Applicant Name: GAINESVILLE REGIONAL UTILITIES

Project Title: Gainesville Gigabit for Education and More in Alachua County

Project Type: Comprehensive Community Infrastructure

_______________________Executive Summary_______________________

The City of Gainesville d/b/a GRUCom is pleased to be applying for project funding under the Broadband Technology Opportunities Program as part of the 2009 American Recovery and Reinvestment Act. The Gainesville Gigabit for Education and More in Alachua County (GGEMAC) project will extend our existing fiber optic network to provide Middle Mile infrastructure connecting new anchor institutions in 7 outlying communities that surround Gainesville, Florida. Additionally, this project will upgrade broadband services at all existing anchor locations in the City of Gainesville and these communities to 1Gbps. The $8.5 million project includes $2.55 million in matching contribution (30%). The area to be served by this project is hard hit by the recession, is designated as a Persistent Poverty County by the U.S. Department of Agriculture Economic Research Service and would remain without adequate broadband service for many years without this grant. In addition, this project will allow Alachua County anchor institutions, via interconnection agreements, to directly connect with anchor institutions located in the 14 surrounding counties that are part of the North Florida Broadband Authority (NFBA), a Round 1 BTOP awardee. GRUCom is a division of Gainesville Regional Utilities, owned by the City of Gainesville. GRUCom is the largest and most comprehensive municipally owned telecommunications service provider in the entire State of Florida. GRUCom was formed in 1995 to meet the Broadband communications needs of the Shands HealthCare system to reach health care providers in Alachua County. The Shands HealthCare system was unable to obtain affordable, reliable, high-capacity connectivity to its Alachua County health care constituents. Shands HealthCare is a private, not-for-profit organization affiliated with the University of Florida. The system has seven Shands hospitals, two Shands home-health agencies and more than 80 affiliated UF outpatient practices located throughout north central and northeast Florida. Shands HealthCare operates a Wide Area Network over GRU fiber facilities. GRUCom is a certificated Alternative Access Vendor and a Competitive Local Exchange Provider that leverages its 317-mile, 10-Gbps network ring to provide services to over 480 locations, including services to Critical Community Institutions (CCIs) and Public Safety sites throughout Alachua County. Other services provided over this open architecture network are Internet services, private bandwidth point to point service, as well as local transport services from GRU's Collocation facilities. GRUCom also owns and operates the Alachua County Public Safety Radio network, serving 11 public safety agencies throughout Alachua County. GGEMAC will offer low-cost, reliable, high-capacity Ethernet transport and broadband Internet service over an all fiber-optic network directly connected to community anchor locations at 1Gbps capacity at inception. GGEMAC will be an aerial and underground 132.3 linear mile fiber-optic network ring and laterals comprised of 48 to 144-strand single mode fiber-optic cable (depending on service offering). The service area to be covered by the GGEMAC project consists of the
City of Gainesville and the rural communities surrounding the City of Gainesville. Anchor institutions in this service area include 46 public schools, 7 community college locations, 1 Institution of Higher Learning, 11 libraries, 1 medical facility and 1 Public Safety Tower. GRUCom must purchase expensive, low capacity access circuits to reach CCIs in portions of its Alachua County Serving Area, raising the cost to schools and other CCIs in this persistent poverty area well beyond their ability to obtain needed high capacity Broadband service. GRUCom's 'Gainesville Gigabit for Education and More in Alachua County' project (GGEMAC) proposes to extend GRUCom's high-capacity fiber-optic network facilities directly to these CCIs, as well as to provide low-cost, reliable, high-capacity Middle Mile access for Last Mile Service providers who would otherwise be unable to serve the area economically. Alachua County has a critical need for affordable connectivity at quality and capacity levels at parity with more populated and affluent areas of the State of Florida. The advanced connectivity provided by GGEMAC will form a strong foundation for needed enhancements to education, community health, public safety; and support programs for low-income vulnerable populations, as well as for economic diversification and recruitment; modernization and expansion of existing businesses; job training and employment. Educational institutions, in particular, are limited in their ability to provide online academic and instructional offerings, practice tests, textbooks, tutorial support - include video tutorials and other learning support tools for students in Alachua County households without Broadband today. The cost and capacity of Broadband services existing within the Proposed Funded Service make it more difficult, or impossible, for low-income student households to access these types of learning support tools like their peers in more urban, affluent areas. Alachua County is also the regional hub for North Central Florida, and thus plays a key role in supporting commercial and educational activities in the North Central Florida Rural Area of Critical Economic Concern (RACEC). Through interconnection agreements between the NFBA and GGEMAC networks, the GGEMAC proposed network is highly synergistic with the North Florida Broadband Authority network that was awarded a grant by NTIA BTOP in 2010 for its Round 1 application. The GGEMAC Proposed Service Area fills the 'Hole in the Doughnut' between GRUCom’s existing network and the NFBA Middle Mile network to be deployed with the BTOP award. BTOP Middle Mile CCI Round 2 funding for GGEMAC would not only provide affordable, reliable, high capacity services for CCIs and low-cost Middle Mile interconnection for Last Mile service providers within this persistent poverty county, but would also allow for a fiber interconnection between the existing GRUCom network and NFBA's network in deployment. A fiber interconnection between the two networks will provide for additional upstream diversity and multi-homing for Last Mile providers in Alachua County, as well as allowing GRUCom and NFBA to extend the upstream reach of their systems to increase access, improve revenues and lower costs. Please see the North Florida Broadband Authority (NFBA) Letter of Cooperation and Support for more info. GGEMAC will facilitate greater use of broadband services by vulnerable populations, including low-income citizens, people with lower educational levels, and disabled and elderly citizens with mobility challenges. The Internet is a transformative tool for vulnerable populations, but studies have shown that the high cost of Middle Mile Access is the barrier to affordable Last Mile connectivity, contributing as much as 60%-70% of the cost of Last Mile service. High consumer pricing lowers adoption rates - especially in an area of poverty. GGEMAC offers low-cost Middle Mile connectivity for retail service providers who, in turn, can offer more affordable broadband service, increasing access and adoption. The design path of this network extension will directly connect to 67 anchor institutions, pass an estimated 90 percent of the businesses
and households in Alachua County and provide connections for additional public safety radio towers to be installed as the system is upgraded in the near future. GRUCom will comply with the Nondiscrimination and Interconnection Obligations set forth in the BTOP NOFA dated January 22, 2010, subject to the needs of law enforcement and reasonable network management. GRUCom will operate GGEMAC as an open access network, negotiating in good faith business arrangements, capacity limits, financial terms, and technical conditions for interconnection with requesting parties, and will seek to resolve any differences through negotiation. GGEMAC will also contribute to job growth within the County. It is estimated that this project will create 6.5 direct job years, 51.7 indirect job years and 32.7 induced job years for a total of 90.9 job years based on the methodology for job creation proposed by the Council of Economic Advisers. Lastly, this network is also designed to accommodate significant future growth with minimal investment. GGEMAC will initially operate at 1Gbps, but can easily be upgraded as needed in the future to 10Gbps or 100Gbps by changing out the optical drivers or equipment at the switch locations. Also, the design and construction methods of the fiber optic cable allows for the insertion of electronic nodes at pre-defined locations along the cable path making service available everywhere on the route. In conclusion, GGEMAC complies with 4 of the 5 BTOP statutory objectives.