



**Franklin County, NC
Request for Proposals (RFP)**

Broadband Enhancement RFP

RFP posted to:

www.kerrtarcog.org

Timeline

August 7, 2018	Request for Proposals FCBI
August 16, 2018	Franklin, Vance and Granville RFP Overview Meeting
August 22, 2018	Questions from Vendors due
August 27, 2018	Answers to vendor questions posted
October 4, 2018	RFP responses due. Bids valid for a minimum of 180 days from deadline date.

Table of Contents

Section	Section Name	Pages
Intro	Franklin County History and Demographics	2-3
1	Project Overview	3-18
2	Survey Results	18
3	Eligible Vendors	18-19
4	Municipal and County Offerings	19-22
5	Vendor Services/Solutions	22
6	Expected RFP Schedule (same as page 1)	22-23
7	Application Submission Process	23
8	Proprietary Information	23

9	Requesting Additional Information and Questions	23
10	Application Requirements and Instructions	23
11	Cover Sheet (To be completed by respondent)	23-24
12	The Project Proposal	24-29
13	Certification by Vendor	29
14	Application Selection Process	30
15	Corrections to Deficient Applications	30
16	Scoring for proposals	31
17	Ranking of Proposals	32
18	Award Requirements	32
19	Further Information	33
A	Appendix A-Glossary	34-35
B	Appendix B-Map of County/Municipal Facilities and Telecommunications Assets (Google Map Link)	36
C	Appendix C-Access to Assets	37
D	Appendix D-Technical and Fiber Construction Specifications	38-43

Franklin County History and Demographics

Located in the northeast Piedmont region of North Carolina and formed in the midst of the American Revolutionary War, Franklin County was carved out of the abolished Bute County and established in 1779. The county’s name is attributed to Benjamin Franklin, a politician, statesman, and iconic founding father of the United States.

As of 2017, the population of Franklin County was 66,168 (60,619 2010 Census) indicating growth of 9.3% during the 2010 to 2017 time period. The total number of housing units in 2017 was 28,439 up from 23,023 in 2010.

In the county, the population was spread out with 27.3% under the age of 20, 5.5% from 20 to 24, 26.2% from 25 to 44, 28.5% from 45 to 64, and 12.6% who were 65 years of age or older. The median age was 39.1 years.

The median household income for a family was \$53,788. This is about 16% above NC median household income.

In 2017, the number of private industry businesses located in Franklin County was 1077 and an additional 1815 individuals considered themselves self-employed. The unemployment rate in December 2017 was 4.5%, matching the State of NC unemployment rate.

The population density in Franklin County is 133 persons per square mile. This compares favorably with Ashe (64); Stokes (105.6) and Warren (48.9) where current or future broadband investments are underway or are being contemplated.

1. Project Overview

Franklin County Government is issuing this Request for Proposals (RFP) to develop Franklin County's next-generation broadband infrastructure. This project will be referred to as the Franklin County Broadband Initiative (FCBI). The focus will be to seek and implement solutions needed to meet the technological needs of current and future businesses, public institutions, educational institutions, and local residents. The FCBI seeks network solutions and business models that are innovative, preparing our region for the future while serving the needs of today. Franklin County seeks opportunities to best use existing public investments in currently underutilized or planned government fiber and broadband assets to provide the maximum benefit to the public.

Vendors or coalitions of vendors are sought to achieve the following goals and objectives:

Goals

1. Create a scalable network solution to foster innovation, drive job creation, stimulate economic growth, and serve new areas of development in the community; by providing service for a minimum of twenty (20) years from the date of first operation.
2. The FCBI prefers that the aggregation network proposed by the provider/vendor network be fiber based; in the last mile, **all technologies will be considered, especially in unserved/underserved areas.**
3. Provide a flexible menu of retail services, that improve service to the following eligible service areas:
 - a. Unserved/Underserved areas - Offer new or enhanced service in underserved and unserved areas of the county (Section 1.2.1)
 - b. High Density Economic Corridors - Offer enhanced service along key business and high density residential corridors in Franklin County's higher residential population areas (Bunn, Franklinton, Louisburg, Youngsville) and connects broadband assets that serve remote areas of the county (Section 1.2.2)
 - c. Government Facilities – Offer lit or dark fiber services to meet the administrative and public safety needs of Franklin County Government and municipal governments. The county will consider new build lit and dark fiber services. The county will also consider owning its own fiber infrastructure along the route displayed in, Appendix B, Google Map Link .

1.1 Eligible Service Areas

The FCBI has identified three areas in need of new or improved service –

- Unserved/Underserved areas (Mapped in section 1.2.1)
- High Density areas services residents and businesses (mapped in Section 1.2.2)
- Government Facilities(Appendix B, Google Map Link). A single vendor or multiple vendors may submit proposals to serve all or some of the service areas.

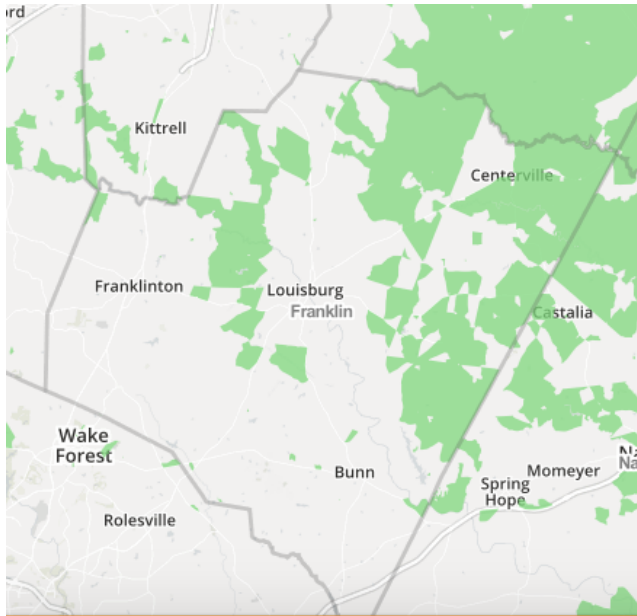
1.2 Service Area Specifications

1.2.1 Unserved/Underserved Areas Maps

According to the Federal Communications Commission’s (FCC) Connect America Fund map the areas in green in Franklin County are underserved.



The incumbent carrier has accepted CAF funding for the period 2016-2021 for all 802 price cap supported locations and all \$173,258 in Franklin County.



These accepted areas appear in green. The incumbent carrier has committed to supply 10 Mbps download and 1 Mbps upload broadband for these areas shaded in green. Franklin County is aware of the FCC's process for verification testing of the CAF acceptance areas and the recent updates by the Commission. The County plans to monitor and make requests to view the verification information for Franklin County.

1.2.1.1 – Unserved/Underserved Description of Services

Based on residential and business survey feedback, these Connect America Fund areas and other areas of the County appear to still lack appropriate broadband service. The County is seeking other options for service in unserved or underserved areas.

The provider(s) of the Network(s) in the unserved/underserved areas will take responsibility to design, engineer, construct, project manage and equip the Network(s). Network(s) access should include building up to the end user drop point or the end user Network(s) interface device. In addition, the Vendor(s) will bear all the operating and maintenance costs, including insurance costs and relevant taxes of the Network(s). Vendor(s) should also demonstrate a clear and continuous upgrade path for the Network(s) to meet future consumer demand, business demand, community anchor institution demand, and service developments.

A. SPEED: 25 Mbps download (down) and 3 Mbps upload (up) wired or wireless solutions, scaling to 100 Mbps symmetrical over the majority of the FCBI geographical service area by 2022. Preference will be given to Vendors offering higher network speeds.

B. SERVICES REQUIRED: high quality voice, data, and video services, and tele-health solutions.

C. PREFERRED TECHNOLOGY: The FCBI espouses a technology neutral approach for these low-density areas of the county. The following are a list of common broadband infrastructure technologies that will be considered for service to these areas. Service Providers should not view this list as exhaustive but should propose technologies that they are certain can scale to the bandwidth and reliability needs outlined in this technical specification.

- **Lit fiber service** – realizing that many of these areas are rural and remote, fiber deployment may not be realistic, but for these areas, if a Fiber to the premise solution is considered the FCBI would prefer it be a fully managed, bundled (transport and access included) service at a minimum 25 Mbps download/3 Mbps upload initially scaling to 100 Mbps symmetrical service by 2022.

The FCBI is willing to consider grants or incentives (not more than a small percentage of the total capital investment) for fiber based last mile service offerings for a minimum of 25 Mbps download/3 Mbps upload initially scaling to 100 Mbps symmetrical service by 2022 in these lower density areas. The vendor should include a network diagram with each solution.

- **Lit terrestrial based service with last mile over a transport medium other than fiber (copper or coaxial) but fiber transport from a nearby node**– realizing that many of these areas are rural and remote, fiber deployment may not be realistic. For these areas, if existing or planned copper or coaxial service is available, the FCBI prefers it be delivered with current generation switching capability at Central Offices in area and fiber backhaul as near as possible to the local Central Offices. The vendor should include a network diagram with each solution showing the equipment used in each switching station and where the handoff to fiber based infrastructure will occur.

Note that the incumbent carrier has accepted Connect America Fund allocations to deploy 10 Mbps download and 1 Mbps upload in many of these areas in Franklin County. The FCBI is willing to consider additional limited (not more than a small percentage of the total capital investment) grants or incentives to the incumbent or new grants or incentives to a competitive carrier to upgrade/or introduce new service offerings to a minimum of 25 Mbps download/3 Mbps upload initially scaling to 100 Mbps symmetrical service by 2022.

- **Lit Point to Point Microwave service** - Service provider owned

microwave with a fully managed, bundled (transport and access included) service at a minimum 25 Mbps download/3 Mbps upload initially scaling to 100 Mbps symmetrical service by 2022.

The vendor shall engineer, design, and implement high-availability microwave paths that have path reliabilities of not less than 99.95% and a fade margin of not less than 30 dB for all microwave paths. The contractor shall apply for, coordinate and obtain FCC licenses for all microwave paths requiring licensing.

If unlicensed spectrum is used, respondent must verify and display its plan to mitigate any interference.

- **Mobile Broadband Service using existing wireless networks** – Preferred using LTE or other current generation fully managed, bundled (transport and access included) service at a minimum 25 Mbps download/3 Mbps upload initially scaling to 100 Mbps symmetrical service by 2022.

The vendor can propose to utilize an existing mobile network for delivery of last mile mobile to the premise solutions. An LTE platform or equivalent mobile wireless broadband technology should be proposed. The vendor should illustrate the existing capacity of the mobile network to be used for last mile broadband and the amount of oversubscription planned in the last mile, in the transport to a POP and at the POP.

- **Mesh mobile network solutions or other innovative solutions**-Given the rapid pace of innovation in the wireless space, FCBI and its affiliates are willing to consider other solutions for the last mile. In all proposals of this kind, the vendor(s) should illustrate the existing capacity of the mobile network to be used for last mile broadband and the amount of oversubscription planned in the last mile, in the transport to a POP and at the POP.

D. SERVICE SPECIFICATIONS – For wireless solutions, the FCBI prefers the following service standards. Respondents should indicate if these standards can be met in their proposal.

- 99.95% circuit uptime
- Frame/packet loss .50% commitment
- 50 ms Network Latency Commitment
- 10 ms Network Jitter Commitment
- Rate limiting and throttling will be reported to customer

- Credits for outages according to the following schedule:

Length of Service Outage	Credit is the following percentage of Monthly Recurring Cost
Less than 2 hours	No Credit
Two (2) to four (4) hours	5%
Greater than four (4) hours and less than eight (8) hours	10%
Greater than eight (8) hours and less than twelve (12) hours	15%
Greater than twelve (12) hours and less than sixteen (16) hours	20%
Greater than sixteen (16) hours and less than twenty-four (24) hours	35%
Greater than twenty-four (24) hours	50%

E. FCBI SUPPORT FOR BROADBAND AVAILABILITY: The Franklin County Commissioners and the FCBI may consider small amounts of subsidy funding for deployment of enhanced terrestrial or wireless service into these unserved and underserved areas of the county. For example, the county may offer a per household or per business subsidy for deployment of terrestrial service or may support service to underserved areas by providing or funding the construction of towers required to bring wireless signal coverage and service availability to these underserved areas of Franklin County. Any subsidy is contingent upon approval and funding by the Franklin County Commissioners.

The amount of subsidy, if any, will be determined at the sole discretion of the FCBI and the Franklin County Commissioners and in no case will exceed a small percentage of the capital deployment costs (construction materials, construction labor, engineering, project management, core/edge/premise equipment) necessary to deliver broadband service to businesses and residences. Vendors requesting a subsidy, must provide detailed/line-item invoices of costs. Subsidies will be divided and paid on a per household or per business basis with proof of subscription.

F. SERVICE PERIOD: Up to 20 years from date of first operation

G. EXPANSION: Provides a comprehensive broadband infrastructure that can be expanded upon to serve other areas of Franklin County when deemed practical.

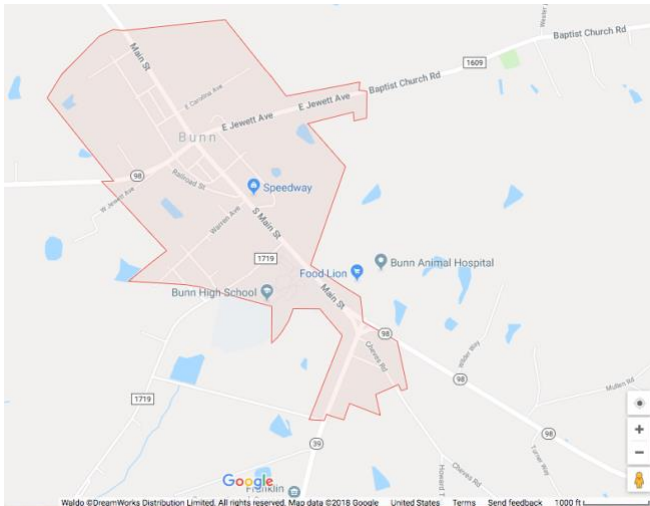
H. ACCESS TO ASSETS:

If permitted by state law, Franklin County may offer, with the approval of its County Commissioners, access to County facilities on a competitively neutral basis to assist with the deployment of broadband in areas of Franklin County.

1.2.2 **High Density Areas of Franklin County**-High density areas of Franklin County are as follows:

Town of Bunn

Town of Bunn’s population is 359 within its town limits.



The Town of Bunn encompasses about 1.614 square miles.

Town of Franklinton, NC

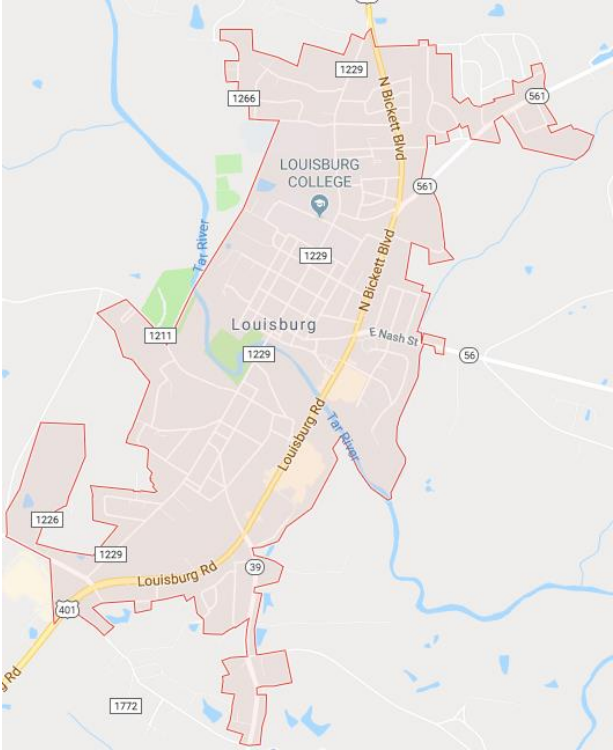
The Town of Franklinton’s population is 2,133 within the town’s limits.



The Town of Franklinton encompasses about 1.722 square miles.

Town of Louisburg, NC

The Town of Louisburg's population is 3,359 within the town's limits.



The Town of Louisburg encompasses about 4.51 square miles

Town of Youngsville

The Town of Youngsville's population is 1,293.



The town encompasses about 2.15 square miles.

1.2.2.1 – High Density Areas Description of Services

The provider(s) proposing to serve areas within the Towns of Bunn, Franklinton, Louisburg and Youngville (and areas/subdivisions/multi-dwelling units) outside of or adjacent to the Townships) will take responsibility to design, engineer, construct, project manage and equip the Network(s). Network(s) access should include building up to the end user drop point or the end user Network(s) interface device. In addition, the Vendor(s) will bear all the operating and maintenance costs, including insurance costs and relevant taxes of the Network(s). Vendor(s) should also demonstrate a clear and continuous upgrade path for the Network(s) to meet future consumer demand, business demand, community anchor institution demand, and service developments.

A. SPEED: Minimum 25 Mbps download /3 Mbps upload for business and consumers within the city limits with availability of service packages up to 1 Gbps symmetrical. As part of the respondent’s proposal, please outline how the service will scale to a minimum of 100 Mbps symmetrical minimum service up to 10 Gbps maximum service by 2022.

B. SERVICE REQUIRED: For fiber-to-the-premise proposals, Active Ethernet, GPON, and/or WDM/PON technologies to provide services to households, businesses, governments, and institutions throughout the Service Area are all acceptable

technologies. This Network(s) must include all active and passive infrastructure, including fiber cabling, active repeater equipment, uninterruptible power supplies, Network(s) cross-connections, software, and ancillary equipment.

C. PREFERRED TECHNOLOGY:

- **Lit Fiber Service**-Service provider owned fiber with a fully managed lit service at a minimum of 25 Mbps download /3 Mbps upload for business and consumers within the city limits with availability of service packages up to 1 Gbps symmetrical. As part of the respondent’s proposal, please outline how the service will scale to a minimum of 100 Mbps symmetrical minimum service up to 10 Gbps maximum service by 2022.

D. OTHER TECHNOLOGY OPTIONS (FCBI would offer no incentive for these technologies):

- **Lit Point to Point Microwave service** - Service provider owned microwave with a fully managed, bundled (transport and access included) service at a minimum of 25 Mbps download /3 Mbps upload for business and consumers within the city limits with availability of service packages up to 1 Gbps symmetrical. As part of the respondent’s proposal, please outline how the service will scale to a minimum of 100 Mbps symmetrical minimum service up to 10 Gbps maximum service by 2022. If licensed spectrum is used please provide documentation confirming access to the proposed licensed spectrum. If unlicensed spectrum is used, please include an outline of the interference mitigation strategy.
- **Mobile Broadband Service** using existing wireless networks – Preferred using LTE or other current generation fully managed, bundled (transport and access included) service at a minimum of 25 Mbps download /3 Mbps upload for business and consumers within the city limits with availability of service packages up to 1 Gbps symmetrical. As part of the respondent’s proposal, please outline how the service will scale to a minimum of 100 Mbps symmetrical minimum service up to 10 Gbps maximum service by 2022.
- Others proposed by vendors

E. SERVICE SPECIFICATIONS – For fiber and high density area solutions, the FCBI prefers the following service standards. Respondents should indicate if these standards can be met in their proposal.

- 99.99% circuit uptime
- Frame/packet loss .50% commitment
- 25 ms Network Latency Commitment
- 10 ms Network Jitter Commitment
- Rate limiting and throttling will be reported to customer
- Credits for outages according to the following schedule:

Length of Service Outage	Credit is the following percentage of Monthly
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	Recurring Cost
Less than 45 minutes	No Credit
45 minutes to four (4) hours	5%
Greater than four (4) hours and less than eight (8) hours	10%
Greater than eight (8) hours and less than twelve (12) hours	15%
Greater than twelve (12) hours and less than sixteen (16) hours	20%
Greater than sixteen (16) hours and less than twenty-four (24) hours	35%
Greater than twenty-four (24) hours	50%

F. GRANT OR INCENTIVE CONSIDERATION FOR FIBER VENDORS ONLY: **For a fiber to the premise (FTTP service)**, the Franklin County Commissioners may consider the granting of grants or incentives as permitted by state law. These grants or incentives may include:

- Financial grants or incentives representing a small percentage of the provider’s capital investment.
 - Any County or FCBI offer of a subsidy may be on a per household or per business subsidy for deployment of a fiber-to-the-premise service. Any subsidy is contingent upon approval and funding by County Commissioners.
- The opportunity to provide service to the county and municipal government facilities listed in section 1.2.3.
- Single point of contact for Franklin County Right of Way permits and other administrative processes.
- Promotion of the service by municipalities, Franklin County Economic Development, the Kerr-Tar COG and other local economic development and community organizations such as chambers of commerce .

G. GRANT OR INCENTIVE CONSIDERATIONS FOR ALL VENDORS FIBER OR WIRELESS: If permitted by state law, Franklin County and FCBI affiliates may offer, with the approval of its County Commissioners or other requisite governing body, access to

County facilities on a competitively neutral basis to assist with the deployment of broadband in areas of Franklin County.

H. SERVICE PERIOD: Up to 20 years from date of first operation

I. EXPANSION: Provides a comprehensive broadband infrastructure that can be expanded upon to serve other areas of Franklin County, including those outside the Bunn, Franklinton, Louisburg and/or Youngsville Town limits, when deemed practical.

J. ACCESS TO ASSETS:

If permitted by state law, Franklin County and FCBI affiliates may offer, with the approval of its County Commissioners or other requisite governing body, access to County facilities on a competitively neutral basis to assist with the deployment of broadband in areas of Franklin County.

Access to other broadband delivery assets owned or controlled by Franklin County, Bunn, Franklinton, Louisburg and/or Youngsville or other FCBI affiliates that are detailed in Section 4 and Appendix C.

FCBI members will also consider entering into service contracts with prospective vendors. This means Town, Township and other Municipal and County facilities currently subscribing to broadband service will consider options for service proposed by respondents.

K. OPEN ACCESS: Open access solution is preferred; the main network vendor offers lit and dark fiber services to other service providers, but proposals that have some variance on this preferred solution may be considered.

L. PRICING:

Service may be priced as;

- Transport only
- Transport and access (bundled) package

1.2.3 Franklin County and Municipal Government Services

The Franklin County anticipates the following broadband needs (assume 60 month term of service):

Franklin County Facilities

Facility	Address	Speed (symmetrical)
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Franklin County Economic Development	228 Park Ave, Youngsville, NC 27596	25 Mbps
Franklin County Emergency Services	8146 NC-56, Louisburg, NC 27549	25 Mbps
Franklin County Sheriff's Office	285 T Kemp Rd, Louisburg, NC 27549	25 Mbps
Franklin County Register of Deeds and Veterans Services	113 S Main St, Louisburg, NC 27549	25 Mbps
Franklin County Finance Department	113 Market St, Louisburg, NC 27549	25 Mbps
Franklin County Planning	215 E Nash St, Louisburg, NC 27549	25 Mbps
Franklin County Health Department/Social Services	107 Industrial Dr, Louisburg, NC 27549	25 Mbps
Franklin County Animal Shelter	351 T Kemp Rd, Louisburg, NC 27549	25 Mbps
Franklin County Water and Sewer	1099 Lane Store Road, Franklinton, NC 27525	25 Mbps
Franklin County Building Maintenance	8148 NC-56, Louisburg, NC 27549	25 Mbps
Franklin County Environmental Health	107 Industrial Dr # C, Louisburg, NC 27549	25 Mbps
Franklin County Cooperative Extension	103 South Bickett Blvd., Louisburg, NC 27549	25 Mbps
Franklin County Probation and Parole	307 E Nash St, Louisburg, NC 27549	25 Mbps
Franklin County Administration Building	113 Market St, Louisburg, NC 27549	25 Mbps
Franklin County Parks and Recreation	62 West River Road, Louisburg, NC 27549	25 Mbps

Franklinton Park	99 Park Ave. Franklinton NC, 27525	25 Mbps
Pilot Lions Park	38 Pilot Bypass Rd. Zebulon NC 27597	25 Mbps
Franklinton Senior Center	602 East Mason, Franklinton, NC 27525	25 Mbps
Louisburg Senior Center	127 Shannon Village, Louisburg, NC 27549	25 Mbps
Franklin County Airport	440 Airport Road, Louisburg, NC 27549	25 Mbps
Franklin County Main Library	906 North Main Street, Louisburg, NC 27549	25 Mbps
Franklin County Public Utilities	1630 US Highway #1, Youngsville, CN 27596	25 Mbps
Franklin County Soil and Water Conservation	101-B South Bickett Blvd., Louisburg, NC 27549	25 Mbps
Franklin County Solid Waste/Land Fill	10 Landfill Rd, Louisburg, NC 27549	25 Mbps

Additional Facilities

Bunn Volunteer Fire Department	2882 NC-98, Louisburg, NC 27549	25 Mbps
Louisburg Fire Department	102 Wade Ave, Louisburg, NC 27549	25 Mbps
Franklin County EMS Station 1	1941 North Carolina 39 Hwy N, Louisburg, NC 27549	25 Mbps
Bunn Rescue	333 NC 98 Hwy W, Bunn, NC 27508	25 Mbps
EMS Station 2	51 Bunn Elementary School Rd, Bunn, NC 27508	25 Mbps
EMS Station 12	450 Airport Rd, Louisburg NC 27549	25 Mbps
Youngsville Rescue/EMS Station 4	105 NW Railroad St, Youngsville, NC 27596	25 Mbps
White Level Volunteer Fire Department	2465 White Level Rd, Louisburg, NC 27549	25 Mbps
Youngsville Rescue Services	215 SW Railroad St, Youngsville, NC 27596	25 Mbps
Justice Rural Volunteer Fire Department	4113 NC-581, Spring Hope, NC 27882	25 Mbps

Brassfield Volunteer Fire Department	1680 NC-96, Franklinton, NC 27525	25 Mbps
Youngsville Fire Station	6755 NC-96, Youngsville, NC 27596	25 Mbps
Youngsville Fire Station 4-2	1126 Flat Rock Church Rd, Louisburg, NC 27549	25 Mbps
Centerville Fire Department	5939 NC-561, Louisburg, NC 27549	25 Mbps
Bunn Fire Department Station 1	505 Main St, Bunn, NC 27508	25 Mbps
Bunn Fire Department Station 3	1516 Bunn Baptist Church Rd, Bunn, NC 27508	25 Mbps
Pilot Fire Department	8028 NC 39 Hwy S, Zebulon, NC 27597	25 Mbps
Hopkins Fire Department	8929 Fowler Rd, Zebulon, NC 27597	25 Mbps
Youngsville Fire Department Station 1	803 Wheaton Ave, Youngsville, NC 27596	25 Mbps
Mitchiners Crossroads Fire Department	2964 West River Rd, Franklinton, NC 27525	25 Mbps
Gold Sand Fire Department	2295 Person Rd, Louisburg, NC 27549	25 Mbps
Justice Fire Department Station 2	942 Sykes Rd, Louisburg, NC 27549	25 Mbps
Franklinton Fire Dept/EMS Station 6	9 Hillsborough St, Franklinton, NC 27525	25 Mbps
Epsom Fire Department/EMS Station 5	8064 NC 39 Hwy S, Henderson, NC 27536	25 Mbps
Youngsville Library	218 US-1 ALT, Youngsville, NC 27596	25 Mbps
Franklinton Library	9 W Mason St, Franklinton, NC 27525	25 Mbps
Bunn Library	610 Main St, Bunn, NC 27508	25 Mbps
Sheriff Sub Station	382 NC 98 Hwy W, Bunn, NC 27508	25 Mbps

Municipal Facilities

Facility	Address	25 Mbps
Louisburg Police Department	104 Wade Avenue, Louisburg, NC 27549	25 Mbps
Town of Louisburg Government	110 W Nash, Louisburg, NC 27549	25 Mbps
Franklinton Municipal Annex	5 W Mason St, Franklinton, NC 27525	25 Mbps
Youngsville Town Government Annex	134 US Highway 1A, Youngsville, NC 27596	25 Mbps
Youngsville Mitchell Park	S College St, Youngsville, NC 27596	25 Mbps
Youngsville Luddy Park	218 US-1 ALT, Youngsville, NC 27596	25 Mbps
Franklinton Police Department	7 W Mason St, Franklinton, NC 27525	25 Mbps
Youngsville Police Department	134 Youngsville Blvd S, Youngsville, NC 27596	25 Mbps
Bunn Police Department	601 Main St, Bunn, NC 27508	25 Mbps
Louisburg Operations Center	115 Industrial Dr, Louisburg, NC 27549	25 Mbps
Joyner Park	224 W River Rd, Louisburg, NC 27549	25 Mbps
Riverbend Park	S Church St, Louisburg, NC 27549	25 Mbps

Respondents to this RFP may submit a bid to provide broadband to these locations. RFP responses will be evaluated for pricing as well as the breadth of their response. While pricing will be a primary factor, meeting the requirements of more than one portion of the RFP will also be a primary consideration.

Fiber Construction- The county may also consider constructing County Owned fiber to serve the needs of County and municipal facilities. If permitted by state law, Franklin County and FCBI affiliates may offer, with the approval of its County Commissioners or other requisite governing body, access to these fiber facilities on a competitively neutral basis to assist with the deployment of broadband in areas of Franklin County.

Construction routes will terminate at the County demarcation (A location) and have node drops/handholes at the County and City facilities listed in section 1.2.3.

Construction specifications for new fiber are outlined in Appendix D.

Access to county assets: The County facilities listed above as well as county properties listed in Appendix C are considered “broadband assets” of the county.

If permitted by state law, Franklin County and FCBI affiliates may offer, with the approval of its County Commissioners or other requisite governing body, access to the following facilities on a competitively neutral basis to assist with the deployment of broadband in areas of Franklin County.

A. SERVICE SPECIFICATIONS– For services to government and public facilities, the Franklin County prefers the following service standards. The contracts for service for government/public sector facilities will be with Franklin County or the municipal owner of the specific facility. Respondents should indicate if these standards can be met in their proposal.

- 99.99% circuit uptime
- Frame/packet loss .50% commitment
- 25 ms Network Latency Commitment
- 10 ms Network Jitter Commitment
- Rate limiting and throttling will be reported to customer
- Credits for outages according to the following schedule:

Length of Service Outage	Credit is the following percentage of Monthly Recurring Cost
Less than 45 minutes	No Credit
45 minutes to four (4) hours	5%
Greater than four (4) hours and less than eight (8) hours	10%
Greater than eight (8) hours and less than twelve (12) hours	15%
Greater than twelve (12) hours and less than sixteen (16) hours	20%

Greaterthansixteen(16) hours and less than twenty-four (24) hours	35%
Greater than twenty-four (24) hours	50%

2. Survey Results

Business Survey Results (66 responses):

Demand for improved service is high. A recent survey of broadband demand among businesses found the following:

1. 50% of businesses in Franklin County are very dissatisfied or somewhat dissatisfied with the service provided by their current broadband provider.
2. 74.24% of businesses in Franklin County reported they desired to upgrade their current broadband service. 83.4% showed a desire to have connections greater than or equal to 100 Mbps.
3. 83.3% of businesses in Franklin County reported they experienced buffering delays either daily or weekly.

Residential Survey Results (2073 respondents):

1. 41.5% of Franklin County residents are either somewhat or very dissatisfied with their current broadband service.
2. 63.43% of Franklin County residents experience buffering of their broadband connection, either daily or weekly.
3. 40% of Franklin County residents are interested in faster broadband service
4. 84.56% of Franklin County residents expressed that it would be a wise investment for Franklin County Government to undertake efforts to attract better broadband service to the region.

3. Eligible Vendors

Eligible vendors will meet the following requirements:

- A Private For-Profit business licensed to operate in NC
- Vendors must have a minimum of three years of operations providing high-speed Internet service.
- Vendors must be in good financial standing. Vendors should have a positive cash flow, a positive credit history and must provide an audit. Financial documents that must be submitted along with this application are outlined in Section 11.4.

The FCBI reserves the right to reject all proposals and may select multiple vendors to provide service.

Each Vendor will be an independent contractor that provides all design, construction, and operation services for the Network(s). FCBI and its affiliates will have no ownership in the Vendor(s) that owns and operates the Network(s). FCBI and its affiliates' contract(s) with the Vendor(s) do not constitute franchise(s). FCBI and its affiliates do not plan to regulate generally Vendor(s)' business activities, nor to grant Vendor(s) a franchise for its activities and operations. FCBI and its affiliates expect that the contracts and property instruments associated with this effort shall establish terms and conditions governing the use of public assets that are utilized by Vendor(s) in its service delivery to its customers.

4. Municipal and County Offerings

If permitted by state law, Franklin County and FCBI affiliates may offer, with the approval of its county commissioners or other requisite governing body, access to the following facilities on a competitively neutral basis to assist with the deployment of broadband in areas of Franklin County. These assets may include:

4.1 County Asset Access Specifications

4.1.1 Fiber

Municipalities and Franklin County do not own fiber or empty conduit.

4.1.2 Conduit

Municipalities and Franklin County do not own fiber or empty conduit.

4.1.3 Tower Access

Respondents may, if permitted by state law, have access to space on towers that are owned by FCBI and/or its affiliates or are owned by entities that allow commercial providers to access them. A tower map and additional information about tower locations can be found in The Google Map link in Appendix B.

4.1.4 Rights of Way

Construction and the installation of equipment in FCBI or its affiliate's rights-of-way will be subject to the applicable requirements and ordinances of FCBI and its affiliates. Subject to existing rights-of way and easements, the FCBI and its affiliates will allow Vendor(s) to have access to necessary rights-of-way on property owned by FCBI and property on which it has an easement and authority to allow such access. Access will be provided in accordance with the applicable requirements or ordinances, but generally access will be provided during regular business hours for non-emergency work and 24 hours a day, 7 days a week in the event of an emergency. Access includes permission to perform construction work on FCBI and its affiliate's property, including construction in the streets as needed for the Network(s), subject to any permit requirements that the FCBI and its affiliates have. FCBI

and its affiliates will assist in obtaining on a timely basis the required approvals to allow such work in said rights-of-way.

If requested, the FCBI and its affiliates will also cooperate with Vendor(s) in efforts to allow Vendor(s) to gain access to rights-of-way owned or controlled by third parties within the Service Area.

Planned street maintenance could be utilized to coordinate any proposed work with preexisting construction schedules and these schedules may have certain flexibility to align with a potential network rollout.

4.1.5 Pole Attachment Rights

FCBI and its affiliates may provide Vendor(s) with access to existing utility poles owned (if permitted by state law) or controlled by the FCBI and its affiliates. The mechanisms by which FCBI and its affiliates will provide such access to the poles, along with fees that will be charged, are subject to negotiation with the pole owner. FCBI will help facilitate these conversations if requested by the vendor.

If requested, FCBI and its affiliates will cooperate with Vendor(s) in its efforts to gain access to poles owned or controlled by third parties within the Service Area.

4.1.6 Co-Location Space and Power

FCBI and its affiliates may provide access (if permitted by state law) to segregated, secured spaces for telecommunications and network equipment within facilities owned or leased by FCBI or its affiliates; this space may exist in telecom closets or equipment huts at tower sites, fire stations, municipal buildings, or other locations. This space is typically not tiered data center space and is generally unconditioned beyond standard building climate control. Some locations may contain generator/UPS backup for electrical utility service, although FCBI and its affiliates are open to proposals from Vendor(s) to add redundant services. Vendor(s) may choose to segregate their equipment within the shared space. FCBI and its affiliates will provide reasonable 24x7 access to the space for equipment maintenance and repair. The intent of FCBI and its affiliates is to make space available through a leasehold interest that matches the term of service.

Access to a segregated, secured space within a data center facility or computer room owned or leased by FCBI or its affiliates used for servers, telecommunications, and/or network equipment may also be made available. FCBI or its affiliates may provide access to the space through routine IT operations processes or through accompanied access to the space; alternatively, Vendor(s) may choose to segregate Vendor(s) and FCBI and its affiliates' equipment from each other in order for FCBI and its affiliates to provide full access by Vendor(s) into the facility without escort. FCBI and its affiliates will ensure data center is capable of receiving electrical service, computer room air conditioning, and customary facility monitoring services. FCBI and its affiliates will provide reasonable 24x7

access to the space for equipment maintenance and repair. Vendor(s) will be required to adhere to municipal security policies and practices for working in such a space.

The common pricing schedule for co-location space and other municipal assets can be found in Appendix D.

4.2 Funding

Service to Unserved/Underserved Areas of Franklin County- Commissioners and the FCBI may consider small amounts of subsidy funding for deployment of enhanced terrestrial or wireless service into these unserved and underserved areas of the county. For example, the county may offer a per household or per business subsidy for deployment of terrestrial service or may support service to underserved areas by providing or funding the construction of towers required to bring wireless signal coverage and service availability to these underserved areas of Franklin County. Any subsidy is contingent upon approval and funding by the Franklin County Commissioners.

The amount of subsidy, if any, will be determined at the sole discretion of the FCBI and the Franklin County Commissioners and in no case will exceed a small percentage of the capital deployment costs (construction materials, construction labor, engineering, project management, core/edge/premise equipment) necessary to deliver broadband service to businesses and residences. Vendors requesting a subsidy, must provide detailed/line-item invoices of costs. Subsidies will be divided and paid on a per household or per business basis with proof of subscription.

Fiber to the premise service to higher density residential areas including Bunn, Franklinton, Louisburg and Youngsville Townships- For a fiber to the premise (FTTP service), the FCBI is willing to consider offering the following grants or incentives if a bid meets the present and future bandwidth and service specifications:

- Serving Franklin County Government administration and Municipal locations.
- Single point of contact for Franklin County Right of Way permits and other administrative processes.
- Promotion of the service by Franklin County Economic Development and Greater Franklin County Chamber of Commerce members to businesses and residences.
- Any County or FCBI offer of a subsidy may be on a per household or per business subsidy for deployment of a fiber-to-the-premise service. Any subsidy is contingent upon approval and funding by the Franklin County Commissioners.

4.2.1 Funding restrictions

FCBI will not award grants to substitute for lost government appropriations or cover pre-existing operating expenses for established organizations or pre-existing deployment to any of the Eligible Service Areas.

4.2.2 Federal, State, Private Grants and Loans

The Franklin County Commissioners and the FCBI will assist respondents in seeking grants or financing to support the proposed broadband infrastructure deployments in Franklin County. This support can take the form of letters of support or participation in meetings/presentations to prospective grant-makers and financing entities.

4.3. Assistance in Identifying and Generating Demand

FCBI and its affiliates may negotiate individual commitments to purchase Network(s) services needed for FCBI or its affiliates operations (e.g., transmission capacity, Internet access, voice, video, security monitoring, cloud computing and storage) through the Network(s).

If requested, FCBI and its affiliates will provide Vendor(s) with publicly available information as to entities in the Service Area that are candidates to enter into contracts for fiber or Network(s) services. Such potential end-users may include educational institutions, large/medium/small employers, and governments. An initial list of such entities and contact information for key personnel may be listed in the Schedules for each individual community.

FCBI and its affiliates may each publicize the proposed Network offerings in the same manner as other private economic development announcements.

5. Vendor Services/Solutions

FCBI and its affiliates are looking for innovative solutions which may entail one or more Vendors collaborating to create a turn-key system.

Service descriptions must include complete system design, engineering, operations, monitoring, maintenance, customer support provisions, and enhancements. The Network(s) rollout will be based upon demonstrated demand by community residents, institutions, governments and businesses, and the availability of necessary infrastructure. The Network(s) design and operation should preferably provide an open access framework that maximizes wholesale and retail service delivery and competition.

6. Expected RFP Schedule

August 7, 2018	Request for Proposals FCBI
August 16, 2018	Franklin, Granville and Vance RFP Overview Meeting
August 22, 2018	Questions from Vendors due
August 27, 2018	Answers to vendor questions posted
October 4, 2018	RFP responses due

7. Application Submission Process

One electronic copy of this application, and all relevant materials, must be received by 4:00 PM on the deadline date. Faxes are not acceptable. The electronic copy should be submitted by e-mail to info@kerrtarcog.org When submitting materials by e-mail, you must have a reply from the Kerr Tar COG representative acknowledging receipt of materials. The e-mail containing the proposal should be entitled "Franklin County Broadband Enhancement RFP Response."

8. Proprietary Information

Proprietary information may be submitted as part of the proposal. Please clearly mark only the pages that contain proprietary information with the word "CONFIDENTIAL."

9. Requesting Additional Information and Questions

FCBI will respond to questions submitted ONLY via e-mail to info@kerrtarcog.org. The deadline for questions is 5:00 PM, August 22, 2018. The questions will be answered to the submitter and all questions and responses will be posted on the website <http://www.kerrtarcog.org> Neither FCBI staff nor County Commissioners nor Town Council members will answer questions directly.

10. Application Requirements and Instructions

Vendors are required to complete and submit the following materials for their grant proposal application:

- (1) **Cover Sheet** (Section 11)
- (2) **The Project Proposal** (Section 12)
- (3) **Certification by Vendor** (Section 13)

11. Cover Sheet: FCBI Broadband RFP

General Information

Legal Name of Vendor Unit:

Name and Title of Manager or CEO:

Mailing Address: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

Email: _____

Name and Title of Project Contact:

(This project contact should be the person who can best answer project questions)

Address: _____

Telephone: _____ Email: _____

Federal Tax ID Number: _____ Fiscal Year-End Date: _____

Project Information

Project Start Date: _____ Project Completion Date: _____

Service Area: Unserved Areas Franklin County High Density Townships & other areas

Government Facilities

12. The Project Proposal

Vendor(s) shall design, build, install, operate, support, and manage the Network(s). Vendor(s) are encouraged to propose on all features with coverage over the full Service Area. Vendors may bid on parts or the whole of the RFP. If a Vendor chooses to propose on less than the whole, Vendor must provide details as to which features and Service Area(s) for which it is proposing, including the use of maps or other diagrams as necessary to sufficiently allow FCBI and its affiliates to review Vendor's proposal. Vendor(s) should describe which, if any, of the turnkey services described below, it will provide. Vendor must explain or describe how it would allow for connection to other Service Areas in the event Vendor wishes to propose on less than the full service Area.

The following list of required information is offered to facilitate the preparation of the comprehensive proposal package that FCBI has to have in order to give each proposal fair and adequate consideration.

All submitted proposals must include the following components as outlined below:

12.1 Technical Plan for the Proposed Project

The technical plan must describe in detail how the proposed project will bring high-speed Internet services to the Eligible Service Area(s). Where relevant, provide accompanying documentation.

12.1.1 Broadband Coverage map

- A map and build out schedule (GIS shape file). If less than the entire Service

Area is being proposed on, Vendor's portion of the Network(s) must provide for interconnection at no cost with other portions of the Network(s). An explanation as to how Vendor(s) expects to accomplish all interconnections should be included in Vendors' response.

- An explanation as to how Vendor(s) expects to accomplish interconnection.
- Detailed design for at least one multi-family dwelling (MDU), a Township business, and/or a residential neighborhood, if such feature is included in proposal.
- A discussion of the anticipated deployment strategy, scope, and timing of the proposed rollout, including if there would be multiple phases of the deployment and availability of services and, if so, what services would be made available during each phase. The discussion should identify the levels of committed demand necessary to trigger rollout obligations and any factors likely to influence the scope or timing of the rollout and explain how those factors impact the strategy.

12.1.2 Project Implementation Timeline and Performance Milestones*

The technical proposal must be accompanied by a proposed implementation timeline.

- The proposal must develop a detailed project schedule that indicates key events that are tied to the need for the release of funds and grants or incentives by the FCBI.
- The proposal must specify the projected date by which the project will be completed and the date service delivery will commence over the proposed infrastructure.

* The FCBI may choose to implement the project in a phased approach, starting with a pilot. If this option is chosen, the County will work with the vendor to adjust the timeline accordingly during the grant agreement discussion.

12.1.3 Service Offerings

A description of proposed wholesale or retail service offerings that the Vendor(s) anticipates offering to institutional, business, government, residential, and other potential customers. Response should address 1) pricing strategy, include anticipated rates for services and minimum time period those rates would remain in place without escalation, and limitations on increases in rates over time, and 2) an explanation of Vendor's willingness to work with the FCBI to develop unique pricing or packages for key community stakeholders and populations (e.g., government, K-12 facilities and economically distressed areas), and 3) customer support model for each service. Proposals must include a reduced rate option for qualifying economically distressed residents. Explanation of the qualifying standard, if available, should be included. The county can provide qualification requirements and determine eligibility, if desired.

Internet Services

- Residential
- Bulk internet to multi-dwelling units (MDUs)
- Dedicated business/institutional
- Wholesale Internet access

Service Circuits

- Point to Point
- Multipoint Optional Services
- VOIP services
- Wi-fi
- Video services

Vendors' response should include any other services that it will provide with its standard services or as optional services.

12.1.4 Technical system explanation

A description of the Network(s) technologies underlying the proposed Network(s) solution(s) included in the response. Each description should include the following information:

- Service Availability
 - Targets for uptime
 - Redundancy
- Design points for capacity
 - Capacity per customer
 - Number of fibers
 - Licensed spectrum used
 - Unlicensed spectrum used
 - Mitigation plan for interference for unlicensed spectrum
- Maximum number of end point customers
- Verification of adherence to Service Level Agreement and Outage Reimbursement standards.

12.2 Roles and Responsibilities

A description of the roles and responsibilities envisioned for Vendor, Vendor team members, FCBI and its affiliates, and subcontractors or third parties (if applicable) for each of the following:

- Network(s) design

- Network(s) construction
- Network(s) operations and management
- Customer support
- Publicly available information
- Marketing

Material Tasks/Components: Vendor shall provide a breakdown or outline of the material tasks or components of the design, construction, operation and management of the Network(s) and its rollout.

12.3 Management and Staffing

The proposal must describe the role of key project personnel (including job descriptions) and provide documentation of the ability of current management and staff to fulfill those responsibilities. Please attach resumes of key project personnel and a list of anticipated subcontractors.

Vendor's proposal shall include organizational documents filed with the applicable governmental agency (i.e., Articles of Incorporation or Articles of Organization) as well as a Certificate of Good Standing (or equivalent) from the applicable agency and any licenses to provide communications services that may be required by the North Carolina Public Utilities Commission, Federal Communications Commission, or any other applicable governmental agency. Additionally, Vendor shall provide a certificate that it is in good standing to do business in the State of North Carolina and that all of its business and regulatory registrations/filings/taxes are current, and all internal corporate documents, are up to date.

The proposal must disclose the relationships, if any, which exist between key personnel and investors in this project.

12.3.1 Contractors - Procurement/Deployment

- The proposal must explain what process will be followed in obtaining services required for the development of this project.
- The proposal must explain if small and historically underutilized firms will be given special consideration in the bid process.
- The proposal must explain if there is a performance bond executed with contractors and subcontractors.

12.4 Project Budget

Provide a copy of the proposed project budget by line item, along with a budget narrative. Sources of other grant or loan funds in the project should be clearly identified.

The project budget should include a pro forma financial statement, identifying projected capital outlays, ongoing operational costs, and expected revenues from wholesale and retail

services for at least the first five years of construction and operation. The plan should identify and quantify all key assumptions underlying the calculations.

The financial projections should specify the matching fund support from FCBI that is assumed and the FCBI asset access that is assumed.

12.5 Organizational Information

12.5.1 Organizational Structure

- The vendor must be a Private For-Profit business licensed to operate in NC and must furnish proof of this designation.
- Briefly describe the ownership structure of your organization. Vendors must identify what type of business they are, where they are organized (what state) and where their principal office is located.
- Vendor should provide a statement of experience highlighting similar Network(s) systems that it has designed, constructed, and operated, including project name, location, size, technology used, and names and phone numbers for reference contacts. Also, the proposal should indicate whether each system is owned by the Vendor(s) or another entity.

12.5.2 Operating Finances

Vendor(s) shall submit 1) 2016/2017 Dun & Bradstreet information supplement and 2) the two most recent annual audited financial statements to permit analysis of financial resources. If Vendor is part of a project group, the audits and Dun & Bradstreet report for each principal group member should be submitted. If the Vendor(s)'s response includes Vendor financing or committed bank or other financing, the audits and Dun & Bradstreet reports of such Vendors and financial institutions should be submitted. Security in the form of a letter of credit, bond or other security in the amount determined by the FCBI and Vendor(s) after negotiation will be required of the successful Vendor(s) to guarantee completion of the Network(s), and shall be held by the FCBI until completion of the Network(s).

12.5.3 Ownership and Equity Conversion Issues

- The proposal must describe the ownership structure of this project, detailing the nature of equity distribution and its basis.
- The proposal must detail any non-financial investment for which equity has been given.
- Vendors must include a proposal for the disposition of assets created or acquired through use of FCBI funds in the event that the project dissolves or terminates. FCBI requires that such dispositions, transfers or assignments preserve the goals of FCBI and the purposes of this RFP.

13. Certification by Vendor

The attached statements and exhibits are hereby made part of this application and the undersigned representative of the vendor certifies that the information in this application and the attached statements and exhibits is true, correct and complete to the best of his/her knowledge and belief. He/She further certifies that:

1. As authorized representative, he/she has been authorized to file this application by formal action of the governing body;
2. That the governing body agrees that if a grant or award of contract from the FCBI is awarded, the vendor will provide proper and timely submittals of all documentation requested by the County;
3. That the governing body agrees to provide for proper operation and maintenance of the project after its completion;
4. That the vendor has substantially complied with or will comply with all federal, state and local laws, rules and regulations and ordinances as applicable to the project.

Signature of Grantee/Authorized Representative

Typed Name and Title

Date

Checklist for Additional Forms:

Please enclose the additional items before submitting:

Cover Sheet Project Proposal (see guidelines in Section 12)

14. Application Selection Process

Applications will be reviewed to ensure that the application is received on time (by the RFP deadline), is substantially complete and meets other eligibility requirements. If these standards are not met, the application will not receive further consideration. Applications will not be returned to the vendor.

- (1) Timeliness. Applications will be reviewed to verify submission by the submission deadline. FCBI may reject applications that do not meet the submission deadline.
- (2) Completeness. Applications will be reviewed to verify completeness. FCBI may reject applications that do not address all items in these sections and are thus materially incomplete.
- (3) Eligible Service Area. Applications will be reviewed to ensure that proposed infrastructure projects will deliver services to areas designated in Section 1.
- (4) Eligible Vendor. Applications will be reviewed to verify the eligibility of the vendor. The vendor must be a private for-profit corporation.
- (5) Eligible Activities. Applications will be reviewed to ensure that the activities for which assistance is requested are eligible for funding.
- (6) Sustainability. Vendors' plans will be reviewed to ensure that the business plan will be sustainable over the long term.
- (7) Appeals Process: There will be no appeals process.

15. Corrections to Deficient Applications

After the application due date, no unsolicited information will be considered. However, FCBI staff may contact the vendor to correct non-substantive deficiencies. In each case of a completeness deficiency, the vendor will be notified by telephone or email documenting the deficiency. All supplemental information requested by the County must be received within five business days of the date of notice or the proposal will not be considered for funding.

16. Scoring for Proposals

Applications deemed complete will be reviewed and scored by the following criteria.

Scoring Factor	Criteria	Max Points
Breadth of the response	<ul style="list-style-type: none"> A. Number of the 4 core requirements met by the proposal B. Includes a well thought-out and realistic project implementation timeline C. Describes specific design and implementation methods and activities to be carried out as part of this project D. Ability to obtain financing 	25
Cost	<ul style="list-style-type: none"> A. Includes a well thought-out and realistic quarterly operating and capital budget B. Total project costs C. Total grant/other funds D. Match required from FCBI E. Monthly cost to subscribers F. Monthly cost to low-income subscribers 	25
Long-term Sustainability	<ul style="list-style-type: none"> A. Includes a well thought-out and realistic explanation of how the provider will continue this project after this grant money has been expended B. Quality customer service offerings C. The solution will provide long-term upgradeability, business sustainability, and quality of service 	20
Capacity to complete the project	<ul style="list-style-type: none"> A. Depth of past/current experience B. Staff capacity and experience, relevant job descriptions C. Financial documents are in good standing 	15
Collaboration	<ul style="list-style-type: none"> A. Quality partnerships that may increase the success or impact of this project B. Experience or willingness to partner with the county to educate the public, especially low-income citizens 	10
Marketing	<ul style="list-style-type: none"> A. Marketing plan and experience to ensure that target audience will be reached 	5

17. Ranking

Each service area proposal will be ranked separately. Scores for each rating factor will be added together for each application to obtain a total score for each proposal. Proposals will then be ranked from highest to lowest according to the total combined score.

FCBI may choose a single vendor or multiple vendors. FCBI reserves the right to reject all proposals.

18. Award Requirements

Each Vendor will be required to enter into a contract with Franklin County before it can receive grant funds or begin project activity. Franklin County may include requirements for job creation, CRM location, etc. in the grant agreement.

Some of the grant award requirements and conditions are outlined below.

- FCBI Broadband Grant funds and commitments of facility access can only be used for the purposes set forth in the contract.
- All recipients must submit regular progress and financial reports. Specific reporting requirements will be described in the contract.
- The project may be implemented in a phased manner, providing service to an area initially and resuming service provision to other areas after an evaluation period. The option of using a phased approach will be discussed as part of the contract process.
- FCBI staff will monitor the progress made as compared to the submitted project milestones. These milestone dates will be a part of the contract. Monitoring will include regularly scheduled staff reviews. Grant payments and facility access will be released/granted based on these reviews and the assessment of progress against project milestones.
- Grant funding may be paid out on a reimbursement basis, with the payment schedule to be outlined in the contract.
- Unless negotiated otherwise, intellectual property rights developed or created with Grant funds, if relevant, will be proportionately shared with FCBI.

19. Further Information

For further information about this program, please Visit the RFP website at www.kerrtarcog.org.

Appendix A -Glossary of Terms

<p>Franklin County Broadband Initiative (FCBI)</p>	<p>An effort led by the Franklin County Commissioners and supported by its citizens and business to bring faster, more reliable, higher value, scalable broadband service to Franklin County, NC. FCBI includes affiliate organizations that have agreed to support the county’s effort to bring enhanced broadband service to FCBI.</p> <p>The goal of this effort is 3-fold:</p> <ol style="list-style-type: none"> 1. Reach underserved areas of the county with more and better broadband service 2. Provide scalable broadband infrastructure within Franklin County that will allow private sector service providers to offer enhanced services to business and consumers within the city key economic corridors and relatively high density residential corridors 3. Meet FCBI member administrative, public safety, public health and other area needs for scalable broadband service for at least the next 20 years.
<p>Advanced Network</p>	<p>A comprehensive approach to meeting the goals of</p> <ol style="list-style-type: none"> 1. Better broadband access for the underserved areas of FCBI 2. Enhanced broadband access for key business/economic development and high density residential corridors 3. An efficient way to meet the broadband needs of government, residents and businesses for the foreseeable future <p>Last mile solutions can be fiber, coax, mobile wireless or microwave. Solution that provide 25 Mbps download/3 Mbps upload immediately and 100 Mbps symmetrical service by 2022 (in accordance with the National Broadband Plan). For last mile solutions in higher density areas the FCBI prefers fiber based solutions.</p>

Open Access	FCBI's preference is that the chosen vendor (s), if the vendors operate a wholesale network (sell access to other service providers), will have reasonable and non- discriminatory access arrangements that (i) ensure equivalence of price and non-price terms and conditions for all retail service providers and (ii) permit such providers to differentiate their product offerings. In addition, the Vendor(s) may not limit the ability of retail service providers or their customers to run applications, use services, and connect devices of their choice to the Network(s).
Service Area:	The FCBI service area includes four Townships (Bunn, Franklinton, Louisburg and Youngsville), and the outlying areas of Franklin County, NC.
Vendor(s):	Business entity or entities which respond(s) to this RFP.

Appendix B – Service Area Maps

The data included in these maps are subject to change.

Google Map Link- Government Facilities and Telecommunications Assets (towers, aggregation points)

<https://www.google.com/maps/d/edit?mid=11XSNncvWHqJ0hijM5mFKcseTTP2Cc0v6&ll=36.04914685670974%2C-78.31080099999997&z=10>

Includes list of facilities and towers located in the County with Longitude and Latitude.

Appendix C– Access to Assets

If permitted by state law, Franklin County and FCBI affiliates may offer, with the approval of its County Commissioners, access to County facilities on a competitively neutral basis to assist with the deployment of broadband in areas of Franklin County.

FCBI may provide Vendor(s) with access to a common pool of the assets, services and infrastructure to the extent available and needed by the Vendor(s) for deployment of the Network(s). Infrastructure may include, but will not be limited to, conduit, fiber, poles, substations, rack space, nodes, buildings, facilities, central office or switch locations, available land, and other assets and services identified below. Ownership of any and all such assets used by the Vendor(s) shall remain with the owner unless provided for otherwise by contract. Any network elements added by the Vendor(s) shall belong to the Vendor(s) but may be purchased at the end of the term by FCBI or an affiliate at reasonable, depreciated market value. If such network elements are not so purchased and are no longer in use, the Vendor(s) shall remove such elements at FCBI/affiliates request. FCBI and their affiliates may also offer access to additional assets, services, and infrastructure at their discretion, this will be determined during the negotiation process with the vendor.

FCBI and its affiliates may charge Vendor(s) as may be authorized or required by law for access to FCBI assets and infrastructure as set forth herein or as otherwise may be required by law. If the response from the vendor indicates funds are required for the design, construction, engineering, project management of the aggregation network or last mile services, FCBI and its affiliate, subject to applicable North Carolina law, will consider provision of these funds.

County and Municipal Facilities are mapped on the Google Map found in Appendix B.

County Owned Property obtained as a result of a foreclosure proceeding is listed below in the table “Franklin County NC Surplus Property”. Ownership or use of this property can be negotiated. This list is subject to change and updates or questions about property can be obtained by contacting the Franklin County Tax Office at franklincountync.us.

Franklin County NC Surplus Property					
Parid#	Map	Tax Record	Price County Paid	Assessed Value	Comments:
000242	map	taxinfo	\$8,734.14	\$6,380.00	0.12 acre lot on Warren Ave, (Bunn citylimits)

002262	map	taxinfo	\$5,966.30	\$15,000.00	1 acre lot in Birchwood Subdivision, Lot#15 on Ingle Dr(close to Ingelside)
009123	map	taxinfo	\$4,687.00	\$15,290.00	0.32 acre lot on RD Collins Rd, off on US 1 Hwy north of Franklinton
009306	map	taxinfo	\$5,381.00	\$16,510.00	0.34 acre lot on RD Collins Rd, off on US 1 Hwy north of Franklinton
015294	map	taxinfo	\$7,053.11	\$26,250.00	2.4 acre lot adjacent to the river, located on the east side of the S Main St bridge (Louisburg Citylimits)
017007	map	taxinfo	\$10,064.00	\$13,910.00	0.29 acre lot on the corner of Kenmore Ave and Dent Ln (Louisburg Citylimits)
026264	map	taxinfo	\$5,137.00	\$16,500.00	2.0 acre lot on Vaiden Rd
002595	map	taxinfo	\$5,493.63	\$22,500.00	2.76 acre lot in Birchwood Subdivision, Lot#17 on Ingle Dr(close to Ingelside)
004805	map	taxinfo	\$5,000.00	\$14,060.00	0.23 acre lot at the end of N College St (Youngsville Citylimits)
017643	map	taxinfo	\$12,000.00	\$29,770.00	1.21 acre lot on S Main St Louisburg (Louisburg Citylimits)
017645	map	taxinfo	\$12,000.00	\$7,970.00	1.66 acre lot off S Main St Louisburg (Louisburg Citylimits)
016549	map	taxinfo	\$23,400.00	\$8,110.00	0.15 acre lot on Kenmore Ave in Louisburg (Louisburg Citylimits)
034887	map	taxinfo	\$4,517.17	\$11,590.00	0.70 acre lot on Turnipseed Dr in Louisburg
034888	map	taxinfo	\$4,517.17	\$11,430.00	0.72 acre lot on Turnipseed Dr in Louisburg
034889	map	taxinfo	\$4,517.17	\$11,380.00	0.76 acre lot on Turnipseed Dr in Louisburg
					*All lots are Vacant

Appendix D: Fiber Construction Specifications

The following are general terms that apply to the construction of fiber to the premise within the or in the area surrounding the Bunn, Franklinton, Louisburg, and Youngsville Townships and for routes to connect Franklin County Government Offices.

These build specifications apply to all new fiber builds contained in this RFP whether directly owned by the FCBI, leased dark strands by the FCBI or built within the Township Limits of Bunn, Franklinton, Louisburg and/or Youngsville and owned by a vendor to serve the citizens, businesses and government.

Colocation Space Availability

As described in Section 4.1.6, FCBI may lease rack or caged spaced at requested locations to house electronics for traffic that will go upstream from the FCBI Hub. Fiber construction/self-provisioning vendors should provide detailed information on access and cross-connect policies and arrangements for power and telephone service at any requested location. Pricing for co-location space will be determined based on location, space and requirements specified and policies and guidelines as permitted by state law and local ordinances.

Meet-me Hole and Mid-Span Interconnection Splicing

It is possible that FCBI may want to interconnect with the existing or newly planned carrier facilities at meet-me manholes or mid-span splice locations. Vendors should detail policies and guidelines that document meet-me manhole and mid-span interconnection procedures along with detailed costs for these activities.

Dark Fiber Performance

FCBI prefers newly built fiber that contains a homogenous fiber type throughout the entire build. It is currently anticipated that fiber utilized for the self-provisioned fiber proposal will be G.652.D fiber.

Dark Fiber Maintenance

Operations and Maintenance Practices: FCBI will require on-going maintenance and operations of any FCBI IRU'd or owned fiber for at least the first 5 years of the life of the self-provisioned fiber. When pricing maintenance and operations, the vendor should include an overview of fiber maintenance practices including:

- Routine maintenance and inspection
- Scheduled maintenance windows and scheduling practices for planned outages
- Fiber monitoring including information on what fiber management software is used, what fiber monitoring system is used, and who performs the monitoring
- Handling of unscheduled outages and customer problem reports What service level agreement is included, and what alternative service levels may be available at additional

cost

- What agreements are in place with applicable utilities and utility contractors for emergency restoration
- Repair of fiber breaks
- Replacement of damaged fiber
- Replacement of fiber which no longer meets specifications
- Policies for customer notification regarding maintenance
- Process for changing procedures, including customer notification practices

The pricing for dark fiber maintenance should include the annual cost per linear mile for dark fiber maintenance and operations.

NEW BUILD FIBER STATEMENT OF WORK

The Work is defined as:

Project Management

- Selected contractor and its subcontractors will provide all project management to accomplish the installation of all project work as outlined in the Statement of Work.
- Provide engineer(s), certified on selected fiber system specifications and procedures to manage all phases of project as outlined in this proposal. This includes ordering and managing the bill of materials as outlined below, directing and managing cable placement and restoration, directing and managing splicing crews and providing detailed documentation at the end of the project.
- Selected contractor and its subcontractors will develop a project management plan, which will include a milestone chart. The milestone chart will outline any critical path events and then track these with the appropriate agency/organization whether; selected contractor, a selected contractor subcontractor or (Vendor name)

Material Management

- Selected contractor and its subcontractors will provide all material management to ensure that the project remains on track according to the project milestones.
- Selected contractor and its subcontractors will develop in conjunction with selected contractor plants and other suppliers a material management plan.

Property Restoration

- All cable routes, which are plowed, will be restored to as near to original condition as possible.

Install overhead and underground fiber optic cable.

- Bore approximately (Number) feet of fiber optic cable through inner duct/conduit/hand hole system

- Plow approximately (Number) feet of fiber optic cable in accordance with selected contractor installation specifications.
- Install customer approved hand-holes and place marker/locator posts.
- Customer will provide entry/exit holes into buildings for routing cables to distribution frames unless otherwise noted.
- (Vendor name) will provide specific details of cable placement using aerial photography and cad drawings.

Install and Splice Hardware at Head Ends and in the Field

- Install optical hardware and splice field cable to equipment tail at head ends and splice tail to pre-stubbed hardware with SC pigtails.
- Prep closures, cables, fibers and splice fibers at all field locations
- Fiber to fiber fusion splicing of optical fibers at each point including head ends.
- Individual splice loss will be ≤ 0.10 dB for single-mode unless after 3 attempts these values cannot be achieved, then the fibers will be re-spliced until a splice loss within 0.05 dB of the lowest previous attempts is achieved. Splice loss acceptance testing will be based on the fusion splicer's splice loss estimator.

Total Project Splices: (number)

Final Testing

- In addition to splice loss testing, selected contractor will perform end-to-end insertion loss testing of single-mode fibers at 1310 nm and 1550 nm from one direction for each terminated fiber span in accordance with TIA/EIA-526-7 (OFSTP 7). For spans greater than 300 feet, each tested span must test to a value less than or equal to the value determined by calculating a link loss budget.
- Inspect each terminated single-mode fiber span for continuity and anomalies with an OTDR at 1550 nm from one direction in accordance with OTDR operating manual.

Documentation

- Provide final documentation consisting of:
 - Route "As-Built" Maps/Diagrams
 - End-to-End Insertion Loss Data
 - OTDR Traces
 - Individual Splice Loss Data

General Scope of Work (Description of all routes)

- Placing approximately (Number of Feet) of new (fiber count) SM cable to provide bored fiber connectivity in route that is used to provide connectivity to (Vendor's eligible facility).

- Placing approximately (Number of Feet) of (fiber count) SM underground cable along Wildlife Road from the route to Vendors Eligible Facility to reach (vendor eligible facility).
- Placing approximately (number of feet) of buried (fiber count) SM fiber from an existing handhold at (address) to vendor eligible facility.
- Placing approximately (number of feet) of buried (fiber count) SM fiber from an existing handhold at (address) to vendor eligible facility.
- Placing of associated hand holes, marker posts, locator posts, inner duct, and miscellaneous materials.
- Splicing of fiber optic cables as specified.
- Procuring and Provisioning of hand holes and miscellaneous materials required to accomplish the above.

Bid Specifications

- All fiber will be bid separately by the Owner in addition to turn-key including fiber and construction.
- All splicing shall be by the fusion method.
- All splicing enclosures and Hand Holes shall be of a type to be determined by the owner.
- All Hand Holes shall be (State) DOT approved, 45,000 lb. load rated CDR or comparable enclosures.
- All plowed cables shall be placed at a depth of 36" along roadways and 24" on private property.
- All road and driveway bores shall be at a depth of 36" and will have a 2" inner duct placed within.
- All buried splice locations will be marked with a locator post and a copper ground wire shall be attached to the splice closure/cable sheath.
- Buried marker posts shall be placed every 1500'.
- A warning tape shall be placed 12" above the buried cable.
- All highway shoulders, schoolyards, and ditch lines will be compacted and restored to satisfactory condition.
- All DOT encroachment permits, railroad encroachment permits, and National Park Service permits shall be submitted by (Vendor) in accordance with the permitting agency requirements.
- The vendor shall be responsible for the payment of any permitting fees and shall be the owner of said facilities.
- Contractor shall furnish an as-built drawing to the owner.
- Contractor shall perform an end-to-end continuity and loss test on each spliced fiber segment and provide the owner with the db loss of each fiber segment.
- Contractor shall be responsible for submitting the appropriate ULOCO locate requests.
- The vendor, the (Vendor) of (name) and the municipalities of (name) and (name) shall grant contractor right of way permission for municipal-

owned properties and roadways.

- All cables to buildings shall be fusion spliced within a minimum of 50' of entering a building at a location to be determined by the owner with an existing single mode fiber and terminated at customer's rack.
- A minimum of 100' coil of cable shall be left in each Hand Hole/Building for splicing use.
- The (Vendor) shall provide the contractor with secured space to store materials and equipment if needed.

Right-of-Way Acquisition & Permitting

- Vendor is responsible to ensure that all cable routes have approved access & rights-of-way for all proposed cables installations.
- Vendor will provide any information or points of contact to allow selected contractor and its subcontractors to facilitate the route prep "Make-ready" and actual cable installation.
- Vendor is responsible for pulling all required construction permits. Selected contractor and its subcontractors will provide officials at (Vendor) with any information necessary to pull these permits in a timely fashion.

Route Maps

- Vendor is responsible for providing; maps, drawings or aerial photographs of the route.

Termination and Splicing locations

- Vendor will in conjunction with selected contractor designate/decide on all termination locations, whether in-building, outside plant or in customer premises. This will include all hand-hole or manhole locations
- Vendor will in conjunction with selected contractor designate/decide on all field splice locations, in-building splice locations (if applicable), or other splice locations necessary to connect the network.

Cable and Hardware Approval

- Vendor will approve all cable and hardware prior to ordering or installation. Selected contractor will provide any required consultation to assist vendor in this effort.
- Vendor will approve all hand-hole or building entrance hardware prior to ordering or installation. Selected contractor will provide any required consultation to assist vendor in this effort.

Material Delivery, Receipt & Storage

- Vendor will provide warehouse or yard space to accommodate all materials provided by selected contractor to accomplish this project. Vendor will inspect, receive and issue any materials to provide

accountability. This will reduce the overall cost to the vendor with no added costs being placed into the proposal to cover the receipt and storage.

Final Inspection

- Vendor will provide at their discretion a person(s) to witness any final testing or construction verification. The person designated by Vendor will be required to initial/provide acceptance of any results. This person(s) will represent Vendor during any and all acceptance testing. This does not relieve the selected contractor from providing agreed upon documentation or absolve the selected contractor of any warranty support.

Communications

- Vendor is responsible for all communications with its customers or other interested parties concerning the proposed construction. Notification of any person(s) affected by this construction is the responsibility of Vendor. Selected contractor will work directly with any persons designated to handle project communications to facilitate awareness and reduce turmoil in the Vendor. Selected contractor will provide consultation to assist in the development of a communications plan as required.