Applicant Name: BESSEMER, CITY OF

Project Title: Bessemer Cut-Off Broadband Project

Project Type: Comprehensive Community Infrastructure

Executive Summary

The Bessemer Cut-Off Area of Jefferson County, Alabama has not participated in the internet revolution to the degree that many other communities in Alabama and elsewhere in the country have. The Bessemer Cut-Off is an underserved and economically underprivileged area in which more than 27% of the households live below the federal poverty level, and fewer than 30% of households currently subscribe to broadband internet service. As a result of these economic circumstances, existing broadband service providers are reluctant to invest in facilities that would extend or upgrade broadband service capabilities in the area. The Bessemer Cut-Off Broadband Project is designed to provide the opportunity for reliable and affordable broadband internet service to residents, businesses, and community anchor institutions throughout the Bessemer Cut-Off area. This service provides a foundation for numerous opportunities to improve services in education, economic development, public safety, and healthcare, and the City of Bessemer has engaged anchor institutions and community leaders throughout the service area in planning this project to ensure that we address the opportunities that are most important to our citizens and their constituents. The proposed service area for the project is the western portion of Jefferson County, Alabama, commonly referred to as the Bessemer Cut-Off. It includes the communities of Bessemer, Adamsville, Graysville, Hueytown, Midfield, Lipscomb, Fairfield, Brighton, McCalla, Pleasant Grove, Sylvan Springs, and Mulga. The area covers approximately 101 square miles and includes a population of 88,650 according to 2007 census update numbers. The potential customer population includes 41,300 households, 1,995 businesses, and 116 community anchor institutions. The community anchor institutions include 45 schools, seven libraries, one community college and two other higher education institutions, two medical and healthcare providers, eight public housing communities, 21 public safety entities, 10 other governmental entities, and 20 community support organizations. Our broadband project provides wireless internet service through a broadband mesh deployed from towers throughout the region. Most of the towers are already in place and all are located in existing right of way, which makes deployment of the solution easier and less disruptive to the environment than other types of solutions. We will offer direct connections to community anchor institutions as part of our middle mile solutions, and will connect all eight public housing communities in the area through out last mile solution. Residents will have the opportunity to subscribe to direct internet connections or to data transport services with internet access. All service offerings offer significantly higher reliability than customers are experiencing today, as well as ubiquitous coverage throughout the service area. We have worked closely with community anchor institutions throughout the planning stages of this project to gain a comprehensive understanding of the services and features most important to them with regard to an internet service offering. As a result, we
have received commitments from more than 100 of our community anchor institutions to subscribe to the service we provide once it is available. Among the anchor institutions, schools and libraries will serve as community centers where residents can go to gain access to internet resources. The availability of reliable high-speed broadband service will enable these institutions to expand and augment the types of programs they are able to provide our citizens. In addition, the Bessemer Cut-Off Broadband Project is the foundational project for a companion grant we are seeking in conjunction with the National Education Foundation, which would provide a CyberLearning program for our citizens. The CyberLearning initiative offers quality courseware for both academic and job skills training, and provides an educational foundation that will enable our citizens to attain higher educational goals and to be more competitive in the job market. Municipal government and public safety entities benefit from the ubiquitous nature of the wireless broadband service. Utility services for water and electricity in this area are primarily provided through municipal utility departments. The wireless deployment enables them to initiate smart metering technology to improve service and reduce costs. Public safety professionals can have access to necessary information and applications from anywhere in the service area rather than having to return to a central location to gain internet access. This not only enhances their access to necessary information, but saves time that may be critical in responding to citizen needs. The Bessemer Cut-Off Broadband Project provides services that enable community colleges and healthcare providers to participate in regional and national information networks, and to implement new service offerings such as distance learning and remote health monitoring. Businesses in the area are excited about the project because it will give them the connectivity that is essential for participation in an increasingly virtual and global economy. The project also benefits the community by creating an estimated 152 job years over the life of the grant period. Residential customers will have expanded opportunities to participate in the services our community anchor institutions have to offer, which will yield benefits in education, healthcare, and employment activities. The residents of our public housing communities who are receiving broadband internet service for the first time will benefit most significantly from our last mile service offering. The City of Bessemer, as the project leader for the Bessemer Cut-Off Broadband Network, has the experience and capabilities necessary to manage this project to completion. We are a regional municipal utility provider experienced in serving subscribers through our water and electric utilities, and our information technology (IT) and public works departments have extensive track records of implementing and managing large-scale installation projects on time and on budget. We have partnered with Honeywell Building Systems and Tropos Networks (Tropos) for their expertise in designing and deploying wireless broadband systems for both private and public entities. Honeywell and Tropos have been instrumental in designing our solution and planning for successful project execution. The Bessemer Cut-Off Broadband Project represents a very reasonable investment of BTOP grant funds. The overall cost to completely deploy this solution is less than $1,000 per household. The benefits this project offers to the residents, businesses, and community anchor institutions in the Bessemer Cut-Off area are substantial for such a modest investment. One indication of the need for the BTOP program funding is that the City of Bessemer is requesting a waiver from the 20% matching funds requirement. Long-term economic issues in the Bessemer Cut-Off area have adversely affected our flexibility with regard to municipal funding capacity, and have also restricted the ability of non-governmental funds to augment our funding. We are providing a match of $500,000 to demonstrate our commitment to the project. The Bessemer Cut-Off Broadband Project offers the opportunity to greatly enhance the
resources and services available to the citizens of our communities. We have completed an extensive process to gain input from the community to determine the services we are providing as part of this project, and in the process have secured the broadest possible commitment and support from residents, businesses, and community anchor institutions alike. We have the technical capability and management and administrative infrastructure in place to carry out this project successfully and to sustain it for the long term, even after the grant period has completed. The communities and citizens of the Bessemer Cut-Off area are excited to participate in this opportunity to bring reliable, affordable high-speed internet service to our area.