Applicant Name: MID-ATLANTIC BROADBAND COOPERATIVE

Project Title: Middle Mile Expansion for Eastern Virginia

Project Type: Comprehensive Community Infrastructure

Executive Summary

The Mid-Atlantic Broadband Cooperative (MBC) is honored to submit this joint BTOP/BIP grant application for consideration. As you will see in this application, MBC was formed in early 2004 as a non-profit cooperative to build, operate and manage a 800+ mile advanced, wholesale, open-access fiber optic backbone network in rural Virginia to promote economic development, private investment and job creation. MBC completed the initial network build in September of 2006, and became an operational entity. Since that time, MBC has grown our revenues from $0 to $4.2 million per year, and have kept costs in line with growth. MBC has received over $52 million in grant funding to complete this project, including $6 million from the US Department of Commerce, EDA and $48 million from the Virginia Tobacco Indemnification and Community Revitalization Commission. MBC was a recent Round One awardee from the NTIA/BTOP program for the middle mile expansion in southern Virginia, which includes $16 million in NTIA funding and $4 million in non-federal grant funding from the Virginia Tobacco Commission. MBC is a unique success story in that we are cash flow positive, are growing the revenue base and adding employees in a very difficult economic environment. We have helped expand the availability of broadband services to residential and business customers in the region by operating this open-access middle-mile network. The reason we are proposing this project is that there are many K-12 schools and unserved communities in the eastern region of Virginia that do not have access to fiber optic connectivity. In order to make those connections happen, over $12 million in capital must be expended to complete those builds, and unfortunately there are no additional resources or grant funds available to do so, without the assistance of the critical NTIA/BTOP broadband stimulus program. This project will result in 28 community anchor institutions including K-12 schools, community colleges, hospital and healthcare facilities, including Old Dominion University and their Modeling and Simulation Center. By connecting directly to the MBC network, many new opportunities for research and economic development will be available from a regional perspective, including direct connectivity to the Rolls Royce manufacturing facility in Prince George County Virginia. MBC has successfully extended the open-access fiber network to other school systems in region and have found that schools are now able to attract more competition from service providers that results in more bandwidth with less cost. This Middle-mile network will enable last-mile services by the private sector. One of MBC's members, Buggs Island Telephone Cooperative, is currently in due diligence with their application for Broadband Stimulus funding for deployment of a substantial wireless last mile broadband network that will cover this proposed service area, utilizing licensed 700Mhz spectrum. Their last mile network will result in affordable broadband services to residential and business customers in the region and will be an effective leveraging tool to improve the quality of life and ability of unserved regions to be connected.
As discussed in the 'Level of Need' section of this application, the proposed funded service area with a population of 95,000 people sits between two large urban population centers of Richmond, VA (1.2 million) and Norfolk/Hampton Roads, VA (1.7 million). This middle mile project will provide the open-access fiber optic backbone network necessary to allow community anchor institutions in these unserved and underserved markets the ability to acquire advanced broadband services at competitive rates, and will level the playing field for economic development by having MBC's carrier neutral open-access fiber optic network to bring telecom service providers and affordable backhaul services for last mile service providers. As a wholesale, open-access provider, MBC does not discriminate with any carrier, and encourages interconnection with any and all carriers who desire a connection to the MBC network. To date, over 55 telecom providers have joined our cooperative and are using the network in various forms. Some are buying 10Mbps Ethernet transport to their wireless broadband system on a water tower to serve residential customers, to others buying 2.5Gbps and 10Gbps wavelengths to connect their data centers in rural Virginia to key Internet peering points in Northern Virginia and the Southeastern United States. We plan to extend the use of our carrier-class SONET/TDM backbone network to allow additional network capacity to be provided to the K-12 school systems. MBC provides Ethernet services over SONET network. From a technical basis, we do this because we offer dedicated bandwidth services ONLY. We do not offer shared connections or routed connections that could result in oversubscription of bandwidth. Our Layer 1 optical transport network is highly beneficial to telecom service providers that utilize our network in that the bandwidth is dedicated and not shared with others. This type of connectivity sets MBC apart from other middle-mile providers, and allows us to deploy flexible Ethernet services (that do not exist from the existing incumbent telephone providers), while maintaining a carrier class system. MBC proposed to build over 170 route miles of new fiber optic cabling, which will ensure connection of all K-12 schools in eastern Virginia that do not have a fiber connection today. We have identified approximately $12 million dollars in capital costs related to this expansion of fiber optic middle-mile resources. MBC will be investing $1.25 million dollars of our own capital into this project, which is 50% of the required 20% matching funds. Our partner in this project, Old Dominion University, will be investing the remaining $1.25 million to fund the remaining amount. This key support from a public/private perspective is critical in making this middle mile project a success for the unserved and underserved communities in eastern Virginia. The strategic reasoning that is behind our application for matching Federal grant dollars is that MBC is a proven entity, with a focus on underserved and unserved areas of Virginia, has a business model for how to do open-access networks that has been embraced by other communities. Recent Round One NTIA award winners have reached out to MBC to ask questions about how we set up open-access networks, how our governance structure was developed, and how we operate our network. We are proud to be seen as a successful resource that other NTIA/BTOP awardees look towards to help make their projects successful. MBC has what few if any other middle-mile providers in rural areas have, which is direct connectivity to Tier 1 Internet peering points in Northern Virginia. MBC has on-net access to Equinix in Ashburn, Virginia where over 190 different carriers interconnect to exchange traffic and IP Transit services. This type of connection is beneficial to the eastern Virginia region, in that we can provide direct connectivity from our ISP and last mile providers in the region to their peering partners, thus improving network performance, reducing costs, and providing a better experience for the residential and business customers that purchase broadband services from MBC telecom service provider members. The other positive attribute about
MBC's proposal is that since we have an existing operational network in place which is up and running today, we can turn up services and start immediately providing middle-mile access to broadband communities once the various fiber segments are completed and tested. We do not need to wait 2 years or more to complete the build, install electronics, and hope to make revenue to make the system viable.

MBC will leverage our existing network base that is quite substantial (over 200Gbps of active network backbone capacity, and multiple OC-192 and OC-48 rings providing many middle mile transport circuits). Using the job creation methodology from the Council of Economic Advisors, we estimate 109 direct job years, and 70 indirect job years and 39 induced job years. MBC has ramped up our internal staffing to address project management, compliance and reporting, and operational support. In summary, MBC's grant application presents a substantial value proposition for the return on ARRA dollars invested in the form of new connections, jobs created, and long-term infrastructure built for the benefit of our rural communities. MBC is a strong partner for the grant programs, and many of our political supporters and key stakeholders take comfort in the fact that Federal and State grant dollars have been properly invested in MBC which is proven to be a stable, viable, operationally successful open-access middle-mile network provider.