#### **Greene County**

Greene County Rural Broadband Initiative

Application ID:	75708142020124019
Application Status:	In Progress - DHCD
Program Name:	Virginia Telecommunications Initiative 2021
Organization Name:	Greene County
Organization Address:	
Profile Manager Name:	Patti Vogt
Profile Manager Phone:	(434) 985-5207
Profile Manager Email:	pmvogt@gcva.us
Project Name:	Greene County Rural Broadband Initiative
Project Contact Name:	Jim Frydl
Project Contact Phone:	(434) 985-5282
Project Contact Email:	jfrydl@gcva.us
Project Location:	PO Box 358 Stanardsville, VA 22973-0358
Project Service Area:	Greene County

Total Requested Amount:\$792,870.00Required Annual Audit Status:No Current Audits Found

#### Greene County

Dudget Information.

Greene County Rural Broadband Initiative

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	\$792,870.00	\$342,130.00	\$1,135,000.00
Other: Electronics	\$101,291.76	\$43,708.24	\$145,000.00
Other: Fiber	\$691,578.24	\$298,421.76	\$990,000.00
Total:	\$792,870.00	\$342,130.00	\$1,135,000.00

Budget Narrative:

#### **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 Greene County Broadband Committee conducted a survey to determine actual internet coverage within the county. The results identified areas that were both unserved and underserved. There were 1336 survey responses, 954 residences, and 219 businesses. The survey response map is included in Attachment 14 - Download Speed Survey Map. The responses represented 19% of occupied households. Greene County worked with our partner, CenturyLink to determine a project area that would provide broadband coverage for areas that were identified by the survey as having no service or only options that provided <3 Mbps. In preparation for this application, the Broadband Committee worked with the Greene Acres HOA and the County Line HOA in Advance Mills to conduct follow up surveys. Greene Acres has the highest concentration of passings within the proposed project areas. 8% of the residents responded and all of the respondents had download speeds less than 3 Mb/s. 27% of the County Line residents responded and only one had access to speeds greater than 10 Mb/s, the rest of the respondents had 3 Mb/s or less. Over half of the responses were sent by US Postal Service because the internet coverage is too unreliable for downloading the survey. This project provides for the placement of four (4) FTTP/GPON switches, five (5) Fiber Distribution Hubs, 320 Fiber Distribution Pedestals and approximately 24 miles of fiber cable in Greene County to bring fiber-based broadband services to 598 residents and 63 businesses. Customers will be able to get Fiber Gigabit, with industry standard speeds up to 940Mb/s, while uploading or downloading data in the Shady Grove, Amicus, Advanced Mills Road, and Greene Lake Road areas of our County where approximately 17% of them have no broadband service (even at 1.5 Mbps) at all today and 84% have no access to speeds greater than 10Mb/s and only less than 1% have access to speeds greater than 25Mb/s.

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).

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#### Answer:

The Greene County Broadband Committee conducted a survey to determine actual internet coverage within the county. The results identified areas that were both unserved and underserved. There were 1336 survey responses, 954 residences, and 219 businesses. The survey response map is included in Attachment 14 – Download Speed Survey Map. The responses represented 19% of occupied households. In addition, the Greene County Planning Director checked with other providers regarding their services and referred to the state broadband map. The Planning Director contacted Alex Phillips, CEO, of Rural Broadband Network Services, LLC and Jonathan Dowler, Director of Sales and Marketing for VA Broadband since their companies were shown as providing service in the proposed project area. Each provider reported that they do not provide service in the project area that meets the VATI broadband criteria and would not contest any application.

More to the point, the need for this project is highlighted by the fact that highspeed access is not available by any provider. 99% of the area does not have access to 25Mb/s and 84% of the area is served with speeds of 3Mb/s or less.

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, and Community Connect. If there have been federal funds awarded near the project, provide a map verifying the proposed project area does not conflict with these areas. Describe if there are Rural Digital Opportunity Fund (RDOF) eligible census blocks located in the proposed project area. Label Map: Attachment 2 – Documentation on Federal Funding Area.

#### Answer:

It is Confirmed that no company accepted CAFII auction (see USDA Map in Attachment – 2), ACAM, (see USDA Map in Attachment – 2), or Community Connect funding for these areas. CenturyLink is the ILEC for this area and no funding was awarded to deploy broadband for this area under the CAFII program. There are RDOF eligible census blocks within the proposed project area (see Attachment – 2).

The ReConnect map in Attachment -2 shows that CVEC has proposed a project in the Simmons Gap Road area. As part of the Greene County Broadband Committee plan representatives have met with ISP providers regarding expansion. In conversation with CVEC, their service area that extends into Greene is only 75 customers and the smallest part of their service area. They indicated at the time of the meeting that the expansion into Greene would be several years away.

4. 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 of 25/3 mbps or less and with less than 10% service overlap within the project area. 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 3 – Documentation Unserved Area VATI Criteria.

#### Answer:

#### There is no anticipated overlap.

As stated in question 2, the Greene County Broadband Committee conducted a survey to determine actual internet coverage within the county. The results identified areas that were both unserved and underserved. There were 1336 survey responses, 954 residences, and 219 businesses. The survey response map is included in Attachment 14 – Download Speed Survey Map. The responses represented 19% of occupied households. In preparation for this

#### Greene County

Greene County Rural Broadband Initiative

application, the Broadband Committee worked with the Greene Acres HOA and the County Line HOA in Advance Mills to conduct follow up surveys. Greene Acres has the highest concentration of passings within the proposed project areas. 8% of the residents responded and all of the respondents had download speeds less than 3 Mb/s. 27% of the County Line residents responded and only one had access to speeds greater than 10 Mb/s, the rest of the respondents had 3 Mb/s or less. Over half of the responses were sent by US Postal Service because the internet coverage is too unreliable for downloading the survey. Customers will be able to get speeds up to 940Mb/s while uploading or downloading data in the Shady Grove and Greene Lake Road areas of our County where approximately 17% of them have no broadband service at all today and 84% have no access to speeds greater than 10Mb/s.

In addition, the Greene County Planning Director checked with other providers regarding their services and referred to the state broadband map. As one of the optional attachments we've included a sampling of the recent broadband survey Attachment 14 – Download Speed Survey Map. The Planning Director contacted Alex Phillips, CEO, of Rural Broadband Network Services LLC and Jonathan Dowler, Director of Sales and Marketing for VA Broadband since their companies were shown as providing service in the proposed project area. Each provider reported that they do not provide service in the project area that meets the VATI broadband criteria and would not contest any application.

99% of the area does not have access to 25Mb/s and 84% of the area is served with speeds of 3Mb/s or less.

5. 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 4 – Passings Form

a. Of the total number of passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area. Describe the methodology used for these projections.

b. Provide the number of serviceable units in the project area that have 10/1 mbps or less. Describe the methodology used for these projections.

#### Answer:

Attachment 4 contains a detailed chart showing each of the area in the total project area and the number of residential serviceable units contained in each area. The total number of residential serviceable units is 598.

We know exactly how many residential serviceable units are in the area we have plotted the actual locations of the residences using the County and CenturyLink's GIS systems and we have planned and designed the proposed network to pass the actual residences we have identified. Each home passed will have access to the CenturyLink Fiber Gigabit service.

The actual homes and fiber facilities are all within the project area boundaries shown in Attachment 1.

There are an additional 63 businesses and community anchors within the project area. These have been identified as those that have applied for business service with CenturyLink. These are included in Attachment 17 – Businesses registered with CenturyLink for Business Service

There are no current providers that offer greater than 10 Mb/s in the project area.

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6. 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. This is not a wireless project.

7. 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.

#### Answer:

Speeds: All locations will have access to CenturyLink's Fiber Gigabit service, which consistent with industry standards provides a maximum of 940 Mbps download and 940 Mbps upload. Bandwidth is dedicated.

Technology: The technology that will be used is "Fiber to the Home," or "GPON." GPON is "Gigabit Passive Optical Network." In a Fiber to the Home/GPON environment, voice and high-speed data (up to 1Gbps) is transported on a single fiber (one wavelength for transmit, another wavelength for receive) from the office/remote electronics to the home or premises. The single fiber operates at a rate of 2.4Gbps downstream (to the home) and 1.2Gbps upstream (from the home). The CenturyLink deployment can share this bandwidth between 32 customers. The GPON infrastructure eliminates the need for active electronics (and the associated powering, real estate and maintenance costs) in the distribution plant, depending on the distance from the Central Office/ Remote and available feeder fibers.

Service offering: Pricing for CenturyLink services is generally a nationwide price, so that customers in rural Virginia pay the same rate as customers in urban areas in other states. CenturyLink currently offers two speed tiers for fiber-to-the-home customers as part of CenturyLink Internet with Price For Life, which are 100 Mbps for \$49/month or Fiber Gigabit (940 Mbps) for \$65/month. There are additional options bundled with other services like Fiber Gigabit (940 Mbps) plus Home Phone Unlimited for \$85/month. The above rates do not include any required taxes or fees, and plans are always subject to change, please refer to centurylink.com for the most up to date information.

Additionally, CenturyLink provides qualifying low-income customers access to Lifeline. Lifeline is the FCC's program to help make communications services more affordable for low-income consumers. Lifeline provides subscribers a discount on monthly telephone service purchased from participating providers. The discounts, which can be applied to stand-alone broadband, bundled voice-broadband packages - either fixed or mobile - and/or stand -alone voice service, help ensure that low-income consumers can afford state-of-the-art Broadband and the access it provides to jobs, education and opportunities.

8. 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

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and the ones that would be added by the proposed project. Provide a detailed explanation of how this information was determined with sources. 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 5 – Propagation Map Wireless Project.

#### Answer:

As described in response to question 7, the network design is "fiber-to-the-home" or "GPON." The components that would be added are optical fiber connections to residences including over 100,000' of fiber cable construction in addition to new GPON electronics, two fiber distribution hubs (FDHs), and 250 fiber pedestals (MDTS). The twisted pair copper lines would no longer be used. Additional components would be necessary to connect the fiber to existing CenturyLink facilities. The advantage of using a fiber-based solution is that it provides the fastest speeds available to consumers. Although copper-based solutions such as VDSL can provide speeds of 100 Mbps, fiber can provide speeds measured in Gigabits. Also, the fiber network does not have the same distance limitation of copper-based DSL technology. The source of these statements is CenturyLink's actual experience in providing fiber solutions to residences across the Commonwealth and county, to many state and federal government customers and to thousands of businesses across the United States and around the world with more than 150,000 buildings "on-net".

This is 100 % fiber to the home project (no wireless) as indicated in Attachment 5

#### 9. 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 6 – Timeline/Project Management Plan; Attachment 7 – MOU/MOA between Applicant/Co-Applicant.

#### Answer:

The project is currently in the planning stage, although most of the network planning has been completed. CenturyLink's map in Attachment 1 shows the actual location for all facilities and equipment needed to complete the project. All of the planning needed to submit this application has been completed and the remaining work would begin once an award is made. CenturyLink has attached as Attachment 6 a timeline of work from grant award to completion of the project. This project management plan is the standard plan that CenturyLink uses on similar projects around the country and is the same plan that was used for prior VATI awarded projects, where CenturyLink completed the work on time and within budget.

A formal partnership between Greene County and CenturyLink is in process. An executed MOU is included in Attachment 7 – Relationship between Applicant/Co-Applicant. A formal agreement is prepared and will be signed once the grant is approved. This agreement is included for reference in Attachment 7 – Relationship between Applicant/CoApplicant.

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CenturyLink's obligations are to implement the Project Management Plan within the designated period, to provide updates to the County on the status of the project, to notify the County if assistance is needed with issues where the County can provide assistance, to submit requests for payment as work is completed, to complete all work within the required timeframe, to provide the County with information showing the locations where broadband has been enabled and to propose any non-disclosure agreements that CenturyLink believes might be required if CenturyLink is requested to share confidential information. The agreement includes obligations of Greene County to process requests for payment in a timely manner, review information provided by CenturyLink and submit requests for additional information in a timely manner, complete any necessary non-disclosure agreements, provide necessary rights of way and assist in contacting citizens and others when appropriate to assist in completing the project within the required timeframe.

10. 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 the 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's cash match is below 10% of total project cost, applicants must provide financial details demonstrating appropriate private investment. Label Attachments: Attachment 8 - Funding Sources Table; Attachment 9 – Documentation of Match Funding.

#### Answer:

The matching funds invested by CenturyLink are listed in Attachment 9 - Matching Funds. Those funds include all of the costs for the project, including all of the planning, engineering, permits and easements, and materials and labor for the installation of the fiber facilities necessary for this project. The matching funds also include the costs of identifying and acquiring any necessary easements.

Greene County will provide in-kind resources to offset the total grant costs. Greene will provide financial project management through the Finance Director and the County Treasurer. Green County will support any easement acquisition, waiver of fees and assistance recording court documents through the Planning Director. Any contract review and document preparation will be handled by the County Attorney. The in-kind services provided by the County would equal \$3670.

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

#### Answer:

Greene County will provide in-kind resources to offset the total grant costs. Greene will provide financial project management through the Finance Director and the County Treasurer. Greene County will support any easement acquisition, waiver of fees and assistance recording court documents through the Planning Director. Any contract review and document preparation will be handled by the County Attorney. The in-kind services provided by the County would equal \$3670.

CenturyLink is ranked the 159th largest company according to Fortune's annual list. In Virginia, CenturyLink has more than \$1.6 Billion in total network investment within Virginia and annualized investments of more than \$54

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million. CenturyLink has internal approval through their Capital Governance process, which allocates capital spending for North America, to spend \$1,135,000as part of the Greene County project before the VATI grant of \$792,870.

#### 12. 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.

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:

CenturyLink will also utilize standard go-to-market plans for fiber-to-the-home launches. CenturyLink's local team determine, based on geography of the impacted households, the best method of marketing the launch in addition to partnering with Hanover County. This could include direct mail, prelaunch/preorder website, yard signs, door hangers, press releases, and/or mobile marketing.

The Greene County Broadband Committee provides service option updates on the broadband website. Additionally, the Committee has an outreach program working with the homeowner associations in the project area. These HOA are committed to promoting the project to each resident through the newsletters, email and HOA meetings. All new projects are also promoted locally in press releases to the newspaper and local TV an radio.

The projected take rate for this project area is 50%. The projection is based on CenturyLink's experience in providing broadband in localities across the Commonwealth, as well as our experience in other states. That projection is also supported by CenturyLink's experience in prior VATI projects, where the overall take rate is 73%.

13. 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 applicant is not a locality(s) in which the project will occur, please provide a letter of support from that locality. Attachment 10 – Letters of Support.

#### Answer:

Name Dale Herring	<b>Title</b> Director of Technology Greene County Public Schools
Jim Frydl	Planning Director Greene County

#### **Role and Responsibilities**

Mr. Herring will be responsible for overall project management for the partnership. He will coordinate all activity with CenturyLink and manage administrative tasks Mr. Frydl will update materials for CAMS entry and verify CenturyLink invoices for accuracy

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Derek Kelly	Government Affairs Director - CenturyLink	Project Coordination – Mr. Kelly will be responsible for overall coordination of the project with Hanover County. He will provide all coordination with the planning, engineering, construction, marketing, and operation teams within CenturyLink. Mr. Kelly has a history managing grants in North Carolina as well.
Heather Lee	Sr. Analyst – Public Policy – CenturyLink	Project Coordination – Ms. Lee will project manage all teams within CenturyLink to ensure reporting requirements are met. Mr. Lee is dedicated to this function for state grants across CenturyLink's footprint.
Darin Wilder	Manager, Edge Planning – CenturyLink	Network Planning – Mr. Wilder oversees all fiber-to-the- home planning for VA, WV, NC, SC, FL, KY, MD, & DC.
Glenn Butler	Sr. Planning Engineer – CenturyLink	Networking Planning – Mr. Butler has direct responsibility for designing fiber-to-the-home solutions for Hanover County and has experience designing successful VATI grants in other counties.

Attachment 10 – Letters of Support includes letters from the Planning District Commission, School Administration, Board of Supervisors, Emergency Services, and Economic Development Director.

#### 14. 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 11 – Derivation of Costs; Attachment 12 - Documentation of Supporting Cost Estimates.

#### Answer:

The budget for this project is \$145,000 in electronics and \$990,000 in fiber costs. The map included in Attachment 1 identifies the costs for the equipment as shown on the map and identifies the location and costs for the fiber that will be installed. Attachment 11 – "Derivation of Costs" also breaks down the amount of Fiber Distribution Hubs (FDH), fiber pedestals (MDTS), GPON Electronics, and fiber footage/mileage along with the associated costs.

- 15. The cost benefit index is comprised of three factors: (i) state share for the total project cost, (ii) state cost per unit passed, and (iii) the internet speed. From these statistics, 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
  - c. Highest residential speed available in proposed project area

#### Answer:

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- a. The Total VATI funding request is \$792,870
- b. There are 598 serviceable units

c. The highest residential speed available is Fiber Gigabit, which consistent with industry is 940 Mbps both download and upload speeds.

#### 16. Commonwealth Priorities

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

a. How the proposed project fits into a larger plan to achieve universal broadband coverage for the locality. Explain the remaining areas of need in the locality and a brief description of the plan to achieve universal broadband coverage.

b. 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.

c. Unique partnerships involved in the proposed project. Examples include electric utilities, universities, and federal/state agencies.

d. 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:

The goal of expanding broadband to attract and support business and entrepreneurship, provide education access to students, and expand access to telehealth services is a priority of the Greene County Board of Supervisors. Greene County formed a Broadband Committee in March 2017 to create a broadband plan and to initiate the actions to create progress. The plan is in Attachment 17 - Greene County Broadband Plan.

To date the Greene County Broadband Committee has surveyed the County to identify areas that are lacking coverage and to determine actual internet speeds. The survey results identified significant portions of the County that have speeds of less than 3 Mb/s. These areas of the County are more rural and the median household income of \$37,188 is 41% lower than the households in the urban growth area within the county. The income gap and lack of easy access to transportation and employment centers put these areas at a great disadvantage. We have learned with the current COVID-19 crisis that the inability to work from home, learn from home and participate in telehealth visits is a major barrier.

The Broadband Committee worked with the CIT to review the County's broadband efforts and to receive recommendation for making Greene broadband ready.

The Broadband Committee has and will continue to meet with ISPs with the goals of supporting and encouraging expansion of services. The Committee has identified specific areas where CenturyLink is the best suited to expand coverage in unserved areas.

This grant application would bring fiber-based broadband services to 598 residents and 63 businesses if awarded. Customers will be able to get speeds up to 940Mb/s while uploading or downloading data in the Shady Grove, 8/19/2020 8:04:55 AM Pages: 10 of 13

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Greene Lake, Celt Road and Advance Mills Road areas of our County where approximately 55% of them have no broadband service at all today and 100% have no access to speeds greater than 10M. There are several community anchors in the Shady Grove area that provide significant support to the Mennonite community in that area. There are several support programs including the Faith Mission School residential home for intellectually disabled children. The lack of reliable internet access has limited the growth of small business and also prevents employees from working at home. The Greene County Schools will also struggle to provide virtual school options to the residents of these areas. This project would have a significant positive impact by offering the residents and businesses the opportunity to work, learn, and access telemedicine that is not currently available. Without improved access to workable internet speeds these residents are placed at a significant disadvantage. The household income is already 40% less than the more urban areas of the County and without reliable internet, that gap will continue to grow.

Greene County and CenturyLink understand that some households may have some income barriers to overcome. CenturyLink provides qualifying low-income customers access to Lifeline. Lifeline is the FCC's program to help make communications services more affordable for low-income consumers. Lifeline provides subscribers a discount on monthly telephone service purchased from participating providers. The discounts, which can be applied to stand-alone broadband, bundled voice-broadband packages - either fixed or mobile - and/or stand-alone voice service, help ensure that low-income consumers can afford state-of-the-art Broadband and the access it provides to jobs, education and opportunities.

#### 17. Additional Information

17. Provide any other information that the applicant desires to include. Applicants are limited to four additional attachments.

Label Additional Attachments as:

- a. Attachment 13 Two most recent Form 477 submitted to the FCC or equivalent
- b. Attachment 14 XXXXXXX
- c. Attachment 15 XXXXXXX
- d. Attachment 16 XXXXXXX
- e. Attachment 17 XXXXXXX

#### Answer:

- . Attachment 13 Two most recent Form 477 submitted to the FCC or equivalent
- b. Attachment 14 Download Current Speed
- c. Attachment 15 Greene County Summary
- d. Attachment 16-Business listing within the project area
- e. Attachment 17 Greene County Broadband Plan

#### Attachments:

Greene County

Greene County Rural Broadband Initiative

Map(s) of project area, including proposed infrastructure Attachment1ProjectAreaMap817202025526.pdf

Documentation of Federal Funding (CAF/ACAM/USDA, etc...) in and/or near proposed project area. Attachment2DocumentationofFederalFundingGreene817202025604.pdf

Documentation that proposed project area is unserved based on VATI criteria Attachment3DocumentationUnservedAreaVATICriteria817202025546.pdf

Passings Form (Please use template provided) Attachment4PassingsForm817202034535.pdf

Propagation Map if Wireless Project

Attachment5PropogationMapWirelessProject817202025621.pdf

Timeline/Project Management Plan

Attachment6TimelineProjectManagementPlanGreene817202025627.pdf

MOU/MOA between applicant/co-applicant (can be in draft form) Attachment7RelationshipBetweenApplicantCoApplicant817202025633.pdf

**Funding Sources Table** 

Attachment8FundingSourceGreene817202031010.pdf

Documentation for match funding

Attachment9MatchingFundsGreene817202032308.pdf

Letters of Support

Attachment10LettersofSupport817202025651.pdf

Derivation of Cost (Project Budget)

Attachment11DerivationofCostsGreene817202030611.pdf

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

Attachment12DocumentationofSupportingCostsGreene817202030711.pdf

Two most recent Form 477 submitted to FCC

Attachment13Form477FilingSummary817202030036.pdf

#### Optional

Attachment14DownloadSpeedSurveyMap817202033454.pdf

#### Optional

Attachment15GreeneCountySummary817202033558.pdf

#### Optional

Attachment16Businesslistingwithinprojectarea817202034228.pdf

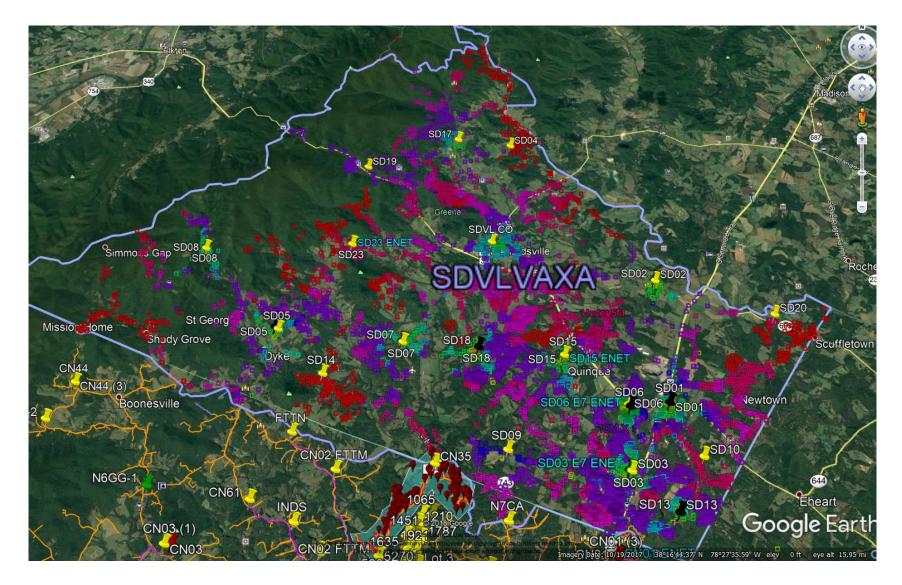
#### Optional

Attachment17GreeneCountyBroadbandPlan817202034237.pdf

# Summary of Projects

	Greene County VATI 2021														
P	Capital Costs						Pas	sir	igs	VATI					
								Living	Сс	st/ Living	VATI Grant	VATI	VATI		
Project	Exchange	Slide		ISP		OSP		Total	units		Unit	Amount	Cost/LU	Grant %	
Amicus	Stanardsville	7	\$	25,000	\$	375,000	\$	400,000	195	\$	2,051	\$339,966	\$1,743	85.0%	
Advance Mills Rd	Stanardsville	8	\$	25,000	\$	125,000	\$	150,000	75	\$	2,000	\$124,638	\$1,662	83.1%	
Greene Lake	Stanardsville	9	\$	65,000	\$	235,000	\$	300,000	209	\$	1,435	\$167,209	\$800	55.7%	
Shady Grove	Stanardsville	10	\$	30,000	\$	255,000	\$	285,000	119	\$	2,395	\$161,057	\$1,353	56.5%	
Total			\$	145,000	\$	990,000	\$	1,135,000	598	\$	1,897.99	\$792,870	\$1,326	69.9%	

# CenturyLink - Greene County Exchange



# **Projects for Consideration**

# Amicus / Celt Road (FTTH)

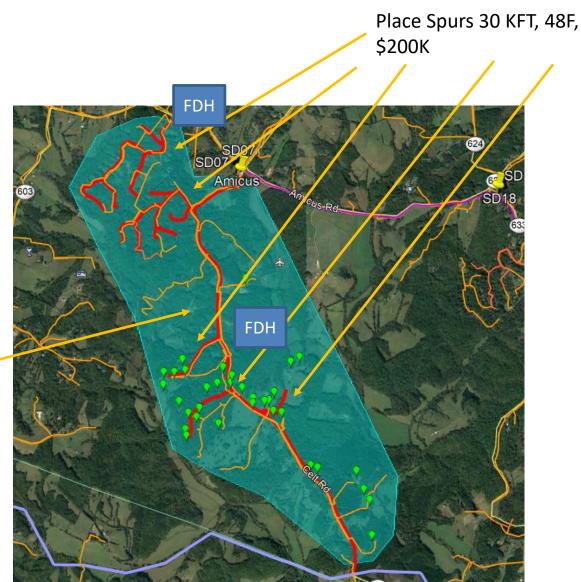
\$400K \$2,051/ 1G LU

195 – 1G Estimate 160 drops < 650 Ft.; 25 between 650 & 1,500; 10 > 1,500 Feet

Place 18 KFT, 96F, \$125K (Celt)

SD07 Place E7 GPON \$25K

Place 2 FDHs & 90 MDTS, \$50K



# Advance Mills Road Area (FTTH)

Place Spurs 7.5 KFT, 48F, \$50K

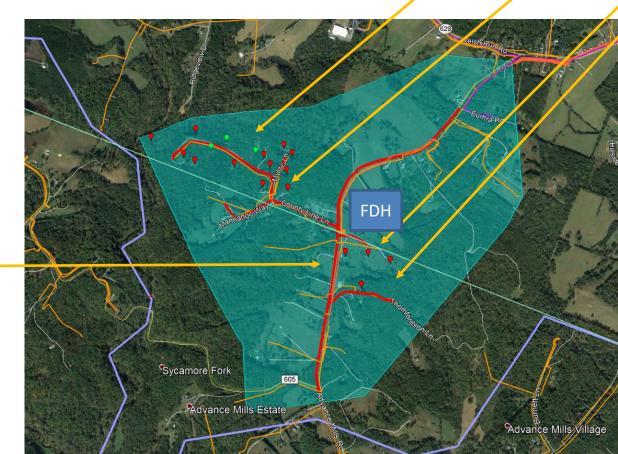
\$150K \$2,000/ 1G LU

75 – 1G Estimate 50 drops < 650 Ft.; 15 between 650 & 1,500; 10 > 1,500 Feet

Place 7 KFT, 96F, \$50K

SD09 Place E7 GPON \$25K

Place 1 FDH & 90 MDTS, \$25K



## Greene Lake (FTTH)

\$300K \$1,435/ 1G LU

Place Spurs 2.5, 2.0 (2), 1.5 & 1 (6) KFT, 48F, \$95K

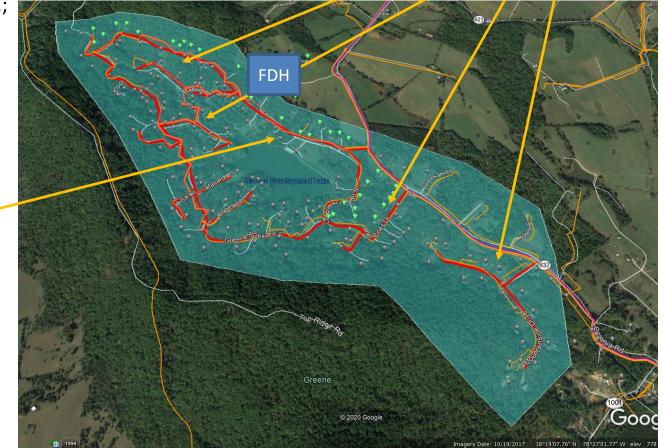
#### 205 – 1G

Estimate 165 drops < 650 Ft.; 25 between 650 & 1,500; 15 > 1,500 Feet

Place 15 KFT, 96F, \$100K

Place ODC-200 E7 GPON \$65K

Place 1 FDH & 70 MDTS, \$40K



#### Place 1 FDHs & 70 MDTS, \$40K

Place 22 KFT, 96F, \$135K

Place GPON in SD05 E7 or

SD12 DISCS, \$30K

Estimate 70 drops < 650 Ft.; 30 between 650 & 1,500; 19 > 1,500 Feet

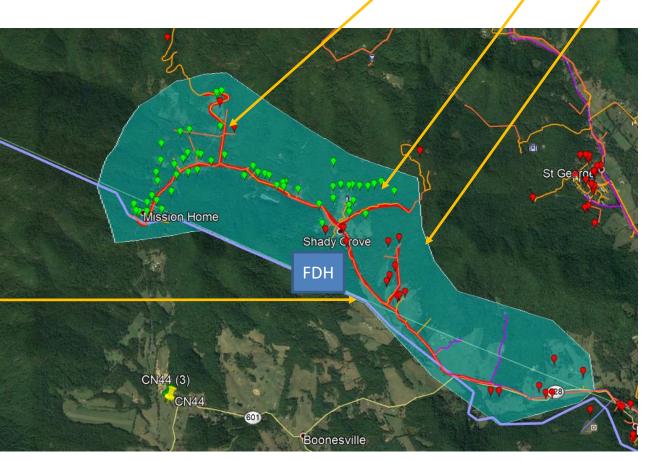
\$285K

119 - 1G

\$2,395/ 1G LU

# Shady Grove (FTTH)

Place Spurs 2.5, 3.5 & 5 KFT, 48F, \$80K



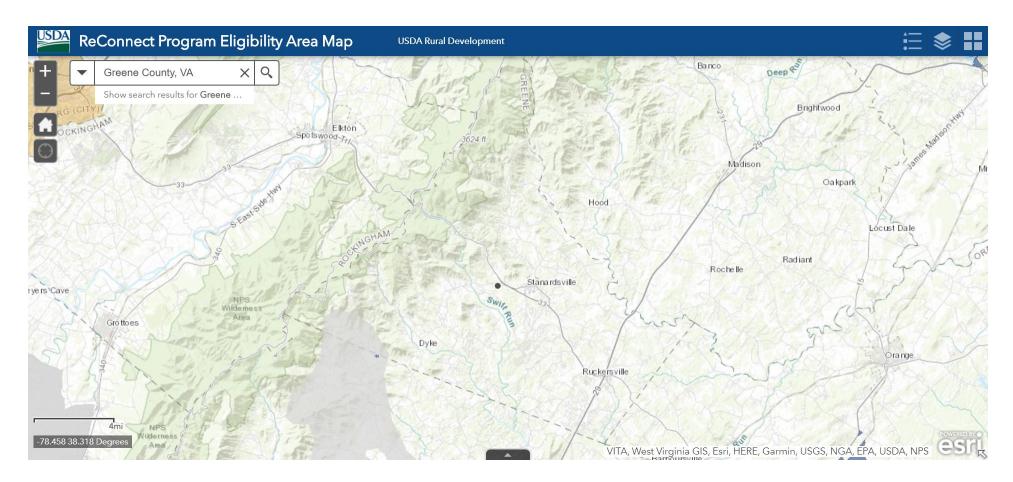
Attachment 2 – Documentation of Federal Funding

CenturyLink / Greene County VATI 2021 Project

USDA ReConnect Program Eligibility Map

This map confirms there are no CAFII Auction winners for Greene County, and there are no pending ReConnect grants.

Source: <u>http://ruraldevelopment.maps.arcgis.com/apps/webappviewer/index.html?id=51bbfce8e72549dcb5374d0aa32e1736</u>



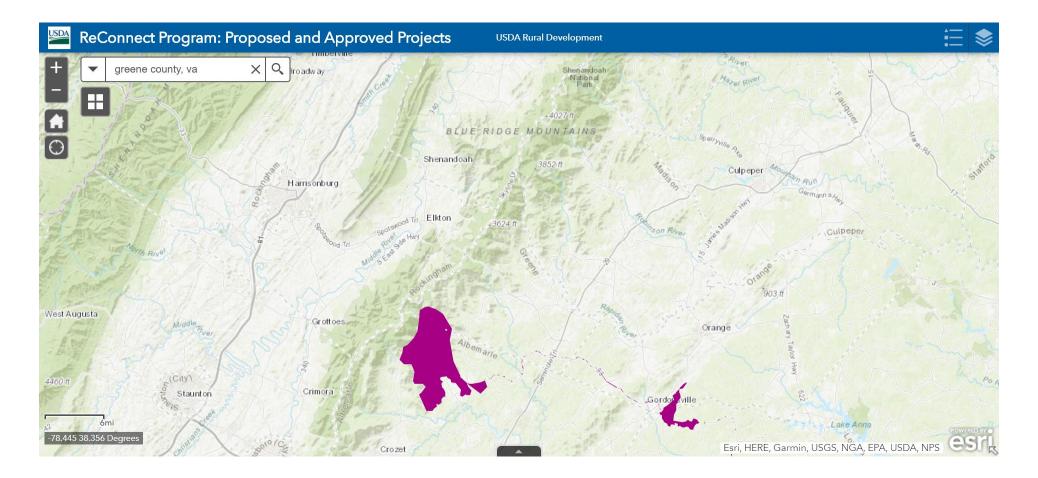
Attachment 2 – Documentation of Federal Funding

CenturyLink / Greene County VATI 2021 Project

USDA ReConnect Program: Proposed and Approved Projects

This map need something here

Source: <a href="https://www.arcgis.com/apps/webappviewer/index.html?id=e2d4c909e06c46d3aa9577bea695a2b9">https://www.arcgis.com/apps/webappviewer/index.html?id=e2d4c909e06c46d3aa9577bea695a2b9</a>

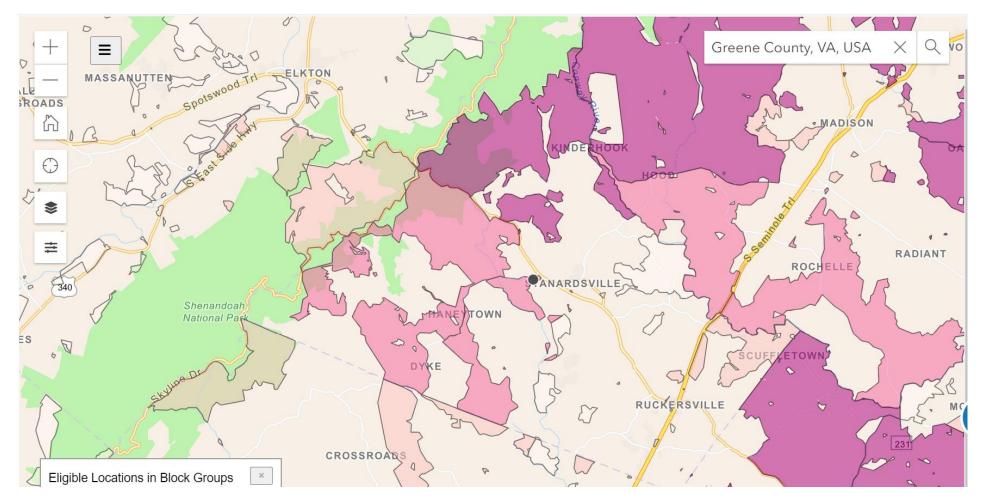


#### Attachment 2 – Documentation of Federal Funding

CenturyLink / Greene County VATI 2021 Project

#### Rural Digital Opportunity Fund (RDOF) Updated Eligible Areas

Source: <a href="https://www.fcc.gov/reports-research/maps/auction-904-updated-jun20-eligible-areas/">https://www.fcc.gov/reports-research/maps/auction-904-updated-jun20-eligible-areas/</a>



#### Attachment 2 – Existing Provider Map

Other than the co-applicant, CenturyLink, there are no other existing providers. The current speeds available are listed in the chart below:

Total Passings	598	
25/3 or greater	5	1%
Greater than 10/1 but less than 25/3	43	7%
10/1 Mbps	48	8%
Less than 10/1	502	84%
3 Mbps or less	473	79%
0 Mbps (no DSL)	101	17%

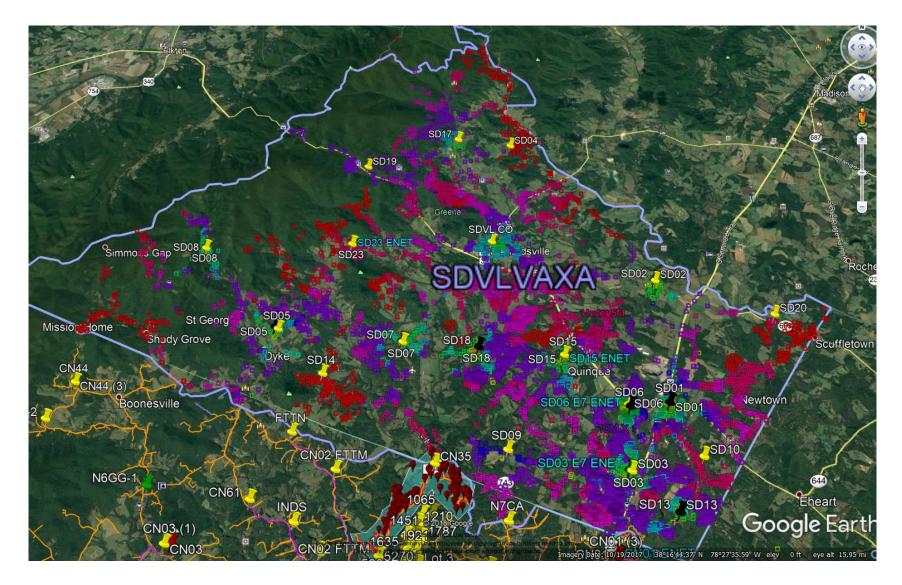
# Summary of Projects

	Greene County VATI 2021														
P	Capital Costs						Pas	sir	igs	VATI					
								Living	Сс	st/ Living	VATI Grant	VATI	VATI		
Project	Exchange	Slide		ISP		OSP		Total	units		Unit	Amount	Cost/LU	Grant %	
Amicus	Stanardsville	7	\$	25,000	\$	375,000	\$	400,000	195	\$	2 <mark>,</mark> 051	\$339,966	\$1,743	85.0%	
Advance Mills Rd	Stanardsville	8	\$	25,000	\$	125,000	\$	150,000	75	\$	2,000	\$124,638	\$1,662	83.1%	
Greene Lake	Stanardsville	9	\$	65,000	\$	235,000	\$	300,000	209	\$	1,435	\$167,209	\$800	55.7%	
Shady Grove	Stanardsville	10	\$	30,000	\$	255,000	\$	285,000	119	\$	2,395	\$161,057	\$1,353	56.5%	
Total			\$	145,000	\$	990,000	\$	1,135,000	598	\$	1,897.99	\$792,870	\$1,326	69.9%	

# Summary of Projects

	Greene County VATI 2021														
P	Capital Costs						Pas	sir	igs	VATI					
								Living	Сс	st/ Living	VATI Grant	VATI	VATI		
Project	Exchange	Slide		ISP		OSP		Total	units		Unit	Amount	Cost/LU	Grant %	
Amicus	Stanardsville	7	\$	25,000	\$	375,000	\$	400,000	195	\$	2 <mark>,</mark> 051	\$339,966	\$1,743	85.0%	
Advance Mills Rd	Stanardsville	8	\$	25,000	\$	125,000	\$	150,000	75	\$	2,000	\$124,638	\$1,662	83.1%	
Greene Lake	Stanardsville	9	\$	65,000	\$	235,000	\$	300,000	209	\$	1,435	\$167,209	\$800	55.7%	
Shady Grove	Stanardsville	10	\$	30,000	\$	255,000	\$	285,000	119	\$	2,395	\$161,057	\$1,353	56.5%	
Total			\$	145,000	\$	990,000	\$	1,135,000	598	\$	1,897.99	\$792,870	\$1,326	69.9%	

# CenturyLink - Greene County Exchange



# **Projects for Consideration**

# Amicus / Celt Road (FTTH)

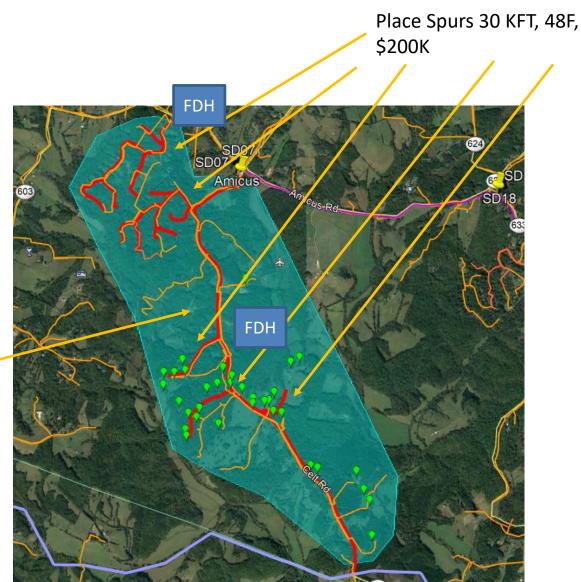
\$400K \$2,051/ 1G LU

195 – 1G Estimate 160 drops < 650 Ft.; 25 between 650 & 1,500; 10 > 1,500 Feet

Place 18 KFT, 96F, \$125K (Celt)

SD07 Place E7 GPON \$25K

Place 2 FDHs & 90 MDTS, \$50K



# Advance Mills Road Area (FTTH)

Place Spurs 7.5 KFT, 48F, \$50K

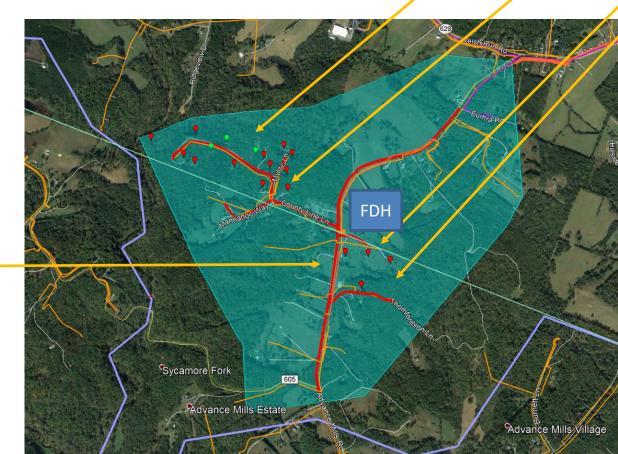
\$150K \$2,000/ 1G LU

75 – 1G Estimate 50 drops < 650 Ft.; 15 between 650 & 1,500; 10 > 1,500 Feet

Place 7 KFT, 96F, \$50K

SD09 Place E7 GPON \$25K

Place 1 FDH & 90 MDTS, \$25K



## Greene Lake (FTTH)

\$300K \$1,435/ 1G LU

Place Spurs 2.5, 2.0 (2), 1.5 & 1 (6) KFT, 48F, \$95K

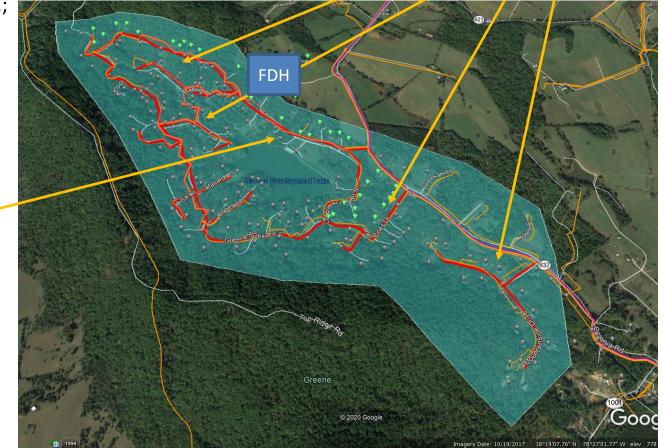
#### 205 – 1G

Estimate 165 drops < 650 Ft.; 25 between 650 & 1,500; 15 > 1,500 Feet

Place 15 KFT, 96F, \$100K

Place ODC-200 E7 GPON \$65K

Place 1 FDH & 70 MDTS, \$40K



#### Place 1 FDHs & 70 MDTS, \$40K

Place 22 KFT, 96F, \$135K

Place GPON in SD05 E7 or

SD12 DISCS, \$30K

Estimate 70 drops < 650 Ft.; 30 between 650 & 1,500; 19 > 1,500 Feet

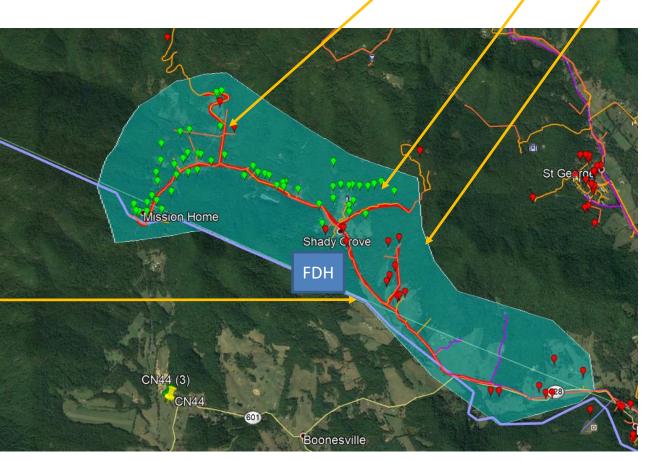
\$285K

119 - 1G

\$2,395/ 1G LU

# Shady Grove (FTTH)

Place Spurs 2.5, 3.5 & 5 KFT, 48F, \$80K



#### Attachment 5 – Propagation Map Wireless Project

This is not a wireless project so a map is not attached.

Month	1	2	3	4	5	6	7	8	9	10	11	12
Approval/Release Funding from VATI												
Project Planning												
Site Survey												
Easement Research and Acquisition												
Design Engineering												
Permit Acquisition												
OSP Fiber Build												
Site Preparation												
Commercial Power Activation												
Equipment Installation & Turn-up												
Cable Transfers												
Market Launch												

#### MEMORANDUM OF UNDERSTANDING

Description of the relationship between the applicant and co-applicant

- 1. The parties to this Memorandum of Understanding (MOU) are the Greene County Board of Supervisors and CenturyLink.
- 2. The purpose of this MOU is to describe the intention of the parties to develop a grant proposal for the FY2021 Virginia Telecommunications Initiative (VATI) program established by the Virginia Department of Housing and Community Development (DHCD). Greene County and CenturyLink will enter into a formal agreement for this proposed project, to be executed if awarded a VATI grant by DHCD.

An agreement would cover the following areas:

- a. CenturyLink would commit to implement the Project Management Plan within the designated period, to provide updates to Greene County staff on the status of the project, to notify Greene County staff if its assistance were needed, to submit requests for payment as work was completed, to complete all work within the required timeframe, to provide Greene County staff with information showing the locations where broadband had been enabled, and to propose any required nondisclosure agreements if CenturyLink were requested to share confidential information.
- b. Greene County would commit to processing requests for payment in a timely manner, to review information provided by CenturyLink and submit requests for additional information in a timely manner, to complete any necessary non-disclosure agreements, to assist CenturyLink in obtaining necessary rights of way within the scope of Greene County's authority, and to assist in contacting residents and others as appropriate to foster completion of the project within the required timeframe.
- c. The parties agree in advance that CenturyLink will be permitted to consolidate bills on at least a monthly basis and submit as a single invoice for processing. The preferred method of billing is at mid-point of the projects and then at the completion of work; thereby providing only two sets of remittance processing.
- d. The parties agree to work jointly to complete the VATI application, collaborating as necessary to facilitate a timely and effective submission of necessary information.
- e. Once awarded grant funding, CenturyLink will sign an official VATI Agreement with Greene County. That agreement is provided in the Attachment Section.

CENTRAL TELEPHONE COMPANY OF VIRGINIA d/b/a Century Link

By: By: Kevin McCarter, President, East Region

8/13/2020 Date:

COUNTY OF GREENE

By:

Mark B. Taylor, County Administrator

Date: 2020

#### Attachment 8 – Funding Sources

#### Greene County / CenturyLink VATI 2021

The funding source table is provided below. The total project cost is \$1,396,500 which includes all equipment, fiber, permits and easements, material and labor for the construction and installation of the fiber solution.

The VATI grant amount is \$792,870. CenturyLink has financial approval to spend \$1,135,000 on the construction of the solution, and after receiving the grant from VATI will fund the remaining \$342,130.

	Greene County VATI 2021										
Project	Project Capital Costs Passings VATI										
			Living	Сс	ost/Living	Ce	nturyLink	VATI Grant	VATI	VATI	
Project	Total	Construction	units		Unit	ŀ	Amount	Amount	Cost/LU	Grant %	
Amicus	\$	400,000	195	\$	2,051	\$	60,034	\$339,966	\$1,743	85.0%	
Advance Mills Rd	\$	150,000	75	\$	2,000	\$	25,362	\$124,638	\$1,662	83.1%	
Greene Lake	\$	300,000	209	\$	1,435	\$	132,791	\$167,209	\$800	55.7%	
Shady Grove	\$	285,000	119	\$	2,395	\$	123,943	\$161,057	\$1,353	56.5%	
Total	\$	1,135,000	598	\$	1,897.99	\$	342,130	\$792,870	\$1,326	69.9%	

Attachment 9 – Matching Funds Greene County / CenturyLink VATI 2021

CenturyLink has internal approval through their Capital Governance process, which allocates capital spending for North America, to spend \$1,135,000 as part of the Greene County project before the VATI grant of \$792,870 leaving the CenturyLink matching funds \$342,130. Those funds include all of the costs for the project, including all of the planning, engineering, permits and easements, and materials and labor for the installation of the fiber facilities necessary for this project. The matching funds also include the costs of identifying and acquiring any necessary easements.

Greene County will provide in-kind resources to offset the total grant costs. Greene will provide financial project management through the Finance Director and the County Treasurer. Green County will support any easement acquisition, waiver of fees and assistance recording court documents through the Planning Director. Any contract review and document preparation will be handled by the County Attorney. The in-kind services provided by the County would equal \$3670.



August 11, 2020

Dr. Tamarah Holmes, 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 Thomas Jefferson Planning District Commission (TJPDC), I would like to offer support for Greene County's efforts to expand broadband services to residents and businesses in the Shady Grove, Greene Lake and Advance Mills areas of the county. A 2021 Virginia Telecommunication Initiative (VATI) grant, if awarded, would provide for the placement of several miles of cable and other infrastructure to support fiber-based broadband access for over 550 customers, more than half of which currently have no broadband service at all. The TJPDC also is excited that this particular project will provide download speeds of approximately 940Mb/s in an area where access to speeds greater than 10Mb/s is nonexistent.

The TJPDC has been a frequent partner with Greene County in seeking to expand broadband access. We have supported the County as it has sought other funding assistance for broadband projects and in its work with surrounding counties on joint broadband ventures. This spring, at the suggestion of, and in collaboration with Greene County, the TJPDC formed a Regional Broadband Partnership (RBP), an information and advisory board that will partner with multi-sector stakeholders related to needed services of high-speed internet supply, demand and use in our region.

We are confident that Greene County will continue its diligence to meet the needs and desires of its citizens for expanded broadband coverage. Accordingly, we are glad to support their application for VATI grant funding.

arles P Bovles. II Executive Director



**Greene County Public Schools** 

P.O. Box 1140, 40 Celt Road Stanardsville, Virginia 22973

Dr. Andrea Whitmarsh Superintendent Office: 434-939-9000 Fax: 434-985-4686 www.greenecountyschools.com

#### Every Child \* Every Chance \* Every Day

August 27, 2019

Jim Frydl Planning Director & Zoning Administrator Greene County, Virginia 40 Celt Road Stanardsville, Virginia 22973

Dear Jim:

I am in full support Greene County's application for a Virginia Telecommunication Initiative grant to provide broadband to unserved homes in Greene County. Reliable communication access for everyone is vital to the success of a modern community. Further, lack of access creates an opportunity gap that may exist for a lifetime.

As Superintendent for the Greene County School District I recognize the need for students and teachers to have broadband availability. Broadband is an important tool to help educators, parents and students meet major challenges. The county's economic welfare and long-term success depend on improving learning for all students, and broadband-enabled solutions hold tremendous promise to help reverse patterns of low achievement. With broadband, students and teachers can expand instruction beyond the confines of the physical classroom and traditional school day. Broadband can also provide more customized learning opportunities for students to access high-quality, low-cost and personally relevant educational material. Broadband can improve the flow of educational information, allowing teachers, parents and organizations to make better decisions tied to each student's needs and abilities. Improved information flow can also make educational product and service markets more competitive by allowing school districts and other organizations to develop or purchase higher-quality educational products and services.

At Greene County Public Schools, our mission is to "Engage all students through learning that is innovative, personalized, and relevant". To accomplish this goal, all of our students require equal access to reliable communications. I strongly support the application in order to make sure every child In Greene has an equal opportunity to reach their full potential.

Sincerely

Andrea E Whitmarsh, EdD Superintendent of Schools

AEW:dlc



**BOARD OF ZONING APPEALS** 

PLANNING COMMISSION

GREENE COUNTY PLANNING DEPARTMENT Post Office Box 358 Stanardsville, Virginia 22973

Tel: 434-985-5282 Fax: 434-985-1459 Website: www.gcva.us Email: planning@gcva.us

Jim Frydl Greene County Broadband Committee 40 Celt Rd Stanardsville, VA 22973

I am writing to support Greene County's application for a Virginia Telecommunication Initiative grant to provide broadband to unserved areas in Greene County. Reliable communications and access to high speed data are increasingly important for a modern, vibrant, successful community.

The Greene County Board of Supervisors believes that broadband is needed to support economic growth and education in an increasingly digitally connected world. Broadband is an important tool to help educators, students, health care providers, and small businesses meet the challenges of the 21<sup>st</sup> century. The county's economic welfare and long-term success depends on supporting business and entrepreneurial growth and broadband-enabled solutions hold tremendous promise in creating market access and new business opportunities. With broadband, students, teachers, health care providers and businesses can expand well beyond the confines of their physical location. Broadband can improve the flow of information, allowing employees and students to work and learn from home, making them more efficient while helping businesses to be more competitive.

Greene County has challenging terrain, which leaves many areas unserved. Greene has a strong tourism industry and is ideal for defense contractors and medical and health providers. Expanding broadband will provide opportunity that currently does not exist. I strongly support the application for the VATI grant.

Sincerely,

Willia By - hait:

Chairman, Greene County Board of Supervisors

#### GREENE COUNTY OFFICE OF EMERGENCY SERVICES

Melissa G. Meador Director 434-985-5232 Office 434-985-3705 Fax Email: mmeador@gcva.us



Fire-Rescue Emergency Management Hazardous Materials 40 Celt Road Stanardsville, VA 22973

August 26, 2019

Mr. James F. Frydl Greene County Planning Director 40 Celt Road Stanardsville, VA 22973

Dear Mr. Frydl,

I am writing in my capacity as the Emergency Services Director for the County of Greene, Virginia to fully endorse and strongly support the grant proposal submitted by our locality to the Virginia Telecommunication Initiative.

Greene County has begun improving public safety and the safety of its emergency responders by planning an upgrade of our entire public safety radio system. This upgrade is designed to provide mission critical voice communications.

A dedicated public safety network would provide mobile access to large amounts of information in a secure method and would have the capability of adapting to new, everchanging technology using a method already familiar to today's first responders. A dedicated, secure network can provide an additional method of communication to serve as a back-up to the radio system that would have the capability of extending beyond the boundaries of the radio system coverage area. The network can provide regional, statewide, and national interoperability far beyond the capabilities of the radio system utilizing a more economical method.

The ability to send and receive large amounts of data is necessary for acquiring licensing data, vehicle registrations, wanted persons files, commercial business storage and floor plans, and many more uses not supported by the radio system.

The Greene County Office of Emergency Services firmly believes this opportunity is unique and has the potential to enhance our overall public safety goals and objectives. Any initiative that can benefit our public safety agencies and our community is welcomed. If awarded, the project may become the initial groundwork for our community to develop a dedicated, secure network to our public safety radio system that would other-wise go unfunded.

On behalf of all public safety entities within Greene County, we appreciate your efforts regarding the proposal.

If you have any questions, concerns or require additional information, please feel free to contact me directly at (434) 985-5232.

Sincerely,

Melima Meador

Melissa G. Meador Emergency Services Director

###



August 28, 2019

To Whom It May Concern:

Please accept this letter as my full support for Greene County's Virginia Telecommunications Initiative grant request for unserved homes to access broadband.

Reliable and reasonable access rates are essential for a thriving community and a solid economic base. As Director of Economic Development and Tourism, I see on a daily basis the need to bring broadband to all parts of the county. Home businesses, individuals that telecommute, and rural businesses struggle to meet their communications needs. This hampers economic growth as potential businesses are not created or choose to locate in another community with broadband.

As a former educator and resident of the community, I see how the lack of broadband has put our students at a great disadvantage when they cannot access the internet. Not only does this impact our community on a personal note, it deters students from integrating into our community after graduating from public education, creating a great loss in potential entrepreneurs that could enhance our community.

Considering the economic impact on our community, I greatly appreciate your consideration for Greene's grant application. By awarding the grant, you will be investing in a community with great potential.

Most Sincerely,

Alan E. Yost Director of Economic Development and Tourism

Greene County Economic Development & Tourism Greene County Visitor Center 8315 Seminole Trail, Ruckersville, VA 22968 Phone: (434) 985-6663 www.exploregreene.com Attachment 11 - Derivation of Costs

Greene County / CenturyLink

The completed budget template document is attached. The following additional information is provided.

The cost for this project includes all of the planning, engineering, permits and easements, materials and labor for the installation of the fiber facilities necessary for this project, along with the equipment necessary to provide the broadband service. The cost estimates are based on CenturyLink's extensive experience in building these same systems throughout the country. CenturyLink's network planning team thoroughly reviewed each passing when developing the project solution, and derived the costs based on the best solution to bring a fiber-to-the-home solution to Greene County.

The total project cost is \$1,135,000, consisting of \$145,000 in electronics and \$990,000 in fiber and distribution facilities.

The below chart details out the ISP (electronics), OSP (GPON fiber and distribution), and total construction costs for each project area. Included in the OSP portion are the placement of five Fiber Distribution Hubs (FDH), 320 fiber pedestals (MDTS), and approximately 24 miles of fiber construction. The ISP portion is for new GPON electronics.

P	roject				Cap	oital Co	sts	
								Total
Project	Exchange	Slide		ISP		OSP	Co	onstruction
Amicus	Stanardsville	7	\$	25,000	\$	375,000	\$	400,000
Advance Mills Rd	Stanardsville	8	\$	25,000	\$	125,000	\$	150,000
Greene Lake	Stanardsville	9	\$	65 <i>,</i> 000	\$	235,000	\$	300,000
Shady Grove	Stanardsville	10	\$	30,000	\$	255,000	\$	285,000
Total			\$	145,000	\$	990,000	\$	1,135,000

			GPON	Fiber	Fiber	FC	DH / MDT		GPON		
Project	FHDs	MDTs	Electronics	Footage	Mileage		Cost	Ele	ectronics Cost	Fil	ber Costs
Amicus	2	90	1	48,000	9.1	\$	50,000	\$	25,000	\$	325,000
Advance Mills Rd	1	90	1	14,500	2.7	\$	25,000	\$	25,000	\$	100,000
Greene Lake	1	70	1	29,000	5.5	\$	40,000	\$	65,000	\$	195,000
Shady Grove	1	70	1	33,000	6.3	\$	40,000	\$	30,000	\$	215,000
Total	5	320	4	124,500	23.6	\$	155,000	\$	145,000	\$	835,000

### Attachment 12 – Documentation of Supporting Costs Greene County / CenturyLink VATI 2021

The cost for this project includes all of the planning, engineering, materials and labor for the installation of the fiber facilities necessary for this project, along with the equipment necessary to provide the broadband service. The cost estimates are based on CenturyLink's extensive experience in building these fiber-to-the-home systems throughout the Commonwealth and the country.

Pages seven through ten of the attached Summary document provides a detailed map of the project areas including fiber routes, approximate locations of passings, placement of Fiber Distribution Hubs, number of MDTS (fiber pedestals), and required equipment. The map and data will be used to expedite the final network plans for CenturyLink's Engineering and Construction teams.

The below chart shows the materials and labor breakdown based on GPON fiber & distribution as well as electronics for each of the eleven project areas:

Project Area	GPON Fiber & Distribution Materials	-	PON Fiber & Distribution Labor	GPON Fiber & Distribution	Electronics Materials	I	Electronics Labor	otal tronics	Т	otal Cost
Amicus	\$ 131,250	\$	243,750	\$375,000	\$ 15,000	\$	10,000	\$25,000	\$	400,000
Advance Mills Rd	\$ 43,750	\$	81,250	\$125,000	\$ 15,000	\$	10,000	\$25,000	\$	150,000
Greene Lake	\$ 82,250	\$	152,750	\$235,000	\$ 39,000	\$	26,000	\$65,000	\$	300,000
Shady Grove	\$ 89,250	\$	165,750	\$255,000	\$ 18,000	\$	12,000	\$30,000	\$	285,000
	\$ 131,250	\$	243,750	\$ 990,000	\$ 15,000	\$	10,000	\$ 25,000	\$	1,135,000



### Attachment 13 - FCC Form 477 Filing Summary (last two)

(RETAIN FOR YOUR RECORDS)

Form 477 Filing Summary

FRN: 001#626853 Data as of: Dec 31, 2019 Operations: ILEC Submission Status: Revised - Submitted Last Upda	FRN: 0018626853	Data as of: Dec 31, 2019	Operations: ILEC	Submission Status: Revised - Submitted	Last Updated: Jun 8, 2020 15:27:55
------------------------------------------------------------------------------------------------------------	-----------------	--------------------------	------------------	----------------------------------------	------------------------------------

#### Filer Identification

Section	Question	Response
Filer Information	Company Name	CenturyLink, Inc.
	Holding Company Name	CenturyLink, Inc.
	SAC ID	160138, 170209, 190254, 190567, 210341, 220356, 230470, 230471, 230485, 240506, 250298, 259788 259789, 270434, 280458, 290552, 290557, 290567, 290574, 300630, 300661, 310671, 310689, 310702 310705, 320747, 320801, 320832, 330841, 330857, 330877, 330884, 330895, 330898, 330913, 330922 330924, 330931, 330934, 330950, 330956, 330959, 330970, 331155, 331159, 341057, 351126, 351274, 355141, 361445, 361456, 365142, 371595, 375143, 385144, 395145, 401142, 401143, 401144, 401705, 401711, 401720, 401727, 411317, 411842, 411957, 421151, 421957, 429784, 429785, 429786, 429787, 442084, 442101, 442114, 442117, 442140, 455101, 462185, 462187, 462208, 465102, 472223, 472225, 475103, 475162, 482249, 485104, 492274, 495105, 505107, 511595, 512299, 515108, 522400, 522408, 522410, 525161, 532361, 532400, 535163, 552223, 552348
	499 ID	801408, 802182, 802263, 802890, 803583, 803998, 804156, 804159, 804165, 804168, 804171, 804180 804186, 804192, 804195, 804201, 804204, 804207, 804210, 804213, 804216, 804219, 804222, 804225 804228, 804231, 804234, 804237, 804246, 804249, 804255, 804256, 805554, 805557, 805725, 806259 806260, 806262, 806263, 806265, 806274, 806277, 8070 <b>9</b> 9, 807684, 808152, 808440, 815632, 817854 817862, 817886, 818006, 820461, 820906, 820908, 820918, 822076, 822566, 822568
Data Contact Information	Data Contact Name	Robert Tice
	Data Contact Phone Number	(913) 884-1110
	Data Contact E-mail	robert.tice@centurylink.com

Emergency Operations Contact Information	Emergency Operations Name	Richard Rousselot
	Emergency Operations Phone Number	(913) 884-1108
	Emergency Operations E-mail	richard.a.rousselot@centurylink.com
Certifying Official Contact	Certifying Official Name	Stacy Hartman
Information	Certifying Official Phone Number	(720) 578-3421
	Certifying Official E-mail	stacy.hartman@centurylink.com

Fi	Form Section	File Name	Date & Time	Number of Rows
	Fixed Broadband Deployment	CTL ILEC Deployment Rev 1 7_Dec 19.csv	Jun 8, 2020 14:06:03	1463243
	Fixed Broadband Subscription	CTL ILEC Broadband Subscribership_Dec 19.csv	May 14, 2020 15:43:43	320832
	Fixed Voice Subscription	CTL Wireline Census Tracts5_Dec 19.csv	May 14, 2020 15:43:43	13851



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(RETAIN FOR YOUR RECORDS)

FRN: 0018626853 Data as of: Jun 30, 2019 Operations: ILEC

Submission Status: Original - Submitted Last Updated: Sep 3, 2019 22:06:42

#### Filer .....

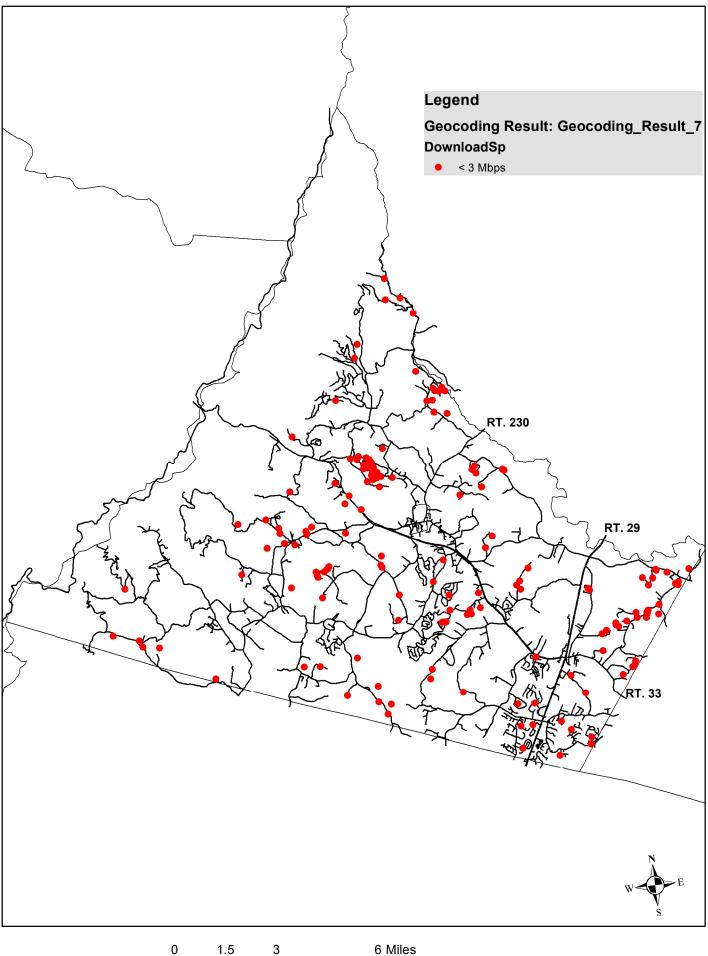
Id	entification	

Section	Question	Response
Filer Information	Company Name	CenturyLink, Inc.
	Holding Company Name	CenturyLink, Inc.
	SAC ID	160138, 170209, 190254, 190567, 210341, 220356, 230470, 230471, 230485, 240506, 250298, 259788, 259789, 270434, 280458, 290552, 290557, 290567, 290574, 300630, 300661, 310671, 310689, 310702, 310705, 320747, 320801, 320832, 330841, 330857, 330877, 330884, 330895, 330898, 330913, 330922, 330924, 330931, 330934, 330950, 330956, 330959, 330970, 331155, 331159, 341057, 351126, 351274, 355141, 361445, 361456, 365142, 371595, 375143, 385144, 395145, 401142, 401143, 401144, 401705, 401711, 401720, 401727, 411317, 411842, 411957, 421151, 421957, 429784, 429785, 429786, 429787, 442084, 442101, 442114, 442117, 442140, 455101, 462185, 462187, 462208, 465102, 472223, 472225, 475103, 475162, 482249, 485104, 492274, 495105, 505107, 511595, 512299, 515108, 522400, 522408, 522410, 525161, 532361, 532400, 535163, 552223, 552348
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Data Contact Information	Data Contact Name	Robert Tice
	Data Contact Phone Number	(913) 353-7069
	Data Contact E-mail	robert.tice@centurylink.com

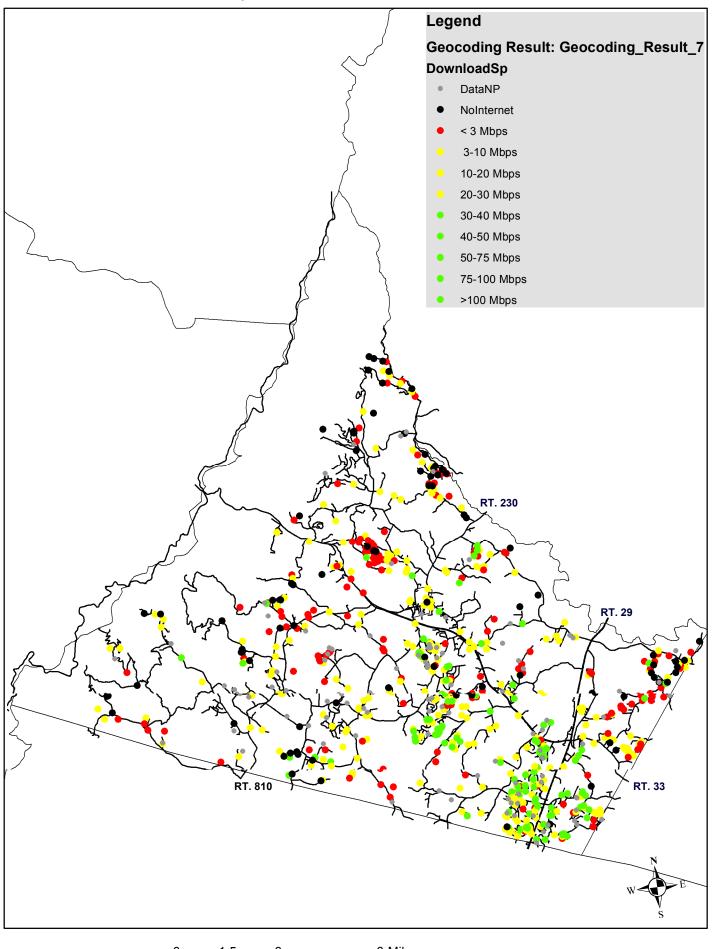
Emergency Operations Contact Information	Emergency Operations Name	Richard Rousselot
	Emergency Operations Phone Number	(913) 353-7066
	Emergency Operations E-mail	richard.a.rousselot@centurylink.com
Certifying Official Contact	Certifying Official Name	Stacy Hartman
Information	Certifying Official Phone Number	(720) 578-3421
	Certifying Official E-mail	stacy.hartman@centurylink.com

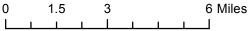
Data Submitted	Form Section	File Name	Date & Time	Number of Rows
	Fixed Broadband Deployment	CTL ILEC Deployment File 7v3_Jun 19.csv	Sep 3, 2019 21:41:22	61785
		CTL ILEC Deployment File 6v3_Jun 19.csv	Sep 3, 2019 21:12:56	249997
		CTL ILEC Deployment File 5v3_Jun 19.csv	Sep 3, 2019 20:22:17	249999
		CTL ILEC Deployment File 4v3_Jun 19.csv	Sep 3, 2019 19:04:36	249999
		CTL ILEC Deployment File 3v3_Jun 19.csv	Sep 3, 2019 19:03:51	249999
		CTL ILEC Deployment File 2v3_Jun 19.csv	Sep 3, 2019 18:07:05	249997
		CTL ILEC Deployment File 1v3_Jun 19.csv	Sep 3, 2019 16:50:00	249984
	Fixed Broadband Subscription	CTL ILEC Broadband Subscribership_Jun 19_v2.csv	Aug 27, 2019 12:02:49	292177
	Fixed Voice Subscription	CTL Wireline Census Tracts5_Jun 19.csv	Aug 21, 2019 12:21:37	13871

Survey Results: Download Speed Less than 3Mbps



## Survey Results: Download Speed





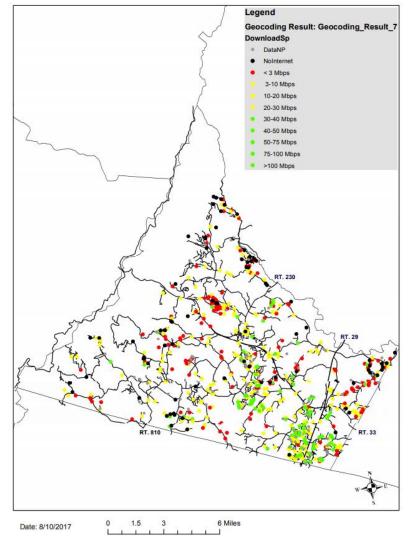
# Greene County 2021 VATI Stanardsville

**Greene County & CenturyLink** 

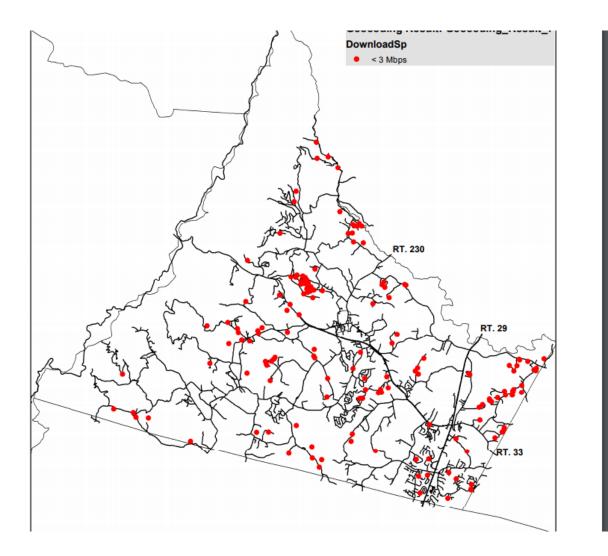
# Summary of Projects

Greene County VATI 2021														
Project			Capital Costs					Passings			VATI			
									Living	Сс	st/ Living	VATI Grant	VATI	VATI
Project	Exchange	Slide		ISP		OSP		Total	units		Unit	Amount	Cost/LU	Grant %
Amicus	Stanardsville	7	\$	25,000	\$	375,000	\$	400,000	195	\$	2,051	\$339,966	\$1,743	85.0%
Advance Mills Rd	Stanardsville	8	\$	25,000	\$	125,000	\$	150,000	75	\$	2,000	\$124,638	\$1,662	83.1%
Greene Lake	Stanardsville	9	\$	65,000	\$	235,000	\$	300,000	209	\$	1,435	\$167,209	\$800	55.7%
Shady Grove	Stanardsville	10	\$	30,000	\$	255,000	\$	285,000	119	\$	2,395	\$161,057	\$1,353	56.5%
Total			\$	145,000	\$	990,000	\$	1,135,000	598	\$	1,897.99	\$792,870	\$1,326	69.9%

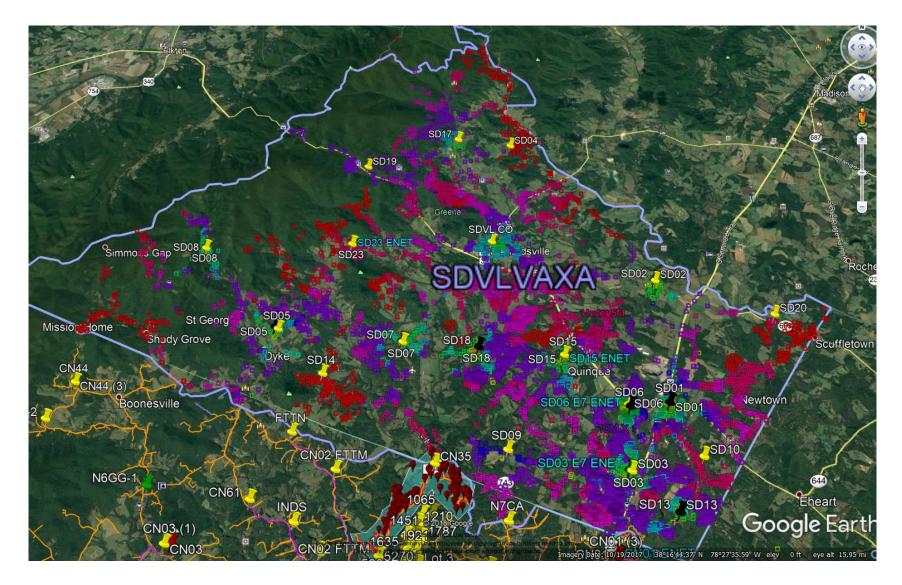
# **County Provided Map**



# **County Provided Map**



## CenturyLink - Greene County Exchange



# **Projects for Consideration**

## Amicus / Celt Road (FTTH)

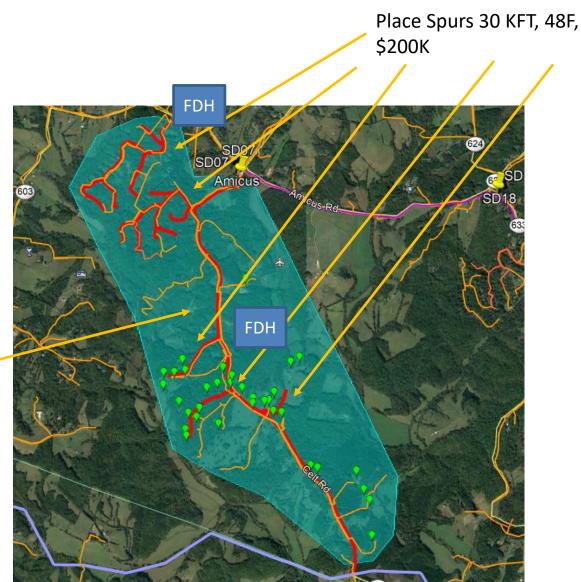
\$400K \$2,051/ 1G LU

195 – 1G Estimate 160 drops < 650 Ft.; 25 between 650 & 1,500; 10 > 1,500 Feet

Place 18 KFT, 96F, \$125K (Celt)

SD07 Place E7 GPON \$25K

Place 2 FDHs & 90 MDTS, \$50K



## Advance Mills Road Area (FTTH)

Place Spurs 7.5 KFT, 48F, \$50K

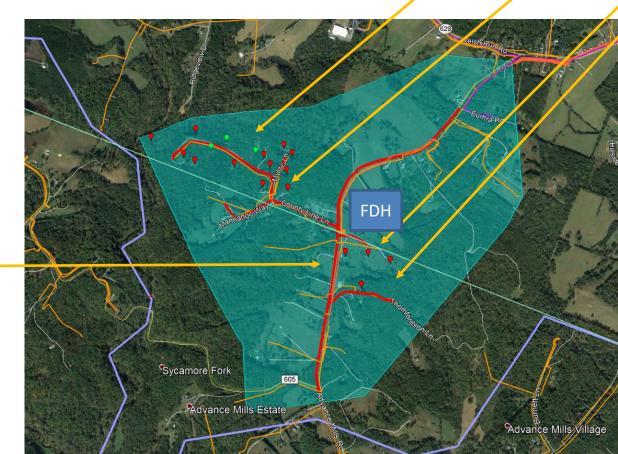
\$150K \$2,000/ 1G LU

75 – 1G Estimate 50 drops < 650 Ft.; 15 between 650 & 1,500; 10 > 1,500 Feet

Place 7 KFT, 96F, \$50K

SD09 Place E7 GPON \$25K

Place 1 FDH & 90 MDTS, \$25K



## Greene Lake (FTTH)

\$300K \$1,435/ 1G LU

Place Spurs 2.5, 2.0 (2), 1.5 & 1 (6) KFT, 48F, \$95K

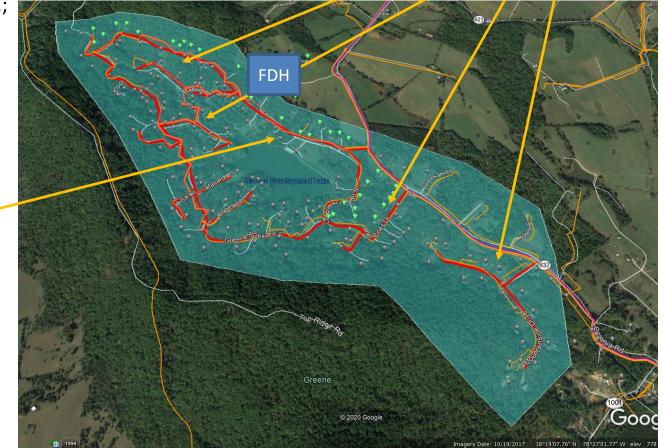
### 205 – 1G

Estimate 165 drops < 650 Ft.; 25 between 650 & 1,500; 15 > 1,500 Feet

Place 15 KFT, 96F, \$100K

Place ODC-200 E7 GPON \$65K

Place 1 FDH & 70 MDTS, \$40K



### Place 1 FDHs & 70 MDTS, \$40K

Place 22 KFT, 96F, \$135K

Place GPON in SD05 E7 or

SD12 DISCS, \$30K

Estimate 70 drops < 650 Ft.; 30 between 650 & 1,500; 19 > 1,500 Feet

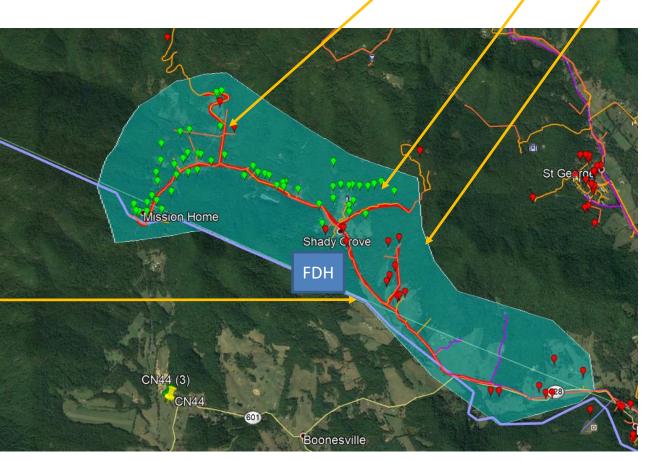
\$285K

119 - 1G

\$2,395/ 1G LU

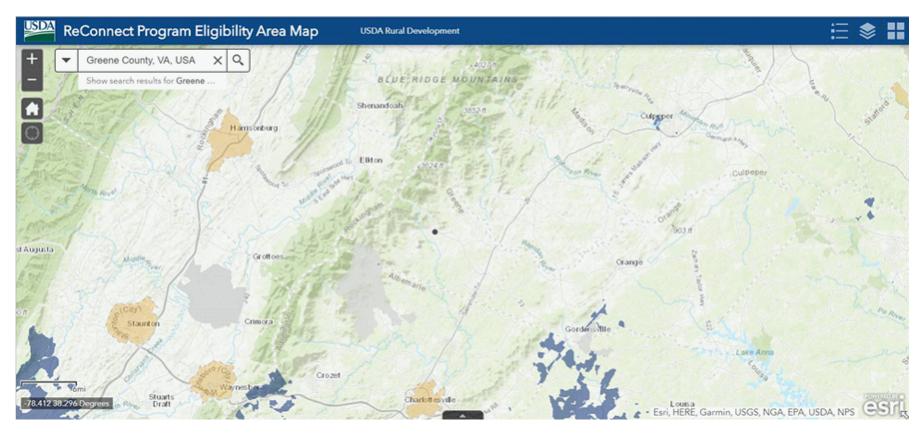
## Shady Grove (FTTH)

Place Spurs 2.5, 3.5 & 5 KFT, 48F, \$80K



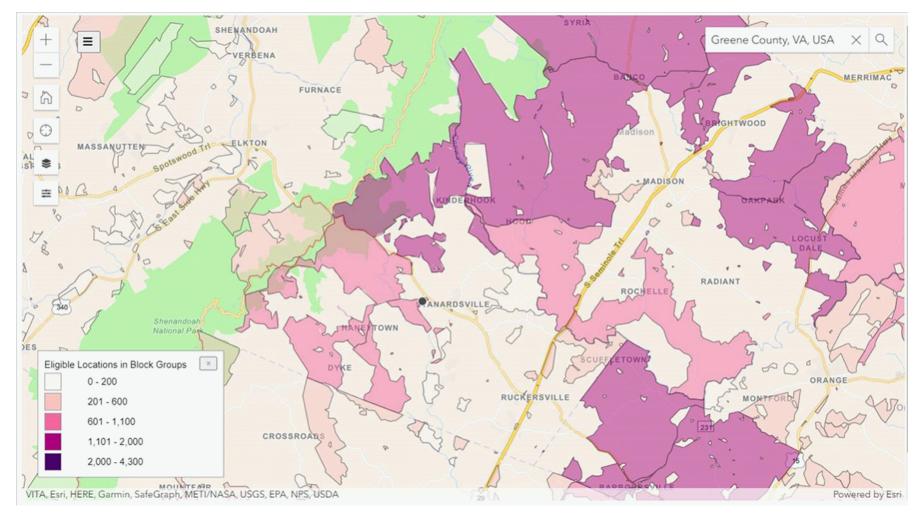
# Federal Broadband Map

## USDA - CAFII Auction and ReConnect Map



Source: http://ruraldevelopment.maps.arcgis.com/apps/webappviewer/index.html?id=51bbfce8e72549dcb5374d0aa32e1736

# RDOF Eligible Map - Greene County



Source: https://www.fcc.gov/reports-research/maps/auction-904-updated-jun20-eligible-areas/

Business Name	Street Address	City	State
A Healthy Lifestyle	3117 Simmons Gap Rd	Free Union	VA
AK Pest Control	1234 Greene Acres Rd N	Stanardsville	VA
All Seasons Services	3400 Advance Mills Rd	Ruckersville	VA
Amish Mennonite Aid	8916 Mission Home Rd	Free Union	VA
Ancient Free & Accepted Masons of Virginia	400 Mountainside Dr	Stanardsville	VA
Anderson Enterprises Llc., T.	344 High Ridge Rd	Stanardsville	VA
Angela Renee Sullivan	7420 Celt Rd	Stanardsville	VA
Auto MD	1367 Celt Rd	Stanardsville	VA
Balguard Roofing	8525 Mission Home Rd	Free Union	VA
Barnahill Tree Farm, LLC	6653 Celt Rd	Stanardsville	VA
Briarleigh Cabin LLC	2137 Simmons Gap Rd	Dyke	VA
Byers Builders	8655 Mission Home Rd	Free Union	VA
Clinedinst Consulting LLC	23 Lisa Ln	Stanardsville	VA
Cloverdale Studio	400 Mountainside Dr	Stanardsville	VA
Columbia Gas Transmission, LLC	2567 Celt Rd	Stanardsville	VA
Comfort Source, LLC	1512 County Line Ln	Ruckersville	VA
Creative Spark Productions LLC	258 Summerfields Ln	Ruckersville	VA
Data Buildr LLC	109 Mallard Ln	Stanardsville	VA
Duprey Contractors Inc	375 Summerfields Ln	Ruckersville	VA
Edenali Inc	212 Springbranch Trl	Stanardsville	VA
Eugene Schlabach	8527 Mission Home Rd	Free Union	VA
Evrhrd Racing, Inc.	3439 Advance Mills Rd	Ruckersville	VA
Faith Mission Home	8239 Mission Home Rd	Free Union	VA
Faith Mission Home School	3540 Mission Home Ln	Free Union	VA
Figure Eight LLC	371 High Ridge Rd	Stanardsville	VA
Force	1103 Greene Acres Rd N	Stanardsville	VA
Galen Lynn Morris	255 Springbranch Trl	Stanardsville	VA
Garretts Trucking LLC	157 Roberts Ln	Stanardsville	VA
Harvest Builders, LLC	3645 Advance Mills Rd	Ruckersville	VA
Hometown Collectables	3754 Simmons Gap Rd	Free Union	VA
International Community	224 Mulberry Dr	Stanardsville	VA
lssr	186 Springbranch Trl	Stanardsville	VA
Ivy Creek Construction, L.L.C.	4049 Simmons Gap Rd	Free Union	VA
Jacobs	5993 Advance Mills Rd	Ruckersville	VA
James B Kiracofe	1852 Thomfordson Ln	Ruckersville	VA
Jevons Appliance Repair	3540 Mission Home Ln	Free Union	VA
Jumping N2 Fun	296 High View Rd	Stanardsville	VA
Key Family Real Estate LLC	972 Greene Acres Rd N	Stanardsville	VA
Lane Shady Family Farm	159 Shady Ln	Free Union	VA
Little Mountain Estates Owners' Association, Inc.	308 Mountainside Dr	Stanardsville	VA
Lotus White Eco Spa	131 Mulberry Dr	Stanardsville	VA
Lotus White Retreat LLC	224 Mulberry Dr	Stanardsville	VA
M & M Custom Designs LLC	48 Mountain Crest Dr	Stanardsville	VA

Matthew C Gibson	1349 Celt Rd	Stanardsville	VA
Montgomery Upholstery	109 Mallard Ln	Stanardsville	VA
Mount Zion Baptist Church	6045 Advance Mills Rd	Ruckersville	VA
On Sight Optical LLC	912 Greene Acres Rd S	Stanardsville	VA
Personalized Children's Books	912 Greene Acres Rd S	Stanardsville	VA
Piedmont Development Associates Limited	1571 Celt Rd	Stanardsville	VA
Proof To Press Graphics and Printing Services, Inc.	458 Riverdale Rd	Stanardsville	VA
Riverbank Appraisal	242 Brokenback Mtn Rd	Free Union	VA
Robert W Cantrell Jr	1761 Meadowview Ln	Ruckersville	VA
Rwc Land Services, LLC	6115 Advance Mills Rd	Ruckersville	VA
S and S Services	3884 Simmons Gap Rd	Free Union	VA
Still Pond Farm and Stables	115 Still Pond Rd	Stanardsville	VA
Summerfields Homeowners Association, Inc.	192 Summerfields Ln	Ruckersville	VA
Swift Run Estates Homeowners' Association	1647 County Line Ln	Ruckersville	VA
Swift Run Lawn & Landscaping	37 Mystic Ln	Ruckersville	VA
Van Derveer, David Clarke	224 Mulberry Dr	Stanardsville	VA
Vfr Enterprises, LLC	1294 County Line Ln	Ruckersville	VA
Vics Chips LLC	37 Mystic Ln	Ruckersville	VA
Wilmer Morris	406 Chapman Rd	Stanardsville	VA
Youth Development Council of Greene	159 Greene Acres Rd S	Stanardsville	VA

Postal Code	Business Type
229402254	Nonclassifiable establishments
229732561	Disinfecting and pest control services
229683210	Services, nec, nsk
229402264	Civic and social associations
229732440	Civic and social associations
229732557	Business consulting, nec, nsk
229733645	Nonclassifiable establishments
229733134	General automotive repair shops, nsk
229402233	Roofing, siding, and sheetmetal work, nsk
229733638	Timber tracts
229351115	Nonclassifiable establishments
229402234	Single-family housing construction, nsk
229732528	Business consulting, nec, nsk
229732440	Miscellaneous personal services, nec, nsk
229733143	Natural gas transmission
229681530	Business services, nec, nsk
229683234	Motion picture and video production, nsk
229732530	Nonclassifiable establishments
229683233	Electrical work, nsk
229733557	Business services, nec, nsk
229402233	Single-family housing construction, nsk
229683210	Racing, including track operation, nsk
229402232	Bread, cake, and related products
229401505	Residential care
229732557	Physical fitness facilities
	Nonclassifiable establishments
	Nonclassifiable establishments
	Local trucking, without storage, nsk
	Single-family housing construction, nsk
	Miscellaneous retail stores, nec, nsk
	Membership organizations, nec, nsk
	Business services, nec, nsk
	Single-family housing construction, nsk
	Engineering services, nsk
	Repair services, nec, nsk
	Equipment rental and leasing, nec
	Real estate agents and managers
	General farms, primarily crop
	Membership organizations, nec, nsk
	Miscellaneous personal services, nec, nsk
	Nonclassifiable establishments
229733572	Business services, nec, nsk

229733134	Lawn and garden services
229732530	Reupholstery and furniture repair, nsk
229681517	Religious organizations
229732523	Optical goods stores
229732523	Book stores
229733136	Management consulting services
229733556	Commercial art and graphic design
229402239	Real estate agents and managers
229681525	Nonclassifiable establishments
229681516	Subdividers and developers, nec
229402249	Business services, nec, nsk
229733627	Animal specialty services
229683232	Civic and social associations
229681527	Civic and social associations
229681512	Landscape counseling and planning, nsk
229733550	Business services, nec, nsk
229681526	Eating places
229681512	Nonclassifiable establishments
229733603	Painting and paper hanging
229732556	Nonclassifiable establishments

VATI 2021 Classiciation	
Community Anchor	
Community Anchor	
Business	
Community Anchor	
Community Anchor	
Business	

Non-Residential

### **Greene County Broadband Plan**

### **Greene County Broadband Initiative Mission Statement**

The mission of the Greene County Broadband Initiative is to study, recommend and support broadband development initiatives with the goal of bringing broadband access to all residents, students, businesses and visitors in Greene County in the most costeffective, equitable, minimum risk, high quality and expedient manner possible.

The Broadband Initiative's primary objectives are as follows:

- Plan and promote access to a robust network of broadband service Identify and develop elements necessary for a comprehensive community broadband network
- Assess current broadband availability and usage
- Anticipate and forecast future demands
- Address the relationship of broadband coverage and community development in the County to the larger regional wireless and telecommunications networks and infrastructure
- Expand broadband service to the County's anchor institutions such as schools, medical facilities, judicial and law enforcement agencies, and all government buildings
- Work with the emergency operations community to ensure every first responder has access to a quality wireless, interoperable broadband public safety network

The Broadband Initiative Committee's purpose is further stated below:

Greene County is aware of the need for broadband access crosses many different paths in Greene County. Whether it be education, public safety, medical services, agriculture, business, tourism, or local government, to name a few, all of these sectors of our community must rely on a seamless, robust communications network to provide their valuable services.

Greene County Broadband Committees action plan.

1) The committee will be host a series of community forums to discuss the broadband initiative and allow for our residents and businesses to share

valuable experience and perspective about the need for enhancements to broadband access in Greene County.

- 2) Compile detailed inventory of towers and other existing communications infrastructure.
- 3) Create and conduct periodic Countywide broadband surveys to determine true internet speed and identify areas lacking coverage
- 4) Work with the CIT (Center for Innovative Technology) to review current coverage, demand, assets, needs, and local policies CIT provided recommendations for next steps.
- 5) Present findings and recommendations to the Greene County Board of Supervisors

The Greene County Board of Supervisors has authorized the Broadband Committee to pursue the following goals:

Develop a broadband implementation plan with specific attention to the County's anchor institutions such as schools, medical facilities, judicial and law enforcement agencies, and all government buildings.

In collaboration with the Emergency Services Communication upgrades, utilize new and /or existing towers and fiber infrastructure to make improvements to the following priorities:

- Emergency Services Communication
- Third party ISP providers
- Third party Cellular providers

Encourage Internet Service Provider (ISP) to invest in providing all residents/businesses with at least 25 megabits of reliable, high-speed broadband access.

Review and update as needed the tower regulations in the Greene County Zoning Ordinance to allow a more streamlined process for situating tower while protecting the aesthetic view sheds.

Explore with and assist developers with plans to provide broadband infrastructure in all new residential and business developments.

Pursue grant and partnership opportunities to support broadband development initiatives.