

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

Application ID: 86509102021141720
Application Status: Pending
Program Name: Virginia Telecommunications Initiative 2022
Organization Name: Roanoke Valley Broadband Authority
Organization Address: 601 South Jefferson Street Suite 110
Roanoke, VA 24011
Profile Manager Name: Frank M. Smith II
Profile Manager Phone: (540) 494-0644
Profile Manager Email: fsmith@highspeedroanoke.net

Project Name: Fiber Optic Transport along Rutrough Road to Explore Park
Project Contact Name: Frank M. Smith II
Project Contact Phone: (540) 494-0644
Project Contact Email: fsmith@highspeedroanoke.net
Project Location: 5204 Bernard Drive
Roanoke, VA 24018-0798
Project Service Area: Roanoke County

Total Requested Amount: \$241,419.00
Required Annual Audit Status: No Current Audits Found

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

Budget Information:

| Cost/Activity Category | DHCD Request | Other Funding | Total |
|---------------------------|---------------------|---------------|---------------------|
| Telecommunications | \$241,419.00 | \$0.00 | \$241,419.00 |
| Construction | \$241,419.00 | \$0.00 | \$241,419.00 |
| Total: | \$241,419.00 | \$0.00 | \$241,419.00 |

Budget Narrative:

The RVBA will substantially discount 10 Gbps back-haul circuits for each project awarded by VATI. This equates to a savings/contribution of \$720,000 over sixty (60) months for a last mile provider to utilize the proposed RVBA Middle Mile across all five proposed projects. In addition, the RVBA will contribute up to two thousand (2000) man hours @ the market rate of \$125.00 per hour across all five proposed projects in support of construction, design, and project management for a savings/contribution of \$250,000 in professional services. When this is taken into consideration, based on RVBA estimates its contribution towards the project is around 53% of all five proposed projects. The RVBA is in a strong position to make significant in-kind contributions to the VATI effort.

Questions and Responses:

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:

The Roanoke Valley Broadband Authority and the County of Roanoke have selected the proposed project area to support the local community with mission critical telecommunications backbone infrastructure and allow for last mile connectivity. The project will provide an essential optical transport backbone and allow for last mile connectivity for citizens in support of universal service to service the community for many years to come. The Roanoke Valley Broadband Authority has already received the necessary crossing permits and right-of-way agreements from the National Park Service's Blue Ridge Parkway division. The geographic area extends along State Route 658, also known as Rutrough Road, in Roanoke County to the Explore Park Area of Roanoke County, as depicted in Attachment 1 – Project Area Map.

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 RVBA in cooperation with Botetourt County and Roanoke County held two VATI outreach meetings for the service provider/carrier community and other stakeholders to solicit ideas for projects, provide carriers information on developing projects, and educate the service provider on the opportunities to serve the Roanoke Valley. These events were well attended by locality officials, service providers/carriers, and other members of the community.

In the proposed serving area, based on citizen discussion and recent infrastructure projects in cooperation with Roanoke County and the Western Virginia Water Authority (WVWA), there is limited to no service in the proposed project area. The Roanoke Valley Broadband Authority has worked with the WVWA's GIS division to determine the need for middle mile backbone infrastructure. Dura-line Future Path conduit has been installed along part of this route with telecommunications hand-holes by the RVBA in anticipation of future project completion through the grant applications process.

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

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:

These areas may be seen on Attachment 2 – Documentation on Federal Funding Area. Based on RVBA's research to date, there is no conflict with federally funded broadband 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:

Based on RVBA's research to date, there are no conflicts with federally funded broadband programs. Please reference Attachment 4 – Documentation of Unserved Area VATI Criteria.

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:

To ensure quality connectivity for the long run, the proposed project provides mission critical telecommunications backbone infrastructure that will allow for future last mile connections to leverage the proposed middle mile network. This Open Access Middle Mile Network will help other last mile providers service the unserved or underserved areas of the Roanoke County region. The middle mile backbone project will support the efforts of the existing Rural Broadband providers to add essential service redundancy, restoration, and resiliency capabilities.

6. 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)

Answer:

Serving a critical role in providing middle mile service as part of the broader, collaborative effort to achieve universal coverage, the total serviceable units are 597 as noted in Attachment 5 – Passings Form.

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

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:

Not applicable.

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:

The proposed fiber optic transport project will provide download and upload synchronous data speeds. The RVBA will provide a 10 Gbps backbone with scalability to 100 Gbps plus as requirements grow. This will provide both current and new providers the opportunity to future proof their service delivery for many years to come.

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:

The RVBA over the past six (6) years has built an Open Access Fiber Optic Network (any carrier may use the network) which currently has over 110 miles of core backbone fiber. There are nine (9) switching centers on the network along with two Colocation Centers with a third being developed. The RVBA partners with multiple commercial service providers and has developed NNI (Network to Network Interface) with several commercial service providers (reference Attachment 17 – RVBA Network Map, Attachment 18 – RVBA General Info Brochure).

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:

The RVBA was formed by the private and public sectors to drive investment, innovation, and service availability across its serving area of Botetourt County, Roanoke County, City of Roanoke, City of Salem, and the surrounding area. The RVBA is a mission critical component for providing service to the unserved and underserved. Currently, the RVBA has active and successful partnerships with last mile providers serving Bedford, Botetourt and Franklin Counties in support of addressing the needs of rural broadband in support of universal service. We are in the "fight" and serving the "troops" at the front-line.

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:

The project has been designed in full, with all walk-throughs and materials planning completed. See Attachment 7 – Timeline Project Management Plan for detailed project timeline and construction schedule. The Roanoke Valley Broadband Authority will be turn-keying this project and no co-applicant is required; therefore, no Memorandums of Understanding or Memorandums of Agreement are included.

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

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:

Not applicable – the RVBA has not received any VATI grant funding.

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:

See attachment 9 – Funding Sources Table. The RVBA is not requesting matching dollars from other parties at this time aside from DHCD/VATI, so no documentation of funding is included.

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:

The RVBA will substantially discount 10 Gbps back-haul circuits for each project awarded by VATI. This equates to a savings/contribution of \$720,000 over sixty (60) months for a last mile provider to utilize the proposed RVBA middle mile across all five proposed projects. In addition, the RVBA will contribute up to two thousand (2000) man hours at the market rate of \$125.00 per hour across all five proposed projects in support of construction, design, and project management for a contribution of \$250,000 in professional services. When this is taken into consideration, based on RVBA estimates, its contribution towards the project is approximately 53% of all five proposed projects. The RVBA is in a strong position to make significant in-kind contributions to the VATI effort.

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:

1. This project will build a middle mile network to help future last mile service providers. As an Open Access Network owned and operated by the Roanoke Valley Broadband Authority, all marketing efforts will be directed and coordinated through the RVBA. This marketing effort will include the continued upkeep and maintenance for the RVBA website where interested partners can find information about the Open Access Network and who to contact directly for opportunities to tap into the network. The RVBA will also work directly with local media outlets to inform the public on information regarding the Open Access Network. Finally, the RVBA will execute a community engagement plan that will feature RVBA member presentations at various community gathering such as schools, STEM programs, and locality meetings.
2. The RVBA will publish relevant information on its website to ensure residents and businesses in the proposed project area know how to utilize the available broadband in the area. In addition, as part of the community engagement plan mentioned above, the RVBA will provide direct community education at neighborhood associations, libraries, and other community gatherings and through various community partners.

- 16.

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

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:

Mr. Frank Smith

President & CEO

RVBA

Mr. Jim Bandy

Vice President of Operations and Solutions Engineering

RVBA

Proposal Business Operations, Management, and Procurement Compliance

Ms. Tywanii Ross

Business Operations Administrator

RVBA

Financial Accounting Governance and Compliance

Ms. Olivia Dooley

Chief Financial Officer

RVBA

Outside Plant Construction Management

Mr. Barry Stacy

Senior Manager for Project Management

RVBA

Project Onsite Scheduling, Compliance, and Inspection

Mr. Danny Martin

Outside Plant Field Manager

RVBA

Network Installation and Planning

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

Mr. Jim Bandy

Vice President of Operations and Solutions Engineering

RVBA

1. The RVBA has an established history of building, maintaining, and growing its 110 miles plus Open Access Network in the Roanoke Valley. Because of its success in building the network, the RVBA has received several awards including the Governor's Technology Award for Cross-Boundary Collaboration and the national award by the Coalition for Local Internet Choice for Local Champion for community broadband development. For more information on the RVBA, please see Attachment 18 – RVBA General Info Brochure.

The RVBA follows strict professional standards in regard to financial management for daily operations and management. These strict standards apply to any outside funding such as federal grant dollars, and or funds received from the Commonwealth of Virginia including the Virginia Resources Authority (VRA). For the past six (6) years, each annual audit of the RVBA has resulted in a nonqualified audit result which demonstrates excellent financial management by the RVBA team.

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:

See Attachment 12 – Derivation of Costs and Attachment 13 – Documentation of Support Cost Estimates

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:

Cost benefit index information

1. Total VATI funding request: \$241,419
2. Number of serviceable units: We are providing middle mile infrastructure for any service providers to enable last mile service, furthering our open-access network. The numbers of passings is 597, as noted in Attachment 5 – Passings Form.

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

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:

Commonwealth Priorities

- a. The Roanoke Valley Broadband Authority and the County of Roanoke have selected the proposed project area to support the local community with mission critical telecommunications backbone infrastructure and allow for last mile connectivity. The project will provide an essential optical transport backbone and last mile connectivity for citizens in support of universal service to service the community for many years to come. What makes this project even more interesting is that the planned route will be able to extend service to a mission critical community asset known as Explore Park in Roanoke County. This location supports local economic development through destination tourism activities as well as promoting environmental sustainability education and management.
- b. Thanks to the partnership with Roanoke County and the Western Virginia Water Authority some initial work has been completed to serve as the basis for the project.
- c. This project will provide middle mile broadband infrastructure that will help reduce costs for last mile providers to expand last mile service further by reducing capital expenditures. This will, in turn, promote more affordable internet service from last mile partners. It will also enable last mile providers to service networks speeds that meet future demand by providing broadband connection to an open-access network with synchronous speeds up to 10 Gbps and greater.

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

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:

- a. Attachment 17 – RVBA Network Map
- b. Attachment 18 – RVBA General Info Brochure

Attachments:

Map(s) of project area, including proposed infrastructure

Attachment1ProjectAreamap910202125248.pdf

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

Attachment2DocumentationofFederalFundingArea910202125313.pdf

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

Attachment3RDOFAwardedAreasincludedintheVATIApplication910202125338.pdf

Documentation that proposed project area is unserved based on VATI criteria

Attachment4DocumentationUnservedAreaVATICriteria910202125415.pdf

Application to DHCD Submitted through CAMS

Roanoke Valley Broadband Authority

Fiber Optic Transport along Rutrough Road to Explore Park

Passings Form (Use template provided)

Attachment5PassingsForm910202125437.pdf

Timeline/Project Management Plan

Attachment7TimelineProjectManagementPlan910202134545.pdf

Funding Sources Table (Use template provided)

Attachment9FundingSourcesTable910202134620.pdf

Letters of Support

Attachment11LettersofSupport910202134746.pdf

Derivation of Cost/Project Budget (Use template provided)

Attachment12DerivationofCosts910202134820.pdf

Documentation of Supporting Cost Estimates

Attachment13DocumentationofSupportingCostEstimates910202134855.pdf

Two most recent Form 477 submitted to the FCC or equivalent

Attachment14TwomostrecentForm477submittedtotheFCCCorequivalent910202130736.pdf

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

Attachment15PointandPolygonShapefiles910202134934.zip




Optional

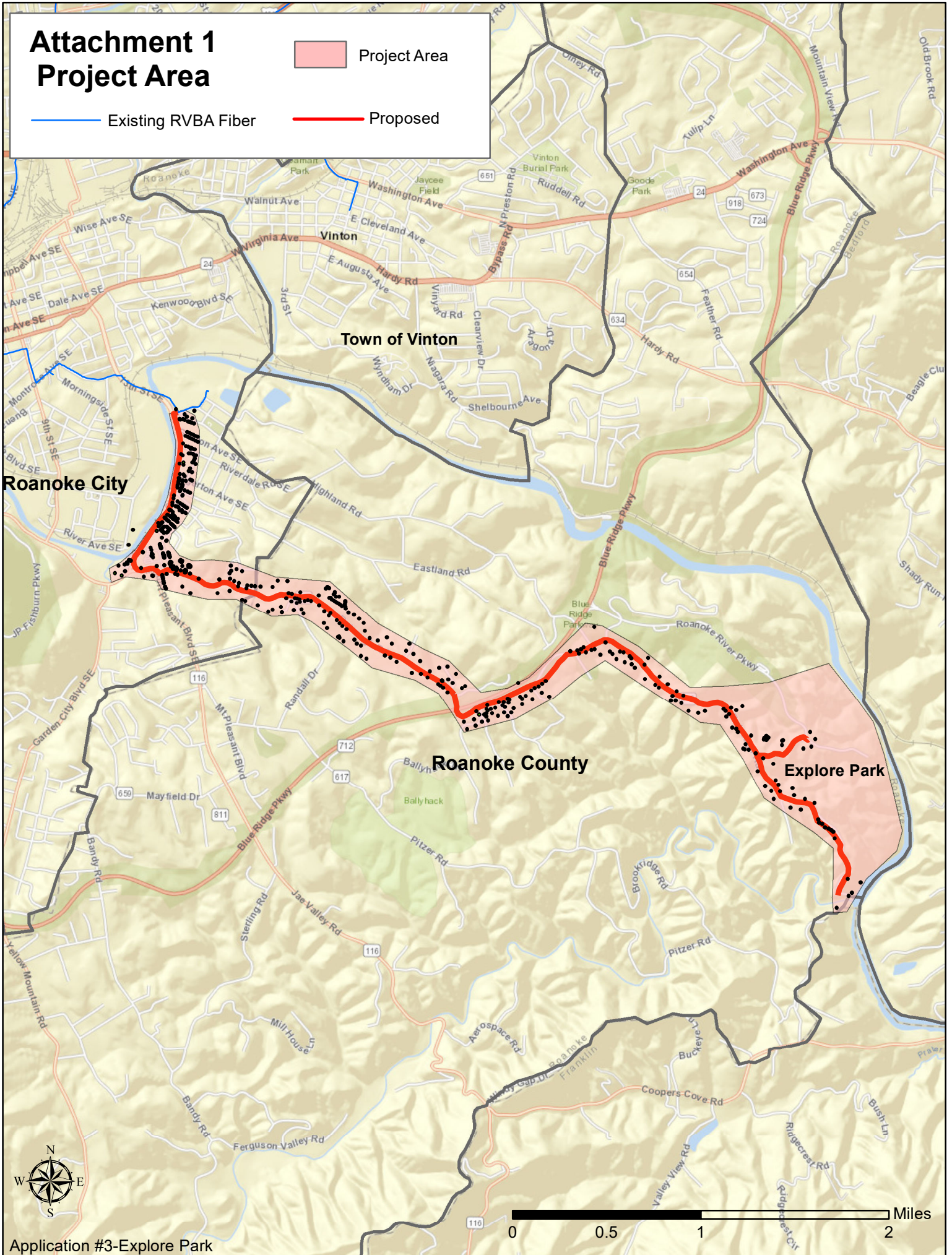
Attachment17RVBANetworkMap910202135015.pdf

Optional

Attachment18RVBAGeneralInfoBrochure910202131915.pdf

Attachment 1 Project Area

-  Project Area
-  Existing RVBA Fiber
-  Proposed

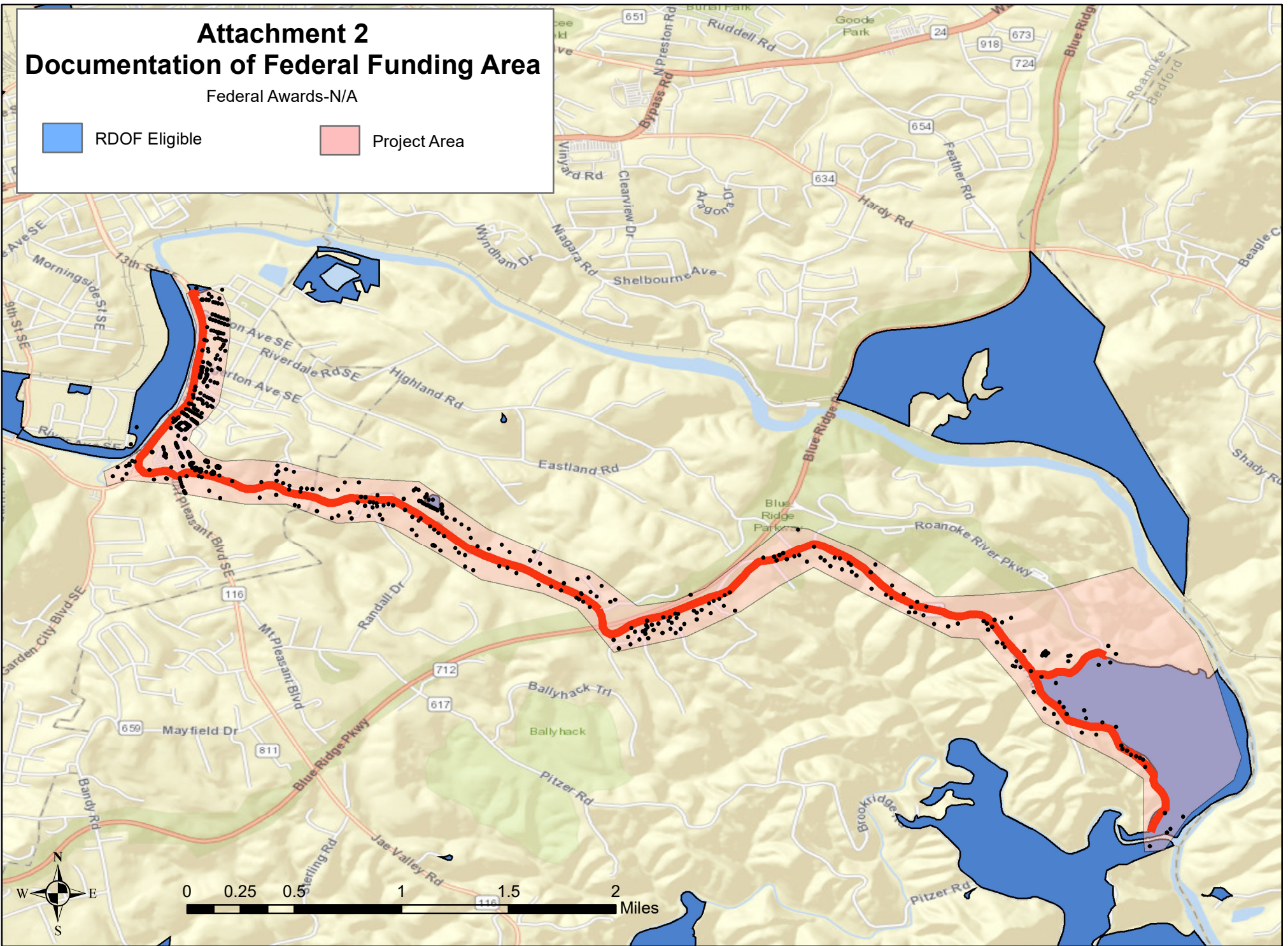


Attachment 2 Documentation of Federal Funding Area

Federal Awards-N/A

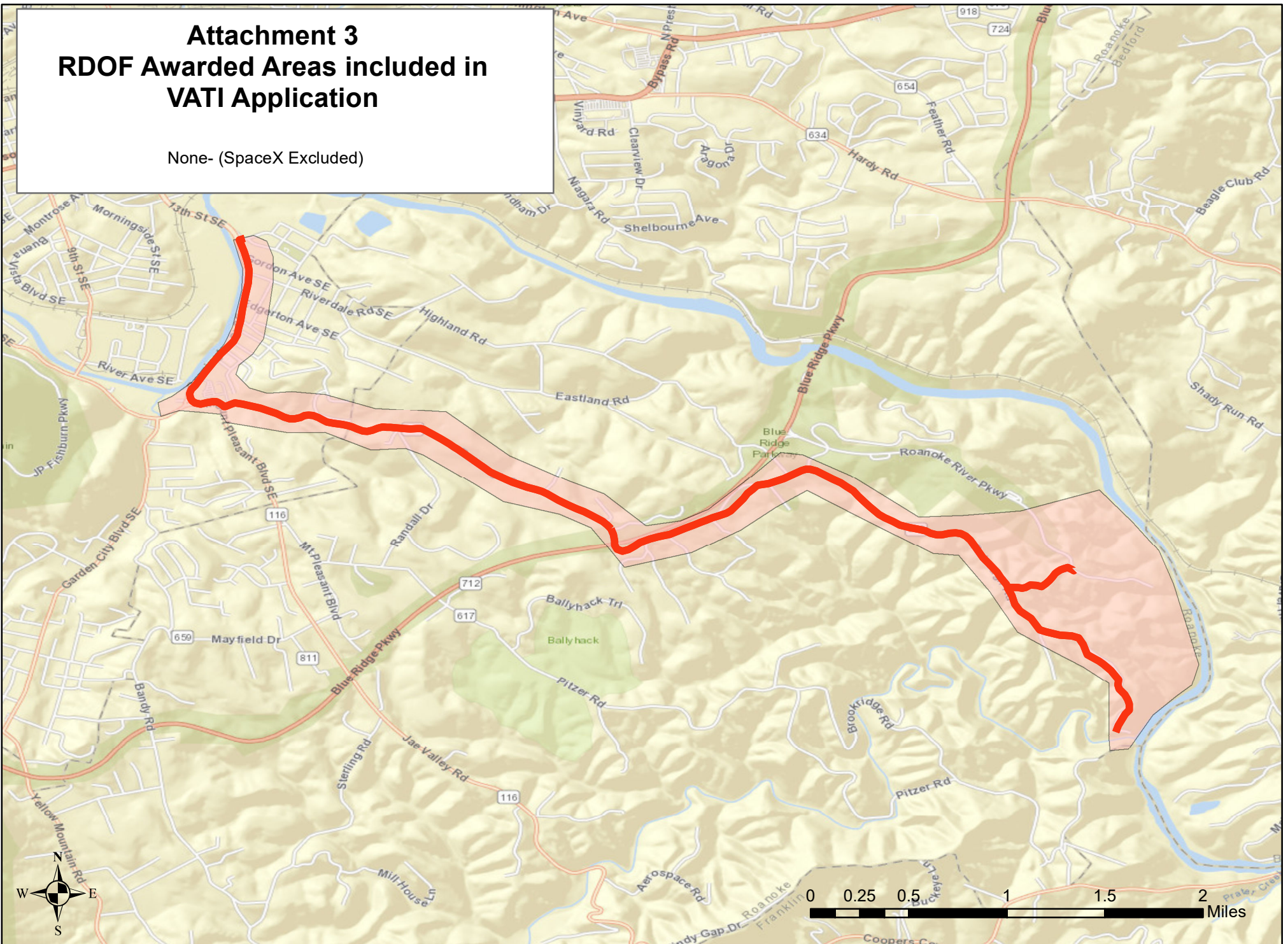
 RDOF Eligible

 Project Area



Attachment 3 RDOF Awarded Areas included in VATI Application

None- (SpaceX Excluded)



2022 Virginia Telecommunication Initiative (VATI) RDOF Passings Form-Explore Park

| Type of Passings | Total Number of Passings in the Project Area that lie within Preliminarily Awarded RDOF Areas ¹ |
|--------------------------------------|--|
| Residential | 0 |
| Businesses (non-home based) | 0 |
| Businesses (home-based) | 0 |
| Community Anchors | 0 |
| Non-residential | 0 |
| Total Number of RDOF Passings | 0 |

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

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.

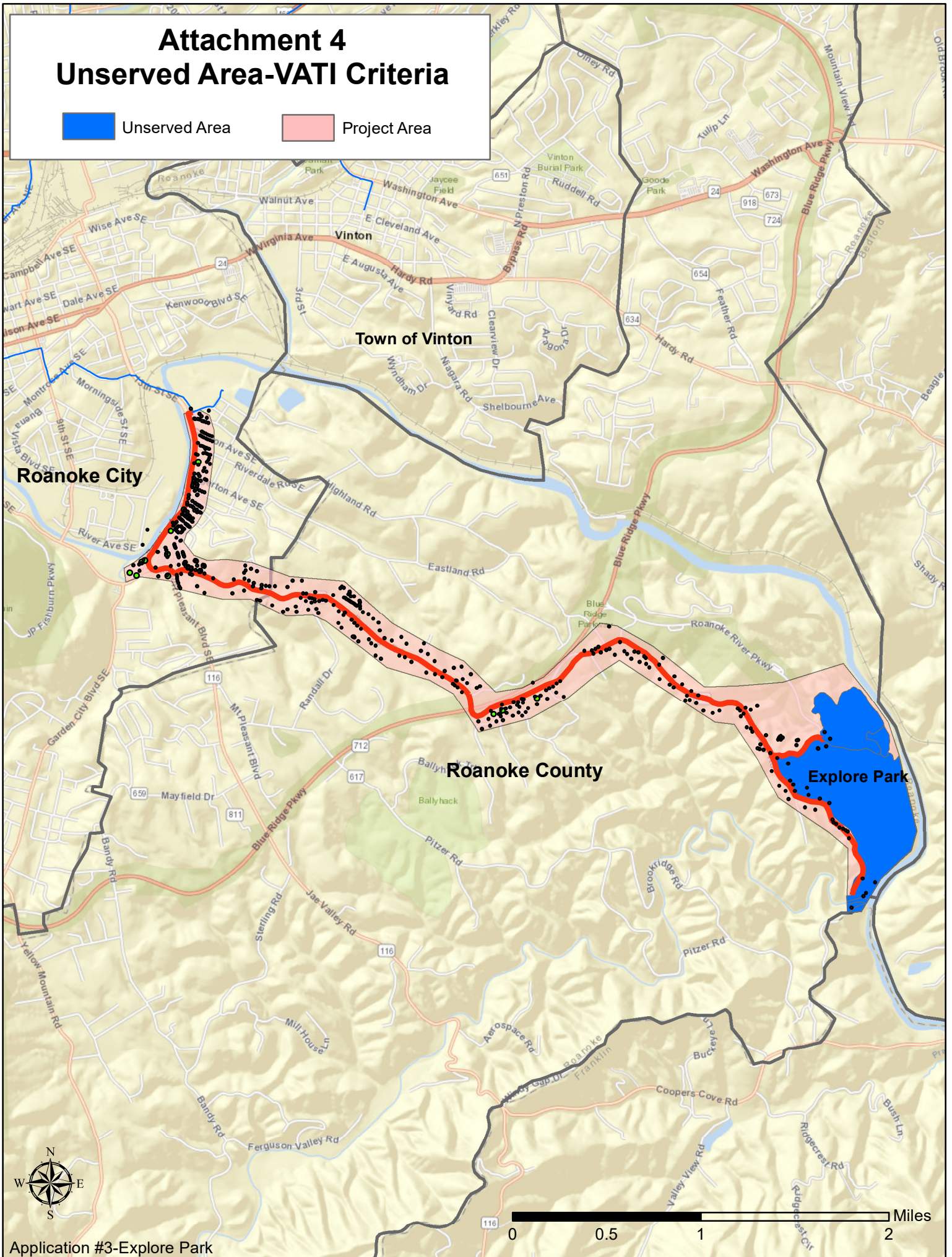
Business – An organization or entity that provides goods or services in order to generate profit. Businesses based in residential homes can count if they are a registered business (BPOL, LLC, etc.).

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.

Attachment 4 Unserviced Area-VATI Criteria

 Unserviced Area  Project Area



2022 Virginia Telecommunication Initiative (VATI) Passing Form-Explore Park

| 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 | 582 | 0 | 0 | 14 |
| Businesses (non-home based) | 11 | 0 | 0 | 1 |
| Businesses (home-based) | 5 | 0 | 0 | 0 |
| Community Anchors | 4 | 0 | 0 | 0 |
| Non-residential | 0 | 0 | 0 | 0 |
| Total | 597 | 0 | 0 | 14 |

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.

Rutrough Rd

Roanoke Valley Broadband

Project Start:

Display Week:

| TASK | ASSIGNED TO | PROGRESS | START | END | Dec 6, 2021 | | | | | | | Dec 13, 2021 | | | | | | | Dec 20, 2021 | | | | | | | Dec 27, 2021 | | | | | | | Jan 3, 2022 | | | | | | | Jan 10, 2022 | | | | | | | Jan 17, 2022 | | | | | | | | | | | | | | | | | | | | |
|---|-------------|----------|----------|----------|-------------|----|---|---|---|---|---|--------------|---|---|---|----|----|----|--------------|----|----|----|----|----|----|--------------|----|----|----|----|----|----|-------------|----|----|----|----|---|---|--------------|---|---|---|---|---|---|--------------|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|
| | | | | | 29 | 30 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | | | | | | |
| | | | | | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S | M | T | W | T | F | S | S |
| Design Documentation and Permits | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pre-Design OSP Planning | | 0% | 12/1/21 | 12/11/21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design and Engineer | | 0% | 12/12/21 | 12/27/21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VDOT Permits | | 0% | 12/28/21 | 2/11/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Traffic Control | | 0% | 12/28/21 | 2/11/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pole Attachment | | 0% | 12/28/21 | 2/26/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bid Process | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Put out for bid and receive responses | | 0% | 12/28/21 | 1/11/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pending Make Ready Completion | | 0% | 12/30/21 | 3/30/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Create Bill of Material | | 0% | 12/12/21 | 12/17/21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Locate order material | | 0% | 12/18/21 | 12/22/21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Receive Material | | 0% | 2/20/22 | 2/24/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction and testing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Complete Construction | | 0% | 3/31/22 | 4/30/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Splice and Test | | 0% | 5/1/22 | 5/5/22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electronics Installation Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Insert new rows ABOVE this one

**ARTICLES OF INCORPORATION
OF THE
ROANOKE VALLEY BROADBAND AUTHORITY**

The Board of Supervisors of Roanoke County, Virginia, the Board of Supervisors of Botetourt County, Virginia, the Council of the City of Roanoke, Virginia, and the Council of the City of Salem, Virginia, have by concurrent resolutions adopted the following Articles of Incorporation of the Roanoke Valley Broadband Authority, pursuant to the Virginia Wireless Services Authorities Act (Chapter 54.1, Title 15.2 of the 1950 Code of Virginia, as amended), (the "Act"). The Authority shall exist for a term of 50 years as a political subdivision.

**ARTICLE I
NAME AND ADDRESS**

The name of the Authority shall be the Roanoke Valley Broadband Authority (the "Authority") and the address of its principal office is c/o Roanoke Valley – Alleghany Regional Commission, 313 Luck Avenue, S.W., Roanoke, VA 24016. The location of the principal office may be changed by the concurrence of three-fourths of the Authority members present at the regular meeting, provided that the clerk of the governing body of each member governmental subdivision has been notified of the contemplated relocation in writing at least thirty (30) days before such meeting.

**ARTICLE II
CREATING JURISDICTIONS**

The names of the incorporating political subdivisions are the County of Botetourt, the County of Roanoke, the City of Roanoke, and the City of Salem.

As the incorporating political subdivisions, hereby acknowledge, covenant, and agree that these Articles of Incorporation shall not be further amended or changed without the express agreement of the governing body of each of the incorporating political subdivisions. None of the following actions shall be taken or permitted to occur by the Board of the Authority without the affirmative vote of a majority of the members from each incorporating political subdivision creating the Authority:

1. The inclusion of additional political subdivisions in the Authority.
2. Additional agreements with political subdivisions other than Authority members, entities, or persons, local universities and colleges, the Town of Vinton, and the Western Virginia Water Authority for the expansion of services or network, or wireless infrastructure.

**ARTICLE III
MEMBERS, TERMS OF OFFICE**

The term of office of the Authority members shall be for four (4) years. Members may serve additional terms as appointed by their governing body. The initial term of office shall be staggered with the initial term being for 2 and 4 years alphabetically by last name.

The Board of the Authority shall consist of five Members. The names and addresses, and terms of office of the initial members of the Board of the Authority ("Authority") are as follows:

| <u>Name and address</u> | <u>Designee</u> | <u>Initial Term</u> |
|--|------------------|---------------------|
| 1. Kevin S. Boggess City Manager's Office 114 North Broad Street Salem, VA 24153 | Salem | 2 years |
| 2. B. Clayton Goodman, III County Administrator's Office 5204 Bernard Drive Roanoke, VA 24018-0798 | Roanoke County | 4 years |
| 3. Kathleen D. Guzi County Administrator's Office 1 West Main Street, Box 1 Fincastle, VA 24090 | Botetourt County | 2 years |
| 4. Michael McEvoy Western Virginia Water Authority 601 S. Jefferson Street, Suite 200 Roanoke, VA 24011 | Citizen | 4 years |
| 5. Christopher P. Morrill City Manager's Office Room 364, Noel C. Taylor Municipal Building 215 Church Avenue, S.W. Roanoke, VA 24011 | Roanoke City | 2 years |

The terms of office of the initial members shall begin on the date of issuance of a certificate of incorporation or charter for the Authority by the State Corporation Commission. The governing body of each participating political subdivision shall appoint one (1) member who may be a member of the governing body. The four (4) members of the Board of the Authority shall recommend to the participating political subdivisions the appointment of the fifth member who shall be a citizen and resident of one of the participating political subdivisions. The governing bodies of each participating political subdivision shall ratify and confirm the appointment of the fifth member. If any of the governing bodies fails to act or are unable to act within 60 days of

the receipt of this recommendation, then the appointment of the fifth member shall be made by the judges of the Circuit Court for the 23rd Judicial District.

Initially, the governing body of the County of Roanoke shall appoint one member to a 4 year term; the governing body of the County of Botetourt shall appoint one member to a 2 year term; the governing body of the City of Roanoke shall appoint one member to a 2 year term; and the governing body of the City of Salem shall appoint one member for a 2 year term. The citizen shall be appointed to a 4 year term. After the initial terms, each member shall be appointed to a four-year term or until a successor is appointed and qualified. The governing body of each political subdivision shall be empowered to remove, at any time, without cause, the member appointed by it and appoint a successor member to fill the unexpired portion of the removed member's term. Vacancies on the Board shall be filled for the unexpired term in the same manner as the appointment of the member vacating the Board was made.

Each member shall be reimbursed by the Authority for the amount of actual expenses in performance of duties as a member of the Authority.

Each member of the Board shall have one equal vote in all matters before the Authority.

ARTICLE IV PURPOSE

The purpose of the Authority is to provide qualifying communication services as authorized by Article 5.1 (§ 56-484.7:1 et seq) of Chapter 15 of Title 56 of the 1950 Code of Virginia, as amended and to provide such other services as provided by law and Chapter 54.1 of Title 15.2 of the 1950 Code of Virginia, as amended. Such services are to be provided to the geographic areas of the County of Roanoke, the County of Botetourt, the City of Roanoke, and the City of Salem to establish local governmental network(s) to meet the communication needs of the participating localities and their subsidiaries and in accordance with the contracts and agreements by and between this Authority and other private or public entities as the Authority may agree in writing upon the terms and conditions established pursuant to such contracts.

ARTICLE V POWERS, GENERAL OPERATIONS

The Authority shall have all the powers granted by Section 15.2-5431.11 of the 1950 Code of Virginia, as amended.

The general business of the Authority, including the issuance of revenue bonds and refunding bonds as permitted by the Act and the expenditure of funds for general expenses, shall be conducted by the majority action of the Board of the Authority, provided such Board may create an executive committee and such other committees as the Board may direct, including project committees. The Authority is vested with the powers of a body corporate, including the power to sue and be sued in its own name, plead and be impleaded, and adopt and use a common seal and alter the same as may be deemed expedient.

**ARTICLE VI
DISSOLUTION**

The Board of the Authority may determine that the purposes for which the Authority was created have been completed, or are impractical or impossible to complete, and that all of the obligations have been paid, or have been assumed by one or more political subdivisions or any Authority created, thereby, or that cash or United States government securities have been deposited for their payment. In such event, it shall adopt and file with each of the governing bodies a resolution declaring such facts. If the governing bodies adopt a resolution, concurring in such declaration and finding that the Authority should be dissolved, they shall file appropriate articles of dissolution with the State Corporation Commission.

**ARTICLE VII
WITHDRAWAL OF LOCALITY**

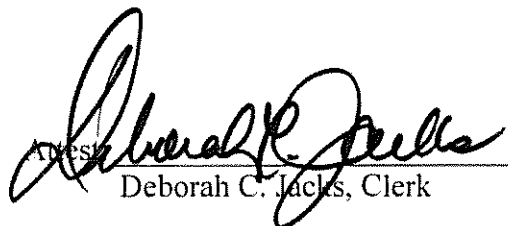
A locality may withdraw from the Authority at any time, provided, that no locality may withdraw from the Authority at any time when bonds are outstanding unless all remaining members approve such withdrawal at such time. Prior to withdrawing, a locality shall provide the Authority and each of the other participating localities with written notice of the locality's intent to withdraw.

In the event that a locality withdraws, such locality electing to withdraw shall execute all documents necessary to reflect such withdrawal, the remaining participating localities shall appoint a replacement member to the Board, and file proper amendments to these Articles with the State Corporation Commission. If any of the governing bodies of the remaining participating localities fails to act or are unable to act to appoint a replacement member within 60 days after the locality electing to withdraw provides notice of withdrawal, then the appointment of the replacement member shall be made by the judges of the Circuit Court for the 23rd Judicial Circuit.

**ARTICLE VIII
AUDIT**

The Authority shall cause an annual audit of its books and records to be made by the State Auditor of Public Accounts or by an independent certified public accountant at the end of each fiscal year and a certified copy thereof to be filed promptly with the governing bodies of each of the incorporating political subdivisions.

IN WITNESS WHEREOF, the Board of Supervisors of Roanoke County, Virginia, the Board of Supervisors of Botetourt County, Virginia, the City Council of the City of Roanoke, Virginia, and the City Council of the City of Salem, Virginia have caused these Articles of Incorporation to be executed in their respective names, and their respective seals have been affixed and attested by the respective clerks of each, this 21ST day of OCTOBER, 2013.

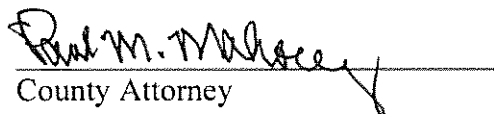

Attest: Deborah C. Jacks, Clerk

COUNTY OF ROANOKE, VIRGINIA

By: Michael W. Altizer
Michael W. Altizer, Chairman
Board of Supervisors

SEAL

Approved as to Form:


Paul M. Mahoney
County Attorney

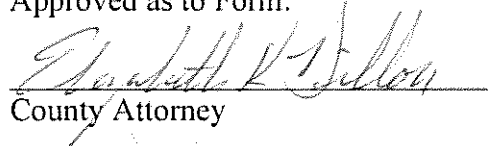
COUNTY OF BOTETOURT, VIRGINIA

Attest: Susan D. Fain
Susan Fain, Clerk

By: Stephen P. Clinton
Stephen P. Clinton, Chairman
Board of Supervisors

SEAL

Approved as to Form:


Elizabeth K. Dillon
County Attorney

CITY OF ROANOKE, VIRGINIA

Attest: Stephanie M. Meon
Stephanie M. Meon, Clerk

By: David A. Bowers
David A. Bowers, Mayor

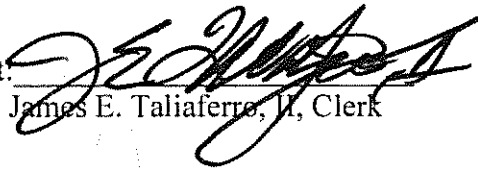
SEAL

Approved as to Form:

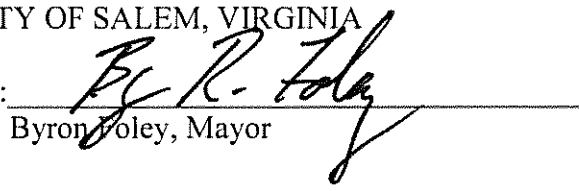

David J. Gallagher
City Attorney

CITY OF SALEM, VIRGINIA

Attest:

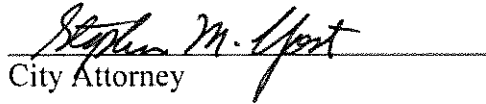

James E. Taliaferro, II, Clerk

By:


Byron Foley, Mayor

SEAL

Approved as to Form:


City Attorney

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 | \$ 241,419 | 67% | Pending |
| RVBA | \$ 68,092 | 19% | SECURED AND IN THE BANK |
| RVBA PROF. SERVICES | \$ 50,000 | 14% | IN-KIND CONTRIBUTION RVBA |
| | \$ | | |
| | \$ | | |
| | \$ | | |
| | \$ | | |
| TOTAL | \$ 359,511 | 100 % | |

Please Note: The RVBA will substantially discount 10 Gbps back-haul circuits for each project awarded by VATI. This equates to a savings/contribution of \$720,000 over sixty (60) months for a last mile provider to utilize the proposed RVBA Middle Mile across all five proposed projects. In addition, the RVBA will contribute up to two thousand (2000) man hours @ the market rate of \$125.00 per hour across all five proposed projects in support of construction, design, and project management for a savings/contribution of \$250,000 in professional services. When this is taken into consideration, based on RVBA estimates its contribution towards the project is around 53% of all five proposed projects. The RVBA is in a strong position to make significant in-kind contributions to the VATI effort.

Attachment Number 10

Fiber Optic Transport along Rutrough Road to explore Park

1. The RVBA will commit to provide at a minimum a 33% contribution towards the cost of each proposed project.



ROANOKE COUNTY

OFFICE OF THE COUNTY ADMINISTRATOR
5204 Bernard Drive, P.O. Box 29800
Roanoke, Virginia 24018-0798

Daniel R. O'Donnell
County Administrator

TEL: (540) 772-2004
FAX: (540) 561-2884

September 1, 2021

Tamarah Holmes, Ph.D
Director
Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, VA 23219

Dear Dr. Holmes:

I am providing this VATI Application Letter of Support for the **Roanoke Valley Broadband Authority** in support of their project application.

Roanoke Valley Broadband Authority in cooperation with the County of Roanoke intends to submit an application for a fiber optic transport and last mile along state route 658 also known as Rutrough Road in Roanoke County to the Explorer Park Area of Roanoke County for the purposes of supporting the local community with mission critical telecommunications backbone infrastructure and last mile connectivity.


The project will provide an essential optical transport backbone and last mile connectivity for citizens in support of Universal Service. This is a true multi-jurisdictional project that will service the community for many years to come.


In addition, the Roanoke Valley Broadband has already received the necessary crossing permits and right of way agreements from the National Park Service's Blue Ridge Parkway division.

Respectfully,

Daniel R. O'Donnell
County Administrator



 111 Franklin Plaza, Suite 333
Roanoke, VA 24011

 540-343-1550

 roanoke.org

September 2, 2021

Tamarah Holmes, Ph.D
Director
Office of Broadband
Department of Housing and Community Development
600 East Main Street, Suite 300
Richmond, Virginia 23219

Dear Dr. Holmes:

I am providing this VATI Application Letter of Support for the Roanoke Valley Broadband Authority to endorse their project applications for our communities.

The Roanoke Valley Broadband Authority in cooperation with the Counties of Botetourt, Roanoke, Craig, Franklin, Town of Boones Mill, Catawba Hospital, Virginia Tech Catawba Sustainability Center, and the Western Virginia Water Authority intends to submit applications for telecommunications infrastructure projects that will support the Roanoke Valley. These projects will provide needed telecommunications capacity and access. At the same time, they will enable critical last mile connectivity for citizens in support of Universal Service. These are truly multi-jurisdictional projects that will serve our communities for many years to come.

Yours truly,


John M Hull, CERP
Executive Director



Roanoke Valley-Alleghany

REGIONAL
commission

rvarc.org

313 Luck Avenue, SW | Roanoke, Virginia 24016 | P: 540.343.4417 | F: 540.343.4416 | rvarc@rvarc.org

September 2, 2021

Tamarah Holmes, Ph.D
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Ste 300
Richmond, VA 23219

Dear Dr. Holmes:

I am providing this Letter of Support for a **Roanoke Valley Broadband Authority VATI** application.

Roanoke Valley Broadband Authority in cooperation with the County of Roanoke intends to apply for a fiber optic transport and last mile project along State Route 658 (Rutrough Road) to the Explore Park in Roanoke County for the purposes of supporting the local community with mission critical telecommunications backbone infrastructure and last mile connectivity. Explore Park is in an unserved area and reliable broadband is critical for the success and development of the facility. In addition, we understand that the Roanoke Valley Broadband Authority has already received the necessary crossing permits and right-of-way agreements from the National Park Service.

We believe this project is in our regional interest to provide improved regional connectivity, while promoting universal coverage and affordable and reliable broadband.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeremy Holmes", is written over a light blue horizontal line.

Jeremy Holmes
Executive Director



ROANOKE REGIONAL
CHAMBER

September 2, 2021

Tamarah Holmes, PhD
Director
Office of Broadband
Department of Housing and Community
Development
600 East Main Street, Ste 300
Richmond, VA 23219

Dear Dr. Holmes:

On behalf of the Roanoke Regional Chamber, I write to you to support the Roanoke Valley Broadband Authority's efforts to expand broadband access in our region.

The pandemic has demonstrated a stark reality for those of our friends, family, and neighbors who don't have reliable internet access. Simply put, those without internet access are being left behind in their careers and in the classroom.

The expansion of broadband is a great recruiting tool to bring businesses and talent to regions where remote working may have never been possible – until now. As more employers convert their workplaces to the virtual space, opportunities will arise for less-populous communities to attract and retain talent. This would not be likely for regions lacking in broadband access.

VATI grants will expedite the rate at which our region is able to offer this vital service to our residents, businesses, and those who might consider relocating to our area. The Chamber stands in support of broadband projects being proposed in our region to secure a more prosperous and successful future for our children, employees, and businesses.

Thank you for your consideration of this application. If you have any questions, I can be reached at 540.682.2101 or JWaugh@RoanokeChamber.org.

Sincerely,

Joyce Waugh
President & CEO

CDBG Derivation of Cost

| Product | Total | VATI | Non-VATI | Source of Estimate | Date |
|---|------------|------------|----------|-------------------------------------|---------------|
| Construction | \$ 169,893 | \$ 169,893 | \$ - | Roanoke Valley Broadband | 9/1/21 |
| Engineering | \$ 13,635 | \$ 13,635 | \$ - | Roanoke Valley Broadband | 9/1/21 |
| Permits, railroad crossing, pole attachment, bonding. | \$ 2,100 | \$ 2,100 | \$ - | Roanoke Valley Broadband | 9/1/21 |
| Outside Plant Material | \$ 118,883 | \$ 118,883 | \$ - | Roanoke Valley Broadband | 9/1/21 |
| Private Easements | \$ - | \$ - | \$ - | Roanoke Valley Broadband | 9/1/21 |
| Initial Electronics | \$ 4,999 | \$ 4,999 | \$ - | Roanoke Valley Broadband | 9/1/21 |

| Item # | Description Construction | Type | plus | Total | Total Cost |
|-------------------------------|--|------|------------|-------|--------------------------------|
| 1 | 18/14mm MicroDuct Installation (Plowing), complete, in place | LF | 5.61 | | \$ - |
| 2 | 18/14mm MicroDuct Installation (Boring), complete, in place | LF | 17.00 | | \$ - |
| 3 | 18/14mm MicroDuct Installation (Boring Rock), complete, in place | LF | 26.70 | | \$ - |
| 4 | 18/14mm MicroDuct Installation (Trenching), complete, in place | LF | 12.50 | | \$ - |
| 5 | 18/14mm MicroDuct Installation (Trenching Rock), complete, in place | LF | 20.41 | | \$ - |
| 6 | Two (2) 1.5-inch Conduits Installation (Plowing), complete, in place | LF | 6.86 | | \$ - |
| 7 | Two (2) 1.5-inch Conduits Installation (Boring), complete, in place | LF | 17.95 | | \$ - |
| 8 | Two (2) 1.5-inch Conduits Installation (Boring Rock), complete, in place | LF | 30.45 | | \$ - |
| 9 | Two (2) 1.5-inch Conduits Installation (Trenching), complete, in place | LF | 9.16 | 45 | \$ 412.31 |
| 10 | Two (2) 1.5-inch Conduits Installation (Trenching Rock), complete, in place | LF | 21.66 | | \$ - |
| 11 | 18/14mm MicroDuct Flex Installation, complete, in place | LF | 22.86 | | \$ - |
| 12 | Bridge Attachment (4-inch Conduit w/18/14mm MicroDuct) Installation, complete, in place | LF | 112.50 | | \$ - |
| 13 | Install Riser | EA | 40.00 | 3 | \$ 120.00 |
| 14 | Aerial Construction (Including Strand, Fiber Optic Cable, 18/14mm MicroDuct, and all Hardware), complete, in place | LF | 6.20 | | \$ - |
| 15 | Aerial Construction (Including Strand, Fiber Optic Cable, and all Hardware), complete, in place | LF | 3.13 | 26083 | \$ 81,509.38 |
| 16 | Fiber storage Snow Shoe (\$40 materials, \$80 labor) | EA | 150.00 | 22 | \$ 3,300.00 |
| 17 | 30" x 48" x 24" HandHole Installation, complete, in place | LF | 900.00 | 1 | \$ 900.00 |
| 18 | "Jetting In" Fiber Optic Cable, including fiber optic cable, complete, in place | LF | 2.39 | 12186 | \$ 29,094.08 |
| 19 | Pulling Cable into Conduit, including fiber cable, complete, in place | LF | 1.75 | | \$ - |
| 20 | Fiber Optic Splice Closure (144 Ct), complete, in place including splice | EA | 7,477.50 | 3 | \$ 22,432.50 |
| 21 | Traffic Control | EA | 2,250.00 | 3 | \$ 6,750.00 |
| 22 | Traffic Control w/ TMA | EA | 2,000.00 | | \$ - |
| 23 | Traffic Control Design | EA | 11,250.00 | | \$ - |
| 24 | Asphalt Repair per cut | EA | 750.00 | | \$ - |
| 25 | Remove and Repair Asphalt | SF | 48.13 | | \$ - |
| 26 | Remove and Repair Concrete | SF | 48.13 | | \$ - |
| 27 | Building Core Drill and Material | EA | 250.00 | | \$ - |
| 28 | Place Anchors and guy | EA | 162.50 | 75 | \$ 12,187.50 |
| 29 | Place overhead Anchor and guy | EA | 225.00 | 10 | \$ 2,250.00 |
| 30 | Tree Trimming | PF | 1.88 | 500 | \$ 937.50 |
| 31 | Misc minor and make ready | EA | 5,000.00 | 2 | \$ 10,000.00 |
| | | | | | Sub Total \$ 169,893.26 |
| Engineering and Design | | | | | |
| 32 | OSP Design Engineering including permit Submission | EA | 13,260.00 | 1 | \$ 13,260.00 |
| 33 | Construction Inspection per day | EA | 125.00 | 3 | \$ 375.00 |
| | | | | | Sub Total \$ 13,635.00 |
| Permit/Permission Fees | | | | | |
| 34 | Railroad Crossing Fees per instances | EA | 0.00 | | \$ - |
| 35 | Pole Attachment Engineering Fees | EA | 1,000.00 | 1 | \$ 1,000.00 |
| 36 | Pole Attachment Make Ready Per Project | EA | 800.00 | 1 | \$ 800.00 |
| 37 | VDOT ROW Permint | EA | 50.00 | 1 | \$ 50.00 |
| 38 | City/County ROW | EA | 50.00 | | \$ - |
| 39 | Bonding | EA | 250.00 | 1 | \$ 250.00 |
| | | | | | Sub Total \$ 2,100.00 |
| 40 | Private Easements | EA | 1,250.00 | | \$ - |
| | | | | | Sub Total \$ - |
| OSP Materials | | | | | |
| 41 | 4-way microduct | LF | 1.75 | | \$ - |
| 42 | 1.5-inch conduit | LF | 1.25 | 45 | \$ 56.25 |
| 43 | 8 count fiber | LF | 0.00 | | \$ - |
| 44 | 12 count fiber | LF | 0.38 | | \$ - |
| 45 | 24 count fiber | LF | 0.29 | | \$ - |
| 46 | 144 count fiber | LF | 1.48 | | \$ - |
| 47 | 288 count micro fiber | LF | 2.42 | 45941 | \$ 111,177.22 |
| 48 | splicing including material | EA | 3,750.00 | | \$ - |
| 49 | Vault | EA | 468.75 | 1 | \$ 468.75 |
| 50 | Small Pull Box Quazite | EA | 152.00 | | \$ - |
| 51 | Tracer wire | LF | 125.00 | | \$ - |
| 52 | strand/guy wire and material | If | 0.28 | 21205 | \$ 5,831.38 |
| 53 | Splice box 144 | EA | 450.00 | 3 | \$ 1,350.00 |
| 54 | parallel conduit | LF | 0.59 | | \$ - |
| | | | | | Sub Total \$ 118,883.60 |
| Electronics related | | | | | |
| 55 | Ciena 3900 10 Kilometer 1310 SFP | EA | 167.05 | 2 | \$ 334.10 |
| 56 | Ciena 3900 80 Kilometer 1550 SFP | EA | 544.11 | | \$ - |
| 57 | Ciena 6500 GE LX 10 Kilometer SFP | EA | 370.59 | 2 | \$ 741.18 |
| 58 | Ciena 6500 1000 Base-T Electrical 0/+ 70C SFP | EA | 247.25 | | \$ - |
| 59 | Ciena 6500 Transceiver 10/100/1000 Base SFP | EA | 211.88 | | \$ - |
| 60 | Ciena 3900 100M/1GIG, 10 Kilometer SM SFP | EA | 167.05 | | \$ - |
| 61 | Ciena 6500 Transceiver , GE ZX, 1550 10/+85C SFP | EA | 989.36 | | \$ - |
| 62 | Ciena Multi-Rate, Full C-Band Tuneable 50 GHZ XFP | EA | 5,494.50 | | \$ - |
| 63 | Ciena 5160 Rack Mount Power supplies and warrenty | EA | 13,175.00 | | \$ - |
| 64 | Ciena 3904 with Brackets | EA | 1,305.31 | | \$ - |
| 65 | Ciena 3942 with Brackets | EA | 5,250.00 | | \$ - |
| 66 | Ciena 3930 with Brackets | EA | 3,923.70 | 1 | \$ 3,923.70 |
| 67 | Rackmount UPS | EA | 736.00 | | \$ - |
| 68 | Hut colo placement | EA | 125,000.00 | 0 | \$ - |
| | | | | | Sub Total \$ 4,998.98 |
| 69 | Configuration | | | | |
| | | | | | Total \$ 309,510.83 |

Attachment 14-Two most recent Form 477 files submitted to the FCC

Form 477 Filing Summary

FRN:
0025284910

Data as of:
Jun 30, 2021

Operations:
Non-ILEC

Submission Status:
Original - Submitted

Last Updated:

Filer Identification

| Section | Field | Response |
|--|-----------------------------------|------------------------------------|
| Filer Information | Company Name | Roanoke Valley Broadband Authority |
| | Holding Company Name | Roanoke Valley Broadband Authority |
| | Filing Type | Non-ILEC |
| | SAC ID | N/A |
| | 499 ID | N/A |
| Data Contact Information | Data Contact Name | Matt Miller |
| | Data Contact Phone Number | (540) 343-4417 |
| | Data Contact E-mail | mmiller@rvarc.org |
| Emergency Operations Contact Information | Emergency Operations Name | Frank Smith |
| | Emergency Operations Phone Number | (540) 904-4739 |
| | Emergency Operations E-mail | fsmith@highspeedroanoke.net |
| Certifying Official Contact Information | Certifying Official Name | Frank Smith |
| | Certifying Official Phone Number | (540) 904-4739 |
| | Certifying Official E-mail | fsmith@highspeedroanoke.net |

Data Submitted

| Form Section | File Name | Date & Time | Number of Rows |
|------------------------------|--------------------------------|-----------------------|----------------|
| Fixed Broadband Deployment | 477_blocks_deployed.csv | Aug 11, 2021 02:33 PM | 675 |
| Fixed Broadband Subscription | 477_rvba_tract_subscribers.csv | Aug 11, 2021 02:34 PM | 22 |

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

| State | DBA Name | Technology | Blocks |
|--------------|------------------------------------|---------------------------------------|------------|
| Virginia | Roanoke Valley Broadband Authority | Optical Carrier/Fiber to the End User | 675 |
| Total | | | 675 |

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 | 22 | 0 | 46 | 46 |
| Total | | 22 | 0 | 46 | 46 |

Fixed Broadband Subscriptions by Bandwidths and End User Type

| Downstream Bandwidth (in Mbps) | Upstream Bandwidth (in Mbps) | Consumer | Business/Govt. | Total |
|--------------------------------|------------------------------|----------|----------------|-----------|
| 1,000.000 | 1,000.000 | 0 | 46 | 46 |
| Total | | 0 | 46 | 46 |

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 | 1,000.000 | 1,000.000 | 0 | 46 | 46 |
| Total | | | 0 | 46 | 46 |

Form 477 Filing Summary

FRN:
0025284910

Data as of:
Dec 31, 2020

Operations:
Non-ILEC

Submission Status:
Original - Submitted

Last Updated:

Filer Identification

| Section | Field | Response |
|--|-----------------------------------|------------------------------------|
| Filer Information | Company Name | Roanoke Valley Broadband Authority |
| | Holding Company Name | Roanoke Valley Broadband Authority |
| | Filing Type | Non-ILEC |
| | SAC ID | N/A |
| | 499 ID | N/A |
| Data Contact Information | Data Contact Name | Olivia Dooley |
| | Data Contact Phone Number | (540) 904-4739 |
| | Data Contact E-mail | odooley@highspeedroanoke.net |
| Emergency Operations Contact Information | Emergency Operations Name | Frank M Smith II |
| | Emergency Operations Phone Number | (540) 904-4739 |
| | Emergency Operations E-mail | fsmith@highspeedroanoke.net |
| Certifying Official Contact Information | Certifying Official Name | Frank M Smith II |
| | Certifying Official Phone Number | (540) 904-4739 |
| | Certifying Official E-mail | fsmith@highspeedroanoke.net |

Data Submitted

| Form Section | File Name | Date & Time | Number of Rows |
|------------------------------|--------------------------------|----------------------|----------------|
| Fixed Broadband Deployment | 477_blocks deployed.csv | Mar 5, 2021 08:17 AM | 675 |
| Fixed Broadband Subscription | 477_rvba tract subscribers.csv | Mar 5, 2021 08:27 AM | 22 |

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

| State | DBA Name | Technology | Blocks |
|--------------|------------------------------------|---------------------------------------|------------|
| Virginia | Roanoke Valley Broadband Authority | Optical Carrier/Fiber to the End User | 675 |
| Total | | | 675 |

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 | 22 | 0 | 44 | 44 |
| Total | | 22 | 0 | 44 | 44 |




Fixed Broadband Subscriptions by Bandwidths and End User Type

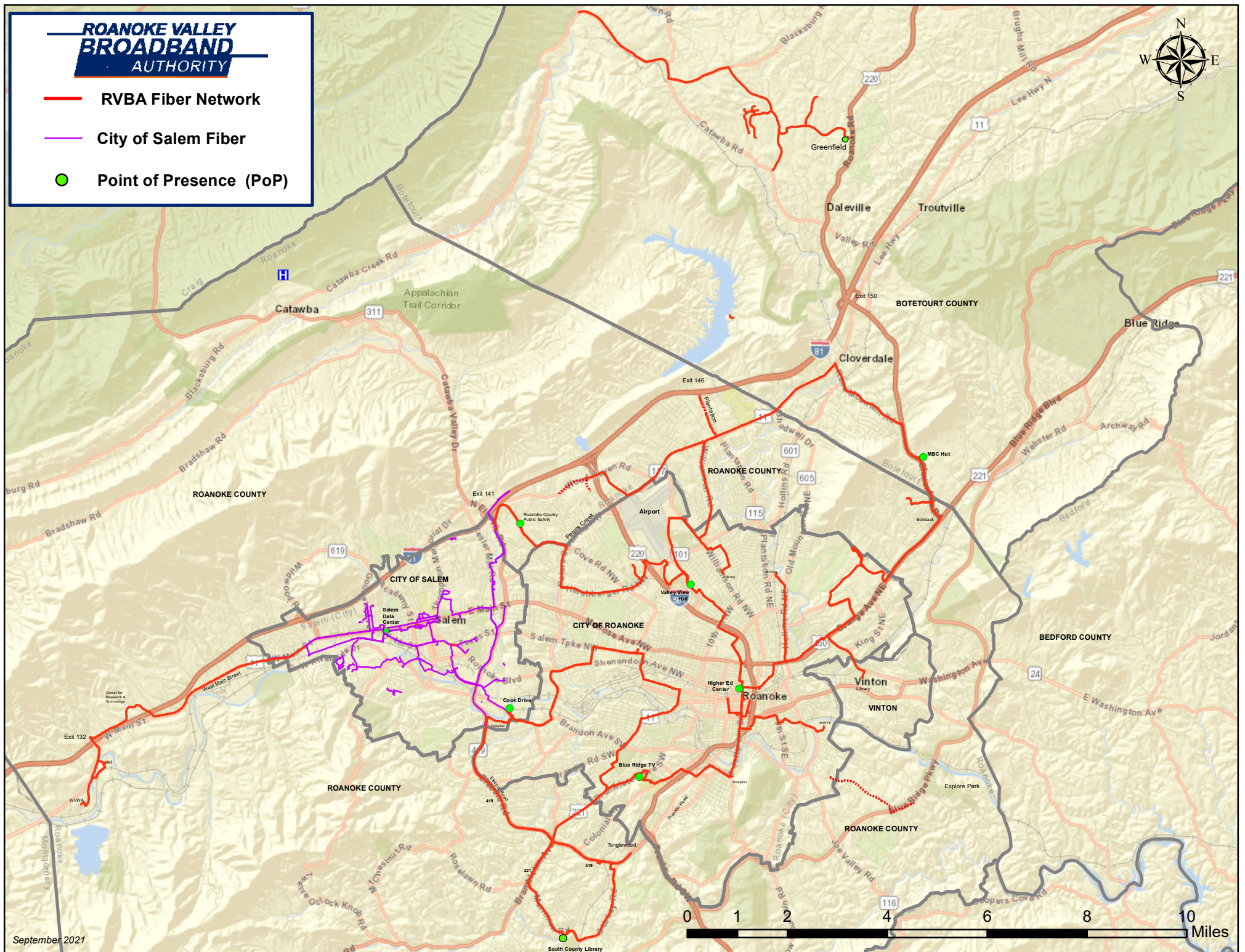
| Downstream Bandwidth (in Mbps) | Upstream Bandwidth (in Mbps) | Consumer | Business/Govt. | Total |
|--------------------------------|------------------------------|----------|----------------|-----------|
| 1,000.000 | 1,000.000 | 0 | 44 | 44 |
| Total | | 0 | 44 | 44 |

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 | 1,000.000 | 1,000.000 | 0 | 44 | 44 |
| Total | | | 0 | 44 | 44 |

**ROANOKE VALLEY
BROADBAND
AUTHORITY**

-  RVBA Fiber Network
-  City of Salem Fiber
-  Point of Presence (PoP)



RVBA HISTORY

In 2011, at the urging of local business leaders concerned with the region's competitive stance in a digital age, a benchmark study determined the region was falling behind and needed better internet service options. A working group was formed and recommended founding the Roanoke Valley Broadband Authority under the Virginia Wireless Service Authorities Act. In 2014, the RVBA was formed, officially solidifying the partnership between four local municipalities: the City of Salem, the City of Roanoke, Roanoke County, and Botetourt County. The RVBA began construction on the 47 mile network in August 2015 and began serving its first customer, Blue Ridge PBS, in April 2016.

OPEN-ACCESS BROADBAND

The RVBA developed a world-class, carrier grade fiber optic network stretched across the four partnering municipalities, delivering mission-critical connectivity to the Roanoke Valley's:

- Business Enterprises
- Healthcare Providers
- Last Mile Providers
- Government Offices
- Education Institutions
- Multi-Tenant Residential Properties

Using an open-access model, the network supports new business attraction by providing a shared regional 'backbone' infrastructure. By lowering barriers-to-entry / expansion for new and existing internet service providers, the RVBA has helped increase local coverage, enabled competition, and improved service options across the Roanoke Valley. The RVBA fosters a competitive service environment that encourages higher quality service options at lower prices. Best of all, as a political subdivision of the Commonwealth of Virginia, the RVBA cannot by law record a profit instead all service fees must be reinvested in building, maintaining and operating the network. This ensures the RVBA's goals are uniquely aligned to community needs. The RVBA network offers enterprise grade:

SPEED

- Reliable and symmetrical high-speed enterprise services
- Internet, data transport, dark fiber services
- Carrier-grade infrastructure
- Speeds scalable up to 400 Gbps
- A guaranteed up-time of 99.999%
- Two local colocation facilities with rentals and turnkey support packages

RELIABILITY

- Fully customizable Service Level Agreements (SLAs)
- Automatic re-routing, 'self-healing' network
- Responsive service that meets or exceeds industry Mean Time to Repair and Mean Time to Restore standards (MTTRs)
- 24/7/365 proactive network monitoring by highly trained staff in a U.S. based network operations center

SECURITY

- Private (non-shared) communication paths
- A secure network built with JITC (defense-grade), Information Assurance (IA) and Information Security (InfoSEC) tested equipment
- Quality of Service (QoS) superiority with carrier-grade restoration, resiliency, and path diversity

**COMMUNITY PARTNERS
AND EARLY ADOPTERS**

- Virginia Western Community College
- RBTC / RAMP
- Feeding America SWVA
- Boxley Building / ABS
- Western Virginia Water Authority
- Salem “Bodyshop” Multi-Unit Development
- Roanoke City
- Roanoke County
- City of Salem
- Botetourt County
- RVARC
- Eldor Corporation
- GE/Meridium
- RDG Filings
- Blue Ridge PBS

*Partial list

SERVICE TYPE DESCRIPTIONS

Dark Fiber

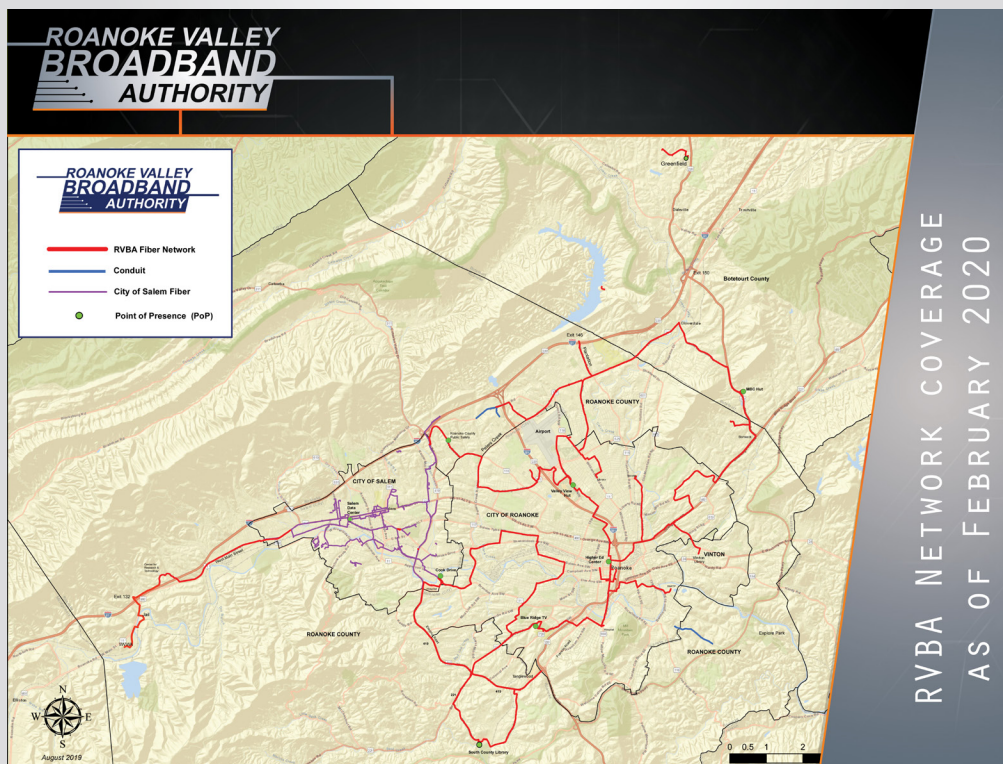
Fiber optic cable is composed of super thin glass cables that are capable of transmitting data as bursts of light. When a company leases a dark fiber strand, it has access to the fiber optic strand and conduit infrastructure, but not the equipment required to light the fiber and transmit data. This allows a company complete flexibility to procure and leverage whatever equipment is necessary to meet their individual transport needs.

Transport

Transport Service without Internet is useful for internal data transfer, load balancing and mirroring. If you are running a data center or need to move data efficiently between locations, then fiber optic Transport Service without Internet is often the best available solution.

Internet

Transport Service + Internet allows your business, organization or agency to become its own last mile internet service provider or even sell service to larger external groups. The Roanoke Valley Broadband Authority’s open-access network offers fully scalable connectivity options for plugging into the fastest, most secure, and most reliable network in the region.



LEGISLATIVE EFFORTS

In 2016, the RVBA convened a consortium of municipal broadband networks and their supporters across the Commonwealth under the name of The Friends of Municipal Broadband. This group evaluates legislation and takes a position where needed to advocate for all the ways municipal broadband authorities can help close the digital divide.

In 2017, this group was successful in their opposition to HB2108 introduced in the General Assembly of Virginia which would have severely limited broadband authorities operational efficacy across the Commonwealth of Virginia.

In 2019 and 2020, this group worked to remove the term non-government from multiple funding channels and to create a seat on the broadband advisory council dedicated to a representative from the municipal broadband community.

In 2021, FOMB successfully advocated for an expansion of the electric co-op pilot program, allowing for municipal broadband providers to partner directly with organizations like AEP and Dominion Energy. Additionally, FOMB introduced a budget amendment that opened up the VATI grant program to direct applications from municipal broadband authorities.

SAFETY FIRST

Frank Smith is Vice Chairman of the VA811 Board of Directors. The RVBA is committed to maintaining and advancing superior safety standards for utility providers and the public they serve.

KEY EVENTS

January 2014

RVBA is formed with Board members from the four local municipalities and one citizen representative.

August 2015

Construction begins on the the 47 mile fiber network.

April 2016

The RVBA celebrates Phase 1 completion with a ceremony at the offices of its first customer, Blue Ridge PBS.

September 2016

The RVBA receives the prestigious COVITS Governor's Technology Award for excellence in Cross Boundary Collaboration.

January 2017

RVBA gathers with municipal broadband providers across Virginia as the Friends of Municipal Broadband to speak out against HB2108.

August 2017

The RVBA attracts the networks first residential ISP, ABS, to serve residents of the historic Boxley Building in downtown Roanoke, VA.

September 2017

RVBA completes Phase 2 of construction, a 25 mile expansion of the network in Roanoke County.

November 2017

The RVBA connects its first customer in Roanoke County, VA.

February 2018

The RVBA connects its first customer in Botetourt County, VA.

January 2019

The RVBA connects its first rural residential wireless ISP in Roanoke County, VA.

February 2020

RVBA announces plans to partner with private sector providers to provide Fiber to the Home.

November 2020

RVBA adds two additional citizen representatives to the Board of Directors to help ensure the organization can continue to stay close to evolving citizen needs.

[LEARN MORE AT RVBA.ONLINE](http://WWW.RVBA.ONLINE)

ROANOKE VALLEY BROADBAND AUTHORITY

OPPORTUNITY UPGRADE

THE ROANOKE VALLEY BROADBAND AUTHORITY (RVBA) PROVIDES OPEN-ACCESS INTERNET INFRASTRUCTURE THAT REDUCES BARRIERS TO ENTRY FOR NEW SERVICE PROVIDERS, DELIVERS MORE HIGH-SPEED ENTERPRISE SERVICE OPTIONS FOR GOVERNMENT, EDUCATION AND BUSINESS CUSTOMERS, AND DRIVES ECONOMIC COMPETITIVENESS TO HELP SECURE HIGH-PAYING JOBS AND DELIVER A HIGH QUALITY OF LIFE TO CITIZENS ACROSS THE REGION. NOW, THAT'S AN OPPORTUNITY UPGRADE.



LEARN MORE AT RVBA.ONLINE