feet of the Project include two CAA sites, two NPDES sites, one TRI site, three PREP sites, and five petroleum release sites. These 13 identified sites are located at 6 distinct locations (*i.e.*, some addresses have

multiple identified sites). Case files for these six locations were obtained via FOIA requests to the DEQ for further review, as summarized below. Site descriptions are provided in Table F-3 and the subsequent section below.

TABLE F-3
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation [a]

Environmental Regulated Facilities and Hazardous Waste/Petroleum Release Sites within 200 Feet (with included site descriptions when applicable)

Site Name	Site Type	Regulatory Authority	Most Proximate Route [a]	Distance from Route (feet)	Gradient from Project (up/down/side)	Agency Status
Superior Concrete (site IDs provided in site descriptions below)	CAA, NPDES, TRI	EPA	Aviator-Takeoff Alternative Route 2	Adjacent	N/A	Active
DuBrook Concrete (IR Number 262264, 262344, 262872)	PREP	DEQ	Aviator-Takeoff Alternative Route 2	Adjacent	N/A	Closed (2006)
Davey Tree Company (PC 19921986)	Petroleum Release	DEQ	Aviator-Takeoff Alternative Route 2	Adjacent	N/A	Closed (1992)
Virginia Power - Sully Substation (PC 19983591)	Petroleum Release	DEQ	Aviator-Takeoff Alternative Route 2	Adjacent	N/A	Closed (1997)
Fairfax Excavation and Paving Company Incorporated (PC 20153053)	Petroleum Release	DEQ	Aviator-Takeoff Alternative Route 3	120	Downgradient	Closed (2016)
REFNR Associates (PC 19930260 and 19931144)	Petroleum Release	DEQ	Aviator-Takeoff Alternative Route 2	125	Downgradient	Closed (1994, 1998)

[a] The Takeoff Substation is included in the route analysis.

1) Superior Concrete

The Superior Concrete site is adjacent to Aviator-Takeoff Alternative Route 2 along Wade Drive. The site is associated with an operating concrete materials manufacturing facility with two active CAA permits (VA0000005110700140 and VA0000005110700086); one inactive (VA0090441) and one active NPDES permit (VAG110094; closed by the EPA in 2015); and one active TRI permit (2015WSPRRC44146). The site is also associated with three DuBrook Concrete PREP sites (IR Numbers 262264, 262344, 262872) regulated by the DEQ (see additional discussion below).

Based on review of available EPA files, the chemicals involved in production-related waste releases include nitrate compounds, lead, and mercury. Approximately 1,317 pounds (lbs.) of nitrate compounds were released via water discharge and approximately 57 lbs. of lead and 0.42 lbs. of mercury were released via air emissions. According to provided EPA files, permit violations were cited during several site inspections. The most recent permit violation occurred in March 2020 involving improper management of rinse water, insufficient procedural design for sampling on-site outfalls, and an omission of

documented procedures for preventing unintentional discharges to on-site outfalls. Contamination to soil and/or groundwater was not reported in documented permit violations. Based on the documented extent of contamination, it is not anticipated that the EPA-regulated sites at the Superior Concrete facility would have caused contamination to soil and/or groundwater in the immediate area of Aviator-Takeoff Alternative Route 2.

Based on the active permits, associated monitoring, and limited risk of contamination occurring in soils and/or groundwater no additional reviews are deemed necessary. Should unanticipated contamination be observed during construction, the Company will implement its standard response and reporting procedures.

2) DuBrook Concrete

The DuBrook Concrete PREP sites (IR Number 262264, 262344, 262872) are adjacent to Aviator-Takeoff Alternative Route 2 along Wade Drive. PREP site 262344 is associated with a reported pollution-response of excessive airborne particulates observed at the entrance of site's facility, first reported in April 2004. According to DEQ files, there were no reported impacts to water bodies or other media. PREP site 262344 was closed by the DEQ in May 2004. PREP site 262872 is similarly associated with excessive airborne particulates caused from site operations first reported in July 2004. There were no reports of chemical constituents associated with the airborne particulates. The site was closed by the DEQ in July 2004. Based on the documented extent of contamination, it is not anticipated that PREP sites 262344 and 262872 would have caused contamination to soil and/or groundwater in the immediate area of Aviator-Takeoff Alternative Route 2.

PREP site 262264 is associated with a petroleum release of approximately 100 gallons of diesel reported in August 2005. The release was discovered on surrounding topsoil of an above-ground storage tank. According to DEQ files, no water bodies were impacted by the petroleum release. Information regarding extent of contamination and depth to groundwater were not provided from DEQ files. PREP site 262264 was closed by the DEQ in January 2006.

Due to the duration of time that has elapsed since the releases, and the fact that the sites were closed by the agency, there is limited risk that contamination will be encountered during the construction of the proposed Project. Should unanticipated contamination be observed during construction, the Company will implement its standard response and reporting procedures.

3) Davey Tree Company

The Davey Tree Company DEQ Petroleum Release site is adjacent to Aviator-Takeoff Alternative Route 2 on Pleasant Valley. The site is associated with one petroleum release case (PC 19921986) involving a minor petroleum spill from a 10,000-gallon underground storage tank ("UST") in 1992. According to files received from the DEQ, it was estimated that less than 20 gallons of unleaded gasoline were spilt from the UST during a routine filling of company vehicles. Both the 10,000-gallon UST and the additional 2,000-gallon

UST holding diesel were removed and the surrounding soil was excavated and sampled for evaluation of contamination extent. No contamination to groundwater was reported. Concentrations of hydrocarbons were detected from the soil samples collected from the bottom of the tank pit (16.0 milligrams per kilogram [mg/kg]). However, it was determined that the extent of contamination was minimal and that no remediation activities were deemed necessary.

Due to the reported extent of contamination, it is not anticipated that soil and/or groundwater is impacted in the immediate area of the routes. However, should previously unidentified contamination be observed during project construction, the Company will implement its standard response and reporting procedures.

4) Virginia Power – Sully Substation

The Virginia Power – Sully Substation Petroleum Release site is located within the Sully Substation. The site is associated with one petroleum release case (PC 19983591) that was reported in October 1997. Information regarding extent of contamination, depth to groundwater, or remediation activities that were conducted was not readily available from VDEQ files. The site was officially closed in March 1999.

Although the Virginia Power - Sully Substation petroleum release site is within the Sully Substation boundary, the site is estimated to be hydraulically downgradient of the 0.9-mile-long Sully-Takeoff Partial Rebuild segment of the Reconductor/Rebuild Proposed Route. Due to the hydraulic gradient, duration of time since the initial release, and limited land disturbance associated with the Project, there is a low risk of encountering contaminated soil and/or groundwater during Project activities. If previously unidentified contamination should be observed during Project construction, the Company will implement its standard response and reporting procedures.

5) Fairfax Excavation and Paving Company Incorporated

The Fairfax Excavation and Paving Company Incorporated DEQ Petroleum Release site is on the corner of Wade Drive and Pleasant Valley Road approximately 120 feet northeast of Aviator-Takeoff Alternative Route 3. The site is associated with one petroleum release case (PC 20153053). Based on review of DEQ files, the site was used for material storage and vehicle maintenance since 1977 and had a UST removed from the northwest portion of the site in the mid-1980s. In 2009, a Phase II Environmental Site Assessment ("ESA") was conducted on the property and detected concentrations of total petroleum hydrocarbons – gasoline-range organics (TPH-GRO; 140 mg/kg) in the soil which exceeded the VDEQ Petroleum Storage Tank Program reporting threshold for petroleum. Concentrations of petroleum-contaminants were detected above the VDEQ VRP Tier II and III Residential Safety Screening Levels in the groundwater including total benzene, toluene, ethylbenzene, and xylenes (BTEX; 0.022 milligrams per liter [mg/L]), xylene (0.010 mg/L), methyl tert-butyl ether (MTBE; 0.009 mg/L), and naphthalene (0.002 mg/L).

In 2014, the DEQ followed up with the property owner (Fairfax Excavation and Paving Company, Inc.) to conduct an additional site investigation. According to the 2015 Phase II ESA, five soil borings were installed at the site and were sampled for total petroleum hydrocarbons – diesel-range organics (TPH-DRO), where the maximum concentration was found at MW-4 (1,200 mg/kg) on the southwest boundary of the site. Monitoring wells were then installed at each of the soil borings. Concentrations of TPH-DRO (2.8 mg/L), acetone (0.320 mg/L), MTBE (0.013 mg/L), and total xylenes (0.006 mg/L) were detected in the groundwater; none of which exceeded the VDEQ Water Quality Standard ("WQS").

The site is estimated to be hydraulically downgradient of the Aviator-Takeoff Proposed Route. The nearest waterbody feature is the Sand Branch waterbody, which is located between the site and the Aviator-Takeoff Proposed Route. The site is approximately 100 feet north of the nearest proposed transmission line structure of the Aviator-Takeoff Proposed Route. Due to the hydraulic gradient, location of the Sand Branch waterbody, and distance from the nearest proposed transmission line structure, it is not anticipated that soil and/or groundwater is impacted in the immediate area of the route. Should previously unidentified contamination be observed during construction, the Company will implement its standard and reporting procedures.

6) REFNR Associates

The REFNR Associates DEQ Petroleum Release site is west of the corner of Wade Drive and Pleasant Valley Road, approximately 125 feet southwest of Aviator-Takeoff Alternative Route 2. The site is associated with two petroleum release cases (PC 19930260 and 19931144). Based on review of DEQ files, both cases were closed by the DEQ in 1994 and 1998 after it was determined that contamination levels at the site did not pose a risk to human health nor the environment. Information regarding the cause or extent of the release was not available.

The site is estimated to be hydraulically downgradient of Aviator-Takeoff Alternative Route 2. Due to the lack of available documentation regarding site investigations and cleanup, the potential exists for encountering undetected contamination in soil and/or groundwater along the Aviator-Takeoff Proposed Route. However, due to the distance from the Project and estimated hydraulic gradient, it is not anticipated that soil and/or groundwater is impacted in the immediate area of the routes. If previously unidentified contamination is observed during project construction, the Company will follow proper safety and reporting procedures.

Summary

All of the Petroleum Release cases within close proximity to the Project have been closed by the DEQ, which deems a case closed once there is no further risk to the general public, although petroleum residue might remain. The PREP sites, two of which are associated with a release of excessive airborne particulates and one with petroleum, similarly have been closed by the EPA. The only site within close proximity to the Project with open

permits, Superior Concrete, has two open CAA, one open NPDES, and one open TRI permits.

Although the Project is constructing overhead lines, some subsurface work is required during installation. This disturbance will occur at discrete locations along the route, with temporary spoils contained as they are generated. The Company has a procedure in place to safely identify, manage, and dispose of any suspected hazardous or contaminated media encountered during construction. If contaminated soil or groundwater are identified (e.g., via sheens or odors), the Company will coordinate with the appropriate regulatory agency and dispose of the contaminants in accordance with applicable regulations.

Care will be taken to operate and maintain construction equipment to prevent any fuel or oil spills. Any waste created by the construction crews will be disposed of in a proper manner and recycled where appropriate and will be further detailed in the Company's stormwater pollution prevention plan, a component of the Virginia Stormwater Management Program, which falls under the purview of the DEQ.

G. Natural Heritage, Threatened and Endangered Species

On behalf of the Company, ERM conducted online database searches for threatened and endangered species in the vicinity of the Project, including the Virginia Department of Conservation and Recreation ("DCR") Natural Heritage Data Explorer ("NHDE"). The NHDE includes Conservation Sites, Stream Conservation Sites ("SCSs"), General Location Areas for Natural Heritage Resources, and Ecological Cores. ERM also obtained query results from the Virginia Department of Wildlife Resources ("DWR") Fish and Wildlife Information Service ("VaFWIS") and the USFWS Information for Planning and Consultation ("IPaC") System to identify federally and state-listed species that may occur within the study area. Digital data were obtained from the DCR-NHDE to identify locations within the study area that potentially support protected species. Results of these queries are provided in Attachment 2.G.1.

Database queries of the above referenced sources identified multiple federal- and state-listed threatened and endangered species within and adjacent to the study area (Table G-1). The Northern long-eared bat ("NLEB") (*Myotis septentrionalis*) and the Yellow lance (*Elliptio lanceolata*), which are both federal- and state-listed, have the potential to occur within the study area, as do the following four additional state-listed species: Wood turtle (*Glyptemys insculpta*), Tricolored bat ("TCB") (*Perimyotis subflavus*), Henslow's sparrow (*Ammodramus henslowii*), and Torrey's mountain-mint (*Pycnanthemum torreyi*). The federal listing of the TCB has been proposed, but it has not been officially listed. The Monarch butterfly (*Danaus plexippus*) was also identified in the query, but it is a candidate species. According to the VaFWIS query, the state-listed TCB, Yellow lance, and Wood turtle have been confirmed as present within a 2.0-mile radius of the study area boundary.

Of the six species, only the Yellow lance and Wood turtle species have the potential to be impacted by construction and operation of the Project due to the crossing of Cub Run. No

instream work will be performed, but the loss of shade along the streambank due to right-of-way clearing could cause an increase in water temperatures, which could negatively impact the presence of Yellow lance. Additionally, Cub Run has been designated as a Threatened and Endangered Species Water ("T&E Water") for the Wood turtle. T&E Waters classify streams and rivers that contain documented occurrences of federal- or state-listed species and their habitat. These designated waterbodies are not given additional protection; however, DWR recommends coordination with their environmental staff before work is performed instream or in the uplands adjacent to (within 900 feet of) the designated water. Because there have been documented occurrences of the Wood turtle and its habitat, Cub Run has been classified as T&E Water. The Company will coordinate with DWR through the permitting process once routes are approved and impacts are finalized.

For additional information related to the Takeoff Loop and Aviator-Takeoff Proposed and Alternative Routes, see Section 5.4.3 of the Environmental Routing Study. Natural heritage and threatened and endangered species impacts from the Sully-Takeoff Partial Rebuild is not included in the Environmental Routing Study, as the area is entirely within existing right-of-way and no route alternatives for this segment are being considered. Potential impacts to natural heritage and threatened and endangered species for this segment will be reviewed during the Project permitting phase.

TABLE G-1
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Potential Federal-and State-Listed Species in the Project Area

Species	Status	Database	Habitat	Results
Northern long-eared bat (*Myotis septentrionalis*)	FE, ST	USFWS IPaC, DWR Winter Habitat and Roost Tree Map	Generally associated with old-growth or late successional interior forests. Partially dead or decaying trees are used for breeding, summer day roosting, and foraging. Hibernation occurs primarily in caves, mines, and tunnels.	Summer foraging habitat present, but no hibernacula or roost trees identified within a 0.5-mile radius of the Takeoff Loop Proposed Route and Alternative Route, Sully-Takeoff Partial Reconductor/Rebuild Proposed Route, or Aviator-Takeoff Proposed or Alternative Routes.
Tricolored bat (*Perimyotis subflavus)*	FPE, SE	USFWS IPaC, VaFWIS, DWR Winter Habitat and Roost Tree Map	Typically roosts in trees near forest edges during summer. Hibernates deep in caves or mines in areas with warm, stable temperatures during winter.	Summer foraging habitat present, but no hibernacula or roost trees identified within 0.5-mile radius of the Proposed Route. However, VaFWIS Search Report confirmed species presence within 2.0-mile radius of study area boundary. The Takeoff Loop Proposed and Alternative Routes, Sully-Takeoff Partial Reconductor/Rebuild Proposed Route, and Aviator-Takeoff Proposed and Alternative Routes do not intersect the area of observation. No impacts are anticipated.

TABLE G-1
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Potential Federal-and State-Listed Species in the Project Area

Species	Status	Database	Habitat	Results
Yellow lance *(Elliptio lanceolata)*	FT, ST	VaFWIS	Main channels of drainages and streams as small as 3 feet across with clean, coarse, medium sized sand or gravel substrate.	VaFWIS Search Report confirmed species presence within 2.0-mile radius of study area boundary. The Aviator-Takeoff Proposed and Alternative Routes intersect upstream from the area of observation, but no instream work will be performed. Minimal impacts are anticipated if streambank shade is significantly reduced.
Wood turtle (*Glyptemys insculpta*)	ST	VaFWIS	Forested streams, floodplains, wet meadows, and open fields or farmland with a perennial stream nearby.	VaFWIS Search Report confirmed species presence within 2.0-mile radius of study area boundary. The Aviator-Takeoff Proposed and Alternative Routes do intersect the area of observation (Cub Run). Coordination with DWR environmental staff is recommended before work is performed adjacent to Cub Run.
Henslow's sparrow (*Ammodramus henslowii*)	ST	VaFWIS	Open grasslands with few or no woody plants and tall dense grasses and litter layer.	VaFWIS Search Report listed as potentially present. Impacts to grassland habitats will be minimal. No impacts are anticipated.
Torrey's mountain-mint (*Pycnanthemum torreyi*)	ST	DCR-DNH	Dry upland forests; rocky woodlands over mafic, ultramafic, or calcareous rocks; edges of sandstone glades; dry-mesic barrens; thickets; upland meadows; and powerline rights-of-way.	Species not confirmed as present, and potential habitat is likely not present.

Federal/State Status:
FE Federally listed as endangered
FT Federally listed as threatened
FPE Federally proposed as endangered
SE State listed as endangered
ST State listed as threatened
FPT Federally proposed as threatened

On behalf of the Company, ERM submitted the Project to the DCR Division of Natural Heritage ("DNH") for review. The DCR completed its review on May 2, 2024, as discussed in detail below (see Attachment 2.G.1).

DCR indicated that there are no Conservation Sites or SCSs present within the study area.

According to the official review, DCR-DNH concluded that the Project will not affect any documented state-listed insects and does not cross any State Natural Area Preserves under DCR's jurisdiction. However, according to a DCR-DNH biologist, "several rare plants [and one state-listed plant species, Torrey's mountain-mint], which are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia," may occur at this location if suitable habitat is present. "Diabase glades are characterized by historically

fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia counties and is located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plants occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction (Rawinski, 1995)." See Attachment 2.G.1.

Due to the potential for the study area to support populations of natural heritage resources, DCR-DNH recommends an inventory for rare plants associated with diabase glades and coordination with DWR pre-construction regarding Cub Run, the T&E Water for the Wood turtle. With the survey results, DCR-DNH indicates that it can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to documented resources.

Diabase Glades

With regard to DCR-DNH's recommendation for an inventory for rare plants associated with diabase glades, the Company notes, for context, that diabase refers to unique plant communities that form in certain circumstances in the presence of underlying igneous diabase rock. Most diabase associated plant species, whose occurrence in Virginia is often associated with diabase derived soils, are not formally listed as endangered or threatened. One plant species having the potential to occur is Torrey's mountain-mint, which is listed as threatened in Virginia. Most of these plants (with the exception of Torrey's mountain-mint) and associated habitat, while considered rare by DCR-DNH, are not protected by any regulations.

Impacts to Diabase Flatrocks are primarily associated with quarrying and road construction, which have a very direct permanent impact on the habitats within a defined Project area. Electric transmission lines, as proposed in the Application for this Project, typically do not have a significant permanent impact outside of structure foundation locations. Habitat conversion is possible but limited to conversion of forested habitat emergent/shrub habitat within the transmission line corridor. Clearing activities are limited to utilizing equipment on mats to minimize land disturbance, stumps are cut to within three inches of the ground surface and left in place. Overall, land disturbance and impacts to vegetation are limited. Upon completion of the transmission line installation, the rights-of-ways will be maintained as a natural emergent/scrub shrub habitat that resembles successional conditions that would allow for natural communities to exist within this converted habitat regime. The successional conditions created and maintained within transmission rights-of-ways- resemble semi-open habitat that mirror a natural disturbance regime. The permanent impacts associated with the proposed Project are discrete and limited to the structure foundation locations only.

Diabase communities are most likely to occur in semi-open areas that have a disturbance regime similar to that of pre-settlement wildfires, and that also have not been heavily infested by invasive plants. Areas that do not receive this type of intermediate disturbance (including areas that are subject to intense disturbance) typically do not provide high quality habitat for the diabase associated species.

Dominion Energy Virginia strives to be in compliance with local, state, and federal regulations. Rare species are not classified as endangered or threatened, so are not protected by any regulations. A requirement to inventory these resources prior to construction would result in significant delay to the construction schedule, potentially increasing project costs.

Due to the low likelihood of diabase plants in the Project area, and the lack of any legal status via federal or state law for the majority of these species, the Company has considered the DCR-DNH recommendations and concludes that DCR-DNH's recommendation for an inventory for rare plants associated with diabase glades in the Project area is not applicable. In lieu of conducting an inventory of these resources prior to construction, Dominion Energy Virginia suggests that it provide the Company's construction team with information about the rare diabase plant species and coordinate with DCR-DNH if a species of concern is observed.

Cub Run (T&E Water)

As mentioned above, DCR-DNH recommends coordination with DWR pre-construction regarding Cub Run, the T&E Water for the Wood turtle. However, it should be noted that there is no confirmed documentation of the Wood turtle within the study area, and according to DWR's Wildlife Environmental Review Map Service database, the closest recorded documentation was in 1998, 5.5 miles north of the study area.

Furthermore, as noted by the DWR, the species is known to occur in habitats with clear streams adjacent to forested floodplains with nearby fields, wet meadows, and farmlands. Impacts would be limited to potential structure placement, and the areas would continue to function as they had prior to construction. Due to significant declines in Wood turtle populations throughout much of Virginia, this species is very unlikely to occur in the Project area even in areas of ostensibly suitable habitat where it may have historically occurred. No impacts are anticipated to the species as a result of the proposed Project.

From a practical perspective, a habitat assessment prior to construction would result in a significant delay to the construction schedule, potentially increasing Project costs. The Company does not believe this is necessary given the low likelihood of disturbance to the Wood turtle species.

For these reasons, the Company concludes that this recommendation from DCR-DNH is unreasonable and unnecessary. In lieu of conducting a habitat assessment,

the Company agrees to provide its construction team with information about the Wood turtle and to coordinate with DCR-DNH if the species of concern is observed within the Project area.

Ecological Cores

DCR also found that the Project intersects multiple Ecological Cores with the ranks of C4 (moderate ecological integrity) and C5 (general ecological integrity). The DCR defines areas of 100 acres or greater of contiguous natural land cover associated with areas of high ecological value as ecological cores, which provide refuge for thousands of species of animals and plants, in addition to a variety of recreational opportunities and open space resources for the public. Smaller areas of continuous interior cover (i.e., 10 to 99 acres), called habitat fragments, support ecological cores and provide similar functions and values. Because the quality of ecological cores varies across different landscapes, the DCR evaluates ecological cores using an Ecological Integrity Score that ranks the relative contribution of different ecosystem services. The rankings range from C5 (General) to C1 (Outstanding). Habitat fragments are similarly classified though none are ranked above C3.

When routing transmission lines, ERM attempts to avoid higher-ranking ecological cores to the extent practicable, while also taking into consideration other routing constraints. When avoidance is not possible, ERM attempts to minimize the crossing length of higher-ranking ecological cores, collocate with existing linear corridors, cross previously cleared or disturbed areas, and minimize fragmentation by following core boundaries to the extent practicable. Where cores are crossed, the habitat is not fully lost as the transmission lines are maintained with an open meadow/shrub cover consistent with successional habitat. Neither the Takeoff Loop Proposed Route nor the Sully-Takeoff Partial Reconductor/Rebuild Proposed Route cross any ecological cores. DCR found that the Aviator-Takeoff Proposed Route and Alternative Routes intersect multiple ecological cores with rankings of C4 or C5. Impacts on these cores from the Project would result from tree clearing for the new transmission right-of-way. Overall, however, due to the current conditions of the cores and locations of the crossings, no significant impact to natural heritage resources is anticipated. Ecological cores crossed by the Aviator-Takeoff Proposed Route and Alternative Routes are presented in Table G-2.

Table G-2
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Ecological Cores C4 (Moderate) through C5 (General) Crossed by 230 kV Aviator-Takeoff Lines

Route	Ecological Core Crossed
Aviator-Takeoff Proposed Route (Route 1)	○ C4 – Moderate ▪ Core ID 33978: The Aviator-Takeoff Proposed Route crosses the southern boundary of this C4 core just north of South Perimeter Road for less than 0.1

Table G-2
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Ecological Cores C4 (Moderate) through C5 (General) Crossed by 230 kV Aviator-Takeoff Lines

Route	Ecological Core Crossed
	mile. This core is an approximately 274-acre forested area that contains Cub Run and the associated Resource Protection Area. It exists south of Runway Road, east of Pleasant Valley Road, and north of Adkins Road. The core has been fragmented by an unmarked road. The Aviator-Takeoff Proposed Route would impact approximately 0.3 acre of the ecological core. o C5 – General ▪ Core ID 34041: The Aviator-Takeoff Proposed Route crosses the southern boundary of this C5 core northeast of the future Aviator Substation and just north of South Perimeter Road for less than 0.1 mile. This core is an approximately 42-acre forested area contained by Runway Road, Equipment Road, and South Perimeter Road. The Aviator-Takeoff Proposed Route would impact approximately 0.3 acre of the ecological core. Historical aerial imagery indicates approximately 6.6 acres of forest was cleared prior to April 1991, but tree cover has since recovered to resemble surrounding area. It is worth noting that Core 34041 would be classified as a habitat fragment based on the DCR's definition, as this core measure 42 acres in area.
Aviator-Takeoff Alternative Route 2	o C5 – General ▪ Core ID 34123: Aviator-Takeoff Alternative Route 2 crosses through the northeastern portion of the core, east of the future Aviator Substation, for 0.2 mile and 2.7 acres. This core is an approximately 74-acre mostly cleared and partially forested area with South Perimeter Road to the north, Willard Road to the west, and Route 50 to the south. Tree clearing of land within the core began between April and June 2022, and currently approximately 34 acres of the core have been cleared for a future data center. The core has been significantly fragmented and reduced in size. Additionally, it is worth noting that Core 34123 would be classified as a habitat fragment based on the DCR's definition, as this core measure 74 acres in area.
Aviator-Takeoff Alternative Route 3	o C5 – General ▪ Core ID 34123: Aviator-Takeoff Alternative Route 3 crosses through the northeastern portion of the core, east of the future Aviator Substation, for 0.2 mile and 2.7 acres. This core is an approximately 74-acre mostly cleared and partially forested area with South Perimeter Road to the north, Willard Road to the west, and Route 50 to the south. Tree clearing of land within the core began between April and June 2022, and currently approximately 34 acres of the core have been cleared for a future data center. The core has been significantly fragmented and reduced in size. Additionally, it is worth noting that Core 34123 would be classified as a habitat fragment based on the DCR's definition, as this core measure 74 acres in area.

To summarize, the only cores crossed by the Project have rankings of C4 (Moderate) or C5 (General) and the areas crossed are either minor areas along the core boundaries or in areas cleared for development.

To obtain the most current eagle nest data, ERM reviewed the Center for Conservation Biology ("CCB") Virginia Eagle Nest Locator mapping portal, which provides information about the Virginia Bald eagle (*Haliaeetus leucocephalus*) population, including the results

of the CCB's annual eagle nest survey. Based on the CCB Virginia Eagle Nest Locator mapping portal, the study area is not located within an Eagle Concentration Area, and the Project's Proposed or Alternative Routes, inclusive of the Takeoff Substation, do not intersect any Primary or Secondary Buffers of currently documented Bald eagle nests as identified in The Bald Eagle Protection Guidelines for Virginia (2012). According to the CCB database, there are no eagle nests within the study area. The closest nest (Nest ID FF1603) is approximately 4.0 miles east of the study area, and it is unknown if the nest is occupied. The nest was last checked for occupation in 2014. None of the route alternatives are within the 660-foot management buffer for the nest. The Company will work with the appropriate jurisdictional agencies to minimize impacts on this species.

Construction and maintenance of the new transmission line facilities could have minor impacts on wildlife; however, impacts on most species will be short-term in nature and limited to the period of construction. The Company will work with the appropriate jurisdictional agencies to minimize impacts on resources, as appropriate and indicated above, during implementation of the Project.

Takeoff Loop and Substation

Takeoff Loop Proposed Route (Route 1)

The Takeoff Loop Proposed Route, inclusive of the proposed Takeoff Substation, has the potential to affect approximately:

- 3.9 acres of forested habitat, which could provide summer habitat for the NLEB and TCB; and
- 4.7 acres of open land, which could provide habitat for Henslow's sparrow and Torrey's mountain-mint.

Takeoff Loop Alternative Route 2

The Takeoff Loop Route 2, inclusive of the proposed Takeoff Substation, has the potential to affect approximately:

- 0.8 acre of forested habitat, which could provide summer habitat for the NLEB and TCB; and
- 5.6 acres of open land, which could provide habitat for Henslow's sparrow and Torrey's mountain-mint.

Sully-Takeoff Partial Rebuild Segment

The 0.9-mile Sully-Takeoff Partial Rebuild Segment is entirely within existing, maintained transmission line rights-of-way, and it will have no new or only negligible impacts on natural resources. The five replacement structures within the 0.9-mile Sully-Takeoff Partial Rebuild Segment will have a total permanent impact of less than 200 square feet (less than 0.01 acre), and no new right-of-way or permanent access roads will be obtained or constructed. As such, the Sully-Takeoff Partial Rebuild Segment will have no impact on natural resources.

Aviator-Takeoff Lines

Aviator-Takeoff Proposed Route (Route 1)

The Aviator-Takeoff Proposed Route has the potential to affect approximately:

- 21.8 acres of forested habitat, which could provide summer habitat for the NLEB and TCB;
- 10.0 acres of open land, which could provide habitat for Henslow's sparrow and Torrey's mountain-mint;
- Three perennial streams (Cub Run, Dead Run, and Cain Branch), which could provide habitat for the Wood turtle or Yellow lance; and
- 0.6 acre across two ecological cores with a DCR ranking of C4 (Moderate) to C5 (General).

Aviator-Takeoff Alternative Route 2

The Aviator-Takeoff Alternative Route 2 has the potential to affect approximately:

- 17.8 acres of forested habitat, which could provide summer habitat for the NLEB and TCB;
- 8.1 acres of open land, which could provide habitat for Henslow's sparrow and Torrey's mountain-mint;
- Three perennial streams (Sand Branch, Cub Run, and Cain Branch), which could provide habitat for the Wood turtle or Yellow lance; and
- 2.7 acres across one ecological core with a DCR ranking of C5 (General).

Aviator-Takeoff Alternative Route 3

The Aviator-Takeoff Alternative Route 3 has the potential to affect approximately:

- 15.3 acres of forested habitat, which could provide summer habitat for the NLEB and TCB;

- 8.0 acres of open land, which could provide habitat for Henslow's sparrow and Torrey's mountain-mint;

- Four perennial streams (Sand Branch with two crossings, Cub Run, and Cain Branch), which could provide habitat for the Wood turtle or Yellow lance; and

- 2.7 acres across one ecological core with a DCR ranking of C5 (General).

Impacts to bat habitat will be minimized through coordination with appropriate jurisdictional agencies and consideration of time of year restrictions ("TOYRs"), as discussed in Section 2.K, Wildlife Resources. Work within streams would be limited to temporary crossings, where necessary, with impacts limited to tree clearing at waterbody crossings and the reduction of riparian buffers. There would be no in-stream construction.

As described in Section 2.B, waterbodies would be maintained for proper drainage using culverts or other crossing devices. Outside of structure placement, there would be no permanent impacts to open land habitat.

New and updated information is continually added to DCR's Biotics database. The Company shall re-submit Project information and a map for an update on this natural heritage information if the scope of the Project changes and/or six months have passed before this information is utilized.[4]

H. Erosion and Sediment Control

The DEQ approved the Company's *Standards & Specification for Erosion & Sediment Control and Stormwater Management for Construction of Linear Electric Transmission Facilities (TE VEP 8000).* These specifications are given to the Company's contractors and require erosion and sediment control measures to be in place before construction of the line begins and specifies the requirements for rehabilitation of the right-of-way. A copy of the current DEQ approval letter dated February 27, 2024, is provided as Attachment 2.H.1. According to the approval letter, coverage is effective from February 27, 2024, through February 26, 2025.

[4] The Company updated this commitment consistent with discussions held between the Company and DCR representatives on August 23, 2022.

I. Archaeological, Historic, Scenic, Cultural, or Architectural Resources

Dutton + Associates, LLC ("D+A") conducted a Stage I Pre-Application Analysis (Stage I Analysis) of potential impacts on cultural resources for the Takeoff Loop and Substation, Aviator-Takeoff Lines, and Sully-Takeoff Partial Reconductor/Rebuild in accordance with the Virginia Department of Historic Resources' (VDHR's) *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (Guidelines) (VDHR 2008). A copy of the Stage I Analysis, which was provided to VDHR on July 16, 2024, is included as Attachment 2.I.1. The analysis identified and considered previously recorded resources within the following study tiers as specified in the Guidelines:

- National Historic Landmark ("NHL") properties located within a 1.5-mile radius of each route centerline.
- National Register of Historic Places ("NRHP")-listed properties, NHLs, battlefields, and historic landscapes within a 1.0-mile radius of each route centerline.
- NRHP-eligible and -listed properties, NHLs, battlefields, and historic landscapes within a 0.5-mile radius of each route centerline.
- Qualifying architectural resources and archaeological sites located within the right-of-way for each route.

Information on cultural resources within each of these study tiers was obtained from the Virginia Cultural Resources Information System ("VCRIS").

In addition to the VCRIS, D+A collected information from the Fairfax County Office of Historic Preservation and Loudoun County Historic and Cultural Sites. D+A additionally collected information from the National Park Service ("NPS") and on battlefields surveyed and assessed by the American Battlefield Protection Program ("ABPP").

Along with a records review carried out for the four tiers as defined by VDHR, D+A also conducted a field assessment of the considered aboveground resources for the Aviator-Takeoff Proposed Routes in accordance with the VDHR Guidelines. Digital photographs of each resource and views to the proposed transmission line were taken. All photographs were taken from the public right-of-way or where access to the property was granted.

A summary of the considered resources identified in the vicinity of the Proposed and Alternative Routes, inclusive of the Takeoff Substation, and recommendations concerning Project effects are provided in the following discussion. The information presented here derives from existing records and does not purport to encompass the entire suite of historic and archaeological resources that may ultimately be affected by the undertaking.

Resources located within the right-of-way of the Takeoff Loop and Substation, Sully-Takeoff Rebuild Segment and Aviator-Takeoff Proposed and Alternative Routes may be subject to both direct impacts from placement of the transmission line across the property as well as visual impacts from changes to the viewshed introduced by the new transmission infrastructure. Resources in the 0-0.5-mile study tier would not be directly impacted but would likely be visually impacted unless topography or vegetation obscures the view from the resource to the transmission line. At a distance over 0.5 mile, it becomes less likely that a resource would be within line-of-sight of the new transmission facilities. Beyond 1.0 mile, it becomes even less likely that a given resource would be within line-of-sight of the Project. A complete architectural survey is necessary to determine which resources would be visually impacted and to survey for additional unrecorded resources. This survey would be completed after the Commission approves the Project.

The nature of the impacts on cultural resources from construction and operation of the Project, while estimated in D+A's study with the assistance of photo simulations, will depend on the final design in which the exact placement and height of transmission line structures are confirmed. As part of the forthcoming architectural survey, Project impacts on these and any newly identified resources would be assessed. The study area for the survey would be defined based on the height of the transmission line structures, topography, tree cover, and other factors impacting line-of-sight from resources to the routes.

Takeoff Loop and Substation

Takeoff Loop Proposed Route (Route 1)

One aboveground historic resource (029-0037) was identified within the one-mile VDHR study tier for Takeoff Loop Proposed Route (Table I-1). This resource would have no impact from this route due to the intervening vegetation and modern infrastructure.

Sully Plantation, 029-0037, is approximately 0.62 mile from Takeoff Loop Route 1. Due to the immediate setting and planned screening from preservation efforts, there is little visibility of surrounding modern infrastructure from the main house on Sully Plantation. The route alternative would be further from the resource than an existing transmission line and would be screened from the resource by the existing transmission line, dense vegetation, and modern development. D+A found that there would be no visibility of the Project from the Sully Plantation property. Thus, D+A concluded that there would be no impact to 029-0037 from the Project.

TABLE I-1
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Resources in VDHR Tiers for Proposed Takeoff Loop Proposed Route

Buffer (miles)	Considered Resources	VDHR #	Description	Impact	Route Alternative(s)
1.0-1.5	National Historic Landmarks	NA	NA	NA	NA
1.0-0.5	National Register - Listed	029-0037	Sully Plantation	No Impact	All Routes

	Battlefields	NA	NA	NA	NA
	Historic Landscapes	NA	NA	NA	NA
0.0-0.5	National Register – Eligible	NA	NA	NA	NA
	National Register -Potentially Eligible	NA	NA	NA	NA
	Battlefields	NA	NA	NA	NA
		NA	NA	NA	NA
0.0 (within ROW)	National Register -Eligible	NA	NA	NA	NA

The Stage I Analysis also considered the potential effects to archaeological resources. However, no archaeological sites fall within the right-of-way for Takeoff Loop Proposed Route.

Takeoff Loop Alternative Route 2

One aboveground historic resource (029-0037) was identified within the one-mile VDHR study tier for Takeoff Loop Alternative Route 2 (Table I-2). This resource would have no impact from this route due to the intervening vegetation and modern infrastructure.

Sully Plantation, 029-0037, is approximately 0.72 mile from Takeoff Loop Alternative Route 2. Due to the immediate setting and planned screening from preservation efforts, there is little visibility of surrounding modern infrastructure from the main house on Sully Plantation. The route alternative would be further from the resource than an existing transmission line and would be screened from the resource by the existing transmission line, dense vegetation, and modern development. D+A found that there would be no visibility of the Project from the Sully Plantation property. Thus, D+A concluded that there would be in no impact to 029-0037 from the Project.

TABLE I-2
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Resources in VDHR Tiers for Proposed Takeoff Loop Alternative Route 2

Buffer (miles)	Considered Resources	VDHR #	Description	Impact	Route Alternative(s)
1.0-1.5	National Historic Landmarks	NA	NA	NA	NA
1.0-0.5	National Register - Listed	029-0037	Sully Plantation	No Impact	All Routes
	Battlefields	NA	NA	NA	NA
	Historic Landscapes	NA	NA	NA	NA
0.0-0.5	National Register – Eligible	NA	NA	NA	NA
	National Register -Potentially Eligible	NA	NA	NA	NA
	Battlefields	NA	NA	NA	NA
		NA	NA	NA	NA
0.0 (within ROW)	National Register -Eligible	NA	NA	NA	NA

Stage 1 Analysis also considered the potential effect to archaeological resources. One site, 44FX1408, lies within what would be the right-of-way of Takeoff Loop Alternative Route 2. This resource is a historic (20th century) multiple dwelling site. There is no information in the VCRIS regarding the site condition, though the site previously was evaluated as not eligible for the NRHP (VCRIS 2024). The site is in a developed area.

Sully-Takeoff Partial Reconductor/Rebuild

One aboveground historic resource was identified within the one-mile VDHR study tier for the Sully-Takeoff Partial Rebuild (Table I-3). This resource would not have any visibility towards this route due to the intervening vegetation and modern infrastructure.

Sully Plantation, 029-0037, is approximately 0.47 mile from the Sully-Takeoff Partial Rebuild. Due to the immediate setting and planned screening from preservation efforts, there is little visibility of surrounding modern infrastructure from the main house at the site. The Project would be installed further from the property than an existing transmission line behind dense vegetation and modern development. It is expected that there would be no view of the Project from the Sully Plantation property. Thus, D+A concluded there would be no impact to 029-0037.

TABLE I-3
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Resources in VDHR Tiers for Sully-Takeoff Partial Reconductor/Rebuild

Buffer (miles)	Considered Resources	VDHR #	Description	Impact
1.0-1.5	National Historic Landmarks	NA	NA	NA
1.0-0.5	National Register - Listed	NA	NA	NA
	Battlefields	NA	NA	NA
	Historic Landscapes	NA	NA	NA
0.0-0.5	National Register – Listed	029-0037	Sully Plantation	No Impact
	National Register - Eligible	NA	NA	NA
	Battlefields	NA	NA	NA
		NA	NA	NA
0.0 (within ROW)	National Register -Eligible	NA	NA	NA

Stage 1 Analysis also considered the potential effect to archaeological resources. There are four archaeological sites within the right-of-way of Sully-Takeoff Partial Reconductor/Rebuild (44FX0286, 44FX0430, 44FX1742, and 44FX1792).

Site 44FX0286 is a prehistoric lithic scatter of unknown temporal affiliation that has been previously disturbed by residential development. The site has not been evaluated to determine its eligibility for listing in the NRHP. It lies on the south side of the existing transmission right-of-way in a residential neighborhood. Due to previous ground

disturbance from residential development over the site area, it is unlikely that any intact cultural remains are present at the site.

44FX0430 is a historic (19th century) farmstead site disturbed by previous commercial development, though it has not been evaluated to determine its eligibility for listing in the NRHP (VCRIS 2024). The site is on the east side of the existing right-of-way in a parking lot. Due to extensive previous ground disturbance from commercial development covering the site area, it is likely the site is destroyed.

Site 44FX1742 is a prehistoric lithic scatter of unknown temporal affiliation impacted by previous commercial development, though it has not been evaluated to determine its eligibility for listing in the NRHP (VCRIS 2024). The site is on the south side of the existing right-of-way in a parking lot. Due to extensive previous ground disturbance from commercial development covering the site area, it is likely the site is destroyed.

Site 44FX1792 is a prehistoric temporary camp site of unknown temporal affiliation impacted by previous commercial development, though it has not been evaluated for to determine its eligibility for listing in the NRHP (VCRIS 2024). The site on the south side of the existing right-of-way in a parking lot. Due to extensive previous ground disturbance from commercial development covering the site area, it is likely the site is destroyed.

Aviator-Takeoff Lines

Aviator-Takeoff Proposed Route (Route 1)

One aboveground historic resource (029-0037) was identified within the one-mile VDHR study tier for Takeoff Loop Route 1 (Table I-4). This resource would have no impact from this route due to the intervening vegetation and modern infrastructure.

Sully Plantation, 029-0037, is approximately 0.7 mile from Aviator-Takeoff Proposed Route. Due to the immediate setting and planned screening from preservation efforts, there is little visibility of surrounding modern infrastructure from the main house on Sully Plantation. The route alternative would be further from the resource than an existing transmission line and would be screened from the resource by the existing transmission line, dense vegetation, and modern development. D+A found that there would be no visibility of the Project from the Sully Plantation property. Thus, D+A concluded that there would be in no impact to 029-0037 from the Project.

TABLE I-4
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Resources in VDHR Tiers for Proposed Aviator-Takeoff Proposed Route

Buffer (miles)	Considered Resources	VDHR #	Description	Impact	Route Alternative(s)
1.0-1.5	National Historic Landmarks	NA	NA	NA	NA
1.0-0.5	National Register - Listed	029-0037	Sully Plantation	No Impact	All Routes
	Battlefields	NA	NA	NA	NA

	Historic Landscapes	NA	NA	NA	NA
0.0-0.5	National Register – Eligible	NA	NA	NA	NA
	National Register -Potentially Eligible	NA	NA	NA	NA
	Battlefields	NA	NA	NA	NA
		NA	NA	NA	NA
0.0 (within ROW)	National Register -Eligible	NA	NA	NA	NA

Stage 1 Analysis also considered the potential effect to archaeological resources. There is one site within what would the right-of-way of Aviator-Takeoff Proposed Route (44FX0693). The site is a special or multi-purpose prehistoric site with an unknown temporal affiliation disturbed by historic landscaping activities. It has not been evaluated to determine its eligibility for listing in the NRHP (VCRIS 2024). While the site is currently forested, due to previous ground disturbance in the area, it is unlikely that any intact cultural remains are present at the site.

Aviator-Takeoff Alternative Route 2

One aboveground historic resource (029-0037) was identified within the one-mile VDHR study tier for Aviator-Takeoff Alternative Route 2 (Table I-5). This resource would have no impact from this route due to the intervening vegetation and modern infrastructure.

Sully Plantation, 029-0037, is approximately 0.7 mile from Aviator-Takeoff Alternative Route 2. Due to the immediate setting and planned screening from preservation efforts, there is little visibility of surrounding modern infrastructure from the main house on Sully Plantation. The route alternative would be further from the resource than an existing transmission line and would be screened from the resource by the existing transmission line, dense vegetation, and modern development. D+A found that there would be no visibility of the Project from the Sully Plantation property. Thus, D+A concluded that there would be in no impact to 029-0037 from the Project.

TABLE I-5
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Resources in VDHR Tiers for Proposed Aviator-Takeoff Alternative Route 2

Buffer (miles)	Considered Resources	VDHR #	Description	Impact	Route Alternative(s)
1.0-1.5	National Historic Landmarks	NA	NA	NA	NA
1.0-0.5	National Register – Listed	029-0037	Sully Plantation	No Impact	All Routes
	Battlefields	NA	NA	NA	NA
	Historic Landscapes	NA	NA	NA	NA
0.0-0.5	National Register – Eligible	NA	NA	NA	NA
	National Register -Potentially Eligible	NA	NA	NA	NA
	Battlefields	NA	NA	NA	NA
		NA	NA	NA	NA
0.0 (within ROW)	National Register -Eligible	NA	NA	NA	NA

Stage 1 Analysis also considered the potential effect to archaeological resources. There are five archaeological sites within what would be the right-of-way of Aviator-Takeoff Alternative Route 2 (44FX0274, 44FX0330, 44FX1012, 44FX1013, and 44FX3259).

44FX0274 is a prehistoric artifact scatter of unknown temporal affiliation. The site has been previously disturbed due to historic cultivation activities and surface erosion. The site additionally is bisected by a road and the northern portion of the site is currently inundated by a retention pond. The site has been previously evaluated as not eligible for listing in the NRHP (VCRIS 2024).

Site 44FX0330 is a prehistoric site of unknown temporal affiliation and function. There is no information in the VCRIS regarding the condition of the site, which has not been evaluated to determine its eligibility for listing in the NRHP (VCRIS 2024). While the site is currently forested, due to previous ground disturbance and nearby commercial development, it is unlikely that intact cultural remains are present at the site.

Site 44FX1012 is a site that has both prehistoric (Paleoindian, Archaic, and Woodland) and unknown historic components and has not been evaluated for the NRHP (VCRIS 2024). Previous Phase I surveys recorded the site as partially destroyed due to historic tree clearing and land grading and artifacts were primarily collected from surface sweeping after bulldozing activities (VRCIS 2024). It is located in a forested area east of Dulles S. Court. Due to previous ground disturbance, it is unlikely that any intact cultural remains that would be evaluated as eligible for the NRHP would be encountered.

Site 44FX1013 is prehistoric site of unknown temporal affiliation and function. There is no information in the VCRIS regarding the condition of the site, which has not been evaluated to determine its eligibility for listing in the NRHP (VCRIS 2024). The site is in a forested area crossed a road. Due to previous ground disturbance and nearby commercial development, it is unlikely that intact cultural remains are present at the site.

Site 44FX3259 is a historic (19th and 20th centuries) single dwelling site. There is no information in the VCRIS regarding the condition of the site, which previously was evaluated as not eligible for listing the NRHP (VCRIS 2024). The site lies in a forested area crossed by a road.

Aviator-Takeoff Alternative Route 3

One aboveground historic resource (029-0037) was identified within the one-mile VDHR study tier for the Aviator-Takeoff Alternative Route 3 (Table I-6). This resource would have no impact from this route due to the intervening vegetation and modern infrastructure.

Sully Plantation, 029-0037, is approximately 0.6 mile from Aviator-Takeoff Alternative Route 3. Due to the immediate setting and planned screening from preservation efforts, there is little visibility of surrounding modern infrastructure from the main house on Sully Plantation. The route alternative would be further from the resource than an existing transmission line and would be screened from the resource by the existing transmission line, dense vegetation, and modern development. D+A found that there would be no visibility of the Project from the Sully Plantation property. Thus, D+A concluded that there would be in no impact to 029-0037 from the Project.

TABLE I-6
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Resources in VDHR Tiers for Proposed Aviator-Takeoff Alternative Route 3

Buffer (miles)	Considered Resources	VDHR #	Description	Impact	Route Alternative(s)
1.0-1.5	National Historic Landmarks	NA	NA	NA	NA
1.0-0.5	National Register – Listed	029-0037	Sully Plantation	No Impact	All Routes
	Battlefields	NA	NA	NA	NA
	Historic Landscapes	NA	NA	NA	NA
0.0-0.5	National Register – Eligible	NA	NA	NA	NA
	National Register -Potentially Eligible	NA	NA	NA	NA
	Battlefields	NA	NA	NA	NA
		NA	NA	NA	NA
0.0 (within ROW)	National Register -Eligible	NA	NA	NA	NA

Stage 1 Analysis also considered the potential effect to archaeological resources. Aviator-Takeoff Alternative Route 3 shares a common alignment with Aviator-Takeoff Alternative Route 2 where it crosses Sites 44FX0274, 44FX0330, and 44FX1012. Descriptions of these sites are provided above. 44FX0152 is a prehistoric artifact scatter of unknown temporal affiliation previously disturbed by historic agricultural activities. This site has not been evaluated to determine its eligibility for listing in the NRHP (VCRIS 2024). While the site is currently forested, due to previous ground disturbance, it is unlikely that any intact cultural remains are present at the site.

By letter dated June 17, 2024, the Company solicited comments from VDHR on the proposed Project.

J. Chesapeake Bay Preservation Areas

Fairfax and Loudoun Counties are localities subject to the Chesapeake Bay Preservation Act ("CBPA"), which regulates development of lands that could impact water quality in the Chesapeake Bay and its tributaries.

Fairfax County has adopted the Chesapeake Bay Preservation Ordinance and has designated environmentally sensitive areas as Resource Protection Areas ("RPAs"), including tidal wetlands, tidal shores, perennially flowing streams, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or perennial waterbodies, and buffer areas that include land within a major floodplain, and a 100-foot buffer around any of these features. As such, Fairfax County designated RPAs are located around perennial waterbodies and associated wetland areas along the Proposed Route, including Dead Run, Cub Run, and Cain Branch, several unnamed, intermittent tributaries to these waterbodies and their associated wetlands.

Loudoun County has designated Chesapeake Bay Preservation Areas RPAs, including tidal wetlands, tidal waterbodies, perennially flowing streams, wetlands associated with perennially flowing streams, and a 100-foot buffer around them; and Resource Management Areas, land that could degrade water quality or value of RPAs. As such, RPAs are located around perennial waterbodies and associated wetland areas along Aviator-Takeoff Proposed Route, including Sand Branch, Dead Run, and Cub Run, several unnamed, intermittent tributaries to these waterbodies and their associated wetlands.

Construction, installation, operation, and maintenance of electric transmission lines are conditionally exempt from the CBPA as stated in the exemption for public utilities, railroads, public roads, and facilities in 9 VAC 25-830-150. The Company will meet those conditions. In addition, the Company will use Best Management Practices to limit impacts to CBPA areas to the minimum extent possible while safely and effectively constructing and maintaining its infrastructure.

See Attachment 2.J.1 for a DEQ memorandum dated July 2, 2024, indicating that, provided the Company adheres to certain requirements, the proposed Project activity would be consistent with the CBPA. The Company will meet those requirements and conditions as applicable and in accordance with the Dominion Energy Virginia *Standards & Specifications for Erosion & Sediment Control and Stormwater Management for Construction and Maintenance of Linear Electric Transmission Facilities* as approved by DEQ.

K. Wildlife Resources

Relevant agency databases were reviewed and requests for comments from the USFWS, and DCR were submitted to determine if the Project has the potential to affect any

threatened or endangered species. As discussed in Section 2.G and identified in Attachment 2.G.1, certain federal and state-listed species were identified as potentially occurring in the Project area. The Company will coordinate with the USFWS, DWR, and DCR as appropriate to determine whether additional surveys are necessary and to minimize impacts on wildlife resources.

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 actively is tracking updates from the USFWS with respect to the final guidance. Once issued, the Company plans to review and follow the final guidance to the extent it applies to the Company's projects. Until the final guidance is issued, the Company will continue following the interim guidance. For projects that may require additional coordination, the Company will coordinate with the USFWS.

The Company is also monitoring potential regulatory changes associated with the potential up-listing of the TCB. On September 14, 2022, the USFWS published the proposed rule to the Federal Register to list the TCB as endangered under the 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.

L. Recreation, Agricultural, and Forest Resources

The Project is expected to have minimal, incremental impacts on recreational, agricultural, and forest resources. Opportunities for collocation with other rights-of-way, particularly existing roads such as South Perimeter Road, were considered where possible as a means of avoiding or minimizing impacts on resources. Based on review of aerial recent aerial photography, no agricultural lands are crossed by the routes. Where forested areas are crossed, trees would be removed and vegetation kept to maintained heights within the right-of-way, though potential developments that will involve vegetation clearing (such as commercial and industrial or roadways) may occur within the study area.

The Virginia Agricultural and Forestal Districts Act provides for the creation of conservation districts designed to conserve, protect, and encourage the development and improvement of a locality's agricultural and forested lands. According to the Virginia Department of Forestry, no Virginia Agricultural and Forestal Districts are crossed by the Project.

The Virginia Scenic Rivers Program identifies and designates outstanding scenic, recreational, and historic waterbodies of statewide significance to conserve their natural corridors. No Scenic Rivers are crossed by the Project.

Under the Virginia Open-Space Land Act, any public body can acquire title or rights to real property for the preservation of open-space land. Most easements created under the Act are held by the Virginia Outdoors Foundation ("VOF"), but any state agency is authorized to create and hold an open-space easement. Such conservation easements are designed to preserve and protect open space and other resources and must be held for no less than five years in duration but can be held in perpetuity. No easements of this type are crossed by the Project.

Both Loudoun County and Fairfax County have local ordinances that are intended to maintain forested/vegetative buffers along waters, referred to in Loudoun County as River and Stream Corridor Resources ("RSCRs") buffers and in Fairfax County as RPAs. Construction of transmission lines is permitted within both RSCR buffer and RPA areas. There are RSCR buffers and RPAs that exist within the study area, associated with named and unnamed waterbodies including Cub Run, Sand Branch, Dead Run, and Cain Branch. Neither Takeoff Loop Proposed Route nor Alternative Route 2 cross any RPA. All three Aviator-Takeoff route alternatives span over these resources, but the crossings are perpendicular, utilize collocation, and are located at the narrowest locations of these resources to the extent practicable. The Sully-Takeoff Partial Reconductor/Rebuild Proposed Route crosses one RPA, although no new tree or vegetation clearing will occur within the RPA. Although transmission lines are exempt from the activity restrictions within RSCR buffers and RPAs, the Company will work to minimize any impact to the extent possible.

Any tree along the right-of-way that is tall enough to endanger the conductors if it were to break at the stump or uproot and fall directly toward the conductors and exhibits signs or symptoms of disease or structural defect that make it an elevated risk for falling, will be designated as a "danger tree" and may be removed. The Company's arborist will contact the property owner if possible before any danger trees are cut, except in emergency situations. The Company's Forestry Coordinator will inspect the rights-of-way within the field and designate any danger trees present. Qualified contractors working in accordance with the Company's Electric Transmission specifications will perform all danger tree cutting. The Project is expected to have minimal impacts on forest resources.

On June 17, 2024, the Company solicited DCR, VOF, and the Virginia Department of Forestry for comments on the Project. Dominion Energy Virginia received responses from VOF on June 18, 2024 and on July 1, 2024, indicating that the Project will not encroach on any existing nor proposed VOF open-space easements. A copy of the June 18th and July 1st responses from VOF are included as Attachment 2.L.1 and Attachment 2.L.2, respectively.

Recreational, agricultural, and forest resources crossed by the Project are discussed below. An assessment of impacts on these resources is provided in the Environmental Routing Study.

Takeoff Loop and Substation

Takeoff Loop Proposed Route (Route 1)

The northeastern corner of Cub Run Stream Valley Park is about 0.2 mile (1,095 feet) southwest of the Takeoff Loop Proposed Route right-of-way at the proposed Takeoff Substation. This resource is a Fairfax County Park Authority-owned and maintained 800-acre park encompassing the Cub Run and Cain Branch waterways. Land uses within the park include natural preservation, hiking, and biking along a network of paved and unpaved trails.[5] Within the study area, Cub Run Stream Valley Park is south of Route 50, east of Pleasant Valley Road, and west of Airline Parkway. Due to distance and the siting of Route 50 between the Takeoff Loop Proposed Route and the recreational resource, impacts to Cub Run Stream Valley Park are not anticipated.

NRCS soils data indicates approximately 1.0 acre is classified as prime farmland and 0.4 acre is classified as farmland of statewide importance, and approximately 3.9 acres of forested lands are crossed.

Takeoff Loop Alternative Route 2

The northeastern corner of the Cub Run Stream Valley Park is about 0.2 mile (1,150 feet) southwest of the Takeoff Loop Alternative Route 2 right-of-way at the proposed Takeoff Substation.

As Takeoff Loop Alternative Route 2 passes over Route 50, the route alternative also crosses two Fairfax County-identified bike paths along Route 50.

Due to the distance from Cub Run Stream Valley Park and allowable use of trails under transmission line infrastructure, physical impacts to these recreational resources are not anticipated. A visual impact should be expected for the bike paths; however, the collocation of the bike trails along Route 50 reduces impacts from project infrastructure.

NRCS soils data indicates there is no land classified as prime farmland and 0.4 acre is classified as farmland of statewide importance, and approximately 0.8 acre of forested land is crossed.

Sully-Takeoff Partial Rebuild Segment

The 0.9-mile Sully-Takeoff Partial Rebuild Segment is entirely within existing, maintained transmission line rights-of-way, and it will have no new or only negligible impacts on recreation, agricultural, and forest resources. The five replacement structures within the 0.9-mile Sully-Takeoff Partial Rebuild Segment will have a total permanent impact of less

[5] Fairfax County. 2024a. Park Authority. Accessed May 2024. https://www.fairfaxcounty.gov/parks/.

than 200 square feet (less than 0.01 acre), and no new right-of-way or permanent access roads will be obtained or constructed.

Aviator-Takeoff Lines

Aviator-Takeoff Proposed Route (Route 1)

In Fairfax County, the northeastern corner of the Cub Run Stream Valley Park is about 0.2 mile (1,125 feet) southwest of the Aviator-Takeoff Proposed Route right-of-way at the proposed Takeoff Substation. Due to the distance and siting of Route 50 between the Proposed Route and recreational resource, impacts to Cub Run Stream Valley Park are not anticipated.

No recreational resources are crossed or within 0.25 mile of Aviator-Takeoff Proposed Route within Loudoun County.

NRCS soils data indicates approximately 6.2 acres are classified as prime farmland and 2.5 acres are classified as farmland of statewide importance, and approximately 21.8 acres of forested lands are crossed. As noted above, however, there is no agricultural land along the crossed by the Project.

Aviator-Takeoff Alternative Route 2

In Fairfax County, the northwestern corner of Cub Run Stream Valley Park is about 0.1 mile (400 feet) southwest of the Aviator-Takeoff Alternative Route 2 right-of-way north of Route 50, east of Cub Run, and west of Avion Park Court. Aviator-Takeoff Alternative Route 2 also crosses four bike trails.

Due to the distance from Cub Run Stream Valley Park (emphasized by the siting of Route 50 between Aviator-Takeoff Alternative Route 2 and the resource) and allowable use of trails under transmission line infrastructure, direct impacts to these recreational resources are not anticipated. A visual impact should be expected for the bike paths; however, the collocation of the bike trails along roads within an industrial/commercial use area mitigates impacts from project infrastructure.

No recreational resources are crossed or within 0.25 mile of Aviator-Takeoff Alternative Route 2 within Loudoun County.

NRCS soils data indicates approximately 5.1 acres are classified as prime farmland and 7.7 acres are classified as farmland of statewide importance, and approximately 17.8 acres of forested lands are crossed. As noted above, however, there is no agricultural land along the crossed by the Project.

Aviator-Takeoff Alternative Route 3

In Fairfax County, the northwestern corner of Cub Run Stream Valley Park is about 0.2

mile (900 feet) southwest of the Aviator-Takeoff Alternative Route 3 right-of-way north of Route 50, east of Cub Run, and west of Avion Park Court. Aviator-Takeoff Alternative Route 3 also crosses four bike trails.

Due to the distance from Cub Run Stream Valley Park (emphasized by the siting of Route 50 between Route 3 and the resource) and allowable use of trails under transmission line infrastructure, direct impacts to these recreational resources are not anticipated. A visual impact should be expected for the bike paths; however, the collocation of the bike trails along roads within an industrial/commercial use area mitigates impacts from project infrastructure.

No recreational resources are crossed or within 0.25 mile of Aviator-Takeoff Alternative Route 3 within Loudoun County.

NRCS soils data indicates approximately 7.3 acres are classified as prime farmland and 7.5 acres are classified as farmland of statewide importance, and approximately 15.3 acres of forested lands are crossed. As noted above, however, there is no agricultural land along the crossed by the Project.

M. Use of Pesticides and Herbicides

Of the techniques available, selective foliar is the preferred method of herbicide application. The Company typically maintains transmission line rights-of-way by means of selective, low-volume applications of EPA-approved, non-restricted use herbicides. The goal of this method is to exclude tall-growing brush species from the right-of-way by establishing early successional plant communities of native grasses, forbs, and low-growing woody vegetation. "Selective" application means the Company sprays only the undesirable plant species (as opposed to broadcast applications). "Low volume" application means the Company uses only the volume of herbicide necessary to remove the selected plant species. The mixture of herbicides used varies from one cycle to the next to avoid the development of resistance by the targeted plants. There are four means of dispersal available to the Company, including by-hand application, backpack, fixed nozzle-radiarc, and aerial. Very little right-of-way maintenance incorporates aerial equipment. The Company uses licensed contractors to perform this work that are either certified applicators or registered technicians in the Commonwealth of Virginia.

DEQ has previously requested that only herbicides approved for aquatic use by the EPA or the USFWS be used in or around any surface water. The Company intends to comply with this request.

Additionally, based on a discussion between Company and DCR-DNH representatives, the Company reviewed its Integrated Vegetation Management Plan ("IVMP") for application to both woody and herbaceous species based on the species list available on the DCR website. The Company continues to coordinate with DNH on an addendum to the IVMP to further explain how the Company's operations and maintenance forestry program addresses invasive species. In November 2023, the Company submitted the

addendum draft to DCR for review and continued discussions. DCR provided an initial response to the addendum in January 2024. The Company will continue to meet with DCR to further discuss the documentation provided. Once the addendum is finalized, the Company will report on the results of its communications with DCR in future transmission certificate of public convenience and necessity ("CPCN") filings.[6]

N. Geology and Mineral Resources

The Project study area located within the Piedmont geologic province, which lies between the mountainous Blue Ridge province to the west and the terraced slopes of the Coastal Plain province to the east. The Piedmont is characterized by rolling topography, thick soils, and heavily weathered bedrock primarily caused by the region's humid climate. The geologic terranes of the province are relatively complex where many of the rock units are separated by faults and contain various igneous and metamorphic histories. Based on review of the Geologic Map of Virginia, the Project is located within a Mesozoic basin between the Blue Ridge and Western Piedmont-Potomac Terranes (William and Mary Department of Geology 2024).

Based on review of the Geologic Map of Virginia, the Takeoff Loop Proposed and Alternative Routes extend solely through a section of Triassic-age bedrock composed of interbedded sandstone, siltstone, and shale. For the Sully-Takeoff Partial Reconductor/Rebuild section, the bedrock underlying the Reconductor and Partial Rebuild Line is composed of one interval of interbedded sandstone and siltstone, followed by an interval of sandstone, both of which belonging to the Newark Supergroup. The bedrock underlying the Aviator-Takeoff Proposed and Alternative Routes belongs to two Triassic-age sections of the Newark Supergroup. Starting from the Aviator Substation, the beginning portion of the Aviator-Takeoff routes transect bedrock composed of interbedded shale and siltstone. Each route then transitions to interbedded sandstone, siltstone, and shale, with sandstone being the primary rock type, before terminating at the Takeoff Substation.

ERM reviewed publicly available Virginia Department of Energy datasets (2023), USGS topographic quadrangles, and recent (2023) digital aerial photographs to identify mineral resources in the Project area. Based on the review, one active mineral resource was

[6] *See, Application of Virginia Electric and Power Company, For approval and certification of electric transmission facilities: 230 kV Line #293 and 115 kV Line #83 Rebuild Project*, Case No. PUR-2021-00272, Final Order at 9-11 (Aug. 31, 2022) *(The Commission agreed with the Chief Hearing Examiner and declined to adopt DCR-DNH's recommendation regarding an invasive species management plan ("ISMP"), but directed the Company to meet with DCR-DNH and to report on the status of the meetings in the Company's next transmission CPCN filing)*; *see also* Report of Alexander F. Skirpan, Jr., Chief Hearing Examiner (Jun. 22, 2022) at 22 *(agreeing with the Company that, with its IVMP, the Company should not be required to undergo the additional cost of DCR-DNH's ISMP; however, recommending that the Company meet with DCR-DNH regarding its IVMP and report the results of the meeting in the next transmission CPCN filing)*.

identified within 0.25 mile of the Project. All Aviator-Takeoff Routes 1, 2, and 3 are located adjacent to but do not cross parcels owned by Chantilly Crushed Stone. According to available permit information, the Chantilly Crushed Stone quarry was originally permitted in 1968 to disturb approximately 304 acres, and to date, quarry operations have disturbed approximately 300 acres. The next closest mineral occurrence is a copper prospect located approximately 0.5 mile south of the Aviator-Takeoff Proposed Route.

The 0.9-mile Sully-Takeoff Partial Rebuild Segment is entirely within existing, maintained transmission line rights-of-way, and it will have no new impacts on geological resources. The five replacement structures within the 0.9-mile Sully-Takeoff Partial Rebuild Segment will have a total permanent impact of less than 200 square feet (less than 0.01 acre), and no new right-of-way or permanent access roads will be obtained or constructed. As such, the Sully-Takeoff Partial Rebuild Segment will have no impact on geological resources.

O. Transportation Infrastructure

Road and Railroad Crossings

No railroads are crossed by the Project (including Takeoff Loop and Substation Proposed and Alternative Routes, the Sully-Takeoff Partial Reconductor/Rebuild, and the Aviator-Takeoff Proposed or Alternative Routes).

Takeoff Loop and Substation

Takeoff Loop Proposed Route (Route 1)

The Takeoff Loop Proposed Route would cross the following three roadways, all maintained by MWAA:

- Lower Perimeter Road
- Downwind Road
- Airplane Road

Based on the 2020-2025 Fairfax County Transportation Priorities Plan ("TPP") and Virginia Department of Transportation ("VDOT") projects, the Takeoff Loop Proposed Route would not impact any future roads.

Takeoff Loop Alternative Route 2

The Takeoff Loop Alternative Route 2 would cross Route 50 and Lee Road, both maintained by VDOT. Based on the Fairfax County TPP and VDOT projects, the Takeoff Loop Alternative Route 2 would not impact any future roads.

Sully-Takeoff Partial Rebuild Segment

The 0.9-mile Sully-Takeoff Partial Rebuild Segment is entirely within existing, maintained transmission line rights-of-way, and it will have no new or only negligible impacts on transportation. The five replacement structures within the 0.9-mile Sully-Takeoff Partial Rebuild Segment will have a total permanent impact of less than 200 square feet (less than 0.01 acre), and no new right-of-way or permanent access roads will be obtained or constructed.

Aviator-Takeoff Lines

Aviator-Takeoff Proposed Route (Route 1)

The Aviator-Takeoff Proposed Route parallels South Perimeter Road for approximately 2.0 miles between Willard Road and Paul Garber Lane and collocates along Lower Perimeter Road for approximately 0.8 mile between Cabin Road and Route 50. The Aviator-Takeoff Proposed Route crosses the following six roadways, all roads (or portions of roads) maintained by MWAA:

- South Perimeter Road
- Equipment Road
- Pleasant Valley Road
- Unnamed airport access road
- Stonecroft Boulevard
- Lower Perimeter Road

Identified in the Loudoun County 2019 Countywide Transportation Plan ("CTP") and in discussions with Loudoun County Department of Transportation and Capital Improvement ("DTCI"), the planned Tall Cedars Parkway is expected to expand north of Route 50, passing west of Wade Drive, and extending into a planned interchange with another proposed roadway, identified as US 50 Alternative and as Route 50 North Collector Road. Tall Cedars Parkway is planned to be constructed as a four-lane roadway and classified as a major collector.

In an October 2023 meeting between ERM, the Company, and Loudoun County DTCI, Loudoun County DTCI stated that construction of Tall Cedars Parkway and Route 50 North Collector Road would not begin by December 2026, the planned in-service date for the Aviator-Takeoff Lines. The Aviator-Takeoff Proposed Route would be adjacent to the future Tall Cedars Parkway, as well as have at least one crossing of the conceptual roadway. The Company will continue to coordinate with Loudoun County DTCI regarding final location and design of the Tall Cedars Parkway.

Based on a review of the Fairfax County TPP and VDOT projects, Proposed Route would not impact any future roads in those jurisdictions.

Aviator-Takeoff Alternative Route 2

Aviator-Takeoff Alternative Route 2 parallels Route 50 for approximately 0.4 mile between Pleasant Valley Road and Stonecroft Boulevard. Aviator-Takeoff Alternative Route 2 crosses the following seven roadways, all roads maintained by VDOT except for the Loudoun Composting access road and Avion Park Court, both privately-owned roadways:

- Wade Drive
- Loudoun Composting access road
- Pleasant Valley Road
- Avion Park Court
- Stonecroft Boulevard
- Avion Parkway
- Virginia Mallory Drive

Based on a review of the Loudoun County CTP, Fairfax County TPP, and VDOT projects, Aviator-Takeoff Alternative Route 2, would cross the future Tall Cedars Parkway in Loudoun County but would not impact any future roads.

Aviator-Takeoff Alternative Route 3

Aviator-Takeoff Alternative Route 3 crosses the following six roadways, all roads maintained by VDOT except for Lavin Lane and Avion Park Court, both privately-owned roadways:

- Lavin Lane
- Pleasant Valley Road
- Avion Park Court
- Stonecroft Boulevard
- Avion Parkway
- Virginia Mallory Drive

Based on a review of the Loudoun County CTP, Fairfax County TPP, and VDOT projects, Aviator-Takeoff Alternative Route 3 would cross the future Tall Cedars Parkway in Loudoun County but would not impact any future roads.

Temporary closures of roads and or traffic lanes could be required during construction of the Project. No long-term impacts on roads are anticipated. The Company will comply with VDOT requirements for access to the rights-of-way from public roads. At the appropriate time, the Company will obtain the necessary VDOT permits as required and comply with permit conditions. The Company will work with Loudoun County to ensure the planned roads and proposed transmission facilities can co-exist.

On June 17, 2024, the Company solicited comments from VDOT on the proposed Project. VDOT responded on June 28, 2024, and a copy of the response is included as Attachment 2.O.1.

Airports

The design of the proposed Project must prevent interference with pilots' safe air travel in and out of airports. Such hazards or impediments include interference with navigation, communication equipment, and glare from materials and external lights.

ERM reviewed the Federal Aviation Administration's ("FAA") website to identify public use airports, airports operated by a federal agency or the U.S. Department of Defense, airports or heliports with at least one FAA-approved instrument approach procedure, and public use or military airports under construction within 10.0 nautical miles (nm) of the Project's Proposed and Alternative Routes. Of the 14 facilities identified by ERM in this area, 12 are private and two are public use.

The Dulles Airport (crossed by the Takeoff Loop Proposed Route and Aviator-Takeoff Proposed Route) is a public facility where the Project potentially could impact navigable airspace. ERM conducted an airport analysis to determine if any of the FAA defined Civil Airport Imaginary Surface would be penetrated by structures associated with the Project. ERM reviewed the height limitations associated with FAA-defined imaginary surfaces for all runways associated with this airport. Standard GIS tools, including ESRI's ArcPro 3D and Spatial Extension software were used to create and geo-reference the imaginary surfaces in space, and in relation to the locations and proposed heights of the transmission structures for all proposed and alternative routes, and the Sully-Takeoff Partial /Rebuild rebuild structure locations. Ground surface data for the study area was derived by using a USGS 10 Meter Digital Elevation Model. Based on the results of this review, ERM found there would be no potential for penetration into any of the imaginary surfaces associated with Dulles Airport. Thus, there would be no impacts to navigable airspace from the Project.

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. As notification will be required for this Project, during the permitting process, Dominion Energy Virginia will submit an FAA Form 7460-1 Notice pursuant to 14 CFR Part 77 for any tower locations that meet the review criteria.

On June 17, 2024, the Company solicited comments from the Virginia Department of Aviation ("DOAv") and the Metropolitan Washington Airports Authority (MWAA) on the proposed Project.

P. Drinking Water Wells

In response to an agency letter sent on June 17, 2024, Dominion Energy Virginia received an email from the Virginia Department of Health ("VDH"), Office of Drinking Water

("ODW") dated June 24, 2024, regarding potential Project impacts to public water distribution systems or sanitary sewage collection systems. A copy of this email is included as Attachment 2.P.1.

As a general matter, water wells within 1,000 feet of the route of the Project may be outside of the transmission line corridor and located on private property. The Company does not have the ability or right to field mark the wells on private property. In June 2021, the Company contacted VDH-ODW to propose a method of well protection, including plotting and calling out the wells on the Project's Erosion and Sediment Control Plan, to which VDH-ODW indicated that the Company's proposed method is reasonable. A copy of that correspondence is included as Attachment 2.P.2. The Company intends to follow this same approach in this proceeding, as it has in other cases, and will coordinate with VDH-ODW, as needed.

Q. Pollution Prevention

Generally, as to pollution prevention, as part of Dominion Energy Virginia's environmental compliance, the Company has a comprehensive Environmental Management System Manual in place that ensures it is committed to complying with environmental laws and regulations, reducing risk, minimizing adverse environmental impacts, setting environmental goals, and achieving improvements in its environmental performance, consistent with the Company's core values. Accordingly, any recommendation by the DEQ to consider development of an effective environmental management system has already been satisfied.

ATTACHMENTS

Dominion Energy Services, Inc.
120 Tredegar Street Richmond, VA 23219
DominionEnergy.com

June 17, 2024

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICAITON

Project: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

To Whom it may Concern,

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
2) Partially rebuild and reconductor an existing 230 kV overhead transmission line in Fairfax County ("Sully-Takeoff Partial Reconductor/Rebuild"); and
3) Construct a new overhead double circuit 230 kV transmission line in Loudoun County and Fairfax County (the "Aviator-Takeoff Lines").

Collectively, the Takeoff Loop and Takeoff Substation, the Sully-Takeoff Partial Reconductor/Rebuild, and the Aviator-Takeoff Lines are referred to as the "230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation" or the "Project."

The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") from the State Corporation Commission of Virginia (the "Commission"). In advance of filing an application for a CPCN from the Commission, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter.

Enclosed is a Project Overview Map depicting the Project's alternative routes, as well as the general Project location. All final materials, including maps, will be available in the Company's application filing to the Commission.

Finally, attached is a GIS shapefile of the transmission line routes to assist in the Project review. Please do not hesitate to contact James Young at (804) 750-6406 or james.p.young@dominionenergy.com if you have any additional questions.

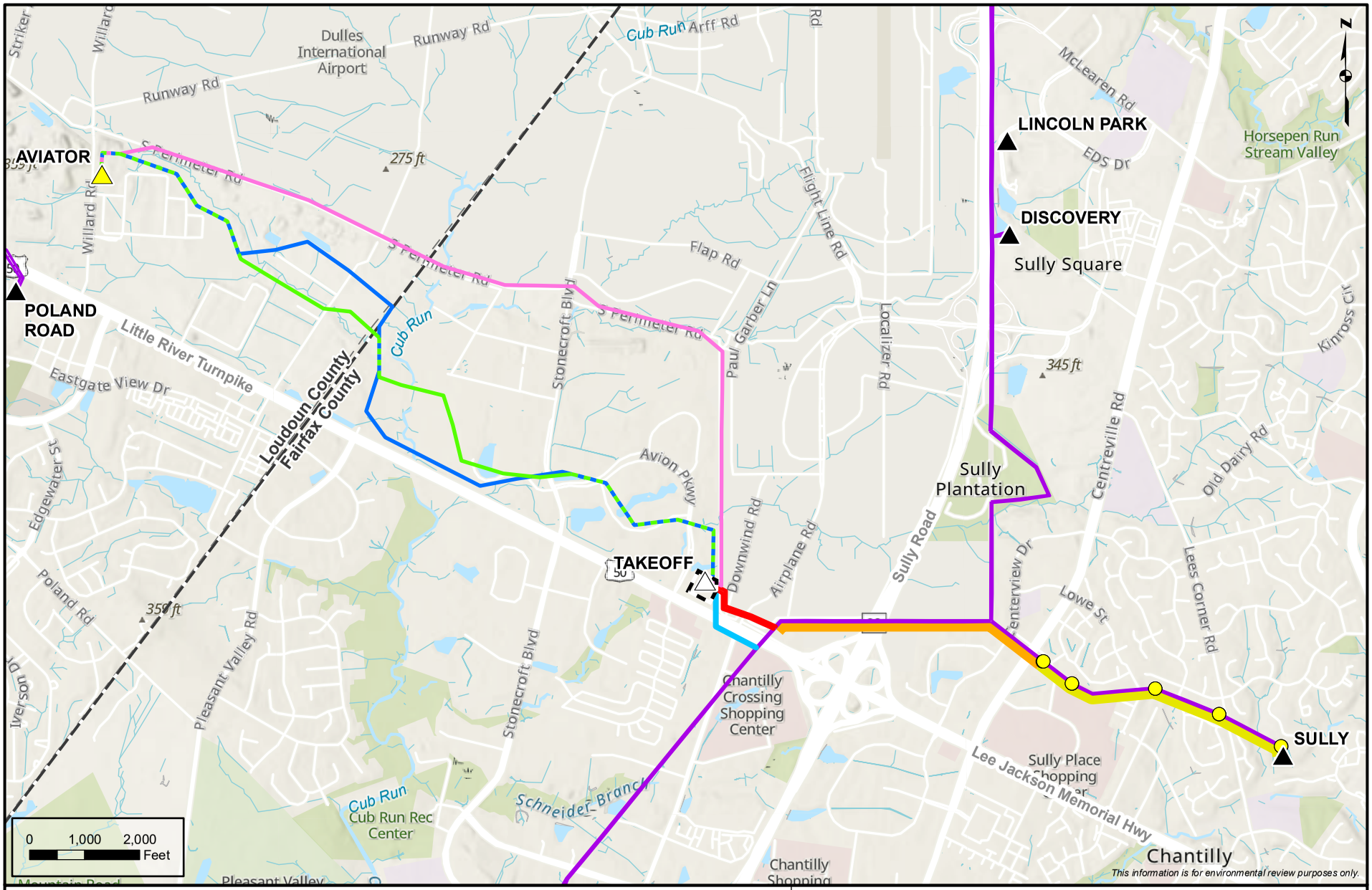
We appreciate your assistance with this Project review and look forward to any additional information you may have to offer.

Sincerely,

Dominion Energy Virginia

Elizabeth "Tibby" Hester
Authorized Representative
Manager, Environmental and Sustainability

Attachment: Project Overview Map
GIS Shapefile



- Existing Substation
- Future Substation
- Proposed Substation
- Existing Dominion Transmission Line

Aviator-Takeoff Lines
- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop
- Takeoff Loop Route 1
- Takeoff Loop Route 2
- Proposed Takeoff Substation Boundary

Sully-Takeoff Line
- Reconductor Only
- Reconductor and Partial Rebuild
- Rebuild Structure

Project Overview Map
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Services, Inc.
120 Tredegar Street Richmond, VA 23219
DominionEnergy.com

June 17, 2024

SCC ELECTRIC TRANSMISSION PROJECT NOTIFICAITON

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

Project: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Ms. Henicheck,

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
2) Partially rebuild and reconductor an existing 230 kV overhead transmission line in Fairfax County ("Sully-Takeoff Partial Reconductor/Rebuild"); and
3) Construct a new overhead double circuit 230 kV transmission line in Loudoun County and Fairfax County (the "Aviator-Takeoff Lines").

Collectively, the Takeoff Loop and Takeoff Substation, the Sully-Takeoff Partial Reconductor/Rebuild, and the Aviator-Takeoff Lines are referred to as the "230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation" or the "Project."

The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") from the State Corporation Commission of Virginia (the "Commission"). Pursuant to the July 2003 Memorandum Wetlands Impact Consultation, Dominion Energy Virginia is sending this letter to initiate consultation with the Virginia Department of Environmental Quality prior to filing an application for a CPCN from the Commission.

A wetland delineation has not been conducted at this time. However, Environmental

Resources Management conducted a wetland desktop study to identify probable wetlands based on a review of multiple data sources. The tables below provide a summary of the medium to high probability wetlands expected to be present within the proposed Project right-of-way. No medium to high probability wetlands were identified along either of the routes for the Takeoff Loop, and therefore, the Takeoff Loop Routes are not included in Table 1.

Table 1: Summary of the Probabilities of Wetland and Waterbody Occurrence along the Aviator-Takeoff Lines Route Alternatives [a, b]

Probability	Total within right-of-way Acres [b]	Wetland and Waterbody type (acres)				
		PEM (Emergent)	PFO (Forested)	PSS (Scrub-shrub)	Riverine (Stream)	PUB (Freshwater pond)
Aviator-Takeoff Route 1						
High	0.7	0.2	0.4	NA	0.1	NA
Medium/High	1.7	0.0	1.5	NA	0.2	NA
Medium	2.8	0.1	2.5	NA	0.2	0.0
Aviator-Takeoff Route 2						
High	2.1	0.2	1.4	NA	0.1	0.3
Medium/High	2.1	0.7	1.1	NA	0.2	0.1
Medium	2.4	0.3	1.3	NA	0.1	0.7
Aviator-Takeoff Route 3						
High	1.2	NA	0.8	NA	0.1	0.3
Medium/High	3.0	0.3	1.7	NA	0.3	0.7
Medium	2.6	0.1	1.1	NA	0.1	1.3
Sully-Takeoff Reconductor and Partial Rebuild						
High	NA	NA	NA	NA	NA	NA
Medium/High	0.0	0.0	0.0	NA	NA	NA
Medium	0.2	0.0	0.1	NA	0.0	0.0

Note: Totals may not equal the sum of addends due to rounding.

NA: Not applicable due to absence of wetland or waterbody type within the alternative route

[a] Numbers in this table have been rounded for presentation purposes; as a result, the totals may not reflect the sum.

[b] Total acres may not total the sum of wetland and waterbody types. This is due to some of the lower probability rankings do not overlap with NWI or interpreted wetlands, and therefore do not have a wetland/waterbody type associated with them.

The full Wetland Desktop Study will be submitted once finalized. Subsequently, a wetland delineation will be conducted and the limits of wetlands of other waters of the United States will be submitted to the U.S. Army Corps of Engineers for confirmation.

In advance of filing an application with the Commission, the Company respectfully requests that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter.

Enclosed is a Project Overview Map depicting the Project's alternative routes, as well as the general Project location. All final materials, including maps, will be available in the Company's application filing to the Commission.

Finally, attached is a GIS shapefile of the transmission line routes to assist in your Project review. Please do not hesitate to contact James P. Young at (804) 750-6406 or James.P.Young@dominionenergy.com if you have any additional questions.

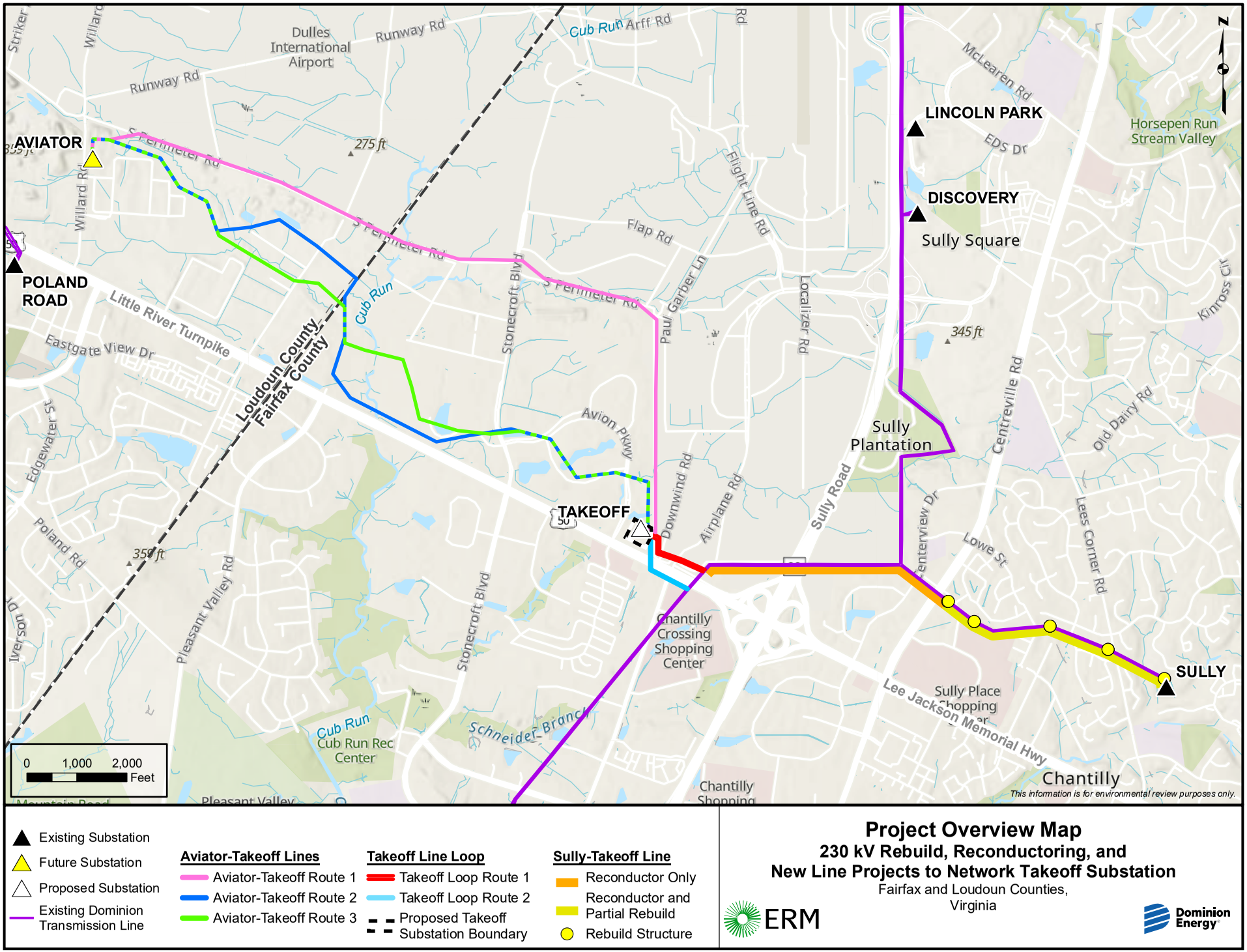
We appreciate your assistance with this Project review and look forward to any additional information you may have to offer.

Sincerely,

Dominion Energy Virginia

Elizabeth "Tibby" Hester
Authorized Representative
Manager, Environmental and Sustainability

Attachment: Project Overview Map
GIS Shapefile



Existing Substation
Future Substation
Proposed Substation
Existing Dominion Transmission Line

Aviator-Takeoff Lines
- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop
- Takeoff Loop Route 1
- Takeoff Loop Route 2
- Proposed Takeoff Substation Boundary

Sully-Takeoff Line
- Reconductor Only
- Reconductor and Partial Rebuild
- Rebuild Structure

Project Overview Map
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

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

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Notice Pursuant to Va. Code § 15.2-2202 E

Dear Mr. Hemstreet:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
2) Partially rebuild and reconductor an existing 230 kV overhead transmission line in Fairfax County ("Sully-Takeoff Partial Reconductor/Rebuild"); and
3) Construct a new overhead double circuit 230 kV transmission line in Loudoun County and Fairfax County (the "Aviator-Takeoff Lines").

Collectively, the Takeoff Loop and Takeoff Substation, the Sully-Takeoff Partial Reconductor/Rebuild, and the Aviator-Takeoff Lines are referred to as the "230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation" or the "Project."

The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") from the State Corporation Commission of Virginia (the "Commission"). Pursuant to § 15.2-2202 of the Code of Virginia, the Company is writing to notify Loudoun County of the proposed Project in advance of the CPCN filing and respectfully requests that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter.

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

Enclosed is a Project Overview Map depicting the Project's alternative routes, as well as the general Project location. All final materials, including maps, will be available in the Company's CPCN filing to the Commission.

If you would like to receive a GIS shapefile of the alternative routes to assist in your Project review or if you have any questions, please do not hesitate to contact me at (804) 201-3053 or greg.r.baka@dominionenergy.com.

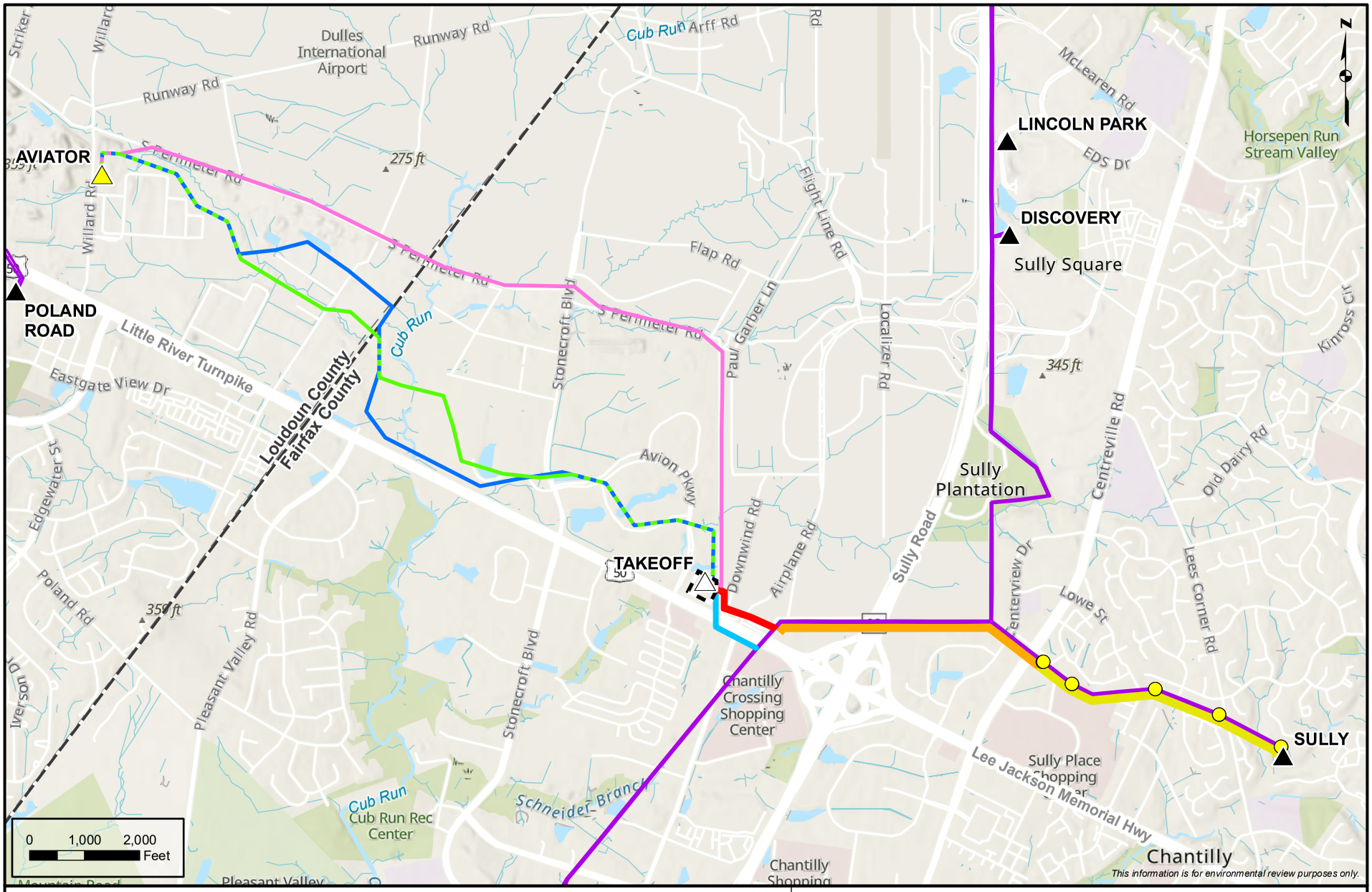
Dominion Energy Virginia appreciates your assistance with this Project review and looks forward to any additional information you may have to offer.

Sincerely,

Greg Baka

Greg Baka
Local Permitting Consultant

Attachment: Project Overview Map



Existing Substation
Future Substation
Proposed Substation
Existing Dominion Transmission Line

Aviator-Takeoff Lines
- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop
- Takeoff Loop Route 1
- Takeoff Loop Route 2
- Proposed Takeoff Substation Boundary

Sully-Takeoff Line
- Reconductor Only
- Reconductor and Partial Rebuild
- Rebuild Structure

Project Overview Map
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

Bryan Hill
Fairfax County Executive
12000 Government Center Pkwy
Fairfax, VA 22035

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation;

Notice Pursuant to Va. Code § 15.2-2202 E

Dear Mr. Hill:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
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3) Construct a new overhead double circuit 230 kV transmission line in Loudoun County and Fairfax County (the "Aviator-Takeoff Lines").

Collectively, the Takeoff Loop and Takeoff Substation, the Sully-Takeoff Partial Reconductor/Rebuild, and the Aviator-Takeoff Lines are referred to as the "230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation" or the "Project."

The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") from the State Corporation Commission of Virginia (the "Commission"). Pursuant to § 15.2-2202 of the Code of Virginia, the Company is writing to notify Fairfax County of the proposed Project in advance of the CPCN filing and respectfully requests that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter.

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

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If you would like to receive a GIS shapefile of the alternative routes to assist in your Project review or if you have any questions, please do not hesitate to contact me at (804) 201-3053 or greg.r.baka@dominionenergy.com.

Dominion Energy Virginia appreciates your assistance with this Project review and looks forward to any additional information you may have to offer.

Sincerely,

Greg Baka

Greg Baka
Local Permitting Consultant

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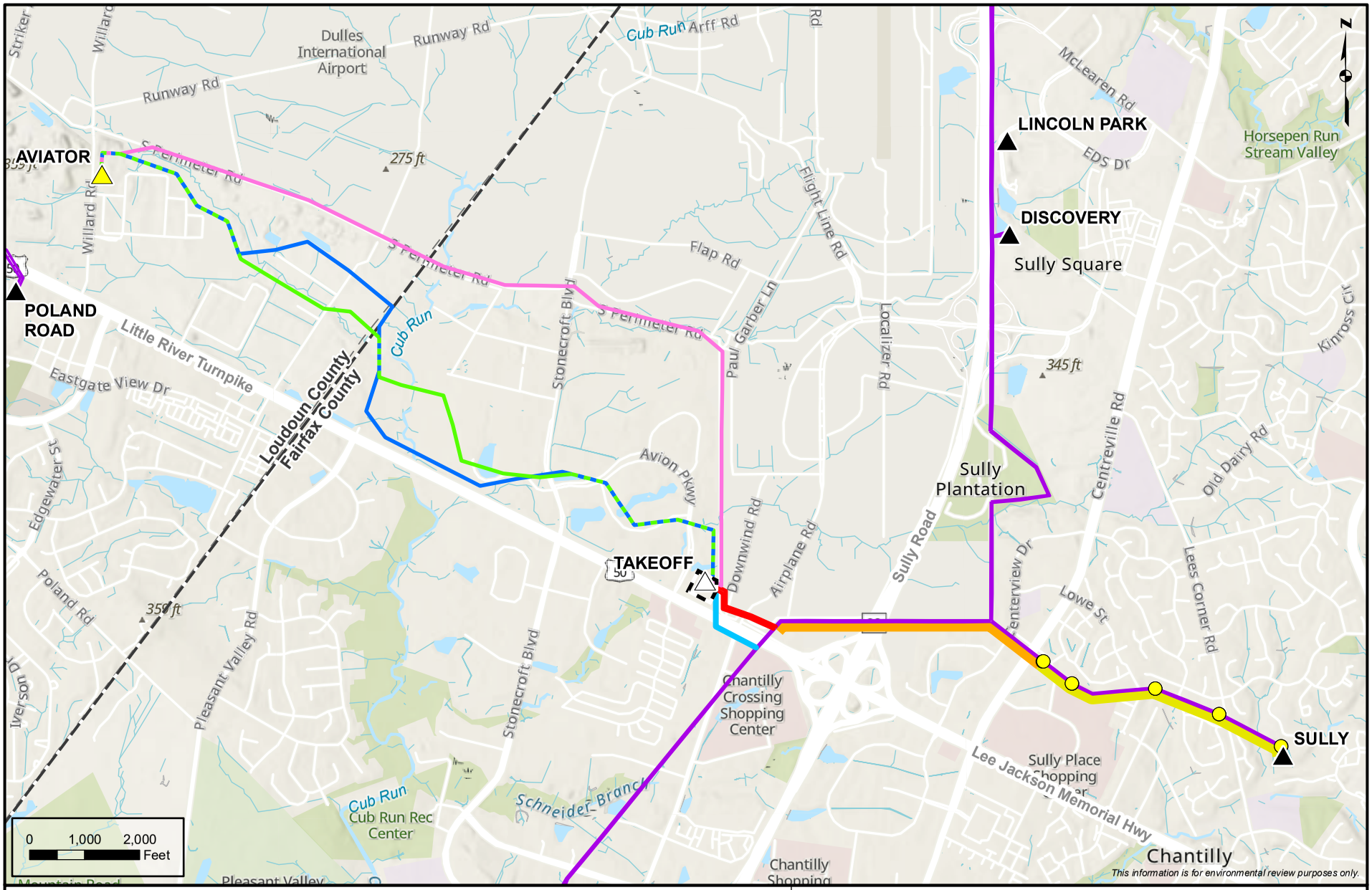

Existing Substation
Future Substation
Proposed Substation
Existing Dominion Transmission Line

Aviator-Takeoff Lines
- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop
- Takeoff Loop Route 1
- Takeoff Loop Route 2
- Proposed Takeoff Substation Boundary

Sully-Takeoff Line
- Reconductor Only
- Reconductor and Partial Rebuild
- Rebuild Structure

Project Overview Map
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

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

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Mr. Denny:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
2) Partially rebuild and reconductor an existing 230 kV overhead transmission line in Fairfax County ("Sully-Takeoff Partial Reconductor/Rebuild"); and
3) Construct a new overhead double circuit 230 kV transmission line in Loudoun County and Fairfax County (the "Aviator-Takeoff Lines").

Collectively, the Takeoff Loop and Takeoff Substation, the Sully-Takeoff Partial Reconductor/Rebuild, and the Aviator-Takeoff Lines are referred to as the "230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation" or the "Project."

The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") from the State Corporation Commission of Virginia (the "Commission"). The Company is writing to notify you of the proposed Project in advance of the CPCN filing and respectfully requests that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter.

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Sincerely,

Greg Baka

Greg Baka
Local Permitting Consultant

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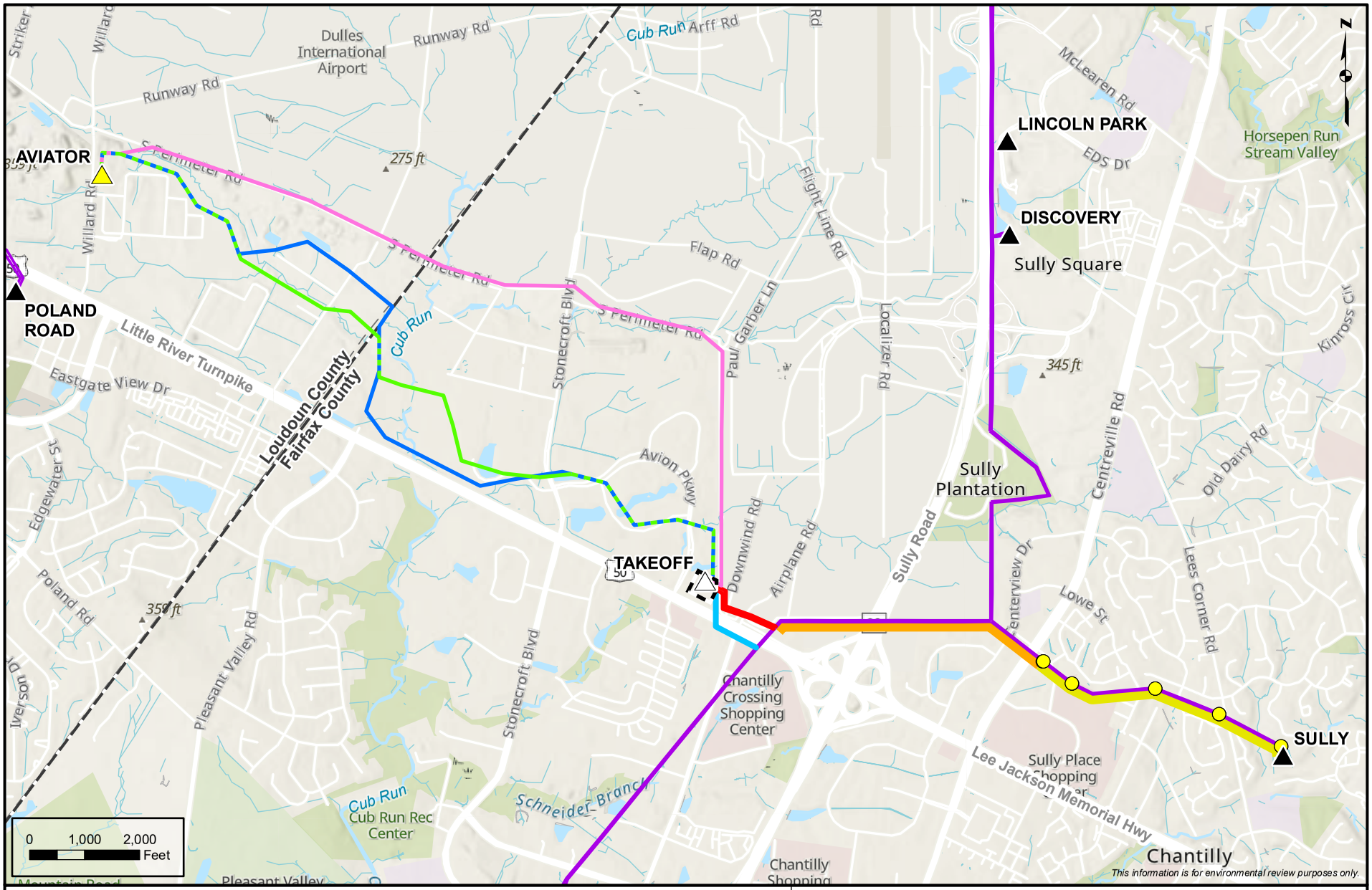

Project Overview Map

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

Mr. Andrew Hascall
Vice President of Engineering Support
Metropolitan Washington Airports Authority
1 Aviation Circle
Washington, DC 20001-6000

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Mr. Hascall:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
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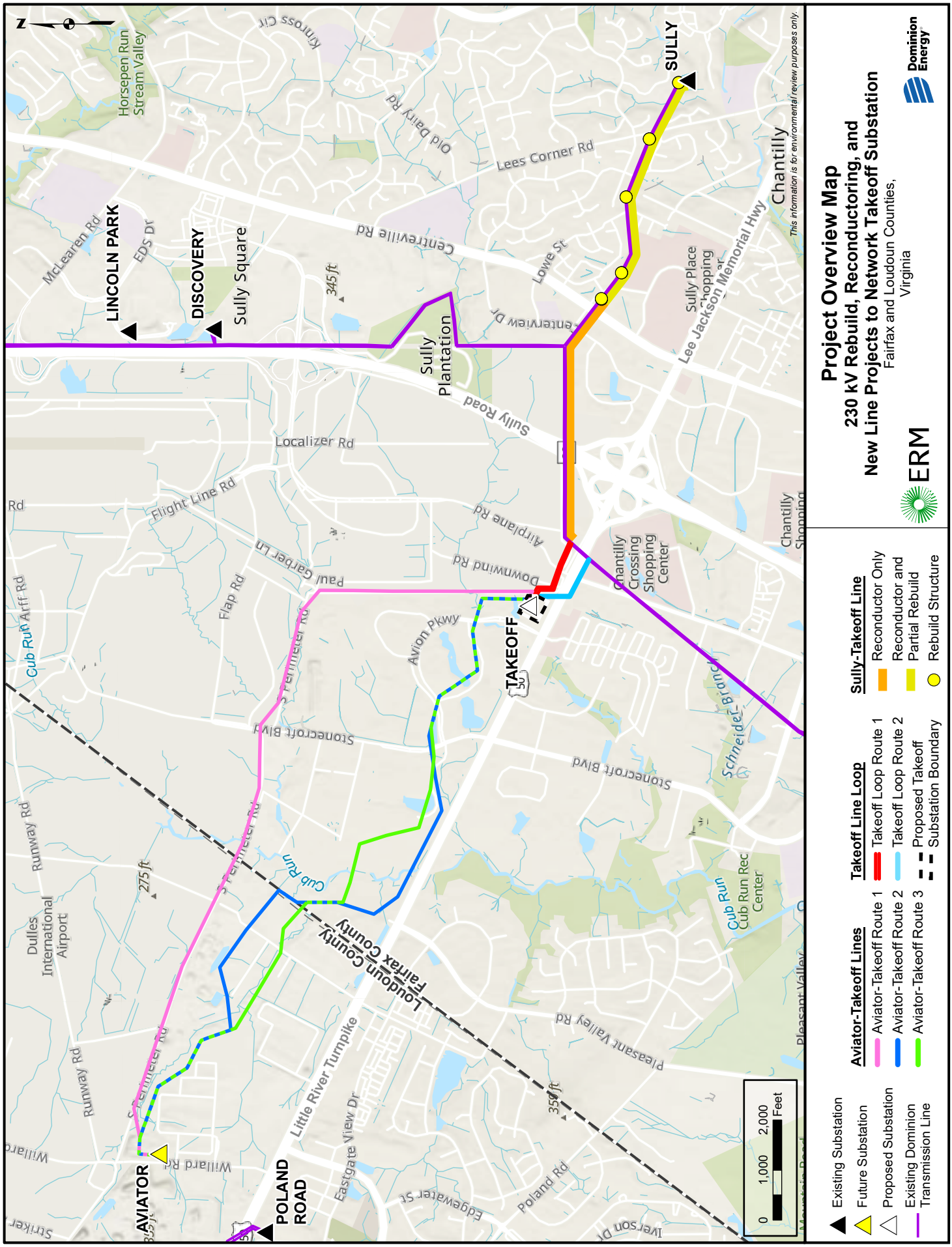
Project Overview Map
230 kV Rebuild, Reconductoring, and
New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties,
Virginia
ERM
Dominion Energy
This information is for environmental review purposes only.
Existing Substation
Future Substation
Proposed Substation
Existing Dominion Transmission Line
Aviator-Takeoff Lines
Aviator-Takeoff Route 1
Aviator-Takeoff Route 2
Aviator-Takeoff Route 3
Takeoff Line Loop
Takeoff Loop Route 1
Takeoff Loop Route 2
Proposed Takeoff
Substation Boundary
Sully-Takeoff Line
Reconductor Only
Reconductor and Partial Rebuild
Rebuild Structure
AVIATOR
POLAND ROAD
TAKEOFF
DISCOVERY
LINCOLN PARK
SULLY
Loudoun County
Fairfax County
Sully Square
Sully Plantation
Chantilly
Dulles International Airport
Cub Run
Little River Turnpike
Lees Corner Rd
Centreville Rd
Sully Road
Lee Jackson Memorial Hwy
Stonecroft Blvd
Pleasant Valley Rd
Poland Rd
Runway Rd
Localizer Rd
Flight Line Rd
Airplane Rd
Downwind Rd
Avion Pkwy
Chantilly Crossing Shopping Center
Sully Place Shopping Center
Cub Run Rec Center
Schneider Brandt
Horsepen Run Stream Valley
McLearen Rd
EDS Dr
Old Dairy Rd
Lowe St
Centerview Dr
Paul Garber Ln
Flap Rd
Cub Run Arff Rd
Willard Rd
Eastgate View Dr
Edgewater St
Iverson Dr
345 ft
275 ft
359 ft
0
1,000
2,000
Feet

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

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

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Mr. Helvey:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
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Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

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Greg Baka

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Local Permitting Consultant

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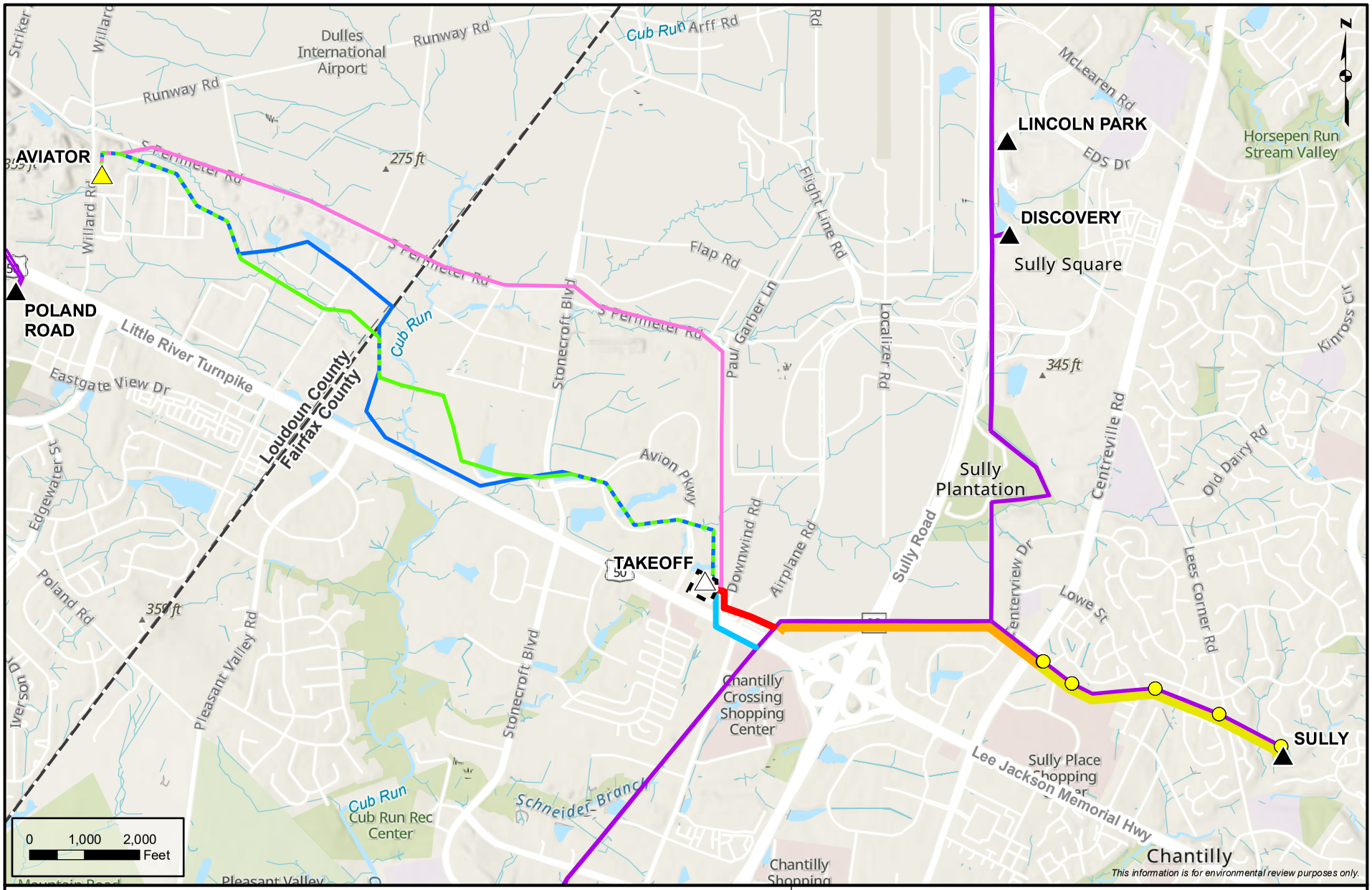

Existing Substation
Future Substation
Proposed Substation
Existing Dominion Transmission Line

Aviator-Takeoff Lines
- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
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Takeoff Line Loop
- Takeoff Loop Route 1
- Takeoff Loop Route 2
- Proposed Takeoff Substation Boundary

Sully-Takeoff Line
- Reconductor Only
- Reconductor and Partial Rebuild
- Rebuild Structure

Project Overview Map
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

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

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Mr. Kirchen:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

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5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

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Greg Baka

Greg Baka
Local Permitting Consultant

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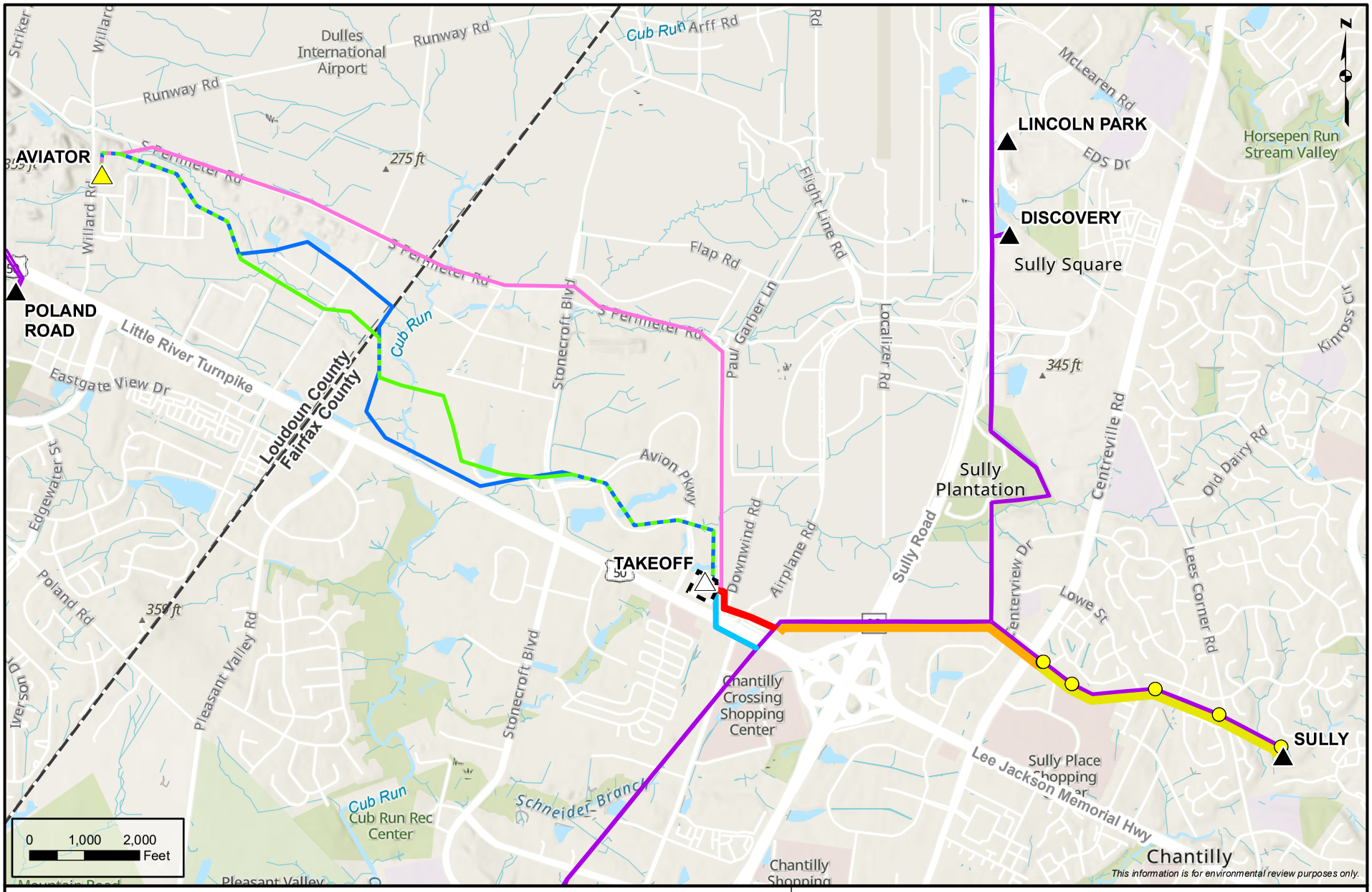

Project Overview Map

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

Supervisor Matt Letourneau
Loudoun County – Dulles District
P.O. Box 7000
Leesburg, Virginia 20177-7000

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Supervisor Letourneau:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

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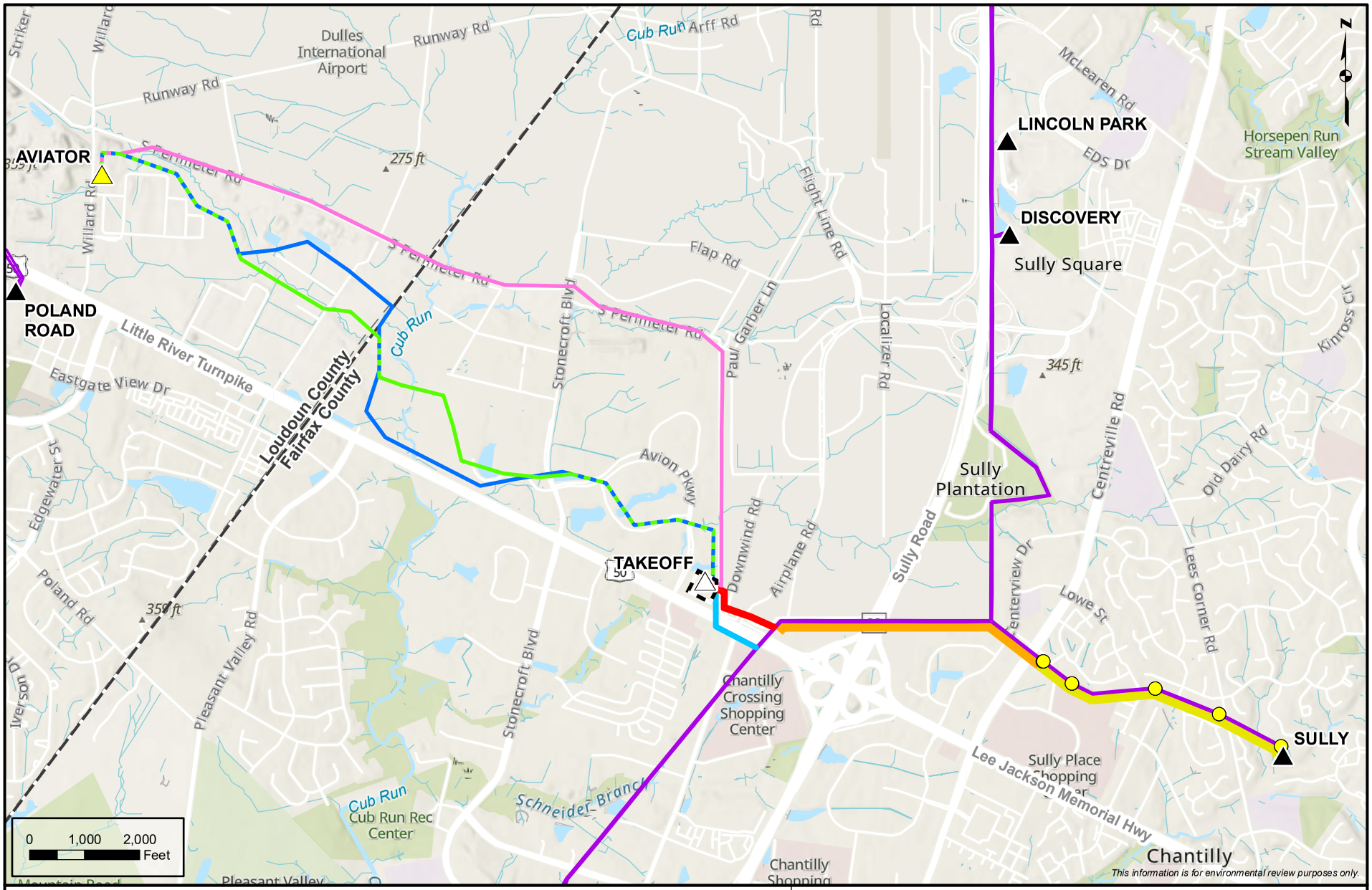
Greg Baka
Local Permitting Consultant

Attachment: Project Overview Map



Project Overview Map

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

Ms. Martha Little
Virginia Outdoors Foundation
P.O. Box 85073, PMB 38979
Richmond, Virginia 23285

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Ms. Little:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
2) Partially rebuild and reconductor an existing 230 kV overhead transmission line in Fairfax County ("Sully-Takeoff Partial Reconductor/Rebuild"); and
3) Construct a new overhead double circuit 230 kV transmission line in Loudoun County and Fairfax County (the "Aviator-Takeoff Lines").

Collectively, the Takeoff Loop and Takeoff Substation, the Sully-Takeoff Partial Reconductor/Rebuild, and the Aviator-Takeoff Lines are referred to as the "230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation" or the "Project."

The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") from the State Corporation Commission of Virginia (the "Commission"). The Company is writing to notify you of the proposed Project in advance of the CPCN filing and respectfully requests that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter.

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

Enclosed is a Project Overview Map depicting the Project's alternative routes, as well as the general Project location. All final materials, including maps, will be available in the Company's CPCN filing to the Commission.

If you would like to receive a GIS shapefile of the alternative routes to assist in your Project review or if you have any questions, please do not hesitate to contact me at (804) 201-3053 or greg.r.baka@dominionenergy.com.

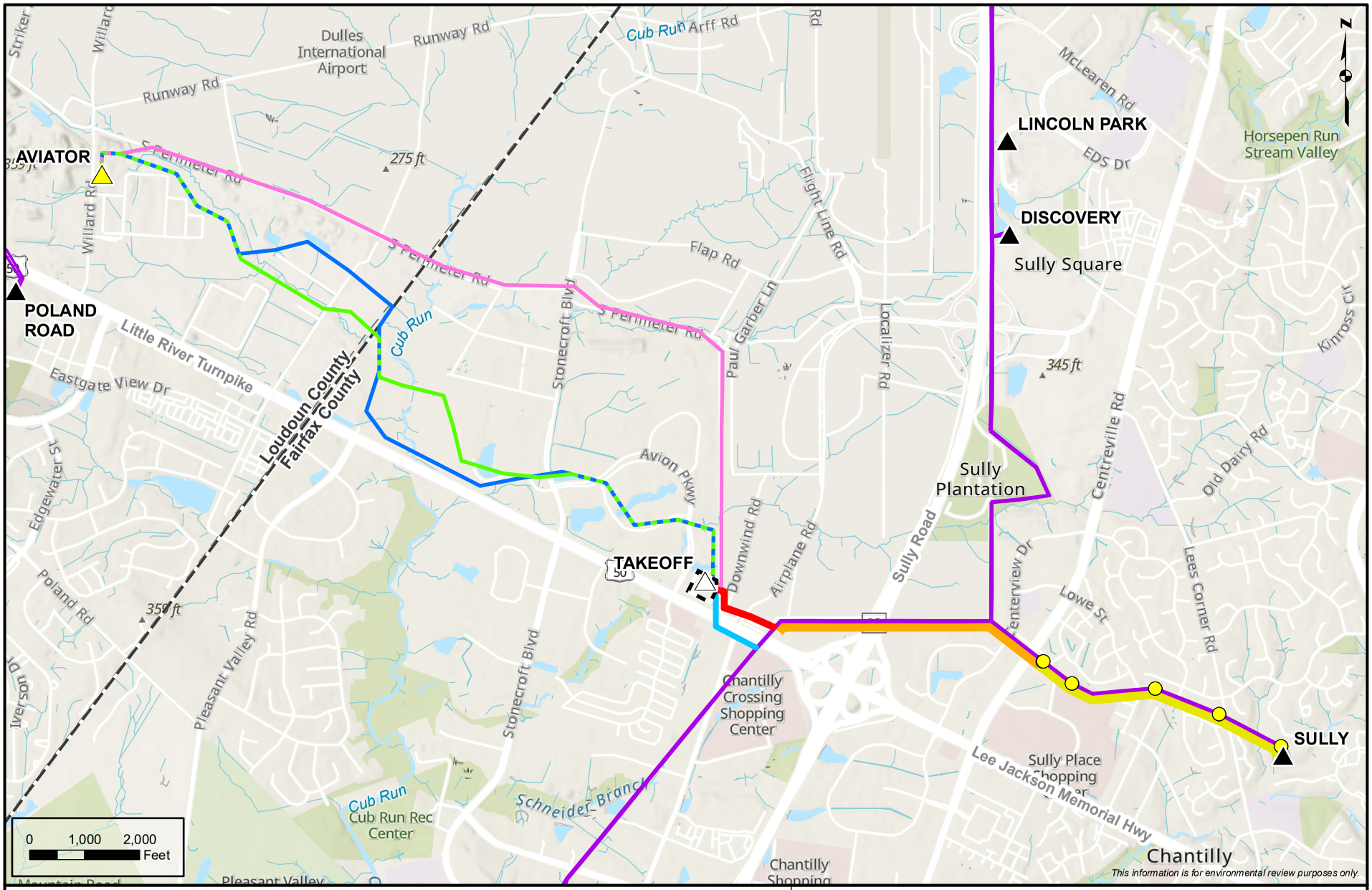
Dominion Energy Virginia appreciates your assistance with this Project review and looks forward to any additional information you may have to offer.

Sincerely,

Greg Baka

Greg Baka
Local Permitting Consultant

Attachment: Project Overview Map



Existing Substation
Future Substation
Proposed Substation
Existing Dominion Transmission Line

Aviator-Takeoff Lines
- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop
- Takeoff Loop Route 1
- Takeoff Loop Route 2
- Proposed Takeoff Substation Boundary

Sully-Takeoff Line
- Reconductor Only
- Reconductor and Partial Rebuild
- Rebuild Structure

Project Overview Map
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

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

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Mr. Lynch:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
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Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

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Dominion Energy Virginia appreciates your assistance with this Project review and looks forward to any additional information you may have to offer.

Sincerely,

Greg Baka

Greg Baka
Local Permitting Consultant

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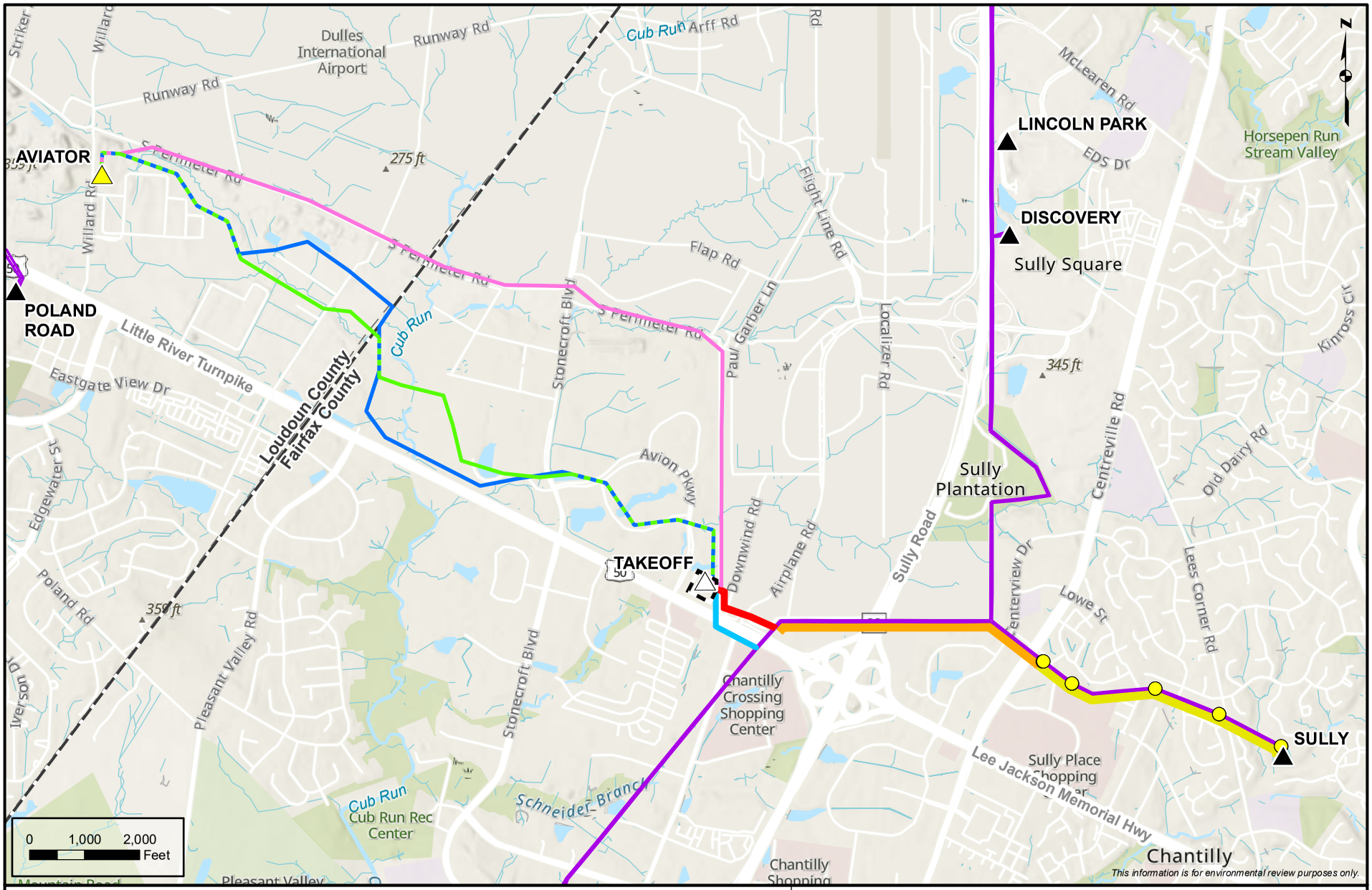

Existing Substation
Future Substation
Proposed Substation
Existing Dominion Transmission Line

Aviator-Takeoff Lines
- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop
- Takeoff Loop Route 1
- Takeoff Loop Route 2
- Proposed Takeoff Substation Boundary

Sully-Takeoff Line
- Reconductor Only
- Reconductor and Partial Rebuild
- Rebuild Structure

Project Overview Map
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

Supervisor Kathy Smith
Fairfax County – Sully District
4900 Stonecroft Blvd
Chantilly, Virginia 20151

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Supervisor Smith:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
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The Company is preparing to file an application for a certificate of public convenience and necessity ("CPCN") from the State Corporation Commission of Virginia (the "Commission"). The Company is writing to notify you of the proposed Project in advance of the CPCN filing and respectfully requests that you submit any comments or additional information you feel would have bearing on the Project within 30 days of the date of this letter.

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Sincerely,

Greg Baka

Greg Baka
Local Permitting Consultant

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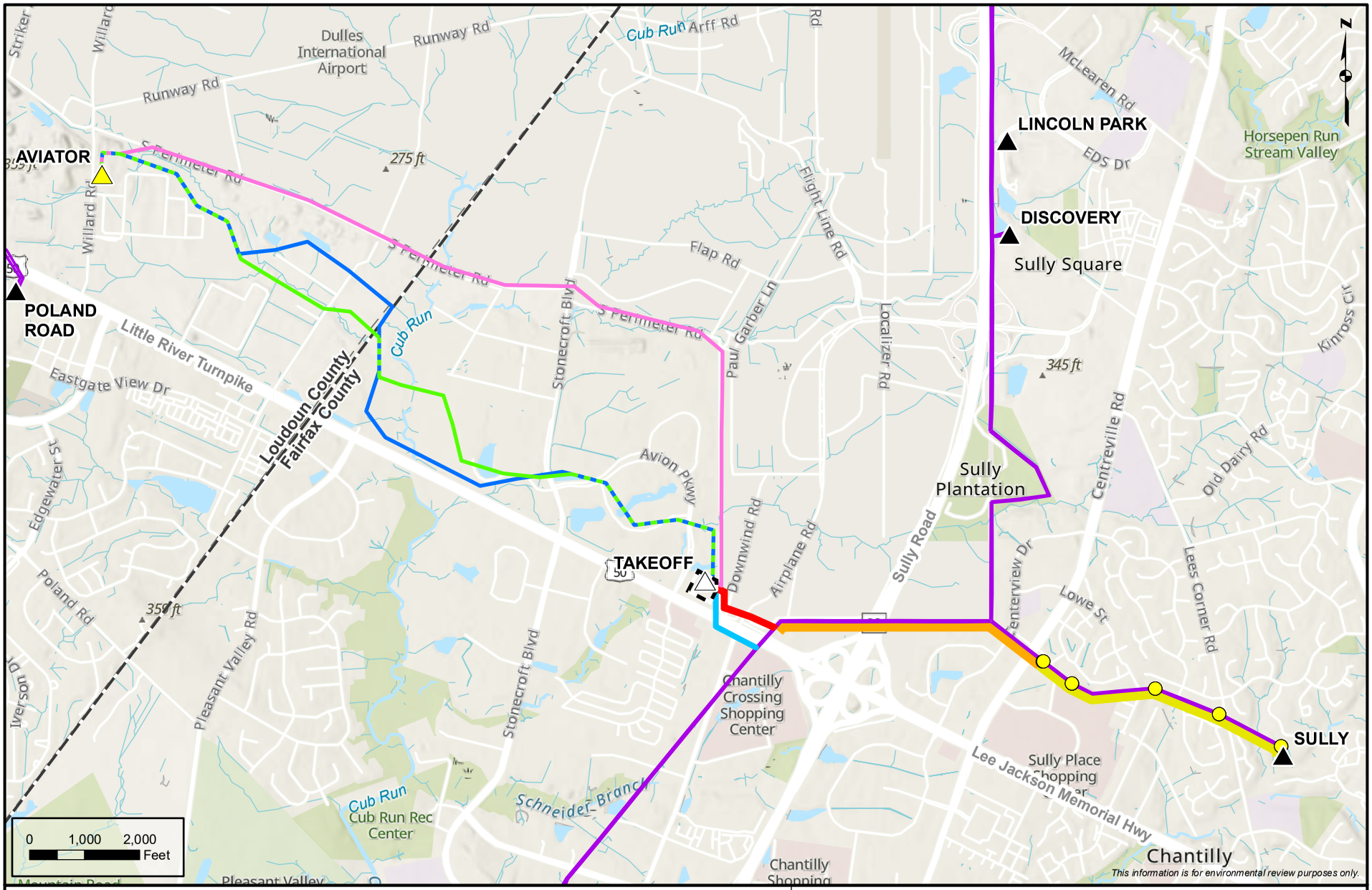

Existing Substation
Future Substation
Proposed Substation
Existing Dominion Transmission Line

Aviator-Takeoff Lines
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Takeoff Line Loop
- Takeoff Loop Route 1
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- Proposed Takeoff Substation Boundary

Sully-Takeoff Line
- Reconductor Only
- Reconductor and Partial Rebuild
- Rebuild Structure

Project Overview Map
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

ERM

Dominion Energy

Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

June 17, 2024

Mr. Steven E. Welch
Assistant District Administrator
Director of Transportation & Land Use – Fairfax & Arlington Counties
Virginia Department of Transportation, Northern Virginia District Office
4975 Alliance Drive
Fairfax, Virginia 22030

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Dear Mr. Welch:

In order to relieve identified violations of mandatory North American Electric Reliability Corporation Reliability Standards, to provide service requested by a data center customer, and to maintain the structural integrity and reliability of its transmission system, Dominion Energy Virginia (or the "Company") is proposing the following within Loudoun County and Fairfax County, Virginia:

1) Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
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Dominion Energy Virginia
5000 Dominion Blvd, 3rd Floor, Glen Allen, Virginia 23060

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Sincerely,

Greg Baka

Greg Baka
Local Permitting Consultant

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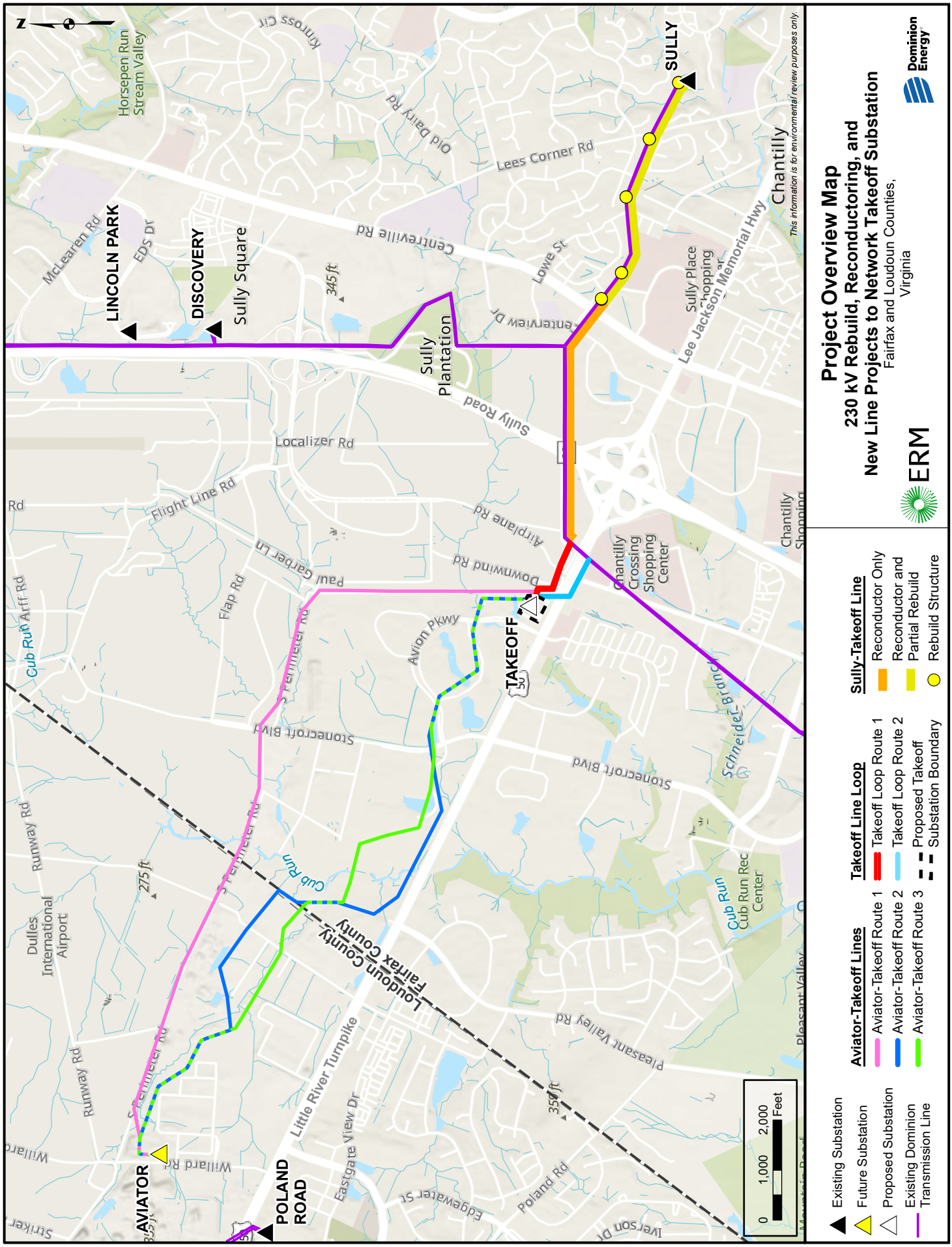
Project Overview Map
230 kV Rebuild, Reconductoring, and
New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties,
Virginia
ERM
Dominion Energy
This information is for environmental review purposes only.
Sully-Takeoff Line
Reconductor Only
Reconductor and Partial Rebuild
Rebuild Structure
Takeoff Line Loop
Takeoff Loop Route 1
Takeoff Loop Route 2
Proposed Takeoff
Substation Boundary
Aviator-Takeoff Lines
Aviator-Takeoff Route 1
Aviator-Takeoff Route 2
Aviator-Takeoff Route 3
Existing Substation
Future Substation
Proposed Substation
Existing Dominion Transmission Line
AVIATOR
POLAND ROAD
TAKEOFF
SULLY
LINCOLN PARK
DISCOVERY
Sully Square
Sully Plantation
Chantilly
Loudoun County
Fairfax County
Dulles International Airport
Cub Run
Little River Turnpike
Lees Corner Rd
Centreville Rd
Sully Road
Lee Jackson Memorial Hwy
Stonecroft Blvd
Pleasant Valley Rd
Poland Rd
Chantilly Crossing Shopping Center
Sully Place Shopping Center
Cub Run Rec Center
Schneider Branch
Horsepen Run Stream Valley
0
1,000
2,000
Feet

From: Fulcher, Valerie (DEQ) <Valerie.Fulcher@deq.virginia.gov>
Sent: Monday, July 1, 2024 4:11 PM
To: dgif-ESS Projects (DWR) <ESSProjects@dwr.virginia.gov>; odwreview (VDH) <odwreview@vdh.virginia.gov>; Churchill, Nikolas (DEQ) <Nikolas.Churchill@deq.virginia.gov>; Ballou, Thomas (DEQ) <Thomas.Ballou@deq.virginia.gov>; Lovain, Ava (DEQ) <Anna.Lovain@deq.virginia.gov>; Gavan, Larry (DEQ) <Larry.Gavan@deq.virginia.gov>; Moore, Daniel (DEQ) <Daniel.Moore@deq.virginia.gov>; Miller, Mark (DEQ) <Mark.Miller@deq.virginia.gov>; Kirchen, Roger (DHR) <Roger.Kirchen@dhr.virginia.gov>; ImpactReview (impactreview@vof.org) <impactreview@vof.org>; Lazaro, Robert (VDOT) <rlazaro@novaregion.org>; Lasher, Terrance J. (DOF) <Terry.Lasher@dof.virginia.gov>; Folks, Clint (DOF) <Clint.Folks@dof.virginia.gov>; Heller, Matthew (Energy) <matt.heller@energy.virginia.gov>; EIR Coordination (VDOT) <EIR.Coordination@vdot.virginia.gov>; coadmin@loudoun.gov (coadmin@loudoun.gov) <coadmin@loudoun.gov>; Hermann, Katherine <Katherine.hermann@fairfaxcounty.gov>
Cc: James P Young (Services - 6) <james.p.young@dominionenergy.com>
Subject: [EXTERNAL] NEW SCOPING Dominion Energy Virginia 230 kV Rebuild, Takeoff Substation

CAUTION! This message was NOT SENT from DOMINION ENERGY
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Good afternoon—attached is a request for scoping comments on the following:

Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation - Loudoun and Fairfax County

If you choose to make comments, please send them directly to the project sponsor (james.p.young@dominionenergy.com). We will coordinate a review when the environmental document is completed.

DEQ-OEIR's scoping response is also attached.

If you have any questions regarding this request, please email our office at eir@deq.virginia.gov.

Valerie

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

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

1111 East Main Street

Richmond, VA 23219

PHONE NUMBER: 804-659-1550

Email: Valerie.Fulcher@deq.virginia.gov

https://www.deq.virginia.gov/permits-regulations/environmental-impact-review [deq.virginia.gov]

For program updates and public notices please subscribe to the Environmental Impact Review Public Notices Bulletin: https://public.govdelivery.com/accounts/VADEQ/subscriber/new [public.govdelivery.com]

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Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director

July1, 2024

James P. Young
Environmental Specialist III
Dominion Environmental & Sustainability (E&S)
120 Tredegar Street, Richmond, VA 23219
Via email: james.p.young@dominionenergy.com

RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation - Loudoun and Fairfax County, VA, Scoping Response

Dear Mr.Young:

This letter is in response to the scoping request for the above-referenced project.

As you may know, the Department of Environmental Quality, through its Office of Environmental Impact Review (DEQ-OEIR), is responsible for coordinating Virginia's review of environmental impacts for electric power generating projects and power line projects in conjunction with the licensing process of the State Corporation Commission.

DOCUMENT SUBMISSIONS

In order to ensure an effective coordinated review of the environmental impact analysis may be sent directly to OEIR. We request that you submit one electronic to eir@deq.virginia.gov (25 MB maximum) or make the documents available for download at a website, file transfer protocol (ftp) site or the VITA LFT file share system (Requires an "invitation" for access. An invitation request should be sent to eir@deq.virginia.gov.). The required "Wetlands Impact Consultation" can be sent directly to Michelle Henicheck at michelle.henicheck @deq.virginia.gov or at the address above.

ENVIRONMENTAL REVIEW UNDER VIRGINIA CODE 56-46.1

While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of the environmental impact analysis document. Accordingly, we have coordinated your request with the following state agencies and those localities and Planning District Commissions, including but not limited to:

Department of Environmental Quality:
- DEQ Regional Office
- Air Division

- Office of Wetlands and Stream Protection
- Office of Local Government Programs
- Division of Land Protection and Revitalization
- Office of Stormwater Management
- Office of Environmental Justice

Department of Conservation and Recreation
Department of Health
Department of Agriculture and Consumer Services
Department of Wildlife Resources
Virginia Marine Resources Commission
Department of Historic Resources
Virginia Energy
Department of Forestry
Department of Transportation

DATA BASE ASSISTANCE

Below is a list of databases that may assist you in the preparation of a NEPA document:

- DEQ Online Database: Virginia Environmental Geographic Information Systems

  Information on Permitted Solid Waste Management Facilities, Impaired Waters, Petroleum Releases, Registered Petroleum Facilities, Permitted Discharge (Virginia Pollution Discharge Elimination System Permits) Facilities, Resource Conservation and Recovery Act (RCRA) Sites, Water Monitoring Stations, National Wetlands Inventory:
  - www.deq.virginia.gov/ConnectWithDEQ/VEGIS.aspx

- DEQ Virginia Coastal Geospatial and Educational Mapping System (GEMS)

  Virginia's coastal resource data and maps; coastal laws and policies; facts on coastal resource values; and direct links to collaborating agencies responsible for current data:
  - https://www.deq.virginia.gov/?splash=https%3a%2f%2fgaia.vcu.edu%2fportal%2fapps%2fsites%2f%23%2fgemsmaps&___isexternal=true

- MARCO Mid-Atlantic Ocean Data Portal

  The Mid-Atlantic Ocean Data Portal is a publicly available online toolkit and resource center that consolidates available data and enables users to visualize and analyze ocean resources and human use information such as fishing grounds, recreational areas, shipping lanes, habitat areas, and energy sites, among others.

  - http://portal.midatlanticocean.org/visualize/#x=-73.24&y=38.93&z=7&logo=true&controls=true&basemap=Ocean&tab=data&legends=false&layers=true

- DHR Data Sharing System.

  Survey records in the DHR inventory:

- www.dhr.virginia.gov/archives/data_sharing_sys.htm

- DCR Natural Heritage Search

  Produces lists of resources that occur in specific counties, watersheds or physiographic regions:
  - www.dcr.virginia.gov/natural_heritage/dbsearchtool.shtml

- Wetland Condition Assessment Tool (WetCAT)
  - https://www.deq.virginia.gov/our-programs/water/wetlands-streams/wetcat

- DWR Fish and Wildlife Information Service

  Information about Virginia's Wildlife resources:
  - http://vafwis.org/fwis/

- Total Maximum Daily Loads Approved Reports
  - https://www.deq.virginia.gov/programs/water/waterqualityinformationtmdls/tmdl/tmdldevelopment/approvedtmdlreports.aspx

- Virginia Outdoors Foundation: Identify VOF-protected land
  - http://vof.maps.arcgis.com/home/index.html

- Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Database: Superfund Information Systems

  Information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL:
  - www.epa.gov/superfund/sites/cursites/index.htm

- EPA RCRAInfo Search

  Information on hazardous waste facilities:
  - www.epa.gov/enviro/facts/rcrainfo/search.html

- Total Maximum Daily Loads Approved Reports
  - https://www.deq.virginia.gov/our-programs/water/water-quality/tmdl-development/approved-tmdls

- EPA Envirofacts Database

  EPA Environmental Information, including EPA-Regulated Facilities and Toxics Release Inventory Reports:
  - www.epa.gov/enviro/index.html

- EPA NEPAssist Database

Facilitates the environmental review process and project planning:
http://nepaassisttool.epa.gov/nepaassist/entry.aspx

If you have questions about the environmental review process, please feel free to contact me. I hope this information is helpful to you.

Sincerely,

Bettina Rayfield, Program Manager
Environmental Impact Review and Long Range Priorities
Virginia Department of Environmental Quality
804-659-1915
bettina.rayfield@DEQ.virginia.gov
Central Office
1111 E. Main Street, Suite 1400
Richmond, Virginia 23219
804-698-4000

ERM

222 South 9th Street
Suite 2900
Minneapolis, Minnesota 55402

T +0 804 253 1090
F +0 804 253 1091

erm.com

Virginia Department of Environmental Quality
Office of Environmental Impact Review
Ms. Bettina Rayfield, Manager
P.O. Box 1105
Richmond, Virginia 23218

DATE
17 July 2024

SUBJECT
230 KV REBUILD, RECONDUCTORING, AND NEW LINE PROJECTS TO NETWORK TAKEOFF SUBSTATION

REFERENCE
0578162 and 0589573

Dear Ms. Rayfield:

Environmental Resources Management (ERM), on behalf of Virginia Electric and Power Company (Dominion Energy Virginia, Dominion, or the Company), conducted a desktop wetland and waterbody review of publicly available information for the proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation (Project) located within Loudoun and Fairfax Counties, Virginia. This delineation was done using desktop resources and methodology. A field delineation is required to verify the accuracy and extent of aquatic resource boundaries. Project route alternatives are shown in Attachment 1, with wetland boundaries identified in this desktop review shown in Attachment 2.

Dominion Energy Virginia is filing an application with the State Corporation Commission (SCC) to:

- Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines by cutting the Company's existing 230 kV Lincoln Park-Loudoun Line #2008 and existing 230 kV Bull Run-Sully Line #265, which are collocated within an existing variable 100- to 120-foot-wide right-of-way. Existing Lincoln Park-Loudoun Line #2008 will be cut at a location between Structures #2008/66 and #2008/67, and existing Bull Run-Sully Line #265 will be cut at a location between Structures #265/88 and #265/89. The two new double circuit lines will extend approximately 0.3 mile from the respective cut-in locations before terminating at a new proposed 230-34.5 kV substation located in Fairfax County, Virginia ("Takeoff Substation") on property to be owned by the Company (the "Takeoff Loop"). The cut ins ultimately will result in (i) 230 kV Loudoun-Takeoff Line #2008, (ii) 230 kV Lincoln Park-Takeoff Line #2356, (iii) 230 kV Bear Run-Takeoff Line #2285 and (iv) 230 kV Sully-Takeoff Line #2357. At the cut in between Structures #2008/66 and #2008/67, the Company will install two new monopole structures to provide a network connection to the Takeoff Substation. Similarly, at the cut in between Structures #265/88 and #265/89, the Company will install two new monopole structures to provide a network

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connection to the Takeoff Substation. These network connections will allow the Takeoff Substation to connect to other existing substations for increased reliability. While the structures installed at the proposed cut-in locations are within the existing right-of-way, the proposed 0.3-mile Takeoff Loop will be constructed in a new 160-foot-wide right-of-way supported primarily by double circuit weathering steel 2-pole structures and utilizing three-phase twin-bundled 768.2 thousand circular mils ("kcmil") 20/7 Aluminum Conductor Steel Supported/Trapezoidal Wire/High Strength ("ACSS/TW/HS") type conductor with a summer transfer capability of 1,573 MVA, with one new Design Number ("DNO")-11410 shield wire over each circuit. Collectively, this proposed work is referred to as the "Takeoff Loop and Substation."

- Partially reconductor and rebuild Sully-Takeoff Line #2357 entirely within existing right-of-way in Fairfax County, Virginia ("Sully-Takeoff Partial Reconductor/Rebuild"). As discussed above, Sully-Takeoff Line #2357 will result from cutting existing Bull Run-Sully Line #265 between Structures #265/88 and #265/89 (the "Sully-Takeoff Cut-in") and extending 0.3 mile of new double circuit lines to the proposed Takeoff Substation. Accordingly, the resulting approximately 2.2-mile Sully-Takeoff Line #2357 will consist of the new 0.3-mile segment from the Takeoff Substation to the Sully-Takeoff Cut-in, and the existing 1.9-mile segment from the Sully-Takeoff Cut-in to the Sully Substation. Hence, only a "partial" reconductor and rebuild of Sully-Takeoff Line #2357—namely, within the 1.9-mile existing segment—is required, as follows.

  - Sully-Takeoff Partial Reconductor: reconductor the existing 1.9-mile segment of Sully-Takeoff Line #2357 between the Sully-Takeoff Cut-in and the existing Sully Substation by uprating the existing conductors from three-phase 1590 kcmil 45/7 Aluminum Conductor Steel Reinforced ("ACSR") and 1534 Aluminum Conductor Alloy Reinforced ("ACAR") 42 EC/19 to three-phase twin bundled 768.2 kcmil 20/7 ACSS/TW/HS with a summer transfer capability of 1,573 MVA.

  - Sully-Takeoff Partial Rebuild: rebuild five of the existing painted steel double circuit monopole structures supporting Line #2357 (*i.e.*, supporting the existing Bull Run-Sully Line #265) and existing Discovery-Sully Line #2107 (existing Structures #265/98 / #2107/72, #265/99 / #2107/71, #265/102 / #2107/68, #265/104 / #2107/66, and #265/107 / #2107/63) in order to maintain proper clearances. The five structures proposed for rebuild are located within an existing 0.9-mile segment between existing Structure #265/98 / #2107/72 and Sully Substation. The five removed structures will be replaced with five double circuit dulled galvanized steel monopole structures.

- Construct a new overhead double circuit 230 kV transmission line beginning at the Company's future Aviator Substation located in Loudoun County, Virginia, and extending

approximately 3.2 miles to terminate at the Company's new proposed Takeoff Substation located in Fairfax County, Virginia, resulting in (i) 230 kV Aviator-Takeoff Line #2358, and (ii) 230 kV Aviator-Takeoff Line #2359 (the "Aviator-Takeoff Lines"). While the proposed Aviator-Takeoff Lines will commence and terminate on Company-owned or to-be-owned property (from Structure #2358/25 / #2359/25 at Aviator Substation to Structure #2358/1 / #2359/1 at Takeoff Substation), the proposed Aviator-Takeoff Lines will be constructed in new 100-foot-wide right-of-way supported primarily by double circuit dulled galvanized steel monopole structures and will utilize three-phase twin-bundled 768.2 kcmil 20/7 ACSS/TW/HS type conductors with a summer transfer capability of 1,573 MVA, with one new DNO-11410 shield wire over each new circuit.

- Perform minor substation-related work at the Company's future Aviator Substation.

Because no ground disturbance is anticipated from the 1.0 mile Sully-Takeoff Partial Reconductor segment, the only Sully-Takeoff project component evaluated in this letter is 0.9 mile Sully-Takeoff Partial Rebuild segment, as described above.

The Project is necessary to relieve identified violations of NERC Reliability Standards in order to maintain and improve reliable electric service to customers in the load area extending generally southeast from the future Aviator Substation in Fairfax and Loudoun Counties (the "Aviator Load Area") and to ensure that Dominion Energy Virginia can provide service requested by its Customer in Fairfax County, Virginia.

The purpose of this desktop analysis is to identify and evaluate potential impacts of the Project on aquatic resources (wetlands, streams, creeks, runs, and open water features) in the area. In accordance with Virginia Department of Environmental Quality (DEQ) and the SCC's Memorandum of Agreement, the evaluation was conducted using various data sets that may indicate wetland location and type. This report is being submitted to the DEQ as part of the DEQ Wetland Impacts Consultation.

This assessment did not include field investigations required for wetland delineations in accordance with the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0).

PROJECT STUDY AREA AND POTENTIAL ROUTES

A study area was developed encompassing an area containing the Project origin and termination points for the planned facilities (i.e., the proposed Project) as well as an area broad enough for the identification of reasonable route alternatives meeting the Project objectives. Additionally, and to the extent practicable, the limits of the study area were defined by reference to easily distinguishable landmarks, such as roads or other recognizable features.

Based on the above, ERM and Dominion defined the boundaries of the study area for the Project as follows:

- Southern boundary of the Dulles Airport property to the north;
- Sully Road (VA Route 28) to the east;
- VA Route 50 (Lee Jackson Memorial Highway in Fairfax County and Little River Turnpike in Loudoun County) to the south; and
- Willard Road to the west.

The study area encompasses approximately 3,700 acres and is located directly south of Dulles Airport. Land use and land cover consists of a mix of industrial and commercial development, open land, and forested areas along Cub Run and associated tributaries. The largest forested/undeveloped areas are associated with riparian areas along Cub Run, Dead Run, and Sand Branch waterways. Commercial developments, including three recent or future data center campuses, are within the study area. The study area is shown in Attachment 1.

Dominion identified two overhead 230 kV double circuit Takeoff Loop alternatives and three overhead 230 kV double circuit Aviator-Takeoff Lines alternatives, described below. No alternatives for the Sully-Takeoff Partial Reconductor/Rebuild were identified.

PROPOSED ROUTE ALTERNATIVES

TAKEOFF LOOP AND SUBSTATION

TAKEOFF LOOP ROUTE 1

Takeoff Loop Route 1 originates at a cut-in location on the Company's existing 230 kV Lincoln Park-Loudoun Line #2008 (between Structures #2008/66 and #2008/67) and Bull Run-Sully Line #265 (between Structures #265/88 and #265/89). From the cut-in location, the route crosses Lower Perimeter Road and heads northwest through MWAA property along the north side of Lower Perimeter Road for about 0.1 mile. It then crosses Airplane Road and Downwind Road as it continues to collocate with Lower Perimeter Road for approximately 0.1 mile. Continuing through MWAA property, Takeoff Loop Route 1 turns north and then northwest for about 0.1 mile, where it terminates at the proposed Takeoff Substation. In total, Takeoff Loop Route 1 measures approximately 0.3 mile in length.

TAKEOFF LOOP ROUTE 2

Takeoff Loop Route 2 originates at a cut-in location on the Company's existing 230 kV Lincoln Park-Loudoun Line #2008 between Structures #2008/65 and #2008/66. From the cut-in location, the route heads northwest for about 0.2 mile as it collocates along the south side of Route 50, crossing Lee Road and developed commercial and industrial parcels. The route then turns north, crosses Route 50, and continues for about 0.1 mile through forested land along,

but outside of, the western boundary of MWAA property, where it terminates at the proposed Takeoff Substation. In total, Takeoff Loop Route 2 measures approximately 0.3 mile in length.

TAKEOFF SUBSTATION

The proposed 230-34.5 kV Takeoff Substation will be constructed on approximately 4.1 acres of land to be obtained by Dominion located northeast of the intersection of Avion Parkway and Route 50. The Takeoff Substation footprint is included in the impacts of Takeoff Loop Routes 1 and Route 2.

SULLY-TAKEOFF PARTIAL RECONDUCTOR/REBUILD

The Company proposes to partially reconductor and rebuild Sully-Takeoff Line #2357 entirely within existing right-of-way in Fairfax County, Virginia (i.e., the Line #2357 Partial Reconductor/Rebuild). As discussed above, Sully-Takeoff Line #2357 will result from cutting existing Bull Run-Sully Line #265 right-of-way north of Route 50 and east of Airplane Road and continues approximately 2.2 miles east and southeast between Sully-Takeoff Cut-in (i.e., Structures #265/88-89) and the existing Sully Substation. The five rebuild structures are location within a 0.9-mile segment between Centreville Road and the existing Sully Substation. Because this 1.9 mile partial reconductor/rebuild is entirely within existing right-of-way, no alternative routes were considered.

AVIATOR-TAKEOFF LINES

AVIATOR-TAKEOFF ROUTE 1

Aviator-Takeoff Route 1 originates at the future Aviator Substation, approximately 0.1 mile south of the intersection of South Perimeter Road and Willard Road in Loudoun County. From there, the route heads north for about 0.1 mile before turning east for approximately 0.2 mile. It then turns to the southeast as it enters MWAA property, collocates with South Perimeter Road, and continues east along the southern boundary of the parcel through forested land for about 1.3 miles. The route next continues generally east for approximately 0.7 mile along MWAA property, then crosses through a forested area on the Fairfax County Police Training Facility for about 0.1 mile. It next turns and heads south for approximately 0.8 mile as it enters a primarily forested area on MWAA property between the National Air and Space Museum Udvar-Hazy Center to the east and commercial and industrial developments to the west. Aviator-Takeoff Route 1 then turns northeast for about 0.1 mile before terminating at the proposed Takeoff Substation. In total, Aviator-Takeoff Route 1 measures approximately 3.2 miles in length.

AVIATOR-TAKEOFF ROUTE 2

Aviator-Takeoff Route 2 originates at the future Aviator Substation, approximately 0.1 mile south of the intersection of South Perimeter Road and Willard Road. From the future Aviator

Substation, Aviator-Takeoff Route 2 heads initially north for about 0.1 mile before turning generally southeast within a parcel cleared for a future data center, then follows the southern boundary of a forested area for approximately 0.6 mile. The route next heads east and southeast for about 0.6 mile, crossing industrial parcels and surface parking/storage lots, a portion of a proposed data center campus, and Pleasant Valley Road, then continues along forested land and a parking lot, where the route enters Fairfax County. It then continues south for approximately 0.5 mile along the western boundary of the Cub Run RPA, adjacent to existing and proposed industrial developments. Aviator-Takeoff Route 2 next heads southeast, collocating with an existing water mainline for approximately 0.4 mile through the Cub Run RPA and across Cub Run. From there, the route continues east for approximately 0.4 mile, crossing forested land, Avion Park Court, Stonecroft Boulevard, and a pond. It then continues southeast for about 0.5 mile, following Virginia Mallory Drive and crossing Avion Parkway and a forested area. The route next turns south for approximately 0.2 mile before terminating at the proposed Takeoff Substation. In total, Aviator-Takeoff Route 2 measures approximately 3.3 miles in length.

AVIATOR-TAKEOFF ROUTE 3

Aviator-Takeoff Route 3 originates at the future Aviator Substation, approximately 0.1 mile south of the intersection of South Perimeter Road and Willard Road in Loudoun County. From the future Aviator Substation, Aviator-Takeoff Route 3 heads north for about 0.1 mile before turning generally southeast for approximately 0.6 mile along the northern boundary of an area recently cleared for a future data center. The route then continues southeast for about 0.6 mile crossing a pond and passing through both industrial parcels and forested land. Aviator-Takeoff Route 3 then exits Loudoun County and enters Fairfax County and the Cub Run RPA. From there, it continues south for approximately 0.2 mile along the western boundary of the RPA, then heads east across the RPA for about 0.2 mile along an existing 15-foot-wide buried utility (waterline) easement. The route then heads south for approximately 0.2 mile along the eastern boundary of the RPA, before continuing east for about 0.5 mile crossing two ponds, forested land, Avion Park Court, and Stonecroft Boulevard. Aviator-Takeoff Route 3 then continues southeast for approximately 0.5 mile, following Virginia Mallory Drive, and crossing Avion Parkway and a forested area. It then turns south for approximately 0.2 mile before entering and terminating at the proposed Takeoff Substation. In total, Aviator-Takeoff Route 3 measures approximately 3.1 miles in length.

DESKTOP EVALUATION METHODOLOGY

The area of effect considered for this study consists of the proposed rights-of-way identified above within which the electric transmission lines would be constructed and operated. Data sources used for this review include the following, each of which is described briefly below:

- USA National Agricultural Imagery Program (NAIP) Natural Color Images, Virginia, 1-meter pixel resolution, photo date 2023 (NAIP 2023)

- USA NAIP Imagery: Color Infrared NAIP Infrared Images, Virginia, 1-meter pixel resolution (NAIP 2021)
- Virginia Information Network (VGIN) Most Recent Imagery (2019-2022) (VDOT 2022)
- Global Plaza Planet Imagery from February 2022 (Planet Imagery 2022)
- Loudoun County Aerial Imagery from March 2023 (Loudoun County 2023)
- Fairfax County Aerial Imagery from spring 2022 (Fairfax County 2023)
- Historic aerial imagery (Google LLC 2022)
- ESRI World Topographic Map, multiple scales (ESRI, et al., 2023)
- Fairfax County LiDAR Contours (Fairfax County 2018)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping (USFWS 2021)
- U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Soil Survey Geographic (SSURGO) database (USDA-NRCS 2023)
- The National Hydrography Dataset Plus High Resolution (NHD) (USGS 2023)

NATURAL COLOR AND INFRARED AERIAL PHOTOGRAPHY

Recent (2023) natural color aerial photography was used to provide a visual overview of the Project area and to assist in evaluating current conditions. Infrared aerial photography was used to identify the potential presence of wetlands based on signatures associated with the levels of reflectance. For example, areas that are inundated with water appear very dark (almost black) due to the low level of reflectance in the infrared spectrum. The presence of these dark colors can be used as a potential indicator of hydric or inundated soils that are likely associated with wetlands.

TOPOGRAPHIC MAPS

Recent ESRI world topographic maps show the topography of the area as well as other important landscape features such as forest cover, development, buildings, agricultural areas, streams, lakes, and wetlands (USGS 2022; ESRI et al., 2023).

USFWS NATIONAL WETLAND INVENTORY MAPPING

NWI maps provide the boundaries and classifications of potential wetland areas as mapped by the USFWS (USFWS 2023). NWI data is based primarily on aerial photo interpretations with limited ground-truthing and may represent incorrect boundaries or wetland cover types. NWI data can be unreliable in some areas, especially in forested landscapes, where aerial photography is used as the major data source. The classifications of the majority of the NWI

polygons in the study area appear to be accurate based on a review of the cover types observed in the aerial photography. However, in areas where there was an obvious discrepancy between the NWI classification and the aerial photography, ERM modified the classification to more accurately reflect current conditions. In order to acknowledge ERM's adjustment of NWI classifications where appropriate, all the wetland types referenced in this assessment are referred to as "assigned wetland cover types" regardless of whether the cover type was actually modified from the NWI classification.

USDA-NRCS SOILS DATA

Soils in the study area were identified and assessed using the SSURGO database, which is a digital version of the original county soil surveys (USDA-NRCS 2023). The attribute data within the SSURGO database provides the proportionate extent of the component soils and their properties (e.g., hydric rating) for each soil map unit. The soils in the study area were grouped into three categories based on the hydric rating of the component soils within each map unit: hydric, partially hydric, and non-hydric. Hydric soils were defined as those where the major component soils, and minor components in some cases, are designated as hydric. Hydric components in these map units account for more than 80 percent of the map unit. Partially hydric soils include map units that only contain minor component soils that are designated as hydric. The partially hydric map units in the Project area contain 10 percent or less hydric soils. The remaining map units do not contain any component soils that are designated as hydric. Areas mapped as hydric or partially hydric have a higher probability of containing wetlands than areas with no hydric soils.

USGS NATIONAL HYDROGRAPHY DATASET

The National Hydrography Dataset (NHD) dataset contains features such as lakes, ponds, streams, rivers, and canals (USGS 2023). The waterbodies mapped by the NHD appeared generally consistent with those visible on the USGS maps and aerial photography.

PROBABILITY ANALYSIS

ERM used a stepwise process to identify probable wetland areas along the proposed routes, as follows:

- Infrared and natural color aerial photography was used in conjunction with topographic maps and soils maps to identify potential wetland areas. Boundaries were assigned to the areas that appeared to exhibit wetland signatures based on this review and a cover type was determined based on aerial photo interpretation. For the purpose of the study, these areas are referred to as Interpreted Wetlands.

- To further determine the probability of a wetland occurring within a given location, the Interpreted Wetland polygon shape files were digitally layered with the NWI mapping and soils information from the SSURGO database.

- The probability of a wetland occurring was assigned based on the number of overlapping data layers (i.e., indicators of potential wetland presence) that occurred in a particular area.

The criteria assigned to each probability are outlined in Table 1.

TABLE 1: CRITERIA USED TO RANK THE PROBABILITY OF WETLAND OCCURRENCE

Probability	Criteria
High	Areas where layers of hydric soils, Interpreted Wetlands, and NWI data overlap
Medium/High	NWI data overlaps hydric soils; or NWI data overlaps Interpreted Wetlands with or without partially hydric soils; or Hydric soils overlap Interpreted Wetlands
Medium	Interpreted Wetlands with or without overlap by partially hydric soils
Medium/Low	Hydric soils only; or NWI data with or without overlap by partially hydric soils
Low	Partially hydric soils only
Very Low	Non-hydric soils only

WETLAND AND WATERBODY CROSSINGS

The desktop analysis provides a probability of wetlands and waterbody occurrence within each route. As stated above, field delineations were not performed and would be required to verify the accuracy and extent of aquatic resource boundaries. A range of wetland occurrence probabilities are reported by this study from very low to high. The probability of wetland occurrence increases as multiple indicators begin to overlap towards the "high" end of the spectrum. The medium, medium-high, and high probability categories are the most reliable representation of in-situ conditions, due to overlapping data sets, and these categories are reported in the summary below as a percentage of the total acreage of each route. Attachment 2 depicts the interpreted wetlands displayed on color base map images.

RESULTS

Results of the probability analysis are presented in Table 2 below. Summaries are provided in the sections following the table. No wetlands were identified using the desktop methodology within Takeoff Line Routes 1 or 2, or within the footprint of the proposed Takeoff Substation.

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Table 2: Summary of the Probabilities of Wetland and Waterbody Occurrence along the Route Alternatives[a,b]

Probability	Total Within Right-of-way (acres)[b]	Wetland and Waterbody type (acres)			
		PEM (Emergent)	PFO (Forested)	PUB (Freshwater pond)	Riverine (Stream)
Sully-Takeoff Partial Rebuild					
High	NA	NA	NA	NA	NA
Medium/High	0	0.0	0.0	NA	NA
Medium	0.2	0.0	0.1	0.0	0.0
Medium/Low	0.1	NA	NA	NA	0.1
Low	NA	NA	NA	NA	NA
Very Low	NA	NA	NA	NA	NA
Aviator-Takeoff Lines					
Aviator-Takeoff Route 1					
High	0.7	0.2	0.4	NA	0.1
Medium/High	1.7	0.0	1.5	NA	0.2
Medium	2.8	0.1	2.5	0.0	0.2
Medium/Low	0.1	NA	NA	NA	0.1
Low	NA	NA	NA	NA	NA
Very Low	NA	NA	NA	NA	NA
Aviator-Takeoff Route 2					
High	2.1	0.2	1.4	0.3	0.1
Medium/High	2.1	0.7	1.1	0.1	0.2
Medium	2.4	0.3	1.3	0.7	0.1
Medium/Low	0.2	0.0	NA	0.1	0.1
Low	NA	NA	NA	NA	NA
Very Low	NA	NA	NA	NA	NA
Aviator-Takeoff Route 3					
High	1.2	NA	0.8	0.3	0.1

Probability	Total Within Right-of-way (acres)[b]	Wetland and Waterbody type (acres)			
		PEM (Emergent)	PFO (Forested)	PUB (Freshwater pond)	Riverine (Stream)
Medium/High	3.0	0.3	1.7	0.7	0.3
Medium	2.6	0.1	1.1	1.3	0.1
Medium/Low	0.1	NA	NA	0.1	0.0
Low	NA	NA	NA	NA	NA
Very Low	NA	NA	NA	NA	NA

NA: Not applicable due to absence of wetland or waterbody type within the alternative route

a Numbers in this table have been rounded for presentation purposes; as a result, the totals may not reflect the sum of the addends.

b Total acres may not total the sum of wetland and waterbody types because some of the lower probability rankings do not overlap with NWI or interpreted wetlands, and therefore do not have a wetland/waterbody type associated with them.

WETLAND CROSSINGS

TAKEOFF LOOP AND SUBSTATION

TAKEOFF LOOP ROUTE 1

The length of the corridor for Takeoff Loop Route 1 is approximately 0.3 miles and encompasses a total of approximately 9.1 acres (including the 4.1-acre Takeoff Substation footprint). Based on the methodology discussed above, there are no wetlands present within the Takeoff Loop Route 1 right-of-way footprint.

TAKEOFF LOOP ROUTE 2

The length of the corridor for Takeoff Loop Route 2 is approximately 0.3 miles and encompasses a total of approximately 7.4 acres (including the 4.1-acre Takeoff Substation footprint). Based on the methodology discussed above, there are no wetlands present within the Takeoff Loop Route 2 right-of-way footprint.

SULLY-TAKEOFF PARTIAL RECONDUCTOR/REBUILD

The length of the corridor for this Sully-Takeoff Partial Rebuild Route is approximately 0.9 miles and encompasses a total of approximately 13.2 acres of existing ROW. Based on the methodology discussed above, the right-of-way footprint will encompass approximately 1.5 percent (0.2 acres) of land with a medium or higher probability of containing wetlands and waterbodies.

AVIATOR-TAKEOFF LINES

AVIATOR-TAKEOFF ROUTE 1

The length of the corridor for Aviator-Takeoff Route 1 is approximately 3.2 miles and encompasses a total of approximately 37.8 acres. Based on the methodology discussed above, the right-of-way footprint will encompass approximately 13.5 percent (5.1 acres) of land with a medium or higher probability of containing wetlands and waterbodies.

AVIATOR-TAKEOFF ROUTE 2

The length of the corridor for Aviator-Takeoff Route 2 is approximately 3.3 miles and encompasses a total of approximately 38.5 acres. Based on the methodology discussed above, the right-of-way footprint will encompass approximately 17.1 percent (6.6 acres) of land with a medium or higher probability of containing wetlands and waterbodies.

AVIATOR-TAKEOFF ROUTE 3

The length of the corridor for Aviator-Takeoff Route 3 is approximately 3.1 miles and encompasses a total of approximately 35.8 acres. Based on the methodology discussed above, the right-of-way footprint will encompass approximately 19.0 percent (6.8 acres) of land with a medium or higher probability of containing wetlands and waterbodies.

WATERBODY CROSSINGS

ERM identified and mapped waterbodies in the study area using similar publicly available GIS databases as those used to identify and map wetlands. Waterbodies crossed by the Aviator to Takeoff Line Routes include the Sand Branch, Dead Run, Cub Run, and Cain Branch, several unnamed, intermittent tributaries to these waterbodies, and multiple open waterbody features (stormwater ponds and impoundments). No waterbodies were identified within the Takeoff Loop Routes or the Takeoff Substation footprint.

TAKEOFF LOOP AND SUBSTATION

Based on the NHD and the methodology discussed above, there are no waterbodies present within the Takeoff Loop Route 1 or 2 right-of-way footprints.

SULLY-TAKEOFF PARTIAL RECONDUCTOR/REBUILD

Based on the NHD and the methodology discussed above, there are no NHD mapped waterbodies present within the 0.9 mile Sully-Takeoff Partial Reconductor/Rebuild right-of-way footprint. Two non-NHD-mapped ponds are within the existing right-of-way; however, no structures will be placed in the waterbodies. As such, the Sully-Takeoff Partial Rebuild will have no impact on waterbodies.

AVIATOR-TAKEOFF LINES

ROUTE 1

Aviator-Takeoff Route 1 would have a total of nine waterbody crossings. Of these, six are NHD-mapped waterbody crossings, including three perennial streams (Sand Branch, Cub Run, and Cain Branch), three intermittent streams (including an intermittent segment of Sand Branch and unnamed, intermittent tributaries to Cub Run), and two lake/ponds. Three are unmapped open waterbody features identified within the right-of-way using aerial imagery. Based on ERM's desktop wetland and waterbody analysis, Route 1 right-of-way would encompass approximately 0.5 acre of RVR and 0.0 acre of PUB wetlands.

ROUTE 2

Aviator-Takeoff Route 2 would have a total of 15 waterbody crossings. Of these, eight are NHD-mapped waterbody crossings, including three perennial streams (Sand Branch (two crossings), Cub Run, and Cain Branch), three intermittent streams (unnamed, intermittent tributaries to Sand Branch and Cub Run), and two lake/ponds. Seven are unmapped open waterbody features identified within the right-of-way using aerial imagery. Based on ERM's desktop wetland and waterbody analysis, the Route 2 right-of-way would encompass approximately 0.4 acre of RVR and 1.1 acre of PUB wetlands.

ROUTE 3

Aviator-Takeoff Route 3 would have a total of 14 waterbody crossings. Of these, nine are NHD-mapped waterbody crossings, including four perennial streams (Sand Branch, Cub Run, and Cain Branch), two intermittent streams (an intermittent segment of Sand Branch and an unnamed, intermittent tributary to Cub Run), and three lake/ponds. Five are unmapped open waterbody features identified within the right-of-way using recent aerial imagery. Based on ERM's desktop wetland and waterbody analysis, the Route 3 right-of-way would encompass approximately 0.4 acre of RVR and 2.3 acre of PUB wetlands.

PROJECT IMPACTS

Avoiding or minimizing new impacts on wetlands and streams was among the criteria used in developing routes for the Project. To minimize impacts on wetland areas, the transmission line has been designed to span or avoid wetlands where possible, keeping transmission structures outside of wetlands to the extent practicable. Direct impacts to wetlands would be limited to placement of structures within wetlands if unavoidable and the permanent conversion of PSS/PFO wetlands within the right-of-way to PSS or PEM type wetlands.

There would be no change in contours of wetlands and waterbodies, or redirection of the flow of water, and the amount of spoil from foundations and structure placement would be minimal. Excess soil in wetlands generated through foundation construction would be mitigated through

Best Management Practices (erosion and sediment controls) and would be removed from the wetland.

The majority of potential direct impacts on wetlands due to Project construction would be temporary in nature. Mats would be used for construction equipment to travel over wetlands, as appropriate. Due to the absence of an existing right-of-way, some new access roads may be necessary along the route. If a section of line cannot be accessed from existing roads, Dominion Energy Virginia may need to install a culvert, ford, or temporary bridge along the right-of-way to cross small streams. In such cases, some temporary fill material in wetlands adjacent to such crossings may be required. This fill would be placed on erosion control fabric and removed when work is completed, returning ground elevations to original contours. When siting transmission lines, perpendicular crossings of wetland systems are prioritized to minimize direct impacts to these sensitive areas and reduce overall impacts to the watershed.

Where the removal of trees or shrubby vegetation occurs within wetlands, Dominion Energy Virginia would use the least intrusive method reasonably possible to clear the corridor. Hand cutting of vegetation would be conducted, where needed, to avoid and minimize impacts on streams and/or wetlands. Where tree clearing is required within the new right-of-way, PFO and PSS wetlands would be permanently converted to PSS or PEM wetland types. Forested wetlands and riparian buffers provide functions such as peak flood flow reduction, nutrient and sediment capture, filtration of pollutants to adjacent waterbodies, and habitat diversity. The conversion of forested wetlands would reduce or eliminate some of these functions.

Required tree removal adjacent to waterbodies would reduce riparian buffer functions such as stream bank stabilization and erosion control, nutrient and sediment filtration, floodwater storage and peak flow reduction, and water temperature modification from shading. Vegetation within the right-of-way would be allowed to return to maintained grasses and shrubs after construction, which would provide some filtration stabilization to help protect waterbodies from pollutants. Within the stream buffers (100 feet), all trees will be hand felled with stumps left in place to reduce the potential for erosion. Shrubs and trees with a diameter at breast height of less than three inches will be left in place unless it impedes temporary access where they would be clipped, leaving roots in place which will be able to naturally regenerate.

SUMMARY

This Wetland and Waterbody Summary report was prepared in accordance with the Memorandum of Agreement between the DEQ and the SCC for the purpose of initiating a Wetlands Impact Consultation. Please note that a formal onsite wetland delineation was not conducted as part of this review.

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In addition, there is a Project website where the SCC application will be available after filing, as well as maps and discussions about the Project. It can be accessed by going to: https://www.dominionenergy.com/nova.

If you have any questions regarding this wetland assessment, please contact me at 857-302-6502 or by email at jake.bartha@erm.com.

Sincerely,

Jake Bartha
Environmental Resources Management

cc: James Young, Dominion Energy Virginia
Heather Kennedy, Dominion Energy Virginia

Enclosures: Attachments 1 and 2

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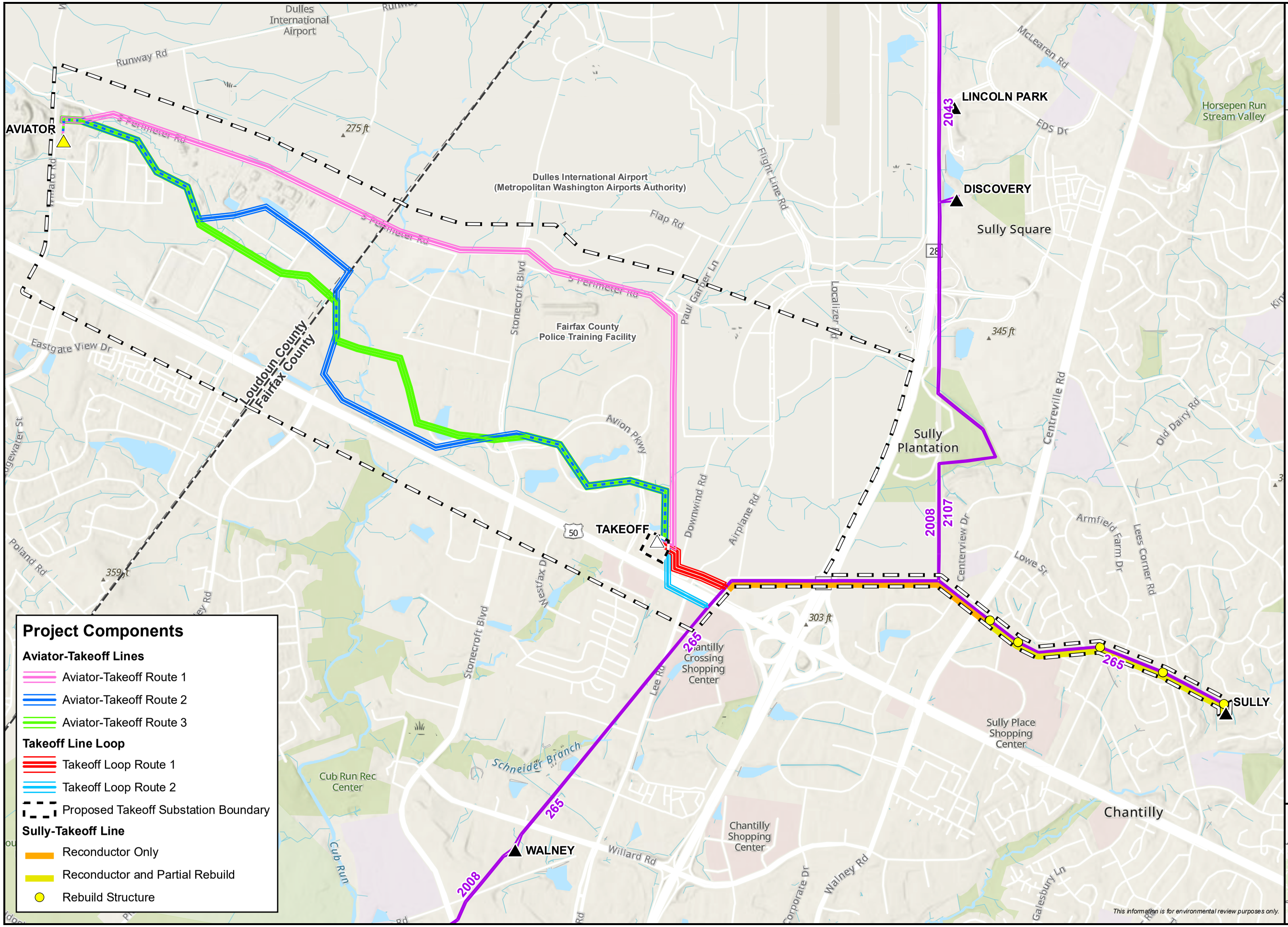
DATE
17 July 2024

REFERENCE
0578162 and 0589573

ATTACHMENT 1



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Attachment 1
Project Overview Map

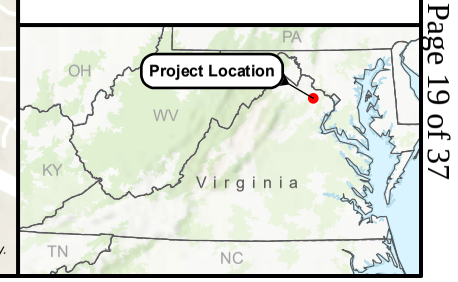
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Existing Substation
- Future Substation
- Proposed Substation
- Study Area
- Existing Dominion Transmission Line
- County Boundary

0 850 1,700
Feet

1:20,400

ERM



222 South 9th Street
Suite 2900
Minneapolis, Minnesota 55402

T +0 804 253 1090
F +0 804 253 1091

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ATTACHMENT 2

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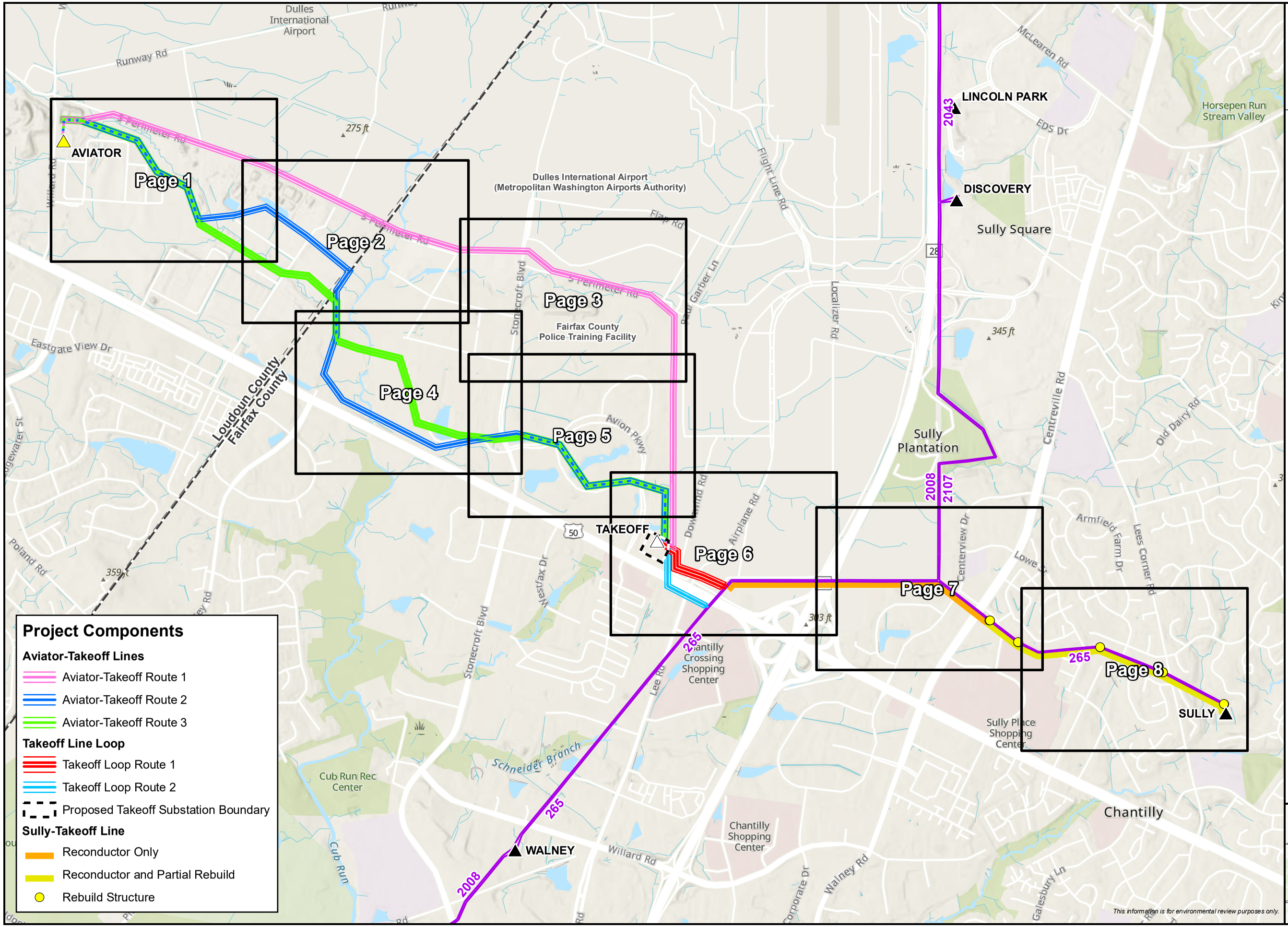


Dominion Energy®

Attachment 2
Overview Map Index

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

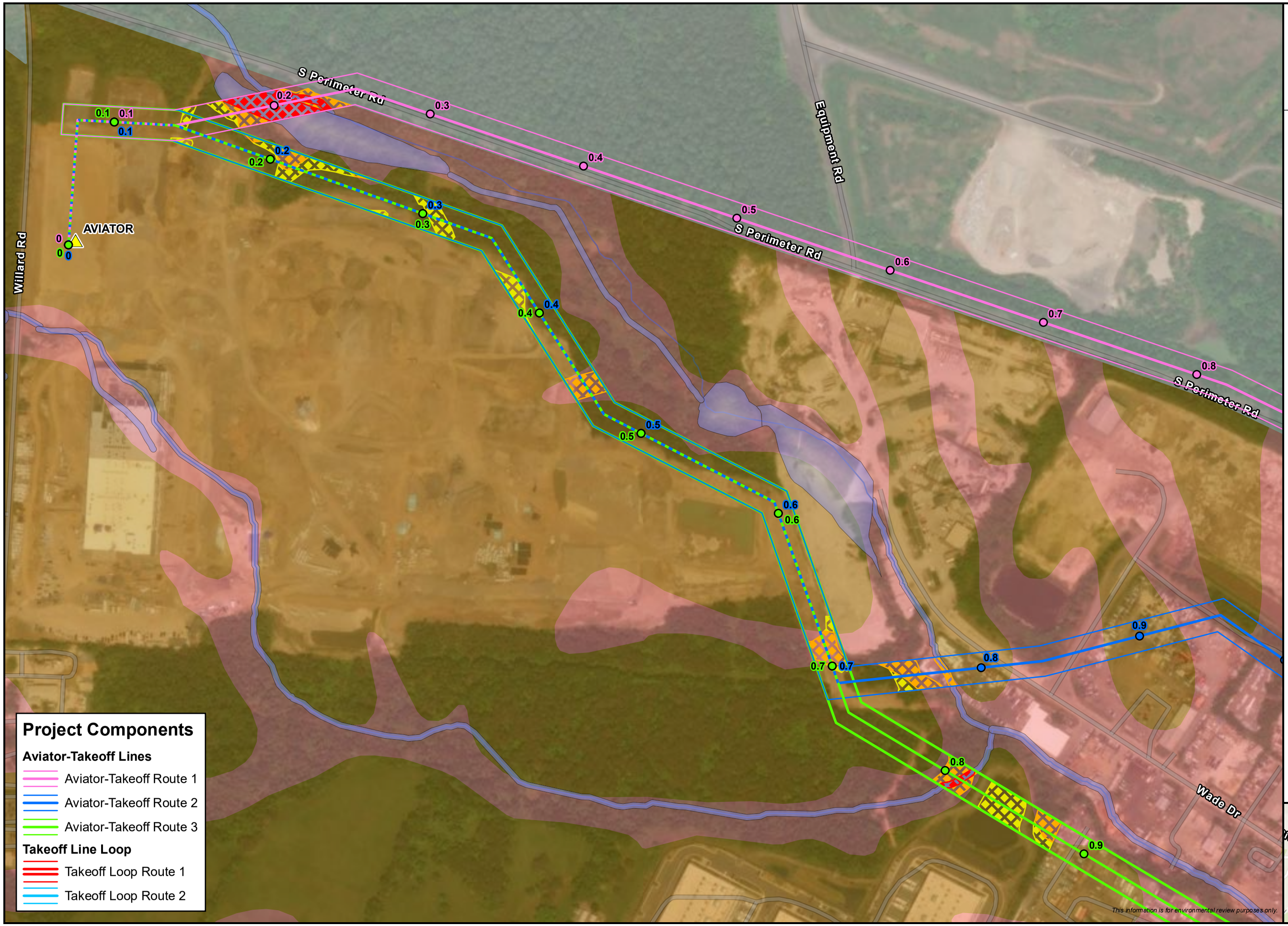
- Viewframe
- Existing Substation
- Future Substation
- Proposed Substation
- Existing Dominion Transmission Line
- County Boundary

0 850 1,700
Feet

1:20,400

ERM

N W E S



Dominion Energy

Attachment 2
Wetland Probability Map Set - Probability

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Milepost
- Future Substation
- NWI Wetland

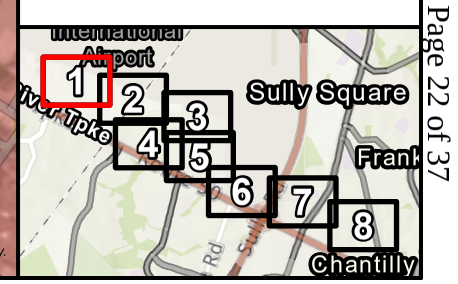
Wetland Probability
- High
- Medium/High
- Medium

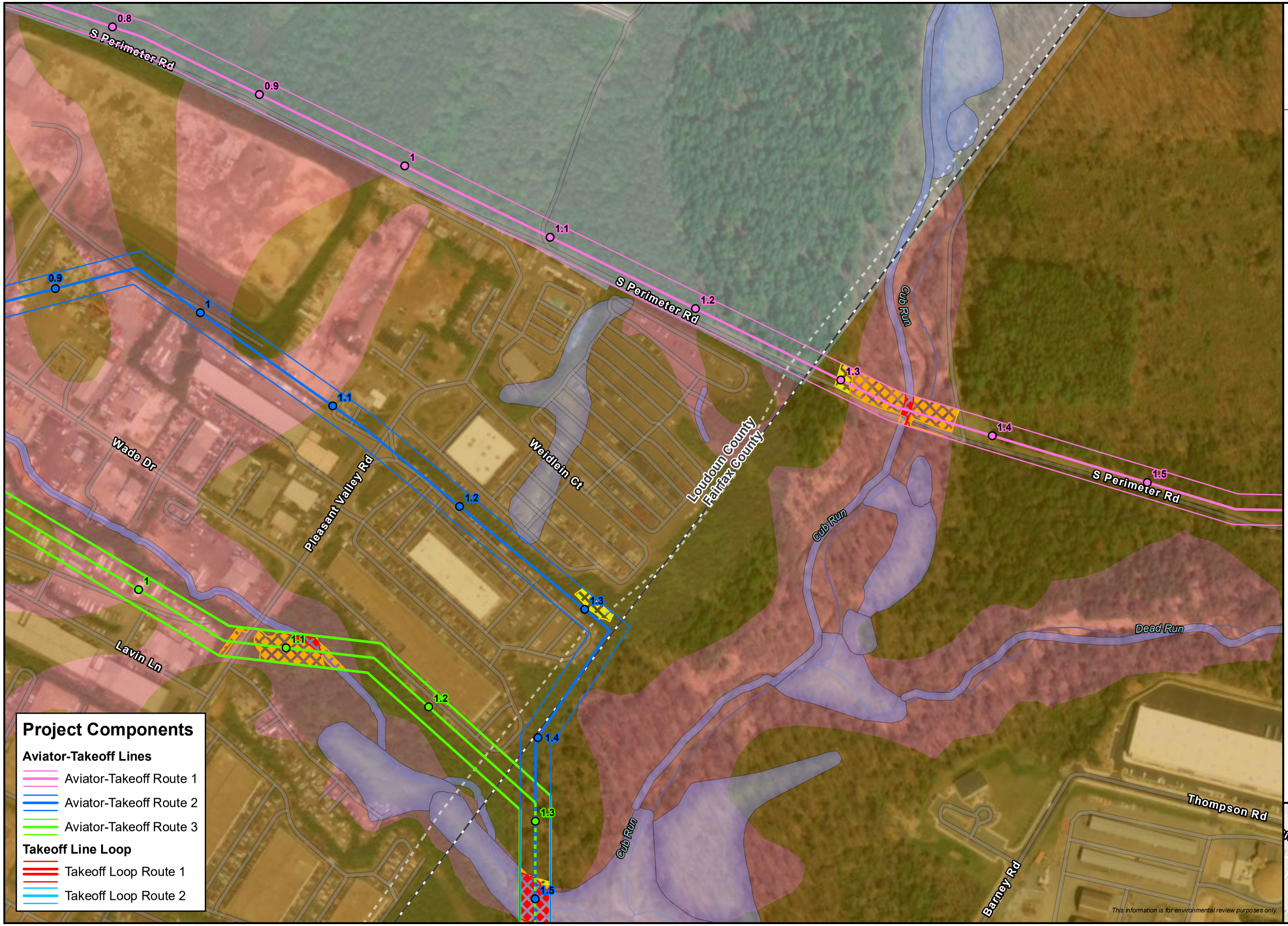
SSURGO Hydric Soil Rating
- Hydric
- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

ERM





Dominion Energy

Attachment 2
Wetland Probability Map Set - Probability

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

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Wetland Probability
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- Medium/High
- Medium

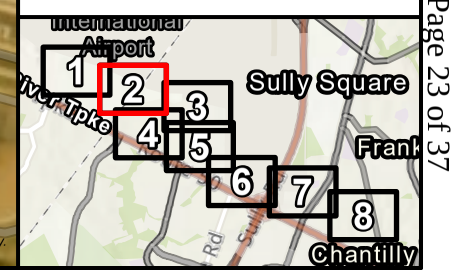
SSURGO Hydric Soil Rating
- Hydric
- Partially Hydric Soil
- Not Hydric

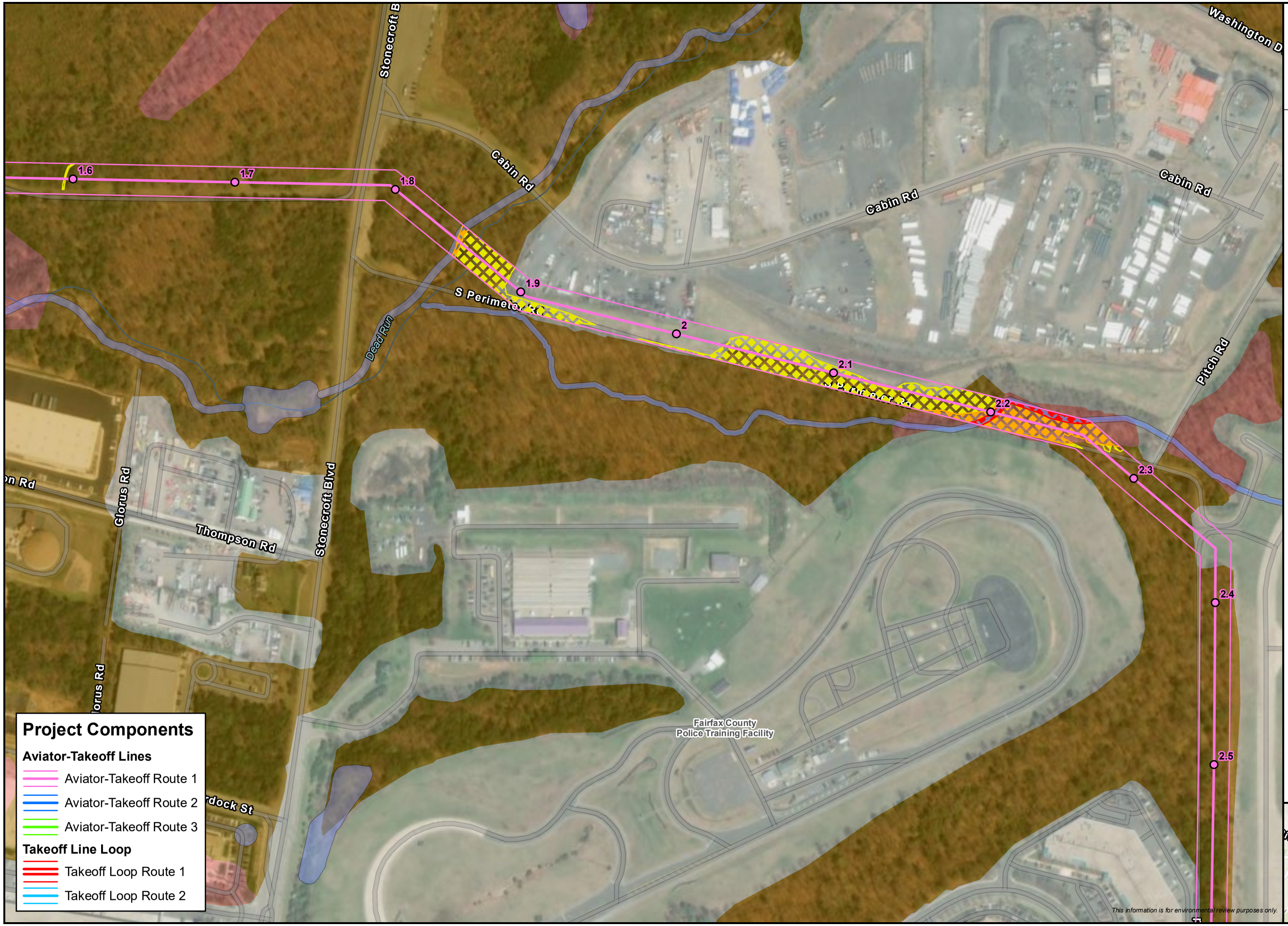
0 150 300
Feet

1:3,600

ERM

N W E S





Dominion Energy

Attachment 2
Wetland Probability Map Set - Probability

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

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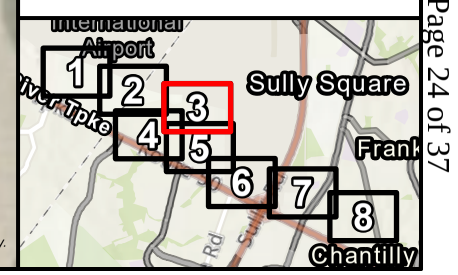
- Medium/High
- Medium

SSURGO Hydric Soil Rating
- Hydric
- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

ERM



Dominion Energy

Attachment 2
Wetland Probability Map Set - Probability

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Milepost
- County Boundary
- NWI Wetland

Wetland Probability
- High
- Medium/High
- Medium

SSURGO Hydric Soil Rating
- Hydric
- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

ERM

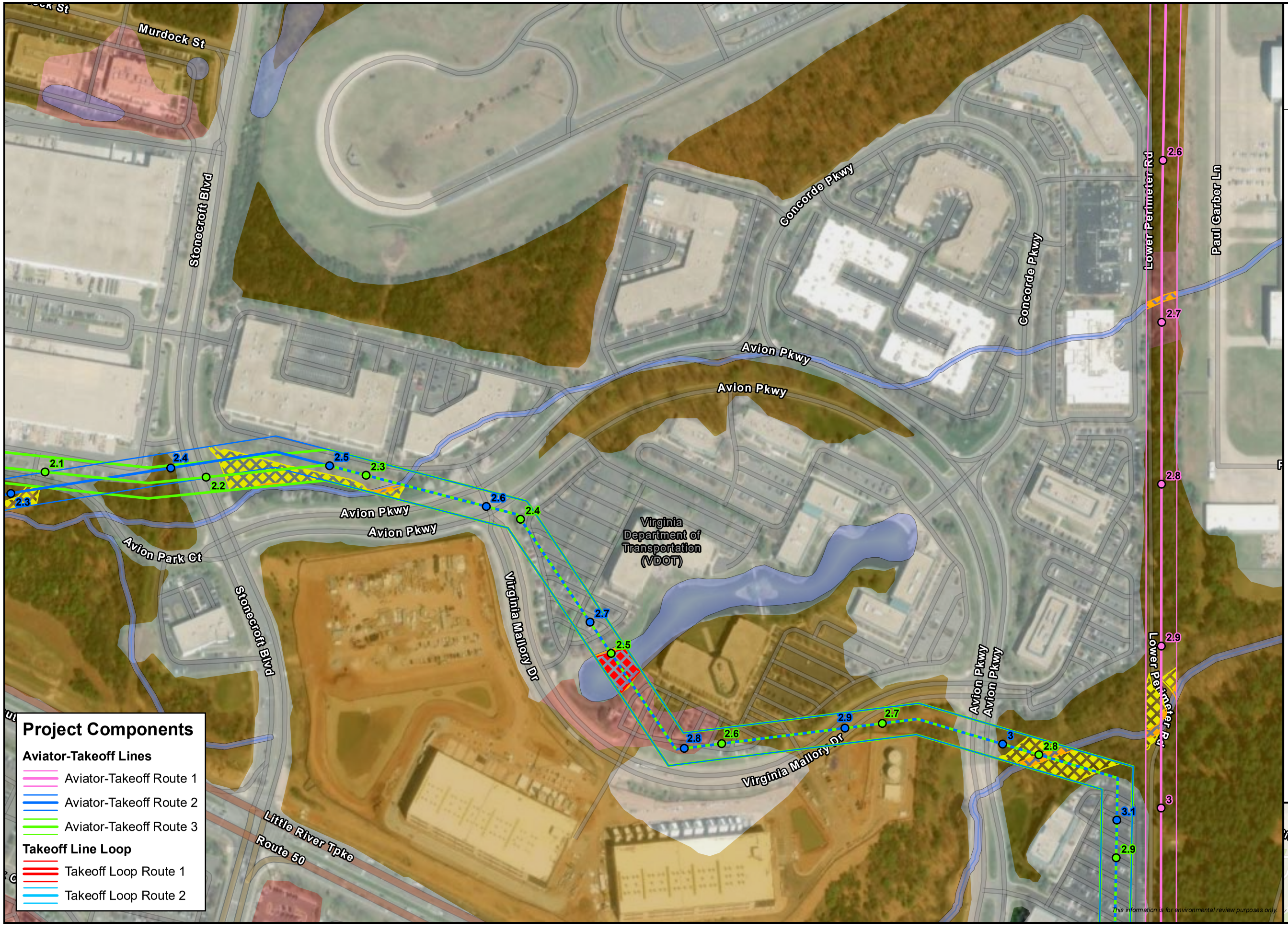
N W E S

Project Components

Aviator-Takeoff Lines
- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop
- Takeoff Loop Route 1
- Takeoff Loop Route 2

This information is for environmental review purposes only.



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Attachment 2
Wetland Probability Map Set - Probability

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Milepost
- NWI Wetland

Wetland Probability
- High
- Medium/High
- Medium

SSURGO Hydric Soil Rating
- Hydric
- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

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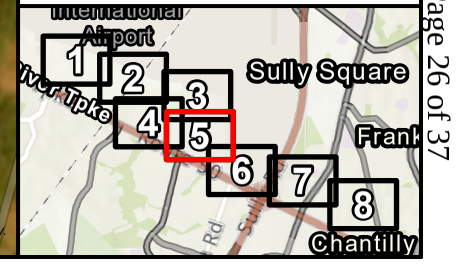

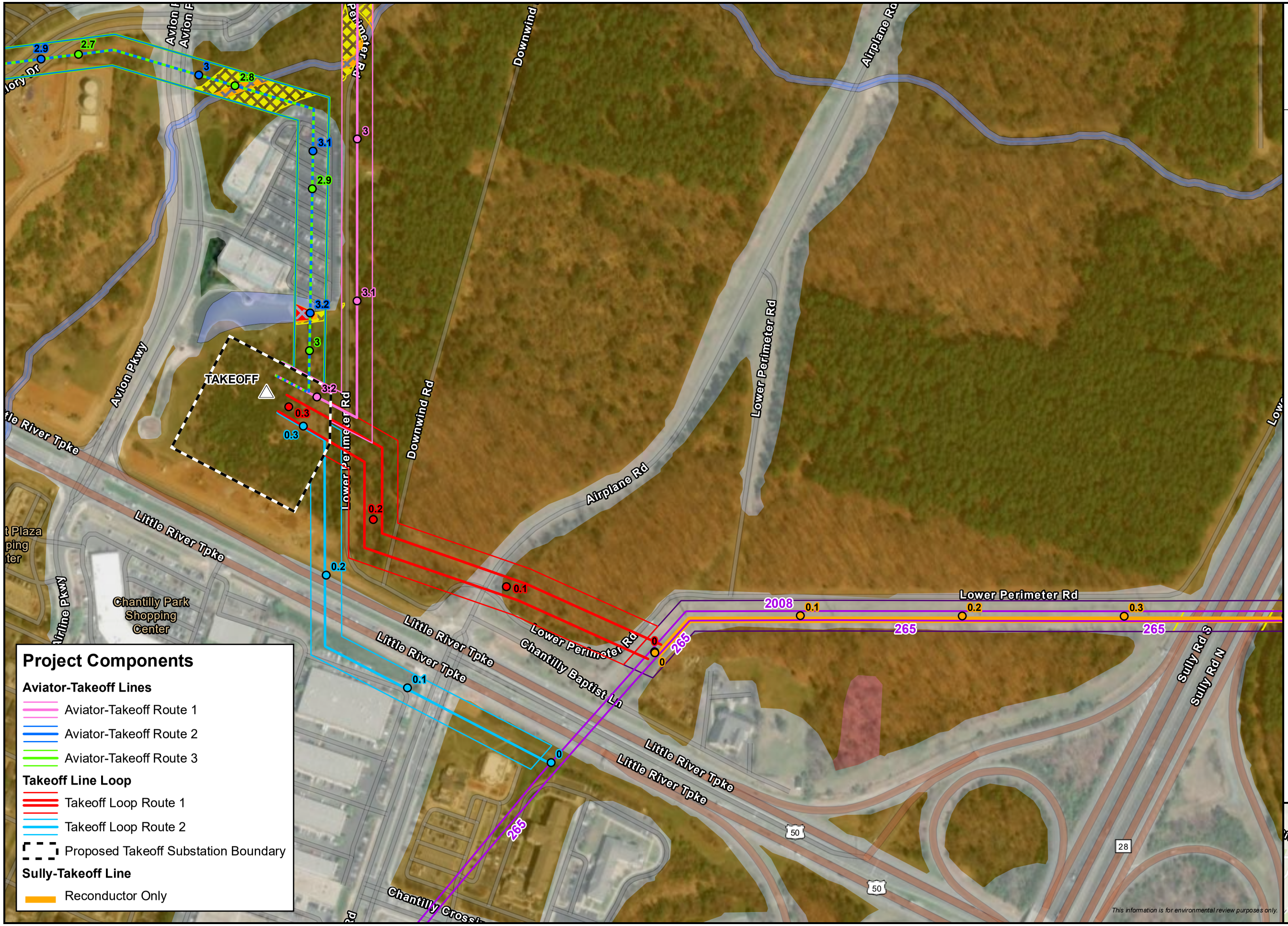

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Attachment 2
Wetland Probability Map Set - Probability

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Milepost
- Proposed Substation
- Existing Dominion Transmission Line
- Existing Dominion Right of Way (Project)
- NWI Wetland

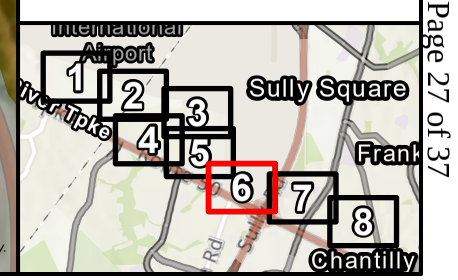
Wetland Probability
- High
- Medium/High
- Medium

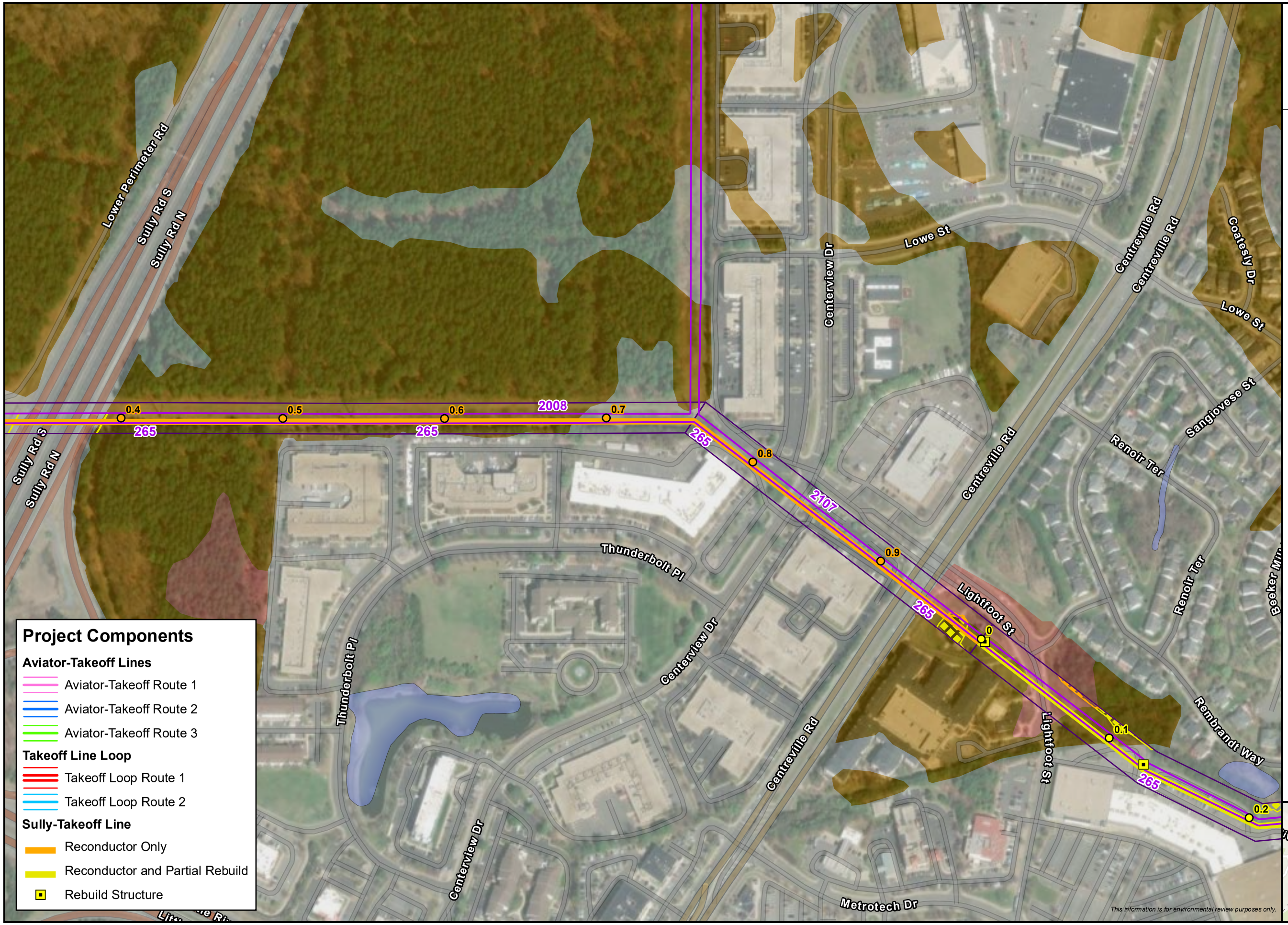
SSURGO Hydric Soil Rating
- Hydric
- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

ERM





Project Components

Aviator-Takeoff Lines
- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop
- Takeoff Loop Route 1
- Takeoff Loop Route 2

Sully-Takeoff Line
- Reconductor Only
- Reconductor and Partial Rebuild
- Rebuild Structure

Dominion Energy®

Attachment 2
Wetland Probability Map Set - Probability

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Milepost
- Existing Dominion Transmission Line
- Existing Dominion Right of Way (Project)
- NWI Wetland

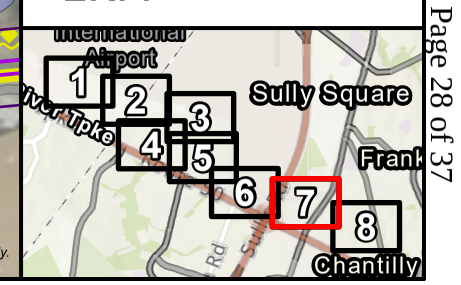
Wetland Probability
- Medium/High
- Medium

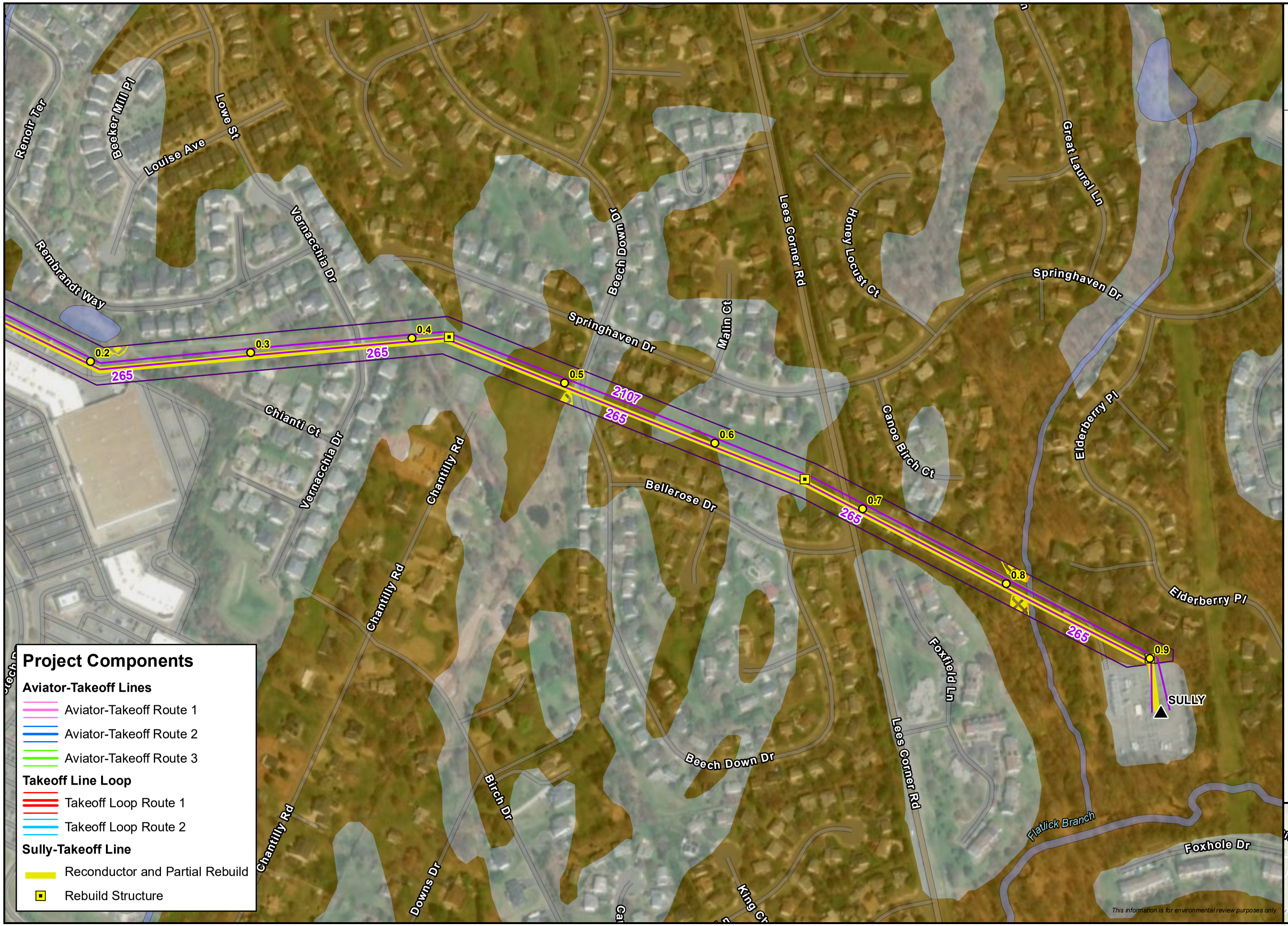
SSURGO Hydric Soil Rating
- Hydric
- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

ERM





Project Components

Aviator-Takeoff Lines

- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop

- Takeoff Loop Route 1
- Takeoff Loop Route 2

Sully-Takeoff Line

- Reconductor and Partial Rebuild
- Rebuild Structure

Dominion Energy®

Attachment 2
Wetland Probability Map Set - Probability

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Milepost
- Existing Substation
- Existing Dominion Transmission Line
- Existing Dominion Right of Way (Project)
- NWI Wetland

Wetland Probability

- Medium/High
- Medium

SSURGO Hydric Soil Rating

- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

ERM

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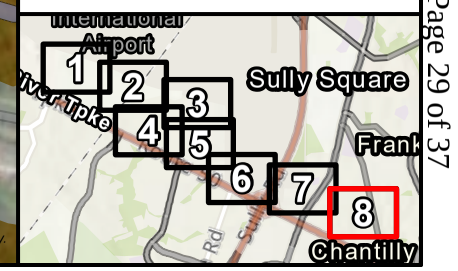

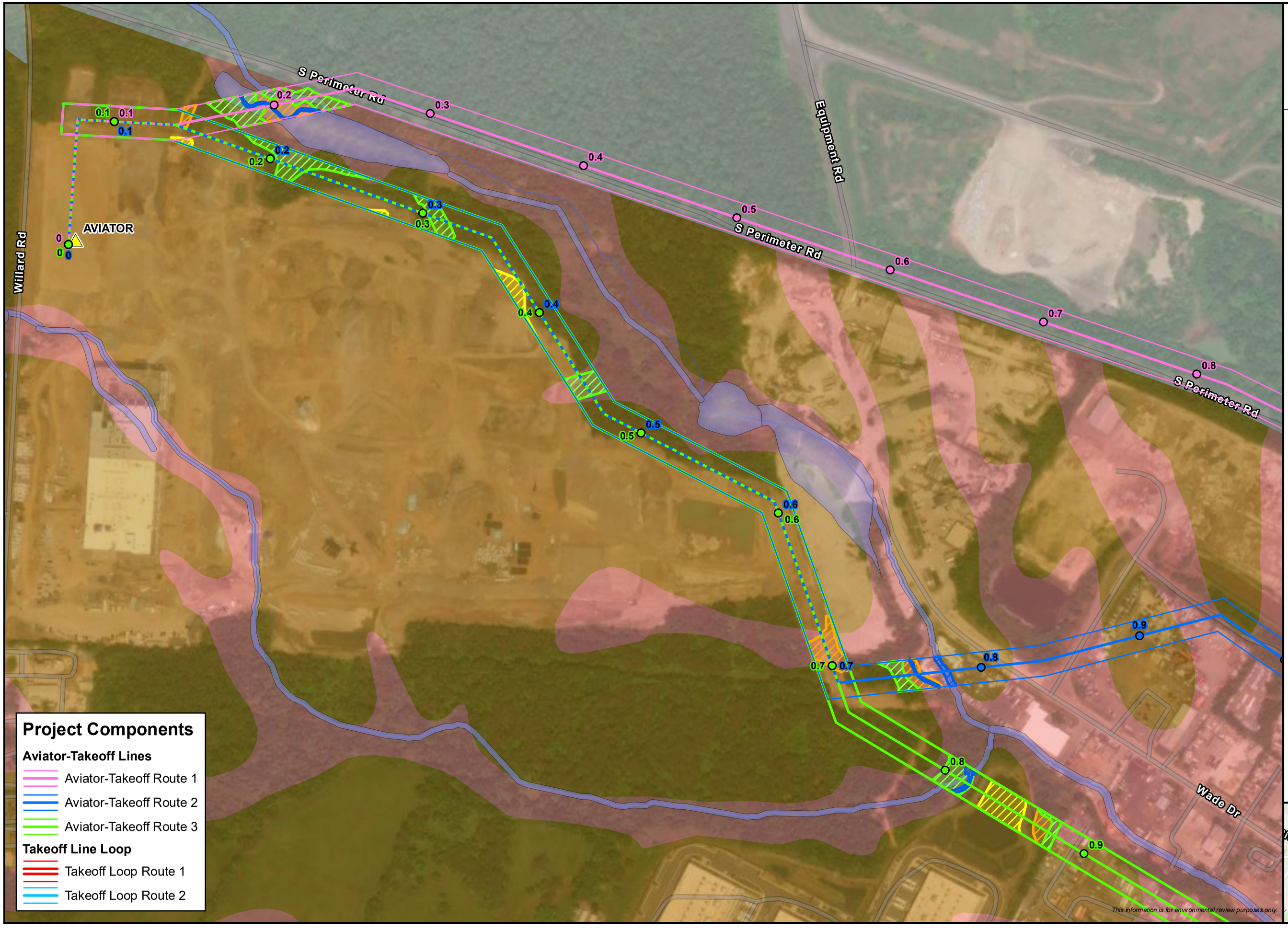

Project Components

Aviator-Takeoff Lines

- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop

- Takeoff Loop Route 1
- Takeoff Loop Route 2

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Attachment 2
Wetland Probability Map Set - Cowardin Classification

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Milepost
- Future Substation
- NWI Wetland

Wetland Cover Type

- PEM
- PFO
- PUB
- Riverine

SSURGO Hydric Soil Rating

- Hydric
- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

ERM

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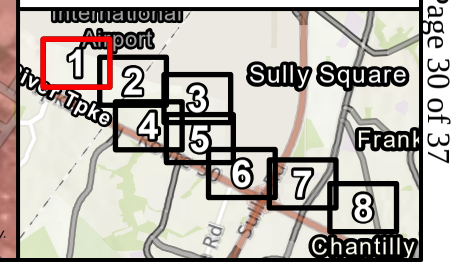
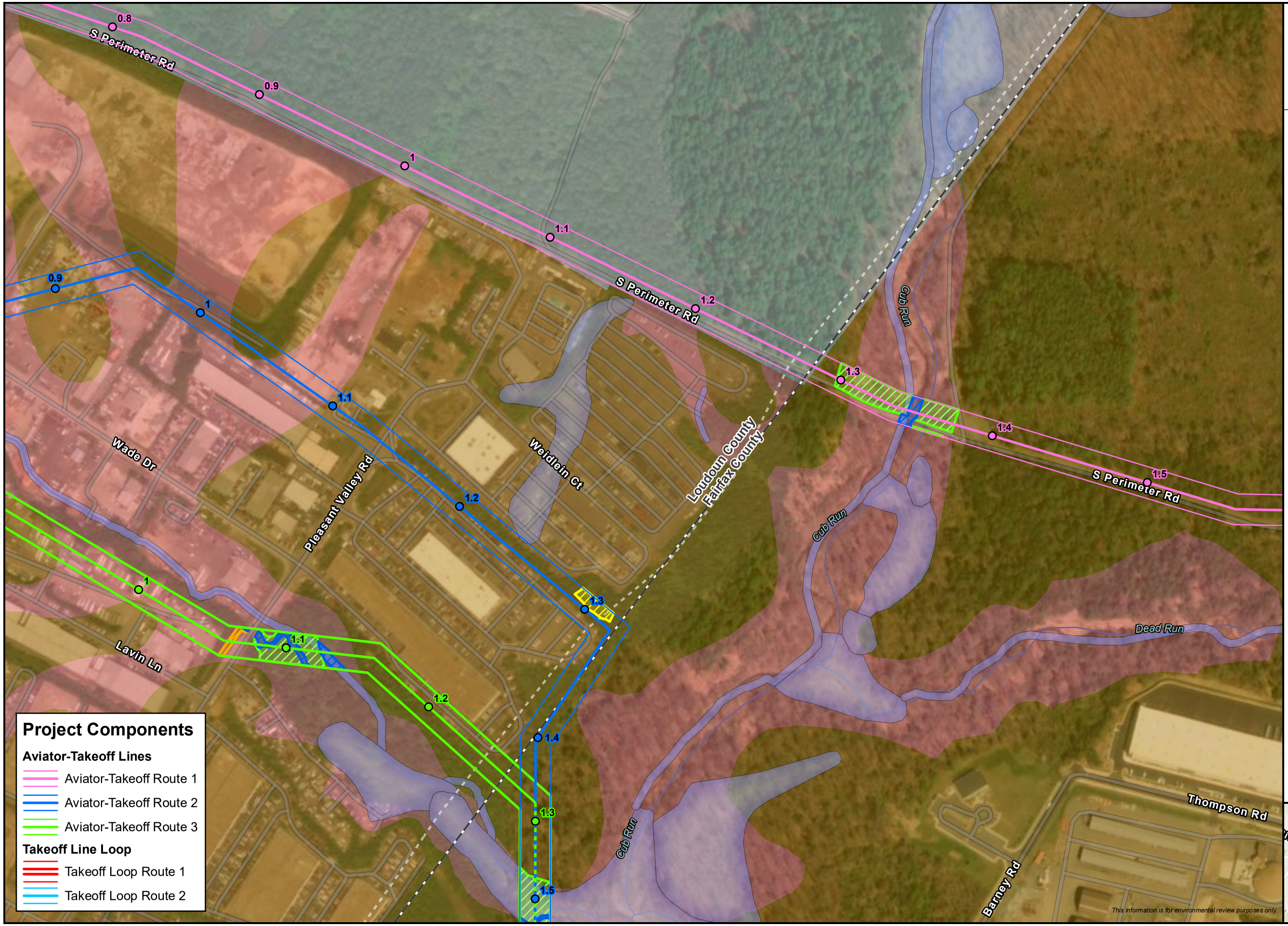




Project Components

Aviator-Takeoff Lines

- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop

- Takeoff Loop Route 1
- Takeoff Loop Route 2

Dominion Energy®

Attachment 2

Wetland Probability Map Set - Cowardin Classification

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Fairfax and Loudoun Counties, Virginia

- Milepost
- County Boundary
- NWI Wetland

Wetland Cover Type

- PEM
- PFO
- PUB
- Riverine

SSURGO Hydric Soil Rating

- Hydric
- Partially Hydric Soil
- Not Hydric

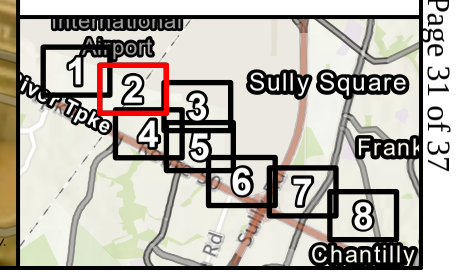
0 150 300

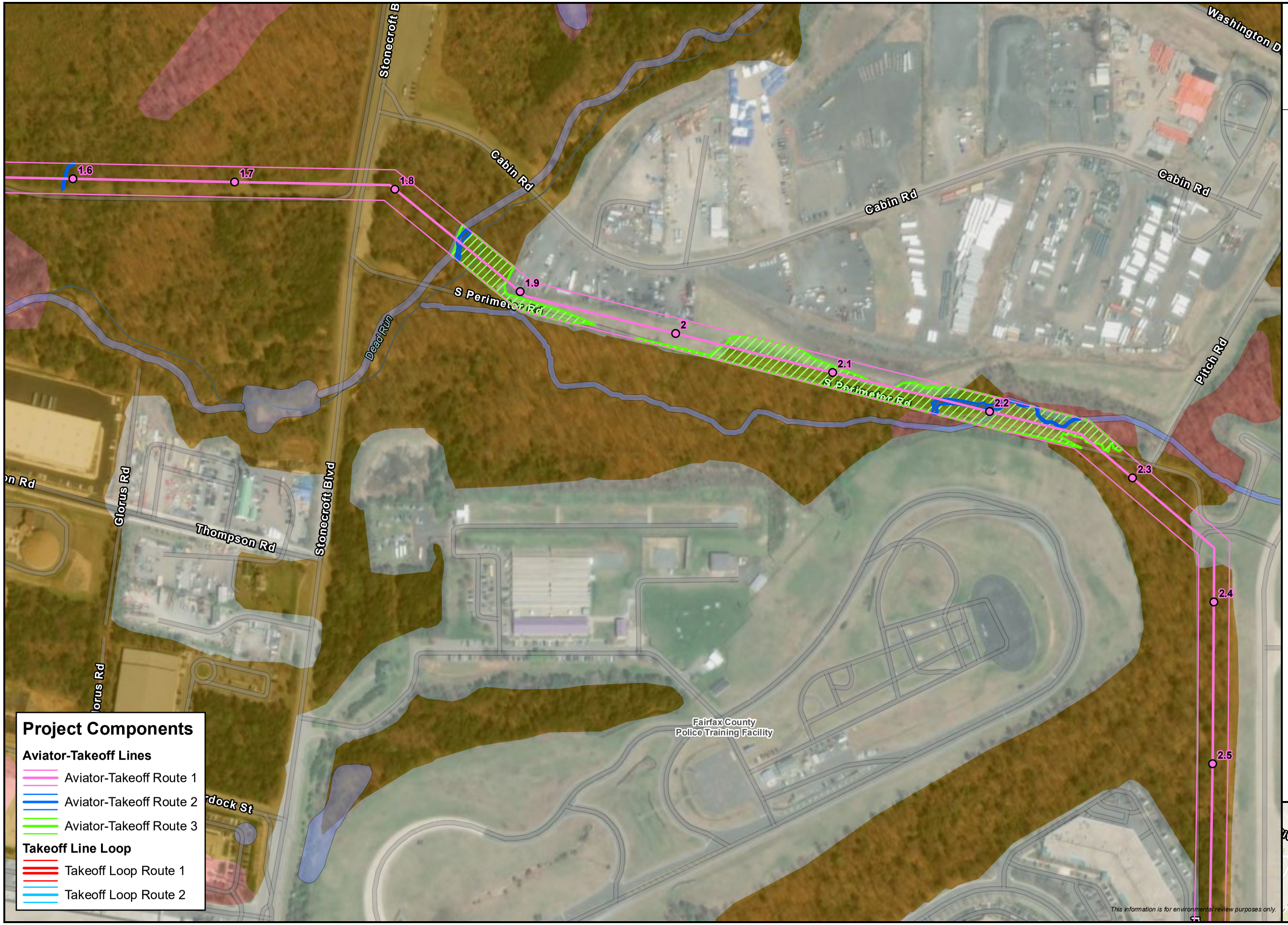
Feet

1:3,600

ERM

N W E S





Project Components

Aviator-Takeoff Lines

- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop

- Takeoff Loop Route 1
- Takeoff Loop Route 2

Dominion Energy®

Attachment 2

Wetland Probability Map Set - Cowardin Classification

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Fairfax and Loudoun Counties, Virginia

- Milepost
- NWI Wetland

Wetland Cover Type

- PFO
- Riverine

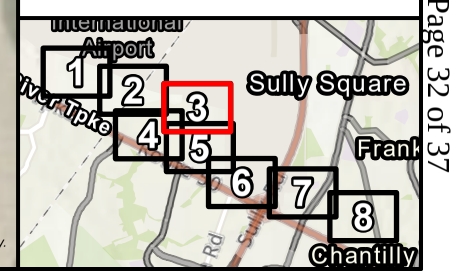
SSURGO Hydric Soil Rating

- Hydric
- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

ERM



Dominion Energy

Attachment 2
Wetland Probability Map Set - Cowardin Classification

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Milepost
- County Boundary
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Wetland Cover Type
- PEM
- PFO
- PUB
- Riverine

SSURGO Hydric Soil Rating
- Hydric
- Partially Hydric Soil
- Not Hydric

0 150 300
Feet

1:3,600

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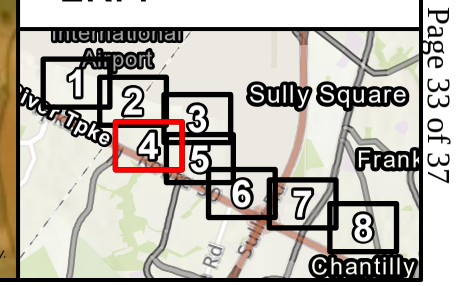

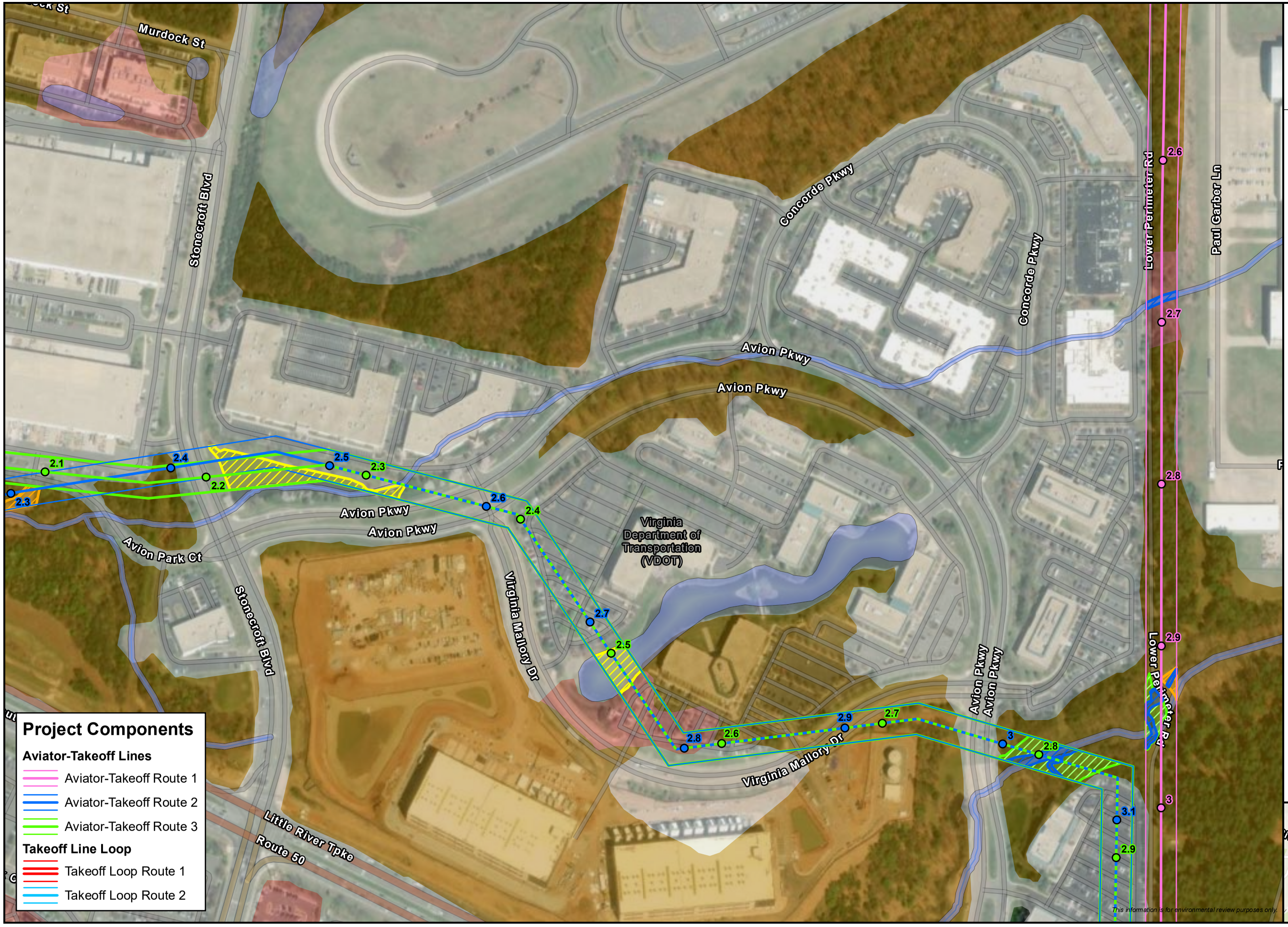
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Stonecroft Blvd
Concorde Pkwy
Concorde Pkwy
Lower Perimeter Rd
Paul Garber Ln
Avion Pkwy
Avion Pkwy
Avion Pkwy
Avion Pkwy
Avion Park Ct
Stonecroft Blvd
Virginia Department of Transportation (VDOT)
Virginia Mallory Dr
Virginia Mallory Dr
Avion Pkwy
Avion Pkwy
Lower Perimeter Rd
Little River Tpke
Route 50
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2.8
2.6
2.9
2.7
3
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3.1
2.9
2.6
2.7
2.8
2.9
3
Project Components
Aviator-Takeoff Lines
Aviator-Takeoff Route 1
Aviator-Takeoff Route 2
Aviator-Takeoff Route 3
Takeoff Line Loop
Takeoff Loop Route 1
Takeoff Loop Route 2
This information is for environmental review purposes only
Dominion Energy
Attachment 2
Wetland Probability Map Set - Cowardin Classification
230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia
Page 5 of 8
Milepost
NWI Wetland
Wetland Cover Type
PEM
PFO
PUB
Riverine
SSURGO Hydric Soil Rating
Hydric
Partially Hydric Soil
Not Hydric
0
150
300
Feet
1:3,600
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Sully Square
Chantilly
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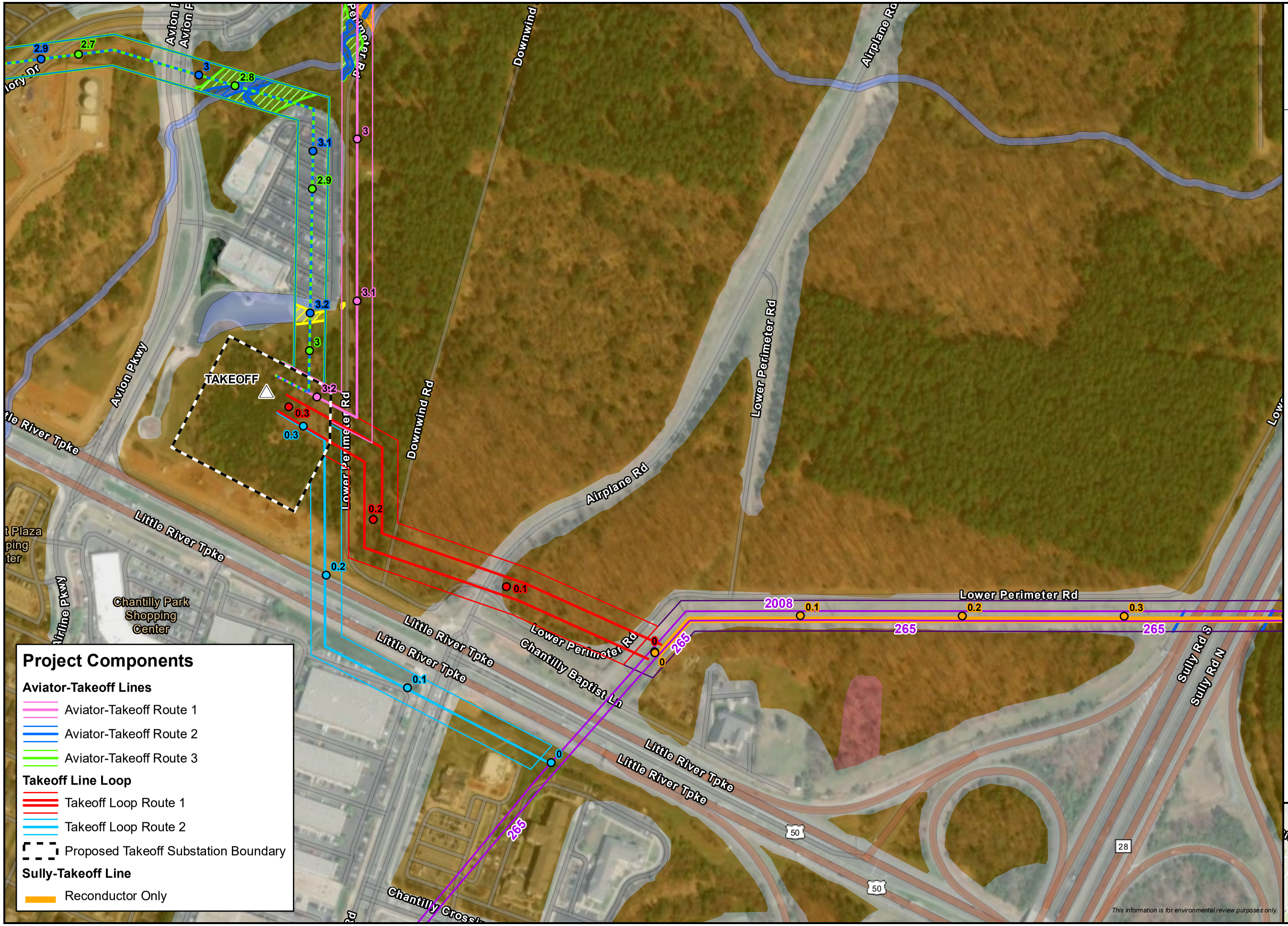

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Attachment 2
Wetland Probability Map Set - Cowardin Classification

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Milepost
- Proposed Substation
- Existing Dominion Transmission Line
- Existing Dominion Right of Way (Project)
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Wetland Cover Type
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SSURGO Hydric Soil Rating
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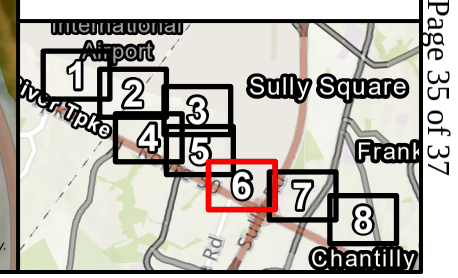
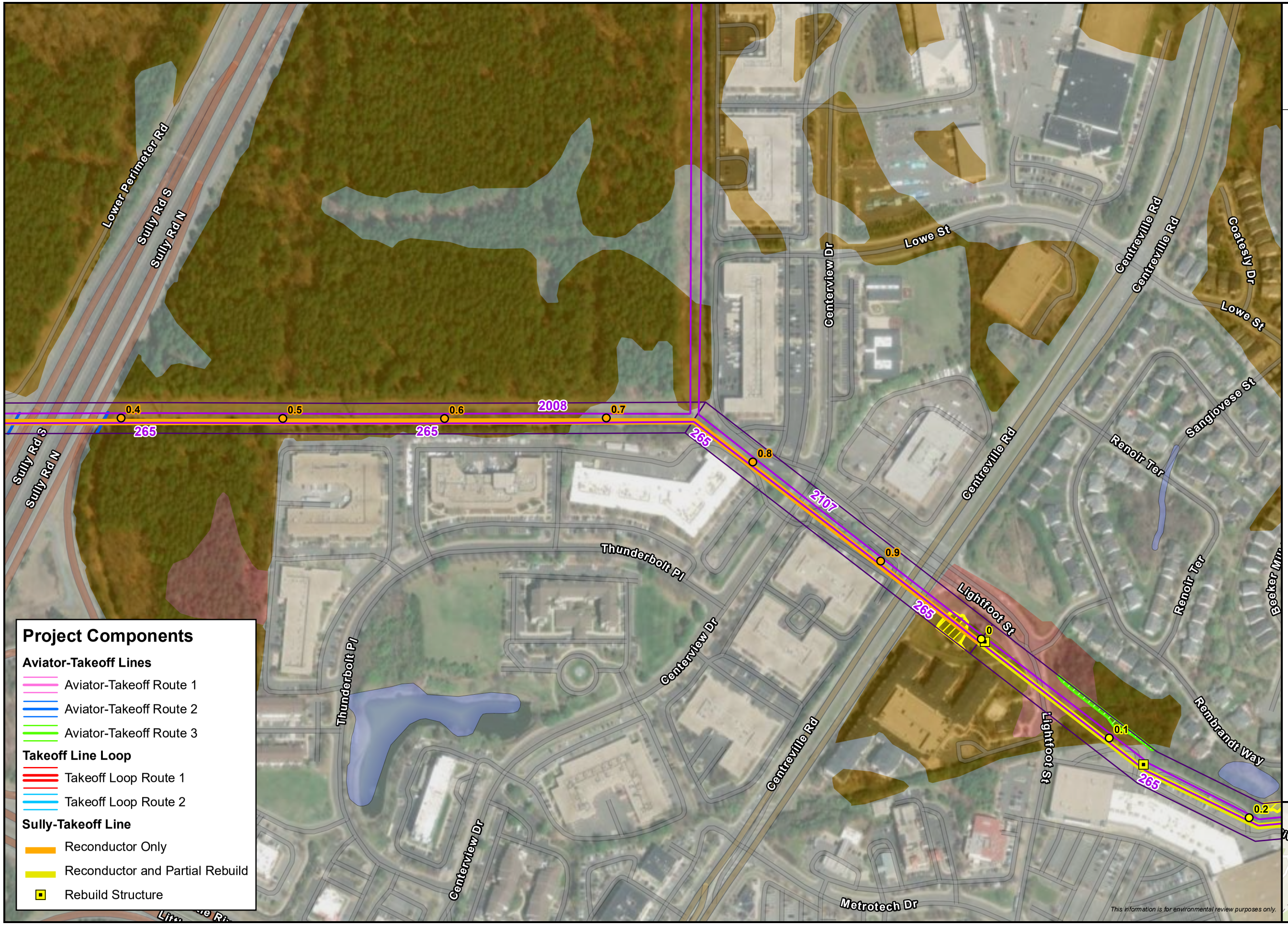
0 150 300
Feet

1:3,600

ERM





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Attachment 2
Wetland Probability Map Set - Cowardin Classification

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

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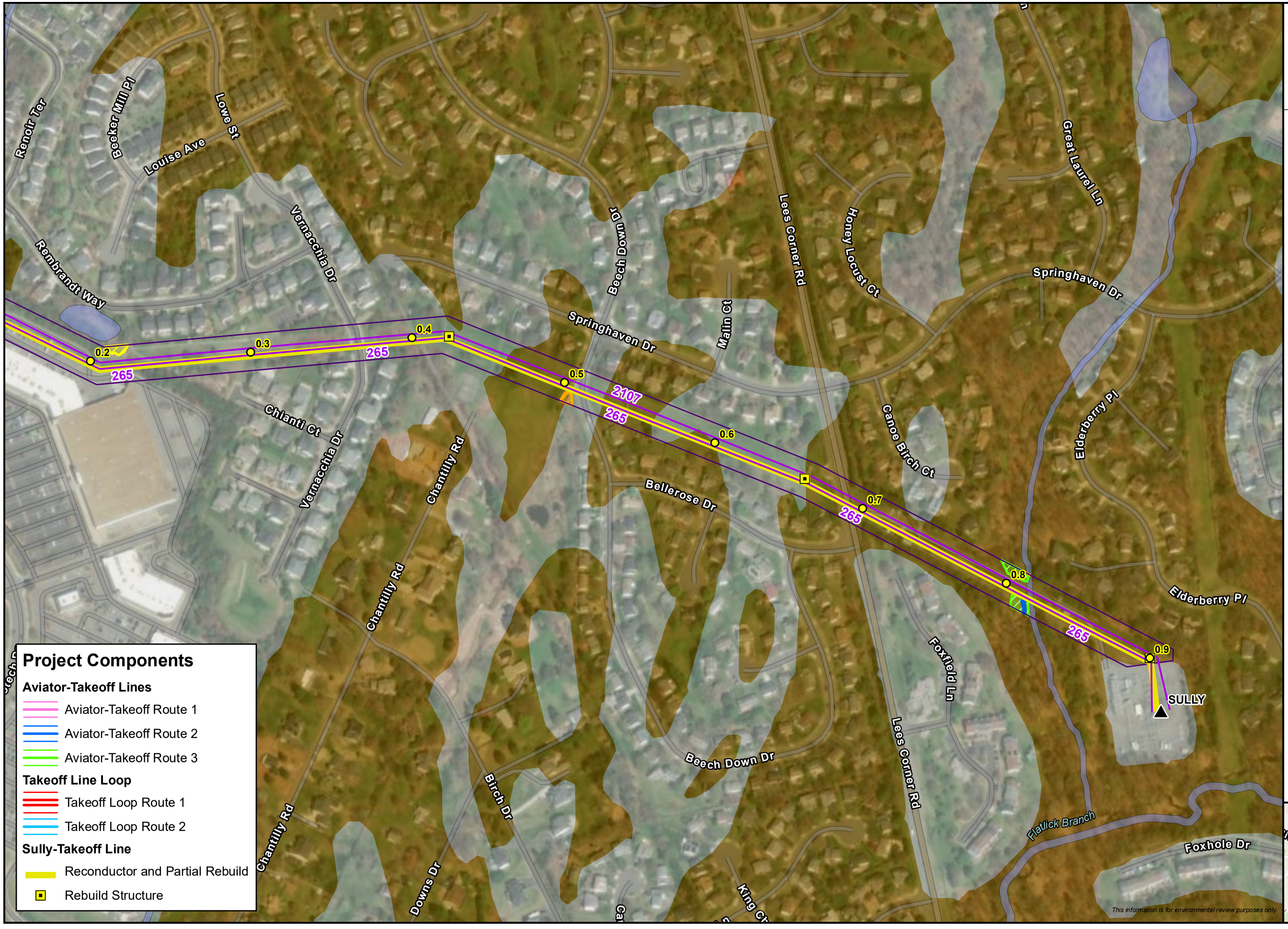
- Not Hydric

0 150 300
Feet

1:3,600

ERM



Project Components

Aviator-Takeoff Lines

- Aviator-Takeoff Route 1
- Aviator-Takeoff Route 2
- Aviator-Takeoff Route 3

Takeoff Line Loop

- Takeoff Loop Route 1
- Takeoff Loop Route 2

Sully-Takeoff Line

- Reconductor and Partial Rebuild
- Rebuild Structure

Dominion Energy®

Attachment 2
Wetland Probability Map Set - Cowardin Classification

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

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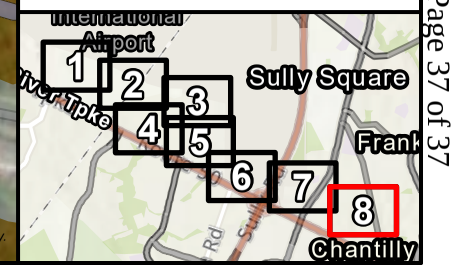
0 150 300
Feet

1:3,600

ERM



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director

July 8, 2024

Elizabeth “Tibby” Hester
Manager, Environmental and Sustainability
Dominion Energy Virginia
120 Tredegar Street
Richmond, VA 23219

RE: Dominion’s Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Aviator Takeoff Substation, Fairfax County, Virginia

Dear Ms. Hester;

In accordance with the Department of Environmental Quality-State Corporation Commission *Memorandum of Agreement Regarding Wetland Impact Consultation* (July 2003), we have reviewed the information submitted by Dominion Energy Virginia. Dominion is proposing the following within Loudoun and Fairfax Counties, Virginia:

1. Construct two new overhead double circuit 230 kilovolt ("kV") transmission lines ("Takeoff Loop") and a new substation in Fairfax County ("Takeoff Substation");
2. Partially rebuild and reconductor an existing 230 kV overhead transmission line in Fairfax County (“Sully- Takeoff Partial Reconductor/Rebuild"); and
3. Construct a new overhead double circuit 230 kV transmission line in Loudoun County and Fairfax County (the Aviator-Takeoff Lines").

Collectively, the Takeoff Loop and Takeoff Substation, the Sully-Takeoff Partial Reconductor/Rebuild, and the Aviator Lines are referred to as the "230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation" or the "Project."

Summary of Findings
A jurisdictional wetland and waters delineation has not been conducted at this time; however, Environmental Resources Management conducted a wetland desktop study to identify probable wetlands based on a review of multiple data sources.

The tables below provide a summary of the medium to high probability wetlands expected to be present within the proposed Project right-of-way. No medium to high probability wetlands were identified along either of the routes for the Takeoff Loop, and therefore, the Takeoff Loop Routes are not included in Table 1.

Table 1: Summary of the Probabilities of Wetland and Waterbody Occurrence along the Aviator-Takeoff Lines Route Alternatives [a, b]

Probability	Total within right-of-way Acres [b]	Wetland and Waterbody type (acres)				
		PEM (Emergent)	PFO (Forested)	PSS (Scrub-shrub)	Riverine (Stream)	PUB (Freshwater pond)
Aviator-Takeoff Route 1						
High	0.7	0.2	0.4	NA	0.1	NA
Medium/High	1.7	0.0	1.5	NA	0.2	NA
Medium	2.8	0.1	2.5	NA	0.2	0.0
Totals	**5.2**	**0.3**	**4.4**	**NA**	**0.5**	**0.0**
Aviator-Takeoff Route 2						
High	2.1	0.2	1.4	NA	0.1	0.3
Medium/High	2.1	0.7	1.1	NA	0.2	0.1
Medium	2.4	0.3	1.3	NA	0.1	0.7
Totals	**6.6**	**1.2**	**3.8**	**NA**	**0.4**	**1.1**
Aviator-Takeoff Route 3						
High	1.2	NA	0.8	NA	0.1	0.3
Medium/High	3.0	0.3	1.7	NA	0.3	0.7
Medium	2.6	0.1	1.1	NA	0.1	1.3
Totals	**6.8**	**0.4**	**3.6**	**NA**	**0.5**	**2.3**
Sully-Takeoff Reconductor and Partial Rebuild						
High	NA	NA	NA	NA	NA	NA
Medium/High	0.0	0.0	0.0	NA	NA	NA
Medium	0.2	0.0	0.1	NA	0.0	0.0
Totals	**0.2**	**0.0**	**0.1**	**N/A**	**0.0**	**0.0**

Note: Totals may not equal the sum of addends due to rounding.
NA: Not applicable due to absence of wetland or waterbody type within the alternative route
[a] Numbers in this table have been rounded for presentation purposes; as a result, the totals may not reflect the sum.
b Total acres may not total the sum of wetland and waterbody types. This is due to some of the lower probability rankings do not overlap with NWI or interpreted wetlands, and therefore do not have a wetland/waterbody type associated with them.

The full Wetland Desktop Study will be submitted once finalized. Subsequently, a wetland delineation will be conducted and the limits of wetlands of other waters of the United States will be submitted to the U.S. Army Corps of Engineers for confirmation.

Water Quality and Wetlands. The disturbance of land and surface waters, which include wetlands, open water, and streams, may require prior approval by the Virginia Department of Environmental Quality (DEQ); the U.S. Army Corps of Engineers (USACE); the Virginia Marine Resources Commission (VMRC); and/or local government wetlands boards (generally in the northern and piedmont regions of Virginia). Measures such as but not limited to Best Management Practices (BMPs) must be taken to first avoid and minimize impacts to surface waters during construction activities, including potential water quality impacts resulting from construction site runoff. Unavoidable impacts may require compensatory mitigation.

The USACE and DEQ work in conjunction to provide official confirmation of whether there are federal and/or state jurisdictional surface waters that may be impacted by the proposed project. DEQ may confirm additional waters as jurisdictional beyond those under federal authority. VMRC provides its own review to determine its agency jurisdiction. Review of National Wetland Inventory maps or topographic maps for locating wetlands, open waters, or streams may not be sufficient; there may need to be a site-specific review by a qualified professional. Based on the information provided at this time, it appears that Route 1 may have the least acreage amount of surface water, including wetlands, that could potentially be impacted compared to the other alternative routes. However, these estimates may change once a wetland delineation is conducted and design plans are developed within the project area.

If construction activities will occur in or along any streams (perennial, intermittent, or ephemeral), open water, or wetlands, the applicant should contact the DEQ-VWP manager at the DEQ regional office closest to the project location (https://www.deq.virginia.gov/get-involved/about-us/contact-us) to determine the need for any permits prior to commencing work that could impact surface waters. Even if there will be no intentional placement of fill material in jurisdictional waters, potential water quality impacts resulting from construction site surface runoff must be minimized. This can be achieved by using BMPs. DEQ's permit need decisions neither replace nor supersede requirements set forth by other local, state, federal, and tribal laws, nor eliminate the need to obtain additional permits, approvals, consultations, or authorizations as required by law before proposed activities may commence.

Erosion and Sediment Control and Storm Water Management. DEQ has regulatory authority for the Virginia Pollutant Discharge Elimination System (VPDES) programs related to municipal separate storm sewer systems (MS4s) and construction activities. Erosion and sediment control (ESC) measures are addressed in local ordinances and State regulations. Additional information is available at https://www.deq.virginia.gov/permits/water/stormwater-construction. Non-point source pollution resulting from this project should be minimized by using effective erosion and sediment control practices and structures. Consideration should also be given to denuded areas to be promptly revegetated following construction work. If the total land disturbance exceeds 10,000 square feet, an ESC plan will be required. Some localities also require an ESC plan for disturbances less than 10,000 square feet. A stormwater management plan may also be required. For any land disturbing activities equal to one acre or more, you are required to apply for coverage under the VPDES General Permit for Discharges of Storm Water from Construction Activities. The Virginia Stormwater Management Permit Authority may be DEQ or the locality.

Recommendations and Potential Permits:

Based upon review of the information provided, DEQ's Virginia Water Protection (VWP) Permit Program offers the following general recommendations concerning potential surface water impacts:

1. Prior to commencing project work, all surface waters on the project site should be delineated by a qualified professional and verified by the USACE or DEQ. Note that the USACE can confirm boundaries of federal jurisdictional waters and state jurisdictional waters but may only provide confirmation of Waters of the United States (WOTUS) boundaries. Except in couple of situations, DEQ provides confirmation of all state surface waters boundaries, whether or not the USACE has jurisdiction.
2. Wetland, stream, and open water impacts should be avoided and minimized to the maximum extent practicable.
3. If the scope of the project changes, additional review will be necessary by one or more offices in the Commonwealth's Secretariat of Natural Resources and/or the USACE.

4. At a minimum, any required compensation for permanent impacts to State Waters, including the compensation for permanent conversion of forested wetlands and scrub-shrub wetlands to emergent wetlands, should be in accordance with all applicable state regulations and laws. The typical ratios for permanent conversion impacts is 1:1 (not a standard ratio). Secondary impacts (e.g., loss of hydrology, significant temporary impacts, etc.) should also be considered, and may require compensatory mitigation at the standard ratios, unless determined otherwise based on project-specific considerations. Permanent impacts to forested or converted wetlands are required to be compensated by establishing or restoring new forested or scrub-shrub wetlands, within the impacted watershed. Compensation is preferred through available sources of mitigation bank and in-lieu program wetland mitigation credits.
5. Any temporary impacts to surface waters associated with this project should be restored to pre-existing conditions.
6. No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts placed in streams must be installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. Furthermore, the activity must not impede the passage of normal or expected high flows and the structure or discharge must withstand expected high flows.
7. Erosion and sedimentation controls (ESC) should be designed in accordance with the most recent version of the Virginia Stormwater Management Handbook. These controls should be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls should also remain in place until the area is stabilized and should then be removed. Any exposed slopes and streambanks should be stabilized immediately upon completion of work in each permitted area. All denuded areas should be properly stabilized in accordance with the most recent Virginia Stormwater Management Handbook. Please note that on June 22, 2023, Virginia's State Water Control Board adopted new Virginia Erosion and Stormwater Management Regulations (9VAC25-875) to consolidate program requirements and correct inconsistencies between erosion and sediment control and stormwater management program regulations. Additionally, the project will require coverage under the new Construction General Permit. These changes will become effective on July 1, 2024.
8. No machinery may enter state surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage.
9. Heavy equipment in temporarily impacted surface waters should be placed on mats, geotextile fabric, or other suitable material, to minimize soil disturbance to the maximum extent practicable. Equipment and materials should be removed immediately upon completion of work.
10. Activities should be conducted in accordance with any time-of-year restriction(s) as recommended by the Department of Wildlife Resources, the Department of Conservation and Recreation (DCR), the Virginia Marine Resources Commission (VMRC), and the U.S. Fish and Wildlife Service (USFWS), or other protective measures for listed threatened or endangered species and/or critical habitat. The permittee should retain a copy of any DEQ and resource agency correspondence concerning species or habitats for the duration of the construction phase of the project.
11. All construction, construction access, and demolition activities associated with this project should be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a Virginia Water Protection (VWP) individual permit, general permit, or general permit coverage. Wet, excess, or waste concrete is prohibited from entering surface waters.

12. Herbicides used in or around any surface water should be approved for aquatic use by the United States Environmental Protection Agency (EPA) or the USFWS. Use of herbicides in state waters shall be performed in accordance with Code of Virginia Chapter 39 - Pesticide Control (§§ 3.2-3900 through 3.2-3947) and 9VAC25-800 et. seq. These herbicides should be applied according to label directions by an herbicide applicator licensed by the Virginia Department of Agriculture and Consumer Services (VDACS), Office of Pesticide Services. A non-petroleum-based surfactant should be used in or around any surface waters.

Permits:

Based on DEQ's review of Dominion's report dated June 17, 2024, the proposed project may require a Virginia Water Protection (VWP) individual permit or general permit coverage. The applicant may submit a Joint Permit Application (JPA) in accordance with form instructions for further evaluation and final permit need determination by DEQ.

Should you have any questions, please don't hesitate to contact me at 804-965-4329 or at **michelle.henicheck@deq.virginia.gov.**

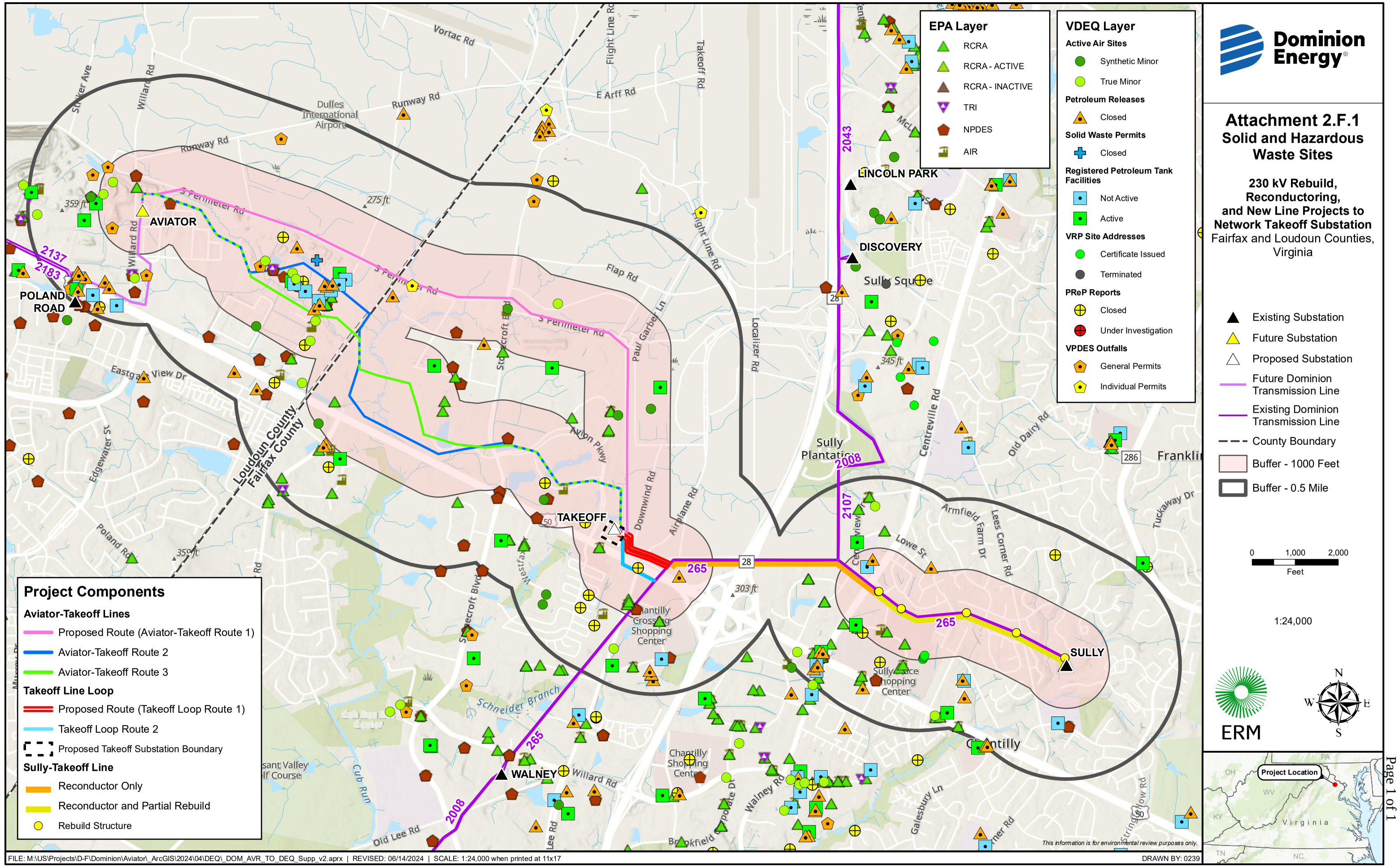
Sincerely,

Michelle Henicheck

Michelle Henicheck, PWS
Senior Wetland Ecologist
Virginia Department of Environmental Quality
Office of Wetlands & Stream Protection

Phone: 804-965-4329
Email: Michelle.Henicheck@DEQ.Virginia.gov
DEQ Office Address:
1111 E. Main Street
Richmond, VA 23219

Cc: Margaret Dannemann, DEQ - NRO
Bettina Rayfield, DEQ - Office of Environmental Review



Dominion Energy®

Attachment 2.F.1
Solid and Hazardous Waste Sites

230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
Fairfax and Loudoun Counties, Virginia

- Existing Substation
- Future Substation
- Proposed Substation
- Future Dominion Transmission Line
- Existing Dominion Transmission Line
- County Boundary
- Buffer - 1000 Feet
- Buffer - 0.5 Mile

0 1,000 2,000
Feet

1:24,000

ERM

Travis A. Voyles
Secretary of Natural and Historic Resources

Matthew S. Wells
Director

Andrew W. Smith
Chief Deputy Director

Frank N. Stovall
Deputy Director for Operations

Darryl Glover
Deputy Director for Dam Safety, Floodplain Management and Soil and Water Conservation

Laura Ellis
Deputy Director for Administration and Finance

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

May 2, 2024

Briana Cooney
Environmental Resources Management, Inc.
222 South 9th Street, South 2900
Minneapolis, MN 55402

Re: 0578162, Aviator to Takeoff

Dear Ms. Cooney:

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

According to a DCR biologist and a predicted suitable habitat layer, there is a potential for several rare plants, which are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia, to occur in the project area if suitable habitat exists on site. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia counties and is located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plants occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction (Rawinski, 1995).

In Northern Virginia, diabase supports occurrences of several global and state rare plant species: Earleaf False foxglove (*Agalinis auriculata*, G3/S1/NL/NL), American bluehearts (*Buchnera americana*, G5?/S1S2/NL/NL), Downy phlox (*Phlox pilosa*, G5/S1/NL/NL), Torrey's Mountain-mint (*Pycnanthemum torreyi*, G2/S2/SOC/LT), Stiff goldenrod (*Solidago rigida var. rigida*, G5T5/S2/NL/NL), and Hairy hedgenettle (*Stachys arenicola*, G5T4?/S1/NL/NL).

Please note that Torrey's Mountain-mint is currently classified as a species of concern by the United States Fish and Wildlife Service (USFWS) and listed as threatened by the Virginia Department of Agriculture and Consumer Services (VDACS).

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

DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact Anne Chazal, Natural Heritage Chief Biologist, at anne.chazal@dcr.virginia.gov or 804-786-9014 to discuss availability and rates for field work.

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

In addition, the proposed project may impact Ecological Cores **(C4, C5)** as identified in the Virginia Natural Landscape Assessment (https://www.dcr.virginia.gov/natural-heritage/vaconvisvnla). Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: http://vanhde.org/content/map.

Ecological Cores are areas of at least 100 acres of continuous interior, natural cover that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitats. Interior core areas begin 100 meters inside core edges and continue to the deepest parts of cores. Cores also provide the natural, economic, and quality of life benefits of open space, recreation, thermal moderation, water quality (including drinking water recharge and protection, and erosion prevention), and air quality (including sequestration of carbon, absorption of gaseous pollutants, and production of oxygen). Cores are ranked from C1 to C5 (C5 being the least significant) using nine prioritization criteria, including the habitats of natural heritage resources they contain.

Impacts to cores occur when their natural cover is partially or completely converted permanently to developed land uses. Habitat conversion to development causes reductions in ecosystem processes, native biodiversity, and habitat quality due to habitat loss; less viable plant and animal populations; increased predation; and increased introduction and establishment of invasive species.

DCR recommends avoidance of impacts to cores. When avoidance cannot be achieved, DCR recommends minimizing the area of impacts overall and concentrating the impacted area at the edges of cores, so that the most interior remains intact.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

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

A fee of $500.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The Virginia Department of Wildlife Resources (VDWR) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed at https://services.dwr.virginia.gov/fwis/ or contact

Hannah Schul at Hannah.Schul@dwr.virginia.gov. According to the information currently in our files, Cub Run, which has been designated by the VDWR as a "Threatened and Endangered Species Water" for the Wood turtle is within the submitted project boundary including a 100-foot buffer. Therefore, DCR recommends coordination with Virginia's regulatory authority for the management and protection of this species, the VDWR, to ensure compliance with the Virginia Endangered Species Act **(**VA ST §§ 29.1-563 – 570).

Should you have any questions or concerns, please contact me at 804-225-2429. Thank you for the opportunity to comment on this project.

Sincerely,

Tyler Meader
Natural Heritage Locality Liaison

CC: Hannah Schul, VDWR

Literature Cited

Rawinski, T.J. 1995. Natural communities and ecosystems: Conservation priorities for the future. Unpublished report for DCR-DNH.

VAFWIS - Department of Wildlife Resources

38.91036 -77.44986
is the Search Point
Submit Cancel

Search Point
- **Change** to "clicked" map point
- **Fixed** at 38.91036 -77.44986

Show Position Rings
Yes No
1 mile and 1/4 mile at the **Search Point**

Show Search Area
Yes No
2 Search distance miles buffer

Search Point is at map center

Base Map Choices
BW Aerial Photography

Map Overlay Choices
Current List: Search

Map Overlay Legend
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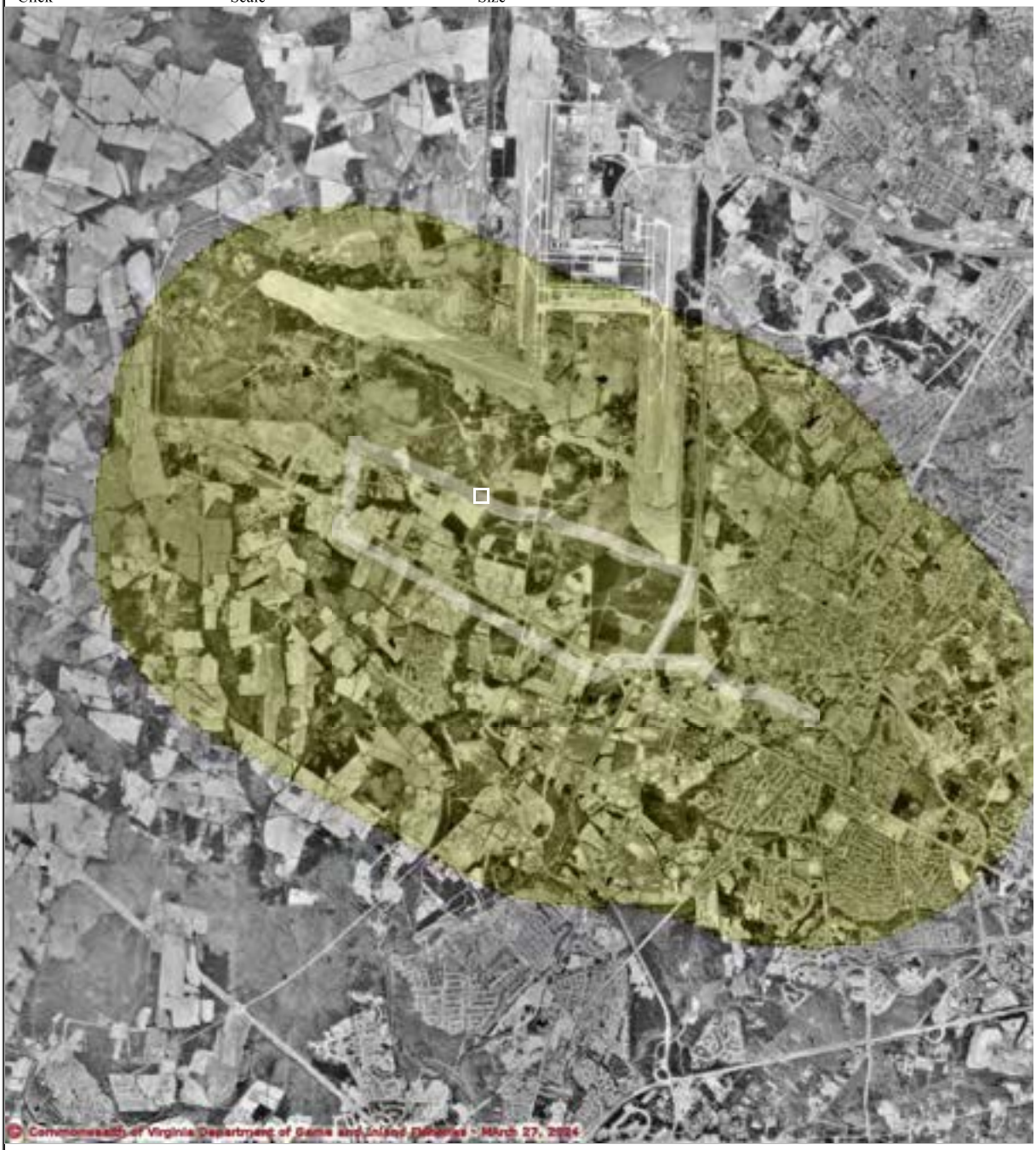

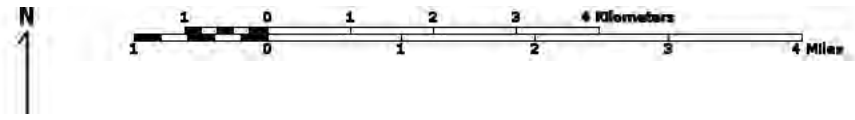

Point of Search 38.91036 -77.44986
Map Location 38.91036 -77.44986

Select **Coordinate System:**
- Degrees,Minutes,Seconds Latitude - Longitude
- Decimal Degrees Latitude - Longitude
- Meters UTM NAD83 East North Zone
- Meters UTM NAD27 East North Zone

Base Map source: Black & White USGS Aerial Photography (see Microsoft terraserver-usa.com for details)

Map projection is UTM Zone 18 NAD 1983 with left 279583 and top 4317683. Pixel size is 16 meters . Coordinates displayed are decimal Degrees North and West. Map is currently displayed as 1000 columns by 1000 rows for a total of 1000000 pixles. The map display represents 16000 meters east to west by 16000 meters north to south for a total of 256.0 square kilometers. The map display represents 52502 feet east to west by 52502 feet north to south for a total of 98.8 square miles.

Topographic maps and Black and white aerial photography for year 1990+-
are from the United States Department of the Interior, United States Geological Survey.
Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
Shaded topographic maps are from TOPO! ©2006 National Geographic
http://www.national.geographic.com/topo
All other map products are from the Commonwealth of Virginia Department of Wildlife Resources.

map assembled 2024-03-27 09:49:42 (qa/qc March 21, 2016 12:20 - tn=1975127 dist=3218 I)
$poi=38.9200700 -77.4652000

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| DWR | Credits | Disclaimer | Contact | Web Policy |

VaFWIS Search Report Compiled on 3/27/2024, 9:52:06 AM

Help

Known or likely to occur within a **2 mile buffer around polygon; center 38.9200700 -77.4651999** in **059 Fairfax County, 107 Loudoun County, VA**

View Map of Site Location

736 Known or Likely Species ordered by Status Concern for Conservation (displaying first 37) (37 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
050022	FEST	Ia	Bat, northern long-eared	Myotis septentrionalis		BOVA
060003	FESE	Ia	Wedgemussel, dwarf	Alasmidonta heterodon		BOVA
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		BOVA
060029	FTST	IIa	Lance, yellow	Elliptio lanceolata	Yes	BOVA,SppObs,HU6
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050027	FPSE	Ia	Bat, tri-colored	Perimyotis subflavus	Yes	BOVA,SppObs
060006	SE	Ib	Floater, brook	Alasmidonta varicosa		BOVA
030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes	BOVA,TEWaters,Habitat,HU6
040096	ST	Ia	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus		BOVA
040379	ST	Ia	Sparrow, Henslow's	Centronyx henslowii	Potential	BOVA,BBA,HU6
100155	ST	Ia	Skipper, Appalachian grizzled	Pyrgus wyandot		BOVA,HU6
060081	FPST	IIa	Floater, green	Lasmigona subviridis		BOVA
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
100079	FC	IIIa	Butterfly, monarch	Danaus plexippus		BOVA
030063	CC	IIIa	Turtle, spotted	Clemmys guttata		BOVA,HU6
030012	CC	IVa	Rattlesnake, timber	Crotalus horridus		BOVA
010077		Ia	Shiner, bridle	Notropis bifrenatus		BOVA

040092		Ia	Eagle, golden	Aquila chrysaetos		BOVA
040040		Ia	Ibis, glossy	Plegadis falcinellus		BOVA,HU6
040306		Ia	Warbler, golden-winged	Vermivora chrysoptera		BOVA
100248		Ia	Fritillary, regal	Speyeria idalia idalia		BOVA,HU6
040213		Ic	Owl, northern saw-whet	Aegolius acadicus		BOVA,HU6
040052		IIa	Duck, American black	Anas rubripes		BOVA,HU6
040033		IIa	Egret, snowy	Egretta thula		BOVA
040029		IIa	Heron, little blue	Egretta caerulea caerulea		BOVA
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040181		IIa	Tern, common	Sterna hirundo		BOVA,HU6
040320		IIa	Warbler, cerulean	Setophaga cerulea		BOVA,HU6
040140		IIa	Woodcock, American	Scolopax minor	Potential	BOVA,BBA,HU6
060071		IIa	Lampmussel, yellow	Lampsilis cariosa		BOVA
040203		IIb	Cuckoo, black-billed	Coccyzus erythropthalmus		BOVA
040105		IIb	Rail, king	Rallus elegans		BOVA
040304		IIc	Warbler, Swainson's	Limnothlypis swainsonii		BOVA,HU6
070020		IIc	Amphipod, Pizzini's	Stygobromus pizzinii		HU6
100154		IIc	Butterfly, Persius duskywing	Erynnis persius persius		BOVA,HU6
100166		IIc	Skipper, Dotted	Hesperia attalus slossonae		BOVA,HU6

To view **All 736 species** View 736

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need
Virginia Widlife Action Plan Conservation Opportunity Ranking:
a - On the ground management strategies/actions exist and can be feasibly implemented.;
b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;
c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

View Map of All Query Results from All

Observation Tables

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams

N/A

Impediments to Fish Passage

N/A

Colonial Water Bird Survey

N/A

Threatened and Endangered Waters (9 Reaches)

View Map of All Threatened and Endangered Waters

Stream Name	T&E Waters Species						View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name					
Cub Run (012081)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (014042)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (014294)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (015699)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (016035)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (019087)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (025116)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (031071)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (09374)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes

Managed Trout Streams (1 records) (Click on Stream Name to view complete reach history)

View Map of All Trout Stream Surveys

Reach ID	Stream Name	Class	Brook Trout	Brown Trout	Rainbow Trout	View Map
07LID-01	Little Difficult Run	Stockable				Yes

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Species Observations

(177 records - displaying first 20 , 2 Observations with Threatened or Endangered species)

View Map of All Query Results
Species Observations

obsID	class	Date Observed	Observer	N Species			View Map
				Different Species	Highest TE*	Highest Tier**	
54177	SppObs	Apr 25 1997	Jones, and Beaty, VPI& SU	3	FTST	II	Yes
644076	SppObs	Jul 29 2022	Chanston Osborne	1	FPSE	I	Yes
648162	SppObs	Jul 26 2021	Samantha Duthe; Dionna Bucci; Christopher Mueller; Ch	23		III	Yes
628297	SppObs	Sep 14 2016	Shannon Curtis; Jonathan Witt; Chris Ruck; Chad Grupe	8		III	Yes
621930	SppObs	Jul 29 2014	John; Burke| Chris; Ruck| Shannon; Curtis| LeAnne; Astin|	16		III	Yes
311859	SppObs	Sep 10 2005	Todd Bolton	2		III	Yes
644004	SppObs	Aug 9 2022	Shawn McKinley; Jennifer Saville	2		IV	Yes
637440	SppObs	Aug 9 2022	Shawn McKinley; Jennifer Saville	2		IV	Yes
644003	SppObs	Aug 8 2022	Shawn McKinley	2		IV	Yes
637439	SppObs	Aug 8 2022	Shawn McKinley	2		IV	Yes
644089	SppObs	Aug 7 2022	Chanston Osborne	2		IV	Yes
644088	SppObs	Aug 7 2022	Chanston Osborne	2		IV	Yes
637437	SppObs	Aug 6 2022	Shawn McKinley; Jennifer Saville	2		IV	Yes
644087	SppObs	Aug 6 2022	Chanston Osborne	2		IV	Yes
644001	SppObs	Aug 6 2022	Shawn McKinley; Jennifer Saville	2		IV	Yes
637436	SppObs	Aug 5 2022	Shawn McKinley; Jennifer Saville	2		IV	Yes

644085	SppObs	Aug 5 2022	Chanston Osborne	3		IV	Yes
644000	SppObs	Aug 5 2022	Shawn McKinley; Jennifer Saville	2		IV	Yes
644083	SppObs	Aug 5 2022	Chanston Osborne	2		IV	Yes
644081	SppObs	Aug 2 2022	Chanston Osborne	1		IV	Yes

Displayed 20 Species Observations

Selected 177 Observations View all 177 Species Observations

Habitat Predicted for Aquatic WAP Tier I & II Species (11 Reaches)

View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species

Stream Name	Tier Species						View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name					
Cabin Branch (20700081)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (20700101)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Cub Run (20700102)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Dead Run (20700101)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Elklick Run (20700101)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Elklick Run (20700102)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Sand Branch (20700101)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
Stallion Branch (20700081)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
tributary (20700081)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
tributary (20700101)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes
tributary (20700102)	ST	030062	ST	Ia	Turtle, wood	Glyptemys insculpta	Yes

Habitat Predicted for Terrestrial WAP Tier I & II Species

N/A

Virginia Breeding Bird Atlas Blocks (8 records)

View Map of All Query Results
Virginia Breeding Bird Atlas Blocks

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE*	Highest Tier**	
50204	Arcola, CE	41		III	Yes
50206	Arcola, SE	72	ST	I	Yes
51204	Herndon, CE	59		III	Yes
51203	Herndon, CW	29		IV	Yes
51206	Herndon, SE	54		III	Yes
51205	Herndon, SW	49		III	Yes
51192	Manassas, NE	68		II	Yes
52205	Vienna, SW	53		III	Yes

Public Holdings:

N/A

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
059	Fairfax	559	FESE	I
107	Loudoun	438	FESE	I

USGS 7.5' Quadrangles:
Arcola
Manassas
Herndon
Vienna

USGS NRCS Watersheds in Virginia:

N/A

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
PL17	Broad Run-Lenah Run	49	ST	I
PL18	Horsepen Run	61	ST	I
PL22	Difficult Run	67	ST	I

PL45	Cub Run	70	FTST	I

Compiled on 3/27/2024, 9:52:06 AM I1975127.0 report=all searchType= P dist= 3218 poi= 38.9200700 -77.4651999 siteDD= 38.9200734 -77.4652075;38.9199357 -77.4648766;38.9199393
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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694

In Reply Refer To: 03/27/2024 15:35:56 UTC
Project Code: 2024-0068869
Project Name: Aviator to Takeoff

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Project Code in the header of this

letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

PROJECT SUMMARY

Project Code: 2024-0068869
Project Name: Aviator to Takeoff
Project Type: Transmission Line - New Constr - Above Ground
Project Description: This request is a part of a pre-permitting effort to determine feasibility of overhead powerline routes.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.9103261,-77.45392948955488,14z

Counties: Fairfax and Loudoun counties, Virginia

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.

3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

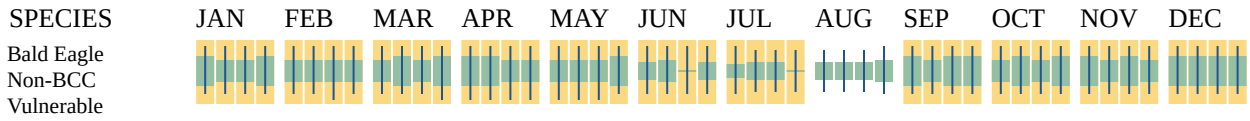
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort – no data



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

NAME	BREEDING SEASON
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

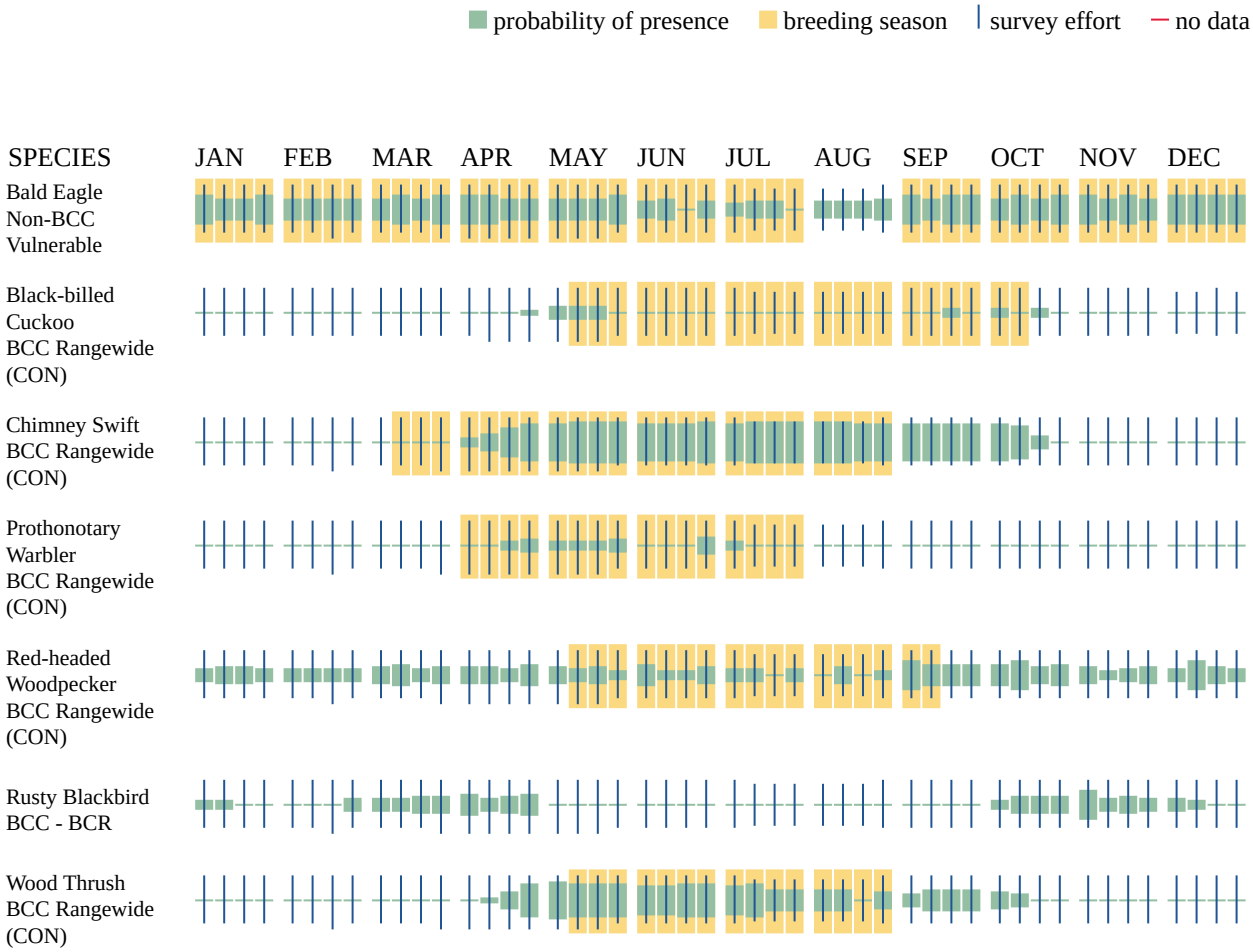
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



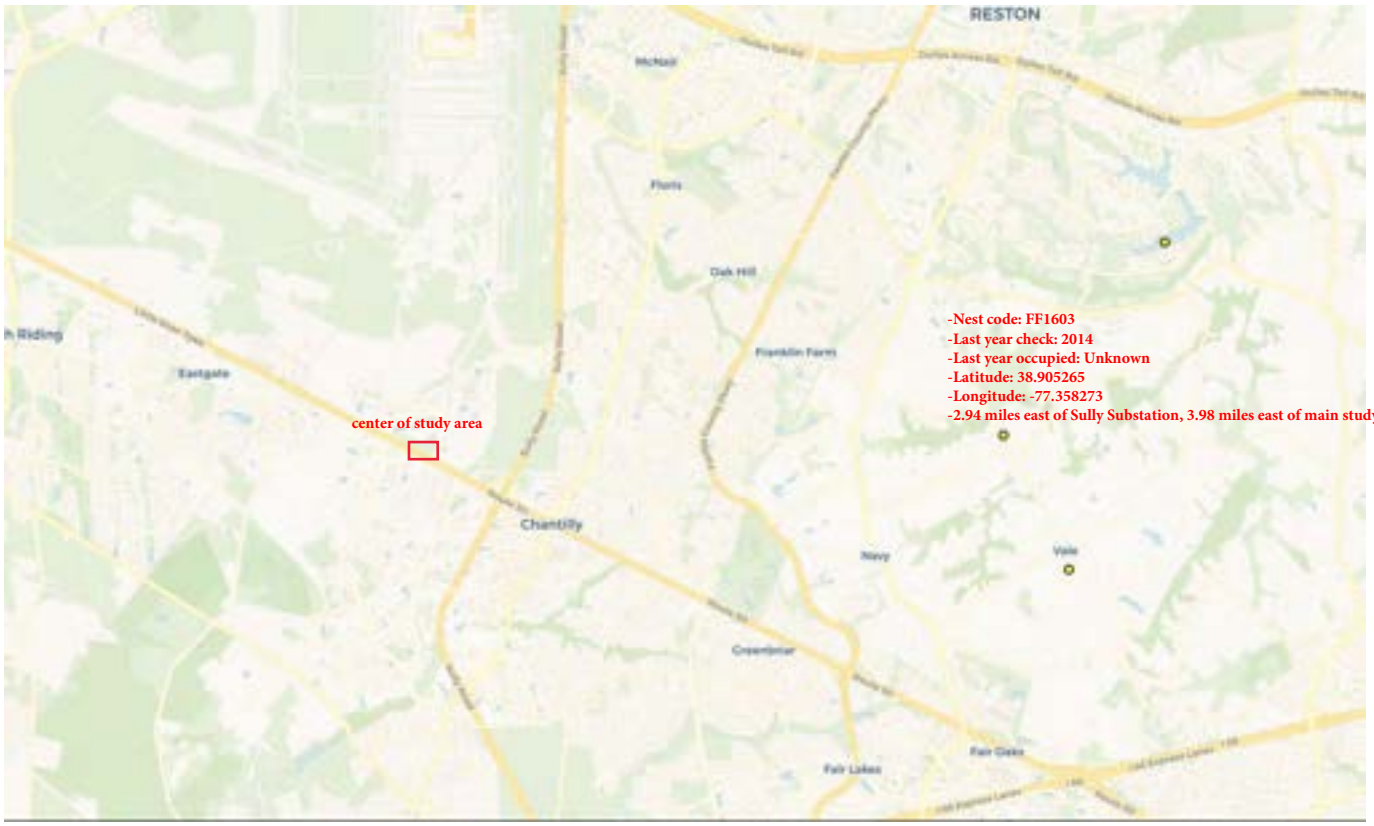
Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

IPAC USER CONTACT INFORMATION

Agency: Environmental Resources Management
Name: Briana Cooney
Address: 222 South 9th Street
Address Line 2: Suite 2900
City: Minneapolis
State: MN
Zip: 55402
Email briana.cooney@erm.com
Phone: 6123477114

CCB Mapping Portal



Layers: VA Eagle Nest Locator

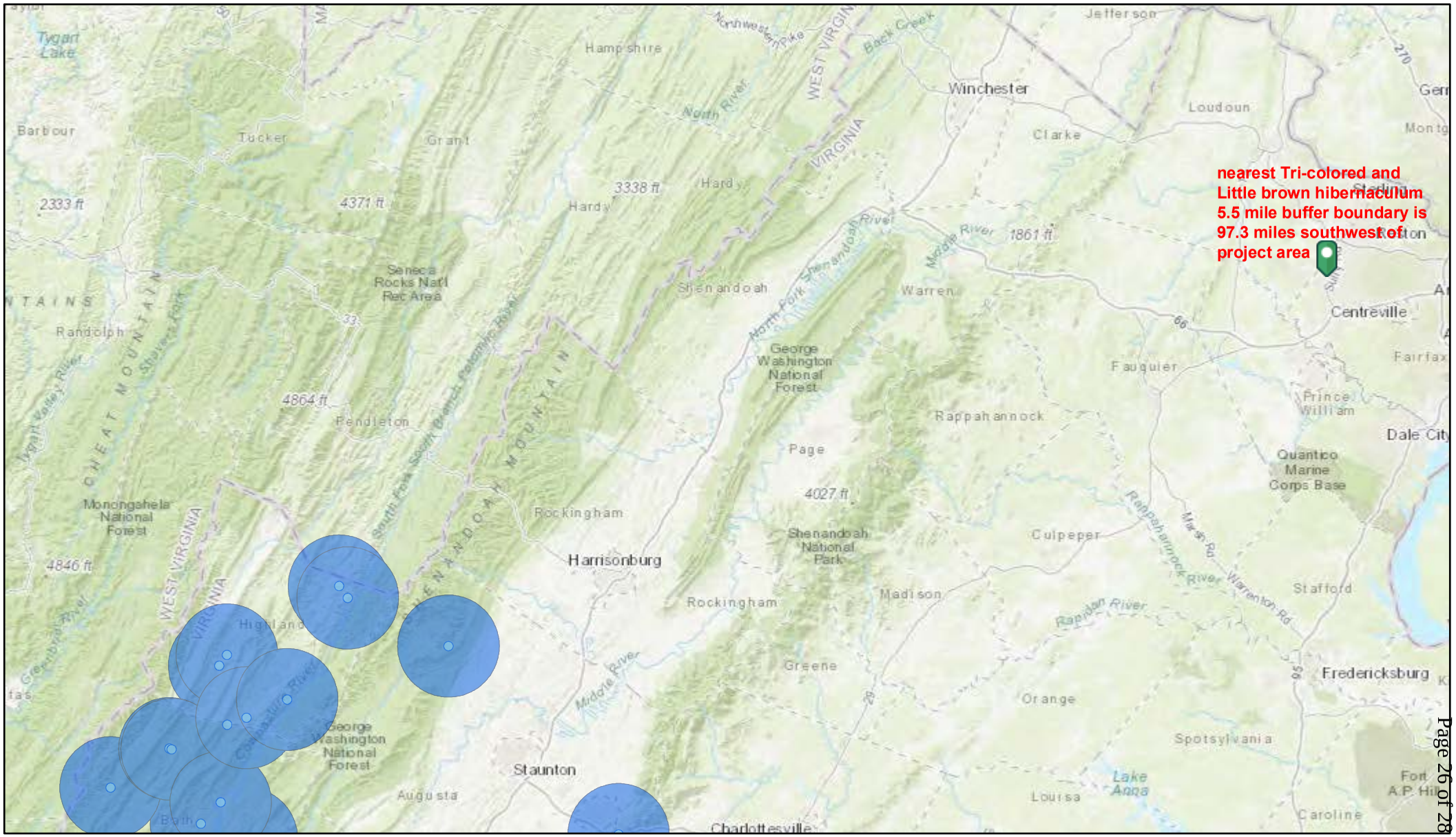
Map Center [longitude, latitude]: [-77.4041748046875, 38.90953556148064]

Map Link:
https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&zoom=13&lat=38.90953556148064&lng=-77.4041748046875&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=Street+Map+%28OSM%2FCarto%29

Report Generated On: 11/22/2023

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the Data Use Agreement to ensure compliance with our data use policies. For additional data access questions, view our Data Distribution Policy, or contact our Data Manager, Marie Pitts, at mlpitts@wm.edu or 757-221-7503.

MYLU-PESU Locations and Roost Trees - Aviator to Takeoff



11/22/2023, 11:39:31 AM

Tri-colored and Little Brown Hibernaculum Half Mile Buffer

Tri-colored and Little Brown Hibernaculum 5.5 Mile Buffer

1:1,155,581

0 5 10 20 mi

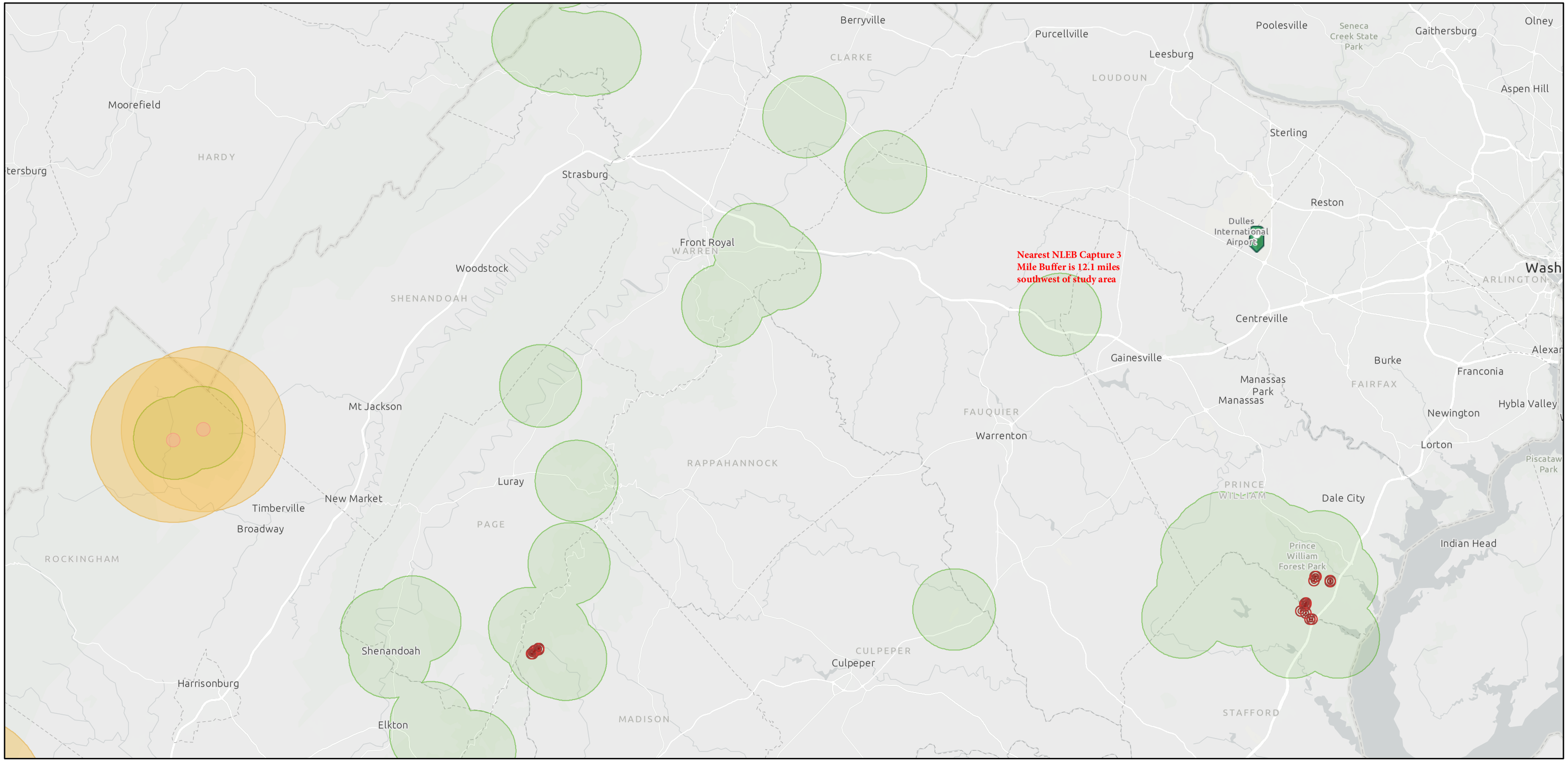
0 12.5 25 50 km

Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS

Dept. Game and Inland Fisheries

Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS |

NLEB Locations and Roost Trees - Aviator to Takeoff



11/22/2023, 11:35:07 AM

- NLEB Known Occupied Maternity Roost (Summer Habitat)
- NLEB Roost Tree 150-Foot Buffer
- NLEB Hibernaculum Half Mile Buffer
- NLEB Hibernaculum 5.5 Mile Buffer
- NLEB Capture 3 Mile Buffer

1:577,791

0 5 10 20 mi

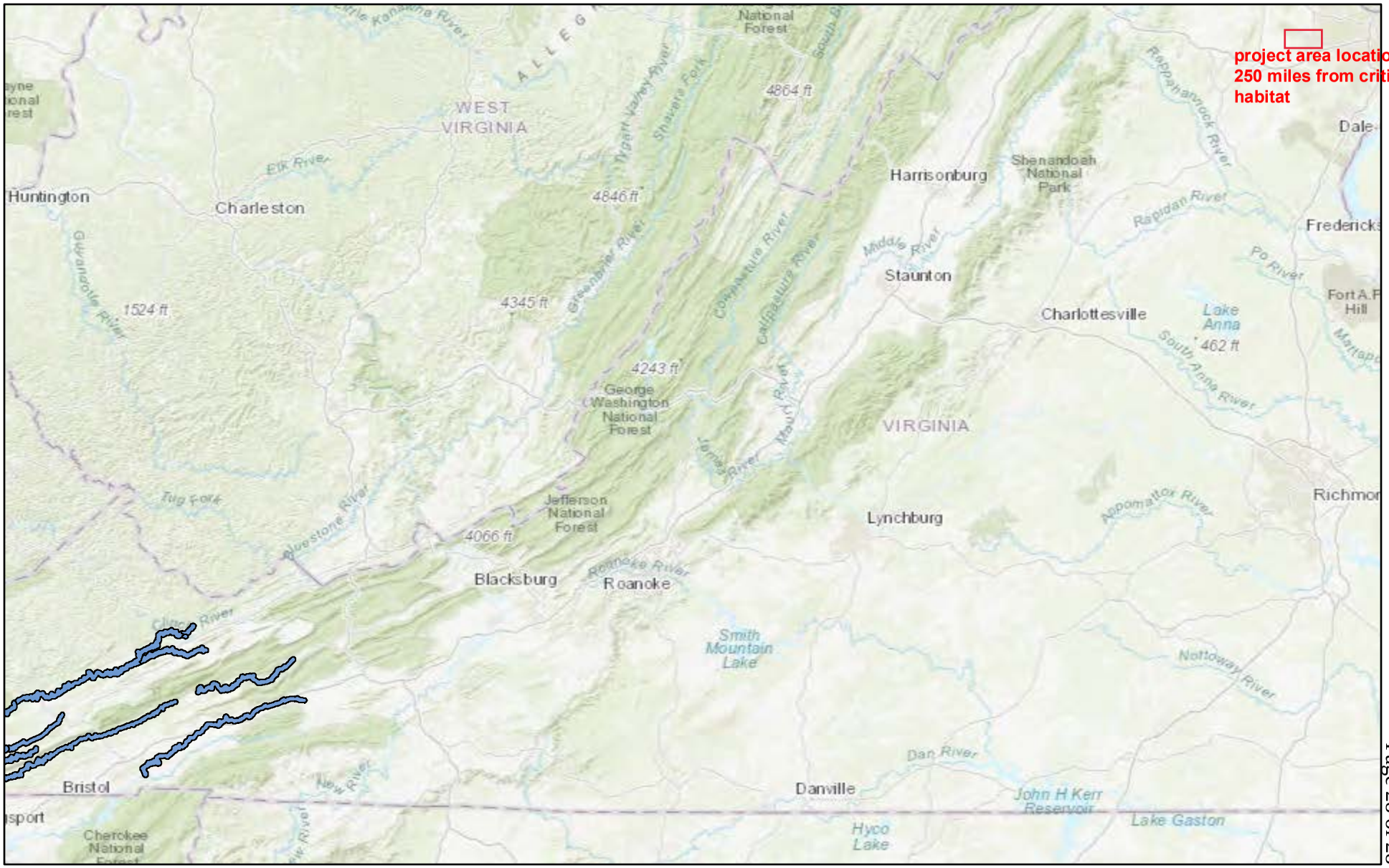
0 5 10 20 km

VGIN, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

VA Dept. Game & Inland Fisheries

VGIN, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS | Virginia Geographic Information Network (VGIN), and the Census and Localities and Towns submitting data to the project | VGIN, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS |

Critical Habitat - Aviator to Takeoff



November 22, 2023

Virginia Critical Habitat (published)

1:2,311,162

0 15 30 60 mi

0 25 50 100 km

Esri, HERE, Garmin, FAO, USGS, EPA, NPS

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482
www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

February 27, 2024

Dominion Energy
120 Tredegar Street
Richmond, VA 23219
Attn: Elizabeth L. Hester

Transmitted Via Email: (Elizabeth.l.hester@dominionenergy.com)

Re: Dominion Energy (Electric Transmission) - AS&S - Program Renewal – 2024/2025

Dear Ms. Hester:

The Virginia Department of Environmental Quality (DEQ) hereby approves the Annual Standards and Specifications for Erosion & Sediment Control and Stormwater Management for Construction and Maintenance of Linear Electric Transmission Facilities for Dominion Energy's document dated "February 2024". This coverage is effective from February 27, 2024, to February 26, 2025.

To ensure compliance with approved specifications, the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act, DEQ staff will conduct random site inspections, respond to complaints, and provide on-site technical assistance with specific erosion and sediment control and stormwater management measures and plan implementation.

Please note that your approved Annual Standards and Specifications include the following requirements:

1. Variance, exception, and deviation requests must be submitted to DEQ separately from this Annual Standards and Specifications' submission. DEQ may require project-specific plans associated with such requests to be submitted for review and approval.

2. The following information must be submitted to DEQ for each project at least two weeks in advance of the commencement of regulated land-disturbing activities. Notifications shall be sent by email to: StandardsandSpecs@deq.virginia.gov
    a. Project name or project number;
    b. Project location (including nearest intersection, latitude and longitude, access point);
    c. On-site project manager name and contact info;

d. Responsible Land Disturber (RLD) name and contact info;
e. Project description;
f. Acreage of disturbance for project;
g. Project start and finish date; and
h. Any variances/exceptions/deviations associated with this project.

3. Project tracking of all regulated land disturbing activities (LDA) must be submitted to DEQ once per 6-month period. Project tracking records shall contain the same information as required in the two week e-notifications for each regulated LDA.

4. Erosion & Sediment Control and Stormwater Management plans must be reviewed by DEQ-certified Plan Reviewers. Dominion Energy, as the AS&S holder, retains the authority to approve plans and must do so in writing. Should an AS&S holder contract out to a third-party to fulfill the plan review function, the third-party Plan Reviewer may recommend approval of the plan, but final approval must come from the AS&S holder.

To ensure an efficient information exchange and response to inquiries, DEQ Central Office is your primary point of contact. Central Office staff will coordinate with our Regional Office staff as appropriate

Please contact Abigail Snider at 804-486-0365 or Abigail.Snider@deq.virginia.gov if you have any questions about this letter.

Respectfully,

Kyle Kennedy, Manager
Office of Stormwater Management

Cc: Larry Gavan, DEQ-CO
Antony Angueira, DEQ-CO

REDACTED

REPORT >

Pre-Application Analysis of Cultural Resources for the 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

LOCATION > Fairfax and Loudoun Counties, Virginia

DATE> JUNE 2024

PREPARED FOR >

Dominion Energy

PREPARED BY >

Dutton + Associates, LLC

PROJECT REVIEW # >

Dutton + Associates

CULTURAL RESOURCE SURVEY, PLANNING, AND MANAGEMENT

SCC Pre-Application Analysis of Cultural Resources for the 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Fairfax and Loudoun Counties, Virginia

***PREPARED FOR*:**
DOMINION ENERGY
5000 DOMINION BOULEVARD, 3RD FLOOR SW
GLEN ALLEN, VA 23060

***PREPARED BY*:**
DUTTON + ASSOCIATES, LLC
1115 Crowder Drive
Midlothian, Virginia 23236
804.644.8290

PRINCIPAL INVESTIGATOR:
Robert J. Taylor, Jr. M.A.

June 2024

ABSTRACT

In June 2024, Dutton + Associates, LLC (D+A) completed a Pre-Application Analysis (analysis) of cultural resources for the 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation (the Project) in Fairfax and Loudoun Counties, Virginia. The analysis was performed for Virginia Electric and Power Company (Dominion Energy Virginia, Dominion, or the Company) in support of a State Corporation Commission (SCC) application for the Project. The analysis was conducted in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (January 2008) and Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation Guidelines for Transmission Line Applications Filed Under Title 56 of the Code of Virginia (August 2017).

The Project entails the construction of new 230kV transmission lines to provide connection from the Aviator Substation in Loudoun County to the Takeoff Substation in Fairfax County with a loop from the proposed Takeoff Substation to the existing Line 265 (Takeoff Loop). After review of the potential electrical solutions, Dominion is investigating three potential routes for the Aviator to Takeoff Lines (Routes 1, 2, and 3), and two potential routes for the Takeoff Loop (Routes 1 and 2). As part of the Project, a portion of the existing Line 265 (Sully-Takeoff) will be reconducted and five structures replaced.

The background research conducted as part of this analysis was consistent with VDHR guidance and designed to identify all previously recorded National Historic Landmarks (NHL) located within 1.5-miles of the proposed Project or closer, all National Register of Historic Places (NRHP)-listed properties, battlefields, and historic landscapes located within 1-mile of the proposed Project or closer, all historic properties considered eligible for listing in the NRHP located within 0.5-miles of the proposed Project or closer, and all archaeological sites located directly within the proposed Project area. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each historic property within the defined tiers, a review of existing documentation and a field reconnaissance was undertaken to assess each property's significant character-defining features, as well as the character of its current setting. Following identification of historic properties, D+A assessed the potential for impacts to any identified properties as a result of the proposed Project. Specific attention was given to determining whether or not construction related to the Project could introduce new visual elements into the property's viewshed or directly impact the property through construction, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP.

Review of the VDHR VCRIS inventory records revealed a total of one-hundred-eight (108) previously recorded architectural resources are located within 1.5 mile of the Aviator-Takeoff and Takeoff Loop project study area. Of these, there are no (0) NHLs located within 1.5 mile of the proposed project or closer, one (1) NRHP-listed property located within 1.0 mile or closer of the Project, no (0) battlefields or historic landscapes located 1.0 mile or closer of the Project, and no (0) properties that have been determined eligible or potentially eligible for listing in the NRHP by

the VDHR within 0.5 mile or closer of the Project. The one (1) NRHP-listed resource is not directly crossed by any of the Project route alternatives.

Assessment of impacts from the NRHP-listed historic property (Sully Plantation– VDHR# 053-0037) found that the historic setting and viewshed within the property boundaries have generally been preserved as a result of its designation as a county historical site and park. However, the property is situated within an otherwise densely developed area so some modern intrusions are visible from the property including Route 28 that extends along the west side of the property as a multi-lane divided highway, and an existing transmission line that extends along with the eastern side of the property of which multiple structures are visible. Beyond the highway and transmission line, there remains a vegetated buffer around the property that generally inhibits views of additional development beyond. This vegetation screens all distant views in the direction of the Project, and therefore none of the Project alternatives would be anticipated to be visible. ***Therefore, it is D+A's recommendation that there will be no impact to Sully Plantation or any other considered historic property as a result of the proposed project, and there is no meaningful difference in impact from the proposed to alternative route options.***

Potential impacts summary for architectural resources.

VDHR #	*Resource Name, Address*	*NRHP-Status*	*Distance from Project**	*Recommended Impact*
029-0037	*Sully Plantation, 3601 Sully Road*	*NRHP-Listed*	*A-T Route 1 – ~0.73 Mile* *A-T Route 2 – ~0.74 Mile* *A-T Route 3 – ~0.74 Mile* *TO Route 1 – ~0.62 Mile* *TO Route 2 – ~0.72 Mile* *Line 265 – ~0.47 Mile*	*A-T Route 1 – No Impact* *A-T Route 2 – No Impact* *A-T Route 3 – No Impact* *TO Route 1 – No Impact* *TO Route 2 – No Impact* *Line 265 – No Impact*

** Abbreviations: Aviator-Takeoff (A-T), Takeoff Loop (TO)*

With regards to archaeology, portions of all three Aviator-Takeoff route alternatives, two Takeoff Loop route alternatives, and the existing Line #265 ROW have been subject to previous phase I survey, although none have been surveyed in their entirety.

Sensitive archaeological data redacted

None of the sites located within or crossed by the ROW of any project alternative or component has been formally evaluated for NRHP eligibility by the VDHR. As no survey or formal investigation of archaeological sites was conducted as part of this effort, ***it is D+A's opinion that any unsurveyed portions of the ROW of the selected routes and ROW be subject to Phase I survey and that any identified sites be evaluated for NRHP eligibility and potential project impacts as additional detail on project engineering become.***

Previously recorded archaeological sites located within or crossed by the Aviator-Takeoff and Takeoff Loop route alternatives, and the Line #265 ROW. Orange highlight denotes site is located within crossed by the ROW of the proposed route alignment or an area in which ground disturbance may be expected.

VDHR #	*Site Type*	*Temporal Context*	*NRHP Status*	*Proximity to Project**
Aviator-Takeoff and Takeoff Loop Route Alternatives				
44FX0152	*No Data*	*Prehistoric/Unknown (15000 B.C. - 1606 A.D.)*	*No Data*	Sensitive archaeological data redacted
44FX0274	*No Data*	*Prehistoric/Unknown (15000 B.C. - 1606 A.D.)*	*DHR Staff: Not Eligible*	
44FX0330	*No Data*	*Prehistoric/Unknown (15000 B.C. - 1606 A.D.)*	*No Data*	
44FX0693	*Other*	*Prehistoric/Unknown (15000 B.C. - 1606 A.D.)*	*No Data*	
44FX1012	*No Data*	*Historic/Unknown, Paleo-Indian (15000 - 8501 B.C.E), Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)*	*No Data*	
44FX1013	*No Data*	*Prehistoric/Unknown (15000 B.C. - 1606 A.D.)*	*No Data*	
44FX1408	*Dwelling, multiple*	*20th Century (1900 - 1999)*	*DHR Staff: Not Eligible*	
44FX3259	*Dwelling, single*	*19th Century: 1st half (1800 - 1849), 20th Century: 1st half (1900 - 1949)*	*DHR Staff: Not Eligible*	
Line #265 Rebuild				
44FX0286	*No Data*	*Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century: 2nd/3rd quarter (1825 - 1874)*	*Not Evaluated*	
44FX0430	*Farmstead*	*19th Century (1800 - 1899)*	*Not Evaluated*	
44FX1742	*No Data*	*Prehistoric/Unknown (15000 B.C. - 1606 A.D.)*	*Not Evaluated*	
44FX1792	*Camp, temporary*	*Prehistoric/Unknown (15000 B.C. - 1606 A.D.)*	*Not Evaluated*	

**** Abbreviations: Aviator-Takeoff (A-T), Takeoff Loop (TO)***

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1. INTRODUCTION

In June 2024, Dutton + Associates, LLC (D+A) completed a Pre-Application Analysis (analysis) of cultural resources for the 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation (the Project) in Fairfax and Loudoun Counties, Virginia (Figure 1-1). The analysis was performed for Virginia Electric and Power Company (Dominion Energy Virginia, Dominion, or the Company) in support of a State Corporation Commission (SCC) application for the Project. The analysis was conducted in accordance with Virginia Department of Historic Resources' (VDHR) guidance titled *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation *Guidelines for Transmission Line Applications Filed Under Title 56 of the Code of Virginia* (August 2017).

This analysis was performed at a level that meets the purpose and intent of VDHR and the SCC's guidance based upon project data and engineering available at the time of the study. It provides information on the presence of previously recorded National Historic Landmark (NHL) properties located within a 1.5-mile buffer area established around the Project, properties listed on the National Register of Historic Places (NRHP), battlefields, and historic landscapes located within a 1-mile buffer around the Project, properties previously determined eligible for listing in the NRHP located within a 0.5-mile buffer area around the Project, and previously identified archaeological resources directly within the Project area. This analysis will not satisfy Section 106 identification and evaluation requirements in the event federal permits or licenses are needed; however, it can be used as a planning document to assist in making decisions under Section 106 as to whether further cultural resource identification efforts may be warranted.

This report contains a research design which describes the scope and methodology of the analysis, discussion of previously identified historic properties, and an assessment of potential impacts. D+A Senior Architectural Historian Robert J. Taylor, Jr. M.A. served as Principal Investigator and oversaw the general course of the Project and supervised all aspects of the work. Copies of all notes, maps, correspondence, and historical research materials are on file at the D+A main office in Midlothian, Virginia.

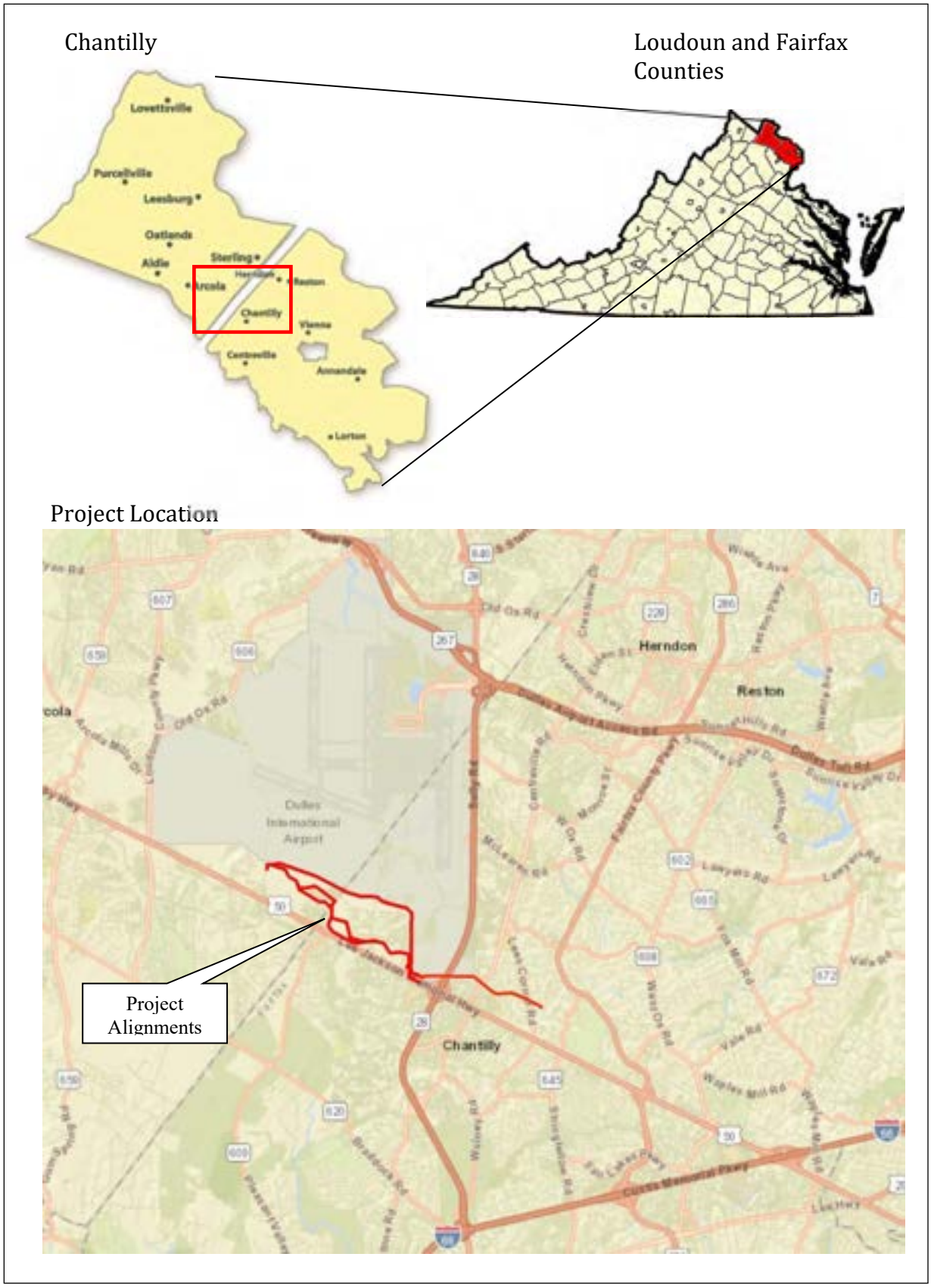

Figure 1-1: General location of the Project alignments.

2. PROJECT DESCRIPTION

The Project entails the construction of new 230kV transmission lines to provide connection from the Aviator Substation in Loudoun County to the Takeoff Substation in Fairfax County with a loop from the proposed Takeoff Substation to the existing Line 265 (Takeoff Loop). After review of the potential electrical solutions, Dominion is investigating three potential routes for the Aviator to Takeoff Lines (Routes 1, 2, and 3), and two potential routes for the Takeoff Loop (Routes 1 and 2). As part of the Project, a portion of the existing Line 265 (Sully-Takeoff) will be reconducted and five structures replaced (Figure 2-1).

At this time, the proposed alignments are the Aviator-Takeoff Route 1 and Takeoff Loop Route 1. However, because all route alternatives are in relatively close proximity to one other, they are collectively grouped as the "Project study area" for the purposes of this analysis, but the individual routes and respective cultural resources are discussed separately when appropriate.

All three Aviator-Takeoff route alternatives would generally extend a length of roughly 3 miles and require a new 100 foot wide right-of-way (ROW). The conductor would be suspended from a combination of individual and paired of dulled galvanized steel monopoles that would range from approximately 95 to 140 feet tall with an average height of 114 feet. Both Takeoff Loop route alternatives would extend a length of roughly one-third of a mile. Proposed Route 1 would require new 160 foot wide ROW and alternative Route 2 would require new 100 foot wide ROW. The conductor would be suspended from weathering steel monopoles that would range from approximately 100 to 110 feet tall with an average height of 103 feet.

As part of the partial rebuild of the Line 265 (Sully-Takeoff), a roughly 1.9-mile length of existing transmission line would be reconducted with five structures along a 0.9-mile length replaced. The existing structures to be replaced are currently steel monopoles that range from 95 feet to 105 feet tall and would be replaced with dulled galvanized steel monopoles that range from 90 feet to 130 feet tall with an average height of 108 feet. Structures would be replaced on a one-to-one basis in generally the same locations and all work would take place within existing ROW.

All structure heights are based on preliminary conceptual design, not including foundation reveal and subject to change based on final engineering design.

Figure 2-1: Aviator-Takeoff and Takeoff Loop Route Alternatives, and Line# 265 structure replacements. Source: Dominion Energy.

3. RESEARCH DESIGN

The intent of this effort was to identify all known historic properties within the vicinity of the proposed project study area in order to assess them for potential impacts brought about by the Project. Historic properties include architectural and archaeological (terrestrial and underwater) resources, historic and cultural landscapes, battlefields, and historic districts. For each previously recorded historic property, an examination of property documentation, current aerial photography, and a field reconnaissance was undertaken to assess each property's integrity of feeling, setting, and association, and to provide photo documentation of the property including views toward the proposed project. The D+A personnel who directed and conducted this survey meet the professional qualification standards of the Department of the Interior (48 FR 44738-9).

ARCHIVAL RESEARCH

In April 2024, D+A conducted archival research with the goal of identifying all previously recorded historic properties and any additional historic property locations referred to in historic documents and other archives, as well as consultation with local informants and other professionals with intimate knowledge of the Project area as appropriate. Background research was conducted at the VDHR and on the internet and included the following sources:

- VDHR Virginia Cultural Resource Information System (VCRIS) site files; and
- National Park Service (NPS), American Battlefield Protection Program (ABPP), maps and related documentation.
- Fairfax County Office of Historic Preservation
- Loudoun County Historic and Cultural Sites

Data collection was performed according to VDHR guidance in *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) and was organized in a multi-tier approach. As such, the effort was designed to identify all previously recorded NHL's located within 1.5-miles of the proposed project study area, all historic properties listed in the NRHP, battlefields, and historic landscapes located within 1-mile of the Project study area, all historic properties previously determined eligible for listing in the NRHP located within 0.5-mile of the Project study area, as well as all archaeological sites located directly within the Project area.

FIELD RECONNAISSANCE

Field reconnaissance included visual inspection of historic properties within the study tiers, although no inspection of archaeological sites or subsurface testing was performed at this time. Visual inspection included digital photo documentation of each property's existing conditions including its setting and views toward the proposed project. Photographs were taken of primary resource elevations, general setting, and existing viewsheds. All photographs were taken from public right-of-way or where property access was granted.

ASSESSMENT OF POTENTIAL IMPACTS

Following identification and field inspection of historic properties, D+A assessed each architectural resource for potential impacts brought about by the proposed project. Assessment of impacts was conducted through a combination of field inspection, digital photography, review of topography and aerial photography, and photo simulation. Photo simulation was conducted from representative vantage points within or near each resource property deemed most likely to have a change in visibility as a result of the Project. The photo simulation entailed digital photography, towards the Project, which was then loaded into a computer with location coordinates and ground-elevation. The transmission line structures to be rebuilt as part of the Project were then also computer modeled to represent the location, height, and configuration following construction. These models were then overlaid onto the digital photograph so that the existing (unaltered) view can be compared with the simulated view that illustrates the proposed structures, as they would appear on the landscape.

Archaeological assessment was limited to desktop review of project improvements in relation to previously delineated site boundaries, however, existing conditions of sites remain unknown at this level of investigation.

When assessing impacts, D+A considered those qualities and characteristics that qualify the property for listing and whether the Project has the potential to alter or diminish the integrity of the property and its associated significance. Specific attention was given to determining whether or not the proposed project would introduce new visual elements into a property's viewshed, which would either directly or indirectly alter those qualities or characteristics that qualify the historic property for listing in the NRHP. Identified impacts were characterized as severe, moderate, minimal, or none in accordance with the following guidance:

According to VDHR guidance, project impacts are characterized as such:

- **None** – Project is not visible from the property
- **Minimal** – Occur within viewsheds that have existing transmission lines, locations where there will only be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate** – Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.
- **Severe** – Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

REPORT PREPARATION

The results of the archival resource, field inspection, and analysis were synthesized and summarized in a summary report accompanied by maps, illustrations, and photographs as appropriate. All research material and documentation generated by this project is on file at D+A's office in Midlothian, Virginia.

4. ARCHIVES SEARCH

This section includes a summary of efforts to identify previously known and recorded cultural resources within the tiered project buffers around the Project. It includes lists, maps, and descriptive data on all previously conducted cultural resource surveys, and previously recorded architectural resources and archaeological sites according to the VDHR archives and VCRIS database. Because the route alternatives for the Aviator-Takeoff lines and Takeoff Loop projects are all within close proximity of one another within a relatively small defined space, a single project study area that encompasses all project components was used for this analysis. Because the partial rebuild of Line 265 is discontiguous from and set at a distance away from the other project components, a separate analysis was conducted for this portion of the Project.

PREVIOUSLY SURVEYED AREAS

Aviator-Takeoff and Takeoff Loop Project Study Area

VDHR and VCRIS records indicate that there have been thirty-one (31) prior Phase I cultural resource surveys within one-mile of the Aviator-Takeoff and Takeoff Loop project study area, seven (7) of which that overlap with or include portions of the proposed ROW for at least one of the route alternatives. These surveys are at a minimum archaeological in nature, although some include architectural resources as well. The 7 surveys overlapping the Project study area were conducted for transportation and utility-related projects. As a result of these prior surveys, portions of both Route 1 and 2 have been subject to survey although some portions remain unsurveyed. The 7 previously conducted cultural resource surveys that include portions of the Project study area are listed in Table 4-1 and illustrated in Figure 4-1.

Table 4-1: Previously conducted cultural resource surveys that include portions of the Aviator-Takeoff and Takeoff Loop project study area. Source: VDHR.

VDHR Survey #	Title	Author	Date	Project Review #
FX-069	Phase I Archaeological Reconnaissance of Federal Portion of Fairfax County's Cain Brand Trunk Sewer	FCAS	1983	N/A
FX-299	Phase I Archaeological Identification and Phase II Archaeological Evaluation for The Proposed National Air and Space Museum (NASM) Dulles Center, Project Number 883506, Fairfax County, Virginia	DM	1997	1997-1868
FX-490	Cultural Resource Survey in Association with the Proposed Widening and Improvement of Route 50, Fairfax and Loudoun Counties, Virginia	LBG	2008	2008-0997
FX-585	Supplemental Archaeological Survey of the Proposed Route 50 and Waterline Betterment Project Corridor, Fairfax and Loudoun Counties, Virginia	WMCAR	2012	2008-0997
FX-730	Phase I Archeological Investigation, Staging Area 1, Dulles International Airport, Fairfax County, Virginia	EACA	2001	courtesy
LD-053	Historic and Archaeological Survey Report Washington Dulles International Airport, Loudoun and Fairfax Counties, VA.	PES	1989	N/A
LD-116	Phase I Archaeological Investigation, Proposed Excess Spoils Site, Dulles International Airport, Loudoun County, Virginia	EACA	2001	N/A

Figure 4-1: Previously conducted surveys that include portions of the Aviator-Takeoff and Takeoff Loop project route ROWs. Source: VCRIS

Line #265 (Sully-Takeoff) Partial Rebuild Study Area

VDHR and VCRIS records indicate that while portions of the existing Line #265 corridor have been subject to prior Phase I cultural resource survey, the portion along-which five structures will be replaced has not been subject to prior survey (Figure 4-2).

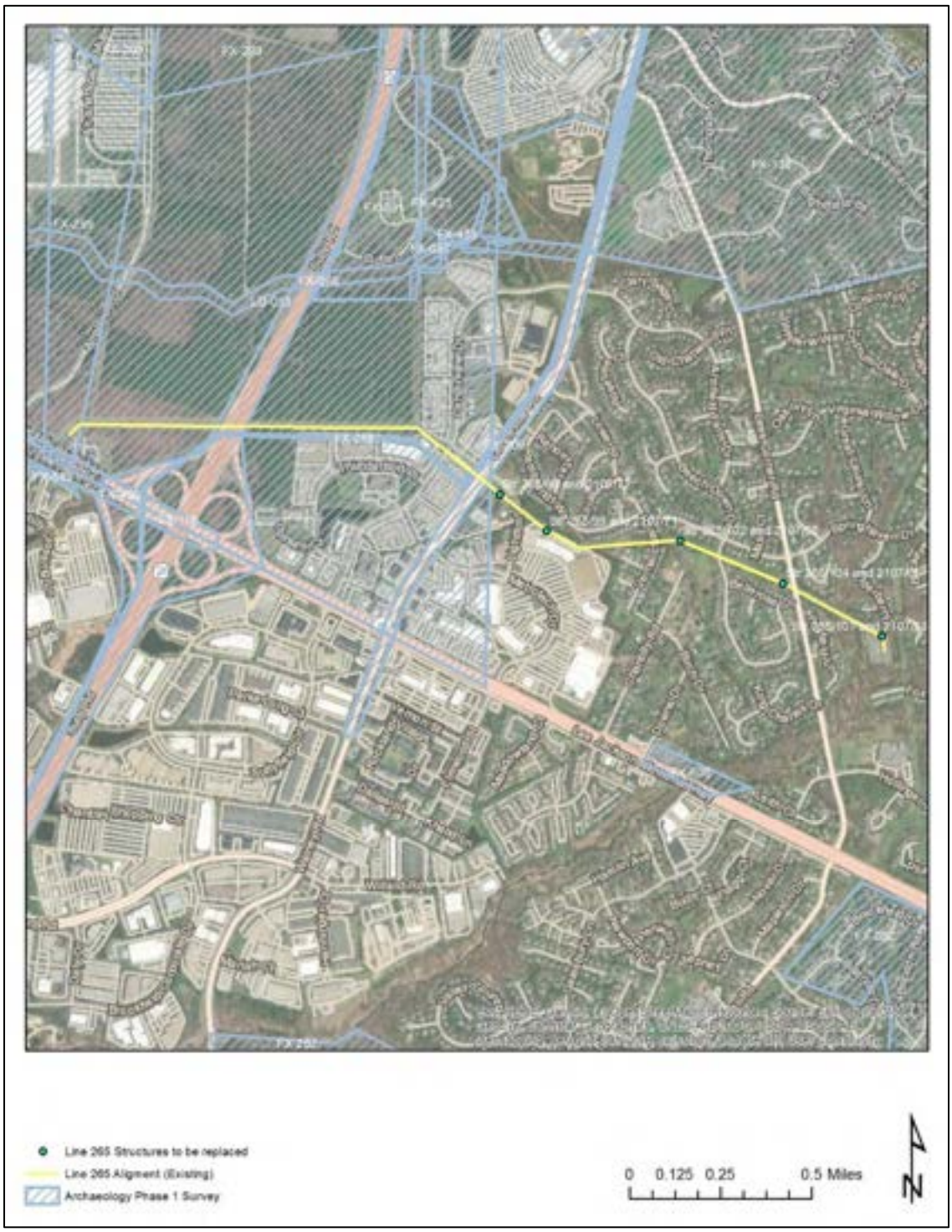

Figure 4-2: Previously conducted surveys in the vicinity of the Line #265 Partial Rebuild. Source: VCRIS

ARCHITECTURAL RESOURCES

Aviator-Takeoff and Takeoff Loop Project Study Area

Review of the VDHR VCRIS inventory records revealed a total of one-hundred-eight (108) previously recorded architectural resources are located within 1.5 mile of the Aviator-Takeoff and Takeoff Loop project study area. Of these, there are no (0) NHLs located within 1.5 mile of the proposed project or closer, one (1) NRHP-listed property located within 1.0 mile or closer of the Project, no (0) battlefields or historic landscapes located 1.0 mile or closer of the Project, and no (0) properties that have been determined eligible or potentially eligible for listing in the NRHP by the VDHR within 0.5 mile or closer of the Project. The one (1) NRHP-listed resource is not directly crossed by any of the Project route alternatives.

Table 4-2 lists all NHLs, NRHP-listed, and NRHP-eligible resources within their respective buffered tiers. A map of all previously recorded architectural resources within 1.5-mile of the Project study area is depicted in Figure 4-3 and a map of any NHL, NRHP-listed, and NRHP-eligible resources within their respective study tiers are included in Figure 4-4.

Table 4-2: Considered Architectural Resources within their respective tiered buffer zones for the Aviator-Takeoff and Takeoff Loop projects

Buffer(miles)	Considered Resources	VDHR #	Description
1.5	National Historic Landmarks	None	None
1.0	National Historic Landmarks	None	None
	National Register- Listed	029-0037	Sully (NRHP Listing), Sully Historic Site (Current Name), Sully Plantation (Historic)
	Battlefields	None	None
	Historic Landscapes	None	None
0.5	National Historic Landmarks	None	None
	National Register- Listed	None	None
	Battlefields	None	None
	Historic Landscapes	None	None
	National Register- Eligible	None	None
0.0 (ROW)	National Historic Landmarks	None	None
	National Register - Listed	None	None
	Battlefields	None	None
	Historic Landscapes	None	None
	National Register- Eligible	None	None

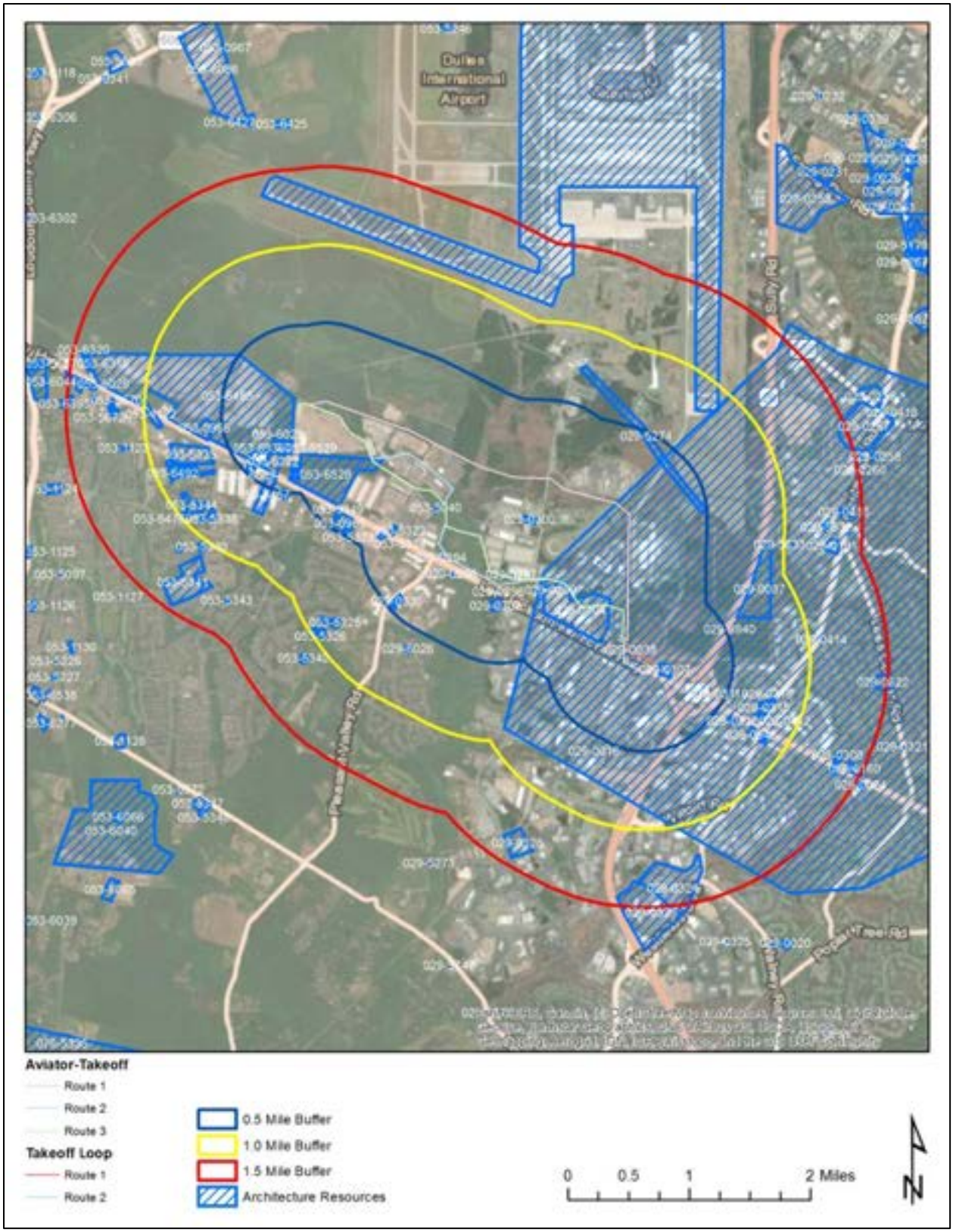

Figure 4-3: All previously identified architectural resources within 1.5-miles of the Aviator-Takeoff and Takeoff Loop project study area. Source: VCRIS

Figure 4-4: Considered architectural resources within their respective tiers around Aviator-Takeoff and Takeoff Loop project study area. Source: VCRIS

Line #265 (Sully-Takeoff) Partial Rebuild Study Area

Review of the VDHR VCRIS inventory records revealed no (0) NHLs located within 1.5 mile of the Line #265 Partial Rebuild project or closer, one (1) NRHP-listed property located within 1.0 mile or closer of the Project, no (0) battlefields or historic landscapes located 1.0 mile or closer of the Project, and no (0) properties that have been determined eligible or potentially eligible for listing in the NRHP by the VDHR within 0.5 mile or closer of the Project. The one (1) NRHP-listed resource is not directly crossed by the Project area.

Table 4-3 lists all NHLs, NRHP-listed, and NRHP-eligible resources within their respective buffered tiers. A map of any NHL, NRHP-listed, and NRHP-eligible resources within their respective study tiers are included in Figure 4-5.

Table 4-3: Considered Architectural Resources within their respective tiered buffer zones for the Line #265 Partial Rebuild project

Buffer(miles)	Considered Resources	VDHR #	Description
1.5	National Historic Landmarks	None	None
1.0	National Historic Landmarks	None	None
	National Register- Listed	029-0037	Sully (NRHP Listing), Sully Historic Site (Current Name), Sully Plantation (Historic)
	Battlefields	None	None
	Historic Landscapes	None	None
0.5	National Historic Landmarks	None	None
	National Register- Listed	None	None
	Battlefields	None	None
	Historic Landscapes	None	None
	National Register- Eligible	None	None
0.0 (ROW)	National Historic Landmarks	None	None
	National Register - Listed	None	None
	Battlefields	None	None
	Historic Landscapes	None	None
	National Register- Eligible	None	None

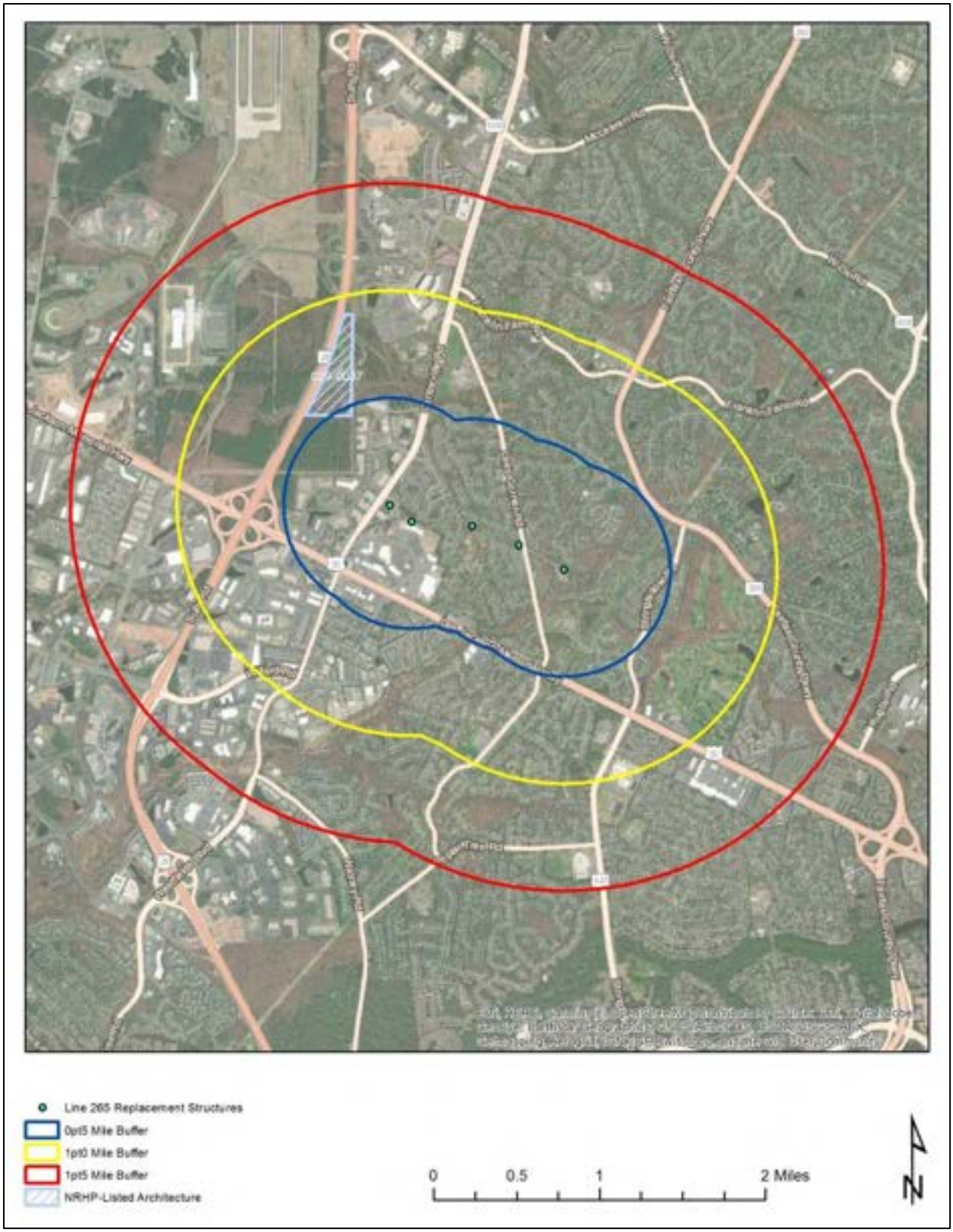

Figure 4-5: Considered architectural resources within their respective tiers around the Line #265 Partial Rebuild Project. Source: VCRIS

NPS AMERICAN BATTLEFIELD PROTECTION PROGRAM (ABPP)

A review of the National Park Service (NPS) ABPP records reveals that none of the Project components are located within one mile of portions of any delineated battlefields.

ARCHAEOLOGICAL SITES

Aviator-Takeoff and Takeoff Loop Project Study Area

Review of the VDHR VCRIS records reveals there are one-hundred-ninety-six (196) previously recorded archaeological sites within one mile of the Aviator-Takeoff and Takeoff Loop project study area. These include prehistoric lithic scatters and camps; as well as historic domestic sites, farmsteads, blacksmith shops, cemeteries, railroad beds, and trash scatters. Of these, three (3) have been determined eligible or potentially eligible for listing in the NRHP, seventy (70) have been determined not eligible for listing, and the remaining sites have not been formally evaluated.

Sensitive archaeological data redacted

Table 4-4 lists all sites that are located within or crossed by a project route alternative. Figure 4-6 illustrates the locations of all previously recorded sites within one mile of the Project study area and Figure 4-7 details the location of the archaeological sites located within or crossed by at least one of the Project route alternatives.

Table 4-4: Previously recorded archaeological sites located within or crossed by at least one of the Aviator-Takeoff and Takeoff Loop project route alternatives.

VDHR #	Site Type	Temporal Context	NRHP Status	Proximity to Project
44FX0152	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	Sensitive archaeological data redacted
44FX0274	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible	
44FX0330	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	
44FX0693	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	
44FX1012	No Data	Historic/Unknown, Paleo-Indian (15000 - 8501 B.C.E), Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	No Data	
44FX1013	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	
44FX1408	Dwelling, multiple	20th Century (1900 - 1999)	DHR Staff: Not Eligible	
44FX3259	Dwelling, single	19th Century: 1st half (1800 - 1849), 20th Century: 1st half (1900 - 1949)	DHR Staff: Not Eligible	

Figure 4-6: Previously recorded archaeological resources located within one-mile of Aviator-Takeoff and Takeoff Loop project study area. Source: VCRIS

Figure 4-7: Detail of previously recorded archaeological resources within or adjacent to the Aviator-Takeoff and Takeoff Loop project route alternative ROWs. Source: VCRIS

Line #265 (Sully-Takeoff) Partial Rebuild Study Area

Review of the VDHR VCRIS records reveals there are four (4) previously recorded archaeological sites located within or crossed by the existing Line #265 ROW. Of these, just one (1) is located within the portion of Line #265 ROW in which five structures will be replaced. This site is a multi-component, prehistoric and historic period site that has not been formally evaluated for NRHP-eligibility.

Table 4-5 lists all sites that are located within or crossed by the Line #265 ROW. Figure 4-8 details the location of the archaeological sites located within or crossed by the ROW.

Table 4-5: Previously recorded archaeological sites located within or crossed by the Line #265 Partial Rebuild ROW.

VDHR #	Site Type	Temporal Context	NRHP Status	Proximity to Project
44FX0286	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century: 2nd/3rd quarter (1825 - 1874)	Not Evaluated	Sensitive archaeological data redacted
44FX0430	Farmstead	19th Century (1800 - 1899)	Not Evaluated	
44FX1742	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	
44FX1792	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	

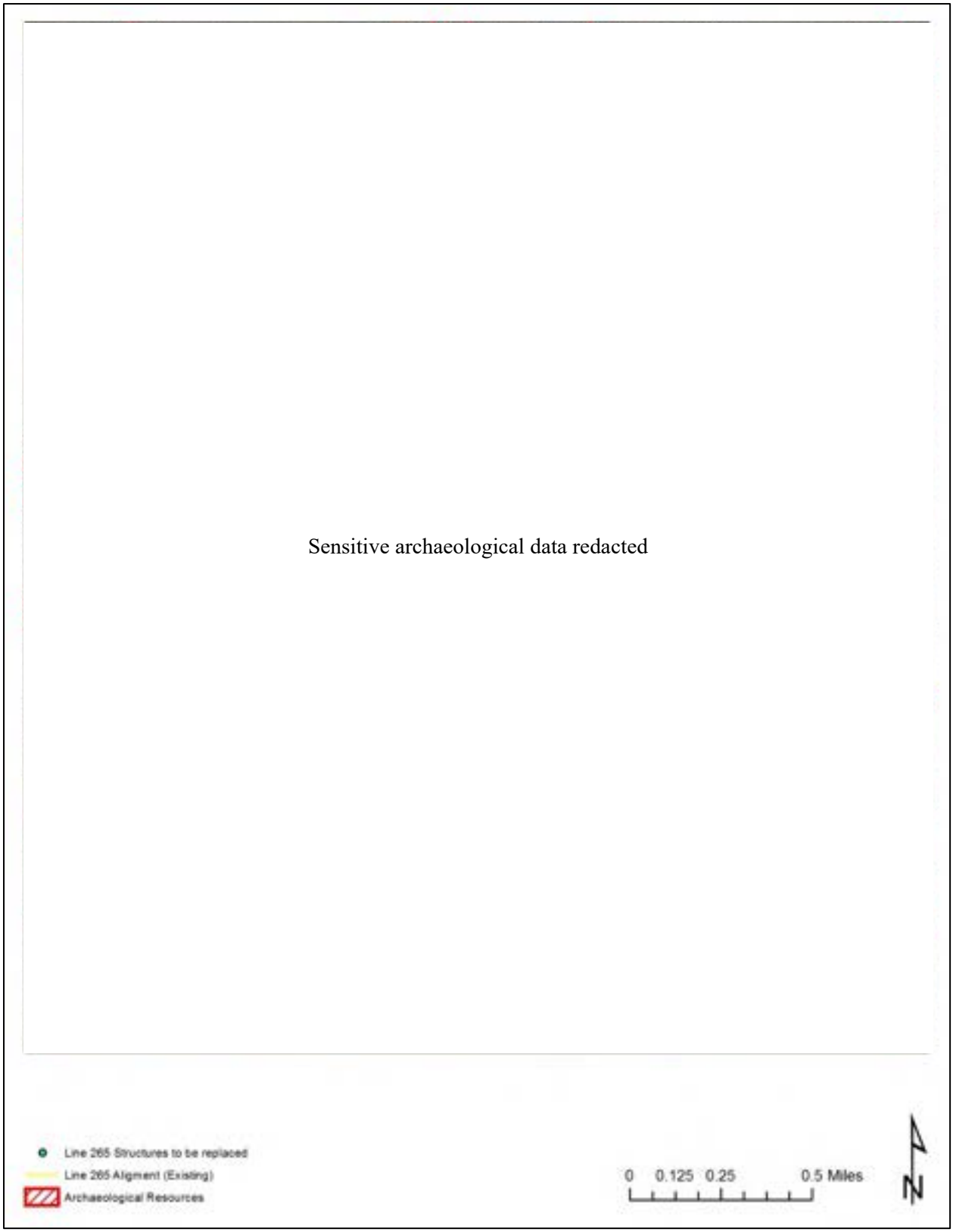

Figure 4-8: Detail of previously recorded archaeological resources within or adjacent to the Line #265 Partial Rebuild ROW. Source: VCRIS

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5. RESULTS OF FIELD RECONNAISSANCE

In accordance with the VDHR guidelines for assessing impacts of proposed electric transmission lines on historic resources, considered architectural properties identified within the VDHR-defined study tiers around the Project components were field verified for existing conditions and photo documented. This included resources within the study tiers around both the Aviator-Takeoff/Takeoff Loop Project study area and the Line #265 Partial Rebuild study area (Figure 5-1 and Figure 5-2; and Table 5-1). Inspection and analysis of the setting around the resource and views towards the Project route alternatives were also conducted to assess potential project impacts. For the purposes of this analysis, an impact is one that alters, either directly or indirectly, those qualities or characteristics that qualify a particular property for listing in the NRHP and does so in a manner that diminishes the integrity of a property's materials, workmanship, design, location, setting, feeling, and/or association. With respect to transmission lines, direct impacts typically are associated with ground disturbance resulting from ROW clearing and structure construction. Indirect impacts typically are associated with the introduction of new visual elements or changes to the physical features of a property's setting or viewshed. According to VDHR guidance, project impacts are characterized by the definitions below.

- **None** – Project is not visible from the property.
- **Minimal** – Occur within viewsheds that have existing transmission lines, locations where there will only be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate** – Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.
- **Severe** – Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

The results of the field reconnaissance and assessment are summarized in the following pages.

Figure 5-1: Considered architectural resources within their respective tiers around the Aviator-Takeoff and Loop project study area. Source: VCRIS

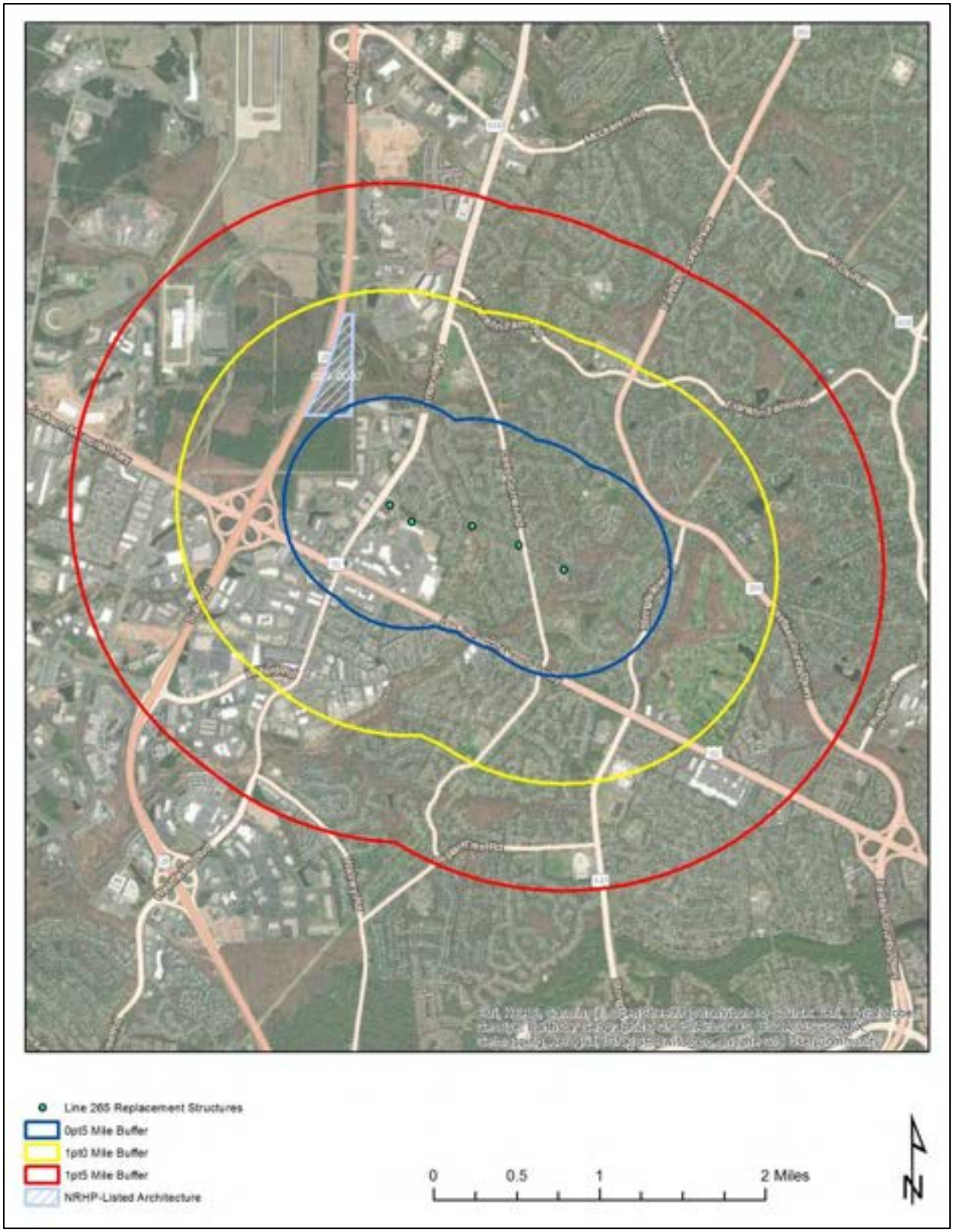

Figure 5-2: Considered architectural resources within their respective tiers around the Line #265 Partial Rebuild. Source: VCRIS

Table 5-1: Considered architectural resources and distance to the Project route alternatives and components.

VDHR #	Resource Name/ Address	NRHP-Status	Distance from Project*
029-0037	Sully Plantation, 3601 Sully Road	NRHP-Listed	A-T Route 1 – ~0.73 Mile A-T Route 2 – ~0.74 Mile A-T Route 3 – ~0.74 Mile TO Route 1 – ~0.62 Mile TO Route 2 – ~0.72 Mile Line #265 – ~0.47 Mile

* *Abbreviations: Aviator-Takeoff (A-T), Takeoff Loop (TO)*

VDHR# 029-0037
Sully Plantation

Sully was the country home of Richard Bland Lee and was built in 1794 on land inherited by his father, Henry Lee II. The house was situated on what was originally a 3,111 acres tract between Cub and Flatlick Runs, then part of Loudoun County, Virginia. When construction of Dulles International Airport began in the 1960s, the house was in danger of demolition, however, it was turned over the Fairfax county Park Authority by the Washington Metropolitan Airports Authority and is now operated as a historic house museum. Sully survives as an important example of a late-eighteenth century farm complex. Its interest is increased by its associations with the Lee family and their acquaintances. Although the house is not a formal mansion, the fine quality woodwork demonstrates the care and attention that was often given to more modest Virginia dwellings. The property was formally ***listed in the NRHP*** in 1970.

The Sully property is currently composed of two adjoining parcels containing approximately 133.29 acres of wooded and cleared land. Route 28, a major north-south transportation corridor through Fairfax County, runs along the western edge of the Sully Historic Site property. The paved Historic Sully Way leads from the exit off Route 28 and enters the property from the north through an entrance that was reworked in 2004. The driveway curves through woodland and arrives at a clearing where the visitor's center, an informational kiosk, and visitor parking are located. An unpaved road leads from the parking lot to the main house and outbuildings. Non-historic resources located near the main house include: a relocated former log schoolhouse; a reconstructed log slave quarters; a stone well cover; an enclosed cemetery; and a formal garden. South of the main house is the former parking lot and a paved road. To the east of the house is an existing transmission line corridor that originally extended in a straight alignment along the eastern edge of the property, but

was reconfigured to its current alignment in 1988 that incorporates a wide loop taking the alignment roughly 500 yards further to the east and away from the central core of the property.

The Aviator-Takeoff project involves the construction of new transmission lines and replacement of structures on an existing line in the landscape generally to the south and west of the Sully property. All three route alternatives for the Aviator-Takeoff Lines and both route alternatives for the Takeoff Loop are situated across Route 28 to the west of the Sully property. The nearest improvements associated with the proposed Aviator-Takeoff Route 1 alignment would be roughly 0.73 mile away while the nearest lengths of Alternative Routes 2 and 3 would be set slightly further away at 0.74 mile at the nearest point. The nearest improvements associated with the proposed Takeoff Loop Route 1 alignment would be roughly 0.62 mile away while alternative Route 2 would be set beyond US-50 roughly 0.72 mile away at the nearest point. The Line #265 Partial Rebuild includes the replacement of five structures and reconductoring of an existing transmission line situated to the south of the Sully property. The nearest structure to be replaced as part of that project is roughly 0.47 mile away from Sully with the other replacement structures set further away.

As such, there will be no direct impact to the Sully property so this assessment was focused on potential indirect visual impacts associated with the Project. In order to assess the potential indirect impacts, a site visit was made to the property to inspect existing conditions, including the setting and viewshed of and from Sully, with emphasis on views towards the Project study area and associated improvements. Photographs were taken from representative vantage points throughout the property towards the Project route alternatives to document current conditions, lines of sight, and visibility of existing similar infrastructure. Photo simulation was also conducted from representative vantage points to model the visibility of proposed transmission structures.

Inspection revealed that the immediate setting and viewshed of and from Sully is intact as a result of preservation efforts and intentional screening. Much of the modern development and infrastructure bordering and beyond the property is not visible due to vegetation, however, some features are visible from discrete vantages. The existing transmission line that borders the property to the east is mostly screened from the main house, however, several structures and the suspended conductor can be seen through the trees from various locations throughout the front lawn with more unobstructed views of the corridor from the paved pedestrian walkway leading from the parking lot to the house. Route 28 that borders the property to the west is likewise screened from many vantages, but can be seen from others.

All of the route alternatives associated with the Aviator-Takeoff Lines and Takeoff Loop, as well as the length of Line #265 to be rebuilt are set much further away from the property beyond additional wooded areas and development. The thick vegetation throughout the landscape between Sully and the Project components generally impedes distant views in these directions, including blocking views of existing development that is located between the property and the Project. As such, it is not anticipated that any of the Project route alternatives or components would be visible from any vantage point within the Sully property. This was confirmed with photo simulation and modeling of the proposed route alternatives.

Therefore, the Project is not anticipated to introduce any noticeable change to the setting or viewshed of or from the property, and it is D+A's recommendation that the Aviator-Takeoff Lines, Takeoff Loop, and Line #265 Partial Rebuild projects will result in ***no impact*** to the Sully Plantation per VDHR's impact characterization scale.

Figure 5-3 depicts the location of the Sully Plantation property in relation to the Project and associated route alternatives with the location and direction of all representative photographs and photo simulations. Figure 5-4 through Figure 5-11 are representative photographs of and from Sully towards the Project and Figure 5-12 through Figure 5-17 provide photo simulations of the Project from representative vantages.

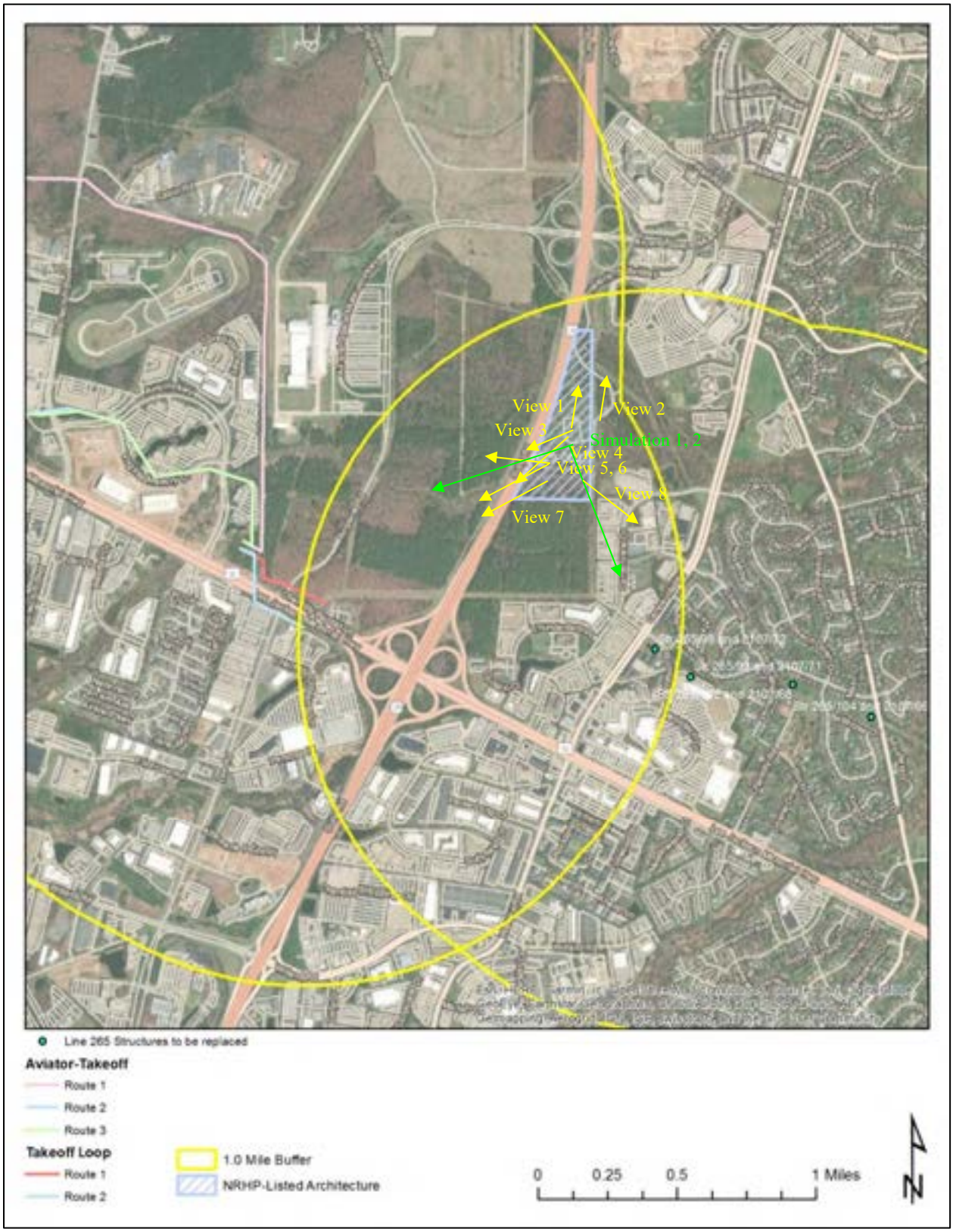

Figure 5-3: Sully Plantation with location and direction of representative photographs and views towards the Projects depicted in yellow and photo simulations depicted in green.

Figure 5-4: Photo location 1- View of the front of Sully house from pedestrian walkway, facing north (revealing views of existing transmission line infrastructure along the edge of the property).

Figure 5-5: Photo location 2- View from Sully pedestrian walkway, facing north (revealing views of existing transmission line infrastructure along the edge of the property).

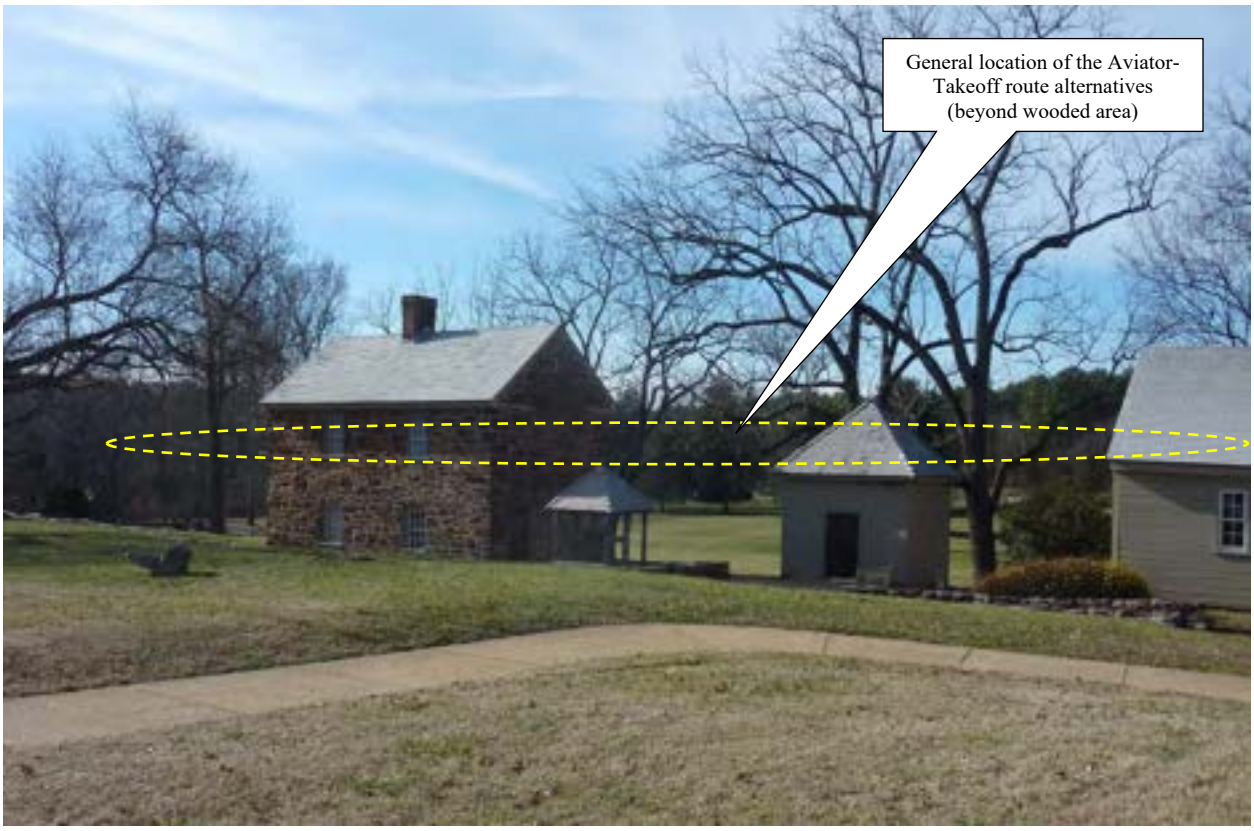

Figure 5-6: Photo location 3- View from main house towards the Aviator-Takeoff route alternatives, facing southwest (No expected visibility – all screened by intervening vegetation).

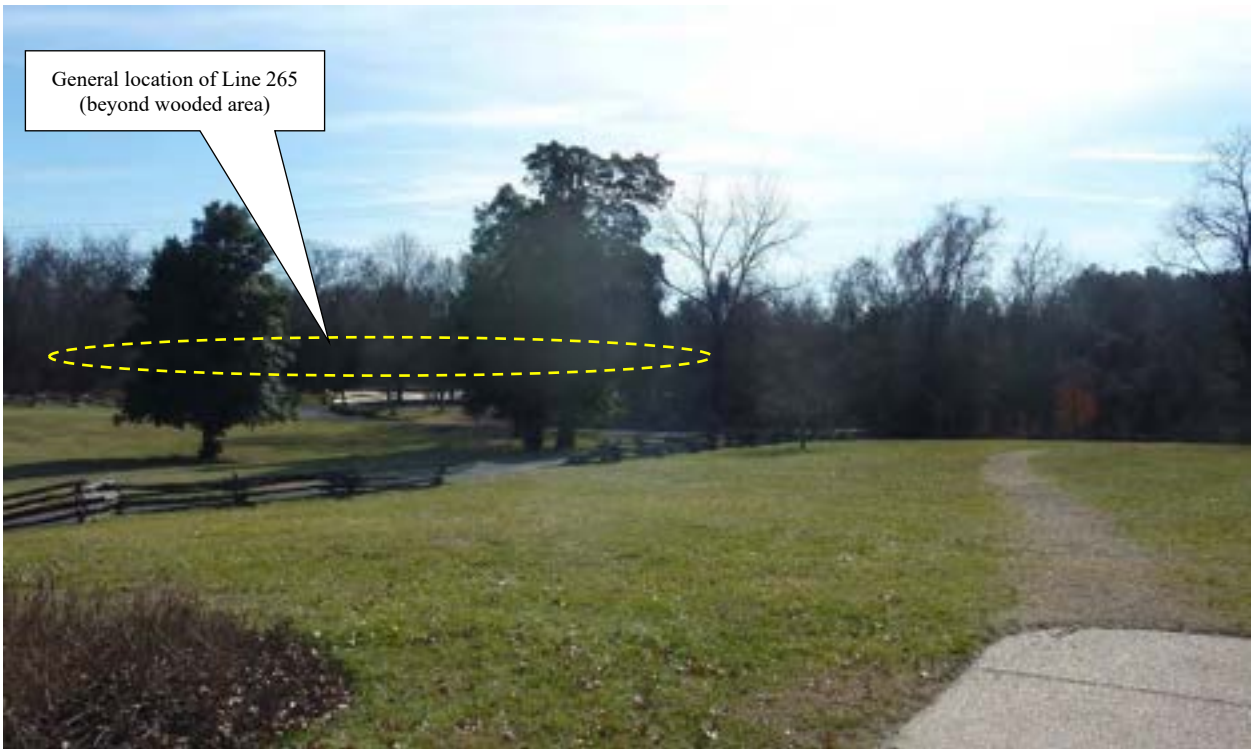

Figure 5-7: Photo location 4- View from main house towards the Line 265 partial rebuild, facing southeast (No expected visibility – screened by intervening vegetation).

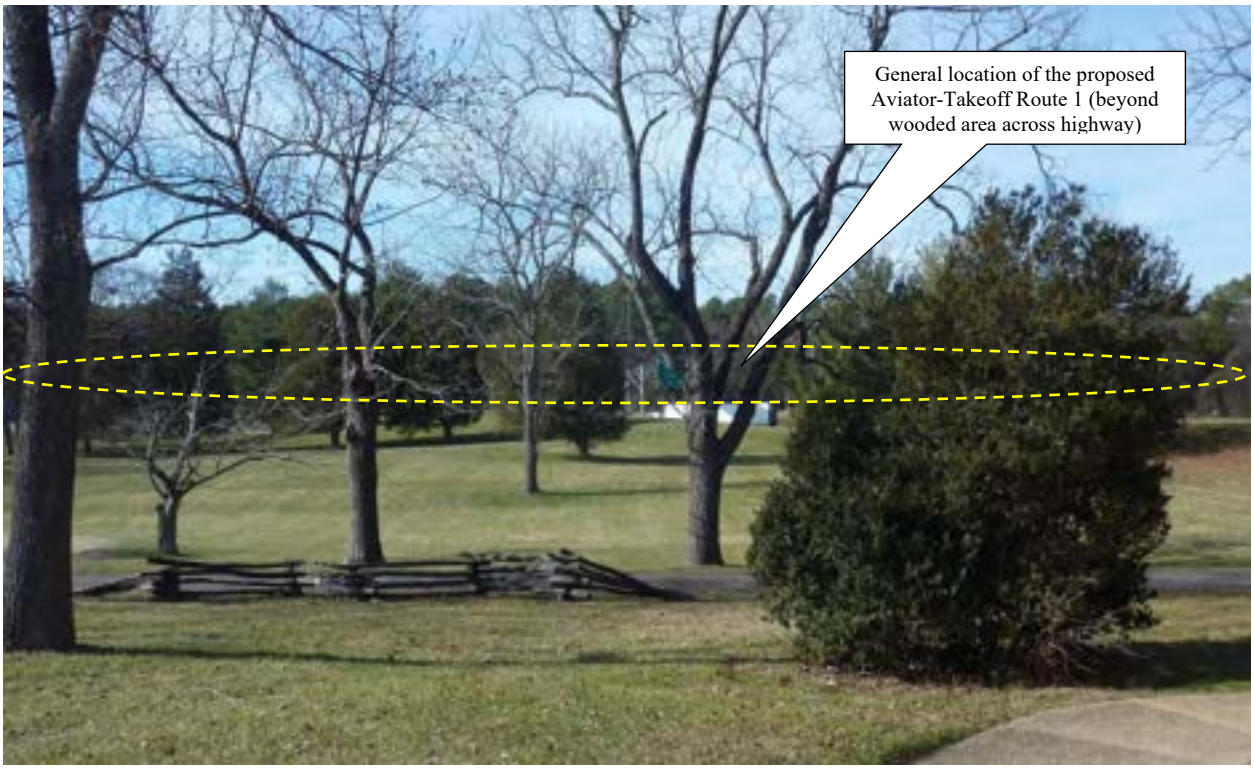

Figure 5-8: Photo location 5- View from former parking lot area towards proposed Aviator-Takeoff Route 1, facing southwest (No expected visibility – screened by intervening vegetation).

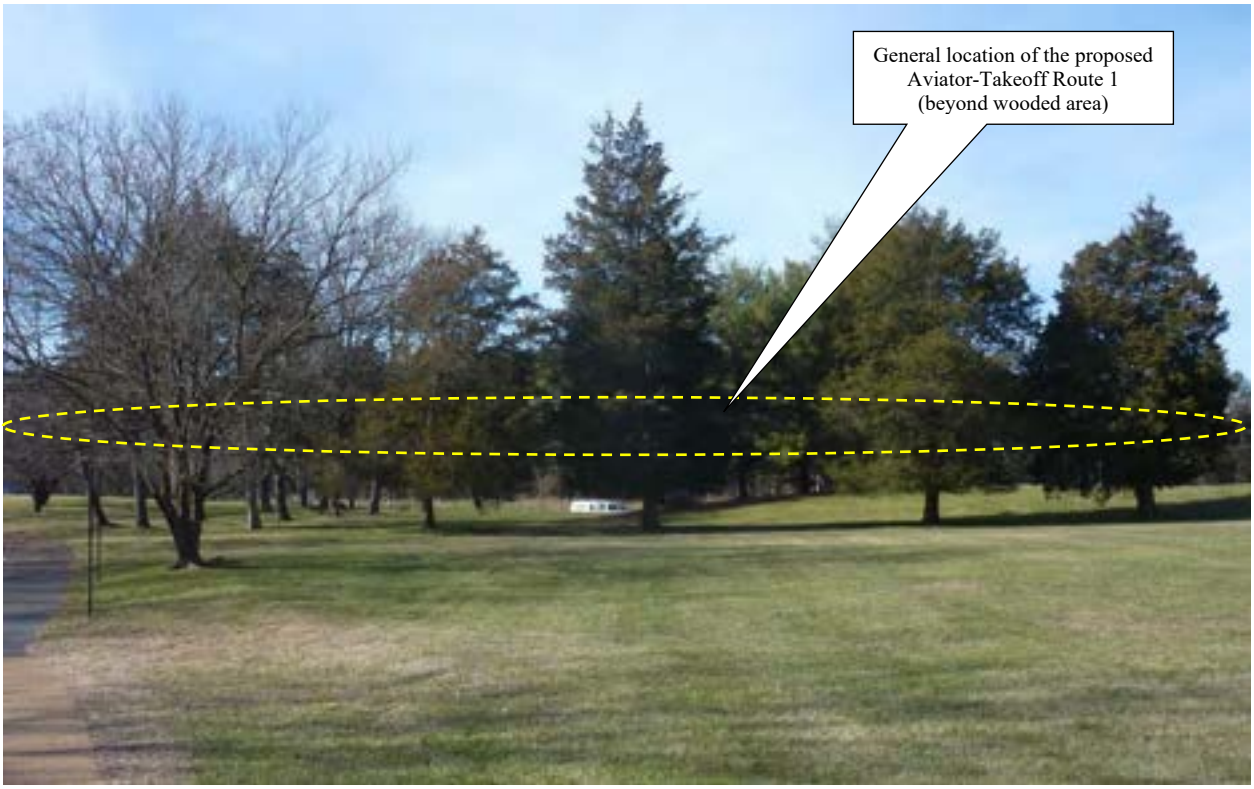

Figure 5-9: Photo location 6- View from former parking lot area towards proposed Aviator-Takeoff Route 1, facing west (No expected visibility – screened by intervening vegetation).

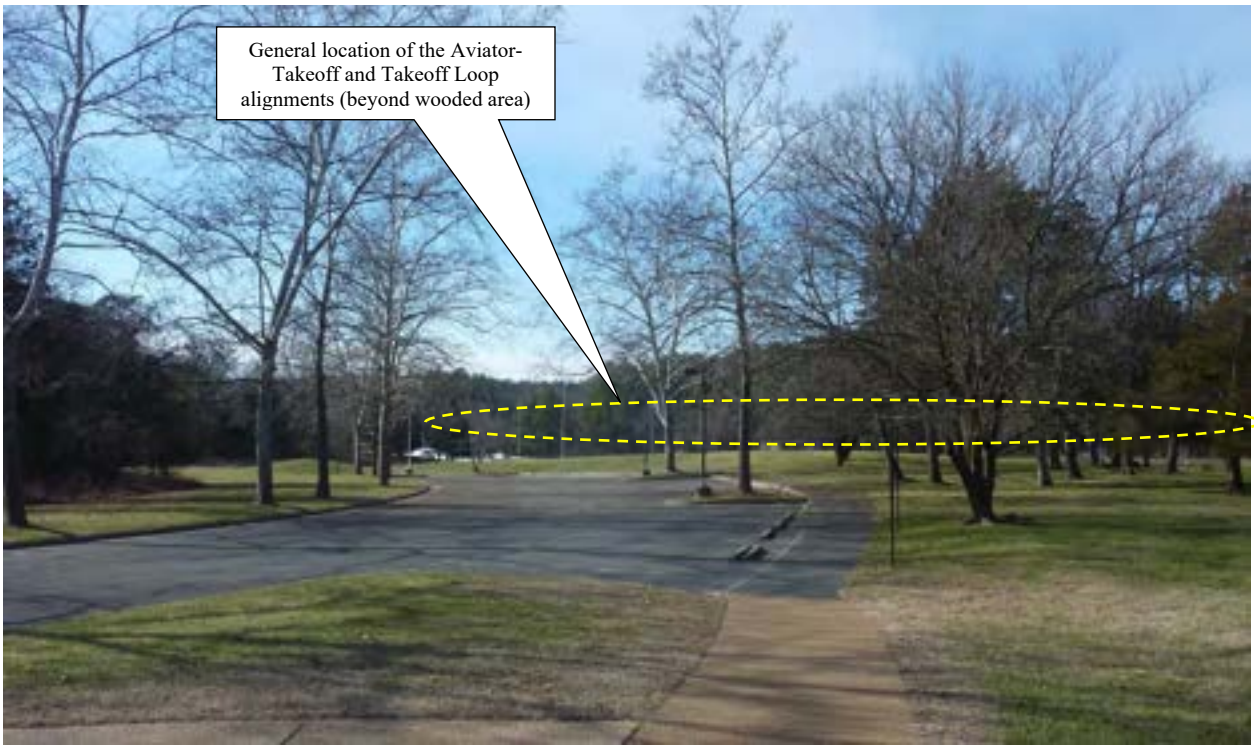

Figure 5-10: Photo location 7- View from former parking lot area towards Aviator-Takeoff and Takeoff Loop alignments, facing southwest (No expected visibility – all screened by intervening vegetation).

Figure 5-11: Photo location 8- View from main house towards the Line 265 partial rebuild, facing southeast (No expected visibility – screened by intervening vegetation).

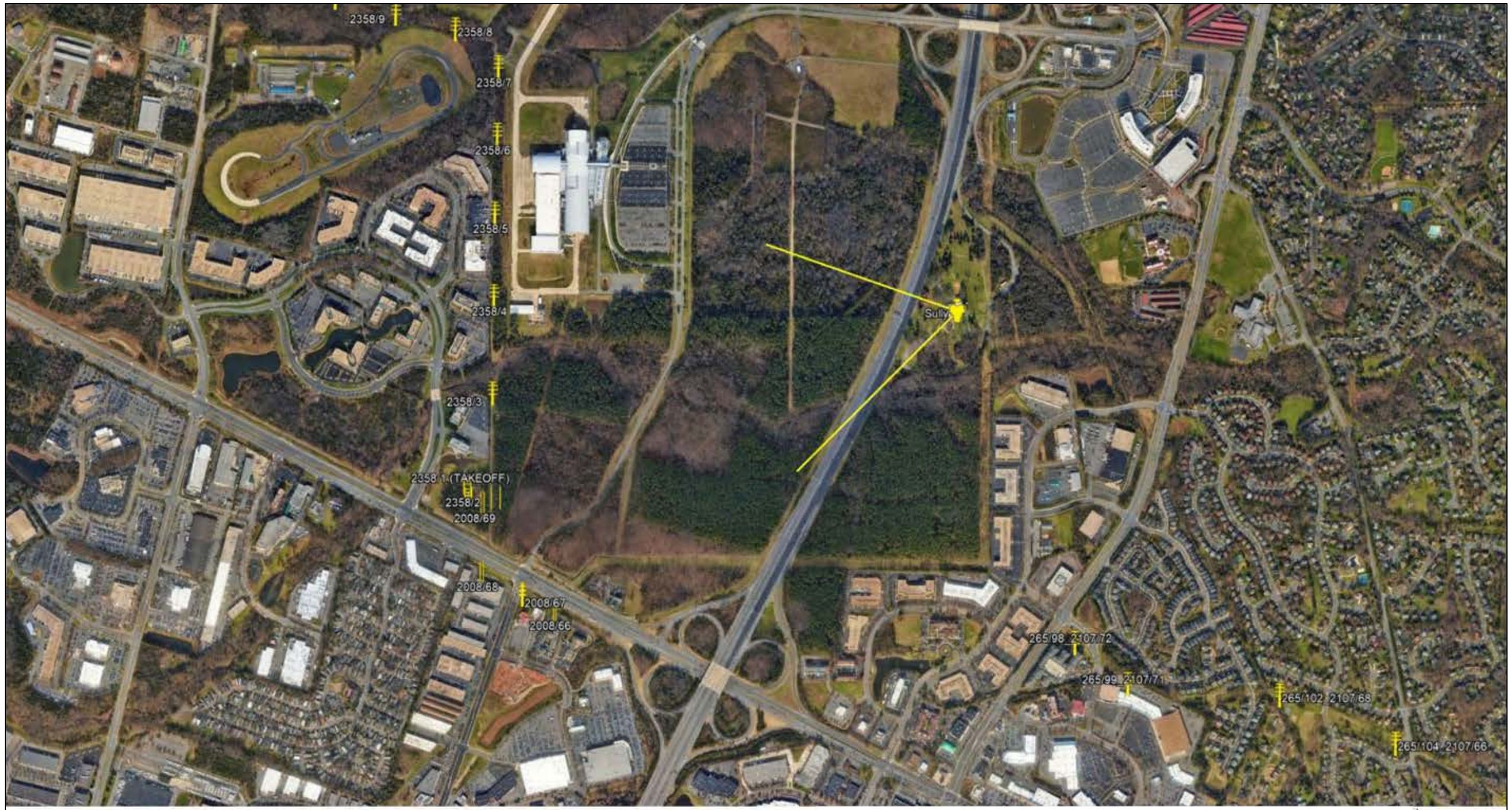

Figure 5-12: Simulation 1 - Location, direction of view, and structures modeled from Sully towards the proposed Aviator-Takeoff Route 1 and Takeoff Loop Route 1. Source: GTTE, LLC

Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Aviator-Takeoff Project**	**Sully Plantation From Front Of Main House Looking West**	**Existing View**	
	Photo Simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.		This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	

Figure 5-13: Simulation 1 - Existing view from Sully towards proposed Aviator-Takeoff Route 1 and Takeoff Loop Route 1. Source: GTTE, LLC

Attachment 2.I.1
Page 44 of 58

Photo simulations prepared by: GTTE LLC email: info@gttellc.com 703 447 1350	**Aviator-Takeoff Project**	**Sully Plantation** **From Front Of Main House Looking West**	**Proposed View** (Location of towers not visible are overlaid with yellow tower icon)	
	Photo Simulations and diagrams represent approximate heights for electric transmission structures from the conceptual design used for the proposed project. These illustrations do not necessarily depict exact structure design or location.		This simulation is designed for viewing on a computer monitor. To achieve the correct scale, the image should be increased or decreased in size until the scale above measures 4". When viewed with the eye at 31" from the screen the image will have the same scale as if the viewer were standing at the camera location.	

Figure 5-14: Simulation 1 - Modeled view of proposed Aviator-Takeoff Route 1 and Takeoff Loop Route 1 from Sully – (No project components visible). Source: GTTE, LLC

Attachment 2.I.1
Page 45 of 58

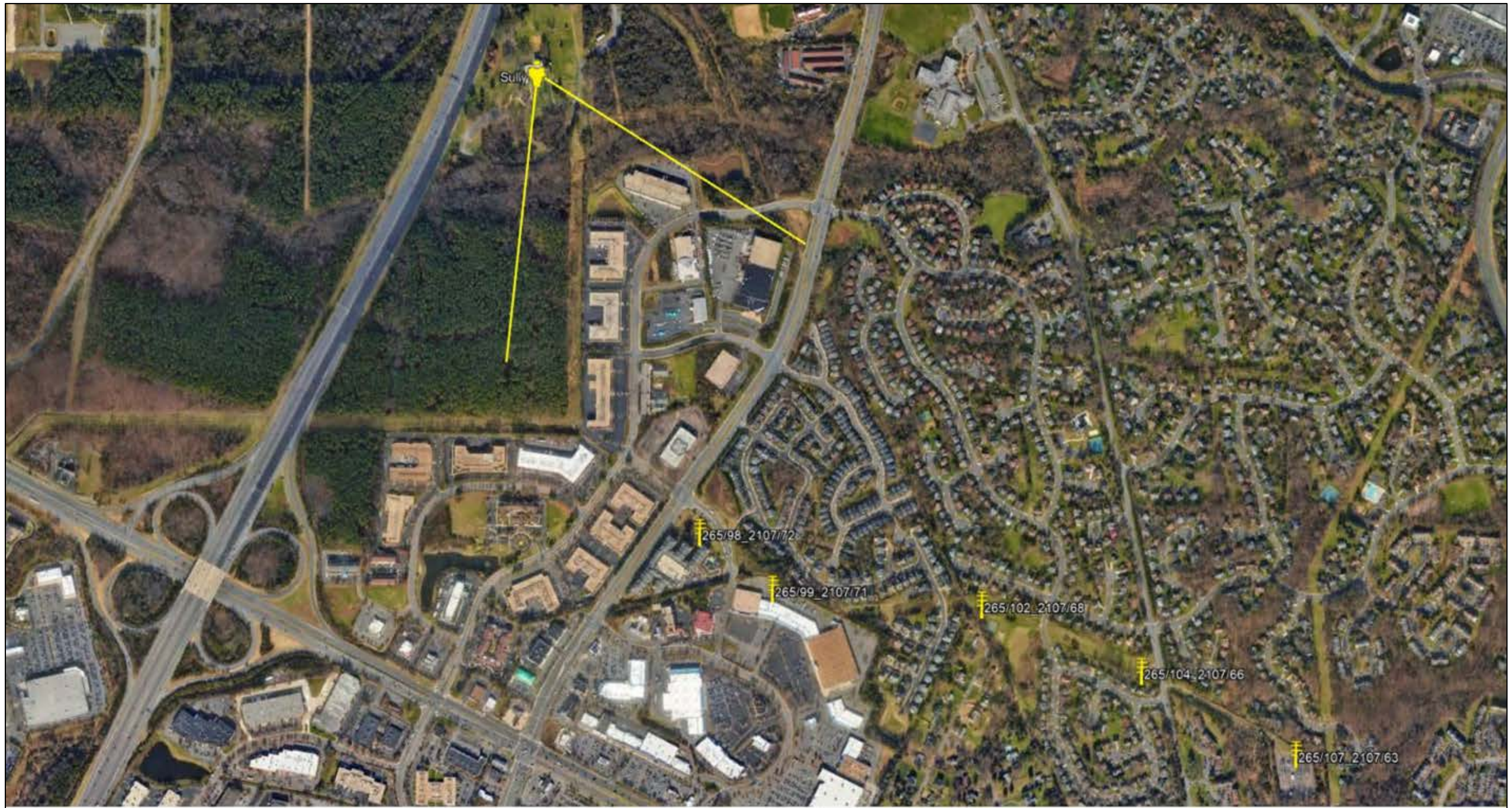

Figure 5-15: Simulation 2 - Location, direction of view, and structures modeled from Sully towards the proposed Line 265 Rebuild. Source: GTTE, LLC

Figure 5-16: Simulation 2 - Existing view from Sully towards proposed Line 265 Rebuild. Source: GTTE, LLC

Figure 5-17: Simulation 2 - Modeled view of proposed Line 265 Rebuild from Sully – (No project components visible). Source: GTTE, LLC

6. ARCHAEOLOGICAL ASSESSMENT

A review of the VDHR VCRIS records reveals that eight (8) previously recorded archaeological sites are located within or crossed by the proposed ROW for at least one of the Aviator-Takeoff and Takeoff Loop project alignment alternatives and four (4) previously recorded sites are located within or crossed by the portion of Line #265 ROW to be rebuilt as part of this project. Formal archaeological fieldwork and investigations were not conducted as part of this effort so the existing conditions of the sites is unknown. Project engineering is also still preliminary so the final project alignment, structure locations, and extent of grading and limits of disturbance are unknown. However, a preliminary assessment of potential impacts was conducted based upon previous site data and preliminary project information.

Based upon a review of project data, one site (44FX0693) is located within or crossed by the proposed ROW of the proposed Aviator-Takeoff and Takeoff Loop alignment. This site is prehistoric and has not been formally evaluated for NRHP eligibility. At this time, no proposed structures are located within proximity to the site, however, the extent of ROW clearing, construction access, or other project-related activities is unknown so this site should be subject to further assessment as project engineering is finalized.

Table 6-1 lists all sites that are located within or crossed by the Aviator-Takeoff and Takeoff Loop route alternatives. Figure 4-7 details the location of the archaeological sites located within or crossed by at least one of the Project route alternatives.

Table 6-1: Previously recorded archaeological sites located within or crossed by at least one of the Aviator-Takeoff and Takeoff Loop project route alternatives. Orange highlight denotes site is located within crossed by the ROW of the proposed route alignment.

VDHR #	Site Type	Temporal Context	NRHP Status	Proximity to Project*
44FX0152	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	Sensitive archaeological data redacted
44FX0274	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible	
44FX0330	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	
44FX0693	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	
44FX1012	No Data	Historic/Unknown, Paleo-Indian (15000 - 8501 B.C.E), Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	No Data	
44FX1013	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	
44FX1408	Dwelling, multiple	20th Century (1900 - 1999)	DHR Staff: Not Eligible	
44FX3259	Dwelling, single	19th Century: 1st half (1800 - 1849), 20th Century: 1st half (1900 - 1949)	DHR Staff: Not Eligible	

**** Abbreviations: Aviator-Takeoff (A-T), Takeoff Loop (TO)***

Figure 6-1: Detail of previously recorded archaeological resources within or adjacent to the Aviator-Takeoff and Takeoff Loop project route alternative ROWs. Source: VCRIS

Review of the VDHR VCRIS records reveals there are four (4) previously recorded archaeological sites located within or crossed by the existing Line #265 ROW. Of these [redacted]
Sensitive archaeological data redacted
This site is a multi-component, prehistoric and historic period site that has not been formally evaluated for NRHP-eligibility.

Based upon a review of project data, four (4) sites [redacted]
Sensitive archaeological data redacted
. This includes two prehistoric sites, one mixed-component site, and one historic site; none of which have been formally evaluated for NRHP eligibility. At this time, three of the sites (44FX0430, 44FX1742, and 44FX1792) [redacted]
Sensitive archaeological data redacted
and therefore there is anticipated to be no potential for impact to these sites. One site (44FX0286) [redacted]
Sensitive archaeological data redacted
of construction access and other project-related activities is unknown so this shite should be subject to further assessment as project engineering is finalized.

Table 6-2 lists all sites that are located within or crossed by the Line #265 ROW. Figure 6-2 details the location of the archaeological sites located within or crossed by the ROW.

Table 6-2: Previously recorded archaeological sites located within or crossed by the Line #265 Partial Rebuild ROW.

VDHR #	Site Type	Temporal Context	NRHP Status	Proximity to Project
44FX0286	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century: 2nd/3rd quarter (1825 - 1874)	Not Evaluated	Sensitive archaeological data redacted
44FX0430	Farmstead	19th Century (1800 - 1899)	Not Evaluated	
44FX1742	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	
44FX1792	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	

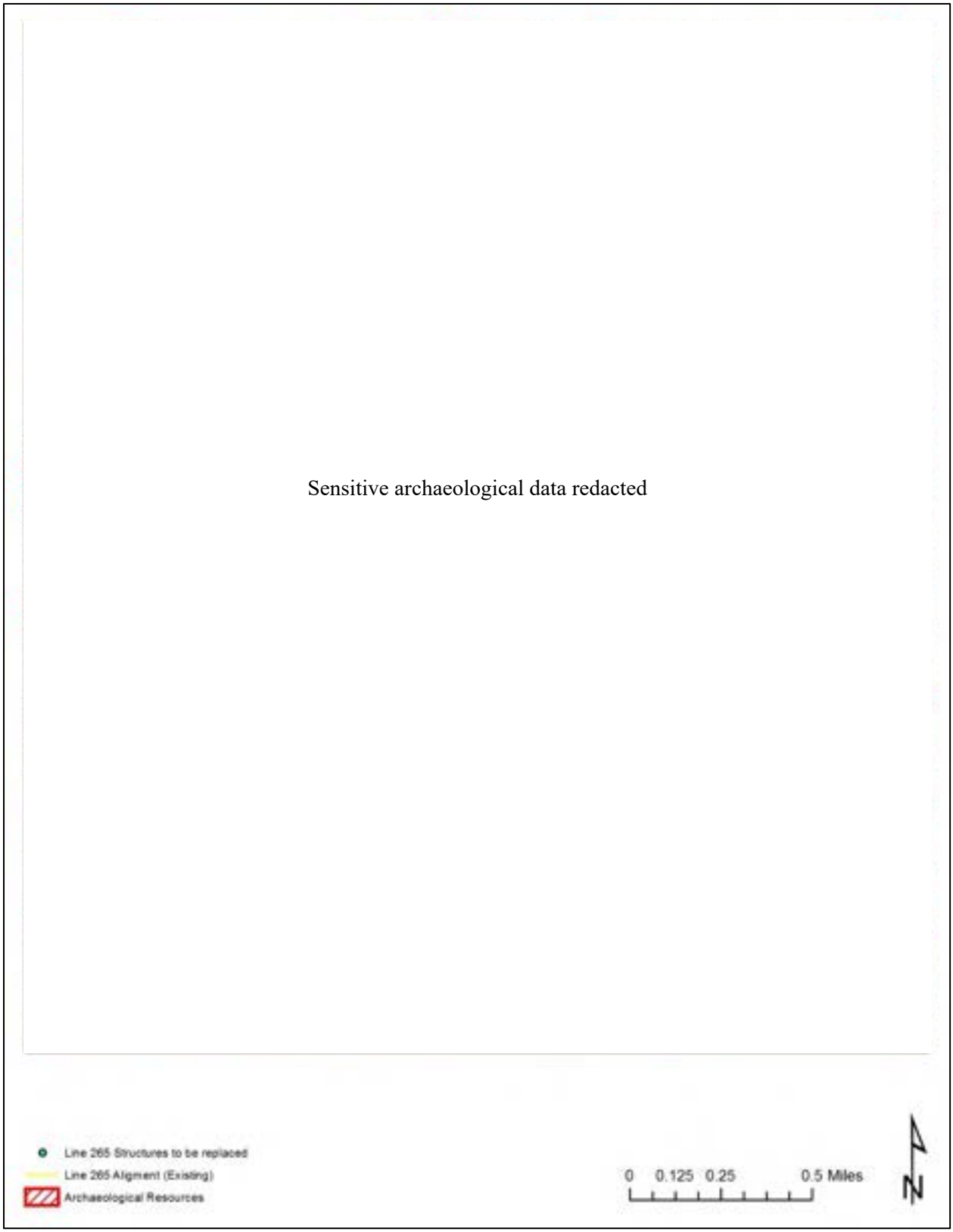

Figure 6-2: Detail of previously recorded archaeological resources within or adjacent to the Line #265 Partial Rebuild ROW. Source: VCRIS

7. SUMMARY OF POTENTIAL IMPACTS

As part of this pre-application analysis of cultural resources for the 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation, potential impacts to previously recorded historic properties that qualify for consideration under VDHR-defined buffered tiers were assessed in accordance with the VDHR guidance. For the purposes of this analysis, an impact is one that alters, either directly or indirectly, those qualities or characteristics that qualify a particular property for listing in the NRHP and does so in a manner that diminishes the integrity of a property's materials, workmanship, design, location, setting, feeling, and/or association. With respect to transmission lines and associated projects, direct impacts typically are associated with ground disturbance resulting from ROW clearing and structure construction. Indirect impacts typically are associated with the introduction of new visual elements or changes to the physical features of a property's setting or viewshed. According to VDHR guidance, project impacts are characterized as such:

- **None** – Project is not visible from the property
- **Minimal** – Occur within viewsheds that have existing transmission lines, locations where there will only be a minor change in tower height, and/or views that have been partially obstructed by intervening topography and vegetation.
- **Moderate** – Include viewsheds with expansive views of the transmission line, more dramatic changes in the line and tower height, and/or an overall increase in the visibility of the route from the historic properties.
- **Severe** – Occur within viewsheds that do not have existing transmission lines and where the views are primarily unobstructed, locations where there will be a dramatic increase in tower visibility due to the close proximity of the route to historic properties, and viewsheds where the visual introduction of the transmission line is a significant change in the setting of the historic properties.

With regards to architectural resources, there are no (0) NHLs located within 1.5 mile of the proposed project or closer, one (1) NRHP-listed property located within 1.0 mile or closer of the Project, no (0) battlefields or landscapes located 1.0 mile or closer of the Project, and no (0) properties that have been determined eligible or potentially eligible for listing in the NRHP by the VDHR within 0.5 mile or closer of the Project. The one (1) NRHP-listed resource identified within the study tiers is not directly crossed by any portions of the Project.

Assessment of impacts from the NRHP-listed historic property (Sully Plantation– VDHR# 053-0037) found that the historic setting and viewshed within the property boundaries have generally been preserved as a result of its designation as a county historical site and park. However, the property is situated within an otherwise densely developed area so some modern intrusions are visible from the property including Route 28 that extends along the west side of the property as a multi-lane divided highway, and an existing transmission line that extends along with the eastern side of the property of which multiple structures are visible. Beyond the highway and transmission line, there remains a vegetated buffer around the property that generally inhibits views of additional development beyond. This vegetation screens all distant views in the direction of the Project, and therefore none of the Project alternatives would be anticipated to be visible. ***Therefore, it is D+A's recommendation that there will be no impact to Sully Plantation or any other considered historic property as a result of the proposed 230 kV***

Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation Projects, and there is no meaningful difference in impact from the proposed to alternative route options (Table 7-1).

Table 7-1: Potential impacts summary for architectural resources.

VDHR #	Resource Name, Address	NRHP-Status	Distance from Project*	Recommended Impact
029-0037	Sully Plantation, 3601 Sully Road	NRHP-Listed	A-T Route 1 – ~0.73 Mile A-T Route 2 – ~0.74 Mile A-T Route 3 – ~0.74 Mile TO Route 1 – ~0.62 Mile TO Route 2 – ~0.72 Mile Line 265 – ~0.47 Mile	A-T Route 1 – No Impact A-T Route 2 – No Impact A-T Route 3 – No Impact TO Route 1 – No Impact TO Route 2 – No Impact Line 265 – No Impact

**** Abbreviations: Aviator-Takeoff (A-T), Takeoff Loop (TO)***

With regards to archaeology, portions of all three Aviator-Takeoff route alternatives, two Takeoff Loop route alternatives, and the existing Line #265 ROW have been subject to previous phase I survey, although none have been surveyed in their entirety.

Sensitive archaeological data redacted

None of the sites located within or crossed by the ROW of any project alternative or component has been formally evaluated for NRHP eligibility by the VDHR. As no survey or formal investigation of archaeological sites was conducted as part of this effort, ***it is D+A's opinion that any unsurveyed portions of the ROW of the selected routes and ROW be subject to Phase I survey and that any identified sites be evaluated for NRHP eligibility and potential project impacts as additional detail on project engineering become available (Table 7-2).***

Table 7-2: Previously recorded archaeological sites located within or crossed by the Aviator-Takeoff and Takeoff Loop route alternatives, and the Line #265 ROW. Orange highlight denotes site is located within crossed by the ROW of the proposed route alignment or an area in which ground disturbance may be expected.

VDHR #	Site Type	Temporal Context	NRHP Status	Proximity to Project*
Aviator-Takeoff and Takeoff Loop Route Alternatives				
44FX0152	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	Sensitive archaeological data redacted
44FX0274	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	DHR Staff: Not Eligible	
44FX0330	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	
44FX0693	Other	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	

VDHR #	Site Type	Temporal Context	NRHP Status	Proximity to Project*
44FX1012	No Data	Historic/Unknown, Paleo-Indian (15000 - 8501 B.C.E), Early Archaic Period (8500 - 6501 B.C.E), Middle Archaic Period (6500 - 3001 B.C.E), Late Archaic Period (3000 - 1201 B.C.E), Early Woodland (1200 B.C.E - 299 C.E), Middle Woodland (300 - 999 C.E), Late Woodland (1000 - 1606)	No Data	Sensitive archaeological data redacted
44FX1013	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	No Data	
44FX1408	Dwelling, multiple	20th Century (1900 - 1999)	DHR Staff: Not Eligible	
44FX3259	Dwelling, single	19th Century: 1st half (1800 - 1849), 20th Century: 1st half (1900 - 1949)	DHR Staff: Not Eligible	
Line #265 Rebuild				
44FX0286	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.), 19th Century: 2nd/3rd quarter (1825 - 1874)	Not Evaluated	
44FX0430	Farmstead	19th Century (1800 - 1899)	Not Evaluated	
44FX1742	No Data	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	
44FX1792	Camp, temporary	Prehistoric/Unknown (15000 B.C. - 1606 A.D.)	Not Evaluated	

**** Abbreviations: Aviator-Takeoff (A-T), Takeoff Loop (TO)***

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8. REFERENCES

National Park Service
2009 "Civil War Sites Advisory Commission Report Update and Resurvey," American Battlefield Protection Program

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

Virginia Department of Historic Resources
2024 Virginia Cultural Resource Information System (VCRIS) database and GIS server.

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Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482 FAX (804) 698-4178
www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

MEMORANDUM

TO: James P. Young, Dominion Energy Environmental Specialist

FROM: Daniel Moore, DEQ Principal Environmental Planner

DATE: July 2, 2024

SUBJECT: SCOPING: Dominion Energy 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Station, Fairfax County, Virginia

We have reviewed the Scoping Request for the proposed 230 kV Rebuild, Reconductoring, and New Line Projects and offer the following comments regarding consistency with the provisions of the *Chesapeake Bay Preservation Area Designation and Management Regulations* (Regulations):

In Fairfax County, the areas protected by the Chesapeake Bay Preservation Act (CBPA), as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs), as designated by the locality. RPAs include tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, and tidal shores. RPAs in Fairfax County also include a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. RMAs, which require less stringent performance criteria than RPAs, includes all lands contiguous to the inland boundary of the RPA and which, if not properly managed, have a potential for degrading water quality or diminishing the functional value of the RPA. In Fairfax County, the RMA includes all areas of the County not included in the RPAs.

It should be noted that Loudoun County is not subject to the Chesapeake Bay Preservation Act and, accordingly, none of the activities associated with the proposed project that are to be carried out in Loudoun County are subject to review for compliance with the Act and Regulations.

The proposed projects calls for the following:

1. the construction of two new overhead double circuit 230 kilovolt (kV) transmission lines ("Takeoff Loop") and a new 230-34.5 substation in Fairfax County ("Takeoff Substation");
2. the partial rebuild and reconductoring of an existing 230 kV overhead transmission line in Fairfax County ("Sully-Takeoff Partial Reconductor/Rebuild"); and
3. the construction of a new overhead double circuit 230 kV transmission line in Loudoun and Fairfax Counties (the "Aviator-Takeoff Lines")

Per 9VAC25-830-150 B 2 of the Regulations, construction, installation, operation, and maintenance of public utilities such as electric transmission lines and their appurtenant structures within local-designated RPAs are exempt, provided the transmission lines are constructed in accordance with the following conditions:

1. To the degree possible, the location of such utilities and facilities should be outside Resource Protection Areas;
2. No more land shall be disturbed than is necessary to provide for the proposed utility installation;
3. All such construction, installation and maintenance of such facilities and facilities shall be in compliance with all applicable state and federal permits and designed and conducted in a manner that protects water quality; and
4. Any land disturbance exceeding an area of 2,500 square feet complies with all erosion and sediment control regulations promulgated pursuant to the Erosion and Sediment Control Law (§10.1-560 et. seq. of the Code of Virginia) and the Stormwater Management Act (§10.1-603.1 et. seq. of the Code of Virginia);

Provided adherence with the above requirements, the proposed activity would be consistent with the Chesapeake Bay Preservation Act and the Regulations.

Greg R Baka (DEV Trans Distribution - 1)

From: ImpactReview <impactreview@vof.org>
Sent: Tuesday, June 18, 2024 1:53 PM
To: Greg R Baka (DEV Trans Distribution - 1)
Cc: Martha Little
Subject: [EXTERNAL] Re: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

CAUTION! This message was NOT SENT from DOMINION ENERGY
Are you expecting this message to your DE email? Suspicious? Use PhishAlarm to report the message. Open a browser and type in the name of the trusted website instead of clicking on links. DO NOT click links or open attachments until you verify with the sender using a known-good phone number. Never provide your DE password.

Hi Greg,

Thanks for the quick follow up.

The Virginia Outdoors Foundation has reviewed the project referenced below. As of June 18, 2024, this project will not encroach on any existing nor proposed VOF open-space easements.

Please contact VOF again for further review if the project area changes or if this project does not begin within 24 months. Thank you for considering conservation easements.

Best,
Baron

Baron Lin (*he/they*)
GIS Specialist
Virginia Outdoors Foundation [vof.org]
cell: 540-935-3163
other work #: 844-863-9800, ext. 355
email: blin@vof.org

From: Greg.R.Baka@dominionenergy.com <Greg.R.Baka@dominionenergy.com>
Sent: Monday, June 17, 2024 4:58 PM
To: ImpactReview <impactreview@vof.org>
Subject: RE: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Alert: This email originated from outside VOF
Baron, please see attached. Hope this helps-

Thank you,

Greg Baka
Electric Transmission – Local Permitting Consultant
Dominion Energy

5000 Dominion Blvd; 3rd Floor
Glen Allen, VA 23060
804-201-3053 cell
greg.r.baka@dominionenergy.com

From: ImpactReview <impactreview@vof.org>
Sent: Monday, June 17, 2024 4:36 PM
To: Greg R Baka (DEV Trans Distribution - 1) <Greg.R.Baka@dominionenergy.com>
Subject: [EXTERNAL] Re: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

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Hi Greg,

Can you please send GIS files related to this project? This will help with our review.

Thanks,
Baron

Baron Lin (*he/they*)
GIS Specialist
Virginia Outdoors Foundation [vof.org]
cell: 540-935-3163
other work #: 844-863-9800, ext. 355
email: blin@vof.org

From: Greg.R.Baka@dominionenergy.com <Greg.R.Baka@dominionenergy.com>
Sent: Monday, June 17, 2024 3:34 PM
To: Martha Little <mlittle@vof.org>; ImpactReview <impactreview@vof.org>
Cc: stefan.p.haas@dominionenergy.com <stefan.p.haas@dominionenergy.com>; james.p.young@dominionenergy.com <james.p.young@dominionenergy.com>; ahaynes@mcguirewoods.com <ahaynes@mcguirewoods.com>
Subject: Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation

Alert: This email originated from outside VOF

Ms. Little,

Please see the attached letter describing Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation in Loudoun and Fairfax County, Virginia.

In advance of filing an application for a CPCN from the Commission, the Company respectfully requests that you submit any comments or additional information that would have bearing on the proposed Project within 30 days of the date of this letter. Enclosed is an Overview Map depicting the proposed location of this project.

Thank you,

Greg Baka
Electric Transmission – Local Permitting Consultant
Dominion Energy
5000 Dominion Blvd; 3rd Floor
Glen Allen, VA 23060
804-201-3053 cell
greg.r.baka@dominionenergy.com

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From: ImpactReview <impactreview@vof.org>
Sent: Monday, July 1, 2024 4:15 PM
To: Fulcher, Valerie (DEQ) <Valerie.Fulcher@deq.virginia.gov>; James P Young (Services - 6) <james.p.young@dominionenergy.com>
Subject: [EXTERNAL] Re: NEW SCOPING Dominion Energy Virginia 230 kV Rebuild, Takeoff Substation

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Hi James,

The Virginia Outdoors Foundation has reviewed the project referenced below. As of July 1, 2024, this project will not encroach on any existing nor proposed VOF open-space easements.

Please contact VOF again for further review if the project area changes or if this project does not begin within 24 months. Thank you for considering conservation easements.

Best,
Baron

Baron Lin (*he/they*)

GIS Specialist

Virginia Outdoors Foundation [vof.org]

cell: 540-935-3163

other work #: 844-863-9800, ext. 355

email: blin@vof.org

From: Fulcher, Valerie (DEQ) <Valerie.Fulcher@deq.virginia.gov>
Sent: Monday, July 1, 2024 4:10 PM
To: dgif-ESS Projects (DWR) <ESSProjects@dwr.virginia.gov>; odwreview (VDH) <odwreview@vdh.virginia.gov>; Churchill, Nikolas (DEQ) <Nikolas.Churchill@deq.virginia.gov>; Ballou, Thomas (DEQ) <Thomas.Ballou@deq.virginia.gov>; Lovain, Ava (DEQ) <Anna.Lovain@deq.virginia.gov>; Gavan, Larry (DEQ) <Larry.Gavan@deq.virginia.gov>; Moore, Daniel (DEQ) <Daniel.Moore@deq.virginia.gov>; Miller, Mark (DEQ) <Mark.Miller@deq.virginia.gov>; Kirchen, Roger

(DHR) <Roger.Kirchen@dhr.virginia.gov>; ImpactReview <impactreview@vof.org>; Lazaro, Robert (VDOT) <rlazaro@novaregion.org>; Lasher, Terrance J. (DOF) <Terry.Lasher@dof.virginia.gov>; Folks, Clint (DOF) <Clint.Folks@dof.virginia.gov>; Heller, Matthew (Energy) <matt.heller@energy.virginia.gov>; EIR Coordination (VDOT) <EIR.Coordination@vdot.virginia.gov>; coadmin@loudoun.gov (coadmin@loudoun.gov) <coadmin@loudoun.gov>; Hermann, Katherine <Katherine.hermann@fairfaxcounty.gov>
Cc: james.p.young@dominionenergy.com (james.p.young@dominionenergy.com) <james.p.young@dominionenergy.com>
Subject: NEW SCOPING Dominion Energy Virginia 230 kV Rebuild, Takeoff Substation

Alert: This email originated from outside VOF
Good afternoon—attached is a request for scoping comments on the following:

Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation - Loudoun and Fairfax County

If you choose to make comments, please send them directly to the project sponsor (james.p.young@dominionenergy.com). We will coordinate a review when the environmental document is completed.

DEQ-OEIR's scoping response is also attached.

If you have any questions regarding this request, please email our office at eir@deq.virginia.gov.

Valerie

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

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

1111 East Main Street

Richmond, VA 23219

PHONE NUMBER: 804-659-1550

Email: Valerie.Fulcher@deq.virginia.gov

https://www.deq.virginia.gov/permits-regulations/environmental-impact-review [deq.virginia.gov]

For program updates and public notices please subscribe to the Environmental Impact Review Public Notices Bulletin: https://public.govdelivery.com/accounts/VADEQ/subscriber/new [public.govdelivery.com]

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Greg R Baka (DEV Trans Distribution - 1)

From: Cioffi, Marc (VDOT) <marc.cioffi@vdot.virginia.gov>
Sent: Friday, June 28, 2024 4:03 PM
To: Greg R Baka (DEV Trans Distribution - 1)
Cc: Welch, Steven (VDOT); Burton, Robert; Fry, Brian E. (VDOT); Castaneda, Gilbert (VDOT); Springhetti, Justin S. (VDOT)
Subject: [EXTERNAL] RE: 230 kV DE
Attachments: DE 230kV Rebuild.pdf

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Mr. Baka,

After reviewing the attached document provided to VDOT and discussing with the appropriate internal staff, VDOT offers the following preliminary comments:

Takeoff Line Loop

- **Route 1 (red) – strongly recommended option due to minimal impacts to existing VDOT assets**
- Route 2 (blue) – not supported by VDOT due to crossings of both Route 50 and Lee Road

Aviator-Takeoff Lines

- **Takeoff Route 1 (Pink) – preferred option due to zero-to-minimal impacts to existing VDOT assets**
- Takeoff Route 2 (dark blue) – while not the preferred route, this option requires minimal impacts to lower volume VDOT maintained roadways and could be supported
- Takeoff Route 3 (green) – again, while not the preferred route, this option also requires minimal impacts to lower volume VDOT maintained roadways and could be supported

Please feel free to contact me if you have any questions or comments and would like to discuss further.

Regards,
--Marc

Marc Cioffi, P.E., PTOE
Fairfax & Arlington Land Use Permits
Virginia Department of Transportation
703-259-2329
Marc.Cioffi@VDOT.Virginia.gov

From: Warren, Arlene (VDH) <Arlene.Warren@vdh.virginia.gov>
Sent: Monday, June 24, 2024 10:26 PM
To: James P Young (Services - 6) <james.p.young@dominionenergy.com>
Subject: [EXTERNAL] RE: Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation - Loudoun and Fairfax County, VA - CPCN agency Notification

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Project #: N/A
Project Name: DOM Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation
UPC #: N/A
Location: Loudoun & Fairfax Counties VA

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

There are no public groundwater wells within a 1-mile radius of the project site.

There are no surface water intakes located within a 5-mile radius of the project site.

The project is within the watershed of the following public surface water sources:

PWS ID Number	System Name	Facility Name
6059501	FAIRFAX COUNTY WATER AUTHORITY	OCCOQUAN RESERVIOR INTAKE

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

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

Best Regards,

Arlene F. Warren
GIS Program Support Technician
Mobile 804-389-2167 (office/cell/text)
Email arlene.warren@vdh.virginia.gov
VDH, Office of Drinking Water
109 Governor Street, 6th Floor
Richmond, VA 23219

From: james.p.young@dominionenergy.com <james.p.young@dominionenergy.com>
Sent: Monday, June 17, 2024 10:34 AM
To: Rayfield, Bettina (DEQ) <bettina.rayfield@deq.virginia.gov>
Cc: ahaynes@mcguirewoods.com; jvalaika@mcguirewoods.com; Hypes, Rene (DCR) <Rene.Hypes@dcr.virginia.gov>; DCR-PRR Environmental Review (DCR) <envreview@dcr.virginia.gov>; Kirchen, Roger (DHR) <roger.kirchen@dhr.virginia.gov>; Martin, Amy (DWR) <Amy.Martin@dwr.virginia.gov>; keith.r.goodwin@usace.army.mil; Didier, Karl (Virginia) <karl.didier@dof.virginia.gov>; MRC - Scoping (MRC) <scoping@mrc.virginia.gov>; Troy Andersen <troy_andersen@fws.gov>; Birge, Tiffany (MRC) <Tiffany.Birge@mrc.virginia.gov>; Tignor, Keith (VDACS) <keith.tignor@vdacs.virginia.gov>; Warren, Arlene (VDH) <Arlene.Warren@vdh.virginia.gov>; Greg.R.Baka@dominionenergy.com; jared.brandell-douglas@erm.com
Subject: Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation - Loudoun and Fairfax County, VA - CPCN agency Notification

Good Morning,

Please see the attached agency notification, associated project location map, and shapefiles for the Dominion Energy Virginia's Proposed 230 kV Rebuild, Reconductoring, and New Line Projects to Network Takeoff Substation - Loudoun and Fairfax County, VA - CPCN agency Notification.

If you have any questions or need additional information, please feel free to contact me.

Thank you and appreciate your time and review

James P. Young
Environmental Specialist III
Dominion Environmental & Sustainability (E&S)
120 Tredegar Street, Richmond, VA 23219
Cell: (804) 750-6406

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From: Warren, Arlene <arlene.warren@vdh.virginia.gov>
Sent: Tuesday, June 22, 2021 7:53 AM
To: Rachel.M.Studebaker@dominionenergy.com
Subject: [EXTERNAL] Re: FW: SCC Case No. PUR-2021-00010/DEQ21-013S

This is an EXTERNAL email that was NOT sent from Dominion Energy. Are you expecting this message? Are you expecting a link or attachment? DO NOT click links or open attachments until you verify them

The proposal from Dominion is reasonable and we consider it acceptable.

Best Regards,

Arlene Fields Warren

GIS Program Support Technician

Office of Drinking Water

Virginia Department of Health

109 Governor Street

Richmond, VA 23219

(804) 864-7781

On Thu, Jun 17, 2021 at 4:33 PM Rachel.M.Studebaker@dominionenergy.com <Rachel.M.Studebaker@dominionenergy.com> wrote:

Hello Ms. Warren,

I am reaching out in regard to the DEQ Report for SCC Case No. PUR-2021-00010/DEQ21-013S (230 kV lines #2113 and #2154 Transmission Line Rebuilds and Related Projects). As part of the VDH ODW review, it was recommended that all wells within a 1,000-foot radius of the project site be field marked and protected from accidental damage. It is our custom construction process to not conduct any work outside of the existing right-of-way (ROW), with the exception of entry using existing access roads, and use DEQ approved erosion and sediment controls. These well are located outside of the project area ROW on private land and Dominion Energy does not have permission to enter private property to field mark the wells.

Therefore, we are proposing to plot and call out the wells on the Erosion and Sediment control plans as a way of flagging them for the construction team for protection from accidental damage. Is this a sufficient approach to comply with the ODW recommendation?

Thank you,

Rachel Studebaker

Environmental Specialist II

Dominion Energy Services

120 Tredegar Street, Richmond, VA 23219

Office: (804) 273-4086

Cell: (804) 217-1847

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