

Submitted By: Information Technology

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Project Classification: Economic Prosperity

Project Focus: Quality of Life

Project Type: Other - Technology infrastructure to provide high speed broadband

Previously Submitted and Rejected: No

Continuation Project: No

Project Total Cost: \$ 6,800,000

Total Operating Cost: \$ 426,000

Project Description: The "High Speed Wireless Broadband" broadband network will consist of twenty-eight towers forming a loop around the entire county to provide high speed broadband access to the Internet. The project is broken into three phases: building out the infrastructure and incorporating it into the ACCGOV workflow, provide Wi-Fi connectivity in the downtown area and targeted advertisements for business development, and finally forming a WISP to provide cost effective Internet access to the underserved county residents.

Project Mission Statement/Goals & Objectives: The advancement of the Internet over the past few decades has been revolutionary in dissemination of information, increasing connectivity, and expanding commerce. Its societal impact is similar to that of the interstate highway system, construction of the electric grid, and advancement of television.

The "High Speed Wireless Broadband" broadband network will provide a plethora of economic, social and community benefits to Athens-Clarke County. Community wireless broadband network will increase public safety and local communication. Providing advanced digital inclusion programs designed to bridge digital divide in rural communities, businesses, educational programs, government services and reduced communications expenses are all very tangible benefits of having ubiquitous broadband connectivity. Additionally, having a technologically advanced community will make Athens-Clarke County more appealing to business and its citizens, fostering aggressive and sustainable economic development.

Projected Useful Life of Project: Tower locations - 30-50 years

Communications hardware - Typically 5 years in the evolving communication hardware environment.

To meet the Project Goals & Objectives, when should this project be completed? Phase I -

Construction of high-speed wireless loop around the entire county. Wireless loop will provide connectivity to ACCGOV assets to provide adequate bandwidth for mission critical facilities that do

not have adequate options from existing carriers and internet providers. This phase should take 12 - 18 months to implement.

Phase II - Design and build a high-speed municipal wireless infrastructure within the downtown area to provide connectivity for businesses, residents and visitors. This phase will include the implementation of business and consumer applications such as location-based advertising, Athens-Clarke County portal for promoting Athens-Clarke County services and businesses. Phase II enables the outdoor Wi-Fi, bus advertising, etc. for the downtown area to establish the building blocks to form a WISP and offer services to residents in Phase III. This phase should take 12 - 18 months to implement, as well.

Phase III - Utilizing the infrastructure implemented in phases I and II, the network will be expanded to service the rural community with high-speed connectivity. The plan is to create a revenue generating model for Athens-Clarke County. Plans include but are not limited to: A private public partnership with Athens-Clarke County to provide private WISP (Wireless Internet Service Provider) to perform the day to day operations and support of infrastructure, client support, billing and marketing efforts within the community. This model will provide a profit sharing model with the county. Advertising - The platform will provide both web based and location-based advertising across the Athens area for residents and visitors. Business connectivity - Provide alternative high speed connectivity for businesses in Athens area. Managed Video Surveillance - Network will provide the ability for Athens police department to offer monitoring services to businesses and neighborhoods. Tower Assets - Carriers such as AT&T and Georgia Power have expressed interest in building similar networks in Athens. With the investment into the proposed tower infrastructure, leasing opportunities are feasible and could result in significant monthly revenues. This phase should also take 12 - 18 months.

The Leadership in Energy and Environmental Design (LEED) Green Building System compliance: N/A

How will this project help meet the Public Safety, Basic Facilities/Infrastructure, and/or Quality of Life needs in Athens-Clarke County? The "High Speed Wireless Broadband" broadband network will provide a secure communications infrastructure dedicated to the Athens-Clarke County government, schools, businesses, and rural underserved residents. The benefits to the proposed solution are:

Public Safety will have their own dedicated frequency providing a secure, high speed, communications platform for real-time access to law enforcement databases, surveillance camera video, and real-time traffic data among other things. Emergency Services can provide telemetry information to the hospital while still in transit, and traffic lights can be controlled in emergency situations. The Fire Department can benefit from controlling traffic signals, access to surveillance cameras and video, as well. It would replace the expensive carrier air cards that are currently used.

Basic Facilities/Infrastructure will eliminate leased line monthly costs connecting government facilities. The broadband network will also provide redundant communication for fiber optic cable disruption, network provider issues, and annual increases from service providers. It provides the ability to centrally monitor and manage street lights, intelligent transportation systems, and municipal utilities

Quality of Life will benefit from the ability to provide rural connectivity, generate revenue opportunities, and business development. It can create a mobile workforce for residents, as well.

How is this Project recommended/included in any approved ACCGOV Land Use Plan, Master Plan, Study, Service Delivery Plan, Envision Athens, etc.? Not Applicable

Triple Bottom Line Impacts

Positive Benefits for the Prosperity of Athens-Clarke County: When a community invests in a municipal broadband network, it often does so because it plans to reap economic benefits from the network. Many people and organizations have explored the positive relationship between municipal Internet networks and economic development, including a White House report published in January 2015. Municipal networks create jobs by ensuring businesses have fast, affordable, and reliable Internet access; the old DSL and cable networks just don't cut it. These networks improve the productivity of existing businesses and attract new businesses to communities, allow individuals to work from home more effectively, support advanced healthcare and security systems, strengthen local housing markets, and represent long term social investments in the form of better-connected schools and libraries. They also create millions of dollars in savings that can be reinvested into local economies.

Detrimental Impacts to the Prosperity of Athens-Clarke County: None

Positive Benefits for our Citizens and Visitors: Business and leisure visitors to Athens should come to expect excellent services and a memorable experience. They want 24/7 immediate access to information about the area, events, and to enjoy high-speed broadband access anywhere they travel throughout the county. They want to remain "connected" to their office and home while enjoying their City experience. A "walled garden" free Internet service will be available to these visitors without having to be a subscriber to the local provider to check in for a flight, reserve a car, find a restaurant, buy tickets to events, and other needs.

The "High Speed Wireless Broadband" network helps to bridge the "digital divide" by providing Internet access to underserved communities that a commercial carrier might not consider viable from a pure business standpoint. With this strategy, no neighborhood has to wait to be included in the digital community.

Detrimental Impacts for our Citizens and Visitors: none

Environmental Benefits, including but not limited to Positive impacts on existing Infrastructure/Systems: Over past 10 years tremendous strides have been in the development of advanced applications that will transform the way cities are monitored and supported. Some examples include:

Smart Parking - Monitoring of parking spaces availability in the city.

Structural health - Monitoring of vibrations and material conditions in buildings, bridges and historical monuments.

Noise Urban Maps - Sound monitoring in bar areas and chosen zones in real time.

Traffic Congestion - Monitoring of vehicles and pedestrian levels to optimize driving and walking routes.

Smart Lighting - Intelligent and weather adaptive lighting in street lights.

Waste Management - Detection of rubbish levels in containers to optimize the trash collection routes.

Smart Roads - Intelligent Highways with warning messages and diversions according to climate conditions and unexpected events

like accidents or traffic jams.

Environmental

Forest Fire Detection - Monitoring of combustion gases and preemptive fire conditions to define alert zones.

Air Pollution - Control of CO2 emissions of factories, pollution emitted by cars and toxic gases generated in farms.

Earthquake Early Detection - Distributed control in specific places of tremors.

Detrimental Impacts for the Environment, including but not limited to Negative impacts on existing Infrastructure/Systems: none

Positive/Negative Impacts on ACCGOV Departments, Agencies, or other Organizations, if not covered in one of the above questions: Positive:

Reduces leased line cost to existing facilities, and monthly costs for carrier supplied air cards.

Provides a secure communications layer for the county.

Project Costs

Detailed project capital budget costs (to be funded from SPLOST 2020 only):

| Project Costs (round to thousand) | Amount |
|---|---------------------|
| 1. Land Acquisition / ROW / Easement: | \$ - |
| 2. Design Fees: (Min.12% of New Const.; 14% of reno,; 16% for LEED proj.) | \$ 678,000 |
| 3. Miscellaneous Fees: (Min. Minimum of 3% of Construction Costs – used for permitting, etc. Utilize minimum of 10% if land acquisition if necessary.) | \$ - |
| 4. Fixtures, Furniture, and Equipment (for a facility): A detailed estimate is preferred – but dependent upon the specific project, utilize at a minimum \$15 to \$20 per square foot. | \$ - |
| 5. Construction: | \$ 985,000 |
| 6. Construction Contingency: (10% of the Construction line item) | \$ 99,000 |
| 7. Acquisition of Capital Equipment: | \$ 3,655,000 |
| 8. Testing: | \$ - |
| 9. Project Management: (4% of the total budget line items above) | \$ 217,000 |
| 10. Project Contingency: (10% of the total budget line items above) | \$ 564,000 |
| 11. Public Art: Calculated at 1% of the Construction line item. | \$ 10,000 |
| 12. Other 1: Installation and testing of radio hardware | \$ 393,000 |
| 13. Other 2: | \$ - |
| Project Subtotal: | \$ 6,601,000 |
| 14. Program Management (3% of Project Subtotal): | \$ 199,000 |
| SPLOST 2020 Project Total: | \$ 6,800,000 |

All towers will be erected on land already owned by ACC.

Operating Cost

Total Annual Net Operating Costs when Project is complete:

Only identify additional or net operating costs to be paid by ACCGOV. Identify the additional or net costs needed above ACCGOV's current operating budget to operate the requested project and any additional project related revenues that would be generated. Provide budget costs for each identified category below.

| Operating Costs (round to thousand) | Estimated Impact for Annual Operating Expenditures |
|--|--|
| TOTAL PROJECTED REVENUES FROM PROJECT | - |
| PROJECTED EXPENDITURES | |
| 1. Personnel Costs: from Appendix A | - |
| 2. Annual Utilities: | |
| • Gas: | - |
| • Electrical: | 12,000 |
| • Water: | - |
| • Sewer: | - |
| • Phone: | - |
| • Solid Waste Collection: | - |
| • Other: service contracts | 217,000 |
| 3. Operating Supplies: | - |
| 4. Equipment Maintenance: | 197,000 |
| 5. Facility Maintenance: | - |
| 6. Fuel: | - |
| 7. Other: | - |
| 8. Other: | - |
| 9. Other: | - |
| TOTAL EXPENDITURES | 426,000 |
| NET OPERATING COSTS OF PROJECT: | \$ 426,000 |

Project Financing

Is the proposed Project to receive funding from source(s) other than SPLOST 2020? No

Project Site

Will the proposed Project require any land, whether existing sites, new site, easements, or Rights of Way? Yes

Will the proposed Project be on a site currently owned by ACCGOV? Yes

Approximately how many acres is available or will be needed for the new facility or Park? Just enough land for the towers.

Project Location/Address (Existing or Proposed):

Multiple county owned locations to place towers in position.

Will the Project require fee simple additional land acquisition? No

Will the Project require Rights-of-Way or Easement acquisition? Unsure

Site Criteria and Standards

Current Property Owner (if applicable): Unsure

Minimum acreage necessary for Project. Just enough to erect towers at multiple locations

Topography: County owned locations

Estimated cost per acre: County owned locations