Dominion Energy®

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

Before the State Corporation Commission of Virginia

Lockridge 230 kV Line Loop and Lockridge Substation

Application No. 296

Case No. PUR-2019-00215

Filed: December 17, 2019

Volume 2 of 2

DEQ Supplement

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

FOR APPROVAL AND CERTIFICATION
OF ELECTRIC FACILITIES

Lockridge 230 kV Line Loop and Lockridge Substation

Application No. 296

DEQ Supplement

Case No. PUR-2019-00215

Filed: December 17, 2019

Table of Contents

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 DEQ and other relevant agencies.

1. Project Description

In order to provide service requested by a retail electric service customer (the "Customer"); to maintain reliable service for the overall growth in the area; and to comply with mandatory North American Electric Reliability Corporation ("NERC") Reliability Standards, Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company") proposes to construct in Loudoun County, Virginia:

(i) a new approximately 0.6-mile 230 kV double circuit transmission line loop on new right-of-way, supported by eight double circuit, single-shaft galvanized steel poles and utilizing three-phase twin-bundled 768.2 ACSS/TW type conductor, from a tap point junction located on future 230 kV Buttermilk-Roundtable Line #2214[1] approximately 0.29 mile east of the Company's existing Roundtable Substation to a new 230-34.5 kV Lockridge Substation (the "Lockridge Loop"); and,

(ii) a new 230-34.5 kV substation located on land owned by the Customer along Lockridge Road in Loudoun County, Virginia ("Lockridge Substation") (the Lockridge Loop and Lockridge Substation, collectively, the "Project").

For this project, the Company requested the services of Environmental Resources Management ("ERM") to help collect information within the study area, identity potential routes, perform a routing analysis comparing the route alternatives, and document the routing efforts in an Environmental Routing Study. After investigating various electrical solutions, the Company identified two electrical solutions for the Project (Options 1 and 2):

- Option 1: a 230 kV overhead route that would tap the future 230 kV Buttermilk-Roundtable Line #2214 between the proposed Lockridge Substation and a proposed junction located east of the Roundtable Substation; and,

- Option 2: a 230 kV overhead route that would tap the existing 230 kV Roundtable-Shellhorn Line #2188 between the proposed Lockridge Substation and a proposed junction located northeast of the Shellhorn Substation. Option 2 is also referred to as Transmission Alternative (1) in Section I.E of this Appendix.

After these two potential termination points for the Project were identified, a study area was developed that encompassed the area surrounding the proposed Lockridge Substation

---

[1] Prior to construction of the proposed Project, Buttermilk Substation, which has a construction target date of December 30, 2020, will be constructed by cutting into existing Line #2170, creating future Buttermilk-Roundtable Line #2214. For purposes of this Appendix, the Company will refer to the line being tapped for the proposed Project as future Buttermilk-Roundtable Line #2214 or future Line #2214.

and potential junction locations. The route development process for the Project is described in more detail in the Environmental Routing Study.

A total of eight routes were initially identified, six routes associated with Option 1 and two routes associated with Option 2. As discussed in more detail below, all of the Option 1 Routes (Routes 1A-1F) and one of the Option 2 Routes (Route 2A) cross lands managed by the United States Postal Service ("USPS"). One Option 2 Route (Route 2B) was developed so that in the event that the Company was unable to secure an easement to cross property managed by the USPS, that a route could still be constructed.

Of these eight routes, one route was identified as the Proposed Route, four routes were identified as potentially viable alternatives to the Proposed Route and three routes were rejected as infeasible. The Proposed Route, the four viable Alternatives Routes and the three routes rejected as infeasible, are discussed below.

Proposed Route (Option 1, Route 1A)

The length of the corridor for the Proposed Route is approximately 0.62 mile. Beginning at the proposed Lockridge Substation, the Proposed Route heads west from the substation for 0.05 mile before turning north for 0.27 mile along the east side of Lockridge Road. This portion of the route is parallel to and overlaps an existing Dominion Energy Virginia overhead and underground electric distribution line right-of-way, as well as the road verge along the eastern edge of Lockridge Road, and abuts the paved parking lot that services the Dulles Post Office that is owned by the USPS. After crossing the existing Prentice Drive, the route continues north within the Dominion Energy Virginia right-of-way for about 0.09 mile, following the western boundary of an undeveloped parcel owned by Boston Properties Limited Partnership ("Boston Properties"). The route then continues across the southwest corner of the Life Time Athletic parking lot. The route then veers slightly northwest for 0.14 mile, away from the Life Time Athletic parking lot, and onto an undeveloped parcel owned by SDC Ashburn I, LLC. The Proposed Route then continues west for 0.07 mile crossing DC Water's Potomac Interceptor easement and Loudoun Water's Broad Run Interceptor easement (referred to collectively as the sanitary sewer easement) until reaching the tap point location with future Line #2214.

Option 1, Alternative Route 1B

The length of the corridor for Alternative Route 1B is approximately 0.64 mile. Beginning at the proposed Lockridge Substation, Alternative Route 1B heads west from the substation for 0.05 mile before heading north for 0.27 mile along the east side of Lockridge Road. This portion of the route is parallel to and overlaps an existing Dominion Energy Virginia overhead and underground electric distribution line right-of-way, as well as the road verge along the eastern edge of Lockridge Road, and abuts a paved parking lot that services the Dulles Post Office owned by the USPS. After crossing the existing Prentice Drive, the route continues north for about 0.09 mile, following the western boundary of an undeveloped parcel owned by Digital Loudoun IV, LLC. The route then continues across

the southwest corner of the Life Time Athletic parking lot. Alternative Route 1B then veers slightly northwest for 0.06 mile, away from the Life Time Athletic parking lot, and onto an undeveloped parcel owned by SDC Ashburn I, LLC. The route then continues north then west for 0.17 mile, crossing a sanitary sewer easement, until reaching the tap point location to future Line #2214.

Option 1, Alternative Route 1C

The length of the corridor for Alternative Route 1C is approximately 0.68 mile. Beginning at the proposed Lockridge Substation, Alternative Route 1C heads west from the substation for 0.05 mile before heading north for 0.27 mile along the east side of Lockridge Road. This portion of the route is parallel to and overlaps an existing Dominion Energy Virginia overhead and underground electric distribution line right-of-way, as well as the road verge along the eastern side of Lockridge Road, and abuts a paved parking lot that services the Dulles Post Office that is owned by the USPS. After crossing the existing Prentice Drive, the route then continues north for about 0.09 mile, following the western boundary of an undeveloped parcel owned by Digital Loudoun IV, LLC and crosses the southwest corner of the Life Time Athletic parking lot. The route then veers slightly northwest for 0.06 mile away from the Life Time Athletic. The route then heads west for 0.17 mile, running parallel to and north of the planned Prentice Drive Extension, and crossing a sanitary sewer easement before heading north for 0.04 mile to a tap point location to future Line #2214.

Option 2, Alternative Route 2A

The length of the corridor for Alternative Route 2A is approximately 0.66 mile. Beginning at the proposed Lockridge Substation, Alternative Route 2A heads west from the substation for 0.05 mile before heading north for 0.1 mile along the east side of Lockridge Road, parallel and overlapping an existing Dominion Energy Virginia overhead and underground electric distribution line right-of-way. After crossing a TC Energy-owned Columbia Gas Transmission ("Columbia Gas") natural gas pipeline right-of-way, the route heads west for 0.35 mile along an undeveloped parcel owned by SDC Ashburn I, LLC. Along this section, Alternative Route 2B crosses Lockridge Road and runs parallel with and overlaps the pipeline right-of-way, then crosses Broad Run, a tributary to Broad Run and a sanitary sewer easement. Route 2A then veers north and northwest for 0.16 mile, crossing a tributary to Broad Run and continuing along a parcel owned by Vizsla Ventures, LLC to a tap point location at Line #2188.

Option 2, Alternative Route 2B

The length of the corridor for Alternative Route 2B is approximately 0.65 mile. The portion of Alternative Route 2B that is different from Alternative Route 2A is a 0.17-mile-long section that begins at the point where Alternative Route 2A heads north of the proposed Lockridge Substation. From this location, Alternative Route 2B turns west for about 0.06 mile, crossing Lockridge Road and onto an undeveloped parcel owned by SDC Ashburn I, LLC. Alternative Route 2B then continues north for about 0.11 mile where it

crosses the planned Shellhorn Road Extension. After crossing a Columbia Gas natural gas pipeline right-of-way, the route heads west for 0.27 mile along an undeveloped parcel owned by SDC Ashburn I, LLC. The route runs parallel with and overlaps the pipeline right-of-way, then crosses Broad Run, a tributary to Broad Run and a sanitary sewer easement. Route 2B then veers north and northwest for 0.16 mile, crossing a tributary to Broad Run and continuing along a parcel owned by Vizsla Ventures, LLC to a tap point location at Line #2188. Alternative Route 2B contains a variation to Alternative Route 2A that avoids crossing an undeveloped parcel owned by the USPS. The variation was developed so that in the event that the Company was unable to secure an easement to cross property managed by the USPS, this route could still be constructed.

2. Environmental Analysis

A. Air Quality

Minimal tree clearing may be required as part of this Project. Tree clearing would be on existing, new and temporary right-of-way. Merchantable logs from those trees would be removed or stacked along the edge of the right-of-way and the remaining limbs and branches typically chipped and spread on the upland portions of the right-of-way. The Company does not expect to burn cleared material, but, if necessary, the Company will coordinate with the responsible locality to obtain these permits and will comply with any conditions set forth by the locality. 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. During construction, if the weather is dry for an extended period of time, 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 in Section 2.G of this Supplement.

B. Water Source

(No water source is required for transmission lines so this discussion will focus on water bodies that will be crossed by the proposed transmission lines.)

ERM identified and mapped waterbodies in the study area using publicly-available geographic information system ("GIS") databases, U.S. Geological Survey ("USGS") topographic maps (1:24,000), and recent (2017) digital aerial photography. Alternative Routes 2A and 2B cross perennial and intermittent waterbodies (rivers, streams, tributaries). No waterbodies would be crossed by the Proposed Route or Alternative Routes 1B or 1C. Waterbodies in the Project area are shown on Figure 2 of Appendix D in the Environmental Routing Study.

The span between transmission line structures proposed by Dominion Energy Virginia would likely be adequate to span the waterbodies identified along the Alternative Routes 2A and 2B. However, tree clearing would likely be required within the forested riparian areas at these crossing locations. Alternative Routes 2A and 2B would likely have an effect

on surface waters along these routes due to the removal of forested riparian areas adjacent to streams.

Short-term, minor water quality impacts could occur during the construction of Alternative Routes 2A and 2B. Such impacts would be associated with the soils from disturbed areas being transported by stormwater into adjacent waters during rain events. Increased turbidity and localized sedimentation of the stream bottom may occur as a result of the runoff. However, these impacts would be significantly reduced by the implementation of Dominion Energy Virginia's erosion control measures, including the installation of erosion control structures and materials.

Waterways crossed by Alternative Routes 2A and 2B would be maintained for proper drainage through the use of culverts or other crossing devices, according to Dominion Energy Virginia's standard policies. Where clearing of trees and/or woody shrubs is required, clearing within 100 feet of a stream would be conducted by hand. Vegetation would be at or slightly above ground level. Dominion Energy Virginia would use sediment barriers along waterways and steep slopes during construction to protect waterways from soil erosion and sedimentation. If a section of line cannot be accessed from existing roads, Dominion Energy Virginia may need to install a culvert, or temporary bridge to cross small streams. In such case, there may be some temporary fill material required that would be placed on erosion control fabric and removed when work is completed, returning the surface to original contours.

According to the U. S. Army Corps of Engineers ("USACE") documentation, no waters considered navigable under Section 10 of the Rivers and Harbors Act are crossed by the Project.

Proposed Route (Route 1A)

Based on USGS National Hydrography Dataset ("NHD") and Loudoun County data, the Proposed Route crosses no perennial or intermittent waterbodies or open water features.

Alternative Route 1B

Based on USGS NHD and Loudoun County data, Alternative Route 1B crosses no perennial or intermittent waterbodies or open water features.

Alternative Route 1C

Based on USGS NHD and Loudoun County data, Alternative Route 1C crosses no perennial or intermittent waterbodies or open water features.

Alternative Route 2A

Based on USGS NHD and Loudoun County data, Alternative Route 2A crosses one perennial and one intermittent waterbody. Neither of these crossings is greater than 100

feet wide. The crossings include one crossing of the named perennial waterbody, Broad Run. Data from ERM's desktop review of waterbodies indicate there are no open waters located within the proposed right-of-way of this route.

Alternative Route 2B

Based on USGS NHD and Loudoun County data, Alternative Route 2B crosses one named perennial waterbody, Broad Run, and one intermittent waterbody; the same features and the same crossing location as described for Alternative Route 2A.

C. Discharge of Cooling Waters

No discharge of cooling waters is associated with the Project.

D. Tidal and Non-tidal Wetlands

ERM has identified wetlands within the Project area using remote sensing data sources to conduct an offsite desktop wetlands delineation. A copy of ERM's report is included in Appendix D of the Environmental Routing Study. These sources include the USGS 7.5 minute series topographic quadrangle maps, the National Wetland Inventory Online Maps from the U.S. Fish and Wildlife Service ("FWS"), soils data from the Natural Resources Conservation Service Web Soil Survey, Digital Orthophoto Quarter Quads dating from 1994, aerial photography dating between 1998 and 2018, and National Agricultural Imagery Program ("NAIP") and Virginia Base Mapping Program ("VBMP") Digital Ortho-Rectified Infrared Images dating from 2009, 2012, and 2017. ERM did not field delineate wetlands within the Project area.

All wetlands will require protective matting to be installed to support construction vehicles and equipment and materials during construction.

While most wetlands will be spanned, forested wetlands will be cleared but allowed to return to scrub-shrub wetlands after construction is completed. All wetlands will require protective matting to be installed to support construction vehicles and equipment and materials during construction.

Tidally-influenced wetlands do not occur in the Project area. The nearest tidal wetlands are approximately 29.2 miles from the Project area.

Correspondence from Dominion Energy Virginia to the USACE and the Virginia Marine Resources Commission is included as Attachment 2.D.1.

Proposed Route (Route 1A)

Based on ERM's Desktop Wetland Analysis data, the centerline of the Proposed Route would cross approximately <0.1 linear mile of wetland habitat and will require the clearing and/or disturbance of up to approximately 0.98 acre of wetland area. Of the 0.98 acre of

wetland habitat that could be disturbed along this route, approximately 0.15 acre consist of palustrine forested ("PFO") wetland area and 0.83 acre consist of palustrine emergent ("PEM") wetland.

Alternative Route 1B

Based on ERM's Desktop Wetland Analysis data, the centerline of Alternative Route 1B would cross approximately 0.1 linear mile of wetland habitat and will require the clearing and/or disturbance of up to approximately 1.46 acre of wetland area. Of the 1.46 acre of wetland habitat that could be disturbed along this route, approximately 0.63 acre consist of PFO wetland area and 0.83 acre consist of PEM wetland.

Alternative Route 1C

Based on ERM's Desktop Wetland Analysis data, the centerline of Alternative Route 1C would cross approximately <0.1 linear mile of wetland habitat and will require the clearing and/or disturbance of up to approximately 0.95 acre of wetland area. Of the 0.95 acre of wetland habitat that could be disturbed along this route, approximately 0.11 acre consist of PFO wetland area, 0.84 acre consist of PEM wetland, and 0.01 acre consist of palustrine scrub/shrub ("PSS") wetland.

Alternative Route 2A

Based on ERM's Desktop Wetland Analysis data, the centerline of Alternative Route 2A would cross about <0.1 linear mile of wetland habitat and will require the clearing and/or disturbance of up to approximately 1.40 acres of wetland area. Of the 1.40 acres of wetland habitat that could be disturbed along this route, approximately 0.22 acre consist of PFO wetland area and 1.18 acres consist of PEM wetland.

Alternative Route 2B

Based on ERM's Desktop Wetland Analysis data, the centerline of Alternative Route 2B would cross about <0.1 linear mile of wetland habitat and will require clearing and/or disturbance of up to approximately 1.43 acres of wetland area. Of the 1.43 acres of wetland habitat that could be disturbed along this route, approximately 0.23 acre consist of PFO wetland area and 1.21 acres consist of PEM wetland.

E. Solid and Hazardous Waste

Environmentally regulated sites in the Project study area have been identified 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, Superfund sites, the storage of

petroleum, petroleum release 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.

A summary of the information from the EPA and DEQ databases within a 1.0 mile buffer of the centerlines of the Proposed Route and Alternative Routes 1B, 1C, 2A, and 2B is provided in Table E-1 below and depicted in Attachment 2.E.1.

TABLE E-1
Lockridge 230 kV Line Loop and Lockridge Substation

Environmental Regulated Facilities and Hazardous Waste/Petroleum Release Sites within 1.0 Mile

Database	Proposed Route (Route 1A)	Alternative Route 1B	Alternative Route 1C	Alternative Route 2A	Alternative Route 2B
Waste	20	20	20	22	22
Toxics	4	4	4	4	4
Land	0	0	0	0	0
Air	18	18	18	18	18
Water	9	9	9	10	10
Solid Waste Facilities	1	1	1	1	1
Petroleum Facilities	15	15	15	13	13
Petroleum Releases	12	12	12	12	12
Total	**79**	**79**	**79**	**80**	**80**

Notes

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

No Brownfield or Superfund sites identified in the reviewed databases were located within 1.0 mile of the Proposed Route, or Alternative Routes 1B, 1C, 2A, or 2B.

To evaluate the potential impact to the routes, ERM further assessed the sites within 1,000 feet of the Proposed Route and Alternative Routes centerlines (Table E-2).

TABLE E-2
Lockridge 230 kV Line Loop and Lockridge Substation

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

Database	Proposed Route (Route 1A)	Alternative Route 1B	Alternative Route 1C	Alternative Route 2A	Alternative Route 2B
Waste	2	2	2	2	2
Toxics	0	0	0	0	0
Land	0	0	0	0	0
Air	0	0	0	0	0
Water	3	3	3	3	3
Solid Waste Facilities	0	0	0	0	0
Petroleum Facilities	1	1	1	1	1
Petroleum Releases	1	1	1	1	1
Total	7	7	7	7	7

Notes

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

Based on a review of sites listed in the EPA and DEQ databases within 1,000 feet of the various route centerlines and the estimated depth to groundwater and flow direction, ERM further evaluated the reported petroleum release associated with the Dulles USPS vehicle maintenance facility located approximately 600 feet west of the Proposed Route and Alternative Routes 1B, 1C, 2A, 2B, and where the routes connect to the proposed Lockridge Substation. According to DEQ files, the petroleum release was reported and confirmed in 1991, and the release case was closed in 1994. The DEQ deems a petroleum release closed once no further risk to the general public has been identified, although petroleum residue might remain. The risk assessment does not always consider the risk to subsurface utility work, nor does it address additional costs associated with managing contaminated soil or groundwater. Based on the distance from the Lockridge Substation, Proposed Route, and Alternative Routes, and the separation provided by an unnamed tributary to Broad Run, it is unlikely that the historic petroleum release impacted soil and/or groundwater in the Project area.

F. Natural Heritage, Threatened and Endangered Species

In order to identify areas of ecological significance within the Project area, ERM reviewed the Virginia Department of Conservation and Recreation's ("VDCR") Natural Heritage Data Explorer ("NHDE"). The NDHE includes three components: Conservation Sites ("CS"), Stream Conservation Units ("SCU"), and General Location Areas for Natural

Heritage Resources ("GLNHR"). ERM also obtained query results from the Virginia Department of Game and Inland Fisheries ("VDGIF") Fish and Wildlife Information Service ("VaFWIS"), and the FWS 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 VDCR NHDE to identify locations within the study area that potentially support protected species. Query results from FWS IPaC include species that may occur in Loudoun County. Query results from NHDE include species known to occur in the county and communities known to historically or currently contain protected species. Query results from VaFWIS include species known or likely to occur in the study area. To obtain the most current eagle nest data, ERM reviewed the Center for Conservation Biology ("CCB") VA Eagle Nest Locator mapping portal, which provides information about the Virginia bald eagle population including the results of the CCB's annual eagle nest survey. If deemed necessary, surveys will be conducted at the appropriate time to determine if these species are present, and the Company will coordinate with VDGIF and VDCR as appropriate to minimize any impact on these resources. The agency/county lists of threatened and endangered species were reviewed and are described in Section 3.2.4 of the Environmental Routing Study. A total of 12 federal and state listed species have the potential to occur within the Project area.

The FWS county list identifies three federally-listed species protected under the Endangered Species Act ("ESA") that potentially occur or have been documented within the proposed Project area. These species include: northern long-eared bat (*Myotis septentrionalis*), dwarf wedgemussel (*Alasmidonta heterodon*), and yellow lance (*Elliptio lanceolata*). The VDGIF operates a *Northern Long-eared Bat Winter Habitat and Roost Trees* online mapping system, which shows general locations of known Northern Long-eared Bat hibernacula and roost trees. A review of this system did not show a hibernaculum or roost tree in Loudoun County. Dwarf wedgemussel and yellow lance have potential to occur in perennial waterbodies.

Based on VDCR and VDGIF queries, in addition to the three federally-listed species discussed above (which are also state-listed), there are nine more state-listed species that potentially occur or have been documented within the proposed Project area. These species include: little brown bat (*Myotis lucifugus*), tri-colored bat (*Perimyotis subflavus*), brook floater (*Alasmidonta varicosa*), green floater (*Lasmigona subviridis*), Appalachian grizzled skipper (*Pyrgus centaureae Wyandot*), wood turtle (*Glyptemys insculpta*), Henslow's sparrow (*Ammodramus henslowii*), loggerhead shrike (*Lanius ludovicianus*), and peregrine falcon (*Falco peregrinus*). According to an official review conducted on August 22, 2019, the VDCR concluded that the Proposed Route and Alternative Routes would not affect any documented state-listed plants or insects, and does not cross any State Natural Area Preserves under VDCR's jurisdiction.

Species-specific surveys may be recommended prior to construction to determine whether a listed species exists within the Project area. If identified, the Company will coordinate with the appropriate regulatory agencies to minimize any impacts on listed species and/or listed habitat(s).

The Proposed Route and Alternative Routes do not intersect with any secondary buffers of currently documented bald eagle nests as identified in The Bald Eagle Protection Guidelines for Virginia (2012). Alternative Route 1B is the closest alternative route to the nest, but it is not located within the 660-foot management buffer for the nest. Nest LD 1901 is approximately 1,350 feet northeast of the route. 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 some minor effects on wildlife; however, impacts on most species will be short-term in nature, and limited to the period of construction.

Correspondence from Dominion Energy Virginia with the VDCR and Virginia Department of Agricultural and Consumer Affairs is included as Attachment 2.F.1.

Proposed Route (Route 1A)

Of the 12 species identified above, none have historically been documented by state agencies in areas crossed by the Proposed Route. Similar to the other routes, the Proposed Route provides suitable foraging habitat for the peregrine falcon and loggerhead shrike in areas cleared for the existing utility right-of-way, and along the forest edge where the route runs south adjacent to public road. Tree clearing requirements for the Proposed Route are similar to those for the Alternative Routes, so neither route is more advantageous for potential impacts to bird or bat habitat. The Proposed Route does not cross the Route 670 SCU (Broad Run); therefore, impacts to aquatic species are not likely. According to the CCB, this route does not cross a primary or secondary buffer zone of a documented bald eagle nest.

Alternative Route 1B

Impacts of Alternative Route 1B to threatened and endangered species are similar to those described above for the Proposed Route.

Alternative Route 1C

Impacts of Alternative Route 1C to threatened and endangered species are similar to those described above for the Proposed Route.

Alternative Route 2A

Alternative Route 2A would cross more forested land than the other alternative routes. Clearing of trees for a utility ROW may create additional suitable foraging habitat for the peregrine falcon and loggerhead shrike; however, the gains in suitable foraging habitat would be offset by the potential loss of suitable roosting habitat for the federally listed NLEB, and state-listed little brown bat and tri-colored bat. Furthermore, the route would also cross Broad Run – Route 670 SCU, which is historically associated with the yellow

lampmussel, and the federally listed dwarf wedgemussel. These mussels and other aquatic species could be negatively impacted if disturbance to the stream bed or banks occurs.

Alternative Route 2B

Impacts from Alternative Route 2B are similar to those for Alternative Route 2A, with the addition of increased tree clearing and loss of habitat associated with cleared trees.

Lastly, during the Company's recent Mt. Storm-Valley 500 kV transmission line rebuild project proceeding (Case No. PUR-2019-00049), the Company and the DCR Division of Natural Heritage ("DCR DNH" or the "Division") jointly presented language that would replace DCR DNH's biotics recommendation in the Company's transmission cases going forward in the form of a late-filed exhibit submitted in that proceeding. The recommendation going forward is as follows:

> New and updated information is continually added to DCR's Biotics database. Following the DCR-DNH SCC planning stage project review, the Company shall re-submit project information with completed information services order form and a map to DCR-DNH or submit the project on-line through the Natural Heritage Data Explorer. This review shall occur during the final design stage of engineering and upon any major modifications of the project during construction (i.e., deviations, permanent or temporary, from the original study area and/or the relocation of a tower(s) into sensitive areas) for an update on natural heritage information and coordination of potential project modifications to avoid and minimize impacts to natural heritage resources.

G. Erosion and Sediment Control

Dominion Energy Virginia is required to submit annual erosion and sediment control specifications and an anticipated list of transmission line projects to DEQ for review and approval. Dominion Energy Virginia's annual submittal will follow DEQ guidelines, and the Project will be included in the submittal. These specifications are given to the Dominion Energy Virginia contractors and require erosion and sediment control measures to be in place before construction of the line begins and specify the requirements for rehabilitation of the right-of-way.

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

Dutton + Associates, LLC ("D+A") conducted an analysis of potential cultural resource impacts for the alternatives under consideration in accordance with the Virginia Department of Historic Resources ("VDHR") 2008 *Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia* (January 2008) *(Guidelines)* 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).

For the pre-application analysis of cultural resources, D+A considered National Historic Landmark ("NHL") properties located within a 1.5-mile radius of the centerline; National Register of Historic Places ("NRHP")-listed properties, NHLs, battlefields, and historic landscapes within a 1.0-mile radius of the centerline; NRHP-eligible and -listed properties, NHLs, battlefields, and historic landscapes within a 0.5-mile radius of the centerline; and all of the above qualifying architectural resources as well as archaeological sites located within the right-of-way for each alternative route. Information on the resources in each tier was collected from the Virginia Cultural Resource Information System ("V-CRIS"). D+A also collected information on battlefields surveyed and assessed by the National Park Service's American Battlefield Protection Program ("ABPP"). In their focus on nationally significant Civil War battlefields, the ABPP identifies the historic extent of the battle (study area), the areas of fighting on the battlefield (core area located within the study area), and potential National Register boundaries. Mapping of those ABPP boundaries in the form of ArcGIS shape files was reviewed as part of the analysis of potential cultural resource impacts. In addition to those resources, Dominion Energy Virginia is considering potential effects to VDHR easements.

Along with the records review carried out for the four tiers defined by VDHR, D+A conducted field assessments of resource 053-6416 to characterize the nature of potential viewshed impacts that would result from each Project alternative in accordance with the VDHR *Guidelines*. Digital photographs of the resource and views toward the Proposed Route and Alternative Routes were taken. Photo simulations were prepared to assess visual effects on the NRHP - listed architectural resource within the tiered study area.

A summary of the considered resources identified in the vicinity of each Project route alternative and recommendations concerning Project effects is 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.

Proposed Route (Route 1A)

The considered resource that lies within the VDHR tiers for the Proposed Route is 053-6416, as shown in Table H-1. It was subjected to field reconnaissance and a preliminary assessment of effects. The results of that assessment indicate that there will be a minimal impact on the Broad Run Ford and Ox Road. Subsequent photo simulations also indicate that there will be minimal impact. The pre-application analysis also took into account the potential effects to archaeological resources, but there were no such resources recorded within the proposed right-of-way.

TABLE H-1 **Lockridge 230 kV Line Loop and Lockridge Substation** **Historic Resources in VDHR Tiers for the Proposed Route (Route 1A)**			
Buffer (miles)	**Considered Resources**	**Resource Number**	**Description**
1.0 to 1.5	National Historic Landmarks	–	
0.5 to 1.0	National Register Properties (Listed)	–	
0.0 to 0.5	National Register Properties (Listed)	–	
	National Register – eligible	053-6416	Broad Run Ford and Ox Road
0.0 (within right-of-way)	National Register Properties (Listed)	–	
	National Register – eligible	–	

Alternative Route 1B

The considered resource that lies within the VDHR tiers for Alternative Route 1B is presented in Table H-2. It was subjected to field reconnaissance and a preliminary assessment of effects. The results of that assessment indicate that there will be a minimal impact on the Broad Run Ford and Ox Road. Subsequent photo simulations also indicate that there will be minimal impact. The pre-application analysis also took into account the potential effects to archaeological resources, but there were no such resources recorded within the proposed right-of-way.

TABLE H-2 **Lockridge 230 kV Line Loop and Lockridge Substation** **Historic Resources in VDHR Tiers for Alternative Route 1B**			
Buffer (miles)	**Considered Resources**	**Resource Number**	**Description**
1.0 to 1.5	National Historic Landmarks	–	
0.5 to 1.0	National Register Properties (Listed)	–	
0.0 to 0.5	National Register Properties (Listed)	–	
	National Register – eligible	053-6416	Broad Run Ford and Ox Road
0.0(within right-of-way)	National Register Properties (Listed)	–	
	National Register – eligible	–	

Alternative Route 1C

The considered resource that lies within the VDHR tiers for Alternative Route 1C is presented in Table H-3. It was subjected to field reconnaissance and a preliminary assessment of effects. The results of that assessment indicate that there will be a minimal impact on the Broad Run Ford and Ox Road. Subsequent photo simulations also indicate that there will be minimal impact. The pre-application analysis also took into account the potential effects to archaeological resources, but there were no such resources recorded within the proposed right-of-way.

TABLE H-3 **Lockridge 230 kV Line Loop and Lockridge Substation** **Historic Resources in VDHR Tiers for Alternative Route 1C**			
Buffer (miles)	**Considered Resources**	**Resource Number**	**Description**
1.0 to 1.5	National Historic Landmarks	–	
0.5 to 1.0	National Register Properties (Listed)	–	
0.0 to 0.5	National Register Properties (Listed)	–	
	National Register – eligible	053-6416	Broad Run Ford and Ox Road
0.0 (within right-of-way)	National Register Properties (Listed)	–	
	National Register – eligible	–	

Alternative Route 2A

The considered resource that lies within the VDHR tiers for Alternative Route 2A is 053-6416, as shown in Table H-4. It was subjected to field reconnaissance and a preliminary assessment of effects. The results of that assessment indicate that there will be a minimal impact on the Broad Run Ford and Ox Road. Subsequent photo simulations also indicate that there will be minimal impact. The pre-application analysis also took into account the potential effects to archaeological resources, but there were no such resources recorded within the proposed right-of-way.

TABLE H-4 **Lockridge 230 kV Line Loop and Lockridge Substation** **Historic Resources in VDHR Tiers for Alternative Route 2A**			
Buffer (miles)	**Considered Resources**	**Resource Number**	**Description**
1.0 to 1.5	National Historic Landmarks	–	
0.5 to 1.0	National Register Properties (Listed)	–	
0.0 to 0.5	National Register Properties (Listed)	–	
	National Register – eligible	053-6416	Broad Run Ford and Ox Road
0.0 (within right-of-way)	National Register Properties (Listed)	–	
	National Register – eligible	–	

Alternative Route 2B

The considered resource that lies within the VDHR tiers for Alternative Route 2B is 053-6416, as shown in Table H-5. It was subjected to field reconnaissance and a preliminary assessment of effects. The results of that assessment indicate that there will be a minimal impact on the Broad Run Ford and Ox Road. Subsequent photo simulations also indicate that there will be minimal impact. The pre-application analysis also took into account the potential effects to archaeological resources, but there were no such resources recorded within the proposed right-of-way.

TABLE H-5 **Lockridge 230 kV Line Loop and Lockridge Substation** **Historic Resources in VDHR Tiers for Alternative Route 2B**			
Buffer (miles)	**Considered Resources**	**Resource Number**	**Description**
1.0 to 1.5	National Historic Landmarks	–	
0.5 to 1.0	National Register Properties (Listed)	–	
0.0 to 0.5	National Register Properties (Listed)	–	
	National Register – eligible	053-6416	Broad Run Ford and Ox Road
0.0 (within right-of-way)	National Register Properties (Listed)	–	
	National Register – eligible	–	

Correspondence from Dominion Energy Virginia to Virginia Department of Historic Resources is included as Attachment 2.H.1.

I. Chesapeake Bay Preservation Areas

Construction, installation, operation and maintenance of electric transmission lines are conditionally exempt from the Chesapeake Bay Act 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.

J. Wildlife Resources

As noted in Section 2.F, the FWS, VDCR and VDGIF databases were searched in order to assess the potential presence of federal- or state-listed threatened or endangered species in the vicinity of the Project. The search determined there is the potential presence of 12 state-listed endangered and threatened species, three of which are also federally listed, within the Project area. In addition to these 12 listed species, one additional rare species was noted as potentially being present in the Project area: yellow lampmussel (*Lampsilis cariosa*). In general, the majority of the Proposed Route right-of-way is developed for public roads and commercial use, and therefore does not contain large amounts of wildlife habitat.

Proposed Route 1A

The majority of the Proposed Route crosses an existing utility right-of-way and areas already developed for public roads and commercial use, and minimal impacts on wildlife resources would be expected.

Alternative Route 1B

The majority of Alternative Route 1B crosses an existing utility right-of-way and areas already developed for public roads and commercial use, and minimal impacts on wildlife resources would be expected.

Alternative Route 1C

The majority of Alternative Route 1C crosses an existing utility right-of-way and areas already developed for public roads and commercial use, and minimal impacts on wildlife resources would be expected.

Alternative Route 2A

The majority of Alternative Route 2A crosses an existing utility right-of-way and areas already developed for public roads and commercial use, and minimal impacts on wildlife resources would be expected in these areas. The route also crosses the Route 670 SCU (Broad Run), and a tributary to Broad Run. These waterway crossings could potentially impact aquatic species if the bed and or banks of the waterways are disturbed.

Alternative Route 2B

Impacts from Alternative Route 2B are similar to those for Alternative Route 2A, with the addition of increased tree clearing and loss of habitat associated with cleared trees.

Correspondence from Dominion Energy Virginia with the FWS and Virginia Department of Games and Inland Fisheries is included as Attachment 2.J.1.

K. Recreation, Agricultural, and Forest Resources

Proposed Route (Route 1A)

The Proposed Route would be collocated with 0.34 mile of road right-of-way (Lockridge Road) and 0.40 mile of an existing overhead/underground electric distribution line easement (Dominion Energy Virginia easement). The two collocation features are parallel, providing a total collocation opportunity of 0.40 mile. The Proposed Route would impact 2.86 acres of forested land along the proposed right-of-way.

The Proposed Route crosses no Agricultural and Forestal Districts ("AFDs") or agricultural lands nor does the route run parallel to or cross any Virginia Byways, Scenic Rivers, Resource Protection Areas, or Virginia Birding and Wildlife Trails.

Alternative Route 1B

Alternative Route 1B would be collocated with 0.34 mile of road right-of-way (Lockridge Road) and 0.47 mile of an existing overhead/underground electric distribution line easement (Dominion Energy Virginia easement). The two collocation features are parallel, providing a total collocation opportunity of 0.47 mile. Alternative Route 1B would impact 2.77 acres of forested land along the proposed right-of-way.

Alternative Route 1B crosses no AFDs or agricultural lands nor does the route run parallel to or cross any Virginia Byways, Scenic Rivers, Resource Protection Areas, or Virginia Birding and Wildlife Trails.

Alternative Route 1C

Alternative Route 1C would be collocated with 0.34 mile of road right-of-way (Lockridge Road), 0.40 mile of an existing overhead/underground electric distribution line easement (Dominion Energy Virginia easement), and 0.04 mile of a sanitary sewer easement (Potomac Interceptor). The three collocation features are parallel, providing a total collocation opportunity of 0.44 mile. Alternative Route 1C would impact 3.35 acres of forested land along the proposed right-of-way.

Alternative Route 1C crosses no AFDs or agricultural lands nor does the route run parallel to or cross any Virginia Byways, Scenic Rivers, Resource Protection Areas, or Virginia Birding and Wildlife Trails.

Alternative Route 2A

Alternative Route 2A would be collocated with 0.10 mile of road right-of-way (Lockridge Road), and 0.08 mile of an existing overhead/underground electric distribution line easement (Dominion Energy Virginia easement) and 0.35 mile of pipeline easement (Columbia Gas pipeline). The three collocation features are parallel, providing a total collocation opportunity of 0.43 mile. Alternative Route 2A would impact 3.99 acres of forested land along the proposed right-of-way.

Alternative Route 2A crosses no AFDs or agricultural lands nor does the route run parallel to or cross any Virginia Byways, Scenic Rivers, Resource Protection Areas, or Virginia Birding and Wildlife Trails.

Alternative Route 2B

Alternative Route 2B would be collocated with 0.27 mile of pipeline easement (Columbia Gas pipeline). Alternative Route 2B would impact 4.78 acres of forested land along the proposed right-of-way.

Alternative Route 2B crosses no Agricultural and Forestal Districts ("AFDs") or agricultural lands nor does the route run parallel to or cross any Virginia Byways, Scenic Rivers, Resource Protection Areas, or Virginia Birding and Wildlife Trails.

L. Use of Pesticides and Herbicides

Dominion Energy Virginia typically maintains transmission right-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 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. These herbicides are routinely applied by hand. DEQ has made previous requests that only herbicides approved for aquatic use by the EPA or the FWS be used in or around any surface water; Dominion Energy Virginia intends to comply with this request.

M. Geology and Mineral Resources

The Proposed Route and Alternative Routes are located within the Piedmont geologic province, which is characterized by strongly weathered bedrock due to the humid climate, thick overlying soils and saprolite (weathered bedrock), and rolling topography that becomes more pronounced closer to the Blue Ridge mountains to the west. In general, the Piedmont province consists of several complex geologic terranes where faults separate rock units with differing igneous and metamorphic histories. Based on the Geologic Map of Virginia, the Project area is located within a Mesozoic basin formed during the opening of the Atlantic Ocean. Within this Mesozoic basin, Triassic shales and siltstones deposited between approximately 225 and 190 million years ago, which were subsequently intruded by fine-grained igneous dikes, comprise the bedrock beneath the Project area (Virginia Division of Geology and Mineral Resources, 1993; William and Mary Department of Geology, 2019).

ERM reviewed publicly available Virginia Department of Mines, Minerals, and Energy (2019) datasets, USGS topographic quadrangles, and recent (2018) digital aerial photographs to identify mineral resources in the Project area. Based on the review, no active mineral resources were identified within 0.25 mile of the Lockridge Substation or the Proposed Route and Alternative Routes. The closest active quarry is located 2.5 miles southeast of the Lockridge Substation at the intersection of Route 606 and Route 636 near Herndon.

N. Transportation Infrastructure

Three public roads occur within the study area – Lockridge Road, Prentice Drive and Shellhorn Road – all of which are roads maintained by Virginia Department of Transportation ("VDOT"). In addition to these existing roads, there are planned extensions of Shellhorn Road and Prentice Drive.

Temporary closures of roads and or traffic lanes would be required during construction of the Proposed Route or any of the Alternatives Routes. No long-term impacts to roads are anticipated. The Company will comply with VDOT requirements for access to the rights-of-way from public roads as well as the underground crossings of the roads. At the appropriate time, the Company will obtain the necessary VDOT permits as required and comply with permit conditions.

There are two proposed road extension projects located in the vicinity of the Proposed and Alternative Routes: the Prentice Drive Extension and the Shellhorn Road Extension.

The Prentice Drive Extension project is currently within the planning and right-of-way acquisition phase. Prentice Drive (VA Route 1071/VA Route 1071 Extended/Route 789 Extended) will provide an additional east-west connection across Broad Run. This major collector adds approximately 3.2 miles of four new through-lanes of Prentice Drive from Shellhorn Road at Metro Center Drive to Lockridge Road and includes an additional connection of Lockridge Road West between Waxpool Road and Prentice Drive. Specifically, the project provides a new alignment extension of Prentice Drive from the intersection with Lockridge Road to the west where it ties into Metro Center Drive at Shellhorn Road. The project includes a large bridge span across the Broad Run floodplain. Construction of the Prentice Drive Extension is expected to commence in 2023 (Northern Virginia Transportation Authority 2018a).

The Shellhorn Road Extension project entails constructing a continuous east-west corridor of Shellhorn Road (VA 643) to Sterling Boulevard (VA 846) between Loudoun County Parkway (VA 607) and Pacific Boulevard. The multimodal corridor is planned to include an urban four-lane road within 120 feet of right-of-way (Northern Virginia Transportation Authority 2018b). The project includes one roundabout, two new signalized intersections, and two signal modifications. The project will extend Shellhorn Road from Loudoun County Parkway to Lockridge Road. This new 1-mile-long, major collector road is planned to have a roundabout at its eastern terminus on Lockridge Road. The Project will reconstruct 0.8 mile of Lockridge Road from Prentice Drive to Moran Road and realign Lockridge Road to tie into the planned Sterling Boulevard Extension from Pacific Boulevard.

As discussed in Section II.A.9, of the Appendix, based on consultations with Loudoun County (Loudoun County Department of Transportation and Capital Infrastructure ("DTCI") and Loudoun County Department of Planning and Zoning ("DPZ"), the Company is aware of concerns regarding impacts to the County's planned Prentice Drive Extension, which encompasses Lockridge Road in the Project area, and the Shellhorn Road Extension. See Appendix Section III.J, Section 3.1.4 of the Environmental Routing Study, and DEQ Supplement Attachment 2.N.1. Based on preliminary drawings shared by the County, the Company believes that none of the noticed Option 1 and Option 2 Routes will conflict with the County's current road extension plans. The Company will work with the County to ensure the planned roads and proposed transmission facilities can co-exist. See Appendix Section III.J, Section 3.1.4 of the Environmental Routing Study, and DEQ Supplement Attachment 2.N.1. Correspondence from Dominion Energy Virginia with VDOT and Loudoun County Department of Transportation and Capital Infrastructure is provided as Attachment 2.N.1.

The nearest public airport is the Dulles International Airport located about 1.7 miles from the proposed Lockridge Substation. As discussed in Section III.H of the Appendix, MWAA informed the Company that it did not object to any of the routes provided they do

not exceed 410 feet Above Mean Sea Level ("AMSL") and expressed a preference for Alternative Route 1B. The Company's proposed structure heights along any of the Proposed or Alternative Routes do not exceed MWAA's limit of 410 feet AMSL, based on preliminary conceptual design and subject to change based on final engineering design. Correspondence with MWAA is provided as Attachment 2.N.1 and 2.N.2.

Correspondence with the Commonwealth of Virginia Department of Aviation and Federal Aviation Administration is provided as Attachment 2.N.3.

Proposed Route (Route 1A)

One road crossing was identified along the Proposed Route. The Proposed Route would run parallel along the east side of Lockridge Road and cross Prentice Drive at the northwest corner of the Dulles Post Office Parking lot. The Proposed Route would run parallel to the east side of the planned Prentice Drive Extension for about 0.32 mile.

Alternative Route 1B

One road crossing was identified along the Alternative Route 1B. Alternative Route 1B would run parallel along the east side of Lockridge Road and cross Prentice Drive at the northwest corner of the Dulles Post Office Parking lot. Alternative Route 1B would run parallel to the east side of the planned Prentice Drive Extension for about 0.32 mile.

Alternative Route 1C

One road crossing was identified along the Alternative Route 1C. Alternative Route 1C would run parallel along the east side of Lockridge Road and cross Prentice Drive at the northwest corner of the Dulles Post Office Parking lot. Alternative Route 1C would run parallel to the east side of the planned Prentice Drive Extension for about 0.49 mile.

Alternative Route 2A

One road crossing was identified along the Alternative Route 2A. Beginning at the Lockridge Substation, Alternative Route 2A would run along the east side of Lockridge Road Route 2A then turns west crossing Lockridge Road and running parallel to the gas pipeline easement.

Alternative Route 2B

Two future road crossings were identified along the Alternative Route 2B. Alternative 2B would exit the Lockridge Substation and continue west crossing the planned Shellhorn Road Extension then head north and make a second crossing of the planned Shellhorn Road Extension before turning west to follow Alternative Route 2A.

ATTACHMENTS

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

Dominion Energy

October 18, 2019

Ms. Theresita Crockett-Augustine
U.S. Army Corps of Engineers - Norfolk District
Northern Virginia Field Office
18139 Triangle Plaza, Suite 213
Dumfries, VA 22026

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Ms. Crockett-Augustine,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 273-4086 or rachel.m.studebaker@dominionenergy.com.

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

Regards,

Lisa C. Messing

Richard B. Gangle for
Director, Environmental Services

Enclosure: Project Overview Map

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

Dominion Energy®

October 18, 2019

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

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Watkinson,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 273-408 6or rachel.m.studebaker@dominionenergy.com.

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

Regards,

Lisa C. Messina

Richard B. Gangle for
Director, Environmental Services

Enclosure: Project Overview Map

COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Bldg 96
Fort Monroe, VA 23651-1064

Matthew J. Strickler
Secretary of Natural Resources

Steven G. Bowman
Commissioner

December 10, 2019

Dominion Energy Virginia
Attn: Rachel Studebaker
10900 Nuckols Road, 4th Floor
Glen Allen VA 23060

Re: Proposed Lockridge Road Transmission Extension Loop
Loudoun County, Virginia

Dear Ms. Studebaker:

This will respond to the request for comments regarding the Proposed Lockridge Road Transmission Extension Loop, prepared by Dominion Energy Virginia. Specifically, Dominion has proposed to construct a new 230 kV transmission line loop that will connect with a new switching station in Loudoun County, Virginia, to meet customer needs.

At this time, the Virginia Marine Resources Commission (VMRC) is unable to determine the impact to our jurisdictional areas based on the information provided. We will provide our complete comments following the submittal of the State Corporation Commission application.

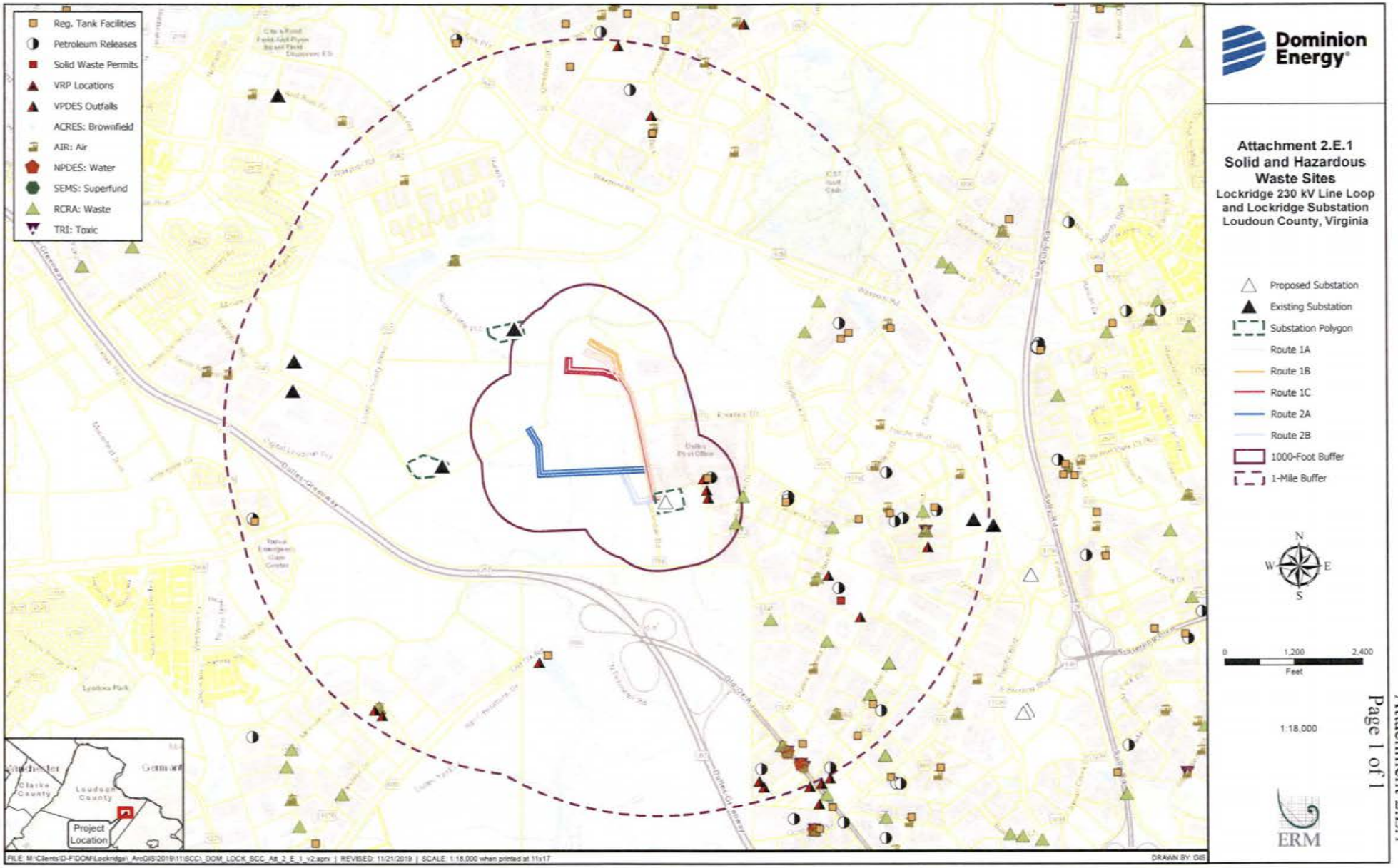
Please be advised that the VMRC, pursuant to §28.2-1200 et seq of the Code of Virginia, has jurisdiction over any encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward of ordinary high water along non-tidal, natural rivers and streams with a drainage area greater than 5-square miles, a permit may be required from our agency.

If you have any questions please contact me at (757) 247-8028 or by email at mark.eversole@mrc.virginia.gov. Thank you for the opportunity to comment.

Sincerely,

Mark Eversole
Environmental Engineer, Habitat Management

MCE/keb
HM



Attachment 2.E.1
Page 1 of 1

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

October 18, 2019

Ms. S. Rene Hypes, Project Review Coordinator
Virginia Department of Conservation and Recreation
Division of Natural Heritage
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Ms. Hypes,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 273-4086 or rachel.m.studebaker@dominionenergy.com.

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

Regards,

Lisa C. Messinger for
Richard B. Gangle
Director, Environmental Services

Attachment: Project Overview Map

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

October 18, 2019

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

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Ms. Rhur,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 273-4086 or rachel.m.studebaker@dominionenergy.com.

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

Regards,

Lisa C. Messina

Richard B. Gangle for
Director, Environmental Services

Enclosure: Project Overview Map

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

Dominion Energy®

October 18, 2019

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

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Tignor,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 273-4086or rachel.m.studebaker@dominionenergy.com.

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

Regards,

Lisa C. Messina

Richard B. Gangle for
Director, Environmental Services

Enclosure: Project Overview Map

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

Russell W. Baxter
Deputy Director of Dam Safety & Floodplain Management and Soil & Water Conservation

Thomas L. Smith
Deputy Director of Operations

August 22, 2019

Maggie Voth
Environmental Resources Management, Inc.
1000 IDS Center
80 South 8th Street
Minneapolis, MN 55402

Re: Lockridge Substation and Transmission Line

Dear Ms. Voth:

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 the information currently in our files, the Broad Run – Route 607 Stream Conservation Unit (SCU) is located within the project site. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are also given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Broad Run – Route 607 SCU has been given a biodiversity ranking of B5, which represents a site of general biodiversity significance. The natural heritage resource associated with this site is:

Lampsilis cariosa	Yellow lampmussel	G3G4/S2/NL/NL

The Yellow lampmussel ranges from Nova Scotia to Georgia in Atlantic slope drainages (NatureServe, 2009). In Virginia, it is recorded from the Roanoke, Chowan, James, York, and Potomac drainages. It is found in larger streams and rivers where good currents exist over sand and gravel substrates and in small creeks and ponds (Johnson, 1970).

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

In addition, according to a DCR predictive species habitat model, potential exists for the Dwarf wedgemussel in Broad Run.

DCR recommends avoidance of impacts to Broad Run. To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR also recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations.

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

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. The current activity will not affect any documented state-listed plants or insects.

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 $625.00 has been assessed for the service of providing this information and associated shapefile. 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. Late payment may result in the suspension of project review service for future projects.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov.

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

Sincerely,

S. René Hypes
Natural Heritage Project Review Coordinator

Cc: Ernie Aschenbach, VDGIF
Troy Andersen, USFWS

Literature Cited

Johnson, R.I. 1970. The systematics and zoogeography of the Unionidae (Mullusca: Bilvava) of the southern Atlantic slope region. Bulletin Museum of Comparative Zoology vol 140(6): 362-365.

NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: April 27, 2010).

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

Williams, J.D., M.L. Warren, Jr., K.S. Cummings, J.L. Harris, and R.J. Neves. 1993. Conservation status of freshwater mussels of the United States and Canada. Fisheries 18: 6-9.

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

October 18, 2019

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

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Kirchen,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact me at (804) 775-5279 or laura.p.meadows@dominionenergy.com.

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

Regards,

Laura Meadows

Laura Meadows
Sr. Siting and Permitting Specialist

Enclosure: Project Overview Map

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

October 18, 2019

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

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Andersen,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 273-4086 or rachel.m.studebaker@dominionenergy.com.

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

Regards,

Lisa C Messing

Richard B. Gangle for
Director, Environmental Services

Enclosure: Project Overview Map

Figure 1
Route Overview Map
Lockridge 230 kV Line Loop and Lockridge Substation
Loudoun County, Virginia

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

October 18, 2019

Ms. Amy Ewing
Virginia Department of Game and Inland Fisheries
7870 Villa Park Drive, Suite 400
Henrico, Virginia 23228

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Ms. Ewing,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Rachel Studebaker at (804) 273-4086 or rachel.m.studebaker@dominionenergy.com.

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

Regards,

Lisa C. Messing

Richard B. Gangle for
Director, Environmental Services

Enclosure: Project Overview Map

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

October 18, 2019

Mr. James Betz
Loudoun District Administrator
Northern Virginia District
Virginia Department of Transportation
4975 Alliance Drive
Fairfax, Virginia 22030

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Betz,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact me at (804) 775-5279 or laura.p.meadows@dominionenergy.com.

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

Regards,

Laura Meadows

Laura Meadows
Sr. Siting and Permitting Specialist

Enclosure: Project Overview Map

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

October 18, 2019

Mr. Thomas Crone, Manager Adjacent Construction
Washington Metropolitan Area Transit Authority
Office of Joint Development & Adjacent Construction
3500 Pennsy Drive, Bldg. C, Room C106
Landover, MD 20785

Reference: **Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia**

Dear Mr. Crone,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact me at (804) 775-5279 or laura.p.meadows@dominionenergy.com.

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

Regards,

Laura Meadows
Sr. Siting and Permitting Specialist

Enclosure: Project Overview Map

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

October 18, 2019

Mr. Joe Kroboth, Director
Loudoun County Transportation and Capital Infrastructure
PO Box 7500
Leesburg, VA 20177

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Kroboth,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact me at (804) 775-5279 or laura.p.meadows@dominionenergy.com.

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

Regards,

Laura Meadows

Laura Meadows
Sr. Siting and Permitting Specialist

Enclosure: Project Overview Map

Loudoun County, Virginia
www.loudoun.gov
Department of Planning and Zoning
1 Harrison Street, S.E., 3rd Floor, P.O. Box 7000, Leesburg, VA 20177-7000
703-777-0246 • Fax 703-777-0441

November 7, 2019

Ms. Laura Meadows, Sr. Siting and Permitting Specialist
Dominion Energy Virginia
10900 Nuckols Rd, 4th Floor
Glen Allen, VA 20177

Ms. Meadows,

Enclosed are Department of Planning and Zoning comments regarding Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop, Loudoun County, Virginia.

Our understanding is that the proposed transmission line extension loop is related to a request from Dominion Energy Virginia to provide service to the proposed Lockridge Substation to support future data centers uses in the area. County records indicate that County Staff and representatives from Dominion Energy Virginia conducted a Pre-Application meeting (PRAP-2019-0073) the proposed substation on September 24, 2019, which you attended. At that time, Community Planning Staff recommended that any proposed transmission lines be sited to avoid impacts to environmental resources and that the applicant consider routing transmission lines along the existing sewer easement and natural gas pipeline corridor to minimize ground disturbance and potential environmental impacts.

Community Planning Staff has reviewed the six potential routes, which are depicted on Figure 1 of your letter dated October 18, 2019. Based on a review of County GIS data, it appears that all the options would impact the floodplain of the Broad Run. Option 2, Route 2A appears to provide the most direct route and have the least environmental impact, utilizing a section of existing high-voltage transmission corridor before bisecting a forested area to join the natural gas pipeline corridor. Additionally, the applicant may consider combining the lower portion of Option 1, Route 1E with the segment of Option 2, Route 2A that parallels an existing sewer easement in order to minimize impacts on environmental features and forest resources. Community Planning Staff strongly recommends this combined route, as it provides the most direct route with the least environmental impact. Community Planning Staff also notes that Option 1, Routes 1A and 1B have also been sited to minimize environmental impacts and parallel existing roadways for an extensive portion of their route. However, these two routes represent a much longer, circuitous route to the proposed Lockridge Substation.

SUMMARY RECOMMENDATION

The policies of the *Loudoun County 2019 General Plan* (2019 GP) support the construction of the proposed Lockridge Road 230kV Transmission Line Extension Loop. The proposed transmission

line, in conjunction with the proposed substation, are expected to improve the reliability of electrical service and help fulfill the electrical demands for new data center development in the area. Community Planning Staff has reviewed the six proposed routes for the transmission right-of-way and supports the construction of a combined route consisting of Route 2, Option 2A and the lower segment of Option 1, Route 1E, as it provides the most direct route with the least environmental impact. Should this route not be feasible, Staff supports the construction of Route 2, Option 2A, followed by Option 1, Routes 1A and 1B. As discussed in the Pre-Application meeting, Loudoun County will review the application for the Lockridge Substation through the Commission Permit legislative review process. Further coordination between County Staff and Dominion Energy Virginia is recommended to achieve policy goals regarding the protection of environmental features.

If you have any questions regarding these comments, please feel free to contact Pat Giglio, Planner III, Loudoun County Department of Planning and Zoning, at 703-737-8563 or patrick.giglio@loudoun.gov.

Thank you for the opportunity to provide comments.

Sincerely,

Alaina Ray

Alaina Ray, AICP
Director, Department of Planning and Zoning

Cc: Alan Brewer, Director, Building and Development (via e-mail)
James David, Deputy Director, Planning and Zoning (via e-mail)
Joe Kroboth, Director, Transportation and Capital Infrastructure (via e-mail)
Dan Galindo, AICP, Program Manager, Community Planning (via e-mail)

Enclosure
1. Vicinity map depicting proposed Alternative Routes and Substation.

Figure 1
Route Overview Map
Lockridge 230 kV Line Loop and Lockridge Substation
Loudoun County, Virginia

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

November 20, 2019

Mr. Pat Giglio
Planner III, Community Planning
Loudoun County Department of Planning & Zoning
1 Harrison Street, S.E., 3rd Floor
Leesburg, Virginia 20175

Mr. Evan Kuznear
Utility Engineer
Transportation and Capital Infrastructure
Loudoun County Department of Transportation and Capital Infrastructure
101 Blue Seal Drive. S.E. Suite 102
P.O. Box 7500
Leesburg, VA 20177-7500

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Giglio and Mr. Kuznear:

I am in receipt of your letters dated November 7, 2019 transmitting the Department of Planning and Zoning's comments and November 18, 2019 transmitting the Loudoun County Department of Transportation and Capital Infrastructure's (DTCI) comments regarding Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop, Loudoun County, Virginia (the Project). I am writing to inform you about some recent changes to the routes that Dominion Energy Virginia (the "Company") is proposing for the Project, including the Company's support for a new Option 1, Route 1A for the proposed Project. I thought it would be more effective to provide a combined response that addresses the concerns and recommendations presented in both of your letters, since there are issues regarding the routing of the project that affect the interests of both of your agencies, and respectfully request a combined response that reflects a consolidated recommendation from the County, to the extent possible.

Department of Planning and Zoning

In your letter dated November 7, 2019, Planning and Zoning (Planning) Staff indicated support for the construction of a combined route consisting of Route 2, Option 2A and the lower segment of Option 1, Route 1E, as it provides the most direct route with the least environmental impact ("Combined Route"). Planning Staff additionally noted that should this Combined Route not be feasible, it would support the construction of Route 2, Option 2A, followed by Option 1, Routes 1A and 1B.

At the time of our Pre-Application meeting (PRAP-2019-0073) on September 24, 2019 with the Department of Planning and Zoning and our subsequent meeting with DTCI on October 17, 2019, the Company was proposing a total of six routes for the Project: Option 1, Routes A-E and Option 2, Route 2A. Following those meetings, the Company learned new information that resulted in the abandonment of three of the original Option 1 routes (Routes 1A, 1D, and 1E) and the development of a new Option 1 route, which replaces the original Option 1, Route 1A. These routes were abandoned by the Company due to the impacts of Routes 1D and 1E on the Prentice Drive Extension project and the Company's ability to secure easements from the United States Post Office (USPS) for Option 1, Route 1A.

Option 1, Routes 1D and 1E were rejected as infeasible following consultations with DTCI. The DTCI informed the Company that as part of the planned Prentice Drive Extension, a bridge would be constructed at the crossing of Broad Run. Routes 1D and 1E both cross Broad Run at the location of this planned bridge. Based on the construction schedules for the bridge and the Project, the Company's transmission line would be installed prior to the bridge. It is the Company's understanding that this would pose a significant challenge to the construction of the bridge. The construction activities for the bridge would be constrained by the presence of the overhead transmission lines. In addition, the presence of the transmission lines over the bridge could limit the flexibility of the contractor in the event that changes need to be made at the time of construction to either the construction methods or design of the bridge. Moreover, the construction of the bridge would not only require that the transmission lines have a high vertical clearance to the bridge deck, but the transmission lines also would need to be de-energized during construction. While the Lockridge Substation will be fed from two circuits, both of the circuits cross at the location where the planned bridge will be constructed, meaning that an outage of these two lines would result in an outage of Lockridge Substation. The Company determined that once operational, the Lockridge Substation could not take an outage for the construction of the bridge. Further, it is the Company's understanding that taller poles over the planned bridge that could potentially alleviate the need for an outage may not be feasible in light of the proximity to the nearby airport. Given this and the significant concerns that DTCI raised regarding the conflicts the route would introduce to the construction of the Prentice Drive Extension bridge, the Company abandoned the development of Option 1, Routes 1D and 1E.

The original Option 1, Route 1A was rejected as infeasible following consultations with between the Company and the USPS. This route would bisect the Dulles Post Office property, crossing just west of a covered pedestrian connection between the Post Office parking lot and Post Office facilities. The USPS informed the Company that it would not grant an easement for this route due to the significant impact it would have to the USPS property. Therefore, the Company has abandoned this route as well.

As I mentioned above, the Company has developed a new route which has replaced the original Option 1, Route 1A. This route, which has been designated Option 1, Route 1A, follows the same alignment along Lockridge Road as Option 1, Routes 1B and 1C. However, at the point where Option 1, Routes 1B and 1C diverge, this new route would follow an alignment that is located between Option 1, Routes 1B and 1C. Route 1A has three primary benefits that distinguish this route from Alternative Routes 1B and 1C. First, in comparison to Route 1B, Route 1A would have much less of a visual impact on the Life Time Athletic facility. In particular, the alignment of Alternative Route 1B is very close to an outdoor pool on the east side of this facility. Second, in comparison to Alternative Route 1C, Route 1A would have no potential impacts on the construction of the Prentice Drive Extension. The Company understands that avoidance of any potential constraints to the construction of the extension of the road is of primary importance to Loudoun County. Moreover, it should be noted that Route 1A is the shortest route and requires the least amount of total right-of-way.

Finally, I would note that as to the recommendation of Planning Staff's Combined Route, all of the Option 1 routes are shorter—not longer—than the Option 2 routes, and would have no potential impacts to Broad Run.

Department of Transportation and Capital Infrastructure

In your letter dated November 18, 2019, DTCI Staff noted its overall support for the Option 1 Routes 1A, 1B and 1C, and noted exceptions and concerns with Option 1 Routes 1D and 1E, as well as Option 2 Route 2A.

First, I would like to address DTCI's concerns regarding the potential impacts of Route 2A and Route 2B (previously identified as Variation 1D-1, 1-E1-2A1) on the Shellhorn Road Extension project. In particular, DTCI expressed concern regarding conflicts posed by Routes 2A and 2B to the construction of the bridge across Broad Run. As I believe that you are aware, there is a Columbia Gas pipeline right-of-way that is located parallel to and to the north of the Shellhorn Route Extension Project. Routes 2A and 2B would not be constructed directly adjacent to the bridge, but, rather, would be situated on the north side of the Columbia Gas pipeline right-of-way. There would, in fact, be approximately 115 feet between the bridge

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

and the transmission structures. This should afford ample space to accommodate the movement of equipment for the construction of the bridge. In addition, the cranes that would be required for the construction for the bridge could be positioned on the southern rather than the northern side of the bridge, since it would not be possible to position the cranes on the gas pipeline right-of-way. Therefore, Routes 2A and 2B should not conflict with the construction of the bridge across Broad Run associated with the Shellhorn Route Extension Project.

DTCI staff also raised a concerned regarding a possible conflict between Route 2A and the potential need to install traffic signals at the intersection of Shellhorn Road and Lockridge Road. I can assure you that in the event that Route 2A is constructed, the Company would coordinate with DTCI to ensure that the placement of the structures and conductors at this location would not interfere with the placement of these traffic signals.

County Recommendation

The Company appreciates the efforts and time expended by both of your agencies to review and comment on the proposed routes for its Project. Based on all of Dominion Energy Virginia's discussions with the County to date, I believe that the Company has modified its plan for the Project and designed a series of routes that address the concerns of both the Planning and DTCI Staffs. As such, we would ask that you provide a consolidated recommendation to the Company as soon as possible that reflects the County's position on routing of the Project. For your reference, I have attached your respective letters to which I am responding, as well as an overall map of the current proposed and alternative routes for the Project.

If you have any questions or comments regarding these changes to the Project, please feel free to contact me by mail at the address above, by phone at (804) 775-5279 or by email at laura.p.meadows@dominionenergy.com.

Regards,

Laura Meadows

Laura Meadows
Sr. Siting and Permitting Specialist

Cc: Alaina Ray, AICP, Director, Department of Planning and Zoning (via e-mail)
Alan Brewer, Director, Building and Development (via e-mail)
James David, Deputy Director, Planning and Zoning (via e-mail)
Joe Kroboth, Director, Transportation and Capital Infrastructure (via e-mail)
Dave Galindo, AICP, Program Manager, Community Planning (via e-mail)
James Zeller, Deputy Director, Transportation and Capital Infrastructure (via e-mail)
Susan Glass, Program Manager, Transportation and Capital Infrastructure (via e-mail)
Mark Hoffman, Civil Engineer, Transportation and Capital Infrastructure (via e-mail)
Suheili Perez, Civil Engineer, Transportation and Capital Infrastructure (via e-mail)
Tim Hemstreet, County Administrator (via e-mail)

Enclosure: Revised Project Overview Map

Figure 1
Route Overview Map
Lockridge 230 kV Line Loop and Lockridge Substation
Loudoun County, Virginia

MPLS M:\Clients\D-F\DOM\Lockridge_ArcGIS\2019\11\Figures_DOM_LOCK_Routes_20191113.mxd | REVISED: 11/13/2019 | SCALE: 1:4,200 when printed at 11x17 DRAWN BY: 0239

Loudoun County, Virginia
www.loudoun.gov
Department of Transportation and Capital Infrastructure
101 Blue Seal Drive, S.E., Suite 102
PO Box 7500, Leesburg, VA 20177-7500
Telephone (703) 777-0396 • Fax (703) 777-0626

November 18, 2019

Ms. Laura Meadows
Dominion Energy Virginia
10900 Nuckols Rd, 4th Floor
Glen Allen, VA 23060

Re: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop – Loudoun County, Virginia

Dear Ms. Meadows,

Please consider these comments from the Loudoun County Department of Transportation and Capital Infrastructure (DTCI) regarding the proposed Dominion Energy Lockridge Road 230 kV Transmission line alternatives per your letter addressed to Mr. Joe Kroboth received on October 18th, 2019.

Route 1A: DTCI takes no objection and is the preferred Route.

Route 1B: DTCI's second preferred route. If selected, the transmission pole structures will need to be coordinated with the designers of the County's proposed Prentice Drive, Lockridge Road and Shellhorn Road projects. Dominion's 100' Easement would be prohibited from overlapping with the roadway Right-of-Way currently laid out as a 110' Right-of-Way or 55' from the centerline of the proposed road. Please note that Dominion Distribution lines currently exist within the proposed 1B Route. DTCI recommends coordination between Dominion Distribution and Dominion Transmission to avoid any potential conflicts with the future roadway(s).

Route 1C: DTCI's third preferred route. If selected, the transmission pole structures will need to be coordinated with the designers of the County's proposed Prentice Drive, Lockridge Road and Shellhorn Road projects. Dominion's 100' Easement would be prohibited from overlapping with the roadway Right-of-Way. Route 1C also parallel's the future Prentice Drive Bridge which could cause conflict with the construction of the roadway project and/or added risk due to equipment restrictions. The Potomac Interceptor and a Loudoun County Service Authority Sanitary Sewer also are present along the route. Please note that Dominion Distribution lines currently exist within the proposed 1C Route. DTCI recommends coordination between Dominion Distribution and Dominion Transmission to avoid any potential conflicts with the future roadway(s).

Route 1D: DTCI takes exception to this alignment and is not recommend. This route proposes crossing the County's Prentice Drive Road project. The County Project necessitates the design and

construction of a ±1,000' bridge that will entail a relatively large spans between the piers to cross Broad Run Creek. The Construction of the bridge under the transmission lines would require specialized construction methods as well as the de-energizing of the overhead conductors. In addition, this alignment would create bridge maintenance concerns and limitations.

Route 1E: DTCI takes exception to this alignment and is not recommend. This route proposes crossing the County's Prentice Drive Road project. The County Project necessitates the design and construction of a ±1,000' bridge that will entail a relatively large spans between the piers to cross Broad Run Creek. The Construction of the bridge under the transmission lines would require specialized construction methods as well as the de-energizing of the overhead conductors.

Route 2A: DTCI takes exception to this alignment and is not recommend. This route proposes paralleling the County's Shellhorn Road project. The County Project necessitates the design and construction of a ±1,000' bridge that will entail a relatively large span between the piers to cross Broad Run Creek. The Construction of the bridge in close proximity to the transmission lines may require specialized construction methods as well as de-energizing the overhead conductors.

Variation 1D1-1E1-2A1: As associated with Route 2A, DTCI takes exception to this alignment and is not recommended. The alignment cuts through the intersection of Shellhorn Road and Lockridge Road. The intersection may be improved in the future to accommodate traffic signals.

On behalf of Loudoun County Department of Transportation and Capital Infrastructure, I appreciate Dominion's efforts in coordinating the Transmission Line Extension project with DTCI staff. Please understand, DTCI is one of many departments and agencies within Loudoun County Government. There may be other comments forthcoming from other agencies.

Thank you again for the opportunity to provide comments in advance.

Sincerely,

Evan Kuznear, Utility Engineer
Transportation and Capital Infrastructure

Loudoun County, Virginia
www.loudoun.gov
Department of Transportation and Capital Infrastructure
101 Blue Seal Drive, S.E., Suite 102
PO Box 7500, Leesburg, VA 20177-7500
Telephone (703) 777-0396 • Fax (703) 777-0626

December 11, 2019

Ms. Laura Meadows
Dominion Energy Virginia
10900 Nuckols Rd, 4th Floor
Glen Allen, VA 23060

Re: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop – Loudoun County, Virginia

Dear Ms. Meadows,

Loudoun County Department of Transportation and Capital Infrastructure (DTCI) and Loudoun County Department of Planning and Zoning (DPZ) are in receipt of your letter dated November 20, 2019 regarding Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop, Loudoun County, Virginia (Project). DTCI and DPZ understand that Dominion Energy (Dominion) has eliminated three of the original Option 1 routes (Route 1A, 1D, and 1E) and have since introduced a new Option 1, Route 1A (replacing original Route 1A) for the proposed Project in addition to the remaining Option 2, Route 2A/2B.

DTCI leadership met to discuss the remaining two options and the potential impacts to the county's Lockridge Road, Prentice Drive and Shellhorn Road Projects. It was determined that the Option 2, Route A path would have the least impact to the county's road projects. In the event Dominion were to proceed to implement the Option 2, Route A, DTCI requests that the locations of the proposed transmission structures be coordinated with our department to ensure they will not conflict with the proposed traffic signals and/or any other features of the county's Shellhorn Road project.

DTCI determined that Dominion's Option 1, Route 1A and the necessary 100 ft. wide easement associated with it, may interfere with the acquisition of right-of-way along the eastern side of the county's Lockridge Road project. If implemented, the county requests that Dominion review the county's proposed right of way to ensure the 100 ft. wide Dominion easement would not overlap with the Lockridge Road proposed right of way. In addition, Dominion Energy currently has distribution power poles located along the USPS parcel. A relocation of Dominion's distribution poles onto the future Dominion transmission easement may be necessary for the successful design and construction of the Lockridge Road project.

DPZ staff in the first referral found that Option 2, Route 2A/2B provided a more circuitous route that bisected a portion of the Broad Run floodplain, but at the time was not identified as the

preferred route. However, recognizing potential conflicts with planned roadways in the area, DPZ Staff finds that Option 2, Route 2A/2B provides a viable alternative route that limits impacts on environmental features and existing business uses.

In response to your request to submit a consolidated response, DPZ staff, and DTCI leadership have conversed and recommend that Dominion Energy implement Option 2, Route A of the Proposed Lockridge Road 230kV Transmission Line Extension Loop Project. Please reach out to myself (Evan.Kuznear@loudoun.gov) and Suheili Perez (Suheili.Perez@loudoun.gov) to ensure proper coordination between our agencies have the opportunity to review and address any potential conflicts between the Project and the county's road projects.

Thank you for the opportunity to provide comments.

Sincerely,

Evan Kuznear, Utility Engineer
Transportation and Capital Infrastructure

Cc: Joe Kroboth, Director, Transportation and Capital Infrastructure (via e-mail)
James Zeller, Deputy Director, Transportation and Capital Infrastructure (via e-mail)
Alan Brewer, Director, Building and Development (via e-mail)
Alaina Ray, Director, Building and Development (via e-mail)
James David, Deputy Director, Planning and Zoning (via e-mail)
Patrick Giglio, Planner III, Planning and Zoning (via e-mail)
Dave Galindo, AICP, Program Manager, Community Planning (via e-mail)
Susan Glass, Program Manager, Transportation and Capital Infrastructure (via e-mail)
Mark Hoffman, Design Program Manager, Transportation and Capital Infrastructure (via e-mail)
Suheili Perez, Civil Engineer, Transportation and Capital Infrastructure (via e-mail)
Tim Hemstreet, County Administrator, (via e-mail)

Enclosure: Revised Project Overview Map

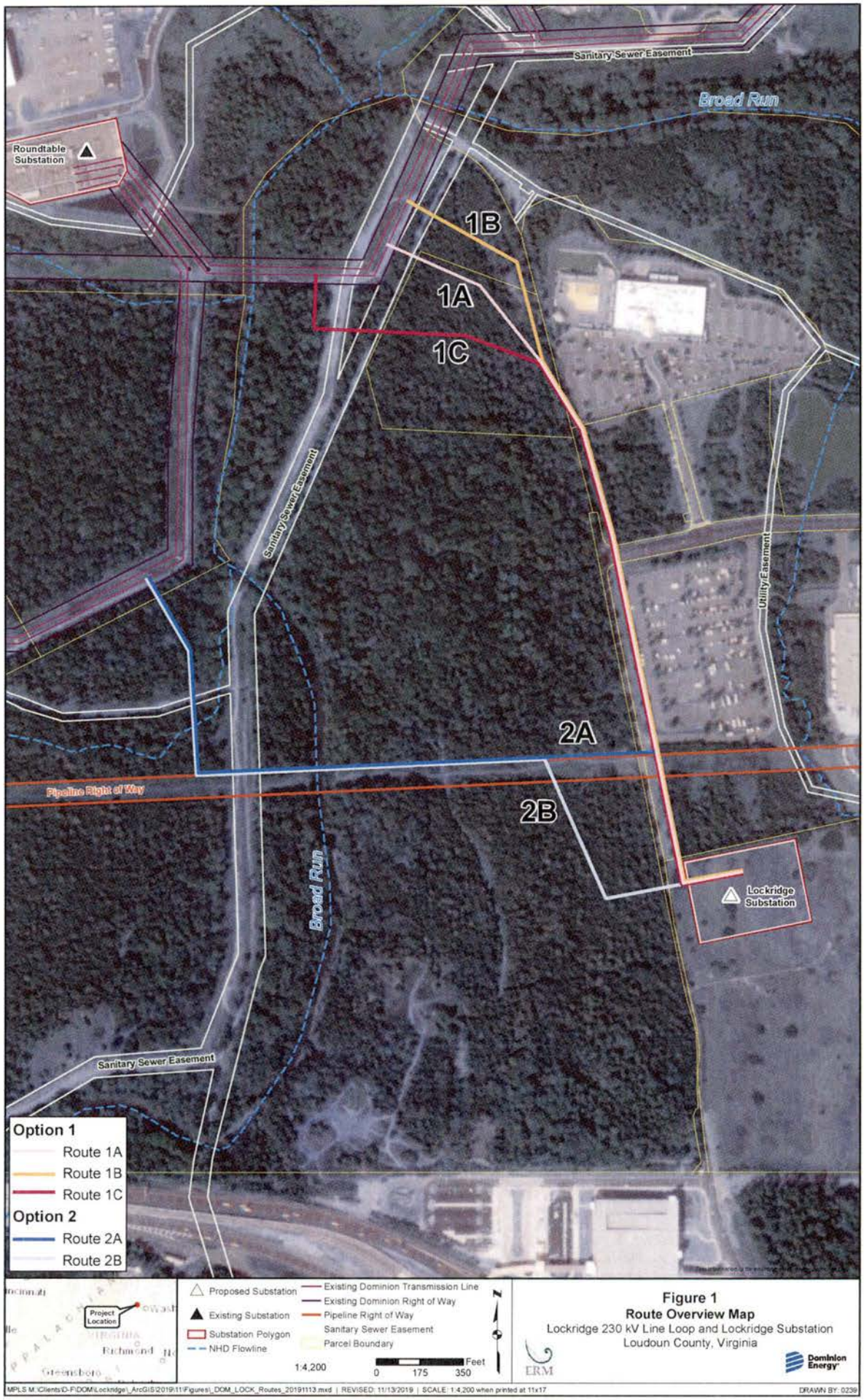


Figure 1
Route Overview Map
Lockridge 230 kV Line Loop and Lockridge Substation
Loudoun County, Virginia

MPLS M:\Clients\D-F\DOM\Lockridge_ArcGIS\2019\11\Figures_DOM_LOCK_Routes_20191113.mxd | REVISED: 11/13/2019 | SCALE: 1:4,200 when printed at 11x17 DRAWN BY: 0239

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

October 18, 2019

Mr. Erik Schwenke
Metropolitan Washington Airports Authority
Office of Engineering
45045 Aviation Drive, Suite 300
Dulles, VA 20166

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Schwenke,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact Laura Meadows at (804) 775-5279 or laura.p.meadows@dominionenergy.com.

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

Regards,

Laura Meadows
Sr. Siting and Permitting Specialist

Enclosure: Project Overview Map

Metropolitan Washington
Airports Authority
1 Aviation Circle
Washington, DC 20001-6000

METROPOLITAN
WASHINGTON
AIRPORTS AUTHORITY

December 9, 2019

Ms. Laura Meadows
Dominion Energy Virginia
10900 Nuckols Rd., 4th Floor
Glen Allen, VA 23060

RE: Dominion Energy's Proposed Lockridge Road 230kV Transmission Line Extension Loop
Loudoun County, Virginia

Dear Ms. Meadows:

Thank you for providing The Metropolitan Washington Airports Authority (Airports Authority) with the opportunity to comment on the above referenced development. This site is located approximately 1.8 miles northeast of The Washington Dulles International Airport's existing Runway 1C/19C.

The Airports Authority understands Dominion Energy's monopole transmission lines will vary in height from 95 feet above ground level (AGL) to 115 feet AGL and multiple routes (1A, 1B, 1C, 2A, 2B) are being considered as referenced by enclosed Figure 1. We do not object to any of the routes provided they do not exceed 410 feet Above Mean Sea Level, however, our preference is route 1B because it furthest from Runway 19C's end. Please inform us as to which route is eventually selected and approved. Also, should Dominion Energy alter the proposed routes or infrastructure height the Airports Authority respectfully requests another opportunity to review changes.

If you have any questions or need additional information, please feel free to contact me at (703) 572-0266 or Mark Rutyna at (703) 572-0262.

Sincerely,

Gregg M. Wollard, P.E., A.A.E.
Manager, Planning Department Engineering

GMW:mmr
Enclosure: Figure 1

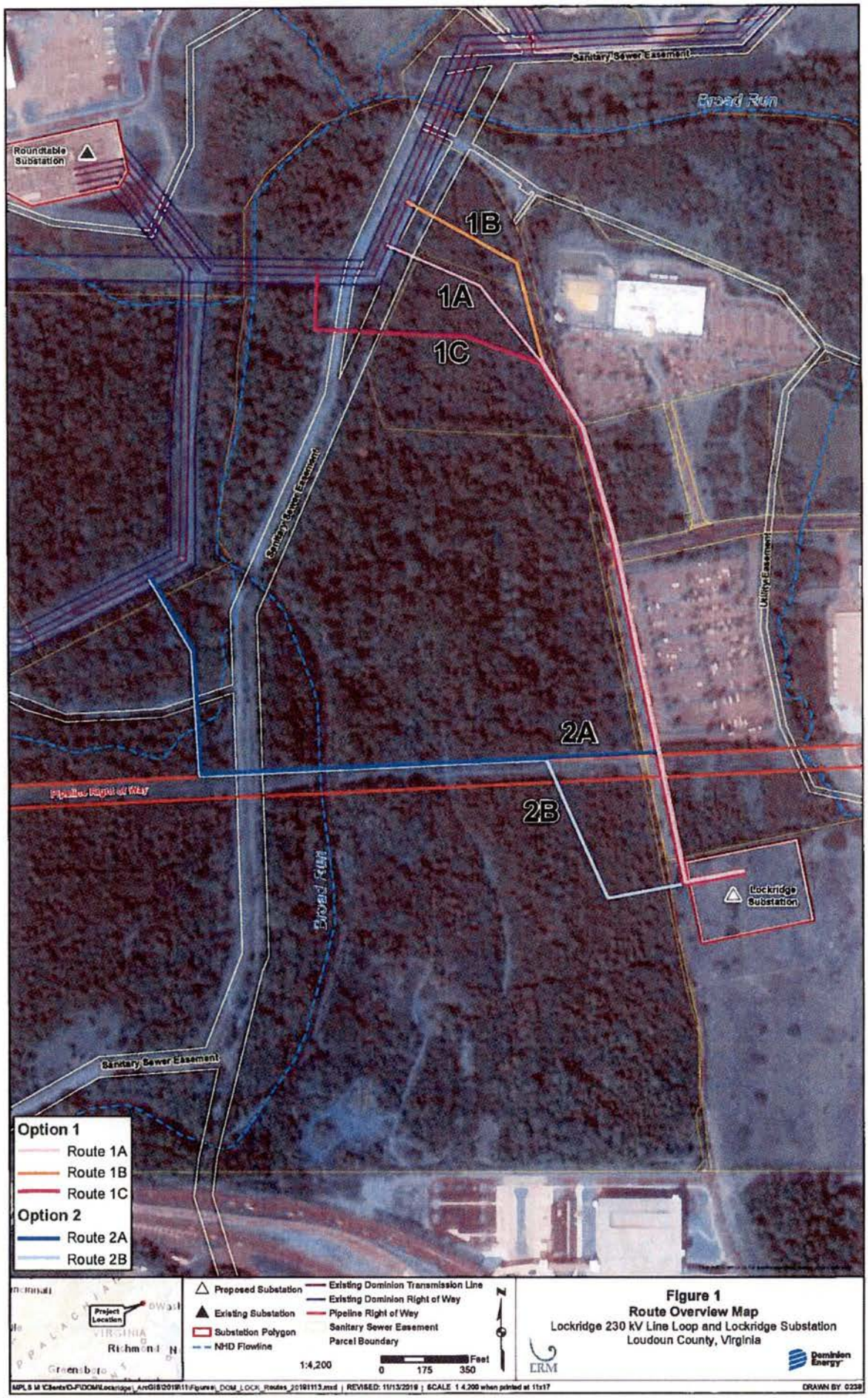


Figure 1
Route Overview Map
Lockridge 230 kV Line Loop and Lockridge Substation
Loudoun County, Virginia

MPLS M:\Clients\D-F\DOM\Lockridge\ArcGIS\2019\11\Figures_DOM_LOCK_Routes_20191113.mxd | REVISED: 11/13/2019 | SCALE 1:4,200 when printed at 11x17 DRAWN BY: 0238

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

October 18, 2019

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

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Denny,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact me at (804) 775-5279 or laura.p.meadows@dominionenergy.com.

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

Regards,

Laura Meadows
Sr. Siting and Permitting Specialist

Enclosure: Project Overview Map

COMMONWEALTH of VIRGINIA

Mark K. Flynn
Director

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

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

October 22, 2019

Ms. Laura Meadows
Dominion Energy Virginia
10900 Nuckols Road, 4th Floor
Glen Allen, Virginia 23060

RE: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission line Extension Loop
Loudoun County Virginia

Dear Ms. Meadows:

The Virginia Department of Aviation has, at your request, reviewed the proposed layouts for the Lockridge Road 230kV Transmission line Extension Loop. Following our review, it appears as though each of the alternatives will result in construction of the proposed development within 20,000 linear feet of the Dulles International Airport. Due to the proximity of the proposed development to the Airport, a 7460 form for the proposed development must be submitted to the Federal Aviation Administration (FAA) for review.

While the information you provided identified the proposed location, it did not identify the height above ground level to which the proposed transmission line will be constructed. Therefore, the Department can only state that staff will not object to the proposed development if; (1) the proposed transmission line does not result in a "Determination of Hazard" by the FAA, and (2) the proposed transmission line placement does not result in the increase to any instrument approach minimums to the Dulles International Airport.

If you have any questions regarding this matter please feel free to contact me at (804) 236-3638.

Sincerely,

S. Scott Denny
Senior Aviation Planner
Virginia Department of Aviation

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

October 18, 2019

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

Reference: Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun County, Virginia

Dear Mr. Alexander,

Dominion Energy Virginia (the "Company") is proposing to build a new 230 kV transmission line loop in the Sterling area of Loudoun County, Virginia, in order to meet customer needs in the area ("Project"). The Project requires the acquisition of new transmission line right-of-way at a width of 100 feet and approximately 0.80 miles long. The proposed Project is beginning from existing Dominion Energy 230kV transmission lines near our Roundtable and Shellhorn Substations and will connect to a new switching station located approximately 0.80 miles southeast.

The Company is in the process of preparing an application for a certificate of public convenience and necessity from the State Corporation Commission ("SCC"), which may be necessary for the Project. At this time, in advance of an SCC filing, 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. If you would like to receive a GIS shapefile of the transmission line routes to assist in the project review or if there are any questions, please do not hesitate to contact me at (804) 775-5279 or laura.p.meadows@dominionenergy.com.

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

Regards,

Laura Meadows

Laura Meadows
Sr. Siting and Permitting Specialist

Enclosure: Project Overview Map

From: Felix, Doug CTR (FAA) <Doug.CTR.Felix@faa.gov>
Sent: Monday, November 25, 2019 7:08 AM
To: Laura P Meadows (PowerDelivery - 6) <Laura.P.Meadows@dominionenergy.com>
Subject: [External] FW: Dominion Energy - Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun, Virginia

Ms. Meadows,

The attached Dominion Energy letter dated October 18, 2019 was received November 21, 2019. The letter had originally been sent to Mr. Robert Alexander and was forwarded to our office. In response to the referenced Dominion Energy Virginia's Proposed Lockridge Road 230kV Transmission Line Extension Loop - Loudoun, Virginia, the following information is provided.

As stated in Title 14 of the Code of federal Regulations (14 CFR) Part 77, Objects that Affect the Navigable Airspace, the primary objectives of the Federal Aviation Administration (FAA) are to promote air safety and the efficient use of the navigable airspace.

To accomplish this mission, aeronautical studies are conducted based on information provided by proponents on FAA Form 7460-1, Notice of Proposed Construction or Alteration. If Dominion Energy sponsors any construction or alterations which may affect navigable airspace and the proposals meet FAA notice filing criteria, the FAA requests that FAA Forms 7460-1 be filed ELECTRONICALLY via https://oeaaa.faa.gov/oeaaa/external/portal.jsp as necessary for each of the proposals. The website contains instructions for using the program and contains a "Notice Criteria Tool" to determine if notice to the FAA is required for locations included in the proposal. If notice to the FAA is required, instructions are available at the website for electronically filing proposals as necessary for transmission line structures.

For future reference, you may contact the Obstruction Evaluation Group at 10101 Hillwood Parkway, Fort Worth, Texas 76177 or (817) 222-5934.

Thank you,

Doug Felix
Federal Aviation Administration
Obstruction Evaluation Group
AJV-A520
Tetra Tech AMT Support
10101 Hillwood Parkway
Fort Worth, TX 76177

Office: 817-222-5934
doug.ctr.felix@faa.gov

Please visit our website:
https://oeaaa.faa.gov

Federal Aviation Administration

Environmental
Routing Study

VIRGINIA ELECTRIC AND POWER COMPANY

Lockridge 230 kV Line Loop and Lockridge Substation

Environmental Routing Study

FINAL REPORT

Prepared by

ERM

December 2019

VIRGINIA ELECTRIC AND POWER COMPANY
Lockridge 230 kV Line Loop and Lockridge Substation

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES (Included in Appendix A)

LIST OF APPENDICES

LIST OF ACRONYMS

ABPP	American Battlefield Protection Program
AFD	Agricultural and Forestal Districts
CCB	Center for Conservation Biology
Columbia Gas	TC Energy-owned Columbia Gas Transmission
Company	Virginia Electric and Power Company
CWA	Clean Water Act
D+A	Dutton + Associates, LLC
dB	decibels
Dominion Energy Virginia	Virginia Electric and Power Company
DTCI	Loudoun County Department of Transportation & Capital Infrastructure
ERM	Environmental Resources Management, Inc.
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FWS	U.S. Fish and Wildlife Service
GIS	geographic information system
GLNHR	General Location Areas for Natural Heritage Resources
GPS	global positioning system
Guidelines	VDHR's 2008 Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia
IPaC	The FWS Environmental Conservation Online System's Information, Planning and Conservation System
KOP	Key observation point
kV	Kilovolt
MWAA	Metropolitan Washington Airports Authority
MP	Milepost
NHD	National Hydrography Dataset
NHDE	Natural Heritage Data Explorer
NHL	National Historic Landmark
NHP	Natural Heritage Program
NLEB	Northern Long-eared Bat
Notice	Notice of Proposed Construction or Alteration
NRHP	National Register of Historic Places
NRI	Nationwide Rivers Inventory
NWI	National Wetlands Inventory
Part 77	14 Code of Federal Regulations Part 77
PDIP	Planned Development-Industrial Park
PDOP	Planned Development-Office Park
PEM	Palustrine Emergent

PFO	Palustrine Forested
PSS	Palustrine Scrub-shrub
Project	Lockridge Road 230 kV line Extension Loop
Project Team	Dominion Energy Virginia project team, including ERM.
SCC	State Corporation Commission
SCU	Stream Conservation Unit
SppObs	Species Observation
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
USPS	United Stated Postal Service
Va. Code	Code of Virginia
VAC	Virginia Administrative Code
VaFWIS	VDGIF Fish and Wildlife Information Service
V-CRIS	Virginia Cultural Resource Information System
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDGIF	Virginia Department of Game and Inland Fisheries
VDHR	Virginia Department of Historic Resources
VOF	Virginia Outdoors Foundation
VSLCD	Virginia Statewide Land Cover Dataset

1.1 INTRODUCTION AND BACKGROUND

This report presents the results of environmental constraint identification and routing study prepared by Environmental Resources Management, Inc. (ERM) on behalf of Virginia Electric and Power Company (Dominion Energy Virginia or Company) for the proposed Lockridge 230 kilovolt (kV) Line Loop and Lockridge Substation (Project)

For this Project, Dominion Energy Virginia proposes multiple new build options that could address reliability and accommodate increased future demand in the area. The Company considered the facilities required to construct and operate the new feeds; the length of new rights-of-way that will be required; the amount of existing development in each area; the potential for environmental impacts on communities; and the relative cost of each option.

After review of the new build options, Dominion Energy Virginia decided to further investigate two options both located entirely within Loudoun County, Virginia. Option 1 will involve tapping future 230 kV Buttermilk-Roundtable Line #2214[1] at a proposed junction site located east of the Roundtable Substation and extending a new 230 kV double circuit transmission line southeast to the proposed Lockridge Substation. Option 2 will involve tapping the existing 230 kV Line #2188 at a potential junction site located east of the Shellhorn Substation and extending a new 230 kV double circuit transmission Line southeast to the planned Lockridge Substation. Both options will require the construction of the proposed Lockridge Substation located on a parcel south of the United Stated Postal Service (USPS) Dulles Post Office and fronting Lockridge Road.

ERM's scope of work for this study consisted of:

1. defining and describing a study area for the Project based on Dominion Energy Virginia's transmission and service needs;

2. participating in the public outreach efforts (e.g., the public open house) to gather information from stakeholders regarding constraints to be considered as part of the routing process;

3. identifying and mapping routing constraints and opportunities within the study area;

4. identifying buildable potential routes, each of which meets the Projects' objective as well as the siting criteria identified in the Code of Virginia (Va. Code) and included in the Virginia State Corporation Commission's (SCC) minimum filing guidelines for transmission projects;

5. comparing the potential routes based on an analysis of environmental impacts and utilization of routing opportunities; and

---

[1] Prior to construction of the proposed Project, Buttermilk Substation, which has a construction target date of December 30, 2020, will be constructed by cutting into existing Line #2170, creating future Buttermilk-Roundtable Line #2214. For purposes of this report, the line being tapped for the proposed Project will be referred to as future Buttermilk-Roundtable Line #2214 or future Line #2214.

6. recommending a proposed and alternate route(s).

Once the study area was defined, ERM identified and mapped existing land use, planned developments, and environmental, visual, and cultural features within the Project area. Sensitive environmental or constructability-related features were defined as routing constraints. ERM also identified existing electric transmission and distribution lines, pipelines, roads, and other existing rights-of-way within the study area. These features were defined as routing opportunities. ERM then layered the routing opportunities over the constraints in a geographic information system (GIS) to identify preliminary routes based on the Project description provided above. Subsequently, a more sophisticated route selection process was completed. ERM refined the preliminary routes, taking into account potential impacts on environmental constraints and utilization of routing opportunities. To the extent practicable, ERM identified routes that both avoid constraints and utilize routing opportunities, where appropriate.

After the potential routes were identified, ERM conducted an analysis using GIS to quantify potential impacts associated with constraints and the use of opportunities for each route. Crossings of sensitive features were measured and tabulated to facilitate route comparisons. Other factors, such as visual and construction-related impacts, were assessed based on ERM's experience in electric transmission route selection. After collecting, mapping, and evaluating constraint information within the study area, Dominion Energy Virginia and ERM (Project Team) identified eight overhead routes. Of these eight routes, six alternative routes were developed for Option 1 and two alternative routes were developed for Option 2. The Project Team evaluated and compared the routes that were considered. Constraints in this study area included planned developments, existing utility infrastructure and rights-of-way, future roadway construction, and environmental constraints, including forested land, wetlands, and Broad Run.

Following a preliminary quantitative assessment of routes, Dominion Energy Virginia engaged the public, including elected officials, and regulatory, planning, and land managing agencies in discussions to gather feedback on the various routes. Some of this feedback resulted in adjustments being made to optimize the potential routes and, in certain cases, helped to inform the Company's decision to reject a particular route. A proposed route and alternative routes were then identified based on a comparison of advantages and disadvantages of each route. The process considered both the sensitivity and extent of the constraints affected relative to each route.

2.0 PROJECT DESCRIPTION

As a first step in identifying potential transmission line routes, ERM (as directed by Dominion Energy Virginia) defined a geographic study area for the Project based on Dominion Energy Virginia's electric transmission and service needs as described above. Generally, the study area was defined to encompass the fixed beginning and ending points for the proposed facilities (i.e., the existing substations), as well as an area broad enough to allow for the identification of reasonable alternative routes meeting the objective of the Project. Additionally, and to the extent practicable, the limits of the study area were defined by reference to easily distinguished features, such as roads or other linear features.

The study area's eastern boundary begins approximately 0.21 mile south and approximately 0.11 mile east of the proposed Lockridge Substation, and extends north for about 0.89 mile past the western side of the Dulles US Post Office building, crossing Prentice Drive, through the Life Time Athletic Club eastern parking lot, crossing Broad Run, DC Water's Potomac Interceptor easement and Loudoun Water's Broad Run Interceptor easement (referred to

collectively as the sanitary sewer easement), and a Dominion Energy Virginia electric transmission right-of-way containing Lines #2152/#2170. The northern boundary of the study area follows the transmission line right-of-way west and south for about 0.51 mile, crossing Dominion Energy Virginia electric transmission Lines #2188/#2031 south of the existing Roundtable Substation. The western boundary of the Study Area extends south and west from the Roundtable Substation for 0.74 mile, running parallel to the west side of the Dominion Energy Virginia transmission right-of-way containing Lines #2188/#2031 and to the west side of the existing Shellhorn Road Substation. West of the Shellhorn Road Substation, the western boundary continues south and west following the existing Dominion Energy Virginia electric transmission right-of-way containing Lines #2095/#2137 for 0.25 mile until reaching the north side of the Dulles Greenway. The southern boundary extends from this point east for about 0.80 mile, where it is roughly parallel to the north side of the Dulles Greenway. Where the Dulles Greenway veers south, the southern boundary continues east for another 0.35 mile until reaching the eastern boundary of the study area. Figure 2.0 in Appendix A shows the study area and the features described above and Appendix B provides a detailed aerial photo-based map set of the routes.

After developing the study area, ERM identified multiple preliminary alternative routes that could meet the Project objectives. Given the amount of planned development in the general area, ERM focused on developing routes that will follow existing roadways and transportation corridors within the study area. Subsequent to identification of those preliminary routes, ERM conducted several site visits and began evaluating the routes. The Company also began stakeholder and agency outreach during this time to assist with route evaluation.

Two electrical solutions (Options 1 and 2) were identified by Dominion Energy Virginia that could meet the Project need. Option 1 will construct an overhead double circuit 230 kV line from the proposed Lockridge Substation to various tap point locations at future Line #2214 (proposed junction sites) located approximately 0.2 mile east of the Roundtable Substation. ERM and Dominion Energy Virginia originally identified six potential routes between the Lockridge Substation and the four tap locations east of the Roundtable Substation associated with Option 1. Three of the routes identified that had the potential to meet the Project objectives are described in Sections 2.1.1 through 2.1.3 below. The remaining three routes were subsequently rejected from further consideration for the reasons discussed in Section 2.1.4.

Option 2 will construct an overhead double circuit 230 kV line from the proposed Lockridge Substation to a single tap point location to Line #2188 (a proposed junction site) approximately 0.4 mile northeast of the Shellhorn Substation. Two routes were identified between the proposed Lockridge Substation the tap point location to Line #2188 (see Figure 2.0).

Both Option 1 and Option 2 will require the construction of a new substation (the proposed Lockridge Substation) located on a parcel south of an undeveloped USPS property along Lockridge Road (see Figure 2.0). The substation will occupy the same footprint for both options. Impacts associated with the 3.8-acre substation construction and operation are included when discussing existing environmental conditions and resources affected for each route.

Section 3 below describes the various resources found along each of the alternative routes and Section 4 discusses how the alternative routes could impact those resources. Finally, Section 5 presents the conclusions and recommendations.

2.1 OPTION 1

As discussed above, a total of six potential routes were identified between the proposed Lockridge Substation and one of the four potential tap points to future Line #2214. The three potential Option 1 routes deemed buildable and worthy of further consideration are described below. A discussion of the three routes rejected from further consideration is provided in Section 2.1.4 below.

2.1.1 Route 1A

Route 1A will construct an overhead double circuit 230 kV line from the proposed Lockridge Substation to a proposed junction site along future Line #2214, located 0.29 mile east of the Roundtable Substation.

The length of the corridor for Route 1A is approximately 0.62 mile. Beginning at the proposed Lockridge Substation, Route 1A will head west from the substation for 0.05 mile before turning north for 0.27 mile along the east side of Lockridge Road. This portion of the route will be parallel to and overlap an existing Dominion Energy Virginia overhead and underground distribution line right-of-way, as well as the road verge along the eastern edge of Lockridge Road, and will abut the paved parking lot that services the Dulles Post Office owned by the USPS. After crossing the existing Prentice Drive, the route continues north within the Dominion Energy Virginia electric distribution line right-of-way for about 0.09 mile, following the western boundary of an undeveloped parcel owned by Boston Properties Limited Partnership. The route continues across the southwest corner of the Life Time Athletic parking lot. The route then veers slightly northwest for 0.14 mile, away from the Life Time Athletic parking lot, and onto an undeveloped parcel owned by SDC Ashburn I, LLC. The Proposed Route then continues west for 0.07 mile, crossing the sanitary sewer easement, until reaching the tap point location at future Line #2214.

2.1.2 Route 1B

Route 1B will construct an overhead double circuit 230 kV line from the proposed Lockridge Substation to a proposed junction site along future Line #2214 located 0.31 mile east of the Roundtable Substation.

The length of the corridor for Alternative Route 1B is approximately 0.64 mile. Beginning at the proposed Lockridge Substation, Route 1B will head west from the substation for 0.05 mile before heading north for 0.27 mile along the east side of Lockridge Road. This portion of the route will be parallel to and overlap an existing Dominion Energy Virginia overhead and underground electric distribution line right-of-way, as well as the road verge along the eastern edge of Lockridge Road, and will abut a paved parking lot that services the Dulles Post Office owned by the USPS. After crossing the existing Prentice Drive, the route continues north for about 0.09 mile, following the western boundary of an undeveloped parcel owned by Digital Loudoun IV, LLC. The route then continues across the southwest corner of the Life Time Athletic parking lot. Alternative Route 1B then veers slightly northwest for 0.06 mile, away from the Life Time Athletic parking lot, and onto an undeveloped parcel owned by SDC Ashburn I, LLC. The route continues north and then west for 0.17 mile, crossing a sanitary sewer easement, until reaching the tap point location at future Line #2214.

2.1.3 Route 1C

Route 1C will construct an overhead double circuit 230 kV line from the proposed Lockridge Substation to a proposed junction site along future Line #2214 located 0.21 mile east of the Roundtable Substation.

The length of the corridor for Alternative Route 1C is approximately 0.68 mile. Beginning at the proposed Lockridge Substation, Alternative Route 1C will head west from the substation for 0.05 mile before heading north for 0.27 mile along the east side of Lockridge Road. This portion of the route will be parallel to and overlap an existing Dominion Energy Virginia overhead and underground electric distribution line right-of-way, as well as the road verge along the eastern side of Lockridge Road, and abut a paved parking lot that services the Dulles Post Office owned by the USPS. After crossing the existing Prentice Drive, the route then continues north for about 0.09 mile, following the western boundary of an undeveloped parcel owned by Digital Loudoun IV, LLC and crosses the southwest corner of the Life Time Athletic parking lot. The route will veer slightly northwest for 0.06 mile away from the Life Time Athletic. The route then heads west for 0.17 mile, running parallel to and north of the Loudoun County planned Prentice Drive Extension, and crossing a sanitary sewer easement before heading north for 0.04 mile to a tap point location at future Line #2214.

2.2 OPTION 2

Option 2 represents an alternative electrical solution for the Project that will entail tapping the Lockridge Loop into the existing 230 kV Shellhorn-Roundtable Line #2188. ERM and Dominion Energy Virginia only identified two routes for Option 2 (Routes 2A and 2B) due to the presence of a number of constraints in the area between Broad Run and Line #2188. As discussed in more detail in Section 3.1.4, there is a planned data center (Project Nova) that will occupy much of the Project area. There are several building envelopes associated with Project Nova in the area to the northeast of the Shellhorn Substation, between the substation and Broad Run. In addition, the Loudoun County Department of Transportation & Capital Infrastructure (DTCI) also is planning to extend Barrister Street through this area as well. The presence of these planned developments precluded the development of a route that will extend further west along the TC Energy-owned Columbia Gas Transmission (Columbia Gas) Pipeline corridor and through this area. In addition, it was not possible to develop a route that will extend further to the north in the area between the sanitary sewer easement and Line #2188 without significantly impacting Broad Run.

2.2.1 Route 2A

Route 2A will construct an overhead single circuit 230 kV line from the proposed Lockridge Substation to a proposed junction site along Line #2188, 0.41 mile east of the Shellhorn Substation.

The length of the corridor for Alternative Route 2A will be approximately 0.66 mile. Beginning at the proposed Lockridge Substation, Alternative Route 2A will head west from the substation for 0.05 mile before heading north for 0.10 mile along the east side of Lockridge Road, parallel to and overlapping an existing Dominion Energy Virginia overhead and underground electric distribution line right-of-way. After crossing a Columbia Gas natural gas pipeline right-of-way, the route heads west for 0.35 mile along an undeveloped parcel owned by SDC Ashburn I, LLC. The route will run parallel with and overlap the pipeline right-of-way, cross Broad Run, a tributary to Broad Run, and a sanitary sewer easement. Route 2A will then veer north and

northwest for 0.16 mile crossing a tributary to Broad Run and continue along a parcel owned by Vizsla Ventures, LLC, to a tap point location at Line #2188.

2.2.2 Route 2B

Route 2B is a variation to Route 2A that avoids crossing an undeveloped parcel owned by the USPS. This route was developed so that, in the event that the Company was unable to secure an easement to cross property managed by the USPS, this route could still be constructed. The overall length of Route 2B is 0.65 mile. The portion of Route 2B that is different from Route 2A is a 0.17-mile-long section that begins at the point where Alternative Route 2A heads north of the proposed Lockridge Substation. From this location, Route 2B turns west for about 0.06 mile, crossing Lockridge Road and onto an undeveloped parcel owned by SDC Ashburn I, LLC. Route 2B then continues north for about 0.11 mile where it crosses the Loudoun County planned Shellhorn Road Extension. From this point the route then follows the same alignment as Alternative Route 2A to the tap point location at Line #2188.

2.3 ROUTES REJECTED FROM FURTHER CONSIDERATION

The Company investigated and subsequently rejected three additional alternative routes associated with Option 1 (Routes 1D, 1E, and 1F). Following a detailed routing analysis and discussions with Loudoun County staff, these three routes were rejected by the Company due to the impacts of two of these routes (Routes 1D and 1E) on a Loudoun County planned development (the Prentice Drive Extension) and the Company's ability to secure easements from the USPS for one these routes (Alternative Route 1F). Figure 2.1.4 shows the rejected routes and the constraints that influenced the decision to reject these routes.

2.3.1 Route 1D

Route 1D will construct an overhead single circuit 230 kV line from the proposed Lockridge Substation to a proposed junction site located 0.2 mile east of the Roundtable Substation.

The length of the corridor for Route 1D will be approximately 0.76 mile, beginning at the proposed Lockridge Substation. Route 1D will head west from the substation for 0.05 mile before heading north for 0.10 mile along the east side of Lockridge Road, parallel and overlapping an existing Dominion Energy Virginia overhead and underground electric distribution line right-of-way as well as the western edge of undeveloped land owned by the USPS. After crossing a Columbia Gas natural gas pipeline right-of-way, the route heads west for 0.22 mile on an undeveloped parcel owned by SDC Ashburn I, LLC, running parallel to and overlapping the existing pipeline right-of-way. Route 1D then heads north on SDC Ashburn I, LLC parcel for 0.39 mile, crossing a Loudoun County utility easement prior to a tap point location at future Line #2214.

Alternative Route 1D was rejected as infeasible following consultations with DTCI. The DTCI informed the Company that as part of the Loudoun County planned Prentice Drive Extension, a bridge will be constructed at the crossing of Broad Run. Routes 1D and 1E cross Broad Run at the location of this planned bridge. Based on the construction schedules for the bridge and the Project, the Company's transmission line will be installed prior to the bridge. It is Dominion Energy Virginia's understanding that this will pose a significant challenge to the construction of the bridge. In particular, the bridge spans will be of such extreme length (145 feet between piers) that large-scale equipment and cranes will be required to construct the bridge. These construction activities for the bridge will be constrained by the presence of the overhead transmission lines. Moreover, the presence of the transmission lines over the bridge could limit

the flexibility of the contractor in the event that changes need to be made at the time of construction to either the construction methods or design of the bridge. The construction of the bridge will not only require that the transmission lines have a high vertical clearance to the bridge deck, but the transmission lines also will need to be de-energized during construction. While the Lockridge Substation will be fed from two circuits, both of the circuits cross at the location where the Loudoun County planned bridge will be constructed, meaning that an outage of these two lines would result in an outage of Lockridge Substation. The Company determined that once operational, the Lockridge Substation could not take an outage for the construction of the bridge. Further, it is the Company's understanding that taller poles over the planned bridge that could potentially alleviate the need for an outage may not be feasible in light of the proximity to the nearby airport. Given this and the significant concerns that the County raised regarding the conflicts the route will introduce to the construction of the Loudoun County planned Prentice Drive Extension bridge, the Company rejected the development of Alternative Route 1D.

2.3.2 Route 1E

This route will construct an overhead single circuit 230 kV line from the proposed Lockridge Substation to a proposed junction site located 0.20 mile east of the Roundtable Substation. The length of the corridor for Route 1E will be approximately 0.88 mile, beginning at the proposed Lockridge Substation (see Figure 2.1.4). Route 1E will head west from the substation for 0.05 mile before heading north for 0.10 mile along the east side of Lockridge Road, parallel and overlapping an existing Dominion Energy Virginia overhead and underground electric distribution line right-of-way way as well as the western edge of undeveloped land owned by the Dulles Post Office. After crossing a Columbia Gas natural gas pipeline right-of-way, the route heads west for 0.34 mile on an undeveloped parcel owned by SDC Ashburn I, LLC, running parallel to and overlapping the existing pipeline right-of-way and crossing Broad Run. Route 1E will then head north for 0.13 mile parallel to a Loudoun County utility easement and a tributary to Broad Run. Route 1E will then head northeast for 0.18 mile crossing Broad Run a second time and continuing parallel to the Loudoun County utility easement. Route 1E then heads north, continuing parallel to Loudoun County utility easement for 0.09 mile to a tap point location at future Line #2214.

Alternative Route 1E was rejected as infeasible following consultations with Loudoun County DTCI, and for the same reasons as Alternative Route 1D described above. Both routes will cross the bridge associated with the Prentice Drive Extension in the same location. In addition, the construction of Route 1E will also require two crossings of Broad Run and the alignment of the route will overlap the route of a tributary to Broad Run for over 500 feet. Given the significant concerns that the County raised regarding the conflicts the route will introduce to the construction of the Prentice Drive Extension bridge, as well as the impacts of the route to Broad Run, the Company rejected the development of Alternative Route 1E.

2.3.3 Route 1F

This route will construct an overhead single circuit 230 kV line from the proposed Lockridge Substation to a proposed junction site located 0.2 mile east of the Roundtable Substation. The length of the corridor for Route 1F will be approximately 0.78 mile, beginning at the proposed Lockridge Substation. Route 1F will head east from the substation for 0.05 mile before heading north for about 0.46 mile, crossing a section of undeveloped land and a paved parking lot owned by the USPS Dulles Post Office, the existing Prentice Drive, the eastern portion of an undeveloped lot (owned by Boston Properties Limited Partnership) through the eastern parking lot of Life Time Athletic Club. Route 1F then heads northwest for 0.11 mile, crossing an

undeveloped parcel of Digital Loudoun IV, LLC, then heads west for 0.16 mile crossing a Loudoun County utility easement, the northern undeveloped tip of the Life Time Athletic property, an undeveloped parcel owned by SDC Ashburn I, LLC, and a Loudoun County utility easement until reaching the tie-in location at future Line #2214.

Alternative Route 1F was rejected as infeasible following initial consultations between the Company and the USPS. The route will bisect the Dulles Post Office Property, crossing just west of a covered pedestrian connection between the Post Office parking lot and Post Office facilities. During discussions between the USPS and the Company, the USPS informed the Company that it will not grant an easement for this route due to the significant impact it will have to the USPS property. In addition, Route 1F will cross the parking lot of Life Time Athletic facility, will be within 100 feet of a children's outdoor playground associated with the facility, and will conflict with planned development on the parcel located north of the Life Time Athletic Facility. Given the objection to the development of this route by the USPS as well as impacts it will have on the Life Time Athletic facility and the planned development to the north of this facility, the Company rejected the development of Alternative Route 1F.

2.4 STRUCTURE TYPES AND RIGHT-OF-WAY WIDTHS

Dominion Energy Virginia will use several structure configurations for the proposed Lockridge 230 kV Line Loop (see proposed structure types in Appendix C). The new structures will be single pole structures constructed of weathering steel, with an approximate height ranging from 90 to 115 feet along the proposed right-of-way. For purposes of this routing study, potential impacts are quantified using the maximum possible impact of a 100-foot-wide right-of-way on the properties along this corridor.

2.5 CONSTRUCTION, OPERATION, AND MAINTENANCE PROCESS

Construction of new overhead transmission lines or rebuild of existing transmission lines may involve some or all of the steps listed below:

- detailed survey of the route alignment;
- right-of-way acquisition and clearing;
- construction of access roads, where necessary;
- installation of tower foundations;
- assembly and erection of new structures and/or removal of existing structures;
- construction of temporary power lines (in the rebuild scenario);
- stringing and tensioning of the conductors; and
- final clean-up and land restoration.

All appropriate materials for the proposed 230 kV structures will be delivered and assembled at each structure location in the right-of-way. Detailed foundation design will not be completed until prior to construction; however, depending on soil conditions, the foundation design could include poured concrete that requires excavation or steel piles or caissons that might be vibrated, drilled, or driven into place. Structures will be erected with a crane and anchored to the foundation during final assembly. If there is excess soil from foundation construction, it will be evenly distributed at each structure and the soil replanted and stabilized. In wetland areas, excess soil will be removed and evenly distributed on an upland site within Dominion Energy Virginia's right-of-way. Typical construction equipment may include hole diggers or drilling equipment, cranes, wire-stringing rigs, tensioners, backhoes, and trucks.

All conductors and shield wires will be strung under tension. This system involves stringing a "lead line" between structures for the conductors and ground wires. The rope pulls a steel cable that is connected to the conductors and shield wires, which are pulled through neoprene stringing blocks to protect the conductor and shield wire from damage. Stringing the conductors and shield wires under tension protects the wires from possible damage should they be allowed to touch the ground, fences, or other objects.

Maintaining the right-of-way under the transmission lines is essential for the reliable operation of the line as well as public safety. Operation and maintenance of the line will consist of periodic inspections of the line and the right-of-way; occasional replacement of hardware as necessary; periodic clearing of vegetation, either mechanically or by selective, low-volume application of approved herbicides of vegetation within the corridor; and the cutting of danger trees outside the right-of-way. Danger trees are trees outside the cleared corridor that are sufficiently tall to potentially impact the transmission line should the trees fall into the right-of-way. Periodic inspections will occur on a regular basis and utilize both aerial and walking patrols. Normal operation and maintenance will require only infrequent visits by Dominion Energy Virginia or its contractors.

Most maintenance activities consist of selective, low-volume herbicide applications targeting only tree species on the right-of-way every 3 to 5 years, and the cutting of danger trees every 3 years. Dominion Energy Virginia only uses herbicides that are approved by the U.S. Environmental Protection Agency on power line rights-of-way.

3.0 INVENTORY OF EXISTING CONDITIONS

Once ERM defined the study area, a list of routing criteria to help guide the routing process and provide a basis for comparing potential routes were developed (see Table 3-1). The routing criteria include routing constraints (i.e., sensitive environmental resources and existing and planned developments) and routing opportunities (i.e., existing corridors) as described in more detail in Section 4. ERM inventoried existing conditions, routing constraints, and routing opportunities using information obtained from publicly available GIS databases, agency websites, and databases; published documents, such as county or municipal land use plans; and communication with agency and county staff, stakeholders, and elected officials. In those cases where GIS data were not available for a particular environmental resource or other feature, ERM obtained the best available hard-copy or online map and hand digitized the information needed to complete the study.

The existing conditions along the routes associated with Options A and B that were identified are discussed below. The discussion of the Project documents the two proposed Options within Loudoun County, Virginia. Table 3-1 identifies the categories of environmental features considered in the study area. Descriptive information regarding these features within the study area is provided in subsequent sections.

TABLE 3-1

Lockridge 230 kV Line Loop and Lockridge Substation Project
Environmental Features Considered

Feature Type	Description
Land Use	
Land ownership	• Federal, state, and local government lands • Private lands
Recreational areas	• National, state, county, or municipal parks in the Project vicinity • Federal, state, county, or municipal managed recreation areas crossed • Golf courses • Recreation trails (biking, hiking, birding, wildlife)
Existing land use and land cover	• Existing subdivisions • Land cover types (e.g., forest, agricultural, developed) • Residences, churches, schools, cemeteries
Planned developments	• Planned, proposed, or conceptual residential, commercial, or industrial developments
Land use planning and zoning	• Zoning districts
Conservation lands	• Virginia Outdoors Foundation and Virginia Department of Conservation and Recreation conservation land and easements • Loudoun County conservation easements • Other conservation lands • Wetland mitigation banks • Animal Preserve and Refuge
Transportation	• Road crossings • Railroad crossings • Private airport facilities
Environmental	
Surface waters	• Wetlands • Waterbodies
Protected or managed areas	• Resource Protection Areas • Wildlife Management Areas
Protected species	• Natural heritage resources • Threatened and endangered species • Bald eagles
Vegetation	• Vegetation characteristics • Virginia Department of Forestry medium and high priority forests
Soils	• Soil characteristics
Visual	
Visually sensitive areas	• Viewsheds to and from Visually Sensitive Areas • Scenic byways • Scenic Rivers
Cultural Resources	
Cultural resource sites	• Archaeological sites • Historical or architectural sites • National Register of Historic Places-listed and eligible historic districts • Battlefields • Virginia Department of Historic Resources protected easements
Engineering	
Length	• Length of routes
Transportation infrastructure crossings	• Roads • Railroads
Greenfield construction	• New corridor (i.e., not adjacent to existing corridor)
Existing corridors	
Existing electric facilities	• Transmission or Distribution Lines
Other utilities	• Pipelines
Transportation infrastructure	• Roads or Railroads

3.1 LAND USE

3.1.1 Land Ownership

ERM quantified information on land ownership in the Project area using publicly available GIS databases and digital tract data obtained from Loudoun County. These data indicate that the majority of the lands within the study area are privately owned land, with one parcel owned by the USPS, and Virginia Department of Transportation (VDOT) owned road rights-of-way. Routes 1A, 1B, 1C, and 2A will affect private and federal (USPS) lands. Route 2B, which avoids the crossing of USPS lands, affects only private lands. Figure 2.0 in Appendix A depicts land ownership along each route segment.

3.1.2 Recreation Areas

ERM reviewed digital data sets and maps, U.S. Geological Survey (USGS) topographic quadrangles, recent digital aerial photography, and county websites. As discussed below, only one existing recreation area was identified within 0.25 mile of the Project study area, with the next closest existing recreation area located approximately 0.36 mile from the study area. In addition, there is one planned recreation area located within 0.25 mile of the study area.

Life Time Athletic

Life Time Athletic is an established fitness and recreation center that opened on October 11, 2008. It consists of cardiovascular and resistance equipment, group exercise studios, cycling studios, personal trainers, an indoor rock climbing wall, and basketball courts, as well as indoor and outdoor aquatic centers. The aquatic centers have a lap pool, as well as multiple waterslides. The fitness center also has a café and full-service spa (Business Wire 2008). Life Time Athletic is located within the Project study area and will be directly affected by construction and operation of Routes 1A, 1B, and 1C.

Broad Run Stream Valley Linear Park

A planned recreational trail is proposed along Broad Run where it crosses through the study area and continues south into the Silver District West development (Washington Business Journal, 2019). The Broad Run Stream Valley Linear Park is planned as part of Loudoun County's Linear Parks and Trail System and Emerald Ribbons Plan, which is an effort to create a countywide system of linear parks and trails that will be interconnected with existing parks, trails, bike routes, and transportation hubs. The plan is currently in the development stage and will be implemented over a 20-year period (Loudoun County 2019b). The portions of Broad Run Stream Valley Linear Park located within 0.25 mile of the study area include a planned 50-foot-wide easement on the west side of Broad Run where it crosses through the study area on a parcel owned by Vizsla Ventures, LLC, and is included in the Dulles Berry Project site plan. As Broad Run continues south of Dulles Greenway, 23 acres have been set aside on the west side of the creek within the Silver District West residential development as part of a continuation of the park. See Section 3.1.4 for additional details regarding these planned projects. The section of Broad Run Stream Valley Linear Park within the study area will be crossed by Routes 2A and 2B.

3.1.3 Existing Land Use and Land Cover

Land use and land cover within the Project vicinity was identified using the most currently available (2016) Virginia Statewide Land Cover Dataset. Existing land use for each route section

is depicted on Figure 3.1.3 in Appendix A and quantified in Table 4-1. Below are the land use categories that occur within the study area as defined by the Virginia Department of Environmental Quality (VDEQ).

Forest - These are areas characterized by tree cover of natural or semi-natural woody vegetation, encompassing an acre in size.

Turfgrass - These are areas primarily covered by planted grasses, including vegetation planted in developed settings for erosion control or aesthetic purposes, but also includes natural herbaceous vegetation and undeveloped land, including upland grasses and forbs.

Tree - These are areas characterized by tree cover of natural or semi-natural woody vegetation covering less than 1 acre.

Impervious - Includes areas characterized by a high percentage of constructed materials such as paved areas, buildings and parking lots, and infrastructure.

Pasture - Includes areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops.

Hydro - These are areas of open water features, including rivers, streams, lakes, canals, waterways, reservoirs, ponds, bays, estuaries, and ocean.

National Wetlands Inventory (NWI)/Other - includes all woody and non-woody wetland areas.

ERM identified buildings (including dwellings) within 500 feet of each route through review of various digital data sets and maps, USGS topographic quadrangles, and current aerial photography. No residences were identified within 500 feet of the route centerlines. The SCC requires that the number of dwellings and businesses within 500 feet of the route be considered. ERM identified buildings (including dwellings) through review of various digital data sets and maps, USGS topographic quadrangles, and recent (2019) aerial photography. Two buildings were identified within 500 feet of the routes: Life Time Athletic and one USPS Post Office building described above.

There are no schools, churches, or cemeteries located within the study area. No subdivisions are located within the study area. The closest existing subdivision is the Regency Subdivision, located about 0.8 mile northwest of the study area. The closest planned subdivision is Silver District West residential development located on the southwest boundary of the Dulles Greenway less than 0.1 mile from the study area.

3.1.4 Existing and Planned Developments

ERM obtained information on planned future developments through publicly-available data on county websites, and consultations with county and city planning officials and other stakeholders. Planned and existing developments located within the study area are described below, listed in alphabetical order. Unless otherwise noted, information on these planned developments was found on the Loudoun County Online Land Application System (Loudoun County 2019b). The existing and planned subdivisions that cross or are adjacent to the routes are quantified in Table 3.1.4-1 and described below. Figure 3.1.4 in Appendix A depicts existing and planned developments.

TABLE 3.1.4-1

Lockridge 230 kV Line Loop and Lockridge Substation Project
Existing and Planned Developments Within the Study Area

Development Name	Status	Route (Approximate Milepost Crossing Range)
Barrister Street	Planned	Not crossed
Digital Loudoun III & IV	Planned	Not crossed
Dulles Berry	Planned	2A and 2B (MP 0.6 - 0.7)
Life Time Athletic	Existing	1A, 1B, and 1C (MP 0.4 – 0.5)
Prentice Drive Extension	Planned	1A and 1B (MP 0.1 – 0.5); 1C (MP 0.1 – 0.6)
Project NOVA	Planned	1A and 1B (MP 0.4 – 0.6); 1C (MP 0.4 – 0.7); 2A and 2B (MP 0.2 – 0.6)
Project Samuel	Planned	Not Crossed
Shellhorn Road Extension	Planned	1A, 1B, and 1C (MP 0.0 – 0.1); 2A and 2B (MP 0.0 – 0.5)
USPS	Existing	1A, 1B, and 1C (MP 0.1 – 0.4); 2A (MP 0.1 – 0.2)

[a] Route follows edge of subdivision and/or crosses an undeveloped portion of subdivision.

Barrister Street

Barrister Street is a planned four-lane road connecting the Shellhorn Road Extension and Prentice Drive Extension projects. The plan for Barrister Street has not been fully developed, but is mentioned in the plans for Prentice Drive and Shellhorn Road. Barrister Drive will run north to south, crossing a 0.20 mile section of the study area east of Shellhorn Substation.

Digital Loudoun III & IV

Digital Loudoun III & IV is a multi-phased project under development for office and data center uses. Based on the conceptual development plan, the portion of Digital Loudoun adjacent to the study area is currently proposed to be used as a wetland mitigation area and open space surrounding Broad Run. Digital Loudoun was approved for rezoning and zoning modifications but will be subject to additional review and approvals prior to final development. Future development may differ from the approved conceptual development plan.

Dulles Berry

Dulles Berry is a proposed data center development that is currently under review by Loudoun County. Based on the conceptual development plan, the portion of the development within the study area contains a developer proffered 100-foot-wide easement along Broad Run in order to accommodate a linear park connection. The adjacent portion of the property also contains delineated wetlands, a floodplain, and a segment of Barrister Street, a proposed four lane median divided roadway. Data center construction is planned further west, just north of Shellhorn Substation.

Route 2A and 2B will cross less than 100 feet into the Dulles Berry development before tying into Line #2188. This portion of the property is within the 100-year floodplain and is not proposed for future development according to recent conceptual plans.

Life Time Athletic

Life Time Athletic is an existing fitness and recreation center located within the study area. The Life Time Athletic facility consists of a two-story main building with an 80,000-square-foot footprint, a parking lot on the south and east side of the building, and a large outdoor pool area

on the west side of the building. The outdoor pool has a waterslide, snack bar, and an additional outdoor turf workout area to the north.

Routes 1A, 1B, and 1C will cross the southwest corner of the Life Time Athletic parking lot near milepost (MP) 0.4 before entering the Project NOVA property.

Prentice Drive Extension

The Prentice Drive Extension project is currently within the planning and right-of-way acquisition phase. Prentice Drive (VA Route 1071/VA Route 1071 Extended/Route 789 Extended) will provide an additional east-west connection across Broad Run. This major collector adds approximately 3.2 miles of four new through-lanes of Prentice Drive from Shellhorn Road at Metro Center Drive to Lockridge Road and includes an additional connection of Lockridge Road West between Waxpool Road and Prentice Drive. The connection will provide multimodal access between the future Loudoun Gateway and Ashburn Metrorail stations. Specifically, the project provides a new alignment extension of Prentice Drive from the intersection with Lockridge Road to the west where it ties into Metro Center Drive at Shellhorn Road. This will be an urban, four lane divided roadway facility with on street bike lanes, a sidewalk, and a shared-use path. This corridor is anticipated to serve bus routes to and from the planned Silver Line Metrorail stations. It will connect Pacific Boulevard (VA Route 1036) to Shellhorn Road (VA Route 643) at Metro Center Drive in the Ashburn Community. The project includes a large bridge span across the Broad Run floodplain. Construction of the Prentice Drive Extension is expected to commence in 2023 (Northern Virginia Transportation Authority 2018a).

Routes 1A and 1B will parallel the Prentice Drive Extension project from MP 0.1 to 0.5. Route 1C follows the Prentice Drive Extension Project from MP 0.1 to 0.6, following the future right-of-way as it turns to the west before crossing Broad Run.

Project NOVA

Project NOVA is a proposed data center development that makes up the majority of the study area. The site is bisected by Broad Run which runs south to north, as well as the Columbia Gas pipeline which runs east to west across the site. There are no final site plans proposed at this time; however, the conceptual development plan identifies several building envelopes that could be subdivided into lots and sold for development to separate users.

Routes 1A, 1B, and 1C will cross the Project NOVA development from approximately MP 0.4 to 0.6, and will impact the northern most building envelope identified in the conceptual development plan.

Route 2A will cross the Project NOVA development from MP 0.2 to 0.6. Route 2A will parallel the north side of the Columbia Gas pipeline and cross Broad Run before turning north and entering the Dulles Berry development. Route 2A will impact the proposed Project NOVA building envelope located north of the Columbia Gas pipeline right-of-way identified in the conceptual plan. Route 2B will also result in impacts on the building envelope north of the Columbia Gas Pipeline right-of-way. In addition, Route 2B will affect the proposed Project NOVA building envelope located south of the Columbia Gas pipeline right-of-way.

Project Samuel

Project Samuel is a proposed data center development located on the western edge of the study area, neighboring Shellhorn Substation to the west. The zoning concept plan was approved by the Board of Supervisors in July 2019 and will likely be developed within 2 years.

None of the proposed routes will cross the Project Samuel site.

Shellhorn Road Extension

The Shellhorn Road Extension project entails constructing a continuous east-west corridor of Shellhorn Road (VA 643) to Sterling Boulevard (VA 846) between Loudoun County Parkway (VA 607) and Pacific Boulevard. The multimodal corridor is planned to include an urban four-lane road within 120 feet of right-of-way (Northern Virginia Transportation Authority 2018b). The project includes one roundabout, two new signalized intersections, and two signal modifications. The project will extend Shellhorn Road from Loudoun County Parkway to Lockridge Road. This new 1-mile-long, major collector road is planned to have a roundabout at its eastern terminus on Lockridge Road. The Project will reconstruct 0.8 mile of Lockridge Road from Prentice Drive to Moran Road and realign Lockridge Road to tie into the planned Sterling Boulevard Extension from Pacific Boulevard.

The Shellhorn Road Extension bisects the study area, running east to west and adjacent to the Columbia Gas pipeline corridor, which is located immediately to the north of the proposed road alignment.

Route 2A runs parallel to the north side of the planned Shellhorn Road Extension; however, Route 2A does not extend south of the existing Columbia Gas pipeline easement but runs parallel to the road extension. Route 2B will cross the Shellhorn Road Extension in two locations between MP 0.0 and 0.2, and then parallel the north side of the road extension as described for Route 2A.

United States Postal Service

There is an existing USPS distribution facility located to the north and east of the proposed Lockridge Substation. The site consists of a mail distribution facility, office building, and a parking lot. The parking lot is located on the west side of the USPS property and is bounded by Prentice Drive to the north and Lockridge Road to the west.

Routes 1A, 1B, and 1C will cross USPS property from MP 0.1 to 0.3 between the parking lot and Lockridge Road.

Route 2A will cross an undeveloped portion of the USPS property for less than 0.1 mile before turning west and following the north side of the Columbia Gas pipeline corridor.

3.1.5 Land Use Planning and Zoning

Land Use Planning

Section 15.2-2223 of the Va. Code requires local planning commissions to adopt a comprehensive plan that provides guidance for the physical development of the territory within its jurisdiction. The plan looks at existing and future land uses, anticipates development trends, and

makes recommendations for guiding long-term development decisions of a city or county. To implement objectives of the comprehensive plan, local governments use zoning. A zoning ordinance creates land use categories that separates incompatible uses and establishes development standards to guide orderly and efficient land use. Virginia requires that a comprehensive plan be reviewed at least once every 5 years to adjust to actual or projected changes in land use conditions or needs. Zoning ordinances may be modified by the local land manager and governing bodies or through requests from residents or businesses to change zoning designations or approved new uses. Loudoun County has adopted a comprehensive plan and zoning ordinances within its jurisdiction.

Zoning

Option 1

Route 1A

Route 1A will cross Planned Development-Industrial Park (PDIP) zoned land for less than 0.1 mile across the Lockridge Substation property. From MP 0.1 to 0.3, the route will cross Planned Development-General Industrial (PDGI) zoned land as it crosses USPS property. From MP 0.3 to 0.7, Route 1A will cross PDIP zoned land in the vicinity of the Life Time Athletic. Route 1A terminates at MP 0.8 on an undeveloped parcel owned by SDC Ashburn I, LLC, until reaching the tie-in location with future Line #2214. This parcel is zoned Planned Development-Office Park (PDOP).

Route 1B

Route 1B will cross PDIP-zoned land for less than 0.1 mile across the Lockridge Substation property. From MP 0.1 to 0.3, the route will cross PDGI-zoned land as it crosses USPS property. From MP 0.3 to 0.4, Route 1B will cross PDIP-zoned land until it crosses the southwest corner of the Life Time Athletic parking lot. Route 1B will cross PDOP-zoned land from MP 0.4 to 0.7 where it terminates at the tie-in location with future Line #2214.

Route 1C

Route 1C will cross PDIP-zoned land for less than 0.1 mile across the Lockridge Substation property. From MP 0.1 to 0.3, the route will cross PDGI zoned land as it crosses USPS property. From MP 0.3 to 0.4, Route 1C will cross PDIP-zoned land until it crosses the southwest corner of the Life Time Athletic parking lot. Route 1B will cross PDOP-zoned land from MP 0.4 to 0.7 where it terminates at the tie-in location with future Line #2214.

Option 2

Route 2A

Route 2A will cross PDIP-zoned land for less than 0.1 mile across the Lockridge Substation property. From MP 0.2 to 0.7 Route 2A will cross PDOP-zoned land on the undeveloped parcel owned by SDC Ashburn I, LLC, until reaching the tie-in location with Line #2188.