

Application to DHCD Submitted through CAMS

Albemarle Broadband Authority

Albemarle Broadband Authority CenturyLink VATI 2021

Application ID: 75706222020164956
Application Status: Pending
Program Name: Virginia Telecommunications Initiative 2021
Organization Name: Albemarle Broadband Authority
Organization Address: 401 Mcintire Road
Charlottesville, VA 22902
Profile Manager Name: Michael Culp
Profile Manager Phone: (434) 296-5891
Profile Manager Email: mculp@albemarle.org

Project Name: Albemarle Broadband Authority CenturyLink VATI 2021
Project Contact Name: Michael Culp
Project Contact Phone: (434) 296-5891
Project Contact Email: mculp@albemarle.org
Project Location: 3666 Taylors Gate Drive
Charlottesville, VA 22903-8001

Project Service Area: Albemarle County

Total Requested Amount: \$3,676,566.00
Required Annual Audit Status: Accepted

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Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	\$3,676,566.00	\$2,032,224.00	\$5,708,790.00
Other: Fiber Costs	\$3,413,966.00	\$1,890,824.00	\$5,304,790.00
Other: Electronics	\$262,600.00	\$141,400.00	\$404,000.00
Total:	\$3,676,566.00	\$2,032,224.00	\$5,708,790.00

Budget Narrative:

The total project cost is \$5,708,790. CenturyLink is contributing 24.4%, \$1,392,224. ABBA is contributing 11.2%, \$640,000 for a combined "Other Funding" total of \$2,032,224. The remaining 64.4%, \$3,676,566 is being requested from DHCD. 2,322 Serviceable units for the project. The ABBA Contribution of \$640,000 is included in the Other Funding column; ABBA will be invoiced by CenturyLink on a prescribed basis. The Albemarle County Board of Supervisors lists the expansion of Broadband to the rural areas as one of its Strategic Priorities. As such, the County has dedicated staff time to these efforts; the broadband work is considered part of the expected staff accomplishments. CenturyLink costs include their 24.4% of the total cost including labor (network design, etc.); equipment, and approximately 120.2 miles of fiber cable. Enabling Fiber Gigabit for 11 sections of unserved areas of the County. The 11 sections are Boonesville, Gilbert Station Road, Jones Mill Road, Campbell/ Cobham, Snow Hill Lane, Jarmans Gap Bucks Elbow, Milton Hills, Box Holly / Taylors Gap, Advance Mills / Fray Road, Tilman Road / Meriweather Hill, and Old Garth Heights. This project provides for the placement of at least nineteen (19) Fiber Distribution Huts, 17 FTTP/GPON switches, 1,500 Fiber Distribution Pedestals and approximately 120 miles of fiber cable in Albemarle County to bring fiber based broadband services to 2,322 serviceable units. With the ABBA contribution; our calculations indicate a cost to VATI of \$1,583 per serviceable unit. As is industry standard, customers subscribing to Fiber Gigabit will be able to get speeds up to 940Mbps while uploading or downloading data in the unserved sections noted where approximately 33% of them have no broadband service at all today and 71% have no access to speeds greater than 10M. There is a detailed summary of infrastructure as part of optional Attachment 14 - ABBA CenturyLink Project Summary.

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 project area and all sections were selected through intensive engagement activities with residents, Albemarle County Public Schools (ACPS) and existing ISPs. Each section is considered unserved and a high priority for ACPS and the Albemarle Broadband Authority's planning. The project is an extension of existing CenturyLink fiber work and will commence in coordination with other fiber to the home work in progress. Our broadband survey tool is available 7 by 24/365. It has been actively used since a re-release with automated speed test

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collection and a Spanish language version. During the period between March 2020 and August 2020; more than 200 reports in the project areas demonstrated speeds of no more than 8 mbps down, with most reports showing speeds of less than 3 mbps down. Most of the respondents reporting struggling with reliability and data caps on wireless providers and have given up on the satellite offerings available to them. Our analysis of the data entered, combined with consistent messaging with residents helped us develop our proposed project area map. The map was then distributed via an RFI and RFP process which included multiple virtual meetings with ISPs. CenturyLink reviewed the areas and worked with us to post a Notice of Intent to Apply with all Census Blocks included. The Albemarle Broadband Authority (ABBA) approved applying for the 11 areas proposed.

There are 11 sections of the project area. They are all rural areas of the County. The residents in each area are working with ABBA, providing data in meetings or through the ABBA data reporting tool. All have had significant difficulty receiving responses for request for service from Comcast, SCS (where applicable), Shentel, Lumos, and others. This new project is a fiber to the home project supporting ABBA's goals.

The project area sections are:

Boonesville : In the northwest part of the County, following Brown's Gap Turnpike through Doylesville to Blackwell's Hollow Road to Boonesville and the Greene County Border

Gilbert Station Rd : In the center of the County, includes 5 Forks Lane to the Norfolk Southern RR

Jones Mill Road : North of Beaver Creek Park including Beaver Ridge Road west to Bear Ridge Road

Campbell/ Cobham : This is a high priority area due to vulnerable population and number of school aged children currently without access to the internet. It includes Cismont and Cobham and other neighborhoods east of Stony Point Rd. and Gordansville Road to the Louisa County Border

Snow Hill Ln : Difficult to reach section bordering Fluvanna County, this is a small project in neighborhood on the eastern side of Albemarle

Bucks Elbow : Bordering the Skyline Drive, West of Crozet to include Jarmans Gap Road

Milton Hills : Difficult to reach section near the Rivanna River, includes Milton Hills Drive and Gables Run Road, significant number of school aged children

Box Holly / Taylors Gap : A significant project south of Interstate 64, with many neighborhoods off Dick Woods Road, all the way past the Ivy Material Utilization Center to Box Holly Road, and east along Taylors Gap Road

Advance Mills / Fray Rd : Bordering Greene County, North of Earlysville, difficult to reach until this round includes Advance Mill Village

Tilman Rd / Meriweather Hill : A small project area in Ivy, Owensville Road on the North, Rt. 250 to the Southeast, parts of this neighborhood have service, this is a project to continue to serve residents

Old Garth Heights : Another small project area included in this year's request, close to Charlottesville, yet difficult to reach until this year's request.

Specific details about each section of the project and related infrastructure for each is provided in Attachment 1 - Project Area Map; it includes placement of infrastructure, residential serviceable units, and the number of school aged children per section.

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 Albemarle Broadband Authority (ABBA) and CenturyLink conducted extensive outreach, including issuance of an RFI, then an RFP, and considerable outreach by email and phone about the areas both before and after

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posting the census blocks and access to the ABBA map in the VATI notice of intent to apply. ABBA provides a data collection tool with feedback loops where citizens report lack of broadband service, the most recent version (available from the ABBA website <https://broadbandsurvey.k12albemarle.org/>) was completed in collaboration with the school division and automatically collects speed test data for time phased analysis. ABBA refers to the I3 connectivity explorer (<https://internet-is-infrastructure.org/>); the broadbandusa and ESRI broadband availability App (<https://broadbandusa.maps.arcgis.com/apps/webappviewer/index.html?id=39dc6d41b49d420e94aef77c441f8af2>) broadbandnow.com maps, USDA ReConnect maps, and FCC CAF 2 maps to determine coverage; then follows up with requests to service providers asking for service availability. ABBA also mapped each selected area and sent the map sets to SCS, Comcast, HighspeedLink, Lumos, CenturyLink, CVEC/Firefly, Shentel and others to determine serviceability. The only service provider with consistent speeds near but below the VATI threshold is CenturyLink. CenturyLink created the project maps and infrastructure maps in Attachment 1 Project Area Map as a result. A Comcast estimated coverage map is included in Attachment 3 – Documentation Unserved Area VATI Criteria. Comcast doesn't serve any of the sections in the project area. All providers were asked to comment on our original maps. Comcast was the only provider to ask to remove sections, and after verifying service availability we adjusted the sections.

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:

ReConnect funds were offered to CVEC/FireFly for only a portion of one of the proposed project areas, Boonesville. CVEC/FireFly was invited to all meetings to indicate concerns about potential overlap including the potential overlap in the Boonesville project area, as this is the only project area where the potential for a 10% overlap may result. The potential for overlap will not be known until after CVEC/FireFly completes the design for the area.

In late spring of 2020, ABBA released an RFI and a subsequent RFP both identifying the Boonesville project as a priority need. Followup calls and emails about the proposed project did not result in a concern raised by CVEC/FireFly only that this area is considered well past the VATI 2021 timeline. It is important to note that both CenturyLink and Comcast commented on other priority areas; as a result ABBA confirmed coverage and removed the contested areas from the proposed projects. CVEC/FireFly had this same opportunity and did not request any adjustments.

In summary, the Boonesville project area is the only impacted area which was offered funds by the federal programs; we researched this through the FCC and USDA websites. Similar to most of rural Virginia, there are RDOF eligible census blocks. CenturyLink has confirmed that no company accepted CAFII auction (as illustrated in Attachment 2). CenturyLink is the ILEC for this area and no funding was awarded to deploy broadband for this area under the CAFII program. See Attachment 2 - Documentation on Federal Funding Area.

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 –

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Documentation Unserved Area VATI Criteria.

Answer:

Our project area is unserved as each of the 11 sections are in rural parts of the County where current speeds are less than 10 Mbps Down / 1 Mbps Up. We used a combination of the FCC Maps, USDA Reconnect Maps, BroadbandNow.com, and the citizen broadband reports we collected to determine this. For each citizen broadband report we received we followed up with the citizen(s) inquiring if they had checked with other providers.

There is no service overlap with Comcast and the other wireline providers.

In all 11 of our project area sections we presented the detailed maps to the incumbent providers. ABBA conducted phone calls, held virtual meetings to discuss and display the proposed areas, traded e-mails, and none of the providers indicated service coverage at 10% for the CenturyLink Project Areas. See Attachment 3 – Documentation Unserved Area VATI Criteria.

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:

2,322 total serviceable units with the total and tables for each of the 11 project areas are included in Attachment 4 - Passings Form.

1,654 of the passings are at 10/1 or less.

- 0 Mbpps (no DSL) 246 passings or 11%
- 3 Mbps or less 1056 passings or 45%
- Less than 10/1 1654 passings or 71%
- Equal to or Greater than 10/1 but less than 25/3 668 or 29%

Total Passings:2,322

The analysis was completed through review of CenturyLink internal systems to determine existing speeds through measurement from the nearest serving electronics.

Passings Summary Table

Type of Passings – <i>Total Project</i>	Total Number in all 11 Project Areas	Number with Speeds at 10/1 or below in all 11 Project Areas
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Residential	2,313	1,648
Businesses (non-home based)		
Businesses (home-based)	568	405
Community Anchors	9	6
Non-residential		
Total Number of Passings	2,322	1,654

Please see Attachment 4 - Passings Form for detailed numbers for each of the 11 project areas.

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 a 100% fiber to the home 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: Download and Upload Speeds: All locations will have access to CenturyLink's Fiber Gigabit service, which 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

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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.

We are working toward other opportunities for digital equity for this project; working with the school division to consider credits and other creative options.

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 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:

Much of the detail for the network design is included in optional Attachment 14 ABBA CenturyLink VATI 2021 Project Summary. The following table provides the new electronics and fiber to be installed for each project and the number of living units served. Please see the optional Attachment 14 as it contains additional detail.

Project	Unit s	FHDs	MDTs	New E7s (GPON Electroni cs)	Fiber Footage	Fiber Mileag e
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Box Holly / Taylors Gap	361	3	240	2	112,100	21.2
Campbell/ Cobham	1,232	6	821	6	284,000	53.8
Milton Hills	75	1	38	1	21,500	4.1
Old Garth Heights	7	1	2	0	3,000	0.6
Snow Hill Ln	68	1	35	0	13,000	2.5
Tilman Rd / Meriweather Hill	51	1	26	0	18,000	3.4
Advance Mills / Fray Rd	125	2	80	1	38,000	7.2
Boonesville	246	2	160	1	79,000	15.0
Gilbert Station Rd	46	1	24	1	16,500	3.1
Bucks Elbow	48	1	32	0	27,000	5.1
Jones Mill Road	63	1	42	0	22,500	4.3
Total	2,322	20	1,500	12	634,600	120.2

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:

This project has passed engineering and financial commit stages and is approaching final design. Attachment 6 – Timeline/Project Management Plan is included and identifies all tasks, staffing, contracting work, with estimated start and completion dates.

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A formal partnership between ABBA and CenturyLink is signed. The MOU is included in Attachment 7 – MOU/MOA between applicant/co-applicant. A similar agreement was used in the prior VATI applications with CenturyLink and Albemarle County and a formal agreement was signed after the grant was approved. This agreement is included for reference in Attachment 7 – MOU/MOA between applicant/co-applicant.

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 ABBA 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.

CenturyLink’s obligations are to implement the work tasks identified in the project plan. The specific initial tasks include project engineering and right of way preparation. CenturyLink may need to obtain the necessary permits/easements from various entities/agencies to place facilities in the VDOT right of way or other properties and will need support from the County in ensuring that necessary power supplies are coordinated and installed with the local electric company. ABBA will assist in obtaining these permits/easements and power supplies expeditiously. This coordination will need to begin immediately upon notice of the grant award. Material procurement and some pre-construction work will occur during this period and will enable CenturyLink to proceed with actual construction as soon as permit/easement issues are obtained.

CenturyLink anticipates completing the project within 12 months after contract execution between the County and DHCD. As contemplated by the 2021 VATI guidelines, CenturyLink may request an extension if it encounters permitting or other circumstances beyond its control which may delay the project timeline. Activation of all HFC plant will be completed by both in-house CenturyLink employees and select contract personnel. The final quality control inspection of all new infrastructure will be completed by CenturyLink employees to ensure all new construction meets or exceeds FCC standards. A notice of service availability will be provided not later than 20 days prior to the completion date

Attachment 10 – Letters of Support contains a small subset of letters of support collected by email from the residents and partners supporting the efforts in the proposed project areas.

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;

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Attachment 9 – Documentation of Match Funding.

Answer:

Attachment 8 - Funding Sources Table and Attachment 9 - Documentation of Match Funding are completed and included in the attachments section. Cost estimates are documented supporting the proposed budget.

CenturyLink is investing \$1,392,224.00 in cash to the project as co-applicant. ABBA is providing \$640,000.00 in cash to supplement the request from VATI for \$3,676,566.00. Bringing the total estimated project cost to \$5,708,790.00. The co-applicants match percentage of 35.6% exceeds the minimum 20% match.

The matching funds invested by CenturyLink are listed in Attachment 8 - Funding Sources Table. Those funds include all of the costs for the project, including all of the planning, engineering, 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.

Attachment 14 - ABBA CenturyLink Project Summary documents the cost estimates per section of the project area. Details of the fiber placement and electronic placement are identified with estimated costs.

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

Answer:

Beyond the leverage of using County resources and support for easements and working with VDOT, residents, and the power companies; the co-applicants plan to leverage strong relationships to provide distance learning and workforce training working with the Albemarle County Public Schools (ACPS), Piedmont Virginia Community College (PVCC), University of Virginia (UVA), and the Jefferson-Madison Regional Library (JMRL) Systems. We will also leverage support from our longstanding working relationship with the Thomas Jefferson Planning District Commission. All of these groups provided support for the application. In addition the Albemarle County Board of Supervisors appropriated \$640,000 in support of the program coupled with dedicated time of at least 3 County staff to work on the resulting project. Our Office of Equity and Inclusion will partner with us and provide support for the LatinX and other ethnic populations in the County to ensure that we reach all communities in our ongoing efforts.

We are also leveraging existing resources which continue work on the VATI 2020 CenturyLink project for fiber to the home in Albemarle. The meeting formats, documents created, ideas and questions raised by the residents and businesses for that project will be important assets for this new project and continue the ABBA goal for universal coverage.

Attachment 10 Letters of Support provide examples of how the partners listed intend to continue to work with ABBA to promote broadband, distance learning, and to address digital equity.

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.

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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:

The projected take rate for this project area is 50% within one year of project completion. 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 its 2017/2018VATI project with Albemarle County, where the overall take rate is 73%.

The actions the co-applicants will take to reach the identified potential customers include frequent notices from both ABBA and CenturyLink indicating this upcoming project supported by the Virginia Telecommunication Initiative and DHCD. We will schedule at least one public meeting in or near each of the 11 sections of the project area to inform the residents about the upcoming work and answer questions. And nearer the completion of the project hold another meeting to encourage sign-ups and answer questions. Our goal is to work with partners supporting low income and other vulnerable populations and provide digital literacy opportunities as part of this effort.

The County Communication and Public Engagement Department has a detailed communication plan for VATI projects. This plan will be customized and utilized for the project; it will include an intense effort with the school division, library, UVA and PVCC to include digital equity and digital literacy efforts. Examples including the digital literacy programs for online training through the library and the Albemarle County Public Schools Online Internet Field Guide being made available for all residents in English and Spanish.

The combined plan will include scheduled press releases, radio and TV interview spots, County wide e-mail, and specific social media posts to encourage sign-ups.

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	Title	Responsibility
Emily Kilroy	Director of Communications and Public Engagement, Albemarle County	Ms. Kilroy and her team are managing the Communications Plan, working with Community Partners and the Press.

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Siri Russell	Office and Equity and Inclusion, Albemarle County	Ms. Russell is working to insure Digital Equity and Inclusion are included in our efforts; helping coordinate Digital Literacy activities
Michele Carter	Management Analyst, Albemarle County	Ms. Carter will update materials for CAMS entry and verify CenturyLink invoices for accuracy.
Mike Culp	Director of Information Technology, Albemarle County	Mr. Culp will be responsible for overall project management for the partnership. He will coordinate all activity with CenturyLink and manage administrative tasks to include invoice processing and remittances with DHCD. Working to support the Commonwealth's Goal for Universal Broadband; Coordination with ABBA.
Derek Kelly	Government Affairs Director - CenturyLink	Project Coordination – Mr. Kelly will be responsible for overall coordination of the project with ABBA. He will provide all coordination with the planning, engineering, construction, marketing, and operation teams within CenturyLink. Mr. Kelly has a history of this function in North Carolina in addition.
Heather Lee	Sr. Analyst – Public Policy – CenturyLink	Project Coordination – Ms. Lee will project manage all teams within CenturyLink to ensure reporting requirements are met. Ms. Lee is dedicated to this function for state grants across CenturyLink's footprint.

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		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 Albemarle County and has experience designing successful VATI grants in other counties.
Craig Hager	Director of Local Network - CenturyLink	Engineering & Construction – Mr. Hager oversees all construction tasks and testing in Virginia in addition to NC, MD, WV, and DC.
Bill Owens	Manager of Local Network, VA – CenturyLink	Mr. Owens has direct responsibility for managing construction and testing for this project. Mr. Owens has managed these functions for multiple VATI grants.
Willie Thompson	Construction Supervisor, VA – CenturyLink	Mr. Thompson will direct all crews for the construction and installation of fiber and equipment for this project. Mr. Thompson has managed these functions for multiple VATI grants.
Trip Stipanovich	Manager, Region Operations	Installation & Operations: Ms. Stipanovich has responsibility for all customer installation and repair for Virginia.

Albemarle County has worked with numerous state and federal agencies on many different types of Grants. Albemarle IT completed the Virginia Telecommunication Planning Initiative Grant with DCHD. Albemarle County and CenturyLink were awarded \$118,000 during the 2017 VATI and completed the project ahead of

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County and CenturyLink were awarded \$118,000 during the 2017 VATI and completed the project ahead of schedule and within budget. Albemarle County received and managed another VATI grant in 2018. Next ABBA was formed, and managed a VATI grant in 2019 and is in process with a VATI grant from 2020.

CenturyLink has extensive experience with managing grants and constructing broadband facilities in the Commonwealth and across the country. In Virginia, CenturyLink and its predecessor companies have provided voice and data services to hundreds of thousands of Virginians for decades. All of those networks were constructed and managed by CenturyLink companies. CenturyLink currently serves approximately 13 million access lines in 37 states and about 6 million high-speed Internet customers using both DSL and “Fiber to the Home” solutions. CenturyLink’s customer base ranges from rural residential customers to international Fortune 500 companies. CenturyLink is a global leader in managed hosting and cloud services and offers network and data systems management, big data analytics and IT consulting in the US and internationally.

CenturyLink also has extensive experience in managing grants. At the national level, for example, CenturyLink accepted about \$500 million in annual support from the federal Connect America Fund (CAF) to provide broadband to over 2.3 million customers in 33 states. In Virginia alone, CenturyLink accepted over \$15.7 million per year for 6 years to reach about 50,000 homes and businesses with broadband by 2020. The CAF program included annual targets, which CenturyLink has met each year in Virginia. CenturyLink also has extensive experience in state-level broadband grant programs. Beginning in 2008, CenturyLink participated in grant programs with Mid-Atlantic Broadband and the Tobacco Commission to build, operate and maintain broadband

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:

Attachment 11 – Derivation of Costs; Attachment 12 - Documentation of Supporting Cost Estimates are completed and included in the Attachment Section. A detailed budget itemizes the electronics and fiber and includes all construction costs as proposed expenses. Each service area costs are documented. Optional Attachment 16 - ABBA CenturyLink VATI 2021 Budget by Area is completed and included in the Attachment Area, this attachment breaks down the Capital Costs by Project.

The total project cost is \$5,708,790. CenturyLink is contributing 24.4%, \$1,392,224. ABBA is contributing \$640,000, 11.2% for a combined "Other Funding" total of \$2,032,224. The remaining 64.4%, \$3,676,566 is being requested from DHCD.

CenturyLink costs include their 24.4% of the total cost including labor (network design, etc.); equipment, and approximately 120.2 miles of fiber cable. Enabling Fiber Gigabit for 11 sections of unserved areas of the County. The 11 sections are Boonesville, Gilbert Station Road, Jones Mill Road, Campbell/ Cobham, Snow Hill Lane,

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Albemarle Broadband Authority

Albemarle Broadband Authority CenturyLink VATI 2021

Bucks Elbow, Milton Hills, Box Holly / Taylors Gap, Advance Mills / Fray Road, Tilman Road / Meriweather Hill, and Old Garth Heights. This project provides for the placement of at least nineteen (19) Fiber Distribution Huts, 17 FTTP/GPON switches, 1,500 Fiber Distribution Pedestals and approximately 120 miles of fiber cable in Albemarle County to bring fiber based broadband services to 2,322 serviceable units. With the ABBA contribution; our calculations indicate a cost to VATI of \$1,583 per serviceable unit. As is industry standard, customers subscribing to Fiber Gigabit will be able to get speeds up to 940Mbps while uploading or downloading data in the unserved sections noted where approximately 33% of them have no broadband service at all today and 71% have no access to speeds greater than 10M. There is a detailed summary of infrastructure as part of optional Attachment 14 - ABBA CenturyLink Project Summary.

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:
- Total VATI funding request
 - Number of serviceable units
 - Highest residential speed available in proposed project area

Answer:

- The Total VATI Funding requested is 64.4% (\$3,676,566.00) of the total project cost (\$5,708,790.00).
- There are 2,322 serviceable units total in all project areas.
- CenturyLink Fiber Gigabit (940 Mbps) is the highest residential speed available and will be offered across all project areas.

16. Commonwealth Priorities

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

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

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Answer:

This proposed project fits into our larger plan to achieve universal broadband coverage for Albemarle County and neighboring Counties. This proposed project fills many gaps in the northern rural areas of the County with opportunities to stretch further into Greene, Fluvanna, and Louisa Counties. Working with the school division, one of our combined goals is to provide quality and reliable broadband with redundancy and future proof so all Albemarle County residents and businesses benefit. Our interactive project map documents 4 other project areas not included in this application. Not only do we continue to research and find funds to meet these 4 project areas; we continue to work with residents who identify areas where service is unreliable, non-existent, or not affordable. Through the combination of funding from the Albemarle County Board of Supervisors, assistance from Albemarle County Public Schools (ACPS) and others, ongoing speed test and report gathering; we will continue to build project areas for broadband service. Not until after all areas are served with affordable and reliable broadband, will we consider our work done.

The proposed project impacts over 500 registered businesses and 9 community anchors. Impacted community anchors include the Ivy Material Utilization Center, Beaver Creek Park, Byrum Forest Reserve Park, Free Union County Day School, Mission Home, and 4 places of worships which may be able to provide outreach, access, equipment, and support services to facilitate greater use of broadband service by vulnerable populations. There are many working farms included in the project areas. Several wineries with retail sales onsite are also included. These, and the many home based businesses in the area, through the introduction of fiber broadband will have a positive economic impact. Providing broadband to these businesses allows them to compete in the global economy and include a telecommuting workforce as part of their growth plans; providing more jobs and more revenue for the County.

We have multiple partnerships involved in the proposed project. We are working with ACPS to determine the best and most appropriate way to ensure low to moderate income households in the proposed project area. We are also working together on multiple digital literacy efforts. One of the more unique partnership is the time, knowledge, and data in support of the UVA Latino Health Initiative (LHI), to achieve a better understanding of the digital divide in the Latino community of Albemarle County and the region. This is a partnership effort using broadband to extend telehealth opportunities and enable community health data collection. We also partner with the Thomas Jefferson Planning District Commission to promote regional efforts and we are working the Jefferson-Madison Regional Library System and others to support digital literacy efforts.

Addressing digital equity is a major focus for ABBA and ACPS. ACPS is successfully moving forward with a one-to-one PC for all students grades 1 through 12. Our goal is to provide distance learning in all cases and make digital literacy as an affordable opportunity for all residents. In addition ACPS invited ABBA to participate in the new ACPS Industry and Community Roundtable where we are working together to identify pathways to careers for ACPS students. Universal broadband is an important aspect of those efforts.

ABBA is also working with ACPS to determine ways to go beyond the LifeLine program as a means to offset costs to residents. 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

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-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. Thus far ABBA shared 2,322 project addresses with ACPS; there is continuing analysis underway to determine ways to reduce the costs for broadband in moderate to low income households across all 11 project areas.

ABBA supports the Commonwealth Connect efforts to bring functional universal broadband to Virginia. And we are focused on digital equity and making broadband affordable for all. We review our Broadband plan on an annual basis and submit quarterly progress reports to the Albemarle County Board of Supervisors. Attachment 16 is the most recent approved version of the Broadband plan.

ABBA is also equally concerned about and working to solve challenges identified in the most recent Commonwealth Connect 2.0. We are working to reduce cost of equipment; implement means to utilize shared infrastructure for network deployment through support of reduced or no fees for pole attachments or other sharing of infrastructure such as conduit; support waiving the cost of easements for broadband deployment; and through our ongoing broadband survey and community outreach continue filling gaps and identifying borders of coverage; and working with ISPs to focus on technologies and projects which avoid or create difficult to serve areas.

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 – XXXXXXXX
- c. Attachment 15 – XXXXXXXX
- d. Attachment 16 – XXXXXXXX
- e. Attachment 17 – XXXXXXXX

Answer:

N/A

Attachments:

Optional

Attachment16ABBACenturyLinkVATI2021BudgetbyArea816202053601.pdf

Map(s) of project area, including proposed infrastructure

Attachment1ProjectAreaMap2021816202032415.pdf

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Albemarle Broadband Authority

Albemarle Broadband Authority CenturyLink VATI 2021

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

Attachment2DocumentationofFederalFunding817202074828.pdf

Documentation that proposed project area is unserved based on VATI criteria

Attachment3DocumentationUnservedAreaVATIcriteria816202042003.pdf

Passings Form (Please use template provided)

Attachment4PassingsForm817202061642.pdf

Timeline/Project Management Plan

Attachment6TimelineProjectManagementPlan816202054626.pdf

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

Attachment7MOUbetweenCenturyLinkABBA817202064425.pdf

Funding Sources Table

Attachment8FundingSourcesTable816202043716.pdf

Documentation for match funding

Attachment9DocumentationofMatchFunding816202050020.pdf

Letters of Support

Attachment10LettersofSupport8172020124207.pdf

Derivation of Cost (Project Budget)

Attachment11DerivationofCosts816202042353.pdf

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

Attachment12DocumentationofSupportingCosts817202043747.pdf

Two most recent Form 477 submitted to FCC

Attachment13Form477FilingSummary817202025815.pdf

Application to DHCD Submitted through CAMS

Albemarle Broadband Authority

Albemarle Broadband Authority CenturyLink VATI 2021

Optional

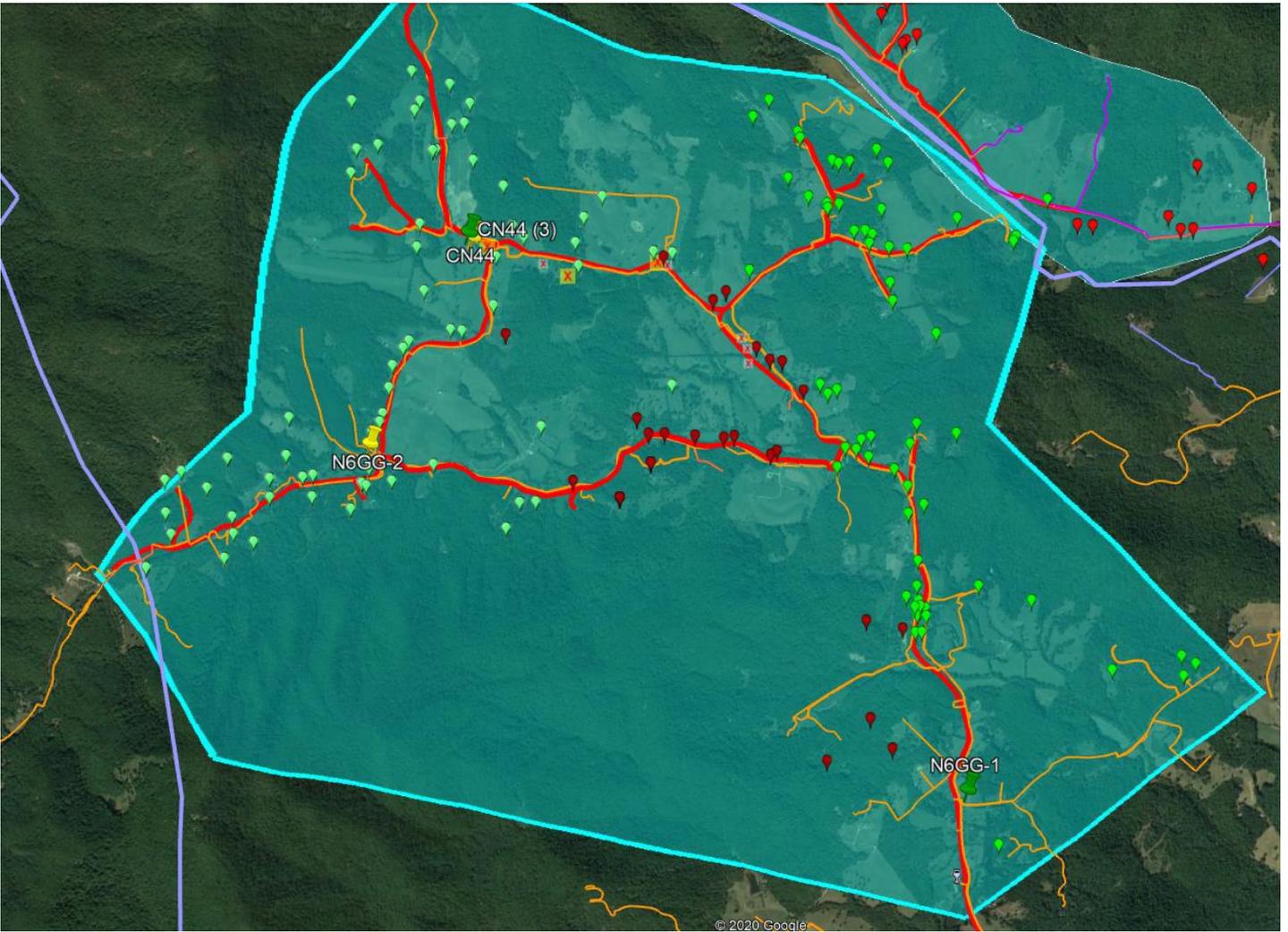
Attachment14ABBACenturyLinkVATI2021ProjectSummary817202043028.pdf

Optional

Attachment15ABBABroadbandPlanJuly2020816202051027.pdf



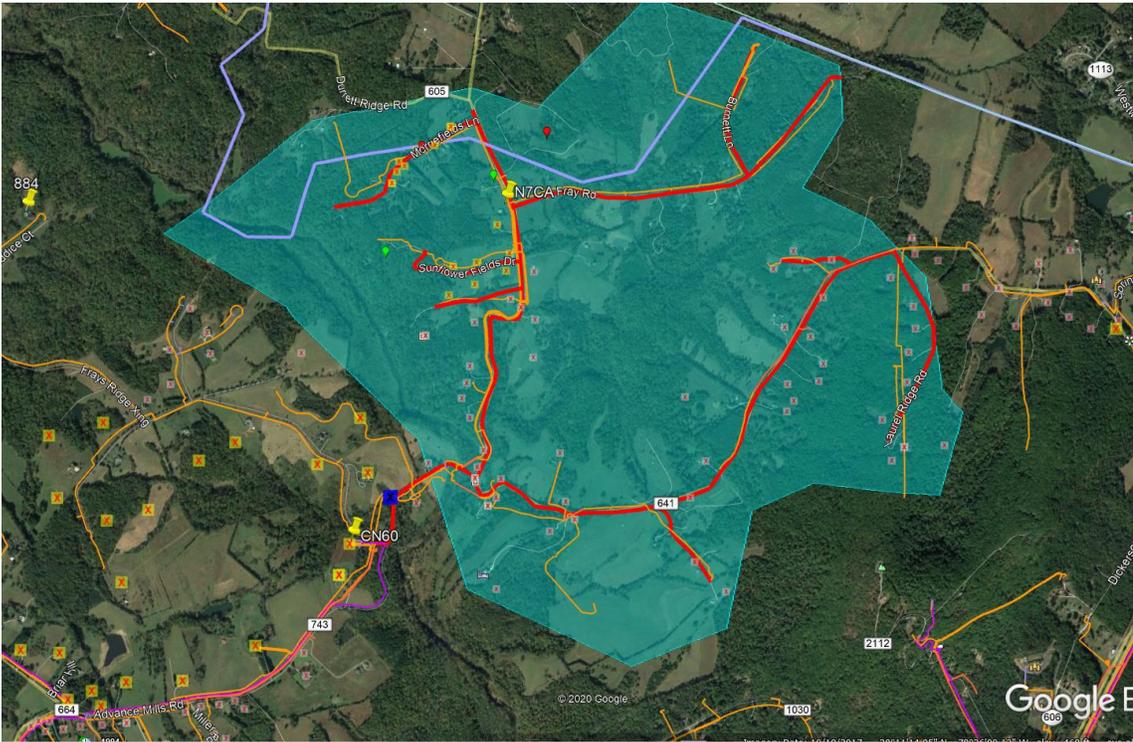
Boonesville; Maps Not to Scale



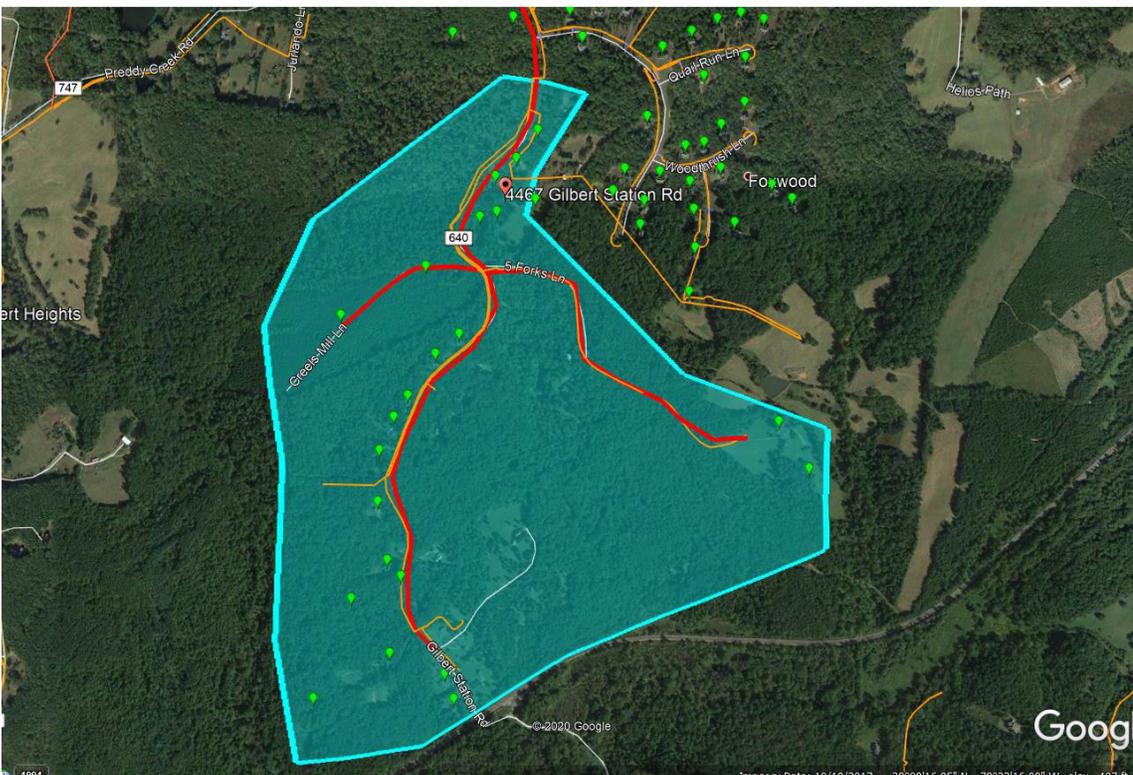


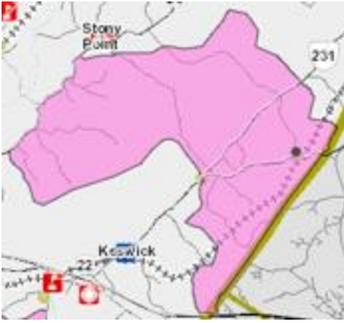
Advance Mills / Frays Road and Gilbert Station Road, Maps not to Scale

Advance Mills and Frays Road

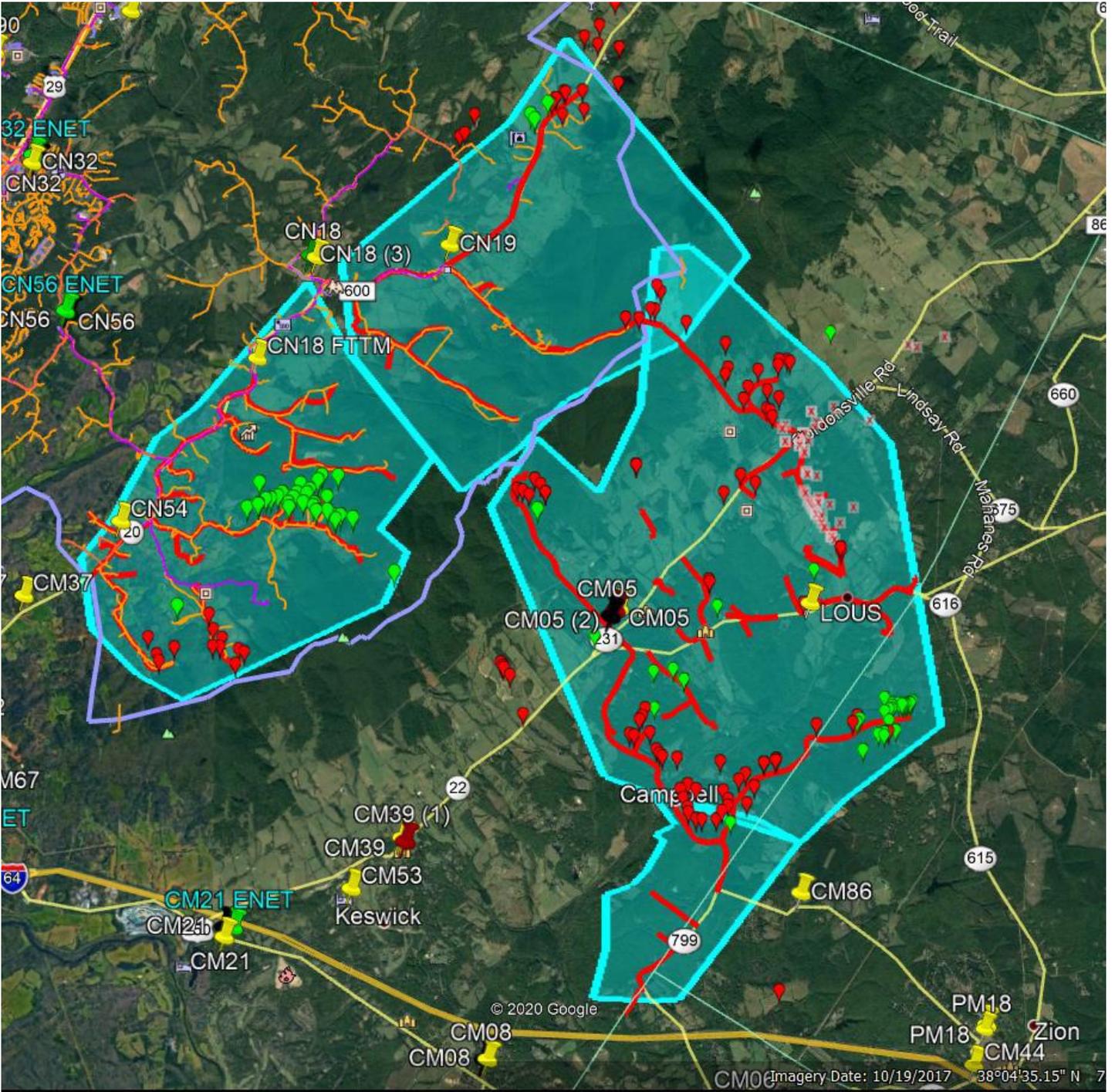


Gilbert Station Road





Cambell Cobham, Maps not to Scale



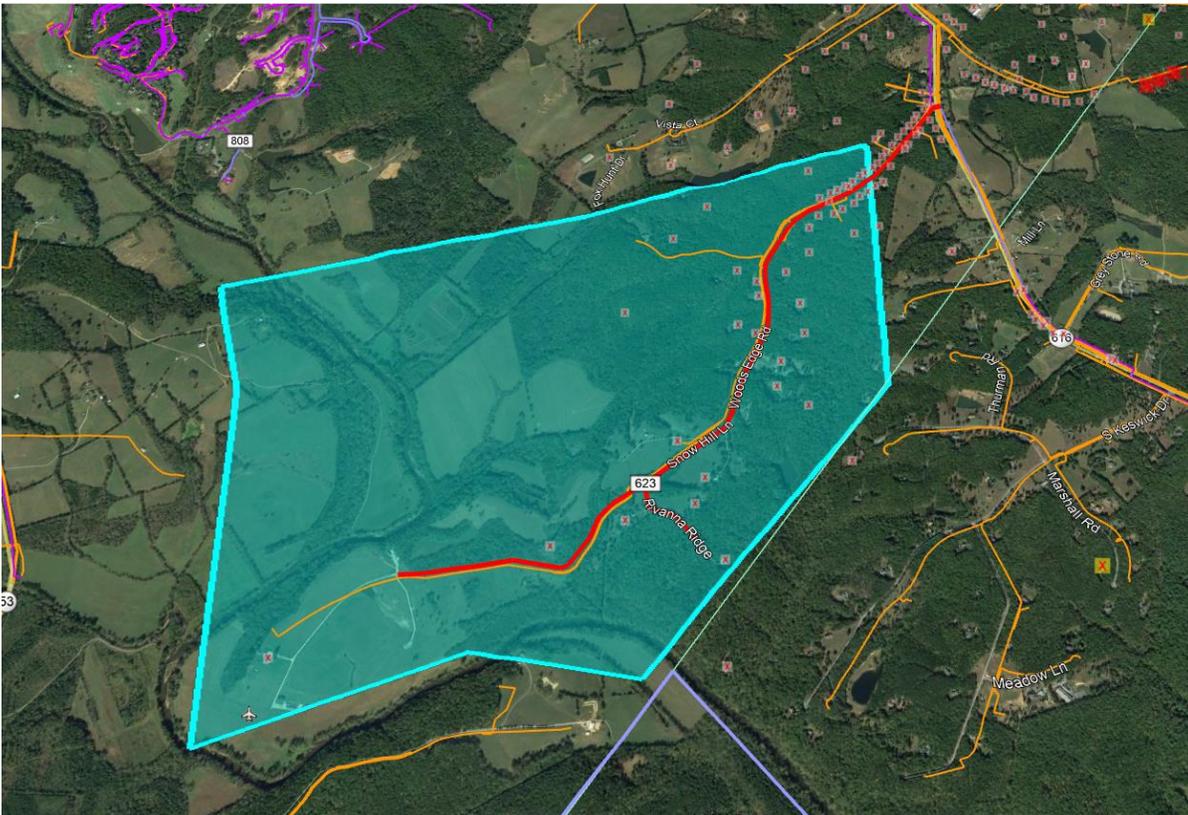


Milton Hills and Snow Hill; Maps not to Scale

Milton Hills



Snow Hill



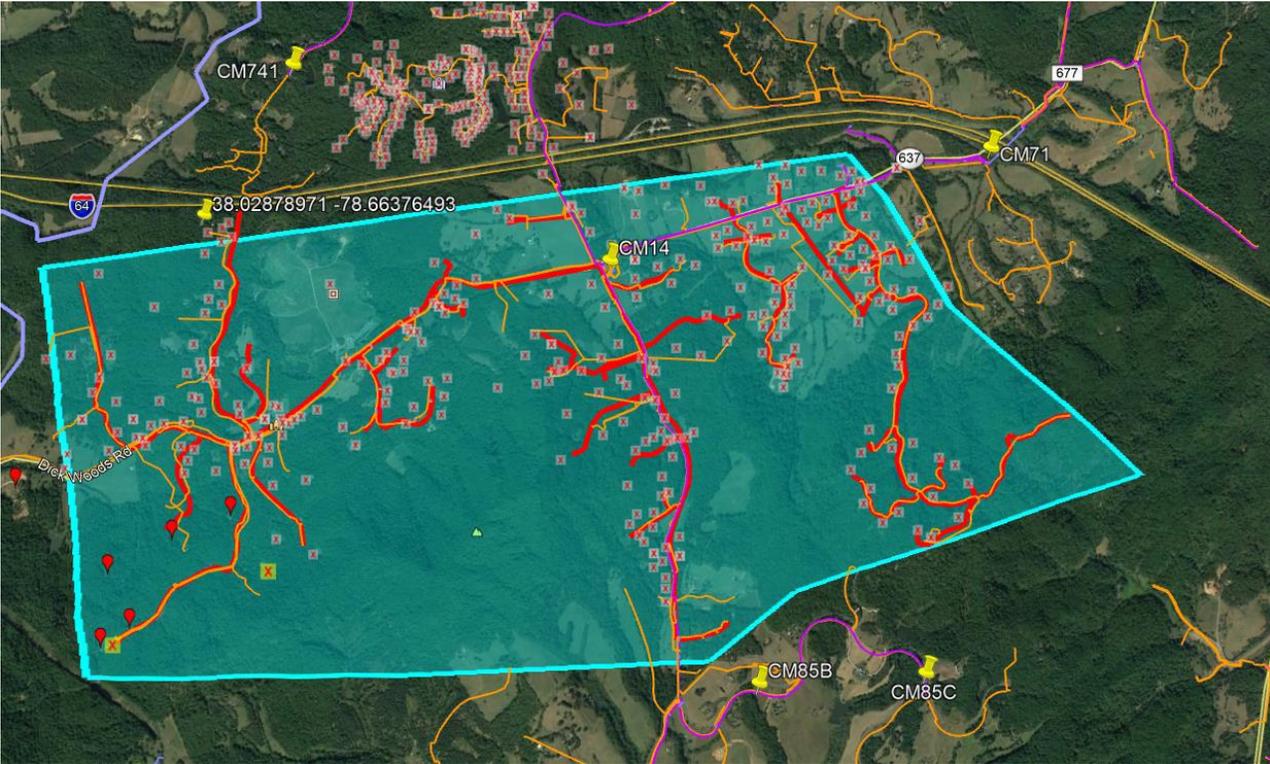


Box Holly / Taylors Gap and

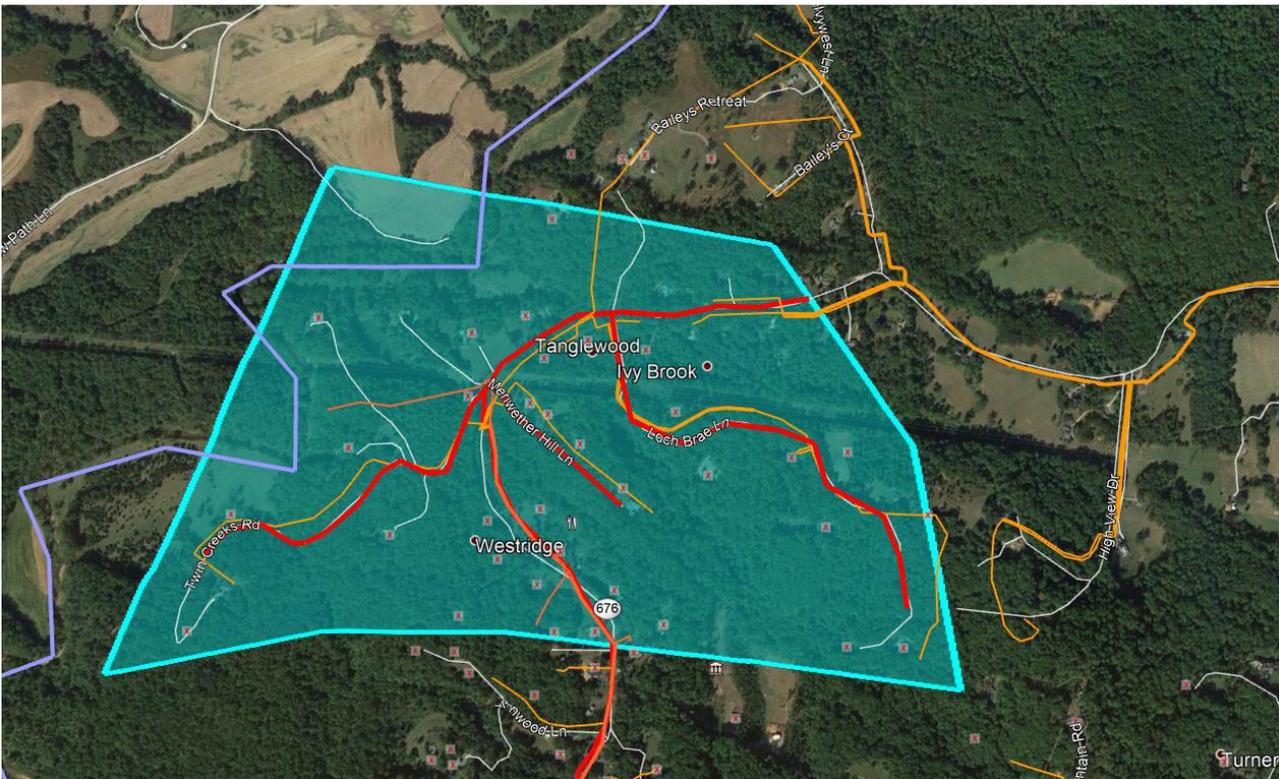


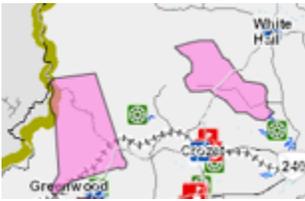
Tilman Road/Meriweather Hill, Maps not to Scale

Box Holly / Taylors Gap



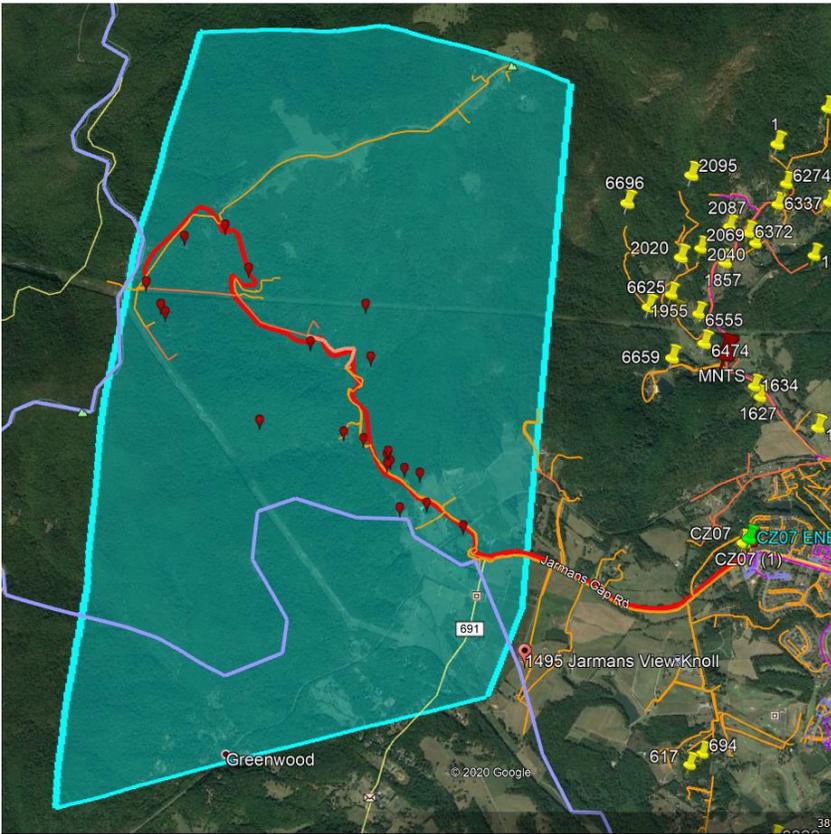
Tilman Road/Meriweather Hill



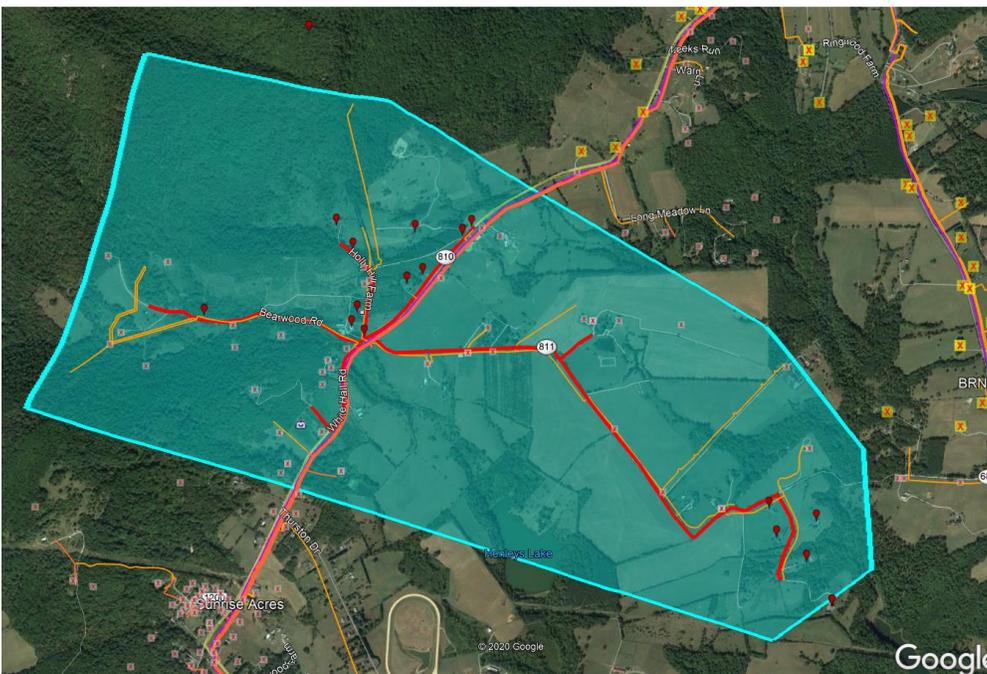


Jarmans Gap (Bucks Elbow) and Jones Mill Road; Maps not to Scale

Jarmans Gap (Bucks Elbow)



Jones Mill Road





Old Garth Heights; Maps not to Scale



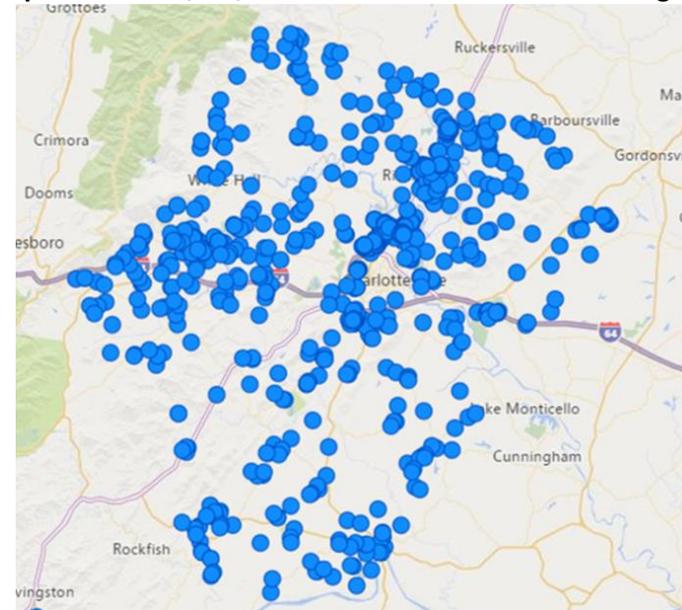
Summary of CenturyLink ABBA VATI 2021 Projects

CenturyLink - Albemarle Broadband Authority - VATI 2021													
Project			Capital Costs			Passings		Passings		ABBA / VATI			
Project	Exchange	Slide	ISP	OSP	Total construction	Living units	Total Cost/Living Unit	Grant Required	Grant Percentage	ABBA Contribution	VATI Grant Amount	VATI Cost/Passing	VATI Grant Percentage
Box Holly / Taylors Gap	CHVLVA	4	\$ 50,000	\$ 898,290	\$ 948,290	361	\$ 2,627	\$ 824,362	86.9%	\$ 106,311	\$ 718,051	\$ 1,989	75.7%
Campbell/ Cobham	CHVLVA	5	\$ 125,000	\$ 2,297,000	\$ 2,422,000	1232	\$ 1,966	\$ 1,819,841	75.1%	\$ 271,525	\$ 1,548,316	\$ 1,257	63.9%
Milton Hills	CHVLVA	6	\$ 54,000	\$ 187,500	\$ 241,500	75	\$ 3,220	\$ 206,860	85.7%	\$ 27,074	\$ 179,786	\$ 2,397	74.4%
Old Garth Heights	CHVLVA	7	\$ 10,000	\$ 26,000	\$ 36,000	7	\$ 5,143	\$ 31,760	88.2%	\$ 4,036	\$ 27,724	\$ 3,961	77.0%
Snow Hill Ln	CHVLVA	8	\$ 30,000	\$ 116,000	\$ 146,000	68	\$ 2,147	\$ 113,658	77.8%	\$ 16,368	\$ 97,290	\$ 1,431	66.6%
Tilman Rd / Meriweather Hi	CHVLVA	9	\$ 30,000	\$ 149,000	\$ 179,000	51	\$ 3,510	\$ 157,483	88.0%	\$ 20,067	\$ 137,416	\$ 2,694	76.8%
Advance Mills / Fray Rd	CHNOVA	10	\$ 15,000	\$ 301,000	\$ 316,000	125	\$ 2,528	\$ 276,947	87.6%	\$ 35,426	\$ 241,520	\$ 1,932	76.4%
Boonesville	CHNOVA	11	\$ 30,000	\$ 656,000	\$ 686,000	246	\$ 2,789	\$ 318,090	46.4%	\$ 76,906	\$ 241,184	\$ 980	35.2%
Gilbert Station Rd	CHNOVA	12	\$ 30,000	\$ 140,500	\$ 170,500	46	\$ 3,707	\$ 117,031	68.6%	\$ 19,114	\$ 97,916	\$ 2,129	57.4%
Bucks Elbow	CRZTVA	13	\$ 15,000	\$ 349,000	\$ 364,000	48	\$ 7,583	\$ 302,217	83.0%	\$ 40,807	\$ 261,410	\$ 5,446	71.8%
Jones Mill Road	CRZTVA	14	\$ 15,000	\$ 184,500	\$ 199,500	63	\$ 3,167	\$ 148,318	74.3%	\$ 22,366	\$ 125,953	\$ 1,999	63.1%
Total			\$ 404,000	\$5,304,790	\$ 5,708,790	2,322	\$ 2,459	\$ 4,316,566	75.6%	\$ 640,000	\$ 3,676,566	\$ 1,583	64.4%

ACPS Student Population in each Project

Project Name	Unique ACPS Addresses	ACPS Students	CenturyLink Total Addresses
Box Holly Taylors Gap	60	103	361
Campbell / Cobham	110	173	1232
Milton Hills	8	11	75
Old Garth Heights	1	1	7
Snow Hill	14	21	68
Tilman Road	14	24	51
Advanced Mill/Fray Road	15	29	125
Boonesville	26	51	246
Gilbert Station	8	12	46
Bucks Elbow	6	14	48
Campbell / Cobham	110	173	1232
Jones Mill Road	6	11	63
Total	268	450	2322

ACPS Reports of "Low, No, or can't Afford Internet" as of Aug. 12, 2020

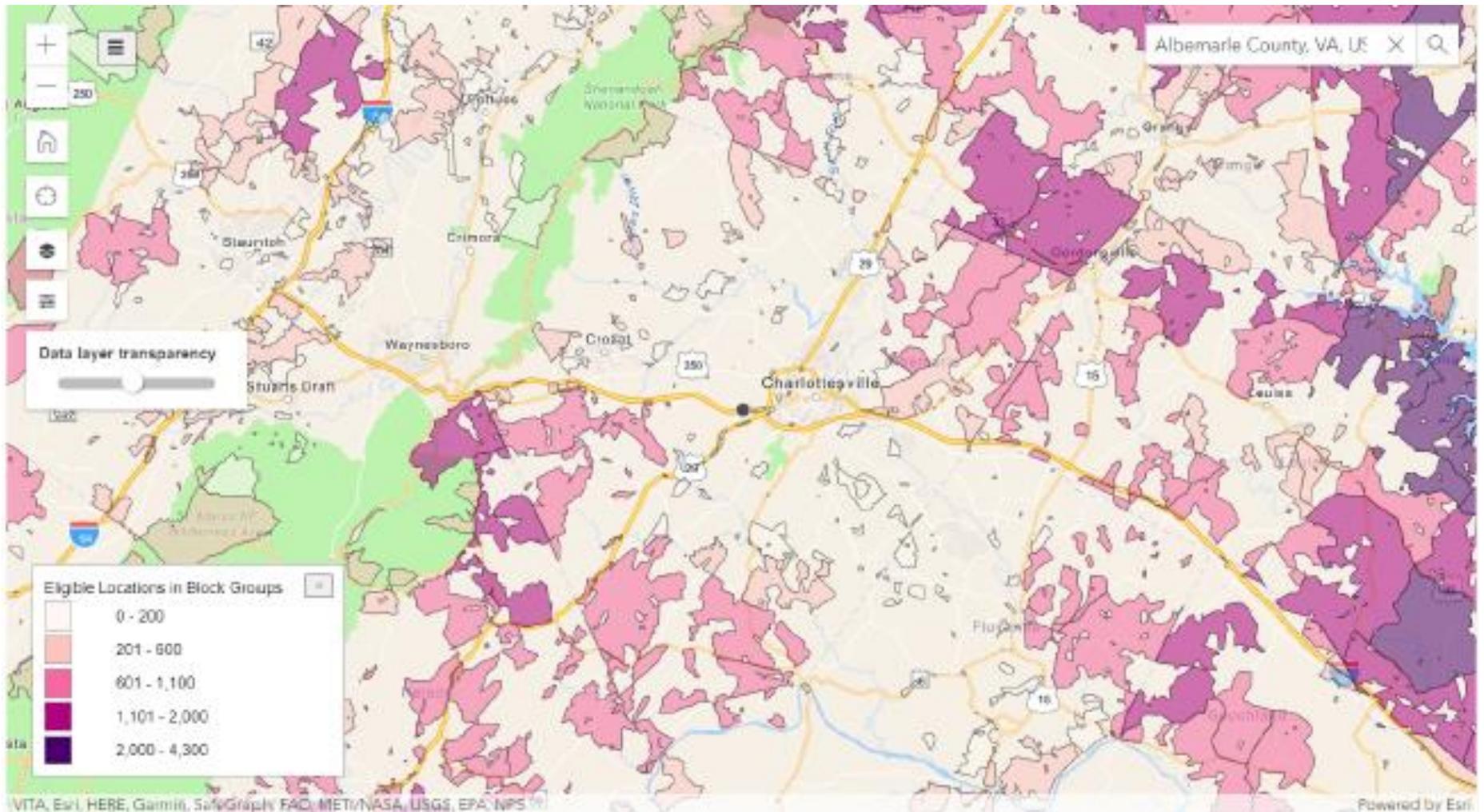


Attachment 2 – Documentation of Federal Funding

CenturyLink / ABBA VATI 2021 Project

RDOF Eligible Map of Albemarle County

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



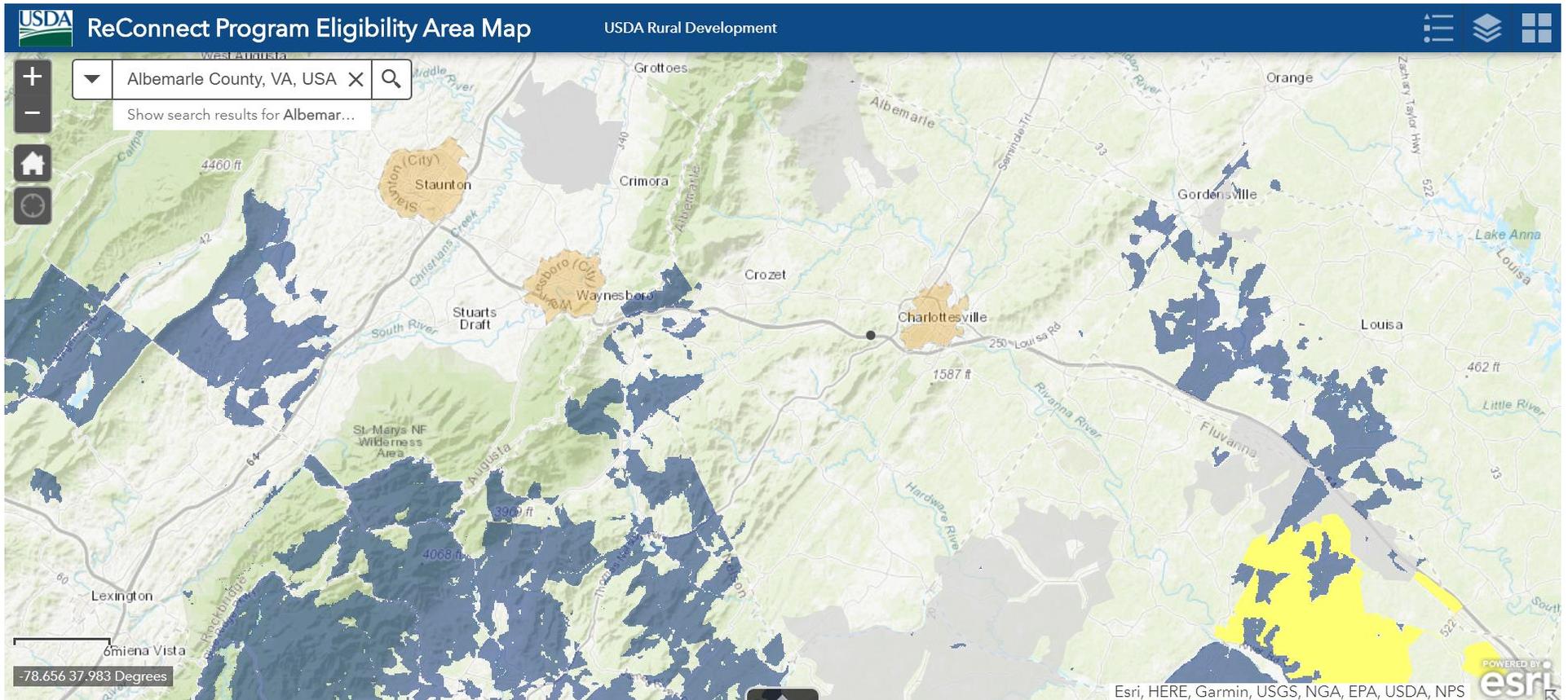
Attachment 2 – Documentation of Federal Funding

CenturyLink / ABBA VATI 2021 Project

USDA ReConnect Program Eligibility Area Map

This map confirms there are no CAF2 Auction winners within the 2021 VATI project area and no pending ReConnect applications.

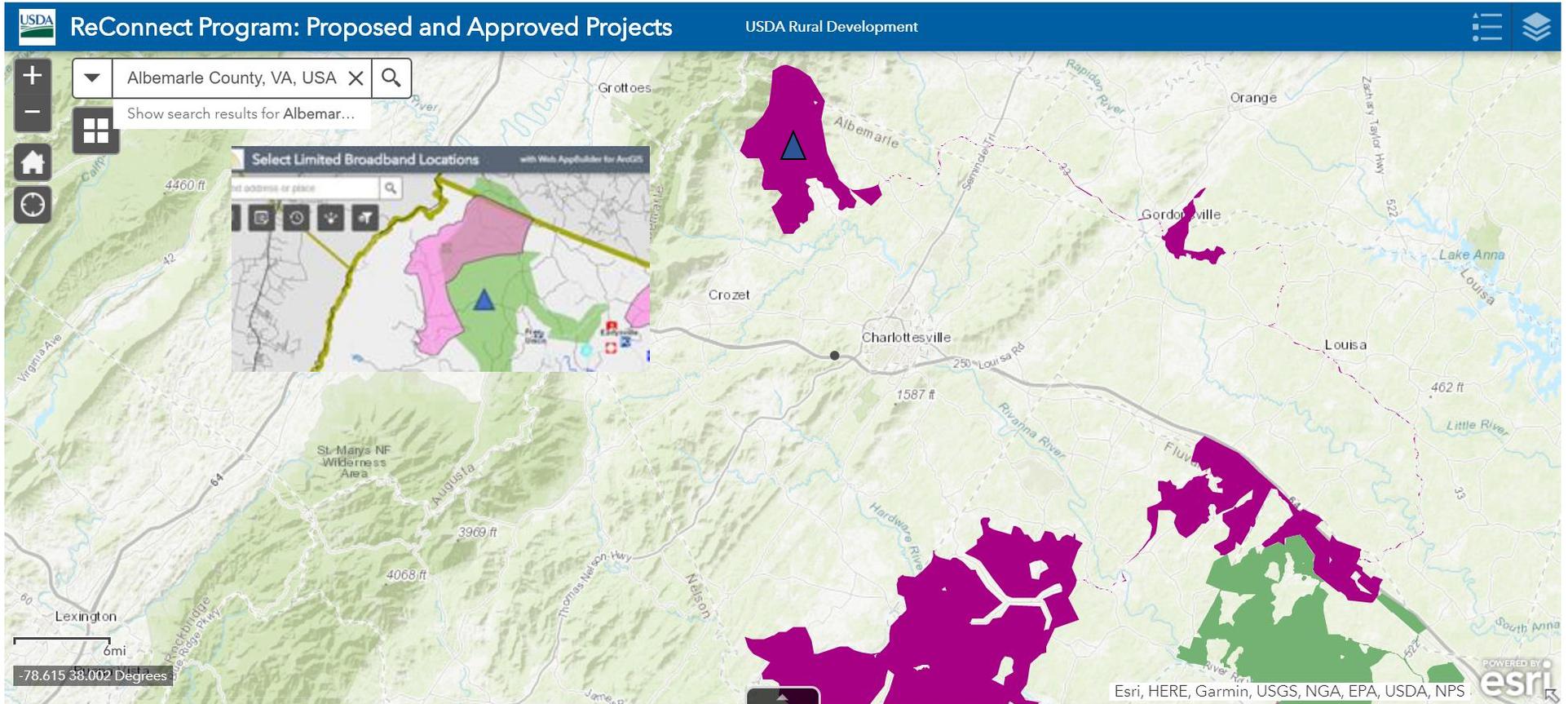
Source: <http://ruraldevelopment.maps.arcgis.com/apps/webappviewer/index.html?id=51bbfce8e72549dcb5374d0aa32e1736>



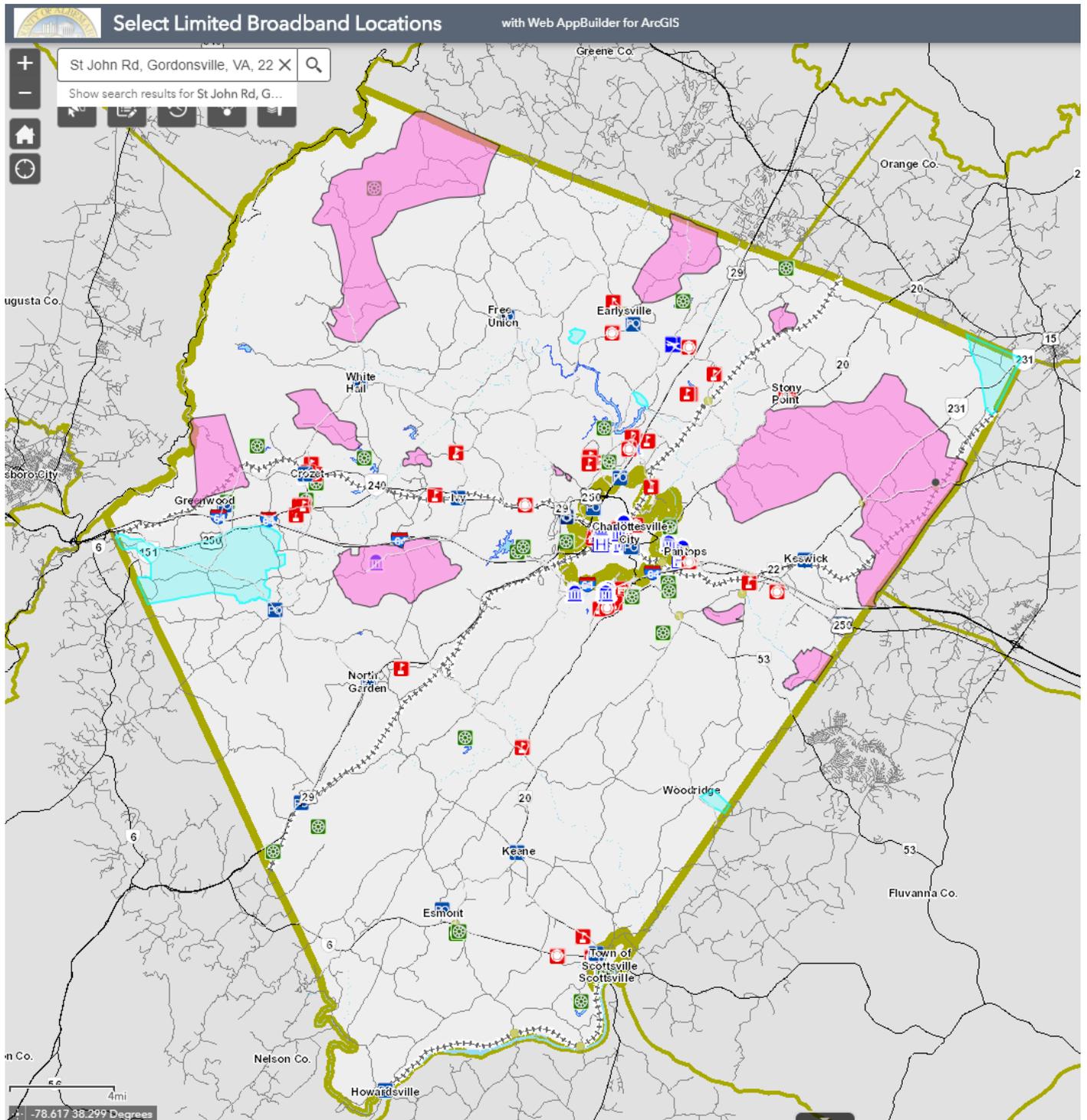
Attachment 2 – Documentation of Federal Funding

CenturyLink / ABBA VATI 2021 Project

The Reconnect Funding available for the Boonesville project is in purple. The ABBA “Select Limited Broadband Locations” insert shows the Reconnect section in green. CVEC/FireFly has been asked if there is interest in removing the impacted Census Blocks and have not responded to calls and emails requesting confirmation. The indication is that the Reconnect funding for the area shown is well past the VATI 2021 timeline.



CenturyLink / ABBA VATI 2021 Project Attachment 3 – Documentation Unserved Area



CenturyLink and ABBA have each completed extensive research and held virtual meetings to determine other service providers for the pink polygons. The next image displays CenturyLink as the primary voice provider in Albemarle County with two sections of Verizon.

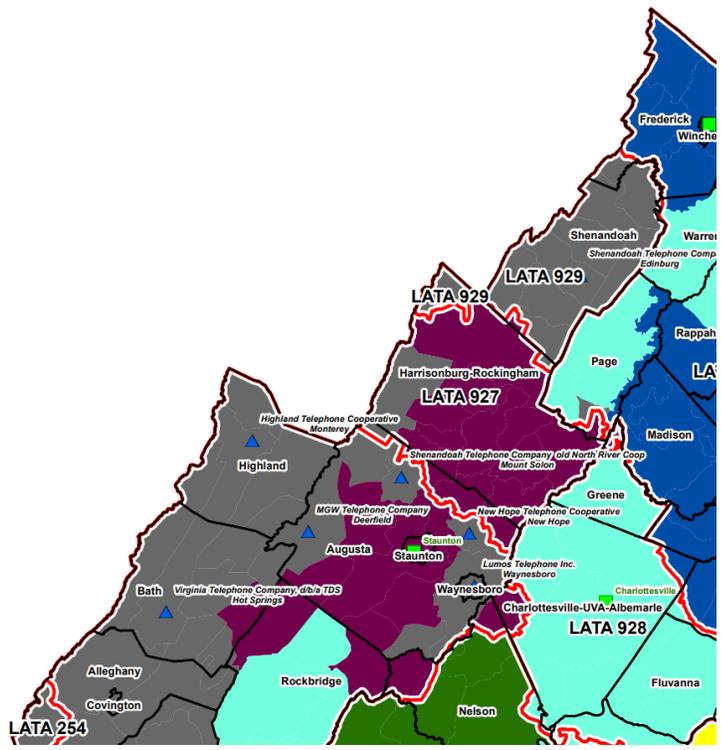
Legend

- ▲ Non-Tandem Central Offices
- Tandems
- ▭ PSAP Boundaries
- ▭ LATA Boundaries

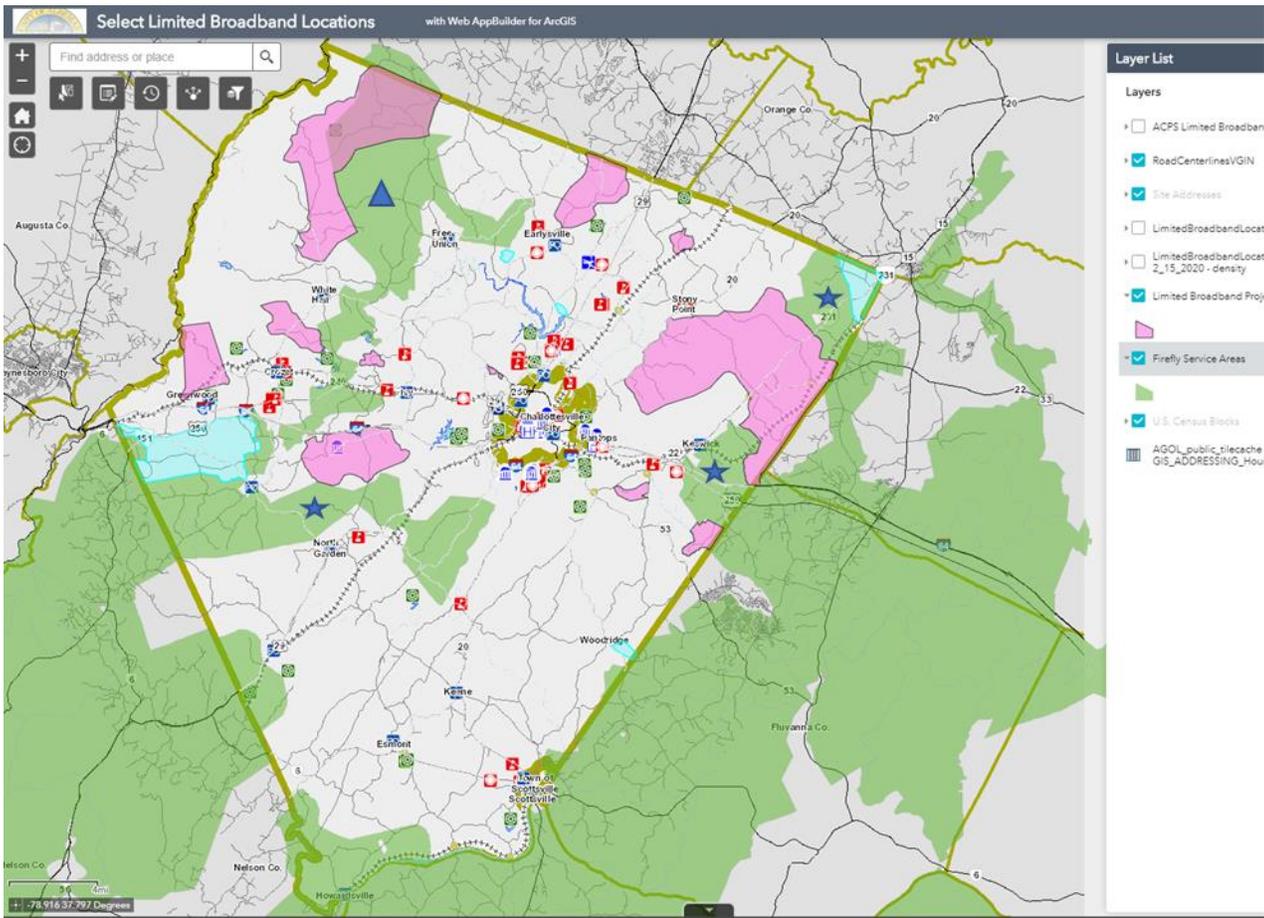
ILECs and Selective Routers or Primary COs

Company -Tandem or COs

- CenturyLink - Johnson City / Wytheville
- CenturyLink - Charlottesville / Farmville
- Verizon - Alexandria / Fairfax
- Verizon - Blacksburg / Norton
- Verizon - Chester / Richmond-Stuart
- Verizon - Danville / Lynchburg
- Verizon - Fredericksburg / Winchester
- Verizon - High Street / Jefferson
- Verizon - Salem / Staunton
- Other Telcos

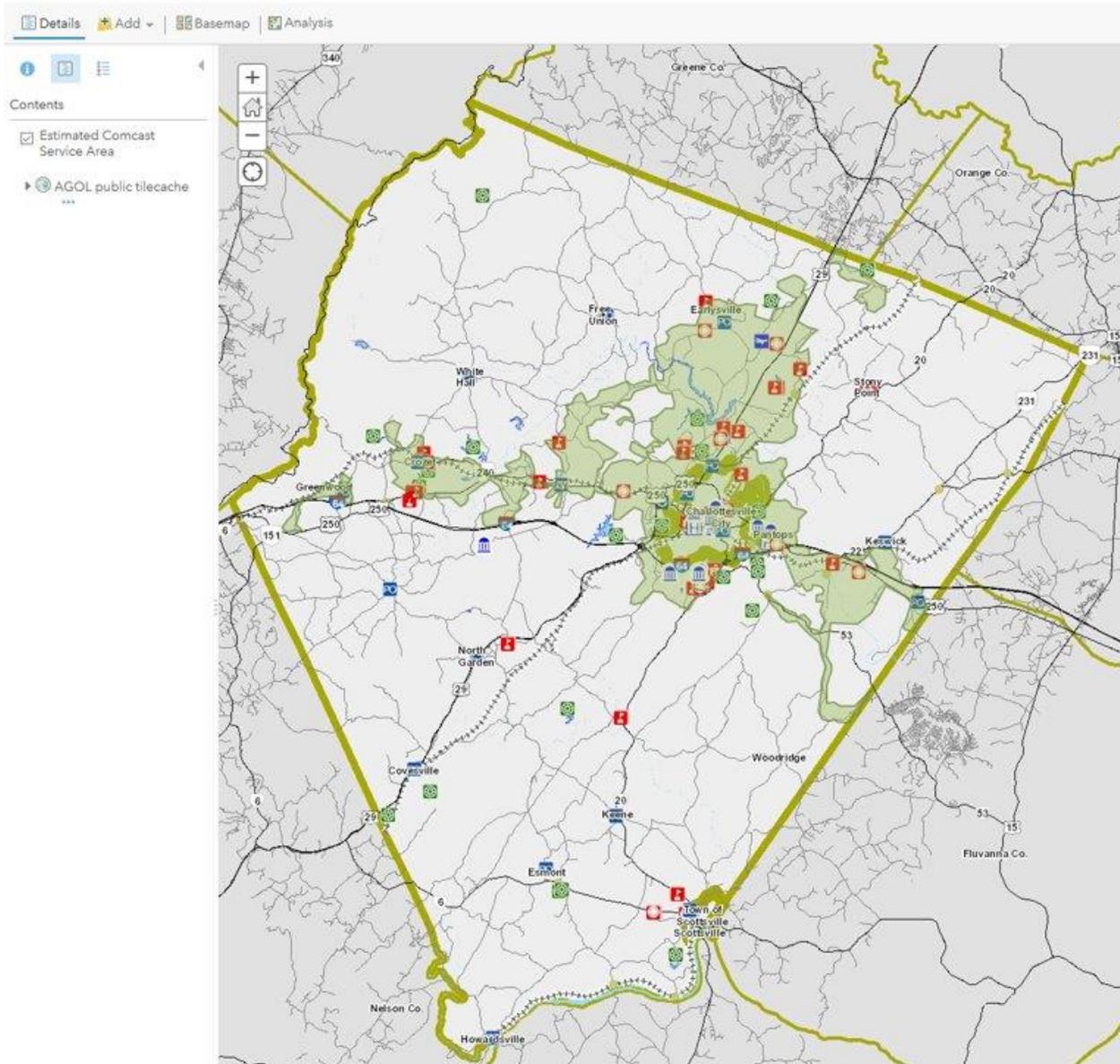


These both are high priority areas for ABBA and Broadband but are not included in our latest application. Next is CVEC Firefly with three activated (★) sections of Albemarle which do not impact the project areas:



Comcast is another provider in the area and contacted us after our Notice of Intent and after verification removed two areas from consideration. Here is a general perspective of the Comcast services which when overlaid on our projects shows no impact.

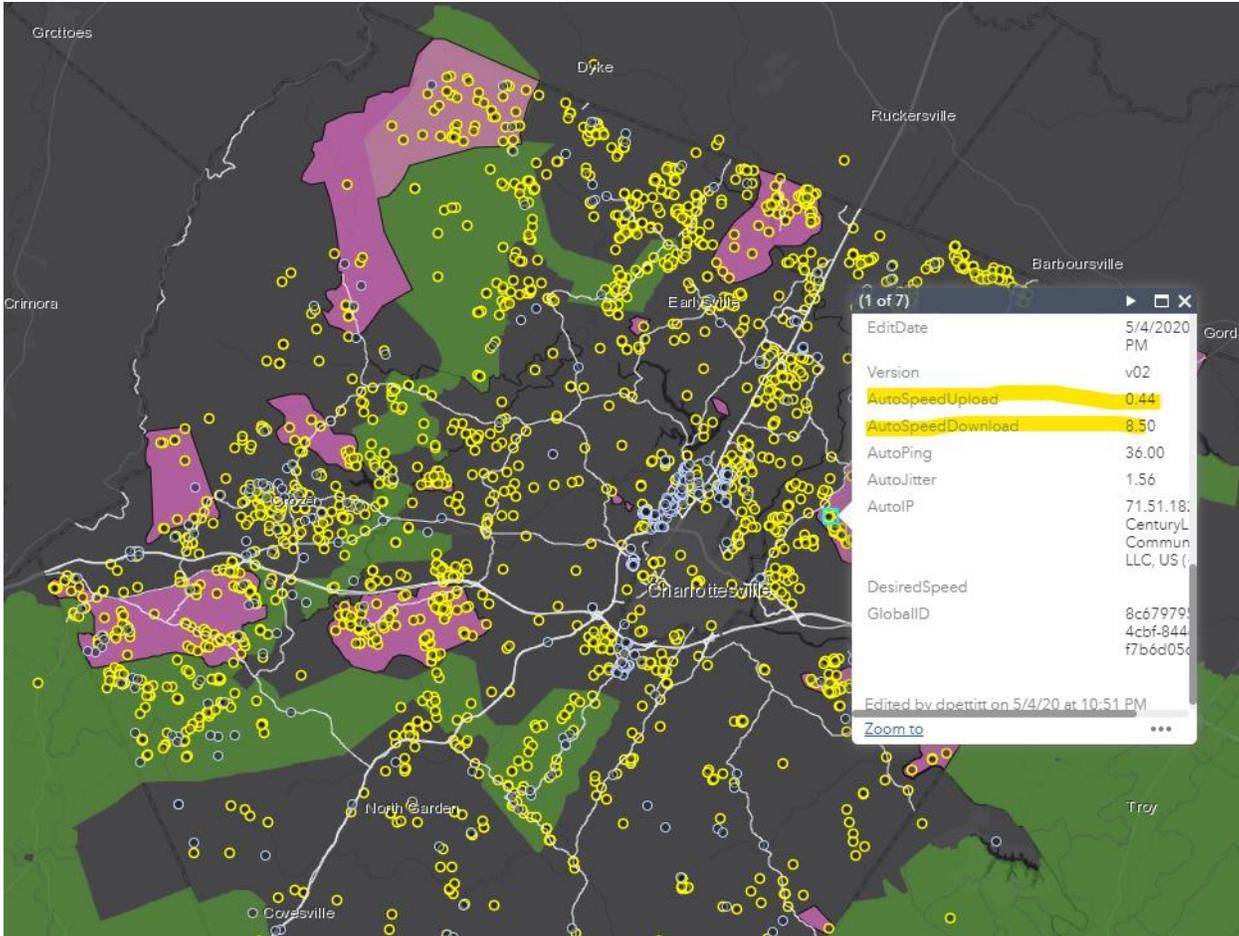
Home ▾ Comcast Estimated Service Area-20190830 v2



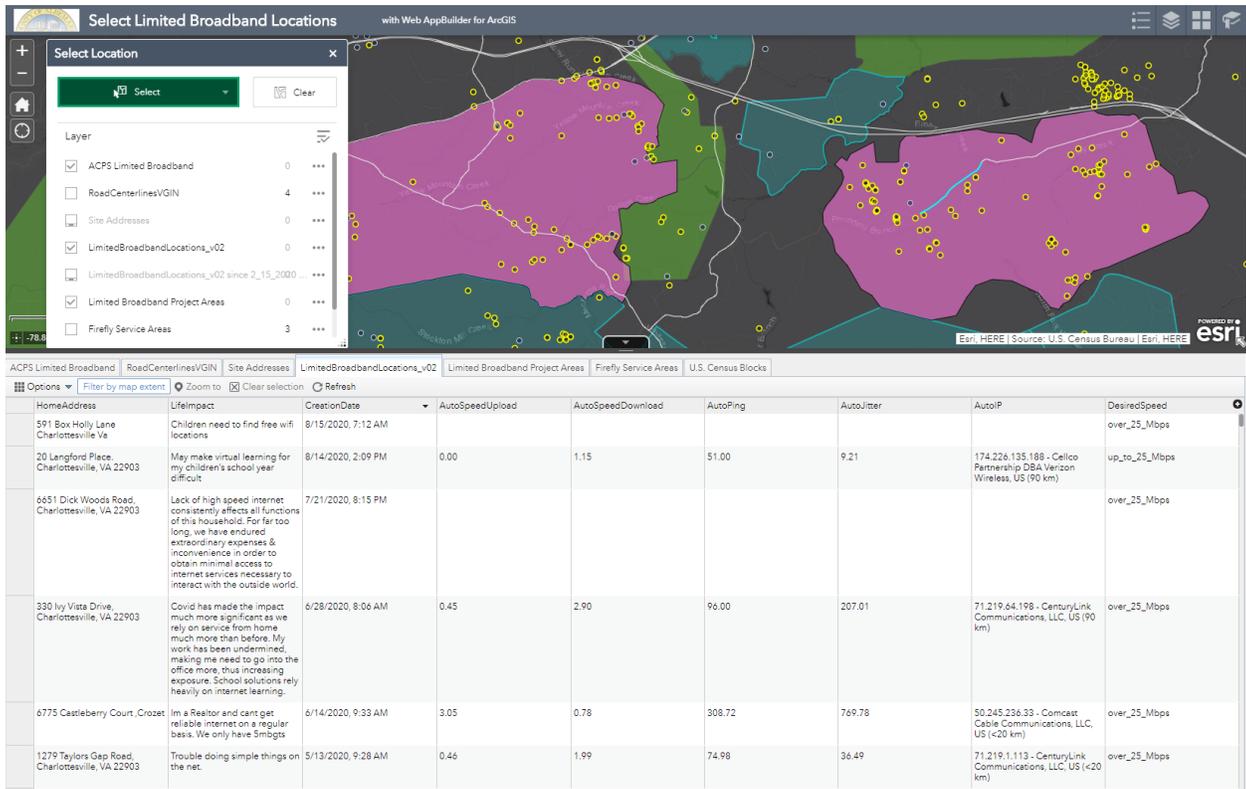
ABBA also performed extensive analysis using a variety of other tools and publicly available maps. The most reliable tool we've found for determining speeds and availability during all times during the day is through our broadband survey and reporting tool. The next few pages provide examples of other analysis used to determine our project areas and lack of broadband speeds.

Yellow dots are resident submitted reports over time; Pink areas are newest Project areas;

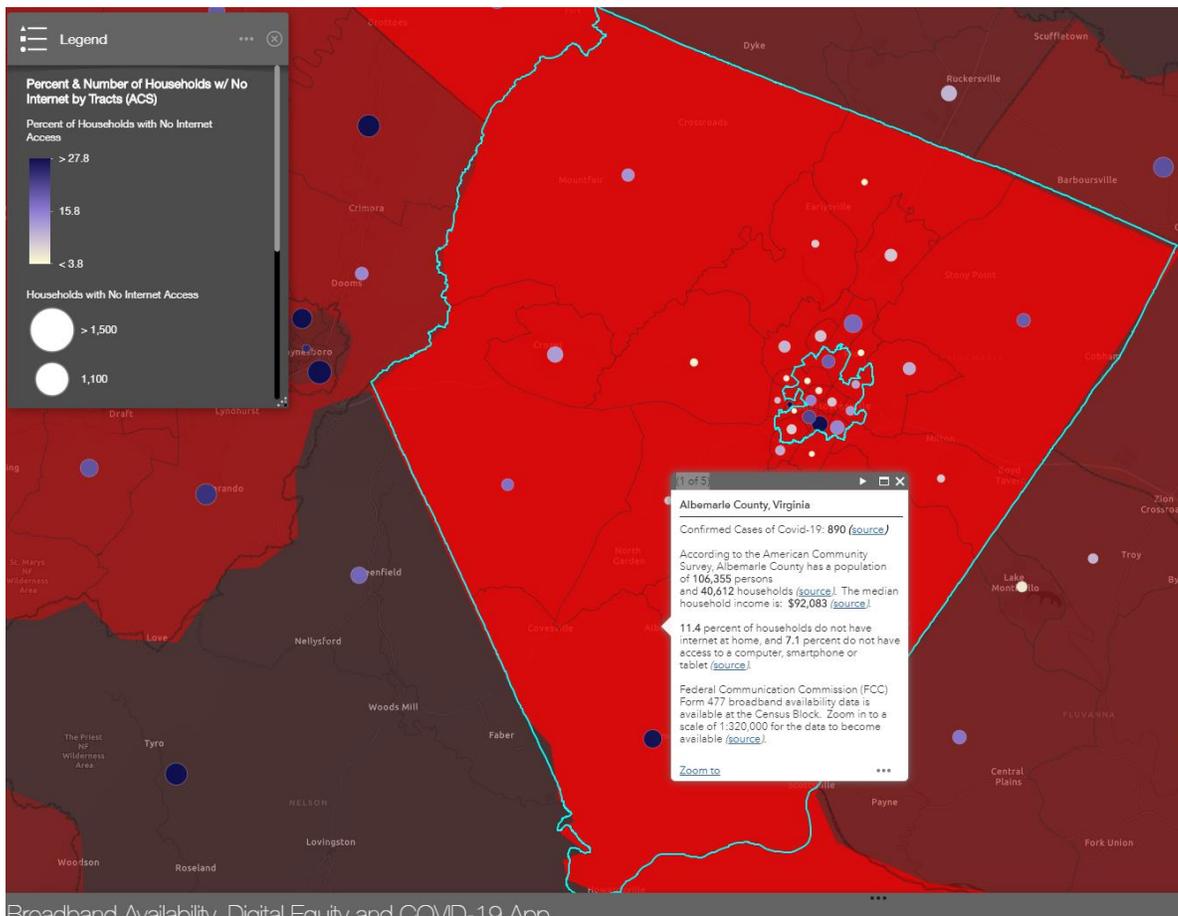
representative automated speed test in example project area:



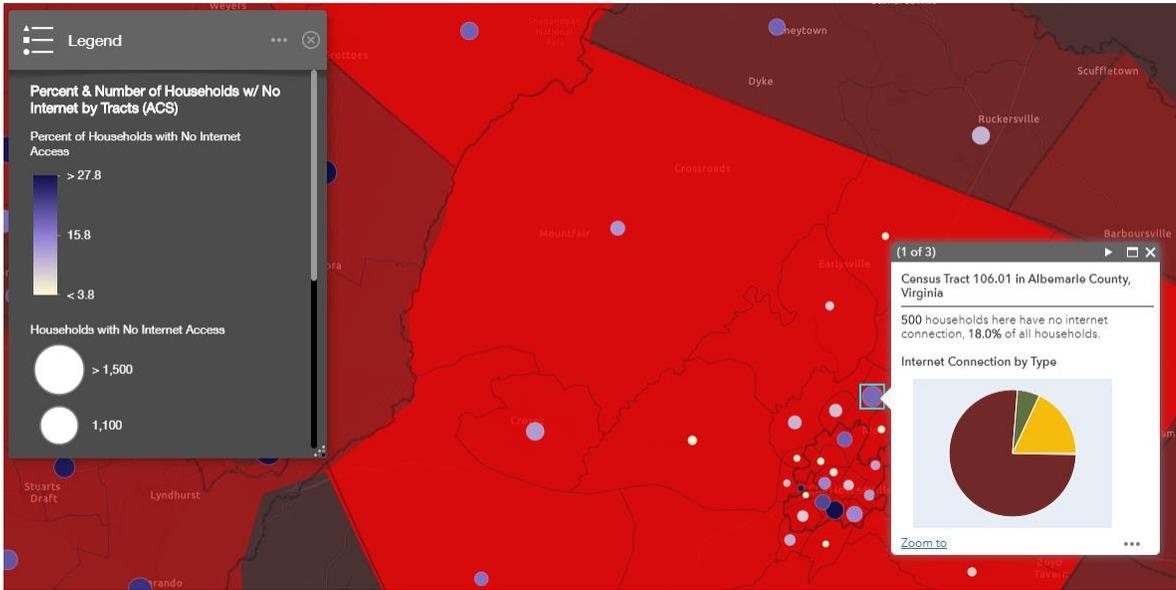
Example analysis of resident of representation project area:



COVID_19 and Households without Internet



Lack of Digital Equity Highlighted in One Project Area:



End of Attachment 3 – Documentation Unserved Area

2021 Virginia Telecommunication Initiative (VATI)

CenturyLink ABBA VATI 2021 Passing Form

First page is total for all projects. Pages 2-7 break down individual projects.

Type of Passings – <i>Total Project</i>	Total Number in all 11 Project Areas	Number with Speeds at 10/1 or below in all 11 Project Areas
Residential	2,313	1,648
Businesses (non-home based)		
Businesses (home-based)	568	405
Community Anchors	9	6
Non-residential		
Total Number of Passings	2,322	1,654

*Note: The Total Number of 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.

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.

Type of Passings - <i>Box Holly / Taylors Gap</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	355	157
Businesses (non-home based)	4	3
Businesses (home-based)	68	29
Community Anchors	2	1
Non-residential	0	0
Total Number of Passings	361	161

Type of Passings – <i>Campbell / Cobham</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	1,211	506
Businesses (non-home based)	16	7
Businesses (home-based)	236	99
Community Anchors	3	1
Non-residential	2	1
Total Number of Passings	1,232	515

Type of Passings – <i>Milton Hills</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	75	72
Businesses (non-home based)	0	0
Businesses (home-based)	14	13
Community Anchors	0	0
Non-residential	0	0
Total Number of Passings	75	72

Type of Passings – <i>Old Garth Heights</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	7	5
Businesses (non-home based)	0	0
Businesses (home-based)	0	0
Community Anchors	0	0
Non-residential	0	0
Total Number of Passings	7	5

Type of Passings – <i>Snow Hill Lane</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	67	38
Businesses (non-home based)	1	1
Businesses (home-based)	17	9
Community Anchors	0	0
Non-residential	0	0
Total Number of Passings	68	39

Type of Passings – <i>Tilman Road / Meriweather Hill</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	51	18
Businesses (non-home based)	0	0
Businesses (home-based)	19	7
Community Anchors	0	0
Non-residential	0	0
Total Number of Passings	51	18

Type of Passings – <i>Advance Mills / Fray Road</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	123	86
Businesses (non-home based)	2	2
Businesses (home-based)	46	32
Community Anchors	0	0
Non-residential	0	0
Total Number of Passings	125	88

Type of Passings – <i>Boonesville</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	235	214
Businesses (non-home based)	7	6
Businesses (home-based)	76	69
Community Anchors	3	3
Non-residential	1	1
Total Number of Passings	246	224

Type of Passings – <i>Gilbert Station Road</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	46	37
Businesses (non-home based)	0	0
Businesses (home-based)	1	1
Community Anchors	0	0
Non-residential	0	0
Total Number of Passings	46	37

Type of Passings – <i>Bucks Elbow</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	46	46
Businesses (non-home based)	2	2
Businesses (home-based)	14	14
Community Anchors	0	0
Non-residential	0	0
Total Number of Passings	48	48

Type of Passings – <i>Jones Mill Road</i>	Total Number in Project Area	Number with Speeds at 10/1 or below in Project Area
Residential	61	61
Businesses (non-home based)	1	1
Businesses (home-based)	33	33
Community Anchors	1	1
Non-residential	0	0
Total Number of Passings	63	63

ABBA CenturyLink VATI 2021 Attachment 6 – Timeline/Project Management Plan

The ABBA CenturyLink VATI 2021 project plan coincides with activity underway to provide CenturyLink fiber to the home in other areas and sometimes adjacent sections of Albemarle County. We are leveraging resources as such to accelerate an approved project for Calendar Year 2021. A 12 month schedule is favorable for these new projects.

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

INFORMATION IN SUPPORT OF CENTURYLINK RESPONSE TO VATI 2021

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

1. The parties to this Memorandum of Understanding (MOU) are the Albemarle Broadband Authority (ABBA), a Wireless service authority and public and corporate body created by the Albemarle County Board of Supervisors, and CenturyLink.
2. The purpose of this MOU is to establish a commitment by the parties to participate in the development of a grant proposal in 2020 for the Virginia Telecommunications Initiative (VATI) program established by the Virginia Department of Housing and Community Development (DHCD). Although a partnership between ABBA and CenturyLink has not yet been formalized for this proposed project, both parties are collaborating on an agreement to be executed if DHCD awards them a VATI grant.

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 ABBA and Albemarle County staff on the status of the project, to notify ABBA or Albemarle 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 ABBA with information the locations where broadband had been enabled, and to propose any required nondisclosure agreements if CenturyLink were requested to share confidential information.
 - b. ABBA 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 ABBA'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 coordinate a complete VATI application, making decisions on roles and responsibilities where necessary to facilitate a timely and effective submission of necessary information.
- e. On March 23, 2020, CenturyLink signed an official VATI Agreement with ~~Albemarle County~~ ABBA. That agreement is provided in the Attachment Section as Attachment A.
- f. On September 13, 2017, CenturyLink signed an official VATI Agreement with Albemarle County. That agreement is provided in the Attachment Section as Attachment B.

The parties anticipate signing a similar agreement if they receive an award.

5-12-2017 MICHAEL

Title:
President, East Region
Signature:

K. R. Melita

Date: 8/14/2020

By: Michael Culp
Title:
Chief Administrative Office
Signature:

Michael Culp

Date: 8/14/2020

Attachment A

Agreement between CenturyLink and Albemarle County
Regarding VATI Funding

**Agreement between CenturyLink and
The Albemarle Broadband Authority
Regarding VATI Funding**

On January 22, 2020, the Virginia Department of Housing and Community Development ("DHCD") announced that it had offered the Albemarle Broadband Authority ("ABBA") a total of \$291,300 in funding under the Virginia Telecommunications Initiative (VATI) program in response to the joint application of ABBA and CenturyLink. ABBA contributed another \$291,300 in support of the project. Planned funds disbursement to CenturyLink for work performed under this agreement total \$582,600.

Pursuant to the program guidelines and statutory authority, the primary objective of the VATI is to provide financial assistance to supplement construction costs by private sector broadband providers, in partnership with local units of government to extend service to areas that presently are unserved by any broadband provider.

An Agreement dated March 5, 2020, between DHCD and ABBA (the "DHCD Agreement") imposes certain responsibilities on the "Grantee" in accepting the VATI grant. As anticipated in the joint application for funding submitted by ABBA and CenturyLink, the parties wish to outline the roles of each party now that the grant has been awarded. Accordingly, the parties now hereby agree as follows:

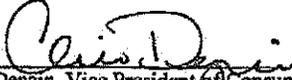
CenturyLink shall perform all work described in the DHCD Agreement and VATI#2020AC-001 (attached hereto and incorporated herein by reference), the submitted application, project management schedule and budget. Specifically, CenturyLink shall complete all Grant Activities described in the DHCD Contract Documents (including but not limited to installation of 45 miles of fiber and purchase of electronic equipment) on or before March 5, 2021. CenturyLink shall indemnify, defend and hold ABBA harmless for any failure(s) (a) to complete any Grant Activities described in the DHCD Contract Documents on or before March 5, 2021 and/or (b) to achieve any project Outcomes by June 30, 2021. CenturyLink will provide information of subscribers and speed package selected, as well as speed validation data to ensure that the proposed Outcomes have been met and broadband speeds meet VATI criteria. CenturyLink may choose to submit either quarterly invoices or a single invoice for payment upon completion of the work. No VATI funds shall be distributed unless and until (a) CenturyLink has submitted all requested documents and (b) the County has verified that pre-construction and/or construction work has been completed or equipment has been ordered and received. Upon any change to availability of funding, ABBA must notify CenturyLink. Upon a change in the availability of grant or ABBA funding, CenturyLink may amend or terminate the project. ABBA will use best efforts to request the full amount of grant funds before June 30, 2021.

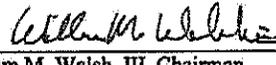
In their application, the parties estimated that 837 residential serviceable units and 14 businesses will have access to the required broadband speeds and, based on prior experience, about 418 customers should subscribe to the broadband service within one year of project completion. CenturyLink and ABBA will exercise due diligence and best efforts on community outreach and marketing the availability of service, which is the intent of the program. ABBA in its role commits to directing all technical, financial, and availability of service questions to the appropriate support service mechanism as defined by CenturyLink. The parties understand, however, that the actual number of customers who choose to subscribe is beyond the parties' control. The parties also understand that the intent of the Department of Housing and Community Development is that the parties exercise due diligence and best efforts and that no funds will be returned to the Commonwealth nor retained by ABBA so long as the parties exercise due diligence and best efforts to reach the program goals.

Attachment A (continued)

ABBA requires a progress report from CenturyLink every 30 days until project completion. CenturyLink agrees to be responsible for keeping ABBA updated per the project timeline included in the grant. Project timeline of the grant states that all activities must be completed by March 5, 2021. CenturyLink agrees to provide ABBA with post-closeout subscriber reports as of September 5, 2021, and March 5, 2022, so that ABBA can report to DHCD in accordance with ABBA's DHCD Agreement.

CENTRAL TELEPHONE COMPANY OF VIRGINIA ALBEMARLE BROADBAND AUTHORITY
d/b/a Century Link

By: 
Chris Denzin, Vice President (of) Consumer Sales

By: 
William M. Walsh, III, Chairman

Date: 3/19/2020

Date: 23-Mar-2020

Attachment B

**Agreement between CenturyLink and Albemarle County
Regarding VATI Funding**

On April 5, 2017, the Virginia Department of Housing and Community Development ("DHCD") announced that it had offered Albemarle County (the "County") a total of \$18,400 in funding under the Virginia Telecommunications Initiative (VATI) program in response to the joint application of the County and CenturyLink. Pursuant to the program guidelines and statutory authority, the primary objective of the VATI is to provide financial assistance to supplement construction costs by private sector broadband providers, in partnership with local units of government to extend service to areas that presently are unserved by any broadband provider.

An Agreement, dated May 13, 2017, between DHCD and the County (the "DHCD Agreement") imposes certain responsibilities on the "Grantee" in accepting the VATI grant. As anticipated in the joint application for funding submitted by Albemarle County and CenturyLink, the parties wish to outline the roles of each party now that the grant has been awarded. Accordingly, the parties now hereby agree as follows:

CenturyLink shall perform all work described in the DHCD Agreement and VATI#AC-002 Special Conditions (both of which are attached hereto and incorporated herein by reference), the submitted application, project management schedule and budget.

Specifically, CenturyLink shall complete all Grant Activities described in the DHCD Contract Documents (including but not limited to installation of 5,800 feet of fiber and purchase of electronic equipment) on or before December 31, 2017. CenturyLink shall indemnify, defend and hold the County harmless for any failure(s) (a) to complete any Grant Activities described in the DHCD Contract Documents on or before December 31, 2017 and/or (b) to achieve any project Outcomes by June 30, 2018. CenturyLink

VATI FUNDING SOURCES TABLE CenturyLink ABBA VATI 2021

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	\$3,676,566.00	64.4 %	Pending
LOCAL FUNDING ALBEMARLE BROADBAND AUTHORITY (ABBA)	\$640,000.00	11.2 %	APPROVED AND APPROPRIATED FOR FY2021 BY THE ALBEMARLE COUNTY BOARD OF SUPERVISORS ACTING AS FISCAL AGENT FOR ABBA
PRIVATE FUNDING THROUGH CENTURYLINK	\$1,392,224.00	24.4 %	INCLUDED AND AUTHORIZED ON AUG. 15, 2020 BY CENTURYLINK CFO
TOTAL	\$ 5,708,790.00	100 %	



CenturyLink will be providing all of the planning, engineering, materials and labor for the installation of the fiber facilities necessary for this project. The value of the CenturyLink contribution that is not reimbursed by VATI is \$ 1,392,224.00. CenturyLink has committed to provide that amount of match funding.

The Albemarle Broadband Authority (ABBA) approved a 11.2% match of the overall cost of the project and will encumber \$640,000.00 in support of the project. This request for matching funds was approved unanimously by the ABBA Board at its Aug. 14, 2020 meeting. The ABBA current budget is included as a report from the County Financial system.

Run Date: 8/10/2020 10:00:01 AM

**COUNTY OF ALBEMARLE
ACCOUNT ACTIVITY DETAIL**

Selection Criteria: FY2021 Period 2020-07-01 to 2021-06-30 Fund 4300 Department 91097
Note: Totals reflect query selection criteria only

PO/JE	Check #	Vendor/Description	Document/Reference	Vendor #	Date	Appropriation	Encumbrance	Expenditure	Balance
Expenditures									
4-4300-91097-491097-130000-1008 PART-TIME WAGES>ALBEMARLE BROADBAND AUTH>ALBEMARLE BROAD BAND AUTHORITY>ALBEMARLE BROADBAND AUTH>Community Development									
		SA2021001 Re-appropriate Fund Balance	Budget Amendment		07/01/2020	3,715.00	0.00	0.00	3,715.00
4-4300-91097-491097-130000-1008 Account Total:						\$3,715.00	\$0.00	\$0.00	\$3,715.00
4-4300-91097-491097-210000-1008 FICA>ALBEMARLE BROADBAND AUTH>ALBEMARLE BROAD BAND AUTHORITY>ALBEMARLE BROADBAND AUTH>Community Development									
		SA2021001 Re-appropriate Fund Balance	Budget Amendment		07/01/2020	285.00	0.00	0.00	285.00
4-4300-91097-491097-210000-1008 Account Total:						\$285.00	\$0.00	\$0.00	\$285.00
4-4300-91097-491097-950030-9999 BROADBAND INCENTIVES>ALBEMARLE BROADBAND AUTH>ALBEMARLE BROAD BAND AUTHORITY>ALBEMARLE BROADBAND AUTH>NON LOCATION									
		SA2021001 Re-appropriate Fund Balance	Budget Amendment		07/01/2020	1,302,415.16	0.00	0.00	1,302,415.16
2021-7298		CENTRAL VA ELECTRIC COOP	2021-7298	000287	07/23/2020	0.00	301,748.00	0.00	1,000,667.16
2021-7298		CENTRAL VA ELECTRIC COOP	2021-7298	000287	07/23/2020	0.00	71,500.00	0.00	929,167.16
4-4300-91097-491097-950030-9999 Account Total:						\$1,302,415.16	\$373,248.00	\$0.00	\$929,167.16
91097 Department Total:						\$1,306,415.16	\$373,248.00	\$0.00	\$933,167.16
4300 Fund Total:						\$1,306,415.16	\$373,248.00	\$0.00	\$933,167.16
Expenditures Category Total:						\$1,306,415.16	\$373,248.00	\$0.00	\$933,167.16



Office of the Superintendent
401 McIntire Road
Charlottesville, Virginia 22902-4596
Phone: (434) 296-5826 Fax: (434) 296-5869
www.k12albemarle.org

August 7, 2013

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:

Albemarle County Public Schools and the Albemarle Broadband Authority (ABBA) continue to work together to close the digital divide through positive use of the internet as a distance learning tool and as a means to encourage and support citizen participation in education and government decision making. Many areas in Albemarle County do not have access to broadband internet today. The 2021 Virginia Telecommunication Initiative Grant Program (VATI 2021) is an excellent means of addressing the broadband need in Albemarle County. On July 13, 2020 ABBA submitted a Notice of Intent to Apply for VATI 2021. This letter is in support of the effort.

Please accept our support for the ABBA and CenturyLink VATI grant application submitted on or before August 17, 2020. Our understanding is if this grant application is offered funds, the resulting projects will offer fiber broadband service (up to gigabit speeds) to 2,322 locations without access to broadband today. If offered funds, the resulting projects will have a positive digital learning impact for 450 ACPS students and their families. We are working with ABBA and CenturyLink to ensure that digital literacy advances throughout the community are keystones of our partnerships.

Sincerely

A handwritten signature in black ink that reads "Matthew S. Haas".

Matthew S. Haas, Ed.D.
Superintendent



JEFFERSON-MADISON
REGIONAL LIBRARY

201 E. Market Street | Charlottesville, VA
434.979.7151 | FAX 434.971.7035 | jmrl.org

August 8, 2020

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:

The Jefferson Madison Regional Library (JMRL) serves the people of Albemarle County, and has firsthand experience with the negative impact that the digital divide means to this community. JMRL works hand in hand with the Albemarle Broadband Authority (ABBA) and Albemarle County Public Schools (ACPS) to meet these challenges, and to provide much needed digital access to all.

JMRL fully supports ABBA's application for VATI 2021, as this grant will help to provide service and access to those that need it more than ever during the current pandemic.

Please accept JMRL's support for the ABBA VATI grant application. Our understanding is if this grant application is offered funds, the resulting projects will offer fiber broadband service (up to gigabit speeds) to 2,322 locations without access to broadband today. If offered funds, the resulting projects will have a positive digital learning impact for the people of Albemarle County.

Sincerely,

David Plunkett
Library Director

grow. learn. connect.



Serving Charlottesville, Albemarle County, Greene County, Louisa County, and Nelson County

August 10, 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 the Albemarle Broadband Authority (ABBA) and Albemarle County Public Schools (ACPS) efforts to expand broadband services and digital learning in their community. We understand that an ABBA/ACPS application for a 2021 Virginia Telecommunication Initiative (VATI) grant, if awarded, will support projects that would offer fiber broadband service to more than 2,300 locations currently lacking broadband access.

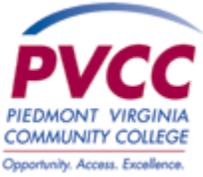
The TJPDC has a long-standing partnership with Albemarle County in seeking to expand broadband access. We led a collaborative effort with Albemarle and other localities in our region in applying for federal ARRA broadband funding more than 10 years ago, and assisted the County in developing a CDBG broadband planning grant application to DHCD five years ago. We have continued to offer support as the County has formed its broadband authority and as it partnered most recently with CVEC on a successful VATI grant.

The TJPDC is confident that ABBA and ACPS will continue to work together to close the digital divide through positive use of the internet as a distance learning tool and as a means to encourage and support citizen participation in education and government decision making. Accordingly, we are glad to support their application for VATI grant funding.

Sincerely,



Charles P. Boyles, II
Executive Director



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 write to endorse the application by the Albemarle County Public Schools and the Albemarle Broadband Authority to expand broadband in Albemarle County. This would be a most appropriate and high impact use of funds from the 2021 Virginia Telecommunications Initiative Grant Program.

Piedmont Virginia Community College is offering 90% of its courses online in Fall Semester. This is creating a digital divide for those students who do not have broadband access at home. This digital divide has a profound impact on minorities and people living in poverty thus creating an equity issue that must be addressed to create a society where all individuals have equal opportunity.

To assist the students at PVCC and to assist K-12 students and support citizen participation in our democracy I fully support and pledge the partnership of PVCC to the initiative.

Sincerely,
Frank Friedman
President
Piedmont Virginia Community College



August 17, 2020

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:

As a developer and a new home builder for over 20 years in Albemarle County, Southern Development has worked to meet the growing housing demands of our local community. During that time, we have seen that many areas in Albemarle County do not have access to broadband internet, creating a digital divide that adversely affects many of our citizens. The 2021 Virginia Telecommunication Initiative Grant Program (VATI 2021) is an excellent means of addressing the broadband need in Albemarle County. On July 13, 2020 the Albemarle Broadband Authority (ABBA) submitted a Notice of Intent to Apply for VATI 2021. This letter is in support of the effort.

Please accept our support for the ABBA and CenturyLink VATI grant application submitted on or before August 17, 2020. Our understanding is if this grant application is offered funds, the resulting projects will offer fiber broadband service (up to gigabit speeds) to 2,322 locations without access to broadband today. If offered funds, the resulting projects will have a positive impact for a number of households in need. We are working with ABBA and CenturyLink to support their efforts.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Frank Ballif', is written over a light blue horizontal line.

Frank Ballif
President



• MCLEAN •
FAULCONER INC.

Farm, Estate and Residential Brokers

503 Faulconer Drive, Suite 5 Charlottesville, Virginia 22903

Phone: (434) 295-1131 Fax: (434) 293-7377

web site:
www.mcleanfaulconer.com

e-mail:
homes@mcleanfaulconer.com

August 14, 2020

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

Dear Dr. Holmes:

I am writing in support of the grant request Albemarle County submitted for the 2021 Virginia Telecommunication Initiative Grant Program. For forty years I have sold real estate in Central Virginia. In the last several years, I have noticed a trend of potential purchasers inquiring about the internet service as they look at properties. Even before the challenges of COVID, I personally lost several ratified contracts when the purchaser took their laptop to the property and realized the DSL service was so slow.

Since COVID arrived, purchasers' scrutiny of the level of internet speed and service has magnified. I can cite a number of situations that either purchasers will not look at a property unless it has high speed or they look but will not submit an offer in spite of liking and wanting the property. The real estate market and the market value of properties in Albemarle County is being impacted because the internet technology is not keeping up with the current needs.

On a personal note, I live four miles from the Charlottesville City limits. The only service available to me is DSL, which is unreliable because of old infrastructure. The few days I tried to work from home, it was virtually impossible to download or send documents. In our country neighborhood, many people must work from home during the pandemic or are trying to work from home while schooling their children. It is very challenging.

I strongly urge you to support Albemarle County's grant application.

Very truly yours,

Charlotte B. Dammann
Associate Broker

NATIONAL ASSOCIATION OF REALTORS
AMERICAN CHAPTER, INTERNATIONAL REAL ESTATE FEDERATION
VIRGINIA CHAPTER, NATIONAL FARM & LAND INSTITUTE

Nearly Daily emails like these, Ms. Zorn approving including her excellent reasoning/concerns:

Question regarding broadband



Trish Zorn <trishzorn@gmail.com>
To:  **Broadband**

 Reply

 Reply All

 Forward



Tue 7/14/2020 9:46 AM

 You replied to this message on 7/14/2020 10:54 AM.

CAUTION: This message originated outside the County of Albemarle email system. DO NOT CLICK on links or open attachments unless you are sure the content is safe.

Good morning,

I hope this email finds you safe and well!

We bought a house and moved to Campbell Road in Keswick last July and were terribly disappointed to find out that our only option for internet was 3 Mbps from Century Link. This, since the start of the Pandemic, has shifted from being a nuisance and inconvenience to a detriment to our livelihood as we were both forced to begin working from home. My partner, a teacher, was unable to successfully hold Zoom classes for his students or upload any assignments with the incredibly slow speed. My work requires a VPN for security purposes and we would have to take turns throughout the day working in order to have enough bandwidth. With no end to the situation in sight, we need something to change or will be forced to move elsewhere.

Our internet regularly goes down for periods throughout the day, and Century Link has not been able to find a solution to this. After speaking with neighbors, who experience the same issues, I found out that the equipment and lines that serve our area are very old, patched together in a lot of places, and there are no plans for improvement.

While the mobile wifi spots put in place to assist students that may not have access to internet work for that purpose, these unsecured connections are not a viable option as they drastically increase the vulnerability of data breaches and identity theft.

I plan to attend the July 22 meeting to learn more, but I would please like to know what steps we can take to bring in a better/faster/more reliable service provider to our area? Every neighbor I've spoken with is on board for getting rid of their Century Link service if another provider was available.

Thanks for your time.

Trish Zorn

Attachment 11 – CenturyLink ABBA VATI 2021 Derivation of Costs

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

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 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 rural portions of Albemarle County.

The project cost is \$5,708,790, consisting of \$404,000 in electronics and \$5,304,790 in fiber. These costs include all of the fiber installation and the equipment required for the project, along with all of the planning, construction and testing costs.

The below chart details out the ISP (electronics), OSP (GPON fiber and distribution), and total construction costs for each project area. Slide number references are included and please refer to Attachment 16 (ABBA CenturyLink Project Summary) for maps and additional details.

Project			Capital Costs		
Project	Exchange	Slide	ISP	OSP	Total construction
Box Holly / Taylors Gap	CHVLVA	4	\$ 50,000	\$ 898,290	\$ 948,290
Campbell/ Cobham	CHVLVA	5	\$ 125,000	\$2,297,000	\$ 2,422,000
Milton Hills	CHVLVA	6	\$ 54,000	\$ 187,500	\$ 241,500
Old Garth Heights	CHVLVA	7	\$ 10,000	\$ 26,000	\$ 36,000
Snow Hill Ln	CHVLVA	8	\$ 30,000	\$ 116,000	\$ 146,000
Tilman Rd / Meriweather Hi	CHVLVA	9	\$ 30,000	\$ 149,000	\$ 179,000
Advance Mills / Fray Rd	CHNOVA	10	\$ 15,000	\$ 301,000	\$ 316,000
Boonesville	CHNOVA	11	\$ 30,000	\$ 656,000	\$ 686,000
Gilbert Station Rd	CHNOVA	12	\$ 30,000	\$ 140,500	\$ 170,500
Bucks Elbow	CRZTVA	13	\$ 15,000	\$ 349,000	\$ 364,000
Jones Mill Road	CRZTVA	14	\$ 15,000	\$ 184,500	\$ 199,500
Total			\$ 404,000	\$5,304,790	\$ 5,708,790

CenturyLink ABBA VATI 2021 Attachment 12 – Documentation of Supporting Costs

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 Albemarle County, the Commonwealth, and the country.

Pages three through thirteen of Attachment 16 (ABBA CenturyLink Project Summary) provide detailed maps of the eleven project areas including fiber routes, approximate locations of passings, placement of Fiber Distribution Hubs, number of MDTs (fiber pedestals), required equipment, and fiber footages. These maps and data will be used to expedite the final network plans for CenturyLink’s Engineering and Construction teams.

The top chart shows the materials and labor breakdown based on GPON fiber & distribution as well as electronics for each of the eleven project areas. The bottom chart details out Fiber Distribution Hubs, Fiber Terminals (MDTs), GPON Electronics, fiber footage/mileage and associated costs.

Exchange	GPON Fiber & Distribution Materials	GPON Fiber & Distribution Labor	GPON Fiber & Distribution	Electronics Materials	Electronics Labor	Total Electronics	Total Cost
Box Holly / Taylors Gap	\$ 314,402	\$ 583,889	\$898,290	\$ 30,000	\$ 20,000	\$50,000	\$ 948,290
Campbell/ Cobham	\$ 803,950	\$ 1,493,050	\$2,297,000	\$ 75,000	\$ 50,000	\$125,000	\$ 2,422,000
Milton Hills	\$ 65,625	\$ 121,875	\$187,500	\$ 32,400	\$ 21,600	\$54,000	\$ 241,500
Old Garth Heights	\$ 9,100	\$ 16,900	\$26,000	\$ 6,000	\$ 4,000	\$10,000	\$ 36,000
Snow Hill Ln	\$ 40,600	\$ 75,400	\$116,000	\$ 18,000	\$ 12,000	\$30,000	\$ 146,000
Tilman Rd / Meriweather Hill	\$ 52,150	\$ 96,850	\$149,000	\$ 18,000	\$ 12,000	\$30,000	\$ 179,000
Advance Mills / Fray Rd	\$ 105,350	\$ 195,650	\$301,000	\$ 9,000	\$ 6,000	\$15,000	\$ 316,000
Boonesville	\$ 229,600	\$ 426,400	\$656,000	\$ 18,000	\$ 12,000	\$30,000	\$ 686,000
Gilbert Station Rd	\$ 49,175	\$ 91,325	\$140,500	\$ 18,000	\$ 12,000	\$30,000	\$ 170,500
Bucks Elbow	\$ 122,150	\$ 226,850	\$349,000	\$ 9,000	\$ 6,000	\$15,000	\$ 364,000
Jones Mill Road	\$ 64,575	\$ 119,925	\$184,500	\$ 9,000	\$ 6,000	\$15,000	\$ 199,500
	\$ 1,856,677	\$ 3,448,114	\$ 5,304,790	\$ 242,400	\$ 161,600	\$ 404,000	\$ 5,708,790

Project	Living Units	FHDs	MDTs	New GPON Electronics	Fiber Footage	Fiber Mileage	FDH / MDT Cost	GPON Electronics	Fiber Costs	Total
Box Holly / Taylors Gap	361	3	240	2	112,100	21.2	\$ 113,590	\$ 50,000	\$ 784,700	\$ 948,290
Campbell/ Cobham	1,232	6	821	6	284,000	53.8	\$ 309,000	\$ 125,000	\$ 1,988,000	\$ 2,422,000
Milton Hills	75	1	38	1	22,500	4.3	\$ 30,000	\$ 54,000	\$ 157,500	\$ 241,500
Old Garth Heights	7	1	2	1	3,000	0.6	\$ 5,000	\$ 10,000	\$ 21,000	\$ 36,000
Snow Hill Ln	68	1	35	1	13,000	2.5	\$ 25,000	\$ 30,000	\$ 91,000	\$ 146,000
Tilman Rd / Meriweather Hill	51	1	26	1	18,000	3.4	\$ 23,000	\$ 30,000	\$ 126,000	\$ 179,000
Advance Mills / Fray Rd	125	2	80	1	38,000	7.2	\$ 42,000	\$ 15,000	\$ 259,000	\$ 316,000
Boonesville	246	2	160	1	79,000	15.0	\$ 75,000	\$ 30,000	\$ 581,000	\$ 686,000
Gilbert Station Rd	46	1	24	1	16,500	3.1	\$ 25,000	\$ 30,000	\$ 115,500	\$ 170,500
Bucks Elbow	48	1	32	1	27,000	5.1	\$ 25,000	\$ 15,000	\$ 324,000	\$ 364,000
Jones Mill Road	63	1	42	1	22,500	4.3	\$ 27,000	\$ 15,000	\$ 157,500	\$ 199,500
Total	2,322	20	1,500	17	635,600	120.4	\$ 699,590	\$ 404,000	\$ 4,605,200	\$ 5,708,790

(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

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
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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 Information	Certifying Official Name	Stacy Hartman
	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 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

(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: 0018626853 | Data as of: Jun 30, 2019 | Operations: ILEC | Submission Status: Original - Submitted | Last Updated: Sep 3, 2019 22:06:42

Filer Identification

Section	Question	Response
Filer Information	Company Name	CenturyLink, Inc.
	Holding Company Name	CenturyLink, Inc.
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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 Information	Certifying Official Name	Stacy Hartman
	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

Albemarle County VATI 2021

Albemarle Broadband
Authority &
CenturyLink

Summary of Projects

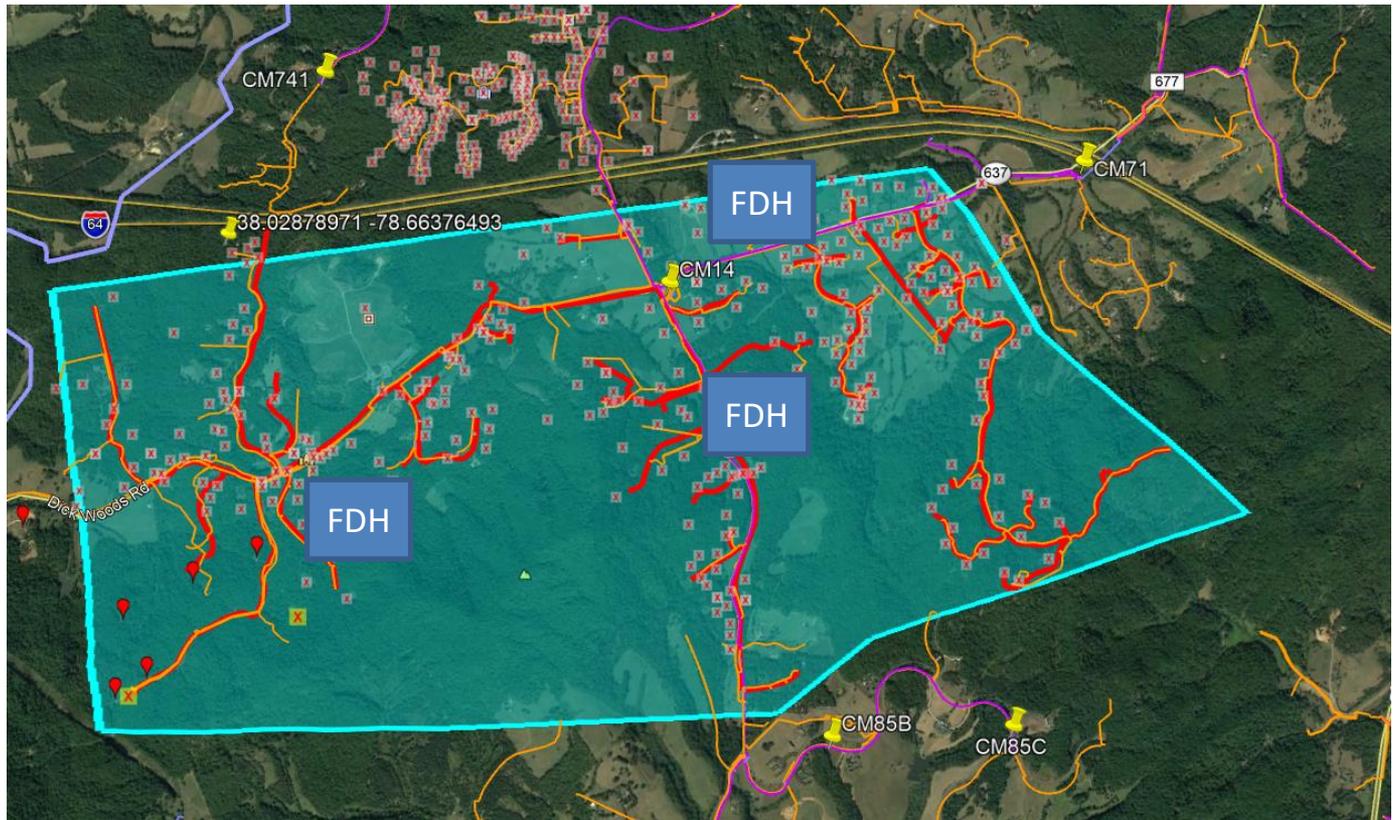
CenturyLink - Albemarle Broadband Authority - VATI 2021

Project			Capital Costs			Passings		Passings		ABBA / VATI			
Project	Exchange	Slide	ISP	OSP	Total construction	Living units	Total Cost/ Living Unit	Grant Required	Grant Percentage	ABBA Contribution	VATI Grant Amount	VATI Cost/Passing	VATI Grant Percentage
Box Holly / Taylors Gap	CHVLVA	4	\$ 50,000	\$ 898,290	\$ 948,290	361	\$ 2,627	\$ 824,362	86.9%	\$ 106,311	\$ 718,051	\$ 1,989	75.7%
Campbell/ Cobham	CHVLVA	5	\$ 125,000	\$ 2,297,000	\$ 2,422,000	1232	\$ 1,966	\$ 1,819,841	75.1%	\$ 271,525	\$ 1,548,316	\$ 1,257	63.9%
Milton Hills	CHVLVA	6	\$ 54,000	\$ 187,500	\$ 241,500	75	\$ 3,220	\$ 206,860	85.7%	\$ 27,074	\$ 179,786	\$ 2,397	74.4%
Old Garth Heights	CHVLVA	7	\$ 10,000	\$ 26,000	\$ 36,000	7	\$ 5,143	\$ 31,760	88.2%	\$ 4,036	\$ 27,724	\$ 3,961	77.0%
Snow Hill Ln	CHVLVA	8	\$ 30,000	\$ 116,000	\$ 146,000	68	\$ 2,147	\$ 113,658	77.8%	\$ 16,368	\$ 97,290	\$ 1,431	66.6%
Tilman Rd / Meriweather H	CHVLVA	9	\$ 30,000	\$ 149,000	\$ 179,000	51	\$ 3,510	\$ 157,483	88.0%	\$ 20,067	\$ 137,416	\$ 2,694	76.8%
Advance Mills / Fray Rd	CHNOVA	10	\$ 15,000	\$ 301,000	\$ 316,000	125	\$ 2,528	\$ 276,947	87.6%	\$ 35,426	\$ 241,520	\$ 1,932	76.4%
Boonesville	CHNOVA	11	\$ 30,000	\$ 656,000	\$ 686,000	246	\$ 2,789	\$ 318,090	46.4%	\$ 76,906	\$ 241,184	\$ 980	35.2%
Gilbert Station Rd	CHNOVA	12	\$ 30,000	\$ 140,500	\$ 170,500	46	\$ 3,707	\$ 117,031	68.6%	\$ 19,114	\$ 97,916	\$ 2,129	57.4%
Bucks Elbow	CRZTVA	13	\$ 15,000	\$ 349,000	\$ 364,000	48	\$ 7,583	\$ 302,217	83.0%	\$ 40,807	\$ 261,410	\$ 5,446	71.8%
Jones Mill Road	CRZTVA	14	\$ 15,000	\$ 184,500	\$ 199,500	63	\$ 3,167	\$ 148,318	74.3%	\$ 22,366	\$ 125,953	\$ 1,999	63.1%
Total			\$ 404,000	\$ 5,304,790	\$ 5,708,790	2,322	\$ 2,459	\$ 4,316,566	75.6%	\$ 640,000	\$ 3,676,566	\$ 1,583	64.4%

Charlottesville Main – Box Holly / Taylors Gap Rd (FTTH)

\$948.29K
\$2,627/ 1G LU

361 1G LUs



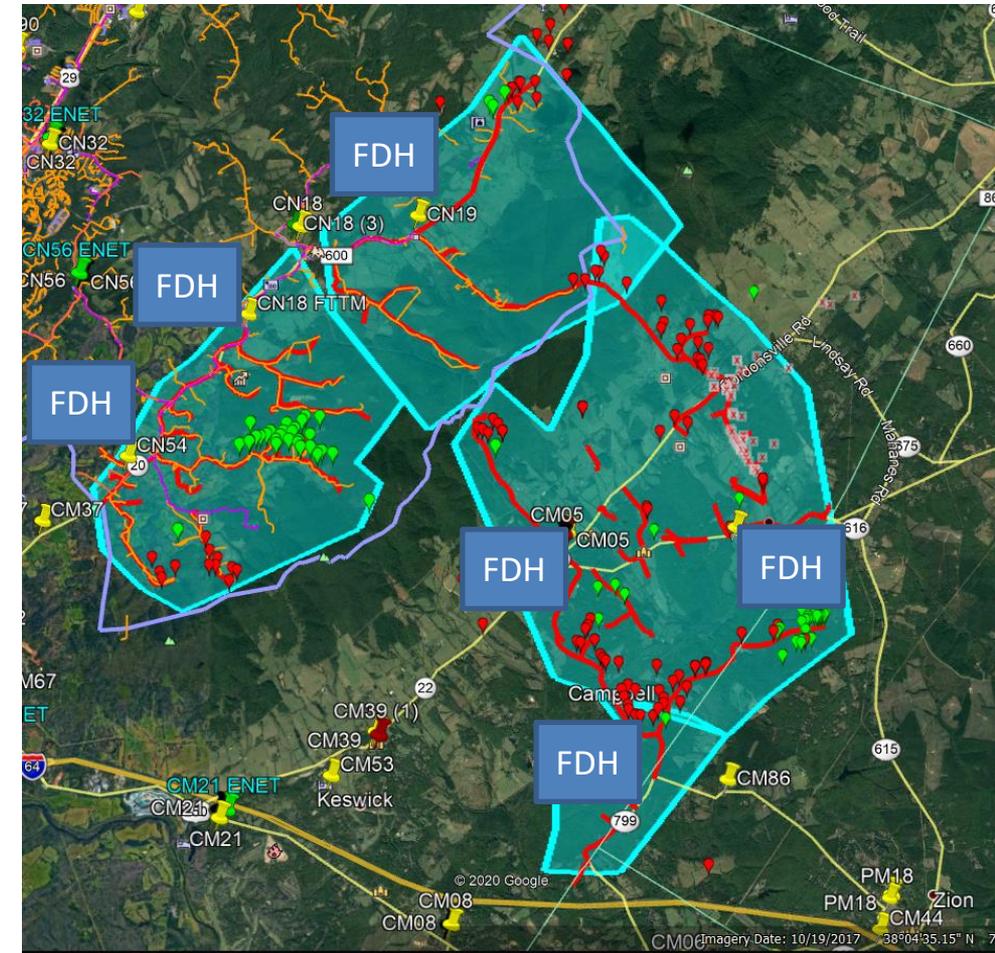
Place 3 FDHs &
240 MDTs, \$113,590K

Add E7 GPON w/
GPON @ CM14 &
CM71, \$50K

Charlottesville Main & North – Campbell/ Cismont/ Cobham / Stony point Pass (FTTH)

\$2,422K
\$1,966/ 1G LU

1232 1G LUs



Place 5-6 FDHs &
821 MDTs, \$309K

Add E7 GPON w/
GPON @ CM05,
CM86, CN18 & CN19
& CN54, \$125K

Charlottesville Main – Milton Hills (FTTH)

\$241.5K
\$3,220/ 1G LU

75 1G LUs

Place 15 KFT, 96F,
\$105K

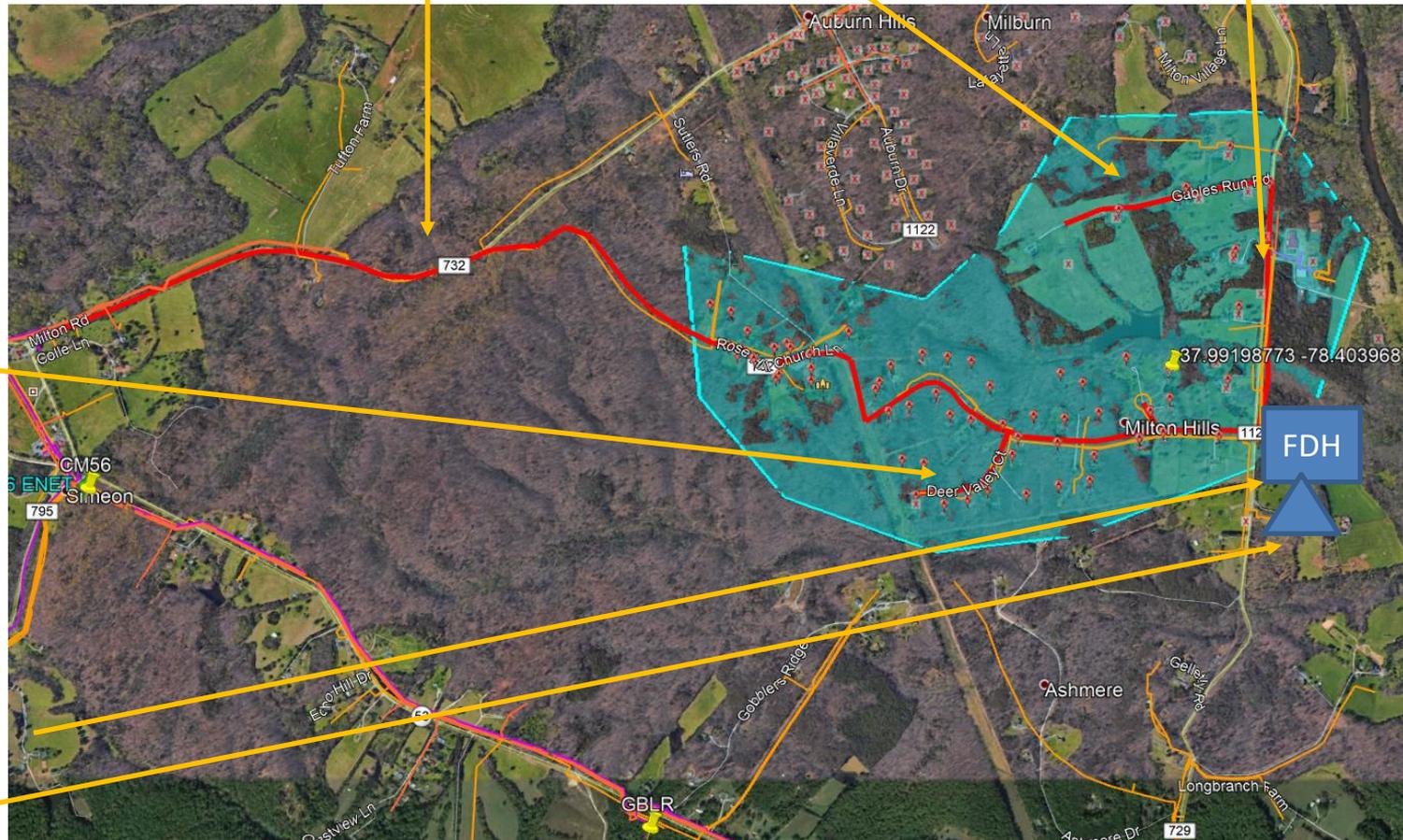
Place 2 KFT, 48F,
\$14K

Place 4 KFT, 96F,
\$28K

Place 1.5 KFT, 48F,
\$10.5K

Place 1 FDH &
38 MDTs, \$30K

New ODC-200 w/ E7
GPON, \$54K



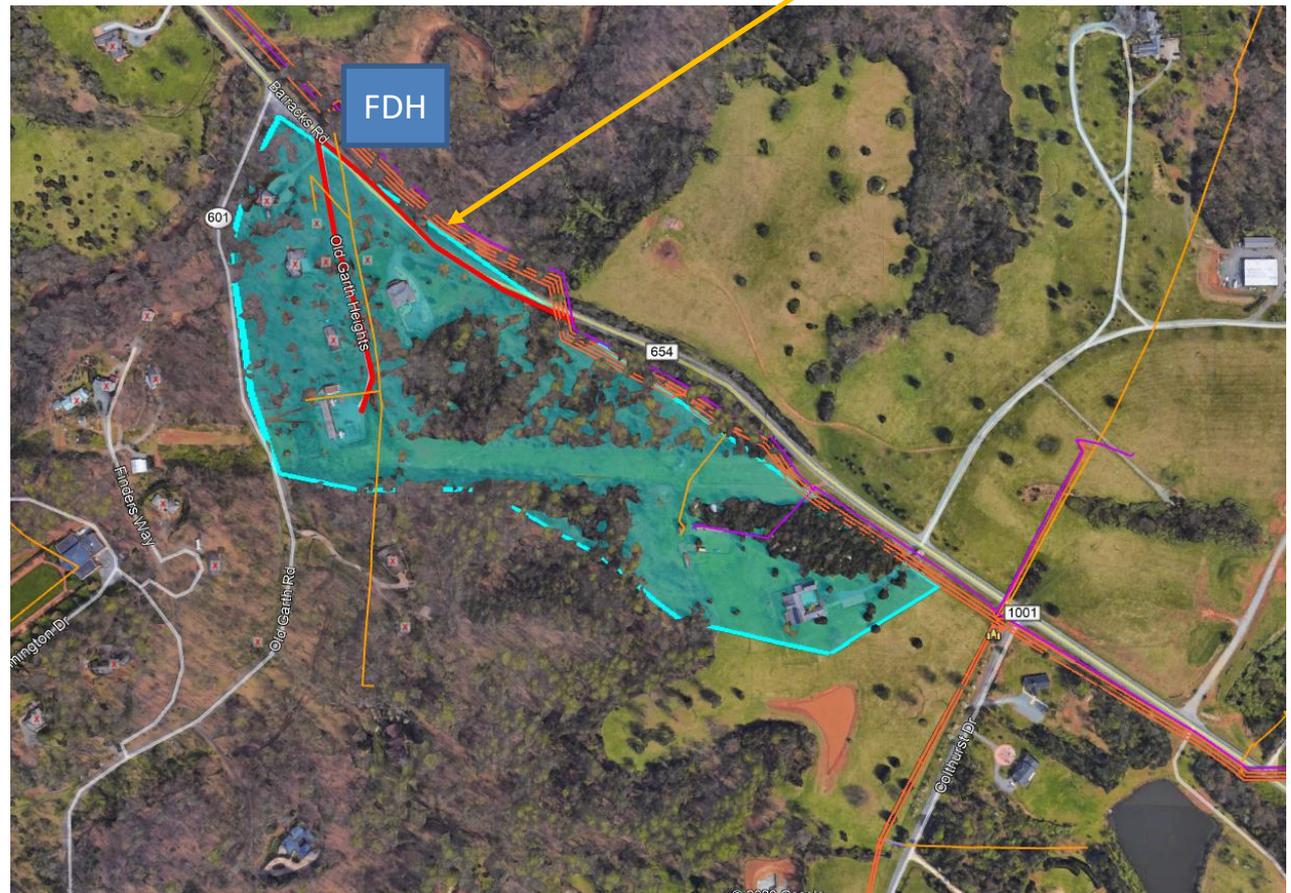
Charlottesville Main – Old Garth Heights (FTTH)

\$36K

\$5,143/ 1G LU

7 1G LUs

Place 3 KFT, 48F, \$21K



Place GPON Card in
CM70, \$10K

Place 1 FDH &
2 MDTs, \$5K

Charlottesville Main – Snow Hill Ln (FTTH)

\$146K
\$2,147/ 1G LU

Place 7 KFT, 96F, \$49K

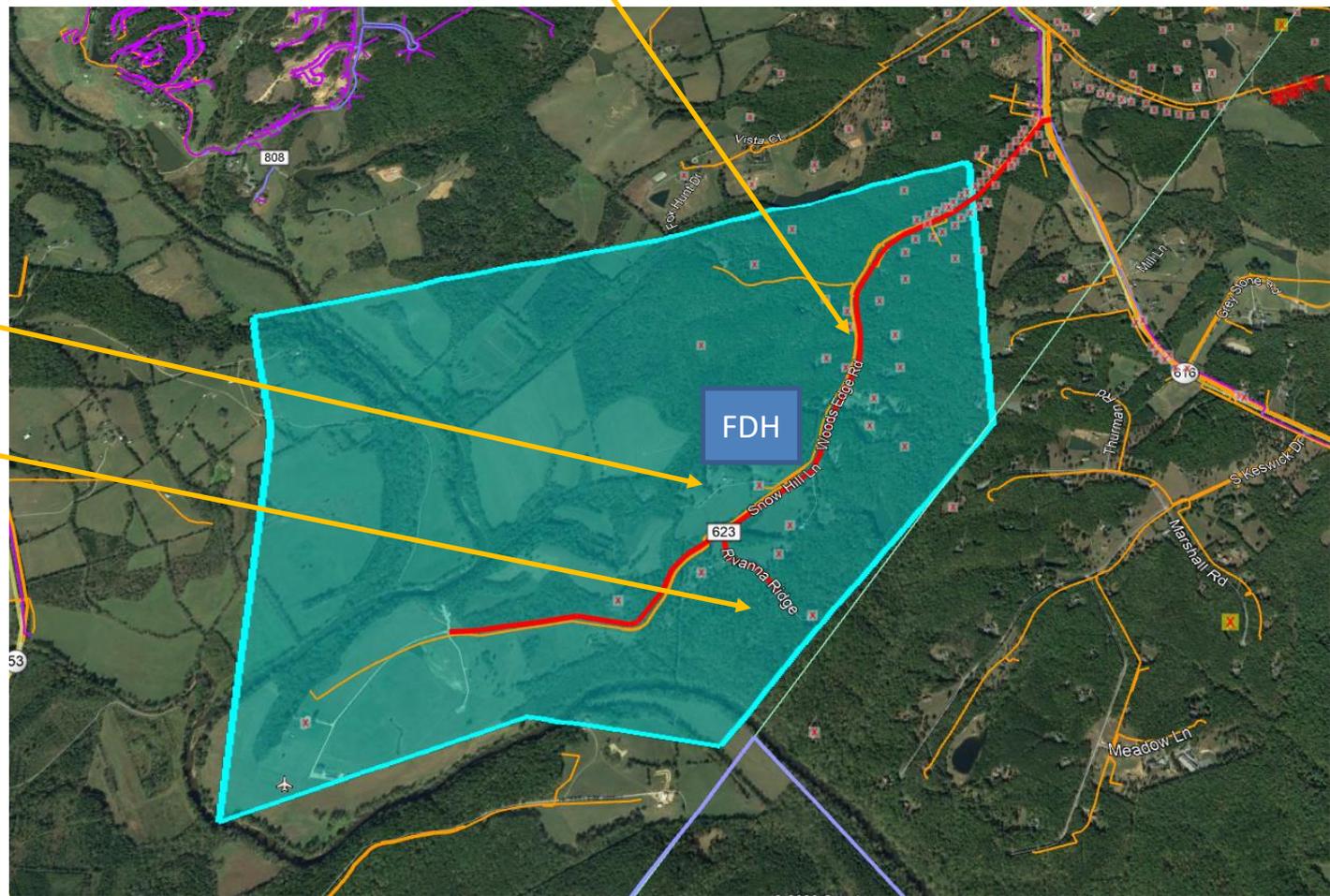
68 1G LUs

Place 5 KFT, 48F, \$35K

Place 1 KFT, 48F, \$7K

Place GPON Card in
CM08, \$30K

Place 1 FDH &
35 MDTS, \$25K



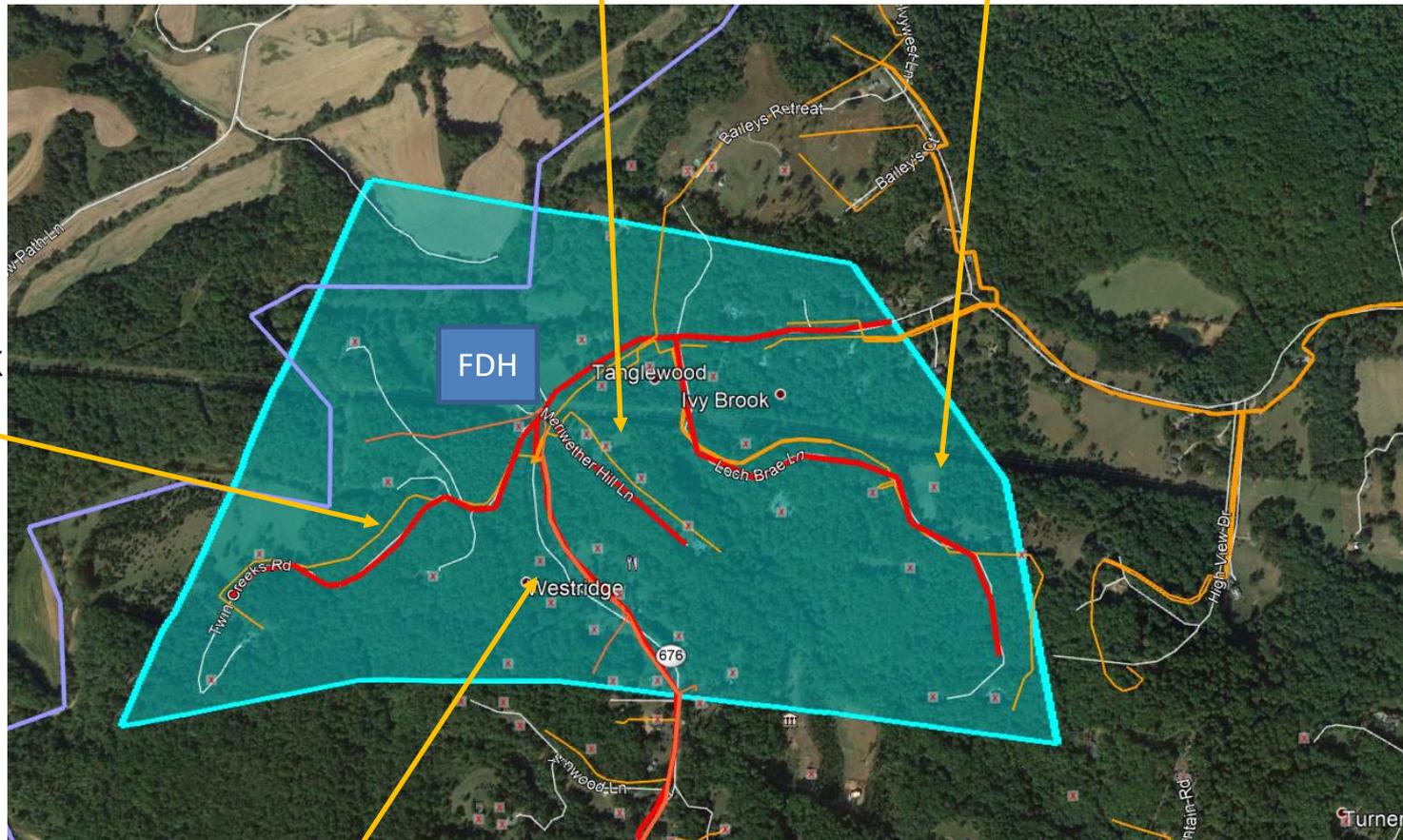
Charlottesville Main – Tilman Rd (FTTH)

\$179K
\$3,510/ 1G LU

Place 3.5 KFT, 48F, \$24.5K

Place 1.5 KFT, 48F, \$10.5K

51 1G LUs



Place 3 KFT, 48F, \$21K

Place GPON Card in
CM30, \$30K

Place 1 FDH &
26 MDTS, \$23K

Place 10 KFT, 96F, \$70K

Charlottesville North – Advance Mills Rd / Fray Rd (FTTH)

\$316K
\$2,528/ 1G LU

Place 6 KFT, 48F, \$42K

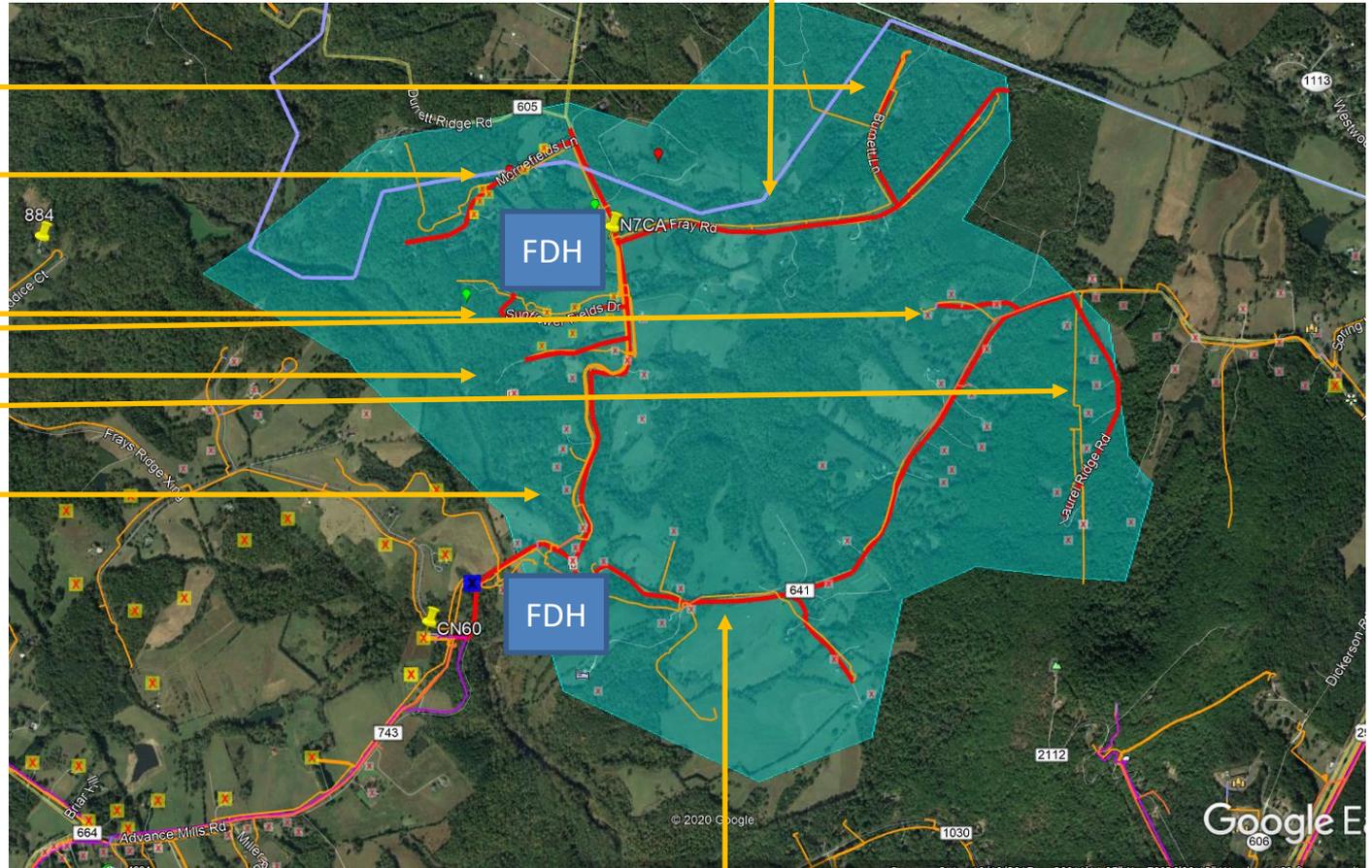
125 1G LUs

Place 7 Spurs, total of
14 Kft, 48F \$91K

Place 9 KFT, 96F, \$63K

Place E7_GPON in
CN60, \$15K

Place 2 FDHs &
80 MDTs, \$42K



Place 9 KFT, 96F, \$63K

Charlottesville North – Boonesville (FTTH)

\$686K
\$2,789/ 1G LU

246 1G LUs

Place 25 Spurs, total of
21 Kft, \$175K

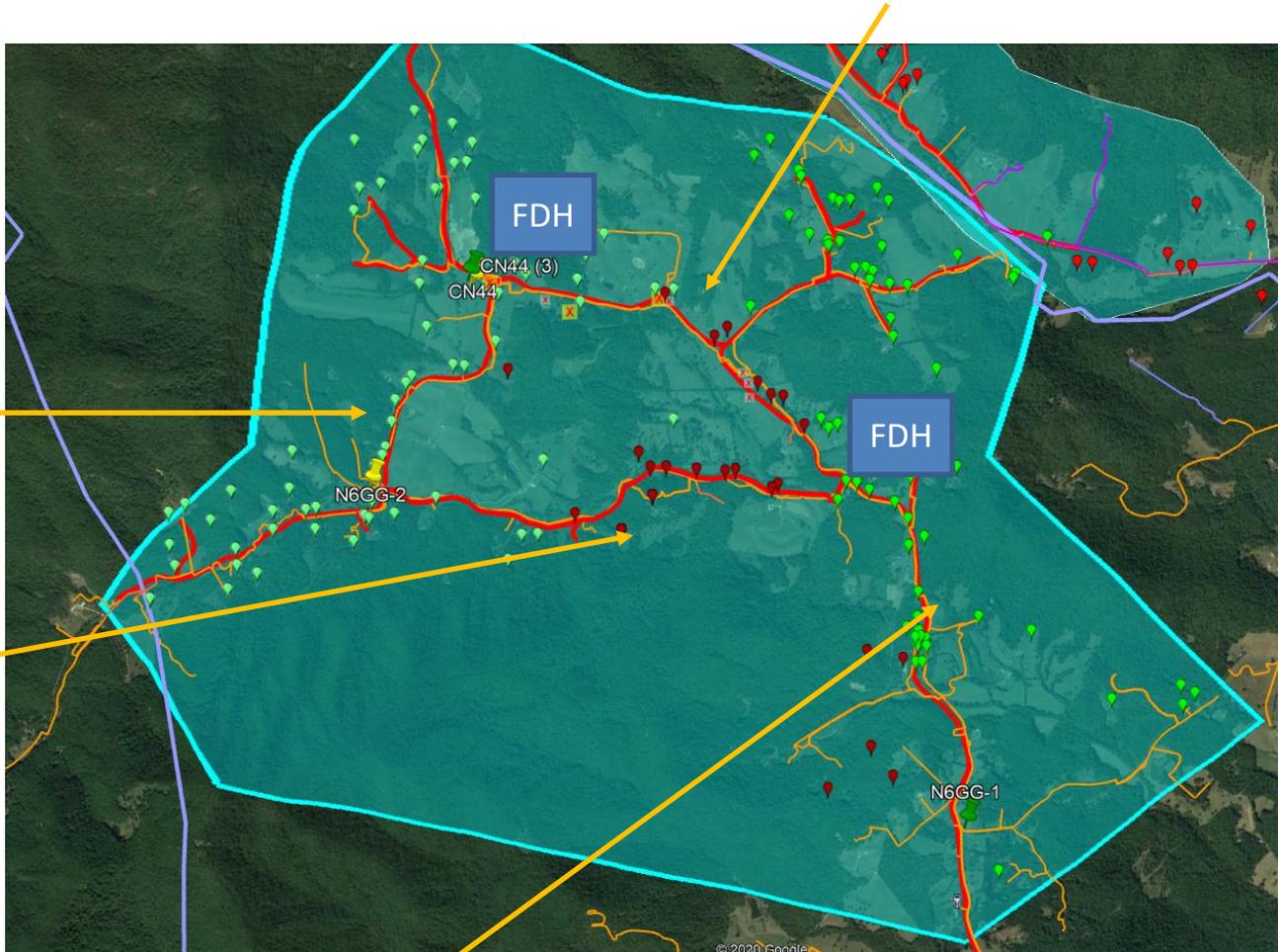
Place 14 KFT, 96F, \$98K

Place 13 KFT, 96F, \$91K

Place E7_GPON in
CN44 or CN03, \$30K

Place 2 FDHs &
160 MDTs, \$75K

Place 13 KFT, 96F, \$91K



Place 18 KFT, 96F, \$126K

Charlottesville North – Gilbert Station Rd (FTTH)

\$170.5K
\$3,707/ 1G LU

Place 12 KFT, 96F, \$84K

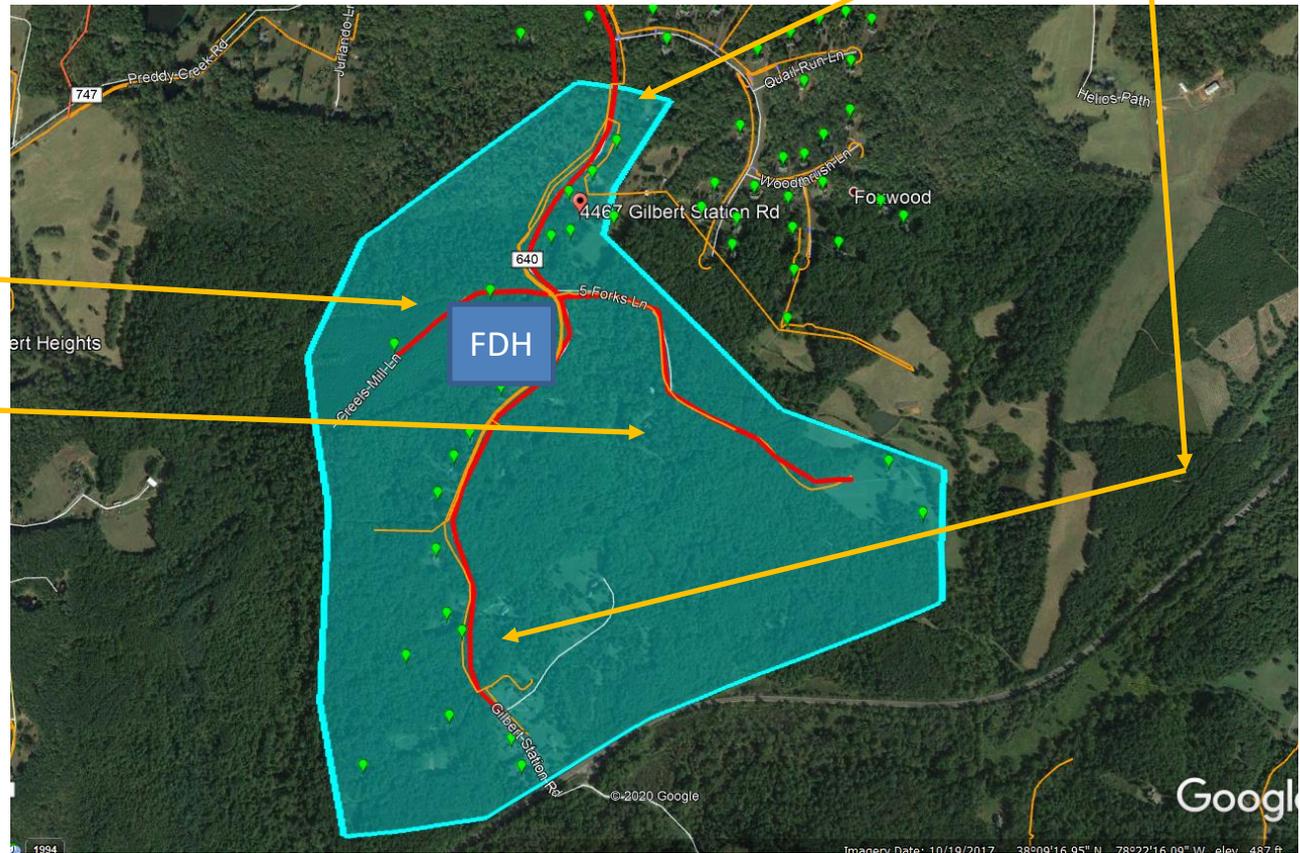
46 1G LUs

Place 1.5 KFT, 48F, \$10.5K

Place 3 KFT, 48F, \$21K

Place E7_GPON in
CN01, \$30K

Place 1 FDH &
24 MDTS, \$25K



Crozet – Bucks Elbow (FTTH)

\$364K
\$7,583/ 1G LU

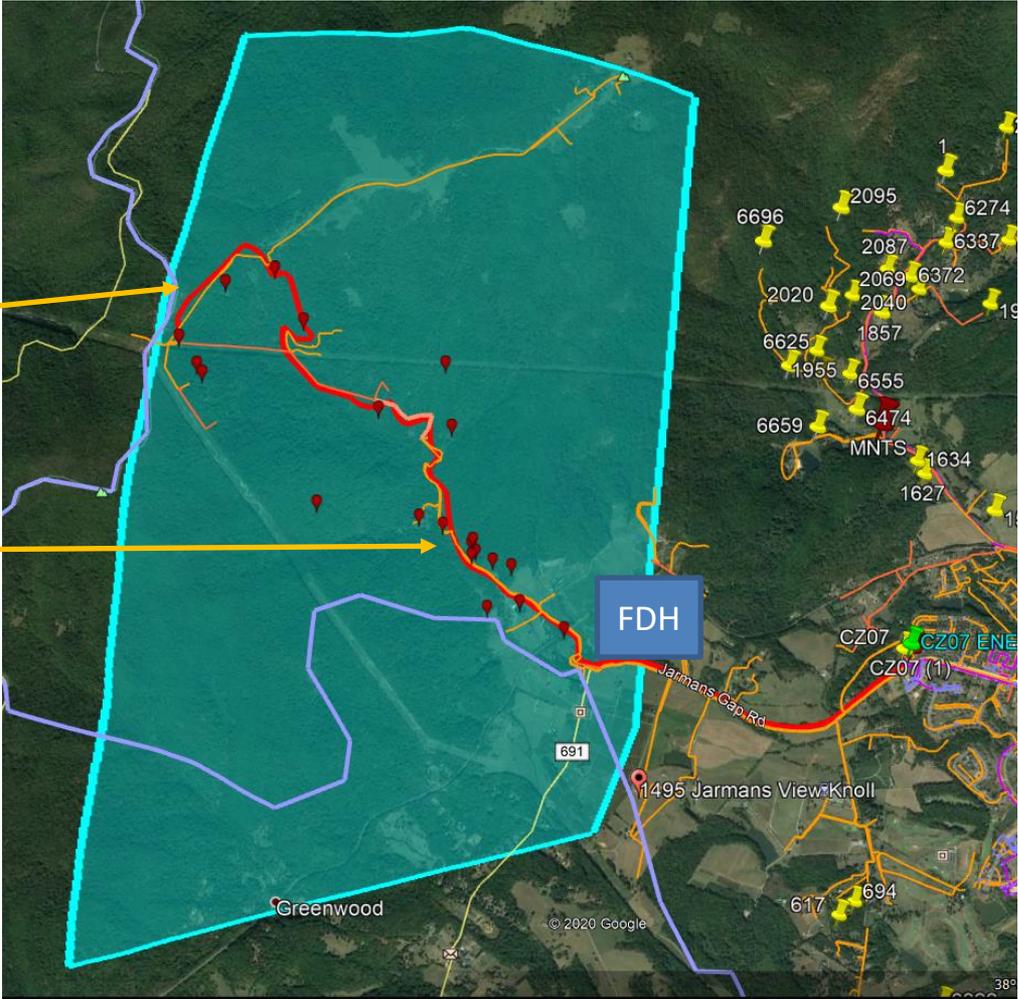
48 1G LUs

Place 1 Spur 48F, total of
3 Kft, \$36K

Place 24 KFT, 96F, \$288K

Place E7 GPON
Card @ CZ07,
\$15K

Place 1 FDH &
32 MDTS, \$25K



Crozet – Jones Mill Road (FTTH)

\$199.5K

\$3,167 / 1G LU

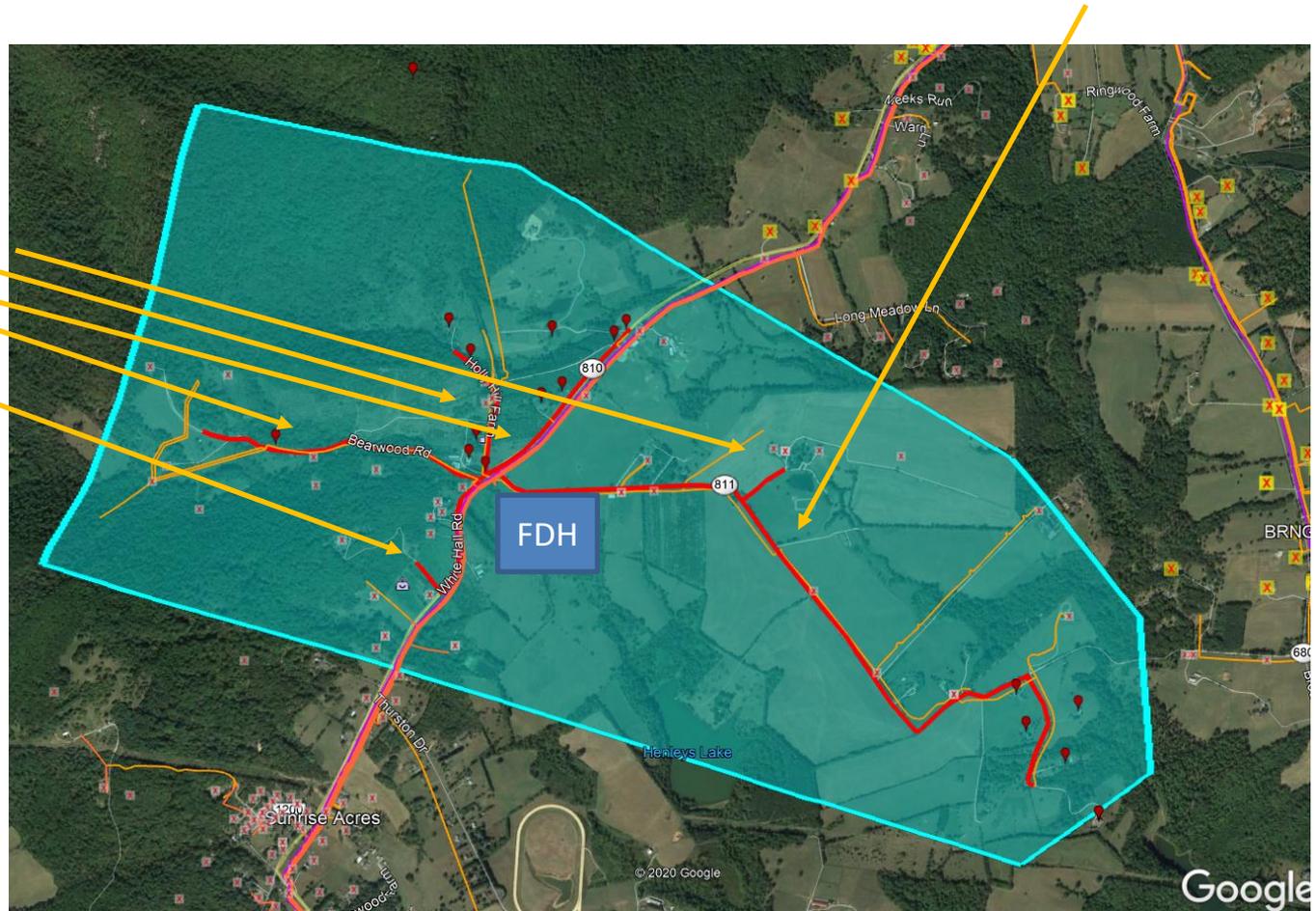
Place 9 KFT, 96F, \$63K

63 1G LUs

Place 6 Legs 48F, total
of 13.5 Kft, \$94.5K

Place E7 GPON
Card @ CZ12,
\$15K

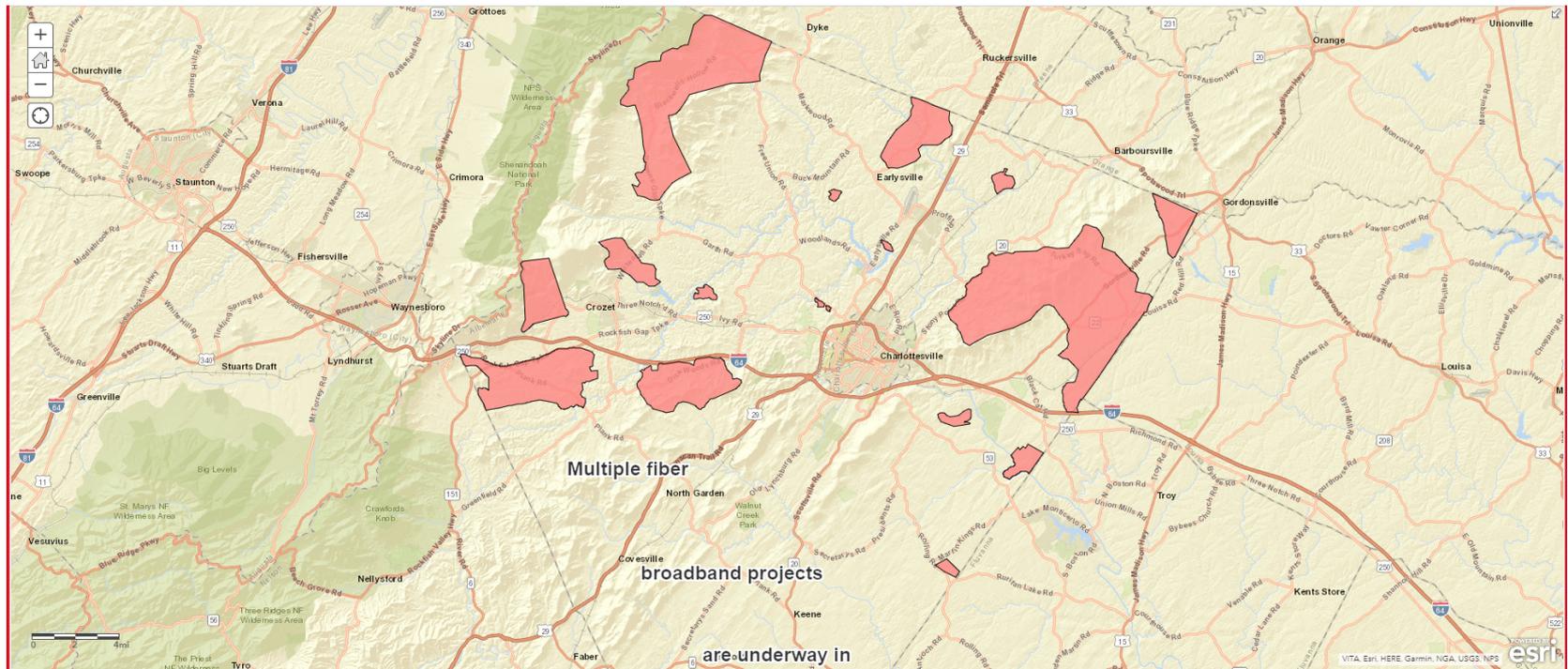
Place 1 FDH &
42 MDTs, \$27K



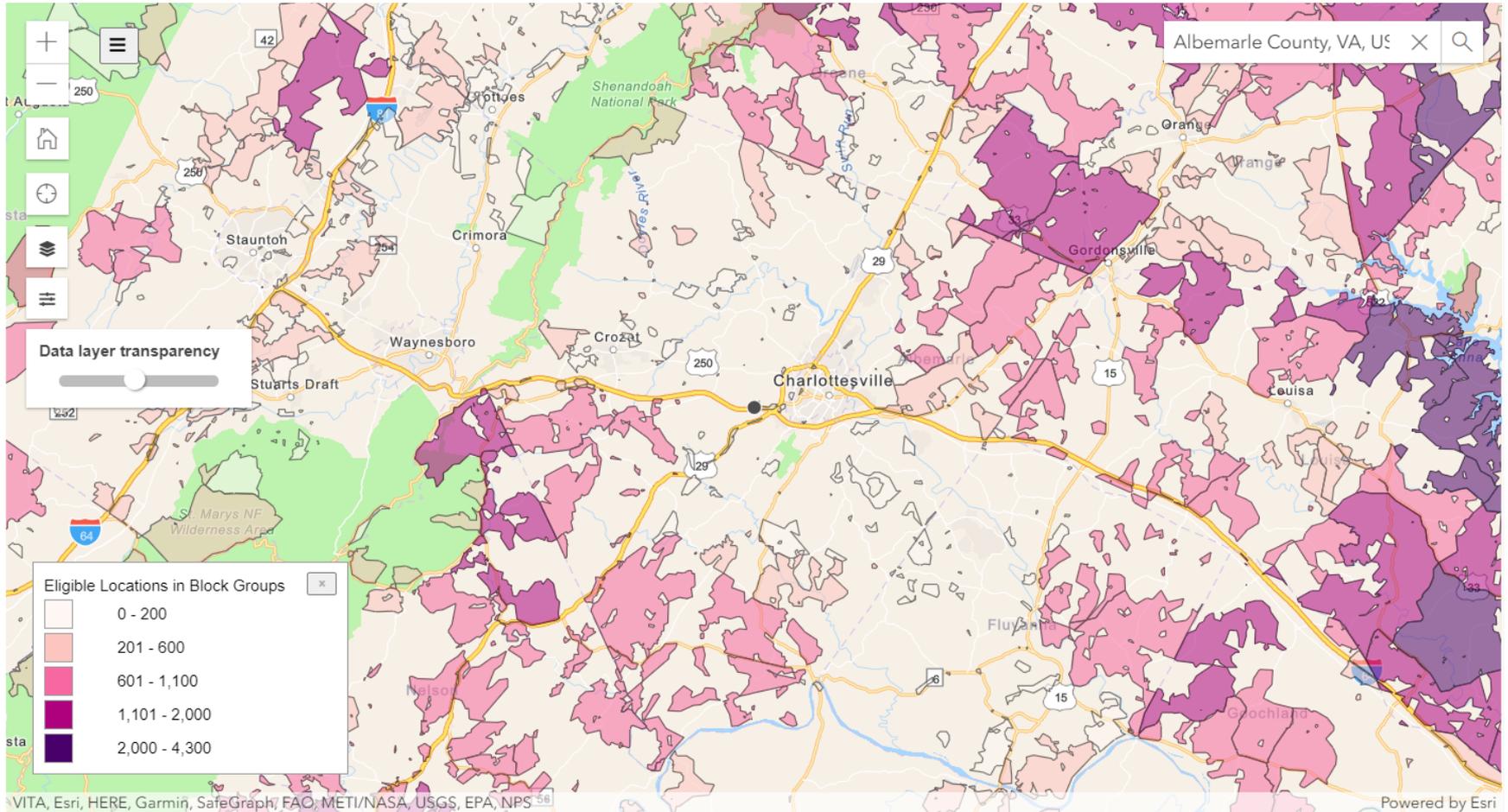
Albemarle County Map

Map illustrates areas identified as unserved with the largest demand based on surveys and speed tests provided by residents and businesses. CenturyLink project would serve 11 of 16 areas identified. Two of the project areas in western Albemarle are outside of CenturyLink's footprint and the three remaining clusters were too small to create an economical project.

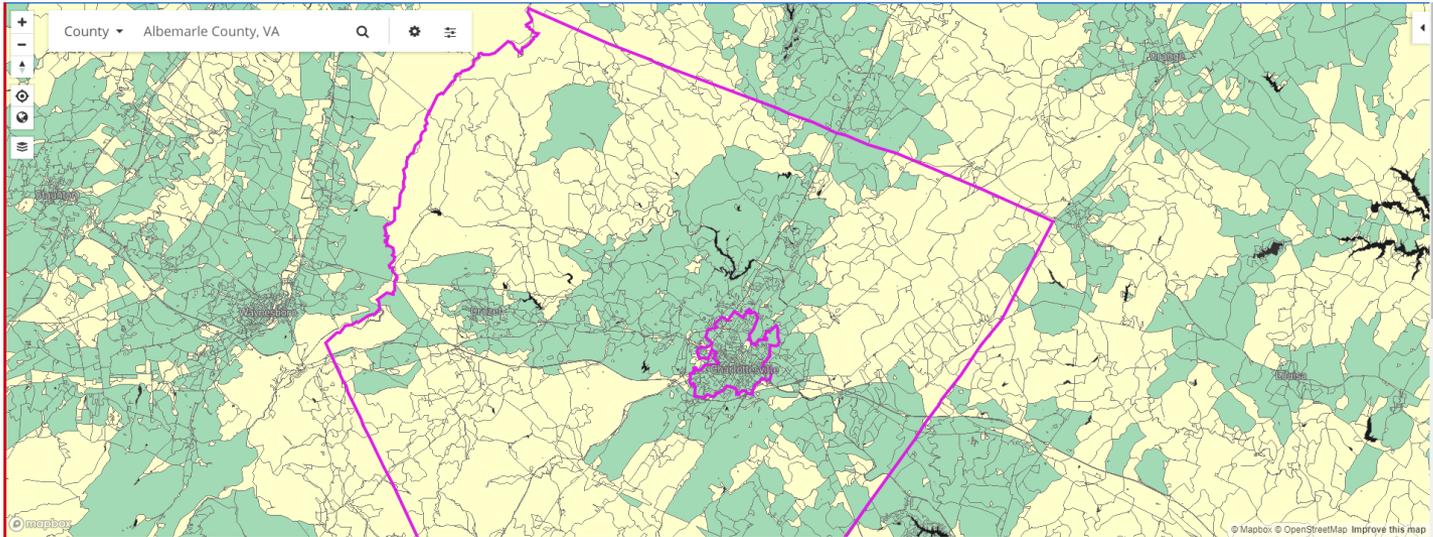
CenturyLink is currently working on six fiber-to-the-home projects in the southern end of the County utilizing a VATI 2020 grant along with a grant from Albemarle Broadband Authority.



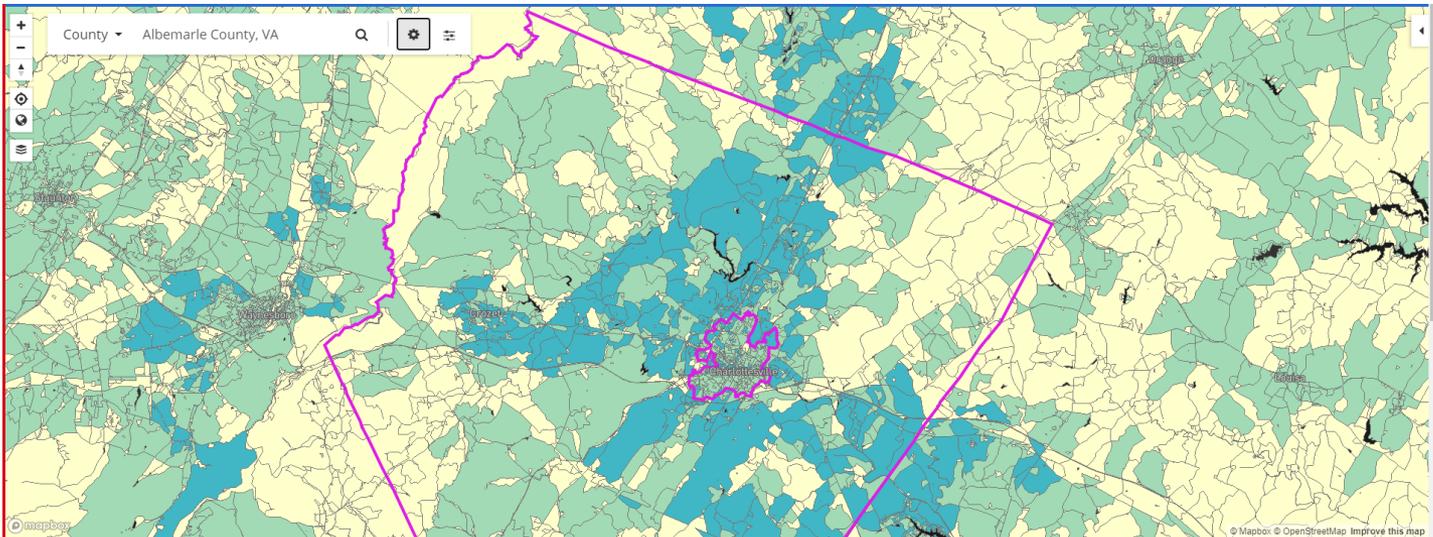
RDOF Eligible Areas



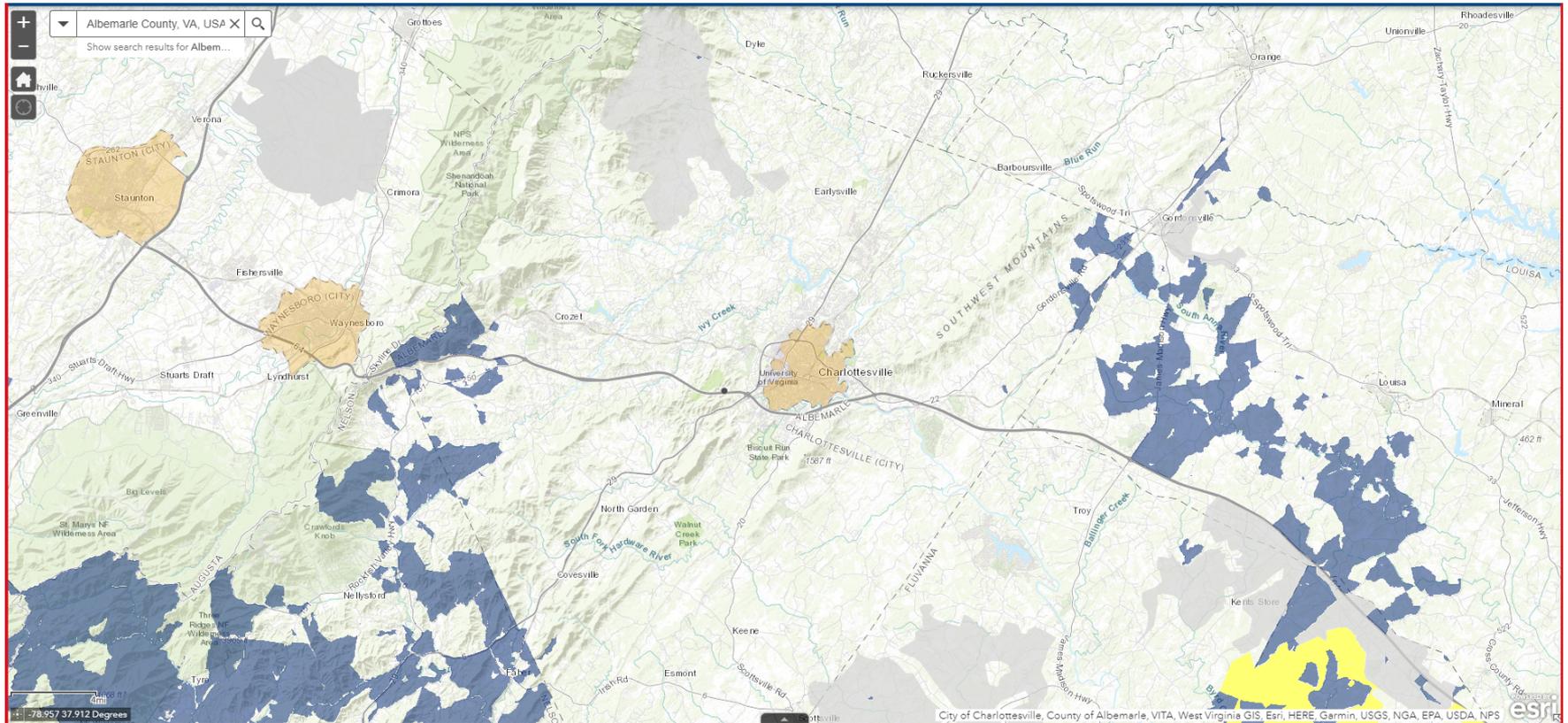
FCC Broadband Map



Upper (cable coverage 25/3) Lower (cable/DSL coverage 25/3)



USDA Reconnect and CAFII Auction Map



Albemarle Broadband Authority

Strategic Plan

July 22,2020

I. Background

In the spring of 2016, Albemarle County was awarded a Virginia Telecommunications Planning Initiative grant through the Virginia Department of Housing and Community Development to develop a community-based telecommunication plan, which was completed in October of 2016. That plan recommended creating a Broadband Authority, and in August, 2017 the Albemarle Broadband Authority, or ABBA, was created.

ABBA consists of two supervisors, two senior county staff members, and two members from the public. ABBA has appointed as its Chief Administrative Officer the current Director of IT for Albemarle County.

In a review of Albemarle County strategies for the future, the Board of Supervisors voted to adopt a [FY 20-22 strategic plan](#) on November 7, 2018. Included as one of 9 points in the strategic plan for the county was to “Expand Broadband: Establish & implement strategic direction to expand broadband affordable access to underserved, rural communities.”

ABBA has defined its goal as follows:

To extend affordable broadband internet service access to every customer in Albemarle county.

A. General Approach

ABBA has determined a general approach to accomplish its goal. This approach is to partner with Internet Service Providers (ISPs), and State, Federal and local funding sources. While the Wireless Services Authorities Act under which ABBA was created permits ABBA to itself offer internet services and become an ISP, that is not the strategic approach Albemarle intended when ABBA was created.

ABBA operates under the following principles:

1. ABBA will partner with current or future businesses to provide internet services.
 - a. ABBA will not operate its own internet service provider facilities
 - b. ABBA will facilitate investment in internet infrastructure through grants and public/private partnerships
 - c. ABBA will not establish preferred provider relationships. ABBA may engage specific providers for specific projects based on requirements for that project and provider availability.

2. Broadband technologies with which ABBA works must be robust.
 - a. Some technologies and implementations are subject to significant degradation due to weather, time of day usage, or other factors. A robust solution will normally meet the broadband definition consistently.
 - b. Solutions which do not meet the broadband definition will not be a focus.
3. Funding sources other than debt will be used for all ABBA activities.
 - a. Federal, state, local and private grants will be sought as needed.

II. Goal

ABBA's simple one sentence goal has very specific meaning:

Extend *affordable broadband* internet service *access* to every *customer* in Albemarle county.

Definitions:

Affordable – Priced at typical user rates. As an example, if customers in the west of the county pay \$60/month on average for broadband, offering this at \$200/month to new customers in the west would not be typical user rates.

Broadband - a nominal 25Mbps down/3Mbps up connection is the minimum preferred (25/3).

Access – the service is available for purchase by the customer.

Customer – residences, businesses, etc. Service access is provided when the service is available to the customer's premises, not when the customer purchases it or distributes it within their premises.

To achieve this goal, ABBA recognizes that it must know where internet services are and are not provided, and to what extent, if any, that those services meet the definition for *broadband*.

While it is not part of the goal, an environment where the *customers* in the county have more than one ISP to select from for *broadband* is believed to offer the most robust solution and is consistent with the belief that competition will produce the most *affordable* solutions.

III. Strategies

As a part of developing specific strategies and plans:

- ABBA monitors the state's efforts and contributes wherever possible to reach the goal of universal broadband by 2028, preferably much sooner.
- ABBA supports efforts to develop digital literacy through its partnerships with the Schools, Libraries, and Higher Education.
- ABBA considers Central Virginia to be the "heart" of a regional hub for fiber connectivity. ABBA is seeking out ways to partner with adjoining counties in order to document and best utilized the various fiber plants in the planning district.

To achieve its goal, ABBA has identified a short list of strategies which it will actively pursue.

A. Track Unserved Areas of the County

The first strategy ABBA follows is to identify and track those locations in the county where broadband service does not exist or the internet service offered does not meet the definition for broadband. Primarily this is in rural areas, but also unserved and underserved areas near urban ring have been identified. Customers all over the county have internet service that neither meets the current definition of broadband, nor does their actual service level come close to the service level they are paying for. In some cases, their service has degraded to less than dial-up speeds or even further to intermittently non-functioning.

ABBA has created a database of more than 1875 addresses where there is either no service, sub-broadband service, or intermittent service. This has been developed with direct resident input via processes in both English and Spanish languages. For those with some form of internet connection, we have a web site where the resident's address and contact information are entered and data including their upload and download speeds, ping time, latency, and ISP can be automatically captured. For residents with no access to the internet from their home or business, we take telephone reports and enter their data into the database manually.

In addition to internet connection data, we also ask for their electrical provider, details on how the internet is used, details on how not having internet access has impacted livelihood/quality of life, attempts to acquire internet access, etc.

From this Unserved and Underserved database, we maintain maps of the areas, regions or pockets where we need broadband projects. These maps are shared with ISPs to drive development in the form of proposals for federal, state, and local funding.

B. Partner with ISPs for New Broadband Installation

“Partner” in this strategy means that ABBA solicits participation, provides information, provides proposal support, and provides funding. As federal and state funding opportunities arise (e.g., RDOF, VATI) ABBA stays in communication with local ISPs to ensure they are engaged. We identify areas of need for these ISPs, and provide specific details from our Unserved and Underserved database for their proposals.

When appropriate, ABBA will offer some funding to improve a proposal’s chance with a funding agency.

C. Partner with Neighborhoods to Address Local Issues

“Partner” in this strategy means sharing contact information, experience, and helping to bring neighborhoods and ISPs together. In many areas of the county, the need for broadband or improved internet services is so great that the residents of a neighborhood or small area are willing to explore how they can fund an installation themselves. ABBA will contact ISPs, and introduce the residents and ISP players to one another. When they sit down for informational sessions, ABBA will be present to share other experiences that we have observed. And if the residents and the ISPs can reach an agreement, ABBA will monitor the development to ensure the outcomes sought are the outcomes achieved.

D. Partner with Schools to Share Information and Address Mutual Goals

The Albemarle County Public Schools (ACPS) have a very specific need to have all of their students have access to broadband from their home. This goal overlaps with ABBA’s. ABBA and ACPS share information and some resources to each further the other’s goals. Free and reduced-price lunch data from ACPS is a key measure for determining areas of economic need.

E. Identify Resources to Meet Needs

“Resources” for this strategy include both funding sources and ISPs. The public funding landscape is in constant flux, and ABBA must keep abreast of those resources as well as their specific requirements. Doing so will enable us to target specific ABBA projects at the best funding resource.

The ISP landscape in Albemarle County is also in constant flux. Working with ABBA, a new ISP has entered the county providing fiber to the home using electric cooperative power poles to connect the fiber. Ultimately, this will serve about 3600 addresses in the county. Other fixed wireless and fiber providers have talked to ABBA about expanding their service into the county. And we are constantly monitoring the progress of Starlink, OneWeb and others who are looking to create a new, low-Earth-orbit satellite service with far better latency than existing satellite

services. Each ISP is more or less well suited to work on each of the projects we have identified. Knowing the capabilities of each enables us to find the best partner opportunities.

F. Fund Specific Projects to Ensure Coverage

ABBA expects that there may be some projects which must be funded locally with ABBA and the ISP providing all of the funding. The reasons for this could be varied: areas which fail some criteria of other public funding grants but which still need to be served, areas which compete for but do not win public funding grants, areas that are too small to consider for public funding grants, areas that are not economically viable for any ISP to build on their own, etc.

When necessary, ABBA will provide the only public funding for some projects. These projects will be selected from our Unserved and Underserved database, and will be selected according to the following criteria.

Criteria:

- Projects that include performance criteria that the vendor (ISP) will meet and report on over a two-year period. Performance criteria will be defined by project type; fixed wireless, fiber, cable, hybrid fiber/cable, or DSL.
- Projects that maximize the number of potential school-age beneficiaries as determined by current ACPS transportation data on school-age children's locations. This is a surrogate for where the actual children are, as the transportation data will not address home-schooled or private school children. However, it should serve as a reasonable comparison between projects.
- Projects that will serve economically disadvantaged residents. This will be determined through reliance upon the data expertise of county staff.
- Projects with the least economic viability as commercial projects. In other words, ABBA prefers those projects that will not or cannot be completed without ABBA funds.
- Projects that best leverage ABBA's funds, e.g., where \$1 invested by ABBA is matched by the highest funding level from a partner ISP.
- Projects that arise externally, where ISP partners propose projects which make sense for their business rather than ABBA identifying a need and then searching for a particular ISP or ISPs to fill it.
- Auctions where multiple ISPs compete for the funds and, if applicable, offer varying technical approaches.
- Projects that deliver end user services over projects which only deploy infrastructure.
- Solutions that meet or exceed its broadband definition of 25Mbps down/3Mbps up are strongly preferred. Bandwidth needs have only gone up and are forecast to only go up for the foreseeable future.
- Solutions which are cost efficient. Cost efficiency is measured by the cost to ABBA per Albemarle County resident who benefits.

- Solutions that create a service offering where none exists. While increasing competition is usually good for the consumer, ABBA’s focus is first on ensuring some service is available for all residents of the County.
- Projects that stimulate economic development with improved connectivity in areas zoned to accommodate business growth.

IV. Development

Beyond our current strategies, ABBA has identified areas for future growth and development of our goal and principles. These topics may be beyond ABBA’s current remit, and require endorsement from the Albemarle County Board of Supervisors before ABBA would proceed in these areas. At the present time these are unprioritized considerations for ABBA to review in the future.

A. Equity

ABBA’s current goal seeks to “Extend affordable broadband internet service *access* to every customer in Albemarle county.” As currently defined, this “access” need only be *available* to a customer and priced at typical rates. This does not address the needs of customers who can not afford an additional monthly charge for broadband. Economic barriers to broadband are just as much barriers as physical ones are. The lack of broadband access can be a symptom of poverty and may be causal in some cases, of poverty as well. This vicious cycle may require governmental intervention to break.

B. Competition

ABBA’s current goal does not include the concept of choice of broadband provider. ABBA has reached its current goal when there is at least one offering of broadband for every customer in the county. As noted previously, an environment where the customers in the county have more than one ISP to select from for broadband is believed to offer the most robust solution and is consistent with the belief that competition will produce the most affordable solutions. Ensuring all citizens of the county have a choice of broadband suppliers warrants consideration as a future goal for ABBA.

C. Limited Service Provision

As a current principle, ABBA will not operate its own internet service provider facilities. To achieve the goal to ensure “every customer” in Albemarle has broadband, ABBA may find it necessary or expedient to acquire or facilitate access to assets that ABBA, the county or the public schools own to enable vendors to make their offerings. Assets such as existing or new dark fiber which could be leased to a vendor, or real estate locations which could be leased for facilities are examples. While not engaging in direct-to-consumer service provision, these kinds

of activities could make ABBA an internet service provider. For a small number of county residents, it might even be necessary for ABBA to be the direct-to-consumer owner/operator of services if it wants to achieve its goal of “every customer”. Some of the last mile locations in the county will be very costly to connect. ABBA would not be competing with other ISPs if no other ISPs can be found to offer the services.

Embarking on any form of limited service provision would be a significant change, and is recorded here as only a possible item for future consideration.

Summary of Projects

CenturyLink - Albemarle Broadband Authority - VATI 2021													
Project			Capital Costs			Passings		Passings		ABBA / VATI			
Project	Exchange	Slide	ISP	OSP	Total construction	Living units	Total Cost/ Living Unit	Grant Required	Grant Percentage	ABBA Contribution	VATI Grant Amount	VATI Cost/Passing	VATI Grant Percentage
Box Holly / Taylors Gap	CHVLVA	4	\$ 50,000	\$ 898,290	\$ 948,290	361	\$ 2,627	\$ 824,362	86.9%	\$ 106,311	\$ 718,051	\$ 1,989	75.7%
Campbell/ Cobham	CHVLVA	5	\$ 125,000	\$2,297,000	\$ 2,422,000	1232	\$ 1,966	\$ 1,819,841	75.1%	\$ 271,525	\$ 1,548,316	\$ 1,257	63.9%
Milton Hills	CHVLVA	6	\$ 54,000	\$ 187,500	\$ 241,500	75	\$ 3,220	\$ 206,860	85.7%	\$ 27,074	\$ 179,786	\$ 2,397	74.4%
Old Garth Heights	CHVLVA	7	\$ 10,000	\$ 26,000	\$ 36,000	7	\$ 5,143	\$ 31,760	88.2%	\$ 4,036	\$ 27,724	\$ 3,961	77.0%
Snow Hill Ln	CHVLVA	8	\$ 30,000	\$ 116,000	\$ 146,000	68	\$ 2,147	\$ 113,658	77.8%	\$ 16,368	\$ 97,290	\$ 1,431	66.6%
Tilman Rd / Meriweather H	CHVLVA	9	\$ 30,000	\$ 149,000	\$ 179,000	51	\$ 3,510	\$ 157,483	88.0%	\$ 20,067	\$ 137,416	\$ 2,694	76.8%
Advance Mills / Fray Rd	CHNOVA	10	\$ 15,000	\$ 301,000	\$ 316,000	125	\$ 2,528	\$ 276,947	87.6%	\$ 35,426	\$ 241,520	\$ 1,932	76.4%
Boonesville	CHNOVA	11	\$ 30,000	\$ 656,000	\$ 686,000	246	\$ 2,789	\$ 318,090	46.4%	\$ 76,906	\$ 241,184	\$ 980	35.2%
Gilbert Station Rd	CHNOVA	12	\$ 30,000	\$ 140,500	\$ 170,500	46	\$ 3,707	\$ 117,031	68.6%	\$ 19,114	\$ 97,916	\$ 2,129	57.4%
Bucks Elbow	CRZTVA	13	\$ 15,000	\$ 349,000	\$ 364,000	48	\$ 7,583	\$ 302,217	83.0%	\$ 40,807	\$ 261,410	\$ 5,446	71.8%
Jones Mill Road	CRZTVA	14	\$ 15,000	\$ 184,500	\$ 199,500	63	\$ 3,167	\$ 148,318	74.3%	\$ 22,366	\$ 125,953	\$ 1,999	63.1%
Total			\$ 404,000	\$5,304,790	\$ 5,708,790	2,322	\$ 2,459	\$ 4,316,566	75.6%	\$ 640,000	\$ 3,676,566	\$ 1,583	64.4%