

Application to DHCD Submitted through CAMS

Central Shenandoah Planning District Commission

Bath-Highland Network Authority 2022 Universal Broadband Project

Application ID: 86508242021135520

Application Status: Pending

Program Name: Virginia Telecommunications Initiative 2022

Organization Name: Central Shenandoah Planning District Commission

Organization Address: 112 MacTanly Place
Staunton, VA 24401-2373

Profile Manager Name: Elizabeth McCarty

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Project Name: Bath-Highland Network Authority 2022 Universal Broadband Project

Project Contact Name: Hunter Moore

Project Contact Phone: (540) 885-5174

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Project Location: 112 MacTanly Place
Staunton, VA 24401-2373

Project Service Area: Bath County, Highland County

Total Requested Amount: \$7,876,800.00

Required Annual Audit Status: Accepted

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Bath-Highland Network Authority 2022 Universal Broadband Project

Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	\$7,876,800.00	\$3,113,200.00	\$10,990,000.00
Construction	\$5,544,000.00	\$2,156,000.00	\$7,700,000.00
Other: Special Construction Costs	\$2,332,800.00	\$907,200.00	\$3,240,000.00
Other: Grant Administration	\$0.00	\$50,000.00	\$50,000.00
Total:	\$7,876,800.00	\$3,113,200.00	\$10,990,000.00

Budget Narrative:

A detailed breakdown of costs for this project is provided in Attachment 12-Derivation of Costs. The CSPDC is the applicant on behalf of the Bath-Highland Network Authority and MGW is the co-applicant to bring universal broadband coverage to Bath and Highland counties. The total cost for the project is \$10,990,000. MGW is providing \$2,013,200 in matching funds. Bath County is providing \$800,000 in local ARPA funds and Highland County is providing \$300,000 in local ARPA funding. The total match is \$3,113,200 (28.3% of the total project). The VATI funding request of \$7,876,800 is for the construction/special construction costs to connect 2,470 serviceable passings.

Questions and Responses:

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1. Project Description and Need

Describe 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:

Bath and Highland counties are located within the Allegheny Mountains with their western border being the state line between West Virginia and Virginia. This geographic area is part of the Ridge and Valley Physiographic Province. Highland County, also known as “Little Switzerland,” received its name from its prevailing high altitude; it has one of the highest mean elevations of any county east of the Mississippi River. Highland County is the least populated county in the Commonwealth. Bath County is the second least populated county. Together, the two counties have 6,441 residents (2020 U.S. Census).

The project area for the Bath-Highland Network Authority 2022 Universal Broadband Project is all locations which are not currently served, or planned to be served, by broadband service (minimum of 25/3) within the two-county area. To ensure that the project will achieve universal coverage, MGW looked at every location in Bath County and Highland County and utilized a funnel-down methodology. First, any location presently served by MGW, co-applicant on this proposal, was removed from the project area. Next, locations served by another ISP or within an area receiving funding through federal broadband programs were removed. Current project areas such as the Augusta/Highland Rural FTTH Project, awarded VATI 2021 funding, were removed. This methodology is described in more detail in Question 5. Through this process, 2,470 unserved locations were identified and included in the project area for this application. This last-mile fiber build-out project will provide not only broadband, but in some cases make internet service available for the first time.

The Counties’ lack of population density creates financial challenges, and the topography creates physical challenges when installing or upgrading broadband networks. The two counties have been trying for many years to address the lack of broadband in their rural and remote region. They completed and adopted a telecommunications strategic plan in 2015 and in 2017, they created the Bath Highland Network Authority with the purpose to seek broadband solutions and funding opportunities to expand broadband access within their counties. While progress has been made, the harder-to-reach places remain. These are expensive to connect; the construction costs of deploying broadband in these areas is why a provider has not already built a network to serve this region.

Today, access to affordable high-speed broadband is essential to encourage economic development, improve educational opportunities, ensure public safety, and enhance quality of life. This project will open opportunities for telework, telehealth, and telelearning that have been critical, but unavailable, to many during the pandemic. As this application is submitted, Bath County schools have suspended in-person learning because of rising COVID cases. As with the start of the pandemic, students are once again challenged with a digital connection to school, and many are relying on hot spots located throughout the county to complete assignments. In April 2020, Bath County had the highest unemployment rate (20.8%) in the Commonwealth. The lack of broadband is affecting both counties’ ability to attract and retain residents and businesses.

MGW has provided telecommunication services in the region since 1967. Their mission is to connect rural communities that larger providers have often ignored. MGW has partnered with BHNA, Bath County, Highland County, and the CSPDC on this project to meet the Counties’ longstanding goal of providing broadband access to every home, farm, business, and community institution. To support this effort, the Counties are using ARPA funds towards the required match. Bath County is allocating 100 % of its ARPA funds for broadband. Highland County has set aside 75 % of its ARPA funds for broadband expansion. By leveraging their partnerships and funding available through ARPA and VATI, the two counties are encouraged that they finally will have the ability to offer high-speed broadband access to all their residents and businesses, to have complete coverage.

2. List existing providers in the proposed project area and the speeds offered. Please do not include satellite. Describe your outreach efforts to identify existing providers and how this information was compiled with source(s).

Answer:

The CSPDC and MGW are very familiar with both the incumbent and other internet providers in the region. We visited each of their websites to obtain the most recent speed and package information, and is included below by County:

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Highland County:

Highland Telephone Cooperative (HTC) - ILEC

4Mbps download and 1Mbps upload (\$29.95/month)

6Mbps download and 1Mbps upload (\$46.95/month)

10Mbps download and 1Mbps upload (\$65.95/month)

25Mbps download and 3Mbps upload (\$89.95/month)

<https://htcnet.org/internet.html>

MGW Telephone Company (MGW) - ILEC

MGW Fiber Pricing

100Mbps: up to 100 Mbps download and 20Mbps upload (\$59.99/month)

250Mbps: up to 250Mbps download and 40Mbps upload (\$69.99/month)

500Mbps: up to 500Mbps download and 40Mbps upload (\$99.99/month)

1Gbps: up to 1Gbps download and 50Mbps upload (\$145/month)

<https://www.mgwnet.com/residentialfiber>

MGW xDSL Pricing

Up to 10Mbps (\$44.99/month)

Up to 25Mbps (\$54.99/month)

Up to 50Mbps (\$64.99/month)

<https://www.mgwnet.com/residentialxdsl>

Bath County:

MGW Telephone Company (MGW) - ILEC:

MGW Fiber Pricing

100Mbps: up to 100 Mbps download and 20Mbps upload (\$59.99/month)

250Mbps: up to 250Mbps download and 40Mbps upload (\$69.99/month)

500Mbps: up to 500Mbps download and 40Mbps upload (\$99.99/month)

1Gbps: up to 1Gbps download and 50Mbps upload (\$145/month)

<https://www.mgwnet.com/residentialfiber>

MGW xDSL Pricing

Up to 10Mbps (\$44.99/month)

Up to 25Mbps (\$54.99/month)

Up to 50Mbps (\$64.99/month)

<https://www.mgwnet.com/residentialxdsl>

Telephone and Data Systems, Inc. (TDS) - ILEC:

The TDS website requires their web visitors to enter an address to find out what packages area available to their general area. We took several addresses from with the project area and compiled all available speed tiers and packages:

Express Internet: 2Mbps to 5Mbps download and 512Kbps upload (\$29.95/month)

Turbo Internet: 6Mbps to 15Mbps download and 768Kbps upload (\$29.955/month)

Warp Internet: 36Mbps to 50Mbps download and 1.5Mbps to 10Mbps upload (\$29.95/month)

WarpX Internet: 75Mbps to 100Mbps download and 7Mbps to 15Mbps upload (\$34.96/month)

<https://tdstelecom.com/shop/internet-services/high-speed-internet-plans.html>

Lumos Networks Corp - ILEC:

Essential Symmetrical: 200Mbps download and 200Mbps upload (\$59.99/month)

Premium Symmetrical: 500Mbps download and 500Mbps upload (\$74.99/month)

Ultimate Symmetrical: 1Gbps download and 1Gbps upload (\$89.99/month)

<https://www.lumosnetworks.com/build-a-bundle/>

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Lingo Networks:

100Mbps: up to 100 Mbps download and 20Mbps upload (\$59.99/month)

250Mbps: up to 250Mbps download and 40Mbps upload (\$69.99/month)

500Mbps: up to 500Mbps download and 40Mbps upload (\$99.99/month)

1Gbps: up to 1Gbps download and 50Mbps upload (\$145/month)

<https://lingonetworks.net/residentialfiber>

BARC Electric:

Entry Level: 50Mbps download and 10Mbps upload (\$60/month)

Basic: 100Mbps download and 50Mbps upload (\$70/month)

Advanced: 250Mbps download and 125Mbps upload (\$80/month)

Ultra: 500Mbps download and 150Mbps upload (\$150/month)

Gigabit: 1000Mbps download and 1000Mbps upload (\$500/month)

<https://www.barconnects.net/residential-internet/>

3. Describe if any areas near the project have received funding from federal grant programs, including but not limited to Connect America Funds II (CAF II), ACAM, ReConnect, Community Connect, and Rural Digital Opportunity Funds (RDOF). If there have been federal funds awarded near the project area(s), provide a map showing these areas, verifying the proposed project area does not conflict with these areas. Do not include areas awarded to satellite broadband providers. Label Map: Attachment 2 – Documentation on Federal Funding Area.

Answer:

Both Bath and Highland have incumbent local exchange carriers (ILECs) who participate in the FCC's Alternative Connect America Cost Model (ACAM) program. The proposed project area overlaps with ACAM areas but only where ACAM reporting shows less than 25/3 speeds available. Highland Telephone Cooperative (HTC's) has provided a letter stating their intention to have broadband to 100% of their service area by 2023. To avoid overlap and overbuilding, none of HTC's service area is included in the proposed project area.

There are three bidding units (census block groups) in Bath County that were included in the RDOF auction- the proposed project area does NOT overlap any RDOF area. In the CAF II Auction 903, there was an area in eastern Bath County where BARC electric was the winning bidder- the proposed project area does NOT overlap with the CAF II area. Attachment 2 includes map layers representing all projects receiving funding from federal grant (or other) programs.

4. Describe if any blocks awarded in Rural Digital Opportunity Fund (RDOF), excluding those awarded to satellite internet service providers, are included in the VATI application area. If RDOF areas awarded to terrestrial internet service providers are included in the VATI application, provide a map of these areas and include information on number of passings in RDOF awarded areas within the VATI application area, and Census Block Group ID number for each block group in the project area. Label Attachment: Attachment 3 – RDOF Awarded Areas Form in VATI Area

Answer:

There are three RDOF bidding units (Census Block Groups) in the two-county area.

510179201001 (2 locations) - winning bidder = Co=op Connections Consortium

510179201002 (29 locations) - winning bidder = Co=op Connections Consortium

510179201004 (1 location) - winning bidder = Space Exploration Technologies Corp.

RDOF Bidding Units (Census Block Groups) 510179201001 and 510179201002 were won by a consortium which BARC Electric participates in when bidding in CAF auctions. BARC Electric is proposing to provide fiber connections to the locations in those two bidding units, and even though the Auction 904: RDOF is a 10-year program, these two RDOF areas were NOT included in our VATI '22 project area.

RDOF Bidding Unit (Census Block Group) 510179201004 was won by Space Exploration Technologies Corp. While VATI guidelines instruct the applicant to "exclude those awarded to satellite internet providers", we confirmed through the use of 911 address databases that there are no addressed structures in the census block group to serve and is therefore NOT included in our VATI '22 project area.

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5. Overlap: 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 below 25/3 mbps and with less than 25% service overlap within the project area for wireless projects and 10% for wireline projects. Describe any anticipated service overlap with current providers within the project area. Provide a detailed explanation as to how you determined the percentage overlap. Label Attachment: Attachment 4 – Documentation Unserved Area VATI Criteria.

Answer:

Question #1 of this application not only asks for a map and description of the project area, but also “how the project was selected”. The funnel-down methodology described in questions #1 was used to not only identify a project area, but a project area that would have minimal to no (less than 10%) overlap with any existing broadband coverage.

MGW has participated in the FCC’s Alternative Connect America Cost Model (ACAM) program since 2016. The ACAM program pre-dates the current definition of broadband (25/3) and the VATI program, has build-out obligations that are lower (in terms of speed) and is for specific census blocks, not an ISPs entire service area. All ACAM recipients (like other Connect America Fund recipients) are required to report the locations they have built-out at the address level. We therefore removed all locations which MGW has already made 25/3 available via their ACAM build-outs.

MGW is not the only broadband provider in the project area who participates in ACAM. All the Incumbent Local Exchange Carriers (ILECs) in Bath & Highland participate in ACAM, which includes Highland Telephone Cooperative (HTC), Telephone and Data Systems, Inc. (TDS), and Lumos Networks Corp. We utilized data from the CAF map (<https://data.usac.org/publicreports/caf-map/>) to remove all locations which an ACAM recipient reported 25/3 or greater were removed. While HTC participates in ACAM, none of their service area is included in this application. To verify that the HTC was already served or planned to be served, HTC provided a letter stating the status of their fiber project which is aimed at achieving universal coverage in their service territory by 2023. The letter is provided as Attachment 18 - HTC Letter of Support.

In addition, we also reached out to some other ISP’s directly to confirm if and to what extent they may have a presence in the project area. Lumos Networks provided a map of their fiber infrastructure in an area of question, and that area was not included in the project area due to Lumos stating that fiber was already available.

We also removed the CAF II Auction 903 areas located in Bath County to remove any overlap with that federal funding program. And lastly, we removed all the locations included in the Augusta/Highland Rural FTTH Project which was awarded VATI 2021 funding and is currently underway.

In summary, much of the proposed project is within MGW’s service territory and only overlaps in areas where MGW provides less than 25/3. With HTC, BARC’s CAF II and RDOF areas removed, and MGW’s VATI ’21 area removed- the only anticipated overlap is with TDS (see map included with Attachment 4). We utilized their ACAM reporting and search tools on their website to determine how much overlap there may actually be. At the time of this application, only 10 of the 279 locations they have reported in/near the project area were reported at speeds > 25/3, which is far less than 10% overlap. Attachment 4 includes the project area map with notes regarding overlap and a zoom-in depicting the TDS reported speeds.

6.

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Total Passings: Provide the number of total serviceable units in the project area. Applicants are encouraged to prioritize areas lacking 10 Megabits per second download and 1 Megabits per second upload speeds, as they will receive priority in application scoring. For projects with more than one service area, each service area must have delineated passing information. Label Attachment: Attachment 5 – Passings Form.

- a. Of the total number of VATI passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area. (Up to 10 points for businesses and community anchor institutions)

- b. If applicable, of the total number of RDOF passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area.

- c. If applicable, provide the number of passings that will require special construction costs, defined as a one-time fee above normal service connection fees required to provide broadband access to a premise . Describe the methodology used for these projections.

- d. If applicable, provide the number of passings included in the application that will receive broadband access because special construction costs have been budgeted in the VATI application. Describe the methodology used for determining which passings with special construction costs were budgeted in the application.

- e. Provide the number of passings in the project area that have 10/1 mbps or less. Describe the methodology used for these projections. (up to 15 points)

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a) The Bath-Highland Network Authority's 2022 Universal Broadband Project includes a total of 2,470 serviceable units.

Total Passings = 2,470

Residential = 2,193

Business = 262

Non-residential = 6

Community Anchors = 9

For counties that do not issue business licenses we have had to rely on a variety of sources and local knowledge to determine what type of "passings" are located in the project area. The CSPDC and MGW have each served the region for over 50 years. We also received input from our local leaders and planners, performed property searches on VAMANet, conducted windshield surveys, and utilized GIS resources as part of this effort.

b) Total RDOF Passings = 0

c) Passings with Special Construction Costs = 270

Passings with special construction costs are generally defined as those that require a service connection that is greater than 500ft in length. Many providers limit their "service availability" to 150-250, but in a rural area such as this very few drops are under that distance. In Bath and Highland Counties, service drops in the 150-250ft range are few and far between. Therefore, as part of the VATI '22 project, we will provide an install up to 500ft with no connection fee. We hope this special offer will help more people get connected.

d) If this application, including the budget for special construction costs, is awarded- ALL the locations identified as requiring special construction costs will be included in the project so long as they meet all of DHCD/VATI's criteria. We designed the scope and budget using a no-home-left-behind approach. Therefore, all 270 locations identified above would receive broadband access. Also, it would be important to note that these special construction costs can be quite significant in some of these remote and hard to reach areas-- one of the samples we looked at was \$29,000 to connect a single home.

e) This project is designed to achieve universal coverage, therefore a large number of the locations within the project area do not have access to 10/1 and many do not have any internet service available aside from satellite. Of the 2,470 passings in this project area, we estimate that 620 do not have 10/1 or greater available. We utilized MGW's (and other providers) most recent CAF reporting information to verify locations with <10, 10-25, and > 25 in order to delineate eligible project areas and determine project statistics such as serviceable units.

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

Answer:

N/A - there are no wireless components included in this proposed project.

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8. Speeds: Describe the internet service offerings, including download and upload speeds, to be provided after completion of the proposed project. 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. List the private co-applicant's tiered price structure for all speed offerings in the proposed project area, including the lowest tiered speed offering at or above 25/3 mbps. (up to 10 points)

Answer:

MGW shall deploy a gigabit-level last-mile network architecture which allows for the delivery of voice and data services across the broadband access platform. MGW will utilize redundant Ethernet uplinks from the proposed FTTP electronics to its existing softswitch to facilitate voice services. The fiber optic cable infrastructure will be designed in a manner that allows MGW to utilize various technologies such as Active Ethernet, Gigabit Passive Optical Network (GPON), or other next-generation technologies. Redundant connections ensure highly reliable broadband data communications services, and MGW will utilize its existing and new data network routers, Internet uplinks, and internet service provider (ISP) services as needed. All the subscribers who receive a FTTH connection will have internet service offerings available with packages starting at 100 Mbps and on up to 1 Gbps (1 Gig). Each customer's service (bandwidth) will be queued as appropriate based upon the package they choose.

The list below shows the speed packages that will be available to the customers in the project area that receive a FTTH connection:

100Mbps: up to 100 Mbps download and 20Mbps upload (\$59.99/month)

250Mbps: up to 250Mbps download and 40Mbps upload (\$69.99/month)

500Mbps: up to 500Mbps download and 40Mbps upload (\$99.99/month)

1Gbps: up to 1Gbps download and 50Mbps upload (\$145/month)

9. Network Design: 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. Provide a detailed explanation of how this information was determined with sources. Provide information on how capacity for scalability, or expansion, of how the network can adapt to future needs. If using a technology with shared bandwidth, describe how the equipment will handle capacity during peak intervals. For wireless projects, provide a propagation map for the proposed project area with a clearly defined legend for scale of map. Label Map: Attachment 6 – Propagation Map Wireless Project.

Answer:

MGW has been in the telcom business since 1967 and has tested and deployed a wide variety of equipment and configurations since that time. MGW uses a Gigabit Passive Optical Network (GPON) technology. GPON provides a robust and cost-effective solution while still meeting the high standards necessary for a carrier-class network. MGW's GPON solution uses GPON Optical Line Terminations (OLTs) connected to residential Optical Network Termination equipment (ONTs), in many situations through use of passive optical splitters. MGW has an existing point-of-presence (POP) in each of the 4 project areas that will facilitate the delivery of broadband to end users. MGW utilizes the Calix platform at each POP, node, and even the end user's customer premise equipment (CPE). Consistency between these components provides reliability, flexibility, and scalability. It also lets MGW proactively respond to any network issues before they become service effecting. Calix is the leading global provider of the cloud and software platforms, systems and services required to deliver the unified access network and smart premises of tomorrow.

Elements to be added as part of the project include, Calix E7 (broadband distribution switch), Small Form-factor Pluggable (SFP) transceivers, GPON cards, FTTP patch panels, and of course the outside plant facilities such as the fiber optic cable, fiber splice closures, fiber distribution pedestals, and the OLT/ONT combo for each location which is provided a fiber connection.

There are no wireless components included in this proposed project.

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10. Explain how the proposed project achieves universal broadband coverage for the locality or fits into a larger plan to achieve universal broadband coverage for the locality. If applicable, explain the remaining areas of need in the locality and a brief description of the plan to achieve universal broadband coverage. (up to 50 points)

Answer:

Bath and Highland have been working towards universal coverage for some time, receiving a Virginia Telecommunication Planning Initiative (VATPI) grant in 2016 and a CDBG Planning Grant prior to that- both of which were used to identify the challenges and provide solutions for the localities to consider. Funding the deployment of broadband was always the #1 challenge to implementing what was described in their broadband plans. In 2017, the Bath-Highland Network Authority was created to pursue funding options for broadband expansion and now universal broadband coverage.

Up until now, our VATI applications focused on making broadband available to as many households as possible, as quick as possible. This was due to the VATI criteria using a cost per passing calculation for ranking the applications received. This caused many of the most rural remote areas to remain unserved because the cost was too great for the homeowner and/or the provider. MGW does have a cost-share program so as to not require full cost recovery from the subscriber. The Bath-Highland Network Authority's 2022 Universal Broadband Project is designed around achieving universal coverage for ALL, regardless of their distance from the road or the cost to get broadband access to them.

11. **Project Readiness**

Describe the current state of project development, including but not limited to: planning, preliminary engineering, identifying easements/permits, status of MOU or MOA, and final design. Prepare a detailed project timeline or construction schedule, identifying specific tasks, staff, contractor(s) responsible, collection of data, etc., and estimated start and completion dates. Applicants must include Memorandums of Understanding (MOUs) or Memorandums of Agreement (MOAs) between applicants (drafts are allowable). Label Attachments: Attachment 7 – Timeline/Project Management Plan; Attachment 8 – MOU/MOA between Applicant/Co-Applicant; (up to 20 points)

Answer:

Approximately 44% of the proposed project area is within MGW's ILEC boundary. MGW has the fiber backbone necessary to facilitate the middle- and last-mile fiber build-out and this project will achieve universal coverage in all MGW's ILEC boundary. With many of the less remote locations already having broadband available, it is only the most rural, high-cost locations remaining. This portion of the project is nearing final design as MGW has performed the preliminary engineering and has the easements/row in most cases.

The other 56% of the project area will require additional middle-mile fiber to be deployed to facilitate fiber-to-the-home. This particular area generally follows the corridor of Rt. 220 and does not have the same number of locations that are greater than 500ft from the road or main service line (fiber). MGW provides a fiber connection to each of the Bath County schools, two of which are on the Rt. 220 corridor. The fiber that exists in this area was installed primarily to serve the schools and can now be leveraged to construction service taps and other laterals to facilitate FTTH.

Upon notice of award, there are numerous portions of the project area that are close to shovel-ready and can begin right away. Attached is a proposed 18-month construction schedule and a project management plan that includes a timeline of activities. These attachments identify specific tasks and the person(s) responsible for ensuring compliance and completeness. A draft MOU between the applicant and co-applicant is also attached.

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12. Has the applicant or co-applicant received any VATI grants? If so, provide a list of these grants, with a detailed summary of the status of each.

Answer:

Yes. The CSPDC submitted a VATI application with co-applicant BARC Electric Cooperative in 2019 and was awarded a \$2.2 million grant. The project will bring broadband access to 492 unserved homes and businesses in Rockbridge County resulting in approximately 111 miles of gigabit last mile fiber infrastructure and a total cost of \$4.4 million dollars. The CSPDC serves as the grant administrator and fiscal agent and is working with Rockbridge County and BARC through the completion of the project. This project is currently in the construction phase and is expected to be completed by the end of 2021.

In 2016, Bath and Highland counties received a grant through the Virginia Telecommunications Planning Initiative to implement recommendations of the comprehensive Community Telecommunications Plan. These strategies included locating clusters of businesses in Bath and Highland counties that could use high-speed fiber connections and then working with providers to make installation of the technology worthwhile. In 2017 and 2018 funding was used to create and establish the Bath-Highland Network Authority (BHNA). The 5-member Network Authority is made up of appointed representatives from Bath, Highland and the Town of Monterey and is staffed and supported by the CSPDC. The BHNA meets quarterly to discuss broadband solutions for the region.

MGW, the co-applicant, has a great deal of experience with the VATI program having applied for at least one project every year since VATI began. MGW was awarded a VATI '17 project in Augusta County where they installed several miles of fiber and constructed a tower to serve the locations that fiber had yet to reach. Following project completion, additional subscribers received fiber connections and others were added to the tower. As of today, the fiber route of the project area had a take rate of >90%.

More recently, MGW was awarded VATI '21 funding for the Augusta/Highland Rural FTTH Project. This project includes approx. 1,100 fiber connections and at the time of this application is approx. 2.5 months into that 18-month VATI contract.

13. Matching funds: Complete the funding sources table indicating the cash match and in-kind resources from the applicant, co-applicant, and any other partners investing in the proposed project (VATI funding cannot exceed 80 percent of total project cost). In-kind resources include, but are not limited to: grant management, acquisition of rights of way or easements, waiving permit fees, force account labor, etc. Please note that a minimum 20% match is required to be eligible for VATI, the private sector provider must provide 10% of the required match. If the private co-applicant cash match is below 10% of total project cost, applicants must provide financial details demonstrating appropriate private investment. Label Attachments: Attachment 9 - Funding Sources Table; Attachment 10 – Documentation of Match Funding

Answer:

The total project cost is \$10,990,000 and the total match is \$3,113,200 or 28.3% which is greater than what is required. Bath and Highland counties, knowing the importance of this project, both elected to utilize all (or nearly all) of their ARPA funds to achieve universal broadband coverage. The funding sources table is attached and shows the breakdown of local and private match and the amount of VATI funds being requested.

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14. Leverage: Describe any leverage being provided by the applicant, co-applicant, and partner(s) in support of the proposed project. (up to 10 points)

Answer:

This project is a partnership among the Bath Highland Network Authority (BHNA), Central Shenandoah Planning District Commission (CSPDC), MGW, Bath County, and Highland County. The CSPDC, on behalf of BHNA, will partner with MGW to deploy last mile fiber to those areas that are unserved. Connecting communities to broadband has been a challenge in these two rural counties because of cost and topography. All the partners, nonetheless, are committed to installing broadband infrastructure in the remaining harder-to-reach places of the counties. This will open opportunities for telework, telehealth, and telelearning that have been critical, but unavailable, to many during the pandemic.

BHNA, Bath County, and Highland County staff will provide significant local assistance to ensure the project's success. Activities will include holding meaningful discussions with community leaders, residents, and businesses about the project. BHNA and the two counties will help MGW respond to residents' questions about the project and will make available MGW's information on available subscription services. As needed, the counties will assist with solutions related to permits, rights of way, easements and any other issues that could potentially cause delays.

Bath and Highland counties have been working together for many years to address the broadband challenges in their rural and remote region. This project leverages their unique partnership with the Bath Highland Network Authority and the planning process that resulted in a regional broadband strategic plan for the two counties. It also leverages the CSPDC's resources that support BHNA. The CSPDC serves as secretary and treasurer to BHNA. The CSPDC staffs the Bath Highland Network Authority, and the CSPDC will act as fiscal agent and grant administrator for this project.

Bath County and Highland County are the Commonwealth's two most rural counties. In leveraging their partnerships and funding available through ARPA and VATI, the two counties will have the ability to offer high-speed broadband access to all its residents and businesses, to have complete coverage. This will encourage economic competitiveness, improve educational opportunities, support public safety, and enrich the region's quality of life. It is also important to note that the amount of ARPA funding received by these two rural counties is a fraction of the amount received by other, even neighboring counties. Each County has elected to contribute all, or close to all, of their ARPA allocations on Universal Broadband Coverage.

MGW will be leveraging existing infrastructure which was installed through private investment and/or participation in the ACAM program. More specifically, MGW utilized the ACAM program to upgrade most all their main cable routes to fiber. This backbone and some middle-mile fiber will be leveraged to facilitate fiber-to-the-home connectivity and services. It would be impossible to identify the exact dollar amount of ACAM funds which are used in the VATI '22 project area specifically, but MGW estimates between \$3-4 million in infrastructure will be leveraged for this project.

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Bath-Highland Network Authority 2022 Universal Broadband Project

15. Marketing: Describe the broadband adoption plan.

a. Explain how you plan to promote customer take rate, including marketing activities, outreach plan, and other actions to reach the identified serviceable units within the project area. Provide the anticipated take rate and describe the basis for the estimate. (up to 10 points)

b. Describe any digital literacy efforts to ensure residents and businesses in the proposed project area sufficiently utilize broadband. Please list any partnering organizations for digital literacy, such as the local library or cooperative extension office.

Answer:

a) The anticipated take rate for the project area is 65%. Any existing < 10/1 or < 25/3 customers in MGW's service area will automatically be upgraded to fiber which accounts for the high take rate. Many of the subscribers in the ILEC area are supportive of the application to expand broadband into the remote areas, but the funding can't come quick enough. MGW keeps a list of service inquires, and there have been a great number of inquiries in the portion of the project area outside of MGW's ILEC boundary and along the Rt. 220 corridor. The forecasted take rate also considers the number and density of those inquiries. Once someone is on the "interested customer list" it makes marketing any new broadband available very streamlined. Anyone in the project that is not on that list, will receive a door hanger (or personal visit if they are home) letting them know "we are bringing fiber" to their neighborhood or street.

b) The counties have made strides in addressing the need for broadband by educating themselves through citizen input, analysis of available data and applying for the VATI grants. Accomplishments to date include:

- The Bath & Highland Broadband Telecommunications Strategic Plan (2015)
- Wifi Hotspots: MGW worked with the schools and various community organizations and business to stand up some public WiFi locations following the onset of the COVID pandemic. The almost overnight demand for more bandwidth speaks volumes to the need for adequate, universal broadband coverage.
- Public Library Digital Literacy: According to the Library Director at the Highland County Library, "The Highland County Public Library supports this project because it will help local families access the many digital literacy resources that the library provides. We know of many families who must drive their vehicles to local hotspots to be able to gain wireless internet access, just to download books or participate in online schooling. With so many children being forced into virtual learning the library has added new digital resources to support them such as Scholastic Bookflix and Scholastic Teachables. These were in addition to our current offerings from such sites as Hoopla, Sesame Street eBooks, and education options such as Rocket Languages, Universal Class, and the Explora suite of research databases. Highland County families need this access."

16. Project Management: Identify key individuals who will be responsible for the management of the project and provide a brief description of their role and responsibilities for the project. Present this information in table format. Provide a brief description of the applicant and co applicant's history and experience with managing grants and constructing broadband communication facilities. Please attach any letters of support from stakeholders. If the applicant is not a locality(s) in which the project will occur, please provide a letter of support from that locality. Attachment 11 – Letters of Support.

Answer:

NAME

TITLE

ORGANIZATION

ROLE DESCRIPTION

Bonnie Riedesel

Executive Director

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CSPDC

Grant Management, Execute Contracts/MOUs, Oversight of Project, Reporting to localities.

Hunter Moore

Regional Planner/ GIS Coordinator

CSPDC

Coordination with localities, DHCD and ISP provider. Attending PM meetings, preparing progress reports. Assistance with GIS/mapping.

Lee Bell

Finance Director

CSPDC

Fiscal reporting, drawdown requests, fiscal management, tracking in-kind. Paying ISP

Ashton Harrison

County Administrator and BHNA Chair

Bath County

General oversight of project, reporting to BoS, B-H Network Authority. Educating the public on the project. Providing support to ISP provider.

Roberta Lambert

County Administrator

Highland County

General oversight of project, reporting to BoS, B-H Network Authority. Educating the public on the project. Providing support to ISP provider.

R. Craig Smith

President

MGW Telephone

Oversee project and ensure project success

Robert Huff

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Strategic Planning Director

MGW Telephone

Project Management, Point of Contact for project partners, submit monthly reports and drawdown requests

Sheri Smith

Regulatory & Compliance Officer

MGW Telephone

Contract administration and project invoicing

Tony McCune

Network Engineer

MGW Telephone

Coordinate permitting; design network architecture and fiber splicing; oversee work of contractors

Casey Wilcher

Construction Supervisor

MGW Telephone

Manage day-to-day activities of fiber installation

John Barnhill

Project Manager

MGW Telephone

Assist with grant and project management

Grant Management & Broadband Construction Experience:

The CSPDC is the grant applicant on behalf of the Bath-Highland Network Authority. The CSPDC staffs the Bath Highland Network Authority, and the CSPDC will act as fiscal agent and grant administrator for this project. The co-applicant, MGW, will implement the project.

The Central Shenandoah Planning District Commission works with local governments and is the region's leading public planning organization. The CSPDC has the staff resources and capacity to carry out the proposed VATI project in an efficient manner. For 50+ years, the CSPDC has been providing assistance to the 21 jurisdictions in the Central Shenandoah Valley and their citizens with issues including land use planning and regulations, transportation, solid waste management, water and wastewater utilities, housing, economic development, water resource management,

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disaster mitigation and education, and human services. Cooperative, cost-saving solutions to problems are addressed at the CSPDC through regional efforts and partnerships with its local jurisdictions and other stakeholders. The CSPDC has a proven record of successfully implementing local and regional projects and programs. The CSPDC provides grant management, project administration, and financial management for a number of federal, state, and locally funded programs. The CSPDC presently is administering two broadband grants, one located in the Town of Goshen and funded through an ARC POWER Initiative Grant and the other in Rockbridge County and funded through a VATI grant. Both projects will be completed by the end of the 2021 calendar year.

MGW Telephone has been installing buried and aerial cable for over 50 years and has all of the tools needed to perform the construction and installation of network components. Tony McCune is the senior Network Engineer at MGW and has been designing telecommunications projects in Bath and Highland Counties for over 30 years. Robert Huff, Strategic Planning Director, has a background in grant, project, and construction management and successfully completed a VATI 2017 project with another county. The scope of that project included several miles of middle-mile fiber to support last-mile FTTH deployment, establishing a new fiber node to deliver broadband to the end-user, and the construction of a 195' tower used to provide FW service in a large coverage area. Mr. Huff also has experience working with the CSPDC on infrastructure projects and is in direct communication with staff at Bath & Highland counties regarding broadband updates for recently completed and upcoming projects.

17. Project Budget and Cost Appropriateness

Budget: Applicants must provide a detailed budget that outlines how the grant funds will be utilized, including an itemization of equipment, construction costs, and a justification of proposed expenses. If designating more than one service area in a single application, each service area must have delineated budget information. For wireless projects, please include delineated budget information by each tower. Expenses should be substantiated by clear cost estimates. Include copies of vendor quotes or documented cost estimates supporting the proposed budget. Label Attachments: Attachment 12 – Derivation of Costs; Attachment 13 - Documentation of Supporting Cost Estimates. (up to 10 points)

Answer:

The total project cost for the Bath-Highland Network Authority's 2022 Universal Broadband Project is \$10,990,000 and will be utilized to install approx. 200 miles of fiber, primarily underground. There is an additional line item for Special Construction Costs in order to serve a substantial number of locations that require one-time fees above normal service connection fees. These items are listed on the Derivation of Cost form, as well as, a grant administration fee for the CSPDC's post-award services.

MGW will be leveraging past investments into fiber distribution equipment at their Central Offices, POPs, and fiber nodes allowing last-mile construction to begin immediately following an award in portions of the project area that are within their ILEC boundary. In other portions of the project area, network upgrades will be required to facilitate Gig-cable fiber-to-the-home services. Equipment and materials that will be required during these upgrades and construction are included in the per mile costs as shown in the Derivation of Costs form. With the goal being Universal Broadband Coverage and considering the amount of "special construction", we wanted to be sure to present all potential costs for the 2,200 passings and the 270 special construction cost passings, and list them separately.

Due to constraints on the supply chain of telecommunications goods and equipment, MGW is setup with their vendors to receive a certain amount of product/equipment on a rolling, monthly basis. Below is a table showing the standard methods and equipment used during construction and their per item cost, and Attachment 13 includes the vendor quotes which support these project costs.

Item

Unit Price

Fiber Pedestals

\$237.93

Handholes

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\$315.65

Road Crossings/Bores

\$3,500

GPON Splitters

\$1215

Patch Panel

\$2042

Splice Closure

\$311.15

Fiber Splicer

\$52

Calix E7

\$796.00

GPON-8 r2 Card

\$8,446.75

10GE-12 Card

\$9,796.50

SFP Plug

\$6,047.25

CO Splitter

\$1,215.00

Fiber Patch Panel

\$2,042.00

CPE (Calix Gigacenter)

\$261.75

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18. The cost benefit index is comprised of state cost per unit passed. Individual cost benefit scores are calculated and averaged together to create a point scale for a composite score. Provide the following:

- a. Total VATI funding request

- b. Number of serviceable units
(up to 125 points)

Answer:

- a) Total VATI funding request: \$7,876,800
- b) Number of serviceable units: 2,470

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19. Commonwealth Priorities (Up to 40 points)

Additional points will be awarded to proposed projects that reflect Commonwealth priorities. If applicable, describe the following:

- a. Businesses, community anchors, or other passings in the proposed project area that will have a significant impact on the locality or region because of access to broadband.
- b. Unique partnerships involved in the proposed project. Examples include electric utilities, universities, and federal/state agencies.
- c. Digital equity efforts to ensure low to moderate income households in the proposed project area will have affordable access to speeds at or above 25/3 mbps.

Answer:

In August 2021, Governor Northam allocated a historic \$700 million of American Rescue Plan Act (ARPA) funding for broadband infrastructure in unserved areas of Virginia. The funding will accelerate the Governor's 10-year goal for achieving statewide universal internet access from 2028 to 2024. This multi-jurisdiction broadband project will help achieve the Governor's goal by bringing universal coverage to Bath and Highland counties.

This application is aimed at servicing the most rural locations because they were left out of previous project and grants due to their extreme high-cost. The VATI'22 funding cycle is going to be the only chance these counties have for universal coverage due to the remoteness of many of the locations we are including as serviceable units. For example, the construction costs for one location we identified as needing special construction costs is \$29,000. While many of the businesses and community anchors have broadband access due to their location in more populated areas, there are still many farms, home-based businesses, and other community-based anchors that require a broadband connection to perform and thrive.

This project is a partnership among the Bath Highland Network Authority (BHNA), Central Shenandoah Planning District Commission (CSPDC), and MGW. The CSPDC is the grant applicant on behalf of the Bath Highland Network Authority. The co-applicant, MGW will implement the project. The Highland Telephone Cooperative (HTC) has provided a letter of support for this project (included in Attachment 18). HTC is actively installing broadband infrastructure in its service territory in western Highland County. HTC is supportive of this VATI application because of the importance of connecting rural areas with reliable broadband. While not directly involved in the proposed VATI project, HTC is a partner in providing universal coverage to the region.

Bath and Highland counties have a unique partnership with the creation of the Bath Highland Network Authority. The two counties have been working together for many years to address the lack of broadband in their rural and remote region. Through earlier planning processes, Bath and Highland counties created the regional "Bath & Highland Counties, VA Community Broadband Telecommunications Strategic Plan." This plan, funded through a Virginia Telecommunication Planning Initiative (VATPI) grant, was completed in 2015. The plan, adopted by the governing bodies of both jurisdictions, lays out a roadmap to provide broadband access to our citizens. To facilitate the implementation of the plan, the governing bodies determined that a broadband authority was needed. Thus, the Bath Highland Network Authority was created in 2017. The purpose of BHNA is to seek broadband solutions and funding opportunities to expand broadband access within the counties of Bath and Highland. The CSPDC staffs the Bath Highland Network Authority, and the CSPDC will act as fiscal agent and grant administrator for this project.

Bath and Highland counties are the two least populated counties in the Commonwealth of Virginia (2020 U.S. Census). Both counties are part of the Appalachian Regional Commission (ARC). The median household income for Bath County is 70% of Virginia's median income; Highland County's is 68% (HUD Median Income FY2021). Because of the region's low population density and mountainous topography, connecting communities to broadband has been a challenge; the costly and harder-to-reach places remain. This project will help to reach all households, businesses, and organizations within the two counties. As a result, it will open opportunities for telework, telehealth, and telelearning that have been critical, but unavailable, to many during the pandemic. Today, access to affordable high-speed broadband is essential to foster economic development, improve educational opportunities, ensure public safety, and enhance the overall quality of life.

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20. Additional Information

Provide the two most recent Form 477 submitted to the FCC, or equivalent, as well as point, polygon, and, for wireless providers, RSSI shapefiles for the project area **in .zip file form**. With attachments 17 through 20, attach any other information 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 - Point and Polygon shapefiles, in.zip file form, showing proposed passings and project area
- c. Attachment 16 - For wireless applicants: shapefiles, in .zip file form, indicating RSSI projections in the application area
- d. Attachment 17 – XXXXXXXX
- e. Attachment 18 – XXXXXXXX
- f. Attachment 19 – XXXXXXXX
- g. Attachment 20 – XXXXXXXX

Answer:

Information is provided in attachments 14 through 18.

Attachments:

Map(s) of project area, including proposed infrastructure

Attachment1ProjectAreaMap914202113748.pdf

Documentation of Federal Funding (CAF/ACAM/USDA/RDOF, etc...) in and/or near proposed project area.

Attachment2DocumentationofFederalFunding914202113856.pdf

RDOF Awarded Areas included in VATI Application (Use template provided)

Attachment3RDOFAwardedAreasincludedinVATIApplication914202113958.pdf

Documentation that proposed project area is unserved based on VATI criteria

Attachment4DocumentationofUnservedAreaVATICriteria914202114038.pdf

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Passings Form (Use template provided)

Attachment5PassingsForm914202114136.pdf

Propagation Map if Wireless Project

Attachment6FiberNetworkArchitecture914202114153.pdf

Timeline/Project Management Plan

Attachment7TimelineandProjectManagementPlan914202114204.pdf

MOU/MOA between applicant/co-applicant (can be in draft form)

Attachment8MOUbetweenApplicantandCoApplicant914202114439.pdf

Funding Sources Table (Use template provided)

Attachment9FundingSourcesTable914202114503.pdf

Documentation of Match Funding

Attachment10DocumentationofMatchFunding914202114611.pdf

Letters of Support

Attachment11LettersofSupport914202114638.pdf

Derivation of Cost/Project Budget (Use template provided)

Attachment12DerivationofCosts914202114654.pdf

Documentation of Supporting Cost Estimates

Attachment13DocumentationofSupportingCostEstimates914202134932.pdf

Two most recent Form 477 submitted to the FCC or equivalent

Attachment14TwomostrecentFrom477submittedtoFCCCorequivalent914202114724.pdf

Point and Polygon shapefiles, in.zip file form, showing proposed passings and project area

Attachment15PointPolygonShapefiles914202114808.zip

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For wireless applicants: shapefiles, in .zip file form, indicating RSSI projections in the application area

Attachment16NANoWireless914202114850.pdf

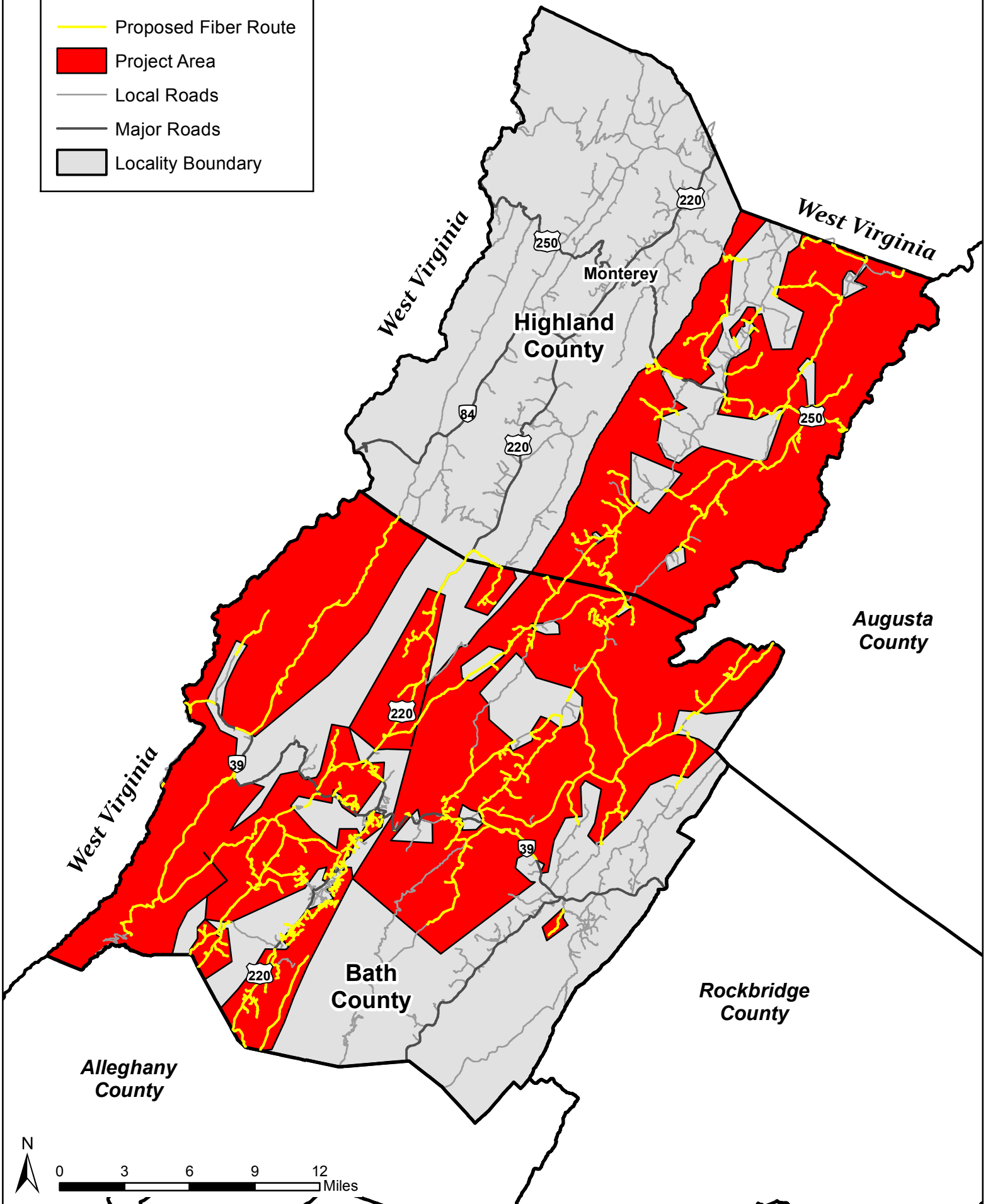
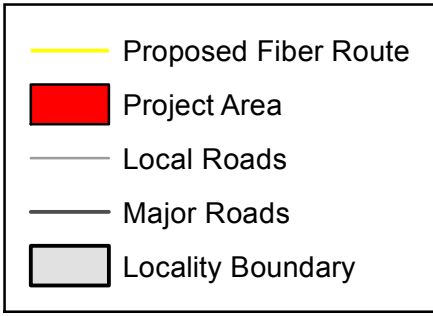
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Attachment17StateFundedAreas914202114951.pdf

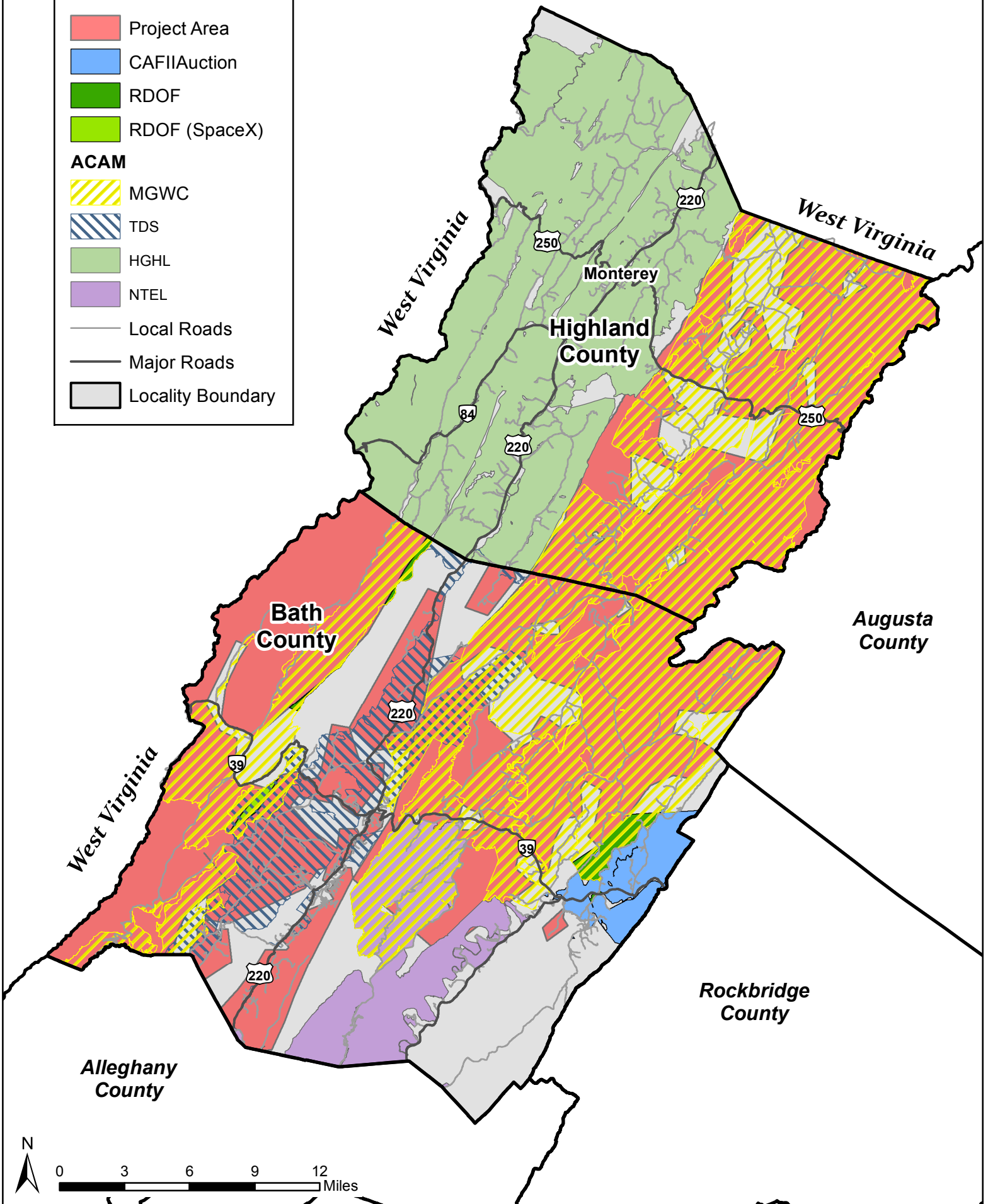
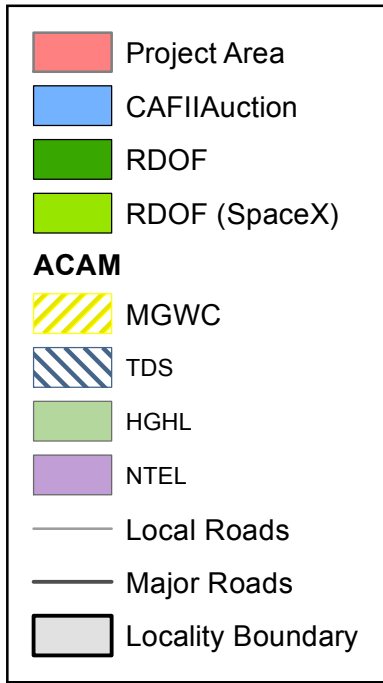
Optional

Attachment18HTCLetterofSupport914202114959.pdf

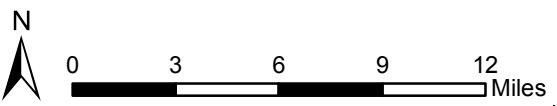
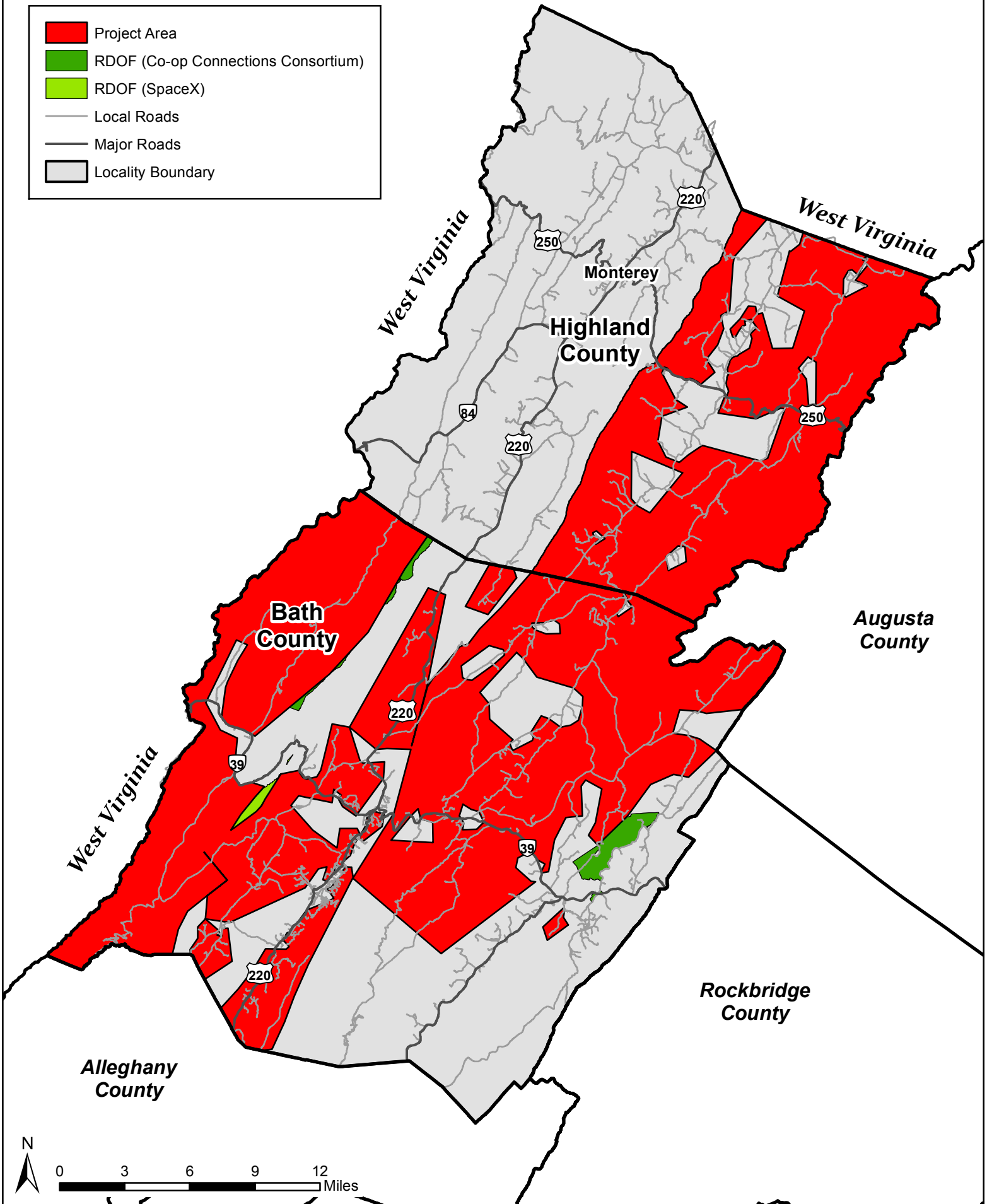
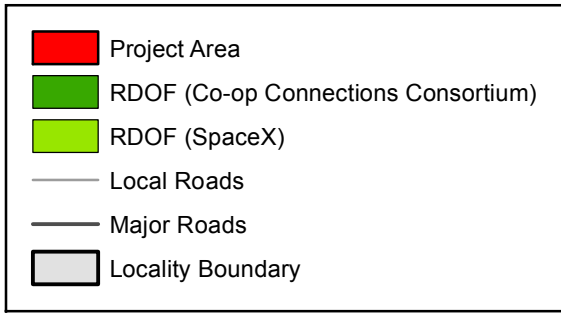
Project Area Map



Federal Funded Areas



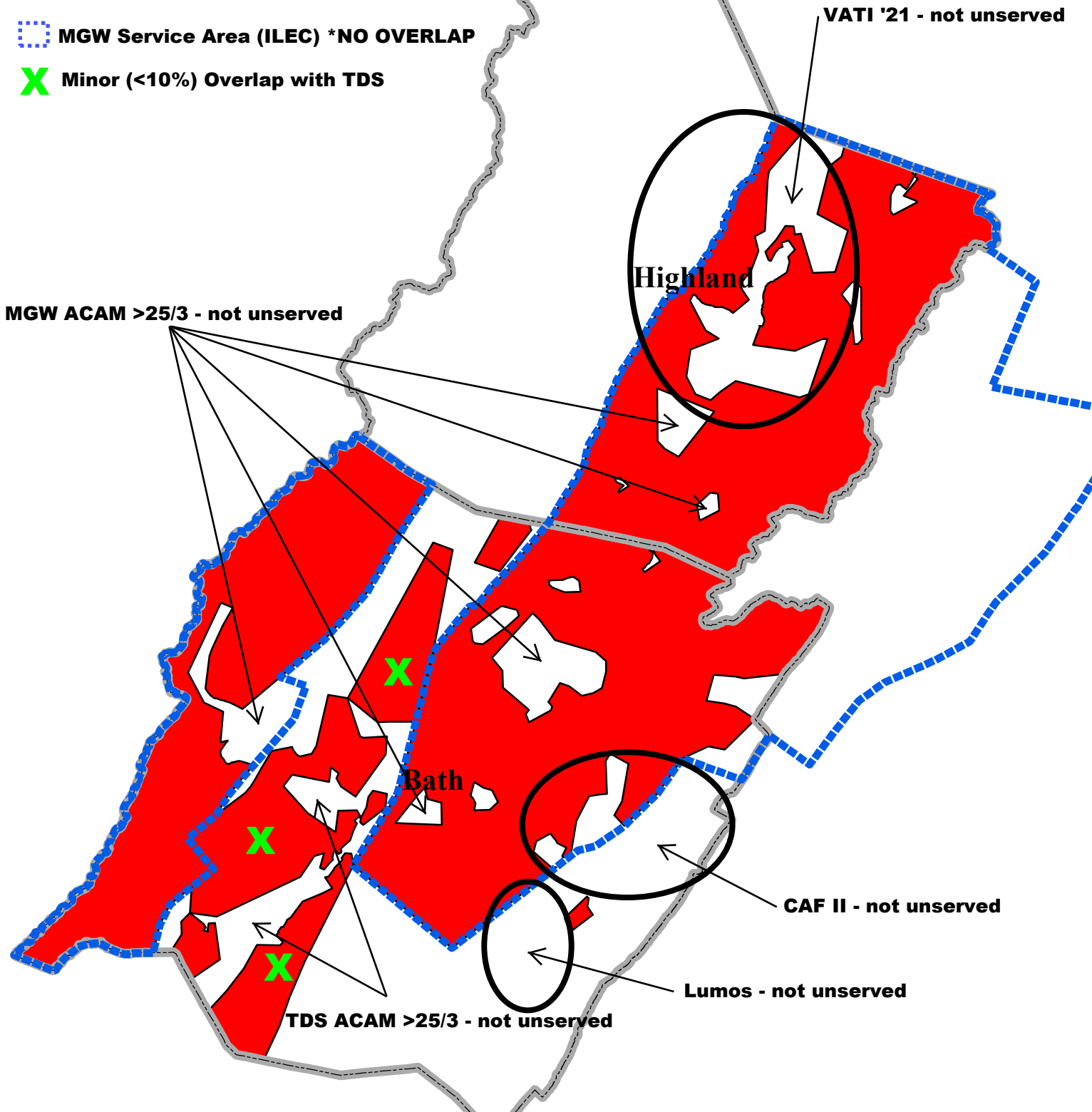
RDOF Funded Areas

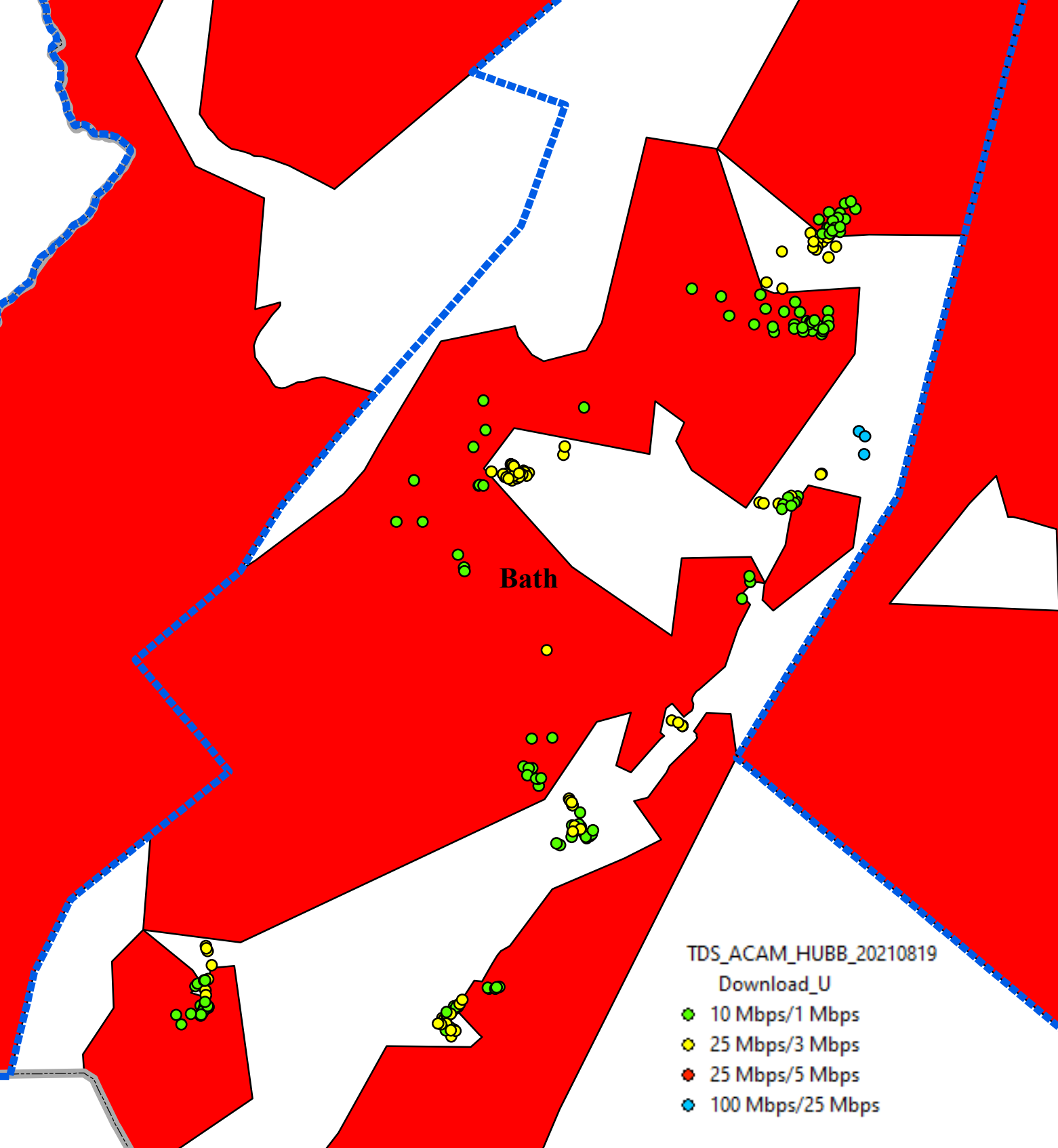


■ VATI '22 Project Area

⋯ MGW Service Area (ILEC) *NO OVERLAP

✕ Minor (<10%) Overlap with TDS





Bath

TDS_ACAM_HUBB_20210819

Download_U

- 10 Mbps/1 Mbps
- 25 Mbps/3 Mbps
- 25 Mbps/5 Mbps
- 100 Mbps/25 Mbps

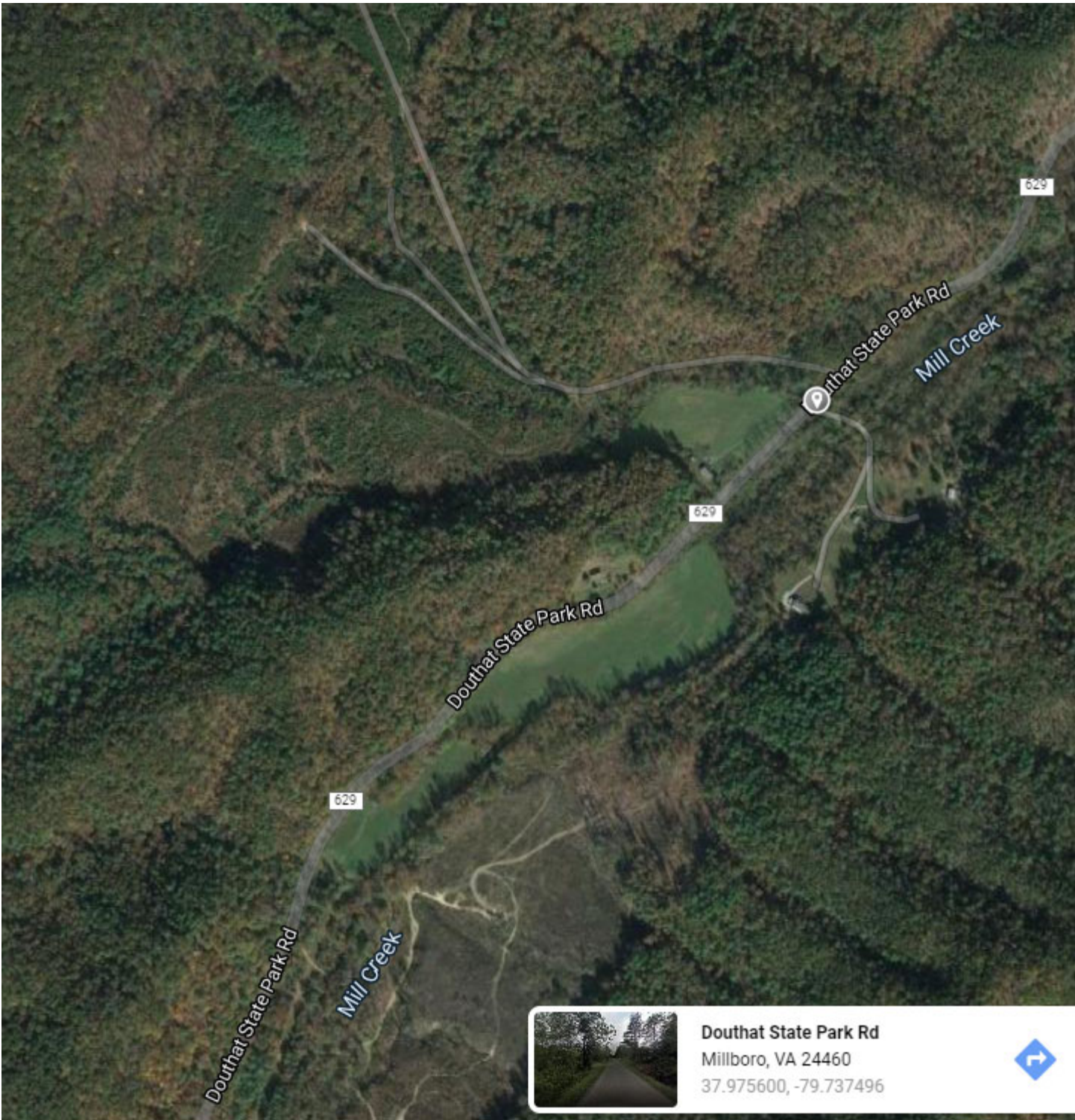
Robert Huff

Subject: FW: Route 629 north of Douthat

Craig,

Hope you are doing well. We do extend past douthat park about 6.5 miles up 629 past the reservoir. Below is a screenshot of the fiber route and a zoomed in section with the coordinates of where we actually stop our service at.





David Smith

Vice President of Technical Ops and Planning

O: 540-591-9913

smithdl@lumosnet.com



2022 Virginia Telecommunication Initiative (VATI) Passing Form

Type of Passings	Total Number of Passings in the Project Area ¹	Passings in the Project Area, without Special Construction Costs Required ²	Passings with Special Construction Costs budgeted in the Application ³	Number of Passings with Speeds at 10/1 or below in Project Area ⁴
Residential	2,193	1,958	235	574
Businesses (non-home based)	18	14	4	7
Businesses (home-based)	244	216	28	31
Community Anchors	9	8	1	3
Non-residential	6	4	2	5
Total	2,470	2,200	270	620

Note: The Total Number of Passings **MUST** be equal to the Residential, Business (non-home based), Non-residential and Community Anchors sum.

Note: Do not include passings in RDOF awarded areas that were awarded to the co-applicant; these passings should be included in the RDOF Passings Form. Passings included in this application in RDOF awarded areas that were not awarded to the co-applicant, unless successfully challenged, are considered unserved and should be counted as passings in this form.

¹The total number of structures in the project area that can receive service. See definition of passing below for more detail.

²The number of structures in the project area that will not require special construction costs to provide service to. These passings fall within the broadband provider's standard service connection drop length and do not require nonstandard equipment or any additional fees above normal service connection fees required to provide broadband access to a premise.

³The number of structures in the project area with all construction costs budgeted in the application. These passings will not require any additional special construction costs beyond those budgeted for in the VATI application.

⁴The number of structures in the project area that do not have access to internet at speeds of at least 10 mbps download and 1mbps upload.

Definitions

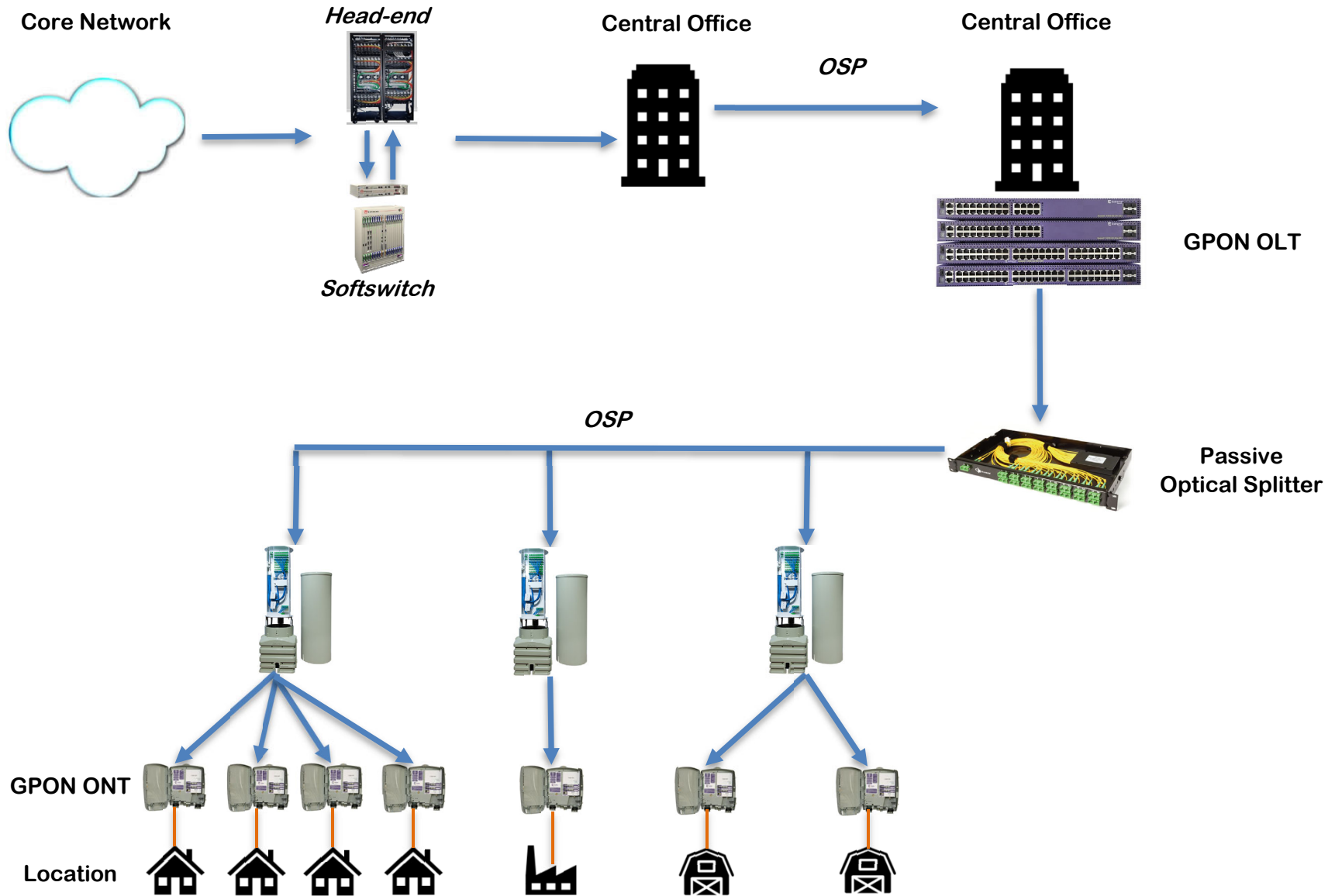
Passing – any structure that can receive service. Multi-unit structures may be counted as more than 1 passing, provided individual connections and account are planned at that structure.

Business – An organization or entity that provides goods or services in order to generate profit. Businesses based in residential homes can count if they are a registered business (BPOL, LLC, etc.).

Community Anchor - schools, libraries, medical and health care providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by vulnerable populations, including low-income, unemployed, and the aged.

Non-Residential Passing – places of worship, federal, state, or local facilities or other potential customers that are neither a residence, business or a community anchor as defined above.

Fiber Network Architecture



Bath-Highland Network Authority's 2021 Universal Broadband Project

	Proposed Construction Schedule																	
	Jan. '22	Feb.'22	Mar '22	April '22	May '22	June '22	July '22	August '22	Sept. '22	Oct. '22	Nov. '22	Dec. '22	Jan. '23	Feb '23	Mar '23	April '23	May '23	June '23
Obtain Permits for OH Construction																		
Obtain Permits for ROW Construction																		
Begin OH Construction																		
Begin OH FTTH																		
Begin UG FTTH																		
Begin Road Bores																		
Begin UG Fiber Construction																		
Complete OH Construction																		
Complete OH FTTH																		
Complete any remaining road crossings																		
Complete UG Fiber Construction																		
Complete UG FTTH																		

OH = overhead

UG = underground

FTTH = fiber-to-the-home (or premise)

Bath-Highland Network Authority's 2021 Universal Broadband Project																					
Task	Responsible Person	Responsible Entity	Proposed Timeline																		
			Jan. '22	Feb.'22	Mar '22	April '22	May '22	June '22	July '22	August '22	Sept. '22	Oct. '22	Nov. '22	Dec. '22	Jan. '23	Feb '23	Mar '23	April '23	May '23	June '23	July '23
VATI Grant Announcement	Governor	DHCD																			
Contract Negotiation Record Activities & VATI Contract Execution	Executive Director	CSPDC																			
Request for Prior Authorization: Begin Incurring Project Expenses	Strategic Planning Director	MGW																			
Local Project Announcements/Press Releases	Executive Director	County/CSPDC																			
Begin Ordering Construction Materials (Fiber & OSP)	Strategic Planning Director	MGW																			
Begin Submitting Project Permits for OH Construction	Strategic Planning Director	MGW																			
Begin Outreach and Marketing	Executive Director/Strategic Planning Director	County//CSPDC/MGW																			
Engineer Road Crossings	Network Engineer	MGW																			
Begin OH Construction on MGW-owned poles	Network Engineer	MGW																			
Begin other OH Construction (dependent upon permits)	Strategic Planning Director	MGW																			
Begin Main Line Fiber Splicing	NOC Coordinator	MGW																			
Begin installing Network Components	Project Manager	MGW																			
Begin installing OH FTTH	Construction Supervisor	MGW																			
Begin installing UG FTTH	Construction Supervisor	MGW																			
Preparing Permits for Construction in the VDOT right of way	Network Engineer	MGW																			
Easement Negotiation and Acquisition	Strategic Planning Director	MGW																			
Begin Road Crossings/Bores	Network Engineer	MGW																			
UG Fiber Construction	Construction Supervisor	MGW																			
Manage the Progress Reports and Drawdowns	Executive Director	CSPDC																			
Monitor Grant Compliance	Finance Director	CSPDC																			
Complete OH Construction of MGW-owned poles	Network Engineer	MGW																			
Complete other OH Construction (dependent upon permits)	Network Engineer	MGW																			
Complete installing OH FTTH	Construction Supervisor	MGW																			
Obtain Any Final VDOT Permits	Network Engineer	MGW																			
Complete any remaining road crossings	Network Engineer	MGW																			
Complete UG Fiber Construction	Construction Supervisor	MGW																			
Perform Final Outreach and Marketing	Executive Director/Strategic Planning Director	County//CSPDC/MGW																			
Complete installing UG FTTH	Construction Supervisor	MGW																			
Submit Final Progress Report & Drawdown	Executive Director	CSPDC																			
Submit Project Closeout	Executive Director	CSPDC																			

OH = overhead

UG = underground

FTTH = fiber-to-the-home (or premise)

VATI Applicant and Co-Applicant Agreement

DRAFT

This agreement is made on _____, _____ between the **Central Shenandoah Planning District Commission** acting on behalf of the Bath-Highland Network Authority (BHNA) 112 MacTanly Place Staunton, Virginia 24401 (“CSPDC”) and **MGW Telephone Company, Inc.**, 27 North Central Avenue, Staunton, Virginia 24401 (“MGW”).

RECITALS:

- A. Whereas, the Department of Housing and Community Development (DHCD) will be implementing the Virginia Telecommunications Initiative (VATI) grant program; and
- B. Whereas, the primary objective of the VATI is to provide financial assistance to supplement construction costs by private sector broadband service providers, in partnership with local units of government to extend service to areas that presently are unserved by any broadband provider; and
- C. Whereas, applications must be submitted by a unit of government (Towns, Cities, Counties, EDA/IDA, Broadband/Wireless Authorities, Planning District Commissions, etc.) with a private sector provider(s) as a co-applicant; and
- D. Whereas, Bath and Highland counties have requested that the CSPDC be the applicant on behalf of the Bath-Highland Network Authority; and
- E. Whereas, Bath and Highland counties and the BHNA have designated MGW as the co-applicant, and
- F. Whereas, the CSPDC and MGW will partner for a grant application for the VATI grant program to serve areas in Bath and Highland counties.

NOW, therefore, the parties agree that they will uphold the following responsibilities:

THE CSPDC on behalf of the Bath-Highland Network Authority:

- 1. The CSPDC as applicant on behalf of the BHNA will act as fiscal agent for the project and maintain accurate records of the financial expenditures of the VATI monies, including, but not limited to financial reports, monthly funding draws; approval of expenditures and invoices, documentation of matching funds, etc.; and
- 2. The CSPDC will provide overall grant management of the VATI project and provide coordination and administration of the project by working as a liaison between the localities, BHNA, MGW and DHCD.
- 3. The CSPDC will provide assistance with GIS mapping throughout the project; and
- 4. The CSPDC will assist the BHNA. The counties and MGW with educating the public about the project and services to be available in their areas.

MGW Telephone Company as project partner:

5. MGW will provide the CSPDC required information for the management of the VATI grant, including, but not limited to progress reports and monthly invoices; and
6. MGW will design, engineer, construct and implement broadband services as designated in the VATI application by the VATI contract deadline, and
7. MGW will guarantee that the standard bandwidth offerings for the projects will be at least 25 Mbps download and 3 Mbps upload; and
8. MGW will own the assets associated with the projects.

This agreement will terminate when DHCD notifies the CSPDC that all grant requirements have been satisfied.

Witness the following authorized signatures on behalf of the parties:

_____		By: _____	Bonnie S. Riedesel CSPDC Executive Director
Date			
_____		By: _____	
Date			Ron Wimer BHNA Chair
_____		By: _____	
Date			Roberta Lambert Highland County Administrator
_____		By: _____	
Date			Ashton Harrison Bathy County Administrator
_____		By: _____	
Date			R. Craig Smith President, MGW Telephone Company, Inc.

Bath-Highland Network Authority's 2021 Universal Broadband Project

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	\$ 7,876,800	71.7	Pending
LOCAL	\$ 1,100,000	10	SECURED
PRIVATE	\$ 2,013,200	18.3	SECURED
	\$		
	\$		
	\$		
TOTAL	\$ 10,990,000	100 %	

Ashton N. Harrison
County Administrator



Bath County Courthouse
P.O. Box 309
Warm Springs, Virginia 24484
540.839.7221 Phone
540.839.7222 Fax
aharrison@bathcountyva.org

September 10, 2021

Dr. Tamarah Holmes, Ph.D.
Virginia Department of Housing
& Community Development
600 E. Main Street, Suite 300
Richmond, VA 23210

Re: Letter of Commitment for 2022 VATI Application

Dear Dr. Holmes:

Bath County is pleased to support the Central Shenandoah Planning District Commission's (CSPDC) 2022 VATI application submitted on behalf of the Bath-Highland Network Authority to achieve universal broadband coverage throughout both Bath and Highland counties.

In line with the Governor's universal broadband initiative in the Commonwealth of Virginia, the CSPDC acting on behalf of the Bath-Highland Network Authority proposes to partner with MGW Networks to develop and implement last mile fiber to approximately 2,400 homes and businesses in the unserved areas of Bath County. This project will provide critical broadband services that will enhance the quality of life and help stimulate the economy in this rural and remote region of the Commonwealth.

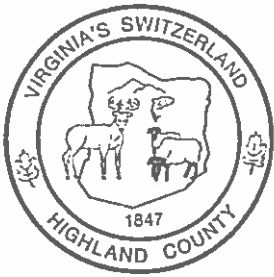
Furthermore, let this letter confirm that if VATI funding requested in this application is awarded, Bath County is committing to provide \$805,506 in local American Rescue Funds to match the VATI funds in this application.

Please be assured of Bath County's complete support of this application, and of our appreciation for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Ashton N. Harrison". The signature is stylized and cursive.

Ashton N. Harrison
County Administrator



COUNTY ADMINISTRATOR
ROBERTA A. LAMBERT
MONTEREY, VIRGINIA

**HIGHLAND COUNTY
BOARD OF SUPERVISORS**

P. O. BOX 130
MONTEREY, VIRGINIA 24465
Phone: 540-468-2347 Fax: 540-468-3447
E-mail: hcboard@htcnet.org
Website: www.highlandcova.org

BOARD MEMBERS:

DAVID W. BLANCHARD
MONTEREY, VIRGINIA

HARRY B. SPONAUGLE
DOE HILL, VIRGINIA

JOHN L. MOYERS, JR.
MCDOWELL, VIRGINIA

September 10, 2021

Dr. Tamarah Holmes, Ph.D.
Virginia Department of Housing
& Community Development
600 E. Main Street, Suite 300
Richmond, VA 23210

Re: Letter of Commitment for 2022 VATI Application

Dear Dr. Holmes:

Highland County is pleased to support the Central Shenandoah Planning District Commission's (CSPDC) 2022 VATI application submitted on behalf of the Bath-Highland Network Authority to achieve universal broadband coverage throughout both Bath and Highland counties.

In line with the Governor's universal broadband initiative in the Commonwealth of Virginia, the CSPDC acting on behalf of the Bath-Highland Network Authority proposes to partner with MGW Networks to develop and implement last mile fiber to approximately 315 homes and businesses in the unserved areas of Highland County. This project will provide critical broadband services that will enhance the quality of life and help stimulate the economy in this rural and remote region of the Commonwealth.

Furthermore, if VATI funding requested in this application is awarded, the Highland County Board of Supervisors has indicated a commitment of no less than \$300,000 in local American Rescue Funds to match the VATI funds in this application.

Please be assured of Highland County's support of this application, and of our appreciation for your consideration.

Sincerely,

Roberta A. Lambert
County Administrator



September 13, 2021

LETTER OF FINANCIAL COMMITMENT

Ms. Hunter Moore
Regional Planner / GIS Coordinator
Central Shenandoah Planning District Commission
112 MacTanly Place
Staunton, VA 24401

RE: Bath-Highland Network Authority's 2021 Universal Broadband Project

Dear Mrs. Moore,

MGW is very pleased to be selected as the Bath-Highland Network Authority's partnering ISP in an application to the Virginia Telecommunications Initiative (VATI) 2022- for projects that will construct last-mile fiber infrastructure and provide broadband to many residents, farms, and businesses in the proposed project areas. As you and the other staff and elected officials know from our numerous meetings, MGW is committed to improving broadband availability in Bath & Highland Counties.

The intent of this letter is to affirm our financial commitment of no less than \$2,013,200 to be used as matching funds for the Bath-Highland Network Authority's 2021 Universal Broadband Project. MGW will have these funds available as cash match to purchase the materials included with the project and to pay our employees who will be working on the project.

We applaud the Bath-Highland Network Authority for your attentiveness to the telecommunications needs throughout your communities and your local investment will undoubtedly assist with the provision of broadband services in these high-cost, unserved areas.

Feel free to contact me with any questions you may have at (540) 448-1336 or by sending an email to craig.smith@mgwnetworks.com

Sincerely,

A handwritten signature in black ink that reads "R. Craig Smith".

R. Craig Smith, President



Bath County Public Schools

P.O. Box 67

Warm Springs, VA 24484

Phone: 540-839-2722 ♦ Fax: 540-839-3040 ♦ Website: www.bath.k12.va.us

September 9, 2021

Dr. Tamarah Holmes, Ph.D.
Office of Broadband
VA Department of Housing and
Community Development
600 E. Main Street, Suite 300
Richmond, VA 23210

RE: 2022 Virginia Telecommunication Initiative (VATI) Application

Dear Dr. Holmes,

Without reservation, please accept this letter as support of the VATI broadband application submitted on behalf of the Bath-Highland Network Authority to increase internet availability to currently unserved homes throughout Bath County.

Online access for students, teachers, and parents has never been more critical for Bath County. As the pandemic introduces wider-scale distance learning for students and work-from-home for teachers, our rural, dispersed population in Bath County continues to struggle with spotty and unreliable internet coverage, especially in far reaches of the county. The current opportunity outlined in this application to leverage the network to be installed by MGW represents a first step in addressing the digital divide that impedes educational access in Bath County

Please be assured of Bath County Public School's complete support of this application, and, on behalf of the students, teachers, and parents, of our appreciation for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Sue Hirsh".

Sue Hirsh
Division Superintendent

SH:prc

Joe Wood, Chair
Shawn Puller, Vice-Chair
Tom Richardson, Secretary
Pat Haynes, Treasurer
Ramona Garcia
David Hahn
Bruce McWilliams



P. O. Box 13
Warm Springs, VA 24484

September 9, 2021

Dr. Tamarah Holmes, Ph.D.
Office of Broadband
Virginia Department of Housing & Community Development
600 E. Main Street, Suite 300
Richmond, VA 23210

RE: 2022 Virginia Telecommunication (VATI)

Dear Dr. Holmes,

The Bath County EDA fully supports the 2022 VATI application submitted on behalf of the Bath-Highland Network Authority to provide universal broadband to the many unserved homes and businesses throughout Bath County.

Business growth in the region depends on reliable, universal internet access, which is not yet widely available throughout Bath County. Many businesses in the County are home-based businesses, located in 'last-mile' zones that are targeted for coverage in this application. Broadband is essential to strengthening our small businesses, diversifying our economy and creating and retaining jobs in the region.

The Bath County EDA is happy to endorse this application in the hope that its implementation will bolster business growth and community and economic development in Bath County.

Sincerely,

Joe Wood
Chair



112 MacTanly Place
Staunton, VA 24401

Phone: (540) 885-5174
Fax: (540) 885-2687

September 10, 2021

Dr. Tamarah Holmes, Ph.D.
Virginia Department of Housing & Community Development
600 E. Main Street, Suite 300
Richmond, VA 23210

Re: 2022 VATI Application

Dear Dr. Holmes:

The Bath Highland Network Authority (BHNA) is pleased that the Central Shenandoah Planning District Commission (CSPDC) is submitting a 2022 Virginia Telecommunications Initiative (VATI) grant application on its behalf BHNA. This multi-jurisdictional project will provide universal broadband coverage throughout Bath and Highland counties. The CSPDC will partner with MGW to deploy last mile fiber to those areas that are unserved.

Bath and Highland counties have been working together for many years to address the lack of broadband in our rural and remote counties. Bath and Highland counties are the two least populated counties in the Commonwealth of Virginia (2020 U.S. Census). Through earlier planning processes, Bath and Highland counties created the regional "Bath & Highland Counties, VA Community Broadband Telecommunications Strategic Plan." This plan, funded through a Virginia Telecommunication Planning Initiative (VATPI) grant, was completed in 2015. The plan, adopted by the governing bodies of both jurisdictions, lays out a roadmap to provide broadband access to our citizens. Access to affordable high-speed broadband is critical in our rural communities to foster economic development, improve educational opportunities, ensure public safety, and enhance the overall quality of life.

To facilitate the implementation of the plan, the governing bodies determined that a broadband authority was needed. Thus, the Bath Highland Network Authority was created in 2017. The purpose of BHNA is to seek broadband solutions and funding opportunities to expand broadband access within the counties of Bath and Highland. The CSPDC staffs the Bath Highland Network Authority, and they will act as fiscal agent and grant administrator for this project.

Because of the region's low population density and mountainous topography, connecting our communities to broadband services has been a challenge; the costly and harder-to-get-to places remain. This project will help us to reach all households, businesses, and organizations within our two counties. It will provide critical broadband services that will enhance quality of life and stimulate the economy in this rural and remote region of the Commonwealth. Thank you for your past support of our planning efforts and consideration of our VATI grant application to bring universal broadband coverage to our communities.

Sincerely,

Ronald Wimer
BHNA Chairman and Mayor of the Town of Monterey



392 Potomac River Road
PO Box 340
Monterey, Virginia 24465-0340
Tel: (540) 468-2131
Fax: (540) 468-1989
www.htcnet.org

September 9, 2021

Dr. Tamarah Holmes, Ph.D.
Virginia Department of Housing
& Community Development
600 E. Main Street, Suite 300
Richmond, VA 23210

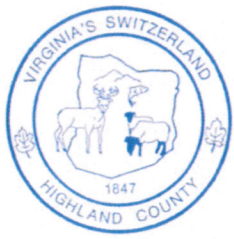
Re: Letter of Support for BHNA 2022 VATI Application

Dear Dr. Holmes:

Highland Telephone Cooperative (HTC) started our fiber to the home project in 2017. With the help of ACAM funding we are happy to announce that we are 90% complete with our fiber build out. Our project when completed will provide reliable connections of 25/3 or greater to our entire service area which includes the Western portion of Highland County. HTC has a completion date of October, 2023 for all fiber construction to be complete. Currently HTC has completed 750 copper to fiber conversions and works daily to increase that number. HTC recognizes the importance of quality broadband and supports the Commonwealth's initiative to bring reliable and affordable broadband to rural communities and is supportive of the 2022 VATI application submitted on behalf of the Bath-Highland Network Authority."

Sincerely,

Chad Kimble
General Manager



Economic Development Authority of Highland County, Virginia

September 9, 2021

Dr. Tamarah Holmes, Ph.D.
Office of Broadband
Virginia Department of Housing & Community Development
600 E. Main Street, Suite 300
Richmond, VA 23210

Chad Kimble
Chair
Blue Grass

Kirk Billingsley
Secretary
Monterey

Henry Budzinski
Hightown

George Hogshead
McDowell

Valerie Lowry
Mill Gap

Bryan Obaugh
McDowell

Betty M. Mitchell
*Economic Development
Officer and Treasurer*

P.O. Box 68
Monterey, VA 24465
highlandeda@htcnet.org

RE: 2022 Virginia Telecommunication (VATI)

Dear Tamarah,

As you heard firsthand from attending the July meeting of the Highland EDA, broadband throughout Highland County is one of our highest priorities. The Highland EDA fully supports the 2022 VATI application submitted on behalf of the Bath-Highland Network Authority to provide universal broadband to the unserved homes and businesses throughout Highland County.

Business growth in the region depends on reliable, universal internet access, which is not yet widely available throughout Highland County. Many businesses in the County are home-based businesses, located in 'last-mile' zones that are targeted for coverage in this application. Broadband is essential to strengthening our small businesses, diversifying our economy and creating and retaining jobs in the region.

Additionally, for a County as sparsely populated as Highland (2,232 people) that continues to lose population, we must have universal broadband to attract younger residents to the community.

The Highland EDA is happy to endorse this application in the hope that its implementation will bolster business growth, resident attraction, community and economic development in Highland County.

Sincerely,

Betty M. Mitchell
Economic Development Officer

Dr. Thomas Schott
Superintendent



Highland County Public Schools

Board Members
Kenny Hodges – Chairman
Joseph Neil – Vice Chair
Sherry Sullenberger

240 Myers Moon Road PO Box 250 Monterey, VA 24465 Phone: 540-468-6300 Fax: 540-468-6306

9/10/2021

Dr. Tamarah Holmes, Ph.D.
Office of Broadband
VA Department of Housing
and Community Development
600 E. Main Street, Suite 300
Richmond, VA 23210

RE: 2022 Virginia Telecommunication Initiative (VATI) Application

Dear Dr. Holmes,

Without reservation, please accept this letter as support of the VATI broadband application submitted on behalf of the Bath-Highland Network Authority to increase internet availability to currently unserved homes throughout Highland County.

Online access for students, teachers, and parents has never been more critical for Highland County. As the pandemic introduces wider-scale distance learning for students and work-from-home for teachers, our rural, dispersed population in Highland County continues to struggle with spotty and unreliable internet coverage, especially in far reaches of the county. The current opportunity outlined in this application to leverage the network to be installed by MGW represents a first step in addressing the digital divide that impedes educational access in Highland County.

Please be assured of Highland County Public School's complete support of this application, and, on behalf of the students, teachers, and parents, of our appreciation for your consideration.

Sincerely,

Dr. Thomas J. Schott
Superintendent
Highland County Public Schools
tschott@highland.k12.va.us
540-468-6300

CDBG Derivation of Cost

**Bath-Highland Network Authority's 2021 Universal Broadband Project
VATI '22 Derivation of Cost Worksheet**

Product	Total	VATI	Non-VATI	Source of Estimate	Date
EXAMPLE					
<u>Construction</u>					
<i>200 LF of fiber @\$150/LF</i>	\$30,000	\$15,000	\$15,000	Company A	9/5/2016
<i>Tower</i>	\$100,000	\$80,000	\$20,000	Company B	9/5/2016
<i>Engineering</i>	\$20,000	\$0	\$20,000	ABC Engineering Firm	9/5/2016

Product	Total	VATI	Non-VATI	Source of Estimate	Date
approx. 192.5 miles of fiber @ \$40,000/mi (fiber to 2,200 serviceable units)	\$ 7,700,000	\$ 5,544,000	\$ 2,156,000	MGW	9/14/2021
Special Construction Costs (270 Locations)	\$ 3,240,000	\$ 2,332,800	\$ 907,200	MGW	9/14/2021
Grant Administration	\$ 50,000		\$ 50,000	CSPDC	9/14/2021
TOTALS	\$ 10,990,000	\$ 7,876,800	\$ 3,113,200		



Network Configuration & Quotation

Customer Name: MGW TELEPHONE
 Project Name: MGW - AXOS GPON pricing - July2021
 Quote Description: MGW - AXOS GPON pricing - July2021
 Author Name: Jessica Allred
 Contact Name:

Quote Reference Number: 661042A-1
 Quote Type: Access
 Date Created: June 30, 2021
 Date Modified: June 30, 2021
 Quote Expiration: July 30, 2021



Equipment Summary

E7	Price	Qty	Ext. Price
000-00372	\$796.00	4	\$3,184.00
E7-2 Field Install Package (CO & ODC/RT): Shelf with Blank Card, FTA, and Field installation Kit			
E7-2 AXOS	Price	Qty	Ext. Price
100-04665	\$8,446.75	4	\$33,787.00
E7-2 GPON-8 r2 card CLEI: BVL3BA5FAB			
100-04964	\$9,796.50	1	\$9,796.50
E7-2 10GE-12 card CLEI: BVL3BA6FAA			
Equipment Total			\$46,767.50
Grand Total			\$46,767.50

Package Details:

000-00372 package consists of the following:

	Qty
100-03590 E7-2 Fan Tray Assembly 2 - FTA2	1
100-01449 E7-2 Shelf, 1RU, 2 Slots, with 1 Blank Card	1
100-01830 E7-2 Field Install Kit for CO & RT (19" and 23" mounting brackets, power and ground cables, etc)	1

Notes & Optional Equipment and Services

All prices are being quoted in US \$ (Dollars).

Due to rounding, some totals may not correspond with the sum of the separate figures.

Calix Warranty - See Purchase Agreement.

Important Ordering Instructions:

Please include the Calix quote number (found in the upper right hand corner) on your PO. You may also provide an internal PO number to be used with your order. Orders received without an internal PO number will use the Calix quote number by default.

Include contact information (Name, Email & Tel) for the person who will receive the order acknowledgements and shipping notifications as well as the required billing and shipping addresses for your order.

Send Purchase Orders to Calix Order Management:

Email: om@calix.com
 Fax: 707-283-3771

You may check the status of your order at any time on our website. (www.calix.com, click Login)



Network Configuration & Quotation

Customer Name: MGW TELEPHONE
 Project Name: MGW - AXOS GPON pricing - July2021
 Quote Description: MGW - AXOS GPON pricing - July2021
 Author Name: Jessica Allred
 Contact Name:

Quote Reference Number: 661042A-1
 Quote Type: Access
 Date Created: June 30, 2021
 Date Modified: June 30, 2021
 Quote Expiration: July 30, 2021



Optional Summary

Extended Warranty

	Price	Qty	Ext. Price
110-01164 Extended Warranty - Upfront - 5 years for 100-01449	\$100.20	4	\$400.80
110-01162 Extended Warranty - Upfront - 5 years for 100-04665	\$274.80	4	\$1,099.20
110-01162 Extended Warranty - Upfront - 5 years for 100-04964	\$274.80	1	\$274.80
Optional Total			\$1,774.80



Customer Name: MGW TELEPHONE
Project Name: MGW - Price Book - Ongoing
Quote Description: MGW - 40G Transport Optics
Author Name: Jessica Allred
Contact Name:

Quote Reference Number: 664658A-1
Quote Type: Access
Date Created: September 14, 2021
Date Modified: September 14, 2021
Quote Expiration: October 14, 2021



Equipment Summary

OIM 100GE Transport

Table with 4 columns: Item ID, Description, Price, Qty, Ext. Price. Rows include items 100-04041, 100-04045, 100-04651, 100-05465, and 100-05477.

Summary table with 2 columns: Category, Amount. Rows: Equipment Total \$15,798.75, Grand Total \$15,798.75.

Notes & Optional Equipment and Services

All prices are being quoted in US \$ (Dollars).

Due to rounding, some totals may not correspond with the sum of the separate figures.

Calix Warranty - See Purchase Agreement.

Important Ordering Instructions:

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Send Purchase Orders to Calix Order Management:

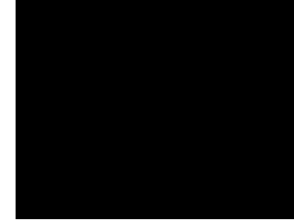
Email: om@calix.com
Fax: 707-283-3771

You may check the status of your order at any time on our website. (www.calix.com, click Login)

Calix Network Configuration & Quotation

Customer Name: MGW TELEPHONE
 Project Name:
 Quote Description:
 Author Name:
 Contact Name:

Quote Reference Number:
 Quote Type:
 Date Created:
 Date Modified:
 Quote Expiration:



Calix Part #	Part Description	Funding	Equipment CLEI	Price	Qty	Extended Price
	800 SG					
100-04011	844G-1 GigaCenter, 2 POTS, 4 GE, Dual Wi-Fi, 1 USB -UPS Power Interface		BVMCH00ARE	\$261.75	1	\$261.75
	E7					
000-00372	E7-2 Field Install Package (CO & ODC/RT): Shelf with Blank Card, FTA, and Field installation Kit			\$796.00	1	\$796.00
100-03656	E7-2 GPON-4 r2 line card (4x GPON OIM, 8x GE SFP, 2x 10GE XFP, 2x 10GE SFP+)		BVL3AW5FTA	\$10,795.50	2	\$21,591.00
	OIM GPON					
100-04200	GPON SFP OIM, Class B+, 1490/1310nm Single Fiber Transceiver, I-Temp (RT), C-Series		BVL3A6UFAA	\$1,083.25	2	\$2,166.50
Funding Equipment Total						\$24,815.25
Funding Grand Total						\$24,815.25

Package Details:

000-00372 package consists of the following:

- 100-01449 E7-2 Shelf, 1RU, 2 Slots, with 1 Blank Card 1
- 100-01830 E7-2 Field Install Kit for CO & RT (19" and 23" mounting brackets, power and ground cables, etc) 1
- 100-03590 E7-2 Fan Tray Assembly 2 - FTA2 1

Calix Network Configuration & Quotation

Customer Name: MGW TELEPHONE
 Project Name:
 Quote Description:
 Author Name:
 Contact Name:

Quote Reference Number:
 Quote Type:
 Date Created:
 Date Modified:
 Quote Expiration:



Equipment Summary					
Calix Part #	Part Description	CLEI	Price	Qty	Extended Price
	800 SG				
100-04011	844G-1 GigaCenter, 2 POTS, 4 GE, Dual Wi-Fi, 1 USB -UPS Power Interface	BVMCH00ARE	\$261.75	1	\$261.75
	E7				
000-00372	E7-2 Field Install Package (CO & ODC/RT): Shelf with Blank Card, FTA, and Field installation Kit		\$796.00	1	\$796.00
100-03656	E7-2 GPON-4 r2 line card (4x GPON OIM, 8x GE SFP, 2x 10GE XFP, 2x 10GE SFP+)	BVL3AW5FTA	\$10,795.50	2	\$21,591.00
	OIM GPON				
100-04200	GPON SFP OIM, Class B+,1490/1310nm Single Fiber Transceiver, I-Temp (RT), C-Series	BVL3A6UFAA	\$1,083.25	2	\$2,166.50
Equipment Total					\$24,815.25
Grand Total					\$24,815.25

Package Details:

000-00372 package consists of the following:

100-01449	E7-2 Shelf, 1RU, 2 Slots, with 1 Blank Card	1
100-01830	E7-2 Field Install Kit for CO & RT (19" and 23" mounting brackets, power and ground cables, etc)	1
100-03590	E7-2 Fan Tray Assembly 2 - FTA2	1

Notes & Optional Equipment and Services

All prices are being quoted in US \$ (Dollars).

Due to rounding, some totals may not correspond with the sum of the separate figures.

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Include contact information (Name, Email & Tel) for the person who will receive the order acknowledgements and shipping notifications as well as the required billing and shipping addresses for your order.

Send Purchase Orders to Calix Order Management:
 Email: om@calix.com

Calix Network Configuration & Quotation

Customer Name: MGW TELEPHONE

Project Name:

Quote Description:

Author Name:

Contact Name:

Quote Reference Number:

Quote Type:

Date Created:

Date Modified:

Quote Expiration:

Fax: 707-283-3771

You may check the status of your order at any time on our website. (www.calix.com, click Login)



MGW Networks_Lingo Networks
 Staunton Virginia 24401
 U.S.A

Purchase Order

PO-00519

Vendor Address

Power & Telephone

2673 Yale Avenue
 Memphis
 38112 TN
 U.S.A



Ship to : MGW Networks

23 N Central Avenue
 Staunton, Va 24401

#	Item & Description	GL Code	Qty	Rate	Amount
1	Clearfield PANEL 144 PORT TB SCAPC SKU : GGBB144C1FAZZ 19&23 MNTG PTCH/SPL FXMP PANEL, LOOSE TUBE PATCH AND SPLICE, 6 INCH /12 CASS. CAP. CHASSIS , ALMOND, 4.77 INCH RODS, 144 PORTS LOADED INTO 12 SINGLEMODE SC/APC CLEARVIEW BLUE CASSETTE(S). FRONT AND REAR PROTECTION. SLACK BASKET INCLUDED	2423200	2.00 1	2,042.00	4,084.00

Sub Total 4,084.00

Total \$4,084.00



MGW Networks_Lingo Networks
 Staunton Virginia 24401
 U.S.A

Purchase Order

PO-00563T

Vendor Address

Power & Telephone

2673 Yale Avenue
 Memphis
 38112 TN
 U.S.A



Ref# : W/O 190301

Ship to : MGW Networks

328 Chapel Road
 Churchville, Va 24421

#	Item & Description	GL Code	Qty	Rate	Amount
1	CHARLES INDUSTRIES ITEM moq of 3 at this price Part # CMPH-75SN/CL CMPH-7500, 2-PIECE BASE, 2 LADDER BARS, CABLE BRACKET W /BOND PLATE W/GROUND LUG, NON-FLAME RETARDANT, CTL LABEL Fiber Pedestal SKU : Special.Charles	2423200	4.00 1	237.93	951.72
2	Fiber 96 LT DCM SJ SA GE FREE SMF 28 E + SKU : FEDH1A1J12CE096E3	2423	20,000.00 1	0.534	10,680.00
3	Fiber 144 LT SJ SA DCM GEL FREE SMF28E+ SKU : FEDH1A1J12CE144E3	2423	20,000.00 1	0.7655	15,310.00
				Sub Total	26,941.72
				Total	\$26,941.72



MGW Networks_Lingo Networks
 Staunton Virginia 24401
 U.S.A

Purchase Order

PO-00575

Vendor Address

VEC Supply
 1155 5th Street SW Extd
 Charlottesville
 22902 VA
 U.S.A



Ref# : Mountain Grove

Ship to : MGW Networks
 23 N Central Avenue
 Staunton, Va 24401

#	Item & Description	GL Code	Qty	Rate	Amount
1	VAULT 24X36X18 TIER 15 BLANK COVER SKU : MBG STK 243618PC T15 1190101	2423200	6.00 1	315.65	1,893.90
2	VAULT HDPE 17X30X18 GREEN WITH LID NO LOGO HEX BOLTS SKU : MAC 1730-18P2PB2 1190101	2423200	8.00 1	173.00	1,384.00
				Sub Total	3,277.90
				Total	\$3,277.90



MGW Networks_Lingo Networks
 Staunton Virginia 24401
 U.S.A

Purchase Order

PO-00582T

Vendor Address

Power & Telephone

2673 Yale Avenue
 Memphis
 38112 TN
 U.S.A



Ship to : MGW Networks

23 N Central Avenue
 Staunton, Va 24401

#	Item & Description	GL Code	Qty	Rate	Amount
1	Coyote Tray Lite Grip SPL 24 CT STD SKU : 80809958	6423200	15.00 1	20.51	307.65
				Sub Total	307.65
				Total	\$307.65



MGW Networks_Lingo Networks
 Staunton Virginia 24401
 U.S.A

Purchase Order

PO-00585T

Vendor Address

Power & Telephone

2673 Yale Avenue
 Memphis
 38112 TN
 U.S.A



Ship to : MGW Networks

23 N Central Avenue
 Staunton, Va 24401

#	Item & Description	GL Code	Qty	Rate	Amount
1	Coyote Dome Closure 9 1/2" x 19" Dome SKU : COYD919B000	6423200	15.00 1	311.15	4,667.25
				Sub Total	4,667.25
				Total	\$4,667.25



Power & Telephone
2673 Yale Ave.
Memphis, TN 38112

QUOTE

UPC Vndr	Ack Date	Order #
PO #	Page #	
RYAN	1	

Ship To: MG-W TELEPHONE COMPANY
BOX 105
WILLIAMSVILLE, VA 24487

Contact: Donna Whitaker
(901)866-3171
donna.whitaker@ptsupply.com

Cust #: 20546
Bill To: MG-W TELEPHONE COMPANY
23 N CENTRAL AVE
STAUNTON, VA 24401

Reference	Currency	USD
Instructions	Sales Rep In	DSW
Ship Point	Terms	Net 30 Days
Power & Telephone Supply Co.	Via	Ship Date
Requested Ship Date	WHS ROUTING	
	Freight In / Out	N/N

Ln #	Product and Description	Quantity Ordered	Qty U/M	Unit Price	Price U/M	Net Amount
	*** MUST SCAN MAC ADDRESSES AND SERIAL NUMBERS *** ***'Only ship UPSS for small pkg. or ODFL for LTL, no CENF***					
1	GJBB024F1FBZZ PANEL FXDS 24 SM LCUPC FXMP PANEL, LOOSE TUBE PATCH AND SPLICE, 1.75 INCH/2 CASS. CAP. CHASSIS , ALMOND, 4.77 INCH RODS, 24 PORTS LOADED INTO 2 SINGLEMODE LC/UPC CLEARVIEW BLUE CASSETTE(S). FRONT AND REAR PROTECTION. REAR COVER INCLUDED	1	EA	534.00	EA	534.00
2	SPECIAL.CLEARFIELD CLEARFIELD ITEMS MGP-PES-EAZ-ZZZ RACK MOUNT SPLITTER ASSEMBLY, 19/23 INCH, (1X) 1X64 PLANAR SPLITTER, TERMINATED WITH LC/UPC CONNECTORS, LC/UPC ADAPTER INPUT(S) AND OUTPUTS	1	EA	1,215.00	EA	1,215.00

2	Lines Total	Qty Shipped Total	2	Total	1,749.00
				Taxes	92.70
				Invoice Total	1,841.70

QUOTE

Customer Copy

Page 1 of 1

Buyer is responsible for evaluating and ordering product for intended use. Custom product is non-cancellable and non-returnable. Other products may not be returnable. Return policy for your order may be verified by your account manager. Buyer has fifteen (15) days from receipt to notify Seller of error, defect or damage. Otherwise, shipment is deemed acceptable. Payment Terms are stated on order. Exceptions must be mutually agreed to in writing in advance of order acceptance by Seller. Full Terms are available at www.ptsupply.com/terms-and-conditions.

Nichols Construction LLC
PO Box 1179
Vansant, VA 24656



Contractor Rate Sheet

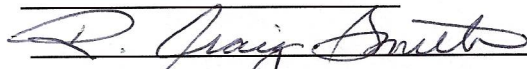
MGW01A	Place Pole 25-35 Ft.	\$ 250.00
MGW01B	Remove Place Pole 25-35 Ft.	\$ 100.00
MGW02A	Place Pole 40-50 Ft.	\$ 380.00
MGW01B	Remove Place Pole 40-50 Ft.	\$ 125.00
MGW03A	Joint Use Pole (Adder)	\$ 550.00
MGW04A	Straighten Pole	\$ 250.00
MGW05A	Hand Dig Hole (Pole/Anchor) (Adder)	\$ 125.00
MGW06A	Hand Set Pole (Adder) No Access	\$ 650.00
MGW07A	Place Push Brach Pole	\$ 375.00
MGW07B	Remove Push Brace	\$ 125.00
MGW10A	Place Anchor	\$ 165.00
MGW10B	Remove Anchor	\$ 45.00
MGW11A	Rock Removal (Pole/Anchor) Per Hole (Adder)	\$ 450.00
MGW12A	Place Cable Extension Arm	\$ 85.00
MGW2B	Remove Place Cable Extension Arm	\$ 50.00
MGW13A	Add Tag Pole	\$ 5.50
MGW20A	Place Strand up to 10M (5/16)	\$ 0.65
MGW20B	Remove Place Strand up to 10M (5/16)	\$ 0.35
MGW21A	Place Fiber Optic Cable (All Sizes)	\$ 0.95
MGW21B	Remove Place Fiber Optic Cable (All Sizes)	\$ 0.40
MGW25A	OverLash Fiber Optic Cable	\$ 0.95
MGW28A	Tree Trimming 5' Radius	\$ 2.60
MGW30A	Place Down Guy	\$ 25.00
MGW30B	Remove Place Down Guy	\$ 15.00
MGW32B	DeLash/ReLash Cable	\$ 1.05
MGW34A	Bond Existing Cables	\$ 8.50
MGW35A	Transfer Attachment	\$ 90.00
MGW35B	Transfer Drop	\$ 48.00
MGW36A	Resag Aerial Cable	\$ 125.00
MGW37A	Place Riser Guards	\$ 84.00
MGW37B	Remove Place Riser Guards	\$ 38.00
MGW38A	Place Snowshoes	\$ 130.00
MGW38B	Remove Snowshoes	\$ 85.00
MGW40A	Plow Fiber/ID 1.25	\$ 3.75
MGW41A	Plow Additional Cable	\$ 1.10
MGW42A	Place Fiber in Open Trench (No Other Work)	\$ 1.25
MGW43A	Hand Dig Fiber/Drop (Non Mechanical)	\$ 11.25
MGW44A	Place Buried Fiber Drop (Plow)	\$ 1.65
MGW45A	Trench Fiber/ID 1.25 @ 36" Depth	\$ 3.25
MGW46A	Backhoe Fiber/ID 1.25 @ 36" Depth	\$ 5.25
MGW50A	Directional Bore 1.25 ID	\$ 14.50
MGW51A	Directional Bore 2 ID	\$ 15.00
MGW52A	Directional Bore 4 ID	\$ 16.00
MGW55A	Place Hand Hole (Small)	\$ 285.00
MGW55B	Remove Place Hand Hole (Small)	\$ 185.00
MGW56A	Place Hand Hole (Large)	\$ 350.00
MGW56B	Remove Place Hand Hole (Large)	\$ 225.00
MGW57A	Mini-X with Ram Hammer	\$ 14.00
MGW58A	Rock Saw @ 30" Depth	\$ 18.50
MGW59A	Directional Bore Up to 4" Semi-Rock (Pre-Approved)	\$ 26.00
MGW59B	Directional Bore up to 4" Solid Rock (Pre-Approved) (Air Hammer or AT)	\$ 88.00

MGW60A	Place Closure / Fiber Organizer / Prep Cables	\$ 325.00
MGW60B	Remove Place Closure / Fiber Organizer	\$ 225.00
MGW61A	Place Fiber Distribution Panel / Prep Cables	\$ 325.00
MGW61B	Remove Place Fiber Distribution Panel	\$ 225.00
MGW62A	Fusion Splicer Fiber 1-24	\$ 52.00
MGW62B	Fusion Splicer Fiber 25-48	\$ 42.00
MGW62C	Fusion Splicer Fiber 49-96	\$ 32.00
MGW62D	Fusion Splicer Fiber 97-144	\$ 25.00
MGW63A	Ring Cut Slack Loop	\$ 225.00
MGW64A	Maintenance Window Fiber Cut-(10 PM-6:00AM)	\$ 1,350.00
MGW70A	Place Fiber in Conduit	\$ 1.50
MGW70B	Remove Fiber from Conduit	\$ 0.75
MGW71A	Place ID 1.25 in Existing Conduit	\$ 1.70
MGW71B	Remove ID 1.25 in Existing Conduit	\$ 0.85
MGW72A	Place Fiber Drop in Existing Conduit	\$ 1.25
MGW72B	Remove Fiber Drop in Existing Conduit	\$ 0.75
MGW73A	Rod Duct and Place Mule Tape	\$ 1.50
MGW74A	Place Pull Line	\$ 1.25
MGW75A	Manhole Setup	\$ 425.00
MGW76A	Core Drill up to 4" Diameter 12" Thickness	\$ 400.00
MGW85A	Placing Foreman	\$ 45.00
MGW85B	Placing Foreman (OT)	\$ 67.50
MGW86A	Linemen	\$ 38.00
MGW86B	Linemen (OT)	\$ 57.00
MGW87A	Equipment Operator	\$ 35.00
MGW87B	Equipment Operator (OT)	\$ 52.50
MGW88A	Laborer/Groundman	\$ 32.00
MGW88B	Laborer/Groundman (OT)	\$ 48.00
MGW90A	Fiber Splicer	\$ 52.00
MGW90B	Fiber Splicer (OT)	\$ 78.00
MGW91A	Pickup Truck	\$ 16.00
MGW92A	Crew Cab Service Truck	\$ 22.00
MGW93A	Service Bucket Truck	\$ 29.00
MGW94A	Line Truck	\$ 35.00
MGW95A	Cable Placer	\$ 38.00
MGW96A	Dump Truck	\$ 31.00
MGW97A	Air Compressor	\$ 15.00
MGW98A	Wood Chipper	\$ 15.00
MGW99A	Fiber Splicing Trailer	\$ 28.00
MGW100A	Flashing Arrow Board	\$ 16.00
MGW101A	Mini-Excavator w/Hammer	\$ 35.00
MGW102A	Directional Boe Crew (JT20 Dirt includes 2 Men)	\$ 155.00
MGW200A	Materials Furnished (15% plus Sales Tax / Shipping)	
MGW201A	Lump Sum Bid	

Nichols Approval _____

Date _____

MGW Approval _____



Date _____



(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: 0004335873 | Data as of: Dec 31, 2020 | Operations: ILEC | Submission Status: Original - Submitted | Last Updated: Mar 15, 2021 11:55:41

Filer Identification

Section	Question	Response
Filer Information	Company Name	MGW Telephone Company, Inc.
	Holding Company Name	MGW Communications, Inc.
	SAC ID	190238
	499 ID	807990
Data Contact Information	Data Contact Name	Sheri Smith
	Data Contact Phone Number	(540) 925-5235
	Data Contact E-mail	sheri.smith@mgwnetworks.com
Emergency Operations Contact Information	Emergency Operations Name	R. Craig Smith
	Emergency Operations Phone Number	(540) 925-2258
	Emergency Operations E-mail	craig.smith@mgwnetworks.com
Certifying Official Contact Information	Certifying Official Name	Sheri Smith
	Certifying Official Phone Number	(540) 925-5235
	Certifying Official E-mail	sheri.smith@mgwnetworks.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	477_MGWTelephoneDeployment_20201231.csv	Mar 15, 2021 11:35:50	422
Fixed Broadband Subscription	477_MGWTELEPHONE_Broadband_Subscription_12-31-20.csv	Mar 5, 2021 09:06:22	43
Fixed Voice Subscription	Interactive data entry		3

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	MGW Telephone	Asymmetric xDSL	318
		Optical Carrier/Fiber to the End User	104
Total			422

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	26	770	43	813
	Optical Carrier/Fiber to the End User	17	43	0	43
Total		43	813	43	856

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
5.000	1.000	323	14	337
10.000	1.000	210	14	224
10.000	2.000	6	0	6
15.000	1.000	53	8	61
15.000	2.000	1	0	1
25.000	1.000	10	2	12
25.000	3.000	115	4	119
25.000	5.000	15	1	16
50.000	5.000	45	0	45
50.000	10.000	13	0	13
75.000	30.000	5	0	5
100.000	10.000	6	0	6
100.000	20.000	8	0	8
200.000	40.000	2	0	2
1000.000	50.000	1	0	1
Total		813	43	856

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	5.000	1.000	319	14	333
	10.000	1.000	210	14	224
	10.000	2.000	5	0	5
	15.000	1.000	53	8	61
	25.000	1.000	10	2	12
	25.000	3.000	114	4	118
	25.000	5.000	3	1	4

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Business /		Total
			Consumer	Govt	
	50.000	5.000	45	0	45
	75.000	30.000	5	0	5
	100.000	10.000	6	0	6
Optical Carrier/Fiber to the End User	5.000	1.000	4	0	4
	10.000	2.000	1	0	1
	15.000	2.000	1	0	1
	25.000	3.000	1	0	1
	25.000	5.000	12	0	12
	50.000	10.000	13	0	13
	100.000	20.000	8	0	8
	200.000	40.000	2	0	2
1000.000	50.000	1	0	1	
Total			813	43	856

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	1428	1289	0	0
Total	1428	1289	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	1428	857	571	170	1119	55	84
Total	1428	857	571	170	1119	55	84

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	1428	1428	0	0	43	0	0	1385

State	Total	by Ownership			by Last-mile Medium			
		Owned	UNE-L	Resale	FTTP	Coax	Fixed Wireless	Copper
Total	1428	1428	0	0	43	0	0	1385



(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: 0004335873 | Data as of: Jun 30, 2020 | Operations: ILEC | Submission Status: Revised - Submitted | Last Updated: Nov 5, 2020 16:39:21

Filer Identification

Section	Question	Response
Filer Information	Company Name	MGW Telephone Company, Inc.
	Holding Company Name	MGW Communications, Inc.
	SAC ID	190238
	499 ID	807990
Data Contact Information	Data Contact Name	Sheri H Smith
	Data Contact Phone Number	(540) 925-5235
	Data Contact E-mail	sheri.smith@mgwnetworks.com
Emergency Operations Contact Information	Emergency Operations Name	R. Craig Smith
	Emergency Operations Phone Number	(540) 925-2258
	Emergency Operations E-mail	craig.smith@mgwnetworks.com
Certifying Official Contact Information	Certifying Official Name	Sheri H Smith
	Certifying Official Phone Number	(540) 925-5235
	Certifying Official E-mail	sheri.smith@mgwnetworks.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	477_MGWTelephoneDeployment_20200630.csv	Nov 5, 2020 16:07:05	397
Fixed Broadband Subscription	477_MGWTELEPHONE_BROADBANDSUBSCRIPTIONS_6_30_2020_REVISED.csv	Nov 5, 2020 16:38:04	34
Fixed Voice Subscription	Interactive data entry		3

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	MGW Telephone	Asymmetric xDSL	305
		Optical Carrier/Fiber to the End User	92
Total			397

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	21	717	42	759
	Optical Carrier/Fiber to the End User	13	24	0	24
Total		34	741	42	783

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
5.000	1.000	385	17	402
10.000	1.000	175	12	187
10.000	2.000	1	0	1
15.000	1.000	58	9	67
15.000	2.000	3	0	3
25.000	1.000	15	2	17
25.000	3.000	59	2	61
25.000	5.000	6	0	6
50.000	1.000	1	0	1
50.000	5.000	24	0	24
50.000	10.000	11	0	11
100.000	20.000	3	0	3
Total		741	42	783

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	5.000	1.000	380	17	397
	10.000	1.000	175	12	187
	15.000	1.000	58	9	67
	25.000	1.000	15	2	17
	25.000	3.000	58	2	60
	25.000	5.000	3	0	3
	50.000	5.000	24	0	24
	50.000	10.000	4	0	4
Optical Carrier/Fiber to the End User	5.000	1.000	5	0	5
	10.000	2.000	1	0	1

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Business /		Total
			Consumer	Govt	
	15.000	2.000	3	0	3
	25.000	3.000	1	0	1
	25.000	5.000	3	0	3
	50.000	1.000	1	0	1
	50.000	10.000	7	0	7
	100.000	20.000	3	0	3
Total			741	42	783

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	1403	1263	0	0
Total	1403	1263	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	1403	783	620	177	1086	55	85
Total	1403	783	620	177	1086	55	85

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	1403	1403	0	0	25	0	0	1378
Total	1403	1403	0	0	25	0	0	1378



(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: 0019225366 | Data as of: Dec 31, 2020 | Operations: Non-ILEC | Submission Status: Revised - Submitted | Last Updated: Apr 30, 2021 13:08:01

Filer Identification

Section	Question	Response
Filer Information	Company Name	MGW Networks, L.L.C.
	Holding Company Name	MGW Communications, Inc.
	SAC ID	
	499 ID	828775
Data Contact Information	Data Contact Name	Sheri H Smith
	Data Contact Phone Number	(540) 925-5235
	Data Contact E-mail	sheri.smith@mgwnetworks.com
Emergency Operations Contact Information	Emergency Operations Name	R. Craig Smith
	Emergency Operations Phone Number	(540) 925-2258
	Emergency Operations E-mail	craig.smith@mgwnetworks.com
Certifying Official Contact Information	Certifying Official Name	Sheri H. Smith
	Certifying Official Phone Number	(540) 925-5235
	Certifying Official E-mail	sheri.smith@mgwnetworks.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	477_MGWNetworksDeployment_20201231.csv	Apr 28, 2021 14:11:48	7084
Fixed Broadband Subscription	MGWNETWORKS_Broadband_Subscription_12312020-REVISED.csv	Apr 30, 2021 13:04:44	264
Fixed Voice Subscription	477_MGWNETWORKS_Voice_subscription_12312020.csv	Apr 28, 2021 14:11:48	25

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	Lingo Networks	Optical Carrier/Fiber to the End User	435
		Terrestrial Fixed Wireless	6649
Total			7084

Fixed Broadband Subscription

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

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business / Govt	Total
Virginia	Optical Carrier/Fiber to the End User	100	378	65	443
	Terrestrial Fixed Wireless	164	1121	33	1154
Total		264	1499	98	1597

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
1.500	1.000	74	3	77
1.500	1.500	0	1	1
3.000	1.000	67	6	73
3.000	1.500	1	0	1
5.000	1.000	6	4	10
6.000	1.000	326	9	335
9.000	1.000	8	6	14
10.000	1.000	421	7	428
10.000	1.500	3	0	3
10.000	2.000	8	0	8
10.000	10.000	0	3	3
15.000	2.000	2	1	3
15.000	3.000	10	1	11
20.000	20.000	1	0	1
25.000	1.000	7	0	7
25.000	1.500	208	4	212
25.000	2.000	6	0	6
25.000	3.000	1	0	1
25.000	5.000	59	4	63
25.000	25.000	0	1	1
50.000	10.000	104	13	117
50.000	50.000	1	6	7
100.000	10.000	1	0	1
100.000	20.000	85	15	100
100.000	25.000	34	1	35
100.000	30.000	4	0	4

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
100.000	100.000	3	2	5
150.000	25.000	1	0	1
200.000	40.000	54	3	57
200.000	200.000	0	1	1
350.000	350.000	1	0	1
400.000	400.000	1	1	2
450.000	450.000	0	1	1
500.000	500.000	0	5	5
1000.000	1000.000	1	0	1
2000.000	200.000	1	0	1
Total		1499	98	1597

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

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Optical Carrier/Fiber to the End User	1.500	1.000	1	0	1
	1.500	1.500	0	1	1
	3.000	1.000	2	0	2
	3.000	1.500	1	0	1
	5.000	1.000	6	4	10
	10.000	1.000	4	3	7
	10.000	10.000	0	3	3
	15.000	2.000	2	1	3
	15.000	3.000	10	1	11
	20.000	20.000	1	0	1
	25.000	2.000	6	0	6
	25.000	3.000	1	0	1
	25.000	5.000	55	4	59
	25.000	25.000	0	1	1
	50.000	10.000	102	13	115
	50.000	50.000	1	5	6
	100.000	10.000	1	0	1
	100.000	20.000	85	15	100
	100.000	25.000	34	1	35
	100.000	30.000	4	0	4

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	100.000	100.000	3	2	5
	150.000	25.000	1	0	1
	200.000	40.000	54	3	57
	200.000	200.000	0	1	1
	350.000	350.000	1	0	1
	400.000	400.000	1	1	2
	450.000	450.000	0	1	1
	500.000	500.000	0	5	5
	1000.000	1000.000	1	0	1
	2000.000	200.000	1	0	1
Terrestrial Fixed Wireless	1.500	1.000	73	3	76
	3.000	1.000	65	6	71
	6.000	1.000	326	9	335
	9.000	1.000	8	6	14
	10.000	1.000	417	4	421
	10.000	1.500	3	0	3
	10.000	2.000	8	0	8
	25.000	1.000	7	0	7
	25.000	1.500	208	4	212
	25.000	5.000	4	0	4
	50.000	10.000	2	0	2
	50.000	50.000	0	1	1
Total			1499	98	1597

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
North Carolina	0	0	2	2
Vermont	0	0	5	0
Virginia	0	0	336	189
West Virginia	0	0	2	2
Total	0	0	345	193

**Fixed Voice
Subscription
(iVoIP)****Over-the-top VoIP Subscriptions by State and End-user Type**

State	Total	Consumer	Business / Govt
North Carolina	2	2	0
Vermont	5	0	5
Virginia	75	1	74
West Virginia	0	0	0
Total	82	3	79

All other VoIP Subscriptions by State, End-user Type, Bundle and Last-mile Medium

State	Total	by End-user Type		by Bundle		by Last-mile Medium			
		Consumer	Business / Government	Sold w/ Internet	Sold w/o Internet	FTTP	Coax	Fixed Wireless	Copper
North Carolina	0	0	0	0	0	0	0	0	0
Vermont	0	0	0	0	0	0	0	0	0
Virginia	261	188	73	257	4	260	0	1	0
West Virginia	2	2	0	2	0	2	0	0	0
Total	263	190	73	259	4	262	0	1	0



(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: 0019225366 | Data as of: Jun 30, 2020 | Operations: Non-ILEC | Submission Status: Revised - Submitted | Last Updated: Mar 3, 2021 07:10:07

Filer Identification

Section	Question	Response
Filer Information	Company Name	MGW Networks, L.L.C.
	Holding Company Name	MGW Communications, Inc.
	SAC ID	
	499 ID	828775
Data Contact Information	Data Contact Name	Sheri H Smith
	Data Contact Phone Number	(540) 925-5235
	Data Contact E-mail	sheri.smith@mgwnetworks.com
Emergency Operations Contact Information	Emergency Operations Name	R. Craig Smith
	Emergency Operations Phone Number	(540) 925-2258
	Emergency Operations E-mail	craig.smith@mgwnetworks.com
Certifying Official Contact Information	Certifying Official Name	Sheri H Smith
	Certifying Official Phone Number	(540) 925-5235
	Certifying Official E-mail	sheri.smith@mgwnetworks.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	477_MGWNetworksDeployment_20200630_rev.csv	Mar 2, 2021 17:54:21	7034
Fixed Broadband Subscription	477_MGWNWORKS_BROADBAND_SUBSCRIPTIONS_06302020(2)_REVISED12162020.csv	Mar 2, 2021 17:50:02	254
Fixed Voice Subscription	477_MGWNWORKS_Voice_Subscription_06302020.csv	Mar 2, 2021 17:50:02	25

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	Lingo Networks	Optical Carrier/Fiber to the End User	385

State	DBA Name	Technology	Blocks
		Terrestrial Fixed Wireless	6649
Total			7034

Fixed Broadband Subscription

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

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business / Govt	Total
Virginia	Optical Carrier/Fiber to the End User	100	310	67	377
	Terrestrial Fixed Wireless	154	1049	41	1090
Total		254	1359	108	1467

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
1.500	1.000	81	4	85
1.500	1.500	0	1	1
3.000	1.000	75	8	83
3.000	1.500	1	0	1
5.000	1.000	6	4	10
6.000	1.000	475	16	491
9.000	1.000	10	6	16
10.000	1.000	246	6	252
10.000	10.000	0	3	3
15.000	2.000	2	1	3
15.000	3.000	14	1	15
20.000	20.000	1	0	1
25.000	1.000	5	0	5
25.000	1.500	163	3	166
25.000	2.000	3	0	3
25.000	3.000	2	0	2
25.000	5.000	64	5	69
25.000	25.000	0	1	1
50.000	10.000	94	14	108
50.000	50.000	1	7	8
75.000	15.000	0	1	1
100.000	20.000	67	11	78

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
100.000	25.000	13	1	14
100.000	30.000	3	0	3
100.000	100.000	3	4	7
150.000	25.000	1	0	1
150.000	150.000	0	2	2
200.000	40.000	26	2	28
200.000	200.000	0	2	2
350.000	350.000	1	0	1
400.000	400.000	1	0	1
500.000	500.000	0	5	5
1000.000	1000.000	1	0	1
Total		1359	108	1467

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

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Optical Carrier/Fiber to the End User	1.500	1.000	2	0	2
	1.500	1.500	0	1	1
	3.000	1.000	2	1	3
	3.000	1.500	1	0	1
	5.000	1.000	6	4	10
	10.000	1.000	3	3	6
	10.000	10.000	0	3	3
	15.000	2.000	2	1	3
	15.000	3.000	14	1	15
	20.000	20.000	1	0	1
	25.000	2.000	3	0	3
	25.000	3.000	2	0	2
	25.000	5.000	64	5	69
	25.000	25.000	0	1	1
	50.000	10.000	93	14	107
	50.000	50.000	1	6	7
	75.000	15.000	0	1	1
100.000	20.000	67	11	78	
100.000	25.000	13	1	14	

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
	100.000	30.000	3	0	3
	100.000	100.000	3	4	7
	150.000	25.000	1	0	1
	150.000	150.000	0	1	1
	200.000	40.000	26	2	28
	200.000	200.000	0	2	2
	350.000	350.000	1	0	1
	400.000	400.000	1	0	1
	500.000	500.000	0	5	5
	1000.000	1000.000	1	0	1
Terrestrial Fixed Wireless	1.500	1.000	79	4	83
	3.000	1.000	73	7	80
	6.000	1.000	475	16	491
	9.000	1.000	10	6	16
	10.000	1.000	243	3	246
	25.000	1.000	5	0	5
	25.000	1.500	163	3	166
	50.000	10.000	1	0	1
	50.000	50.000	0	1	1
	150.000	150.000	0	1	1
Total			1359	108	1467

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
North Carolina	0	0	2	2
Vermont	0	0	5	0
Virginia	0	0	308	160
West Virginia	0	0	1	1
Total	0	0	316	163

Over-the-top VoIP Subscriptions by State and End-user Type

State	Total	Consumer	Business / Govt
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**Fixed Voice
Subscription
(iVoIP)**

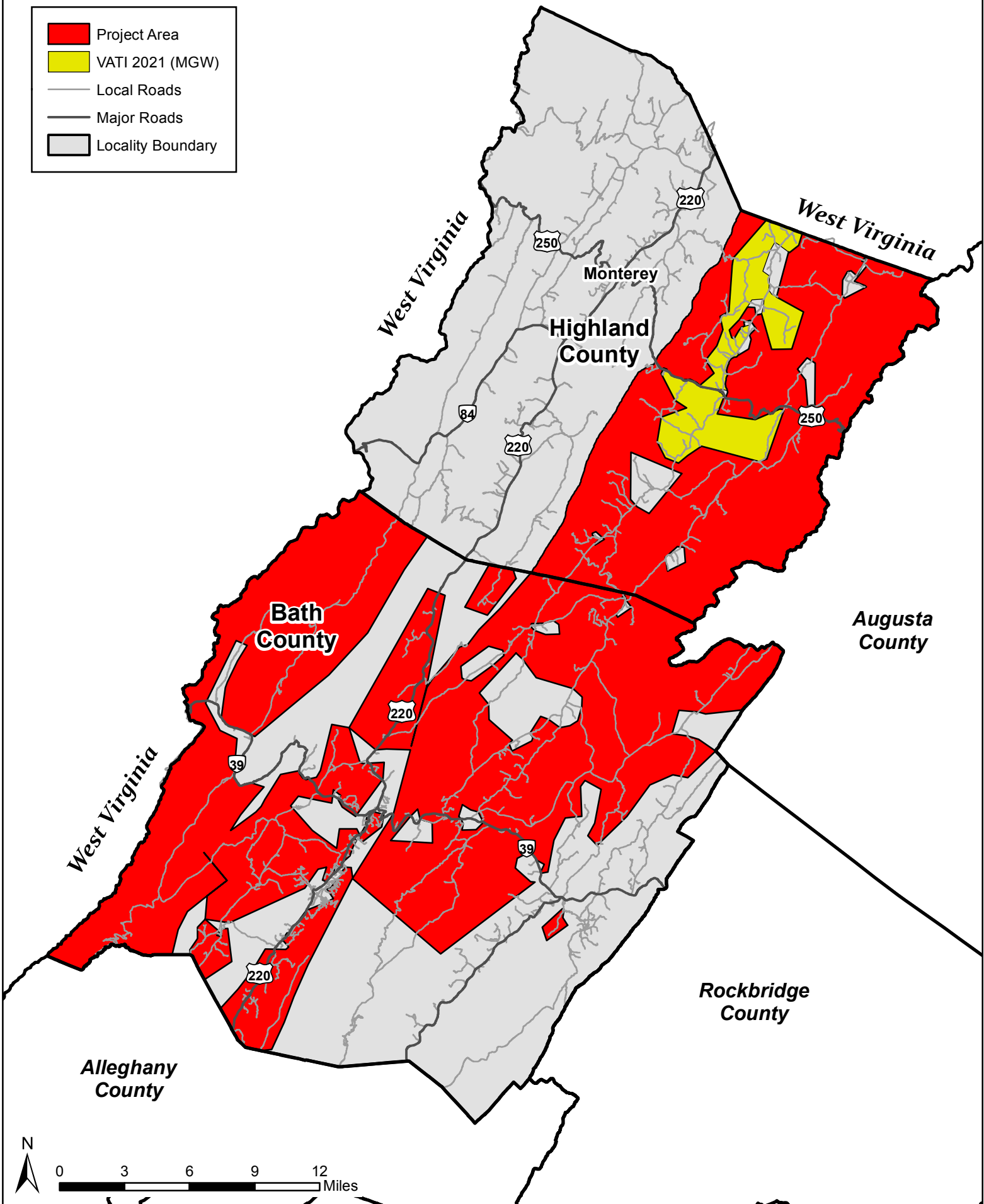
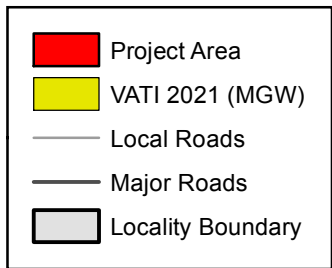
State	Total	Consumer	Business / Govt
North Carolina	2	2	0
Vermont	5	0	5
Virginia	76	0	76
West Virginia	0	0	0
Total	83	2	81

All other VoIP Subscriptions by State, End-user Type, Bundle and Last-mile Medium

State	Total	by End-user Type		by Bundle		by Last-mile Medium			
		Consumer	Business / Government	Sold w/ Internet	Sold w/o Internet	FTTP	Coax	Fixed Wireless	Copper
North Carolina	0	0	0	0	0	0	0	0	0
Vermont	0	0	0	0	0	0	0	0	0
Virginia	232	160	72	232	0	232	0	0	0
West Virginia	1	1	0	1	0	1	0	0	0
Total	233	161	72	233	0	233	0	0	0

Attachment 16 – There is not wireless infrastructure for this project

State Funded Areas





392 Potomac River Road
PO Box 340
Monterey, Virginia 24465-0340
Tel: (540) 468-2131
Fax: (540) 468-1989
www.htcnet.org


September 9, 2021

Dr. Tamarah Holmes, Ph.D.
Virginia Department of Housing
& Community Development
600 E. Main Street, Suite 300
Richmond, VA 23210

Re: Letter of Support for BHNA 2022 VATI Application

Dear Dr. Holmes:

Highland Telephone Cooperative (HTC) started our fiber to the home project in 2017. With the help of ACAM funding we are happy to announce that we are 90% complete with our fiber build out. Our project when completed will provide reliable connections of 25/3 or greater to our entire service area which includes the Western portion of Highland County. HTC has a completion date of October, 2023 for all fiber construction to be complete. Currently HTC has completed 750 copper to fiber conversions and works daily to increase that number. HTC recognizes the importance of quality broadband and supports the Commonwealth's initiative to bring reliable and affordable broadband to rural communities and is supportive of the 2022 VATI application submitted on behalf of the Bath-Highland Network Authority."

Sincerely,

Chad Kimble
General Manager