



Alabama
Broadband
Accessibility Fund |
Pea Ridge
Application

Farmers Telecommunications Cooperative, Inc.

Farmers Telecommunications Cooperative Information

Project Name: Pea Ridge Alabama Broadband Accessibility Grant

Mailing Address: P.O. Box 217 | 144 McCurdy Ave. N.
Rainsville, AL 35986

Legal Name and Entity: Farmers Telecommunications Cooperative, Inc.

Name and Title of CEO: Fred Johnson, Executive Vice President and General Manager

Name and Title of Contact: Taylor Richards, Marketing Assistant /Digital Marketing Coordinator

Phone Number and Email of Contact: 1-(256)-638-2144 ext. 2018
trichards@staff.farmerstel.com

Attachment A, Project Description



A. Project Description

1. Proposed Funded Service Area (PFSA)

Farmers Telecommunications Cooperative, Inc. (FTC) recognizes the importance of having high speed broadband for building the future network of tomorrow. Many rural communities are being left behind, including residents of the Pea Ridge and New Home communities in DeKalb County, Alabama.

*Please note that the location name **Pea Ridge** is used within this application to represent the entire proposed funded service area (PFSA), which consists of the Pea Ridge and New Home communities in DeKalb County, Alabama.

The proposed funded service area (PFSA) upon which this grant application is based was selected specifically by FTC for its unique characteristic within the FTC incumbent local exchange service territory as being unable to receive a minimum of 10 Mbps download and 1 Mbps upload service via the existing facilities in use. Residents in the PFSA currently receive internet service via DSL over twisted copper pairs at speeds from less than 1 Mbps for many of the more remote locations, to about 8 Mbps at the locations closest to the serving wire center.

The PFSA consists of approximately 18 route miles of buried and aerial fiber-optic cable in a mountainous region that has layers of rock to contend with throughout much of the service area.

Households	Businesses	Community Anchors
60	2	0

For clear identification of households, businesses and community anchors, refer to the PFSA engineering maps in Attachment A in the Preliminary Project Evaluation.

In order for a block to qualify as urban, it must have a density of 1,000 people per square mile. The Census Bureau defines rural as any population, housing, or territory NOT in an urban area. The proposed funded service area of Pea Ridge is 3.814 square miles which includes 16 locations (households) per square mile. The average number of people per household is 2.49. Therefore, there are approximately 39.84 persons per square mile in the proposed funded service area. This area qualifies as a rural area.

This table, provided from census.gov shows the percentage of the county population living in rural areas as of the 2010 Census. Counties with less than 50 percent of the population living in rural areas are classified as mostly urban; 50 to 99.9 percent are classified as mostly rural; 100 percent rural are classified as completely rural.

2015 Geography Name	2010 Census Total Population	2010 Census Urban Population	2010 Census Rural Population	2010 Census Percent Rural
DeKalb County, Alabama	71,109	7,018	64,091	90.1

The Pea Ridge Community is unincorporated and located in the Henagar, AL (35978) zip code in DeKalb County and serves a small portion of residents in the Valley Head (35989) zip code. The demographics for Henagar, AL are representative of the proposed funding service area. The city of Henagar is incorporated and the population of Henagar is 2,344 with a total of 942 total households. Valley Head has a total population of 558. 19.9% of all families in this area live below the poverty level. 38.7% of homes with children under 18 years of age live below the poverty level. It is estimated that a total of 25.1% of the total population live below the poverty level. 20.5% of DeKalb County persons live in poverty. Workers have a mean travel time to employment of 25 minutes. 47.7% of population 6 and over are not in the labor force. 19.4% of the population has no health insurance coverage. Median house value is \$78,800 compared to Alabama's, which is \$128,500. The median household income is \$35,694 compared to the state of Alabama being \$44,758. The mean household income is \$47,010. Per capita income is \$19,075 and Alabama's is \$24,736.

DeKalb County is part of Alabama's Appalachian Region which is considered one of the most impoverished regions of the United States.

The Appalachian Regional Commission (ARC) was created by Congress in 1965 to bring the 13 Appalachian states into the mainstream of the American economy. The Commission is a partnership of federal, state, and local governments, and was created to promote economic growth and improve the quality of life in the 13-state region stretching along the Appalachian Mountains from southern New York to northern Mississippi.

FTC's goal to obtain the Alabama Broadband Accessibility Act grant funding to expand broadband into rural DeKalb County (Pea Ridge Community) absolutely meets the stated ARC objectives listed below.

1. Invest in entrepreneurial and business development strategies that strengthen Appalachia's economy.
2. Improve the education, knowledge, skills and health of residents to work and succeed in Appalachia.
3. Invest in critical infrastructure- especially broadband, transportation, and water/wastewater systems.
4. Strengthen Appalachia's community and economic development potential by leveraging the Region's natural and cultural heritage assets.
5. Build the capacity and skills of current and next generation leaders and organizations to innovate, collaborate and advance community and economic development.

Tennessee Valley Authority (TVA) Special Opportunities County (SOC):

TVA designates two of the 13 AL TVA Counties as Special Opportunities Counties (SOC). Only counties with the lowest per capita personal income, the highest percentage of residents below the poverty level, and the highest average annual unemployment rates are eligible for the SOC program. The list of eligible counties is updated annually. The designation is for one-year periods and DeKalb County has been designated multiple times within the past 10 years. DeKalb County is currently a TVA SOC county. Refer to Schedule C-9 for the 2018 TVA Special Opportunities Counties Map.

2. Types of Technology to be Deployed and Future Usage Projections

The copper wireline network will be replaced with an all fiber-optic FTTH network utilizing a combination of Active Ethernet (AE) and passive optical network (PON) designs providing fiber connectivity to each home. Service will be delivered over the Calix B and Calix E series platforms. FTC will also offer industry-best Carrier Class Wi-Fi inside the home using Calix Gigacenter to deliver Mesh-Enhanced Carrier Class Wi-Fi experience throughout the home. The fiber connectivity to the side of the home will deliver broadband speeds of 1 Gig (1,000 Mbps) symmetrical with unlimited scalability, allowing this network to grow to meet future broadband needs.

Each of the establishments in the PFSA will be passed with a fiber-optic cable network providing a dedicated fiber pre-assignment to each establishment as well as 20% overhead in fiber capacity for growth in any area. Should the number

of homes in any given area increase by more than 20%, the GPON design architecture allows the ability to increase the number of homes served by up to 32 times the original number. Having a dedicated fiber to each home will also allow unlimited future scalability of bandwidth requirements; the fiber optic connection for 10 Gig or even 100 Gig will use the same fiber connection with updated electronics.

As requested by the customer, drops will be placed to each establishment and terminated in network access points. FTC has already deployed about 1,800 miles of fiber-optic cable in other markets and connected over 11,500 customers with fiber. So FTC is very confident that all of the processes needed to connect any home within the PFSA have already been addressed and any home can be served, usually with a 3 week or less wait time.

3. Types of Services to be Offered

Voice, broadband and security will be offered to every home and business within the PFSA. Standard broadband data speeds will be symmetrical - 100 Mbps download and 100 Mbps upload, with 1 Gig (1,000 Mbps) download and 1 Gig (1,000 Mbps) upload also available.

Broadband data services (capable of supporting up to 1 Gig (1,000 Mbps) Symmetrical) to the end user will include: support for telemedicine; internet access for video; voice and data services; support for schools/colleges and long distance learning opportunities; and access to on-line governmental services and information.

The Applicant is proposing with this system design to provide the PFSA customers with two (2) tiers of broadband service with no data caps. Tier 1 will have symmetrical speeds of 100 Mbps priced at \$70.81 per month. Tier 2 will have symmetrical speeds of 1 Gig (1000 Mbps) priced at \$90.81 per month.

IP voice and unlimited long distance service will be available as well.

With access to broadband, security and home automation services will be available including security monitoring, burglary alarms, video surveillance, fire alarms, emergency panic alarms, severe weather monitoring and home automation services.

4. Preliminary Project Evaluation

FARMERS TELECOMMUNICATIONS COOPERATIVE NORTH END DESIGN COST ESTIMATE BY REMOTE AREA					Not Eligible	
REMOTE	CABLE	QUANTITY	PRICE	COST	QUANTITY	COST
NWHM	BFO12	12,902	\$3.09	\$39,867.18	0	\$0.00
NWHM	BFO24	4,200	\$3.12	\$13,104.00	0	\$0.00
NWHM	BFO36	15,500	\$3.16	\$48,980.00	0	\$0.00
NWHM	BFO48	3,800	\$3.18	\$12,084.00	0	\$0.00
NWHM	BFO72	2,076	\$3.50	\$7,266.00	0	\$0.00
NWHM	BFO96	5,900	\$3.76	\$22,184.00	0	\$0.00
NWHM	CO12(10M)	14,700	\$3.20	\$47,040.00	0	\$0.00
NWHM	CO12(E)	5,180	\$2.21	\$11,447.80	0	\$0.00
NWHM	CO48(10M)	3,354	\$3.45	\$11,571.30	0	\$0.00
NWHM	CO48(E)	2,200	\$2.46	\$5,412.00	0	\$0.00
				\$218,956.28		
PRDG	BFO 12	8600	\$3.08	\$26,488.00	6600	\$20,328.00
PRDG	BFO 24	10500	\$3.12	\$32,760.00	0	\$0.00
PRDG	BFO 36	2200	\$3.16	\$6,952.00	2200	\$6,952.00
PRDG	BFO 48	1300	\$3.18	\$4,134.00	0	\$0.00
PRDG	CO48(E)	2100	\$2.48	\$5,208.00	0	\$0.00
				\$75,542.00	0	\$0.00

94,512 (ft)
17.90 (mi)

\$294,498.28

\$27,280.00

CERTIFICATION

I, the undersigned Professional Engineer, have reviewed and do hereby certify that the data included in this ADECA Broadband Grant Application is correct to the best of my knowledge and belief and that the costs and timeline for construction are reasonable and prudent. I based my technical evaluation of this project on my years of experience of working on similar projects in size and scope.

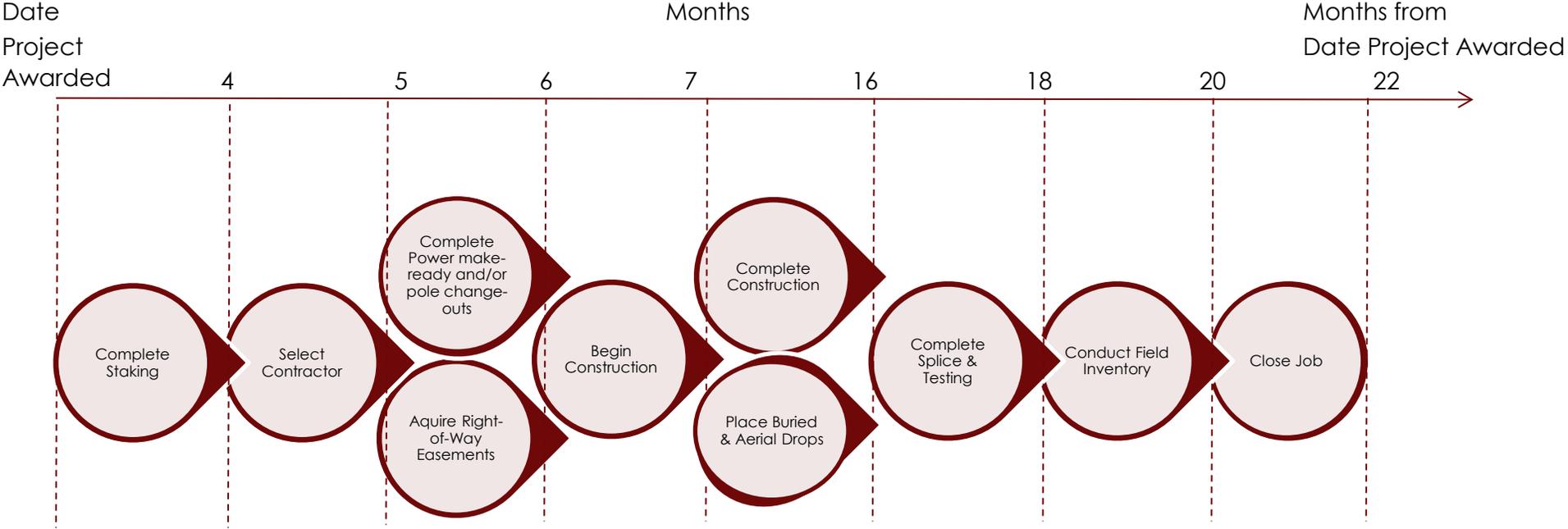
9/27/18

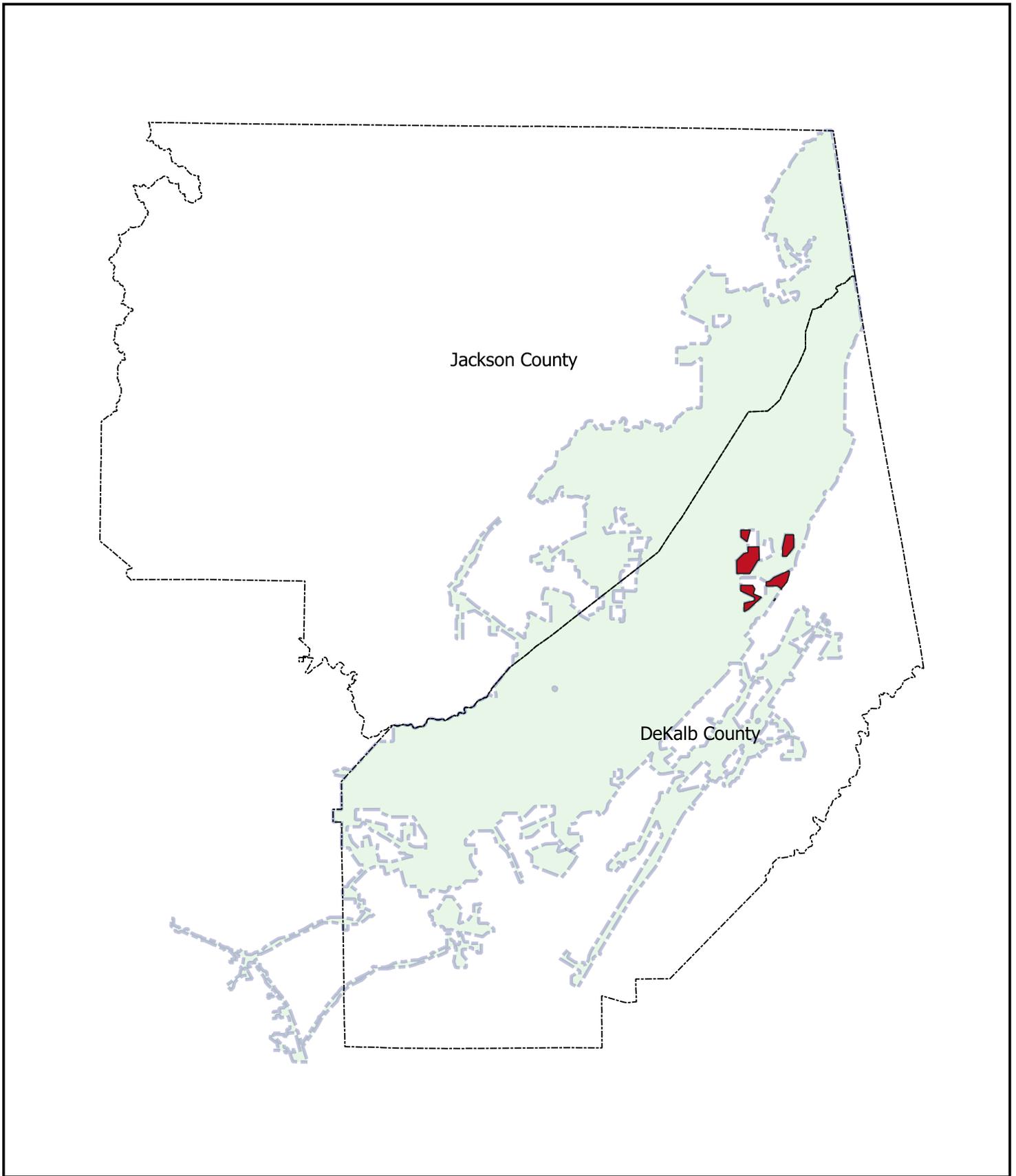
Date

Carol Leigh Brackett
Carol Leigh Brackett
Alabama Registered Professional Engineer No. 25055



**Preliminary Technical Evaluation
Project Schedule & Timeline**

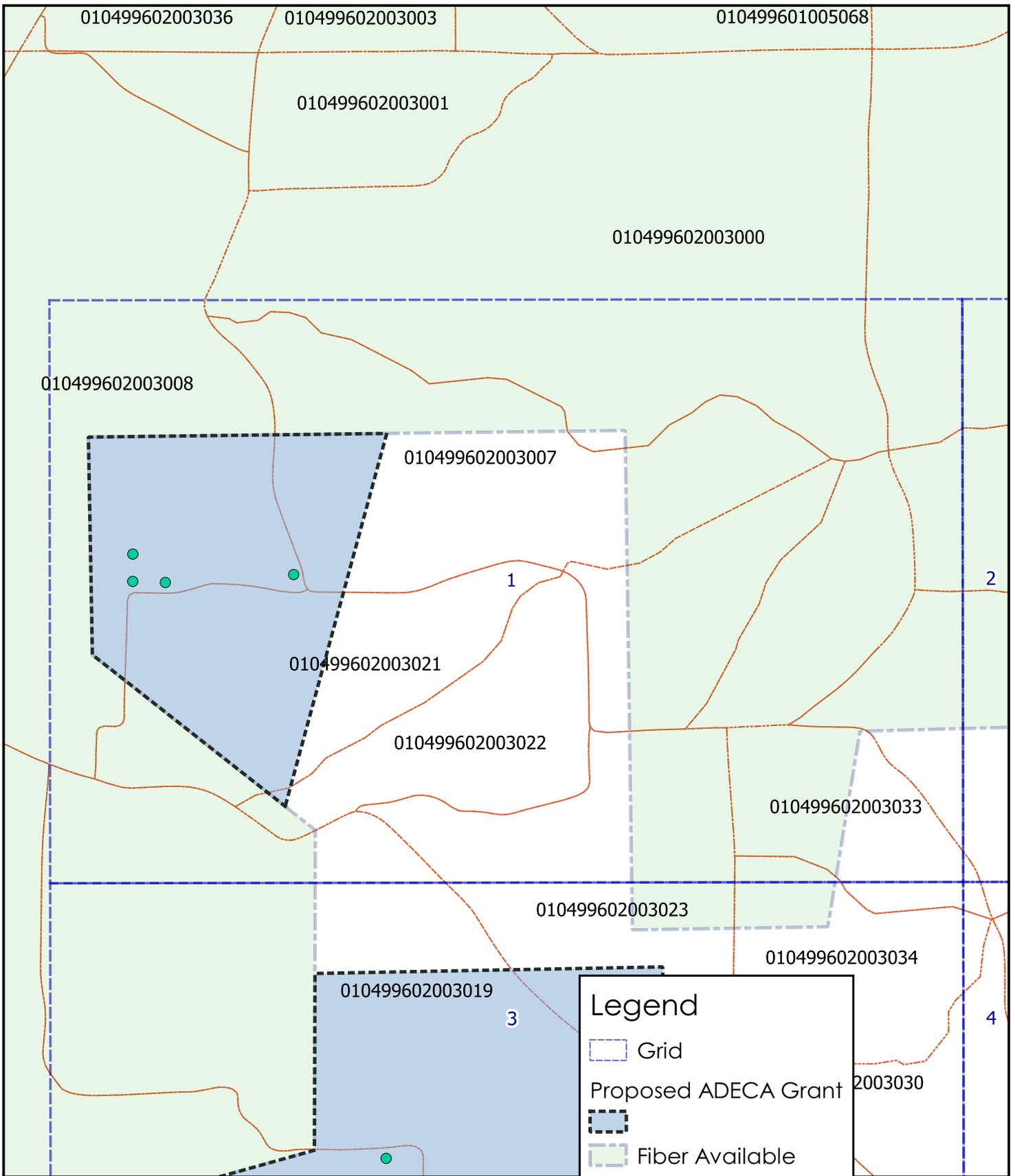




ADECA Grant 2018 - Pea Ridge

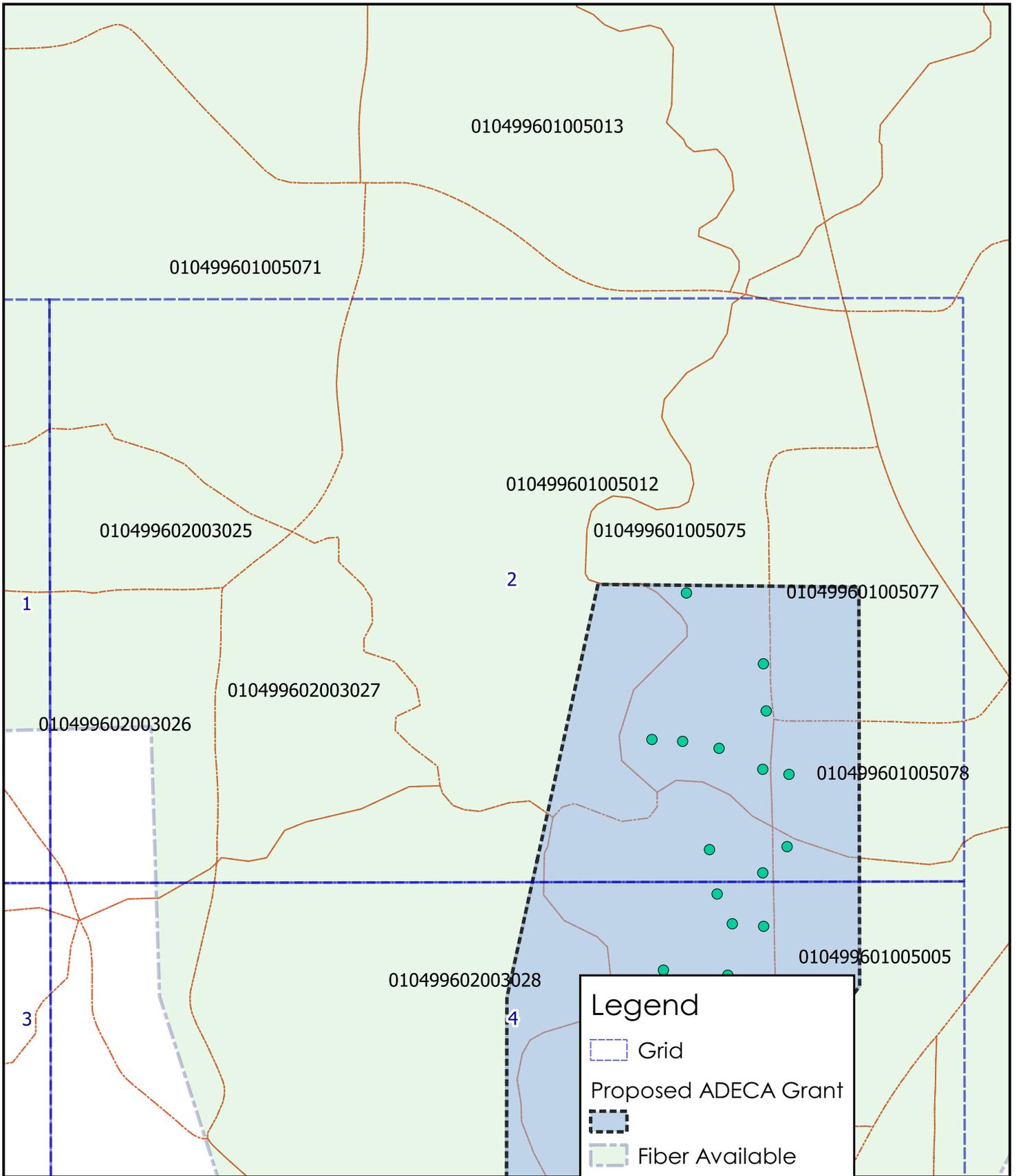
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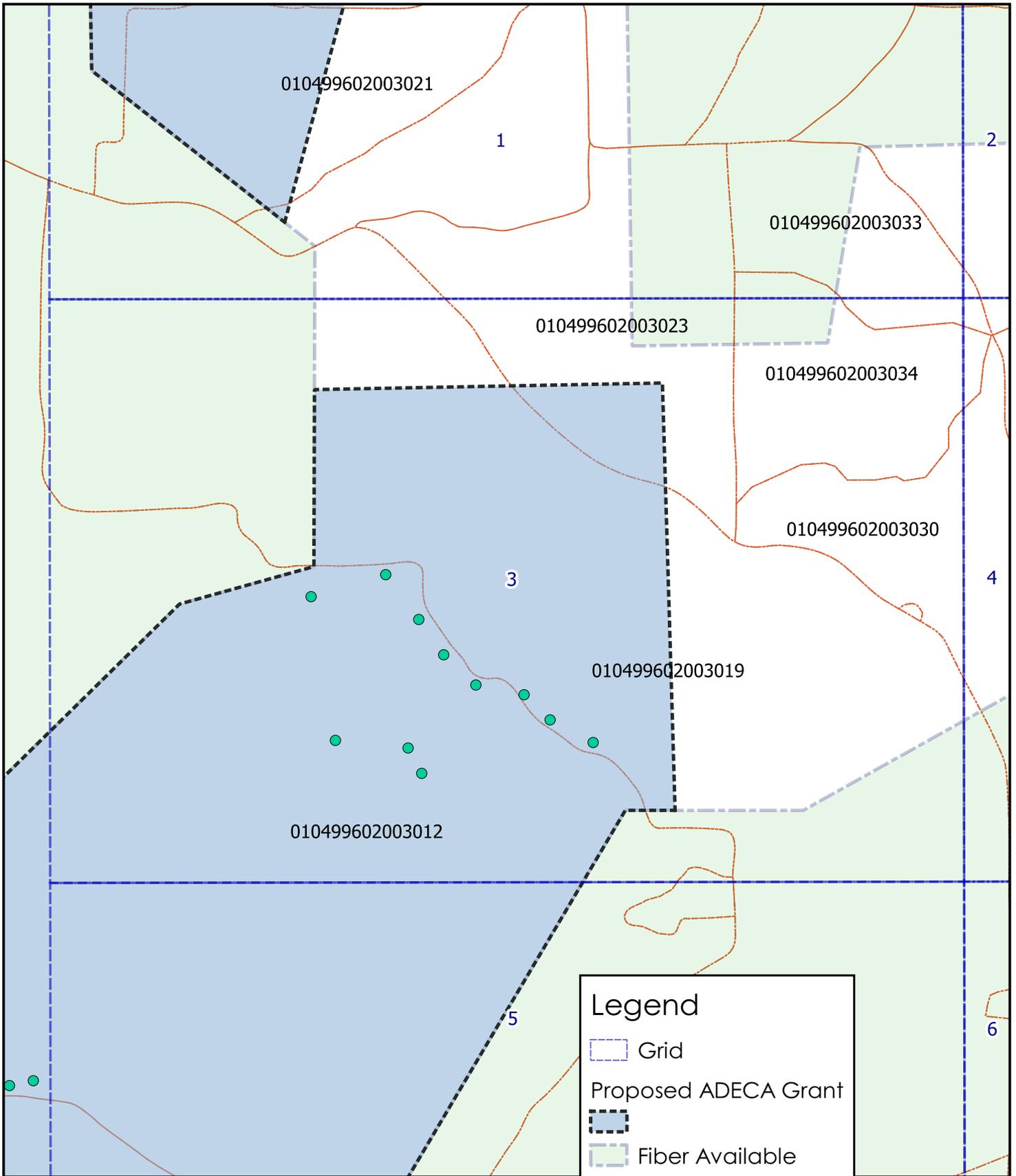
-  Proposed Pea Ridge Grant Area
-  Current FTC Fiber Availability
-  Alabama Counties



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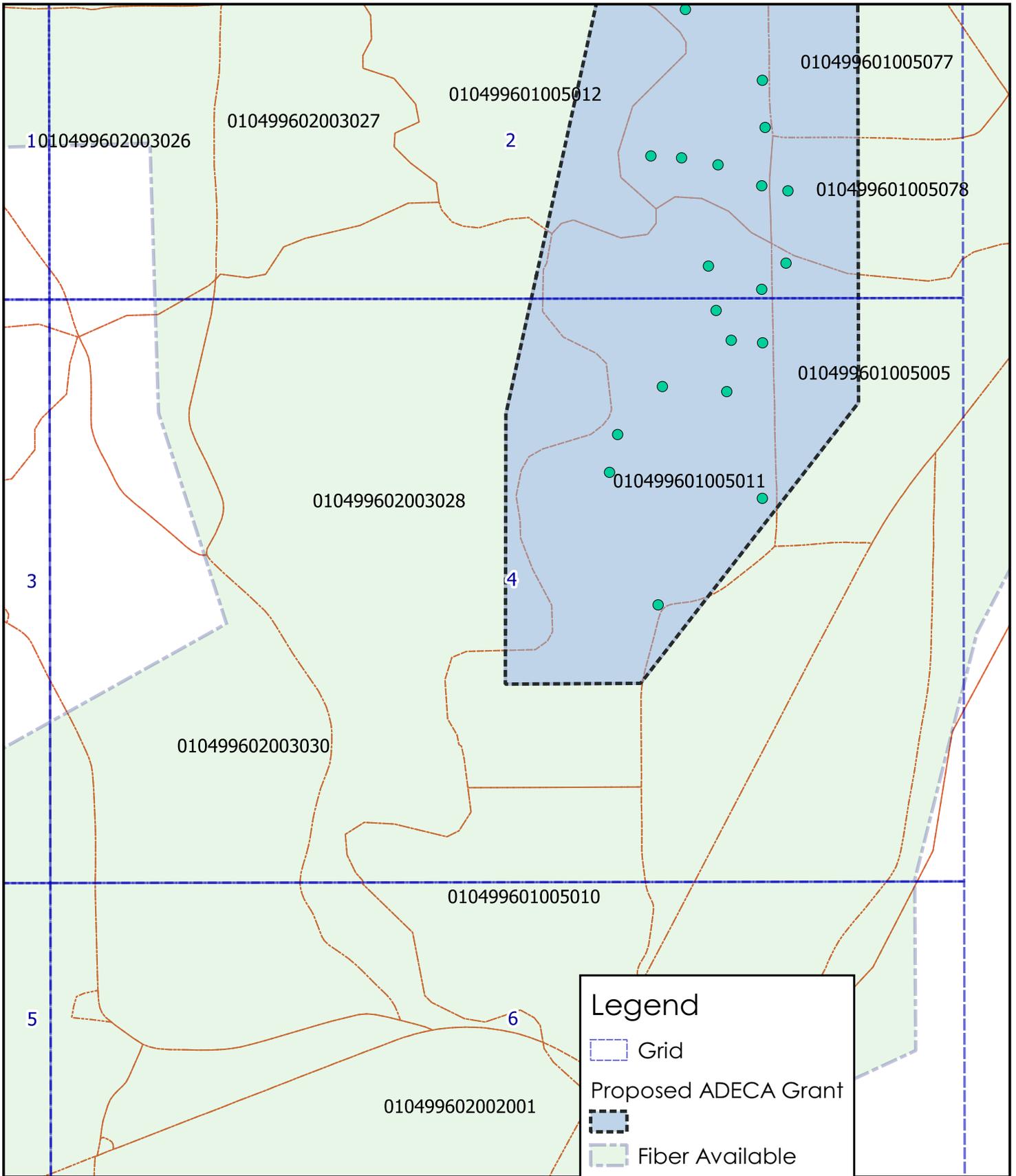
-  Grid
-  Proposed ADECA Grant
-  Fiber Available
-  Census Block
- Customers
 -  Residential
 -  Business
- CO Facilities
 -  Fiber and Copper
 -  Fiber Only
 -  Copper Only





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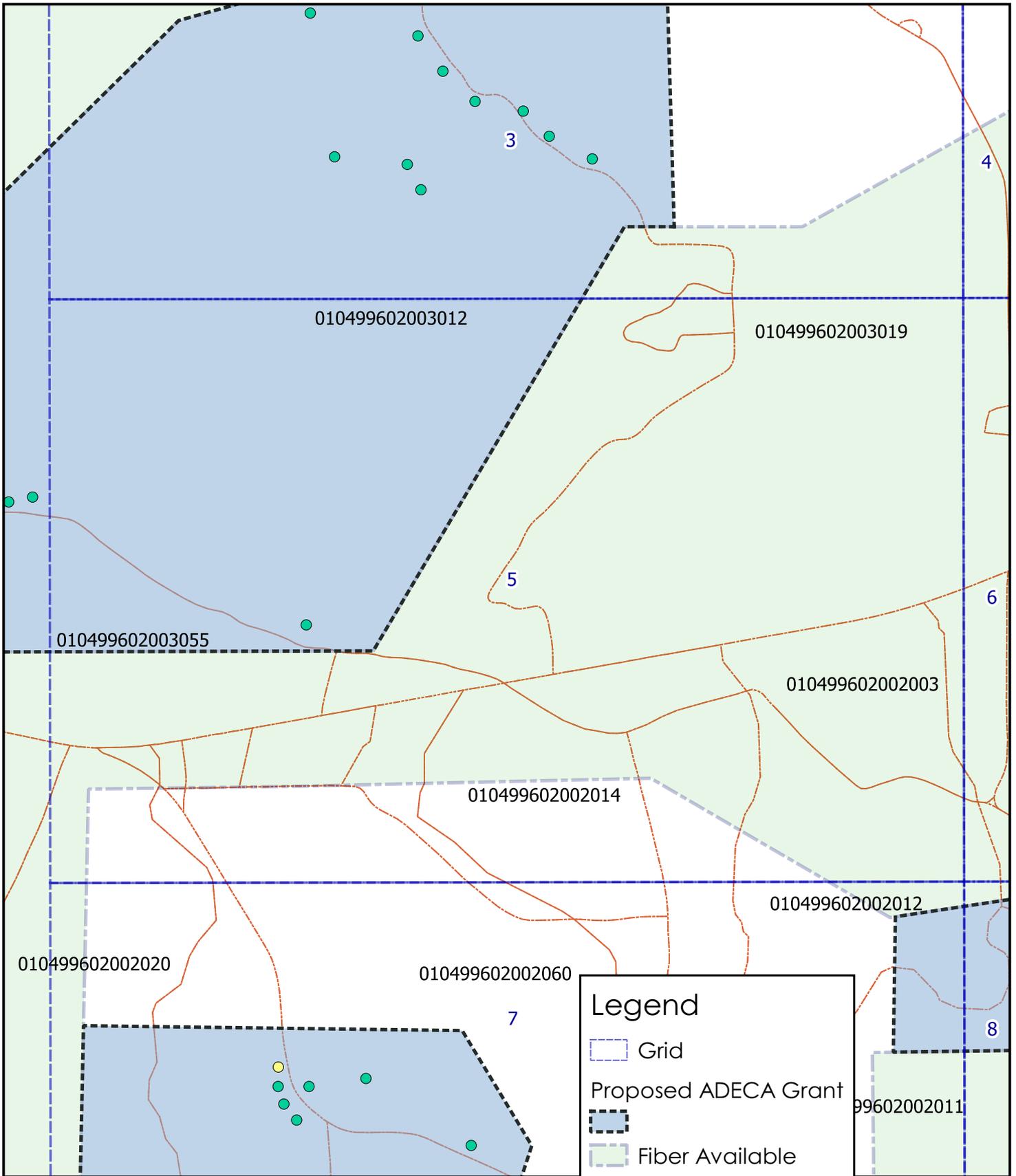
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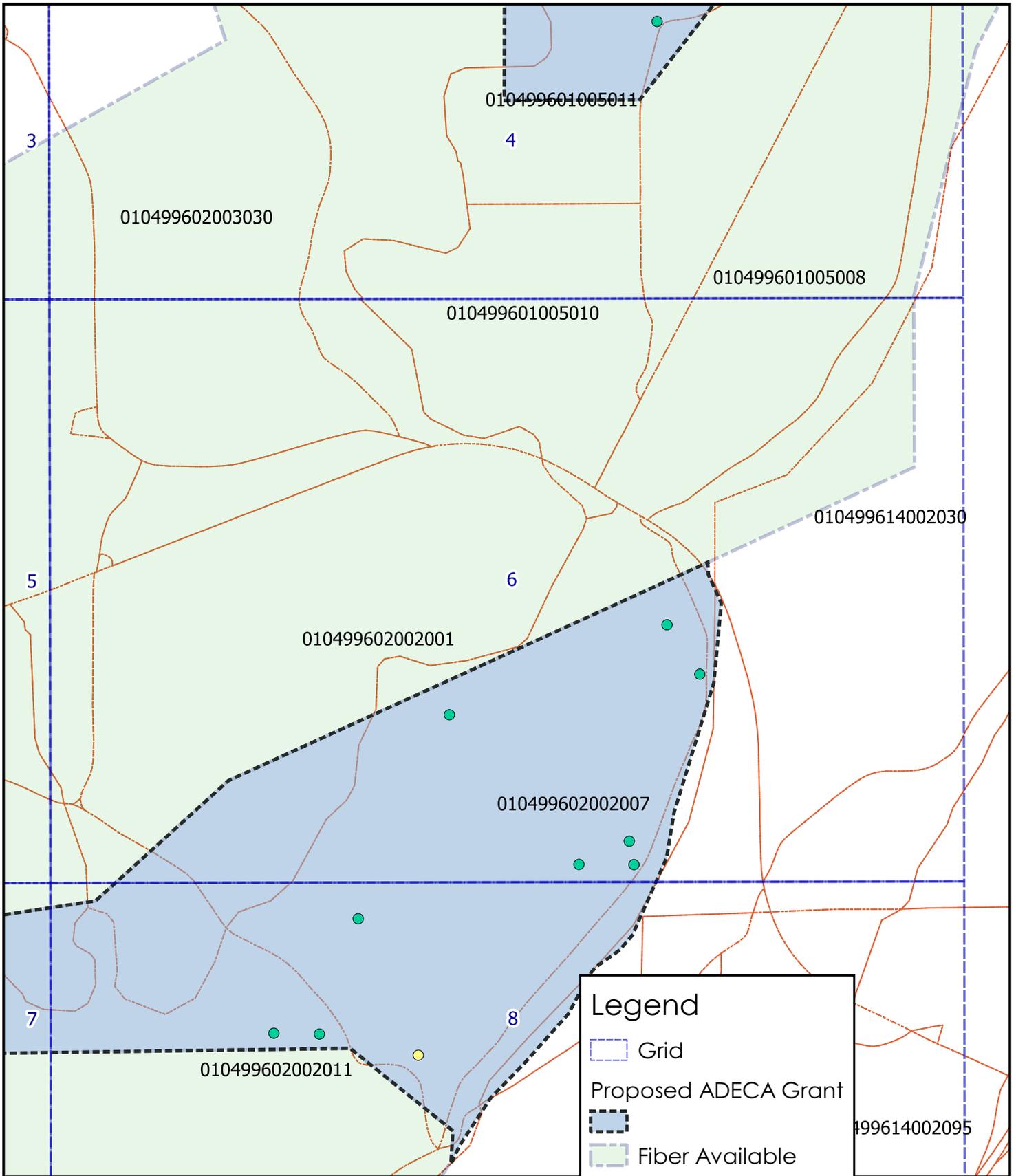




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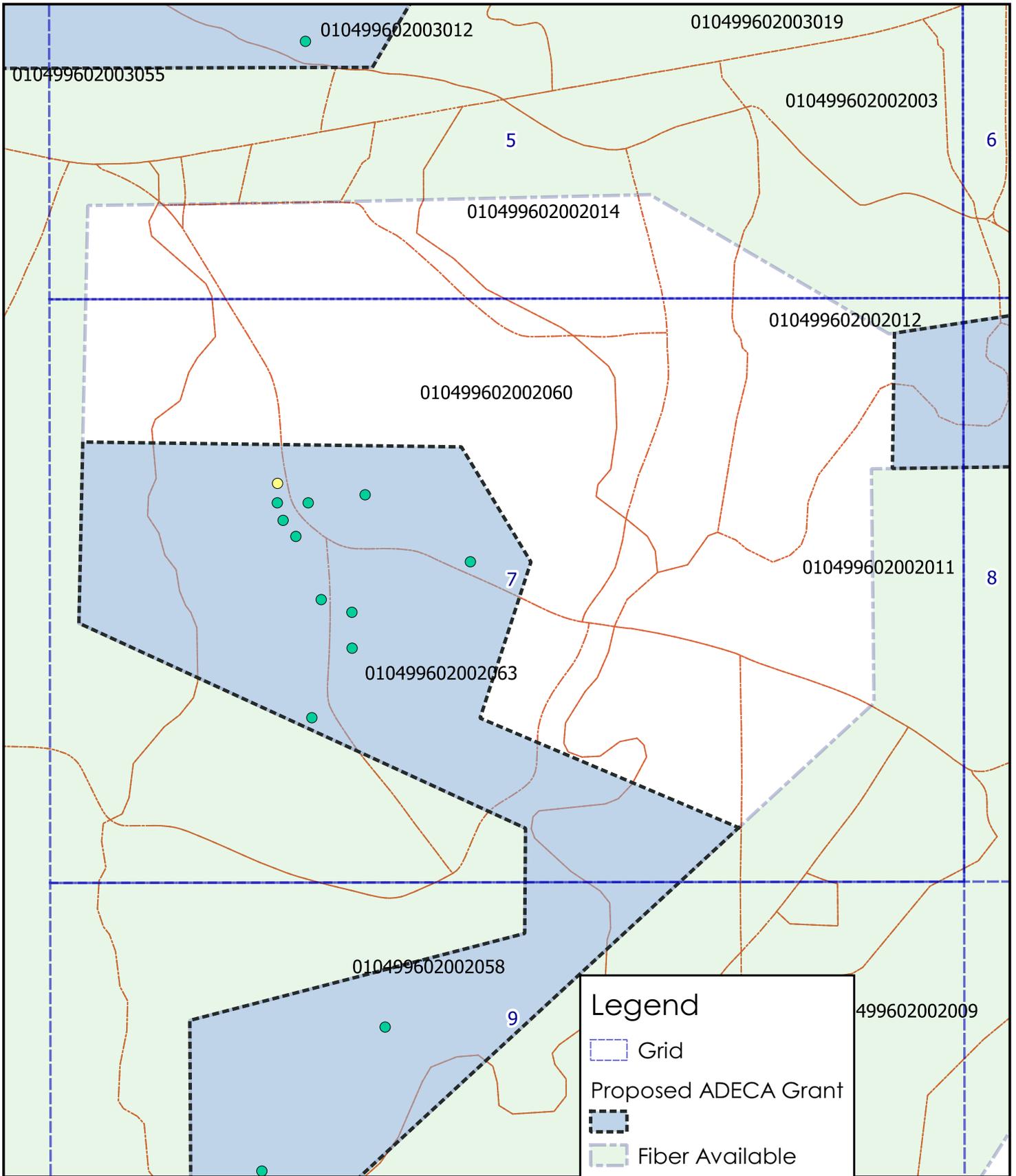
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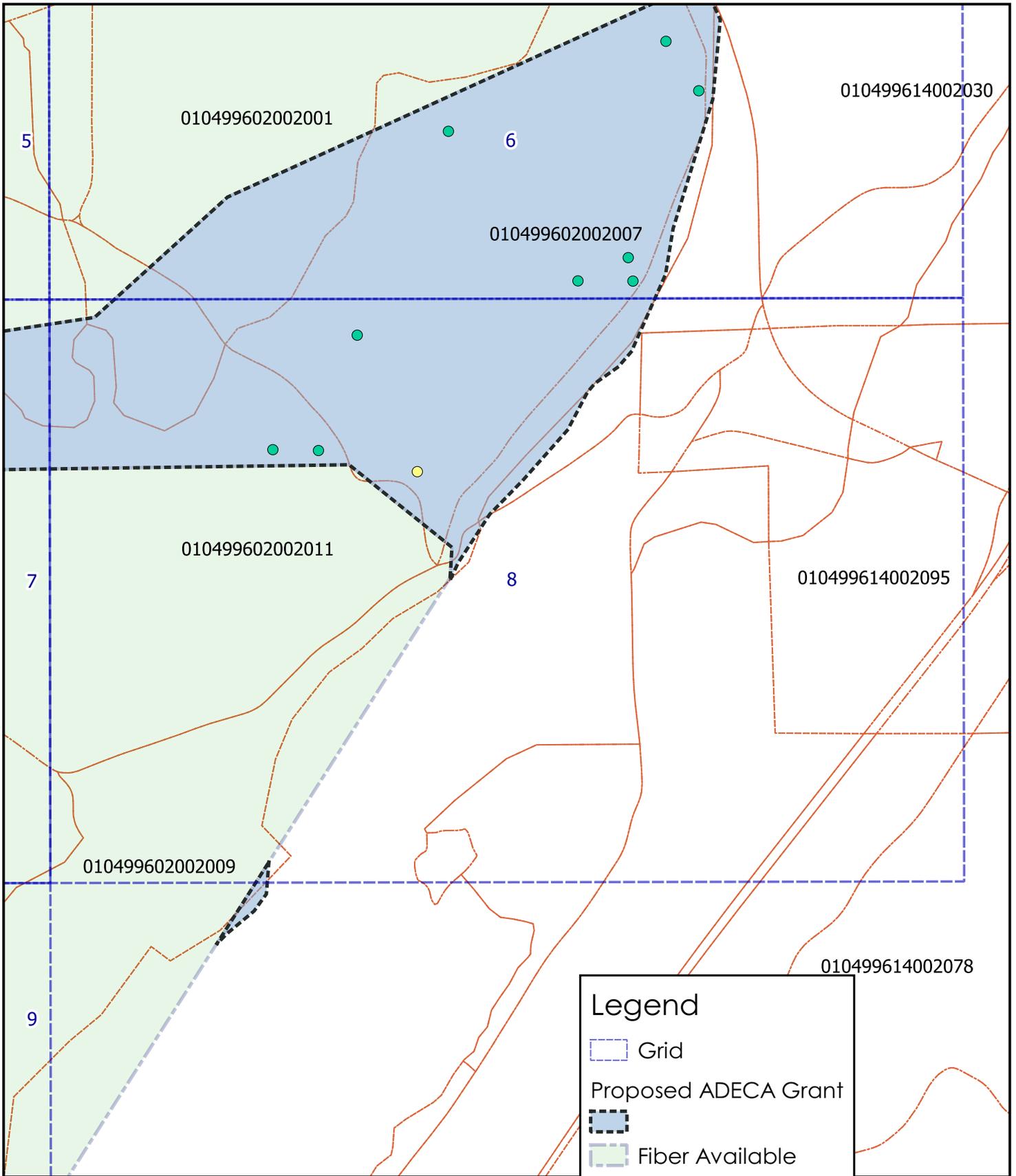
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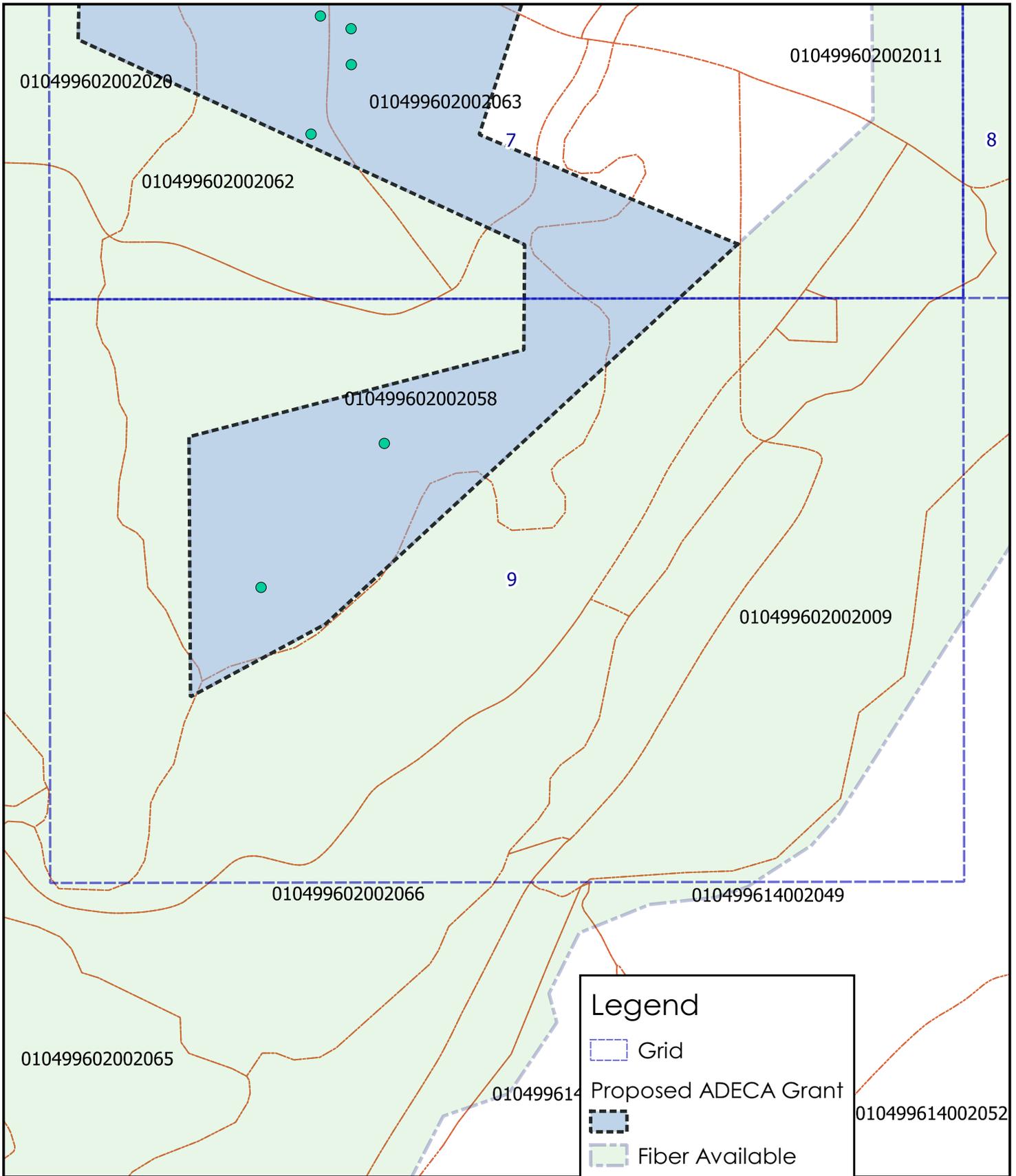
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5. Technical and Managerial Capabilities

Farmers Telecommunications Cooperative, Inc. is the largest member-owned telecommunications cooperative in the state of Alabama. Directly through the Cooperative, along with its wholly-owned subsidiary, Farmers Telecommunications Corporation, thousands of homes and businesses across DeKalb, Jackson, and Marshall counties are served. We are dedicated to bringing world-class telecom services to the rural areas, cities, and towns in our service area.

Serving the northeastern-most corner of Alabama south and east of the Tennessee River, FTC has long borne a history of technological progress and commitment to the economic infrastructure of its served areas. FTC deployed Alabama's first digital switch in 1976. In 2007, it embarked upon an RUS financed \$36,000,000 overbuild of optical fiber to a planned 72% of its ILEC locations. Through careful refinement of its engineering design, persistence in wisely using its financing resources, and a general responsiveness to changing economics, FTC stretched this original budget and was able to achieve a 92% fiber availability within its ILEC area.

Our optical fiber network offers customers access to some of the fastest internet speeds in the country, including gigabit access in most areas. This optical fiber network positions the region to attract new jobs, support economic growth, increase access to telemedicine and introduce improved opportunities in education.

With the ever-increasing demands for smart homes, FTC also offers its Connected Life Security and Home Automation services to protect what matters most, home and family.

As features and technology continue to evolve, we continue our commitment to providing the best and most advanced voice services to homes and businesses in the region.

In November of 2015, NTCA - The Rural Broadband Association, the premier association representing nearly 900 independent, community-based telecommunications companies that are leading innovation in rural and small-town America, awarded FTC as a Certified Gig-Capable Provider for delivering gigabit broadband speeds and enabling technological innovation in its service area. FTC was one of the first companies to have this designation, which has now grown to 150 companies.

In September of 2018, NTCA – The Rural Broadband Association also honored FTC with the Smart Rural Community Showcase award for deploying advanced technologies and leveraging those technologies to enable innovation in the areas of economic development and commerce, education, enhanced health care, government services, security and energy use. The NTCA Smart Rural Community initiative recognizes and celebrates the efforts of rural telecommunications providers and their communities to deliver technologies that make rural communities vibrant places in which to live and do business. The goal of the initiative is to foster the development of Smart Rural Communities throughout rural America by recognizing trailblazers, like FTC, and providing resources to assist broadband providers and connected industries.

In the decades since FTC was founded, the technology and services we provide have changed immensely for the people we serve across DeKalb, Jackson, and Marshall counties. But some things haven't changed. Just as in 1952, we remain focused on serving our customers and strengthening our local connections to better carry out our cooperative mission. We're proud to be member-owned and to provide the advanced, reliable telecom services that keep our neighbors connected.

FTC is professionally led by J. Frederick Johnson, MBA CPA, its CEO. Mr. Johnson has served the rural telecommunications and rural electric industry for 36 years, first in an auditing capacity, then nine years as the CFO of a rural electric cooperative, followed by 25 years at FTC, the past 16 as its CEO. Mr. Johnson relies heavily upon an Assistant General Manager, Chris Bryant, with over 29 years of experience at FTC. FTC's engineering and operations group is led by 28 year veteran Shane Trotman who was personally responsible for the majority of the oversight of FTC's most recent optical fiber overbuild. Mr. Trotman's wealth of outside plant engineering and operations experience coupled with his professional business training affords him an outstanding platform upon which to base design and execution phases of optical fiber networks.

This was the primary leadership team responsible for FTC's successful deployment of the first widely adopted optical fiber gigabit capable network within the state of Alabama and one of the first such in the Southeast based upon an active Ethernet platform. FTC's optical network now reaches approximately 92% of its ILEC locations, 100% of its CLEC locations and serves a population of over 80,000 residents.

The balance of FTC management ranks is comprised of well-educated and experienced professionals, all considered well versed in their particular area of

responsibility. The senior staff alone, apart from Johnson and Bryant, offers a combined 74 years of experience in their respective areas of responsibility.

Attachment B, Application Budget



B. Application Budget

The proposed project will provide internet speeds of at least:

Project Type A: 10 Mbps download and 1 Mbps upload
 Project Type B: 25 Mbps download and 3 Mbps upload

Total Project Cost \$ 372,932.00

20% of Total Project Cost

Total Grant Amount Requested \$ 74,586.00

Standard broadband data speeds will be symmetrical - 100 Mbps download and 100 Mbps upload, with 1 Gig (1,000 Mbps) download and 1 Gig (1,000 Mbps) upload also available.

1. Eligible Expenses

Eligible project expenses are subdivided into two categories, initial construction and installation costs.

Initial construction costs include installed costs for buried and aerial distribution fiber totaling \$267,218. A detailed listing of the record units in question is as follows:

Cable	Quantity			Cost		
	Eligible	Not Eligible	Total	Eligible	Not Eligible	Total
BFO12	12,902	-	12,902	\$ 39,867	\$ -	\$ 39,867
BFO24	4,200	-	4,200	\$ 13,104	\$ -	\$ 13,104
BFO36	15,500	-	15,500	\$ 48,980	\$ -	\$ 48,980
BFO48	3,800	-	3,800	\$ 12,084	\$ -	\$ 12,084
BFO72	2,076	-	2,076	\$ 7,266	\$ -	\$ 7,266
BFO96	5,900	-	5,900	\$ 22,184	\$ -	\$ 22,184
CO12(10M)	14,700	-	14,700	\$ 47,040	\$ -	\$ 47,040
CO12(E)	5,180	-	5,180	\$ 11,448	\$ -	\$ 11,448
CO48(10M)	3,354	-	3,354	\$ 11,571	\$ -	\$ 11,571
CO48(E)	2,200	-	2,200	\$ 5,412	\$ -	\$ 5,412
BFO 12	2,000	6,600	8,600	\$ 6,160	\$ 20,328	\$ 26,488
BFO 24	10,500	-	10,500	\$ 32,760	\$ -	\$ 32,760
BFO 36	-	2,200	2,200	\$ -	\$ 6,952	\$ 6,952
BFO 48	1,300	-	1,300	\$ 4,134	\$ -	\$ 4,134
CO48(E)	2,100	-	2,100	\$ 5,208	\$ -	\$ 5,208
Total				\$267,218	\$ 27,280	\$ 294,498

In addition to the construction costs detailed above and to complete the initial construction phase of the Pea Ridge project, FTC anticipates incurring engineering and electronics costs of \$53,444 and \$16,033 respectively.

Subsequent to the completion of initial construction, FTC expects to incur an additional \$36,237 in costs associated with transitioning 39 subscribers currently receiving services over copper to an optical fiber network. These costs include the materials, labor, and electronics required to connect the subscribers to the newly constructed network additions.

2. Financial Resources

FTC does not expect any adverse financial issues arising out of the project upon which this grant application is based. The consolidated enterprise, with assets of approximately \$82 Million and annual operating revenues of approximately \$34,000,000, now maintains over 1,800 route miles of optical fiber and serves as the most robust component of the telecommunications infrastructure within a geographic area covering 590 square miles with a population of approximately 80,792.

FTC reported net margins of \$1,061,325 and \$2,072,946 for 2017 and 2016 respectively. During 2017, FTC retired \$2,760,130 in both long-term and short-term debt. FTC also continues to maintain a strong position with regard to the equity of its members. On December 31, 2017, total member equity was \$48,714,299, or 60 % of total assets.

In addition to its strong financial performance and solid equity position, FTC has been able to sustain positive cash flows sufficient to meet operating obligations, service its long-term debt, continue to retire member equity, and self-fund minor plant expansion. FTC reported net positive cash flows of \$2,617,268 and \$510,405 respectively for 2017 and 2016. Due to its current cash position and, if needed, access to debt capital, FTC is confident that financing will not be a barrier to constructing and maintaining the assets associated with the Pea Ridge project.

3. Partners and Subcontractors

A. Project management – Farmers Telecommunications Cooperative (FTC) has already deployed over 1,800 miles of fiber-optic cable in other markets and connected more than 11,500 customers with fiber, largely through an RUS FTTH

loan program. Project management was conducted by FTC staff. Project management for this program will also be performed by FTC staff members.

B. Engineering –

- a. **System design** – Has already been completed as a joint effort by FTC engineering staff and engineering consultants, LADD Engineering
- b. **Staking of routes** – Will primarily be handled by qualified engineering consultants.
- c. **Permitting** – Will be performed by FTC engineering staff
- d. **Right-of-Way** – Will be performed by FTC engineering staff
- e. **Inspect** – Will be performed by FTC engineering staff
- f. **Inventory & Close-out** – Will be completed as a joint effort by FTC engineering staff and qualified engineering consultants

C. Contractor selection – Will be performed by FTC staff members.

D. Construction – Will be performed by private contractors chosen as part of FTC's bid or vetting process. Contractors will be highly qualified and trained in all code and RUS guidelines. Construction contracts for projects of this size in the past have been awarded to Red Stag, Electricom, and others.

E. Splice and test – Will be performed by private contractors chosen as part of FTC's bid or vetting process. Contractors will be highly qualified and trained in all code and RUS guidelines. Splicing contracts for projects of this size in the past have been awarded to Red Stag, QB Telecom, and others.

F. Customer location connection – Will be performed by FTC crews.

4. Federal Funds Associated with Project

FTC is an Eligible Telecommunications Carrier with respect to FCC Rules. As such, FTC is a recipient of Federal Universal Service support from the Connect America Fund. However, FTC has deployed optical fiber to more than 80% of its incumbent local exchange subscribers and is therefore not subject to further build out requirements commonly associated with the FCC's Alternative Connect America Model (ACAM) or the Connect America Fund Phase II auction (CAFI). Thereby, with respect to the project upon which this grant application is based, FTC has not applied for nor has it received any funds through other federal universal service funding programs designed specifically to encourage broadband deployment in the areas applied for.

Attachment C, Other Program Priorities



C. Other Program Priorities

FTC publishes a 16-page bimonthly customer newsletter that provides numerous articles on broadband use. It provides many resources and examples of how others use broadband. The newsletter also provides internet safety tips. FTC will market to this community with direct mail advertising to gain broadband adoption.

Does this project seek to leverage grant funds through private investment?

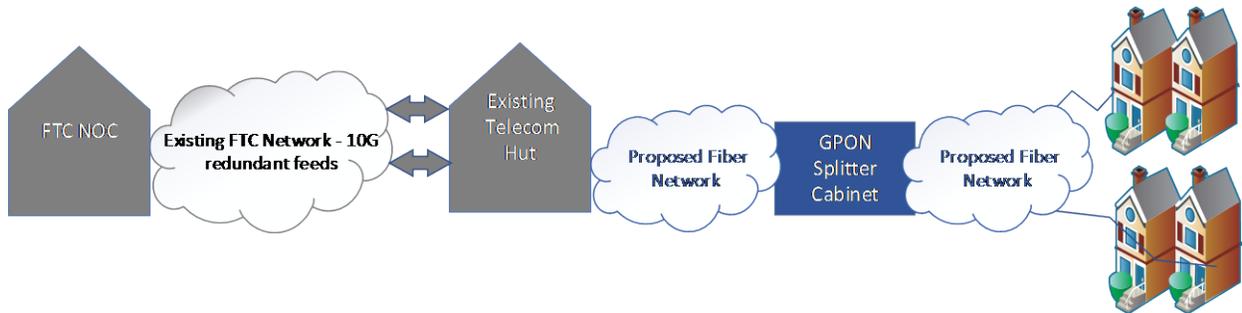
Yes. Farmers Telecommunications Cooperative, Inc. intends to leverage grant funds through its own private investment. As evidenced in the schedule below, every \$1.00 of grant funds leverages \$4.51 in investment by FTC.

<u>Initial Construction Costs</u>	
Cable & Wire Facilities	294,498.00
Engineering	58,900.00
Central Office Electronics	17,670.00
Subtotal	371,068.00
<u>Cutover & Installation Costs</u>	
Installation/Connection Costs	28,860.00
Customer Premise Equipment	11,076.00
Subtotal	39,936.00
<u>Grant/Private Investment</u>	
Total Investment	411,004.00
Less Grant Funds Requested	74,586.34
Private Investment	336,417.66
Ratio Private/Grant Funds Invested	4.51

Will this project be an extension of existing infrastructure?

Yes. The PFSA will be fed from our existing New Home network location telecommunications hut which already has both battery backup and standby generator power backup to be used in extended power failure situations. . This location has fiber-optic 10 Gbps transport feeds through a fully redundant ring offering diverse paths back to the Network Operations Center (NOC) in Rainsville,

AL. The build will also take advantage of existing Calix Active E access cards that are currently serving other FTTH customers adjacent to the PFSA. Although additional network equipment will be added as demand requires, using the existing telecommunications hut, 10 Gbps transport feeds, and access cards will allow FTC to serve the Pea Ridge PFSA subscribers with the best network possible while leveraging existing infrastructure to lower costs.



Does this project serve locations with demonstrated community support?

Yes. FTC has received support from individuals within the community in hopes that the proposed project comes to fruition. Letters have been received from local and state legislative delegates, elected officials, and community leaders.

FTC also sent letters to residents in the PFSA asking them to go online to **connect.farmerstel.com** to complete a survey about their internet needs and uses.

These letters of support and resident surveys are available for review.



ALABAMA STATE SENATE
ALABAMA STATE HOUSE
11 SOUTH UNION STREET, 7TH FLOOR
MONTGOMERY, ALABAMA 36130-4600
334.242.7876

STEVE LIVINGSTON
STATE SENATOR, DISTRICT 8
DISTRICT OFFICE:
POST OFFICE BOX 623
SCOTTSBORO, ALABAMA 35768

August 29, 2018

COMMITTEES:
AGRICULTURE, CONSERVATION AND FORESTRY
FINANCE AND TAXATION GENERAL FUND
FISCAL RESPONSIBILITY AND ECONOMIC DEVELOPMENT
TRANSPORTATION AND ENERGY
VETERANS AND MILITARY AFFAIRS

Alabama Department of Economic and Community Affairs
Attn: Director Kenneth Boswell
P.O. Box 5690
Montgomery, Alabama 36103-5690

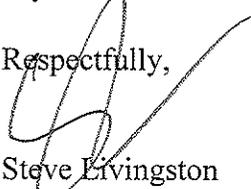
Mr. Boswell:

Farmers Telecommunications Cooperative, Inc. (FTC-Rainsville, AL) is applying for the 2018 Alabama Broadband Accessibility Fund Grant in hopes to expand their fiber network to provide high-speed broadband internet access to a rural area located in DeKalb County, near the New Home community. The areas identified are currently underserved and cannot get internet speeds of at least ten (10) megabits per second download and one (1) megabit per second upload.

As you are well aware, broadband is an essential component to further growth across our state. North Alabama, specifically DeKalb County, is a major contender among economic development prospects given their close proximity to the Google Data Center and Bellefonte in Jackson County. North Alabama is continuing to grow and it is important that our infrastructure is able to support those prospects looking at us as a viable option. My constituency deserves the ability to take online classes, do businesses and "connect" with broadband access irrespective of the fact that they live in a rural area and with this grant it would allow Farmers Tel to offer this service to an even greater consumer base.

Mr. Boswell, I truly believe that this grant and access to broadband will enhance the lives of my constituents but will also prove necessary for further economic growth in the region. I thank you for your time and consideration of this request. Please do not hesitate to contact me if I can be of any further assistance with this request.

Respectfully,


Steve Livingston
Senator, District 8



ALABAMA HOUSE OF REPRESENTATIVES

11 S. UNION STREET, MONTGOMERY, ALABAMA 36130

REP. NATHANIEL LEDBETTER
MAJORITY LEADER

STATE HOUSE: 334-242-7492

August 29, 2018

Alabama Department of Economic and Community Affairs
Attn: Director Kenneth Boswell
P.O. Box 5690
Montgomery, Alabama 36103

Director Boswell:

Farmers Telecommunications Cooperative, Inc. (FTC-Rainsville, AL) is applying for the 2018 Alabama Broadband Accessibility Fund Grant. They do so in hopes to expand their fiber network to provide high-speed broadband internet access to a rural area located in DeKalb County, near the New Home community.

Farmers Telecommunications provides high quality telecommunications services throughout my district and beyond. As you are well aware providing these services is essential in today's world and essential to economic development, education, health care and safety and security. My constituents, whether they live in the middle of town or in a rural community deserve the same access to broadband.

Mr. Boswell, I offer my full support to Farmers Tel and their endeavor to secure this funding. I respectfully request that you give every consideration to this application. If I can be of further assistance please do not hesitate to reach out to me.

Sincerely,

A handwritten signature in black ink, appearing to read "Nathaniel Ledbetter".

Nathaniel Ledbetter
Majority Leader
House District 24



Northeast Alabama Community College

Office of the President
Dr. David Campbell

September 1, 2018

Kenneth W. Boswell
Director, Alabama Department of Economic and Community Affairs
P.O. Box 5690
Montgomery, AL 36103-5690

Dear Mr. Boswell,

Farmers Telecommunications Cooperative, Inc. (FTC-Rainsville, AL) is applying for the 2018 Alabama Broadband Accessibility Fund Grant in hopes to expand their fiber network to provide high-speed broadband internet access to a rural area located in Jackson County near the Flat Rock/Fabius community and also in Dekalb County in the New Home community east of Henagar.

The areas identified are currently underserved and cannot get internet speeds of at least ten (10) megabits per second download and one (1) megabit per second upload.

Broadband is essential in today's information economy infrastructure. This service will help rural areas compete with information for commercial and economic development. This area is also an integral part of the Google Data Center community.

It would be helpful for our residents to have an option for telecommuting and for our students taking existing courses online. These rural areas are located in the Northeast Alabama Community College service area, yet the students do not have a viable broadband option for taking online classes.

We believe these grants will greatly enhance the quality of life for the members of these rural areas and sincerely appreciate any assistance you can give us.

Sincerely,

A handwritten signature in blue ink, appearing to read "David Campbell", is written over a horizontal line.

Dr. David Campbell
President, Northeast Alabama Community College

DR. JASON BARNETT
Superintendent of Education



DEKALB COUNTY SCHOOLS

BOARD MEMBERS
Jeff Williams, Chairman
Randy Peppers, Vice Chair
Mark Richards
Matt Sharp
Robert Elliot

October 15, 2018

Alabama Broadband Accessibility Grant Committee:

Farmers Telecommunications Cooperative's mission statement of "We Keep You Connected" and Google's mission statement of "to organize the world's information and make it universally accessible and useful" are two of the most important mission statements for DeKalb County Schools faculty and student body. FTC and Google are two of the strongest partners we have in providing our students a relevant and personalized educational experience that prepares them for their future. As educators it should be our mission to educate our students in critical thinking, evaluation of information and its applicability to the topic at hand and the appropriate application of the information we are receiving or reviewing. To this end, FTC assists us in providing proper internet connectivity, a prerequisite for preparing a student to be successful in his or her academic career as well as in his or her work post-secondary, whether that be college or career.

In Dekalb County we are very fortunate to have Farmers Telecommunications Cooperative serve our local schools and communities through internet, phone, security and television service. I have reaped the benefits of their service both as a residential and education customer through their agreement with the Alabama Supercomputer Authority. The services FTC provides our schools as our internet provider has allowed us to transition to the Google Education Suite, which allows teachers and students access to the entire suite of Google programs as well as Google Classroom. This partnership is overhauling the learning experience for our nearly 9,000 students. We also integrate 12,000 computers on our network daily so that teachers can participate in professional learning activities for themselves and their colleagues, and facilitate student learning through the use of Promethean Boards, digital streaming services, interactive learning software and formative assessment tools to better inform their practice as teachers. Students also use this technology to learn digitally through the use of Chromebooks and iPads on services and programs such as IXL, Moby Max, PLATO, Global Scholar, Compass Learning, Odysseyware, Accelerated Math, ACT preparation programs, ACCESS distance learning courses, etc... DeKalb County has also expanded its offerings to a virtual School whereby students complete their entire academic coursework via an online learning experience.

As a parent and educator, the ability to use technology as a tool for learning is highly instrumental and an absolute necessity in a child's formative education and assuredly even more important in preparing students for a successful post-secondary experience, whether they choose to enter the workforce or a college of their choice. Today's employers require an ever-changing skill set that is surrounded in Science, Technology, Engineering and Math



P.O. Box 1668 | 306 Main St. W
Rainsville, AL 35986



www.DeKalbK12.org



Phone: (256) 638-6921
Fax: (256) 638-6972

(STEM). In order for our area to be vital, we must be able to integrate these subjects and learning experiences into the education of our students.

There is a bright spot to this, however. As previously mentioned, FTC has been, is, and will continue to be a great partner in bringing economic growth and connectivity to our communities. With the assistance of the Alabama Broadband Accessibility Fund, FTC could expand its fiber network to provide high-speed broadband internet to the Pea Ridge community, which is near Henagar, where many of our students reside and would benefit exponentially from this digital expansion. As we know, learning does not and should not stop when students pass through the school doors. This grant would aide in giving them the same affordable internet access as their peers after school hours.

It is with the students and communities of DeKalb County in mind that I request your consideration of awarding Farmers Telecommunication Cooperative an Alabama Broadband Accessibility Grant and support Farmers Telecommunications Cooperative's mission statement of "We Keep You Connected" to areas where Gig and fiber internet connectivity was once inconceivable. If I can be of further assistance, please feel free to contact me at jbbarnett@dekalbk12.org or at 256-638-6921.



Jason Barnett
DeKalb County School Superintendent



Pea Ridge Customer Surveys

Full Name	Street Address
Victor Mc Curdy	2002 County Road 671, Henagar, AL 35978-5035
QUESTION	RESPONSE
How would having access to broadband in your area enhance opportunities for businesses and/or rural residents?	I would be able to do part of my work from home.
How would having access to broadband in your area increase your quality of life?	This increase my productivity with the computer and open many more options with all streaming services.
Would having access to broadband in your area reduce those problems?	Yes
What problems do you or your household face due to the unavailability of broadband in your area? Ex.) Education barriers, healthcare barriers, working from home barriers, safety, etc.	My working from home is severely limited. It takes way too long to search for items for work also. Have tried to use streaming service for my TV and it is slow and tries to buffer. Have contacted Farmers about the problem and I have the best that is available is what I was told.
What is your download and upload internet speeds (Mbps)?	.110 download and .548 upload
Who is your Internet Service Provider?	Farmerstel.com

Full Name	Street Address
Dee Ann Stanbery	1592 County Road 671, Henagar, AL 35978
QUESTION	RESPONSE
How would having access to broadband in your area enhance opportunities for businesses and/or rural residents?	We believe we could use more in-depth, or more detailed record-keeping larger programs, etc to keep up with a small business rather than having to keep our records, etc manually; we also could use our smart tv functions etc to watch movies, use fitness and news sites, we could download items we are interested in as well as communicate with family thru other sites and/or devices.
How would having access to broadband in your area increase your quality of life?	i believe we would be able to access more of the internet than we can at this time; we would also hopefully have enough speed and be able to up/down load pages, forms, sites and so on that we are unable to see and/or interact with now and in the past. There have been several times I will get an 'error or upload incomplete message' that says the upload was too slow. Even though we have a two smart tvs, we are not able to access most of its functions, with the exception of watching basic tv because our internet speed is much too slow, at least that is what the messages we receive give as a reason we cannot perform whatever it is we are trying to do. There are many times I will avoid even getting on the computer

	and/or on my phone simply because of the hassles of having to waste time because everything is so slow, we wind up having to wait so long for screens to load which makes me so irritated, I just quit whatever I am trying to do/see. I try to use my phone and computer with a device called 'The Grandpad' which is a device that I purchased to use to help keep up with my dad, socially and medically, for the most part but when I try to upload items, such as a picture, or send him a message, my devices are too slow. I dont know exactly why we have a problem.
Would having access to broadband in your area reduce those problems?	Yes
What problems do you or your household face due to the unavailability of broadband in your area? Ex.) Education barriers, healthcare barriers, working from home barriers, safety, etc.	I am not really very computer/internet/upload/download literate. I get confused easily by the instructions and 'verbage' used describing most actions/capabilities of my computer, etc. I can say that in my honest opinion I believe we face problems and numerous barriers like working from home and trying to perform business and educational functions. We also have problems trying to use fitness sites and obtain healthcare information. There are entertainment barriers; family connection barriers; social website barriers; etc pertaining to trying to use internet functions with our smart tv. It is my understanding that we are unable to do many things with our smart tv/internet/computer simply because of our slow speeds.
What is your download and upload internet speeds (Mbps)?	download 0.262 Mbps and upload 0.578 Mbps per 'your current speed'
Who is your Internet Service Provider?	Boonlink (now Farmerstel)

Full Name	Street Address
James Whisenant	1689 County Road 671, Henagar, AL 35978-5048
QUESTION	RESPONSE
How would having access to broadband in your area enhance opportunities for businesses and/or rural residents?	could respond quicker to work issues speed up personal use with internet multiple usage
How would having access to broadband in your area increase your quality of life?	could respond quicker to work issues speed up personal use with internet multiple usage
Would having access to broadband in your area reduce those problems?	Yes
What problems do you or your household face due to the unavailability of broadband in your area? Ex.) Education barriers, healthcare barriers, working from home barriers, safety, etc.	problems working from home slow access not everyone can log in at same time
What is your download and upload internet speeds (Mbps)?	NA
Who is your Internet Service Provider?	Farmers telephone

Will this project serve the highest number of unserved homes, businesses, and community anchor points for the least cost?

Yes. The PFSA consists of approximately 18 route miles of buried and aerial fiber-optic cable in a mountainous region that has layers of rock to contend with throughout much of the service area. The estimated costs to place the outside plant components of this 18 route miles of fiber is \$267,218.00. By utilizing GPON splitter cabinets, FTC has lowered the quantity and size of the fiber optic feeds, thus reducing the OSP cost from what an 100% Active Ethernet network would have cost. The PFSA will be fed from an existing network location. The location is an existing telecom huts already established with redundant fiber feeds back to FTC's NOC, and it has existing generator backup, and existing 10 Gbps redundant transport equipment. The additional electronic costs are for additional access line cards, SFP transceivers, and two field splitter cabinets with splitters. The electronic cost estimate of \$16,033.00 is much lower than what it would have been if FTC were not able to leverage the existing switch hut locations and associated power components. Finally, engineering costs for the project are estimated to be \$53,444.00.

Of the 60 homes and 2 businesses passed, FTC has projected to connect 48 homes and 2 businesses. The cost to add a network access point (NAP) to the fiber optic cable, place an aerial or buried drop, mount an optical network terminal (ONT) at the house, and provide fiber-optic connectivity is estimated to average \$740.00 per home/business or \$37,000.00 total. Likewise, the cost to add customer premise equipment, industry-best Carrier Class Wi-Fi inside the home using Calix Gigacenter to deliver Mesh-Enhanced Carrier Class Wi-Fi, is estimated to be \$284.00 per home/business or \$14,200.00.

These estimates utilize what is considered by the industry as the most efficient and cost effective means to deliver gigabit service directly to the home, and are backed by FTC's experience in have already deploying more than 1,800 route miles of fiber-optic cable and connecting more than 11,500 customer locations.

Does this project emphasize the highest broadband speeds?

Yes. Standard broadband data speeds will be symmetrical - 100 Mbps download and 100 Mbps upload, with 1 Gig (1,000 Mbps) download and 1 Gig (1,000 Mbps) upload also available.

Will this project provide material broadband enhancements to hospitals located in rural areas as defined in Section 22-21-20, Code of Alabama 1975?

No. There are no hospitals located within the PFSA.

However, with expanding broadband access to underserved areas, healthcare could improve dramatically with the use of telehealth services. Telemedicine provides 24/7 access to patient health portals, telemedicine clinicians, remote patient monitoring, telepsychiatry solutions, store and forward technologies, patient-care education, etc. Medicare's newly passed telehealth policy will require significant advances in services as part of the (CHRONIC) Care Act. Broadband access in rural areas like DeKalb County, AL will be necessary to carry out the intentions of these healthcare advances. The intentions of some of the policy changes are to allow the patient's home to serve as the originating site for telehealth services rather than having to commute to a medical clinic. With telehealth services available like remote patient monitoring and store and forward technologies, expensive and unnecessary hospital visits can be reduced. Research indicates that Telehealth reduces hospital admissions by 25% and overall length of stay by 59%. Telehealth access will enable patients to have convenient access to specialist and eliminate the costs to commute long distances and reduce the hours of work missed due to travel. Video classes and remote care has helped the **CDC's National Diabetes Prevention Program** as well. It is expected that more telehealth coverage will include services offered by certified diabetes educators, respiratory therapists, audiologists, occupational therapists, speech-language therapists, and physical therapists. Broadband access would provide many educational resources to help maintain and/or prevent poor health conditions. Broadband can also provide important healthy lifestyle resources that can improve the quality of life for those living in this poverty-stricken area.

23% of DeKalb County, AL population is in poor or fair health which is slightly higher than Alabama's that is 21%. 15% of the DeKalb County population is in frequent physical distress and 14% is in frequent mental distress. Counties in the southern and Appalachian regions of the United States tend to have the highest incidence of diabetes prevalence and DeKalb County, AL is at 12% and the national rate is 7.2%. 22% of the county is adult smokers. 31% of the county's population is classified as obese adults. 32% are physically inactive and only 48% have access to exercise opportunities. It is reported that 36% of the population gets insufficient sleep. 12% experience food insecurity. There are 18% of DeKalb County's population that is uninsured. The ratios for doctor to patient are as follows: Primary Care Physicians 2,450 to 1, Dentists 3,550 to 1 and Mental health providers 5,910 to 1. 31% of children in DeKalb County are in poverty. It is reported that there has been 69 preventable hospital stays in 2018. The serving hospitals for this area are in Fort Payne, AL (16 miles or 16 minutes away) and Scottsboro, AL (25 miles or 33 minutes away).

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?

No. There are no local libraries located within the PFSA.

While there are not any physical libraries within the PFSA, broadband access in rural DeKalb County would enable access to online libraries such as the Camellia Net-Alabama's Digital Library, Open Library, Project Gutenberg, Google Books, Library of Congress online, and the Alabama Virtual Library - which is free to all citizens in the state. With broadband access, libraries are available anytime and anywhere to anyone.

Attachment D, Certifications



D. Certifications

1. FTC certifies that it is a non-governmental entity.
2. FTC certifies that 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. FTC certifies that 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. FTC 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. FTC certifies that for any area served as a result of the 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.

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: 	Date: 10/24/18
Title of Applicant: Executive Vice President and General Manager	