

Application to DHCD Submitted through CAMS

Botetourt County

Botetourt County/ LUMOS Broadband Expansion 2020

Application ID: 64508272019090727
Application Status: Pending
Program Name: Virginia Telecommunications Initiative 2020
Organization Name: Botetourt County
Organization Address: 5 West Back Street
Fincastle, VA 24090
Profile Manager Name: Tony Zerrilla
Profile Manager Phone: (540) 928-2102
Profile Manager Email: tzerrilla@botetourtva.gov

Project Name: Botetourt County/ LUMOS Broadband Expansion 2020
Project Contact Name: David Smith
Project Contact Phone: (855) 465-8667
Project Contact Email: smithdl@lumosnet.com
Project Location: 57 South Center Drive
Daleville, VA 24083-3001
Project Service Area: Botetourt County

Total Requested Amount: \$2,008,938.56
Required Annual Audit Status: Accepted

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Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	\$2,008,938.56	\$1,106,626.13	\$3,115,564.69
Construction	\$2,008,938.56	\$1,106,626.13	\$3,115,564.69
Total:	\$2,008,938.56	\$1,106,626.13	\$3,115,564.69

Budget Narrative:

Questions and Responses:

1. Project Area

Explain why and how the project area(s) was selected. Describe the proposed geographic area including specific boundaries of the project area (e.g. street names, local and regional boundaries, etc.). Attach a copy of the map of your project area(s). Label map: Attachment 1 –Project Area Map.

Answer:

The proposed project area is East of Fincastle and west and southwest of the Town of Buchanan in a large unserved area that is served by Verizon landline service. The area includes the parts of the following census block group 510230402001, 510230402003, and a small portion of census block group 510230403011.

The detail area is:

1. On the west side of the James River, the area covers Davis Run Rd, Mt Joy Rd, Prease Rd, Beaver Dam Rd, Black Magic Farm Rd, Connect Rd stopping at Little Timber Ridge and Springwood Rd.
2. Southwest to Oak Ridge Rd, Route 11 on the North/west side of I-81 to Arch Mill Rd. This sub-area includes Old Hollow Rd, Wheatland Rd, Loope Ln, Goad Rd.
3. South/East side of I-81 the area includes Hardbarger Rd and Lithia Rd to Fringer Trail, to just west of Buchanan town limits to Bobletts Gap Rd. This sub-area includes Back Creek Ln, Mountain Valley Rd, Ellis Run Ln, Goode Ln, Hodges Rd, Delong Ln and Walnut Springs Ln.

2.

Describe your outreach efforts to identify existing providers in the selected project area. Provide a detailed explanation of how this information was compiled and the source(s). Provide a map and list of all existing providers (fixed and wireless) and speeds offered within the project area. Label Map: Attachment 2 – Existing Provider Map; label documentation: Attachment 3 – Documentation on CAF Funding Area.

Answer:

Botetourt County conducted an extensive citizen outreach effort in late 2017 and 2018 through two citizen surveys.

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The citizen data provided clarity on areas that lacked any fixed broadband and hundreds of citizens responded from this specific project area on how they are suffering with lack of Internet access. Additionally in late 2018 Rural Broadband Consulting, LLC did extensive research leveraging FCC 477 data, citizen survey data and communications with incumbent providers throughout Botetourt County. The project area for this application is an area where over 546 locations including over 30 businesses have relied upon cellular and satellite connectivity as the existing Verizon copper landline service is not capable of delivering DSL service of any quality. Many families living in this area are near James River High School yet have no connectivity other than expensive cellular or satellite service to support their children's access to complete homework. Some citizens in this area report they cannot even obtain satellite service due to the terrain blocking the southern sky.

Botetourt County has also created a dedicated website to share all the information with the community and providers from their past surveys and research. This has been an instrumental tool for both the County and Lumos in designing this project. The website can be found at <https://rbbc-llc.maps.arcgis.com/apps/MapJournal/index.html?appid=104238e5824e457ea4e3f1a8059f6ec0>

3. Project Need/Description

To be eligible for VATI, applicants must demonstrate that the proposed project area(s) is unserved. An unserved area is defined as an area with speeds of 10 Mbps / 1 Mbps or less and with less than 10 percent service overlap within the project area. Describe any anticipated service overlap with current providers within the project area. Provide specific information as to how you determined the percentage overlap. Label Attachment: Attachment 4 – Documentation Unserved Area VATI Criteria.

Answer:

Rural Broadband Consulting, LLC included the FCC 477 data as of June 2017 in their work for Botetourt County. That data along with citizen survey data confirmed there are no fixed broadband providers serving the area with any Internet service greater than 10Mbps/1. There is no reported fixed service of any speed reported in June 2017 data for the selected project area except in one small area in the eastern corner where one census block is reported served by Shentel. However, citizen survey data indicates there is not service available. Utilizing the data from the past surveys and research, the county was able to formulate the demand area for the county. Along with the need for broadband, county residents were not able to receive any type of service at their residences and they are required to utilize their cellular devices (if LTE is available) resulting in high cellular bills or go to community areas that had wifi access. As you will see from attachment 4, the project area has only DSL access with extended copper lengths resulting in slower and unreliable services.

4. Provide the number of residential serviceable units in the project area(s). Describe the eligible premises that will be served by the proposed project and the basis for these projections.

Answer:

The area represents 546 addressed locations including over 30 businesses based on County parcel data and business data. Approximately 29% of the residences have school-aged children and based on household income, education and age we estimate the residential take rate at 61% and 80% for businesses based on our experience

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with business subscriptions. The take rate was calculated using Pew Research Institute's 2018 findings on home broadband adoption and local demographic data. Majority of the addresses are large lots exceeding multiple acres with property values regularly exceeding \$300,000. Based on the estimated take rate we anticipate serving a minimum of 340 locations.

5. Indicate the numbers of businesses and community anchor institutions the proposed project will pass in the project area. Also indicate the number of home-based businesses. Provide specific information.

Answer:

The proposed project area includes 32 businesses, either home-based or stand-alone — using Botetourt County business data and one community anchor institution (James River High School which is already served by Lumos fiber services).

6. Understanding that projected take rates are an estimate, provide the anticipated take rate for the proposed service within one year of project completion and describe the basis for the estimate. Also detail all actions (e.g. marketing activities, outreach plan) to be implemented to reach the identified potential serviceable units within the project area.

Answer:

Based on Pew Research Institute's home broadband adoption findings from 2018, we anticipate a take rate of 61% based on household income, education and age. The County has engaged the citizens about their broadband initiative and issued a Request for Proposals early this year including this specific area which falls in their Phase 2 area (total of 6 phased areas). Lumos' proposal was accepted by the County and an interim agreement has been executed between Botetourt County and Lumos for this initiative.

7. **For wireless projects only:** Please explain the ownership of the proposed wireless infrastructure. Will the wireless co-applicant own or lease the radio mast, tower, or other raised structure onto which the wireless infrastructure will be installed?

Answer:

Not applicable. All addresses will be serviced with fiber to the premise (FTTP).

8. Provide the proposed download and upload speeds for the project area. Detail whether that speed is based on dedicated or shared bandwidth, and detail the technology that will be used. This description can be illustrated by a map or schematic diagram, as appropriate. Describe the Internet service offerings to be provided after completion of this project and your price structure for these services. The service offerings should include all relevant tiers.

Answer:

Lumos Networks currently offers four (4) GIGABIT FAST fiber broadband speed profiles to reliably meet the Internet needs of residential customers. All profiles are unlimited, so there is no throttling or data capping, and customers have competitive options for security protection, managed Wi-Fi, and bundled savings with digital

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television and digital home telephone services. The graph below reflects the current no contract, non-promotional pricing for broadband speeds.

Package	Speeds	Solo	Bundled
Basic	25 Mbps Download 5 Mbps Upload	\$39.95	na
Essential	150 Mbps Download 20 Mbps Upload	\$59.95	\$44.95
Premium	300 Mbps Download 40 Mbps Upload	\$74.95	\$59.95
Ultimate (1 GIG)	1,000 Mbps Download 250 Mbps Upload	\$89.95	\$79.95

For small business and enterprise applications, Lumos Networks offers symmetrical fiber broadband service profiles that start at \$99.95 for 150/150 Mbps, and scale to 2 GIG, 4 GIG and 8 GIG. Fiber broadband services may also be bundled with managed Wi-Fi, digital television and digital voice services.

9. Provide a description of the network system design used to deliver broadband service from the network's primary Internet point(s) of presence to end users, including the network components that already exist and the ones that would be added by the proposed project. Also describe specific advantages of using this technology. Provide a detailed explanation on how this information was compiled and source(s). For wireless projects, provide a propagation map including the proposed project. Label Map: Attachment 5 – Propagation Map Wireless Project

Answer:

Lumos Networks will utilize part of its existing fiber infrastructure to extend its redundant fiber network into the proposed areas. Lumos currently provides service utilizing its partnership with Adtran for its Access Network equipment. Utilizing ERPS ring topology, the solution provides redundant network paths to the access equipment in the field. Lumos utilizes the Adtran TA5000 access platform that provides a multi-solution platform that includes voice, dsl and gpon. For this solution, we will utilize the GPON cards in the access equipment to service the area. Lumos Networks will build 59 miles of fiber to service all the addresses. From the GPON card, Lumos will build fiber to a local convergence point (LCP) and place our splitters in this cabinet which will service up to 32 customers per splitter. From the LCP cabinet towards the customers, we will build distribution fiber out that will be splice in using multiports. The size of the multiports will vary depending on the expected number of homes in the area ranging from 4 up to 12 ports. From the multiport, Lumos will install a single fiber drop to each customer that will be plugged into the fiber ONT. Majority of Lumos's ONT are indoor and we have capabilities of offering up to 48 hours of battery backup for residential customers.

Using this same format of deployment, Lumos Networks currently offers service to over 20,000 addresses that can receive the fiber services and up to 1 GIG speeds.

10. Project Readiness

What is the current state of project development (e.g. planning, preliminary engineering, identifying easements/permits, final design, etc.)? Prepare a detailed project timeline or construction schedule which identifies specific tasks, staff, contractor(s) responsible, collection of data, etc., and estimated start and completion dates.

Provide any Memorandums of Understanding (MOUs) or Memorandums of Agreement (MOAs) (drafts are

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allowable), letters of support, etc. The timeline should include all activities being completed within 12 months of contract execution with DHCD. Label Attachments: Attachment 6 – Timeline/Project Management Plan; Attachment 7 – Relationship between Applicant/Co-Applicant; Attachment 8 – Letters of Support;

- i. If the partnership is formalized in a written agreement, provide a copy of that agreement.
- ii. If the partnership has not been formalized, provide a short description of the project management role, financial commitment, or other contribution to the project for the applicant, co-applicant, and any additional partners.
- iii. If applicant is not a locality(s) in which the project will occur, please provide a letter of support from that locality.

Answer:

The project has currently been Preliminary engineered in order to gather the correct information for the application. Lumos Networks has performed the same steps it takes when deploying new fiber neighborhoods in designing the network from our mapping system. Lumos reached out to AEP in order to receive the latest pole information for the market and completed the process of identifying all poles that will be needed for attachment. Lumos is currently actively engineering the fiber extensions that are inside the LEC footprint in order to get an early start on the detail engineering. Per the timeline attachment, we expect an extended time line for the AEP pole permits and make ready as we will be attaching to well over 500 poles with this project. Right now the timeline calls for 14 months due to the make ready schedule but Lumos is actively looking at decreasing timelines for other areas to attempt to keep within 12 months.

11. Matching funds: Provide a description of the matching funds the applicant and co-applicant will invest in the proposed project (VATI funding cannot exceed 80 percent of total project cost). The Funding Sources Table must be completed. Label Attachments: Attachment 9 - Documentation of Match Funding; Attachment 10 – Funding Sources Table;
 - i. For each element of matching funds in the description, indicate the type of match (e.g. cash, salary expense, or in-kind contribution).
 - ii. Identify whether the applicant or co-applicant is responsible for providing each element of the proposed matching funds.
 - iii. Include copies of vendor quotes or documented cost estimates supporting the proposed budget.

Answer:

The total project cost is \$3,115,564.69. The matching funds for the project includes requesting VATI to fund \$2,008,938.56 or 64% of the total project. Lumos Networks would be providing cash, salary expenses and in-kind contributions for a total of \$702,626.13 or 23% and Botetourt County will be matching with an additional \$404,000 in cash or 13%.

12. Applicant and Co-Applicant: A description of the public-private partnership involved in the project. Detail the local government assistance: Local government co-applicants should demonstrate assistance to project that will lower overall cost and further assist in the timely completion of construction, including assistance with permits, rights of way, easements, and other issues that may hinder or delay timely construction and increase cost. Provide

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detail if this project includes additional partners such as municipal providers, middle-mile providers, or investor-owned utilities

Answer:

The local government applicant is Botetourt County and has partnered with Lumos Networks as the co-applicant.

Botetourt County has offered funds of \$404,000 to help assist with the project. Along with utilizing the county resources and data that has been gathered through the Broadband Committee in the surveys to assist with the creation of this application.

Lumos Networks is contributing over \$700,000 to the project as part of their expansion in Botetourt County. Lumos Networks has actively been building fiber to the home in Botetourt since 2009 and has recently added over 400 fiber addresses over the last 12 months in Botetourt. Lumos Networks is committed to the community from its 121 year old back ground of being started to service the customers with their telephone needs.

13. Identify key individuals, including name and title, who will be responsible for the management of the project. Provide a concise description of their role and responsibilities for the project. Present this information in table format.

Answer:

Mr. Diego Anderson is Senior Vice President and General Manager and supports engineering, operations, sales, marketing, and service delivery. Originally from Charleston, SC, he earned a B.S. in Electrical Engineering Technology from South Carolina State, and a Masters in Administration from Central Michigan University. Mr. Anderson has more than 25 years of experience in various business management and executive leadership roles
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Mr. Rob Cale is Senior Director of Product and Marketing, and responsible for product commercialization, lifecycle management, and marketing communications. He is originally from Waynesboro, VA, and holds a B.S. in Business Marketing from Radford University. Mr. Cale's more than 25 years of experience has included leadership roles within marketing, product management, and branding.
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Mr. David Smith is Senior Director of Technical Operations and Planning. He is responsible for network and field operations, engineering, outside plant, and project management. Mr. Smith is originally from Covington, VA and holds a B.S. in Information Systems Management from Bridgewater College, and a MBA from Averett University. He has more than 10 years of experience in Information Technology and Telecommunications industry along with various business management roles
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Mr. Todd Denning is Director of Care and Service Delivery, and
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supports call center operations for customer care, loyalty, and service delivery. Originally, from Southern California, he attended Crafton Hills College in Redlands, CA, and moved to Virginia in 2000. Mr. Denning has more than 20 years of experience in leadership roles including Customer Service, Systems Administration, Workforce Management, and Service Delivery.

Mr. John Bell is Director of Program Operations, and responsible for systems, processes, training and quality assurance. He is from Covington, VA and earned an apprentice degree in digital electronics and an Associate's Degree in Business Management from BRCC. Mr. Bell has been with the company for 44 years, including 13 years in various craft positions and the past 31 years in various management and leadership roles.

Ms. Heidi Padgett is Senior Manager of Residential Sales, and supports the Company's retail and inside sales organizations for residential sales and order services. Originally from Bedford, VA, Ms. Padgett has been with the company for 20 years, serving in management and leadership positions for the last 10 years.

Mr. Mike Joseph is the Small Business Development Manager and is responsible for supporting an enterprise sales team, developing and maintaining business relationships, and uncovering new opportunities. Mr. Joseph is from Harrisonburg, VA. He joined the company in 1994 as a local business account executive, and later led a sales team of business account executives covering multiple states before joining and leading outside sales efforts for Lumos Networks.

14. Project Budget and Cost Appropriateness

Applicants shall provide a detailed budget as to how the grant funds will be utilized, including an itemization of equipment and construction costs and a justification of proposed expenses. Expenses should be substantiated by clear cost estimates. Label Attachment: Attachment 11 – Derivation of Costs; Attachment 12 - Documentation of Supporting Costs; Attachment 13 – Supporting Documentation of Cost Estimates.

Answer:

The grant funds will go towards construction and engineering the fiber network. As you will see from the attachment 12 and 13, Lumos Networks has a workbook that is utilized in creating all of our Project Plans. Inside of these workbooks we include the breakdown of cost for each category. In the tabs in the workbook, Lumos lays out the labor, material and services work that will be needed to complete the task. We have left the rates that we currently have from our in house or contracting personnel to perform the work. Along with those details, we have also laid out the estimated footage of aerial and underground fiber that will be needed for this project.

15. The cost benefit index is comprised of three factors: (i) state share for the total project cost, (ii) state cost per unit

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passed, and (iii) the internet speed. From these statistics, individual cost benefit scores are calculated. Finally, the three component scores are averaged together and converted to a 30-point scale to form a composite score. Please provide the following three pieces of information:

- a. Total State funding requested / Total Project cost
- b. Number of serviceable units
- c. Highest residential speed available

Answer:

The applicants are requesting \$2,008,938.56 from the VATI fund which will service 546 addresses which results in \$3,679.37 cost per address.

All these addresses will be able to receive up to 1GIG (or 1000 MBPS) right now with plans to offer up to 10GIG to residential customers over the next year.

16. A brief description of applicant and co-applicant's history or experience with managing grants and constructing broadband communication facilities in the Commonwealth of Virginia and elsewhere.

Answer:

Lumos Networks first started deploying Fiber to the home in 2008 with the first production neighborhood coming online at Ashley Plantation in Botetourt County. Since then, Lumos Networks has completed multiple major fiber buildouts, resulting in a fiber-footprint of more than 21,000 served addresses.

Lumos Networks has completed a number of relevant large-scale fiber build projects over the last five (5) years, and these are listed below.

- Alleghany Highlands RUS – This project resulted in over 5,300 addresses getting access to Lumos Networks fiber. This was a partnership grant with a total project cost of \$16 million dollars. The project scope included providing fiber services to the Lumos Networks LEC territories in Alleghany County. The project was successfully completed in 2015.
- 2017 Fiber Builds – Lumos Networks performed a fiber overbuild project that resulted in bringing fiber service to more than 800 residential and business addresses. The project was completed in 6 months.
- 2018 Fiber Builds – Lumos Networks performed another overbuild project that resulted in bringing fiber services to more than 1,000 addresses. This project was successfully completed in 7 months.
- ACAM Projects – Lumos Networks has completed a number of ACAM funded projects over the last 2 years. This has resulted in more than 300 rural addresses that are now able to receive fiber services.

17. **Commonwealth Priorities**

Additional points will be awarded to proposed projects that reflect Commonwealth priorities. Please describe if the project fits into a larger locality or regional universal broadband plan.

Answer:

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Botetourt County has a six-phased broadband plan and strategies to expand service to the entire county. Phase 1 is being partially addressed by the Craig-Botetourt Electric Coop fiber build and the remainder will be addressed by Lumos leveraging federal ACAM funding. Phase 2 includes the project area for this application. Phase 3 will be served by BARC Electric's CAF II Reverse Auction federal award for a fiber build. Phase 4 and Phase 6 were addressed in Lumos' proposal to Botetourt and will be discussed later with the County. Phase 5 will be served by Lumos' applying ACAM federal funds for upgrades to fiber service.

Botetourt County's broadband approach is resulting in multiple public-private partnerships with Lumos proposing to address the majority of the unserved areas in the County.

18. Additional Information

Any other equitable factor that the applicant desires to include. Applicants are limited to four additional attachments. Label Additional Attachments as:

- a. Attachment 14 – Two most recent Form 477 submitted to the FCC or equivalent
- b. Attachment 15 – Copy of Public Notice
- c. Attachment 16 – XXXXXXXX
- d. Attachment 17 – XXXXXXXX
- e. Attachment 18 – XXXXXXXX
- f. Attachment 19 – XXXXXXXX

Answer:

N/A

Attachments:

Map(s) of project area, including proposed infrastructure

OverallAreas93201985645.docx

Map(s) or schematic of existing broadband providers (inventory of existing assets)

BotetourtLumosVATI2020ExistingProvidersMap93201985823.pdf

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Documentation that proposed project area is not designated for Connect America Funding (CAF)

LumosNetworksCAFArea93201992320.pdf

Documentation that proposed project area is unserved based on VATI criteria

LumosNetworksVatiCriteria93201993409.pdf

Project Management Plan

LumosNetworksHighLevelIPM93201994840.xlsx

Documentation of relationship between applicant and co-applicant (formal or informal)

LUMOSSupportletter93201990249.pdf

Letters of Support

LUMOSVATItrsofsupport090319293201944006.pdf

Documentation for in-kind contributions, including value(s)

LumosNetworksContribution93201933258.xlsx

Funding Sources Table

LumosNetworksFundingSourceTables932019101443.docx

Derivation of Cost (Project Budget)

LumosNetworksDerivationofCost93201930503.xlsx

Documentation supporting project costs (i.e. vendor quotes)

LumosProjectWorkBook93201931907.xlsx

Supporting documentation for costs estimates

LumosExampleDetailWorkbook93201932332.xlsx

Two most recent Form 477 submitted to FCC

LumosNetworks47793201983628.pdf

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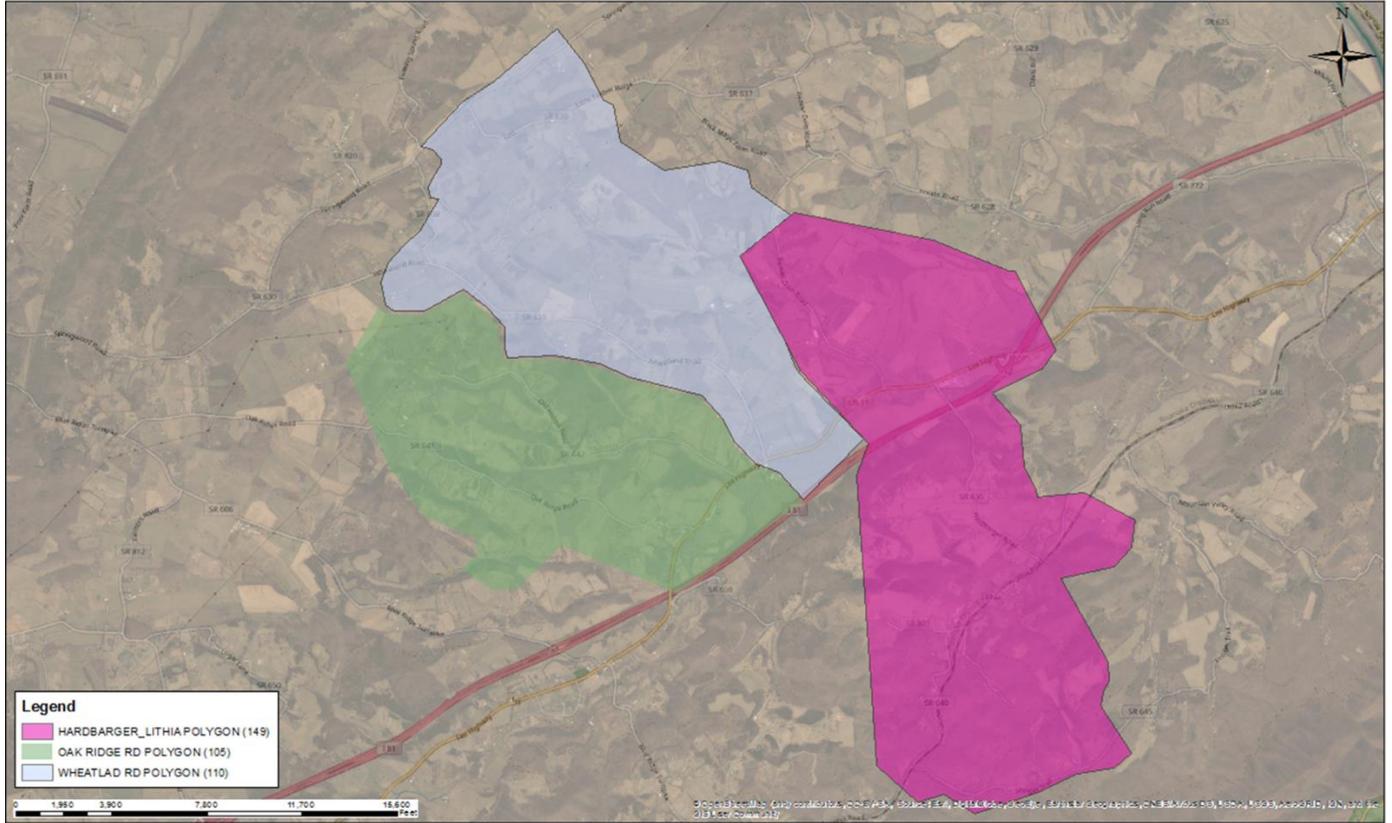
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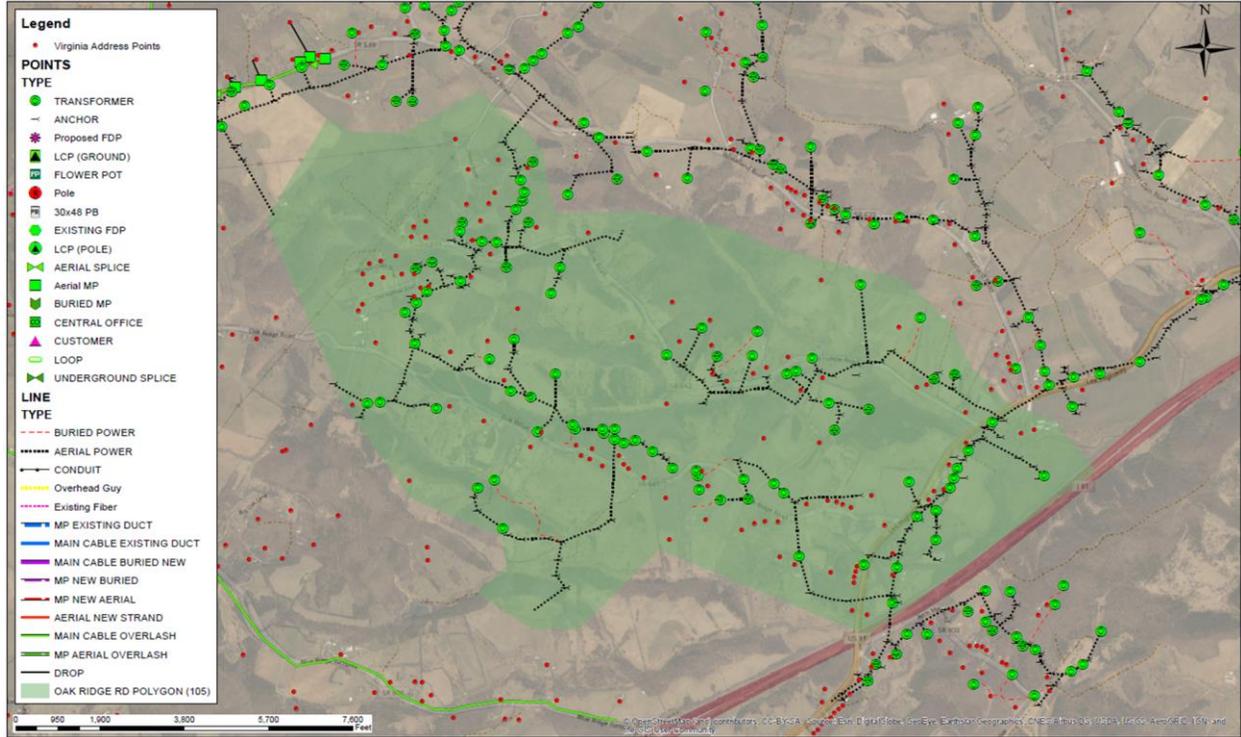
Copy of Public Notice

BoCoVATI2020grantpublicnotice93201983131.docx

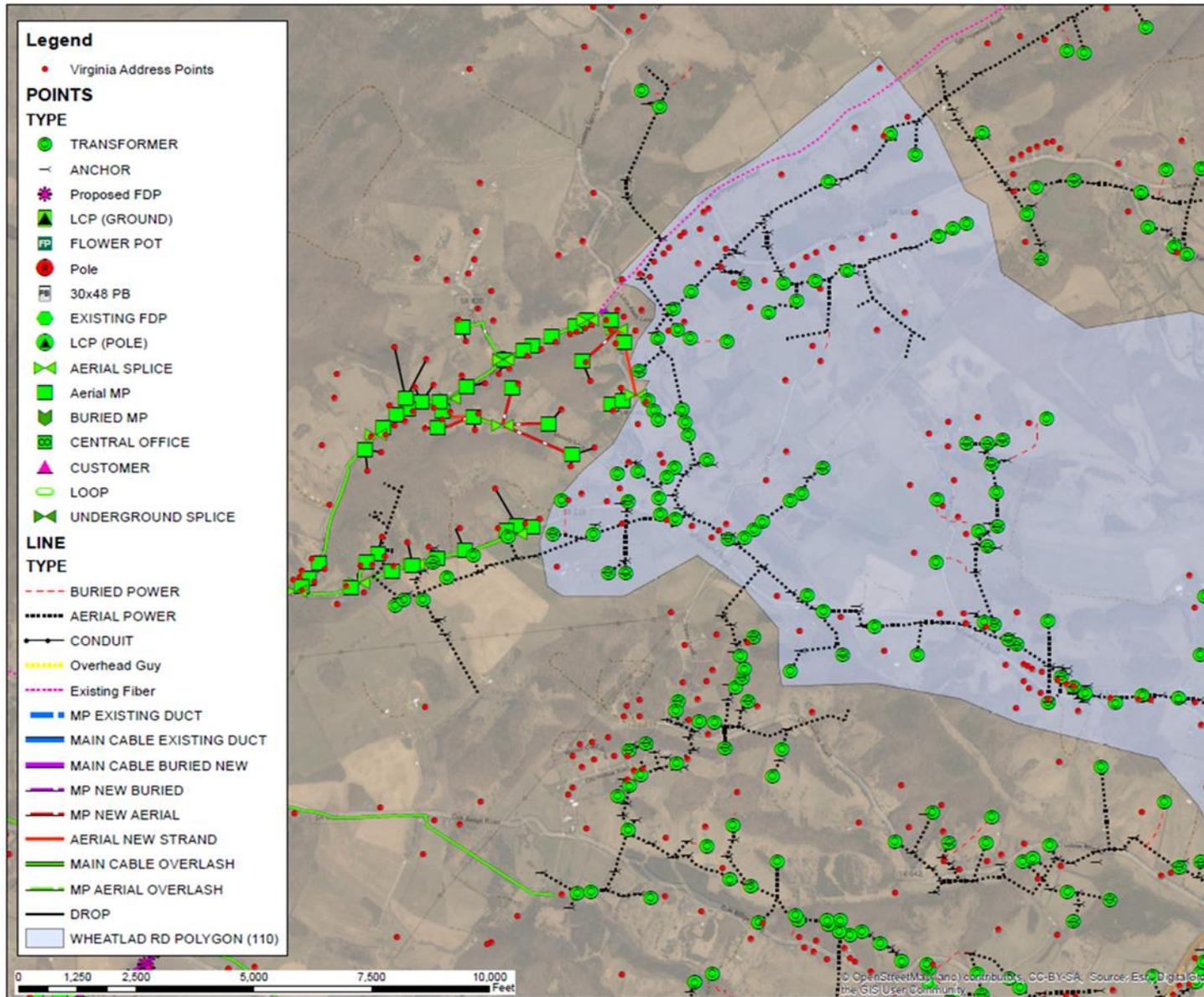
Overall Areas



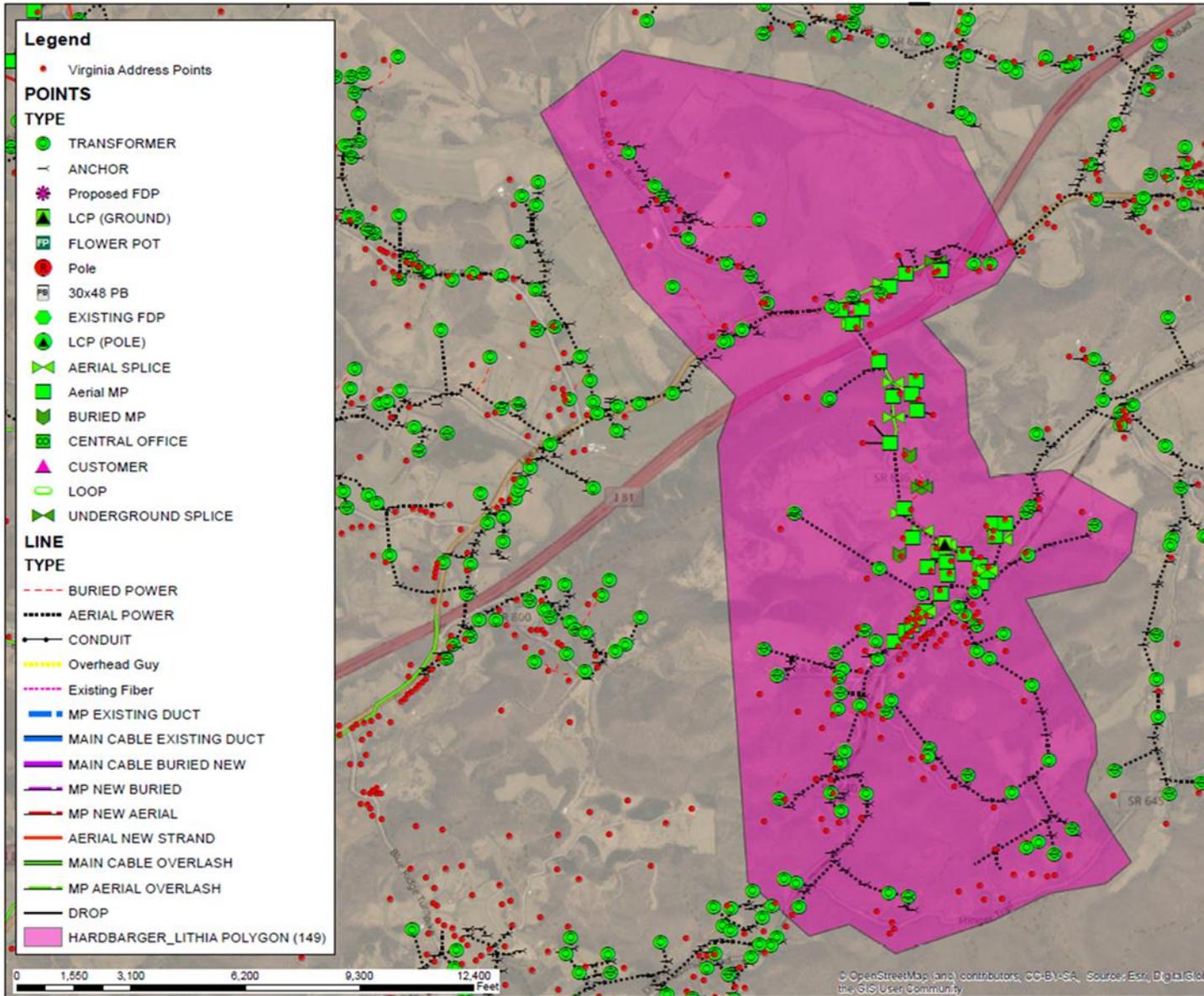
Oak Ridge Area



Wheatland Area



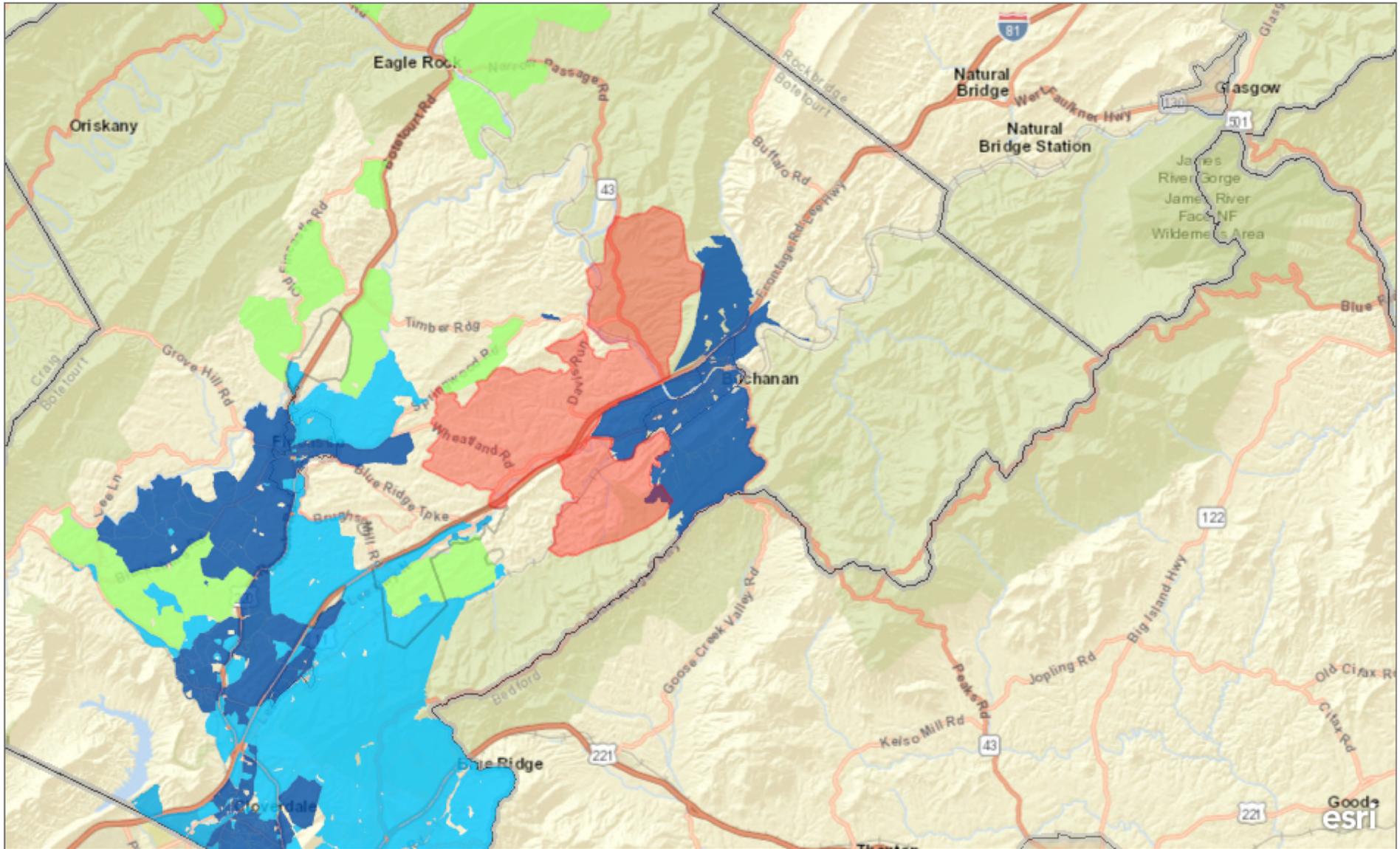
Hardbarger Area



BotetourtCo

Botetourt Lumos VATI 2020

Attachment 2 - Existing Provider Map



Business Case Analysis Botetourt Co (RBBC-LLC)

VITA, Esri, HERE, Garmin, NGA, USGS, NPS | Federal Railroad Administration (FRA), Esri | Virginia Geographic Information Network (VGIN)

- DSL (Lumos)
- Fiber (Lumos & Shentel near Buchanan)
- Cable (Comcast)
- Proposed Unserved Project Area





9/3/2019

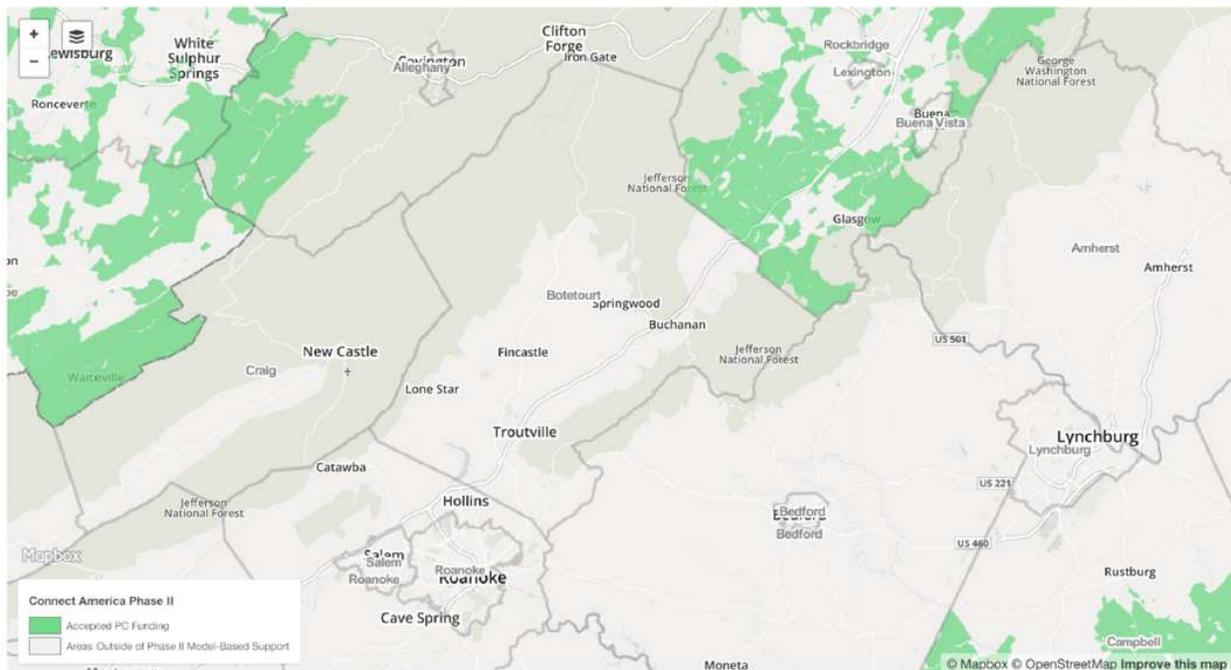
CAF Funding for VATI Grant

To whom it may Concern,

The area that is being applied for does not include any eligible or accepted CAF funding. The attached map is the FCC's Connect America Fund Phase II map where the green areas show where CAF II funding was received. Please see map below.

Connect America Fund Phase II

Accepted Areas Map



Sincerely,

David Smith

SR Director of Technical Operations and Planning

O: 540-591-9913

smithdl@lumosnet.com



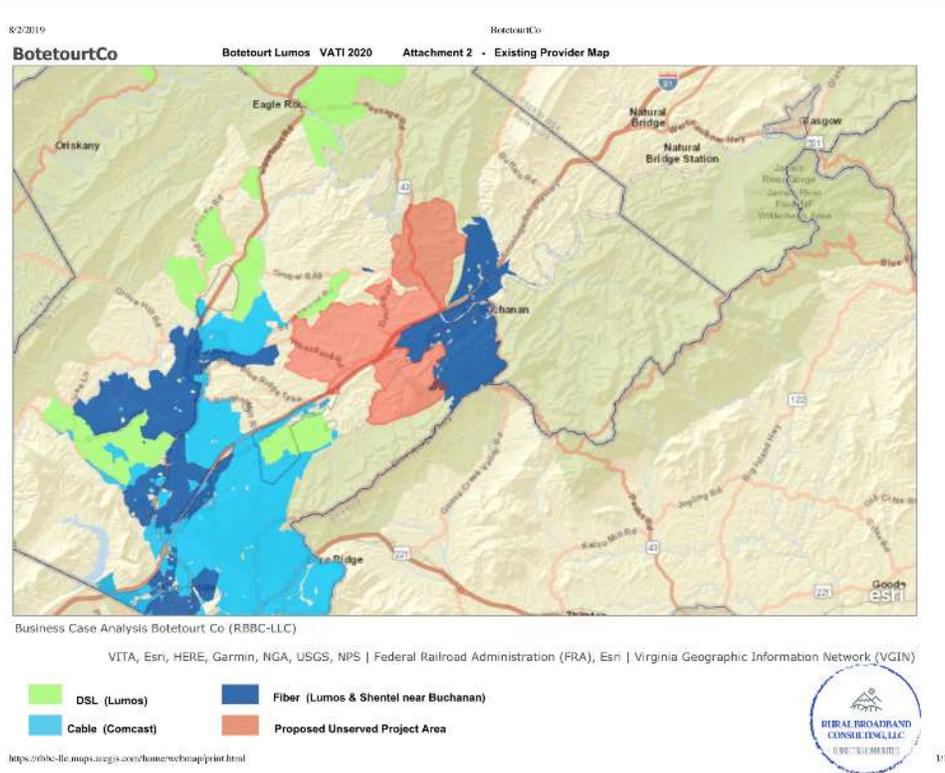


9/3/2019

Project Area underserved based on VATI criteria

To whom it may Concern,

The proposed area is outside of Lumos Networks LEC boundary but leading to the proposed area Lumos currently offers ADSL speeds (up to 10M) but due to distance most of the speeds are closer to 6M. The area being proposed is currently serviced by Verizon ADSL with most customers getting 3M with the best receiving a little over 4M. Verizon has also implemented a cap on their copper facilities resulting in no new connections when properties are sold or disconnected.



Sincerely,

David Smith

SR Director of Technical Operations and Planning

O: 540-591-9913

smithdl@lumosnet.com





Billy W. Martin, Sr.
Chair

Donald M. "Mac" Scothorn
Vice-Chairman

Richard G. Bailey DMV
Steve P. Clinton
I. Ray Sloan

Office of the Administrator

57 South Center Drive
Daleville, Virginia 24083
September 3, 2019

Dr. Tamarah Holmes
Associate Director Policy and Strategic Development Virginia Department of Housing
and Community Development
Main Street Center 600 East Main Street, Suite 300
Richmond, Virginia 23219

Re: Botetourt County funding and partnership support for LUMOS' Virginia
Telecommunications Initiative proposal

Dear Dr. Holmes:

Botetourt County is excited to support the LUMOS partnership proposal for DHCD
broadband expansion funding.

The total LUMOS proposal equals \$3,115,564.69 and the combined contributions from
LUMOS and Botetourt is more than 35.5% of the total cost of the project. The Botetourt
contribution is \$404,000 and the LUMOS contribution is \$702,626.13 for a total local
contribution of \$1,106,626.13.

Botetourt County has determined that fiber to the home is the way to "future proof"
Botetourt and LUMOS plans to deploy 59 miles of fiber in a priority area as identified in
the Botetourt broadband deployment strategy.

We were exceptionally thankful for the grant dollars during the last round of funding that
has allowed CBEC to start deploying fiber to the home in area 1 of the Botetourt
broadband deployment strategy.

(540) 928-2006
GLarrowe@BotetourtVA.gov
BotetourtVA.gov

If you have questions or concerns, please contact me directly at 540-797-7623 or glarrowe@BotetourtVA.gov. We look forward to a very positive outcome of this round of funding to get yet another “broadband hole” filled for the citizens of Botetourt County.

Sincerely,



Gary Larrowe
County Administrator
Botetourt County, Virginia

CC: Botetourt Board of Supervisors
Diego Anderson – LUMOS
Rob Cale – LUMOS
David Smith – LUMOS
Ken McFadyen, Director of Economic Development

15 August 2019

OPEN LETTER CONCERNING LACK OF BROADBAND IN OUR COMMUNITY

Anyone having broadband and unlimited data may not realize the existing problem. A little history from the standpoint of a teacher and librarian who want their students to "be on a level playing field" with students in urban centers. All students need access to up to date information and research, and particularly those interested in science.

Timeline:

1987-early 1990s--Students could use reference books, called *Reader's Guide to Periodical Literature* for research on topics (these volumes were out -of- date in a month in science). At James River High School, attempts to bring students into the 20th century for current research in science included long field trips to every college within a 50 mile radius from the school for updates to "Reader's Guide." After a lengthy ride, students had a maximum of two hours to hurriedly complete research.

In the mid 90s Virginia Tech allowed us to use their Agricola and Medline offerings, and the Health Sciences school in Roanoke allowed access to Medline. Mrs. Linda Vail, established a VaPen account where students could participate in the forum with researchers and educators. And the Science Club visited the Roanoke Valley Governor's School after school to access their online sources. Those were the only options we had in technology at that time.

In 1995, I was invited to Genentech, San Francisco, CA, along with 99 other Biology teachers, where we received instruction in Apple 2e computers, given a 2e, and printer, and free internet access for one year (telephone charges for one minute to access the phone lines in Roanoke was \$0.35/minute from my farm). So I could share research information with my students.

Subsequently, Linda Vail worked hard to get access to the internet for students at the school so that students could do relevant up-to-date research. Finally, through her diligence, students were on that "level playing field."

Many people have (or are getting) broadband and unlimited access to important information, however, not all. Many of my students in the Jackson River Governor's School still do not have that broadband capability, as well as myself.

I have been asked by the AAAS forum to offer lectures to scientists everywhere on the challenging topics in the philosophy and history of science, and Dabney Lancaster Community College expects us to offer live and recorded courses for students. Of course, I cannot comply.

The problem is not solved until each citizen in our county has the option to connect to the 21st Century world, and the "playing field" is getting bumpier daily.

Thank you,

Barbara Keel
(540) 798-7645

**Botetourt County Farm Bureau
2019 Resolutions**

Be it resolved that Virginia Department of Game and Inland Fisheries and the Virginia Department of Transportation need to be responsible for any new species of plant or animal that they introduce into Virginia (including Autumn Olive and Elk). If these species become invasive to agriculture, the state agencies should be responsible for control and/or eradication.

Be it resolved that the Botetourt County Farm Bureau would like to acknowledge and thank all fire and rescue personnel for services provided to the county.

 Be it resolved that the Botetourt County Farm Bureau encourages local wireless providers to provide DSL service at a reasonable rate to more people and bring broadband to residents of Botetourt County.

Be it resolved that the Botetourt County Farm Bureau urges state and federal officials to provide more readily available assistance and/or permits for control of black vultures.

Be it resolved that the Botetourt County Farm Bureau support Botetourt County providing adequate facilities for the extension service to include but not limited to 4H and FFA.

Be it resolved that the Botetourt County Farm Bureau ask Sheriff and State Police to monitor traffic especially where tractor-trailers are crossing the yellow line and enforce problem areas.

August 30, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

Dear Ms. Holmes and Ms. Breski,

I am a Commercial Realtor with Poe & Cronk Real Estate Group in Roanoke, VA. I'm writing a letter in support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI).

I've facilitated several transactions in Botetourt County on behalf of landlords and tenants through leasing, and representing buyers and sellers through property sales. The availability of fiber, or lack thereof plays a major role in a company's decision making process. Expanding availability for fiber connectivity will have a very positive effect on the value and marketability of properties where the service does not currently exist.

Furthermore, the speed and capacity broadband provides is very important when a company makes a decision on location. Creating more availability of broadband access will make Botetourt County more attractive for development. The resulting new development will lead to job growth and further contribute to the overall economic health of the surrounding area.

Sincerely,



Stephen Pendergrass
Vice President

Poe & Cronk Real Estate Group
10 S Jefferson St, Suite 1200
Roanoke, VA 24011

August 28, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

To Whom it may concern:

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area bounded by Blue Ridge Turnpike, Interstate-81, Springwood Road, and Beaver Dam Road. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

As a parent of a 2 year old and a newborn, I would like to express my explicit support for bringing high speed internet to my area of Botetourt County. While I am only 26, I noticed when I went to college that many of my peers were far ahead of me due to having regular internet usage throughout their middle/high school years. As a teacher's assistant, I can vouch that we are using internet based programs in the schools more and more. It pains me to think that when my kids are middle/high school age, I may need to move away from my family farm, just to provide my children with the same advantages that children in internet service areas would have.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Clara Holland
715 Little Timber Ridge Road
Buchanan, VA 24066

August 28, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

To Whom it may concern:

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area bounded by Blue Ridge Turnpike, Interstate-81, Springwood Road, and Beaver Dam Road. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

As the parent of 2 middle school students, 2 high school students and 1 freshman in community college, I can assure you that the lack of internet service at my home on Pinehaven Road is a challenge. I spend probably 6-8 hours a week transporting my children to the library or back to school so that they can have internet access to complete their homework and other school projects. My college freshman spends many extra hours at Virginia Western, just taking advantage of their free wifi. I find myself being concerned that the lack of internet access as children will negatively impact their ability to pursue technologically based careers.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Jessica B. Wilhelm
230 Pinehaven Rd
Fincastle, VA 24090

September 2, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

To Whom it may concern:

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area bounded by Blue Ridge Turnpike, Interstate-81, Springwood Road, and Beaver Dam Road. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

First and foremost, internet to my home would allow me to more ably perform my job as a real estate agent. As an independent contractor, I am not provided with an office, so I am forced spend many hours at local coffee shops and libraries, because I cannot do my job without internet, which is not offered at my current home. I am also finding that when I show homes to prospective buyers, internet service availability is one of their first questions. I am finding people choosing not to move to our unserved areas simply because there is no internet service. If we are going to grow Botetourt County and be desirable location, there is no option but to bring internet service into our unserved areas.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Jenna Lawrence
789 Black Magic Farm Road
Buchanan, VA 24066

August 30, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support for Botetourt County Virginia Telecommunication Initiative Application

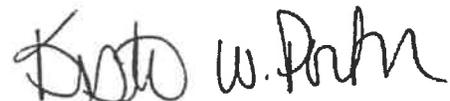
Dear Ms. Holmes and Ms. Breski,

I am a resident of Botetourt County. I am writing a letter of support for the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area between Fincastle and Buchanan. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

My husband and I own and operate a business in Troutville, Botetourt County. We recently moved to the Buchanan area, from Troutville, where we had access to high speed broadband internet service. As business owners, we have found it very difficult to keep up with our workload and to maintain the quality of our work/life balance without having sufficient internet connectivity at our new residence in Buchanan. The internet access we are able to get is very slow and frequently loses signal. With young children, we worry that they will be at a disadvantage upon entering school without having access to a better, more reliable form of internet connectivity.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,



Kristi Porter
14249 Lee Hwy
Buchanan, VA 24066
540-798-6317

September 1, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

To Whom it may concern:

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area bounded by Blue Ridge Turnpike, Interstate-81, Springwood Road, and Beaver Dam Road. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

As a business owner in Botetourt County with no internet access, I am put at a disadvantage when compared with other businesses. I am forced to use my cell phone, when I am able to get service to perform basic business functions. While I have computerized my business books/records, I am not able to use many of the newer cloud based system because I do not have access to reliable internet service. The only way we will continue to grow the economy of Botetourt County is by providing internet service to our residents.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Weldon & Kimberly Lawrence
594 Wheatland Road
Buchanan, VA 24066

September 1, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

To Whom it may concern:

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area bounded by Blue Ridge Turnpike, Interstate-81, Springwood Road, and Beaver Dam Road. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

My wife and I both run businesses out of our home, currently, we are paying several hundred dollars each month for satellite internet service, that only works some of the time. This has caused numerous delays in our business and many inconveniences. While we love this area and the beauty of Botetourt County, we have on many occasions considered taking our business elsewhere, where we can have amenities that are expected in 2019, such as reliable high speed internet service.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

John & Stephanie Surprenant
1481 Little Timber Ridge
Buchanan, VA 24066

September 1, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

To Whom it may concern:

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area bounded by Blue Ridge Turnpike, Interstate-81, Springwood Road, and Beaver Dam Road. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

I am a Licensed Speech Therapist by profession, many of my continuing education classes and seminars are only available in internet format. I am required to do these classes and a certain number of hours of other education (generally web based) in order to keep my licensure. Due to these requirements, I currently have to spend many hours away from my family, at a location where the internet is available in order to complete these trainings/classes. If we had high speed service at my home, I could maintain a significantly better work/life balance, and stay on top in my field.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Jordan Kidd
3610 Wheatland Rd
Fincastle, VA 24090

September 2, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

Dear Ms. Holmes and Ms. Breski,

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area between Fincastle and Buchanan. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

I work part time, often from home, as a landscape designer for a large local company. Having a strong, reliable and affordable internet service is crucial for me to maintain my current job. I also run a small flower farm on my property and need internet access for billing, marketing and ordering. The two jobs really rely on each other in that if I didn't have the flexibility of working from home from time to time I probably would not be able to successful manage my farm either. In our community we have be talking about better internet access for years and I really hope that is going to happen in the very near future.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Ashleigh M. Kritzberger
540-520-5349
petalandpail@gmail.com

August 29, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

Dear Ms. Holmes and Ms. Breski,

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area between Fincastle and Buchanan. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

My job requires that I grade papers and do certain school work from my home computer which I am unable to do because I have to use Satellite which is extremely slow and insufficient internet. Makes it very difficult.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Jill Franceschini
146 Melody Lane
Fincastle VA 24090

September 3, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

Dear Ms. Holmes and Ms. Breski,

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area between Fincastle and Buchanan. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

We have 2 college age children who use the internet daily for papers, research, entertainment, etc. We struggle each month with our current provider as our internet slows down drastically as we approach the end of the month. It will circle back to full service by mid-month, but it is frustrating to not be able to use the internet when needed. We are currently using a US Cellular satellite plan that is nowhere near the level of service that we need in our area.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Kevin & Beth Assenat
428 Melody Lane
Fincastle, VA 24090
elizabethassenat@gmail.com
kassenat@gmail.com
540-580-3923/540-580-4579

August 26, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

Dear Ms. Holmes and Ms. Breski,

I am a resident of Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents and businesses in the underserved area between Fincastle and Buchanan. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

My wife and I are trying to start a boarding stable and equestrian business on our farm in the Wheatland Road area of Buchanan. Trying to do much of anything these days without internet is challenging but trying to start a business is dang near impossible. From bills and banking, accounting, advertising, to permitting and regulations. Everything is on the internet! Lack of reliable service is really impacting our ability to start a small business.

Even something as simple as health insurance and medical care is challenging without the internet. We cannot access patient portals set up through our primary care providers, or take advantage of online doctor visits. When you live in rural America access to health care is limited already, the internet would open many additional avenues to receive care.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Matthew S. Peyton
434-841-8738
Mpeyton83@gmail.com



B O T E T O U R T
C O U N T Y O F V I R G I N I A

Department of
Economic
Development
57 South Center Drive
Daleville, VA 24083
Phone: (540) 928-2140

August 29, 2019

Dr. Tamarah Holmes, Associate Director
Policy and Strategic Development
Virginia Department of Housing and Community Development
Main Street Center
600 East Main Street, Suite 300
Richmond, Virginia 23219

Re: Letter of Support for LUMOS's Virginia Telecommunications Initiative proposal

Dear Dr. Holmes:

The Botetourt County Department of Economic Development is pleased to provide a letter of support for LUMOS's Virginia Telecommunications Initiative proposal. We believe that LUMOS is an outstanding partner to work with the Commonwealth of Virginia and Botetourt County to deliver greater broadband availability in our community. The need for the greater availability of quality, affordable broadband service for our residents and businesses is evident in the studies that Botetourt County has prepared in recent years and in recent economic development accomplishments.

The Botetourt County economy is growing significantly. Our community has experienced roughly fifteen percent (15%) job growth between 2015 and 2018, and job growth here in Botetourt has outpaced that of the Roanoke Valley by roughly 3 to 1 in terms of percentage growth, with the strongest growth in health care, real estate, retail and wholesale trade.

In-county jobs account for just over 10,000 positions and over 17,000 county residents are engaged in the regional and local workforce. Of Botetourt County's total 845 employers, approximately eighty percent (80%) employ ten or fewer workers and we are seeking ways to actively do more for our small businesses to help them form, grow and thrive in our local economy. Approximately 2,000 residents in Botetourt are considered to be "non-employers" or self-employed by the Internal revenue Service. We can reasonably expect these county residents must have access to quality, affordable broadband connectivity. Availability of broadband is an essential part of this emerging small business development strategy. From 2016 to date, \$200 million in new investments and over 1,000 new jobs have been announced by our community's manufacturers and larger employers, again demonstrating the critical importance of broadband connectivity.

In 2016, we conducted a focus group of young professionals and they told us three things. For Botetourt's economy to continue growing and to be sustainable for all of our residents and businesses, we need to further develop three assets in the community: greenways, workforce housing and broadband. We have made tremendous progress with the first two assets in recent years. The third asset is the focus of our support for LUMOS's proposal to the Department of Housing and Community Development's Virginia Telecommunications Initiative.

To demonstrate our county's need to develop broadband, in 2017, we embarked upon a survey of residents and businesses to understand the situation of broadband in the county. We contracted with the Roanoke Valley Broadband Authority to conduct the survey to gather reliable and detailed information about broadband and telecommunications services in the county.

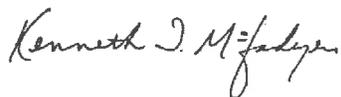
Of business respondents, sixteen percent (16%) of business respondents stated that they had no internet service availability at their place of business. Ninety-one percent (91%) of business respondents and eighty-four percent (84%) of residential respondents considered reliable internet connectivity to be a "necessity."

Of residential respondents, forty percent (40%) indicated that their internet service (not via hotspot) needs improvement, compared to thirty percent (30%) who indicated it is satisfactory. When asked what they used the internet to accomplish, fifty-three percent (53%) indicated they use the internet for school or job training, compared to roughly ten percent (10%) who indicated using it for leisure streaming or gaming. Roughly half of residential respondents indicated that a telework option with fast, reliable service would be possible with such service availability. More than half of the residential respondents tested their home internet speed for the survey. Roughly sixty-nine percent (69%) of residential respondents did not have broadband speed, as defined by the Federal Communications Commission.

Our goal for Botetourt County broadband is for all residents and businesses to have access to reliable and affordable broadband connectivity. Our partnership with LUMOS and Department of Housing and Community Development's Virginia Telecommunications Initiative will greatly assist the Commonwealth and Botetourt County in achieving this critical economic development goal.

We look forward to working with you. Thank you.

Sincerely,



Ken McFadyen
Director of Economic Development

Cc: Gary Larowe, County Administrator
Sandie Terry, President, Rural Broadband Consulting, LLC
David Smith, LUMOS

CENTRAL ACADEMY MIDDLE SCHOOL

367 Poor Farm Road

Fincastle, Virginia 24090

August 26, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

Dear Ms. Holmes and Ms. Breski,

I currently serve as the Principal at Central Academy Middle School, a Community Anchor Institution in Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to underserved area east of Fincastle, and west, north and southwest of the Town of Buchanan in Botetourt County. This area includes over 645 locations including 43 businesses, and James River High school, a community anchor institution that could all be potential customers. It is my understanding that Botetourt County has prepared a six-phased broadband plan and strategies to expand service to the entire county.

I have been the principal at CAMS for 12 years now and have witnessed firsthand how students and staff members that do not have access to internet connectivity have been affected. Teachers and students only have one option for internet. This option has been insufficient for students to complete their assignments at home and staff members being able to work at home.

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,



Timothy A. McClung
Principal



Virginia Cooperative Extension
Botetourt Office
PO Box 217
9 West Main Street
Fincastle, Virginia 24090
Ph: 540-473-8260 Fax: 540-473-8379
email: MCL87@vt.edu
<https://botetourt.ext.vt.edu>

August 26, 2019

Tamarah Holmes and Tammy Breski
Department of Housing and Community Development
600 East Main Street Suite 300
Richmond, VA 23219

RE: Letter of Support Botetourt County Virginia Telecommunication Initiative Application

Dear Ms. Holmes and Ms. Breski,

I am the Agricultural Extension Agent for Botetourt County. I am writing a letter of support of the Botetourt County application for additional funding from the Virginia Telecommunication Initiative (VATI). This funding will encourage providers to extend and improve broadband service to residents, businesses, farms, and students in the underserved area between Fincastle and Buchanan. I cannot express to you how vitally important reliable internet access is to my clients (farmers) in this area.

Through my role with Virginia Cooperative Extension I serve as the liaison between farmers and our Land Grant Universities (Virginia Tech and Virginia State University). Striving to bring current pertinent information and technology to our farmers to better enable them run a successful, sustainable, and profitable businesses. Technology is moving as fast in the agricultural industry as it is in any other and our local farmers cannot keep up without reliable internet access. The lack of internet access in this area is without question hindering our local agricultural businesses.

I also worry that our 4-H and FFA youth that are being raised in these areas are going to suffer great setbacks because of their lack of internet access in their home. To complete project record books and school projects many of them are having to carve out time at the local library or stay late at school (if that is an option).

Ms. Holmes and Ms. Breski, please accept my letter of support of the Virginia Telecommunication Initiative application for additional funding for Botetourt County. Thank you.

Sincerely,

Kate Lawrence
540-473-8260
MCL87@vt.edu

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Extension is a joint program of Virginia Tech, Virginia State University, the U.S. Department of Agriculture, and state and local governments.

Virginia Cooperative Extension programs and employment are open to all, regardless of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other basis protected by law. An equal opportunity/affirmative action employer.



Lumos Networks			
Calculation of in kind contribution			
	# hours	rate	Total
David Smith	280	\$ 70.00	\$ 19,600
Ray Lipes	45	\$ 50.00	\$ 2,250
Terry Strock	245	\$ 40.00	\$ 9,800
John Van Lew	130	\$ 65.00	\$ 8,450
Rob Cale	25	\$ 70.00	\$ 1,750
		Total	\$ 41,850

VATI FUNDING SOURCES TABLE

Please fill in the chart below with a description of the project funding source (local, federal, state, private, other), the amount from that source, the percentage of total project funding that source represents, and a description of the current status of the funds (pending, secured, etc.).

Source	Amount	%	Status
REQUESTED VATI	\$ 2,008,938.56	64.48%	Pending
Lumos Networks	\$ 702,626.13	22.55%	SECURED
Botetourt County	\$ 404,000	12.97%	SECURED
	\$		
	\$		
	\$		
	\$		
TOTAL	\$ 3,115,564.69	100 %	

CDBG Derivation of Cost

Product	Total	VATI	Non-VATI	Source of Estimate	Date
Construction					
Engineering	\$ 131,400.00	\$ -	\$ 131,400	Lumos Networks Project Work Book	9/3/2019
Drafting	\$ 23,040.00	\$ 23,040		Lumos Networks Project Work Book	9/3/2019
Pole Application Fees	\$ 141,625.00	\$ 141,625	\$ -	Lumos Networks Project Work Book	9/3/2019
Pole Make Ready	\$ 226,600.00		\$ 226,600	Lumos Networks Project Work Book	9/3/2019
Rail Road Crossing	\$ 36,000.00		\$ 36,000	Lumos Networks Project Work Book	9/3/2019
Interstate Crossing	\$ 10,000.00		\$ 10,000	Lumos Networks Project Work Book	9/3/2019
Traffic Control	\$ 38,634.00	\$ 38,634	\$ -	Lumos Networks Project Work Book	9/3/2019
Line Construction	\$ 1,599,952.64	\$ 1,599,953	\$ -	Lumos Networks Project Work Book	9/3/2019
Fiber Splicing	\$ 177,694.31	\$ 177,694	\$ -	Lumos Networks Project Work Book	9/3/2019
LCP Equipment	\$ 27,992.61	\$ 27,993	\$ -	Lumos Networks Project Work Book	9/3/2019

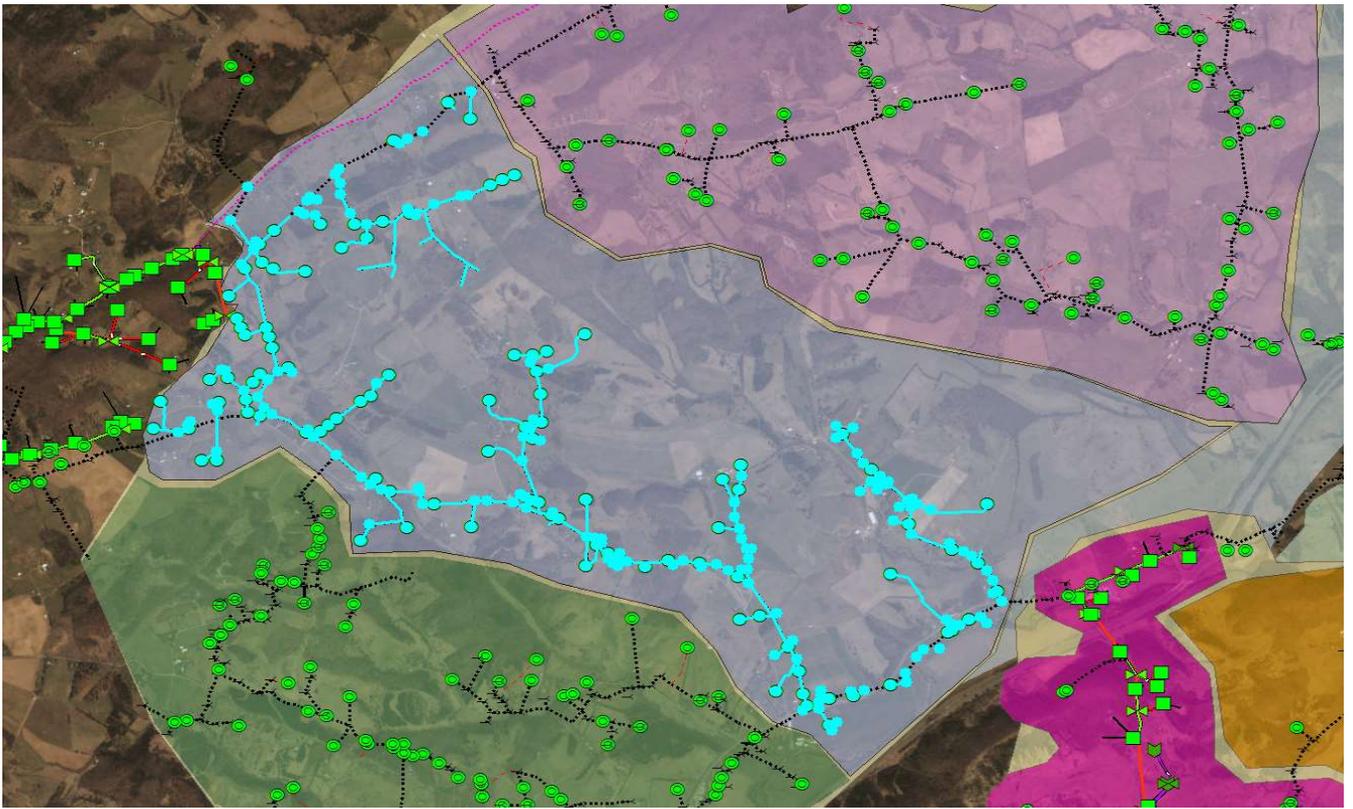
CDBG Derivation of Cost

Feeder Fiber Build	\$ 702,626.13	\$ -	\$ 702,626	Lumos Networks Project Work Book	9/3/2019
TOTAL	\$ 3,115,564.69	\$ 2,008,938.56	\$ 1,106,626.13	Lumos Networks Project Work Book	9/3/2019

RSB WORKBOOK						
CUSTOMER NAME	LUMOS NETWORKS			ENGINEER	Terry Strock	
CUSTOMER LOCATION	Oak Ridge Grant			DATE	9/3/2019	
SALES PERSON				Project #	HLE	
SALES SUPPORT PERSON		Permits Due Date		Job Package Date		
CAPITAL BUDGET #		Planning Guide #				
					Cost	Days
Project #		Aerial Construction	0	DOH	\$0.00	
EWO #		New Aerial	0	Municipal	\$0.00	
DDID #		Overlash	0	RR	\$0.00	
Planned Completion		Buried Construction	8,511	Easement	\$0.00	
HLE		Existing Conduit	0	Pole	\$114,725.00	
Detailed		Fiber Footage	115584	Conduit	\$0.00	
Job Package		Distance Covered	8511	Other	\$238,018.18	Feeder
MRC	-	Variance Approved Dates		Traffic Control	\$12,878.00	
NRC	-	HLE to Detailed Est		Engineering	\$36,792.00	
Total OSP Cost	#####	Detailed Est to JP		Drafting	\$7,680.00	
Total Including Equ.	#####			Permitting	\$0.00	
				Construction	\$559,571.42	
LCP Name				Splicing	\$61,295.97	
Fibers Reserved				Access Equipment	\$0.00	
				LCP Equipment	\$9,330.87	

RSB WORKBOOK						
CUSTOMER NAME	LUMOS NETWORKS			ENGINEER	Terry Strock	
CUSTOMER LOCATION	VERIZON LEC (WHEATLAND RD Polygon)			DATE	9/3/2019	
SALES PERSON				Project #	HLE	
SALES SUPPORT PERSON		Permits Due Date		Job Package Date		
CAPITAL BUDGET #		Planning Guide #				
					Cost	Days
Project #		Aerial Construction	0	DOH	\$0.00	
EWO #		New Aerial	0	Municipal	\$0.00	
DDID #		Overlash	0	RR	\$0.00	
Planned Completion		Buried Construction	7,679	Easement	\$0.00	
HLE		Existing Conduit	0	Pole	\$105,625.00	
Detailed		Fiber Footage	103865	Conduit	\$0.00	
Job Package		Distance Covered	7679	Other	\$203,348.86	
MRC	-	Variance Approved Dates		Traffic Control	\$12,878.00	
NRC	-	HLE to Detailed Est		Engineering	\$45,990.00	
Total OSP Cost	\$945,969.67	Detailed Est to JP		Drafting	\$7,680.00	
Total Including Equ.	\$945,969.67			Permitting	\$0.00	
				Construction	\$507,700.93	
LCP Name				Splicing	\$53,416.01	
Fibers Reserved				Access Equipment	\$0.00	
				LCP Equipment	\$9,330.87	

RSB WORKBOOK						
CUSTOMER NAME	LUMOS NETWORKS			ENGINEER	Terry Strock	
CUSTOMER LOCATION	VERIZON LEC (Hardbarger_Lithia Polygon)			DATE	9/3/2019	
SALES PERSON				Project #	HLE	
SALES SUPPORT PERSON		Permits Due Date		Job Package Date		
CAPITAL BUDGET #		Planning Guide #				
					Cost	Days
Project #		Aerial Construction	0	DOH	\$10,000.00	
EWO #		New Aerial	0	Municipal	\$0.00	
DDID #		Overlash	0	RR	\$36,000.00	
Planned Completion		Buried Construction	0	Easement	\$0.00	
HLE		Existing Conduit	0	Pole	\$147,875.00	
Detailed		Fiber Footage	143962	Conduit	\$0.00	
Job Package		Distance Covered	0	Other	\$261,259.09	Lumos
MRC	-	Variance Approved Dates		Traffic Control	\$12,878.00	
NRC	-	HLE to Detailed Est		Engineering	\$48,618.00	
Total OSP Cost	#####	Detailed Est to JP		Drafting	\$7,680.00	
Total Including Equ.	#####			Permitting	\$0.00	
				Construction	\$532,680.29	
LCP Name				Splicing	\$62,414.31	
Fibers Reserved				Access Equipment	\$0.00	
				LCP Equipment	\$9,330.87	



CUSTOMER NAME	LUMOS NETWORKS	Tax	5%
ENGINEER	Terry Strock	Provisioning	10%
Project #	HLE		

Task Name	QUANTITY	ACTUAL QUANTITY	REEL NUMBER	ITEM #	DESCRIPTION	COST	TOTAL
AERIAL FIBER ASSET MATERIAL							
O.FBR.AERL	103864.8			FIBOFSH144FORTEX	Average for all cable sizes	0.86	\$89,323.73
O.FBR.AERL	173			HDWANCH10HLX	ANCHOR 10" HELIX C102-5205	41.64	\$7,203.13
O.FBR.AERL	173			HDWTRPLEYENUT	TRIPLEYE EYENUT 12585	7.51	\$1,298.80
O.FBR.AERL	173			HDWANCHRD1X7	ANCHOR ROD 1" X 7' 12334P	32.49	\$5,619.91
O.FBR.AERL	91			MTPCOM6PRT700	Average for 2,4, and 6 Port MP	188.00	\$17,108.00
O.FBR.AERL	78875			STRSTRAND6MM	STRAND 6M	0.34	\$26,541.44
O.FBR.AERL	5190			STRSTRAND10M	STRAND 10M	0.51	\$2,640.67
O.FBR.AERL	173			HDWGGRDYLW7	GUY GUARD YELLOW PVC X 7'0 G5517	4.58	\$792.34
O.FBR.AERL	390			HDWLUMOAERCBLTAG	LUMOS AERIAL CABLE WRAP TAG	3.51	\$1,368.90
BURIED FIBER ASSET MATERIAL							
O.FBR.BURD	10			PEDFTTHPRFRM10	PEDESTAL- FTTH- PRO10FSNGURB 10" PROFORM - EMERSON	76.19	\$731.36
CONDUIT ASSET MATERIAL							
O.CONDUIT	7679			INDSMOOTH2	Average for 2" and 1.25" Conduit	0.79	\$6,066.41
O.CONDUIT	15			PBXCH130X48X24	Average for All Pull Box Sizes	432.00	\$6,634.66
O.CONDUIT	15			SPLROUTEMARKER	FIBER ROUTE MARKER SIGN	20.64	\$316.99
AERIAL SPLICING MATERIAL							
O.FBR.AERL	29			SPLCOYTCLS95X28	9.5"x28" DOME KIT W/7 PORT ENDPLATE & GROMMETS - 96F & LARGER	355.28	\$10,250.30
O.FBR.AERL	231			SPLCOYTTRAY0086	COYOTE SPLICE TRAY - 36 SPLICE PER TRAY - NEW CLOSURES	24.48	\$5,650.25
O.FBR.AERL	864			SPLHEATSHRINK60MM	HEAT SHRINK SLEEVE/SING FIBER(50MM)	0.21	\$181.96
MISC.	58			SPLGROM8003989	GROMMET 4 HOLE FLAT DROP ONLY	10.48	\$604.72
LCP / EQUIPMENT							
S.D.EQ	1			CABCOM432ARMLT	COMMSCOPE 432 PORT POLE MOUNT LCP (216 FIBER TAILS)	6,749.16	\$6,749.16
S.D.EQ	2			HDWCOMPLGNPLYSPLTR	COMMSCOPE 32 PORT SPLITTER FOR ALL LCPS (INCLUDES PIG TAILS)	682.32	\$1,364.64
						Sheet Total	\$219,014.46

CUSTOMER NAME - LUMOS NETWORKS
 ENGINEER - Terry Strook
 Project # - HLE

Solid Rock Adder

A U AND AFO

Task Name	QUANTITY	UNIT	UNIT DESCRIPTION	UNIT COST	TOTAL
ENGINEERING					
-	920		PROJECT PLANNING / DESIGN - COMPANY LABOR	50.00	\$46,000.00
DRAFTING					
-	240		CONTRACTOR - CAD INPUT / MAPPING (M4)	32.00	\$7,680.00
PERMITTING					
-	-		PERMIT FEES - POLE	105,625.00	\$105,625.00
-	-		PERMIT FEES - TRAFFIC CONTROL (ENGINEERING DESIGN)	12,878.00	\$12,878.00
AERIAL					
O.FBR.AERL	78875	100AF	PLACE AERIAL FIBER PER S&N CONTRACT - NEW CONSTRUCTION	2.59	\$204,286.25
BURIED FIBER					
O.FBR.BURD	7679	210	PULL FIBER IN EXISTING CONDUIT	1.20	\$9,214.80
O.FBR.BURD	7679	200	BURIED ANY METHOD PER S&N CONTRACT	13.40	\$102,898.60
O.FBR.AERL	29	112	Install Closure - Two (2) Cables	150.00	\$4,327.70
O.FBR.AERL	864	122	Fusion Splice (Testing Included): 1 - 36 Fibers	32.00	\$27,648.00
O.FBR.AERL	15	129	Lower Aerial Cable/Closure/Loop from Strand (Bucket Truck)	75.00	\$1,125.00
O.FBR.AERL	15	130	Raise Aerial Cable/Closure/Loop on Strand (Bucket Truck)	75.00	\$1,125.00
FTTP UNIT PRICING					
O.FBR.AERL	91	803	Mount Multi Port Tap to Strand	16.50	\$1,501.50
O.FBR.BURD	4	815	Place/Remove or Transfer Fiber Term/LCP (Pole or Handhole installation)	202.00	\$808.00
TOTAL LABOR COST					\$728,466.71

NAME LUMOS NETWORKS
LOCATION VERIZON LEC (WHEATLAND RD Polygon)
Project # HLE
MetaSolv # 0
DDID # HLE
CODE

CODE	DESCRIPTION	AMOUNT
ENGINEERING		
<u>PROJECT PLANNING / DESIGN</u>		
	Project Planning / Design - Contract Labor	\$0.00
	Project Planning / Design - Company Labor	\$45,990.00
	Misc. Copper Splicing Labor	\$0.00
	Job Coordination/Lumos Labor	\$0.00
<u>JOB PRINTS / DRAFTING</u>		
	Job Prints / Mapping - Contract Labor	\$7,680.00
	Job Prints/ Mapping - Company Labor	\$0.00
<u>PERMITS AND AUTHORIZATION</u>		
	Permits / Authorization - Contract Labor	\$0.00
	Permits / Authorization - Company Labor	\$0.00
	Easements / Acquisition - Contract Labor	\$0.00
	Easements / Acquisition - Company Labor	\$0.00
	CONTRACTOR - NEGOTIATION OF EASEMENT BEYOND	\$0.00
	CONTRACTOR - NEGOTIATION OF BUILDING LICENSE /	\$0.00
	CONTRACTOR - SPECIALIZED PERMITS	\$0.00
	CONTRACTOR - PE STAMP - PLUS 15% OF COST	\$0.00
	Administration Permitting Time - Company Labor	\$0.00
	Administration Permitting Time - Contract Labor	\$0.00
	Easement Fees	\$0.00
	Permit Fees	\$308,973.86
<u>PROJECT PLANNING / CONSTRUCTION / ADMIN</u>		
	TRAFFIC CONTROL	\$12,878.00
<u>PLACE POLE</u>		
O.POLES	Contractor Labor	\$0.00
O.POLES	Material - Pole	\$0.00
O.POLES	Provisioning - Pole Material	\$0.00
O.POLES	Total + Tax - Pole Material	\$0.00
<u>PLACE CABLE</u>		
O.FBR.AERL	Contractor Labor - Aerial Fiber	\$204,286.25
O.FBR.AERL	Material - Aerial Fiber	\$151,896.91
O.FBR.AERL	Provisioning - Aerial Material	\$22,784.54
O.FBR.AERL	Total + Tax - Aerial Material	\$174,681.45
O.FBR.UNDG	Contractor Labor - Underground	\$0.00
O.FBR.UNDG	Material - Underground	\$0.00
O.FBR.UNDG	Provisioning - Underground Material	\$0.00
O.FBR.UNDG	Total + Tax - Underground Material	\$0.00
O.FBR.BURD	Contractor Labor - Buried	\$112,113.40
O.FBR.BURD	Material - Buried	\$731.36

O.FBR.BURD	Provisioning - Buried Material	\$109.70
O.FBR.BURD	Total + Tax - Buried Material	\$841.06
<u>PLACE CONDUIT</u>		
O.CONDUIT	Material - Buried Fiber	\$13,018.06
O.CONDUIT	Provisioning - Conduit Material	\$1,952.71
O.CONDUIT	Total + Tax - Conduit Material	\$14,970.76
<u>SPLICE CABLE</u>		
O.FBR.AERL	Lumos Labor - Aerial Fiber	\$34,225.70
O.FBR.AERL	Material - Aerial Fiber	\$16,687.23
O.FBR.AERL	Provisioning - Aerial Splicing Material	\$2,503.08
O.FBR.AERL	Total + Tax - Aerial Splicing Material	\$19,190.31
O.FBR.UNDG	Lumos Labor - Underground Fiber	\$0.00
O.FBR.UNDG	Material - Underground Fiber	\$0.00
O.FBR.UNDG	Provisioning - Underground Splicing Material	\$0.00
O.FBR.UNDG	Total + Tax - Underground Splicing Material	\$0.00
<u>MISCELLANEOUS LABOR</u>		
MISC.	Total - MISCELLANEOUS LABOR	\$0.00
<u>ACCESS EQUIPMENT</u>		
	PLACE FTTP EQUIP	\$808.00
	HLE ACCESS EQUIP.	\$0.00
	DROPS	\$0.00
	ONT'S	\$0.00
S.D.EQ	TOTAL ACCESS EQUIPMENT	\$9,330.87
	TOTAL JOB COST	\$945,969.67

FID	Id	TYPE	NAME	MP_SIZE	SPLICE_ID
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(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: 0003775244 | Data as of: Jun 30, 2019 | Operations: ILEC | Submission Status: Original - Submitted | Last Updated: Aug 30, 2019 09:50:39

Filer Identification

Section	Question	Response
Filer Information	Company Name	Lumos Telephone of Botetourt Inc.
	Holding Company Name	Lumos Networks Corp. dba Segra
	SAC ID	190226, 190249
	499 ID	807075, 807819
Data Contact Information	Data Contact Name	Jen Marshall
	Data Contact Phone Number	(540) 946-6805
	Data Contact E-mail	jen.marshall@segra.com
Emergency Operations Contact Information	Emergency Operations Name	Networks Operations Center
	Emergency Operations Phone Number	(877) 411-6930
	Emergency Operations E-mail	HELP@LUMOS.NET
Certifying Official Contact Information	Certifying Official Name	Mary McDermott
	Certifying Official Phone Number	(540) 946-8677
	Certifying Official E-mail	mary.mcdermott@segra.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	FCC_TL_Broadband_Deployment 2.csv	Aug 21, 2019 16:15:04	3048
Fixed Broadband Subscription	FCC_TL_Broadband_Subscription 2.csv	Aug 21, 2019 17:04:09	449
Fixed Voice Subscription	FCC_TL_Voice_Telephone_Subscription 2.csv	Aug 22, 2019 12:15:47	40

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	Lumos Networks Inc	Asymmetric xDSL	1283
		Optical Carrier/Fiber to the End User	1436
		Symmetric xDSL	1
		VDSL	328
Total			3048

Fixed Broadband Subscription

Fixed Broadband Subscriptions by State, Technology and End-user Type

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business / Govt	Total
Virginia	Asymmetric xDSL	173	5427	569	5996
	Optical Carrier/Fiber to the End User	269	8541	600	9141
	Other Copper Wireline	6	0	8	8
	Symmetric xDSL	1	0	1	1
Total		449	13968	1178	15146

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
0.256	0.128	56	0	56
0.384	0.384	0	1	1
1.000	1.000	0	56	56
1.500	0.512	4	0	4
1.500	1.500	0	8	8
3.000	0.768	136	224	360
6.000	1.000	4484	232	4716
10.000	10.000	0	5	5
15.000	4.000	45	0	45
15.000	8.000	0	25	25
20.000	4.000	2	0	2
20.000	5.000	30	0	30
20.000	10.000	0	6	6
20.000	20.000	0	14	14
25.000	4.000	37	0	37
25.000	5.000	5220	40	5260
25.000	10.000	0	176	176
25.000	25.000	0	31	31
35.000	15.000	0	4	4
50.000	10.000	281	28	309
50.000	20.000	700	93	793
50.000	50.000	0	17	17
75.000	20.000	1419	49	1468

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
75.000	75.000	0	16	16
100.000	10.000	27	12	39
100.000	20.000	61	0	61
100.000	40.000	132	27	159
100.000	100.000	0	5	5
150.000	40.000	672	0	672
150.000	150.000	0	16	16
200.000	200.000	0	4	4
300.000	300.000	0	1	1
500.000	500.000	0	1	1
1000.000	250.000	662	42	704
1000.000	1000.000	0	45	45
Total		13968	1178	15146

Fixed Broadband Subscriptions by Technology, Bandwidths and End-user Type

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Asymmetric xDSL	0.256	0.128	56	0	56
	1.500	0.512	4	0	4
	3.000	0.768	136	224	360
	6.000	1.000	4484	232	4716
	15.000	4.000	45	0	45
	15.000	8.000	0	25	25
	20.000	5.000	30	0	30
	20.000	10.000	0	6	6
	25.000	5.000	293	40	333
	50.000	10.000	281	28	309
	50.000	20.000	10	2	12
	100.000	10.000	27	12	39
	100.000	20.000	61	0	61
	Optical Carrier/Fiber to the End User	1.000	1.000	0	56
10.000		10.000	0	5	5
20.000		4.000	2	0	2
20.000		20.000	0	14	14

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	25.000	4.000	37	0	37
	25.000	5.000	4927	0	4927
	25.000	10.000	0	176	176
	25.000	25.000	0	31	31
	35.000	15.000	0	4	4
	50.000	20.000	690	91	781
	50.000	50.000	0	17	17
	75.000	20.000	1419	49	1468
	75.000	75.000	0	16	16
	100.000	40.000	132	27	159
	100.000	100.000	0	5	5
	150.000	40.000	672	0	672
	150.000	150.000	0	16	16
	200.000	200.000	0	4	4
	300.000	300.000	0	1	1
	500.000	500.000	0	1	1
	1000.000	250.000	662	42	704
	1000.000	1000.000	0	45	45
Other Copper Wireline	1.500	1.500	0	8	8
Symmetric xDSL	0.384	0.384	0	1	1
Total			13968	1178	15146

Fixed Voice Subscription

VGE Lines and VoIP Subscriptions by State and End-user Type

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Virginia	18291	10869	0	0
Total	18291	10869	0	0

Fixed Voice Subscription (VGE Lines)

VGE Lines Provided to Unaffiliated Providers by State

State	Wholesale	UNE-L
Virginia	0	0
Total	0	0

VGE Lines Provided to End Users by State, Bundle and Product Type

State	Total	by Bundle		by Product Type			
		Sold w/ Internet	Sold w/o Internet	Consumer		Bus-Govt	
				& No PIC	& PIC	& No PIC	& PIC
Virginia	18291	3840	14451	5052	5817	4256	3166
Total	18291	3840	14451	5052	5817	4256	3166

VGE Lines Provided to End Users by State, Ownership and Last-mile Medium

State	Total	by Ownership			by Last-mile Medium			
		Owned	UNE-L	Resale	FTTP	Coax	Fixed Wireless	Copper
Virginia	18291	18291	0	0	5081	0	0	13210
Total	18291	18291	0	0	5081	0	0	13210

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Form 477 Filing Summary

FRN: 0003742442 | Data as of: Jun 30, 2019 | Operations: Non-ILEC | Submission Status: Original - Submitted | Last Updated: Aug 30, 2019 09:51:48

Filer Identification

Section	Question	Response
Filer Information	Company Name	Lumos Networks dba Segra
	Holding Company Name	Lumos Networks Corp.
	SAC ID	209002
	499 ID	807074, 807076, 821222, 821316
Data Contact Information	Data Contact Name	Jen Marshall
	Data Contact Phone Number	(540) 946-6805
	Data Contact E-mail	jen.marshall@segra.com
Emergency Operations Contact Information	Emergency Operations Name	Networks Operations Center
	Emergency Operations Phone Number	(877) 411-6930
	Emergency Operations E-mail	noc@segra.com
Certifying Official Contact Information	Certifying Official Name	Mary McDermott
	Certifying Official Phone Number	(540) 946-8677
	Certifying Official E-mail	mary.mcdermott@segra.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	FCC_CL_Broadband_Deployment 2.csv	Aug 26, 2019 21:53:17	717
Fixed Broadband Subscription	FCC_CL_Broadband_Subscription 2.csv	Aug 26, 2019 14:14:04	1610
Fixed Voice Subscription	FCC_CL_Voice_Telephone_Subscription 2.csv	Aug 28, 2019 10:53:24	817

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Maryland	Lumos Networks Inc	Asymmetric xDSL	7
		Symmetric xDSL	1
Pennsylvania	Lumos Networks Inc	Symmetric xDSL	11
Virginia	Lumos Networks Inc	Asymmetric xDSL	331
		Optical Carrier/Fiber to the End User	47

State	DBA Name	Technology	Blocks
		Symmetric xDSL	13
West Virginia	Lumos Networks Inc	Asymmetric xDSL	149
		Optical Carrier/Fiber to the End User	95
		Symmetric xDSL	63
Total			717

Fixed Broadband Subscription

Fixed Broadband Subscriptions by State, Technology and End-user Type

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business / Govt	Total
Kentucky	Optical Carrier/Fiber to the End User	1	0	1	1
Maryland	Asymmetric xDSL	7	3	4	7
	Optical Carrier/Fiber to the End User	26	0	31	31
	Other Copper Wireline	7	0	7	7
	Symmetric xDSL	1	1	0	1
North Carolina	Optical Carrier/Fiber to the End User	9	0	9	9
Ohio	Optical Carrier/Fiber to the End User	1	0	1	1
	Other Copper Wireline	5	0	6	6
Pennsylvania	Optical Carrier/Fiber to the End User	39	0	48	48
	Other Copper Wireline	2	0	2	2
	Symmetric xDSL	11	5	6	11
South Carolina	Optical Carrier/Fiber to the End User	4	0	4	4
Tennessee	Optical Carrier/Fiber to the End User	1	0	1	1
Virginia	Asymmetric xDSL	153	179	278	457
	Optical Carrier/Fiber to the End User	572	1091	1766	2857
	Other Copper Wireline	71	0	92	92
	Symmetric xDSL	13	12	12	24
West Virginia	Asymmetric xDSL	110	43	119	162
	Optical Carrier/Fiber to the End User	442	0	1380	1380
	Other Copper Wireline	82	0	89	89
	Symmetric xDSL	53	34	30	64
Total		1610	1368	3886	5254

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
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Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
0.256	0.256	0	2	2
0.320	0.320	0	1	1
0.384	0.384	2	27	29
0.512	0.512	12	9	21
0.704	0.704	0	1	1
0.768	0.768	14	44	58
0.896	0.896	0	1	1
1.000	1.000	0	1909	1909
1.100	1.100	24	7	31
1.200	1.000	0	3	3
1.200	1.200	0	4	4
1.300	1.300	0	1	1
1.500	0.512	31	0	31
1.500	0.768	1	1	2
1.500	1.000	4	12	16
1.500	1.500	0	129	129
3.000	0.768	26	180	206
3.000	1.000	38	5	43
3.000	3.000	0	43	43
4.000	0.768	0	7	7
4.000	1.000	0	8	8
4.000	4.000	0	6	6
4.500	4.500	0	3	3
5.000	5.000	0	22	22
6.000	1.000	125	194	319
6.000	2.000	0	18	18
6.000	6.000	0	5	5
8.000	8.000	0	7	7
10.000	5.000	0	22	22
10.000	10.000	0	106	106
15.000	8.000	0	7	7
20.000	4.000	4	0	4
20.000	10.000	0	32	32

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
20.000	20.000	0	100	100
25.000	5.000	537	1	538
25.000	10.000	0	18	18
25.000	25.000	0	3	3
30.000	15.000	0	1	1
35.000	15.000	0	1	1
50.000	20.000	99	20	119
50.000	50.000	0	236	236
75.000	20.000	263	0	263
75.000	75.000	0	6	6
100.000	40.000	30	7	37
100.000	100.000	0	336	336
150.000	40.000	86	0	86
150.000	150.000	0	2	2
200.000	80.000	0	1	1
200.000	200.000	0	124	124
300.000	300.000	0	41	41
400.000	400.000	0	1	1
500.000	500.000	0	42	42
1000.000	250.000	72	0	72
1000.000	1000.000	0	99	99
2000.000	2000.000	0	16	16
3000.000	3000.000	0	5	5
4000.000	4000.000	0	2	2
5000.000	5000.000	0	6	6
8000.000	8000.000	0	1	1
10000.000	10000.000	0	1	1
Total		1368	3886	5254

Fixed Broadband Subscriptions by Technology, Bandwidths and End-user Type

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Asymmetric xDSL	1.200	1.000	0	3	3
	1.500	0.512	31	0	31

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	1.500	0.768	1	1	2
	1.500	1.000	4	12	16
	3.000	0.768	26	179	205
	3.000	1.000	38	5	43
	4.000	0.768	0	7	7
	6.000	1.000	125	194	319
Optical Carrier/Fiber to the End User	0.256	0.256	0	1	1
	0.320	0.320	0	1	1
	0.384	0.384	0	5	5
	0.512	0.512	0	1	1
	0.768	0.768	0	1	1
	1.000	1.000	0	1900	1900
	1.100	1.100	0	1	1
	1.200	1.200	0	3	3
	1.500	1.500	0	7	7
	3.000	0.768	0	1	1
	3.000	3.000	0	19	19
	4.000	1.000	0	8	8
	4.000	4.000	0	6	6
	5.000	5.000	0	22	22
	6.000	2.000	0	18	18
	6.000	6.000	0	3	3
	8.000	8.000	0	7	7
	10.000	5.000	0	22	22
	10.000	10.000	0	106	106
	15.000	8.000	0	7	7
	20.000	4.000	4	0	4
	20.000	10.000	0	32	32
	20.000	20.000	0	100	100
	25.000	5.000	537	1	538
	25.000	10.000	0	18	18
	25.000	25.000	0	3	3

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	30.000	15.000	0	1	1
	35.000	15.000	0	1	1
	50.000	20.000	99	20	119
	50.000	50.000	0	236	236
	75.000	20.000	263	0	263
	75.000	75.000	0	6	6
	100.000	40.000	30	7	37
	100.000	100.000	0	336	336
	150.000	40.000	86	0	86
	150.000	150.000	0	2	2
	200.000	80.000	0	1	1
	200.000	200.000	0	124	124
	300.000	300.000	0	41	41
	400.000	400.000	0	1	1
	500.000	500.000	0	42	42
	1000.000	250.000	72	0	72
	1000.000	1000.000	0	99	99
	2000.000	2000.000	0	16	16
	3000.000	3000.000	0	5	5
	4000.000	4000.000	0	2	2
	5000.000	5000.000	0	6	6
	8000.000	8000.000	0	1	1
	10000.000	10000.000	0	1	1
Other Copper Wireline	0.256	0.256	0	1	1
	0.384	0.384	0	6	6
	0.512	0.512	0	8	8
	0.704	0.704	0	1	1
	0.768	0.768	0	17	17
	0.896	0.896	0	1	1
	1.000	1.000	0	9	9
	1.200	1.200	0	1	1
	1.300	1.300	0	1	1

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	1.500	1.500	0	122	122
	3.000	3.000	0	24	24
	4.500	4.500	0	3	3
	6.000	6.000	0	2	2
Symmetric xDSL	0.384	0.384	2	16	18
	0.512	0.512	12	0	12
	0.768	0.768	14	26	40
	1.100	1.100	24	6	30
Total			1368	3886	5254

Fixed Voice Subscription

VGE Lines and VoIP Subscriptions by State and End-user Type

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Kentucky	59	0	0	0
Maryland	2485	0	0	0
Ohio	177	0	0	0
Pennsylvania	1795	0	0	0
Virginia	24636	125	0	0
West Virginia	17644	239	0	0
Total	46796	364	0	0

Fixed Voice Subscription (VGE Lines)

VGE Lines Provided to Unaffiliated Providers by State

State	Wholesale	UNE-L
Kentucky	0	0
Maryland	0	0
Ohio	0	0
Pennsylvania	0	0
Virginia	0	0
West Virginia	0	0
Total	0	0

VGE Lines Provided to End Users by State, Bundle and Product Type

State	Total	by Bundle		by Product Type	
		Sold w/ Internet	Sold w/o Internet	Consumer	Bus-Govt

State	Total	by Bundle		by Product Type			
		Sold w/ Internet	Sold w/o Internet	Consumer		Bus-Govt	
				& No PIC	& PIC	& No PIC	& PIC
Kentucky	59	0	59	0	0	54	5
Maryland	2485	6	2479	0	0	1372	1113
Ohio	177	0	177	0	0	123	54
Pennsylvania	1795	0	1795	0	0	865	930
Virginia	24636	326	24310	25	100	15267	9244
West Virginia	17644	180	17464	1	238	10592	6813
Total	46796	512	46284	26	338	28273	18159

VGE Lines Provided to End Users by State, Ownership and Last-mile Medium

State	Total	by Ownership			by Last-mile Medium			
		Owned	UNE-L	Resale	FTTP	Coax	Fixed Wireless	Copper
Kentucky	59	53	6	0	53	0	0	6
Maryland	2485	904	1479	102	904	0	0	1581
Ohio	177	67	110	0	67	0	0	110
Pennsylvania	1795	316	1378	101	316	0	0	1479
Virginia	24636	8906	15711	19	8906	0	0	15730
West Virginia	17644	6758	10672	214	6758	0	0	10886
Total	46796	17004	29356	436	17004	0	0	29792

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Form 477 Filing Summary

FRN: 0003775244 | Data as of: Dec 31, 2018 | Operations: ILEC | Submission Status: Original - Submitted | Last Updated: Mar 6, 2019 12:15:58

Filer Identification

Section	Question	Response
Filer Information	Provider Name	Lumos Telephone of Botetourt Inc.
	Holding Company Name	Lumos Networks Corp.
	SAC ID	190226, 190249
	499 ID	807075, 807819
Data Contact Information	Data Contact Name	Jen Marshall
	Data Contact Phone Number	(540) 946-6805
	Data Contact E-mail	jen.marshall@segra.com
Emergency Operations Contact Information	Emergency Operations Name	Networks Operations Center
	Emergency Operations Phone Number	(888) 553-6454
	Emergency Operations E-mail	HELP@LUMOS.NET
Certifying Official Contact Information	Certifying Official Name	Mary McDermott
	Certifying Official Phone Number	(540) 946-8677
	Certifying Official E-mail	mary.mcdermott@segra.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	FCC_TL_Broadband_Deployment.csv	Mar 6, 2019 12:07:26	2998
Fixed Broadband Subscription	FCC_TL_Broadband_Subscription.csv	Mar 5, 2019 21:30:39	454
Fixed Voice Subscription	FCC_TL_Voice_Telephone_Subscription.csv	Mar 5, 2019 21:48:26	40

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	Lumos Networks Inc	Asymmetric xDSL	1390
		Optical Carrier/Fiber to the End User	1284
		Symmetric xDSL	1
		VDSL	323
Total			2998

Fixed Broadband Subscription

Fixed Broadband Subscriptions by State, Technology and End-user Type

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business / Govt	Total
Virginia	Asymmetric xDSL	177	5677	629	6306
	Optical Carrier/Fiber to the End User	270	7985	567	8552
	Other Copper Wireline	6	0	8	8
	Symmetric xDSL	1	0	1	1
Total		454	13662	1205	14867

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
0.256	0.128	65	0	65
0.384	0.384	0	1	1
1.000	1.000	0	66	66
1.500	0.512	3	0	3
1.500	1.500	0	8	8
3.000	0.768	152	249	401
6.000	1.000	4752	268	5020
10.000	10.000	0	6	6
15.000	4.000	58	0	58
15.000	8.000	0	29	29
20.000	4.000	2	0	2
20.000	5.000	42	0	42
20.000	10.000	0	7	7
20.000	20.000	0	14	14
25.000	4.000	37	0	37
25.000	5.000	5026	35	5061
25.000	10.000	0	153	153
25.000	25.000	0	28	28
35.000	15.000	0	5	5
50.000	10.000	246	24	270
50.000	20.000	839	92	931
50.000	50.000	0	20	20
75.000	20.000	1044	39	1083

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
75.000	75.000	0	14	14
100.000	10.000	35	14	49
100.000	20.000	40	0	40
100.000	40.000	293	26	319
100.000	100.000	0	5	5
150.000	40.000	442	0	442
150.000	150.000	0	13	13
200.000	200.000	0	3	3
300.000	300.000	0	1	1
500.000	500.000	0	1	1
1000.000	250.000	586	45	631
1000.000	1000.000	0	39	39
Total		13662	1205	14867

Fixed Broadband Subscriptions by Technology, Bandwidths and End-user Type

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Asymmetric xDSL	0.256	0.128	65	0	65
	1.500	0.512	3	0	3
	3.000	0.768	152	249	401
	6.000	1.000	4752	268	5020
	15.000	4.000	58	0	58
	15.000	8.000	0	29	29
	20.000	5.000	42	0	42
	20.000	10.000	0	7	7
	25.000	5.000	271	35	306
	35.000	15.000	0	1	1
	50.000	10.000	246	24	270
	50.000	20.000	13	2	15
	100.000	10.000	35	14	49
	100.000	20.000	40	0	40
Optical Carrier/Fiber to the End User	1.000	1.000	0	66	66
	10.000	10.000	0	6	6
	20.000	4.000	2	0	2

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	20.000	20.000	0	14	14
	25.000	4.000	37	0	37
	25.000	5.000	4755	0	4755
	25.000	10.000	0	153	153
	25.000	25.000	0	28	28
	35.000	15.000	0	4	4
	50.000	20.000	826	90	916
	50.000	50.000	0	20	20
	75.000	20.000	1044	39	1083
	75.000	75.000	0	14	14
	100.000	40.000	293	26	319
	100.000	100.000	0	5	5
	150.000	40.000	442	0	442
	150.000	150.000	0	13	13
	200.000	200.000	0	3	3
	300.000	300.000	0	1	1
	500.000	500.000	0	1	1
	1000.000	250.000	586	45	631
	1000.000	1000.000	0	39	39
Other Copper Wireline	1.500	1.500	0	8	8
Symmetric xDSL	0.384	0.384	0	1	1
Total			13662	1205	14867

Fixed Voice Subscription

VGE Lines and VoIP Subscriptions by State and End-user Type

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Virginia	19137	11290	0	0
Total	19137	11290	0	0

Fixed Voice Subscription (VGE Lines)

VGE Lines Provided to Unaffiliated Providers by State

State	Wholesale	UNE-L
Virginia	0	0
Total	0	0

VGE Lines Provided to End Users by State, Bundle and Product Type

State	Total	by Bundle		by Product Type			
		Sold w/ Internet	Sold w/o Internet	Consumer		Bus-Govt	
				& No PIC	& PIC	& No PIC	& PIC
Virginia	19137	4195	14942	5163	6127	4519	3328
Total	19137	4195	14942	5163	6127	4519	3328

VGE Lines Provided to End Users by State, Ownership and Last-mile Medium

State	Total	by Ownership			by Last-mile Medium			
		Owned	UNE-L	Resale	FTTP	Coax	Fixed Wireless	Copper
Virginia	19137	19137	0	0	4985	0	0	14152
Total	19137	19137	0	0	4985	0	0	14152

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Form 477 Filing Summary

FRN: 0003742442 | Data as of: Dec 31, 2018 | Operations: Non-ILEC | Submission Status: Revised - Submitted | Last Updated: Mar 7, 2019 17:06:51

Filer Identification

Section	Question	Response
Filer Information	Provider Name	Lumos Networks Inc.
	Holding Company Name	Lumos Networks Corp.
	SAC ID	209002
	499 ID	807074, 807076, 821222, 821316
Data Contact Information	Data Contact Name	Jen Marshall
	Data Contact Phone Number	(540) 946-6805
	Data Contact E-mail	jen.marshall@segra.com
Emergency Operations Contact Information	Emergency Operations Name	Networks Operations Center
	Emergency Operations Phone Number	(877) 411-6930
	Emergency Operations E-mail	noc@segra.com
Certifying Official Contact Information	Certifying Official Name	Mary McDermott
	Certifying Official Phone Number	(540) 946-8677
	Certifying Official E-mail	mary.mcdermott@segra.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	FCC_CL_Broadband_Deployment.csv	Mar 7, 2019 16:58:30	775
Fixed Broadband Subscription	FCC_CL_Broadband_Subscription v2.csv	Mar 7, 2019 17:05:23	1583
Fixed Voice Subscription	FCC_CL_Voice_Telephone_Subscription.csv	Mar 7, 2019 16:58:30	824

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Maryland	Lumos Networks Inc	Asymmetric xDSL	8
		Symmetric xDSL	1
Pennsylvania	Lumos Networks Inc	Symmetric xDSL	11
Virginia	Lumos Networks Inc	Asymmetric xDSL	362
		Optical Carrier/Fiber to the End User	40

State	DBA Name	Technology	Blocks
		Symmetric xDSL	13
West Virginia	Lumos Networks Inc	Asymmetric xDSL	164
		Optical Carrier/Fiber to the End User	103
		Symmetric xDSL	73
Total			775

Fixed Broadband Subscription

Fixed Broadband Subscriptions by State, Technology and End-user Type

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business / Govt	Total
Maryland	Asymmetric xDSL	7	4	5	9
	Optical Carrier/Fiber to the End User	22	0	25	25
	Other Copper Wireline	7	0	7	7
	Symmetric xDSL	1	1	0	1
Ohio	Other Copper Wireline	5	0	6	6
Pennsylvania	Optical Carrier/Fiber to the End User	36	0	43	43
	Other Copper Wireline	2	0	2	2
	Symmetric xDSL	12	5	7	12
South Carolina	Optical Carrier/Fiber to the End User	1	0	1	1
Virginia	Asymmetric xDSL	156	188	306	494
	Optical Carrier/Fiber to the End User	529	1145	1802	2947
	Other Copper Wireline	82	0	106	106
	Symmetric xDSL	13	12	12	24
West Virginia	Asymmetric xDSL	121	46	132	178
	Optical Carrier/Fiber to the End User	439	0	1637	1637
	Other Copper Wireline	90	0	98	98
	Symmetric xDSL	60	37	37	74
Total		1583	1438	4226	5664

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
0.256	0.256	0	3	3
0.320	0.320	0	1	1
0.384	0.384	3	31	34
0.512	0.512	12	12	24

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
0.704	0.704	0	1	1
0.768	0.768	15	51	66
0.896	0.896	0	1	1
1.000	1.000	0	2280	2280
1.100	1.100	25	7	32
1.200	1.000	0	3	3
1.200	1.200	0	4	4
1.300	1.300	0	1	1
1.500	0.512	31	0	31
1.500	0.768	1	1	2
1.500	1.000	4	15	19
1.500	1.500	0	142	142
2.000	2.000	0	2	2
3.000	0.768	26	201	227
3.000	1.000	42	7	49
3.000	3.000	0	50	50
4.000	0.768	0	9	9
4.000	1.000	0	12	12
4.000	4.000	0	6	6
4.500	4.500	0	4	4
5.000	5.000	0	22	22
6.000	1.000	134	210	344
6.000	2.000	0	18	18
6.000	6.000	0	7	7
8.000	8.000	0	7	7
10.000	5.000	0	22	22
10.000	10.000	0	106	106
15.000	8.000	0	8	8
20.000	4.000	4	0	4
20.000	10.000	0	33	33
20.000	20.000	0	103	103
25.000	5.000	586	1	587
25.000	10.000	0	18	18

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
25.000	25.000	0	3	3
30.000	15.000	0	1	1
35.000	15.000	0	2	2
50.000	20.000	147	19	166
50.000	50.000	0	233	233
75.000	20.000	240	0	240
75.000	75.000	0	4	4
100.000	40.000	35	7	42
100.000	100.000	0	286	286
150.000	40.000	78	0	78
150.000	150.000	0	1	1
200.000	80.000	0	1	1
200.000	200.000	0	103	103
300.000	300.000	0	31	31
400.000	400.000	0	1	1
500.000	500.000	0	29	29
1000.000	250.000	55	0	55
1000.000	1000.000	0	83	83
2000.000	2000.000	0	10	10
3000.000	3000.000	0	4	4
4000.000	4000.000	0	1	1
5000.000	5000.000	0	6	6
8000.000	8000.000	0	1	1
10000.000	10000.000	0	1	1
Total		1438	4226	5664

Fixed Broadband Subscriptions by Technology, Bandwidths and End-user Type

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Asymmetric xDSL	1.200	1.000	0	3	3
	1.500	0.512	31	0	31
	1.500	0.768	1	1	2
	1.500	1.000	4	15	19
	3.000	0.768	26	198	224

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	3.000	1.000	42	7	49
	4.000	0.768	0	9	9
	6.000	1.000	134	210	344
Optical Carrier/Fiber to the End User	0.256	0.256	0	1	1
	0.320	0.320	0	1	1
	0.384	0.384	0	6	6
	0.512	0.512	0	1	1
	0.768	0.768	0	1	1
	1.000	1.000	0	2270	2270
	1.100	1.100	0	1	1
	1.200	1.200	0	3	3
	1.500	1.500	0	9	9
	2.000	2.000	0	2	2
	3.000	0.768	0	3	3
	3.000	3.000	0	22	22
	4.000	1.000	0	12	12
	4.000	4.000	0	6	6
	5.000	5.000	0	22	22
	6.000	2.000	0	18	18
	6.000	6.000	0	5	5
	8.000	8.000	0	7	7
	10.000	5.000	0	22	22
	10.000	10.000	0	106	106
	15.000	8.000	0	8	8
	20.000	4.000	4	0	4
	20.000	10.000	0	33	33
	20.000	20.000	0	103	103
	25.000	5.000	586	1	587
	25.000	10.000	0	18	18
	25.000	25.000	0	3	3
30.000	15.000	0	1	1	
35.000	15.000	0	2	2	

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	50.000	20.000	147	19	166
	50.000	50.000	0	233	233
	75.000	20.000	240	0	240
	75.000	75.000	0	4	4
	100.000	40.000	35	7	42
	100.000	100.000	0	286	286
	150.000	40.000	78	0	78
	150.000	150.000	0	1	1
	200.000	80.000	0	1	1
	200.000	200.000	0	103	103
	300.000	300.000	0	31	31
	400.000	400.000	0	1	1
	500.000	500.000	0	29	29
	1000.000	250.000	55	0	55
	1000.000	1000.000	0	83	83
	2000.000	2000.000	0	10	10
	3000.000	3000.000	0	4	4
	4000.000	4000.000	0	1	1
	5000.000	5000.000	0	6	6
	8000.000	8000.000	0	1	1
	10000.000	10000.000	0	1	1
Other Copper Wireline	0.256	0.256	0	2	2
	0.384	0.384	0	6	6
	0.512	0.512	0	11	11
	0.704	0.704	0	1	1
	0.768	0.768	0	19	19
	0.896	0.896	0	1	1
	1.000	1.000	0	10	10
	1.200	1.200	0	1	1
	1.300	1.300	0	1	1
	1.500	1.500	0	133	133
	3.000	3.000	0	28	28

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	4.500	4.500	0	4	4
	6.000	6.000	0	2	2
Symmetric xDSL	0.384	0.384	3	19	22
	0.512	0.512	12	0	12
	0.768	0.768	15	31	46
	1.100	1.100	25	6	31
Total			1438	4226	5664

Fixed Voice Subscription

VGE Lines and VoIP Subscriptions by State and End-user Type

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Kentucky	59	0	0	0
Maryland	2593	0	0	0
Ohio	153	0	0	0
Pennsylvania	1910	0	0	0
Virginia	25454	128	0	0
West Virginia	18599	255	0	0
Total	48768	383	0	0

Fixed Voice Subscription (VGE Lines)

VGE Lines Provided to Unaffiliated Providers by State

State	Wholesale	UNE-L
Kentucky	0	0
Maryland	0	0
Ohio	0	0
Pennsylvania	0	0
Virginia	0	0
West Virginia	0	0
Total	0	0

VGE Lines Provided to End Users by State, Bundle and Product Type

State	Total	by Bundle		by Product Type			
		Sold w/ Internet	Sold w/o Internet	Consumer		Bus-Govt	
				& No PIC	& PIC	& No PIC	& PIC
Kentucky	59	0	59	0	0	54	5

State	Total	by Bundle		by Product Type			
		Sold w/ Internet	Sold w/o Internet	Consumer		Bus-Govt	
				& No PIC	& PIC	& No PIC	& PIC
Maryland	2593	6	2587	0	0	1441	1152
Ohio	153	0	153	0	0	125	28
Pennsylvania	1910	0	1910	0	0	917	993
Virginia	25454	356	25098	30	98	15599	9727
West Virginia	18599	199	18400	1	254	10954	7390
Total	48768	561	48207	31	352	29090	19295

VGE Lines Provided to End Users by State, Ownership and Last-mile Medium

State	Total	by Ownership			by Last-mile Medium			
		Owned	UNE-L	Resale	FTTP	Coax	Fixed Wireless	Copper
Kentucky	59	53	6	0	53	0	0	6
Maryland	2593	916	1572	105	916	0	0	1677
Ohio	153	41	112	0	41	0	0	112
Pennsylvania	1910	314	1494	102	314	0	0	1596
Virginia	25454	8932	16499	23	8932	0	0	16522
West Virginia	18599	6972	11390	237	6972	0	0	11627
Total	48768	17228	31073	467	17228	0	0	31540



PUBLIC NOTICE

The County of Botetourt is accepting public comments on a potential, joint grant application to the Virginia Department of Housing and Community Development (DHCD) by the County of Botetourt and Lumos Networks (Segra) to obtain funds through the Virginia Telecommunications Initiative (VATI) to provide for last-mile expansion of broadband services into the following sections of Botetourt County that are considered unserved by any broadband provider, per the grant guidelines:

- West of the I-81 corridor bordered by Little Timber Ridge Road, Springwood Road, Oak Ridge Road, and beyond Narrow Passage Road across the James River to Cartmills Gap Road.
- East of I-81 and U. S. Route 11 (Lee Highway) including Hardbarger Road, Lithia Road, U. S. Route 11 to Bobletts Gap Road.

Comments should be submitted to Mr. Gary Larrowe, Botetourt County Administrator, 57 S. Center Drive, Daleville, VA 24083, via e-mail to sfain@botetourtva.gov, or via fax (540-473-8225), by 12:00 P. M. on Friday, August 23, 2019.

Gary Larrowe
Botetourt County Administrator

Please publish the attached ad as a “run of press” on Wednesday, July 24 and again on Wednesday, July 31, 2019.