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Walker

PART 2

WITNESS DIRECT TESTIMONY SUMMARY

Witness: David F. Walker
Title: Director – Rural Broadband
Summary:

Company Witness David F. Walker provides an update on the previously approved rural broadband projects in Surry County ("Surry Project") and Botetourt County ("Botetourt Project"). He also provides information on the project in the Northern Neck region of Virginia ("Northern Neck Project") for which the Company received prudency approval in Case No. PUR-2020-00197 in 2021. Testimony regarding the Northern Neck Project includes details on the additional miles required within the four original counties (King George, Westmoreland, Richmond, and Northumberland) and a request to expand the project to include the unserved areas of King William County and Lancaster County. Mr. Walker's testimony also discusses the Company's request to install middle-mile broadband capacity in the unserved areas in the Thomas Jefferson Planning District in central Virginia, specifically Louisa and Appomattox Counties (the "Thomas Jefferson Planning District Project") (collectively, the "Proposed New Projects").

As Mr. Walker explains, the lack of access to adequate broadband services in areas of the Commonwealth negatively impacts the vitality of these areas, limits educational and economic development opportunities, and impedes access to healthcare. By partnering with ISPs, Dominion Energy Virginia can help bridge that gap by leveraging the Company's newly installed fiber to make broadband capacity available to Internet service providers ("ISPs") in unserved areas. The Company has partnered with All Points Broadband for the Northern Neck Project and Firefly Fiber Broadband for the Thomas Jefferson Planning District Project. Mr. Walker's testimony provides detailed descriptions of the Proposed New Projects including an overview of the cost estimates, the plan and timing for implementation for each area, and the Company's easement strategy. Through the Proposed New Projects, the Company proposes to install a total of approximately 300 miles of additional fiber. The Company will reserve a portion of the fiber optic cable for internal use, allowing the remaining fiber to be leased to ISPs so that they can deliver broadband service to unserved residences and businesses in the Northern Neck region, Appomattox County, and Louisa County.

In addition to an annual update for the Surry and Botetourt Projects, the Company also seeks to recover the costs of the Northern Neck Project and the Thomas Jefferson Planning District Project through the rate adjustment clause ("RAC"), designated Rider RBB. Mr. Walker describes the Company's approach to determining the costs of providing broadband capacity. Specifically, Mr. Walker explains the method for allocating costs between the Rural Broadband Projects Rider RBB and the Grid Transformation Plan cost recovery mechanism, Rider GT. The Company is seeking to recover an estimated \$7.4 million in costs associated with the Rural Broadband Projects.

**DIRECT TESTIMONY
OF
DAVID F. WALKER
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2022-00062**

1 **Q. Please state your name, business address, and position of employment.**

2 A. My name is David F. Walker, and my business address is 600 East Canal Street,
3 Richmond, Virginia 23219. I am the Director of Rural Broadband for Virginia Electric
4 and Power Company ("Dominion Energy Virginia" or the "Company"). A statement of
5 my background and qualifications is included as Appendix A.

6 **Q. What are your responsibilities as the Director of Rural Broadband for the**
7 **Company?**

8 A. As Director of Rural Broadband, I am responsible for program development and
9 deployment of rural broadband infrastructure within the Company's regulated service
10 territory in Virginia. Areas of responsibility include managing and expanding
11 partnerships with Internet Service Providers ("ISPs"), oversight of the internal
12 organization responsible for the day-to-day activities associated with middle-mile fiber,
13 oversight of the relationships with the professional services companies being utilized for
14 design and right of way services, and the development of internal processes to support the
15 ongoing deployment of middle-mile fiber. Additionally, my responsibilities related to
16 Company fiber also include Grid Transformation Plan ("GT Plan") fiber projects.

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to provide an update on the previously approved rural
3 broadband projects in Surry County ("Surry Project") and Botetourt County ("Botetourt
4 Project"). I will also provide information on the pilot project in the Northern Neck
5 Region of Virginia ("Northern Neck Project") for which the Company received prudency
6 approval in Case No. PUR-2020-00197 in 2021. Testimony regarding the Northern Neck
7 Project will include details on the additional miles required within the four original
8 counties (King George, Westmoreland, Richmond, and Northumberland) and a request to
9 expand the project to include the unserved areas of King William County and Lancaster
10 County. Additionally, my testimony will include a request to install middle-mile
11 broadband capacity in the unserved areas in the Thomas Jefferson Planning District in
12 central Virginia, specifically, Louisa and Appomattox Counties (the "Thomas Jefferson
13 Planning District Project" and collectively with the Northern Neck Project, the "Proposed
14 New Projects"), pursuant to § 56-585.1:9 of the Code of Virginia ("Va. Code"). Finally
15 my testimony requests an update to the rate adjustment clause ("RAC"), Rider RBB, to
16 recover costs associated with the Surry Project, the Botetourt Project, and the Proposed
17 New Projects (collectively, the "Rural Broadband Projects").

18 More specifically, I will: (i) present a summary of the expenditures and progress to date
19 on the Surry Project and Botetourt Project; (ii) provide an update on the Northern Neck
20 Project, including details on the additional miles of fiber required for the ISP to reach
21 unserved customers in Westmoreland, King George, Richmond, and Northumberland,
22 and address the need for additional broadband capacity in King William and Lancaster
23 Counties; (iii) describe the need for broadband projects in Louisa and Appomattox

Counties; (iv) explain the method for allocating costs between the Rural Broadband Projects Rider RBB and the Company's GT Plan cost recovery mechanism, Rider GT; and (v) introduce the witnesses that will provide additional information in support of the Petition.

Q. During the course of your testimony, will you introduce an exhibit?

A. Yes. Company Exhibit No. __, DFW, consisting of Schedules 1, 4 through 8, and Extraordinarily Sensitive Schedules 2 and 3, was prepared under my supervision and direction and is accurate and complete to the best of my knowledge and belief. The table below provides a description of these schedules.

SCHEDULE	DESCRIPTION
Schedule 1	County Letters of Support
Extraordinarily Sensitive Schedule 2	Actual Capital and O&M Costs through December 31, 2021
Extraordinarily Sensitive Schedule 3	Projected Capital and O&M Costs (January 2022 – November 2023)
Schedule 4	Northern Neck Route Maps
Schedule 5	Thomas Jefferson Planning District Route Maps
Schedule 6	Northern Neck Supplemental Assessment of Additional Miles in Westmoreland, King George, Richmond and Northumberland; Northern Neck Environmental Justice Report: King William
Schedule 7	Thomas Jefferson Planning District Environmental Justice Reports: Appomattox and Louisa
Schedule 8	Sample Supplementary Communication Rights Easement Agreement

1 I am also sponsoring Filing Schedules 46.c.1.i through iii and 46 d.1. i through ii as
2 directed by the Commission's Rules Governing Utility Rate Applications and Annual
3 Informational Filings for Investor-Owned Electric Utilities, 20 VAC 5-204-10, *et seq.*
4 These schedules provide all projected and actual costs as well as key documents
5 supporting the costs.

6 **Q. How is your testimony organized?**

7 A. I. Background and Overview

8 II. Project Updates for Previously Approved RAC Projects

9 A. Surry Project

10 B. Botetourt Project

11 III. Proposed New Projects for Approval

12 A. Northern Neck Project Including King William and Lancaster Counties

13 B. Thomas Jefferson Planning District Project: Louisa and Appomattox
14 Counties

15 IV. The Company's Rural Broadband Projects

16 **I. BACKGROUND AND OVERVIEW**

17 **Q. Please describe the statutory provision that is pertinent to the Company's petition.**

18 A. In 2019, the Virginia General Assembly enacted legislation, codified at Va. Code § 56-
19 585.1:9, establishing the pilot program to extend broadband capacity to unserved areas in
20 the Commonwealth (the "Broadband Statute"). The Broadband Statute was revised in
21 2020 (HB 831) and in 2021 (HB 2304, HB 1923). Presently, the Broadband Statute
22 permits the Company to submit multiple petitions to the Commission for approval to
23 make broadband capacity available to ISPs in areas of the Commonwealth unserved by

1 broadband. The Broadband Statute further states that the utility's provision of broadband
2 capacity to ISPs in unserved areas of the Commonwealth is in the public interest.¹

3 Finally, the Broadband Statute permits the Company to recover costs of providing
4 broadband capacity related to rural broadband projects, net generated revenue, from
5 customers as an electric grid transformation project pursuant to clause (vi) of subdivision
6 A 6 of § 56-585.1 of the Code of Virginia, filed on or after July 1, 2021. These costs are
7 recoverable as a non-bypassable charge. As of July 1, 2021, effectuated with the
8 broadband legislation becoming permanent, the Company may file one or more petitions
9 for approval of such a rate adjustment clause seeking recovery of the associated costs and
10 the Commission shall issue its final order within six months of the filing date.²

11 **Q. When you refer to broadband, what does that mean?**

12 A. Virginia Code § 56-585.1:9 F defines broadband as Internet access at speeds greater than
13 the adequate speed as determined by the broadband guidelines set out by the Department
14 of Housing and Community Development ("DHCD") for its Virginia Telecommunication
15 Initiative ("VATI") from time to time.

16 **Q. What do you mean when you refer to unserved areas?**

17 A. Under Virginia Code Section 56-585.1:9 F, "unserved by broadband" means a designated
18 area in which less than 10 percent of residential and commercial units are capable of
19 receiving broadband service, provided that the DHCD for its VATI may by guideline
20 increase such percentage from time to time.

¹ Va. Code § 56-585.1:9 A.

² Va. Code § 56-585.1:9 B.

1 **Q. Please describe the Company's general approach to determining whether an area is**
2 **unserved by broadband.**

3 A. Generally, the Company relies on Virginia Code § 56-585.1:9 D which
4 provides in relevant part that:

5 An area shall be determined to be unserved by broadband if (i) the
6 Department of Housing and Community Development has certified
7 within the last 18 months that the designated area is unserved; (ii)
8 the Virginia Telecommunication Initiative of the Department of
9 Housing and Community Development has issued a grant or loan to
10 construct a broadband service project within the last 18 months, and
11 the grant or loan recipient is the Internet service provider to which
12 the utility proposes to lease capacity; (iii) the federal government
13 has issued a grant or loan or has provided support to construct a
14 broadband service project in the designated area within the last 18
15 months, and the grant or loan recipient is the Internet service
16 provider to which the utility proposes to lease capacity....

17 Ultimately, the partnering ISP companies identify the unserved locations
18 throughout each jurisdiction. Validation of the identified unserved locations
19 occurs through either a broadband grant award from the VATI program and/or
20 financial support through a federal program, which results in all locations
21 proposed to be served meeting the definition of "unserved by broadband" as
22 defined in Va. Code § 56-585.1:9 D.

23 **Q. Please describe efforts to extend broadband to unserved regions in the**
24 **Commonwealth?**

25 A. Recent efforts in Virginia have provided ISPs with additional funding resources. As an
26 example, in December 2021, Governor Northam announced \$722 million in VATI
27 awards³ to connect 278,000 Virginia homes and businesses and achieve universal

³ <https://www.governor.virginia.gov/newsroom/all-releases/2021/december/headline-916304-en.html>.

1 broadband coverage in 70 counties. As a result of VATI funding supporting our partner
2 ISPs' last-mile infrastructure combined with the Broadband Statute, Dominion Energy
3 Virginia is in the unique position to help bridge the digital divide by installing fiber that
4 will expand broadband capacity to unserved areas.

5 **Q. How does the Company's proposal in this proceeding address the need for**
6 **broadband in rural areas of the Commonwealth?**

7 A. Dominion Energy Virginia has received approval to install fiber optic communications
8 cable in many areas of its service territory as part of its efforts to transform Virginia's
9 distribution grid into a more reliable, resilient, and secure system. Specifically, as part of
10 the Company's GT Plan, the Company received approval and is committed to connecting
11 electric distribution substations with fiber for telecommunication purposes.⁴ In this
12 proceeding, the Company is proposing incremental work consistent with the Broadband
13 Statute. In conjunction with the Phase IA and Phase II GT Plan telecommunications
14 projects, the Rural Broadband Projects provide a way for the Company to install "middle-
15 mile" infrastructure, which ISPs can then leverage to provide broadband access in areas
16 of the Commonwealth that are unserved by broadband today.

⁴ See *Petition of Virginia Electric and Power Company, For approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2018-00100, Final Order at 5, 15 (Jan. 17, 2019); *Petition of Virginia Electric and Power Company, For approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00127, Final Order at 13 (Jan. 7, 2022).

1 Q. Please describe the need for broadband access in King William, Lancaster, Louisa
2 and Appomattox Counties.

3 A. Broadband access supports economic development and social equity while
4 simultaneously promoting public health, public safety, employment opportunities, and
5 educational opportunities for citizens of the Commonwealth. Availability of high-speed
6 broadband access plays a critical role in economic development. Today, most businesses
7 consider broadband an important resource and would not consider operating in or moving
8 to a region without high-speed Internet access. Communities that lack high-speed
9 broadband service may be at a significant disadvantage for attracting and retaining
10 businesses and residential growth. High-speed Internet access is also essential for
11 educational institutions and for students to do their homework and pursue their studies at
12 home. For instance, Dr. Shannon L. Kennedy, president of Rappahannock College
13 explains,

14 All of our courses involve some technological component.
15 Everything has an online component. This was exacerbated by the
16 pandemic. And so those who don't have broadband are just left
17 without an opportunity. Prior to the pandemic, 19% of our students
18 didn't have broadband. In fall of 2020, during the middle of the
19 pandemic, we still had 18% without broadband. Can you imagine
20 sitting, trying to do a zoom class without having broadband, access
21 on your smartphone or in your car in a parking lot, trying to get high
22 speed Internet? So, it is really critical to us to be able to prepare our
23 citizens to be the future employees of our world.⁵

24 Students in other unserved counties have similar experiences. The main driver of
25 bandwidth demand inside schools is that more classrooms and resources are online, and
26 those classrooms have more and more connected devices, interactive lessons, and
27 Internet-reliant homework assignments. The formal and informal education of the labor

⁵ <https://www.dominionenergy.com/projects-and-facilities/electric-projects/rural-broadband-program>.

1 market is also adversely impacted by the lack of access to cost-effective high-speed
2 broadband at home.

3 Additionally, healthcare providers are offering broader telemedicine and telehealth
4 services, which offer in-home services to patients. There is a wide variety of healthcare-
5 related services that require high-speed broadband, including sharing of medical records,
6 remote monitoring of patients, and communicating via videoconference with medical
7 professionals in other locations.

8 The ongoing COVID-19 public health crisis has further demonstrated the importance of
9 broadband access. Although the public health crisis appears to have turned in a positive
10 direction in recent months, many are continuing to work remotely and perform other key
11 activities virtually; thus the need for broadband access continues to be vitally important.
12 COVID-19 has also accelerated the trend of telehealth and virtual medical appointments
13 as more people use telemedicine to address their health care needs.

14 The lack of access to adequate broadband services in areas of the Commonwealth
15 negatively impacts the vitality of these areas, limits educational and economic
16 development opportunities, and impedes access to healthcare. See my Schedule I for
17 additional details.

18 **Q. What is the Company requesting in this proceeding?**

19 A. The Company is requesting approval of the Northern Neck Project, which includes miles
20 previously approved as prudent by the Commission, approximately 65.8 additional miles
21 of fiber within the original Northern Neck counties, and the addition of King William and

1 Lancaster Counties. The Company is also requesting approval of the Thomas Jefferson
2 Planning District Project (Louisa and Appomattox Counties). Each project is described
3 in more detail later in my testimony. In addition to an annual update for the Surry and
4 Botetourt Projects, the Company also seeks to recover the costs of the Northern Neck
5 Project and the Thomas Jefferson Planning District Project through Rider RBB.

6 **Q. Please describe the Company's approach to determining the costs of providing**
7 **broadband capacity.**

8 A. The Company received Commission approval of telecommunications modernization
9 projects as part of its GT Plan Phase IA and Phase II, and is committed to connecting
10 electric distribution substations with fiber for telecommunication purposes throughout its
11 service territory as part of its GT Plan. As fiber capacity is installed as part of rural
12 broadband projects, the Company will also have the ability to utilize broadband capacity
13 for grid operational purposes. Given the dual capacity of fiber installed as part of the
14 Rural Broadband Program, it is necessary to allocate costs between distribution grid
15 operations and broadband utilization. The Company recommends continuing to use the
16 methodology previously approved in Case No. PUR-2020-00197 to allocate costs
17 between the Rural Broadband Projects and approved GT Plan telecommunications
18 projects.⁶

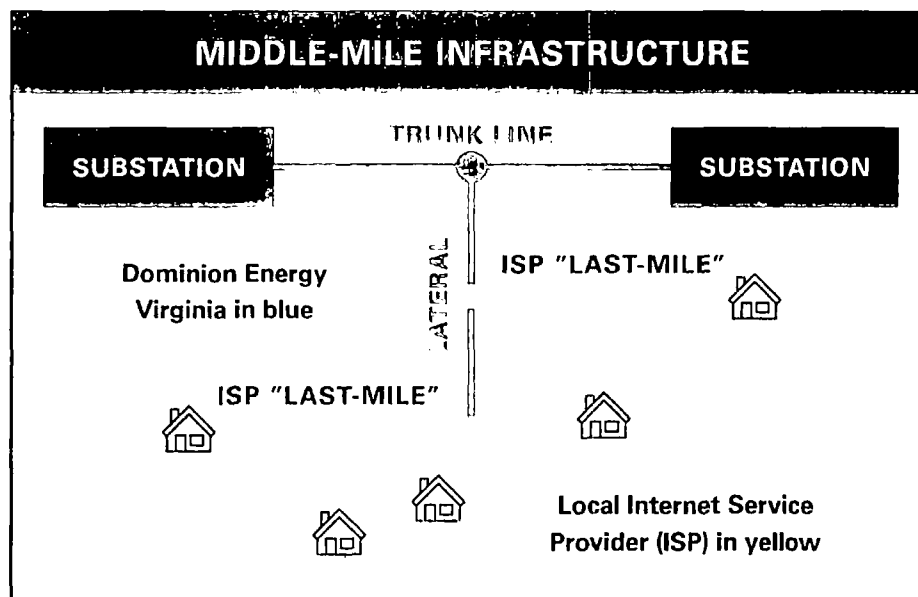
19 **Q. Please describe the methodology.**

20 A. To understand the methodology, it is necessary to understand two key terms—trunk line
21 and lateral, as the cost allocation methodology is dependent on the locational value of the

⁶ *Petition of Virginia Electric and Power Company, For approval of a rate adjustment clause, designated Rider GT, under § 56-585.1 A 6 of the Code of Virginia, Case No. PUR-2021-00083 (pending).*

1 fiber along our distribution facilities. Figure 1 below has a simple one-line diagram that
 2 depicts these terms.

Figure 1



3 First, trunk lines are the fiber facilities that will be installed along the Company's existing
 4 electric distribution facilities that run between substations. These existing electric
 5 facilities are typically the Company's main three-phase distribution lines that
 6 interconnect distribution substations. From these trunk lines, fiber laterals will be
 7 installed along electric distribution tap lines that spur off the three-phase mainline to
 8 serve residential and commercial customers. These electric tap lines can traverse long
 9 distances and often serve a relatively small number of customers in rural areas. The fiber
 10 laterals are a key component of enabling last mile ISPs to offer broadband services to
 11 areas currently unserved, and therefore critical to the success of the projects. The
 12 Company's middle-mile fiber must be reasonably close to customers and businesses so

1 the ISP can install the last mile in a cost-effective manner and provide sustainable
 2 broadband to these unserved areas. Also, it is worth reiterating that customers will not be
 3 directly connected to the Company's middle-mile fiber.

4 The Company plans to install 144-strand fiber along these trunk lines to allow for (i)
 5 broadband capacity to ISPs, (ii) Company use, and (iii) sufficient spares for both repair
 6 work and technology growth.

7 For purposes of allocating the costs for the trunk lines, the Company considers all costs
 8 associated with (i) installation of access points for the ISPs and (ii) easement research and
 9 acquisition to be incremental to the GT Plan projects. These two cost categories are
 10 clearly incremental to the GT Plan costs as they are driven solely by the need to provide
 11 middle-mile service to the ISPs.⁷ With respect to costs associated with designing the
 12 fiber installation, installing the fiber and the make-ready work, the Company initially
 13 plans to allocate 72 strands for the provision of broadband in these unserved areas and
 14 leave 72 strands for its own use. As a result, the Company considers the allocation of 50
 15 percent of these trunk line costs to be the incremental costs for purposes of Rider RBB,
 16 with the remaining 50 percent allocated to Rider GT.⁸

17 Based on current methodology, the new fiber along the laterals will have a higher
 18 utilization towards providing middle-mile broadband capacity to ISPs. The Company's
 19 current plan is to install 72-strand fiber along the laterals. The Company initially plans to

⁷ The Company has existing easements for its electric distribution facilities, but in some cases, it is required to obtain new easements to provide middle-mile broadband capacity. These are referred to as "Supplementary Communications Rights Easements." Since these easement acquisition costs are directly caused by the rural broadband projects, all such costs are allocated to Rider RBB.

⁸ *Petition of Virginia Electric and Power Company, For approval of a rate adjustment clause, designated Rider GT, under § 56-585.1 A 6 of the Code of Virginia*, Case No. PUR-2021-00083 (pending).

1 allocate 60 strands (or approximately 83% of total strands) for the provision of broadband
 2 in these unserved areas and leave 12 strands (or approximately 17% of total strands) for
 3 its own use. The Company currently envisions a more limited use for the fiber along
 4 these laterals based on the design of an electric distribution system; therefore, it believes
 5 the allocation of 12 strands is reasonable and prudent for its own use should future
 6 operational needs arise or for use at distributed solar facilities. The Company also notes
 7 that it is best to allocate fiber strands in increments of 12 for operational use. The 60
 8 strands for broadband use will be adequate to meet the needs of our current ISP partners,
 9 allow for sufficient spares, and be available for future ISPs if requested. For purposes of
 10 cost allocation, consistent with the methodology for trunk lines, all costs for easement
 11 research and acquisition and access point costs are considered incremental to the GT Plan
 12 costs. With respect to costs associated with designing the fiber installation, installing the
 13 fiber and the make-ready work, the Company considers the allocation of 83% of these
 14 lateral line costs to be the incremental costs for purposes of Rider RBB. The remaining
 15 17 % of the lateral costs will be allocated to Rider GT.

16 **II. PROJECT UPDATES FOR PREVIOUSLY APPROVED RAC PROJECTS**

17 **A. Surry Project**

18 **Q. Please provide a progress update for the Surry Project, including costs incurred.**

19 **A.** As of December 31, 2021, the Surry Project was substantially complete. This includes
 20 middle-mile fiber construction, fiber testing and handoff to our ISP partner, PGEC
 21 Enterprises, LLC, DBA RURALBAND ("RURALBAND"), and execution of the lease
 22 agreement with RURALBAND. Although the entire path was built in 2021, there is a
 23 small portion of the mileage associated with a work request that closed in 2022. As

indicated by the number of customer enrollments in the Company's Annual Report provided in Case No. PUR-2020-00197 on March 31, 2022, RURALBAND has been successfully connecting unserved customers in Surry County. These results reflect the need and interest of customers that currently lack broadband access today.

The estimated costs for the Surry Project are shown in Table 1 below, and the actual costs incurred for the Surry Project are shown in Table 2 below and in my Schedule 2.

Extraordinarily Sensitive Information Redacted

Table 1

SURRY BROADBAND PILOT COST ALLOCATION METHODOLOGY - ESTIMATED COSTS

SURRY	GT Fiber / RBB Pilot - 144 ADSS				GT Fiber / RBB Pilot - 72 ADSS				GT Fiber / RBB Pilot - SURRY		
	26.7 Miles - Trunkline to support ISP				16.5 Miles - Laterals to unserved areas				43.2 Miles - to support ISP		
	Est. Costs	GTP Alloc.	RBB Alloc.		Est. Costs	GTP Alloc.	RBB Alloc.		Est. Costs	GTP Alloc.	RBB Alloc.
Design											
Easement Acq.											
Make Ready											
Fiber Install.											
Access Points											
	2,295,415	930,436	1,364,980		1,290,519	166,297	1,124,222		3,585,934	1,096,733	2,489,201
	Allocation %	41%	59%		Allocation %	13%	87%		Allocation %	31%	69%

Table 2

SURRY BROADBAND PILOT COST ALLOCATION METHODOLOGY - ACTUAL COSTS

SURRY	GT Fiber / RBB Pilot - 144 ADSS				GT Fiber / RBB Pilot - 72 ADSS				GT Fiber / RBB Pilot - SURRY		
	23.5 Miles - Trunkline to support ISP				16.5 Miles - Laterals to unserved areas				40 Miles - to support ISP		
	Act. Costs	GTP Alloc.	RBB Alloc.		Act. Costs	GTP Alloc.	RBB Alloc.		Act. Costs	GTP Alloc.	RBB Alloc.
Design				+				=			
Easement Acq.											
Make Ready											
Fiber Install.											
Access Points											
	3,935,291	1,444,096	2,491,195		2,371,032	270,016	2,101,016		6,306,323	1,714,112	4,592,211
	Allocation %	37%	63%		Allocation %	11%	89%		Allocation %	27%	73%

When comparing the estimated cost to the actual cost shown in the table above, it is critical to note that the pilot allowed the Company to develop and test strategies which would ultimately permit the program to be executed efficiently once scaled up. The cost differential is largely due to the Company's initial easement strategy and the need for more expensive workarounds for parcels where the Company was unable to obtain supplemental easements. The Company's initial approach, which was implemented on

1 the Surry Project and portions of the Northern Neck and Botetourt Projects, was to
2 attempt to secure supplemental easements from all property owners along the path of new
3 broadband installations. The Company found its initial approach was time-consuming,
4 laborious, and led to expensive workarounds, which included instances of
5 undergrounding new fiber facilities to avoid parcels where overhead infrastructure (poles)
6 already existed, but the Company was unable to secure a supplemental easement.

7 Observed costs versus mitigated risks for the Surry Project led the Company to revisit the
8 supplemental easement strategy. The Company now conducts easement research, utilizes
9 existing land rights and language in enabling legislation, which has improved program
10 efficiency. Overall, the pilot projects have been extremely valuable to the Company's
11 understanding and development of more efficient processes for project execution.

12 Adjustments made to the approach for project execution will provide more cost certainty
13 on future petitions, most notably by limiting the need for costly underground
14 workarounds. As a result, the Company does not anticipate substantial cost differences
15 between estimates and the actual project costs going forward.

16 **B. Botetourt Project**

17 **Q. What is the current status of the Botetourt Project?**

18 **A.** As of December 31, 2021, a 2.2-mile work request was complete and closed on the
19 Botetourt Project. There are currently numerous other work requests in various stages of
20 the construction process. Once complete, the overall Botetourt Project will include
21 approximately 31.3 miles of middle-mile fiber. Easement research and acquisition have
22 been completed.

1 In the final design process, the Company identified an approximately 5.1-mile section of
 2 the middle-mile fiber route that will traverse severe terrain and will necessitate fiber
 3 installation on a section of H-frame transmission facilities that is currently used for
 4 distribution purposes. The unique nature of this section has extended the anticipated
 5 duration of the overall project due to the engineering study and future construction
 6 project required for this portion of the middle-mile route. It is worth noting this section
 7 could impact the actual cost for the Botetourt Project. Also, although easement related
 8 activities were generally successful on the Botetourt Project, the amount of review and
 9 detailed customer interactions will potentially influence the overall actual cost. Details
 10 on the final cost variance, if any, will be included in a future true-up for the Botetourt
 11 Project. The costs incurred thus far for the Botetourt Project through December 31, 2021,
 12 for Rider RBB, are shown by year in Table 3 and by month in my Schedule 2.

Table 3

Project Expenses	2020	2021
Botetourt	\$639K	\$2.0M

13 **Q. What is the expected completion date for the Botetourt Project?**

14 **A.** As of the date of this Petition, 15.4 miles (or approximately 50%) of the estimated 31.3
 15 mile Botetourt Project were either complete or in some phase of the construction process.
 16 Of the miles remaining, approximately 5 miles pertain to the work request being installed
 17 on the H-frame transmission infrastructure, and the Company is currently reviewing the
 18 engineering and design report provided by the vendor who performed the study. The
 19 Company anticipates finalizing the design requirements of the outstanding project miles
 20 in the second quarter of 2022 and will then transition the project through the construction

1 process. Based on progress to date, the Company expects to complete the Botetourt
2 Project by November 30, 2022.

3 **Q. Pursuant to Ordering Paragraph (1) of the June 9, 2021 Final Order of the**
4 **Commission issued in Case No. PUR-2020-00197, the Company was required to**
5 **submit an annual report to Staff providing project updates and certain ISP**
6 **customer information. Did the Company submit the required report in 2022?**

7 A. Yes, the Company submitted the report on March 31, 2022, in the docket for Case No.
8 PUR-2020-00197, providing the requested information.

9 **Q. As a part of this proceeding, does the Company wish to propose changes to the**
10 **annual reporting requirements?**

11 A. Yes, based in part on the changes to the Broadband Statute, the Company requests that it
12 only be required to provide information that is within its control, specifically the miles of
13 fiber installed and miles of fiber remaining to be installed, and the breakdown of the
14 number of poles replaced and rationale for replacement.

15 **Q. Please explain further.**

16 A. The current version of the Broadband Statute provides in relevant part that the
17 “Commission shall also condition any approval of such petition on the requirement that
18 the utility *and its Internet service provider submit* annual public reports on construction
19 progress by the utility and delivery of broadband services by the Internet service provider
20 until construction is completed.”⁹ The Broadband Statute therefore recognizes that the
21 information regarding delivery of broadband services to citizens is possessed by the ISPs

⁹ Va. Code § 56-585.1:9 D (emphasis added).

1 and not under the control of the Company. The Company is committed to working with
 2 Staff to determine the best course for providing meaningful information within the
 3 Company's control.

4 III. PROPOSED NEW PROJECTS FOR APPROVAL

5 A. Northern Neck Project Including King William and Lancaster Counties

6 **Q. Please provide a status update for the Northern Neck Project.**

7 A. The Company has approximately 116 miles in some stage of the construction process.
 8 The remaining mileage is in the permitting process and will continue to be released to
 9 construction throughout the rest of the year.

10 **Q. As with any construction project, minor changes, such as mileage variances, can be**
 11 **expected. Were there any variations or changes to the original estimated route?**

12 A. Yes. When the Company submitted the pilot filing in October 2020 for the Northern
 13 Neck Project the estimated mileage of 217.2 miles (including Stafford) was based on
 14 information available at that time related to trunk line and laterals required to provide
 15 access to unserved areas. Since the filing, the Company has worked closely with its ISP
 16 partner, All Points Broadband ("All Points"), and performed detailed scoping efforts in
 17 the field to identify the specific routes required to provide access to all unserved
 18 customers throughout the Northern Neck region. These efforts resulted in minor changes
 19 to the original estimated route, increasing the estimated mileage to 221.9.¹⁰

¹⁰It is the Company's position that these additional 4.7 miles are within the scope of the estimated miles for the Northern Neck Project approved by the Commission in Case No. PUR-2020-00197. Should the Commission disagree, the Company requests approval for this additional work as part of the Northern Neck Project in this proceeding.

Q. Beyond these minor adjustments, why are additional miles of fiber in the initial counties necessary for the Northern Neck Project?

A. As described in the testimony of James G. Carr, All Points was awarded funding through the Rural Digital Opportunity Fund ("RDOF") in December 2020 and VATI in December 2021, which both occurred after the original pilot filing. These awards resulted in the identification of additional unserved areas across the Northern Neck region, which resulted in the need for an additional 65.8 miles of middle-mile fiber across the four counties to provide universal access to all unserved customers in the Northern Neck area. As a result, the original Northern Neck Project includes a total of approximately 287.7 miles of fiber in the original counties. In conjunction with the original counties, the Company is also requesting approval to install fiber in King William and Lancaster Counties. Please refer to Table 4 below for a detailed breakdown of the 416 total miles estimated for the Northern Neck Project.

Table 4

	Prudency Approved							Expansion			Total Miles
	2020 Testimony			True-Up			Delta	Add'l Miles	New Counties		
	Trunk Line	Lateral	TOTAL	Trunk Line	Lateral	TOTAL			All	Trunk Line	Lateral
Stafford	8.1	-	8.1	8.6	-	8.6	0.5	-			8.6
King George	23.9	45.7	69.6	40.0	28.3	68.3	(1.3)	19.7			88.0
Westmoreland	35.1	30.9	66.0	33.7	32.0	65.7	(0.3)	23.2			88.9
Richmond	21.3	4.8	26.1	11.6	19.3	30.9	4.8	1.9			32.8
Northumberland	28.2	19.2	47.4	33.3	15.1	48.4	1.0	21.0			69.4
Lancaster									20.9	46.2	67.1
King William									28.9	32.3	61.2
Total	116.6	100.6	217.2	127.2	94.7	221.9	4.7	65.8	49.8	78.5	416.0

Q. Please describe the work to be done in King William and Lancaster Counties as proposed by the Company?

A. Dominion Energy Virginia and All Points have entered into a memorandum of understanding ("MOU") where All Points will lease middle-mile dark fiber from the

1 Company in King William and Lancaster counties. All Points will serve as the ISP and
2 be responsible for building the last mile of fiber in King William and Lancaster Counties
3 for Dominion Energy customers, including the Pamunkey Indian Reservation.¹¹ All
4 Points will also serve as the ISP and be responsible for building the last mile of fiber in
5 Lancaster County for Northern Neck Electric Cooperative customers and in King
6 William County for Rappahannock Electric Cooperative customers.

7 Dominion Energy Virginia plans to install 144-count All-Dielectric Self-Supporting
8 ("ADSS") fiber along the trunkline route for approximately 28.9 miles throughout King
9 William County as depicted in my Schedule 4. Additionally, the Company plans to
10 install 72-count ADSS fiber along the various lateral routes for approximately 32.3 miles
11 as depicted in my Schedule 4. Along that route, the Company will provide All Points
12 with access points at each location requested by All Points. At each access point, a coil
13 bracket and splice enclosure are required so the Company can extract the strands at each
14 requested location. Once the fiber exits the splice enclosure, the designated strands for
15 the ISP will be routed to a terminal block located further down on the pole. In addition to
16 the access points requested by All Points, the Company plans to install coil brackets
17 approximately 1,500 feet apart to store excess fiber for restoration and maintenance
18 purposes as recommended by the Company's engineering team.

19 The approximately 61.2 miles of fiber in King William County accomplishes two goals.
20 First, approximately 28.9 miles of trunkline fiber will enable [BEGIN
21 **CONFIDENTIAL INFORMATION** [REDACTED] **END**

¹¹ <https://news.dominionenergy.com/Fiber-To-The-Home-Initiative-To-Serve-The-Pamunkey-Indian-Reservation>.

1 **CONFIDENTIAL INFORMATION]** in King William County. Additionally, mainline
2 fiber will be extended to the border of King and Queen County so the **[BEGIN**

3 **CONFIDENTIAL INFORMATION]** [REDACTED]
4 **[END CONFIDENTIAL INFORMATION]** as part of a future GT Plan project. Also,

5 mainline fiber will extend to the border of Hanover County and connect to existing fiber
6 **[BEGIN CONFIDENTIAL INFORMATION]** [REDACTED]

7 [REDACTED] **[END CONFIDENTIAL INFORMATION]**. Second, the remaining
8 approximately 32.3 miles represent lateral middle-mile fiber infrastructure that the
9 Company plans to build in support of the partnership with All Points to provide
10 broadband to customers in the unserved areas of King William County. See Schedule 4.

11 Dominion Energy Virginia plans to install 144-count ADSS fiber along the trunkline
12 route for approximately 20.9 miles throughout Lancaster County as depicted in my
13 Schedule 4. Additionally, the Company plans to install 72-count ADSS fiber along the
14 various lateral routes for approximately 46.2 miles as depicted in my Schedule 4.

15 The approximately 67.1 miles of fiber in Lancaster County accomplishes two goals.

16 First, approximately 20.9 miles of trunkline fiber which will enable the Company to

17 **[BEGIN CONFIDENTIAL INFORMATION]** [REDACTED]
18 [REDACTED] **[END**

19 **CONFIDENTIAL INFORMATION]** as part of future GT Plan projects. Second, the
20 remaining approximately 46.2 miles represent lateral middle-mile fiber infrastructure that
21 the Company plans to build in support of the partnership with All Points to provide
22 broadband to customers in the unserved areas of Lancaster County. See Schedule 4.

1 Access points will be provided to All Points and additional fiber will be stored as
2 described above.

3 **Q. How did the Company identify potential ISPs and ultimately select All Points**
4 **Broadband as the preferred ISP for the Northern Neck Project?**

5 **A.** Dominion Energy Virginia submitted a Request for Information (“RFI”) in August 2019
6 announcing the Company’s interest in pursuing partnership opportunities under Va. Code
7 § 56-585.1:9 with non-governmental ISPs. All Points responded to the RFI. The
8 Company met with All Points in October 2019. After signing a non-disclosure
9 agreement, both parties started to negotiate the project potential for numerous counties,
10 including various counties across the Northern Neck region. All Points and the Company
11 initially reached agreement on four counties in the Northern Neck region, King George,
12 Westmoreland, Richmond, and Northumberland. After additional meetings and
13 presentations, the Company, All Points, and King William County executed an MOU to
14 expand the partnership in the Northern Neck initiative in November 2020.

15 Lancaster County was also part of the Company’s initial evaluation in the Northern Neck
16 and referenced in the pilot filing. Ultimately, Lancaster was removed from the pilot
17 project because Lancaster was not part of the original MOU. Since that time, the
18 Company, All Points, and Lancaster County also executed an MOU in April 2021 to
19 further expand the partnership for the Northern Neck initiative.

20 **Q. What is the expected completion date for the Northern Neck Project?**

21 **A.** As of the date of this petition, 116 miles (or approximately 28%) of the estimated 416
22 miles in the Northern Neck Project are in some phase of the construction process. The

1 Company is in the process of finalizing design related steps for the remaining 300 miles
 2 so those projects can also be released to the construction process. Based on the progress
 3 to date and the remaining mileage, the Company has a high degree of confidence that the
 4 majority of the Northern Neck Project for the initial counties will be complete by the end
 5 of 2022, barring any unforeseen delays that can arise on individual work requests related
 6 to unique permitting situations.

7 **Q. What are the total estimated costs for the Northern Neck Project that the Company**
 8 **seeks to recover in this proceeding?**

9 A. The total estimated capital cost for the Northern Neck Project is approximately \$43.9
 10 million, with rural broadband incremental costs of approximately \$32.1 million. The
 11 Company therefore seeks recovery of \$32.1 million for the Northern Neck Project in this
 12 proceeding. See Schedule 3.

13 **B. Thomas Jefferson Planning District Project: Louisa and Appomattox Counties**

14 **Q. Please describe the proposed fiber installation in Louisa and Appomattox Counties.**

15 A. Dominion Energy Virginia, Firefly Fiber Broadband (a non-governmental ISP and
 16 wholly-owned subsidiary of Central Virginia Electric Cooperative ("CVEC")) and
 17 Rappahannock Electric Cooperative ("REC") have entered into an agreement where
 18 Firefly Fiber Broadband ("Firefly") will lease middle-mile dark fiber from the Company
 19 in eight counties, including Appomattox and Louisa Counties.¹² Firefly will serve as the

¹² <https://news.dominionenergy.com/2021-06-24-More-than-25,000-Central-Virginians-Could-Get-Broadband-Access-Through-Regional-Broadband-Partnership>.

1 ISP and be responsible for building the last mile of fiber in Appomattox and Louisa
2 Counties for both Dominion Energy Virginia and REC customers.

3 Dominion Energy Virginia plans to install 144-count ADSS fiber along the trunkline
4 route for approximately 13.1 miles throughout Appomattox County as depicted in my
5 Schedule 5. Additionally, the Company plans to install 72-count ADSS fiber along the
6 various lateral routes for approximately 40.9 miles as depicted in my Schedule 5. Along
7 the routes, the Company will provide Firefly with access points at each location requested
8 by Firefly. At each access point, a coil bracket and splice enclosure are required so the
9 Company can extract the strands at each requested location. Once the fiber exits the
10 splice enclosure, the designated strands for the ISP will be routed to a terminal block
11 located further down on the pole. In addition to the access points requested by Firefly,
12 the Company plans to install coil brackets approximately 1,500 feet apart to store excess
13 fiber for restoration and maintenance purposes as recommended by the Company's
14 engineering team.

15 The approximately 54 miles of fiber in Appomattox County accomplishes two goals.
16 First, approximately 13.1 miles of trunkline fiber will help [BEGIN CONFIDENTIAL
17 INFORMATION] [REDACTED]
18 [REDACTED] [END CONFIDENTIAL
19 INFORMATION]. Second, the remaining approximately 40.9 miles represent lateral
20 middle-mile fiber infrastructure that the Company plans to build in support of the
21 partnership with Firefly to provide broadband to customers in the unserved areas of
22 Appomattox County. See Schedule 5.

1 Dominion Energy Virginia plans to install 144 count ADSS fiber along the trunkline
2 route for approximately 16.7 miles throughout Louisa County as depicted in my Schedule
3 5. Additionally, the Company plans to install 72 count ADSS fiber along the various
4 lateral routes for approximately 43.1 miles as depicted in my Schedule 8. Along the
5 routes, the Company will provide Firefly with access points at each location requested by
6 Firefly.” Access points will be provided to Firefly and additional fiber will be stored as
7 described above.

8 The approximately 59.8 miles of fiber in Louisa County likewise accomplishes two goals.
9 First, approximately 16.7 miles of trunkline fiber will help [BEGIN CONFIDENTIAL
10 INFORMATION] [REDACTED]
11 [REDACTED] [END CONFIDENTIAL INFORMATION]. In
12 addition, the Company will build trunkline to the border of Orange County, so the
13 [BEGIN CONFIDENTIAL INFORMATION] [REDACTED]
14 [END CONFIDENTIAL INFORMATION] by a future GT Plan project. Second, the
15 remaining approximately 43.1 miles represent lateral middle-mile fiber infrastructure that
16 the Company plans to build in support of the partnership with Firefly to provide
17 broadband to customers in the unserved areas of Louisa County. See Schedule 5.

18 **Q. How did the Company identify potential ISPs and ultimately select Firefly Fiber**
19 **Broadband as the preferred ISP for the Thomas Jefferson Planning District**
20 **Project?**

21 **A.** Dominion Energy Virginia issued an RFI in August 2019 announcing the Company’s
22 interest in pursuing partnership opportunities under Va. Code § 56-585.1:9 with non-
23 governmental ISPs. Firefly responded with an interest in partnering with the Company.

1 After signing a non-disclosure agreement, both parties started to negotiate the project
2 potential with numerous counties across the central Virginia region that are part of a
3 larger regional initiative, known as the Thomas Jefferson Planning District. Firefly and
4 the Company identified nine counties, including Appomattox and Louisa, within the
5 regional initiative where the Company will build middle-mile infrastructure. After
6 various meetings and presentations, the Company, Firefly, REC, and eight of the nine
7 counties executed an MOU¹³ to partner in the Thomas Jefferson Planning District
8 regional broadband program effective March 2021.

9 **Q. Please describe the timeline for implementation for the Thomas Jefferson**
10 **Planning District Project?**

11 A. In Appomattox and Louisa Counties, scoping activities are complete and detailed design
12 is underway. Installation of middle-mile fiber will likely commence before the end of
13 2022, with completion planned in 2023.

14 **Q. What are the total estimated costs for the Thomas Jefferson Planning District**
15 **Project that the Company seeks to recover in this proceeding?**

16 A. The total estimated capital cost for the Thomas Jefferson Planning District Project is
17 approximately \$12 million, with the rural broadband incremental costs of approximately
18 \$9.5 million. At the county level, the estimated capital costs are approximately \$5.4
19 million for Appomattox and \$6.6 million for Louisa, with the incremental cost of

¹³ More than 25,000 Central Virginians Could Get Broadband Access Through Regional Broadband Partnership - Jun 24, 2021 (dominionenergy.com).

1 approximately \$4.3 million and \$5.2 million, respectively. The Company seeks recovery
2 of \$9.5 million for the Thomas Jefferson Planning District Project in this proceeding.

3 **Q. Please describe the capital cost categories for the Proposed New Projects and how**
4 **they will be allocated between Rider RBB and the Rider GT?**

5 **A.** The Company plans to allocate project costs between Rider GT and Rider RBB by
6 compartmentalizing costs into five main categories: (i) Design, (ii) Easement Research
7 and Acquisition, (iii) Make-Ready, (iv) Fiber Installation, and (v) Access Points.

- 8 • **Design** costs reflect the labor to support the field assessments, detailed technical
9 drawings, permitting, joint use coordination utilizing the National Joint Utilities
10 Notifications System, and coordination with project management regarding the
11 access point locations needed to support the ISP partnership.
- 12 • **Easement research and acquisition** costs represent the labor to support the
13 process of researching existing easements and securing Supplemental
14 Communication Easements in specific cases, such as installing a new pole, so the
15 Company can lease the dark fiber to third-parties for telecommunication purposes.
- 16 • **Make-ready** costs represent the work that needs to be done on Company-owned
17 electric distribution infrastructure to accommodate the installation of fiber within
18 the Company's supply space. This work includes moving wires and devices, and
19 replacing or adding poles if sufficient spacing or clearances cannot be achieved
20 with other options.
- 21 • **Fiber installation** costs include the labor and material required to install the fiber
22 along the proposed fiber route once make-ready work has been completed.

- Access point costs include the labor and material required to deliver the leased fiber strands at locations designated by the ISP. These locations establish a “point of demarcation” that separates the Company’s system from the ISP fiber system.

Please see Tables 5 and 6 below and my Schedule 3 for cost estimates by capital cost category and fiber line type, along with the allocation percentages between Rider RBB and Rider GT.

Extraordinarily Sensitive Information Redacted

Table 5

Northern Neck Broadband Cost Allocation Methodology

Values exclude estimated project surcharge

Expense Categories	Estimated Costs	GTP Allocation	RBB Allocation
Design			
Easement Res			
Make Ready			
Fiber Install			
Access Points			
	\$ 17,573,680	\$ 7,608,370	\$ 9,965,310
	Allocation %	43%	57%

177.0 Miles - Mainline to support ISP

+

Expense Categories	Estimated Costs	GTP Allocation	RBB Allocation
Design			
Easement Res			
Make Ready			
Fiber Install			
Access Points			
	\$ 23,575,041	\$ 3,457,491	\$ 20,117,550
	Allocation %	15%	85%

239.0 Miles - Laterals to unserved areas

=

Expense Categories	Estimated Costs	GTP Allocation	RBB Allocation
Design			
Easement Res			
Make Ready			
Fiber Install			
Access Points			
	\$ 41,148,721	\$ 11,065,861	\$ 30,082,860
	Allocation %	27%	73%

416.0 Miles - Total

Extraordinarily Sensitive Information Redacted

Table 6

Thomas Jefferson Broadband Cost Allocation Methodology

Values exclude estimated project surcharge

Expense Categories	Estimated Costs	GTP Allocation	RBB Allocation
Design			
Easement Res			
Make Ready			
Fiber Install			
Access Points			
	\$ 2,952,382	\$ 1,224,557	\$ 1,727,825
	Allocation %	41%	59%

29.8 Miles - Mainline to support ISP

+

Expense Categories	Estimated Costs	GTP Allocation	RBB Allocation
Design			
Easement Res			
Make Ready			
Fiber Install			
Access Points			
	\$ 8,286,622	\$ 1,167,934	\$ 7,118,688
	Allocation %	14%	86%

84.0 Miles - Laterals to unserved areas

=

Expense Categories	Estimated Costs	GTP Allocation	RBB Allocation
Design			
Easement Res			
Make Ready			
Fiber Install			
Access Points			
	\$ 11,239,005	\$ 2,392,491	\$ 8,846,514
	Allocation %	21%	79%

113.8 Miles - Total

1 **IV. THE COMPANY'S RURAL BROADBAND PROJECTS**

2 **Q. How has the Company considered the environmental justice impact of the Proposed**
3 **New Projects in this proceeding?**

4 A. The Company engaged Dramby Environmental Consulting, Inc. to conduct an
5 environmental justice review for the Proposed New Projects and to provide
6 comprehensive environmental justice reports for the areas surrounding each project.¹⁴
7 The environmental justice review indicates that the projects will not disproportionately
8 impact environmental justice ("EJ") communities. Rather, EJ communities and other
9 Company customers stand to benefit from the program regardless of their race or
10 socioeconomic status. For more detailed information regarding the environmental justice
11 review and impact, please see the environmental justice reports attached as Schedules 6
12 and 7.

13 **Q. Va. Code § 56-585.1:9 states that the Company is responsible for obtaining all**
14 **necessary rights-of-way, easements or real property rights to permit leasing of**
15 **broadband capacity to an ISP. Has the Company developed a plan for ensuring**
16 **that it has the necessary easements or property rights?**

17 A. Yes. Where permissible, Dominion Energy Virginia will utilize its existing easements
18 for the Company's rural broadband efforts pursuant Va. Code § 55.1-306.1. If there are
19 additional easements required, the Company plans to secure a new Supplemental
20 Communication Rights Easement for the corresponding parcel in the respective county
21 where fiber is to be installed. Since the Company plans to utilize existing electric

¹⁴ An environmental assessment for Lancaster County was included in the Environmental Justice Report for the Northern Neck Project submitted in Case No. PUR-2020-00197. See Ex. 22, Rebuttal Testimony of Augustus Johnson, IV, Schedule 3.

1 distribution infrastructure, the new document will serve as a supplemental agreement to
2 the existing rights-of-way. A sample Supplementary Communication Rights Easement
3 Agreement is included as Schedule 8.

4 **Q. Will residents, schools, local government offices, libraries, churches, and businesses**
5 **in the areas impacted by the installation of the fiber be notified?**

6 A. Yes. The Company has developed a comprehensive communications plan for the
7 program. With each project, initial outreach is conducted with local stakeholders,
8 officials, and partner organizations. Historically, a press release coincides with an online
9 announcement on Dominion Energy Virginia's public website
10 (www.DominionEnergy.com/RuralBroadband) with follow-up news coverage via local
11 media outlets. While crews and contractors are working, the Company provides general
12 project updates on the web or via other channels, such as presentations or email
13 exchanges, during the preliminary project scoping and design phases.

14 Once properties have been identified, owners will be mailed a series of communications
15 during the project lifecycle, including an introductory mailer, an easement package
16 (where necessary), and follow-up correspondence. Land agents, authorized to work on
17 behalf of the Company to secure the easements, will also communicate with property
18 owners through phone calls, emails, or in-person appointments. Communications will
19 continue throughout the construction phase. If residential or commercial customers are
20 impacted by a service outage, the Company will utilize existing outage notification
21 processes currently in place for electric distribution projects.

1 **Q. What are the total estimated capital costs for the Northern Neck Project (including**
2 **King William and Lancaster Counties), and the Thomas Jefferson Planning District**
3 **Project (Louisa and Appomattox Counties)?**

4 **A. The total estimated capital costs for the Northern Neck Project (including King William**
5 **and Lancaster Counties) and the Thomas Jefferson Planning District Project are**
6 **approximately \$55.9 million, with the rural broadband incremental costs of**
7 **approximately \$41.6 million. See Schedule 3.**

8 **Q. How did the Company develop the cost estimates for the Northern Neck and**
9 **Thomas Jefferson Planning District Projects?**

10 **A. The Company prepared estimates based on its experience and on detailed designs for the**
11 **majority of the miles within these project areas, complete with unit pricing and other key**
12 **professional services. The detailed design estimates were used as the foundation to**
13 **determine the estimated cost for the projects as provided in Schedule 3.**

14 **Q. In addition to the projected capital spend, are there incremental operation and**
15 **maintenance (“O&M”) costs associated with the Northern Neck and Jefferson**
16 **Planning District Projects?**

17 **A. Yes, there will be incremental O&M costs associated with these fiber projects. These are**
18 **related to the new activities that will be required to support the ISPs, maintain and repair**
19 **the fiber routes, setup and operate the required billing processes, develop and report on**
20 **service level agreements, and administer the contracts and agreements in place with third**
21 **parties.**

1 **Q. What are the estimated incremental O&M costs, and how have those estimates been**
2 **developed?**

3 A. The incremental O&M costs required to support the Northern Neck and Thomas
4 Jefferson Planning District Projects are estimated at approximately 10% of the capital
5 project costs. This estimate consists of direct fiber maintenance and repairs, which is
6 estimated at approximately 6% of project capital costs, plus an additional approximately
7 4% to cover the incremental support and administration efforts described above. The
8 fiber maintenance and repair estimate is based on Company actuals from current fiber
9 projects as well as industry benchmarks. The support and administration estimate is
10 based on Company labor rates and inputs from similar efforts and prior experience. See
11 Schedule 3. A true-up of the O&M costs will occur each year, as described in Company
12 Witness Justin A. Wooldridge's testimony.

13 **Q. The Company already operates a fiber network as part of its telecommunications**
14 **infrastructure. Why are these costs not already covered as part of those operations?**

15 A. The Rural Broadband Projects are a new business and operating model that is unique
16 from the Company's existing operations. This effort involves the design and execution of
17 new processes, operations of new systems, and creation of new roles and responsibilities
18 to support the ISPs through outages and repairs, maintenance activities, recurring billing,
19 and contract administration activities. For example, a new contract mechanism and set of
20 activities will be developed to handle incoming support requests from an ISP because the
21 electric outage reporting processes that exist today for core operations are not designed to
22 handle this type of service. Communication channels to handle requests will need to be
23 created and maintained for this specific purpose, as well as the associated management,

1 tracking, and reporting of requests and how they are resolved. Personnel and supervisors
2 will need to be trained in the new diagnostics and troubleshooting processes associated
3 with each request, including new procedures to work with utility operations while
4 supporting the Company's obligations to the ISPs under the relevant lease agreements
5 between the Company and each ISP. A similar level of new systems and processes will
6 be required to support each functional area within this new line of fiber business.

7 **Q. Has the Company proposed the most cost-effective solutions for the Proposed New**
8 **Projects?**

9 A. Yes, the Company plans to deploy a dark fiber system, built in the power supply space to
10 help reduce the make-ready costs associated with fiber deployment.

11 **Q. Do you believe that the Proposed New Projects should be found reasonable and**
12 **prudent by the Commission?**

13 A. Yes, I do. Broadband access is no longer a convenience but a necessity. It is necessary
14 to support economic stability and development, social equity, public health, public safety,
15 and educational access. Accordingly, the General Assembly concluded that the utility's
16 provision of broadband capacity to ISPs in unserved areas of the Commonwealth is in the
17 public interest.¹⁵

18 **Q. Briefly explain why cost recovery should also be approved in this proceeding for the**
19 **Proposed New Projects.**

20 A. As explained by Company Witness Wooldridge, the Company is requesting recovery of a
21 total revenue requirement of approximately \$7.4 million for these projects and the

¹⁵ Va. Code § 56-585.1:9 A.

1 previously approved projects. The implementation of the proposed Rider RBB on
 2 December 1, 2022, will increase the residential customer's monthly bill, based on 1,000
 3 kWh per month, by \$0.14 compared to the current Rider RBB. The total Rider RBB
 4 monthly bill impact will be \$0.17. The cost estimates are detailed and reasonable, as they
 5 are supported by the Company's experience, requests for proposals, vendor quotes,
 6 existing contracts, and design plans.

7 **Q. Does the revenue requirement account for the lease revenues received from ISPs?**

8 **A.** Yes. The Company and the ISP partners have agreed on the amounts and the timing for
 9 lease payments.

10 **Q. Please introduce the witnesses sponsoring direct testimony for the Company in this**
 11 **proceeding.**

12 **A.** In support of its Petition, the Company is presenting the following additional witnesses:

- 13 • **Bradley R. Carroll, Sr., Director – IT Telecommunications**, discusses the
 14 technologies, including fiber optic cable, to be deployed for the Proposed New
 15 Projects and addresses potential cybersecurity concerns. Mr. Carroll also
 16 describes the Company's nearly 40-year experience building and maintaining
 17 fiber optic networks.
- 18 • **James G. Carr, CEO – All Points Broadband**, supports the Company's plan to
 19 extend middle-mile broadband infrastructure in the Northern Neck Project,
 20 including King William and Lancaster Counties. He provides an overview of All
 21 Points' role as the ISP and how the project will bring reliable high-speed Internet
 22 to unserved areas in the Northern Neck region.
- 23 • **Gary E. Wood, President and CEO – Firefly Fiber Broadband**, supports the
 24 Company's plan to extend middle-mile broadband infrastructure in the Thomas
 25 Jefferson Planning District, specifically Appomattox and Louisa Counties. He
 26 provides an overview of Firefly's role as the ISP and how the project will bring
 27 reliable high-speed Internet to unserved areas in these counties.
- 28 • **Justin A. Wooldridge, Regulatory Analyst**, addresses the development of the
 29 revenue requirement for the Rural Broadband Projects that the Company proposes

1 to update and implement on December 1, 2022, pursuant to Va. Code §§ 56-
2 585.1:9 and 56-585.1 A 6.

- 3 • **Robert E. Miller, Regulatory Specialist**, addresses the rate design and allocation
4 aspects of Rider RBB based on the revenue requirement presented by Company
5 Witness Wooldridge, to be effective for usage on and after December 1, 2022. In
6 addition, he discusses the impact that the updated Rider RBB rate will have on
7 customer bills.

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

9 **A. Yes, it does.**

**BACKGROUND AND QUALIFICATIONS
OF
DAVID F. WALKER**

David F. Walker is Director of Rural Broadband for Dominion Energy Virginia's Power Delivery Group. He is responsible for program development and deployment of rural broadband infrastructure within the Company's regulated service territory in Virginia. Additional responsibilities include management and support of the Company's Grid Transformation Plan fiber deployment.

Mr. Walker joined Dominion Energy Virginia in 2001 as a Customer Projects Designer in the Distribution Design organization, and has held various roles in Finance, Six Sigma, Energy Marketing, Customer Service, and Key Accounts. In July 2019, Mr. Walker was promoted to Director of Key Accounts and then moved into his current role in August 2021.

Mr. Walker holds a Bachelor of Science from Radford University and a Master of Business Administration from Virginia Commonwealth University.



King William County
Est. 1702 in Virginia

20220325

BOARD OF SUPERVISORS

Percy C. Ashcraft
County Administrator

William L. Hodges, First District
Travis J. Moskalski, Second District
Stephen K. Greenwood, Third District
C. Stewart Garber, Jr., Fourth District
Edwin H. Moren, Jr., Fifth District

March 25, 2022

David Walker, Director
Rural Broadband Program
Dominion Energy
600 E. Canal St, 12th Floor
Richmond, VA 23219

RE: Dominion Energy's Petition to Virginia State Corporation Commission

Dear Mr. Walker,

King William County would like to express its enthusiastic support of Dominion Energy's efforts to include us in a program that will greatly increase broadband capacity in our region. We are a rural locality in eastern Virginia, approximately 25 miles northeast of Richmond. In 2020, the U.S. Census reported the County population as 17,810. Much of the approximately 285 square miles in King William County is farmland and timberland. Less than five percent of the County is developed for residential subdivisions, which makes it very difficult to achieve universal coverage of broadband services.

Like all rural areas in the country, King William County has been working towards improving telecommunications connectivity for our businesses and residents. The County is underserved with respect to high-speed, broadband fiber services. While progress has been made by providers in parts of the County, most of the area is unserved.

The COVID-19 crisis made it clear that the lack of broadband access is something every jurisdiction must address immediately. In the last few months, we have witnessed how our residents and businesses were at a disadvantage when the need arose to work or study from home, access online meetings, or serve customers while adhering to the recommended social-distancing guidelines. Activities enumerated by the Virginia Department of Health to mitigate the spread of the virus would have been a great deal easier to follow had all our residents and businesses had access to reliable broadband services.

Page 2

King William County engaged All Points Broadband in September of 2020 with a mandate to make real progress towards bringing fiber-to-the-home broadband to currently unserved locations in the County. Dominion Energy's support was vital to All Points success in developing network plans and securing federal funding for Phase One of the project in only five months.

The success of that initial engagement is what brought King William County to enter into a Memorandum of Understanding to collaborate with Dominion Energy, Rappahannock Electric Cooperative, and All Points Broadband with the goal of facilitating the extension of broadband capacity to all presently unserved locations in the County. The grant award funding from the Virginia Telecommunications Initiative (VATI) can be leveraged with the American Recovery Plan Act (ARPA), which includes specific funding for broadband connectivity, distance learning, telehealth, and telework. There has been no better time, in terms of potential funding availability, to implement King William County's longtime strategy to bring broadband services to our residents, businesses, and public institutions.

King William County's leadership is aware of how this project will pave the way to improved broadband access in the county, and how it will contribute, in the long term, to the County's overall strategy of resilience and economic development and enable us to put our Comprehensive Plan, Blueprint 2041, into action.

Sincerely,



Percy C. Ashcraft
County Administrator
pashcraft@kingwilliamcounty.us



**APPOMATTOX COUNTY
BOARD OF SUPERVISORS**

P.O. Box 863, Appomattox, VA 24522 Phone: (434) 352-2637
www.AppomattoxCountyVA.gov

April 25, 2022

Mr. David Walker, Director
Rural Broadband Program
Dominion Energy
600 E. Canal Street, 12th Floor
Richmond, VA 23219

RE: Dominion Energy's Petition to Virginia State Corporation Commission

Dear Mr. Walker:

Appomattox County would like to express its enthusiastic support of Dominion Energy's efforts to include us in a program that will greatly increase broadband capacity in our region. We are a rural locality in the Piedmont region and near the center of the Commonwealth of Virginia, approximately 92 miles east of Richmond. The County has a total of 335 square miles, much of which is farmland and timberland. In 2020, the U.S. Census reported the County population as 16,119.

Like all rural areas in the country, Appomattox County has been working towards improving telecommunications connectivity for our businesses and residents. The County is underserved with respect to high-speed broadband fiber services. While progress has been made by providers in parts of the County, most of the area is unserved.

The COVID-19 crisis made it clear that the lack of broadband access is something every jurisdiction must address immediately. In the last few months, we have witnessed how our residents and businesses were at a disadvantage when the need arose to work or study from home, access online meetings, or serve customers while adhering to the recommended social distancing guidelines. Activities enumerated by the Virginia Department of Health to mitigate the spread of the virus would have been a great deal easier to follow had all our residents and businesses had access to reliable broadband services.


Appomattox County engaged B2X Online broadband and Central Virginia Electric Cooperative's Firefly fiber broadband project to make real progress towards bringing broadband to currently unserved locations in the County. Dominion Energy's support was vital to success in developing network plans and securing federal funding for the project.

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The success of that initial engagement is what brought Appomattox County to enter into a Memorandum of Understanding to collaborate with Dominion Energy, Central Virginia Services, Inc., Firefly Fiber Broadband, and Rappahannock Electric Cooperative with the goal of facilitating the extension of broadband capacity to all presently unserved locations in the County. The grant award funding from the Virginia Telecommunications Initiative (VATI) can be leveraged with the American Recovery Plan Act (ARPA), which includes specific funding for broadband connectivity, distance learning, telehealth, and telework. There has been no better time in terms of potential funding availability to implement Appomattox County's longtime strategy to bring broadband services to our residents and businesses.

Appomattox County's leadership is aware of how this project will pave the way to improved broadband access in the county and how it will contribute in the long term to the County's overall strategy of resilience and economic development and enable us to put our Comprehensive Plan into action.

Sincerely,



Susan M. Adams
County Administrator
Susan.adams@appomattoxcountyva.gov

Rural Broadband Capital
November 2019 - December 2021
2022 Filing
(Presented in Dollars)

	Actual 2019	Actual 2020	Actual 2021
Easements	-		
Access Points	-		
Other	-		
Approved Projects	-	1,931,749	5,300,941
Easements			
Access Points			
Other			
Northern Neck	45,415	781,862	7,036,321
Easements	-	-	-
Access Points	-	-	-
Other	-	-	-
Total Jefferson	-	-	-
Total Rural Broadband Capital:	45,415	2,713,610	12,337,262

Extraordinarily Sensitive Information Redacted

Company Exhibit No. _____
Witness: DFW
Extraordinarily Sensitive Schedule 2
Page 1 of 10

960015022

Rural Broadband Capital (Actuals)
 November 2019 - December 2021
 2022 Filing
 (Presented in Dollars)

	Actual Nov-19	Actual Dec-19	Actual Jan-20	Actual Feb-20	Actual Mar-20	Actual Apr-20	Actual May-20	Actual Jun-20
Easements	-	-	-	-	-	-	-	-
Access Points	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Approved Projects	-	-	-	-	-	28,706	10,978	52,918
Easements	-	-	-	-	-	-	-	-
Access Points	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Northern Neck	37,607	7,808	15,844	27,493	24,879	12,731	15,571	17,999
Easements	-	-	-	-	-	-	-	-
Access Points	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total Jefferson	-	-	-	-	-	-	-	-
Total Actual Capital:	37,607	7,808	15,844	27,493	24,879	41,437	26,549	70,918

Rural Broadband Capital (Actuals)
November 2019 - December 2021
2022 Filing
(Presented in Dollars)

	Actual Jul-20	Actual Aug-20	Actual Sep-20	Actual Oct-20	Actual Nov-20	Actual Dec-20	Actual Jan-21	Actual Feb-21
Easements								
Access Points								
<u>Other</u>								
Approved Projects	166,932	152,550	253,172	206,643	904,215	155,634	75,863	505,012
Easements								
Access Points								
<u>Other</u>								
Northern Neck	10,182	8,867	27,136	40,561	450,892	129,705	39,150	477,882
Easements	-	-	-	-	-	-	-	-
Access Points	-	-	-	-	-	-	-	-
<u>Other</u>	-	-	-	-	-	-	-	-
Total Jefferson	-	-	-	-	-	-	-	-
Total Actual Capital:	177,114	161,417	280,308	247,204	1,355,107	285,339	115,012	982,894

2022 Filing
Extraordinarily Sensitive Schedule 2
Page 3 of 10

Rural Broadband Capital (Actuals)
November 2019 - December 2021
2022 Filing
(Presented in Dollars)

	Actual Mar-21	Actual Apr-21	Actual May-21	Actual Jun-21	Actual Jul-21	Actual Aug-21	Actual Sep-21
Easements							
Access Points							
Other							
Approved Projects	602,528	1,219,179	608,162	708,574	391,205	479,160	(207,722)
Easements							
Access Points							
Other							
Northern Neck	415,291	348,181	265,868	915,745	153,377	568,426	1,028,498
Easements	-	-	-	-	-	-	-
Access Points	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Total Jefferson	-	-	-	-	-	-	-
Total Actual Capital:	1,017,818	1,567,360	874,029	1,624,320	544,582	1,047,586	820,776

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Rural Broadband Capital (Actuals)
 November 2019 - December 2021
 2022 Filing
 (Presented in Dollars)

	Actual Oct-21	Actual Nov-21	Actual Dec-21	Total
Easements				
Access Points				
<u>Other</u>				
Approved Projects	310,938	250,608	357,433	7,232,690
Easements				
Access Points				
<u>Other</u>				
Northern Neck	928,430	561,858	1,333,615	7,863,598
Easements	-	-	-	-
Access Points	-	-	-	-
<u>Other</u>	-	-	-	-
Total Jefferson	-	-	-	-
Total Actual Capital:	1,239,368	812,467	1,691,049	15,096,287

Rural Broadband O&M
November 2019 - December 2021
2022 Filing
(Presented in Dollars)

	<u>Actual</u> <u>2019</u>	<u>Actual</u> <u>2020</u>	<u>Actual</u> <u>2021</u>
Repair & Maintenance	-	-	-
Depreciation	-	11,543	126,684
Property Tax	-	-	13,314
ISP Revenue	-	-	-
Approved Projects	-	11,543	265,370
Repair & Maintenance	-	-	-
Depreciation	235	8,268	93,541
Property Tax	-	292	5,023
ISP Revenue	-	-	-
Northern Neck	235	8,560	98,564
Repair & Maintenance	-	-	-
Depreciation	-	-	-
Property Tax	-	-	-
ISP Revenue	-	-	-
Total Jefferson	-	-	-
Total Rural Broadband Operating Expenses:	235	20,103	363,934

Rural Broadband Operating Expenses (Actuals)
November 2019 - December 2021
2022 Filing
(Presented in Dollars)

	<u>Actual</u> <u>Nov-19</u>	<u>Actual</u> <u>Dec-19</u>	<u>Actual</u> <u>Jan-20</u>	<u>Actual</u> <u>Feb-20</u>	<u>Actual</u> <u>Mar-20</u>	<u>Actual</u> <u>Apr-20</u>	<u>Actual</u> <u>May-20</u>	<u>Actual</u> <u>Jun-20</u>
Repair & Maintenance	-	-	-	-	-	-	-	-
Depreciation	-	-	-	-	-	81	112	252
Property Tax	-	-	-	-	-	-	-	-
ISP Revenue	-	-	-	-	-	-	-	-
Approved Projects	-	-	-	-	-	81	112	252
Repair & Maintenance	-	-	-	-	-	-	-	-
Depreciation	106	128	173	251	321	357	401	452
Property Tax	-	-	24	24	24	24	24	24
ISP Revenue	-	-	-	-	-	-	-	-
Northern Neck	106	128	198	275	346	382	426	476
Repair & Maintenance	-	-	-	-	-	-	-	-
Depreciation	-	-	-	-	-	-	-	-
Property Tax	-	-	-	-	-	-	-	-
ISP Revenue	-	-	-	-	-	-	-	-
Total Jefferson	-	-	-	-	-	-	-	-
Total Actual Operating Expenses:	106	128	198	275	346	463	538	729

Rural Broadband Operating Expenses (Actuals)
November 2019 - December 2021
2022 Filing
(Presented in Dollars)

	Actual Jul-20	Actual Aug-20	Actual Sep-20	Actual Oct-20	Actual Nov-20	Actual Dec-20	Actual Jan-21	Actual Feb-21
Repair & Maintenance	-	-	-	-	-	-	-	-
Depreciation	613	940	1,455	1,688	3,144	3,257	3,456	4,225
Property Tax	-	-	-	-	-	-	1,110	1,110
ISP Revenue	-	-	-	-	-	-	-	-
Approved Projects	613	940	1,455	1,688	3,144	3,257	4,565	5,334
Repair & Maintenance	-	-	-	-	-	-	-	-
Depreciation	481	505	581	661	1,858	2,225	2,328	3,329
Property Tax	24	24	24	24	24	24	419	419
ISP Revenue	-	-	-	-	-	-	-	-
Northern Neck	505	530	605	686	1,883	2,249	2,747	3,747
Repair & Maintenance	-	-	-	-	-	-	-	-
Depreciation	-	-	-	-	-	-	-	-
Property Tax	-	-	-	-	-	-	-	-
ISP Revenue	-	-	-	-	-	-	-	-
Total Jefferson	-	-	-	-	-	-	-	-
Total Actual Operating Expenses:	1,119	1,469	2,060	2,374	5,027	5,506	7,312	9,082

Rural Broadband Operating Expenses (Actuals)
 November 2019 - December 2021
 2022 Filing
 (Presented in Dollars)

	Actual Mar-21	Actual Apr-21	Actual May-21	Actual Jun-21	Actual Jul-21	Actual Aug-21	Actual Sep-21	Actual Oct-21
Repair & Maintenance	-	-	-	-	-	-	-	-
Depreciation	5,230	8,569	10,192	11,817	12,827	13,993	13,060	13,728
Property Tax	1,110	1,110	1,110	1,110	1,110	1,110	1,110	1,110
ISP Revenue	-	-	-	-	-	-	-	-
Approved Projects	6,339	9,679	11,302	12,927	13,936	15,103	41,618	42,129
Repair & Maintenance	-	-	-	-	-	-	-	-
Depreciation	4,392	5,335	5,749	7,399	7,711	8,399	9,963	11,230
Property Tax	419	419	419	419	419	419	419	419
ISP Revenue	-	-	-	-	-	-	-	-
Northern Neck	4,811	5,753	6,167	7,817	8,130	8,818	10,382	11,649
Repair & Maintenance	-	-	-	-	-	-	-	-
Depreciation	-	-	-	-	-	-	-	-
Property Tax	-	-	-	-	-	-	-	-
ISP Revenue	-	-	-	-	-	-	-	-
Total Jefferson	-	-	-	-	-	-	-	-
Total Actual Operating Expenses:	11,150	15,432	17,469	20,744	22,066	23,921	52,000	53,777

Rural Broadband Operating Expenses (Actuals)
November 2019 - December 2021
2022 Filing
(Presented in Dollars)

	<u>Actual</u> <u>Nov-21</u>	<u>Actual</u> <u>Dec-21</u>	<u>Total</u>
Repair & Maintenance			
Depreciation	14,379	15,208	138,226
Property Tax	1,110	1,110	13,314
<u>ISP Revenue</u>			
Approved Projects	34,851	67,587	276,913
Repair & Maintenance			
Depreciation	12,589	15,117	102,043
Property Tax	419	419	5,315
<u>ISP Revenue</u>	-	-	-
Northern Neck	13,007	15,536	107,359
Repair & Maintenance			
Depreciation	-	-	-
Property Tax	-	-	-
<u>ISP Revenue</u>	-	-	-
Total Jefferson	-	-	-
Total Actual Operating Expenses:	47,858	83,123	384,272

Rural Broadband Capital
January 2022 - November 2023
2022 Filing
(Presented in Dollars)

	Projected 2022	Projected 2023
Easements		
Access Points		
Other		
Approved Projects	1,993,956	-
Easements		
Access Points		
Other		
Northern Neck	32,099,037	-
Easements		
Access Points		
Other		
Total Jefferson	9,476,052	-
Total Rural Broadband Capital:	43,569,045	-

Rural Broadband Capital (Projected)
January 2022 - November 2023
2022 Filing
(Presented in Dollars)

	Projected Jan-22	Projected Feb-22	Projected Mar-22	Projected Apr-22	Projected May-22	Projected Jun-22	Projected Jul-22	Projected Aug-22
Easements								
Access Points								
Other								
Approved Projects	175,270	245,475	192,261	174,801	183,541	183,541	166,061	183,541
Easements								
Access Points								
Other								
Northern Neck	663,995	1,453,319	3,399,989	3,090,899	3,245,444	3,245,444	2,936,354	3,245,444
Easements								
Access Points								
Other								
Total Jefferson	-	94,457	1,063,892	967,175	1,015,533	1,015,533	918,816	1,015,533
Total Projected Capital:	839,266	1,793,251	4,656,163	4,232,875	4,444,519	4,444,519	4,021,231	4,444,519

Rural Broadband Capital (Projected)
January 2022 - November 2023
2022 Filing
(Presented in Dollars)

	Projected Sep-22	Projected Oct-22	Projected Nov-22	Projected Dec-22	Projected Jan-23	Projected Feb-23	Projected Mar-23	Projected Apr-23
Easements								
Access Points								
Other								
Approved Projects	183,541	174,801	131,101	-	-	-	-	-
Easements								
Access Points								
Other								
Northern Neck	3,245,444	3,090,899	2,318,174	2,163,629	-	-	-	-
Easements								
Access Points								
Other								
Total Jefferson	1,015,533	967,175	725,381	677,022	-	-	-	-
Total Projected Capital:	4,444,519	4,232,875	3,174,656	2,840,652	-	-	-	-

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Rural Broadband O&M
January 2022 - November 2023
2022 Filing
(Presented in Dollars)

	Projected 2022	Projected 2023
Repair & Maintenance		
Depreciation	49,961	58,372
Property Tax	193,467	-
ISP Revenue		
Approved Projects	460,300	72,327
Repair & Maintenance		
Depreciation	597,918	-
Property Tax	48,089	230,838
ISP Revenue		
Northern Neck	654,321	230,311
Repair & Maintenance		
Depreciation	-	-
Property Tax	121,867	-
ISP Revenue	-	57,292
Total Jefferson	121,867	54,549
Total Rural Broadband Operating Expenses:	1,236,488	357,187

Rural Broadband Operating Expenses (Projected)
January 2022 - November 2023
2022 Filing
(Presented in Dollars)

	Projected Jan-22	Projected Feb-22	Projected Mar-22	Projected Apr-22	Projected May-22	Projected Jun-22	Projected Jul-22	Projected Aug-22
Repair & Maintenance								
Depreciation	4,163	4,163	4,163	4,163	4,163	4,163	4,163	4,163
Property Tax	15,000	15,661	16,179	16,650	17,145	17,639	18,087	18,581
ISP Revenue								
Approved Projects	39,164	39,825	40,343	40,814	41,308	41,803	42,250	42,745
Repair & Maintenance								
Depreciation	16,176	20,040	29,081	37,299	45,929	54,558	62,366	70,995
Property Tax	4,007	4,007	4,007	4,007	4,007	4,007	4,007	4,007
ISP Revenue								
Northern Neck	20,183	24,048	33,088	41,307	49,936	58,565	66,373	75,003
Repair & Maintenance								
Depreciation	-	-	-	-	-	-	-	-
Property Tax	-	251	3,081	5,653	8,354	11,055	13,499	16,199
ISP Revenue	-	-	-	-	-	-	-	-
Total Jefferson	-	251	3,081	5,653	8,354	11,055	13,499	16,199
Total Projected Operating Expenses:	59,347	64,124	76,512	87,773	99,598	111,423	122,122	133,947

Rural Broadband Operating Expenses (Projected)
January 2022 - November 2023
2022 Filing
(Presented in Dollars)

	Projected Sep-22	Projected Oct-22	Projected Nov-22	Projected Dec-22	Projected Jan-23	Projected Feb-23	Projected Mar-23	Projected Apr-23
Repair & Maintenance								
Depreciation	4,163	4,163	4,163	4,163	5,307	5,307	5,307	5,307
Property Tax	19,076	19,547	19,900	-	-	-	-	-
ISP Revenue								
Approved Projects	43,239	36,001	36,354	16,454	10,780	10,780	10,780	7,372
Repair & Maintenance								
Depreciation	79,625	87,843	94,007	-	-	-	-	-
Property Tax	4,007	4,007	4,007	4,007	20,985	20,985	20,985	20,985
ISP Revenue								
Northern Neck	83,632	94,622	100,786	6,779	24,567	24,567	24,567	23,602
Repair & Maintenance								
Depreciation	18,900	21,473	23,402	-	-	-	-	-
Property Tax	-	-	-	-	5,208	5,208	5,208	5,208
ISP Revenue								
Total Jefferson	18,900	21,473	23,402	-	6,215	6,215	6,215	5,588
Total Projected Operating Expenses:	145,772	152,096	160,542	23,233	41,562	41,562	41,562	36,562

Rural Broadband Operating Expenses (Projected)
 January 2022 - November 2023
 2022 Filing
 (Presented in Dollars)

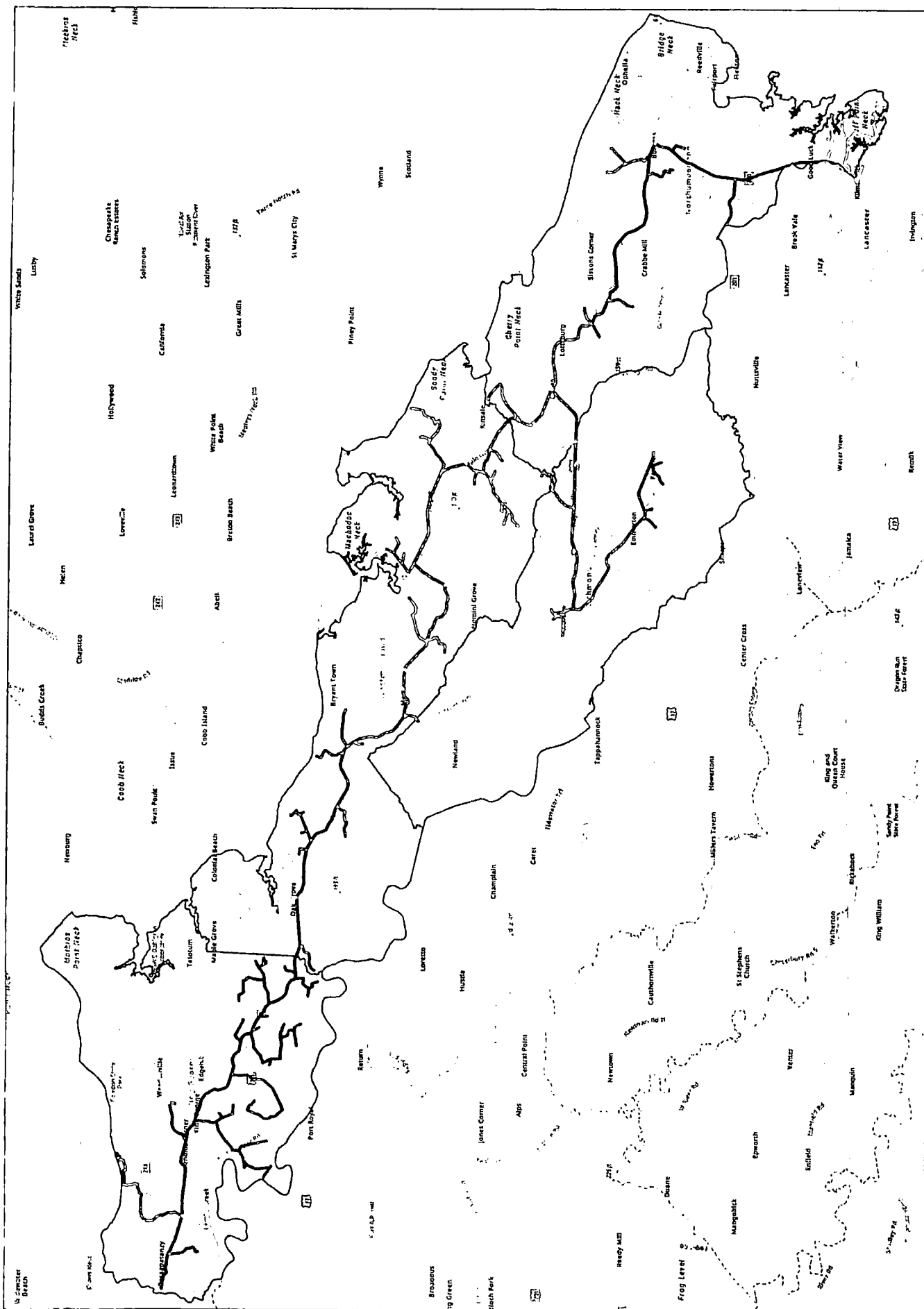
	Projected May-23	Projected Jun-23	Projected Jul-23	Projected Aug-23	Projected Sep-23	Projected Oct-23	Projected Nov-23	Total
Repair & Maintenance								
Depreciation	5,307	5,307	5,307	5,307	5,307	5,307	5,307	108,333
Property Tax	-	-	-	-	-	-	-	-
ISP Revenue	-	-	-	-	-	-	-	-
Approved Projects	7,372	7,372	3,963	3,963	3,963	2,990	2,990	339,160
Repair & Maintenance								
Depreciation	-	-	-	-	-	-	-	597,918
Property Tax	20,985	20,985	20,985	20,985	20,985	20,985	20,985	-
ISP Revenue	-	-	-	-	-	-	-	-
Northern Neck	23,602	23,602	18,460	18,460	18,460	15,210	15,210	605,705
Repair & Maintenance								
Depreciation	-	-	-	-	-	-	-	121,867
Property Tax	5,208	5,208	5,208	5,208	5,208	5,208	5,208	-
ISP Revenue	-	-	-	-	-	-	-	-
Total Jefferson	5,588	5,588	4,139	4,139	4,139	3,363	3,363	119,124
Total Projected Operating Expenses:	36,562	36,562	26,562	26,562	26,562	21,562	21,562	1,063,989

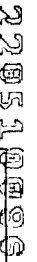


Created by GIS Services
 Proposed their routes as of April 2022
 subject to change

Trunkline 144 ADSS
 Lateral 72 ADSS
 Expansion Routes
 Pilot Filling
 Expansion

Northern Neck Project Original Counties



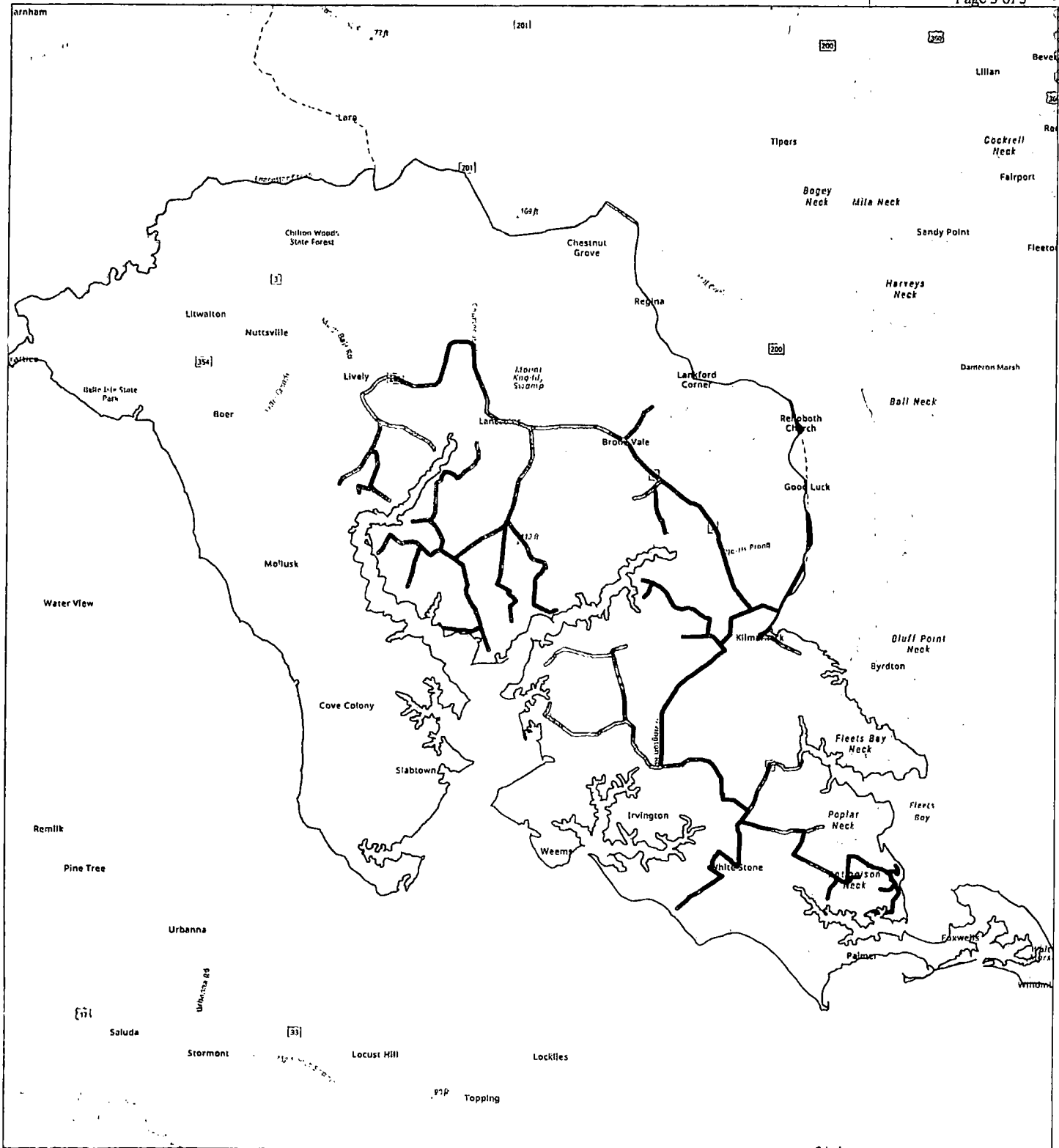


0 1.25 2.5 5 Miles



**Created by GIS Services
Proposed fiber routes as of April 2022;
subject to change**

220510005



Northern Neck Project **Lancaster County**

Layer
 — Trunkline 144 ADSS
 - - Lateral 72 ADSS
 Unserviced Area

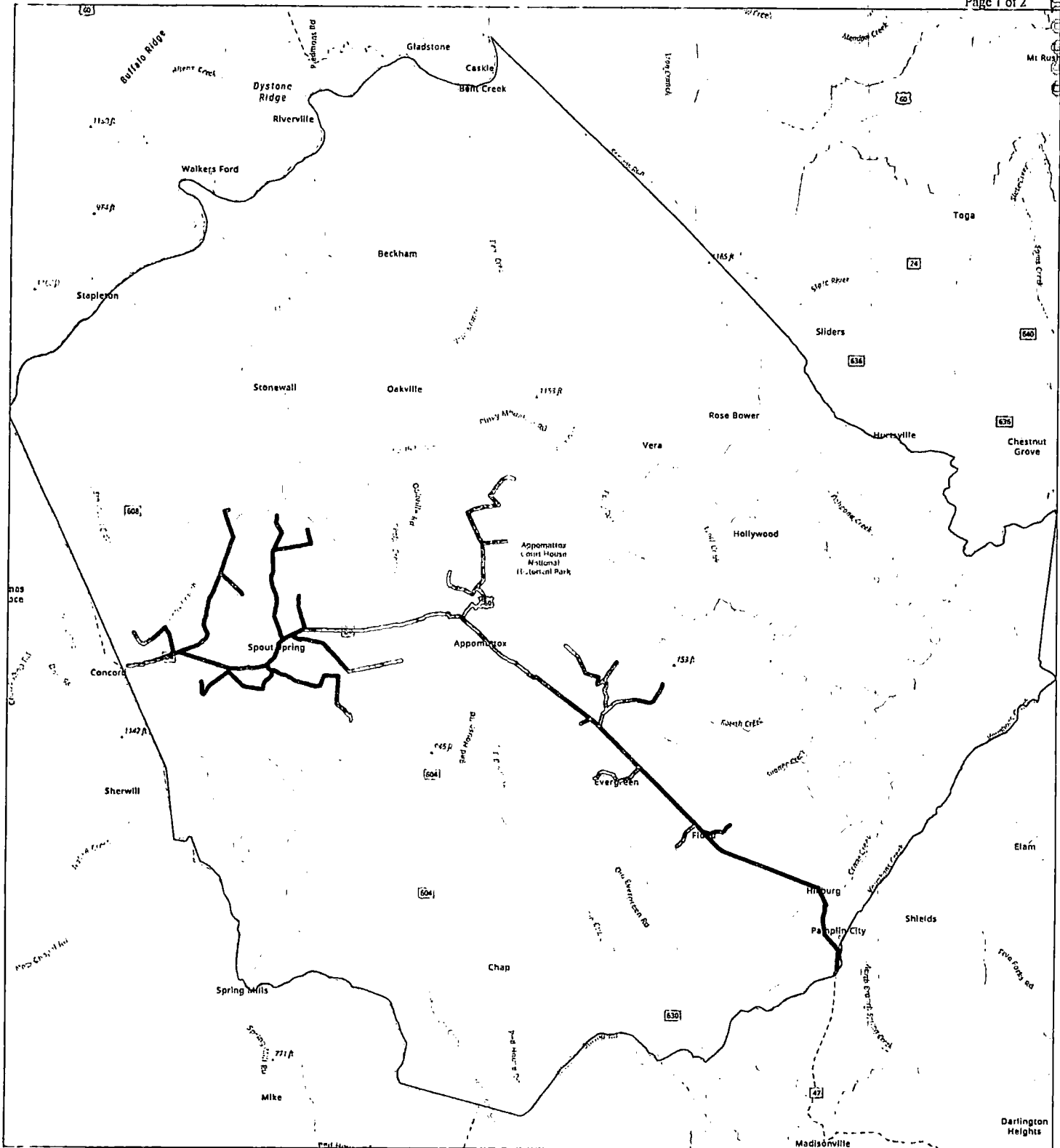


0 0.75 1.5 3 Miles



Created by GIS Services
 Proposed fiber routes as of April 2022;
 subject to change

220510006



**Thomas Jefferson
Planning District Project
Appomattox County**

Layer
Trunkline 144 ADSS
Lateral 72 ADSS
Unserved Area

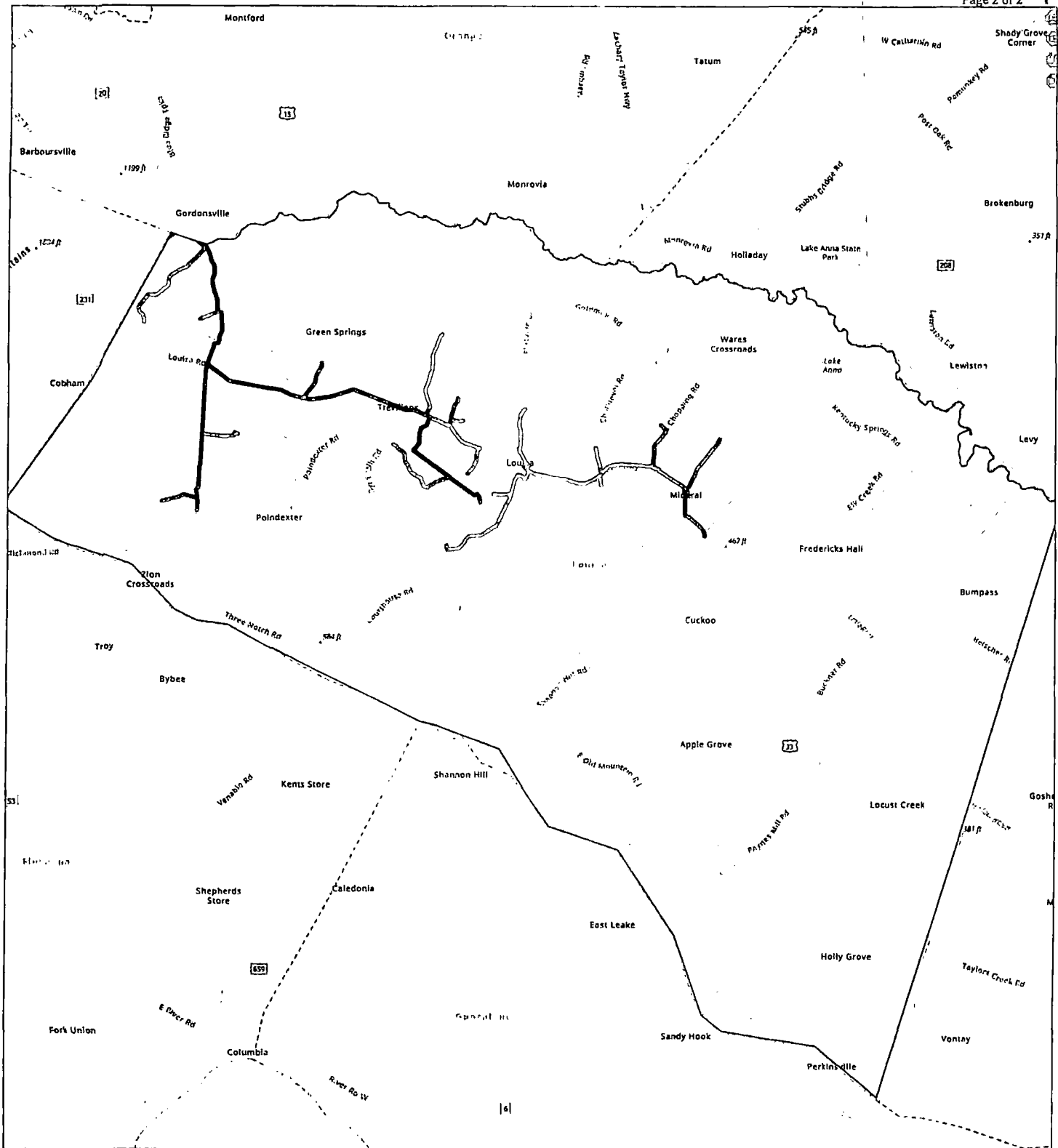


0 1 2 4 Miles



Created by GIS Services
Proposed fiber routes as of April 2022;
subject to change

2205140000



**Thomas Jefferson
Planning District Project**
Louisa County

Layer
Trunkline 144 ADSS
Lateral 72 ADSS
Unserved Area



0 1.25 2.5 5 Miles



Created by GIS Services
Proposed fiber routes as of April 2022;
subject to change