Alabama Broadband Accessibility Fund
2018 Grant Application and Guide

broadband.fund@adeca.alabama.gov

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Alabama Broadband Accessibility Fund
2018 Grant Application and Guide

2018 Grant Application Guidelines

An application workshop will be held at 9:00 a.m. on Thursday, May 24, 2018, in the Alabama Center for Commerce 7th floor Auditorium. The code for the Decatur Street entrance to the parking deck is 7013#. Seating is limited; therefore, all attendees must register by calling or emailing Ms. Susan Fleeman at (334) 242-5292 or susan.fleeman@adeca.alabama.gov. An online version of the workshop and questions and answers from the workshop will be posted on the Alabama Department of Economic and Community Affairs (ADECA) website prior to May 28, 2018, at http://adeca.alabama.gov/broadband.

Applications shall be submitted in .pdf format by email to broadband.fund@adeca.alabama.gov

Applications will be accepted starting on May 28, 2018. Completed applications must be submitted by 11:59 PM, CST, on October 24, 2018. Any applications received after the deadline will not be considered. All applications must be complete; however, ADECA reserves the right to contact applicants for additional information and/or clarifications. All applications received will be posted on ADECA's website at http://adeca.alabama.gov/broadband.

Existing service providers shall have from October 25, 2018 through November 26, 2018 to file objections to the eligibility of the proposed projects. All objections must be filed by email to broadband.fund@adeca.alabama.gov and must include verifiable documentation to support the challenge.

An applicant may submit more than one application. However, each project must have a separate application and budget. Each project must stand alone in meeting the Alabama Broadband Accessibility Fund program requirements.

Eligibility

An eligible applicant is a non-government entity that is a cooperative, corporation, limited liability company, partnership, or other private business entity that provides broadband service.

Funding

Projects must be completed within two years of the effective date of the grant agreement. The grant will be in the form of a reimbursement of eligible costs up to the award amount in the grant agreement. Reimbursement will be made within 30 days of project completion and final inspection by ADECA.

All projects will be scored based on the established rating criteria. The criteria can be found at http://adeca.alabama.gov/broadband. Those eligible projects receiving the highest scores will be selected for funding. The number of projects funded will be determined by the funds available and the total amount of requests made. ADECA may request amended projects and/or offer reduced grant participation.

ADECA shall ensure that not less than 40% of the funds awarded will be awarded to projects serving unincorporated areas.

2018 Grant Application

Applicant Information

Project Name: Dixie Area

Legal Name of Entity: R. M. Greene, Inc.

Mailing Address: P. O. Box 130 Phenix City, Al 36868

Name and Title of CEO: Lynne G. Frakes, President

Name and Title of Contact: Patricia Allen, Accountant

Phone Number and Email of Contact: (334) 664-0131

Project Description

This section is worth up to 15 points. Points will be awarded based on verifiable information only.

Please attach a project description in a file titled Attachment A, Project Description. The description shall include:

1. A discussion of the area served including boundaries, number of households, businesses, and any community anchors (libraries, schools, police and fire stations, hospitals, etc.). This response shall also identify if the project area is located within an unincorporated area and provide information regarding how the area meets the definition of rural (US Census data).

2. A discussion of the technology to be deployed (fiber, cable, DSL, etc.). Additionally, include a discussion of future usage projections and the ability to upgrade.

3. A discussion of internet speeds, service tier and pricing levels, data caps, etc.

4. A preliminary technical evaluation of the project certified by an engineer. The evaluation shall include a project cost estimate, project schedule and timeline to include a completion date of no more than two years, and maps showing the proposed project area. Maps should be in .shp, .kml, or .kmz formats.

   Additionally, maps shall clearly show area eligibility (unserved areas). Generally, applicants may establish that an area is eligible by using the ADECA Broadband map showing unserved areas (http://adeca.alabama.gov/broadband). Other methodology, such as household surveys, may be acceptable, but shall be pre-approved by ADECA.

5. A discussion of the operator's technical and managerial capabilities to complete the project within two years of the effective date of the grant award.

Application Budget

This section is worth up to 15 points. Points will be awarded based on verifiable information only.

For the table, please complete the shaded boxes only. The total grant amount cannot exceed the lesser of 20% of total project costs, or $750,000/$1,400,000 ($750,000 for project type A, or $1,400,000 for project type B). If federal funds are involved in the project, please see number 4 below.

The proposed project will provide internet speeds of at least (check one):

Project Type A: ☐ 10 Mbps download and 1 Mbps upload

Project Type B: ☑ 25 Mbps download and 3 Mbps upload

Total Project Cost	$273,140.55
20% of Total Project Cost	$54,628.11
Total Grant Amount Requested	**$218,512.44**

Please provide a detailed project budget narrative in a file titled Attachment B, Project Budget. The budget narrative shall include:

1. Itemize eligible project expenses. Generally, eligible expenses will be limited to construction and construction related costs of broadband infrastructure. Operating expenses will not be eligible expenses. Any additional expenses associated with the project, but not part of the grant budget, should be included.

2. A discussion of the applicant's necessary financial resources to:

   a. sustain service to the project area (business model);

b. provide adequate project financing (additional documentation may be requested by ADECA).

3. A discussion of any partners or subcontractors associated with the project's deliverables including but not limited to adoption, deployment, and service delivery. Please describe each party's role in the project.

4. A discussion of any federal funds associated with the project.

    a. Eligible projects may include projects that have received funds through other federal universal service funding programs designed specifically to encourage broadband deployment in an area without broadband access in an amount not exceeding 50% of the total project cost, provided, however, that any award of state funds may only be utilized to either:

        i. fund project components that extend beyond the specifications supported by the federal funding, said eligible components being extension of service to unserved rural areas not otherwise served by the federally supported project; or

        ii. ensure that areas being served by the federal funding at speeds less than 25 Mbps of download speed and 3 Mbps of upload speed will, in fact, receive faster speeds of not less than 25 Mbps of download speed and 3 Mbps of upload speed.

    b. Grants issued to projects receiving federal funds shall not exceed 40% of total grant funding, with such grants not exceeding 20% of total project costs.

<u>Other Program Priorities</u>

Please answer each of the following questions either "yes" or "no." For each "yes" answer, please provide a brief narrative and any supporting documentation. Any claims that cannot be verified will receive zero points in our scoring system. "No" answers will receive zero points in our rating system. **"Yes" answers (that can be verified) will receive up to 10 points.**

Does this project seek to leverage grant funds through private investment?	YES ☐	NO ☐	If yes, include an explanation and documentation in a file titled Attachment C
Will this project be an extension of existing infrastructure?	YES ☐	NO ☐	If yes, include an explanation and documentation in a file titled Attachment C

Does this project serve locations with demonstrated community support?	YES ☐	NO ☐	If yes, include an explanation and documentation in a file titled Attachment C
Will this project serve the highest number of unserved homes, businesses, and community anchor points for the least cost?	YES ☐	NO ☐	If yes, include an explanation and documentation in a file titled Attachment C
Does this project emphasize the highest broadband speeds?	YES ☐	NO ☐	If yes, include an explanation and documentation in a file titled Attachment C
Will this project provide material broadband enhancements to hospitals located in rural areas as defined in Section 22-21-20, Code of Alabama 1975?	YES ☐	NO ☐	If yes, include an explanation and documentation in a file titled Attachment C
Will this project support local libraries in this state for the purpose of assisting the libraries in offering digital literacy training pursuant to state library and archive guidelines?	YES ☐	NO ☐	If yes, include an explanation and documentation in a file titled Attachment C

Certifications

1. The applicant certifies that it is a non-governmental entity.

2. The applicant certifies all new customers served as a result of this project will have access to an internet connection that provides a capacity for transmission at an average speed per customer of at least 10 Mbps download and at least 1 Mbps upload.

3. The applicant certifies that all new customers served as a result of this project are not located within the boundaries of any incorporated city or town having a population in excess of 25,000 inhabitants, according to the last federal census.

4. The applicant certifies that it has the technical and managerial capabilities to complete the project within two years of the effective date of the grant agreement.

5. Choose one:

a. ☐ The applicant certifies that for any area served as a result of this project there is not at least one provider of terrestrial broadband service that is either:

i) offering a connection to the internet meeting the minimum service threshold; or

ii) required, under the terms of the Federal Universal Service Fund or other federal or state grant, to provide a connection to the internet at speeds meeting the minimum service threshold within five years of the effective date of the Broadband Accessibility Act.

b. ☐ The applicant certifies that the project has received funds through other federal universal service funding programs designed specifically to encourage broadband deployment in an area without broadband access in an amount not exceeding fifty percent of the total project cost, and that any award of state funds shall only be utilized to either:

i) fund project components that extend beyond the specifications supported by the federal funding, said eligible components being extension of service to unserved rural areas not otherwise served by the federally supported project, or

ii) ensure that areas being served by the federal funding at speeds less than 25 megabits per second of download speed and three megabits per second of upload speed will, in fact, receive faster speeds of not less than 25 megabits per second of download speed and three megabits per second of upload speed.

Certification	
I the undersigned am authorized to obligate my entity and enter into agreements for my organization. I understand that the above certifications do not guarantee funding and a grant agreement will be executed prior to project funds being expended. I further understand that if the above statements cannot be verified, no grant funds will be awarded under this program. Finally, to the best of my knowledge the above certifications are true and correct.	
Signature of Applicant: Katie H. Waldrep	Date: October 24, 2018
Title of Applicant: Vice President	

For more information regarding the Alabama Broadband Accessibility Fund, please send questions to Maureen Neighbors at broadband.fund@adeca.alabama.gov, or call (334) 242-5292 between the hours of 8:00 a.m. to 4:00 p.m., Monday through Friday.

Project Area

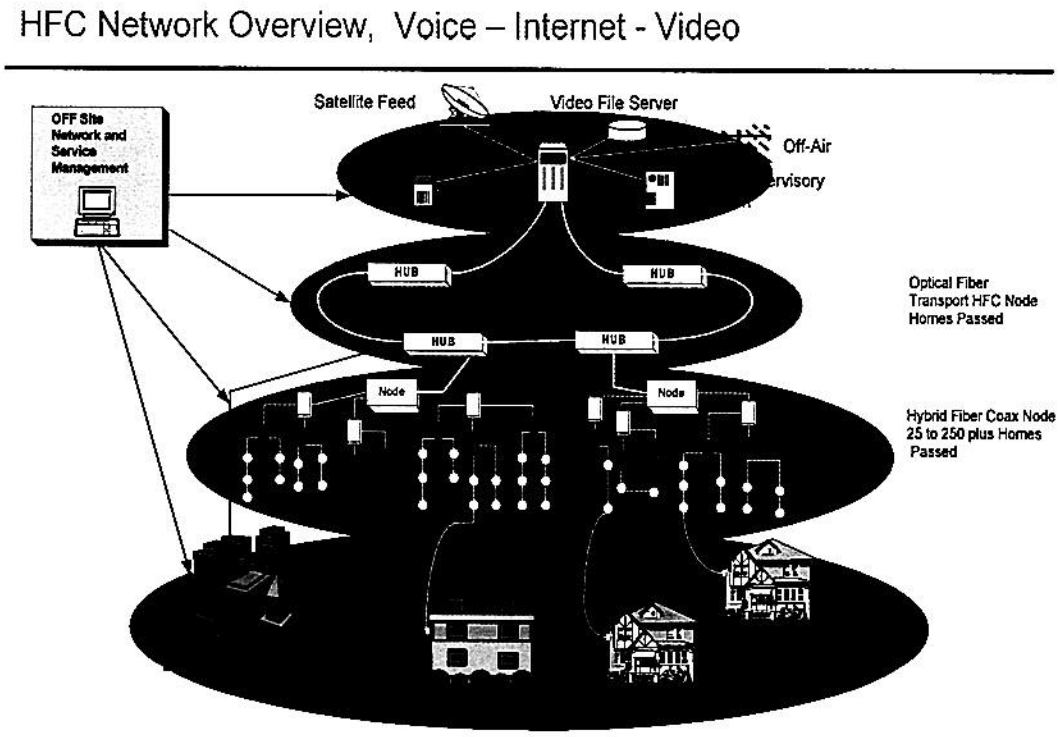
The Dixie Area Project includes the address from 4827 Hwy 80 Opelika, Al to 5125 Hwy 80 Opelika, Al; 15 Huguley Rd Opelika, Al to 195 Huguley Rd, Opelika, Al; 190 Maringo Creek Rd Phenix City, Al to 198 Maringo Creek Rd Phenix City, AL ; 16 Collier Rd Opelika, Al to 61 Collier Rd Opelika, Al; 2 Thomas Rd Salem, Al to 10 Thomas Rd Salem, Al; 17 Green Dudley Rd Salem, Al to 97 Green Dudley Rd Salem, AL; 7 Pine Grove Ln Salem, Al to 40 Pine Grove Ln Salem, Al; 3 Lamb Rd Opelika, Al to 134 Lamb Rd Opelika, Al; 9 Candlelight Dr Opelika, Al to 19 Candlelight Dr Opelika, Al; 2 North Herring Rd Opelika , Al to 189 North Herring Rd Opelika, Al; 265 Lee Rd 169 Opelika, Al to 1020 Lee Rd 169 Opelika, Al; 21 Lee Rd 2007 Opelika, Al to 362 Lee Rd 2007 Opelika, Al; 20 Gaddy Ln Opelika, Al to 30 Gaddy Ln Opelika, Al . The Dixie Area includes a total of 234 residential homes, 1 school, 2 business and 1 church currently not served by any internet provider.

Project Technology

R.M. Greene, Inc. HFC Network Overview for Cable Modems

R.M. Greene, Inc. takes advantage of cutting-edge design and technology advances with the reduction of analog video channels increasing spectrum availability for internet traffic within the two-way broadband capacity of 750 MHz Since the video channels are now digital using less spectrum the Hybrid Fiber Coax now has 32 6 MHz channels allocated for Cable Modem data which when bonded with DOCSIS 3.0 provide approximately 1280 Mbps for target service areas.

FIGURE 1: HFC NETWORK USED FOR CABLE MODEM INTERNET TRAFFIC



R.M. Greene, Inc.'s Distribution hubs are directly connected to the master head-end by 1550 and /or 1310 nanometer circuits to provide Internet service to the Hub if used and/or then directly to autonomous fiber nodes, which serve approximately 200 homes or less. From the individual nodes, coaxial cable will deliver signals from the fiber nodes to individual home's cable modem over RF amplifiers and taps.

Headend

The head-end is where network intelligence is concentrated, and the headend contains equipment used to originate, receive communication and entertainment services and transmit analog and digital signals to homes and small businesses.

R.M. Greene, Inc. serves all of its subscribers from one central headend. In addition, the headend' s equipment is scalable, and as R.M. Greene, Inc. continues to grow, additional equipment components can be added without building a new central headend and expensive electronic costs can be spread across more subscribers. As penetration deepens, the system will be scalable so that components can be added to ensure redundancy for peak load periods. (Scalable means that technology can be added at a cost that is proportionate to the likely number of service users; a small number of homes cannot justify expensive equipment.)

In addition to receiving and transmitting satellite and over-the-air video signals, the headend serves as R.M. Greene, Inc.'s gateway to other physical and virtual networks. The E6000 DOCSIS 3.0/3.1 Cable Modem Transmission System is the interface device from the Local core router to the cable modem at the customer premise. By using the DOCSIS protocol, internet signals rides on the local Hybrid Fiber Coax system from the customer to the rest of the world. R.M. Greene, Inc. uses long haul fiber optic networks to provide long distance service as part of its bundle of Broadband Services, plus multiple direct links to the Internet procured through multiple transport carriers. Today Greene has 4 - 10Gbps circuits carrying broadband data from its networks in Russell and Lee counties to Dallas, Texas and Atlanta, Georgia points of presence where its peers with the rest of the internet. The NOC monitors the broadband networks 24-hours per day, seven days per week.

High Fiber Optic Cable Counts Connect Headend, Hubs and Nodes

R.M. Greene, Inc.'s HFC design uses fiber optic cable extensively. With the fiber optic backbones, the HFC network is a highly flexible system that allows cable systems to deliver more capacity to the home, to improve system reliability, and to reduce operating costs. Not only does fiber offer more capacity and reliability, the cost of fiber optic cable is now about the same as that of coaxial cable trunking.

Pushing fiber deeper into the HFC network reduces the number of amplifiers on the coax cable cascade, which in turn increases the capacity and reliability of the network. Fiber optic networks use larger lasers to send signals further from the headend to individual nodes, and because fiber optic cable do not use amplifiers in the fiber optic portion of the network, the lower number of amplifiers

on a coax cascade between the headend and customer through the use of fiber allows significant increases in capacity and reliability.

In addition, by removing "active" or powered components from the headend to the node, increases the reliability of the network. The presence of dozens of cascaded, electrically powered amplifiers between the headend and the home has meant that if one amplifier failed, the entire network could go down. Because there are fewer amplifiers in a typical cascade to fail in a fiber-enhance system, fewer customers affected by any given individual amplifier failure. In addition, cable systems with many amplifiers spend more on maintenance because amplifiers must be periodically adjusted or "fine-tuned" to give the best performance. Because fiber reduces the number of amplifiers, it takes less time to maintain a line or to diagnose and locate a faulty amplifier.

Fiber Node

The node is the optical to electrical conversion point. The node receives forward optical signals over the fiber optical cable and converts the signals to electrical RF signals, amplifies the RF signals and begins the forward transmission over coaxial cable. In addition, the node converts upstream RF signals over the coax cable from set-top boxes into optical signals for delivery over the fiber optic cable to distribution hub and in turn to the head-end. The size of the fiber node is about the same as trunk amplifier, and most vendors of distribution nodes (RF or fiber) allow the nodes to being converted from fiber to RF and vice versa without replacing or re-splicing the respective cable. This allows R.M Greene Inc. to push fiber deeper into the RF amplifier segment of the cascade. While there is no route redundancy at the node, it could connect nearby nodes with fiber in the future that to provide some route diversity and redundancy.

Coax Cable the Last Mile

Over short distances, coaxial cable has very high capacity. While fiber enters the fiber optic node from the headend, coaxial cable is used from the node to individual homes. The electrical characteristics of coaxial cable make it suitable for very high bandwidth transmission, up to 1 gigahertz (GHz), which is the equivalent of 150 channels (even before the use of digital compression). However, even though coaxial cable is capable of carrying 150 channels of television to the home, cable television systems using 100% coaxial cable plant have generally been unable to deliver more than 75 channels, in large part due to the amplifier issue. Compared on the common "twisted pair" copper telephone line, coaxial cable can carry 900 times the information that can be carried over the phone line.

With R.M. Greene, Inc.'s design, while coax cable is used from the fiber node to home, there are generally five or fewer RF two-way amplifiers between fiber node and home. Electrical signals are attenuated or repeated using RF amplifiers to compensate for losses as splitters are used to feed homes. Amplifiers are powered from the commercial power grid, and the amplifier power is converted 60 Hz electric power from the commercial grid to 87-V, 60 Hz sinusoilal power. Power is carried over the coax cable from the center conductor of the coaxial cable into the amplifier. R.M. Greene, Inc. uses parallel hybrid amplifiers from the node, which the signal is tapped off for use in the coax feeder plant and passes the signal through without amplification and thus does not directly affect overall system quality. R.M. Greene, Inc. also uses line extenders, which are specialized amplifiers used on the coax feeder plant to maintain signal integrity put to the point of direct connection from the coax feeder cable to the home (tap and drop). Line extender amplifiers are generally spaced 300 to 900 feet apart, depending on the density of homes. Directional taps are used to split off a few lines for direct input to the subscriber's homes over the coax cable drop.

While the average drop length is about 100 feet, actual lengths vary from 50 feet to more than 300 feet in rural areas.

The coax drop is connected to a NIU on the side of the house, which separates the Cable Modems signals from the other services. Inside the home, coax cable wiring is utilized to connect to the Cable Modem. The customer's computer is connected to the Cable modem via Ethernet and/ or Wi-Fi.

High Speed Data and Growth

R.M. Greene, Inc. has many years' experience with data over cable modems. We have been working with Cable Modem configuration with Data streams now from 10 Mbps downstream to cable modem and 1 Mbps upstream to the CMTS (Cable Modem Termination System) all the way up to 1 Gbps downstream to cable modem and 10 Mbps upstream to CMTS. Regardless of whether we are dealing with cable modem or Fiber to the Premise we have found that services can be over subscribe without impact performance or guarantee of service level. Our modeling takes into account the total bandwidth in a given circuit with an oversubscription rate of 6 assuming that a single customer is not requiring the total rate.

As an example, in a Cable Modem circuit of 32 six MHz channels at 40 Mbps each when bonded that equals 1280Mbps of data thru-put; now if offering a 100 Mbps package after adding in TCPIP overhead+minor imperfection =110 Mbps and that works out to a 12.5 customer count which is oversubscribed by 6 to 1 therefor putting maximum customer count a 73.0 Downstream. Now if offering a 25 Mbps package after adding in TCPIP overhead+minor imperfection =27.5 Mbps and that works out to a 46.5 customer count which if oversubscribed by 6 to 1 therefor putting maximum customer count a 279 Downstream. By the end of 2018 we will be deploying DOCSIS 3.1 which is a software upgrade on CMTS with a DOCSIS 3.1 Modem which we are starting to deploy.

Now looking into the Upstream assuming you have 5 six MHz channels at 30mbps each plus another channel at channel at 3.2 MHz at 19 Mbps all together when bonded equals 169 Mbps of thru-put; now if offering 10 Mbps upstream after adding TCPIP overhead+minor imperfection = 11 Mbps which works out 15 customer count which if oversubscribe by 6 therefore putting maximum customer count at 97 Upstream.

This will represent the peak load on the circuit. Depending on the different speeds of customer the number of customers will vary and there are multiple models that take into account various customer packages. Say for example if all customers were at 25 Mbps down and 3 Mbps, the number of customers would be 279, the downstream is the limiting factor. It just simple Erlanger modeling based on traffic analysis. By watching peak load periods additional customers may be added if accommodation can be made if circuit traffic continues to grow. In the Cable Modem environment, HFC nodes can be separated or DOCSIS 3.1 can be implemented if the circuit continues to grow from customer activity. Network monitoring of circuits with rules in place will allow for growth of customers on the same circuit if contingency plans for migrations are in place. It will happen, it just a matter of being prepared to migrate.

The information that can be made available to support this assertion is MRTG graphs of systems showing the circuit loading from the multiple 10 Gbps circuit in to the system and the actual load utilization of the 32 individual channels in each of the MAC domain of the E6000 Downstream channels and the same for the upstream channels of the E6000. This is part of the MIBs in the CMTS. Also, further verified is the actual cable modems and the speeds they are configured for in each MAC domain.

Internet Speeds, Service Tier and Pricing Levels

Today R. M. Greene, Inc. provides internet services from 20 to 200Mbps downstream with 1 to 5Mbps upstream with no data caps. **For all projects covered und ADECA minimum speeds will be 25Mbps downstream and 3Mbps still no data caps.** Monthly recurring service fees for the internet package of 25Mbps/3Mbps is $98.05.

Technical Evaluation

A preliminary technical evaluation of the project has been conducted and the project can be built well within the time frame allowed as this project is an extension of the existing system with fiber, and no pole line make ready will be required. The project estimated cost is $273,140.55 which include labor and material to complete the project. The project will take approximately 30 days to complete.

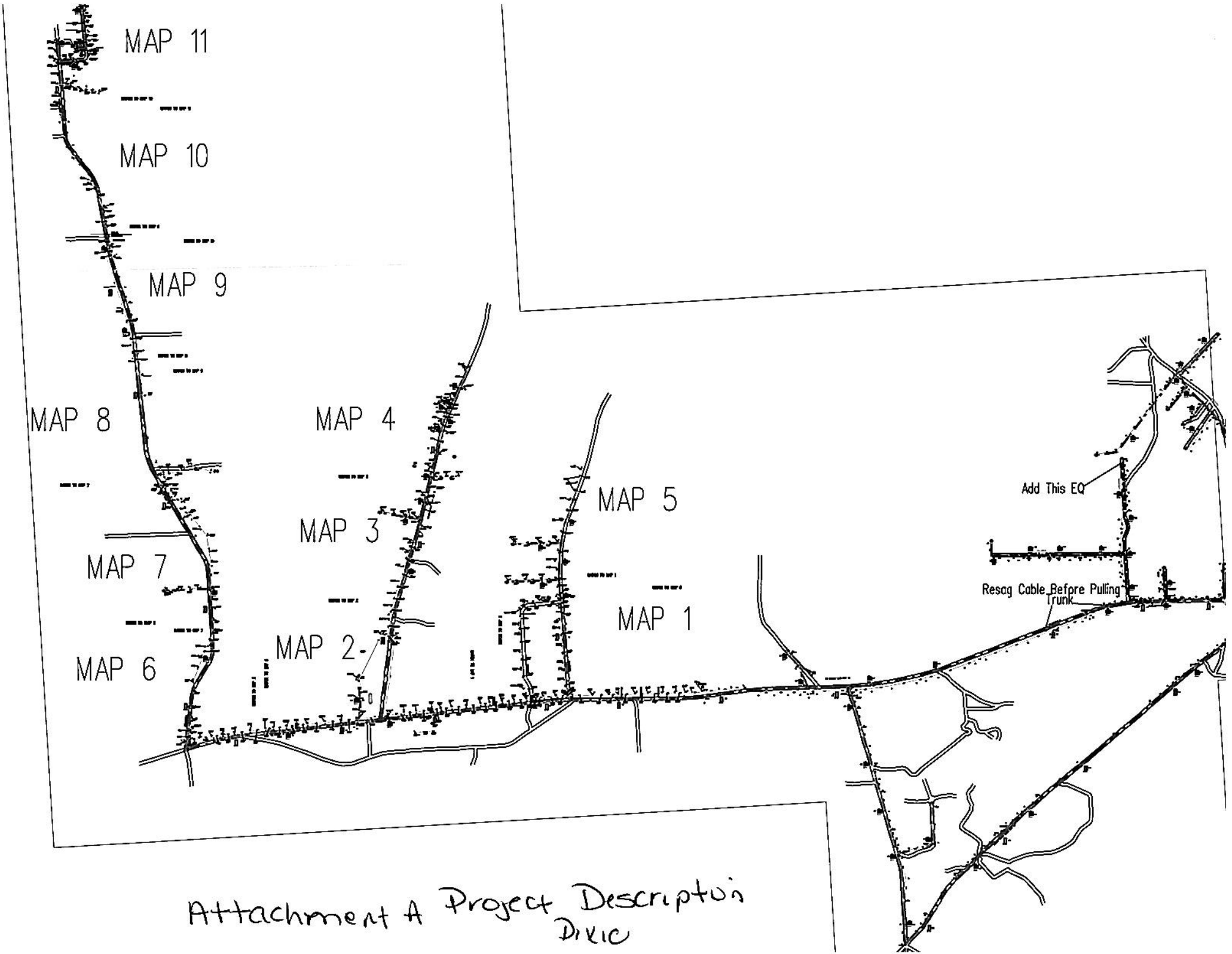
Operator's Technical and Managerial Capabilities

The applicant has been in the business for over 50 years and has experience in building rural areas. Engineering field ride outs have been finalized to determine whether overhead or underground construction will be done, field environmental may have an adverse cost on the construction of outside plant as it is more economical to build overhead plant verses underground construction. Furthermore, the field engineering has been done determining specs for pole attachments, required make ready cost to attach to poles, footage for, optical loss budget, coax budgeting, placement of equipment. All documented on Maps. Design will use this engineering information to insure equipment is placed within the specifications required to provide proper signals RF and /or optical for the last mile. A bill of Materials has been determined from the final design engineering which includes strand and route miles of construction, strand and hardware, fiber, splice enclosures, optical equipment, and labor.

Marcus R. Luke, Ph.D. BCTE has served as Chief Technology Officer of Cable TV of East Alabama since January 2013. Prior thereto, he served as Chief Technology Officer of Knology, Inc. since May 1995. Prior to joining the Company, Dr Luke served at Storer Communications Inc. as Vice President of Engineering. Prior to 1985, he spent 12 years in various engineering and management positions with Storer Communications Inc.

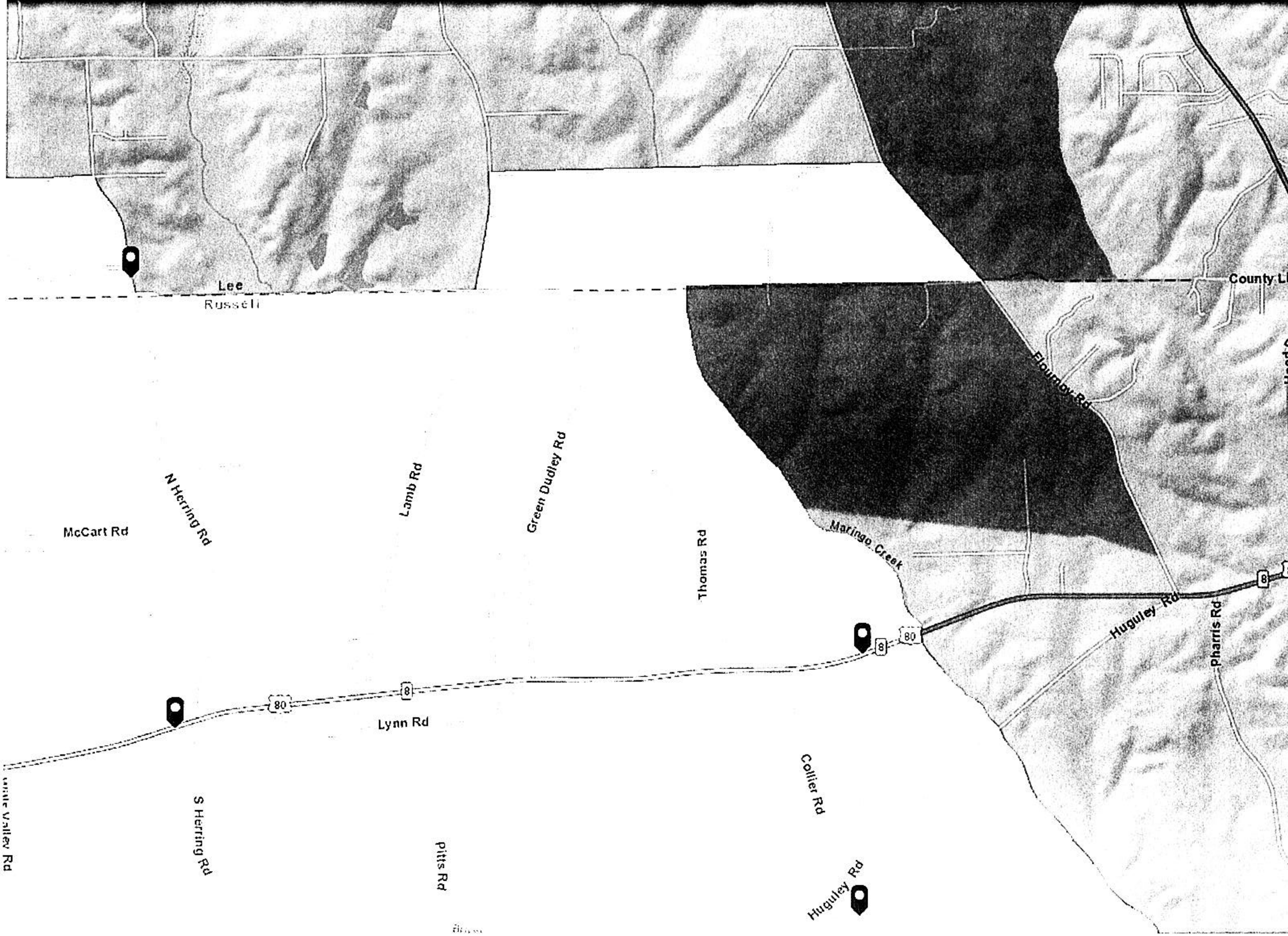
Dr. Luke is a Senior SCTE (society of cable telecommunication engineers) broadband certified engineer, an ISCET certified electronics technician and holds a general class FCC radio/telephone license. He was inducted into the Cable TV Pioneers 1999 and the SCTE hall of Fame in 2017. As SCTE member since 1979 and co-founder and past president of SCTE chapters in Arizona (Cactus) and Alabama (Dixie), presented numerous papers and presentations on bandwidth management,

and migration strategies for IPTV. Member of SCTE data and digital standards subcommittees. He holds masters' and doctoral engineers' degrees from California Coast University as well as various degrees and certificates from University of Alabama, East Central Technical College, and Cleveland Institute of Electronics.



Attachment A Project Description
Dixie

Created using FCC Form 477 data



Itemize eligible Project Expenses

DIXIE MATERIAL

25	750 AMPS	@	$519.29 EA	$12,982.25
38	750 L.E.'S	@	$346.47 EA	$13,165.86
63,351'	1/4" STRAND	@	$0.16 FT	$10,136.16
31,126'	875 AERIAL	@	$1.25 FT	$38,907.50
5,412'	875 FLOODED	@	$1.29 FT	$6,981.48
50,648'	625 AERIAL	@	$0.65 FT	$32,921.20
4,201'	625 FLOODED	@	$0.69 FT	$2,898.69
99	ANCHORS	@	$26.50 EA	$2,623.50
2	1 GIG NODES	@	$2,807.59 EA	$5,615.18
2	P2 HD 13 PXTS-10SA	@	2850 EA	$5,700.00
2	P2 HD 13 RXR-SA	@	$2532.2EA	$5,064.00
5	TV 60 PEDESTALS	@	$47.90 EA	$239.50
1	TV 104 "			$102.95
4	TV 1024 "	@	$175.00 EA	$700.00
2	TV 80 "	@	$57.95 EA	$115.90
4	90 VOLT POWER SUPPLIES	@	$2,008.00 EA	$8,032.00
4	POWER SUPPLY SERVICE BOXES	@	$150.00 EA	$600.00
10	2-WAY SPLITTERS	@	$33.52 EA	$335.20
6	DC-8 COUPLERS	@	$25.42 EA	$152.52
4	POWER INSERTERS	@	$33.63 EA	$134.52
160	ROLLS LASHING WIRE	@	$18.54 EA	$2,966.40
16,583'	24CT FIBER	@	$0.43 FT	$7,130.69
	HARDWARE 208 POLES	@	$7.00 EA	$1,456.00
156	2 PORT TAPS	@	$9.82 EA	$1,531.92
16	4 PORT TAPS	@	$10.96 EA	$175.36
70 TUBES	SHRINK BOOT	@	$1.35 EA	$94.50
131	TAP BRACKETS	@	$1.50 EA	$196.50
277	625 CONNECTORS	@	$8.42 EA	$2,332.34
59	875 CONNECTORS	@	$16.21 EA	$956.39
8	180 CONNECTORS	@	$18.36 EA	$146.88
75	HOUSING TO HOUSING	@	$5.95 EA	$446.25
6	625 SPLICES	@	$12.95 EA	$77.70
6	875 SPLICES	@	$28.55	$171.30
6	RISER GUARDS	@	$25.81	$154.86
99	YELLOW GUY GUARDS	@	$6.95 EA	$688.05
52	TERMINATORS	@	$4.52 EA	$235.04
2	LEQ	@	$32.95 EA	$65.90
			MATERIAL	*$166,234.49*
			TAX	*$13,992.34*
			TOTAL MATERIAL	*$180,226.83*

	LABOR			
60,876'	INSTALL STRAND	@	$0.23 FT	$14,001.48
60,876'	LASH CABLE	@	$0.32 FT	$19,480.32
16,583'	OVERLASH FIBER	@	$0.34 FT	$5,638.22
7,523'	TRENCHING	@	$2.50 FT	$18,807.50
1,500'	BORING	@	$4.00 FT	$6,000.00
99	SET ANCHORS	@	$24.00 EA	$2,376.00
62,451'	SPLICING	@	$0.20 FT	$12,490.20
	FIBER SPLICING			$750.00
208 POLES	TREC PERMITS			$7,530.00
	DOT PERMIT			$500.00
	ENGINEERING & DESIGN			$5,000.00
4	POWER SUPPLY CONNECTIONS	@	$85.00 EA	$340.00
			TOTAL LABOR	*$92,913.72*
			TOTAL PROJECT	***$273,140.55***

Financial Resources

The company, R. M. Greene, Inc., fully expects to be able to sustain construction and service to the project area. The construction of this project will be funded out of cash flow from R. M. Greene, Inc. In the event there is a need for more funds to finish this project, the company will pull from its cash reserves. As of Friday, October 19, 2018, R. M. Greene, Inc. and related revealed $5.3 million in deposits with several FDIC banks. In addition, the company does not hold long-term or short-term liabilities. This company does not anticipate the need to pull from cash reserves or borrow any money from a financial institution.

Partners or Subcontractors

R. M. Greene, Inc. will be utilizing a subcontractor for the buildout of the project. The subcontractor has been used by the company for the last several years. The subcontractor has 61 years of combined experience in all phases of Aerial and underground cable and fiber optic construction.

Federal Funds

There will be no federal funds associated with this project.

Attachment C Other Program Priorities Dixie

Extension of Existing infrastructure

The Dixie ares project will be an extension of existing infrastructure. R. M. Greene, Inc currently services customer in 2010 census 011130310002019 based on the FCC 477 filing. R. M. Greene, Inc would extend the existing infrastructure down Highway 80 and down the following roads: Huguley Rd, Maringo Creek Rd, Collier Rd, Thomas Rd, Green Dudley Rd, Pien Grove Ln, Lamb Rd, Candlelight Dr, North Herring Rd, Lee Rd 169 , Lee Rd 2007 and Gaddy Ln. The following 2010 census would be included in the project 011130310002020,011130310002021 011130310002024, 011130310002025, 011130310002027 011130310002059 011130310002060 01113030002072 010810421021019 010810421021031 010810421021035 010810421021036 010810421021022 and 010810421023018.

Community Support

Enclosed letters from local elected officials

Higher Broadband Speed

The Padgetts Rd project will have access to the highest required internet speed which is the 25 Mbps download and mostly up to 200 Mbps download speeds.. R. M. Greene, Inc currently offers download speeds of up to 200 Mbps and are currently working toward increasing our capability to over up to 1gb download speed.

Attachment C Other Program Priorities - Dixie

To: Alabama Broadband Accessibility Grant Committee

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It also provides a voice for our small local communities with local access programming and a free weekly newspaper (the largest weekly in the state of Alabama) to each subscriber. Mr. Greene was adamant that Phenix City-Russell County and surrounding portions of Lee County's voice not be over shadowed by Columbus and neighboring Georgia municipalities' politics, since the Chattahoochee River border separates Phenix City-Russell County from Georgia.

Because of his love for his hometown local community, Mr. Greene continued to expand a costly plant well into small remote rural areas, which were not cost effective to build from a business prospective and would have never met the economic model of a large company. All of this has been done with private capital focused only on Russell and Lee Counties unlike these other companies who stretch beyond their boundaries to follow the industry trend of mega expansion into densely populated areas. Consequently, much of the existing rural plant has less than ten passings per mile.

I know firsthand what Mr. Greene and his family have done to support and provide services to our economically depressed rural community. In addition to the continued plant expansion to last- mile residents in unlucrative areas by any company's economic standard, he has always provided complimentary services to our local government agencies and non-profits including the county courthouse, law enforcement, fire departments, local libraries, local schools and Project Greene Light, a non-profit supporting our local foster community. When big companies weren't interested in serving our residents, Mr. Greene was there for us.

As technology has advanced, CTV Beam has kept up with those advancements and now offers internet speeds up to 200 mbps in some areas, with plans to offer up to 1 gig in the near future.

As an elected official serving constituents of Russell County, I personally know what an expansion of last-mile services would mean to those constituents. We have residents constantly asking for wireline quality services that simply are not currently available due to economic constraints. It's my understanding that construction averages $20,000 - $25,000 per mile.

Awarding CTV Beam funding for further expansion into the remote areas of Russell County would be tax dollars well spent! I respectfully request, on behalf of my constituents, that you award funding to CTV Beam for rural broadband expansion in Russell County.

Signature Gentry Lee

Printed Name Gentry Lee

Title Russell County Commissioner Dist. 1

Attachment C Other Program Priorities Dixie

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Because of his love for his hometown local community, Mr. Greene continued to expand a costly plant well into small remote rural areas, which were not cost effective to build from a business prospective and would have never met the economic model for large company. All of this has been done with private capital focused only on Russell and Lee Counties unlike these other companies who stretch beyond their boundaries to follow the industry trend of mega expanses to densely populated area only. Consequently, much of the existing rural plant has less than ten passing per mile. I knew firsthand what Mr. Greene and his family have done to support and provide services to our economically depressed rural community. In addition to the continued plant expansion to last- mile residents in on-lucrative areas by any company's economic standard, he has always provided complimentary services to our local government agencies and non-profits including the county courthouse, law enforcement, fire departments, local libraries, schools and Project Greene Light, a non-profit supporting our local foster community. When big companies weren't interested in serving our residents, Mr. Greene was there for us.

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Signature C. L. Bell

Printed Name Chris Blackshear

Title AL. House Dist. 80 Representative

Attachment C Other Program Priorities Dixie

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As a former elected official previously serving constituents of Lee County, I personally know what an expansion of last-mile services would mean to those constituents. We have residents constantly asking for wireline quality services that simply are not currently available due to economic constraints. It's my understanding that construction averages $20,000 - $25,000 per mile.

Awarding CTV Beam funding for further expansion into the remote areas of Lee County would be tax dollars well spent! I respectfully request, on behalf of my constituents, that you award funding to CTV Beam for rural broadband expansion in Lee County.

Signature LaFaye E. Dellinger

Printed Name LaFaye E. Dellinger

Title Former Mayor Smiths Station
2001 - 2017.

Attachment C Other Program Priorities DIXIE

To: Alabama Broadband Accessibility Grant Committee

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As Veterans Service Officer I personally know what an expansion of last-mile services would mean to Russell County. We have veterans constantly asking for wireline quality services that simply are not currently available due to economic constraints. It's my understanding that construction averages $20,000 - $25,000 per mile.

Awarding CTV Beam funding for further expansion into the remote areas of Russell County would be tax dollars well spent! I respectfully request, on behalf of my constituents, that you award funding to CTV Beam for rural broadband expansion in Russell County.

Signature Leroy Davis Jr

Printed Name Leroy Davis Jr

Title Veterans Service officer
Russell County Veterans org.

Attachment C Other Program Priorities Dixie

To: Alabama Broadband Accessibility Grant Committee

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As an elected official serving constituents of Lee County, I personally know what an expansion of last-mile services would mean to those constituents. We have residents constantly asking for wireline quality services that simply are not currently available due to economic constraints. It's my understanding that construction averages $20,000 - $25,000 per mile.

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Signature E.C. "Bobby" Copeland

Printed Name E.C. "Bobby" Copeland

Title Mayor City of Smiths Station AL

Attachment C Other Program Priorities Dixie

To: Alabama Broadband Accessibility Grant Committee

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Signature _____

Printed Name Heath Taylor

Title Sheriff of Russell County, AL

Attachment C Other Forum Docs

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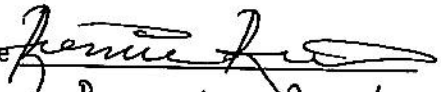
Signature 

Printed Name Ronnie Reed

Title Russell County Commissioner
Dist. #4