

# Application to DHCD Submitted through CAMS

Cumberland Plateau PDC

CPC Broadband Expansion - Council to Davenport

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**Application ID:** 64508292019163210  
**Application Status:** Pending  
**Program Name:** Virginia Telecommunications Initiative 2020  
**Organization Name:** Cumberland Plateau PDC  
**Organization Address:** 224 Clydesway Drive  
Lebanon, VA 24266-0548  
**Profile Manager Name:** Jim Baldwin  
**Profile Manager Phone:** (276) 889-1778  
**Profile Manager Email:** jimbaldwin@bvu.net

**Project Name:** CPC Broadband Expansion - Council to Davenport  
**Project Contact Name:** Jim Baldwin  
**Project Contact Phone:** (276) 889-1778  
**Project Contact Email:** jimbaldwin@bvu.net  
**Project Location:** Helen Henderson Highway  
Council, VA 24646-4864  
**Project Service Area:** Buchanan County

**Total Requested Amount:** \$226,560.00  
**Required Annual Audit Status:** Accepted

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## Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
<b>Telecommunications</b>	<b>\$226,560.00</b>	<b>\$528,643.00</b>	<b>\$755,203.00</b>
Construction	\$226,560.00	\$528,643.00	\$755,203.00
<b>Total:</b>	<b>\$226,560.00</b>	<b>\$528,643.00</b>	<b>\$755,203.00</b>

### Budget Narrative:

The budget consists of construction labor & materials, engineering, inspection and management. The current budget assumes using Point Broadband's existing construction, engineering, inspection and management resources and assets. The budget allows for the construction of approximately 13.91 miles of fiber and will pass approximately 489 households. The request is for a 30% VATI request and 70% match by the co-applicant and applicant (in-kind).

## Questions and Responses:

### 1. Project Area

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

### Answer:

The project area is in the Council to Davenport area of Buchanan County. It spans from the Russell County line on Route 80, Helen Henderson Highway to the intersection of Howard Flat Road and Route 80. The project area includes the following routes: Route 720, Krider Road, Cunningham Road, Route 246, Tiller Drive, Chandler Road, Berkshire Road, Tiller House Road, Route 4252, Route 4255, Route 672, Deep Wood Road, RP Harris Drive, Dixie Lane, Bright Leaf Road, Campground Road, Quinn Branch Road, Route 620, Route 602, Chain Road, Grace Road, Route 692, Fairlane Road, Hewlett Harris Road, Combs Ridge Road, Compton and Combs Road, Overlook Road, Indian Pass Road, Cainsville Road, Route 4220, Bramblewood Road, Windmill Road, and Firestone Road.

The project area was selected by reviewing the grant guidelines and determining it met the competitive criteria, the definition of unserved and had strong community support for broadband expansion. The project service area also has existing backbone fiber. Map is attached.

### 2.

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

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## Answer:

The Council to Davenport proposed service area was selected due to its lack of broadband access. Research and review of the FCC 477 filing data and the VA CIT mapping revealed the only service available advertising the required speeds were satellite providers. Websites for both satellite providers show service is not available in the Council or Davenport zip codes. Market research also consistently supports that advertised satellite speeds are notoriously unreliable, and even more so in the mountains of Buchanan County. The satellite providers also have published soft data caps (accomplished by throttling speeds to less than 3 Mbps). Government officials in Buchanan County also report that their constituents do not have reliable access to the true required speeds of 10/1. We conducted a survey of the potential customers in the project area. The results support the lack of service providers and the need for speeds consistently exceeding 10/1.

### 3. Project Need/Description

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

## Answer:

The only service providers in the area are satellite providers Hughesnet and ViaSat. The 477 map shows them as offering speeds exceeding 10/1 in the census block, but their own websites show service not available in the corresponding zip codes. There is no cable option for this area. There is no documented overlap for a service provider that can provide reliable speeds above 10/1. Market research also consistently supports that advertised satellite speeds are notoriously unreliable, and even more so in the mountains of Buchanan County. The satellite providers also have published soft data caps (accomplished by throttling speeds to less than 3 Mbps). Government officials in Buchanan County also report that their constituents do not have reliable access to the true required speeds of 10/1. We conducted a survey of the potential customers in the project area. The results support the lack of service providers and the need for speeds consistently exceeding 10/1.

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

## Answer:

There are 489 total households in the project area. The average persons per household in Buchanan County is 2.1 per the census 2010 census data and the 2017 census bureau estimates. The total projected population to be served by the project is 1026. The total households in the service area came from the e-911 data for Buchanan County.

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

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**Answer:**

The following businesses and community anchor institutions are present in the Davenport and Council areas: Council High School, Council Middle/Elementary School, Breeding Masonry Construction, Country Drive-In, Davenport Clinic, Davenport Lifesaving Crew, Green Valley Construction, Steward Concept, Inc, Council Park & Pool and Hurricane Baptist Church.

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

**Answer:**

The take rate for the projected service area is 40%. The basis for this take rate is based on 10+ years of rural broadband expansion experience. Our survey of the homes in the project service area indicates over 40% are unhappy with their current service and speed, or lack of provider choice. Strong support from local community leaders is also a factor. In order to reach or exceed the projected take rate Point Broadband will actively market the service using the following marketing channels: direct mail, door to door sales, direct dial sales and local advertising. Point Broadband will also hold at least 3 community events to allow customers in the area the opportunity to sign up in person. The applicant and Buchanan County will also assist with planning, promotion and marketing of the Community Events. A detailed marketing plan is attached.

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

**Answer:**

N/A

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

**Answer:**

Plan	Down	Up	Cost
Basic	50	25	\$79.95
Performance	100	50	\$89.95
Performance Plus	200	100	\$99.95
Ultra	500	200	\$109.95
Extreme	1000	500	\$130.95

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The speeds are dedicated and not shared. The technology that is used will be fiber to the home.

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

**Answer:**

Point Broadband of Bristol, Virginia operates a Gigabit Passive Optical Network (GPON) to deliver triple play services to the communities of Southwest Virginia. GPON has the advantage of being able to support multiple users through a single optical fiber reducing equipment and satisfying both high density and rural areas (GPON.com, n.d.). Furthermore, Wang Zhaoqing of the IEEE denotes, "besides the transmission characteristics of good quality, large capacity, and long distance, GPON has the advantages of low maintenance cost, high confidentiality, and strong anti-jamming capability" (Zhaoqing, 2011). The following sections describe how Point Broadband uses this technology to provide superior broadband service to the consumers of Southwest Virginia.

Point Broadband's broadband Internet services originate from two geo-redundant locations at Equinix in Ashburn, Virginia, and Digital Realty in Atlanta, Georgia. Within each diverse location Point Broadband is provided access to the Internet from both XO Communications, and Level3 (Century Link) service providers. Furthermore, the customer experience is enhanced by the connection to each location's Internet Peering Exchange (Equinix Internet Exchange, Digital Realty Internet Exchange). An Internet exchange allows Internet Service Providers (ISPs) to directly interconnect networks and exchange Internet Protocol (IP) traffic. The exchanges provide the Point Broadband end user with a lower latency network, and increased redundancy through the availability of more paths and improved routing.

Traveling from each redundant location, for increased reliability Point Broadband has chosen transport partners offering three diverse paths over 10 Gigabit fiber links. For example, from the origination point in Atlanta, traffic is delivered through one of two 10 Gigabit paths of which both terminate in the Central Office located in Bristol, VA. Ashburn traffic passes through a 10 Gigabit path and terminates in Point Broadband's Disaster Recovery Point of Presence located in Wytheville, VA. Each of the 10 Gigabit optical paths from Atlanta terminate into an edge routing device.

The 10 Gigabit transport data terminating in Wytheville travels along Point Broadband's Dense wavelength division multiplexing (DWDM) fiber ring. The implementation of the DWDM ring affords Point Broadband the ability to transport high capacity, low latency, protected broadband data amongst 19 different POP locations. The ring allows for the East/West flow of up to 200 Gigabits per second. Customer traffic from Ashburn to Wytheville travels along this ring finally terminating at Bristol's North POP on another edge routing device. The edge routing devices provide another distinct advantage to customers through the connection of content caching servers implemented from large providers like Google. Caching servers save both Point Broadband and the consumers from having traffic return to their origination points for content. By traffic not having to continuously flow back to the origin it decreases the overall bandwidth required at the origination point (Atlanta or Ashburn).

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Point Broadband's protection and redundancy continues as traffic from each edge router flows into one of two Service Router devices. These devices, one located within the Bristol CO, and the other at the North POP are interconnected with each other through a 20 Gigabit Link Aggregation Group (LAG). The multiple chassis along with the LAG (MC-LAG) allow for more efficient use of bandwidth and sub-second failover in case one of the two chassis were to fail. Each service router uses a physical port or more to feed the customer facing network or Optical Line Termination (OLT).

The OLT is the origination point for the definition of the GPON network as described previously. OLTs much like network switches contain cards with ports each port represents a PON. 10 Gigabits of available broadband traffic is spread amongst cards containing from four to eight individual PON ports. Point Broadband has chosen to keep the customer per PON ratio in the customer's favor for a 32 to 1 standard. This standard means simply Point Broadband allows up to 32 customers per PON port. This is in direct comparison to the 64 or even 128 to 1 ratio, which reduce the overall bandwidth capabilities to each customer. Traffic flows from these PON ports connecting to a passive optical splitter located close to the customer within a fiber cabinet.

Each of the 32 splitter ports connects directly to a customer premise device or Optical Network Terminal (ONT). ONTs are attached directly to the customer's home or business. A single fiber connects to the ONT and from the ONT Category 3, Category 5/6 Ethernet, and even Radio Frequency connections are available. The ONT facilitates the transmission of data into customer's devices such as telephones, computers, routers, and video devices. Each customer can receive up to a 1 Gigabit per second service.

Sources GPON.com. (n.d.). Why GPON. Retrieved from Gigabyte Passive Optical Network (GPON): <http://www.gpon.com/why-gpon> Zhaoqing, W. (2011). Research on the Application of GPON Technologies.

Retrieved 12 13, 2018, from <http://ieeexplore.ieee.org/xpl/abstractauthors.jsp?reload=true&arnumber=5957468&punumber=5955409>

## 10. Project Readiness

What is the current state of project development (e.g. planning, preliminary engineering, identifying easements/permits, final design, etc.)? Prepare a detailed project timeline or construction schedule which identifies specific tasks, staff, contractor(s) responsible, collection of data, etc., and estimated start and completion dates. Provide any Memorandums of Understanding (MOUs) or Memorandums of Agreement (MOAs) (drafts are allowable), letters of support, etc. The timeline should include all activities being completed within 12 months of contract execution with DHCD. Label Attachments: Attachment 6 – Timeline/Project Management Plan; Attachment 7 – Relationship between Applicant/Co-Applicant; Attachment 8 – Letters of Support;

- i. If the partnership is formalized in a written agreement, provide a copy of that agreement.
- ii. If the partnership has not been formalized, provide a short description of the project management role, financial commitment, or other contribution to the project for the applicant, co-applicant, and any additional partners.

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iii. If applicant is not a locality(s) in which the project will occur, please provide a letter of support from that locality.

**Answer:**

Preliminary engineering is complete on the project. Point Broadband has identified the pole route and is prepared to submit AEP pole applications immediately upon notice of award. Point Broadband maintains a running inventory of fiber and construction would begin immediately upon receipt of the first pole permits. A detailed Gantt chart is attached that outlines project management and project timeline.

The relationship between the applicant and co-applicant is formalized in an operating agreement and it is attached. Letters of support from Buchanan County Board of Supervisors, Buchanan County IDA, Buchanan County School System and the Cumberland Plateau Planning District Commission are attached.

11. Matching funds: Provide a description of the matching funds the applicant and co-applicant will invest in the proposed project (VATI funding cannot exceed 80 percent of total project cost). The Funding Sources Table must be completed. Label Attachments: Attachment 9 - Documentation of Match Funding; Attachment 10 – Funding Sources Table;

i. For each element of matching funds in the description, indicate the type of match (e.g. cash, salary expense, or in-kind contribution).

ii. Identify whether the applicant or co-applicant is responsible for providing each element of the proposed matching funds.

iii. Include copies of vendor quotes or documented cost estimates supporting the proposed budget.

**Answer:**

The matching funds are cash from the co-applicant and In-Kind from the applicant.

The Funding Sources Table is attached.

The Documentation of Matching Funding is attached.

12. Applicant and Co-Applicant: A description of the public-private partnership involved in the project. Detail the local government assistance: Local government co-applicants should demonstrate assistance to project that will lower overall cost and further assist in the timely completion of construction, including assistance with permits, rights of way, easements, and other issues that may hinder or delay timely construction and increase cost. Provide detail if this project includes additional partners such as municipal providers, middle-mile providers, or investor-owned utilities

**Answer:**

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The co-applicant will be supplying a majority of the matching funds. The applicant will provide up to \$10,000 of matching funds through the following in-kind services:

1. Grant administration and support - Executive Director and staff
2. GIS mapping support - GIS staff
3. Community Event promotion & customer outreach - PDC staff

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

**Answer:**

Name	Organization	Title	Responsibility
Noah Maden	Point Broadband	Senior Operations Manager	Project Management
Joseph Puckett	Point Broadband	General Manager	Grant Administration
Mark Alldredge	Point Broadband	Senior Director of Engineering	Project Design and Engineering
Dave Whitmer	Point Broadband	Residential Sales Manager	Sales and Marketing of the Project
Jim Baldwin	CPC	Executive Director	Manages all activities of the Applicant

Details for the Co-Applicant team are attached

14. Project Budget and Cost Appropriateness

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

**Answer:**

See Attachments.

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. Finally, the three component scores are averaged together and converted to a 30-point scale to form a composite score. Please provide the following three pieces of information:

- a. Total State funding requested / Total Project cost



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- b. Number of serviceable units
- c. Highest residential speed available

**Answer:**

- A.  $226,560/755,203 = 30\%$
- B. 489
- C. 1000 Mbps (1 Gbps)

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

**Answer:**

Point Broadband currently has one active grant contract. It is with the state of Tennessee and it is in good standing. That project is projected to be complete in the fourth quarter of 2019.

Management Experience and Completed Funded Projects:

Tobacco Commission - Fiber Deployment Proof of Concept

2001 – Community Volunteer

? Construction on LENOWISCO Rural Area Network (RAN)

? Proved open ditch concept for fiber collocation with public water deployments.

Tobacco Commission - Fiber Deployment Phase I

2002 – Vice President and COO Cornerpost Software, LLC

? Construction on LENOWISCO Rural Area Network (RAN)

? Proved proof of concept for fiber deployments with 10 customers per mile.

? Rural fiber to the home

Tobacco Commission - Fiber Deployment Phase II – Last Mile

2003 – Vice President and COO Sunset Digital Communications

? Construction on LENOWISCO Rural Area Network (RAN)

? Fiber Backbone Geodesic Mesh© – Phase V(b)

Appalachian Regional Commission - Fiber Deployment

2004 – Vice President & COO Sunset Digital Communications

? Telecommunications Initiative – 400 yards to Jonesville

? Small town FTTH

Tobacco Commission – Dark Fiber Preliminary Engineering and Design

2005 – Vice President & COO Sunset Digital Communications

? Construction on LENOWISCO Rural Area Network (RAN)

RUS Community Connect Rose Hill

2005 – Vice President & COO Sunset Digital Communications

? Extended LENOWISCO Rural Area Network (RAN) into the Rose Hill, VA community.

Independence, VA – Blown Fiber Deployment

2006 – Vice President & COO Sunset Digital Communications

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? Construction of blown fiber optic infrastructure for the town of Independence, VA.  
RUS Community Connect Ewing  
2006 – Vice President & COO Sunset Digital Communications  
? Extended LENOWISCO Rural Area Network (RAN) into the Ewing, VA community.  
Tobacco Commission – Fiber Deployment Phase III  
2006 – Vice President & COO Sunset Digital Communications  
? Construction on LENOWISCO Rural Area Network (RAN)  
? Fiber backbone Geodesic Mesh© – Phase V(b)  
VCEDA Last Mile  
2007 – Vice President & COO Sunset Digital Communications  
? Funded 500 last mile connections.  
RUS Community Connect St. Charles  
2007 – Vice President & COO Sunset Digital Communications  
? Extended LENOWISCO Rural Area Network (RAN) into the St. Charles, VA community.  
Additional Backbone Build Out for LENOWISCO Inc.  
2008 – Vice President & COO Sunset Digital Communications  
? Construction on LENOWISCO Rural Area Network (RAN) to extend network backbone reach  
RUS Community Connect Blackwater  
2008 – Vice President & COO Sunset Digital Communications  
? Extended LENOWISCO Rural Area Network (RAN) into the Blackwater, VA community.  
RUS BIP Project – Transform Tennessee  
2010 – 2015 – Vice President & COO Sunset Digital Communications  
? Funded backbone buildout, advanced DWDM Deployment, and 2500 last mile connections in Claiborne and Hancock Counties in TN.

## CPC Grant Experience

Each year, the Cumberland Plateau Planning District Commission staff prepares, or assists in preparing, numerous funding applications for local governments in Buchanan, Dickenson, Russell and Tazewell Counties Applications prepared and/or approved since 2016 include the following:

1. Lebanon Downtown Revitalization Project - \$2,388,080 (CDBG, LOCAL, PRIVATE)
2. Rt. 643/Duty Rd/Pawpaw/Swan Fork Water Project- \$1,483,654 (CDBG, SWVW/WW, CDWF, LOCAL)
3. Coon Branch Waterline Extension - \$1,192,798 (CDBG, SWVW/WW, CDWF)
4. Haysi Trail Center - \$393,056 (ARC, VCEDA)

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5. Buchanan County IDA Access Road Phase 1 & 2 - \$4,000,000 (ARC)
  
6. Dog Hollow Waterline Replacement - \$118,830 (SWVW/WW)
  
7. Tunnel Rd Waterline Extension - \$45,000 (SWVW/WW)
  
8. Cleveland Water/Sewer line Extensilon- \$175,120 (SWVW/WW)
  
9. Donkenny/Breaks/Tivis Pump Station Replacement Project - \$570,000 (ARC, CWDF ,SWVW/WW, LOCAL)
  
10. Fincastle Estates Water - \$640,053 (VDH)
  
11. Falls Mills Adult Daycare - \$2,180,000 (CDBG, TCIDA, AC, AASC, LOCAL, TOBACCO COMMISSION, USDA- RD, THOMPSON FOUNDATION, SHOTT FOUNDATION)
  
12. Honaker Downtown Business & Upper Story Housing Survey - \$35,000 (DHCD)
  
13. Honaker DT Upper Story Housing Assessment & Slate Building PAR - \$20,000 (VHDA)
  
14. Rural Transportation Planning Grant - \$58,000 (VDOT)

Total \$13,299,591

These projects will result in more households in the District on public water and sewer, as well as increased employment, tourism, educational and entrepreneurial opportunities for District citizens. The PDC planning staff

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has nearly 100 years of grant writing experience and counts it as a privilege to work with our local, state and federal officials to help bring much needed grant dollars to benefit local citizens and communities.

## 17. Commonwealth Priorities

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

### Answer:

The Council project is listed as the 6th ranked project by need in the SWVA Broadband Needs Assessment Plan (attached).

## 18. Additional Information

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

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

### Answer:

Attachment 16 - Key Personnel - Detail on the project management team

Attachment 17 - 2019 Rural Marketing Plan - Details on our rural marketing plans for the project

Attachment 18 - SWVA Broadband Study

### Attachments:

Map(s) of project area, including proposed infrastructure

Attachment1ProjectMapAreaCouncil8292019101239.pdf

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

Attachment2ExistingProvidersMapCouncil8292019101251.pdf

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

Attachment3DocumentationonCAFFundingArea8292019101301.pdf

Documentation that proposed project area is unserved based on VATI criteria

Attachment4DocumentationUnservedAreaVATICriteria8292019101312.pdf

Project Management Plan

Attachment6TimelineandProjectManagementPlanCouncil8292019101335.xlsx

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

Attachment7RelationshipbetweenApplicantCoApplicant8292019101345.pdf

Letters of Support

Attachment8LettersofSupportCouncil93201931820.pdf

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

Attachment9DocumentationofMatchFunding922019105734.pdf

Funding Sources Table

Attachment10FundingSourcesTableCouncil8292019101406.docx

Derivation of Cost (Project Budget)

Attachment11DerivationofCostCouncil829201995426.xlsx

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

Attachment12DocumentationofSupportingCostsCouncil829201995434.xlsx

Supporting documentation for costs estimates

Attachment13SupportingDocumentationofCostEstimates830201990429.pdf

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Two most recent Form 477 submitted to FCC

Attachment14TwomostrecentForm477submittedtoFCC830201990441.pdf

Copy of Public Notice

Attachment15CopyofPublicNoticeCouncil8292019101419.pdf

Optional

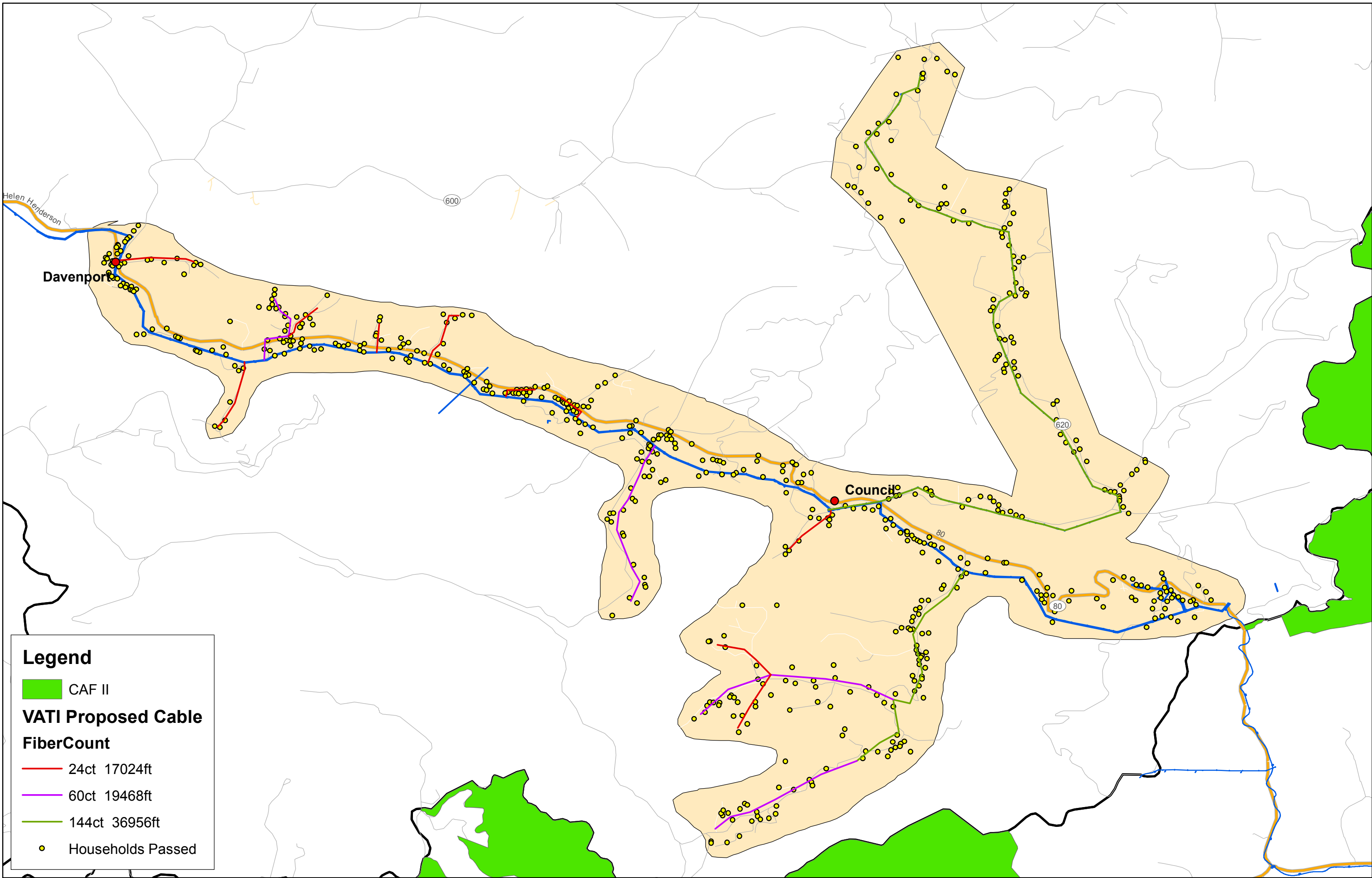
Attachment16KeyPersonnel8292019101436.pdf

Optional

Attachment172019RuralMarketingPlan8292019101447.pdf

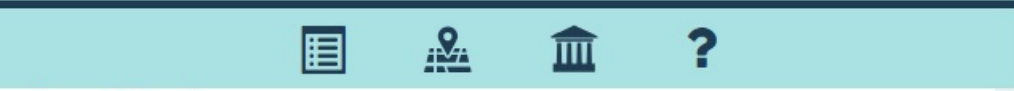
Optional

Attachment18SWVABroadbandStudyandPlan8292019101526.pdf





# Virginia Broadband Availability Map and Integrated Broadband Planning and Analysis Toolbox



Show Results

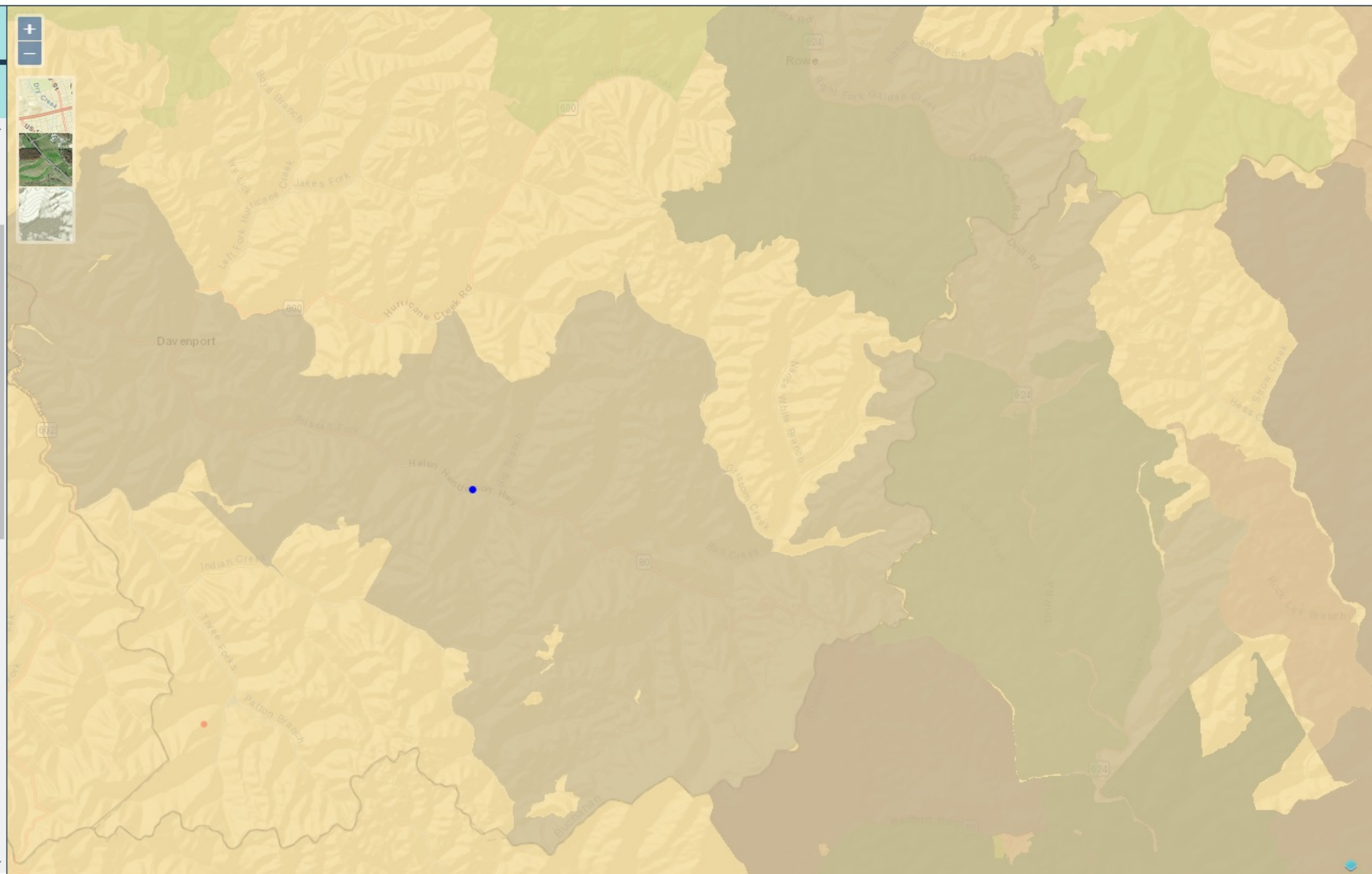
ON ?

Query Results

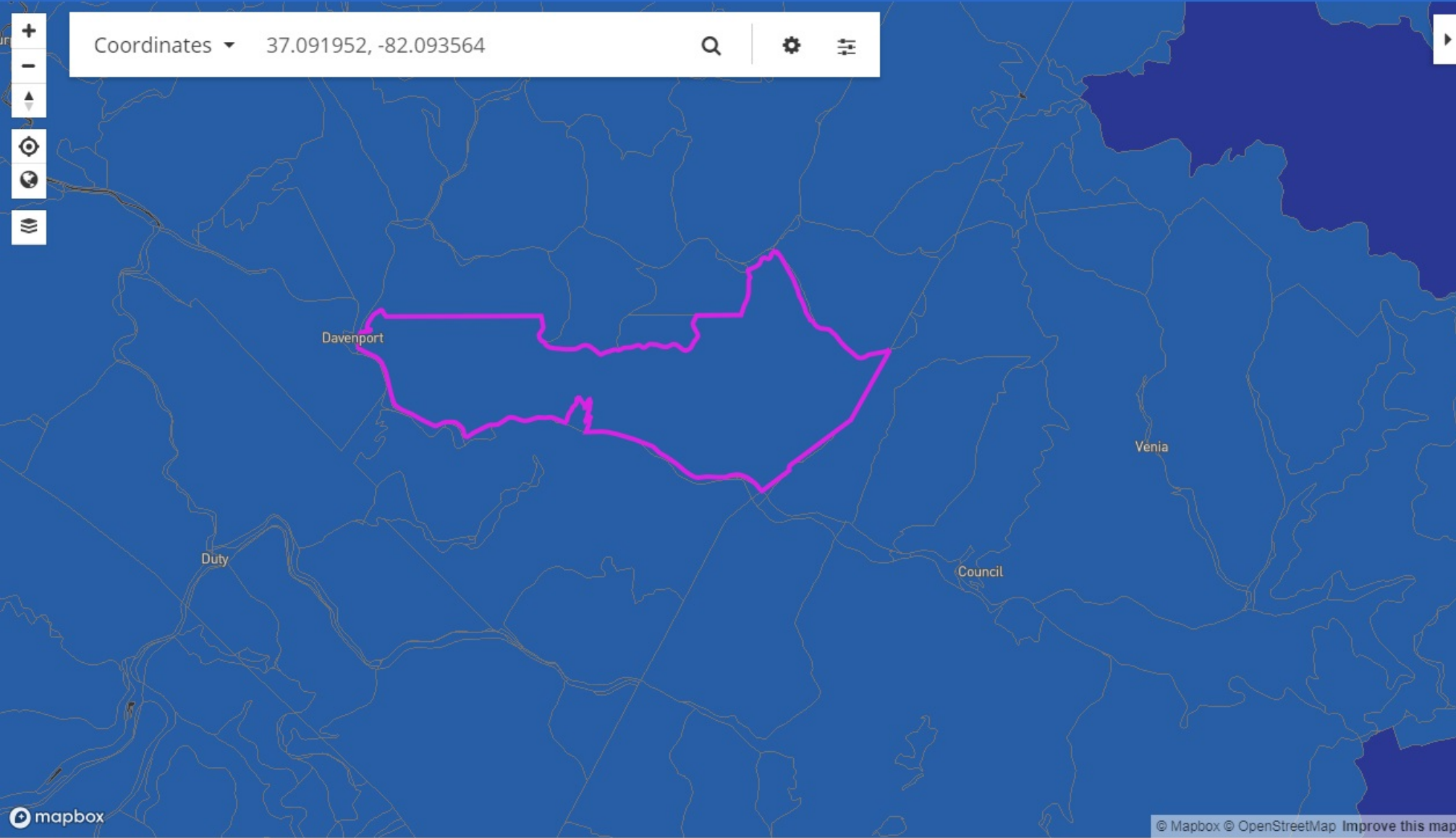
Provider	Technology	Consumer Upload Speed	Consumer Download Speed	Business Upload Speed	Business Download Speed
<a href="#">IGO TECHNOLOGY, INC.</a>	Fixed Wireless	2 Mbps	20 Mbps	Unavailable	Unavailable
<a href="#">OPTINET</a>	Fiber	50 Mbps	1000 Mbps	1000 Mbps	1000 Mbps
<a href="#">HUGHESNET</a>	Satellite	2 Mbps	15 Mbps	2 Mbps	15 Mbps
<a href="#">VIASAT INC</a>	Satellite	3 Mbps	25 Mbps	Unavailable	Unavailable

Choose Some Layers

- Cities/Counties
- Cable Wireline Coverage (Jun. 2017)
- DSL Wireline Coverage (Jun. 2017)
- Cable/DSL Intersect Wireline Coverage (Jun. 2017)
- Copper Wireline Coverage (Jun. 2017)
- Fiber Optic Coverage (Jun. 2017)
- Fixed Wireless Coverage (Jun. 2017)
- Mobile Wireless Coverage (Dec. 2016)
- 4G/LTE Wireless Coverage (Dec. 2016)
- Satellite Coverage (Jun. 2017)
- Underserved Areas (Dec. 2016)  
[greater than 10 Mbps download and 1 Mbps upload and less than 25 Mbps download and 3 Mbps upload]
- Unserved Areas (Dec. 2016)  
[below 10 Mbps download and 1 Mbps upload]








Coordinates ▾ 37.091952, -82.093564

**All Providers Reporting Service** 🔗 ⓘ

Census block ID: 510270107001043

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**Number of Fixed Residential Broadband Providers**



0 1 2 3 4 6 12 or more

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**Broadband** ⚙️

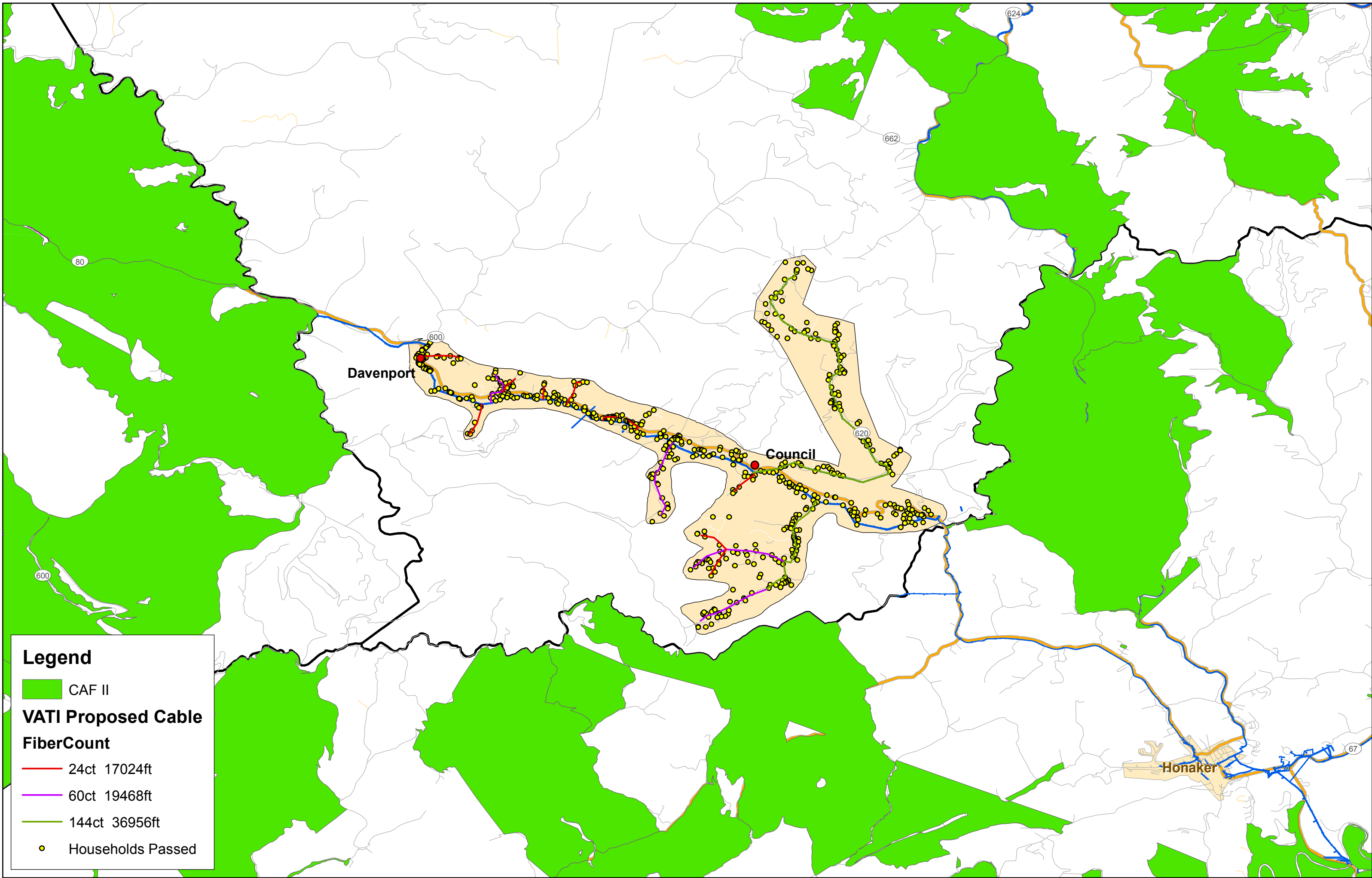
**Technology** ADSL, Cable, Fiber, Fixed Wireless, Satellite, Other

**Speed** ≥ 10/1 Mbps

**Date** June 2017 *(latest public release)*

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Provider	Tech	Down <i>(Mbps)</i>	Up <i>(Mbps)</i>
<a href="#">BVU Authority</a>	Fiber	1000	50
<a href="#">dishNET Holding, LLC</a>	Satellite	25	3
ViaSat, Inc.	Satellite	12	3
iGo Technology, Inc.	Fixed Wireless	5	0.512
<a href="#">VSAT Systems, LLC</a>	Satellite	2	1.3



**Legend**

- CAF II
- VATI Proposed Cable**
- FiberCount**
- 24ct 17024ft
- 60ct 19468ft
- 144ct 36956ft
- Households Passed

# Get Started

Find plans and offers in your area now!

Council, VA, USA

✖ Sorry, we're having trouble locating your address. Please call 844-737-2700 for assistance

Example: 123 Main Street, Annapolis, MD, United States

Sorry, we're having trouble locating your address. Please call 844-737-2700 for assistance

FIND PLANS

 LIVE CHAT

# Get Started

Find plans and offers in your area now!

Davenport, VA, USA

 Sorry, we're having trouble locating your address. Please call 844-737-2700 for assistance

Example: 123 Main Street, Annapolis, MD, United States

Sorry, we're having trouble locating your address. Please call 844-737-2700 for assistance

**FIND PLANS**

 **LIVE CHAT**



For Home

For Business

Current Customers

ORDER NOW 844-605-2426

Log in

HOME » PLAN RESULTS » SERVICE NOT AVAILABLE

# Service Not Available In Your Area

Viasat satellite internet is unavailable in 24646.

Due to strong demand, new installations have been suspended in your area. We apologize for the inconvenience.

Try a different location?

Example: 80238

Go >

While Viasat is not currently available in your area, we're headed your way with super-fast services soon!

## Viasat

- Internet Service
- Voice Services
- Unlimited Plan
- Viasat Browser
- EasyCare

## Company

- Our Company, Viasat
- Career Opportunities
- Become a Dealer or Installer
- Viasat Business
- Viasat in the Air

## Contact

- Contact Us
- Online Community
- Locate a Dealer

## Customer

- Viasat Blog
- Legal
- Details and Restrictions
- Viasat Customer Support

## Media Center

- Press Releases
- Fact Sheets
- Image Gallery & Logos
- Resources



HOME » PLAN RESULTS » SERVICE NOT AVAILABLE

# Service Not Available In Your Area

Viasat satellite internet is unavailable in 24239.

Due to strong demand, new installations have been suspended in your area. We apologize for the inconvenience.

Try a different location?

Example: 80238

While Viasat is not currently available in your area, we're headed your way with super-fast services soon!

### Viasat

- Internet Service
- Voice Services
- Unlimited Plan
- Viasat Browser
- EasyCare

### Company

- Our Company, Viasat
- Career Opportunities
- Become a Dealer or Installer
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- Contact Us
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### Customer

- Viasat Blog
- Legal
- Details and Restrictions
- Viasat Customer Support

### Media Center

- Press Releases
- Fact Sheets
- Image Gallery & Logos
- Resources

Did you find what you were looking for?

Yes

No



**EXECUTION VERSION**

**CPC OPTINET OPERATOR AGREEMENT**

**BY AND AMONG**

**CUMBERLAND PLATEAU PLANNING DISTRICT COMMISSION,**

**CUMBERLAND PLATEAU COMPANY, INC.,**

**SUNSET DIGITAL HOLDING, LLC,**

**SUNSET DIGITAL COMMUNICATIONS, LLC**

**AND**

**SUNSET FIBER, LLC**

**DATED**

**AUGUST \_\_, 2018**



## CPC OPTINET OPERATOR AGREEMENT

This CPC OptiNet Operator Agreement (the “**Agreement**”) dated as of August \_\_, 2018 and effective as of the closing of the Transaction (defined below) (the “**Effective Date**”), by and among the Cumberland Plateau Planning District Commission, a planning district commission and political subdivision of the Commonwealth of Virginia organized pursuant to Section 15.2-4200 *et seq.* of the Code (“**CPPDC**”), the Cumberland Plateau Company, Inc., a nonstock corporation organized under the laws of the Commonwealth of Virginia by CPPDC (“**CPC**”) (CPPDC and CPC, collectively the “**Cumberland Plateau Parties**”), Sunset Digital Holding, LLC, a Delaware limited liability company (“**Sunset Holding**”), Sunset Digital Communications, LLC, a Delaware limited liability company (Sunset Digital”) and Sunset Fiber, LLC, a Delaware limited liability company (collectively “**Sunset**”) (CPPDC, CPC, Sunset Holding, Sunset Digital and Sunset Fiber each a “**Party**”, collectively, the “**Parties**”), provides as follows:

### RECITALS

**WHEREAS**, the Cumberland Plateau Parties together with the BVU Authority, a political subdivision of the Commonwealth of Virginia (“**BVU Authority**”), constructed a broadband fiber optic backbone (the “**CPC OptiNet**”) for the delivery of telephone, data, and other telecommunications services to the four Virginia Counties of Buchanan, Dickenson, Russell, and Tazewell and certain adjoining counties and communities (collectively, the “**Cumberland Plateau Region**”); and,

**WHEREAS**, the Cumberland Plateau Parties and the BVU Authority entered into that certain CPC OptiNet Agreement dated August 26, 2004, as amended March 21, 2006, as amended and restated August 26, 2010 (the “**2010 Agreement**”), and as further amended February 23, 2012 (collectively the 2010 Agreement, as amended, the “**CPC OptiNet Agreement**”); and,

**WHEREAS**, the Virginia Tobacco Region Revitalization Commission (“**Tobacco Commission**”) has invested significant resources into the development of the CPC OptiNet within the Cumberland Plateau Region, including Grant Numbers 501, 962, 1185, 1303, 1471, 1768, 1811, 2070, and 2391 and desires to see the continued growth and operation of the CPC OptiNet; and,

**WHEREAS**, the Virginia Coalfield Coalition, Inc., a Virginia nonstock corporation (“**VCC**”), the board of directors of which is appointed one-half by CPPDC and one-half by the LENOWISCO Planning District Commission, served as a grant recipient for certain funds deployed to build a portion of the CPC OptiNet; and,

**WHEREAS**, as a result of the purchase of the assets of the OptiNet division of the BVU Authority by Sunset (the “**Transaction**”), a portion of the CPC OptiNet is now jointly co-owned by Sunset and the Cumberland Plateau Parties (recognizing that a portion of the CPC OptiNet was funded by the EDA-VCC Grant and is owned by the VCC), the Parties now desire to establish the terms and conditions for the operation of the CPC OptiNet recognizing that certain specific conditions related to the grants utilized to construct the CPC OptiNet continue to apply to portions of the CPC OptiNet; and,

**WHEREAS**, the Parties desire to confirm the ownership of the assets comprising the CPC OptiNet both on the date of this Agreement and in the future; and,

**WHEREAS**, the Parties desire to reaffirm the goal of deploying the CPC OptiNet for job creation and economic development while beginning to connect residential customers; and,

**WHEREAS**, Sunset and the Cumberland Plateau Parties desire to replace the CPC OptiNet Agreement with this Agreement;

**NOW THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

**SECTION 1. DEFINITIONS.**

**"Adjustment Rate"** has the meaning set forth in Section 8(b).

**"Backbone"** means the transmission trunk line over which signals travel from one POP to another POP, and from which Distribution lines are deployed.

**"BTOP Grant"** means that certain grant by the NTIA pursuant to Grant Number NT10BIX5570066 as set forth in that certain Financial Assistance Award dated July 1, 2010 for the project known as *"The Southwest Virginia Middle Mile Project."*

**"BVU Authority"** has the meaning set forth in the Recitals.

**"Business Day"** means a day other than a Saturday, Sunday or other day on which commercial banks in the Commonwealth of Virginia are authorized or required by law to close.

**"CFO Certification"** has the meaning set forth in Section 10(A)(1).

**"Code"** means the Code of Virginia of 1950, as amended.

**"Confidential Information"** means all written and verbal proprietary or confidential communications among the Parties and all plans, documents, materials and data provided by each Party to another Party in connection with and related to the CPC OptiNet, including the existence of discussions about the improvement of the CPC OptiNet or deployment of the CPC OptiNet, from time-to-time; *provided, however,* Sunset shall identify which written or verbal communications are proprietary and/or confidential and which provision(s) of the Virginia Freedom of Information Act is/are applicable to such proprietary and/or confidential information upon the delivery of confidential information to the Cumberland Plateau Parties.

**"CPC"** has the meaning set forth in the Recitals.

**"CPC Electronics"** has the meaning set forth in Section 2(B)(1)(a).

**"CPC Fibers"** has the meaning set forth in Section 2(B)(1)(a).

**"CPC OptiNet"** has the meaning set forth in the Recitals.

**"CPC OptiNet Agreement"** has the meaning set forth in the Recitals.

**"CPPDC"** has the meaning set forth in the Recitals.

**"Cumberland Plateau Interest"** has the meaning set forth in Section 2(B)(1)(a).

**"Cumberland Plateau Parties"** has the meaning set forth in the Recitals.

**"Cumberland Plateau Region"** has the meaning set forth in the Recitals.

**"Distribution"** means the fiber or line which links the Backbone to neighborhoods or businesses, and over which signals travel from the Backbone to the Last Mile.

**"EDA"** means the United States Economic Development Administration.

**“EDA Grants”** means the following:

(i) EDA grant number 01-79-07886 issued to the BVU Authority and CPC pursuant to that certain Financial Assistance Award dated May 28, 2003 in an amount not to exceed One Million Six Hundred Fifty-Five Thousand Dollars (\$1,655,000.00) for the installation of fifty-one (51) miles of fiber optic backbone through the Virginia Counties of Russell and Tazewell, (**“EDA Grant 07886”**);

(ii) EDA grant number 01-01-08480 issued to the BVU Authority and CPC pursuant to that certain Financial Assistance Award dated June 20, 2007 in an amount not to exceed One Million Five Hundred Fifty Thousand Dollars (\$1,550,000.00) for the installation of forty-five (45) miles of advanced fiber optic backbone cable through the Virginia Counties of Buchanan and Dickenson (**“EDA Grant 08480”**); and,

(iii) EDA grant number 01-01-08739 issued to the BVU Authority and CPC pursuant to that certain Financial Assistance Award dated September 18, 2009 in an amount not to exceed One Million Two Hundred Eighty-Seven Thousand Dollars (\$1,287,000.00) for the installation of the forty (40) mile expansion of the fiber optic backbone through the Virginia Counties of Dickenson and Russell (comprised of two sections: (1) a twenty-six (26) mile segment from St. Paul, Virginia to Fremont, Virginia and (2) a fourteen (14) mile segment from Honaker, Virginia to Raven, Virginia (**“EDA Grant 08739”**)) (collectively, EDA Grant 07886, EDA Grant 08480, and EDA Grant 08739, the **“EDA Grants”**).

**“EDA Letter”** means that certain letter from Linda Cruz-Carnall to Don Bowman dated December 21, 2016 (re: Release of EDA Federal Interest in Three Grant Awards to Bristol Virginia Utilities Authority (EDA Grant Nos. 01-79-07886, 01-01-08480, and 01-01-08739) attached hereto as Exhibit A.

**“EDA-VCC Grant”** means the funds the VCC received from the EDA for the construction of a portion of the CPC OptiNet pursuant to that certain grant number 01-01-08271 of the EDA issued to VCC pursuant to that certain Financial Assistance Award dated December 20, 2005 in an amount not to exceed Three Million Dollars (\$3,000,000.00) for the installation of One Hundred Fifty-Five (155) miles of fiber optic backbone through the City of Norton, Virginia and six Southwest Virginia counties and commonly referred to as EDA grant number two.

**“Effective Date”** has the meaning set forth in the Preamble.

**“Extraordinary Connection Request”** means a new installment request that does not have a financial break-even return on investment (*i.e.*, taking into consideration the cost of connection as reasonably determined by Sunset) by the end of Twenty-Four (24) months or that has a capital investment requirement that is not commercially reasonable based upon market standards.

**“FCC”** means the United States Federal Communications Commission.

**“Federal Share”** means the current fair market value of real, personal or mixed property in the CPC OptiNet that is attributable to EDA’s investment in the CPC OptiNet via the EDA Grants and any program income generated and reinvested from that investment, as more fully described in 13 CFR § 314.5.

**“Force Majeure”** has the meaning set forth in Section 24(J).

**“Grant Funds”** means funds provided by the EDA, NTIA, Tobacco Commission, and certain federal and state agencies through grants to the VCC and the Cumberland Plateau Parties.

**“Gross Revenue”** means the total of any and all funds from sales and services received from customers utilizing the CPC OptiNet, including receipts from customers connected to the CPC OptiNet by Sunset-owned infrastructure, less any chargebacks, rebates, cash discounts, surcharges, taxes (unrelated to local property taxes), or local, state or federal regulatory fees and charges. For the sake of clarity, Gross Revenue shall include receipts from customers of the CPC OptiNet on the portion of the CPC OptiNet from the Point of Presence located at the

intersection of Main Street and Routes 58 and 19 in the Town of Abingdon, Virginia, continuing to the Russell County, Virginia line, including the Brumley Gap area customers.

“**ITC**” means ITC Capital Partners, LLC, a Delaware limited liability company.

“**ITC Commitment Letter**” means that certain letter attached hereto as Exhibit B.

“**Immediate Family**” shall mean a spouse, lineal descendant, father, mother, brother, or sister, including “in-laws” and adopted children.

“**Initial Rate**” has the meaning set forth in Section 8(A)(1).

“**Intellectual Property Rights**” means worldwide common law and statutory rights associated with: (i) patents and patent applications; (ii) works of authorship, copyrights, copyright applications, copyright registrations and other rights; (iii) the protection of trade and industrial secrets and confidential information; (iv) trademarks, service marks, slogans, logos, sound marks, motion marks, trade dress, domain names, trade names, corporate names, or indicia of the same; (v) other proprietary rights relating to the rights to items (i) through (iv); and (vi) divisions, continuations, renewals, re-issuances and extensions of the rights set forth in items (i) through (v), now existing or hereafter filed, issued, or acquired.

“**IPTV**” means Internet Protocol television.

“**IRU**” has the meaning set forth in Section 2(B)(5)(c).

“**Last Mile**” means the line or other medium through which signals travel in the neighborhood or business area from the Distribution line to the end user’s premises.

“**LENOWISCO**” means the LENOWISCO Planning District Commission, a planning district commission and political subdivision of the Commonwealth of Virginia organized pursuant to Section 15.2-4200 *et seq.* of the Code for the Virginia Counties of Lee Wise and Scott, and the City of Norton, Virginia.

“**New Connection Commitment**” has the meaning set forth in Section 4(C)(1).

“**NTIA**” means the National Telecommunications and Information Administration.

“**NTIA Letter**” means that certain letter from Arlene Simpson Porter to Cameron S. Bell dated December 29, 2016 (re: BTOP Grant Award Number: NT10BIX5570066 Bristol Virginia Utilities Authority Request to Transfer BTOP-Funded Equipment) attached hereto as Exhibit C.

“**Operating Responsibilities**” means all pre-grant allocation planning, including business plan evaluation and technical project architecture decisions, engineering, including preliminary engineering, procurement, including procurement for grants awarded to or administered by the Cumberland Plateau Parties, Sunset or the VCC, advertisement, signage, acquisitions, construction contracts, materials acquisition contracts, construction and construction supervision, pole attachment and fiber burying contracts and permits acquisition, equipment maintenance contracts and acquisition and construction of fiber system, including Backbone, Distribution, Last Mile, POP and equipment maintenance, and provision of all services provided over and through the system, including cable provided directly or indirectly when permitted and economically feasible and all and any other acts that are done in the creation and operation of any part of the fiber system and any services provided through said system in the Cumberland Plateau Region.

“**Point of Presence**” or “**POP**” means a location housing electronics, where signals originate and terminate, to and from Backbone lines and or Distribution lines.

**“Premises”** means a residence, commercial building, multi-dwelling unit, or buildable lot that can be feasibly and reasonably served by the CPC OptiNet.

**“Project”** means the construction, maintenance and provision of services over equipment and fiber paid for by any single grant or loan.

**“Qualified and Documented”** with respect to any potential customer of the CPC OptiNet shall mean a credit worthy potential customer who has provided written documentation of such interest by execution of a contract for service.

**“Quarterly Payment”** has the meaning set forth in Section 8(A)(3)(a).

**“Rate”** has the meaning set forth in Section 8(A)(3).

**“Standard Rate”** has the meaning set forth in Section 8(A)(3).

**“Sunset”** has the meaning set forth in the Recitals.

**“Sunset EDA Interest”** has the meaning set forth in Section 2(B)(3)(a).

**“Sunset NTIA Assets”** has the meaning set forth in Section 2(B)(3)(b).

**“Sunset Services”** has the meaning set forth in Section 6(A)(2).

**“Term”** has the meaning set forth in Section 11(A).

**“Threshold Event”** means the deployment by Sunset of Three Million Two Hundred Fifty Thousand Dollars (\$3,250,000.00) of the New Connection Commitment.

**“Tobacco Commission”** means the Virginia Tobacco Region Revitalization Commission, a political subdivision of the Commonwealth of Virginia chartered by Section 3.2-3100 *et seq.*

**“Transaction”** means the purchase of the ownership interests, assets and business of the OptiNet division of the BVU Authority by Sunset.

**“VCC”** has the meaning set forth in the Recitals.

**“VCC Assets”** means fiber optic assets of the VCC that were funded by the EDA-VCC Grant.

**“VCEDA”** means the Virginia Coalfield Economic Development Authority.

**“VTC Grants”** has the meaning set forth in Section 2(B)(4)(a).

## **SECTION 2. THE CPC OPTINET.**

### **A. CPC OptiNet Background.**

(1) Description. The CPC OptiNet is a contiguous array of broadband fiber and related electronics and support equipment, which exists in the Cumberland Plateau Region. The CPC OptiNet was constructed with Grant Funds, investments by the BVU Authority, and the reinvestment of funds from the operation of the CPC OptiNet. The CPC OptiNet is comprised of assets (a) owned outright by each of the Cumberland Plateau Parties, the VCC, and Sunset and (b) assets owned jointly by the Cumberland Plateau Parties and Sunset. For certain

assets in the CPC OptiNet, the ownership interests of the Cumberland Plateau Parties, the VCC and Sunset are subject to reversionary interests of the EDA, NTIA and Tobacco Commission.

(2) Growth and Deployment of Network. Originally conceived of by the Cumberland Plateau Parties, the CPC OptiNet network has grown to become a vital telecommunications infrastructure in the Cumberland Plateau Region focused on job creation and economic development. The Cumberland Plateau Parties desire to continue the growth and deployment of the network and continue the preservation of the CPC OptiNet as a vital infrastructure resource for the Cumberland Plateau Region.

(3) Required Consents. The Parties acknowledge that the EDA, NTIA, Tobacco Commission, and VCC have each consented to the Transaction and to this Agreement and that no further consents are required.

(A) NTIA Approval. Pursuant to the NTIA Letter, the NTIA granted a waiver for the completion of the Transaction conditioned on the ongoing applicability of the grant requirements and conditions affecting the assets funded by the NTIA, which Sunset has agreed to accept as of the Effective Date.

(B) EDA Approval. Pursuant to the EDA Letter, the EDA granted a conditional approval for the sale of the ownership interest of BVU Authority in the EDA-funded assets to Sunset, noting that EDA grant conditions continued to apply to the ownership interest in the EDA-funded assets held by the Cumberland Plateau Parties.

(C) VCC Approval. As reflected in the *“Consent of Virginia Coalfield Coalition”* attached hereto as Exhibit D, the VCC granted its approval and consent to the Cumberland Plateau Parties entering this Agreement, and to Sunset assuming operational responsibilities for the VCC-owned portion of the CPC OptiNet.

B. Ownership Rights of the Parties.

(1) Assets of Cumberland Plateau Entities.

(a) Cumberland Plateau Entities Ownership. The Cumberland Plateau Parties own a joint undivided Fifty Percent (50%) ownership interest in the assets funded by the EDA Grants (**“Cumberland Plateau Interest”**), which includes Fifty Percent (50%) of: (1) the assets funded by the EDA Grants including the electronic equipment (**“CPC Electronics”**), and (2) the fiber strands funded by the EDA (**“CPC Fibers”**).

(b) Grant Conditions. Any conditions resulting from the receipt of Grant Funds affecting the assets of the Cumberland Plateau Parties remain as set forth in such conditions and are the responsibility of the Cumberland Plateau Parties or the VCC.

(c) Replacement of Grant-Funded Assets.

(1) During the operation of the CPC OptiNet, consistent with EDA guidelines and requirements, Sunset may remove electronic equipment from service and dispose of same in the normal course of business.

(2) Sunset shall take all available reasonable and customary actions to recognize the value of such retired asset, either through resale, salvage or scrap, and at least half of any value so recovered shall be (1) reinvested in the CPC OptiNet or (2) delivered to the Cumberland Plateau Parties together with an accounting of the disposition of such asset.

(3) Any asset purchased with funds from the disposition of a piece of equipment originally funded by Grant Funds shall be jointly owned by the Parties.

(4) Any asset purchased solely by funds not including funds received from the disposition of a piece of equipment originally funded by Grant Funds shall be owned by the funding Party.

(5) Sunset shall report quarterly to the Cumberland Plateau Parties on any such assets so removed from CPC OptiNet, including a description of the asset, its location prior to being removed from service, the reason for its removal and the amount of any recovered value, if any.

(2) Assets of the VCC.

(a) VCC Ownership. The VCC owns One Hundred Percent (100%) of the VCC Assets funded by the EDA-VCC Grant, subject to a reversionary interest in the assets held by the EDA and Tobacco Commission.

(b) Grant Conditions. Any conditions resulting from the receipt of Grant Funds affecting the VCC Assets remain as set forth in such remaining grant conditions, if any, and are the responsibility of the VCC.

(3) Assets of Sunset.

(a) Sunset EDA Interest. Pursuant to the CPC OptiNet Agreement, the BVU Authority and the Cumberland Plateau Parties jointly owned an undivided Fifty Percent (50%) interest in the Backbone, Distribution, Last Mile, and any other infrastructure acquired for the CPC OptiNet with Grant Funds provided by the EDA and the Tobacco Commission. Effective as of the Effective Date, Sunset Fiber will (i) have purchased the Fifty Percent (50%) share previously owned by the BVU Authority as a result of the payment of the Federal Share to the United States Treasury during the Transaction and (ii) will own all BVU Authority CPC OptiNet asset interests (the "**Sunset EDA Interest**").

(b) Sunset NTIA Assets. The NTIA funded a portion of the CPC OptiNet through the BTOP Grant. Sunset purchased all assets of the CPC OptiNet purchased by funds from the BTOP Grant as part of the Transaction ("**Sunset NTIA Assets**") pursuant to a waiver provided in the NTIA Letter and subject to the conditions set forth in the NTIA Letter; *provided, however*, recognizing a dispute exists between the Cumberland Plateau Parties and BVU regarding the ownership of the NTIA funded assets in the Cumberland Plateau Region, as of the Effective Date of this Agreement, Sunset shall:

(i) deliver the Cumberland Plateau Region certain rights to such NTIA-funded fiber optic cable, as set forth below in Section 5(c);

(ii) immediately following the closing of the Transaction, together with the Cumberland Plateau Parties, jointly petition the NTIA to recognize and approve the transfer of ownership of the NTIA funded assets described in Section 5(c) in the Cumberland Plateau Region to the Cumberland Plateau Parties;

(iii) until the NTIA approves the transfer of the ownership of such NTIA-funded fiber to the Cumberland Plateau Parties, Sunset will adhere to any remaining grant conditions related to the NTIA-funded fiber; and,

(iv) following such transfer, the Cumberland Plateau Parties recognize that such NTIA-funded fiber will remain subject to any remaining grant conditions, and the Cumberland Plateau Parties will adhere to the exclusivity grant to Sunset set forth in Section 3 of this Agreement;

*provided, however*, no NTIA-funded fiber outside the Cumberland Plateau Region will be transferred or considered part of the CPC OptiNet.

(4) Third Party Interests in CPC OptiNet Assets.

(a) Assets of the Tobacco Commission. The Tobacco Commission retains an equitable reversionary interest and claw back right in certain assets of the CPC OptiNet for the useful life of the project assets based on the grants listed on Schedule 1 (collectively, “**VTC Grants**”).

(b) Assets Funded by EDA.

(1) The EDA funded the development of certain CPC OptiNet assets through the EDA Grants. For the sake of clarity, the Parties acknowledge that the assets originally funded by the EDA Grants are now owned jointly in equal undivided Fifty Percent (50%) interests by the Cumberland Plateau Interest and the Sunset EDA Interest.

(2) The EDA retains a reversionary interest in the undivided, equal Fifty Percent (50%) of the Cumberland Plateau Interest assets for the useful life of such assets as set forth in the EDA Letter; and, as a result of the payment of the Federal Share to the United States Treasury at the consummation of the Transaction, no such EDA grant conditions apply to the Sunset EDA Interest.

(c) Assets Funded by NTIA. All NTIA grant funded assets remain subject to certain terms and conditions of the BTOP Grant as set forth on Exhibit E. Subject to the asset transfer set forth in Section 5(c) and Section 2(B)(3)(b)(ii), all NTIA grant-funded assets are owned by Sunset pursuant to the waiver issued by under the NTIA Letter.

(5) Transfer by Sunset to Cumberland Plateau Parties.

(a) During the Transaction, Sunset discovered a dispute among the Cumberland Plateau Parties and the BVU Authority regarding the ownership of assets related to the CPC OptiNet. To resolve this dispute and confirm the ownership rights of the Cumberland Plateau Parties, effective as of the Effective Date, Sunset will deliver the Bill of Sale substantially in the form attached hereto as Exhibit F (“**Bill of Sale (Balance Sheet Assets)**”) to transfer to the Cumberland Plateau Parties a greater ownership of the fiber and equipment than that ownership interest represented by one-half of the grant funding provided by the EDA, to produce for the Cumberland Plateau Parties a continuous fiber network with a fully functioning backbone instead of a series of disconnected ownership interests of diverse and unrelated pieces of equipment not able to independently function as a contiguous network. This transfer will result in the Cumberland Plateau Parties owning assets valued at the time of original purchase by BVU Authority and recorded on the balance sheet of the entities at an original cost of Three Million Seven Hundred Seventy-Two Thousand, Three Hundred Sixty-One Dollars (\$3,772,361.00) instead of the value of Two Million Eight Hundred Fifty-Eight Thousand Seventy-Four Dollars (\$2,858,074.00), which would be the value of one-half of the EDA grant-funded assets as of the date of the original deployment. The fiber deployed with EDA grant funds totals Four Million Four Hundred Thirty-Nine Thousand Five Hundred Thirty-Nine Dollars (\$4,439,539.00) and one-half of that original cost of deployment, which represents the cost of the CPC Fibers, is Two Million Two Hundred Nineteen Thousand Seven Hundred Seventy Dollars (\$2,219,770.00). Sunset will assign to the Cumberland Plateau Parties Fifty Percent (50%) of the EDA-funded fiber deployed in Washington County totaling Two Hundred Ninety-Five Thousand One Hundred Eighty-Two Dollars (\$295,182.00), and one-half of that cost equals One Hundred Forty-Two Thousand Five Hundred Ninety-One Dollars (\$142,591.00). Total original cost of equipment and deployment assigned to the Cumberland Plateau Parties pursuant to this Section 2(B)(5) totals Three Million Seven Hundred Seventy-Two Thousand Three Hundred Sixty-One Dollars (\$3,772,361.00) or Sixty-Six Percent (66%) of the EDA investment in the network. To accomplish the asset allocation set forth in Section 2(B)(3)(b) above, Sunset hereby acknowledges ownership by the Cumberland Plateau Parties of one-half of the Eleven and Twenty-Three Hundredths (11.23) miles of fiber that extends into Washington County as part of the EDA-funded assets owned by the Cumberland Plateau Parties, totaling Two Hundred Ninety-Five Thousand One Hundred Eighty-Two Dollars (\$295,182.00), of which one-half of that cost equals One Hundred Forty-Two Thousand Five Hundred Ninety-One Dollars (\$142,591.00). All original costs referenced in this Section 2(B)(5)(a) represent the original cost recorded on the BVU Authority Balance Sheets to the best of the Parties’ knowledge as of the date of the original deployment.



The Parties acknowledge that certain assets referenced in this Section 2(B)(5)(a) may be discovered to be owned by the VCC and if so discovered this Section 2(B)(5)(a) will be deemed to be adjusted accordingly.

(b) By execution of the Bill of Sale (Infinera) substantially in the form attached hereto as Exhibit G, as of the Effective Date, Sunset will transfer any ownership rights represented by the Sunset EDA Interest it may have in the Infinera backbone equipment located in the Cumberland Plateau Region, represented by the diagram attached as Exhibit H, to the Cumberland Plateau Parties.

(c) To reflect the jointly owned nature of the CPC OptiNet, Sunset will, as an act in the normal course of business, execute an indefeasible right of use (“**IRU**”) for Fifty Percent (50%) of the NTIA fibers within the Counties of Dickenson, Russell, Tazewell and Buchanan to the Cumberland Plateau Parties.

(d) For the sake of clarity, all equipment and fiber references in this Section 2(B)(5) is covered by the grant to Sunset set forth in Section 3.

(6) Ownership of Assets Purchased With Future Investment.

(a) Sunset Ownership. The Parties acknowledge going forward that Sunset may find it necessary to invest some of its own funds in capital improvements to grow the system and keep it up to date. This Agreement will not obligate Sunset to invest any of its own funds, except as set forth in Section 4(C), and to the extent that it does invest its own funds, any equipment, fiber and other capital acquired or constructed shall be the sole property of Sunset. Following the execution of this Agreement, any Backbone, Distribution, Last Mile or other infrastructure assets deployed in or for the Cumberland Plateau Region, purchased by Sunset following the execution of this Agreement, are the individual property of Sunset, and nothing herein will be construed to give any other individual or entity any ownership interest in any such assets unless specifically noted.

(b) Cumberland Plateau Ownership. Following the execution of this Agreement, any Backbone, Distribution, Last Mile or other infrastructure assets deployed in or for the Cumberland Plateau Region, purchased by the Cumberland Plateau Parties following the execution of this Agreement, are the individual property of the Cumberland Plateau Parties, and nothing herein will be construed to give any other individual or entity any ownership interest in any such assets unless specifically noted.

(c) Asset Reporting. Asset ownership for assets purchased pursuant to Section 2(B)(6)(a) and Section 2(B)(6)(b) shall be tracked by Sunset and reported to the Cumberland Plateau Parties on a quarterly basis with sufficient specificity to identify each asset purchased by the Cumberland Plateau Parties together with the cost and the location of such asset.

(d) Additional Grant Investments. Subject to the conditions set forth in Section 7(C) of this Agreement, the Cumberland Plateau Parties and Sunset will work together to secure grants and other resources to continue to grow the CPC OptiNet, with Sunset providing technical expertise and matching funds for such applications where possible. Sunset will work with the leadership of the Cumberland Plateau Parties and the individual four counties to identify opportunities to leverage the private investment being made by Sunset to secure additional funds to increase the pace of deployment.

**SECTION 3. EXCLUSIVE GRANT TO SUNSET.**

A. Exclusive Grant. Upon the Effective Date, the Cumberland Plateau Parties hereby grant to Sunset the exclusive right, consistent with the principle of open access as required by the NTIA Letter, to use, operate, manage, deploy, sublicense, maintain and take all other actions consistent with the management and operation of the CPC OptiNet during the term of this Agreement and any renewal thereof, subject to the NTIA open-network grant condition.

B. Non-Conveyance. Nothing in this Agreement shall be interpreted to convey or is intended to convey legal title in the Cumberland Plateau Interest in the CPC OptiNet or the VCC Assets to Sunset; *provided, however,* in the event either or all of the Cumberland Plateau Parties or VCC sell(s), assign(s), otherwise transfer(s) title in, or abandon(s) the Cumberland Plateau Interest in the CPC OptiNet or the VCC Assets prior to the expiration of the Term of this Agreement, Sunset's rights pursuant to Section 3(A) regarding the CPC OptiNet shall not be affected in any way whatsoever and any such sale, assignment, transfer or abandonment shall explicitly be made subject to and conditioned upon the continuation of the rights granted in Section 3(A).

#### **SECTION 4. CONTINUED DEVELOPMENT OF THE CPC OPTINET**

A. Guidelines for Continued Deployment. The Cumberland Plateau Parties and Sunset hereby acknowledge that the CPC OptiNet was intended from its inception to primarily function to attract and serve businesses, employers and other individuals and entities involved in economic development in the Cumberland Plateau Region. The Cumberland Plateau Parties and Sunset reaffirm that in the continued deployment and operation of the CPC OptiNet they will maintain a primary focus on businesses, employers and other individuals and entities involved in economic development in the Cumberland Plateau Region. In addition, and because of new capital being made available by the CPC, Sunset and the Tobacco Commission, it is the intent of the Cumberland Plateau Parties and Sunset to also start and maintain a robust program of new residential customer connection.

B. Additional Investment in the CPC OptiNet.

(1) Sunset acknowledges that it intends to invest its own money, including the New Connection Commitment described below, into the CPC OptiNet for either operation, maintenance or capital expenditures, and specifically to fund increased residential connections. Similarly, the Cumberland Plateau Parties may invest their own money in the CPC OptiNet. Such investments in the CPC OptiNet by either the Cumberland Plateau Parties or Sunset shall become a part of the CPC OptiNet that will each be owned by their individual contributor. The Parties acknowledge going forward that the Cumberland Plateau Parties and Sunset may find it necessary to invest some of their own funds in capital improvements to grow the system and keep it up to date. This Agreement will not obligate the Cumberland Plateau Parties or Sunset to so invest any of their own funds (with the exception of Sunset's New Connection Commitment made below); however, to the extent that they do invest their own funds, any equipment, fiber and other capital acquired or constructed shall become a part of the CPC OptiNet that is owned by each individual party.

(2) From time to time, the Cumberland Plateau Parties may notify Sunset of capital funds available at the Cumberland Plateau Parties for investment in the CPC OptiNet network and Sunset shall work with the Cumberland Plateau Parties for the deployment of the capital into the network assets owned by the Cumberland Plateau Parties.

C. New Connection Commitment.

(1) As a condition to the closing of the Transaction, Sunset committed to the Tobacco Commission to invest Ten Million Dollars (\$10,000,000.00) in Southwest Virginia, and the Tobacco Commission agreed that Seven Million Dollars (\$ 7,000,000.00) of that commitment to be directed to new connections in the Cumberland Plateau Region (the "**New Connection Commitment**") and Sunset hereby agrees that the New Connection Commitment is now made directly to the Cumberland Plateau Parties with the right to enforce such New Connection Commitment as set forth in this Section 4(C). Pursuant to the ITC Commitment Letter, ITC hereby agrees that, through its affiliates or subsidiaries, it will provide the necessary financial support for Sunset Digital Holding, LLC, and/or its two operating subsidiaries Sunset Digital Communications, LLC and Sunset Fiber, LLC to meet the financial commitment set forth in this Section 4(C).

(a) Sunset and the Cumberland Plateau Parties shall mutually agree upon the deployment plan for the New Connection Commitment, taking into consideration, with respect to residential connections, that with respect to an Extraordinary Connection Request, the Cumberland Plateau Parties may direct

Sunset to develop a plan to connect such residential customer by investing funds controlled by CPC or coordinating with local and regional funding agencies to fund the installation of such services; *provided, however*, the Cumberland Plateau Parties and Sunset shall work together in good faith to coordinate the timing of the delivery of broadband services to such residential customers in as expeditious a manner as possible.

(i) Following the execution of this Agreement, the Cumberland Plateau Parties and Sunset shall jointly promote the availability of broadband expansion within the Cumberland Plateau Region by encouraging potential customers to designate their interest in service by signing up on the Sunset website (or by utilizing other sign-up processes which may be available) to generate clusters of interest for underserved communities. The Cumberland Plateau Parties shall assist Sunset in identifying local community individuals who may be willing to serve as a catalyst for the generating interest for broadband deployment within their neighborhood or community.

(ii) Sunset will compile the potential customer data and recommend an initial deployment strategy to the Cumberland Plateau Parties within One Hundred Twenty Days (120) following execution of this Agreement.

(iii) The Parties will review the deployment strategy to balance rural underserved communities with communities closer to municipal jurisdictions in the Cumberland Plateau Region and mutually agree upon the deployment strategy taking into account Extraordinary Connection Requests.

(b) If Qualified and Documented demand for broadband services exists within the first year following the Effective Date, Sunset shall deploy at least One Million Five Hundred Thousand Dollars (\$1,500,000.00) in the Cumberland Plateau Region for new business and residential connections; and, for each year for the Five (5) years thereafter, Sunset shall deploy One Million Dollars (\$1,000,000.00) in the Cumberland Plateau Region for new business and residential connections until the entire New Connection Commitment is expended. Sunset shall deploy the New Connection Commitment by the Seventh (7<sup>th</sup>) anniversary of this Agreement; *provided, however*, that any remaining balance on the New Connection Commitment shall carry over until fully deployed. The Cumberland Plateau Parties may, from time-to-time, request to meet with Sunset and review the list of commercial customer connections and review the residential area connections by neighborhood or other geographic designation.

(2) Each calendar year quarter, Sunset shall provide the Cumberland Plateau Parties and the Tobacco Commission a quarterly report that details, for the current calendar year, the amount of New Connection Commitment funds that have been spent, and how much remains to be spent in that calendar year, and Sunset shall report New Connection Commitment expenditures to the Cumberland Plateau Parties and the Tobacco Commission on the CFO Certification referenced in Section 10(A). Sunset shall provide to the Cumberland Plateau Parties and the Tobacco Commission all work orders and any other documentation necessary to substantiate the cost of the connection in fulfillment as set forth in Section 10(A). The Parties will work in good faith to resolve any disputes as to the proper cost of a connection made as part of a New Connection Commitment.

D. Residential Connections.

(1) Residential Focus. Sunset shall start and maintain a robust program of new residential customer connections for the deployment of the CPC OptiNet to residential customers in the Cumberland Plateau Region based upon interest in such residential deployment and technical, construction and cost requirements and considerations, as reasonably determined by Sunset.

(2) Connected Home Advisory Council. The Cumberland Plateau Parties and Sunset shall create the “**CPC OptiNet Connected Home Advisory Council**” comprised of Two (2) citizens from each of the Counties of Buchanan, Dickenson, Russell and Tazewell to advise the Cumberland Plateau Parties and Sunset on future deployment and to balance revenue generating neighborhoods and the Sunset “clustering” model with outlying homes in need of connectivity and to develop strategies for the connection of all homes in the Cumberland

Plateau Region. The members of the Connected Home Advisory Council shall be appointed by the Cumberland Plateau Parties and Sunset, with the Cumberland Plateau Parties and Sunset each having the right to appoint one citizen from each of the Counties of Buchanan, Dickenson, Russell and Tazewell.

E. Business and Economic Development Connections.

(1) Economic Development Focus. The Cumberland Plateau Parties and Sunset share the desire of the EDA, NTIA, and Tobacco Commission to continue to utilize the CPC OptiNet to promote economic development and job creation in the Cumberland Plateau Region and desire to work with local and regional economic development stakeholders using commercially reasonable efforts to support the following economic development strategies:

- (a) Continue to support the economic development effort of the Cumberland Plateau Parties;
- (b) Regularly meet with county IDA leadership to coordinate business and economic development focus;
- (c) Sponsor booth space to facilitate a regional presence at major trade shows pushing connected communities;
- (d) Sponsor booth space for a regional presence at economic development events;
- (e) Support regional marketing programs, including the new regional marketing initiative of VCEDA, in advertisements, magazines, newsletters in metro areas in the United States and abroad promoting the region;
- (f) Explore “Coal to Code” or similar programs that Sunset would support at local universities and colleges and community colleges;
- (g) Deliver quarterly highlights on bandwidth to communities and their industrial parks;
- (h) Promote regional outdoor and cultural activities (e.g. Spearhead Trails, Appalachian Spring, Crooked Road, Round the Mountain and kayaking adventures around the area);
- (i) Work with local economic development officials to promote the region, such as organizing VIP tours;
- (j) Support and publicize the existing regional initiatives underway, including the Spearhead Trails, the Crooked Road, Appalachian Spring, and Round the Mountain; and,
- (k) Coordinate with the Cumberland Plateau Parties for the further deployment of the CPC OptiNet with regional tourism venues to aid in the promotion of those venues and the “user” experience for visitors to assist in the further growth of the region’s new economic efforts.

(2) Cumberland Plateau Broadband Council. Recognizing that the initial deployment of the CPC OptiNet focused on business and commercial customers, the Cumberland Plateau Parties and Sunset will create the “**Cumberland Plateau Broadband Council**” comprised of Two (2) business leaders from each of the Counties of Buchanan, Dickinson, Russell and Tazewell to monitor deployment to the business community (large and small) and work with economic development leaders to foster economic growth in the region, inviting many stakeholders to participate, including the Parties, the VCC, VCEDA, and local Industrial Development Authorities and Chambers of Commerce of each county in the Cumberland Plateau Region. The members of the Cumberland Plateau Broadband

Council shall be appointed by the Cumberland Plateau Parties and Sunset, with the Cumberland Plateau Parties and Sunset each having the right to appoint one citizen from each of the Counties of Buchanan, Dickenson, Russell and Tazewell..

(3) Connection Issues.

(A) Beginning on the Effective Date, and continuing until the full New Connection Commitment is invested, Sunset shall provide to the Cumberland Plateau Parties at the beginning of each quarter the number of commercial and residential customers who have indicated an interest in connecting to the CPC OptiNet (the “**Connection List**”). The Connection List shall show the date such business or individual was added to the Connection List and the number of businesses and individuals that Sunset proposes to connect during the quarter. Sunset’s Cumberland Plateau Region senior designated representative shall review with representatives of the Cumberland Plateau Parties, from time-to-time, specific customer connection information so that the Cumberland Plateau Region representatives may track the status of specific pending requests for connection, including the opportunity from time-to-time to review the names and status of actual pending customer connections.

(B) Beginning on the Effective Date, the Cumberland Plateau Parties shall provide monthly to Sunset a list of any businesses and individuals that they would like considered for connection to the CPC OptiNet. Sunset shall add those businesses and individuals to the Connection List described in the preceding paragraph within Thirty (30) days of receipt of the information from the Cumberland Plateau Parties.

(C) If the Cumberland Plateau Parties receive a verified written complaint from a local or regional economic development official, including members of the staff and Board of Directors of the Cumberland Plateau Parties, or other local government official, that Sunset has failed to connect a potential business customer, or other potential customer having an economic development aspect, requesting broadband services, Sunset will have Thirty (30) calendar days from receipt of the complaint to develop a plan and budget for the connection of the potential business or economic development customer or to report why such connection request is not valid.

(D) While it is anticipated that Sunset likely will make such commercial connections in the ordinary course of business, in the event Extraordinary Connection Requests are made, the Parties agree to work in good faith to resolve any economic development connection issues involving potential business or economic development customers. In the event an Extraordinary Connection Request exists, the Cumberland Plateau Parties may direct Sunset to develop a plan to connect such business customer by investing funds controlled by the Cumberland Plateau Parties or coordinating with local and regional economic development agencies to fund the installation of such services; *provided, however*, the Cumberland Plateau Parties and Sunset shall work together in good faith to coordinate the timing of the delivery of broadband services to such business customer in as expeditious a manner as possible.

(E) The Cumberland Plateau Parties may request Sunset connect any individual or business listed on the Connection List; and no later than Sixty (60) days thereafter, Sunset shall (1) deliver an estimated connection date for such prospective connection within such Sixty (60) day period or (2) deliver to the Cumberland Plateau Parties a plan of connection for such potential connection, including technical and financial requirements necessary to make such connection.

**SECTION 5. REGIONAL WIRELESS NETWORK DEPLOYMENT.**

To encourage the growth of the CPC OptiNet and the promotion of regional economic development initiatives, Sunset will develop a network of Wi-Fi hot spots to be deployed in major gathering places like Main Streets, high school sports facilities and recreational facilities throughout Southwest Virginia so long as such service remains a technically competitive product. Immediately following the Effective Date, Sunset shall begin work to deploy the network of Wi-Fi hot spots. Sunset’s estimate is that it will deploy a network of at least Four (4) Wi-Fi hot spots in

the Cumberland Plateau Region (one per county) within the next Five (5) years. The Cumberland Plateau Parties and Sunset will work cooperatively together, and with local and regional stakeholders, to identify suitable locations for such Wi-Fi locations.

**SECTION 6. SUNSET OBLIGATIONS AND RESPONSIBILITIES.**

A. CPC OptiNet Operator Responsibilities. Sunset shall be the operator of the CPC OptiNet and as such, Sunset Fiber shall:

(1) Receive, service and resolve all requests for support, including, but not limited to, technical, billing, and sales and marketing inquiries;

(2) Invoice, bill and undertake all collection activities (collectively, Section 6(A)(1) and Section 6(A)(2), the “Sunset Services”);

(3) Install, operate and maintain a fiber optic Backbone line as set forth in this Agreement. Sunset will continue to extend the Backbone, Distribution and Last Mile fiber systems, timed so that adequate oversight can be provided to each project by Sunset;

(4) If and as necessary as determined by technical review and testing, Sunset shall add capacity to the Backbone so that service to existing customers, and the growth through adding new customers, is not degraded or limited by the Backbone’s fiber capacity;

(5) Obtain, from various owners of utility poles along said routes, the right to attach said fiber optic cable line to their poles and obtain railroad crossing agreements;

(6) Provide, if necessary, electronic equipment necessary to light the CPC OptiNet fiber optic cable and any other equipment necessary to provide broadband Internet service, including data service, local exchange or voice-over IP (“VOIP”) telephone and long distance telephone service, and cable television to areas in the four counties of the Cumberland Plateau Region, including the towns therein, and to charge customary and ordinary fees for said services;

(7) Where sufficient demand and density of population make it feasible extend a fiber optic cable Distribution and Last Mile system to areas to make Distribution and Last Mile delivery systems available in the Cumberland Plateau Region, including the towns therein, where such areas are within reasonable proximity of said Backbone, with priority being given to industrial, commercial and governmental end users. Sunset has expressed and shall work in good faith towards a goal of connecting Ten Thousand (10,000) additional residential customers within the next Ten (10) years in the Cumberland Plateau Region, although the exact number of new residential connections will be dependent on multiple factors, including economics and new residential customer interest;

(8) Make available cable or IPTV programming signals to a cable television service provider to be designated by Sunset for ordinary and customary fees within the industry, and to be franchised in each jurisdiction involved, to serve multi-channel television programming in the areas where Last Mile facilities are available, and for the same ordinary and customary fees, make telephone and data services available to end user customers who have Last Mile connections;

(9) After installation, maintain said fiber optic cables and electronic equipment in good working order, doing those things normally necessary to operate said systems to deliver such telephone, broadband data and cable services in an efficient and business-like manner; Sunset agrees to procure and maintain appropriate insurance on the CPC OptiNet, including coverage of the electronic assets that comprise the CPC OptiNet, as well as business interruption and casualty/liability insurance that lists the “Cumberland Plateau Planning District Commission” and the “Cumberland Plateau Company, Inc.” as additional insureds;

(10) Undertake all Operating Responsibilities;

(11) Consistent with the NTIA requirement that the CPC OptiNet be operated as an open network, honor and maintain all existing contracts held by the BVU Authority with any third parties, including wholesale customers, who operate using services provided by the CPC OptiNet, unless changes to such agreements are requested by such customers;

(12) Operate the CPC OptiNet consistent with the requirements of the EDA Letter and NTIA Letter, as and if applicable;

(13) Offer employment to the current BVU Authority workforce based in the Cumberland Plateau Region, who have experience working on the CPC OptiNet in the Cumberland Plateau Region;

(14) Acknowledge that the Cumberland Plateau Parties remain subject to the terms and conditions contained in the EDA Letter;

(15) Discharge these obligations and responsibilities in a good and workmanlike manner, and provide service to the customers of the CPC OptiNet in accordance with industry standards and in a manner that maintains a high level of satisfaction among the business and residential customers of the CPC OptiNet; and,

(16) Provide an operations report to the Cumberland Plateau Parties on a quarterly basis which shall contain metrics to measure operational quality and customer satisfaction, and which shall be based on the metrics reported by the previous operator of the CPC OptiNet.

## **SECTION 7. CUMBERLAND PLATEAU PARTIES OBLIGATIONS AND RESPONSIBILITIES.**

A. Additional Grant Funding. The Cumberland Plateau Parties may from time-to-time make available funds necessary for engineering, acquisition, construction and capitalized operating costs related to the grant funded projects contemplated herein to be performed by Sunset and utilized to expand the CPC OptiNet. The source of such funds to be furnished by the Cumberland Plateau Parties will be various federal and state governmental grants and loans with potentially matching funds from local governments, the Tobacco Commission, stakeholders, or Sunset. Nothing in this Agreement shall prevent Sunset from seeking and utilizing grant funds for the development of the CPC OptiNet or from other local and regional entities from seeking and utilizing grant funds for the development of the CPC OptiNet.

B. Title to Grant Funded Assets. Title to any assets which are grant funded and added to the CPC OptiNet shall be determined by such grants. To the extent possible the Parties shall attempt to have the grant funder allow the assets to be owned on an equal 50% basis by Sunset and the Cumberland Plateau Parties. Title to any funds obtained by other local and regional entities shall follow the terms and conditions of any such grant.

C. Grant Cooperation. The Cumberland Plateau Parties and Sunset acknowledge and agree that working together to obtain additional grants to support the CPC OptiNet is in their mutual best interest. Accordingly, the Cumberland Plateau Parties and Sunset hereby agree to work together cooperatively and in good faith to identify, apply for and deploy grants that will further the mission of the CPC OptiNet. Such cooperation includes sharing all grant applications before submission. The Cumberland Plateau Parties shall not submit any grant application affecting the CPC OptiNet until Sunset has reviewed and has been able to create a business plan that establishes a reasonable basis for there being sufficient incremental income from the intended project to cover all incremental expenses for the operation of the projected fiber addition. The Cumberland Plateau Parties will obtain Sunset's written permission before using its name in any grant application, and will copy Sunset with the grant application when submitted. Sunset shall provide all pre-grant application services to any grant that a third party intends to apply for, to the extent that the grant project will add to the system in the Cumberland Plateau Region for the CPC OptiNet and shall be reimbursed if requested for reasonable expenses related to the delivery of such pre-grant application services.

D. Local Assistance. The Cumberland Plateau Parties, through the members of their respective Board of Directors residing in various Counties of its area, may assist, if requested and as appropriate, Sunset in obtaining all required local franchises, licenses and permits from the various Counties and Towns in the Cumberland Plateau Region that the members of the respective Board of Directors of the Cumberland Plateau Parties agree to provide; *provided, however*, Sunset acknowledges that such members may determine a conflict of interests exists causing them to be unable to provide such assistance. The Cumberland Plateau Parties will encourage their member jurisdictions to facilitate an expedited review of all applications for permits submitted by Sunset, including requests for approvals necessary for construction, maintenance or other work within a jurisdiction's rights-of-way and easements related to access to a jurisdiction's assets or infrastructure, all in accordance with applicable regulations and ordinances and such jurisdiction's standard processes and practices generally made available to all third parties.

E. Operating Restriction. The Cumberland Plateau Parties shall have no Operating Responsibilities of any kind, and will coordinate their grant writing efforts with Sunset to obtain basic system planning, engineering and all other operational information for said application. Sunset will have the sole right and obligation to perform all Operating Responsibilities and the Cumberland Plateau Parties will not attempt, directly or indirectly, to perform any Operating Responsibilities, whether expressly set forth herein or of like kind to the express Operating Responsibilities herein set forth. This operating restriction shall not apply to prevent the Cumberland Plateau Parties from engaging in grant administration or grant procurement for any grant that provides funds for further deployment of the CPC OptiNet. The Cumberland Plateau Parties hereby acknowledge that this Section 7(E) operating restriction provision is essential to the Agreement, and any attempt by the Cumberland Plateau Parties' employees or agents to participate in Operating Responsibilities other than is stated herein shall constitute a breach of this contract for which Sunset may terminate this Agreement, after notice to the Cumberland Plateau Parties and a reasonable period to cure. The activities of the Cumberland Plateau Parties related to participating in the development of strategies for the deployment of the network set forth in Section 4 shall not be deemed to be a violation of this Section 7(E).

F. Customer Complaints. In the event the Cumberland Plateau Parties receive complaints related to deployment, operation, reliability, pricing, etc. from a customer of the CPC Optinet, the Cumberland Plateau Parties shall immediately forward such complaint to Sunset, which shall act in good faith to address the complaint and resolve same if possible, and shall regularly report to the Cumberland Plateau Parties regarding the status of each such complaint, if any.

## **SECTION 8. CUMBERLAND PLATEAU ECONOMIC DEVELOPMENT FEE.**

A. Cumberland Plateau Economic Development Fee. Following the Execution Date, Sunset shall pay the Cumberland Plateau Parties an annual fee ("**Cumberland Plateau Economic Development Fee**") based upon:

(1) Ten and Twenty-One Hundredths Percent (10.21%) (the "**Initial Rate**") of Gross Revenue until Sunset achieves the Threshold Event; then,

(2) Seven and Twenty-One Hundredths Percent (7.21%) of Gross Revenue (the "**Adjustment Rate**") until Sunset has recovered that amount of money that is the difference between the amount of Cumberland Plateau Economic Development Fee paid based upon the Initial Rate and that amount that would have been due based upon on the Standard Rate (defined below); and, following recovery of such difference; then,

(3) Eight and Seventy-One Hundredths Percent (8.71%) (the "**Standard Rate**") (collectively, Initial Rate, Adjustment Rate, Standard Rate, the "**Rate**") of Gross Revenue during the remainder of the Term of this Agreement, each of (a) and (b) calculated in quarterly installments as follows:

(a) Thirty (30) calendar days following the end of each calendar year quarter Sunset shall deliver to CPC an amount equal to the applicable Rate times the actual Gross Revenue for the preceding calendar year quarter ("**Quarterly Payment**"); and,



(b) By March 31 of each year, Sunset shall determine the actual Cumberland Plateau Economic Development Fee for the previous year and deliver within Fifteen (15) calendar days any deficiency from the previous year's fee; *provided, however*, that in the event the previous year's fee was overpaid, Sunset shall credit such overpayment to the fee due for the next year.

B. Entire Fee. The Cumberland Plateau Economic Development Fee shall be the only fee, payment, distribution or other economic payment of any type delivered to the Cumberland Plateau Parties pursuant to this Agreement. The Cumberland Plateau Parties shall be responsible for any fees, payments or distributions due to the VCC for the use of CPC OptiNet assets funded by the EDA-VCC Grant and for any Federal, state or local obligations placed upon the use of the Cumberland Plateau Economic Development Fee.

#### **SECTION 9. IPTV AVAILABILITY.**

A. Availability. The Parties acknowledge that the status of cable television and IPTV television is currently uncertain. For so long as economically viable, Sunset will make available cable or IPTV programming signals to serve multi-channel television programming in the areas where Last Mile facilities are available, and for the same ordinary and customary fees, make telephone and data services available to end user customers who have Last Mile connections; *provided, however*, the Parties acknowledge that industry changes could impact the delivery such television services making such services no longer necessary or no longer viable.

B. Local And Regional Government Programming. Sunset will expand the utilization of the CPC OptiNet for the promotion of community and local activities and the engagement of local citizens in the local and regional governmental activities by dedicating a television channel to community access programming of local school programs and sporting events and by, when feasible, filming regional activities for viewing online and on the regional television channel.

#### **SECTION 10. REPORTS.**

##### **A. Financial Reporting.**

(1) Sunset will develop a separate accounting category for the collection of Gross Revenue from the CPC OptiNet and Sunset will deliver the CFO Certification, substantially in the form attached hereto as Exhibit J, ("**CFO Certification**") certifying the following: (a) the amount of Gross Revenue from the CPC OptiNet; (b) the amount of the New Connection Commitment expended during such quarter, and the amount of the New Connection Commitment remaining to be deployed.

(a) Sunset will deliver such CFO Certification (a) within Thirty (30) days following the end of each calendar year quarter, providing the Gross Revenue for the preceding calendar year quarter; and, (b) at the end of each calendar year, Sunset will deliver the CFO Certification of the annual Gross Revenue from the CPC OptiNet with an accompanying review by an independent auditor within Thirty (30) days following receipt of such audit.

(b) If the Cumberland Plateau Parties dispute the calculation of Gross Revenue, the Cumberland Plateau Parties shall deliver written notice as set forth in Section 19 of such disputed calculation and the reason for such disputed calculation within Forty-Five (45) days after receipt of the CFO Certification. Each Party will use reasonable efforts to resolve a dispute within Forty-Five (45) calendar days following its receipt of the dispute notice. If the Parties are unable to resolve a dispute within such Forty-Five (45) calendar days, the Parties will engage a mediator to assist in the resolution of the dispute. If the Cumberland Plateau Parties fail to properly notify Sunset of a dispute within Forty-Five (45) days after receipt of the CFO Certification, then such right to dispute the CFO Certification is waived.

B. Annual Board Presentation. Sunset will make annual presentations to the Boards of Directors of the Cumberland Plateau Parties setting forth the details of the operations of the CPC OptiNet. The prior calendar year's operation and a summary of the financials of that calendar year shall be presented at a meeting of the Boards of Directors of the Cumberland Plateau Parties on or before, but no later than, March 31 of the following year (e.g. the presentation for calendar year 2017 shall be due by March 31, 2018).

C. Annual CPC OptiNet Performance Review. The Parties will hold an annual meeting to discuss the status of the system and invite the EDA, NTIA, and Tobacco Commission. Unless the attendees agree otherwise, the meeting will be held in Washington, D.C., and no later than March 30<sup>th</sup>. During the meeting, Sunset shall provide a comprehensive presentation of the financial, operational and customer service results of the CPC OptiNet for the most recent calendar year. Sunset shall also provide a detailed plan for further deployment of the CPC OptiNet in the current year and over the next five-year period. If agreed by the Parties, the meeting in Section 10(B) above may be combined the meeting anticipated by this subsection.

D. Financial Accounting and Reporting. Sunset agrees to maintain a separate financial account for the CPC OptiNet which shall record all the financial information related to the operation of the CPC OptiNet. Sunset shall provide sufficient financial information and inspection rights to enable the Cumberland Plateau Parties to verify the amount of Gross Revenue under this Agreement.

E. Inspection Rights. The Cumberland Plateau Parties shall have the right, with reasonable notice and at their own expense, to have a Certified Public Accountant inspect the financial account for the CPC OptiNet to verify the actual Gross Revenue of the CPC OptiNet. The number of such inspections shall not be limited, but the Cumberland Plateau Parties agree to exercise the right of inspection on a reasonable basis. Sunset shall work with the Cumberland Plateau Parties to produce a geolocation report utilizing Sunset's proprietary Fibertrac software or other similar software to provide reports of the Cumberland Plateau Region customer activity.

F. Annual Audit. Sunset shall engage, at its expense, an independent, third-party auditor to conduct an audit of all the CPC OptiNet financial information necessary to validate performance by Sunset of the obligations of Sunset under this Agreement. The audit shall be done on a calendar year basis, unless another basis is agreed to by the Parties. Sunset shall also have prepared and deliver annually to the Cumberland Plateau Parties audited financial reports of the CPC OptiNet Division of Sunset, which financial information the Cumberland Plateau Parties shall treat as confidential under the Virginia Freedom of Information Act, if applicable.

G. Quarterly Financial and Operating Review Meetings. Sunset and the Cumberland Plateau Parties agree to establish a schedule for regular quarterly meetings, to be held at the CPC offices in Lebanon, Virginia, between the leadership and staff of the Cumberland Plateau Parties, the VCC, and the leadership of Sunset. Representatives of the Tobacco Commission shall be notified of the meeting so they may attend if desired by them. The purpose of these meetings shall be to review and discuss items of mutual concern related to finances, operations and any other topics which impact on the health and wellbeing of the CPC OptiNet. The meetings are intended to create a mechanism by which the Parties can meet regularly, discuss matters of mutual concern, and generate a sense of goodwill and shared purpose with respect to their mutual shared interest of success for the CPC OptiNet.

## **SECTION 11. TERM, RENEWAL AND TERMINATION.**

A. Term. The term of this Agreement shall begin on the Effective Date and shall end at midnight on December 31, 2042 ("**Term**"), if not terminated before such date.

B. Optional Term Extension. If the Cumberland Plateau Parties are not in default under this Agreement, they shall have the automatic right to renew this Agreement for Two (2) consecutive Five (5) year terms. If Sunset is not in default under this Agreement, it shall have the automatic right to renew this Agreement for Two (2) consecutive Five (5) year terms.

C. Termination. This Agreement may be terminated as follows:

(1) Either Party may terminate this Agreement upon the other Party's insolvency, dissolution, bankruptcy or cessation of business operations.

(2) Either Party may, upon written notice, terminate this Agreement for the other Party's failure to make a payment due hereunder, if such failure remains uncorrected for Thirty (30) calendar days following written notice that payment has not been received as provided in this Agreement.

(3) In the event of a breach of any material term or condition in this Agreement by a Party, the other Party may terminate this Agreement upon Ninety (90) days' written notice, if the breaching Party fails to cure the breach during such Ninety (90) day period. A breach that cannot be reasonably cured within a Ninety (90) day period may be addressed by a written waiver of this Section 11(C)(3) signed by the Parties or by immediate termination by the non-breaching Party. In the event a breach that cannot be reasonably cured within such Ninety (90) day period results from a technically related issue, Sunset shall present a plan for the correction of such issue and a schedule for addressing such issue. Payments pursuant to this Agreement requiring one Party to compensate the other shall not be excused by notice of intent to terminate the Agreement for an alleged breach. However, at the payer Party's option, payment due may be placed in escrow during the Ninety (90) days while the alleged breach may be cured and may remain in escrow pending resolution of the alleged breach.

D. Effect of Termination. Upon any material breach of this Agreement by a Party, which is not cured after expiration of all applicable notice and cure periods, the offended Party may, at its sole option, do any or all of the following:

(1) Suspend payments, without penalty;

(2) Terminate this Agreement;

(3) Collect any shortfall amounts for the remaining portion of the Term or any applicable renewal term of the Agreement; and,

(4) Pursue mediation of the dispute to be held within Thirty (30) days of the declaration of a dispute and the passage of any cure period related to such alleged breach; *provided, however*, that in the event the Parties are unable to resolve the dispute through mediation, a Party may then pursue any other legal or equitable remedy or relief as may be appropriate.

E. Obligations Upon Termination.

(1) Upon termination of this Agreement before the end of the useful life of any asset owned by the Cumberland Plateau Parties, for any reason above or at the end of the initial term or any applicable renewal term under this Agreement, Sunset will identify the remaining assets of the Cumberland Plateau Parties then in operation, if any, and shall transfer control to such assets back to the Cumberland Plateau Parties by terminating the grant under Section 3 with respect to such assets. The IRU described in Section 2(B)(5)(c) shall become effective, if in existence because the transfer contemplated by Section 2(B)(3)(b)(ii) has not occurred. The Cumberland Plateau Parties shall be obligated, if desired, to secure such services, connections and equipment at their own expense. If the Cumberland Plateau Parties and Sunset so desire, Sunset will enter a support agreement to enable the CPC OptiNet to continue operating following such separation; *provided, however*, the Cumberland Plateau Parties will be responsible for all third-party costs related to the operation of their network.

(2) The Cumberland Plateau Parties and Sunset agree that they will act cooperatively and in good faith either to (A) renegotiate a new operating agreement for the CPC OptiNet with Sunset continuing as the operator, or (B) Sunset shall act cooperatively and in good faith to maintain and operate the CPC OptiNet in a good and workmanlike fashion consistent with all terms of this Agreement during the period that the Operator

Responsibilities are being transferred to a new operator. Sunset shall continue to pay the Cumberland Plateau Parties pursuant to the terms of this Agreement, including payments due hereunder.

(3) Sunset shall execute and deliver to the Cumberland Plateau Parties the IRU referenced in Section 2(B)(5)(c), if in existence because the transfer contemplated by Section 2(B)(3)(b)(ii) has not occurred.

F. Immediate Transfer Fee. Given the disruption and expense caused to the Cumberland Plateau Parties due to the BVU Authority's exercise of its right of assignment, the Parties agree that if Sunset assigns this Agreement or its rights under this Agreement within Five (5) years from the Effective Date, except as contemplated by Section 13(A)(5), Sunset shall pay the Cumberland Plateau Parties Two Million Dollars (\$2,000,000.00) to compensate the Cumberland Plateau Parties for the time, expense and opportunity costs associated with the assignment process.

## SECTION 12. OPERATOR PERFORMANCE

### A. CPC OptiNet Network Goals.

(1) *CPC OptiNet Network Vision.* Together the Parties will work in good faith to continue the utilization of the network as a tool for economic development and job creation while working to expand the residential connections on the network.

(2) *CPC OptiNet Network Deployment.* Sunset acknowledges that the delivery of reliable, high-quality service at reasonable rates through the CPC OptiNet, both to business and residential customers, remains a very high priority for the Cumberland Plateau Parties. The Cumberland Plateau Parties acknowledge that under this Agreement Sunset will be delivering these services in rural areas that contain communities or individual connections that may be remote and located in difficult terrain.

(3) *CPC OptiNet Demand.* The Parties acknowledge the extraordinary existing demand for broadband throughout the Cumberland Plateau Region. Following the execution of this Agreement, the Parties anticipate a significant amount of inquiries from potential customers desiring to be connected to the network. The Cumberland Plateau Parties will direct all interested parties to register their interest on Sunset's website to enable Sunset to incorporate their interest in the Sunset tracking system. Together the Parties will work with the *Connected Home Advisory Council* set forth in Section 4(D) of this Agreement and the *Cumberland Plateau Business Broadband Council* set forth in Section 4(E) of this Agreement to address future connection issues. Sunset will track and report network connections issues separate from existing customer customer-service issues.

B. Operator Standards and Customer Service. Sunset shall strive to operate a rural best-in-class, carrier-class, fiber optic network that delivers industry-leading uptime to customers of varying service levels and to deliver those services consistent with the individual customer service level agreement executed by the customers of the CPC OptiNet network from time-to-time, recognizing that commercial customers and residential customers will likely have different agreed upon response times for outages and connections. Sunset will work to establish and maintain a robust and redundant network and Twenty-Four (24) hour customer support, and ensure that the CPC OptiNet customers rarely experience a material service interruption that is not caused by a *Force Majeure* event. Sunset will continue to operate a call center for the Cumberland Plateau Region on a Twenty-Four (24) hour-a-day, Three Hundred Sixty-Five (365) day-a-year basis, seeking to maintain the ability for a CPC OptiNet customer to speak to a customer service representative or receive a response to email inquiries in a timely manner. The foregoing are referred to as the "**Performance Standards**". Sunset shall deliver to the Cumberland Plateau Parties a quarterly report on operational quality and customer satisfaction.

### C. Resolution of Performance Issues.

(1) Performance Improvement Demand.

(a) Performance Notice. In the event that (1) the Cumberland Plateau Parties believe significant and identifiable ongoing unresolved concerns exist about Sunset meeting the Performance Standards, and (2) informal attempts to resolve the issues have failed, the Cumberland Plateau Parties will notify Sunset in writing of the concerns of the Cumberland Plateau Parties (“**Performance Notice**”) and provide Thirty (30) days for Sunset to deliver a written report regarding the concerns raised by the Cumberland Plateau Parties, including, if requested by the Cumberland Plateau Parties, a plan of resolution (“**Performance Resolution Report**”) for the issues raised by the Cumberland Plateau Parties in such written notice, recognizing that resolution of such issues could require the cooperation of third parties outside the control of Sunset, and the Parties further recognize that Sunset cannot be held responsible for performance issues outside of its control.

(b) Content of Performance Notice. The Parties agree that a Performance Notice is not intended to address day-to-day concerns of individual customers, such as a network performance issues related to individual website performance, individual customer equipment performance affected by computer virus issues discovered by Sunset’s monitoring and diagnosis. The Parties acknowledge that a Performance Notice is intended to address significant, systemic issues not occurring because of the unique nature of the rural landscape in which the network exists (such as a prolonged interruption of service due to severe weather and remote customer locations), but existing because of Sunset’s lack of performance in the operation and maintenance of the CPC OptiNet Network.

(c) Extraordinary Situations. The Parties acknowledge that the Performance Notice process shall only be used for extraordinary situations or for concerns believed by the Cumberland Plateau Parties to constitute long-term and systemic problems.

(2) Performance Resolution Meeting.

(a) Report Review Meeting. At the written request (which shall contain the specific issues to be discussed) of the Cumberland Plateau Parties, the Parties shall meet within Fourteen (14) days following receipt of the Performance Resolution Report.

(b) Expanded Performance Review. In the event the Cumberland Plateau Parties are unsatisfied with the Performance Resolution Report produced by Sunset, the Cumberland Plateau Parties may demand a meeting between Sunset, the Cumberland Plateau Parties and the Executive Director of the Tobacco Commission to discuss the concerns of the Cumberland Plateau Parties, with the Executive Director of the Tobacco Commission serving as a mediator, to determine an agreed upon resolution of the issues. If any of the assets of the CPC OptiNet Network remain subject to conditions of any federal or state granting agencies, the Parties shall invite representatives of such agencies to attend any meeting called under this Section 12(C)(2)(b). The Executive Director of the Tobacco Commission shall review the performance issues, including the causes of such issues, and structure a resolution of the issues.

(3) Sole Remedy. The sole remedy of the Cumberland Plateau Parties for addressing Performance Standards, including the causes of such issues, and structure a resolution of such issues shall be the process set forth in this Section 12; *provided, however*, Sunset hereby acknowledges that this Section 12(B) (“Operator Standards and Customer Service”) is essential to the Agreement and failure by Sunset, after delivery of the Performance Notice and completion of the process set forth in Section 12(C)(1) and Section 12(C)(2), if such issues described in the Performance Notice persist and if such issues are the direct fault of Sunset, then, because determining the exact amount of damages caused by such breach would be difficult, the Parties agree, that following written notice from the Cumberland Plateau Parties that a persistent performance issue remains, the Cumberland Plateau Parties shall be entitled to liquidated damages until such issues are resolved in an amount equal to the daily amount paid by such customer(s), unless Sunset refunds or credits such amount directly to the customer(s).

(4) Transition Period. The Parties acknowledge that following the execution of this Agreement, the CPC OptiNet will undergo a significant transition with the closing of the Transaction that could

potentially last up to a year, and minor disruptions or delays outside the normal course of business may occur as a result of such transition.

### **SECTION 13. OPERATOR TRANSITION**

A. Assignment. Either Sunset or the Cumberland Plateau Parties may assign their rights under this Agreement to a third party pursuant to the provisions of this Section 13.

(1) Notification. A party potentially assigning its rights under this Agreement (the “Assignor”) shall deliver written notification to the other party within five (5) days of the execution of a letter of intent or other preliminary agreement document that could lead to such an assignment so that the non-assigning party is aware of a potential assignment of the Assignor’s rights. All information delivered shall be subject to the confidentiality provisions set forth below.

(2) Basic Requirements of Assignment.

(a) If Sunset wishes to assign its rights under this Agreement, the assignee must at a minimum have the experience, infrastructure and financial resources sufficient to properly operate and maintain the CPC OptiNet. If such assignment contemplates that the managerial, technical and operational infrastructure of Sunset shall remain in place following such assignment, the assignee shall be deemed to have met this minimum requirement.

(b) If the Cumberland Plateau Parties desire to assign their rights under this Agreement, the assignee must at a minimum be able to legally hold title to the assets of the CPC OptiNet network, perform the responsibilities of the Cumberland Plateau Parties under this Agreement, and acknowledge in writing the exclusivity of the Operating Responsibilities of Sunset under this Agreement.

(3) Meeting of the Parties. At the request of the non-assigning party, the Assignor shall meet with the non-assigning party to review the proposed assignment of rights under this Agreement.

(4) Third Party Consents. The Parties acknowledge that any assignment of rights under this Agreement may be subject to approval by the EDA, the NTIA, the Tobacco Commission, or other public fund granting agency.

(5) Change of Control; Affiliate Assignment. Notwithstanding any provision of this Section 13 to the contrary, Sunset shall have the absolute right, without the consent of any Party, to assign or otherwise transfer this Agreement in its entirety as follows:

(a) to any of its affiliates; *provided, however*, that all such rights, obligations and performance hereunder shall revert to Sunset automatically and immediately at such, if any, time as such affiliated person or entity ceases to be an affiliate of Sunset, and, *provided further*, that Sunset shall remain responsible for all acts and omissions of such affiliate in the performance of this Agreement;

(b) to any third party in connection with any merger, consolidation or reorganization involving Sunset (regardless of whether Sunset is a surviving or disappearing entity), or a sale of all or substantially all of Sunset’s business or assets relating to this Agreement to an unaffiliated third party of good financial standing; or

(c) by any owner of Sunset, to (i) a member of such owner’s Immediate Family; (ii) any trust, the sole beneficiaries of which are members of such owner’s Immediate Family; or (iii) any entity the sole owners of which are members of such Sunset owner’s Immediate Family.

(d) Notwithstanding anything to the contrary contained in this Agreement, Sunset

shall have the absolute right, without the consent of any Party, to undergo a direct or indirect change of control by any available means, including by issuing equity interests and/or issuing debt (including any security interest or collateralization of the debt) by Sunset, in its sole discretion.

(6) Successors. This Agreement is binding on and inures to the benefit of the Parties hereto and their respective permitted successors and assigns.

(7) Waiver of Right of Approval Fee. As an acknowledgement of the permanent loss of the right of approval contained in the CPC OptiNet Agreement, upon the first occurrence of an assignment of the nature contemplated in Section 13(A)(5)(b), Sunset shall pay CPC a fee of One Million Dollars (\$1,000,000.00). No Waiver of Right Approval Fee under this section shall be due or payable if Section 13(A)(5)(b) is triggered by debt financing by Sunset.

B. Confidentiality. In addition to any covenants related to confidentiality contained or referenced in this Agreement, with respect to this Section 13 and information that may be disclosed by either party, the Parties agree as follows:

(1) Purpose of Disclosure. The Parties agree that the sole purpose for the disclosure of the Confidential Information by a Party is or shall be to enable the Party receiving the Confidential Information to evaluate the Party's responsibilities and obligations under this Agreement ("**Purpose**"). Confidential Information may not be disclosed by a Party to any person other than its members of the Boards of Directors, employees, attorneys, agents, or such other Parties who have a need-to-know status; *provided, however*, that all such Parties have agreed to treat the information as Confidential Information consistent with this requirement.

(2) Non-Confidential. The requirements of confidentiality shall not apply to the following information: (a) information known to a Party at the time of disclosure and not obtained under a confidential relationship; (b) information learned by a Party from a third party lawfully holding same and not disclosing the information in violation of an obligation of confidentiality; (c) information that subsequently becomes generally known other than as the result of wrongful disclosure; and (d) information required to be disclosed publicly by law or regulation to the extent so disclosed, but only after prior written notice to disclosing Party of such requirement prior to such disclosure.

(3) Confidential Information. Pursuant to this Section 13, all nonpublic information of any kind related to an assignment or other transfer of a party's rights under this Agreement furnished by Company or any of its officers, employees, agents or representatives to recipient, in whatever form, tangible or intangible, whether orally or in writing, shall be "**Confidential Information**" governed by this Agreement. Any documents or other tangible information containing Confidential Information shall be marked as "**Confidential Information**" by the discloser before providing same to recipient or otherwise identified as Confidential Information by the disclosure in writing at the time of transmittal to recipient. Information disclosed to other private sources (such as financing institutions) shall be deemed nonpublic information. Confidential Information includes but is not limited to nonpublic information about: (a) discloser's assignment plans and related information; (b) all discussions, negotiations, proposals and agreements between discloser and recipient, whether or not executed; (c) third-party information held by the discloser in confidence; and (f) any information embodying or developed in whole or in part on any of the foregoing.

(4) Confidential Preservation. Recipient shall take measures at least as stringent as the measures it takes to preserve its own proprietary information, and in no event less than reasonable measures, to safeguard the Confidential Information against unauthorized use or disclosure.

(5) Non-Disclosures. Recipient shall hold in confidence all Confidential Information. Recipient shall not use the Confidential Information, in whole or in part, directly or indirectly for any use or purpose except for the Purpose defined above (or any other purposes as expressly authorized in writing by an officer of Company). The Recipient shall (a) restrict disclosure of the Confidential Information to those Grantors, counsel, Consultants,

directors, officers and employees of Recipient who are directly responsible for the Recipient's fulfillment of the Purpose and who have signed a copy of this Agreement ; (b) disclose the Confidential Information only to the extent it is strictly necessary for those Grantors, counsel, Consultants, directors, officers and employees to perform such duties for the Recipient; and (c) disclose confidential information to the representatives of the Grantors only to the extent necessary to fulfill the Purpose of the disclosure.

(6) Survival. The obligations of confidentiality and non-use regarding the Confidential Information shall survive this Agreement without limitation in duration for a period of Five (5) years following the termination of this Agreement.

(7) Equitable Relief. Recipient acknowledges that the restrictions contained in this Agreement are, in view of the nature of the business of discloser, reasonable and necessary to protect the legitimate interests of the discloser, and that any violation of any provisions of this Agreement will likely result in irreparable injury to the discloser. Recipient acknowledges that the discloser shall be entitled to temporary and permanent injunctive relief and to other equitable relief including, without limitation, an equitable accounting of all earnings, profits and other benefits or uses, advances or developments arising from any such violation, which rights shall be cumulative of and in addition to any other rights or remedies to which the discloser may be entitled. The discloser will not be required to place a bond to enforce its rights hereunder.

(8) Conflict. In the event of a conflict between the terms of this Section 13 and any other confidentiality agreement between the Parties, this provision shall control unless in such other agreement the Parties specifically identify this Section 13 and alter provisions contained herein.

#### **SECTION 14. TAXES AND ASSESSMENTS.**

Sunset shall remit to the appropriate authorities, when due, any federal, state and local sales, use, excise, utility, gross revenue, privilege, income (if not exempt), or other similar taxes and regulatory fees and assessments which might be duly imposed upon the CPC OptiNet. Such federal, state and local sales, use, excise, utility, gross revenue, privilege, income (if not exempt), or other similar taxes and regulatory fees and assessments remitted by Sunset to the appropriate authorities shall not be deducted from the calculation of Gross Revenue; *provided, however*, the Cumberland Plateau Parties acknowledge that they are responsible for the taxes, if any, on the CPC OptiNet assets owned by the Cumberland Plateau Parties.

#### **SECTION 15. COMPLIANCE WITH LAWS.**

During the Term, the Parties shall comply with all federal, state, and local laws and regulations applicable to this Agreement and to their respective businesses. Further, each Party shall obtain, file and maintain any tariffs, permits, certifications, authorizations, licenses or similar documentation as may be required by the FCC, Virginia's State Corporation Commission, or any other governmental body or agency having competent jurisdiction over its business. The Parties will cooperative in arranging such compliance.

#### **SECTION 16. REPRESENTATIONS AND WARRANTIES.**

A. Sunset Representations and Warranties. Sunset represents and warrants to the other Parties that the statements below are true and correct as of the Effective Date:

(1) Organization of Sunset. Sunset is a corporation duly organized, validly existing and in good standing under the laws of the Commonwealth of Virginia. Sunset is qualified to do business and is in good standing in each jurisdiction in which it is required to be as a result of the transactions contemplated by this Agreement.

(2) Authority of Sunset. Sunset has full corporate power and authority to enter into this Agreement, to carry out its obligations hereunder and thereunder and to consummate the transactions contemplated hereby. The execution and delivery by Sunset of this Agreement, the performance by Sunset of its



obligations hereunder and thereunder and the consummation by Sunset of the transactions contemplated hereby and thereby have been duly authorized by all requisite corporate action on the part of Sunset. This Agreement has been duly executed and delivered by Sunset, and (assuming due authorization, execution and delivery by the Cumberland Plateau Parties) this Agreement constitutes a legal, valid and binding obligation of Sunset enforceable against Sunset in accordance with its terms.

(3) No Conflicts; Consents. The execution, delivery and performance by Sunset of this Agreement, and the consummation of the transactions contemplated hereby, does not and will not: (a) conflict with or result in a violation or breach of, or default under, any provision of the certificate of incorporation, bylaws or other organizational documents of Sunset; (b) conflict with or result in a violation or breach of any provision of any law or governmental order applicable to Sunset; or (c) require the consent, notice or other action by any person under any Contract to which Sunset is a party or result in a breach of any such Contract. No consent, approval, permit, governmental order, declaration or filing with, or notice to, any governmental authority is required by or with respect to Sunset about the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby.

B. CPPDC Representations and Warranties. CPPDC represents and warrants to the other Parties that the statements below are true and correct as of the Effective Date:

(1) Organization and Qualification. CPPDC is a political subdivision of the Commonwealth of Virginia duly organized pursuant to Section 15.2-4200 *et seq.* of the Code and validly existing under the laws of the Commonwealth of Virginia. CPPDC has full corporate power and authority to own, operate or lease the properties and assets now owned, operated or leased by it and to carry on its business as currently conducted.

(2) Authority of the CPPDC. CPPDC has full corporate power and authority to enter into this Agreement, to carry out its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by CPPDC of this Agreement, the performance by CPPDC of its obligations hereunder and thereunder and the consummation by CPPDC of the transactions contemplated hereby have been duly authorized by all requisite corporate action on the part of CPPDC. This Agreement has been duly executed and delivered by CPPDC, and (assuming due authorization, execution and delivery by Sunset) this Agreement constitutes a legal, valid and binding obligation of CPPDC enforceable against CPPDC in accordance with its terms.

(3) No Conflicts; Consents. The execution, delivery and performance by CPPDC of this Agreement, and the consummation of the transactions contemplated hereby and thereby, do not and will not: (a) conflict with or result in a violation or breach of, or default under, any provision of the certificate of incorporation, by-laws or other organizational documents of CPPDC or (b) conflict with or result in a violation or breach of any provision of any law applicable to CPPDC or the assets of the Cumberland Plateau Parties or require the consent, notice or other action by any person under, conflict with, result in a violation or breach of, constitute a default or an event that, with or without notice or lapse of time or both, would constitute a default under, result in the acceleration of or create in any Party the right to accelerate, terminate, modify or cancel any contract, permit, license, franchise or grant of public funds to which CPPDC is a party or by which CPPDC or the CPC OptiNet is bound or to which any of the assets of the Cumberland Plateau Parties are subject. No consent, approval, permit, governmental order, declaration or filing with, or notice to, any governmental authority is required by or with respect to CPPDC about the execution and delivery of this Agreement or the consummation of the transactions contemplated hereby.

C. CPC Representations and Warranties. CPC represents and warrants to the other Parties that the statements below are true and correct as of the Effective Date:

(1) Organization and Qualification. CPC is a nonstock corporation duly organized and validly existing under the laws of the Commonwealth of Virginia and has full corporate power and authority to own, operate

or lease the properties and assets now owned, operated or leased by it and to carry on the Business as currently conducted.

(2) Authority of the CPC. CPC has full corporate power and authority to enter this Agreement, to carry out its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by CPC of this Agreement, the performance by CPC of its obligations hereunder and thereunder and the consummation by CPC of the transactions contemplated hereby have been duly authorized by all requisite corporate action on the part of CPC. This Agreement has been duly executed and delivered by CPC, and (assuming due authorization, execution and delivery by Sunset) this Agreement constitutes a legal, valid and binding obligation of CPC enforceable against CPC in accordance with its terms.

(3) No Conflicts; Consents. The execution, delivery and performance by CPC of this Agreement, and the consummation of the transactions contemplated hereby and thereby, do not and will not: (a) conflict with or result in a violation or breach of, or default under, any provision of the certificate of incorporation, by-laws or other organizational documents of CPC; or (b) conflict with or result in a violation or breach of any provision of any law applicable to CPC or the assets of the Cumberland Plateau Parties. No consent, approval, permit, governmental order, declaration or filing with, or notice to, any governmental authority is required by or with respect to CPC in connection with the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby.

#### **SECTION 17. INTELLECTUAL PROPERTY RIGHTS.**

Sunset shall be the owner of and will remain the owner of all Intellectual Property Rights created, conceived, prepared, made, discovered or produced with respect to the CPC OptiNet.

#### **SECTION 18. INDEMNIFICATION.**

A. Each Party shall defend, indemnify and hold harmless the other Parties and their affiliates, directors, officers, shareholders, employees, representatives and agents from any and all claims, taxes, penalties, interest, expenses, damages, lawsuits, actions, demands or other liabilities (including without limitation, reasonable attorneys' fees and court costs) relating to or arising out of one or more of the following:

- (1) Any breach of any covenant or obligation of such Party contained in this Agreement;
- (2) Any violation of criminal law;
- (3) Any act or omission committed by Sunset in the discharge of its Operating Responsibilities which gives rise to a complaint, claim, demand, lawsuit or arbitration against one or both of the Cumberland Plateau Parties, and/or which results in a finding of damages against one or both of the Cumberland Plateau Parties;
- (4) Any grossly negligent act of such Party; or,
- (5) Any claims that may be asserted by the EDA, NTIA, or Tobacco Commission resulting from actions or inactions of such Party.

B. Operator Indemnity. Sunset hereby agrees to indemnify and hold harmless the Cumberland Plateau Parties, the VCC, and the Tobacco Commission (collectively, the "**Indemnified Group**"), their respective officers, directors and employees, for any and all claims or causes of action asserted against a member of the Indemnified Group or damages awarded against a member of the Indemnified Group arising out of Sunset's discharge of the Operating Responsibilities.

#### **SECTION 19. NOTICES.**

Whenever any notice or other communication or any other item is permitted or required to be given or delivered pursuant to this Agreement, such notice must be given in writing and will be deemed to have been delivered upon occurrence of any of the following:

- (1) When received, if hand delivered in person directly to the intended recipient (including by commercial delivery service);
  - (2) Three (3) days after being mailed, postage prepaid, by certified mail, return receipt requested;
  - (3) Two (2) days after being sent by a nationally recognized overnight courier such as FedEx;
- or,
- (4) When sent by facsimile or email, and a confirmation of delivery is received by the sender.

Such notice must be addressed, or faxed, as the case may be, as follows:

If to CPC:

Cumberland Plateau Company, Inc.  
Post Office Box 548  
Lebanon, Virginia 24266  
Attention: Executive Director

With a copy to:

Hunton Andrews Kurth LLP  
Riverfront Plaza, East Tower  
951 East Byrd Street  
Richmond, Virginia 23219  
Attention: Lonnie Nunley, Esq.  
Email: cnunley@hunton.com

If to CPPDC:

Cumberland Plateau Planning District Commission  
Post Office Box 548  
Lebanon, Virginia 24266  
Attention: Executive Director

With a copy to:

Hunton Andrews Kurth LLP  
Riverfront Plaza, East Tower  
951 East Byrd Street  
Richmond, Virginia 23219  
Attention: Lonnie Nunley, Esq.  
Email: cnunley@hunton.com

If to Sunset:

Sunset Fiber, LLC  
1791 O.G. Skinner Drive,  
West Point, Georgia 31833

E-mail: cwachter@itcholding.com

With a copy to:

Maynard, Cooper & Gale, P.C.  
655 Gallatin Street SW  
Huntsville, Alabama 35801  
E-mail: mjohnson@maynardcooper.com

**SECTION 20. CONFIDENTIAL INFORMATION.**

A. Virginia Freedom of Information Act. Notwithstanding the foregoing, the Parties acknowledge that the Cumberland Plateau Parties and the Tobacco Commission are subject to the Virginia Freedom of Information Act and that certain Confidential Information may be required by law to be disclosed to comply with the provisions of the Virginia Freedom of Information Act; however, until required or compelled to make such a disclosure, the Cumberland Plateau Parties and the Tobacco Commission shall treat information from Sunset marked “**CONFIDENTIAL**” as confidential under the Virginia Freedom of Information Act. The Cumberland Plateau Parties and the Tobacco Commission agree to promptly, and in no event less than Twenty-Four (24) hours after receipt, notify Sunset of any inquiry, demand or request that may be disclosed pursuant to the Virginia Freedom of Information Act requiring a disclosure of Confidential Information of Sunset. Prior to any such disclosure the Cumberland Plateau Parties and the Tobacco Commission will provide Sunset a reasonable opportunity to attempt to secure confidential treatment of any such Confidential Information. Likewise, in the event Sunset receives a demand or court action requiring the release of Confidential Information of the Cumberland Plateau Parties or the Tobacco Commission, Sunset will promptly, and in no event less than Twenty-Four (24) hours after receipt, notify the Cumberland Plateau Parties and the Tobacco Commission, as the case may be, of such request or demand. The Parties agree that Sunset may review certain information with the Cumberland Plateau Parties that Sunset retains in its possession.

B. Other Agreements. The confidentiality agreement stated in this Section 20 is in addition to any confidentiality agreement signed by the Parties, if any, and in addition the provisions of Section 13(B), and, in the event of a conflict between this Section 20 and such separate confidentiality agreement, the provisions of the separate confidentiality agreement shall control, and, in the event of a conflict between the provisions of this Section 20 and Section 13(B), the provisions of Section 13(B) shall control.

**SECTION 21. FORCED DIVESTITURE.**

A. Cumberland Plateau Parties. In the event the Cumberland Plateau Parties should be compelled to divest their ownership to avoid forfeiture of rights to provide services as contemplated by this Agreement, due to provisions of law, such as Section 56-484.7:4 of the Code, or for any other reason the Cumberland Plateau Parties become unable to provide services as contemplated by this Agreement, then, in any such event, Sunset shall have the option to acquire all of the Cumberland Plateau Parties’ ownership of the infrastructure within the CPC OptiNet, including, without limitation, all cable and electronics, subject to the following: (i) the transfer must be approved by the EDA, NTIA and Tobacco Commission, if those grant conditions are still applicable, and (ii) the transfer price of the Cumberland Plateau Parties’ interests to be divested must be reasonable compensation which would reflect its ownership rights, depreciation and the assets’ worth at the time.

B. Sunset. In the event that Sunset should be compelled to divest its ownership interest in the CPC OptiNet to avoid forfeiture of rights to provide services as contemplated by this Agreement, due to provisions of law, such as Section 56-484.7:4 of the Code, or for any other reason Sunset becomes unable to provide services as contemplated by this Agreement, then, in any such event, the Cumberland Plateau Parties shall have the option to acquire all of Sunset’s ownership of the infrastructure within the CPC OptiNet, including, without limitation, all cable and electronics, subject to the following: (i) the transfer must be approved by the EDA, NTIA, and Tobacco Commission, if those grant conditions are still applicable, and (ii) the transfer price of Sunset’s interests to be

divested must be reasonable compensation which would reflect its ownership rights, depreciation and the assets' worth at the time, and the value of the CPC OptiNet business enterprise.

**SECTION 22. DISCLAIMER AND LIMITATION OF WARRANTIES.**

A. **DISCLAIMER OF WARRANTIES.** EXCEPT AS SET FORTH HEREIN, EACH PARTY EXPRESSLY DISCLAIMS ALL WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, IN RELATION TO THE CPC OPTINET OR THE SUNSET SERVICES. SUNSET MAKES NO WARRANTY OF ANY KIND, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING WITHOUT LIMITATION WARRANTIES OF TITLE, MERCHANTABILITY, FITNESS FOR A PARTICULAR USE AND NON-INFRINGEMENT RELATED TO THE CPC OPTINET, THE CURRENT SERVICES, SUNSET SERVICES OR THIS AGREEMENT.

B. **LIMITATIONS OF LIABILITY.** EXCEPT FOR ANY UNAUTHORIZED USE OR DISCLOSURE OF SUNSET'S INTELLECTUAL PROPERTY RIGHTS, OR A PARTY'S BREACH OF CONFIDENTIALITY OBLIGATIONS HEREUNDER, IN NO EVENT WILL ANY PARTY BE LIABLE TO ANY OTHER PARTY FOR ANY INDIRECT, CONSEQUENTIAL, SPECIAL, INCIDENTAL, RELIANCE, OR PUNITIVE DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO ANY LOST PROFITS, LOST REVENUES, LOST SAVINGS, OR HARM TO BUSINESS, AND EXCEPT AS SET FORTH AT THE BEGINNING OF THIS SECTION, EACH PARTY HEREBY RELEASES THE OTHER PARTY, ITS SUBSIDIARIES, PARENT COMPANIES AND AFFILIATES, AND THEIR RESPECTIVE TRUSTEES, OFFICERS, DIRECTORS, MANAGERS, COUNCIL MEMBERS, EMPLOYEES, AND AGENTS, FROM ANY SUCH CLAIM FOR SUCH TYPES OF DAMAGES. EXCEPT FOR ANY BREACH OF SUNSET'S INTELLECTUAL PROPERTY RIGHTS, OR A PARTY'S CONFIDENTIALITY OBLIGATIONS HEREUNDER, IN NO EVENT SHALL THE AGGREGATE LIABILITY OF ANY PARTY FOR ANY BREACH OF THIS AGREEMENT EXCEED TWO MILLION DOLLARS \$2,000,000.00; *PROVIDED, HOWEVER*, THIS LIMIT OF LIABILITY SHALL NOT AFFECT THE ACTUAL FINANCIAL PAYMENT DUE TO THE CUMBERLAND PLATEAU PARTIES NOR THE DAMAGES OBTAINABLE BY SUNSET AGAINST THE CUMBERLAND PLATEAU PARTIES FOR A BREACH OF THIS AGREEMENT. IN PARTICULAR, WITH RESPECT TO CONSTRUCTION, SUNSET'S ENTIRE LIABILITY FOR ANY DAMAGE CAUSED TO THE PARTIES BY ANY CONSTRUCTION WORK PERFORMED BY OR FOR SUNSET WILL BE LIMITED TO THE COST OF REPAIRING PHYSICAL PROPERTY DAMAGE THAT OCCURS AT THE SITE OF CONSTRUCTION. THE LIMITATION OF LIABILITY SET FORTH IN THIS SECTION 22 IS A FUNDAMENTAL BASIS OF THIS AGREEMENT; AND EACH PARTY UNDERSTANDS AND AGREES THAT THE OTHER WOULD NOT HAVE ENTERED INTO THIS AGREEMENT WITHOUT THIS LIMITATION OF LIABILITY.

**SECTION 23. ASSIGNMENT OF THE CPC OPTINET AGREEMENT.**

By execution of this Agreement, the Cumberland Plateau Parties hereby confirm their consent to the assignment of the CPC OptiNet Agreement from BVU Authority to Sunset and the Parties hereto agree that once this Agreement is executed, this Agreement will govern the relation of Sunset and the Cumberland Plateau Parties going forward.

**SECTION 24. MISCELLANEOUS.**

A. **Independent Contractors.** Nothing in this Agreement, or in the course of dealing between the Parties pursuant to this Agreement, shall be deemed to create between the Parties (including their respective affiliates, directors, officers, employees and agents) a partnership, joint venture, association, employment relationship or any other relationship, other than that of independent contractors with respect to each other. No Party shall have the authority to commit or legally bind any other Party, in any manner whatsoever, including, but not limited to, the acceptance or making of any Agreement, representation or warranty.

B. **Waivers and Amendment.** No waiver of any term or condition of this Agreement will be enforceable unless it is in writing and signed by each Party. No failure or delay by a Party in exercising any right, power or remedy will operate as a waiver of such right, power or remedy. The waiver by a Party of any of the covenants, conditions or Agreements to be performed by another Party or any breach thereof shall not operate or be construed as a waiver of any subsequent breach of this covenant, condition or Agreement. No

waiver of any rights under this Agreement or any modifications or amendments of this Agreement will be effective or enforceable, unless in writing and signed by all Parties affected by such amendment.

C. Cumulative Rights and Remedies. Except as may otherwise be provided in this Agreement, the rights and remedies set forth in this Agreement are cumulative and the assertion by a Party of any right or the obtaining of any remedy under this Agreement, other than arbitration, shall not preclude this Party from asserting or obtaining any other right or remedy, at law or in equity, under this Agreement.

D. Dispute Resolution. Except as specifically set forth in this Agreement, the Parties will attempt to resolve all disputes, disagreements, or controversies arising in connection with the Agreement through good faith negotiations to reach a mutually acceptable resolution. If, after negotiating in good faith for a Thirty (30) day period, the Parties are unable to resolve the dispute, then the Parties may seek restitution by exercising any rights or remedies available to such Party at law or equity. The Parties specifically retain the right to seek a trial by jury in the event of a civil action arising out of this Agreement and the obligations herein.

E. Governing Law. This Agreement shall be governed by the laws of the Commonwealth of Virginia without regard to any choice of law principles that could result in the application of the laws of any other jurisdiction.

F. Expenses. All costs and expenses incurred in connection with this Agreement and each other agreement, document, and instrument contemplated by this Agreement and the transactions contemplated hereby shall be paid by the Party incurring such costs and expenses.

G. Business Days. If any date on which a Party is required to make a payment or a delivery pursuant to the terms hereof is not a Business Day, then such Party shall make such payment or delivery on the next succeeding Business Day.

H. Further Assurance. Each of the Parties hereto shall, and shall cause their respective affiliates to, execute and deliver such additional documents, instruments, conveyances, and assurances and take such further actions as may be reasonably required to carry out the provisions hereof and give effect to the transactions contemplated hereby.

I. Interpretation. For purposes of this Agreement, (a) the words "include," "includes," and "including" are deemed to be followed by the words "without limitation;" (b) the word "or" is not exclusive; and (c) the words "herein," "hereof," "hereby," "hereto," and "hereunder" refer to this Agreement as a whole. Unless the context otherwise requires, references herein: (x) to sections, schedules, and exhibits mean the sections of, and schedules and exhibits attached to, this Agreement; (y) to an agreement, instrument, or other document means such agreement, instrument, or other document as amended, supplemented, and modified from time-to-time to the extent permitted by the provisions thereof; and (z) to a statute means such statute as amended from time-to-time and includes any successor legislation thereto and any regulations promulgated thereunder. This Agreement shall be construed without regard to any presumption or rule requiring construction or interpretation against the Party drafting an instrument or causing any instrument to be drafted. The schedules and exhibits referred to herein shall be construed with, and as an integral part of, this Agreement to the same extent as if they were set forth verbatim herein.

J. Force Majeure. No Party will be deemed in default under this Agreement if it is prevented from performing any of the obligations under this Agreement by reason of severe weather and storms, earthquakes or other natural occurrences, strikes or other labor unrest or third parties, power failures, terrorist activity, nuclear or other civil or military emergencies, acts of legislative, judicial, executive or administrative authorities, or other similar circumstances that are not within its reasonable control and ability to prevent (a "**Force Majeure**" event). In the event of a *Force Majeure* event, the Party who first becomes aware of the event must promptly give written notice to the other Party of such event.

K. Headings. The Section titles and headings of this Agreement are intended only to be of convenience in locating provisions, and shall have no effect upon the construction or interpretation of any part of this Agreement.

L. Construction. This Agreement is the joint work product of all Parties. Accordingly, in the event of ambiguity, no presumption will be imposed against any Party by reason of document preparation.

M. Third Parties. Except for the right of the NTIA to enforce any provisions of the terms and conditions of the BTOP Grant and the rights of the Tobacco Commission to enforce any provisions of the terms and conditions of VTC Grants, the provisions of this Agreement and the rights and obligations created under this Agreement are intended for the sole benefit of the Parties executing this Agreement, and such provisions do not create any right, claim or benefit on the part of any person not a party to this Agreement, including customers or beneficiaries of the Parties.

N. Survival of Provisions. All applicable provisions of this Agreement, including, without limitation, ownership provisions contained in preceding Section 1, Section 2(B), Section 11(D), Section 11(E), Section 13(B), Sections 16 through 20, Section 22, and Section 24, survive the termination or expiration of this Agreement.

O. Execution of Counterparts. This Agreement will be executed in three separate counterparts, each of which, when so executed and delivered, shall be an original, but all such counterparts shall together constitute but one and the same instrument.

P. Joint and Several Obligations. All obligations of the CPC and the CPPDC shall be joint and several obligations with respect to acts or commissions of any other Party to this Agreement. Similarly, all obligations of Sunset Digital and Sunset Fiber shall be joint and several obligations with respect to acts or commissions of any other Party to this Agreement.

Q. Integration. This Agreement represents the entire Agreement between the Parties with respect to any obligations to be performed pursuant to this Agreement and supersedes and merges all prior Agreements, promises, undertakings, statements, representations, warranties, indemnities, and inducements to the making of this Agreement relied upon by the Parties, whether written or oral. This Agreement replaces in all respects the CPC OptiNet Agreement.

R. Severability. If any term or provision of this Agreement is invalid, illegal, or unenforceable in any jurisdiction, such invalidity, illegality, or unenforceability shall not affect any other term or provision of this Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction. Upon such determination that any term or other provision is invalid, illegal, or unenforceable, the Parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

S. Remedies; Specific Performance. Except as provided otherwise in this Agreement, all rights and remedies granted to the Parties under this Agreement are cumulative and in addition to, and not in lieu of, any other rights or remedies otherwise available to such Party at law or in equity. The Parties agree that irreparable damage would occur in the event any provision of this Agreement were not performed in accordance with the terms hereof and that the Parties shall be entitled to specific performance of the terms hereof in addition to any other remedy at law or in equity, including monetary damages, that may be available to it.

[Signature Page Follows]

[SIGNATURE PAGE TO CPC OPTINET OPERATOR AGREEMENT]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the date first written above.

CUMBERLAND PLATEAU PLANNING DISTRICT COMMISSION

By: G. Roger Rife  
G. Roger Rife  
Chairman of the Board

CUMBERLAND PLATEAU COMPANY, INC.

By: G. Roger Rife  
G. Roger Rife  
Chairman of the Board

SUNSET DIGITAL HOLDING, LLC

By: M. Todd Holt  
Todd Holt  
Chief Executive Officer

SUNSET DIGITAL COMMUNICATIONS, LLC

By: M. Todd Holt  
Todd Holt,  
Chief Executive Officer

SUNSET FIBER, LLC

By: M. Todd Holt  
Todd Holt,  
Chief Executive Officer



**Schedule 1**

**VTC Grants**

(A) *Grant Number 501*, granted pursuant to that certain Letter of Agreement – Grant Funds dated July 10, 2003 in the amount of One Million Nine Hundred Thirty Thousand Dollars (\$1,930,000.00) for the project entitled “*BVU High Speed Bandwidth in Rural Areas*”;

(B) [?] *Grant Number 962*, granted pursuant to that certain Letter of Agreement – Grant Funds dated August 18, 2005 for One Million Two Hundred Thousand Dollars (\$1,200,000.00) for the project entitled “*Fiber - Optic Backbone Infrastructure – Rural Retreat to Bluefield*”;

(C) *Grant Number 1303*, granted pursuant to that Letter of Agreement – Grant Funds by and among the BVU Authority and the [CPPDC][CPC] dated April 26, 2007 for Four Hundred Thousand Dollars (\$400,000.00), for the installation of fiber optic infrastructure in the Town of Tazewell, Virginia;

(D) *Grant Number 1471*, granted pursuant to that Letter of Agreement – Grant Funds dated December 3, 2007 for Five Million Two Hundred Thousand Dollars (\$5,200,000.00) for the installation of Backbone fiber optic infrastructure for southwest fiber routes;

(E) *Grant Number 1768*, [OPEN] granted pursuant to that certain Letter of Agreement- Grant Funds by and among the BVU Authority and [CPC][CPPDC] dated January 13, 2009 in the amount of One Million Two Hundred Fifty Thousand Dollars (\$1,250,000.00) to complete the project entitled “*Fiber Optic Infrastructure in the CPPDC*”;

(F) [?] *Grant Number 1811*, granted pursuant to that certain Letter of Agreement – Grant Funds dated November 4, 2009 in the amount of Three Million Five Hundred Thousand Dollars (\$3,500,000.00) for Southwest Virginia diverse route to Mid-Atlantic Broadband;

(G) [?] *Grant Number 1185*, granted pursuant to that certain Letter of Agreement – Grant Funds dated \_\_\_\_\_ in the amount of Two Hundred Thirteen Thousand Dollars (\$213,000.00) for \_\_\_\_\_;

(H) [?] *Grant Number 2070*, granted pursuant to that certain Letter of Agreement – Grant Funds by and among the VTRRC, the BVU Authority and the CPPDC dated \_\_\_\_\_ in the amount of Five Million Six Hundred Fifty-Nine Thousand Five Hundred Two Dollars (\$5,659,502.00) for matching funds for the NTIA Grant for the Middle Mile Construction Projects; and

(I) [?] *Grant Number 2391*, granted pursuant to that certain Letter of Agreement – Grant Funds dated September 29, 2011 in the amount One Million Eight Hundred Thousand Dollars (\$1,800,000.00) for the completion for the project entitled “*BVU Southwest Virginia Last Mile Fiber Expansion Project*”.

**Exhibit A**

**EDA Letter**

**(Attached)**

**Exhibit B**

**ITC COMMITMENT LETTER**

Exhibit C

NTIA LETTER

**EXHIBIT D**

**Consent of Virginia Coalfield Coalition**

**TO BE FINALIZED AND INSERTED UPON THE CONSENT OF THE VCC.**

## Exhibit E

### NTIA Grant Terms and Conditions

The NTIA Grant remains subject to “*Special Award Conditions to Award Number NT10BIX5570066 Amendment Number 0*” (“Special Conditions Amendment 0”) and “*Special Award Conditions to Award Number NT10BIX5570066 Amendment Number 2*” (“Special Conditions Amendment 2”). The NTIA Grant award has expired, but the following remaining grant conditions of are ongoing:

- (1) Special Conditions Amendment Paragraph 7 Infrastructure-Wide SACs
  - (a) **Nondiscrimination and Interconnection:** The recipient shall comply with the nondiscrimination and network interconnection obligations set forth in section V.D.3.b. of the NOFA and in Section 6001(j) of the Recovery Act. Recipients may be asked to provide supporting documentation upon request from the Grants Officer. Failure to comply with this provision of the award may be considered grounds for any and all of the following actions: establishment of an account receivable for affected BTOP award, withholding payments under any and all BTOP awards to the recipient, changing the method of payment from advance to reimbursement only, or the imposition of other special award conditions, suspension of any BTOP active awards, and termination of any BTOP active awards.
  - (b) **Sale or Lease of Real Property Purchased Award Funds:** Recipients may not sell or lease any portion of the award-funded broadband facilities or equipment during their life, except as otherwise approved by NTIA. NTIA will consider a petition for waiver of the restriction if: (1) the transaction is for adequate consideration; (2) the purchaser or lessee agrees to fulfill the terms and conditions relating to the project after such sale or lease; and, (3) the transaction would be in the best interests of those served by the project. The petition for waiver may be submitted at any time during the life of the award-funded facilities and equipment, and it must include supporting documentation and justification regarding why the petition should be granted. This requirement is not meant to limit CCI awardees from leasing facilities to another service provider for the provision of broadband services, nor is this section meant to restrict a transfer of control of the awardee (NOFA, Section IX.C.2.)
  - (c) **Security Interest in Real Property including Broadband Facilities and Equipment:** The recipient shall execute a security interest or other statement of NTISs interest in real property including broadband facilities and equipment acquired or improved with Federal funds acceptable to NTIA, which must be perfected and placed on record in accordance with local law. This security interest will provide that, for the estimated useful life of the real property, facilities, or equipment, the recipient will not sell, transfer, convey, or mortgage any interest in the real property including broadband equipment acquired or improved in whole or in part with Federal funds made available under the award, nor shall the recipient use the real property including broadband facilities and equipment for purposes other than the purposes for which the award was made, without prior written approval of the Grants Officer. Such approval may be withheld until such

time as the recipients first pays to NTIA the Federal Share of the real property including broadband facilities and equipment as provided in 15 CFR 14.32 (15 CFR 24.13) for state, local or other governmental entities). This security interest shall be executed in advance of any sale or lease and not later than closeout of the grant.

(2) Department of Commerce NTIA Broadband Technology Opportunities Program Notice of Funds Availability<sup>1</sup> announced the NTIA focus on the “comprehensive communities” approach to “award BTOP grants for infrastructure projects that emphasize Middle Mile broadband capabilities and new or substantially upgraded connections to community anchor institutions to maximize the benefits of BTOP funds.” By focusing on this approach, the NTIA Section 6001 of the American Recovery and Reinvestment Act of 2009 provides the following statutory purposes for the national broadband service development effort:

- (a) To provide access to broadband service to consumers residing in unserved areas of the country;
- (b) To provide improved access to broadband service to consumers residing in underserved areas of the country;
- (c) To provide broadband education, awareness, training, access, equipment, and support to: (i) schools, libraries, medical and healthcare providers, community colleges and other institutions of higher learning, and other community support organizations; (ii) organizations and agencies that provide outreach, access, equipment and support services to facilitate greater use of broadband services to facilitate greater use of broadband services by vulnerable populations (e.g., low-income, unemployed, aged); or (iii) job-creating strategic facilities located in state or Federally-designated economic development zones;
- (d) To improve access to, and use of broadband service by public safety agencies; and,
- (e) To stimulate the demand for broadband, economic growth, and job creation.<sup>2</sup>

(3) Sunset acknowledges these policy goals and commits to maintain the Optinet system in a manner that adheres to these policy goals. As further explained by the NTIA in the Second Notice of Funds Availability, “Once Middle Mile facilities are built, the costs of providing services to a broad array of end users are reduced. Much like the interstate highways that link together the nation’s roads and streets, Middle Mile broadband facilities play a critical role in the healthy functioning of the nation’s broadband infrastructure and are a necessary foundation for the ultimate provision of affordable end-user broadband services in unserved and underserved communities.”<sup>3</sup>

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<sup>1</sup> Broadband Technologies Opportunity Program, 75 Fed. Reg. 3,792 (2010) (SECOND NOFA).

<sup>2</sup> See American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115, 128 (2009).

<sup>3</sup> SECOND NOFA, at 3795.

## Excerpt from Second NOFA

### 3. Additional Requirements Applicable to Comprehensive Community Infrastructure Applicants

#### a. Broadband Service

All CCI applicants must propose to offer service meeting the definition of broadband as defined in Section III.

#### b. Nondiscrimination and Interconnection

All CCI applicants must commit to the following Nondiscrimination and Interconnection Obligations:<sup>4</sup>

- (i) Adhere to the principles contained in the FCC's Internet Policy Statement (FCC 05-151, adopted August 5, 2005) or any subsequent ruling or statement;
- (ii) not favor any lawful Internet applications and content over others;
- (iii) display any network management policies in a prominent location on the service provider's Web page and provide notice to customers of changes to these policies (awardees must describe any business practices or technical mechanisms they employ, other than standard best efforts Internet delivery, to allocate capacity; differentiate among applications, providers, or sources; limit usage; and manage illegal or harmful content);
- (iv) connect to the public Internet directly or indirectly, such that the project is not an entirely private closed network; and
- (v) offer interconnection, where technically feasible without exceeding current or reasonably anticipated capacity limitations, at reasonable rates and terms to be negotiated with requesting parties. This includes both the ability to connect to the public Internet and physical interconnection for the exchange of traffic. Applicants must disclose their proposed interconnection, nondiscrimination, and network management practices with the application.

All these requirements shall be subject to the needs of law enforcement and reasonable network management. Thus, awardees may employ generally accepted technical measures to provide acceptable service levels to all customers, such as caching (including content delivery networks) and application-neutral bandwidth allocation, as well as measures to address spam, denial of service attacks, illegal content, and other harmful activities. In evaluating the reasonableness of network management techniques, NTIA will be guided by any applicable rules or findings established by the FCC, whether by rulemaking or adjudication.

In addition to providing the required connection to the Internet, awardees may offer managed services, such as telemedicine, public safety communications, distance learning, and virtual private networks, that use private network connections for enhanced quality of service rather than traversing the public Internet.

An awardee may satisfy the requirement for interconnection by negotiating in good faith with all parties making bona fide requests. The awardee and requesting party may negotiate terms such as business arrangements, capacity limits, financial terms, and technical conditions for interconnection. If the awardee and requesting party cannot reach agreement, they may voluntarily seek an interpretation by the FCC of any FCC rules implicated in the

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<sup>4</sup> Nothing herein shall be construed to affect the jurisdiction of the FCC with respect to such matters. (original footnote # 42).



dispute. If an agreement cannot be reached within 90 days, the party requesting interconnection may notify NTIA in writing of the failure to reach satisfactory terms with the awardee. The 90-day limit is to encourage the parties to resolve differences through negotiation.

With respect to non-discrimination, those who believe an awardee has failed to meet the non-discrimination obligations should first seek action at the FCC of any FCC rules implicated in the dispute. If the FCC chooses to take no action, those seeking recourse may notify NTIA in writing about the alleged failure to adhere to commitments of the award.

These conditions apply to the awardee and will remain in effect for the life of the awardee's Federally funded facilities and equipment used in the project. These conditions will not apply to any existing network arrangements or to non-awardees using the network. Note, however, that the awardee may negotiate contractual covenants with other broadband service providers engaged to deploy or operate the network facilities and pass these conditions through to such providers. Awardees that fail to accept or comply with the terms listed above may be considered in default of their grant agreements. NTIA may exercise all available remedies in the event of a default, including suspension of award payments or termination of the award.<sup>5</sup>

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<sup>5</sup> Note that the changes made to this section from the First NOFA are meant to clarify, and not to change, applicants' obligations. (original footnote #43).

**Exhibit F**

**Bill of Sale (Balance Sheet Assets)**

**(Attached)**

## **BILL OF SALE**

This Bill of Sale (the "**Agreement**") made and entered into as of August \_\_, 2018 (the "**Effective Time**"), by and between Sunset Fiber, LLC, a Delaware limited liability company ("**Sunset Fiber**"), and the Cumberland Plateau Planning District Commission, a political subdivision of the Commonwealth of Virginia ("**CPPDC**"), together with its affiliated entity Cumberland Plateau Company, Inc., a Virginia nonstock corporation ("**CPC**") (CPPDC and CPC, collectively, the "**Cumberland Plateau Parties**"), provides as follows:

### **WITNESSETH**

**WHEREAS**, Sunset Fiber and the Cumberland Plateau Parties have entered into that certain CPC OptiNet Operator Agreement, dated as of August \_\_, 2018 (the "**Operator Agreement**"), pursuant to which, among other things, Sunset Fiber has agreed, pursuant to Section 5(a) of the Operator Agreement, to sell to the Cumberland Plateau Parties, and the Cumberland Plateau Parties have agreed to purchase from Sunset Fiber, certain balance sheet assets as follows:

Assets recorded on the balance sheet of the BVU Authority valued at the time of original purchase by BVU Authority and recorded on the balance sheet of the entities at an original cost of Three Million Seven Hundred Seventy-Two Thousand, Three Hundred Sixty-One Dollars (\$3,772,361.00) instead of the value of Two Million Eight Hundred Fifty-Eight Thousand Seventy-Four Dollars (\$2,858,074.00), which would be the value of one-half of the EDA grant-funded assets as of the date of the original deployment. The fiber deployed with EDA grant funds totals Four Million Four Hundred Thirty-Nine Thousand Five Hundred Thirty-Nine Dollars (\$4,439,539.00) and one-half of that original cost of deployment, which represents the cost of the CPC Fibers, is Two Million Two Hundred Nineteen Thousand Seven Hundred Seventy Dollars (\$2,219,770.00). Sunset will assign Fifty Percent (50%) of the EDA-funded fiber deployed in Washington County totaling Two Hundred Ninety-Five Thousand One Hundred Eighty-Two Dollars (\$295,182.00), and one-half of that cost equals One Hundred Forty-Two Thousand Five Hundred Ninety-One Dollars (\$142,591.00). Total original cost of equipment and deployment assigned to the Cumberland Plateau Parties pursuant to this Section 2(B)(5) totals Three Million Seven Hundred Seventy-Two Thousand Three Hundred Sixty-One Dollars (\$3,772,361.00) or Sixty-Six Percent (66%) of the EDA investment in the network. To accomplish the asset allocation set forth in Section 2(B)(5)(a) above, Sunset hereby acknowledges ownership by the Cumberland Plateau Parties of one-half of the Eleven and Twenty-Three Hundredths (11.23) miles of fiber that extend into Washington County as part of the EDA-funded assets owned by the Cumberland Plateau Parties, totaling Two Hundred Ninety-Five Thousand One Hundred Eighty-Two Dollars (\$295,182.00), of which one-half of that cost equals One Hundred Forty-Two Thousand Five Hundred Ninety-One Dollars (\$142,591.00). All original costs referenced in this Section 2(B)(5)(a) represent the original cost recorded on the BVU Authority Balance Sheets to the best of the Parties' knowledge as of the date of the original deployment (all such assets, collectively, the "**Assets**"); and,

**WHEREAS**, the Parties acknowledge that such assets shall not include assets owned by the Virginia Coalfield Coalition, Inc., a Virginia non-stock corporation; and,

**WHEREAS**, as of the Effective Time, the Cumberland Plateau Parties desire to accept such Assets from Sunset Fiber on the terms and conditions set forth herein and in the Operator Agreement;

## AGREEMENT

**NOW THEREFORE**, for and in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Certain Defined Terms. Each capitalized term in this Agreement that is used but not defined in this Agreement has the meaning given to it in the Operator Agreement.

2. Transfer. As of the Effective Time, Sunset Fiber, for and upon the consideration provided in the Operator Agreement, does hereby, sell, assign, transfer, and convey, on an as-is, where-is, with all faults basis, without covenant, representation or warranty (express or implied) of any kind by Sunset Fiber, to the Cumberland Plateau Parties, and the Cumberland Plateau Parties hereby accepts, all of the Sunset Fiber's right, title, and interest in and to the Assets.

3. Terms of the Operator Agreement. Subject to Section 2 of this Agreement, the terms of the Operator Agreement are incorporated herein by this reference. Except as set forth in Section 2 of this Agreement, in the event of any conflict or inconsistency between the terms of the Operator Agreement and the terms hereof, the terms of the Operator Agreement shall govern.

4. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, email or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

5. Further Assistance. Each of the parties hereto shall execute and deliver, at the reasonable request of the other party hereto, such additional documents, instruments, conveyances and assurances and take such further actions as such other party may reasonably request to carry out the provisions hereof and give effect to the transactions contemplated by this Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Bill of Sale to be executed by their authorized officers all as of the day and year first above written.

**SUNSET:**

SUNSET FIBER, LLC

By:   
Todd Holt, Chief Executive Officer

CUMBERLAND PLATEAU PLANNING DISTRICT  
COMMISSION

By:   
G. Roger Rife, Chairman

CUMBERLAND PLATEAU COMPANY, INC.

By:   
G. Roger Rife, Chairman

**Exhibit G**

**Bill of Sale (Infinera)**

**(Attached)**

## **BILL OF SALE**

This Bill of Sale (the "**Agreement**") made and entered into as of August \_\_, 2018 (the "**Effective Time**"), by and between Sunset Fiber, LLC, a Delaware limited liability company ("**Sunset Fiber**"), and the Cumberland Plateau Planning District Commission, a political subdivision of the Commonwealth of Virginia ("**CPPDC**"), together with its affiliated entity Cumberland Plateau Company, Inc., a Virginia nonstock corporation ("**CPC**") (CPPDC and CPC, collectively, the "**Cumberland Plateau Parties**"), provides as follows:

## **WITNESSETH**

**WHEREAS**, Sunset Fiber and the Cumberland Plateau Parties have entered into that certain CPC OptiNet Operator Agreement, dated as of August \_\_, 2018 (the "**Operator Agreement**"), pursuant to which, among other things, Sunset Fiber has agreed to sell to the Cumberland Plateau Parties, and the Cumberland Plateau Parties have agreed to purchase from Sunset Fiber, certain Infinera backbone equipment located in the Cumberland Plateau Region, as further set forth in the Operator Agreement (the "**Assets**"); and,

**WHEREAS**, as of the Effective Time, the Cumberland Plateau Parties desire to accept such Assets from Sunset Fiber on the terms and conditions set forth herein and in the Operator Agreement.

## **AGREEMENT**

**NOW THEREFORE**, for and in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

6. Certain Defined Terms. Each capitalized term in this Agreement that is used but not defined in this Agreement has the meaning given to it in the Operator Agreement.

7. Transfer. As of the Effective Time, Sunset Fiber, for and upon the consideration provided in the Operator Agreement, does hereby, sell, assign, transfer, and convey to the Cumberland Plateau Parties, and the Cumberland Plateau Parties hereby accept, all of the Seller's right, title, and interest in and to the Assets.

8. Terms of the Operator Agreement. The terms of the Operator Agreement, including, but not limited to, the representations, warranties, covenants, agreements and indemnities relating to the Assets are incorporated herein by this reference. The parties hereto acknowledge and agree that the representations, warranties, covenants, agreements and indemnities contained in the Operator Agreement shall not be superseded hereby but shall remain in full force and effect to the full extent provided therein. In the event of any conflict or inconsistency between the terms of the Operator Agreement and the terms hereof, the terms of the Operator Agreement shall govern.

9. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, email or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

10. Further Assistance. Each of the parties hereto shall execute and deliver, at the reasonable request of the other party hereto, such additional documents, instruments, conveyances and assurances and take such further actions as such other party may reasonably request to carry out the provisions hereof and give effect to the transactions contemplated by this Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Bill of Sale to be executed by their authorized officers all as of the day and year first above written.

**SUNSET:**

**SUNSET FIBER, LLC**

By: M. Todd Holt  
Todd Holt, Chief Executive Officer

**CUMBERLAND PLATEAU PLANNING DISTRICT  
COMMISSION**

By: G. Roger Rife  
G. Roger Rife, Chairman

**CUMBERLAND PLATEAU COMPANY, INC.**

By: G. Roger Rife  
G. Roger Rife, Chairman



**Exhibit H**

**Infinera Backbone Equipment Diagram**

**Proposed CPC Network**

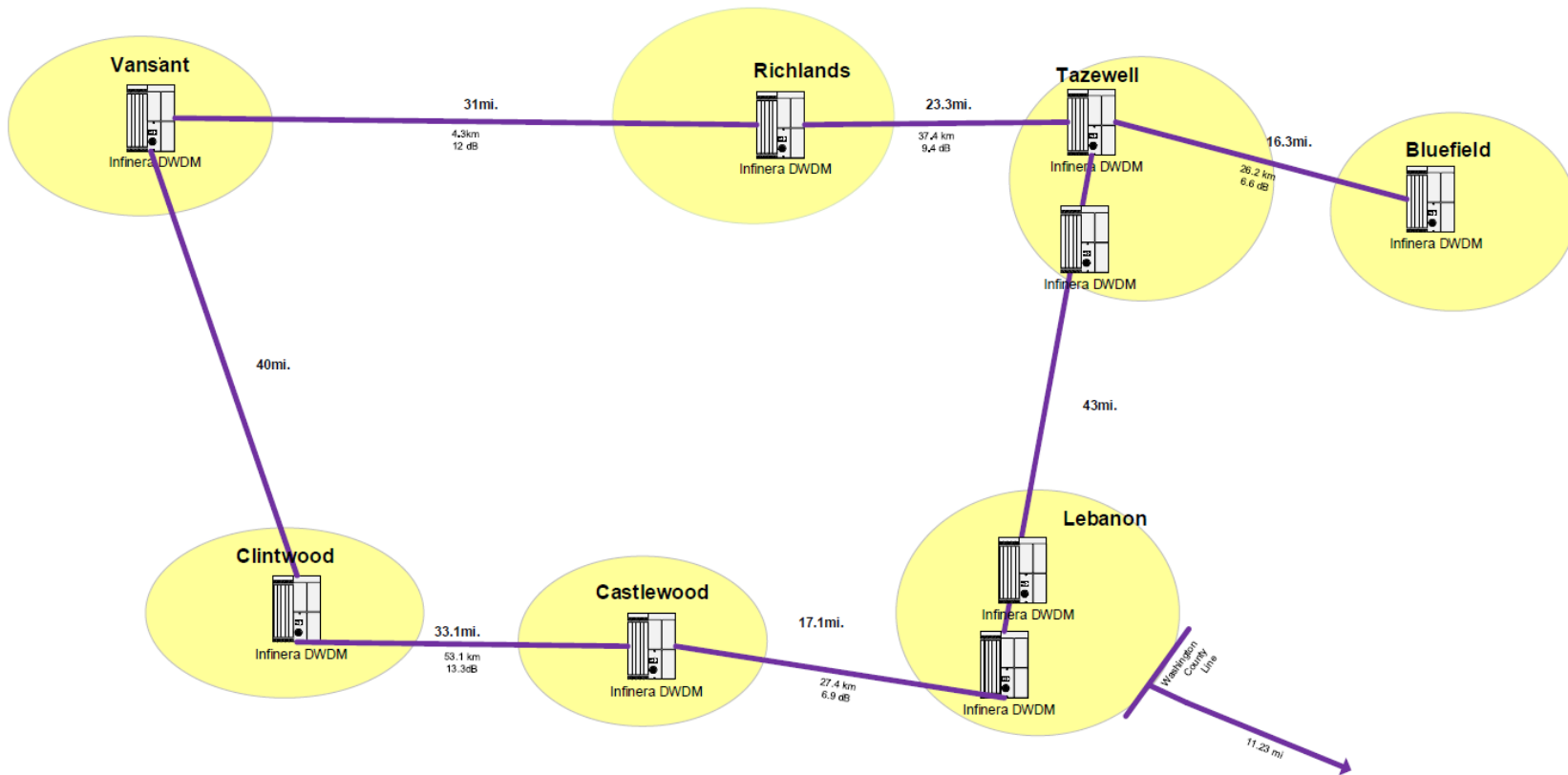


Exhibit I

Certificate of Chief Financial Officer

**Sunset Fiber, LLC  
Officer's Certificate**

The undersigned, Nicholas DeWeese, Chief Financial Officer of Sunset Fiber, LLC, a Delaware limited liability company ("**Sunset**"), hereby certifies on behalf of the Company, pursuant to Section 8 of that certain Cumberland Plateau Operator Agreement dated as of \_\_\_\_\_, 2018 (the "**Agreement**"), by and among Cumberland Plateau Planning District Commission, a planning district commission and political subdivision of the Commonwealth of Virginia organized pursuant to Section 15.2-4200 *et seq.* of the Code of Virginia ("**CPPDC**"), the Cumberland Plateau Company, Inc., a nonstock corporation organized under the laws of the Commonwealth of Virginia by CPPDC ("**CPC**") (CPPDC and CPC, collectively the "**Cumberland Plateau Parties**"), Sunset, and the Virginia Tobacco Region Revitalization Commission, a political subdivision of the Commonwealth of Virginia chartered by Section 3.2-3100 *et seq.* of the Code of Virginia (the "**Tobacco Commission**"), that:

The Gross Revenue for the operation of the CPC OptiNet is \$\_\_\_\_\_ for the previous quarter .

1. The Gross Revenue for the operation of the CPC OptiNet is \$\_\_\_\_\_ for the current calendar year.
2. The total amount of expenditure for the New Connection Commitment in the CPC OptiNet for the previous quarter is \$\_\_\_\_\_.
3. The total amount remaining for the New Connection Commitment in the CPC OptiNet following the expenditures for the previous quarter is \$\_\_\_\_\_.

IN WITNESS WHEREOF, the undersigned has executed this Officer's Certificate on behalf of the Company as of this \_\_\_ day of \_\_\_\_\_, 20\_\_.

**SUNSET FIBER, LLC**

By \_\_\_\_\_  
Nicholas DeWeese, Chief Financial Officer

August 29, 2019

To whom it may concern:

The Buchanan County Industrial Development Authority lends its full support to Point Broadband's efforts to expand high-speed Internet access in Buchanan County.

The grant funding currently being sought by Point Broadband through the Virginia Telecommunications Initiative will be transformative for all those who would benefit in the Council/Davenport community, as well as other areas the expansion effort would reach in that section of Buchanan County. Our residents in this area are unserved by high-speed fiber, and the IDA resoundingly supports Point's efforts.

Business recruitment is no longer a regional game; we compete with the rest of the globe for jobs and a skilled workforce. The lack of high-speed Internet availability at Council/Davenport withholds a key tool for us as economic and industrial developers to use to lure new business and industry to Buchanan County.

The Buchanan County IDA supports this grant application fully, and we hope you will give its approval the utmost consideration.

Thank you.

A handwritten signature in black ink that reads "Scotty Wampler". The signature is written in a cursive style with a long horizontal flourish at the end.

Scotty Wampler  
Director of Marketing and Tourism  
Buchanan County Industrial Development Authority



MELANIE L. HIBBITTS  
Division Superintendent  
E-Mail:  
melanie.hibbitts@buchanancountyschools.com  
Carolyn Dillow, Clerk

SCHOOL BOARD MEMBERS:  
David Thornbury, *Chairman*  
Angelia McClanahan, *Vice Chairman*  
Mike Thompson  
Heath Harrison  
Scotty Owens  
Tim Prater  
Easter Rife

*"Our Children, Our Future, Our Responsibility"*

August 29, 2019

Joseph Puckett  
Point Broadband  
[joseph.puckett@point-broadband.com](mailto:joseph.puckett@point-broadband.com)

To Whom It May Concern:

Buchanan County Public Schools is in full support of any and all efforts to expand high-speed broadband Internet throughout the county, especially in areas that are currently unserved.

It is our understanding Point Broadband has applied for grant funding through the Virginia Telecommunications Initiative (VATI) to extend fiber to potentially hundreds of unserved residential customers along the State Route 80 corridor through Council, Davenport and the surrounding communities.

High-speed Internet service is currently available in only a handful of population centers in Buchanan County, creating significant challenges for our residents and local entrepreneurs to conduct business, and severely limiting educational opportunities for our children.

Please accept this letter as evidence of our full support for Point Broadband's pursuit of this funding. The company is a welcome partner in the expansion of high-speed fiber throughout our communities.

Sincerely,

A handwritten signature in black ink that reads "Melanie Hibbitts".

Melanie Hibbitts  
Division Superintendent



*A Region Connected*

## **Cumberland Plateau Planning District**

August 30, 2019

To Whom It May Concern:

The Executive Board of the Cumberland Plateau Planning District Commission and Cumberland Plateau Company met on Thursday, August 29, 2019, and reviewed and supported VATI applications to be submitted on September 3, 2019, for the following two (2) projects:

- (1) Council to Davenport in Buchanan County
- (2) Bearpen in Dickenson County

The projects are made possible through a partnership with Point Broadband, a private company, and support the Cumberland Plateau's mission to expand broadband services to our unserved and underserved communities. We appreciate the State's financial commitment to this same mission statewide, and we look forward to submitting additional applications in the next funding cycle.

Sincerely,

James A. Baldwin  
Executive Director

cc: Joseph Puckett, Point Broadband

**BUCHANAN COUNTY  
CHAMBER of COMMERCE**

PO BOX 2818  
GRUNDY VA 24614  
276-935-4147



August 30, 2019

To whom it may concern:

The Buchanan County Chamber of Commerce lends its support to Point Broadband's efforts to expand high speed Internet access in Buchanan County.

The Virginia Telecommunications Initiative grant would have tremendous impact on the residents of the Council and Davenport area. The mission of the Chamber is to promote and meet the needs of business and industry and to create the best community in which to live, work and do business. Access to fiber fed broadband offers the best community option.

The Chamber fully supports the application of Point Broadband and the expansion of broadband in Buchanan County.

Respectfully,

Mary Belcher  
Executive Director

**Sunset Digital Holding, LLC**  
**Balance Sheet at December 31, 2018**

**Assets**

**Current Assets**

Cash and cash equivalents	\$ 2,864,645
Accounts receivable	
Customers, net of allowance of \$162,978	1,868,273
Other	101,101
Prepayments and other	680,711
Total current assets	<u>5,514,730</u>

**Noncurrent Assets**

Goodwill, net	10,020,033
Other intangible assets, net	6,345,983
Other assets	53,872
Total noncurrent assets	<u>16,419,888</u>

**Property, Plant, and Equipment**

Telecommunications plant in service	51,642,259
Construction and premise inventory	1,317,788
	<u>52,960,047</u>
Less accumulated depreciation	2,940,708
Net property, plant, and equipment	<u>50,019,339</u>
Total assets	<u><u>\$ 71,953,957</u></u>

The accompanying notes are an integral part of these financial statements.

## Liabilities and Shareholders' Equity

### Current Liabilities

Current maturities on long-term debt	\$	218,652
Current portion of deferred grant proceeds for employment costs		47,222
Accounts payable		
Trade		1,853,138
Unearned revenue		921,716
Customer deposits and other customer prepayments		397,490
Accrued liabilities		
Taxes		801,926
Shareholders		538,569
Interest		370,348
Other		1,078,359
Total current liabilities		<u>6,227,420</u>

### Long-Term Liabilities

Notes payable		47,362,930
Less debt issuance costs		682,500
Less current maturities on long-term debt		218,652
Unearned revenue		563,885
Deferred grant proceeds for employment costs		160,555
Less current portion of deferred grant proceeds for employment costs		47,222
Total long-term liabilities		<u>47,138,996</u>
Total liabilities		<u>53,366,416</u>

### Shareholders' Equity

Capital contributions		23,200,000
Accumulated deficit		<u>(4,612,459)</u>
Total shareholders' equity		<u>18,587,541</u>
Total liabilities and shareholders' equity	\$	<u><u>71,953,957</u></u>



VATI FUNDING SOURCES TABLE

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

Source	Amount	%	Status
<b>REQUESTED VATI</b>	\$ 223,600	30%	Pending
Private – Point Broadband	\$ 521,543	69%	SECURED
Cumberland Plateau Company	\$10,000	1%	SECURED
	\$		
	\$		
	\$		
	\$		
<b>TOTAL</b>	<b>\$ 755,143</b>	<b>100</b>	



## Estimate for Council to Davenport Grant

Homes	489
Footage	73448
Total miles	13.91
Total cost of construction	\$ 537,377.51
Cost of Installation	\$ 207,825.00
	\$ 755,202.51

<u>Category</u>	<u>Item</u>	<u>QTY</u>	<u>Price</u>	<u>Unit</u>	<u>Cost</u>
Engineering and Project Management	Field Engineering and Design	13.91	600.00	MI	8346.00
Engineering and Project Management	Pole Permits	11	500.00	Ea	5500.00
Engineering and Project Management	VDOT Permits	15	500.00	Ea	7500.00
Engineering and Project Management	Dedicated PM	160	100.00	Hr	16000.00
Engineering and Project Management	Poleline Makeready	13.91	10000.00	MI	139100.00
<b>TOTAL</b>					<b>\$ 176,446.00</b>
AE MATL	1/4" Strand	50000	0.14	FT	7000.00
AE MATL	Strand Hardware (includes DG, OHG, Lash Nut, Bolts etc.)	45000	0.60	FT	27000.00
AE MATL	144 Ct Fiber Cable	67300	1.11	FT	74703.00
AE MATL	60 Ct Fiber Cable	22400	0.47	FT	10528.00
AE MATL	24 CT fiber Cable	19600	0.26	FT	5096.00
AE MATL	Commscope FOSC D enclosure	2	313.00	Ea	626.00
AE MATL	Commscope FOSC B enclosure		232.00	Ea	0.00
AE MATL	Splice Tray 2 pak	12	30.00	Ea	360.00
AE MATL	Coyote ATC kit	60	135.00	Ea	8100.00
AE MATL	Splice sleeves	800	0.30	Ea	240.00
AE MATL	OptiLoops	200	26.00	Ea	5200.00
<b>TOTAL</b>					<b>\$ 138,853.00</b>
Tax and Handling					\$ 16,662.36
<b>TOTAL</b>					<b>\$ 155,515.36</b>
AE LAB	Place Strand (Composite)	44917	0.70	FT	31441.90
AE LAB	Lash Fiber	44917	1.25	FT	56146.25
AE LAB	Overlash Fiber	50076	1.00	FT	50076.00
AE LAB	Splice fiber (includes OTDR)	800	27.00	Ea	21600.00
AE LAB	Prep and Place Splice Case	62	165.00	Ea	10230.00
AE LAB	MidSheath Entry	50	145.00	Ea	7250.00
<b>TOTAL</b>					<b>\$ 176,744.15</b>
Fixed MATL	Calix E7 w/ one 8 port card	1	9500.00	Ea	9500
	10G optics	4	1125.00		4500
Fixed MATL	XFP	8	475.00	Ea	3800
Fixed MATL	1x32 splitter module	8	975.00	Ea	7800
<b>TOTAL</b>					<b>\$ 25,600.00</b>
Tax and Handling					\$ 3,072.00
<b>TOTAL</b>					<b>\$ 28,672.00</b>

Assumptions

Requires no Distribution Cabinets  
 50076 ft of 144 ct fiber is overlashed  
 Requires new E7 Chassis with one 8 port card



Supply Solutions, LLC  
 8107 PLAINWOOD AVE  
 STONEWOOD WV 26301  
 United States

# Invoice

#INV3491

Sales Order #SO1632

07/29/2019

**Bill To**

SUNSET DIGITAL HOLDING, LLC  
 ACCOUNTS PAYABLE  
 WEST POINT GA 31833  
 United States

**Ship To**

SUNSET DIGITAL HOLDING, LLC  
 POINT BROADBAND LLC  
 15022 LEE HIGHWAY  
 FOUR POINTS SUITE #2  
 BRISTOL VA 24202  
 United States

**TOTAL**

**\$18,887.46**

Due Date:  
**08/13/2019**

Terms	Due Date	Customer PO #	Sales Rep	Shipping Method	Tracking Number
Net 15	08/13/2019	0701SupplyS	JN	Estes	123-0281429

Item	Qty Ordered	Qty Shipped	Qty B/O	Rate	Amount
<b>800013673</b> CLOSURE, COYD928B	20	20	0	\$442.95	\$8,859.00
<b>8006914</b> CLOSURE, COYOTE DROP CABLE, UNFILLED	15	15	0	\$49.97	\$749.55
<b>800013672</b> CLOSURE, COYD622B	15	15	0	\$190.00	\$2,850.00
<b>8006671</b> CLOSURE KIT, COYOTE RUNT CIFA#143376	20	20	0	\$139.81	\$2,796.20
<b>LGSTS16</b> TRAY, LITE-GRIP, SHORT, 16/40CT 80808392BX, ARM # C02714 & T02520....	100	100	0	\$19.80	\$1,980.00

Subtotal	\$17,234.75
Tax Total (%)	\$950.65
Shipping Cost	\$702.06
<b>Total</b>	<b>\$18,887.46</b>



INV3491



Supply Solutions, LLC  
 8107 PLAINWOOD AVE  
 STONEWOOD WV 26301  
 United States

# Invoice

#INV3653

Sales Order #SO2020

08/02/2019

**Bill To**

SUNSET DIGITAL HOLDING, LLC  
 ACCOUNTS PAYABLE  
 WEST POINT GA 31833  
 United States

**Ship To**

SUNSET DIGITAL HOLDING, LLC  
 POINT BROADBAND LLC  
 15022 LEE HIGHWAY  
 FOUR POINTS SUITE #2  
 BRISTOL VA 24202  
 United States

**TOTAL**

**\$4,132.84**

**Due Date:**  
**08/17/2019**

Terms	Due Date	Customer PO #	Sales Rep	Shipping Method	Tracking Number
Net 15	08/17/2019	0726Supply	JN	UPS	1Z99A2R30377413588 1Z99A2R30376253771 1Z99A2R30378128760 1Z99A2R30377254554 1Z99A2R30376712195

Item	Qty Ordered	Qty Shipped	Qty B/O	Rate	Amount
<b>LGSTS16</b> TRAY, LITE-GRIP, SHORT, 16/40CT 80808392BX, ARM # C02714 & T02520 ...	40	40	0	\$19.80	\$792.00
<b>8003676</b> GROMMET, 7 HOLE GROMMET KIT FOR COYOTE	80	72	8	\$10.75	\$774.00
<b>8003990</b> GROMMET, .50 - .60 (12.7 - 15.2) .125 - .25 (3.2 - 6.4) and Flat Drop, 4-hole	50	24	26	\$10.75	\$258.00
<b>8006914</b> CLOSURE, COYOTE DROP CABLE, UNFILLED	40	7	33	\$49.97	\$349.79
<b>CSSLH</b> HEADS,CABLE SUPPORT , DELTEC, ARM # C01797 & T02847	1,000	0	1,000	\$0.21	\$0.00
<b>CSS50B</b> STRAP, DELTEC SYSTEM, ARM # C01796 & T02846	100	100	0	\$16.35	\$1,635.00

Subtotal	\$3,808.79
Tax Total (%)	\$208.02
Shipping Cost	\$116.03
<b>Total</b>	<b>\$4,132.84</b>
<b>Amount Due</b>	<b>\$4,132.84</b>



INV3653



Supply Solutions, LLC  
 8107 PLAINWOOD AVE  
 STONEWOOD WV 26301  
 United States

# Invoice

#INV1694  
 Sales Order #SO181  
 05/03/2019

Bill To  
 SUNSET DIGITAL HOLDING, LLC  
 SUNSET DIGITAL HOLDING, LLC  
 ACCOUNTS PAYABLE  
 WEST POINT GA 31833  
 United States

Ship To  
 SUNSET DIGITAL HOLDING, LLC  
 SUNSET DIGITAL HOLDING, LLC  
 333 FRALEY AVE  
 DUFFIELD VA 24244  
 United States

TOTAL

**\$173,913.48**

Due Date:  
 06/02/2019

Terms	Due Date	Customer PO #	Sales Rep	Shipping Method	Tracking Number
Net 30	06/02/2019	10413		Drop Ship	

Item	Qty Ordered	Qty Shipped	Qty B/O	Rate	Amount
<b>AT3BE27D6024CLIB</b> FIBER, ADSS, Double Jkt PowerGuide ADSS Double PE Jkts, Dielectric Central Member ALLWAVE-SM- 35/ 31/ 25 db/km@1310/1385/1550 CABLE DIAMETER: 13.3 mm (.524 in.)	10,000	10,000	0	\$0.369	\$3,690.00
<b>AT3BE27D6024CLIB</b> FIBER, ADSS, Double Jkt PowerGuide ADSS Double PE Jkts, Dielectric Central Member ALLWAVE-SM- 35/ 31/ 25 db/km@1310/1385/1550 CABLE DIAMETER: 13.3 mm (.524 in.)	10,000	10,000	0	\$0.369	\$3,690.00
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INV1694



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 8107 PLAINWOOD AVE  
 STONEWOOD WV 26301  
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#INV1694

Sales Order #SO181

05/03/2019

Item	Qty Ordered	Qty Shipped	Qty B/O	Rate	Amount
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<b>AT3BE27D6024CLIB</b> FIBER, ADSS, Double Jkt PowerGuide ADSS Double PE Jkts, Dielectric Central Member ALLWAVE-SM- 35/31/25 db/km@1310/1385/1550 CABLE DIAMETER: 13.3 mm (.524 in.)	10,000	10,000	0	\$0.369	\$3,690.00
<b>AT3BE27D6024CLIB</b> FIBER, ADSS, Double Jkt PowerGuide ADSS Double PE Jkts, Dielectric Central Member ALLWAVE-SM- 35/31/25 db/km@1310/1385/1550 CABLE DIAMETER: 13.3 mm (.524 in.)	10,000	10,000	0	\$0.369	\$3,690.00
<b>AT3BE27D6024CLIB</b> FIBER, ADSS, Double Jkt PowerGuide ADSS Double PE Jkts, Dielectric Central Member ALLWAVE-SM- 35/31/25 db/km@1310/1385/1550 CABLE DIAMETER: 13.3 mm (.524 in.)	10,000	10,000	0	\$0.369	\$3,690.00



INV1694



Supply Solutions, LLC  
 8107 PLAINWOOD AVE  
 STONEWOOD WV 26301  
 United States

# Invoice

#INV1694  
 Sales Order #SO181  
 05/03/2019

Item	Qty Ordered	Qty Shipped	Qty B/O	Rate	Amount
<b>AT3BE27DT060CMBB</b> FIBER, ADSS, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_35/31/25 DB/KM@1310/1385/1550 CABLE DIAMETER 13.4 MM (.528 IN.)	10,000	10,000	0	\$0.515	\$5,150.00
<b>AT3BE27DT060CMBB</b> FIBER, ADSS, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_35/31/25 DB/KM@1310/1385/1550 CABLE DIAMETER 13.4 MM (.528 IN.)	10,000	10,000	0	\$0.515	\$5,150.00
<b>AT3BE27DT060CMBB</b> FIBER, ADSS, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_35/31/25 DB/KM@1310/1385/1550 CABLE DIAMETER 13.4 MM (.528 IN.)	10,000	10,000	0	\$0.515	\$5,150.00
<b>AT3BE27DT060CMBB</b> FIBER, ADSS, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_35/31/25 DB/KM@1310/1385/1550 CABLE DIAMETER 13.4 MM (.528 IN.)	10,000	10,000	0	\$0.515	\$5,150.00
<b>AT3BE27DT060CMBB</b> FIBER, ADSS, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_35/31/25 DB/KM@1310/1385/1550 CABLE DIAMETER 13.4 MM (.528 IN.)	10,000	10,000	0	\$0.515	\$5,150.00
<b>AT3BE27DT060CMBB</b> FIBER, ADSS, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_35/31/25 DB/KM@1310/1385/1550 CABLE DIAMETER 13.4 MM (.528 IN.)	10,000	10,000	0	\$0.515	\$5,150.00
<b>AT3BE27DT060CMBB</b> FIBER, ADSS, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_35/31/25 DB/KM@1310/1385/1550 CABLE DIAMETER 13.4 MM (.528 IN.)	10,000	10,000	0	\$0.515	\$5,150.00
<b>AT3RF27DT060CMRR</b> FIBER, ADSS, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_35/31/25 DB/KM@1310/1385/1550 CABLE DIAMETER 13.4 MM (.528 IN.)	10,000	0	10,000	\$0.515	\$0.00
<b>AT3BE27DT096CMDB</b> FIBER, ADSS, 96 CT, PowerGuide_96_F_AW_35/31/25 @1310/1385/1550	10,000	10,000	0	\$0.796	\$7,960.00
<b>AT3BE27DT096CMDB</b> FIBER, ADSS, 96 CT, PowerGuide_96_F_AW_35/31/25 @1310/1385/1550	10,000	10,000	0	\$0.796	\$7,960.00
<b>AT3BE27DT096CMDB</b> FIBER, ADSS, 96 CT, PowerGuide_96_F_AW_35/31/25 @1310/1385/1550	10,000	10,000	0	\$0.796	\$7,960.00
<b>AT3BE27DT096CMDB</b> FIBER, ADSS, 96 CT, PowerGuide_96_F_AW_35/31/25 @1310/1385/1550	10,000	10,000	0	\$0.796	\$7,960.00



INV1694





Supply Solutions, LLC  
 8107 PLAINWOOD AVE  
 STONEWOOD WV 26301  
 United States

# Invoice

#INV1694

Sales Order #SO181

05/03/2019

Item	Qty Ordered	Qty Shipped	Qty B/O	Rate	Amount
<b>AT3BE27DT144CMCB</b> FIBER, ADSS, 144CT, Double Jkt PowerGuide ADSS Double PE Jkts, Dielectric Central Member ALLWAVE-SM- 35/ 31/ 25 db/km@1310/1385/1550 CABLE DIAMETER 20.7 MM ( 815 IN )	10,000	0	10,000	\$1.108	\$0.00
<b>AT3BE27DT144CMCB</b> FIBER, ADSS, 144CT, Double Jkt PowerGuide ADSS Double PE Jkts, Dielectric Central Member ALLWAVE-SM- 35/ 31/ 25 db/km@1310/1385/1550 CABLE DIAMETER 20.7 MM ( 815 IN )	10,000	0	10,000	\$1.108	\$0.00
<b>AT3BE27DT216CMIB</b> FIBER, ADSS, 216CT, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_ 35/ 31/ 25 DB/ KM @1310/1385/1550NM CABLE DIAMETER 21.1MM / 831 IN	10,000	10,000	0	\$1.446	\$14,460.00
<b>AT3BE27DT216CMIB</b> FIBER, ADSS, 216CT, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_ 35/ 31/ 25 DB/ KM @1310/1385/1550NM CABLE DIAMETER 21.1MM / 831 IN	10,000	10,000	0	\$1.446	\$14,460.00
<b>AT3BE27DT216CMIB</b> FIBER, ADSS, 216CT, DOUBLE JKT POWERGUIDE ADSS DOUBLE PE JKTS, DIELECTRIC CENTRAL MEMBER ALLWAVE-SM_ 35/ 31/ 25 DB/ KM @1310/1385/1550NM CABLE DIAMETER 21.1MM / 831 IN	10,000	10,000	0	\$1.446	\$14,460.00

<b>Subtotal</b>	\$165,160.00
<b>Tax Total (%)</b>	\$8,753.48
<b>Shipping Cost</b>	\$0.00
<b>Total</b>	\$173,913.48



INV1694



(RETAIN FOR YOUR RECORDS)  
Form 477 Filing Summary

FRN: 0006823991    Data as of: Dec 31, 2018    Operations: Non-ILEC    Submission Status: Original - Submitted    Last Updated: Mar 8, 2019 16:03:45

**Filer Identification**

Section	Question	Response
Filer Information	Provider Name	Sunset Fiber, LLC
	Holding Company Name	Sunset Fiber, LLC
	SAC ID	
	499 ID	822704
Data Contact Information	Data Contact Name	Chad Wachter
	Data Contact Phone Number	(706) 773-2663
	Data Contact E-mail	cwachter@itchohold.com
Emergency Operations Contact Information	Emergency Operations Name	Chad Wachter
	Emergency Operations Phone Number	(706) 773-2663
	Emergency Operations E-mail	cwachter@itchohold.com
Certifying Official Contact Information	Certifying Official Name	John Kemp
	Certifying Official Phone Number	(844) 407-6468
	Certifying Official E-mail	jkemp@itchohold.com

**Data Submitted**

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	2018-12-31_BVU_FCC477_Data_Deployment.csv	Mar 8, 2019 10:04:44	17096
Fixed Broadband Subscription	2018-12-31_BVU_FCC477_Fixed_Broadband_Subscription.csv	Mar 8, 2019 11:10:34	684
Fixed Voice Subscription	2018-12-31_BVU_FCC477_Fixed_Voice_Data_Subscription.csv	Mar 7, 2019 15:39:41	74

**Fixed Broadband Deployment**

**Census Block Counts by State, DBA Name and Technology**

State	DBA Name	Technology	Blocks
Minnesota	OptiNet	Optical Carrier/Fiber to the End User	1
Tennessee	OptiNet	Optical Carrier/Fiber to the End User	1067
Texas	OptiNet	Optical Carrier/Fiber to the End User	1
Virginia	OptiNet	Optical Carrier/Fiber to the End User	16027
<b>Total</b>			<b>17096</b>

**Fixed  
Broadband  
Subscription**

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

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business / Govt	Total
Tennessee	Optical Carrier/Fiber to the End User	15	2	16	18
Virginia	Optical Carrier/Fiber to the End User	669	8053	2993	11046
<b>Total</b>		<b>684</b>	<b>8055</b>	<b>3009</b>	<b>11064</b>

**Fixed Broadband Subscriptions by Bandwidths and End-user Type**

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
0.384	0.384	0	450	450
1.000	1.000	0	1	1
1.500	0.384	99	55	154
1.500	1.000	0	120	120
1.500	1.500	0	2	2
2.000	2.000	0	179	179
3.000	1.000	0	439	439
5.000	5.000	0	58	58
6.000	1.000	1	266	267
10.000	1.000	0	87	87
10.000	10.000	0	44	44
12.000	2.000	0	278	278
15.000	1.000	2317	1	2318
15.000	15.000	0	1	1
20.000	2.000	0	209	209
20.000	20.000	0	11	11
25.000	2.000	0	1	1
25.000	5.000	0	11	11
25.000	25.000	0	21	21
30.000	5.000	1978	301	2279
50.000	5.000	1917	169	2086
50.000	50.000	0	48	48
75.000	10.000	1250	0	1250
100.000	3.000	0	1	1
100.000	10.000	85	75	160
100.000	100.000	0	47	47

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
150.000	20.000	43	0	43
150.000	150.000	0	21	21
200.000	20.000	0	8	8
200.000	200.000	0	18	18
300.000	50.000	0	2	2
300.000	300.000	0	1	1
400.000	400.000	0	1	1
500.000	500.000	0	3	3
600.000	600.000	0	1	1
1000.000	1000.000	0	15	15
2000.000	2000.000	0	1	1
5000.000	5000.000	0	2	2
10000.000	10000.000	0	1	1
<b>Total</b>		<b>8055</b>	<b>3009</b>	<b>11064</b>

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

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Optical Carrier/Fiber to the End User	0.384	0.384	0	450	450
	1.000	1.000	0	1	1
	1.500	0.384	99	55	154
	1.500	1.000	0	120	120
	1.500	1.500	0	2	2
	2.000	2.000	0	179	179
	3.000	1.000	0	439	439
	5.000	5.000	0	58	58
	6.000	1.000	1	266	267
	10.000	1.000	0	87	87
	10.000	10.000	0	44	44
	12.000	2.000	0	278	278
	15.000	1.000	2317	1	2318
	15.000	15.000	0	1	1
	20.000	2.000	365	269	634
	20.000	20.000	0	11	11
	25.000	2.000	0	1	1

Technology	Downstream Bandwidth (in	Upstream Bandwidth (in	Business		Total
	Mbps)	Mbps)	Consumer	Govt	
	25.000	5.000	0	11	11
	25.000	25.000	0	21	21
	30.000	5.000	1978	301	2279
	50.000	5.000	1917	169	2086
	50.000	50.000	0	48	48
	75.000	10.000	1250	0	1250
	100.000	3.000	0	1	1
	100.000	10.000	85	75	160
	100.000	100.000	0	47	47
	150.000	20.000	43	0	43
	150.000	150.000	0	21	21
	200.000	20.000	0	8	8
	200.000	200.000	0	18	18
	300.000	50.000	0	2	2
	300.000	300.000	0	1	1
	400.000	400.000	0	1	1
	500.000	500.000	0	3	3
	600.000	600.000	0	1	1
	1000.000	1000.000	0	15	15
	2000.000	2000.000	0	1	1
	5000.000	5000.000	0	2	2
	10000.000	10000.000	0	1	1
<b>Total</b>			<b>8055</b>	<b>3009</b>	<b>11064</b>

**Fixed Voice Subscription**

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

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Minnesota	4	0	0	0
Tennessee	24	1	0	0
Texas	29	0	0	0
Virginia	12535	4859	0	0
<b>Total</b>	<b>12592</b>	<b>4860</b>	<b>0</b>	<b>0</b>

**Fixed Voice  
Subscription  
(VGE Lines)**

**VGE Lines Provided to Unaffiliated Providers by State**

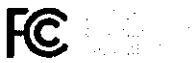
State	Wholesale	UNE-L
Minnesota	0	0
Tennessee	493	0
Texas	0	0
Virginia	0	0
<b>Total</b>	<b>493</b>	<b>0</b>

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

State	Total	by Bundle		by Product Type			
		Sold w/ Internet	Sold w/o Internet	Consumer		Bus-Govt	
				& No PIC	& PIC	& No PIC	& PIC
Minnesota	4	4	0	0	0	0	4
Tennessee	24	24	0	0	1	0	23
Texas	29	0	29	0	0	0	29
Virginia	12535	10843	1692	774	4085	860	6816
<b>Total</b>	<b>12592</b>	<b>10871</b>	<b>1721</b>	<b>774</b>	<b>4086</b>	<b>860</b>	<b>6872</b>

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

State	Total	by Ownership				by Last-mile Medium		
		Owned	UNE-L	Resale	FTTP	Coax	Fixed Wireless	Copper
Minnesota	4	4	0	0	4	0	0	0
Tennessee	24	24	0	0	24	0	0	0
Texas	29	29	0	0	29	0	0	0
Virginia	12535	12535	0	0	12535	0	0	0
<b>Total</b>	<b>12592</b>	<b>12592</b>	<b>0</b>	<b>0</b>	<b>12592</b>	<b>0</b>	<b>0</b>	<b>0</b>



(RETAIN FOR YOUR RECORDS)  
Form 477 Filing Summary

FRN: 0026198762    Data as of: Dec 31, 2018    Operations: Non-ILEC    Submission Status: Original - Submitted    Last Updated: Mar 7, 2019 15:29:20

**Filer Identification**

Section	Question	Response
Filer Information	Provider Name	Point Broadband, LLC
	Holding Company Name	Point Broadband, LLC
	SAC ID	
	499 ID	832079
Data Contact Information	Data Contact Name	Chad Wachter
	Data Contact Phone Number	(706) 773-2663
	Data Contact E-mail	cwachter@itchohold.com
Emergency Operations Contact Information	Emergency Operations Name	Chad Wachter
	Emergency Operations Phone Number	(706) 773-2663
	Emergency Operations E-mail	cwachter@itchohold.com
Certifying Official Contact Information	Certifying Official Name	Tanya Belk
	Certifying Official Phone Number	(706) 773-1015
	Certifying Official E-mail	tbelk@point-broadband.com

**Data Submitted**

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	form477_deployments_ODfufD.csv	Mar 6, 2019 17:55:52	1102
Fixed Broadband Subscription	form477_subscriptions_wiozJG.csv	Mar 6, 2019 17:56:26	148

**Fixed Broadband Deployment**

**Census Block Counts by State, DBA Name and Technology**

State	DBA Name	Technology	Blocks
Alabama	Point Broadband LLC	Terrestrial Fixed Wireless	204
Florida	Point Broadband LLC	Terrestrial Fixed Wireless	3
Georgia	Point Broadband LLC	Terrestrial Fixed Wireless	805
Louisiana	Point Broadband LLC	Asymmetric xDSL	4
		Terrestrial Fixed Wireless	22
Mississippi	Point Broadband LLC	Terrestrial Fixed Wireless	64
<b>Total</b>			<b>1192</b>

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

State	Technology	Subscriptions			
		Census Tracts	Consumer	Business / Govt	Total
Alabama	Terrestrial Fixed Wireless	48	409	27	436
Florida	Terrestrial Fixed Wireless	2	3	0	3
Georgia	Terrestrial Fixed Wireless	81	1607	95	1702
Louisiana	Asymmetric xDSL	1	5	0	5
	Terrestrial Fixed Wireless	2	82	1	83
Mississippi	Terrestrial Fixed Wireless	14	174	6	180
<b>Total</b>		<b>148</b>	<b>2280</b>	<b>129</b>	<b>2409</b>

**Fixed Broadband Subscriptions by Bandwidths and End-user Type**

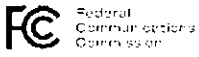
Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
5.000	1.000	1	0	1
9.999	1.000	0	5	5
10.000	1.000	1183	32	1215
10.000	1.033	4	0	4
10.000	5.000	0	1	1
20.000	2.000	745	72	817
20.000	5.000	1	0	1
30.000	3.000	31	6	37
30.000	3.036	1	0	1
50.000	1.000	314	13	327
<b>Total</b>		<b>2280</b>	<b>129</b>	<b>2409</b>

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

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Asymmetric xDSL	10.000	1.000	5	0	5
Terrestrial Fixed Wireless	5.000	1.000	1	0	1
	9.999	1.000	0	5	5
	10.000	1.000	1178	32	1210
	10.000	1.033	4	0	4
	10.000	5.000	0	1	1
	20.000	2.000	745	72	817
	20.000	5.000	1	0	1



Downstream Bandwidth (In Mbps)	Upstream Bandwidth (In Mbps)	Consumer	Business / Govt	Total
30.000	3.000	31	6	37
30.000	3.036	1	0	1
50.000	1.000	314	13	327
<b>Total</b>		<b>2280</b>	<b>129</b>	<b>2409</b>



(RETAIN FOR YOUR RECORDS)  
Form 477 Filing Summary

FRN: 0010678001 Data as of: Jun 30, 2018 Operations: Non-ILEC Submission Status: Original - Submitted Last Updated: Dec 13, 2018 11:37:49

Filer Identification	Section	Question	Response
	Filer Information	Provider Name	Sunset Digital Communications, INC
		Holding Company Name	Sunset Digital Communications, Inc.
		SAC ID	
		499 ID	826320
	Data Contact Information	Data Contact Name	Ryan B. Elswick
		Data Contact Phone Number	(276) 431-7200
		Data Contact E-mail	ryan@sunset-fiber.com
	Emergency Operations Contact Information	Emergency Operations Name	Ryan B. Elswick
		Emergency Operations Phone Number	(276) 431-7200
		Emergency Operations E-mail	ryan@sunset-fiber.com
	Certifying Official Contact Information	Certifying Official Name	Ryan B. Elswick
		Certifying Official Phone Number	(276) 431-7200
Certifying Official E-mail		ryan@sunset-fiber.com	

Data Submitted	Form Section	File Name	Date & Time	Number of Rows
	Fixed Broadband Deployment	FBD_20180630.csv	Dec 13, 2018 11:31:00	1110
	Fixed Broadband Subscription	FBS_20180630.csv	Dec 13, 2018 11:32:08	167
	Fixed Voice Subscription	FVS_20180630.csv	Dec 13, 2018 11:32:35	23

Fixed Broadband Deployment	Census Block Counts by State, DBA Name and Technology			Blocks
	State	DBA Name	Technology	
	Tennessee	Sunset Digital Communications, Inc.	Optical Carrier/Fiber to the End User	524
	Virginia	Sunset Digital Communications, Inc.	Optical Carrier/Fiber to the End User	586
	<b>Total</b>			<b>1110</b>

Fixed Broadband Subscription	Fixed Broadband Subscriptions by State, Technology and End-user Type					
	State	Technology	Census Tracts	Subscriptions		Total
Consumer				Business / Govt		
	Tennessee	Optical Carrier/Fiber to the End User	72	1801	36	1837

Virginia	Optical Carrier/Fiber to the End User	95	1460	67	1527
<b>Total</b>		<b>167</b>	<b>3261</b>	<b>103</b>	<b>3364</b>

**Fixed Broadband Subscriptions by Bandwidths and End-user Type**

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
10.000	1.000	2425	0	2425
10.000	10.000	0	6	6
20.000	20.000	0	2	2
25.000	2.000	416	0	416
25.000	25.000	0	8	8
50.000	5.000	0	57	57
50.000	50.000	0	6	6
75.000	5.000	51	0	51
100.000	3.000	336	0	336
100.000	8.000	25	0	25
100.000	10.000	0	7	7
100.000	100.000	0	7	7
200.000	20.000	7	1	8
200.000	200.000	0	1	1
1000.000	50.000	1	0	1
1000.000	1000.000	0	5	5
3000.000	3000.000	0	2	2
10000.000	10000.000	0	1	1
<b>Total</b>		<b>3261</b>	<b>103</b>	<b>3364</b>

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

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
<b>Optical Carrier/Fiber to the End User</b>	10.000	1.000	2425	0	2425
	10.000	10.000	0	6	6
	20.000	20.000	0	2	2
	25.000	2.000	416	0	416
	25.000	25.000	0	8	8
	50.000	5.000	0	57	57
	50.000	50.000	0	6	6
	75.000	5.000	51	0	51
	100.000	3.000	336	0	336
	100.000	8.000	25	0	25
	100.000	10.000	0	7	7

	100,000	100,000	0	7	7
	200,000	20,000	7	1	8
	200,000	200,000	0	1	1
	1000,000	50,000	1	0	1
	1000,000	1000,000	0	5	5
	3000,000	3000,000	0	2	2
	10000,000	10000,000	0	1	1
<b>Total</b>			<b>3261</b>	<b>103</b>	<b>3364</b>

**Fixed Voice  
Subscription**

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

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Tennessee	0	0	457	421
Virginia	0	0	206	168
<b>Total</b>	<b>0</b>	<b>0</b>	<b>663</b>	<b>589</b>

**Fixed Voice  
Subscription  
(iVoIP)**

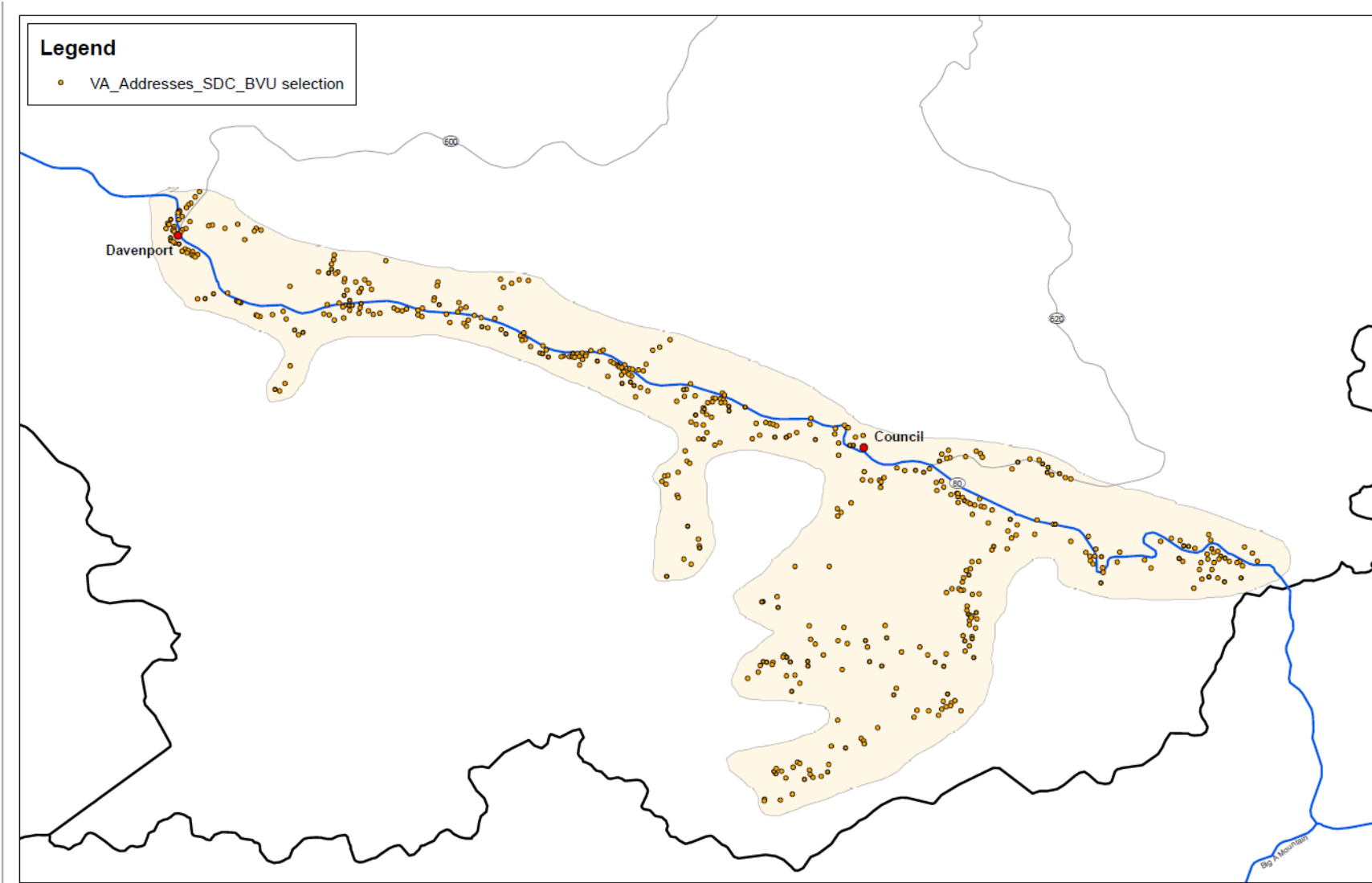
**Over-the-top VoIP Subscriptions by State and End-user Type**

State	Total	Consumer	Business / Govt
Tennessee	0	0	0
Virginia	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

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

State	by End-user Type			by Bundle		by Last-mile Medium			
	Total	Consumer	Business / Government	Sold w/ Internet	Sold w/o Internet	FTTP	Coax	Fixed Wireless	Copper
Tennessee	457	421	36	450	7	457	0	0	0
Virginia	206	168	38	9	197	206	0	0	0
<b>Total</b>	<b>663</b>	<b>589</b>	<b>74</b>	<b>459</b>	<b>204</b>	<b>663</b>	<b>0</b>	<b>0</b>	<b>0</b>

# Council to Davenport Broadband Expansion Project



The Cumberland Plateau Company and its co-applicant, Point Broadband, will be submitting a grant application to the VATI program for the Council to Davenport area of Buchanan County. The application passes 670 definable E-911 addresses. The Virginia Department of Housing and Community Development (DHCD) will implement the Virginia Telecommunication Initiative (VATI). The goal of VATI is to enhance sustainability and growth of communities throughout the Commonwealth by preparing those communities to build, utilize, and capitalize on telecommunications infrastructure. Consistent with the enabling legislation, DHCD will award the \$19 million FY 2020 appropriation to eligible applicants to provide last-mile services to unserved areas of the State. DHCD reserves the flexibility to award any amount to eligible grantees, depending entirely on the quality and quantity of applications received. The primary objective of VATI is to provide financial assistance to supplement construction costs by private sector broadband service providers, in partnership with local units of government to extend service to areas that presently are unserved by any broadband provider.

<b>Name</b>	<b>Title</b>	<b>Role/Responsibilities</b>
Weldon Feightner	CEO	Responsible for overall project deliverable
Ryan Elswick	Vice President of Operations	Responsible for installation and customer service
Mark Alldredge	Director of Outside Plant Engineering	Responsible for engineering and layout of the project and the construction management
Joseph Puckett	Director of Business Development	Grant reimbursement, tracking and reporting.
David Christian	Sales Manager	Responsible for all marketing and sales activities



# 2019 Strategic Marketing Plan

*Unique Selling Proposition – Fiber to the Home*

## **Summary:**

Point Broadband's strategic marketing plan is based upon our unique selling proposition of Fiber to the Home. Using this core strategy, we will differentiate our company, products and services significantly enough to achieve and exceed our planned market share. Our objective is to consistently deliver the fastest most reliable high-speed internet service with best in class customer service as we build and promote our brands as quality based. We aim to gain customers through the strength of our fiber to the premise network and the benefit of doing business with a local company.

Our approach is to completely alter the local landscape of telecommunications services. We are not a cable company or a telephone company. We are a fiber broadband company. We are the "experts" in this industry.

Our goal is to be known as an active local community asset, both commercially and charitably. We achieve this by maintaining a year around awareness of community events in each territory, contributions to specific educational or cultural programs and our own self-promotional events.

Realistically, when breakdowns do occur, we will be known as the company who responds with alacrity and integrity, taking responsibility and fixing the problem graciously. It is all about service, and we are specially trained to serve.

## **Marketing Strategy/Marketing Communications**

At Point Broadband, we compete against telecommunications, ISP's and entertainment companies. To win and keep customers we must focus on our distribution channels and service goals. Our most critical tactical tool is our people – they understand that in every interaction they have with the customer, they determine Point Broadband's success. We support them with the following concrete tactical tools.

### **Digital Advertising:**

Point Broadband will optimize its brand presence using digital media, SEO, SEM and Social Media. Strategic email campaigns will be used to target B2B clients and SMS messaging will be used to target residential customers.

### **Print Advertising**

1. Direct Mail: utilizing targeted mailing areas we will utilize direct mail to announce new service areas and special promotions to drive in-bound potential customer activity.
2. Newspaper: Promotion and seasonal driven, Point Broadband supports local direct mail and radio promotions with tactical newspaper ads to enhance the promotion.



## **Broadcast Advertising**

1. Television: both Point Broadband focused and coop advertising on local broadcast stations as well as cross channel on cable inventory will be used to create awareness and promote offers to drive in-bound activity.

## **Event Marketing**

1. Upon the launch of a particular area Point Broadband will send direct mail to each newly serviceable address inviting the residents to a local community event where they can learn about all products and services provided by Point Broadband and will have the opportunity to order service at that time as well.
2. Community events are key to Point Broadband's success in converting customers and supporting the local community. Each event, both commercial and residential will be staffed with quality brand ambassadors who can answer questions and sign up new customers.
3. B2B events will be scheduled and coordinated with local chambers of commerce, business groups, networking events, industry specific events etc....
4. Residential Community events will be scheduled and held in centralized area locations such as; Volunteer Fire Departments, Convenience Stores, etc.

## **Direct Sales**

1. Direct sales: Our Door-to-Door sales program is designed to sell based on value and addressing the customer's needs. Upon the launch of a new area Point Broadband's street force penetrates new build areas and makes in person presentations. Our Business Account executives focus on high value commercial & enterprise customers with strong revenue potential with long term relationships.

# Telecommunications Needs Assessment and Development of Remedial Strategies for Southwest Virginia

Prepared for:

The Virginia Department of Housing and Community Development

The Town of Nickelsville

LENOWISCO, Cumberland Plateau, and Mount Rogers PDCs

May 8, 2019

*Prepared by*



*and*



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## 2 EXECUTIVE SUMMARY

This report documents a comprehensive needs assessment of the telecommunications services in thirteen counties and three cities in Planning Districts 1, 2 and 3 in Southwest Virginia.

The rural parts of Southwest Virginia are largely under-served, with some areas completely *unserved*, by broadband providers. The low population density in the region and the highly challenging geography -- the Appalachian Mountain range -- make it unlikely that the region's leaders will be able to rely on the private sector to solve this problem -- if there were a market-based business case, the investor-owned service providers would already be serving.

With few exceptions, the Incumbent Local Exchange Carriers' traditional copper and cable networks are insufficient to meet the current and future bandwidth needs of the region. Due to the financial impracticality of deploying current-technology networks, most incumbent local exchange carriers have neglected to extend, upgrade, or expand their networks in the region. Through public and private investment funds, others have built middle-mile fiber along the main corridors but generally without a last-mile solution.

This lack of ubiquitous, affordable, reliable broadband has had an ongoing impact on the region. In many areas covered in this study, populations are declining. Communities are having difficulties retaining youth. Economies are stagnant and lacking the means to grow. Residents are frustrated and, in some cases, indignant about the lack of broadband and wireless. Students are falling behind. Small businesses cannot compete. Larger businesses are moving out of the region. Not all of these maladies are caused by lack of sufficient broadband services, but it is certainly a contributing factor.

The need and demand for broadband communications services is great. The demand is sufficient to justify a long-term public investment. The total projected cost for broadband is estimated at \$52 Million. This represents a high-level estimate of the total cost to solve the last-mile issue at 62 high-priority communities within the three Planning Districts. This cost estimate is based upon leveraging the existing investments made by the Virginia Tobacco Region Revitalization Commission, the Virginia Coalfield Economic Development Authority, the EDA, and other providers of capital in the regional communications infrastructure. The plan calls for approximately -372 miles of new backbone fiber and 931 miles of drops, resulting in an estimated cost of \$ 7,584 per home. The investment will pass over 9,800 homes and it is estimated 6,884 will subscribe to service. It must be noted that these unserved and underserved 62 communities are the most difficult to reach with the sparsest population density. Also, once the backbone is built to serve these communities, additional incremental (those not subscribing to service in the initial buildout) can be added for approximately \$2,200 per residence, depending upon drop length.

The following table displays the breakdown of the residences to be served, the miles of backbone and drops, and total estimated cost to remediate the targeted areas by Planning District.

Cost Estimate	Regional Total	PDC 1	PDC 2	PDC 3
Homes Passed	9,831	1,368	4,574	3,889
No. of Customers (at take rate)	6,884	957	3,202	2,725
Miles of Backbone	372	70	126	177
Miles of Drop	931	130	433	368
Total Cost (EST)	\$ 52,207,296	\$ 8,662,984	\$ 20,566,494	\$ 22,977,817
Cost per Home	\$ 7,584	\$ 9,052	\$ 6,423	\$ 8,432

This \$52 million investment will not solve all of the regional connectivity problems. It will however, address access to high-speed Internet service for the communities in the greatest need.

Additionally, this plan does not address wireless services (cellular) in the region. Simply put, there is no path forward to improving commercial wireless services in the region without a partnership/collaboration with one of the major wireless operators. The region has immense potential to build upon the wireless infrastructure deployed for the 4g project, but it is fruitless to build additional towers, distributed antennae systems, or microcells in hopes that a wireless service provider will use the assets. Wireless operators are inscrutable in their network planning and never use assets simply because they have been made available.

The prioritized list of communities to be addressed are presented in Section 5 of this report. For implementation of this plan we recommend that the regional leaders find a way to formalize a relationship with Scott County Telephone Cooperative, Citizens Telephone Cooperative, and CPC Broadband. All three of these organizations have displayed a long history of *purpose-over-profit* and shared values with the regional planning leaders to improve the quality of life in the region and drive economic development. For any collaboration to work, shared values is the most important characteristic for success.

To fund this plan Section 7.2 of the Appendices lists the resources available to improve the lack of broadband services in the identified communities. It is recommended that a separate legal entity be organized to address the connectivity issues (broadband and

wireless) in the 13 -county region. Additionally, that Executive Director must be tasked with specific accountabilities (and rewards) to seek funding for these high priority communities. In short, all of rural America will be competing for these funds. The regional leaders must become tireless advocates for the region's communications needs.

Intuitively, everyone understands there is a correlation between investments in broadband and economic development. The relationships are well studied and there are a number of scholarly articles that quantify the impacts of investment in rural broadband and economic growth, specifically:

- Gross Domestic Product Per capita Increase,
- Median Household Income Increase, and
- Productivity Increase

One of the more recent studies commissioned by the World Bank, studied the economic impact in developing economies:

*Digital Dividends. Exploring the Relationship Between Broadband and Economic Growth,*  
by Michael Mingos, 2016.

The study concludes that a 10 percentage point increase in fixed broadband penetration would increase GDP growth by 1.21% in developed economies and 1.38% in developing ones. The GDP of the 13 county region is approximately \$12 Billion annually. The resulting economic impact in the region from the proposed investment can be expected to yield between \$145 Million and \$166 Million of economic growth, recurring annually.

There are hundreds of scholarly articles supporting this expectation.

## 3 INTRODUCTION

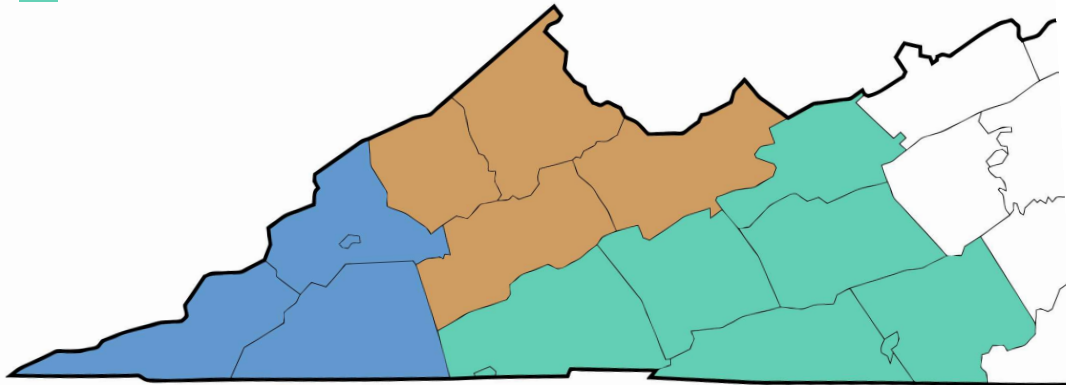
This report documents a comprehensive needs assessment of the telecommunications services in thirteen counties and three cities in Planning Districts 1, 2 and 3 in Southwest Virginia.

### 3.1 Project Area

#### Broadband Project Assessment Area – SW VA

##### Legend

- LENOWISCO PDC 1
- Cumberland Plateau PDC 2
- Mount Rogers PDC 3



Despite the fact that Southwest Virginia has seen over \$160 mm in capital investment over the last 20 years to improve the communications infrastructure, the region still has significant gaps in coverage. In 2016, a study by the Virginia Chamber of Commerce indicated that only 53 percent of rural Virginians had access to broadband Internet compared to urban areas with 96 percent.

During the course of this study, many communities have come forward to highlight the fact that there are areas completely unserved and underserved, and that many services are unaffordable. This outcry prompted leaders within the planning districts to strive to help improve high-speed Internet service, emergency communications service, and wireless service.

The areas studied are outlined in the following table. Across the region, population densities are low, and counties and cities are losing population due to the lack of vibrant economies. To support a growing economy, the region must have sufficient infrastructure and technologies.

Region	2010 Census	2018 Estimate	Percent Change	Square Miles	Density per Sq. Mile
Bland	6,824	6,432	-6%	358	18
Bristol city	17,835	16,877	-5%	13	1,297
Buchanan	24,098	21,576	-10%	503	43
Carroll	30,042	29,141	-3%	475	61
Dickenson	15,903	14,516	-9%	331	44
Galax City	7,042	6,587	-6%	8	799
Grayson	15,533	15,330	-1%	442	35
Lee	25,587	23,994	-6%	436	55
Norton City	3,958	3,908	-1%	7	522
Russell	28,897	27,057	-6%	474	57
Scott	23,177	22,121	-5%	536	41
Smyth	32,208	30,475	-5%	451	68
Tazewell	45,078	41,973	-7%	519	81
Washington	54,876	53,992	-2%	561	96
Wise	41,452	38,386	-7%	403	95
Wythe	29,235	28,650	-2%	462	62
<b>Total/Average</b>	<b>401,745</b>	<b>381,015</b>	<b>-5%</b>	<b>5,977</b>	<b>211</b>

### 3.2 Project Team

#### Thompson and Litton Engineers

Thompson & Litton Engineers (T&L), a local professional services firm, was selected to develop the study. T&L teamed with Blue Ridge Advisory Services Group, Inc. (Blue Ridge) to complete a comprehensive needs assessment and identify potential remedial solutions for the LENOWISCO (PDC 1), Cumberland Plateau (PDC 2), and Mount Rogers (PDC 3) planning districts.

T&L has over 100 employees in eight offices, offering an array of engineering, architectural, surveying, planning and construction services throughout Southwest Virginia, Tennessee, and West Virginia. T&L has designed 15 broadband projects and numerous wireless deployment projects since 2006.



With offices in Wise, Tazewell, and Chilhowie, T&L has a presence in each PDC associated with this study and is committed to providing superior service to the people within the region, as it has since 1956.

T&L's related project experiences include:

- Roanoke Valley Broadband Authority
- Citizens Telephone Cooperative
- Bristol VA Utilities/Cumberland Plateau
- Virginia Coalfield Coalition
- Verizon Wireless
- AT&T Mobility
- Nextel Communications
- SBA Communications
- Roanoke County, Virginia
- Virginia State Police

### **Blue Ridge Advisory Services Group**

Blue Ridge Advisory Services Group (Blue Ridge) is a professional services firm that has been serving the telecommunications sector for 20 years. The firm provides strategies, business plans, feasibility studies, financial modeling, and other value-added related services to bring about actionable plans to improve communities.

Blue Ridge's related project experience includes:

- Dominion Energy Telecommunications,
- DukeNet,
- CaroNet,
- TVA Telecom,
- Bonneville Power Telecom,
- Mid-Atlantic Broadband (and LIT Networks),
- Virginia Coalfield Coalition 4g Wireless.
- LENOWISCO LLC
- Roanoke Valley Broadband Authority
- Consolidated Cooperative FTTH Initiative

The study is being funded by a grant from the Appalachian Regional Commission (ARC) and Virginia Department of Housing and Community Development (DHCD). It is sponsored by the Town of Nickelsville, the Cumberland Plateau, LENOWISCO and Mount Rogers PDCs, and the Virginia Coalfield Coalition (VCC). The results of this study will serve to increase awareness and knowledge of where the broadband gaps are and hopefully lead to improved broadband choices for all residents, businesses, and visitors in Southwest Virginia.

### **3.3 Deliverables**

The final deliverables of this study include this written report, as well as two presentations to the management team. The first presentation was made in February 2019 and was followed by a second presentation in April 2019. All work products are the property of the ARC, DHCD, the VCC, the three PDCs, and the Town of Nickelsville.

### **3.4 Methodology**

T&L and Blue Ridge worked with a cross-functional management team of regional representatives to define:

- Accomplishments in the Region,
- Community Needs,
- Regional Needs,
- Remedial Strategies and Associated Costs,
- Prioritized List of Communities in Greatest Need,
- Potential Funding Sources and Strategies, and
- Potential Service Providers.

To identify the specific needs of each community (as well as the regional needs identified in Section 7.1 of the Appendices to this report) Blue Ridge conducted 40 interviews with key stakeholders in the region, covering 13 counties and 3 cities in Southwest Virginia, including:

- 8 with LENOWISCO
- 6 with Cumberland Plateau
- 8 with Mount Rogers
- 7 with industry leaders/stakeholders in the region
- 11 with telecom service providers that are active in the region

### 3.5 Accomplishments in Southwest Virginia

Over the past 20 years, approximately \$168 Million dollars of public investments have been made in Planning Districts 1, 2 and 3 to enhance broadband communication. The following table shows a breakdown of those investments by planning district.

Planning District	Amount Invested
LENOWISCO	\$ 71,579,167
Cumberland Plateau	\$ 45,758,931
Mount Rogers	\$ 50,383,291
<b>Total Public Investment in Planning Districts 1, 2, &amp; 3</b>	<b>\$167,721,389</b>

Beginning in 2000, the PDCs, realizing that the Internet was more than a passing fad, began to aggressively integrate broadband planning into their regional planning. Attitudes towards broadband gradually shifted from being considered an *amenity* to being recognized as a *necessity*. Broadband has become a quality of life issue and a necessity for ensuring economic development in every region. Essentially, it is the modern day equivalent of the Rural Electrification Act from the 1930s that brought electricity to rural America. In fact, today many are calling broadband “*the fifth utility*.”

On a national level, investments are being made in tele-health, school system technology, distance learning, and emergency preparedness. Telecommunications grants and loans are being made to improve services in each of these critical areas within the study area.

While some of these grant awards were single purpose and would not allow broadband operators to maximize their use by connecting all classes of commercial and residential customers in some cases, technology investment has driven and enhanced economic development in certain areas. A prime example of this is the Southwest Virginia Technology Center of Excellence, which is a software development and systems integration facility in the town of Lebanon in Russell County. CGI Group Inc., the fifth largest independent information technology and business process services firm in the world, invested in the area because of the grant-funded fiber optic backbone. Northrop Grumman Corporation, an American global aerospace and defense technology company, is also located in Lebanon.

Other examples include DP Facilities, Inc. data center in Wise County and Sykes Enterprises’ call centers in Buchanan and Wise Counties. Norton (PDC 1) has a Medicare transportation call center and one of its partners – the medical records data center - is in Duffield (Scott County). It is billed as “the first Tier 4 commercial data center in the US.”

## 4 Regional Needs

The region's needs to support technology-enabled, quality-of-life-improving applications were identified by interviewing key stakeholders throughout the three planning districts. Regional leaders view broadband as a necessity - a "4th utility." Some county leaders have taken the lack of broadband into their own hands and have begun their own initiatives to secure better services (Grayson County's RFP, for example).

### Major Trends

These viewpoints and initiatives demonstrate the following major trends/needs that were identified during the interview process:

- Plenty of middle-mile fiber exists in the region but there is **very little last mile connection**, especially in the more rural areas/off the main corridors. This presents a real need for a last-mile solution, as several providers have deployed fiber in the region along the major corridors but haven't extended the lines. The existing last mile providers, the incumbent local exchange carriers (ILECs), have not invested in upgrading their networks to adequately serve customers or ensure reliability in service.
- Broadband is available in areas with higher densities (cities such as Bristol and/or Norton), but issues include **unaffordable prices, lack of competition, and low quality of service**
- Some areas lack the basics - *cable TV* and/or reliable *landline* service
- **Cellular service is spotty** throughout parts of the region; there is no comprehensive cellular solution. *Some areas still run on 3G.*
- Residents in the more rural areas seem to tolerate the lack of coverage. Visitors and prospective investors -- who are accustomed to better services -- do NOT. They take their business elsewhere.

### Impact on Economic Development

While there is adequate connectivity to most of the industrial parks in the region, the lack of broadband in many areas has a profound impact on economic development.

- **Attracting Investment** - Prospective companies expect broadband to be available & won't wait for it to be built to suit. If a business expects to locate, high speed broadband with 4G is anticipated. Potential investors who cannot place a phone call from their cell phones are immediately turned off.
- **Tourism** - Tourists don't come back without cell service.
- **Infrastructure** - Broadband infrastructure is key to economic survival. Can't "get in the game" or even "sit on the bench" without it.
- **Workforce** - It's a serious "workforce issue" for retaining employees or getting new hires to relocate. Non-traditional, virtual jobs, and work from home will become more and more the future.

- **Innovation** - Broadband is necessary to foster innovation and to retain young people -- largest export is educated youth.
- **Real Estate** - Impacts home sales, as there is a noted lower demand for homes without access to broadband
- **Farming** - Impacts farming as operations become more technology-driven

#### **Impact on Citizens**

- **Options** - Without fiber and broadband, communities are unable to develop and provide advanced services
- **Price** - Consumers experience substantial pricing differentials across the region, depending on the level of competition
- **Speeds** – There is a gap between what’s advertised and what residents are experiencing, plus asymmetry between upload and download speeds

#### **Impact on Emergency Medical Services**

- Seamless emergency services communication is necessary
- A large concern by EMS is reaching tourists who cannot place cellular calls from remote areas
- Some people have to use landlines to call 911. As an illustration, in Haysi, if a call doesn’t go through, it doesn’t get forwarded, and callers have no access to emergency service.

#### **Impact on Educational System**

- Schools are well connected, but there is a major disconnect between school and home accessibility, also known as the “homework gap”

## 5 PRIORITIZATION OF COMMUNITIES

To prioritize the communities, the following methodology was agreed upon and used:

Rank	Criteria	Weight
<b>1</b>	<b>Level of Need</b>	<b>50 points</b>
	a) Un-served	
	b) Underserved	
<b>2</b>	<b>Number of Potential Connections</b>	<b>30 points</b>
<b>3</b>	<b>Cost</b>	<b>20 points</b>
	a) Backbone Connection Cost	
	b) Cost Per Connection (wireless, fiber)	

### 5.1 Broadband – Target Areas for Improvement

The following areas have been identified as targets for remediation in descending order of priority.

#### PDC 1 -- Broadband

PDC 1 - LENOWISCO								
Priority	County	Target Area for Improvement - Broadband	Homes Passed	Cost per Customer	Customers (at take rate)	Backbone Miles	Drop Miles	Total Estimated Cost
1	Lee	District 5 (north of 58 Alt)	62	\$ 8,100	43	3	6	\$ 348,313
2	Scott	Gate City to Duffield	366	\$ 10,688	256	24	35	\$ 2,736,206
3	Wise	Appalachia - Stonega	268	\$ 6,388	188	7	25	\$ 1,201,032
4	Wise	Appalachia - Exeter	260	\$ 6,578	182	8	25	\$ 1,197,236
5	Wise	Coeburn	150	\$ 7,005	105	5	14	\$ 735,528
6	Wise	Guest River	103	\$ 10,309	72	6	10	\$ 742,264
7	Wise	Birchfield	91	\$ 12,389	64	7	9	\$ 792,921
8	Lee	Blackwater	39	\$ 19,884	27	6	4	\$ 536,867
9	Wise	Hurricane	29	\$ 18,631	20	4	3	\$ 372,618
<b>TOTAL - PDC 1</b>			<b>1,368</b>	<b>\$ 9,052</b>	<b>957</b>	<b>70</b>	<b>129</b>	<b>\$ 8,662,984</b>

## PDC 2 -- Broadband

PDC 2 - CUMBERLAND PLATEAU								
Priority	County	Target Area for Improvement - Broadband	Homes Passed	Cost per Customer	Customers (at take rate)	Backbone Miles	Drop Miles	Total Estimated Cost
1	Tazewell	Baptist Valley	712	\$ 3,671	498	2	67	\$ 1,828,233
2	Dickenson	Haysi	37	\$ 5,454	26	1	4	\$ 141,813
3	Russell	Cleveland to Carbo	690	\$ 4,246	483	6	65	\$ 2,050,899
4	Buchanan	Council to Davenport	473	\$ 3,415	331	0	45	\$ 1,130,458
5	Tazewell	Abbs Valley	370	\$ 3,899	259	2	35	\$ 1,009,884
6	Tazewell	Gratton Valley	341	\$ 5,317	239	6	32	\$ 1,270,687
7	Dickenson	Honey Camp	85	\$ 9,467	60	5	8	\$ 568,009
8	Buchanan	Conaway	77	\$ 10,159	54	5	7	\$ 548,573
9	Buchanan	Big Rock	76	\$ 7,936	53	3	7	\$ 420,621
10	Tazewell	Richlands to Jewell Ridge	248	\$ 7,172	174	9	23	\$ 1,247,892
11	Buchanan	Dismal River Rd to Whitewood	234	\$ 11,460	164	17	22	\$ 1,879,384
12	Dickenson	Clinchco	112	\$ 4,267	78	1	11	\$ 332,822
13	Tazewell/Buchanan	Jewell Ridge to Bearwallow	63	\$ 13,490	44	6	6	\$ 593,565
14	Tazewell	Thompson Valley	167	\$ 11,241	117	12	16	\$ 1,315,201
15	Russell	Green Valley Rd	139	\$ 7,311	97	5	13	\$ 709,206
16	Russell	Belfast Mills	129	\$ 7,011	90	4	12	\$ 630,976
17	Tazewell	Tannersville	122	\$ 13,576	85	11	12	\$ 1,153,952
18	Buchanan	Home Creek	105	\$ 7,835	74	4	10	\$ 579,798
19	Buchanan	Hurricane Creek	89	\$ 9,166	62	5	8	\$ 568,297
20	Dickenson	Breaks	78	\$ 8,462	55	4	7	\$ 465,385
21	Buchanan	Hurley	57	\$ 9,021	40	3	5	\$ 360,833
22	Dickenson	Hill Ridge	56	\$ 6,974	39	2	5	\$ 271,981
23	Dickenson	Lick Creek	79	\$ 16,872	55	10	7	\$ 927,987
24	Buchanan	Bearwallow to Peapatch	35	\$ 22,402	25	6	3	\$ 560,039
<b>TOTAL - PDC 2</b>			<b>4,484</b>	<b>\$ 209,957</b>	<b>3,139</b>	<b>126</b>	<b>425</b>	<b>\$ 20,566,494</b>

**PDC 3 -- Broadband**

PDC 3 - MOUNT ROGERS								
Priority	County	Target Area for Improvement - Broadband	Homes Passed	Cost per Customer	Customers (at take rate)	Backbone Miles	Drop Miles	Total Estimated Cost
1	Washington	South of Glade Spring	182	\$ 7,733	127	7	17	\$ 982,091
2	Bland	Ceres	39	\$ 6,271	27	1	4	\$ 169,327
3	Grayson	Providence to Fries	374	\$ 4,548	262	4	35	\$ 1,191,642
4	Smyth	Sugar Grove	301	\$ 4,910	211	4	29	\$ 1,035,967
5	Bland	Clear Fork	113	\$ 13,752	79	11	11	\$ 1,086,374
6	Smyth	Rich Valley	443	\$ 6,863	310	14	42	\$ 2,127,419
7	Bland	Bland to Holly Brook	283	\$ 10,703	198	19	27	\$ 2,119,121
8	Carroll	Hillsville to Fancy Gap	254	\$ 7,132	178	9	24	\$ 1,269,484
9	Washington	Damascus	182	\$ 3,768	127	1	17	\$ 478,483
10	Wythe	Austinville	175	\$ 5,955	123	4	17	\$ 732,497
11	Bland	Grapefield	96	\$ 16,083	67	11	9	\$ 1,077,560
12	Grayson	Independence to Elk Creek	185	\$ 9,485	130	10	18	\$ 1,233,007
13	Bland	Dry Fork	151	\$ 8,958	106	8	14	\$ 949,500
14	Grayson	Baywood	76	\$ 6,313	53	2	7	\$ 334,601
15	Washington	Mendota	63	\$ 4,959	44	1	6	\$ 218,205
16	Grayson	Galax to Old Town	60	\$ 5,962	42	1	6	\$ 250,419
17	Washington	Hayter's Gap	45	\$ 9,927	32	3	4	\$ 317,649
18	Smyth	Chilhowie Industrial Park	1	\$ 88,852	1	1	0	\$ 88,852
19	Bland	Little Creek	119	\$ 15,516	83	13	11	\$ 1,287,826
20	Carroll	Dugspur to Laurel Fork	105	\$ 15,285	74	11	10	\$ 1,131,108
21	Grayson	Independence to Bridle Creek	101	\$ 9,296	71	5	10	\$ 660,010
22	Wythe	Castleton Road	98	\$ 9,239	69	5	9	\$ 637,484
23	Carroll	South of Woodlawn	73	\$ 8,112	51	3	7	\$ 413,735
24	Wythe	Barren Springs	53	\$ 8,221	37	2	5	\$ 304,195
25	Grayson	East of Troutdale	25	\$ 7,217	18	1	2	\$ 129,910
26	Grayson	Mouth of Wilson to Rugby	87	\$ 14,762	61	9	8	\$ 900,503
27	Grayson	Rte 58 to Providence	77	\$ 12,331	54	6	7	\$ 665,873
28	Grayson	Elk Creek to Comers Rock	74	\$ 9,816	52	4	7	\$ 510,407
29	Grayson	Bridle Creek to Mouth of Wilson	54	\$ 17,752	38	7	5	\$ 674,567
<b>TOTAL - PDC 3</b>			<b>3,889</b>	<b>\$ 349,720</b>	<b>2,725</b>	<b>177</b>	<b>368</b>	<b>\$ 22,977,817</b>



## 5.2 Broadband Prioritized Target Areas for Improvement; All PDCs

Ranking	PDC	County	Target Area for Improvement - Broadband	Ranking	PDC	County	Target Area for Improvement - Broadband
1	PDC2	Tazewell	Baptist Valley	32	PDC1	Wise	Coeburn
2	PDC3	Washington	South of Glade Spring	33	PDC2	Russell	Green Valley Rd
3	PDC3	Bland	Ceres	34	PDC2	Russell	Belfast Mills
4	PDC2	Dickenson	Haysi	35	PDC3	Grayson	Baywood
5	PDC2	Russell	Cleveland to Carbo	36	PDC3	Washington	Mendota
6	PDC2	Buchanan	Council to Davenport	37	PDC3	Grayson	Galax to Old Town
7	PDC3	Grayson	Providence to Fries	38	PDC3	Washington	Hayter's Gap
8	PDC2	Tazewell	Abbs Valley	39	PDC3	Smyth	Chilhowie Industrial Park
9	PDC2	Tazewell	Gratton Valley	40	PDC2	Tazewell	Tannersville
10	PDC3	Smyth	Sugar Grove	41	PDC3	Bland	Little Creek
11	PDC3	Bland	Clear Fork	42	PDC3	Carroll	Dugspur to Laurel Fork
12	PDC2	Dickenson	Honey Camp	43	PDC2	Buchanan	Home Creek
13	PDC2	Buchanan	Conaway	44	PDC1	Wise	Guest River
14	PDC2	Buchanan	Big Rock	45	PDC3	Grayson	Independence to Bridle Creek
15	PDC1	Lee	District 5 (north of 58 Alt)	46	PDC3	Wythe	Castleton Road
16	PDC3	Smyth	Rich Valley	47	PDC2	Buchanan	Hurricane Creek
17	PDC1	Scott	Gate City to Duffield	48	PDC2	Dickenson	Breaks
18	PDC3	Bland	Bland to Holly Brook	49	PDC3	Carroll	South of Woodlawn
19	PDC1	Wise	Appalachia - Stonega	50	PDC2	Buchanan	Hurley
20	PDC1	Wise	Appalachia - Exeter	51	PDC2	Dickenson	Hill Ridge
21	PDC3	Carroll	Hillsville to Fancy Gap	52	PDC3	Wythe	Barren Springs
22	PDC2	Tazewell	Richlands to Jewell Ridge	53	PDC3	Grayson	East of Troutdale
23	PDC2	Buchanan	Dismal River Rd to Whitewood	54	PDC1	Wise	Birchfield
24	PDC3	Washington	Damascus	55	PDC3	Grayson	Mouth of Wilson to Rugby
25	PDC3	Wythe	Austinville	56	PDC2	Dickenson	Lick Creek
26	PDC2	Dickenson	Clinchco	57	PDC3	Grayson	Rte 58 to Providence
27	PDC3	Bland	Grapefield	58	PDC3	Grayson	Elk Creek to Comers Rock
28	PDC2	Tazewell/Buchanan	Jewell Ridge to Bearwallow	59	PDC3	Grayson	Bridle Creek to Mouth of Wilson
29	PDC3	Grayson	Independence to Elk Creek	60	PDC1	Lee	Blackwater
30	PDC2	Tazewell	Thompson Valley	61	PDC2	Buchanan	Bearwallow to Peapatch
31	PDC3	Bland	Dry Fork	62	PDC1	Wise	Hurricane

### 5.3 Cellular – Target Areas for Improvement

#### PDC 1 – Wireless

PDC 1	
County	Target Area for Improvement - Cellular
Lee	Blackwater
Lee	Ewing
Lee	Flatwoods
Lee	Keokee
Lee	LMU Vet School
Lee	Rose Hill
Lee	St Charles
Norton	Flag Rock Recreation Area
Norton	Hawthorne Drive
Scott	Clinchport to Dungannon
Scott	Dungannon
Scott	Fort Blackmore
Scott	Gate City to Duffield
Scott	Gate City to Nickelsville
Scott	Nickelsville
Scott/Russell	Nickelsville to Lebanon (Russell County, 30 mi)
Scott	Rye Cove
Scott	Twin Springs
Wise	Airport
Wise	Appalachia
Wise	Coeburn
Wise	Guest River area (NW of Norton, N of Blackwood)
Wise	Pound
Wise	Wise (past the airport towards Dickenson County)

**PDC 2 – Wireless**

<b>PDC 2</b>	
<b>County</b>	<b>Target Area for Improvement - Cellular</b>
Buchanan	US 460 Vasant to Richlands
Buchanan/Dickenson/Russell	Route 80/Scenic Bike Trail
Dickenson	Clintwood to St. Paul
Dickenson	Edwards Ridge
Dickenson	Haysi
Dickenson	Lick Creek
Russell	Cleveland
Russell	Dante
Russell	Honaker
Russell	Lebanon to Hansonville
Russell/Washington	Hansonville to Abingdon

**PDC 3 – Wireless**

<b>PDC 3</b>	
<b>County</b>	<b>Target Area for Improvement - Cellular</b>
Bland	Ceres
Bland	Clear Fork
Bland	Dry Fork
Bland	Grapefield
Bland	Holly Brook
Bland	Little Creek
Carroll	Dugspur
Carroll	Laurel Fork
Carroll	S of Woodlawn/NE of Lambsburg
Washington	Abingdon

**Wireless Service in the Future**

Unlike Broadband Service, little can be done by the regional leaders to improve wireless communications without the full cooperation and assistance of a major wireless carrier.

It is impossible to forecast the total capital cost to improve the wireless coverage in these unserved communities. The recent 4g wireless project undertaken by the Virginia Coalfield Coalition resulted in significant regional coverage expansion (estimated at 90% of the population in PDCs 1 and 2) for \$15 Million, with a matching capital expenditure by a carrier. It is reasonable to estimate that a similar budget would be required to achieve 100% coverage.

One thing is clear from the initial 4g wireless initiative. There can be no economic development, eco-tourism, smart communities, smart electric grid, autonomous vehicles, or anything of the like without solid wireless communications network.

#### **5<sup>th</sup> Generation Wireless (5G).**

The next evolution of wireless communications (mobile point-to-multipoint communications, sometimes called “cellular”) is called 5<sup>th</sup> Generation Wireless or 5G. 5G is a standards-based protocol that enables much higher data transmission speed to wireless devices than any previous standard.

**Why is 5G important?** 5<sup>th</sup> generation wireless will enable speeds of up to 4 gigabits per second. That is 80 times faster than the speeds experienced on a 4g LTE network. Our world is becoming increasingly more dependent upon mobile data. Things like Smart Cities, Smart Grid, Hi-definition Tele Health, and Autonomous Vehicles will all require 5G.

**What is the network like?** 5G operates at a much higher wave frequency than any of the previous generation’s networks. This means the signals will travel shorter distances and not be able to travel through impediments. However, the frequencies will carry much greater data payloads.

The FCC concluded its first 5G spectrum auction this year in the 28 GHz band, and its auction of 24 GHz spectrum is taking place right now. Later this year, the FCC will auction the upper 37 GHz, 39 GHz, and 47 GHz bands.

5G will require a completely different network architecture and infrastructure than is currently in place. Instead of 200 foot-tall towers with large macro cells that can cover miles of territory, 5G will require small-cell or micro-cell architecture that broadcasts only a few hundred feet. It is generally believed that 5G cells will be required every thousand feet or so. Cells will be placed on light poles, utility poles, rooftops, and sides of buildings. The cells are small and require less power than macro cells. A key component of the network is fiber optic cable, as all cells must be connected with fiber to meet the bandwidth and latency requirements.

**When will 5G be deployed?** Carriers are working on beta tests and early network testing in a handful of metropolitan markets. The complete spectrum auction being managed by the FCC will not be completed until the end of 2019. Mobile handset makers like Apple will not release a 5G phone until late 2020 or 2021. 5G will not be widely available for several years. The initial deployments that have been announced are all major metropolitan areas. It is unknown how long, if ever, 5G will be deployed in rural markets like our three Planning Districts. ***There is nothing expected from 5G that would disrupt the plan outlined in this document for the foreseeable planning horizon.***

## 6 Recommendations and Next Steps

It is neither the purpose nor the intention of this study to point out the obvious to the leadership of PDCs 1, 2, and 3. The situation is plainly known to every planner, politician, stakeholder, and citizen in the region – **the communications infrastructure in Southwest Virginia is woefully inadequate to move the region forward.**

There are areas of breakthrough performance that can be pointed to as major successes:

1. LIT Networks bringing direct fiber connectivity and terabit speeds to the region from Ashburn thus enabling the development of critical data centers. Lowering the cost of wholesale Internet for all regional service providers. And providing diversity to the major Internet NAPs in Atlanta Georgia with ring protection.
2. Scott County Telephone's, Citizens Telephone's, and Sunset Digital's Fiber to the Home (FTTH) initiatives delivering gigabit speeds to residential customers.
3. The VCC 4g wireless project which enabled 4<sup>th</sup> generation wireless services to reach a reported 90% of the population of PDC's 1 and 2 (excluding Scott and Tazewell Counties).
4. CPC Broadband (formerly CPC OptiNet) is a subsidiary company of the Cumberland Plateau PDC. It was organized to serve Russell, Dickenson, Tazewell, and Buchanan Counties. Partnering with Point Broadband the Company has obtained over \$37 million in grant funding for the construction of 700 miles of fiber optic broadband backbone that is now serving almost 900 industrial, commercial, governmental and educational institutions in the region, including Northrup Grumman, Sykes, Pyott-Boone, and Dickenson County Public Schools.

Yet, despite these successes, the plain truth is that without service **ubiquitously** in the region, there can be no sustainable economic development, job creation and retention, and work force development.

The purpose of this report is to identify a prioritized inventory of areas to address; presented in Section 5. Our recommendations for implementing improvement are as follows:

### 6.1 Recommendations

1. Address the broadband problem on a regional basis as three PDC's, not individually, competing against one another for scarce resources. Consider forming a separate legal entity (or repurposing an existing one like the VCC) specifically to attack solving the broadband problems in the region. Hire a

dedicated Executive Director and task him/her with time-specific and measurable goals. Link compensation to goal attainment.

2. This report presents a priority list by PDC, and a single integrated list. There are economies of scale to network deployment. It may be far more cost effective to attack the highest priority from PDC 3 and a middle priority from PDC 2 at the same time. This should be considered before undertaking a strict buildout of the presented priorities.
3. Formalize agreements with SCTC, Citizens, and CPC Broadband that outline the mechanics of how network will be funded, deployed, operated, and maintained, including any revenue sharing.
4. Continue to encourage WISPs such as iGo, HillCom, and Gigabeam to deploy their wireless networks in unserved markets. While wireless is neither as robust nor as high-a-quality service as fiber, this is a situation where anything is better than nothing for the unserved customer. The encouragement can come in the form of discounted costs for tower attachment, access to dark fiber, and assistance with grant/loan programs.
5. Ignore the notion that some communities may eventually be served by virtue of the Connect America Fund. The FCC Connect America Fund recipients are not obligated to serve customers for up to six years. The unserved residents of Southwest Virginia need service NOW.
6. Attain legislative assistance, particularly for wireless (cellular) deployments. Several times in this report it has been noted that there is no path forward for wireless expansion without a carrier's participation. When the VCC implemented the 4g wireless program in 2011, it was only possible because of the leadership of Delegate Kilgore and the Tobacco Commission striking a deal with a commercial wireless provider.
7. Strive to get Southwest Virginia broadband worked into the annual state budget. Governor Northam has noted several times that rural broadband is a priority for his administration. In December 2018, the Governor announced plans to ask the General Assembly to commit \$46 million in the state's upcoming budget to assist rural areas of Virginia to get broadband Internet access. The Southwest Legislative Delegation should strive for a specific earmark for the region.

## 7 ATTACHMENTS AND APPENDICES

### 7.1 COMMUNITY NEEDS APPENDIX

#### LENOWISCO

The following table shows the population change and density per square mile for PDC 1 – LENOWISCO (Lee, Norton, Wise, and Scott).

PDC 1	2010 Census	2018 Estimate	Percent Change	Square Miles	Density/Sq. Mile
Lee	25,587	23,994	-6%	436	55
Norton City	3,958	3,908	-1%	7	522
Wise	41,452	38,386	-7%	403	95
Scott	23,177	22,121	-5%	536	41
<b>Total/Average</b>	<b>94,174</b>	<b>88,409</b>	<b>-5%</b>	<b>1,382</b>	<b>68</b>

#### Lee County

Lee County is served by Comcast and Verizon with additional services provided by Sunset Digital Communications.

Pennington Gap and Jonesville are the main population centers within the county and are relatively well served. However, St. Charles and the surrounding communities are not as well served. A few areas reported no telephone service in inclement weather and a complete void of multi-channel video service. Of course, high speed Internet service is non-existent. Business services are limited.



From Rose Hill westward toward Cumberland Gap, complaints about broadband service have been ongoing for years.

Verizon, the Incumbent Local Exchange Carriers (ILEC) in the region, is offering broadband services using DSL in some portions of the region. DSL has a physical

distance limitation that precludes it from being widely available. Even then, DSL is insufficient to meet the current FCC definition of broadband. Because of the technology limitations, it is understood there are no upgrades forthcoming for DSL that will keep pace with current bandwidth services in most of the nation.

Poor cellular service is a common complaint. New towers are being planned in Lee County for emergency services. The county planners are building these towers to accommodate commercial carriers in the hope that macro cells will be collocated on these towers and improve that wireless situation. To date, no commercial carriers have shown an interest in these new towers. Local officials understand that cellular wireless service is inadequate throughout the county and that it is an impediment to sustainability.

Communities identified as high-priority for broadband expansion are:

- District 5 (north of 58 Alt)
- Keokee
- Blackwater
- Flatwoods
- Rose Hill
- Ewing

***“The two things which we must overcome as a community and as a region is the challenge of overcoming the older generation/leaders’ way of thinking and planning for the expected exponential change in [broadband] capacity needs in the future.” –  
Leton Harding, Powell Valley National Bank***

### Wise County

Wise County receives most of its digital services from Comcast, Verizon, Sunset Digital, and Scott County Telephone Cooperative (SCTC).



Wise County has several backbone networks traversing the county with acceptable service levels to many. As a result, the county has seen economic development opportunities improve. One major data center, two call centers, and one digital-operations-center have located in Wise County.

However, not all residents of Wise County are receiving satisfactory services. Customers farthest from the main networks experience service quality and reliability failures, and competitive services options are not available. Greater speeds for uploads and downloads are needed for work-at-home opportunities for entrepreneurs and the general workforce.



Wise County communities identified as high-priority for broadband expansion are:

- Powell Valley
- Appalachia and the immediately surrounding coal camps
- Blackwood
- Areas north of the City of Norton
- West of US. 23
- Areas outside of Coeburn toward Scott County
- Smaller communities northeast of the Town of Wise
- Coeburn Mountain area (including Airport Road)
- Northwest of St. Paul
- Pound

### Scott County

Scott County Telephone Cooperative is the Incumbent Local Exchange Carrier for the county. SCTC has been very active in providing advanced telecom services throughout the county and region. Residents and businesses located near SCTC's central offices, remote access nodes, and switching centers receive excellent service. However, communities located further from the main exchanges don't have all of the bandwidth necessary to power their digital needs.



All schools in the county are well served; however, the lack of last-mile connectivity to residents hampers the full digital curricula potential.

The lack of adequate wireless (cellular) coverage throughout the county continues to be a challenge, with routine complaints coming in from various governmental entities within the county.

Specific communities in need for improved cellular service include:

- Nickelsville
- Fort Blackmore
- Rye Cove and
- Dungannon

*“Our biggest obstacle is not the infrastructure, but our vision of how to use that infrastructure.” – Danny Dixon, Vice Mayor of Nickelsville*

## City of Norton

The City of Norton has enjoyed robust communications services for years as a result of Verizon hosting a major Central Office in the downtown area. Economic development has taken advantage of that situation by successfully recruiting several digital businesses over the years including the Dual Party Relay Center providing services for the entire Commonwealth of Virginia through a contract with AT&T. That center recently closed as a result of contract changes and consolidation of services elsewhere. Verizon has also placed a directory assistance center within the city as has the statewide service that arranges Medicaid transportation services for their clients.

## Cumberland Plateau

The following table shows the population change and density per square mile for PDC 2 – Cumberland Plateau (Buchanan, Dickenson, Russell, and Tazewell Counties).

PDC 2	2010 Census	2018 Estimate	Percent Change	Square Miles	Density/Sq. Mile
Buchanan	24,098	21,576	-10%	503	43
Dickenson	15,903	14,516	-9%	331	44
Russell	28,897	27,057	-6%	474	57
Tazewell	45,078	41,973	-7%	519	81
<b>Total/Average</b>	<b>113,976</b>	<b>105,122</b>	<b>-8%</b>	<b>1,826</b>	<b>56</b>

## Buchanan County

Buchanan County is deep within the Coalfields of Virginia, adjacent to both Kentucky and West Virginia. The greatest communications network challenges in Buchanan County are the steep mountain terrain. However, a certain “can do” attitude exists which has fostered creative solutions to many problems.

This theme carried throughout the interviews conducted in the county. When solutions weren’t forthcoming from the service providers, local leaders took the initiative to raise funds and, in some cases, worked directly with the incumbent providers to extend services into communities where a business case could be made.

Educational institutions have created strong demand for broadband and wireless services, making communications a critical success factor for the region. A private law school and college of pharmacy have been operational in Buchanan County since 1994 and 2003,





*“Poor cellular coverage results in unsatisfying tourism experiences for our visitors” - Rita Surratt, Director, Dickenson County Chamber of Commerce*

## Russell County

Service providers in Russell County include Shentel, Verizon, and the Cumberland Plateau Company through a partnership with Sunset Digital. Russell County has capitalized on the “gig economy” by successfully recruiting call centers and software development centers to the region.

High-speed fiber lines were first placed in Lebanon nearly two decades ago which allowed the creation of data center and software development jobs.

However, connectivity beyond the Lebanon and the transportation corridors is still a problem for most of the county.



Affordability of broadband services was mentioned as a particular issue in Russell County.

When interviewees were asked about particular Russell County needs, **“all areas beyond Lebanon”** was the response.

Particular communities outlined regarding cellular wireless service needs included:

- Lebanon to Gate City - 71 - No service 75% of the time (1 hr. drive)
- Lebanon to Hansonville - Dropped calls/spotty coverage
- Lebanon to Abingdon - Dropped calls/spotty coverage
- Dante (near St. Paul) - Dropped calls/spotty coverage
- Cleveland - Dropped calls/spotty coverage
- Swords Creek -- Dropped calls/spotty coverage

The most pressing concern however was the inability to foster innovation and retain young people without dependable, affordable, quality broadband communications.

*From an economic development perspective, “you can’t ‘get in the game’ or even ‘sit on the bench’ without broadband infrastructure.” – Rachel Patton, WIA One Assistant Director*



## Bland County

Bland County, the least populated county studied, was recently awarded a \$459,764 grant from the Appalachian Regional Commission for a 33-mile fiber build to businesses and institutions in the county. The fiber run will start in Rocky Gap, then south through Bastian, then to Bland. The fiber will run along the Route 52 corridor. Once the fiber construction is finished, an ISP partner will use wireless technology to reach additional locations off Route 52. The project will make Internet access available to 37 businesses, as well as Bland County Schools, the Board of Education offices and the Bland County Medical Clinic, a federally qualified health center.



The existing providers in Bland County primarily use fixed wireless and existing DSL network plant to provide service and include:

- Sunset - Middle-mile fiber along Rt. 42 to Bland Correctional Facility
- CenturyLink – Some 10 MBPS service over copper but mostly 3 MBPS
- Verizon
- Gigabeam – Serving approximately 200 residents using towers throughout the county. They provide 50 MBPS service for \$79/mo. and 25 MBPS for \$30/mo.

Bland currently has a public-private partnership with Gigabeam Networks for up to 2 gig wireless.

Currently, the residential needs are not being met. The following areas were identified as having the greatest needs:

- Ceres (agriculture, tourism, 42/52 split)
- Grapefield
- Dry fork, Clear Fork, and Little Creek
- Hollybrook

## Carroll County

Carroll County has a population of approximately 29,724. Parts of the county are adequately served (the north side of Hillsville, for example), but other areas (specifically the south side of Hillsville) can only get about 1.5 MBPS, or “barely enough to e-mail.” In terms of cellular coverage, U.S Cellular has “good coverage” along main transportation corridors.



Resident complaints stem from CenturyLink and the lack of responsiveness to customers. The county has good broadband in the industrial parks, but workforce is the big issue for economic development.

CenturyLink is using its incumbent network (DSL) to serve customers

and used CAF funding to make it look as if customers had access to broadband when, in fact, they didn't.

Areas of greatest need include:

- Pipers Gap
- Laurel Fork
- Dugspur Region
- South of Woodlawn/Northeast of Lambsburg (FastLink has about 300 customers north of Lambsburg)

### Grayson County

Grayson County has been very proactive in pursuing solutions to its communities' broadband needs. In fall 2018, Grayson County issued an RFP for Broadband Services.

While a high level of detail on Grayson County's specific needs can be found in the RFP, a high level assessment is that most of the county is underserved or unserved.

- 77%, or 5,222 households have documented need for improved broadband
- Broadband is the number one need in the community. After Broadband, "Roads" are the number two need.
- Real estate sales and values are impacted by the degree to which broadband is available in a community.
- There is a potential growth opportunity for farmers to implement enabling technologies to better manage farm operations, but these technologies often require a broadband infrastructure
- Population retention & recruitment is a top priority for the Grayson County government. Broadband is considered #1 opportunity to solve this problem.



- As a former health care administrator, the County Administrator sees the value of connectivity to the entire population to improve health outcomes, especially in an area such as Grayson with a “graying population.”
- A lack of high speed communications is also contributing to the loss of young people after graduation.
- Areas of greatest need in the county (from current RFP):
  - Wilson & Elk Creek Districts; Mouth of Wilson, Rugby, East of Troutdale, Comers Rock
  - Providence, Elk Creek and Old Town; Elk Creek, Independence, Baywood
  - Wilson & Elk Creek Districts; East Mouth of Wilson, Buck Mountain, Big Ridge, Bridle Creek
  - Wilson District; West Mouth of Wilson, Whitetop
  - Providence, Old Town Districts; Fries, Baywood (east)
- Existing providers include:
  - CenturyLink
  - HughesNet and Exceed (WildBlue)
  - Comcast
  - Lingo (via Wired Road)
  - Citizens Telephone
- There are 13 total towers in the County but providers lack the incentive to upgrade.

*“High speed communication is a driver and enabler for the community. After Broadband, ‘Roads’ are the number two need.” – Bill Shepley, Grayson County Administrator*

### Smyth County

Smyth County has some fiber assets in the area through Sunset but, like many other counties in the planning districts covered in this report, needs a last mile solution. The business community’s needs are not being met and are at risk of leaving.

Providers serving Smyth County include CenturyLink, Comcast, and Sunset. There are no competitive local exchange carriers in the area. Cell phone service is “totally unreliable” in certain areas (northern and southern bands of the county), but providers won’t locate off the towers in the area. The majority of the complaints are about CenturyLink’s service.



The communities within Smyth County with the greatest need are:



- Sugar Grove
- Rich Valley.

### Washington County



In Washington County, business needs are being met only along I-81 corridor and within the Town of Abingdon and the City of Bristol. Beyond a three-mile radius from that corridor, businesses are either underserved or unserved. Residential needs are even greater. Mendota, Glade Spring and Damascus are all in need of service. Complaints from residents are frequent.

Service providers include Sunset, Charter, CenturyLink, and Comcast. Cellular wireless providers include VZW, T-Mobile and AT&T.

The specific communities within the county with the greatest needs include:

- Mendota
- Glade Spring
- Damascus

### Wythe County



In general, the industrial parks have good service. Businesses located along the transportation corridors are considered adequately served due to the amount of fiber available. However, residential coverage is spotty. The county has been suffering from economic stagnation in recent years. Historically, Wythe had been slowly growing while counties to the west were losing population. Only recently has the trend changed in Wythe as well. The current population is just over 29k.

The level of coverage in Wythe County varies depending on the part of the county. The denser areas (the eastern end of the county including Max Meadows and Austinville) have more coverage than less dense areas.

The current providers include CenturyLink and Shentel (which bought Rural Retreat Cable). Shentel offers “higher” speeds in Rural Retreat (up to 10 Mbps). The Chairman

of the BoS lives on Chapman road (the road running parallel to I-81/77 corridor (south side of Interstate) and is very dissatisfied with options and speeds available.

The Fort Chiswell/Lead Mines area is the one of greatest need. Also, the eastern end of the county is the largest growth area.

### **City of Galax**

Galax is more dense than other areas with the planning district. Also, it is part of Wired Road and is a Regional Broadband Authority, so the businesses and residents' needs are being met for the most part.

- Big businesses include Albany Industries, Moag Industrial, Vaughn Bassett furniture company, etc. CrossRoads Facility is a business incubator, and XM Radio call center has about 150 employees.
- There are about 7,000 people over 8 square miles, so a bit denser than other areas in the planning district.
- Wired Road forced providers to upgrade and expand their networks
- Perceived positive impact on real estate (byers won't consider moving to homes without broadband)
- Important for small businesses' online sales
- Schools are seeing higher enrollments and were using Lingo, which is one of the Wired Road providers. They are now using CenturyLink.
- Galax is upgrading some cell towers to ensure reliability
- Fiber runs east up to Airport Road

The main regional service providers in Galax include:

- Comcast – up to 130 meg residential in some areas; has a retail store in downtown Galax.
- CenturyLink – up to 25 meg
- Wired Road RBA

## 7.2 Sources of Funding Appendix

### National Funding

In December 2018, US Department of Agriculture (through RUS) announced a \$600 million grant and loan Broadband Program, ReConnect, to assist with building rural broadband infrastructure. Telecommunications companies, rural electric cooperatives and utilities, Internet service providers, and municipalities may apply for funding. To be eligible, communities must have populations smaller than 20,000 people with no broadband service or where service is slower than 10/1. Loan applications are due April and May 2019, depending on the program applied for.

### State Level Awards Granted

The state of Virginia, through Governor Northam, is heavily invested in the vision of equitable broadband coverage throughout the state. The Governor's vision is statewide broadband coverage within 10 years. The two agencies that have deployed the most capital to support broadband connectivity are the Virginia Tobacco Region Revitalization Commission (Tobacco Commission) and the Virginia Department of Housing and Community Development (DHCD). Part of receiving funding is a requirement that communities/localities have a "granular plan" for ensuring coverage.

#### Virginia Coalfield Economic Development Authority (VCEDA)

VCEDA has been involved with regional broadband expansion efforts for many years. They have been a provider of capital for the LENOWISCO Fiber-to-the-Home initiative, the Cumberland Plateau Company network expansion, and the Virginia Coalfield Coalition 4g Wireless project.

VCEDA indicated that "the more broadband deployed in the region, the more economic development is enhanced."

VCEDA identified the following communities as high potential candidates for broadband deployment:

- Haysi
- Nickelsville
- US 460 (between Richlands and Vansant)
- Hurley
- Whitewood
- Clinchco.

### Regional Awards Granted

#### Appalachian Regional Commission (ARC)

The Appalachian Regional Commission, or ARC, believes that “access to advanced telecommunications infrastructure for all Appalachian communities is essential for the Region to reach economic parity with the nation.”

ARC partners with public entities, non-profits, and the private-sector to spread access to telecommunications infrastructure and applications throughout the Region.

Specifically, ARC’s POWER program is a congressionally funded initiative that targets federal resources to help communities and regions that have been affected by job losses in coal mining, coal power plant operations, and coal-related supply chain industries due to the changing economics of America’s energy production. Virginia will receive 5 grants totaling more than \$2.8 million as part of this program.

One of the grants will go to Bland County (in the amount of \$459,764) for a 33-mile fiber build to businesses in the county. The fiber run will start in Rocky Gap, then south through Bastian, then to Bland. The fiber will run along the Route 52 corridor. Once the fiber construction is finished, an ISP partner will use wireless technology to reach additional locations off Route 52. The project will make Internet access available to 37 businesses, as well as Bland County Schools, the Board of Education offices and the Bland County Medical Clinic, a federally qualified health center.

**Pending Applications at the Tobacco Commission**

- Fiscal year 2019 pending last mile broadband applications to the Tobacco Commission for Southwest Virginia are outlined in the following table:

FY 2019 Last Mile Broadband - Pending Applications for SWVA

<b>Req #</b>	<b>Organization</b>	<b>Project Title</b>	<b>Request Amount</b>
3535	Carroll County Industrial Development Authority	The Wired Road/Carroll County Last Mile Neighborhood Pole Project	\$200,000
3531	Cumberland Plateau Company	Cleveland Broadband Expansion Project	\$544,137
3530	Grayson County	Connect Grayson	\$325,000
3522	Industrial Development Authority of Dickenson County	Honey Camp Last Mile Broadband	\$65,000
3519	Scott County Telephone Cooperative	Weber City Broadband Fiber-to-the-Home Initiative	\$1,500,000
3525	Tazewell County Industrial Development Authority	Tazewell County Wireless Service Authority Broadband Expansion Phase III	\$150,000
3527	Industrial Development Authority of Russell County VA	North Central Russell / South Buchanan Counties Broadband Expansion Project	\$1,900,000
<b>Total Potential Funding for SWVA</b>			<b>\$4,684,137</b>

## Funding Strategy

Identify the highest potential providers of capital, including government and private sources, to fund the highest priority communities. Start at the regional level, then state, then national.

- Virginia Rural Broadband Planning Initiative (VRBPI)
- Connect America Fund
- Rural Utility Services
- Community Development Block Grants (CDBG)

## Potential Funding Sources

The following table outlines a more comprehensive list of potential funding sources that have been identified by the Tobacco Commission.

Source	Opportunity	Brief Description	Application Timeline
<b>State Funding Opportunities</b>			
<b>Department of Housing and Community Development (DHCD)</b>	Community Development Block Grant Planning Grant <a href="http://www.dhcd.virginia.gov/index.php/community-partnerships-dhcd/79-community-development-block-grant-cdbg-planning-grant.html">http://www.dhcd.virginia.gov/index.php/community-partnerships-dhcd/79-community-development-block-grant-cdbg-planning-grant.html</a>	Funds available for 3 areas: planning grants, local innovation grants, implementation and economic development, and large scale local level projects.	January – September
<b>Department of Housing and Community Development (DHCD)</b>	Virginia Telecommunication Initiative <a href="http://www.dhcd.virginia.gov/">http://www.dhcd.virginia.gov/</a>	Provides financial assistance to supplement construction costs by private sector providers to extend services to areas that are presently unserved by any broadband provider. Definition of unserved; speeds <= 10 Mbps/1 Mbps. Eligible applicants: towns, cities, counties, EDA/IDA, broadband/wireless authorities, PDC, etc.	Fall

<b>Virginia Tobacco Region Revitalization Commission</b>	TRRC Last-mile Grant and Loan Fund  <a href="https://www.revitalizeva.org/grant-loan-program/grant-programs/research-development-grant-program/">https://www.revitalizeva.org/grant-loan-program/grant-programs/research-development-grant-program/</a>	Provides grants and loans to public/private partnerships between localities and ISPs to construct projects within its service area.	Announced annually
<b>Virginia Resources Authority (VRA)</b>	Virginia Pooled Financing Program <a href="http://www.virginiaresources.org/page/virginia-pooled-financing-program/">http://www.virginiaresources.org/page/virginia-pooled-financing-program/</a>	Provides financing to local governments for essential projects. All VRA's authorized project areas are eligible for financing in the Virginia Pooled Financing Program (VPFP). Since inception in 2003, over 100 local governments in Virginia have utilized this program to finance or refinance over \$2 billion in infrastructure projects.	Multiple windows annually

**Federal Funding Opportunities**

<b>United States Department of Agriculture Rural Development (USDA)</b>	Community Connect Grant program  <a href="https://www.rd.usda.gov/programs-services/community-connect-grants">https://www.rd.usda.gov/programs-services/community-connect-grants</a>	This program helps fund broadband deployment into rural communities where it is not yet economically viable for private sector providers to deliver service.	Announced periodically
<b>United States Department of Agriculture Rural Development (USDA)</b>	Rural Broadband Access Loan and Loan Guarantee <a href="https://www.rd.usda.gov/programs-services/rural-broadband-access-loan-and-loan-guarantee">https://www.rd.usda.gov/programs-services/rural-broadband-access-loan-and-loan-guarantee</a>	This program offers financial assistance to eligible applicants that will construct, improve, or acquire facilities and equipment needed to provide service at the broadband lending speed as defined in the most recent funding announcement in eligible rural areas.	Announced periodically
<b>United States Department of Agriculture Rural Development (USDA)</b>	Telecommunications Infrastructure Loans & Loan Guarantees  <a href="https://www.rd.usda.gov/programs-services/telecommunications-">https://www.rd.usda.gov/programs-services/telecommunications-</a>	This program provides financing for the construction, maintenance, improvement and expansion of telephone service and broadband in rural areas.	Applications are accepted on a continuing basis

	<a href="#">infrastructure-loans-loan-guarantees</a>		
<b>United States Department of Agriculture Rural Development (USDA)</b>	Distance Learning and Telemedicine Program  <a href="https://www.rd.usda.gov/programs-services/distance-learning-telemedicine-grants">https://www.rd.usda.gov/programs-services/distance-learning-telemedicine-grants</a>	This program helps rural communities use telecommunications to connect to each other and to the world for the purposes of distance learning and telemedicine.	Announced periodically
<b>United States Department of Agriculture Rural Development (USDA)</b>	Community Facilities Direct Loan & Grant Program  <a href="https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program">https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program</a>	This program provides affordable funding to develop essential community facilities in rural areas.	Applications are accepted on a continuing basis
<b>Federal Communications Commission (FCC)</b>	Connect America Fund <a href="https://www.fcc.gov/general/connect-america-fund-caf">https://www.fcc.gov/general/connect-america-fund-caf</a> CAF I, \$1.5B over 10 years to 103 companies. CAF II \$1.98 B over 10 years. Bidding ended 8/2018. Awards pending.	Provider funding for FCC eligible areas only. Eligible areas map: <a href="https://www.fcc.gov/reports-research/maps/connect-america-phase-ii-initial-eligible-areas-map/">https://www.fcc.gov/reports-research/maps/connect-america-phase-ii-initial-eligible-areas-map/</a>	No longer active for new bidders.
<b>Federal Communications Commission (FCC)</b>	FCC Mobility Fund Phase II <a href="https://www.fcc.gov/mobility-fund-phase-2">https://www.fcc.gov/mobility-fund-phase-2</a>	The FCC plans to make up to \$4.53 billion in funding available to mobile operators that are building out 4G LTE networks to underserved rural markets. The funding will be made available over a 10-year period. Operators that receive the support from the auction will build out 4G LTE mobile service that will deliver at least 10 Mbps to customers in markets that lack access to unsubsidized 4G LTE.	Not yet active
<b>Federal Communications Commission (FCC)</b>	E-Rate Funding <a href="http://www.fcc.gov/encyclopedia/e-rate-schools-libraries-usf-program">http://www.fcc.gov/encyclopedia/e-rate-schools-libraries-usf-program</a>	The schools and libraries universal service support program, commonly known as the E-Rate program, helps schools and libraries to obtain affordable broadband.	Winter-Spring
<b>Universal Service Administration Co. (USAC)</b>	Lifeline Support <a href="https://www.usac.org/li/">https://www.usac.org/li/</a>	Lifeline is a federal program that lowers the monthly cost of phone and Internet for eligible customers. Participating companies in Virginia: <a href="http://www.lifelinesupp">http://www.lifelinesupp</a>	Applications are accepted on a continuing basis

		<a href="http://www.usac.org/rhc/healthcare-connect/default.aspx">ort.org/ls/companies/CompanyListing.aspx?state=VA&amp;stateName=Virginia</a>	
<b>Universal Service Administration Co. (USAC)</b>	Rural Health Care – Healthcare Connect Fund  <a href="https://www.usac.org/rhc/healthcare-connect/default.aspx">https://www.usac.org/rhc/healthcare-connect/default.aspx</a>	This program provides a 65 percent discount on eligible expenses related to broadband connectivity to both individual rural health care providers (HCPs) and consortia, which can include non-rural HCPs, if the consortium has a majority of rural sites.	Winter - Summer
<b>Universal Service Administration Co. (USAC)</b>	Rural Health Care – Telecommunications Program <a href="https://www.usac.org/rhc/telecommunications/default.aspx">https://www.usac.org/rhc/telecommunications/default.aspx</a>	This program provides reduced rates to rural health care providers (HCPs) for telecommunications services related to the use of telemedicine and telehealth.	Winter - Summer
<b>US Economic Development Administration (EDA)</b>	Planning Program and Local Technical Assistance Program  <a href="https://www.grants.gov/web/grants/view-opportunity.html?oppld=301936">https://www.grants.gov/web/grants/view-opportunity.html?oppld=301936</a>	This program assists eligible recipients in developing economic development plans and studies designed to build capacity and guide the economic prosperity and resiliency of an area or region.	Applications are accepted on a continuing basis
<b>US Economic Development Administration (EDA)</b>	Public Works and Economic Adjustment Assistance Programs <a href="https://www.grants.gov/web/grants/view-opportunity.html?oppld=294771">https://www.grants.gov/web/grants/view-opportunity.html?oppld=294771</a>	Grants made under this program will leverage regional assets to support the implementation of regional economic development strategies designed to create jobs, leverage private capital, encourage economic development, and strengthen America's ability to compete in the global marketplace.	Applications are accepted on a continuing basis
<b>Department of Education (DOE)</b>	Promise Neighborhoods Competition <a href="http://www2.ed.gov/programs/promiseneighborhoods/index.html">http://www2.ed.gov/programs/promiseneighborhoods/index.html</a>	This program provides funding to support eligible entities to significantly improve the educational and developmental outcomes of children and youth in our most distressed communities.	Spring
<b>Appalachian Regional Commission (ARC)</b>	ARC Project Grants <a href="https://www.arc.gov/funding/arprojectgrants.asp">https://www.arc.gov/funding/arprojectgrants.asp</a>	ARC funds a number of telecommunications activities, including strategic community planning, equipment	Announced annually



		acquisition, and hardware and software for network building. ARC funds can be used for strategic telecommunications planning activities, telecommunication service inventory and assessment activities, aggregation of demand projects, among other activities.	
<b>Federal Reserve</b>	Community Reinvestment Act (CRA) <a href="https://www.dallasfed.org/cd/pubs/digitaldivide.aspx">https://www.dallasfed.org/cd/pubs/digitaldivide.aspx</a>	The Federal Reserve has issued guidance on how to leverage a bank's CRA resources in digital equity initiatives.	Ongoing
<b>Tribal Funding Opportunities</b>			
<b>U.S. Department of Housing and Urban Development (HUD)</b>	Indian Community Development Block Grant <a href="http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/grants/icdbg">http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/grants/icdbg</a>	Provides funds to eligible grantees for housing rehabilitation, land acquisition, community facilities, infrastructure construction, and economic development activities. Eligible applicants for assistance include any Indian tribe, band, group, or nation.	Winter
<b>U.S. Department of Housing and Urban Development (HUD)</b>	Indian Housing Block Grant (IHBG) program <a href="http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/grants/ihbg">http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/grants/ihbg</a>	The provision of broadband is eligible under this program. Eligible IHBG recipients are Federally recognized Indian tribes or their tribally designated housing entity (TDHE), and a limited number of state recognized tribes who were funded under the Indian Housing Program authorized by the United States Housing Act of 1937 (USHA).	Winter
<b>Institute of Museum and Library Services</b>	Native American Library Services <a href="https://www.ims.gov/nofo/native-american-library-services-basic-grants-fy16-notice-funding-opportunity">https://www.ims.gov/nofo/native-american-library-services-basic-grants-fy16-notice-funding-opportunity</a>	Basic Grants are available to support existing library operations and to maintain core library services. Indian tribes, Alaska native villages, regional corporations, and village corporations are eligible to apply for funding under the Native American Library Services grant program.	Spring

### 7.3 Addressable Market Appendix

#### Market Overview

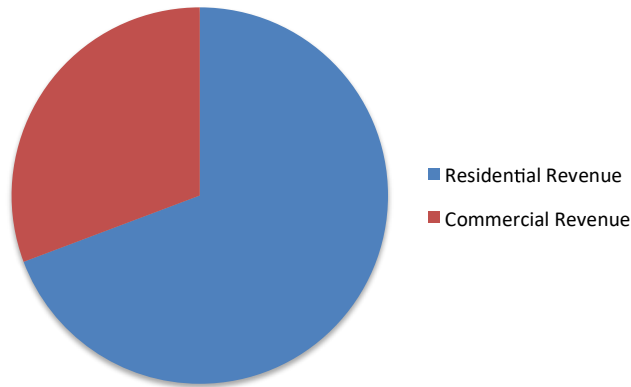
The telecommunications market in Southwest Virginia is estimated at \$289 Million annually for voice, video, data, and wireless services. This estimate is based on the following key factors:

Key Economic Index Factors	SWVA Region
Residential	
Population (2018)	401,745
Households (BRASG 2018 Estimate)	84,270
Median Household Income (BRASG 2018 Estimate)	\$38,945
Economic Index (Income Relative to US)	68%
Economic Index (Income Relative to VA)	56%
Commercial	
Businesses (BRASG Estimate)	7,430
Employment (BRASG Estimate)	49,423

On average, approximately 4% of household income is spent on all communication services.

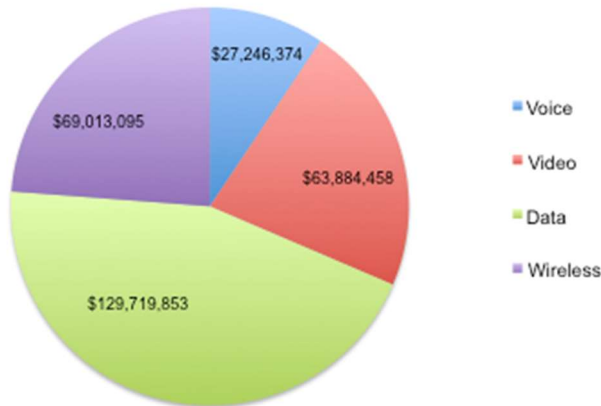
The overall market is roughly split between 31% commercial and 69% residential services.

### Total Revenue – Residential vs. Commercial



By service, the revenue distribution is outlined in the following table, with broadband services driving most of the growth:

### Total Annual Telecom Revenue at Year 1



The important market dynamics that will influence this addressable market are threefold:

- Cable TV Cord Cutting.** As wireless service becomes more reliable and ubiquitous, and as broadband becomes more available, there will be a continued defection not only from landline voice to wireless but also from cable tv to digital, a-la-carte streaming services. Cisco predicts that nearly four-fifths (79 percent) of the world’s mobile data traffic will be video by 2022.
- Mobile Data Demand.** The explosion in mobile data demand only continues. It grew 23% in 2017 in North America. The increasing number of wireless devices and connections will continue to drive the surge in demand for wireless data.

3. **5G Technology.** The evolution of 5<sup>th</sup> Generation, or 5G, networks, holds the promise to deliver faster speeds. However, it is likely that rural areas such as Southwest Virginia may be last in line to see the carriers upgrade, as they will target the larger markets initially. A strong fiber backbone will still be needed to service the 5G network. 4G will carry most of the traffic for the next 10 years or so.

These trends will drive demand for expanded fiber and wireless-dependent services in the region, presenting an opportunity for service providers. However, the issue remains. The associated costs of upgrading networks to meet that demand is still extremely high due to the low population densities and challenging geography of the region. Regional leaders must find ways to partner with providers to bridge the gap so that their communities are not left behind.

## **7.4 Service Provider Appendix**

Following is a brief description of the regional service providers and their capabilities:

### **Burkes Garden Telephone Company**

Burkes Garden Telephone Company (BGTCO) is a small, investor-owned telephone company offering “triple-play” services via a fiber-optic system of approximately 72 fiber miles. The service area is tucked in the eastern edge of Tazewell County, adjacent to Bland County, Virginia. BGTCO migrated from copper to fiber over approximately two years.

The service area covers approximately 75 Sq. Miles from the top of Rich Mountain through Little Creek through Burkes Garden. The service area sits within a crater-like bowl with a mountain ridge totally surrounding the region. The customer count includes 160 full-time with as many as 185 during the summer season. Approximately 100 customers receive broadband, which equates to a take rate of 62%.

GPON and active Ethernet are utilized to serve these customers providing 15/10 Mbps service priced at \$32.95/mo. There are no business customers on the system and approximately 13 or 14 customers are considered to be Amish and as such only utilize the telephone service.

### **Charter Communications**

Charter / Spectrum is the second largest cable provider in the United States (third largest multi-channel video service provider when AT&T / DirecTV are considered) but has limited network operations in Southwest Virginia. Spectrum’s local network is primarily in Buchanan and Tazewell counties, with some network in Russell County. Charter has an operational office in Richlands, with a head-end site in Cedar Bluff. Spectrum’s network covers the Town of Tazewell, a good portion of Tazewell County, Grundy, and Richlands. Charter utilizes a hybrid-fiber-coaxial cable network architecture. 100 MBPS asynchronous service is Charter’s standard/basic service at \$44.99 per month. This price is dependent upon various bundling schemes.

### **Citizens Telephone Cooperative**

Citizens is a regional ILEC with full-service communications offerings, including land-line telephone, VoIP, IPTV Video, web and e-mail hosting, DSL, and FTTP (Fiber to the Premise, and Business Ethernet. Citizen’s serves portions of 7 counties in Southwest Virginia. Based in Floyd, Virginia, Citizens network is still 90% copper based, but they are rolling out gigabit FTTP.

There is some overlap of their services and a few counties within PDC’s 1, 2, &3, including Carroll County, Grayson County, and Wythe County. Citizens’ network stops at the Smyth County line. Their fiber runs from 58 to 16 (BVU/Sunset) and 221 to Sparta. They just completed a build on 221 (North) to Roanoke Co., passing over 1,000 homes with FTTH.

## **Century Link**

CenturyLink is the incumbent local exchange carrier in many parts of the study region. CenturyLink still has their legacy network in place and have not invested in upgrading their network. As a result, customer satisfaction rates due to speed and reliability, were low across the board. The biggest complaint related to customer service and the perception of a total “lack of response.”

## **Comcast**

Comcast is the largest cable provider in the United States (second largest multi-channel video service provider when AT&T / DirecTV are considered). Comcast operates a hybrid-fiber-coaxial system throughout the study area. Comcast is doing little in terms of upgrades, with some limited upgrades in PDC 1. In PDC 2, one respondent placed Comcast quality of service at the middle of the pack of the 5 service providers available in that area. Another respondent in the northwestern portion of PDC 2 listed Comcast as “adequate” with 4 stars. Still another official in the southwestern portion of region 3 gave Comcast high marks for quality of service.

## **CPC Broadband**

CPC Broadband (formerly CPC OptiNet) is a subsidiary company of the Cumberland Plateau PDC. It was organized to serve Russell, Dickenson, Tazewell, and Buchanan Counties. Partnering with Bristol Virginia Utility's OptiNet division (now Point Broadband) the Company has obtained over \$37 million in grant funding for the construction of 700 miles of fiber optic broadband backbone that is now serving almost 900 industrial, commercial, governmental and educational institutions in the region.

## **iGo Technologies**

iGo, founded in 1994, is a Virginia-based Internet service company, providing wireless and fiber high speed Internet service to its customers who include residential and commercial clients, individuals and small to mid-size and large business. In 2017, iGo also began offering telephone service to its Internet customers.

iGo coverage areas include parts of Buchanan, Russell, Tazewell, Washington and Wise counties, with additional operations in Tennessee and West Virginia. iGo utilizes one VCC tower to reach unserved residents of the region.

iGo is mainly a fixed wireless provider with 6-8 towers, 520 customers, and 12 employees. Although existing customers are mostly wireless, iGo has successfully competed for USDA Community Connect grants for FTTH build outs. They are underway with a \$1.78M project awarded in 2016 which will include 21 miles of fiber in the Buchanan County area north of Oakwood.

In 2017, they were awarded an additional \$3.0M project for a buildup Garden Creek Rd toward Honaker. iGo was just awarded \$455,581 to extend the build into Russell County and add interconnection with SCTC along Virginia Route 624.

The current build includes 468 customers passed. iGo is an essential element of solving the problem of unserved residents in the region.

### **Gigabeam Networks**

Gigabeam Networks, a wireless Internet service provider, or WISP, provides service in Southwest Virginia, West Virginia and southeastern Kentucky. Their network is completely wireless, including the backhaul. Gigabeam is a small entrepreneurial venture owned by Michael Clemens. They have approximately 200 subscribers in Bland and utilize towers throughout the county. Their service packages include \$79/mo. for 50 meg and \$30 for 25 meg.

### **HillCom**

HillCom, Inc is a family-owned wireless Internet service provider located in Dickenson County. The company started in 2016 out of necessity when a local resident was unable to access adequate Internet service but was able to create his own wireless broadband network solution. By 2017, HillCom had responded to neighbors requesting the service and grew to 20 customers. They then purchased DCWin (Dickenson County Wireless) and now have approximately 600 customers (95% in Dickenson County), with a mission to provide service to the entire county.

Most of the service requests HillCom receives are from the following areas within the county:

- Lick Creek
- Honey Camp
- Breaks

### **Point Broadband**

Formerly BVU OptiNet, Point Broadband was organized in 2018 as the combination of Duffield-based Sunset Digital and Bristol-based BVU OptiNet. The organization is part of a family of telecommunications enterprises headquartered in West Point, Georgia called ITC Holding Company, LLC. ITC began as The West Point Telephone and Electric Company, founded in 1896. Point Broadband is in the process of an organization period, and their exact strategy is unknown. As with many other providers in the region, Point Broadband is attempting to determine how to affordably build out and maintain their network. Point Broadband is the recipient of a multi-million-dollar CAF II award for the study region including Lee County, and the Cumberland Plateau counties of Dickenson, Russell, and Tazewell.

### **Scott County Telephone Cooperative**

Scott County Telephone Cooperative (SCTC), a local provider headquartered in Gate City, is a key player in the region. It serves 420 square miles of Scott County with some service in Tennessee. Their current service territory includes parts of Russell, Wise, Dickenson, and Lee Counties, and the City of Norton. They provide voice, video, and data Voice,

video, data, and security, primarily over a traditional copper/ILEC network but have been upgrading to eventually deploy and utilize an all fiber network to provide enhanced broadband services.

Using primarily grant funding, SCTC has upgraded about 100 miles of its network to fiber, with builds to 5 exchanges in the following areas:

- Ft. Blackmore
- Duffield
- Nickelsville
- Dungannon
- Clinchport

SCTC has approximately 7,000 access lines (about 5,000 in ILEC area and 2,000 in CLEC area). Additionally, they have about 7,000 high speed Internet customers.

### **Shentel**

Shentel, or Shenandoah Telecommunications Company, is a publicly traded telecommunications company headquartered in Edinburg, Virginia. Shentel has digital wireless and wireline network in rural Virginia, West Virginia, Maryland and Pennsylvania. Shentel is also an affiliate of Sprint with wireless coverage in Pennsylvania, Maryland, Virginia, West Virginia, Kentucky and Ohio. It owns its own cell site towers built on leased land and leases space on these towers to both affiliates and non-affiliated service providers. Shentel has invested over \$200 million in the past two years upgrading and expanding its wireless networks, primarily in rural markets. Shentel also provides fiber services to commercial and wholesale customers along its 5,641-mile fiber network across four states.

Shentel's cable segment provides video, Internet and voice services in franchise areas in Virginia, West Virginia, and portions of western Maryland and leases fiber optic facilities throughout its service area. It does not include video, Internet and voice services provided to customers in Shenandoah County, Virginia.

Shentel's wireline segment provides regulated and unregulated voice services, DSL Internet access and long-distance access services throughout Shenandoah County and portions of Rockingham, Frederick, Warren and Augusta Counties, Virginia. The segment also provides video services in portions of Shenandoah County and leases fiber optic facilities throughout the northern Shenandoah Valley of Virginia, northern Virginia and adjacent areas along the Interstate 81 corridor, including portions of West Virginia and Maryland.

Shentel has over 5,400 fiber route miles with fiber to over 325 cell sites, but with network in only Carroll and Russell counties. It has cable plant in Lebanon, Honaker, Swords Creek, Rye, Dante, Wytheville, and Rural Retreat.

Shentel does not actively pursue grant funding, as they have not been very successful in the past doing so.



## **Wired Road**

The Wired Road Authority is a collaborative effort between private sector service providers, the local governments of Grayson County, Carroll County, and the City of Galax, and the Carroll-Grayson-Galax Regional Industrial Facilities Authority (dba Blue Ridge Crossroads Economic Development Authority). Its purpose is to provide the critical enabling infrastructure to transform the regional economy into a dynamic, small business, and entrepreneurial economy. This transformation, enabled by The Wired Road and a complementary economic development focus on attracting and supporting entrepreneurs and small businesses, will allow the region's economy to spawn new businesses, generate jobs, create wealth, and protect the rural character of our region.

The Wired Road network has been in operation for over ten years and is a true public/private partnership with two service providers offering last mile services on the network. The Wired Road is an open access, fully integrated fiber and wireless regional broadband network offering "big broadband" 100 megabit and Gigabit fiber connections and multi-megabit wireless connections in Carroll County, Grayson County, and Galax.

Currently, the Wired Road is finishing a network extension which will connect fiber in Galax with fiber in Hillsville. It is also expanding its wireless coverage and constructing "community poles" to get service to areas that couldn't be reached before. Fiber Wireless Providers

The bill will allow Dominion Energy and Appalachian Power to provide or make available broadband capacity to service providers in unserved areas. It also authorizes the utility to own or lease broadband capacity equipment.

With existing infrastructure that already serves almost every resident and business in rural areas, utilities are uniquely positioned to bridge the gap between middle mile networks and last mile consumers.

## References

Source data for population: Published on January 28, 2019 by the Weldon Cooper Center for Public Service Demographics Research Group <https://demographics.coopercenter.org>

Source data for county land area: U.S. Census Bureau, Census of Population and Housing. Land area is based on current information in the TIGER® data base, calculated for use with Census 2010.

Source: WideOpen Networks, The Wired Road, "Broadband Recommendations," April 2017, Revised, October 2017, pp. 32-34.

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Breski, Tammy <tammy.breski@dhcd.virginia.gov>

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**FW: email of support**

1 message

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**Puckett, Joseph** <Joseph.Puckett@point-broadband.com>

Mon, Aug 12, 2019 at 11:11 AM

To: Tammy Breski <tammy.breski@dhcd.virginia.gov>

Cc: Jim Baldwin <jimbaldwin@bvu.net>

Tammy,

Please see below for an email of support from Buchanan County for our Council to Davenport application.

Thank you,

**Joseph Puckett**

*General Manager – VA/TN Markets*



15022 Lee Highway, Bristol, VA 24202

Office: 844-40-POINT

Cell: 276-791-1724

[website](#)

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**From:** Scotty Wampler <[scotty.wampler@buchanancounty-va.gov](mailto:scotty.wampler@buchanancounty-va.gov)>

**Sent:** Monday, August 12, 2019 10:58 AM

**To:** Puckett, Joseph <[Joseph.Puckett@point-broadband.com](mailto:Joseph.Puckett@point-broadband.com)>

**Subject:** Re: email of support

**\*\*CAUTION:** External Email.\*\*

As the further deployment of high-speed Internet is of vital importance to our county and the entire region, the Buchanan County Industrial Development Authority fully supports Cumberland Plateau's application for VATI funding concerning the Council-to-Davenport project.

-----

Scotty Wampler

Director of Marketing & Tourism

Buchanan County Industrial Development Authority

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