



2019-2020 Florida Job Growth Grant Fund Public Infrastructure Grant Proposal

Proposal Instructions: The Florida Job Growth Grant Fund Proposal (this document) must be completed by the governmental entity applying for the grant and signed by either the chief elected official, the administrator for the governmental entity or their designee. Please read the proposal carefully as some questions may require a separate narrative to be completed. If additional space is needed, attach a word document with your entire answer.

Governmental Entity Information

Name of Governmental Entity: Jackson County Board of County Commissioners

Government Federal Employer Identification Number: ██████████

Primary Contact Name: Wilanne Daniels

Title: County Administrator

Mailing Address: 2864 Madison Street
Marianna, FL 32448

Phone Number: 850.693.6657 or 850.209.1370

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Secondary Contact Name: Pam Pichard

Title: _____

Phone Number: 850.693.6657 or 850.209.1370

Public Infrastructure Grant Eligibility

Pursuant to section 288.101, F.S., the Florida Job Growth Grant Fund was created to promote economic opportunity by improving public infrastructure and enhancing workforce training. Eligible entities that wish to access this grant fund must submit public infrastructure proposals that:

- Promote economic recovery in specific regions of the state, economic diversification or economic enhancement in a targeted industry. ([View Florida's Targeted Industries here.](#))
- Are not for the exclusive benefit of any single company, corporation or business entity.
- Are for infrastructure that is owned by the public and is for public use or predominately benefits the Public.

1. Program Requirements:

(If additional space is needed, attach a word document with your entire answer.)

Each proposal must include the following information describing how the project satisfies eligibility requirements listed on page 1.

A. Provide a detailed description of the public infrastructure improvements.

See attached file for narrative

B. Provide location of public infrastructure, including physical address and county of project.

Proposed project in Jackson County in Enterprise Zone (EZ) - 3201. See attached location maps.

C. Is this infrastructure currently owned by the public?

Yes No

If no, is there a current option to purchase or right of way provided to the County?

D. Provide current property owner.

See attached file for narrative.

E. Is this infrastructure for public use or does it predominately benefit the public?

Yes No

See attached file for narrative

F. Will the public infrastructure improvements be for the exclusive benefit of any single company, corporation or business entity?

Yes No

G. Provide a detailed description of, and quantitative evidence demonstrating, how the proposed public infrastructure project will promote:

- Economic recovery in specific regions of the state;
- Economic diversification; or
- Economic enhancement of a Targeted Industry ([View Florida's Targeted Industries here.](#))
 - Describe how the project will promote specific job growth. Include the number of jobs that will be retained or created, and in which industry(ies) the new net jobs will be created using the North American Industry Classification System ([NAICS](#)) codes. Where applicable, you may list specific businesses that will retain or create jobs or make capital investment.
 - Provide a detailed explanation of how the public infrastructure improvements will connect to a broader economic development vision for the community and benefit additional current or future businesses.

See attached file for narrative.

2. Additional Information:

(If additional space is needed, attach a word document with your entire answer.)

A. Provide the proposed commencement date and number of days required to complete construction of the public infrastructure project.

B. What permits are necessary for the public infrastructure project?

- C. Detail whether required permits have been secured, and if not, detail the timeline for securing these permits. Additionally, if any required permits are local permits, will these permits be prioritized?

See above narrative on Permits (Section B on additional pages file) for requested information.

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- D. What is the future land use and zoning designation on the proposed site of the infrastructure improvements, and will the improvements conform to those uses?

The proposed Jackson County Fiber Network for the Middle Mile project is not in conflict with the applicant's comprehensive plan since it is the number 1 infrastructure priority in the Restore Renew Rebuild Master Plan. Please, refer to the enclosed Restore Jackson Framework file.

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- E. Will an amendment to the local comprehensive plan or a development order be required on the site of the proposed project or on adjacent property to accommodate the infrastructure and potential current or future job creation opportunities? If yes, please detail the timeline.

Yes No

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- F. Is the project ready to commence upon grant fund approval and contract execution? If no, please explain.

Yes No

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- G. Does this project have a local match amount? Yes No

If yes, please describe the entity providing the match and the amount.

Jackson County received \$1.8M award from Rural Infrastructure Fund (RIF) FY2019-20 Florida Panhandle Specific appropriation 2314.

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- H. Provide any additional information or attachments to be considered for this proposal. Maps and other supporting documents are encouraged.

See attached Environmental Narrative file.

3. Program Budget

(If additional space is needed, attach a word document with your entire answer.)

Estimated Costs and Sources of Funding: Include all applicable public infrastructure costs and other funding sources available to support the proposal.

1.) **Total Amount Requested** \$ 7,425,642.90
 Florida Job Growth Grant Fund

A. Other Public Infrastructure Project Funding Sources:

City/County \$ _____

Private Sources \$ _____

Other (grants, etc.) \$ _____

Please Specify: _____

Total Other Funding \$ 1,856,410.80

B. Public Infrastructure Project Costs:

Construction \$ 3,963,311.27

Reconstruction \$ _____

Design & Engineering \$ 1,518,577.24

Land Acquisition \$ _____

Land Improvement \$ 816,360.80

Other \$ _____

Please Specify: Admin/Legal,
 Contin., Equip

Total Project Costs \$ 9,282,053.64

Note: The total amount requested must be calculated by subtracting the total other public infrastructure project funding sources in A. from the total public infrastructure project costs in B.

- C. Provide a detailed budget narrative, including the timing and steps necessary to obtain the funding and any other pertinent budget-related information.

See attached file for budget narrative.

4. Approvals and Authority

(If additional space is needed, attach a word document with your entire answer.)

- A. If the governmental entity is awarded grant funds based on this proposal, what approvals must be obtained before it can execute a grant agreement with the Florida Department of Economic Opportunity (e.g., approval of a board, commission or council)?

If awarded DEO funds, the Jackson County Board of County Commissioners would need to supply approvals prior to the execution of a grant agreement.

If board authorization is not required, who is authorized to sign?

N/A

- B. If approval of a board, commission, council or other group is needed prior to execution of an agreement between the governmental entity and the Florida Department of Economic Opportunity:

- i. Provide the schedule of upcoming meetings for the group for a period of at least six months.
- ii. State whether entity is willing and able to hold special meetings, and if so, upon how many days' notice.

The Board voted to allow the County to apply for these grants, including the DEO Job Growth Grant, and authorized the Chairman Pate (referenced below) to sign. i. The Board of County Commissioners meets the second and fourth Tuesday of every month and they can set a special meeting with reasonable notice given to the public (typically 3 or more days). ii. The Board can also call an emergency special meeting, if necessary.

- C. Attach evidence that the undersigned has all necessary authority to execute this proposal on behalf of the governmental entity. This evidence may take a variety of forms, including but not limited to: a delegation of authority, citation to relevant laws or codes, policy documents, etc.

Chairman of the Board Clint Pate is the authorized signatory for Jackson County. Statute 125 outlines signatory authority for the Board Chairman.

I, the undersigned, do hereby certify that I have express authority to sign this proposal on behalf of the above-described entity and to the best of my knowledge, that all data and information submitted in proposal is truthful and accurate and no material fact has been omitted.

Name of Governmental Entity: Jackson County Board of County Commissioners

Name and Title of Authorized Representative: Wilanne Daniels, County Administrator

Representative Signature: Wilanne Daniels

Signature Date: 1-17-2020

I, the undersigned, do hereby certify that I have express authority to sign this proposal on behalf of the above-described entity and to the best of my knowledge, that all data and information submitted in proposal is truthful and accurate and no material fact has been omitted.

Name of Governmental Entity: Jackson County Board of County Commissioners

Name and Title of Authorized Representative: Wilanne Daniels, County Administrator

Representative Signature: Wilanne Daniels

Signature Date: 1-13-20

1. Program Requirements

A. Project Description of Public Infrastructure Improvement:

Following the devastating effects of Hurricane Michael on the local economy and agriculture, and timber industries, Jackson County is seeking innovative strategies to diversify its economic development by investing in infrastructure, such as fiber optics, to stimulate local business development, foster high-paying job creation, attract technology dependent businesses, advanced manufacturing and industrial operations. Jackson County is currently seeking \$9,282,054 in State grant funding from the Florida Department of Economic Opportunity's Rural Infrastructure Fund FY 2019-2020 Florida Panhandle Specific Appropriation 2314 program for the development of a last mile broadband Open Application Network in Marianna and Sneads. The Open Access model means that while the infrastructure itself will be built by Jackson County, they will not provide services across it, but will rather charge private providers for the right to utilize the network for those and other purposes. Thus, the local government is not competing with the private sector, but rather enabling a greater degree of private sector competition for the benefit of county residents and businesses. Through the completion of this project, Jackson County's fiber network will serve as a catalyst for local job creation, workforce training, Smart City technological innovations, telemedicine, private investment, and a mechanism to reduce the "homework gap" faced by local students who lack affordable access in their homes.

In addition to these aspects, Jackson County is also interested in leveraging Opportunity Zones within the County to attract private equity investment for last mile deployment. From a public safety perspective, Jackson County's middle and last mile network infrastructure will also serve as a means for local law enforcement, first responders and emergency operations authorities to maintain reliable network connectivity for communication during emergency and nonemergency events. Additionally, the robust network will also provide a means for healthcare providers to counter to the opioid epidemic in Jackson County by providing a means for affected individuals to seek counseling and treatment programs. The connectivity for businesses and residents will be critical in addressing the digital divide between individuals who lack affordable and accessible connectivity at their premises. For individuals who are unemployed and seeking job opportunities, education, and training, connectivity to the network will be critical for their success as evolution in technology has transitioned from paper applications to online submittals and processing. Additionally, the fiber network's deployment to the premise will further enable Jackson County to be ready and enabled for eventual 5G connectivity and private sector investment.

Enhanced broadband access will enable residents and businesses to maintain connectivity and improve communication during emergency evacuations, which might otherwise be unavailable. While Jackson County cannot predict when the next major disaster will occur in its area, the community will be more resilient to disruptions in the local economy and the ability to protect lives and property caused by those events. As Jackson County and the panhandle region rebuild and recover from the impacts of Hurricane Michael, it is confident that the technology provided through this investment will strengthen its long-term economic growth and potential to reduce local population declines, poverty level, and unemployment by increasing workforce training, job opportunities, and the value of assets and property. Another potential impact of the proposed project involves the enhanced capabilities provided by the state-of-the-art fiber optic technology to serve as a center of innovation for the demonstration of Smart City technology such as advanced air quality, water quality, and gunshot detection sensors, street lighting, autonomous vehicles, municipal utilities, and smart buildings. These Smart City related activities will not only improve the quality of life of residents in Jackson County, but they will also serve as a launching pad for the adoption in other communities and adjacent counties throughout the region.

Additionally, the proposed fiber network will also connect to the Jackson County Regional Employment Center Development at the former Arthur G. Dozier School for Boys. Jackson County has been successful in receiving grant funding from the Economic Development Administration and the Florida Department of Economic Opportunity for

the new site, which will support job training, workforce development, and employment opportunities in the Global Logistics, Life Sciences, and Manufacturing industries. The training facility will allow the region to generate additional potential ready to work employees that heretofore have been lost to the workforce. The site will provide more than 6.1 million square feet of industrial space and no less than 1.7 million square feet of commercial space. This will be supported with no less than 1.1 million square feet of public spaces and approximately 6.8 million square feet of new residential space. The potential industrial space alone will support approximately 3,100 targeted industry jobs, more than 330 million dollars of private capital investment and support a huge increase to the local tax base. The potential impact of both the Jackson County Fiber Network and the Regional Employment Center Development project will be instrumental for the long-term recovery strategy of the county. Enhanced fiber network connectivity will enable innovative approaches for workforce development and vocational training programs that require ultra-fast broadband for simulation modules and remote connectivity to educational resources, community colleges and universities.

In summary, Jackson County needs an economic catalyst, such as the Fiber Network project, to strategically drive long-term stability, industry diversification, job creation, and private investment. Jackson County understands the vital role that enhanced broadband connectivity will provide to each of the communities in terms of economic resiliency, innovation, and platform for smart city technological implementation. Pursuing the status quo indefinitely without adequate broadband infrastructure has and will cause dire effects in the county and region. The alternative to this scenario is to take a proactive approach in identifying the needs, preparing the business case, and establishing the overall feasibility for deployment of the county owned infrastructure that will serve as the driving force and catalyst for the transformation in Jackson County.

B. Project Location

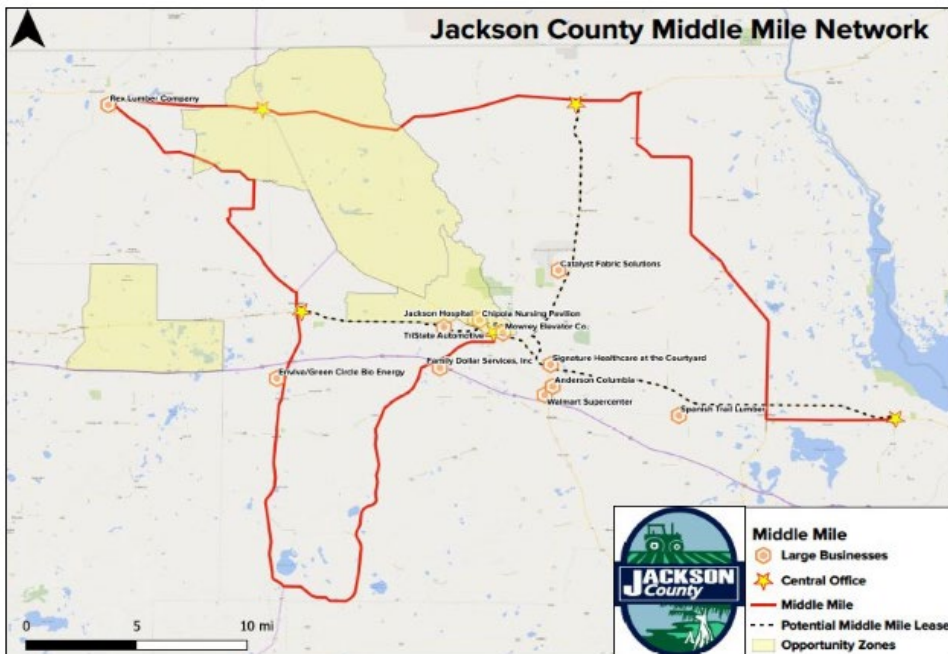


Figure 1 (above). Proposed 111 mile backbone ring illustrating the proposed network route along Jackson County's major employers.

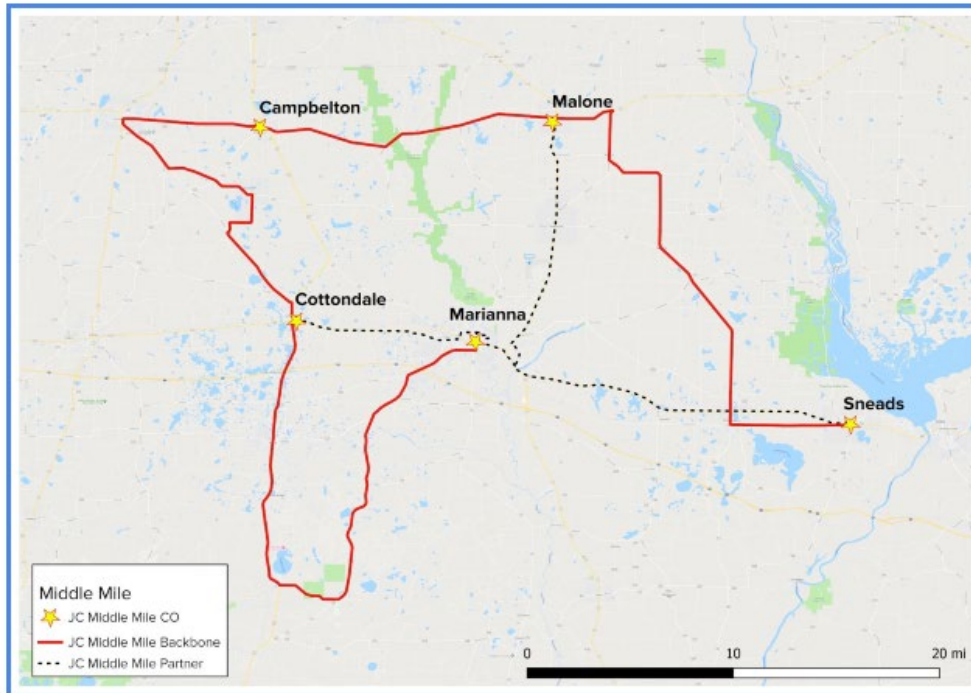


Figure 2 (above). Proposed 111 mile backbone ring connecting 5 Meet Me Center locations in Marianna, Sneads, Malone, Campbelton, and Cottondale. The dotted gray lines represent Uniti's network where Jackson County could lease dark or lit fibers to help complete their ring.

D. Current Property Owner

Based on the preliminary/conceptual route and layout of the proposed project, the Jackson County Board of County Commissioners does not anticipate the need to acquire property to complete the project. In the event that real property acquisition is necessary, Jackson County will obtain a current fair market value appraisal completed by a certified appraiser for the property to be purchased and submit the respective documentation to the DEO.

Jackson County will own both the Last Mile network infrastructure in Marianna and Sneads included in Phase I. Outside of the Phase I project, additional private sector entities will be involved with development and financing of Last Mile infrastructure, which will be proportionate to the levels of investment and participation. With respect to the maintenance of the Fiber Network project, Jackson County anticipates that the need to strategically utilize the revenue from the network to contract with an experienced and capable third party to maintain the infrastructure and be responsible for responding to repairs, splicing and maintenance tasks to ensure that reliability is at the highest level of service quality.

E. Public Benefit

In terms of the Jackson County Fiber Network's nexus to the disaster that has affected its local economy, industries, and residents since October 2018, the County has identified critical resilient telecommunications infrastructure as a means to reduce the risk and vulnerability of the area and its ability to recover future events that will cause even further effects if left ignored. Jackson County has the options of letting the private telecommunications industry bring state-of-the-art infrastructure to its communities on its own schedule and constraints or develop a feasible strategy on its own that can provide the connectivity that the community needs to not only be resilient to disasters, but to economic downturns as well.

From a public safety perspective, Jackson County's middle and last mile network infrastructure will also serve as a means for local law enforcement, first responders and emergency operations authorities to maintain reliable network connectivity for communication during emergency and non-emergency events. Enhanced broadband access will enable residents and businesses to maintain connectivity and improve communication during emergency evacuations, which might otherwise be unavailable. While Jackson County cannot predict when the next major disaster will occur in its area, the community will be more resilient to disruptions in the local economy and the ability to protect lives and property caused by those events. As Jackson County and the panhandle region rebuild and recover from the impacts of Hurricane Michael, it is confident that the technology provided through this investment will strengthen its long-term economic growth and potential to reduce local population declines, poverty level, and unemployment by increasing workforce training, job opportunities, and the value of assets and property.

In order to deploy resilient telecommunications infrastructure, Jackson County will pursue the combination of underground, aerial, and wireless technology to ensure that communications can function under the direst of scenarios, such as flooding, damaging winds, and natural disasters. The ability for residents and businesses to maintain connectivity during these emergency events can potentially save lives, protect property, and establish an efficient manner to coordinate evacuations and rescue efforts. While Jackson County cannot predict when the next major disaster will occur in its area, the community will be more resilient to disruptions in the local economy and the ability to protect lives and property caused by those events. As Jackson County and the panhandle region rebuild and recover from the impacts of Hurricane Michael, it is confident that the technology provided through this investment will strengthen its long-term economic growth and potential to reduce local population declines, poverty level, and unemployment by increasing workforce training, job opportunities, and the value of assets and property. In summary, the proposed Jackson County Fiber Network will not only assist in the recovery and resiliency of the community and its residents and infrastructure, but it will also serve as an economic catalyst to strategically drive long-term stability, industry diversification, job creation, and private investment.

G. Detailed Description of quantitative evidence demonstrating how project will promote economic recovery.

Since the 2010 census, the U.S. Census Bureau projected a population decline for Jackson County of 2.9% by 2018. This represents an average population decline of 0.37%. If this decline represents the status quo that will continue without sufficient broadband, then over 10 years the impacts to Jackson County would be:

- A loss of 28 employer establishments and 339 jobs
- A loss of approximately 1,700 population and 620 households

If, on the other hand, the availability of county-wide broadband is leveraged to retain and attract population and businesses with an average 0.79% annual population growth (half of the statewide population growth), then over 10 years the impacts to Jackson County could be:

- A growth of 62 employer establishments and 753 jobs
- A growth of approximately 3,900 population and 1,400 households

The net change over ten years from a declining to growing population scenario creates local economic growth from retained and new businesses and jobs, plus a stronger tax base from retained and new households with local

employment increasing local spending. Based on a net improvement of 1,092 jobs (growth of 753 versus a loss of 339 jobs), the annual impact to local GDP in year 10 would be approximately \$84 million.

In addition, through adoption of online business practices with improved broadband availability the additional economic impact would be:

- 102 new jobs
- \$7.9 million in annual local GDP
- \$224,000 in additional annual state and local income taxes

Specific industries to benefit from the Middle Mile Fiber proposed project (NAICS codes): 238210

The total annual local GDP growth between the status quo and growth scenarios is estimated to be an average of \$54 million per year over 10 years. This far exceeds the one-time investment of \$18 million in broadband infrastructure.

(Note: These economic impact estimates are approximate based on available public information and do not account for unknown local dynamics that could affect projections over time.)

There are also the community and quality of life benefits as broadband enables individuals and families to continue to reside in their community of choice by enabling people to:

- Age in place and stay in touch with family
- Obtain access to healthcare remotely
- Keep up with education trends for online research and homework
- Gain remote employment to work from home
- Start a home-based business

Communities with quality broadband services are positioned to attract businesses and teleworkers who wish to benefit from local amenities, more affordable properties, and the lifestyle benefits of Jackson County. Teleworkers earn above average income, with more than 80% of teleworking households earning \$50,000 or more per year.

A growing population with growing household income contributes to the local economy and local business growth, creating more jobs. In addition, businesses that learn to adopt more online business practices accelerate their growth by being more relevant and competitive.

As part of the final Engineering Feasibility Report, Jackson County has included a county-wide Broadband Impact and Market Assessment component in the grant proposal to forecast subscription rates for services and to illustrate why and how broadband matters to local households, businesses, and the community. Quantifying how these impacts the local economy and benefit local quality of life builds an economic case for investing in broadband and further engages stakeholders in the Jackson project. It is important to not only understand the current and future demand for broadband, but also to understand and measure the impacts from broadband investments.

Broadband Market Demand	Economic Impact
Focus on identifying service demand and driving revenues.	Focus on identifying and driving network benefits, for users and for the community.
Understand the current state of broadband use and needs in your market	Understand the gaps and opportunities for broadband use in your market

Identify actual and potential demand for services across market segments	Estimate the economic impact of opportunities from your network investment
Assess the potential for driving demand for services and increasing revenues	Measure the impacts of the network and quantify its benefits

Total

estimated jobs and private investment that is expected to be generated by this project:

- Estimated Jobs Created: 753
- Estimated Jobs Retained: 339
- Estimated Private Investment: Based on a net improvement of 1,092 jobs (growth of 753 versus a loss of 339 jobs), the annual impact to local GDP in year 10 would be approximately \$84 million. The County’s Broadband Impact and Market Assessment study will provide a more detailed breakdown regarding the impact on both local GDP and the amount of private investment as a result of the project.

The estimates above were derived by comparing to impacts from other projects (Ammon, Idaho, Custer County, Colorado, State of Tennessee Broadband Study, State of Arkansas Broadband Study, State of Illinois Broadband Study, and State of Kansas Broadband Study) along with other methods that track impacts directly from end-users and incorporates input-output modeling to assess GDP, tax base, and employment impacts.

Broadband Impact on Population Growth

The first aspect relates to losses or gains for business establishments, jobs, and households over a ten-year period. Estimates are based on a simple projection of population growth/decline at a constant rate. Estimates for business establishments, jobs, and households are based on the current ratios relative to populations, for example, on average there is one business establishment per 14.2 population, 8.7 employees per establishment, and 2.83 persons per household. These ratios were kept constant over the ten years for estimation purposes. It is understood that many other as-yet-unknown factors can impact these ratios over time.

Using this method, two scenarios were compared for projected impacts. The first scenario is the status quo based on a negative population growth rate of -0.37% per annum. This value is based on the current US Census Bureau (USCB) estimate for population growth from 2010 through 2018 for Jackson County, FL. The USCB also estimates the population growth rate for the State of Florida to be 1.57% per annum over the same period. Therefore, the alternative scenario assumed a population growth rate of half the statewide estimate, or 0.79% per annum, which is also similar to the estimated population growth for Leon County (a more urban county, with Tallahassee).

The rationale for assuming a higher growth rate in the second scenario, stimulated by broadband availability and adoption, is based on research that shows a positive impact on population retention and growth from broadband. For example, more than 38 percent of rural households are very likely to relocate in order to get broadband, placing pressure on population loss for Jackson County. This statistic is even higher for younger and working age populations. Conversely, the availability of broadband becomes an attractive force enabling those same populations to migrate to Jackson County, stimulated by opportunities from telework and new business start-ups, including home businesses. The availability of broadband not only stems the net outward migration but stimulates population attraction as well as population growth from the retained households.

Broadband Impact on Existing Businesses

The second aspect of economic impact relates to business growth resulting from increased use of online business practices. The industry profile of Jackson County was used to estimate the incremental revenues generated by existing businesses from a 5 percent increase in broadband utilization. The resulting aggregate direct revenue impact was entered into an Input-Output economic impact model, which estimates the direct, indirect, and induced job impacts, as well as estimates for additional local GDP and income taxes. The average GDP impact per new job was also applied to the net job impacts from population growth from the first aspect of economic impact.

It is understood that these estimates are based on assumptions using publicly available data and extrapolating historical trends into the future. Additional research specific to Jackson County would be needed to refine the methodology and to use data that reflects the dynamics of Jackson County.

2. Additional Information

Project Phase	Months																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Project Management		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Procurement (Engineering)	█																							
Design		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█						
Permitting				█	█	█	█	█	█	█	█	█	█	█	█	█	█							
Procurement (Construction)							█	█																
Construction									█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

A. Proposed Project Timeline

Based on the estimated number of months outlined above for each respective task, Jackson County anticipates that the entire project can be completed under 24 months.

B. Required Permits

A listing of the anticipated permits required for the project are shown on the table below:

Permit (Local/State/Federal)	Timeframe	Relation to Overall Project Schedule
CSX Railroad	90 Days	Long lead permit crossing, please see D.7 below.
Florida Department of Transportation	60 Days	Right of Way
City Right of Way Permits	30 Days	Right of Way for Marianna, Sneads, Malone, <u>Cambelton</u> , etc.

Permit (Local/State/Federal) Timeframe Relation to Overall Project Schedule CSX Railroad 90 Days Long lead permit crossing, please see D.7 below. Florida Department of Transportation 60 Days Right of Way City Right of Way Permits 30 Days Right of Way for Marianna, Sneads, Malone, Campbelton, etc.

The “middle mile network” will cross beneath or over railroad right of way and the engineering partner selected will work to use existing conduit or submit permit applications early enough as to not delay construction of the network.

In addition to the permits listed above, Jackson County anticipates that consultation, coordination, and federal permits may be required from the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service and state permitting from the applicable agencies. Jackson County understands that the terms and conditions for federal award of grant funding will require the proposed project to obtain an environmental clearance prior to commencement of construction activities. Upon consultation with the respective agencies, Jackson County will proceed with the appropriate level of environmental assessment and conduct the public involvement and notification process for the project. Should the proposed project require any special permitting mitigation activities, the County will require the engineering consultant and general contractor to demonstrate compliance with any special conditions put forth in the respective permit approval.

3. Program Budget

C. Detailed Budget Narrative (below)

Administrative and Legal Expenses

Funding for this line item is allocated for a consultant to perform project management services throughout the entire project. Jackson County will utilize this funding to ensure that each of the project phases are performed within budgeted allocations, timeframes and scope. This line item will also include project management planning, risk management, QA/QC, communications and documentation management, and procurement support for the construction bidding and contractor selection process.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Project Management Organization (PMO) - Planning and Strategy	Middle Mile	Monthly	2	\$33,013	\$66,026
Project Management Organization (PMO) - Engineering	Middle Mile	Monthly	3	\$33,013	\$99,039
Project Management Organization (PMO) - Construction	Middle Mile	Monthly	16	\$24,760	\$396,160
Total					\$561,225

Architectural and Engineering Fees

Funding for this line item is allocated for a consultant to prepare the project’s Final Engineering Feasibility Report, which includes a Demand Aggregation Survey, Broadband Impact and Market Assessment, and Wireless Infrastructure Assessment. This line item also includes funding for the consultant to complete the Final (100%) Network Design Plan, Specification and Estimates.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Onsite Assessment - Make Ready Engineering and Pre-Construction Ride Out	Middle Mile	Foot	586,920	\$0.02	\$11,738
Schedule Creation - Engineering and Construction	Middle Mile	Foot	586,920	\$0.07	\$41,084
Field Data Collection and Extraction	Middle Mile	Foot	586,920	\$0.22	\$129,122
Detailed Network Design within a GIS Database	Middle Mile	Foot	586,920	\$0.62	\$363,890
Construction Package Creation - AutoCAD Files	Middle Mile	Foot	586,920	\$0.24	\$140,861
Bill of Materials and Splice Sheet Creation	Middle Mile	Foot	586,920	\$0.21	\$123,253
GIS Fiber Management Software	Middle Mile	Monthly	240	\$1,250	\$300,000
Total					\$1,109,950

Other Architectural and Engineering Fees - Environmental Assessment

Funding for this line item is allocated for a consultant to perform the Environmental Assessment for the project, including completion of all documentation, additional studies (archeological, air, water, noise, etc.), and coordination with the respective state and federal agencies.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Environmental Assessment for Engineered Infrastructure Path	Middle Mile	Foot	586,920	\$0.12	\$70,430
Total					\$70,430

Other Architectural and Engineering Fees - Permitting

Funding for this line item is allocated for a consultant to perform local, state and federal Permitting services for the project, including coordination with the respective authorities and agencies, preparation of permitting applications, support documentation, and technical information requests to obtain the proper approvals. This line item also includes funding for the respective consultant to document and report the project's compliance as required.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Make Ready Engineering Application and Pole Loading Analysis (State, Federal, Local)	Middle Mile	Foot	335	\$95.00	\$31,825
Underground Permits and Railroad Crossings (State, Federal, Local)	Middle Mile	Foot	528,228	\$0.58	\$306,372
Total					\$338,197

Project Inspection Fees

Funding for this line item is allocated for a consultant to perform Construction Management and Inspection during the construction phase of the project. Jackson County has included this expense to ensure that a dedicated and responsible party is provided to coordinate with the Construction Contractor throughout the entire construction phase and ensure that designs and specifications are followed. Additionally, the Construction Manager/Inspector will be responsible for evaluating contractor Pay Applications, Schedule of Values reviews, completion status, change order reviews and recommendations, and lead contact for any identifying and mitigating construction issues that may cause schedule delays or budget overruns.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Construction Management Services - General	Middle Mile	Monthly	16	\$14,250	\$228,000
Construction Management Services - Field Inspection	Middle Mile	Foot	586,920	\$0.24	\$140,861
Total					\$368,861

Site Work

Funding for this line item is allocated for the Engineering vendor to complete a site walk, topographical survey and analysis for the 5 Meet Me Center locations planned off the Middle Mile Network. These locations will include potential private easement acquisition or partnership in the 5 Cities to for the location most advantageous for future Last Mile connection points.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Site Walk and Field Data	Middle Mile	Meet Me Center	5	\$4,500	\$22,500
Preliminary Design and Meet Me Center Planning	Middle Mile	Meet Me Center	5	\$12,500	\$62,500
Topographical Survey and Land Analysis	Middle Mile	Meet Me Center	5	\$24,500	\$122,500
Final Designs and Civil Engineering Plans	Middle Mile	Meet Me Center	5	\$48,000	\$240,000
Total					\$447,500

Construction

Funding for this line item is allocated for the County to hire a General Contractor to construct the Fiber Network middle mile infrastructure. This line item includes costs for all aspects of the network’s construction, including mobilization, materials procurement, labor, heavy equipment, etc. The County will require all pertinent payment and performance bonds, insurance and references to ensure that construction will be completed on time and within budget.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost	Less Contingency
Make Ready Construction	Middle Mile	Mile	11	\$23,500	\$258,500	\$245,575
Cabinet Placement and Meet Me Construction - Labor for Pad and Power	Middle Mile	Meet Me Center	5	\$35,000	\$175,000	\$166,250
Underground Construction Labor	Middle Mile	Mile	100	\$35,178	\$3,517,800	\$3,341,910
Aerial Construction Labor	Middle Mile	Mile	11	\$10,451	\$114,961	\$109,213
As-Build Database Posting and Final Updates	Middle Mile	Foot	586,920	\$0.18	\$105,646	\$100,363
Total					\$4,171,907	\$3,963,311

Equipment/Electronics

Funding for this line is allocated for the County to pay for the necessary equipment, hardware and software to make the network functional and operational. This allocation also includes funding for the installation, testing, and training of County staff (or consultants) who will be responsible for Operations and Maintenance. The County will ensure that all equipment is procured according to the federal grant award requirements and warranted and protected for its respective useful life.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost	Less Contingency
Underground Materials (includes cables, ducts, vaults, splice cabinets)	Middle Mile	Mile	100	\$17,340	\$1,734,000	\$1,734,000
Aerial Materials (includes cables, strands, anchor and guys, splice cases)	Middle Mile	Mile	11	\$11,234	\$123,574	\$123,574
Drop Materials (includes vault cables)	Middle Mile	Demand Point	2,458	\$145	\$356,410	\$356,410
Total					\$2,213,984	\$2,103,285

Contingencies

Funding for this line item is allocated for any unforeseen costs, changes in scope, specifications, and budget for up to 5% (\$343,250) of construction and equipment costs. As the engineering consultant progresses through its design, it is expected that the deviation from the construction cost estimate is reduced to the 5% range. If funding from the contingency is required, the Construction Manager/Inspector and Project Manager will coordinate with the County and U.S. EDA to document the need and justifications for use.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Overall Project Contingencies (5% of the Construction and Equipment Costs)	Middle Mile	5% of C&E	5%	\$6,385,891	\$319,295
Total					\$319,295

Total Project Costs - \$9,282,053.64

This amount represents the sum of costs from the elements described above, including the local matching of 20% of total project costs.

Amount of Federal Assistance Requested - \$7,425,642.91

4. This amount represents 80% of the total project cost above.

Environmental File (Enclosed)

Jackson County Fiber Network



Environmental Narrative November 2019

**Applicant: Jackson County, Florida
Prepared for the U.S. DEO Job Growth Fund**

Table of Contents

A. Beneficiaries...	Page 1
B. Project Description...	Page 1
B.1. Proposed Construction...	Page 1
B.2. Alternatives to the Proposed Project	Page 2
B.3. Mitigation.....	Page 4
C. Historic/Archeological Resources... ..	Page 6
D. Affected Environment... ..	Page 6
D.1. Affected Area.....	Page 6
D.2. Shorelines, Estuaries, Beaches, and Dunes	Page 6
D.3. Wetlands.....	Page 7
D.4. Floodplain... ..	Page 7
D.5. Vegetation and Wildlife Resources.....	Page 9
D.6. Endangered Species... ..	Page 10
D.7. Land Use and Zoning... ..	Page 17
D.8. Solid Waste Management.....	Page 17
D.9. Hazardous or Toxic Substances... ..	Page 17
D.10. Water Resources.....	Page 18
D.11. Water Supply and Distribution System.....	Page 18
D.12. Wastewater Collection and Treatment Facilities... ..	Page 19
D.13. Environmental Justice (Executive Order 12898)... ..	Page 19
D.14. Transportation (Streets, Traffic and Parking).....	Page 19
D.15. Air Quality.....	Page 20
D.16. Noise Pollution.....	Page 20
D.17. Permits.....	Page 21
D.18. Public Notification/Controversy.....	Page 21
D.19. Direct, Indirect, and Cumulative Effects... ..	Page 22
Appendix.....	Page 23
Exhibit B.1. Topographical Map and Site Map... ..	Page 24
Exhibit C.1. National Historic Sites Map... ..	Page 26
Exhibit D.3. U.S. Fish and Wildlife Services Wetland Map... ..	Page 28
Exhibit D.4. Federal Emergency Management Agency Floodplain Map... ..	Page 30
Exhibit D.9. Applicant Certification Clause (Appendix A)... ..	Page 32
Exhibit D.15. U.S. Environmental Protection Agency Non-Attainment List. ..	Page 35

Jackson County Fiber Network Environmental Narrative

A. Beneficiaries

The primary beneficiaries of the proposed project are the residents of Jackson County Florida, particularly those who are in communities either unserved or underserved by broadband infrastructure. Access to broadband is widely understood to be of critical importance to economic vitality, job creation, education, and health outcomes. However, it is expensive to deploy in sparsely populated rural communities, and therefore difficult for the incumbent service providers in Jackson County and communities like it to justify the investments they would need to make in order to serve the bandwidth needs of today and tomorrow. While the residents are therefore the primary stakeholders, local businesses and community anchor institutions such as schools, libraries, hospitals, and public safety assets also stand to gain substantially improved performance and efficiency. The situation faced by Jackson County is one familiar to rural communities in every State of the Union. Opportunities for employment and advancement are increasingly gravitating towards urban and metro areas, drawing educated young people away from their hometowns in a phenomenon known as brain drain. Connectivity already plays an increasingly important role in how we go about our work and education, an absence of which puts communities not just at a substantial disadvantage as they struggle for economic vitality but poses an existential threat to their futures as well. The technology that underpins our connected world is fiber optic networks, and there really is no alternative or shortcut to this crucial infrastructure. Jackson County, and thousands of other similar counties around the country, must make the decision to take their digital futures into their own hands, or risk a future of irrelevance.

B. Project Description

B.1. Proposed Construction

Jackson County Florida is proposing to construct a fiber optic “middle mile network”, to be constructed in existing municipal, County, and State Rights-of-way (ROW). The network will consist of approximately 528,228 feet of underground construction installed within a pair of 2” HPDE conduits, primarily by the use of directional boring, with certain areas built using either open trenching or plowing based on an engineering analysis and the availability of joint trench opportunities with other utility or infrastructure projects. There is also an estimated 58,670 feet of aerial construction, which will consist of attaching strand and fiber optic cable to existing utility poles within pre-existing ROWs and easements.

The construction staging areas would be located strategically around the county in warehouse and yard facilities already zoned for the storage of construction materials and equipment. Best Management Practices (BMP) would be implemented including but not limited to the installation of straw bales and silt fences to minimize impacts to storm water runoff and/or wetlands protection. Construction would only occur from 7 am-5 pm to minimize noise impacts in the project areas. The total duration of construction is expected to total 17 months, not including potential scheduling impacts related to compliance with any federal or state regulations which may limit construction periods in order to protect mating, nesting, or otherwise fragile periods of life for any relevant threatened or endangered species with habitat adjacent to the previously

disturbed construction areas within the ROWs. Please see Exhibit B.1 for a topographical map of the project area and proposed path of the project.

B.2. Alternatives to the Proposed Project

For years, Jackson County has struggled with substandard connectivity. Its population density and demographics are such that the incumbent telecommunications providers have been unable to justify the substantial investment required to address the issue with private funding.

Alternatives to the county building their own network infrastructure have therefore long been exhausted, with the county coming to the inevitable conclusion that if they want to bridge the digital divide in their communities, they will have to play a pivotal role in doing so themselves. Unfortunately, lower cost alternatives to the construction of a fiber optic backbone ring, such as reliance on microwave towers to transmit signals in lieu of fiber cables, would severely limit the useful life of the infrastructure, whereas fiber-based network infrastructure is essentially future proof.

No Build Alternative

The county does nothing and hopes that the private sector will address their need for broadband. Because the incumbent providers and potential overbuilders have been unable to make the business case for upgrading their infrastructure, or for building new infrastructure, the County's current lack of connectivity will persist and worsen. The relationship between broadband and economic vitality is well understood, the county therefore faces an existential threat to its future economic vitality should it choose to do nothing.

Alternative No. 1 : Aerial Deployment

The county builds network infrastructure using only existing and new utility poles. Aerial network deployments are often the quickest and cheapest, and therefore warrant consideration. However, placing critical infrastructure aerially in an area known to regularly experience hurricane strength winds is inadvisable, as utility pole lines are often downed in these environments. The cost and time to deploy can also be adversely impacted by the make-ready engineering and construction process, particularly if the poles are owned by parties opposed to the project, such as incumbent telecommunications and cable carriers.

Alternative No. 2: Underground Deployment

The county builds network infrastructure using only directional boring, open trenching, and other below grade placement methods such as plowing. Underground network deployments are extremely secure, and protect the infrastructure from damage by vandalism, accidents, weather, and other acts of god. However, the construction process is lengthy, and usually substantially more expensive than purely aerial deployments.

Alternative No. 3: Microwave Tower Deployment

The County builds microwave towers instead of a fiber-based network. This is sometimes considered a viable alternative to building fiber, particularly in sparsely populated rural areas where construction costs are high due to rocky or otherwise difficult terrain to build in. It is

however never a long-term solution, and network deployments that begin with microwave hops generally proceed to full fiber builds as soon as it is viable to do so. This approach would translate to a higher overall cost to the county over time, as well as an increased possibility of environmental damage, as this type of deployment would necessitate the acquisition of land upon which to erect new towers instead of taking place within existing ROWs.

Alternative No. 4: Value Engineered Mixed Method Deployment

The county builds the infrastructure using a mixture of deployment methods, determined by an engineering analysis to be the ideal balance of resilient/secure as well as cost effective to construct.

Evaluation of Alternatives Evaluation of Alternatives

Scenario	Environmental/Social Considerations	Cost Considerations	Notes
No Build Alternative	Existential threat to future economic viability of the County	No immediate cost to the County, however over time will result in a dramatic reduction in population and tax revenue.	Not considered an acceptable option by the stakeholder group
Alternative No. 1 (100% Aerial)	This deployment technique leaves the infrastructure vulnerable to outages. High winds associated with hurricanes and tropical storms can down pole lines	Sometimes the most economic deployment approach, costs and project delays and can escalate quickly due to unforeseen issues relating to pole attachment agreements, and make ready engineering and construction	Considered inadvisable by SME consultants hired by the County to perform a broadband deployment analysis, due to the critical role the infrastructure will play in supporting public safety communication
Alternative No. 2 (100% Underground)	This deployment technique is more secure than aerial construction, and much less prone to damage which could result in outages	Underground construction is usually substantially more expensive per foot than aerial construction. It can also be more time-consuming work to perform	Installing the entirety of the network underground is advisable, however not cost effective. Portions of the network can be built aerially without compromising its' resilience

Alternative No. 3 (Microwave)	This deployment technique requires real estate acquisition for tower sites, as well as construction on those sites	Temporary fix requiring further and substantial investment within 10 years	Not considered a viable option by SME consultants hired by the County to perform a broadband deployment analysis
Alternative No. 4 (Mix)	A flexible deployment technique like this allows for building with the least impactful and most cost-effective methods for each different type of terrain or circumstance within the approximately 213 miles of the project	The application of value and design engineering allows for the ideal mix of deployment methods that maximizes both the resiliency of the installed plant, as well as the savings in deploying it	This is the approach advised by the SME consultants hired by the county, and the stakeholder group agrees.

Preferred Alternative

The path proposed for the project is the mixed/flexible deployment. The proportion of deployment techniques was selected through a value engineering process in which alternative network architectures and paths were explored through the use of an algorithmically driven auto design tool, which was programmed to lay out the network in as cost efficient a manner as possible, while still passing through, or reasonably close, to each community within the County. This engineering analysis, in conjunction with advisement from subject matter experts in the realm of wide area network deployment, has provided the County with an optimal deployment strategy that best suits their needs as well as budgetary constraints.

The no build alternative, as well as alternatives 1, 2, and 3, were rejected in a collaborative decision-making process by the stakeholder group and subject matter experts as non-viable alternatives.

B.3. Mitigation

Large infrastructure projects can significantly impact many aspects of the environment including wildlife and their habitats, wetlands, and groundwater resources. In situations where impacts cannot be completely avoided, mitigation or conservation efforts are required. Environmental mitigation is the process of addressing damage to the environment caused by infrastructure projects or programs. The process of mitigation is best accomplished through enhancement, restoration, creation and/or preservation projects that serve to offset unavoidable environmental impacts. The table below outlines specific mitigation approaches and the resources/impacts they address.

Potential Environmental Mitigation Opportunities

Resource/Impacts	Potential Mitigation Strategies
Wetlands and Water Resources	<ul style="list-style-type: none"> » Restore degraded wetlands » Create new wetland habitats » Enhance or preserve existing wetlands » Improve stormwater management » Purchase credits from a mitigation bank
Forested and other Natural Areas	<ul style="list-style-type: none"> » Use selective cutting and clearing » Replace or restore forested areas » Preserve existing vegetation » Identify and protect critical root zones for established trees » Shield tree trunks from damage by equipment » Preserve existing grade by removing spoils » Limit construction activity in forested areas during periods when damage to trees would make them more susceptible to parasites and disease.
Habitats	<ul style="list-style-type: none"> » Construct underpasses, such as culverts » Use other design measures to minimize potential fragmenting of animal habitats.
Streams	<ul style="list-style-type: none"> » Stream restoration » Vegetative buffer zones » Strict erosion and sedimentation control measures to eliminate soil erosion and siltation.
Threatened or Endangered Species	<ul style="list-style-type: none"> » Preservation » Enhancement or restoration of degraded habitat » Creation of new habitats » Establish buffer areas around existing habitat
Noise, Dust, and emissions Generation	<ul style="list-style-type: none"> » Limit construction activity to 7am-5pm » Minimize haul distances » Reduce vehicle/equipment idle time » require the usage of hybrid equipment » Employ water tanker trucks in construction areas where the soil will be disturbed.

C. Historic/Archeological Resources

The State of Florida’s Bureau of Historic Preservation will be contacted if the project is selected for further evaluation for funding, as indicated in the Environmental Narrative requirements. This includes the Tribal Historic Preservation Officers (THPO), Tribal Leaders, and other interested parties to be consulted with. THPO contacts will be consulted when directed by EDA in the event this project receives further evaluation for funding. A list of Tribal Historic Preservation Officers (THPO) contacts for Jackson County is below:

Seminole Tribe of Florida Paul Backhouse, Ph.D., THPO Ah-Ta-Thi-Ki Museum 30290 Josie Billie Hwy, PMB 1004 Clewiston, FL 33440 Tel: 863.983.6549 x 12244 Fax: 863.902.1117 Email: paulbackhouse@semtribe.com Website: www.stofthpo.com	Bureau of Historic Preservation R.A. Gray Building 500 South Bronough Street Tallahassee, FL 32399-0250 Tel: 850.245.6333 Fax: 850.245.6439 Website: https://dos.myflorida.com/historical/
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For an overview map displaying the project location’s proximity to the historic sites, please see Exhibit C.1 National Historic Site Map in the Appendix.

D. Affected Environment

D.1. Affected Area

Jackson County, FL is 955 square miles and home to 48,000 residents and 700 businesses. Jackson County is located in the panhandle of Florida neighboring the borders of Alabama and Georgia sitting on Interstate 10 between Pensacola and Tallahassee. There are 11 municipalities and 9 unincorporated communities within the County. Jackson County attracts residents and visitors to the area with its natural resources including spring fed rivers, caves, and gorgeous historic homes; all surrounded by canopy oak trees and rolling hills. The economy of Jackson County employs 16,200 people with the largest industries being Health Care, Retail Trade, and Public Administration.

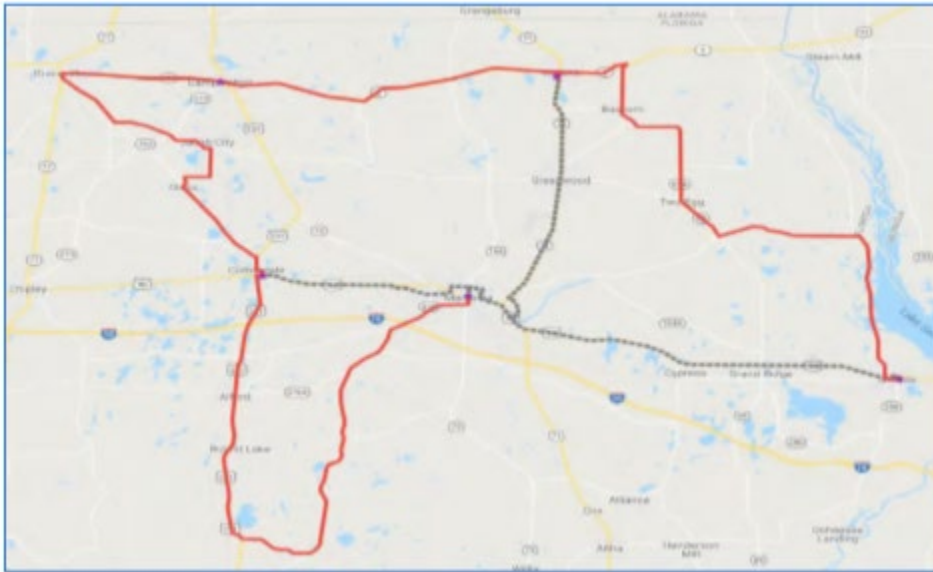


Figure 1. Proposed 111-mile backbone ring connecting 5 Meet Me locations in Marianna, Sneads, Malone, Campbellton, and Cottondale. The dotted gray lines represent existing network where Jackson County could lease dark or lit fibers to help complete their ring, and the red lines represent proposed construction path within existing ROWs

D.2. Shorelines, Estuaries, Beaches, and Dunes

The entire State of Florida is located within a National Oceanic and Atmospheric Administration (NOAA) Coastal Zone, however the landmass of the State is divided into two tiers based on their eligibility for coastal management funding. Local governments eligible to receive coastal management funds are limited to those Gulf and Atlantic coastal cities and counties which include or are contiguous to state water bodies where marine species of vegetation constitute the dominant plant community. Jackson County is therefore ineligible for coastal management funds, as the closest it comes to such a marine body of water is approximately 20 miles from its southwest corner. There are no marine shorelines, estuaries, beaches, or dunes in close

proximity to the proposed path of the project, and construction will be limited to previously disturbed areas in existing ROWs. Stream and river crossings will be accomplished using existing conduit and bridges where possible. Should new sub-stream borings be necessary, all permitting and environmental regulations will be strictly adhered to.

D.3. Wetlands

Provide a determination of effects including the amount of jurisdictional waters affected by type (e.g. 1.1 acres of palustrine emergent wetlands would be impacted by the proposed project).

Below is a map wetland/waters delineation performed in accordance with the 1987 (or current version) U.S. Army Corps of Engineers Wetland Delineation Manual, as amended. It has not received a preliminary or final Jurisdictional Determination from the U.S. Army Corps of Engineers (USACE), Despite passing through designated wetlands, construction for the project is limited to the previously disturbed areas as within existing ROWs. Despite this, the County will contact USACE concerning any jurisdictional waters resources and provide the EDA with any correspondence or comments from USACE related to the project's impacts. At this time, Jackson County anticipates that within the existing ROWs where the project will be built, there are a total of 12.44 acres of wetlands comprised of a combination of some, but necessarily all, of the following wetland types:

- Estuarine and Marine Deep Water
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- Other

For an overview map displaying the project location's proximity to the respective wetlands, please see Exhibit D.3 U.S. Fish and Wildlife Services Wetlands Map in the Appendix.

D.4. Floodplain

Provide a FEMA floodplain map (with the map number and effective date) displaying the project location and boundaries, existing and proposed project components, and location of all sites and/or companies benefiting from the proposed project. The document should be of sufficient clarity for adequate interpretation of the applicant's intentions.

Jackson County is proposing to construct a 111-mile fiber optic "middle mile network" to be constructed in existing City, County, and State Rights-of-Way (ROW). The entire network route will be located along existing and previously disturbed right-of-way where other utilities are presently located such as; electric, water, gas, and sanitary sewer lines. For an overview map displaying the project location and boundaries (40' width), please see Exhibit D.4 Federal Emergency Management (FEMA) Floodplain Map in the Appendix. According to FEMA's Flood Map Service Center website, there are a total 69 Flood Insurance Rate Maps (FIRM) for the entire

limits of Jackson County, of which 25 FIRM maps are located along the proposed middle mile networks. The table below displays the applicable FIRM maps that are located along the proposed network route:

FIRM Panel ID	Effective Date	FEMA MSC Direct Link
12063C0175D	12/17/2010	Link
12063C0404D	12/17/2010	Link
12063C0485D	12/17/2010	Link
12063C0575D	12/17/2010	Link
12063C0395D	12/17/2010	Link
12063C0313D	12/17/2010	Link
12063C0410D	12/17/2010	Link
12063C0135D	12/17/2010	Link
12063C0294D	12/17/2010	Link
12063C0415D	12/17/2010	Link
12063C0475D	12/17/2010	Link
12063C0125D	12/17/2010	Link
12063C0140D	12/17/2010	Link
12063C0385D	12/17/2010	Link
12063C0500D	12/17/2010	Link
12063C0384D	12/17/2010	Link
12063C0350D	12/17/2010	Link
12063C0275D	12/17/2010	Link
12063C0407D	12/17/2010	Link
12063C0300D	12/17/2010	Link
12063C0130D	12/17/2010	Link
12063C0200D	12/17/2010	Link

12063C0145D	12/17/2010	Link
12063C0535D	12/17/2010	Link
12063C0085D	12/17/2010	Link

Based on publicly available data from FEMA’s [Policy & Claim Statistics for Flood Insurance](#) website, Jackson County is a participant in the NFIP program with the following statistics:

- Number of Policies in Force: 123
- Building Coverage: \$20,863,100
- Content Coverage: \$6,351,400
- Total Coverage: \$27,214,500
- Estimated Population Housing Units: 20,774
- 2015 Population: 48,599
- Percentage of Properties Insured: 1%

D.5. Vegetation and Wildlife Resources

All construction will take place within previously disturbed areas in ROWs belonging to the state, the county, and municipalities within Jackson County. As such, there will be little to no impact to wild areas, forest, or other vegetation. Any disturbed ground will be re-seeded and protected from erosion with industry standard best practices for erosion and siltation control (see section B3 to review potential mitigation strategies).

Below are listed the State and National Parks, National Wildlife Refuges, National Game Preserves, and Designated Wilderness Areas in Jackson County:

Apalachee Wildlife Management Area (WMA)

Governed by the Florida Fish and Wildlife Conservation Commission, the Apalachee WMA consists of 7,952 acres of upland longleaf pine and wetland habitat three miles north of Sneads in Jackson County. The area is broken up into three management zones, all located along Lake Seminole and the Chattahoochee River. High-quality longleaf pine forest here is preferred by species such as Bachman's sparrow, brown-headed nuthatch, gopher tortoise, and Florida pine snake. The upland habitat, interspersed with floodplain forests and marshes, offers prime habitat for both migratory and resident birds. The federally-listed gentian pinkroot (*Spigelia gentianoides*) grows within the Apalachee WMA. It is also a site on the Great Florida Birding and Wildlife Trail, and its strong wildlife populations attract wildlife viewers year-round.

Chipola River Wildlife Management Area (WMA)

Governed by the Florida Fish and Wildlife Conservation Commission, the Chipola River Wildlife Management Area (WMA) spans 9,094 acres in two separate tracts located along the Chipola River in Jackson and Calhoun counties. The 7,719-acre Jackson County tract lies four miles north of Marianna and shares its southern boundary with Florida Caverns State Park. This tract encompasses the upper watershed of the Chipola River, which includes its two main tributaries,

Marshalls Creek and Cowarts Creek, and portions of the spring-runs of Hayes and Waddell Springs. The WMA provides valuable protection to water resources associated with the river, which flows south for 95 miles from Marianna to the Apalachicola River.

Florida Caverns State Park

Governed by the Florida Department of Environmental Protection, Florida Caverns State Park is a U.S. National Natural Landmark. It is located in Jackson County near Marianna and is the only Florida state park with air-filled caves accessible to the public. The park is notable for its geological features, a protected area of karst topography. This geology hosts an ecosystem with plants and animals that are adapted to the limestone substrates. The caves and waterways have blind crayfish, bats, salamanders, and other species. Native Americans inhabited the area, and it is also a site of archaeological interest.

Three Rivers State Park

Governed by the Florida Department of Environmental Protection, Three Rivers State Park is a Florida State Park located north of Sneads, on the shores of Lake Seminole near the Georgia border, in northwestern Jackson County. It is named for the main rivers associated with Lake Seminole: the Chattahoochee and the Flint, which flow into it from Georgia, and the Apalachicola, whose source is the lake itself.

D.6. Endangered Species

The Below table lists all endangered and threatened species of plants and animals known to be found in Jackson County, Florida, as well as formerly listed species now in recovery, and species whose status is under review. Since all work for the project in question will occur in previously disturbed areas within rights of way on roadsides, disruption to the habitats of any of these plants or animals is not expected. Despite this, a full review will be conducted, and mitigation plans prepared along the entirety of the proposed path of the project to ensure that no such disruption occurs, and that none of these species will be negatively impacted in any way by the proposed project. Furthermore, the nature of the proposed infrastructure is such that it will support a number of technologies which may be useful in the study and protection of crucial habitats and ecologies, such as a variety of sensors and high definition cameras which can be used to collect data on air quality, rainfall levels, game movement, and so on. As such, the project stakeholder group will include local research universities and/or institutions which may be interested in leveraging the infrastructure for these or other purposes.

Group	Species	Status	Habitat
Amphibians	Ambystoma bishopi	Endangered	The Reticulated Flatwoods Salamander is a burrowing species of salamander that lives among the leaf litter beneath longleaf pine (Pinus

			palustris) and wiregrass (<i>Aristida stricta</i>) in the flatwoods coastal plain ecosystems of the Southeastern United States.
Amphibians	<i>Haideotriton wallacei</i>	Under Review	The Georgia Blind Salamander is a resident of the Marianna Lowlands (Dougherty Plain) karst aquifer; it is found in subterranean streams and clear pools in caves and deep wells. It may sometimes leave water and climb limestone walls of caves. It may ultimately depend on guano from associated bat populations.
Amphibians	<i>Lithobates capito</i>	Under Review	Gopher frogs' primary habitat is native xeric upland habitats, particularly longleaf pine-turkey oak sand hill associations; also xeric to mesic longleaf pine flat woods, sand pine scrub, xeric oak hammocks, and ruderal successional stages of these habitats. It is absent from most coastal islands and dunes.
Birds	<i>Falco peregrinus tundrius</i>	Recovery	Arctic Peregrine Falcons are wide ranging migratory bird known to winter in central America, including the Florida Peninsula. Delisted as endangered in 1994.
Birds	<i>Haliaeetus leucocephalus</i>	Recovery	Bald Eagles tend to use tall, sturdy conifers that protrude above the forest canopy, providing easy flight access and good visibility. In southern parts of their range, Bald Eagles may nest in deciduous trees, mangroves, and cactus.
Birds	<i>Mycteria americana</i>	Threatened	Wood storks inhabit mainly tidal waters, marshes, swamps, streams and mangroves. They hunt for prey in shallow, muddy-bottomed banks or

			wetlands. Their nests are ideally constructed in trees surrounded by water to limit depredation of the eggs.
Clams	<i>Amblema neislerii</i>	Endangered	The fat threeridge clam, is a freshwater mussel native to the rivers in southern Georgia and Florida. It belongs to the family Unionidae. It resides in shallow rivers in the muddy and sandy bottom of the river beds.
Clams	<i>Elliptio chipolaensis</i>	Threatened	The Chipola Slabshell is a species of freshwater mussel in the family Unionidae, the river mussels. It is native to Florida in the United States, where it is now found only in the Chipola River and associated creeks, which passes through the center of Jackson County. It is extirpated from Alabama. There are no more than about 2500 individuals remaining.
Clams	<i>Elliptoideus sloatianus</i>	Threatened	The purple Bankclimber is found in sand, fine gravel or muddy sand substrates in moderate current in large rivers or streams.
Clams	<i>Fusconaia burkei</i>	Threatened	The Tapered Pigtoe is found in medium-sized creeks to large rivers. It prefers a sand and gravel substrata, occasionally occurring in silty sands, in slow to moderate current. It can occasionally be found in floodplain lakes.
Clams	<i>Hamiota australis</i>	Threatened	The Southern Sandshell occurs in clear medium-sized creeks to rivers with slow to moderate current and sandy substrates.
Clams	<i>Lampsilis subangulata</i>	Endangered	The Shiny-Rayed Pocketbook inhabits medium-sized creeks and rivers with

			slow to moderate current and clean or silty sand substrates.
Clams	<i>Medionidus penicillatus</i>	Endangered	The Gulf Moccasinshell typically occupies small streams to large rivers with moderate flow and sandy substrates. This species has also been found in gravel and cobble substrates.
Clams	<i>Pleurobema pyriforme</i>	Endangered	The Oval Pig Toe occurs in medium-sized creeks to small rivers where it inhabits silty sand to sand and gravel substrates, usually in slow to moderate current. Stream channels with clean substrates possibly offer the best habitat.
Clams	<i>Pleurobema strodeanum</i>	Threatened	The Fuzzy Pig Toe inhabits moderate current rivers in small to medium-sized rivers, where it is found in silty-mud and silty-sand substrates.
Clams	<i>Ptychobranthus jonesi</i>	Endangered	The Southern Kidney Shell is known from clean slow moving water parts of 'small to medium sized creeks of low gradients' and larger rivers, where the substrata is silty but sandy and stable with some 'woody debris'. It has also been found in 'claystone pockets with sand.
Clams	<i>Villosa choctawensis</i>	Endangered	The Chactaw Bean is known from large creeks and rivers with moderate current over sand to silty-sand substrates.
Conifers and Cyads	<i>Torreya taxifolia</i>	Endangered	<i>Torreya taxifolia</i> , commonly called Florida torreya, is a dioecious, small to medium sized, evergreen coniferous tree in the yew family that is currently found in the wild along bluffs, slopes and wooded ravines on the east side

			of the Apalachicola River in Liberty and Gadsden Counties in Florida plus in adjacent Decatur County in Georgia, with an additional small population on the west side of the river in Jackson County, Florida. Today, this tree is listed as a critically endangered species on the Federal Red List.
Fishes	<i>Acipenser oxyrinchus (=oxyrhynchus) desotoi</i>	Threatened	The species historical range included coastal waters and wetlands in Alabama, Florida, Georgia, Louisiana, and Mississippi.
Flowering Plants	<i>Baptisia megacarpa</i>	Under Review	Apalachicola Wild Indigo grows in dry pine and oak woods, in ravines, along streams, and on roadsides.
Flowering plants	<i>Linum westii</i>	Under Review	Shallow pond margins in slash pine-saw palmetto flatwoods, bogs, cypress pond margins, and ditches. Depression marshes, dome swamps, wet flatwoods, and wet prairies. Restricted to north Florida. Extant populations are known in Liberty, Franklin, Gulf, Okaloosa, and Clay counties. Historically also collected in Baker and Jackson counties.
Flowering plants	<i>Lobelia boykinii</i>	Under Review	Grows in cypress swamps and other wet habitat types, such as meadows, bays, and ponds.
Flowering plants	<i>Salix floridana</i>	Under Review	Edges of spring-fed streams and springheads, openings in wet woods with sphagnum moss, alder, Virginia willow, and club moss.
Flowering Plants	<i>Sideroxylon thornei</i>	Under Review	Forested limesink depressions and swamps over limestone.

Flowering Plants	<i>Silene polypetala</i>	Endangered	This plant grows in soils of sandy, calcareous loam, often in moist habitat in forests and woods.
Flowering Plants	<i>Spigelia gentianoides</i>	Endangered	Gentian Pinkroot grows in wooded areas dominated by trees such as loblolly pine (<i>Pinus taeda</i>), longleaf pine (<i>Pinus palustris</i>), water oak (<i>Quercus nigra</i>), laurel oak (<i>Quercus hemisphaerica</i>), southern red oak (<i>Quercus falcata</i>), and black tupelo (<i>Nyssa sylvatica</i>).[2] It also occurs in dolomite glades in Alabama.
Insects	<i>Oecetis parva</i>	Under Review	Occurs in lakes and natural ponds in Florida.
Mammals	<i>Myotis grisescens</i>	Endangered	With rare exceptions, gray bats live in caves year-round. During the winter gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers. These caves are in limestone karst areas of the southeastern United States. They do not use houses or barns.
Reptiles	<i>Drymarchon corais couperi</i>	Threatened	The eastern indigo snake frequents flatwoods, hammocks, dry glades, stream bottoms, cane fields, riparian thickets, and high ground with well-drained, sandy soils. In Georgia, the eastern indigo snake prefers excessively drained, deep sandy soils along major streams, as well as xeric sandridge habitats. Xeric slash pine plantations seem to be preferred over undisturbed longleaf pine habitats. Habitat selection varies seasonally. From December to April, eastern indigo snakes prefer sandhill habitats; from May to July the snakes shift from winter dens to summer territories;

			from August through November they are located more frequently in shady creek bottoms than during other seasons.
Reptiles	<i>Gopherus polyphemus</i>	West of Mobile and Tombigbee Rivers it has Threatened status, east of there it is considered a Candidate for Threatened status	Gopher Tortoises are found in the Lower Coastal Plain of the Southeast, from southern South Carolina to Louisiana and throughout Florida. This species prefers well-drained sandy areas (in which it can burrow) and is absent from extensive wetland area (e.g., the Everglades and Okefenokee). It was a resident of the fire-dependent longleaf pine belt that is now highly fragmented. Now it persists only in areas where the canopy is open enough to allow for a dense understory on which it can feed.
Reptiles	<i>Graptemys barbouri</i>	Under Review	Barbour's map turtles live almost all of their lives in large freshwater systems with limestone bottoms. They leave the water only to lay eggs and bask in the sun on large fallen branches and other accessible areas. They prefer deeper and faster flowing waters than other turtles in the family Emydidae. Females are normally found in deeper water than males, hatchlings and juveniles tend to stay closer to the riverbank than adults.
Reptiles	<i>Macrolemys temmincki</i>	Under Review	The alligator snapping turtle is only found in rivers and streams that flow into the Gulf of Mexico. They are found as far north as Iowa in the Mississippi River drainage, west into eastern Texas, and east into southern Georgia and the Florida panhandle. They do not usually occur in isolated

			wetlands or ponds but are found in oxbow lakes.
Reptiles	Pituophis melanoleucus mugitus	Under Review	Although not common, the Florida Pine Snake requires dry sandy soils for burrowing. It is found most often in open pine-turkey oak woodlands and abandoned fields, and also in scrub, sandhills, and longleaf pine forest.

D.7. Land Use and Zoning

The entirety of the proposed project will be constructed within existing ROWs along city and county roads, with no construction activity whatsoever taking place on parcels zoned for use as agricultural, industrial, commercial, residential, recreational, woodlands, mines/quarries, or open spaces.

D.8. Solid Waste Management

Indicate the types and quantities of solid wastes to be produced by the project facilities and primary beneficiary.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Describe local solid waste collection and disposal methods and the expected useful life of the disposal facility.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate if recycling or resource recovery programs are currently being use or will be used in the future.

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.9. Hazardous or Toxic Substances

Describe any toxic, hazardous, or radioactive substances that will be utilized or produced by the proposed project facilities and primary beneficiaries.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Describe the manner in which these substances will be stored, used, or disposed.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Complete and sign one “Applicant Certification Clause” for each co-applicant (see Appendix A). Please see Exhibit D.9 for a copy of Jackson County’s Applicant Certification Clause form.

If a recent Phase I or Phase II Environmental Site Assessment has been performed, please provide a copy.

At this time, there have been no Phase I or Phase II Environmental Site Assessments performed to date.

D.10. Water Resources

Describe surface and underground water resources at or near the project site(s) and any impacts of the project to these.

With respect to surface and underground water resources at or near the project site(s), please see the map in Exhibit B.1 Topographical Map and Site Map and Exhibit D.3 U.S. Fish and Wildlife Services (USFWS) Wetlands Map that illustrates the proposed network routes and proximity to the respective surface and underground water resources.

If groundwater will be used, is the aquifer in overdraft and /or adjudicated?

Based on the nature and scope of the proposed project, this criterion is not applicable.

If there will be discharges to surface water, is the receiving surface water body listed on the U.S. Environmental Protection Agency's (EPA) Section 303(d) list of impaired waters?

Based on the nature and scope of the proposed project, this criterion is not applicable.

Is a National Pollution Discharge Elimination System (NPDES) permit required for any discharges to surface waters?

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate if the proposed project is located within an area mapped by the EPA as sole source aquifer recharge area (maps and further information are available on EPA's website at www.epa.gov).

Jackson County has reviewed the EPA's sole source aquifer recharge area maps and based on the location of the proposed project, this criterion is not applicable.

Describe any induced changes in local surface water runoff patterns, and the status of storm water discharge permit processes (if applicable).

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.11. Water Supply and Distribution System

Indicate the source, quality, and supply capacity of local domestic and industrial/commercial water resources, and the amount of water that project facilities and primary beneficiaries are expected to utilize.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Applicants should note whether the water that is being supplied is in compliance with the Safe Drinking Water Act, and if not, what steps are being taken to ensure compliance.

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.12. Wastewater Collection and Treatment Facilities

Describe all domestic class or process wastewater or other discharges associated with the project facilities and its primary beneficiaries, and the expected composition and quantities to be discharged either to a municipal system or to the local environment.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Describe the wastewater treatment facilities available for processing the additional effluent and indicate their design capacities and current loading (both daily average and peak), and their adequacy in terms of degree and type of treatment required.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate all discharges that will require on-site pre-treatment.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Applicants should note whether the wastewater treatment plant is in violation of the Clean Water Act, and if so, what steps are being taken to ensure compliance.

Based on the nature and scope of the proposed project, this criterion is not applicable.

If local treatment and sewer systems are or will be inadequate or overloaded, describe the steps being taken for necessary improvements and their completion dates.

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.13. Environmental Justice (Executive Order 12898)

The proposed project is in alignment with Executive Order 12898, which directs federal agencies to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. The order is also intended to promote nondiscrimination in federal programs that affect human health and the environment, as well as provide minority and low-income communities' access to public information and public participation. While the proposed project will not create adverse human health or environmental effects, it will enable substantial grassroots empowerment through improved access to educational, vocational, and economic opportunities. Furthermore, the proposed project is from the very beginning envisioned as a vehicle for addressing the twin issues of digital equity and the digital divide, which disproportionately impact minority and low-income populations. Community engagement and participation are cornerstones of the project, having been key drivers for its inception, and indicators of its success going forward.

D.14. Transportation (Streets, Traffic, and Parking)

Briefly describe the local street/road system serving the project site(s) and describe any new traffic patterns that may arise because of the project.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate if land use in the vicinity, such as residential, hospital, school, or recreational, will be affected by these new traffic patterns.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate if any existing capacities of these transportation facilities will be exceeded as a direct or indirect result of this project implementation, particularly in terms of car and truck traffic, and what the new Level of Service designation will be.

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.15. Air Quality

Indicate types and quantities of air emissions (including odors) to be produced by the project facilities and its primary beneficiaries, and any measures proposed to mitigate adverse impacts.

Our grant proposal and budget include the execution of a full environmental impact study that will assess the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

Indicate the impact that the project would have on greenhouse gas emissions.

Our grant proposal and budget include the execution of a full environmental impact study that will assess the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

Is the proposed project site classified as a "non-attainment" area for any criteria pollutants?

As per the U.S. Environmental Protection Agency's *Current Non-Attainment Counties for All Criteria Pollutants*, Jackson County, Florida is not listed (as of August 31, 2019) as shown on Exhibit D.15 United States Environmental Protection Agency Non-Attainment List in the Appendix.

Indicate any local topographical or meteorological conditions that hinder the dispersal of air emissions.

Our grant proposal and budget include the execution of a full environmental impact study that will assess the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

D.16. Noise Pollution

Will operation of project facilities or primary beneficiaries' facilities increase local ambient noise levels?

Jackson County does not anticipate any long-term noise pollution and/or increase in local ambient noise levels as a result of the project, however it is expected that the construction of the network will cause a temporary minimal increase in local ambient noise.

If yes, indicate the estimated levels of increase, and the areas and sensitive receptors (e.g., residences) to be affected.

Our grant proposal and budget include the execution of a full environmental impact study that will assess the project's impact on this criteria. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

D.17. Permits

Identify any Federal, State, or local permits of an environmental nature needed for the project (e.g., USACE, US Environmental Protection Agency (EPA), Coastal Zone Management/Shoreline Management, Air Quality, State Environmental Policy Act, NPDES, etc.) and the status of any such permits.

Permit (Local/State/Federal)	Timeframe	Relation to Overall Project Schedule
CSX Railroad	90 Days	Long lead permit crossing, please see D.7 below.
Florida Department of Transportation	60 Days	Right of Way
City Right of Way Permits	30 Days	Right of Way for Marianna, Sneads, Malone, Cambelton, etc.

In addition to the permits listed above, Jackson County anticipates that consultation, coordination, and federal permits may be required from the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and State permitting from the applicable agencies. Jackson County understands that the terms and conditions for federal award of grant funding will require the proposed project to obtain an environmental clearance prior to commencement of construction activities. Upon consultation with the respective agencies, Jackson County will proceed with the appropriate level of environmental assessment and conduct the public involvement and notification process for the project. Should the proposed project require any special permitting mitigation activities, the County will require the engineering consultant and general contractor to demonstrate compliance with any special conditions put forth in the respective permit approval.

D.18. Public Notification/Controversy

Provide evidence of the community's awareness of the project, such as newspaper articles or public notification and/or public meetings, as applicable. If a formal public hearing has been held, attach a copy of the transcript.

Jackson County has been publicly discussing the proposed Fiber Network project in various Board of County Commissioners meetings during calendar years 2018 and 2019., however there have been no other public notifications and/or public meetings specifically regarding the proposed project. Our grant proposal and budget include the execution of a full environmental

impact/assessment study that will include these details regarding the project's impact on this criterion, including the respective public involvement, notification and collection of comments and feedback regarding the project and its impact. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

Fully describe any public controversy or objections which have been made concerning this proposed project and discuss steps taken to resolve such objections.

At this time, there have been no public controversies or objections regarding the proposed project. As mentioned previously, our grant proposal and budget include the execution of a full environmental impact/assessment study that will include these details regarding the requirements for this criterion. As part of the process, Jackson County will collect all the public comments received regarding the project and will include them in the draft and final environmental impact study,

D.19. Direct, Indirect, and Cumulative Effects

Please list projects (public and private) that have occurred or will occur in the past, present, and future in and around the project area that could result in significant cumulative or indirect impacts when considered in aggregate with the proposed EDA project. Cumulative impacts result from the incremental impacts of a proposed action when added to other past, present and reasonable foreseeable future actions (40 C.F.R. Section 1508.7). Indirect impacts are those that are caused by a proposed action, but that may occur later in time or farther removed in distance, relative to the primary impacts of the proposed action (40 C.F.R. Section 1508.7)

Our grant proposal and budget include the execution of a full environmental impact/assessment study that will include these details regarding the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

Applicants should identify the direct and indirect effects of the proposed action; which resources, ecosystems, and human communities are affected; and which effects on these resources are important from a cumulative effects' perspective.

Our grant proposal and budget include the execution of a full environmental impact/assessment study that will include these details regarding the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

3. Program Budget

(If additional space is needed, attach a word document with your entire answer.)

Estimated Costs and Sources of Funding: Include all applicable public infrastructure costs and other funding sources available to support the proposal.

1.) **Total Amount Requested** \$ 7,425,642.90
 Florida Job Growth Grant Fund

A. Other Public Infrastructure Project Funding Sources:

City/County	\$ _____
Private Sources	\$ _____
	\$1,856,410.80
Other (grants, etc.)	\$ <u>1,056,410.80</u>
Total Other Funding	\$ <u>1,856,410.80</u>

Please Specify: DEO RIF

B. Public Infrastructure Project Costs:

Construction	\$ <u>3,963,311.27</u>
Reconstruction	\$ _____
Design & Engineering	\$ <u>1,518,577.24</u>
Land Acquisition	\$ _____
Land Improvement	\$ <u>816,360.80</u>
	\$2,983,804.33
Other	\$ <u>2,983,804.33</u>
Total Project Costs	\$ <u>9,282,053.64</u>

Please Specify: Admin/Legal, Contin., Equip

Note: The total amount requested must be calculated by subtracting the total other public infrastructure project funding sources in A. from the total public infrastructure project costs in B.

I, the undersigned, do hereby certify that I have express authority to sign this proposal on behalf of the above-described entity and to the best of my knowledge, that all data and information submitted in proposal is truthful and accurate and no material fact has been omitted.

Name of Governmental Entity: Jackson County Board of County Commissioners

Name and Title of Authorized Representative: Wilanne Daniels, County Administrator

Representative Signature: Wilanne Daniels

Signature Date: 1-17-2020

1. Program Requirements

A. Project Description of Public Infrastructure Improvement:

Following the devastating effects of Hurricane Michael on the local economy and agriculture, and timber industries, Jackson County is seeking innovative strategies to diversify its economic development by investing in infrastructure, such as fiber optics, to stimulate local business development, foster high-paying job creation, attract technology dependent businesses, advanced manufacturing and industrial operations. Jackson County is currently seeking \$9,282,054 in State grant funding from the Florida Department of Economic Opportunity's Rural Infrastructure Fund FY 2019-2020 Florida Panhandle Specific Appropriation 2314 program for the development of a last mile broadband Open Application Network in Marianna and Sneads. The Open Access model means that while the infrastructure itself will be built by Jackson County, they will not provide services across it, but will rather charge private providers for the right to utilize the network for those and other purposes. Thus, the local government is not competing with the private sector, but rather enabling a greater degree of private sector competition for the benefit of county residents and businesses. Through the completion of this project, Jackson County's fiber network will serve as a catalyst for local job creation, workforce training, Smart City technological innovations, telemedicine, private investment, and a mechanism to reduce the "homework gap" faced by local students who lack affordable access in their homes.

In addition to these aspects, Jackson County is also interested in leveraging Opportunity Zones within the County to attract private equity investment for last mile deployment. From a public safety perspective, Jackson County's middle and last mile network infrastructure will also serve as a means for local law enforcement, first responders and emergency operations authorities to maintain reliable network connectivity for communication during emergency and nonemergency events. Additionally, the robust network will also provide a means for healthcare providers to counter to the opioid epidemic in Jackson County by providing a means for affected individuals to seek counseling and treatment programs. The connectivity for businesses and residents will be critical in addressing the digital divide between individuals who lack affordable and accessible connectivity at their premises. For individuals who are unemployed and seeking job opportunities, education, and training, connectivity to the network will be critical for their success as evolution in technology has transitioned from paper applications to online submittals and processing. Additionally, the fiber network's deployment to the premise will further enable Jackson County to be ready and enabled for eventual 5G connectivity and private sector investment.

Enhanced broadband access will enable residents and businesses to maintain connectivity and improve communication during emergency evacuations, which might otherwise be unavailable. While Jackson County cannot predict when the next major disaster will occur in its area, the community will be more resilient to disruptions in the local economy and the ability to protect lives and property caused by those events. As Jackson County and the panhandle region rebuild and recover from the impacts of Hurricane Michael, it is confident that the technology provided through this investment will strengthen its long-term economic growth and potential to reduce local population declines, poverty level, and unemployment by increasing workforce training, job opportunities, and the value of assets and property. Another potential impact of the proposed project involves the enhanced capabilities provided by the state-of-the-art fiber optic technology to serve as a center of innovation for the demonstration of Smart City technology such as advanced air quality, water quality, and gunshot detection sensors, street lighting, autonomous vehicles, municipal utilities, and smart buildings. These Smart City related activities will not only improve the quality of life of residents in Jackson County, but they will also serve as a launching pad for the adoption in other communities and adjacent counties throughout the region.

Additionally, the proposed fiber network will also connect to the Jackson County Regional Employment Center Development at the former Arthur G. Dozier School for Boys. Jackson County has been successful in receiving grant funding from the Economic Development Administration and the Florida Department of Economic Opportunity for

the new site, which will support job training, workforce development, and employment opportunities in the Global Logistics, Life Sciences, and Manufacturing industries. The training facility will allow the region to generate additional potential ready to work employees that heretofore have been lost to the workforce. The site will provide more than 6.1 million square feet of industrial space and no less than 1.7 million square feet of commercial space. This will be supported with no less than 1.1 million square feet of public spaces and approximately 6.8 million square feet of new residential space. The potential industrial space alone will support approximately 3,100 targeted industry jobs, more than 330 million dollars of private capital investment and support a huge increase to the local tax base. The potential impact of both the Jackson County Fiber Network and the Regional Employment Center Development project will be instrumental for the long-term recovery strategy of the county. Enhanced fiber network connectivity will enable innovative approaches for workforce development and vocational training programs that require ultra-fast broadband for simulation modules and remote connectivity to educational resources, community colleges and universities.

In summary, Jackson County needs an economic catalyst, such as the Fiber Network project, to strategically drive long-term stability, industry diversification, job creation, and private investment. Jackson County understands the vital role that enhanced broadband connectivity will provide to each of the communities in terms of economic resiliency, innovation, and platform for smart city technological implementation. Pursuing the status quo indefinitely without adequate broadband infrastructure has and will cause dire effects in the county and region. The alternative to this scenario is to take a proactive approach in identifying the needs, preparing the business case, and establishing the overall feasibility for deployment of the county owned infrastructure that will serve as the driving force and catalyst for the transformation in Jackson County.

B. Project Location

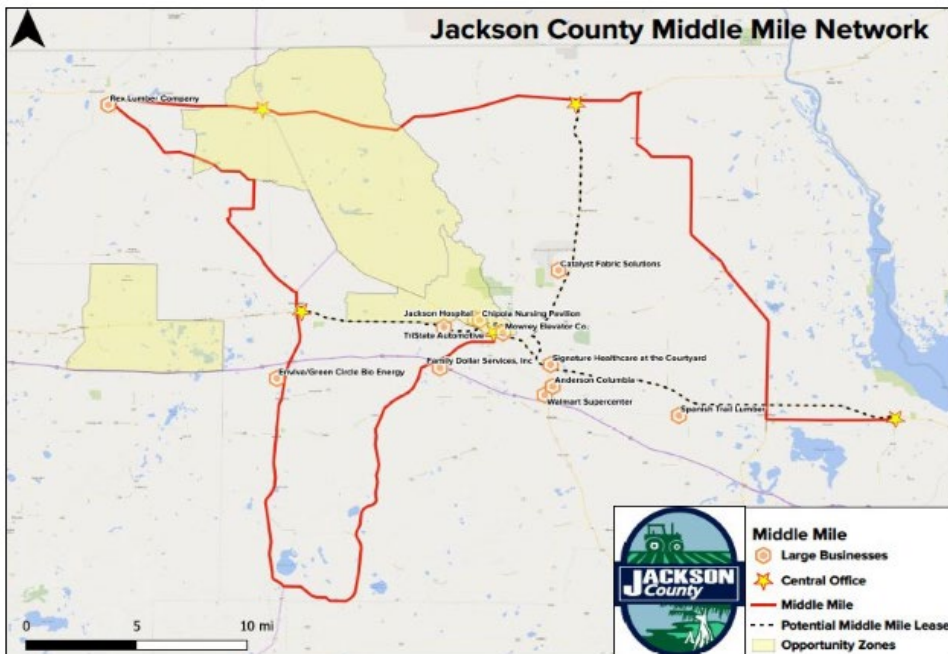


Figure 1 (above). Proposed 111 mile backbone ring illustrating the proposed network route along Jackson County's major employers.

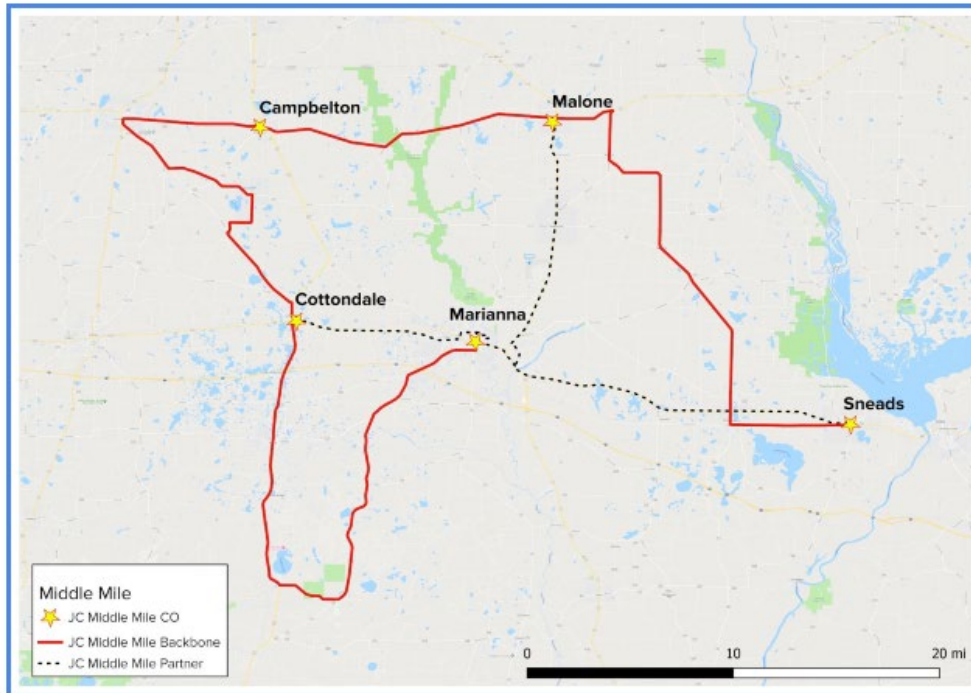


Figure 2 (above). Proposed 111 mile backbone ring connecting 5 Meet Me Center locations in Marianna, Sneads, Malone, Campbelton, and Cottondale. The dotted gray lines represent Uniti's network where Jackson County could lease dark or lit fibers to help complete their ring.

D. Current Property Owner

Based on the preliminary/conceptual route and layout of the proposed project, the Jackson County Board of County Commissioners does not anticipate the need to acquire property to complete the project. In the event that real property acquisition is necessary, Jackson County will obtain a current fair market value appraisal completed by a certified appraiser for the property to be purchased and submit the respective documentation to the DEO.

Jackson County will own both the Last Mile network infrastructure in Marianna and Sneads included in Phase I. Outside of the Phase I project, additional private sector entities will be involved with development and financing of Last Mile infrastructure, which will be proportionate to the levels of investment and participation. With respect to the maintenance of the Fiber Network project, Jackson County anticipates that the need to strategically utilize the revenue from the network to contract with an experienced and capable third party to maintain the infrastructure and be responsible for responding to repairs, splicing and maintenance tasks to ensure that reliability is at the highest level of service quality.

E. Public Benefit

In terms of the Jackson County Fiber Network's nexus to the disaster that has affected its local economy, industries, and residents since October 2018, the County has identified critical resilient telecommunications infrastructure as a means to reduce the risk and vulnerability of the area and its ability to recover future events that will cause even further effects if left ignored. Jackson County has the options of letting the private telecommunications industry bring state-of-the-art infrastructure to its communities on its own schedule and constraints or develop a feasible strategy on its own that can provide the connectivity that the community needs to not only be resilient to disasters, but to economic downturns as well.

From a public safety perspective, Jackson County's middle and last mile network infrastructure will also serve as a means for local law enforcement, first responders and emergency operations authorities to maintain reliable network connectivity for communication during emergency and non-emergency events. Enhanced broadband access will enable residents and businesses to maintain connectivity and improve communication during emergency evacuations, which might otherwise be unavailable. While Jackson County cannot predict when the next major disaster will occur in its area, the community will be more resilient to disruptions in the local economy and the ability to protect lives and property caused by those events. As Jackson County and the panhandle region rebuild and recover from the impacts of Hurricane Michael, it is confident that the technology provided through this investment will strengthen its long-term economic growth and potential to reduce local population declines, poverty level, and unemployment by increasing workforce training, job opportunities, and the value of assets and property.

In order to deploy resilient telecommunications infrastructure, Jackson County will pursue the combination of underground, aerial, and wireless technology to ensure that communications can function under the direst of scenarios, such as flooding, damaging winds, and natural disasters. The ability for residents and businesses to maintain connectivity during these emergency events can potentially save lives, protect property, and establish an efficient manner to coordinate evacuations and rescue efforts. While Jackson County cannot predict when the next major disaster will occur in its area, the community will be more resilient to disruptions in the local economy and the ability to protect lives and property caused by those events. As Jackson County and the panhandle region rebuild and recover from the impacts of Hurricane Michael, it is confident that the technology provided through this investment will strengthen its long-term economic growth and potential to reduce local population declines, poverty level, and unemployment by increasing workforce training, job opportunities, and the value of assets and property. In summary, the proposed Jackson County Fiber Network will not only assist in the recovery and resiliency of the community and its residents and infrastructure, but it will also serve as an economic catalyst to strategically drive long-term stability, industry diversification, job creation, and private investment.

G. Detailed Description of quantitative evidence demonstrating how project will promote economic recovery.

Since the 2010 census, the U.S. Census Bureau projected a population decline for Jackson County of 2.9% by 2018. This represents an average population decline of 0.37%. If this decline represents the status quo that will continue without sufficient broadband, then over 10 years the impacts to Jackson County would be:

- A loss of 28 employer establishments and 339 jobs
- A loss of approximately 1,700 population and 620 households

If, on the other hand, the availability of county-wide broadband is leveraged to retain and attract population and businesses with an average 0.79% annual population growth (half of the statewide population growth), then over 10 years the impacts to Jackson County could be:

- A growth of 62 employer establishments and 753 jobs
- A growth of approximately 3,900 population and 1,400 households

The net change over ten years from a declining to growing population scenario creates local economic growth from retained and new businesses and jobs, plus a stronger tax base from retained and new households with local

employment increasing local spending. Based on a net improvement of 1,092 jobs (growth of 753 versus a loss of 339 jobs), the annual impact to local GDP in year 10 would be approximately \$84 million.

In addition, through adoption of online business practices with improved broadband availability the additional economic impact would be:

- 102 new jobs
- \$7.9 million in annual local GDP
- \$224,000 in additional annual state and local income taxes

Specific industries to benefit from the Middle Mile Fiber proposed project (NAICS codes): 238210

The total annual local GDP growth between the status quo and growth scenarios is estimated to be an average of \$54 million per year over 10 years. This far exceeds the one-time investment of \$18 million in broadband infrastructure.

(Note: These economic impact estimates are approximate based on available public information and do not account for unknown local dynamics that could affect projections over time.)

There are also the community and quality of life benefits as broadband enables individuals and families to continue to reside in their community of choice by enabling people to:

- Age in place and stay in touch with family
- Obtain access to healthcare remotely
- Keep up with education trends for online research and homework
- Gain remote employment to work from home
- Start a home-based business

Communities with quality broadband services are positioned to attract businesses and teleworkers who wish to benefit from local amenities, more affordable properties, and the lifestyle benefits of Jackson County. Teleworkers earn above average income, with more than 80% of teleworking households earning \$50,000 or more per year.

A growing population with growing household income contributes to the local economy and local business growth, creating more jobs. In addition, businesses that learn to adopt more online business practices accelerate their growth by being more relevant and competitive.

As part of the final Engineering Feasibility Report, Jackson County has included a county-wide Broadband Impact and Market Assessment component in the grant proposal to forecast subscription rates for services and to illustrate why and how broadband matters to local households, businesses, and the community. Quantifying how these impacts the local economy and benefit local quality of life builds an economic case for investing in broadband and further engages stakeholders in the Jackson project. It is important to not only understand the current and future demand for broadband, but also to understand and measure the impacts from broadband investments.

Broadband Market Demand	Economic Impact
Focus on identifying service demand and driving revenues.	Focus on identifying and driving network benefits, for users and for the community.
Understand the current state of broadband use and needs in your market	Understand the gaps and opportunities for broadband use in your market

Identify actual and potential demand for services across market segments	Estimate the economic impact of opportunities from your network investment
Assess the potential for driving demand for services and increasing revenues	Measure the impacts of the network and quantify its benefits

Total

estimated jobs and private investment that is expected to be generated by this project:

- Estimated Jobs Created: 753
- Estimated Jobs Retained: 339
- Estimated Private Investment: Based on a net improvement of 1,092 jobs (growth of 753 versus a loss of 339 jobs), the annual impact to local GDP in year 10 would be approximately \$84 million. The County’s Broadband Impact and Market Assessment study will provide a more detailed breakdown regarding the impact on both local GDP and the amount of private investment as a result of the project.

The estimates above were derived by comparing to impacts from other projects (Ammon, Idaho, Custer County, Colorado, State of Tennessee Broadband Study, State of Arkansas Broadband Study, State of Illinois Broadband Study, and State of Kansas Broadband Study) along with other methods that track impacts directly from end-users and incorporates input-output modeling to assess GDP, tax base, and employment impacts.

Broadband Impact on Population Growth

The first aspect relates to losses or gains for business establishments, jobs, and households over a ten-year period. Estimates are based on a simple projection of population growth/decline at a constant rate. Estimates for business establishments, jobs, and households are based on the current ratios relative to populations, for example, on average there is one business establishment per 14.2 population, 8.7 employees per establishment, and 2.83 persons per household. These ratios were kept constant over the ten years for estimation purposes. It is understood that many other as-yet-unknown factors can impact these ratios over time.

Using this method, two scenarios were compared for projected impacts. The first scenario is the status quo based on a negative population growth rate of -0.37% per annum. This value is based on the current US Census Bureau (USCB) estimate for population growth from 2010 through 2018 for Jackson County, FL. The USCB also estimates the population growth rate for the State of Florida to be 1.57% per annum over the same period. Therefore, the alternative scenario assumed a population growth rate of half the statewide estimate, or 0.79% per annum, which is also similar to the estimated population growth for Leon County (a more urban county, with Tallahassee).

The rationale for assuming a higher growth rate in the second scenario, stimulated by broadband availability and adoption, is based on research that shows a positive impact on population retention and growth from broadband. For example, more than 38 percent of rural households are very likely to relocate in order to get broadband, placing pressure on population loss for Jackson County. This statistic is even higher for younger and working age populations. Conversely, the availability of broadband becomes an attractive force enabling those same populations to migrate to Jackson County, stimulated by opportunities from telework and new business start-ups, including home businesses. The availability of broadband not only stems the net outward migration but stimulates population attraction as well as population growth from the retained households.

Broadband Impact on Existing Businesses

The second aspect of economic impact relates to business growth resulting from increased use of online business practices. The industry profile of Jackson County was used to estimate the incremental revenues generated by existing businesses from a 5 percent increase in broadband utilization. The resulting aggregate direct revenue impact was entered into an Input-Output economic impact model, which estimates the direct, indirect, and induced job impacts, as well as estimates for additional local GDP and income taxes. The average GDP impact per new job was also applied to the net job impacts from population growth from the first aspect of economic impact.

It is understood that these estimates are based on assumptions using publicly available data and extrapolating historical trends into the future. Additional research specific to Jackson County would be needed to refine the methodology and to use data that reflects the dynamics of Jackson County.

2. Additional Information

Project Phase	Months																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Project Management		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Procurement (Engineering)	█																							
Design		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█						
Permitting				█	█	█	█	█	█	█	█	█	█	█	█	█	█							
Procurement (Construction)							█	█																
Construction									█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

A. Proposed Project Timeline

Based on the estimated number of months outlined above for each respective task, Jackson County anticipates that the entire project can be completed under 24 months.

B. Required Permits

A listing of the anticipated permits required for the project are shown on the table below:

Permit (Local/State/Federal)	Timeframe	Relation to Overall Project Schedule
CSX Railroad	90 Days	Long lead permit crossing, please see D.7 below.
Florida Department of Transportation	60 Days	Right of Way
City Right of Way Permits	30 Days	Right of Way for Marianna, Sneads, Malone, <u>Cambelton</u> , etc.

Permit (Local/State/Federal) Timeframe Relation to Overall Project Schedule CSX Railroad 90 Days Long lead permit crossing, please see D.7 below. Florida Department of Transportation 60 Days Right of Way City Right of Way Permits 30 Days Right of Way for Marianna, Sneads, Malone, Campbellton, etc.

The “middle mile network” will cross beneath or over railroad right of way and the engineering partner selected will work to use existing conduit or submit permit applications early enough as to not delay construction of the network.

In addition to the permits listed above, Jackson County anticipates that consultation, coordination, and federal permits may be required from the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service and state permitting from the applicable agencies. Jackson County understands that the terms and conditions for federal award of grant funding will require the proposed project to obtain an environmental clearance prior to commencement of construction activities. Upon consultation with the respective agencies, Jackson County will proceed with the appropriate level of environmental assessment and conduct the public involvement and notification process for the project. Should the proposed project require any special permitting mitigation activities, the County will require the engineering consultant and general contractor to demonstrate compliance with any special conditions put forth in the respective permit approval.

3. Program Budget

C. Detailed Budget Narrative (below)

Administrative and Legal Expenses

Funding for this line item is allocated for a consultant to perform project management services throughout the entire project. Jackson County will utilize this funding to ensure that each of the project phases are performed within budgeted allocations, timeframes and scope. This line item will also include project management planning, risk management, QA/QC, communications and documentation management, and procurement support for the construction bidding and contractor selection process.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Project Management Organization (PMO) - Planning and Strategy	Middle Mile	Monthly	2	\$33,013	\$66,026
Project Management Organization (PMO) - Engineering	Middle Mile	Monthly	3	\$33,013	\$99,039
Project Management Organization (PMO) - Construction	Middle Mile	Monthly	16	\$24,760	\$396,160
Total					\$561,225

Architectural and Engineering Fees

Funding for this line item is allocated for a consultant to prepare the project’s Final Engineering Feasibility Report, which includes a Demand Aggregation Survey, Broadband Impact and Market Assessment, and Wireless Infrastructure Assessment. This line item also includes funding for the consultant to complete the Final (100%) Network Design Plan, Specification and Estimates.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Onsite Assessment - Make Ready Engineering and Pre-Construction Ride Out	Middle Mile	Foot	586,920	\$0.02	\$11,738
Schedule Creation - Engineering and Construction	Middle Mile	Foot	586,920	\$0.07	\$41,084
Field Data Collection and Extraction	Middle Mile	Foot	586,920	\$0.22	\$129,122
Detailed Network Design within a GIS Database	Middle Mile	Foot	586,920	\$0.62	\$363,890
Construction Package Creation - AutoCAD Files	Middle Mile	Foot	586,920	\$0.24	\$140,861
Bill of Materials and Splice Sheet Creation	Middle Mile	Foot	586,920	\$0.21	\$123,253
GIS Fiber Management Software	Middle Mile	Monthly	240	\$1,250	\$300,000
Total					\$1,109,950

Other Architectural and Engineering Fees - Environmental Assessment

Funding for this line item is allocated for a consultant to perform the Environmental Assessment for the project, including completion of all documentation, additional studies (archeological, air, water, noise, etc.), and coordination with the respective state and federal agencies.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Environmental Assessment for Engineered Infrastructure Path	Middle Mile	Foot	586,920	\$0.12	\$70,430
Total					\$70,430

Other Architectural and Engineering Fees - Permitting

Funding for this line item is allocated for a consultant to perform local, state and federal Permitting services for the project, including coordination with the respective authorities and agencies, preparation of permitting applications, support documentation, and technical information requests to obtain the proper approvals. This line item also includes funding for the respective consultant to document and report the project’s compliance as required.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Make Ready Engineering Application and Pole Loading Analysis (State, Federal, Local)	Middle Mile	Foot	335	\$95.00	\$31,825
Underground Permits and Railroad Crossings (State, Federal, Local)	Middle Mile	Foot	528,228	\$0.58	\$306,372
Total					\$338,197

Project Inspection Fees

Funding for this line item is allocated for a consultant to perform Construction Management and Inspection during the construction phase of the project. Jackson County has included this expense to ensure that a dedicated and responsible party is provided to coordinate with the Construction Contractor throughout the entire construction phase and ensure that designs and specifications are followed. Additionally, the Construction Manager/Inspector will be responsible for evaluating contractor Pay Applications, Schedule of Values reviews, completion status, change order reviews and recommendations, and lead contact for any identifying and mitigating construction issues that may cause schedule delays or budget overruns.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Construction Management Services - General	Middle Mile	Monthly	16	\$14,250	\$228,000
Construction Management Services - Field Inspection	Middle Mile	Foot	586,920	\$0.24	\$140,861
Total					\$368,861

Site Work

Funding for this line item is allocated for the Engineering vendor to complete a site walk, topographical survey and analysis for the 5 Meet Me Center locations planned off the Middle Mile Network. These locations will include potential private easement acquisition or partnership in the 5 Cities to for the location most advantageous for future Last Mile connection points.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Site Walk and Field Data	Middle Mile	Meet Me Center	5	\$4,500	\$22,500
Preliminary Design and Meet Me Center Planning	Middle Mile	Meet Me Center	5	\$12,500	\$62,500
Topographical Survey and Land Analysis	Middle Mile	Meet Me Center	5	\$24,500	\$122,500
Final Designs and Civil Engineering Plans	Middle Mile	Meet Me Center	5	\$48,000	\$240,000
Total					\$447,500

Construction

Funding for this line item is allocated for the County to hire a General Contractor to construct the Fiber Network middle mile infrastructure. This line item includes costs for all aspects of the network’s construction, including mobilization, materials procurement, labor, heavy equipment, etc. The County will require all pertinent payment and performance bonds, insurance and references to ensure that construction will be completed on time and within budget.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost	Less Contingency
Make Ready Construction	Middle Mile	Mile	11	\$23,500	\$258,500	\$245,575
Cabinet Placement and Meet Me Construction - Labor for Pad and Power	Middle Mile	Meet Me Center	5	\$35,000	\$175,000	\$166,250
Underground Construction Labor	Middle Mile	Mile	100	\$35,178	\$3,517,800	\$3,341,910
Aerial Construction Labor	Middle Mile	Mile	11	\$10,451	\$114,961	\$109,213
As-Build Database Posting and Final Updates	Middle Mile	Foot	586,920	\$0.18	\$105,646	\$100,363
Total					\$4,171,907	\$3,963,311

Equipment/Electronics

Funding for this line is allocated for the County to pay for the necessary equipment, hardware and software to make the network functional and operational. This allocation also includes funding for the installation, testing, and training of County staff (or consultants) who will be responsible for Operations and Maintenance. The County will ensure that all equipment is procured according to the federal grant award requirements and warranted and protected for its respective useful life.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost	Less Contingency
Underground Materials (includes cables, ducts, vaults, splice cabinets)	Middle Mile	Mile	100	\$17,340	\$1,734,000	\$1,734,000
Aerial Materials (includes cables, strands, anchor and guys, splice cases)	Middle Mile	Mile	11	\$11,234	\$123,574	\$123,574
Drop Materials (includes vault cables)	Middle Mile	Demand Point	2,458	\$145	\$356,410	\$356,410
Total					\$2,213,984	\$2,103,285

Contingencies

Funding for this line item is allocated for any unforeseen costs, changes in scope, specifications, and budget for up to 5% (\$343,250) of construction and equipment costs. As the engineering consultant progresses through its design, it is expected that the deviation from the construction cost estimate is reduced to the 5% range. If funding from the contingency is required, the Construction Manager/Inspector and Project Manager will coordinate with the County and U.S. EDA to document the need and justifications for use.

Task	Network	Unit of Measure	Total Volume	Unit Cost	Total Cost
Overall Project Contingencies (5% of the Construction and Equipment Costs)	Middle Mile	5% of C&E	5%	\$6,385,891	\$319,295
Total					\$319,295

Total Project Costs - \$9,282,053.64

This amount represents the sum of costs from the elements described above, including the local matching of 20% of total project costs.

Amount of Federal Assistance Requested - \$7,425,642.91

4. This amount represents 80% of the total project cost above.

Environmental File (Enclosed)

Jackson County Fiber Network



Environmental Narrative November 2019

**Applicant: Jackson County, Florida
Prepared for the U.S. DEO Job Growth Fund**

Table of Contents

A. Beneficiaries...	Page 1
B. Project Description...	Page 1
B.1. Proposed Construction...	Page 1
B.2. Alternatives to the Proposed Project	Page 2
B.3. Mitigation.....	Page 4
C. Historic/Archeological Resources... ..	Page 6
D. Affected Environment... ..	Page 6
D.1. Affected Area.....	Page 6
D.2. Shorelines, Estuaries, Beaches, and Dunes	Page 6
D.3. Wetlands.....	Page 7
D.4. Floodplain... ..	Page 7
D.5. Vegetation and Wildlife Resources.....	Page 9
D.6. Endangered Species... ..	Page 10
D.7. Land Use and Zoning... ..	Page 17
D.8. Solid Waste Management.....	Page 17
D.9. Hazardous or Toxic Substances... ..	Page 17
D.10. Water Resources.....	Page 18
D.11. Water Supply and Distribution System.....	Page 18
D.12. Wastewater Collection and Treatment Facilities... ..	Page 19
D.13. Environmental Justice (Executive Order 12898)... ..	Page 19
D.14. Transportation (Streets, Traffic and Parking).....	Page 19
D.15. Air Quality.....	Page 20
D.16. Noise Pollution.....	Page 20
D.17. Permits.....	Page 21
D.18. Public Notification/Controversy.....	Page 21
D.19. Direct, Indirect, and Cumulative Effects... ..	Page 22
Appendix.....	Page 23
Exhibit B.1. Topographical Map and Site Map... ..	Page 24
Exhibit C.1. National Historic Sites Map... ..	Page 26
Exhibit D.3. U.S. Fish and Wildlife Services Wetland Map... ..	Page 28
Exhibit D.4. Federal Emergency Management Agency Floodplain Map... ..	Page 30
Exhibit D.9. Applicant Certification Clause (Appendix A)... ..	Page 32
Exhibit D.15. U.S. Environmental Protection Agency Non-Attainment List. ..	Page 35

Jackson County Fiber Network Environmental Narrative

A. Beneficiaries

The primary beneficiaries of the proposed project are the residents of Jackson County Florida, particularly those who are in communities either unserved or underserved by broadband infrastructure. Access to broadband is widely understood to be of critical importance to economic vitality, job creation, education, and health outcomes. However, it is expensive to deploy in sparsely populated rural communities, and therefore difficult for the incumbent service providers in Jackson County and communities like it to justify the investments they would need to make in order to serve the bandwidth needs of today and tomorrow. While the residents are therefore the primary stakeholders, local businesses and community anchor institutions such as schools, libraries, hospitals, and public safety assets also stand to gain substantially improved performance and efficiency. The situation faced by Jackson County is one familiar to rural communities in every State of the Union. Opportunities for employment and advancement are increasingly gravitating towards urban and metro areas, drawing educated young people away from their hometowns in a phenomenon known as brain drain. Connectivity already plays an increasingly important role in how we go about our work and education, an absence of which puts communities not just at a substantial disadvantage as they struggle for economic vitality but poses an existential threat to their futures as well. The technology that underpins our connected world is fiber optic networks, and there really is no alternative or shortcut to this crucial infrastructure. Jackson County, and thousands of other similar counties around the country, must make the decision to take their digital futures into their own hands, or risk a future of irrelevance.

B. Project Description

B.1. Proposed Construction

Jackson County Florida is proposing to construct a fiber optic “middle mile network”, to be constructed in existing municipal, County, and State Rights-of-way (ROW). The network will consist of approximately 528,228 feet of underground construction installed within a pair of 2” HPDE conduits, primarily by the use of directional boring, with certain areas built using either open trenching or plowing based on an engineering analysis and the availability of joint trench opportunities with other utility or infrastructure projects. There is also an estimated 58,670 feet of aerial construction, which will consist of attaching strand and fiber optic cable to existing utility poles within pre-existing ROWs and easements.

The construction staging areas would be located strategically around the county in warehouse and yard facilities already zoned for the storage of construction materials and equipment. Best Management Practices (BMP) would be implemented including but not limited to the installation of straw bales and silt fences to minimize impacts to storm water runoff and/or wetlands protection. Construction would only occur from 7 am-5 pm to minimize noise impacts in the project areas. The total duration of construction is expected to total 17 months, not including potential scheduling impacts related to compliance with any federal or state regulations which may limit construction periods in order to protect mating, nesting, or otherwise fragile periods of life for any relevant threatened or endangered species with habitat adjacent to the previously

disturbed construction areas within the ROWs. Please see Exhibit B.1 for a topographical map of the project area and proposed path of the project.

B.2. Alternatives to the Proposed Project

For years, Jackson County has struggled with substandard connectivity. Its population density and demographics are such that the incumbent telecommunications providers have been unable to justify the substantial investment required to address the issue with private funding.

Alternatives to the county building their own network infrastructure have therefore long been exhausted, with the county coming to the inevitable conclusion that if they want to bridge the digital divide in their communities, they will have to play a pivotal role in doing so themselves. Unfortunately, lower cost alternatives to the construction of a fiber optic backbone ring, such as reliance on microwave towers to transmit signals in lieu of fiber cables, would severely limit the useful life of the infrastructure, whereas fiber-based network infrastructure is essentially future proof.

No Build Alternative

The county does nothing and hopes that the private sector will address their need for broadband. Because the incumbent providers and potential overbuilders have been unable to make the business case for upgrading their infrastructure, or for building new infrastructure, the County's current lack of connectivity will persist and worsen. The relationship between broadband and economic vitality is well understood, the county therefore faces an existential threat to its future economic vitality should it choose to do nothing.

Alternative No. 1 : Aerial Deployment

The county builds network infrastructure using only existing and new utility poles. Aerial network deployments are often the quickest and cheapest, and therefore warrant consideration. However, placing critical infrastructure aerially in an area known to regularly experience hurricane strength winds is inadvisable, as utility pole lines are often downed in these environments. The cost and time to deploy can also be adversely impacted by the make-ready engineering and construction process, particularly if the poles are owned by parties opposed to the project, such as incumbent telecommunications and cable carriers.

Alternative No. 2: Underground Deployment

The county builds network infrastructure using only directional boring, open trenching, and other below grade placement methods such as plowing. Underground network deployments are extremely secure, and protect the infrastructure from damage by vandalism, accidents, weather, and other acts of god. However, the construction process is lengthy, and usually substantially more expensive than purely aerial deployments.

Alternative No. 3: Microwave Tower Deployment

The County builds microwave towers instead of a fiber-based network. This is sometimes considered a viable alternative to building fiber, particularly in sparsely populated rural areas where construction costs are high due to rocky or otherwise difficult terrain to build in. It is

however never a long-term solution, and network deployments that begin with microwave hops generally proceed to full fiber builds as soon as it is viable to do so. This approach would translate to a higher overall cost to the county over time, as well as an increased possibility of environmental damage, as this type of deployment would necessitate the acquisition of land upon which to erect new towers instead of taking place within existing ROWs.

Alternative No. 4: Value Engineered Mixed Method Deployment

The county builds the infrastructure using a mixture of deployment methods, determined by an engineering analysis to be the ideal balance of resilient/secure as well as cost effective to construct.

Evaluation of Alternatives Evaluation of Alternatives

Scenario	Environmental/Social Considerations	Cost Considerations	Notes
No Build Alternative	Existential threat to future economic viability of the County	No immediate cost to the County, however over time will result in a dramatic reduction in population and tax revenue.	Not considered an acceptable option by the stakeholder group
Alternative No. 1 (100% Aerial)	This deployment technique leaves the infrastructure vulnerable to outages. High winds associated with hurricanes and tropical storms can down pole lines	Sometimes the most economic deployment approach, costs and project delays and can escalate quickly due to unforeseen issues relating to pole attachment agreements, and make ready engineering and construction	Considered inadvisable by SME consultants hired by the County to perform a broadband deployment analysis, due to the critical role the infrastructure will play in supporting public safety communication
Alternative No. 2 (100% Underground)	This deployment technique is more secure than aerial construction, and much less prone to damage which could result in outages	Underground construction is usually substantially more expensive per foot than aerial construction. It can also be more time-consuming work to perform	Installing the entirety of the network underground is advisable, however not cost effective. Portions of the network can be built aerially without compromising its' resilience

Alternative No. 3 (Microwave)	This deployment technique requires real estate acquisition for tower sites, as well as construction on those sites	Temporary fix requiring further and substantial investment within 10 years	Not considered a viable option by SME consultants hired by the County to perform a broadband deployment analysis
Alternative No. 4 (Mix)	A flexible deployment technique like this allows for building with the least impactful and most cost-effective methods for each different type of terrain or circumstance within the approximately 213 miles of the project	The application of value and design engineering allows for the ideal mix of deployment methods that maximizes both the resiliency of the installed plant, as well as the savings in deploying it	This is the approach advised by the SME consultants hired by the county, and the stakeholder group agrees.

Preferred Alternative

The path proposed for the project is the mixed/flexible deployment. The proportion of deployment techniques was selected through a value engineering process in which alternative network architectures and paths were explored through the use of an algorithmically driven auto design tool, which was programmed to lay out the network in as cost efficient a manner as possible, while still passing through, or reasonably close, to each community within the County. This engineering analysis, in conjunction with advisement from subject matter experts in the realm of wide area network deployment, has provided the County with an optimal deployment strategy that best suits their needs as well as budgetary constraints.

The no build alternative, as well as alternatives 1, 2, and 3, were rejected in a collaborative decision-making process by the stakeholder group and subject matter experts as non-viable alternatives.

B.3. Mitigation

Large infrastructure projects can significantly impact many aspects of the environment including wildlife and their habitats, wetlands, and groundwater resources. In situations where impacts cannot be completely avoided, mitigation or conservation efforts are required. Environmental mitigation is the process of addressing damage to the environment caused by infrastructure projects or programs. The process of mitigation is best accomplished through enhancement, restoration, creation and/or preservation projects that serve to offset unavoidable environmental impacts. The table below outlines specific mitigation approaches and the resources/impacts they address.

Potential Environmental Mitigation Opportunities

Resource/Impacts	Potential Mitigation Strategies
Wetlands and Water Resources	<ul style="list-style-type: none"> » Restore degraded wetlands » Create new wetland habitats » Enhance or preserve existing wetlands » Improve stormwater management » Purchase credits from a mitigation bank
Forested and other Natural Areas	<ul style="list-style-type: none"> » Use selective cutting and clearing » Replace or restore forested areas » Preserve existing vegetation » Identify and protect critical root zones for established trees » Shield tree trunks from damage by equipment » Preserve existing grade by removing spoils » Limit construction activity in forested areas during periods when damage to trees would make them more susceptible to parasites and disease.
Habitats	<ul style="list-style-type: none"> » Construct underpasses, such as culverts » Use other design measures to minimize potential fragmenting of animal habitats.
Streams	<ul style="list-style-type: none"> » Stream restoration » Vegetative buffer zones » Strict erosion and sedimentation control measures to eliminate soil erosion and siltation.
Threatened or Endangered Species	<ul style="list-style-type: none"> » Preservation » Enhancement or restoration of degraded habitat » Creation of new habitats » Establish buffer areas around existing habitat
Noise, Dust, and emissions Generation	<ul style="list-style-type: none"> » Limit construction activity to 7am-5pm » Minimize haul distances » Reduce vehicle/equipment idle time » require the usage of hybrid equipment » Employ water tanker trucks in construction areas where the soil will be disturbed.

C. Historic/Archeological Resources

The State of Florida’s Bureau of Historic Preservation will be contacted if the project is selected for further evaluation for funding, as indicated in the Environmental Narrative requirements. This includes the Tribal Historic Preservation Officers (THPO), Tribal Leaders, and other interested parties to be consulted with. THPO contacts will be consulted when directed by EDA in the event this project receives further evaluation for funding. A list of Tribal Historic Preservation Officers (THPO) contacts for Jackson County is below:

Seminole Tribe of Florida Paul Backhouse, Ph.D., THPO Ah-Ta-Thi-Ki Museum 30290 Josie Billie Hwy, PMB 1004 Clewiston, FL 33440 Tel: 863.983.6549 x 12244 Fax: 863.902.1117 Email: paulbackhouse@semtribe.com Website: www.stofthpo.com	Bureau of Historic Preservation R.A. Gray Building 500 South Bronough Street Tallahassee, FL 32399-0250 Tel: 850.245.6333 Fax: 850.245.6439 Website: https://dos.myflorida.com/historical/
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For an overview map displaying the project location’s proximity to the historic sites, please see Exhibit C.1 National Historic Site Map in the Appendix.

D. Affected Environment

D.1. Affected Area

Jackson County, FL is 955 square miles and home to 48,000 residents and 700 businesses. Jackson County is located in the panhandle of Florida neighboring the borders of Alabama and Georgia sitting on Interstate 10 between Pensacola and Tallahassee. There are 11 municipalities and 9 unincorporated communities within the County. Jackson County attracts residents and visitors to the area with its natural resources including spring fed rivers, caves, and gorgeous historic homes; all surrounded by canopy oak trees and rolling hills. The economy of Jackson County employs 16,200 people with the largest industries being Health Care, Retail Trade, and Public Administration.

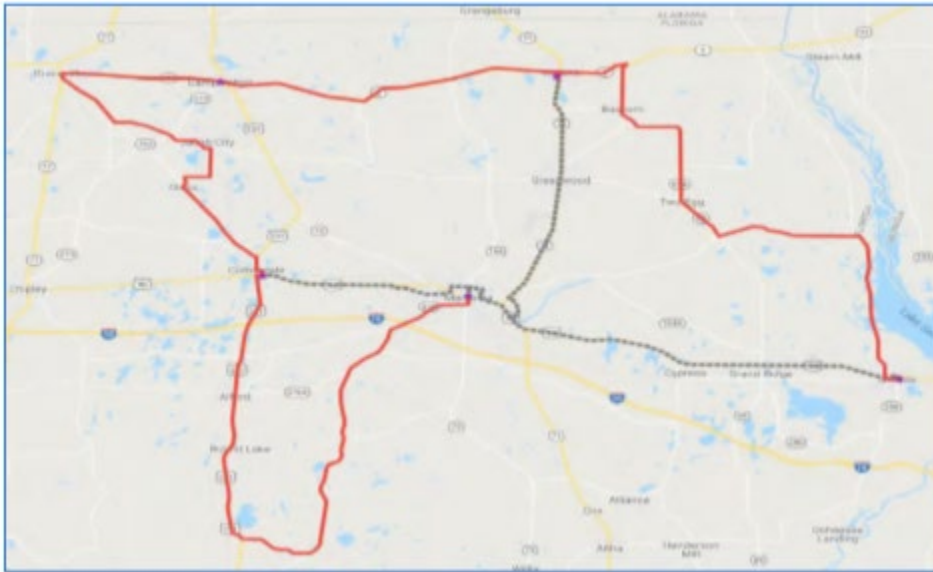


Figure 1. Proposed 111-mile backbone ring connecting 5 Meet Me locations in Marianna, Sneads, Malone, Campbellton, and Cottondale. The dotted gray lines represent existing network where Jackson County could lease dark or lit fibers to help complete their ring, and the red lines represent proposed construction path within existing ROWs

D.2. Shorelines, Estuaries, Beaches, and Dunes

The entire State of Florida is located within a National Oceanic and Atmospheric Administration (NOAA) Coastal Zone, however the landmass of the State is divided into two tiers based on their eligibility for coastal management funding. Local governments eligible to receive coastal management funds are limited to those Gulf and Atlantic coastal cities and counties which include or are contiguous to state water bodies where marine species of vegetation constitute the dominant plant community. Jackson County is therefore ineligible for coastal management funds, as the closest it comes to such a marine body of water is approximately 20 miles from its southwest corner. There are no marine shorelines, estuaries, beaches, or dunes in close

proximity to the proposed path of the project, and construction will be limited to previously disturbed areas in existing ROWs. Stream and river crossings will be accomplished using existing conduit and bridges where possible. Should new sub-stream borings be necessary, all permitting and environmental regulations will be strictly adhered to.

D.3. Wetlands

Provide a determination of effects including the amount of jurisdictional waters affected by type (e.g. 1.1 acres of palustrine emergent wetlands would be impacted by the proposed project).

Below is a map wetland/waters delineation performed in accordance with the 1987 (or current version) U.S. Army Corps of Engineers Wetland Delineation Manual, as amended. It has not received a preliminary or final Jurisdictional Determination from the U.S. Army Corps of Engineers (USACE), Despite passing through designated wetlands, construction for the project is limited to the previously disturbed areas as within existing ROWs. Despite this, the County will contact USACE concerning any jurisdictional waters resources and provide the EDA with any correspondence or comments from USACE related to the project's impacts. At this time, Jackson County anticipates that within the existing ROWs where the project will be built, there are a total of 12.44 acres of wetlands comprised of a combination of some, but necessarily all, of the following wetland types:

- Estuarine and Marine Deep Water
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- Other

For an overview map displaying the project location's proximity to the respective wetlands, please see Exhibit D.3 U.S. Fish and Wildlife Services Wetlands Map in the Appendix.

D.4. Floodplain

Provide a FEMA floodplain map (with the map number and effective date) displaying the project location and boundaries, existing and proposed project components, and location of all sites and/or companies benefiting from the proposed project. The document should be of sufficient clarity for adequate interpretation of the applicant's intentions.

Jackson County is proposing to construct a 111-mile fiber optic "middle mile network" to be constructed in existing City, County, and State Rights-of-Way (ROW). The entire network route will be located along existing and previously disturbed right-of-way where other utilities are presently located such as; electric, water, gas, and sanitary sewer lines. For an overview map displaying the project location and boundaries (40' width), please see Exhibit D.4 Federal Emergency Management (FEMA) Floodplain Map in the Appendix. According to FEMA's Flood Map Service Center website, there are a total 69 Flood Insurance Rate Maps (FIRM) for the entire

limits of Jackson County, of which 25 FIRM maps are located along the proposed middle mile networks. The table below displays the applicable FIRM maps that are located along the proposed network route:

FIRM Panel ID	Effective Date	FEMA MSC Direct Link
12063C0175D	12/17/2010	Link
12063C0404D	12/17/2010	Link
12063C0485D	12/17/2010	Link
12063C0575D	12/17/2010	Link
12063C0395D	12/17/2010	Link
12063C0313D	12/17/2010	Link
12063C0410D	12/17/2010	Link
12063C0135D	12/17/2010	Link
12063C0294D	12/17/2010	Link
12063C0415D	12/17/2010	Link
12063C0475D	12/17/2010	Link
12063C0125D	12/17/2010	Link
12063C0140D	12/17/2010	Link
12063C0385D	12/17/2010	Link
12063C0500D	12/17/2010	Link
12063C0384D	12/17/2010	Link
12063C0350D	12/17/2010	Link
12063C0275D	12/17/2010	Link
12063C0407D	12/17/2010	Link
12063C0300D	12/17/2010	Link
12063C0130D	12/17/2010	Link
12063C0200D	12/17/2010	Link

12063C0145D	12/17/2010	Link
12063C0535D	12/17/2010	Link
12063C0085D	12/17/2010	Link

Based on publicly available data from FEMA’s [Policy & Claim Statistics for Flood Insurance](#) website, Jackson County is a participant in the NFIP program with the following statistics:

- Number of Policies in Force: 123
- Building Coverage: \$20,863,100
- Content Coverage: \$6,351,400
- Total Coverage: \$27,214,500
- Estimated Population Housing Units: 20,774
- 2015 Population: 48,599
- Percentage of Properties Insured: 1%

D.5. Vegetation and Wildlife Resources

All construction will take place within previously disturbed areas in ROWs belonging to the state, the county, and municipalities within Jackson County. As such, there will be little to no impact to wild areas, forest, or other vegetation. Any disturbed ground will be re-seeded and protected from erosion with industry standard best practices for erosion and siltation control (see section B3 to review potential mitigation strategies).

Below are listed the State and National Parks, National Wildlife Refuges, National Game Preserves, and Designated Wilderness Areas in Jackson County:

Apalachee Wildlife Management Area (WMA)

Governed by the Florida Fish and Wildlife Conservation Commission, the Apalachee WMA consists of 7,952 acres of upland longleaf pine and wetland habitat three miles north of Sneads in Jackson County. The area is broken up into three management zones, all located along Lake Seminole and the Chattahoochee River. High-quality longleaf pine forest here is preferred by species such as Bachman's sparrow, brown-headed nuthatch, gopher tortoise, and Florida pine snake. The upland habitat, interspersed with floodplain forests and marshes, offers prime habitat for both migratory and resident birds. The federally-listed gentian pinkroot (*Spigelia gentianoides*) grows within the Apalachee WMA. It is also a site on the Great Florida Birding and Wildlife Trail, and its strong wildlife populations attract wildlife viewers year-round.

Chipola River Wildlife Management Area (WMA)

Governed by the Florida Fish and Wildlife Conservation Commission, the Chipola River Wildlife Management Area (WMA) spans 9,094 acres in two separate tracts located along the Chipola River in Jackson and Calhoun counties. The 7,719-acre Jackson County tract lies four miles north of Marianna and shares its southern boundary with Florida Caverns State Park. This tract encompasses the upper watershed of the Chipola River, which includes its two main tributaries,

Marshalls Creek and Cowarts Creek, and portions of the spring-runs of Hayes and Waddell Springs. The WMA provides valuable protection to water resources associated with the river, which flows south for 95 miles from Marianna to the Apalachicola River.

Florida Caverns State Park

Governed by the Florida Department of Environmental Protection, Florida Caverns State Park is a U.S. National Natural Landmark. It is located in Jackson County near Marianna and is the only Florida state park with air-filled caves accessible to the public. The park is notable for its geological features, a protected area of karst topography. This geology hosts an ecosystem with plants and animals that are adapted to the limestone substrates. The caves and waterways have blind crayfish, bats, salamanders, and other species. Native Americans inhabited the area, and it is also a site of archaeological interest.

Three Rivers State Park

Governed by the Florida Department of Environmental Protection, Three Rivers State Park is a Florida State Park located north of Sneads, on the shores of Lake Seminole near the Georgia border, in northwestern Jackson County. It is named for the main rivers associated with Lake Seminole: the Chattahoochee and the Flint, which flow into it from Georgia, and the Apalachicola, whose source is the lake itself.

D.6. Endangered Species

The Below table lists all endangered and threatened species of plants and animals known to be found in Jackson County, Florida, as well as formerly listed species now in recovery, and species whose status is under review. Since all work for the project in question will occur in previously disturbed areas within rights of way on roadsides, disruption to the habitats of any of these plants or animals is not expected. Despite this, a full review will be conducted, and mitigation plans prepared along the entirety of the proposed path of the project to ensure that no such disruption occurs, and that none of these species will be negatively impacted in any way by the proposed project. Furthermore, the nature of the proposed infrastructure is such that it will support a number of technologies which may be useful in the study and protection of crucial habitats and ecologies, such as a variety of sensors and high definition cameras which can be used to collect data on air quality, rainfall levels, game movement, and so on. As such, the project stakeholder group will include local research universities and/or institutions which may be interested in leveraging the infrastructure for these or other purposes.

Group	Species	Status	Habitat
Amphibians	Ambystoma bishopi	Endangered	The Reticulated Flatwoods Salamander is a burrowing species of salamander that lives among the leaf litter beneath longleaf pine (Pinus

			palustris) and wiregrass (<i>Aristida stricta</i>) in the flatwoods coastal plain ecosystems of the Southeastern United States.
Amphibians	<i>Haideotriton wallacei</i>	Under Review	The Georgia Blind Salamander is a resident of the Marianna Lowlands (Dougherty Plain) karst aquifer; it is found in subterranean streams and clear pools in caves and deep wells. It may sometimes leave water and climb limestone walls of caves. It may ultimately depend on guano from associated bat populations.
Amphibians	<i>Lithobates capito</i>	Under Review	Gopher frogs' primary habitat is native xeric upland habitats, particularly longleaf pine-turkey oak sand hill associations; also xeric to mesic longleaf pine flat woods, sand pine scrub, xeric oak hammocks, and ruderal successional stages of these habitats. It is absent from most coastal islands and dunes.
Birds	<i>Falco peregrinus tundrius</i>	Recovery	Arctic Peregrine Falcons are wide ranging migratory bird known to winter in central America, including the Florida Peninsula. Delisted as endangered in 1994.
Birds	<i>Haliaeetus leucocephalus</i>	Recovery	Bald Eagles tend to use tall, sturdy conifers that protrude above the forest canopy, providing easy flight access and good visibility. In southern parts of their range, Bald Eagles may nest in deciduous trees, mangroves, and cactus.
Birds	<i>Mycteria americana</i>	Threatened	Wood storks inhabit mainly tidal waters, marshes, swamps, streams and mangroves. They hunt for prey in shallow, muddy-bottomed banks or

			wetlands. Their nests are ideally constructed in trees surrounded by water to limit depredation of the eggs.
Clams	<i>Amblema neislerii</i>	Endangered	The fat threeridge clam, is a freshwater mussel native to the rivers in southern Georgia and Florida. It belongs to the family Unionidae. It resides in shallow rivers in the muddy and sandy bottom of the river beds.
Clams	<i>Elliptio chipolaensis</i>	Threatened	The Chipola Slabshell is a species of freshwater mussel in the family Unionidae, the river mussels. It is native to Florida in the United States, where it is now found only in the Chipola River and associated creeks, which passes through the center of Jackson County. It is extirpated from Alabama. There are no more than about 2500 individuals remaining.
Clams	<i>Elliptoideus sloatianus</i>	Threatened	The purple Bankclimber is found in sand, fine gravel or muddy sand substrates in moderate current in large rivers or streams.
Clams	<i>Fusconaia burkei</i>	Threatened	The Tapered Pigtoe is found in medium-sized creeks to large rivers. It prefers a sand and gravel substrata, occasionally occurring in silty sands, in slow to moderate current. It can occasionally be found in floodplain lakes.
Clams	<i>Hamiota australis</i>	Threatened	The Southern Sandshell occurs in clear medium-sized creeks to rivers with slow to moderate current and sandy substrates.
Clams	<i>Lampsilis subangulata</i>	Endangered	The Shiny-Rayed Pocketbook inhabits medium-sized creeks and rivers with

			slow to moderate current and clean or silty sand substrates.
Clams	<i>Medionidus penicillatus</i>	Endangered	The Gulf Moccasinshell typically occupies small streams to large rivers with moderate flow and sandy substrates. This species has also been found in gravel and cobble substrates.
Clams	<i>Pleurobema pyriforme</i>	Endangered	The Oval Pig Toe occurs in medium-sized creeks to small rivers where it inhabits silty sand to sand and gravel substrates, usually in slow to moderate current. Stream channels with clean substrates possibly offer the best habitat.
Clams	<i>Pleurobema strodeanum</i>	Threatened	The Fuzzy Pig Toe inhabits moderate current rivers in small to medium-sized rivers, where it is found in silty-mud and silty-sand substrates.
Clams	<i>Ptychobranthus jonesi</i>	Endangered	The Southern Kidney Shell is known from clean slow moving water parts of 'small to medium sized creeks of low gradients' and larger rivers, where the substrata is silty but sandy and stable with some 'woody debris'. It has also been found in 'claystone pockets with sand.
Clams	<i>Villosa choctawensis</i>	Endangered	The Chactaw Bean is known from large creeks and rivers with moderate current over sand to silty-sand substrates.
Conifers and Cyads	<i>Torreya taxifolia</i>	Endangered	<i>Torreya taxifolia</i> , commonly called Florida torreya, is a dioecious, small to medium sized, evergreen coniferous tree in the yew family that is currently found in the wild along bluffs, slopes and wooded ravines on the east side

			of the Apalachicola River in Liberty and Gadsden Counties in Florida plus in adjacent Decatur County in Georgia, with an additional small population on the west side of the river in Jackson County, Florida. Today, this tree is listed as a critically endangered species on the Federal Red List.
Fishes	<i>Acipenser oxyrinchus (=oxyrhynchus) desotoi</i>	Threatened	The species historical range included coastal waters and wetlands in Alabama, Florida, Georgia, Louisiana, and Mississippi.
Flowering Plants	<i>Baptisia megacarpa</i>	Under Review	Apalachicola Wild Indigo grows in dry pine and oak woods, in ravines, along streams, and on roadsides.
Flowering plants	<i>Linum westii</i>	Under Review	Shallow pond margins in slash pine-saw palmetto flatwoods, bogs, cypress pond margins, and ditches. Depression marshes, dome swamps, wet flatwoods, and wet prairies. Restricted to north Florida. Extant populations are known in Liberty, Franklin, Gulf, Okaloosa, and Clay counties. Historically also collected in Baker and Jackson counties.
Flowering plants	<i>Lobelia boykinii</i>	Under Review	Grows in cypress swamps and other wet habitat types, such as meadows, bays, and ponds.
Flowering plants	<i>Salix floridana</i>	Under Review	Edges of spring-fed streams and springheads, openings in wet woods with sphagnum moss, alder, Virginia willow, and club moss.
Flowering Plants	<i>Sideroxylon thornei</i>	Under Review	Forested limesink depressions and swamps over limestone.

Flowering Plants	<i>Silene polypetala</i>	Endangered	This plant grows in soils of sandy, calcareous loam, often in moist habitat in forests and woods.
Flowering Plants	<i>Spigelia gentianoides</i>	Endangered	Gentian Pinkroot grows in wooded areas dominated by trees such as loblolly pine (<i>Pinus taeda</i>), longleaf pine (<i>Pinus palustris</i>), water oak (<i>Quercus nigra</i>), laurel oak (<i>Quercus hemisphaerica</i>), southern red oak (<i>Quercus falcata</i>), and black tupelo (<i>Nyssa sylvatica</i>).[2] It also occurs in dolomite glades in Alabama.
Insects	<i>Oecetis parva</i>	Under Review	Occurs in lakes and natural ponds in Florida.
Mammals	<i>Myotis grisescens</i>	Endangered	With rare exceptions, gray bats live in caves year-round. During the winter gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers. These caves are in limestone karst areas of the southeastern United States. They do not use houses or barns.
Reptiles	<i>Drymarchon corais couperi</i>	Threatened	The eastern indigo snake frequents flatwoods, hammocks, dry glades, stream bottoms, cane fields, riparian thickets, and high ground with well-drained, sandy soils. In Georgia, the eastern indigo snake prefers excessively drained, deep sandy soils along major streams, as well as xeric sandridge habitats. Xeric slash pine plantations seem to be preferred over undisturbed longleaf pine habitats. Habitat selection varies seasonally. From December to April, eastern indigo snakes prefer sandhill habitats; from May to July the snakes shift from winter dens to summer territories;

			from August through November they are located more frequently in shady creek bottoms than during other seasons.
Reptiles	<i>Gopherus polyphemus</i>	West of Mobile and Tombigbee Rivers it has Threatened status, east of there it is considered a Candidate for Threatened status	Gopher Tortoises are found in the Lower Coastal Plain of the Southeast, from southern South Carolina to Louisiana and throughout Florida. This species prefers well-drained sandy areas (in which it can burrow) and is absent from extensive wetland area (e.g., the Everglades and Okefenokee). It was a resident of the fire-dependent longleaf pine belt that is now highly fragmented. Now it persists only in areas where the canopy is open enough to allow for a dense understory on which it can feed.
Reptiles	<i>Graptemys barbouri</i>	Under Review	Barbour's map turtles live almost all of their lives in large freshwater systems with limestone bottoms. They leave the water only to lay eggs and bask in the sun on large fallen branches and other accessible areas. They prefer deeper and faster flowing waters than other turtles in the family Emydidae. Females are normally found in deeper water than males, hatchlings and juveniles tend to stay closer to the riverbank than adults.
Reptiles	<i>Macrolemys temmincki</i>	Under Review	The alligator snapping turtle is only found in rivers and streams that flow into the Gulf of Mexico. They are found as far north as Iowa in the Mississippi River drainage, west into eastern Texas, and east into southern Georgia and the Florida panhandle. They do not usually occur in isolated

			wetlands or ponds but are found in oxbow lakes.
Reptiles	Pituophis melanoleucus mugitus	Under Review	Although not common, the Florida Pine Snake requires dry sandy soils for burrowing. It is found most often in open pine-turkey oak woodlands and abandoned fields, and also in scrub, sandhills, and longleaf pine forest.

D.7. Land Use and Zoning

The entirety of the proposed project will be constructed within existing ROWs along city and county roads, with no construction activity whatsoever taking place on parcels zoned for use as agricultural, industrial, commercial, residential, recreational, woodlands, mines/quarries, or open spaces.

D.8. Solid Waste Management

Indicate the types and quantities of solid wastes to be produced by the project facilities and primary beneficiary.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Describe local solid waste collection and disposal methods and the expected useful life of the disposal facility.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate if recycling or resource recovery programs are currently being use or will be used in the future.

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.9. Hazardous or Toxic Substances

Describe any toxic, hazardous, or radioactive substances that will be utilized or produced by the proposed project facilities and primary beneficiaries.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Describe the manner in which these substances will be stored, used, or disposed.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Complete and sign one “Applicant Certification Clause” for each co-applicant (see Appendix A). Please see Exhibit D.9 for a copy of Jackson County’s Applicant Certification Clause form.

If a recent Phase I or Phase II Environmental Site Assessment has been performed, please provide a copy.

At this time, there have been no Phase I or Phase II Environmental Site Assessments performed to date.

D.10. Water Resources

Describe surface and underground water resources at or near the project site(s) and any impacts of the project to these.

With respect to surface and underground water resources at or near the project site(s), please see the map in Exhibit B.1 Topographical Map and Site Map and Exhibit D.3 U.S. Fish and Wildlife Services (USFWS) Wetlands Map that illustrates the proposed network routes and proximity to the respective surface and underground water resources.

If groundwater will be used, is the aquifer in overdraft and /or adjudicated?

Based on the nature and scope of the proposed project, this criterion is not applicable.

If there will be discharges to surface water, is the receiving surface water body listed on the U.S. Environmental Protection Agency's (EPA) Section 303(d) list of impaired waters?

Based on the nature and scope of the proposed project, this criterion is not applicable.

Is a National Pollution Discharge Elimination System (NPDES) permit required for any discharges to surface waters?

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate if the proposed project is located within an area mapped by the EPA as sole source aquifer recharge area (maps and further information are available on EPA's website at www.epa.gov).

Jackson County has reviewed the EPA's sole source aquifer recharge area maps and based on the location of the proposed project, this criterion is not applicable.

Describe any induced changes in local surface water runoff patterns, and the status of storm water discharge permit processes (if applicable).

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.11. Water Supply and Distribution System

Indicate the source, quality, and supply capacity of local domestic and industrial/commercial water resources, and the amount of water that project facilities and primary beneficiaries are expected to utilize.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Applicants should note whether the water that is being supplied is in compliance with the Safe Drinking Water Act, and if not, what steps are being taken to ensure compliance.

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.12. Wastewater Collection and Treatment Facilities

Describe all domestic class or process wastewater or other discharges associated with the project facilities and its primary beneficiaries, and the expected composition and quantities to be discharged either to a municipal system or to the local environment.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Describe the wastewater treatment facilities available for processing the additional effluent and indicate their design capacities and current loading (both daily average and peak), and their adequacy in terms of degree and type of treatment required.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate all discharges that will require on-site pre-treatment.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Applicants should note whether the wastewater treatment plant is in violation of the Clean Water Act, and if so, what steps are being taken to ensure compliance.

Based on the nature and scope of the proposed project, this criterion is not applicable.

If local treatment and sewer systems are or will be inadequate or overloaded, describe the steps being taken for necessary improvements and their completion dates.

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.13. Environmental Justice (Executive Order 12898)

The proposed project is in alignment with Executive Order 12898, which directs federal agencies to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. The order is also intended to promote nondiscrimination in federal programs that affect human health and the environment, as well as provide minority and low-income communities' access to public information and public participation. While the proposed project will not create adverse human health or environmental effects, it will enable substantial grassroots empowerment through improved access to educational, vocational, and economic opportunities. Furthermore, the proposed project is from the very beginning envisioned as a vehicle for addressing the twin issues of digital equity and the digital divide, which disproportionately impact minority and low-income populations. Community engagement and participation are cornerstones of the project, having been key drivers for its inception, and indicators of its success going forward.

D.14. Transportation (Streets, Traffic, and Parking)

Briefly describe the local street/road system serving the project site(s) and describe any new traffic patterns that may arise because of the project.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate if land use in the vicinity, such as residential, hospital, school, or recreational, will be affected by these new traffic patterns.

Based on the nature and scope of the proposed project, this criterion is not applicable.

Indicate if any existing capacities of these transportation facilities will be exceeded as a direct or indirect result of this project implementation, particularly in terms of car and truck traffic, and what the new Level of Service designation will be.

Based on the nature and scope of the proposed project, this criterion is not applicable.

D.15. Air Quality

Indicate types and quantities of air emissions (including odors) to be produced by the project facilities and its primary beneficiaries, and any measures proposed to mitigate adverse impacts.

Our grant proposal and budget include the execution of a full environmental impact study that will assess the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

Indicate the impact that the project would have on greenhouse gas emissions.

Our grant proposal and budget include the execution of a full environmental impact study that will assess the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

Is the proposed project site classified as a "non-attainment" area for any criteria pollutants?

As per the U.S. Environmental Protection Agency's *Current Non-Attainment Counties for All Criteria Pollutants*, Jackson County, Florida is not listed (as of August 31, 2019) as shown on Exhibit D.15 United States Environmental Protection Agency Non-Attainment List in the Appendix.

Indicate any local topographical or meteorological conditions that hinder the dispersal of air emissions.

Our grant proposal and budget include the execution of a full environmental impact study that will assess the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

D.16. Noise Pollution

Will operation of project facilities or primary beneficiaries' facilities increase local ambient noise levels?

Jackson County does not anticipate any long-term noise pollution and/or increase in local ambient noise levels as a result of the project, however it is expected that the construction of the network will cause a temporary minimal increase in local ambient noise.

If yes, indicate the estimated levels of increase, and the areas and sensitive receptors (e.g., residences) to be affected.

Our grant proposal and budget include the execution of a full environmental impact study that will assess the project's impact on this criteria. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

D.17. Permits

Identify any Federal, State, or local permits of an environmental nature needed for the project (e.g., USACE, US Environmental Protection Agency (EPA), Coastal Zone Management/Shoreline Management, Air Quality, State Environmental Policy Act, NPDES, etc.) and the status of any such permits.

Permit (Local/State/Federal)	Timeframe	Relation to Overall Project Schedule
CSX Railroad	90 Days	Long lead permit crossing, please see D.7 below.
Florida Department of Transportation	60 Days	Right of Way
City Right of Way Permits	30 Days	Right of Way for Marianna, Sneads, Malone, Cambelton, etc.

In addition to the permits listed above, Jackson County anticipates that consultation, coordination, and federal permits may be required from the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and State permitting from the applicable agencies. Jackson County understands that the terms and conditions for federal award of grant funding will require the proposed project to obtain an environmental clearance prior to commencement of construction activities. Upon consultation with the respective agencies, Jackson County will proceed with the appropriate level of environmental assessment and conduct the public involvement and notification process for the project. Should the proposed project require any special permitting mitigation activities, the County will require the engineering consultant and general contractor to demonstrate compliance with any special conditions put forth in the respective permit approval.

D.18. Public Notification/Controversy

Provide evidence of the community's awareness of the project, such as newspaper articles or public notification and/or public meetings, as applicable. If a formal public hearing has been held, attach a copy of the transcript.

Jackson County has been publicly discussing the proposed Fiber Network project in various Board of County Commissioners meetings during calendar years 2018 and 2019., however there have been no other public notifications and/or public meetings specifically regarding the proposed project. Our grant proposal and budget include the execution of a full environmental

impact/assessment study that will include these details regarding the project's impact on this criterion, including the respective public involvement, notification and collection of comments and feedback regarding the project and its impact. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

Fully describe any public controversy or objections which have been made concerning this proposed project and discuss steps taken to resolve such objections.

At this time, there have been no public controversies or objections regarding the proposed project. As mentioned previously, our grant proposal and budget include the execution of a full environmental impact/assessment study that will include these details regarding the requirements for this criterion. As part of the process, Jackson County will collect all the public comments received regarding the project and will include them in the draft and final environmental impact study,

D.19. Direct, Indirect, and Cumulative Effects

Please list projects (public and private) that have occurred or will occur in the past, present, and future in and around the project area that could result in significant cumulative or indirect impacts when considered in aggregate with the proposed EDA project. Cumulative impacts result from the incremental impacts of a proposed action when added to other past, present and reasonable foreseeable future actions (40 C.F.R. Section 1508.7). Indirect impacts are those that are caused by a proposed action, but that may occur later in time or farther removed in distance, relative to the primary impacts of the proposed action (40 C.F.R. Section 1508.7)

Our grant proposal and budget include the execution of a full environmental impact/assessment study that will include these details regarding the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.

Applicants should identify the direct and indirect effects of the proposed action; which resources, ecosystems, and human communities are affected; and which effects on these resources are important from a cumulative effects' perspective.

Our grant proposal and budget include the execution of a full environmental impact/assessment study that will include these details regarding the project's impact on this criterion. At this time, there are no known impacts that will have significant adverse effects on the quality of the human environment either individually or cumulatively.