

Broadband USA Applications Database

Applicant Name: Maryland Broadband Cooperative, Inc

Project Title: Maryland Broadband Fiber Optic Backbone Initiative

Project Type: Middle Mile

Executive Summary

The Maryland Broadband Cooperative (Mdbc), Inc., a 501(c)(12) organization, is a public/private partnership to promote economic development through the deployment of technology supporting infrastructures. Supported by its members who provide last mile services, our mission is to spur economic growth through open access to broadband services via a fiber optic network that serves rural Maryland. This state-of-the-art technology/network architecture includes routes that traverse the Eastern, Southern and Western Counties of Maryland (Allegany, Garrett, Washington, St. Mary's, Calvert, Charles, Cecil, Kent, Queen Anne's, Caroline, Talbot, Dorchester, Wicomico, Somerset and Worcester Counties), providing connectivity to industrial parks and community anchor institutions, and will interconnect with the broadband network serving the Mid-Atlantic region. In compliance with NTIA regulations, the Mdbc asserts that it will (1) commit to the substantial completion of the project within two years and project completion within three years; (2) demonstrate that the project is technically feasible and shovel-ready; (3) agree to comply with nondiscrimination and interconnection obligations; (4) demonstrate that the project advances the BTOP statutory purposes; (5) demonstrate that the project could not be completed in the grant period but for federal funding; and (6) demonstrate that the budget is reasonable and all costs are eligible. PROJECT OPPORTUNITY Maryland's rural areas are traditionally served by the incumbent telecommunications carrier through low speed dial up and limited range DSL access with reliable speeds under 10Mbps. Inadequate infrastructure is a significant barrier to diversification of the rural economy and inhibits development and recruitment of new industries. To make these regions attractive to high tech companies, the development of a regional IT backbone is essential. The purpose of the network outlined in this proposal is to leverage the capability of high-speed internet connectivity to extend economic opportunities and social benefits into rural communities. This high-speed bandwidth initiative will bring economic opportunity to unserved and underserved regions of the state years before private companies will invest in the proposed level of infrastructure. The purpose of this project is to (1) facilitate broadband deployment in unserved and underserved areas to enhance expansion of broadband communications services and infrastructure in order to advance the objectives of the Recovery Act to spur economic growth and opportunity; (2) expand broadband access to a wide range of institutions, individuals and vulnerable populations; (3) improve access for use by public safety facilities; and (4) ensure that services for education, health care and public safety are enhanced to the greatest population of users. BROADBAND SYSTEM The Mdbc will construct a statewide, fiber optic broadband network with the specific focus of offering broadband accessibility to rural regions of Maryland. The network is designed, engineered and shovel-ready. We are proposing a fiber optic cable network that has 144 fibers. The broadband standard identified in the

NOFA is 760 kbps download speed and 200 kbps upload speed. The MdBC fiber optic network is planned to offer services up to OC 192; however, with technology available from Nortel, our broadband network has a theoretically limitless capacity. PROPOSED SERVICES AND APPLICATIONS Managed Optical Network Services – These services are based upon a comprehensive range of optical networking technologies so that service arrangements may be flexible for each individual member. Through the MdBC network, members will be capable of providing the performance and flexibility necessary to open the global market to rural Maryland. Dark Fiber – Fiber optic strands may be provided to a Member on a monthly lease, annual lease, or IRU basis for up to 20 years. The fiber must be lit and used on a regular basis by a Member who has the business demand and competency to plan and manage their own fiber network. MdBC will provide continuous 24x7 network continuity monitoring and fiber restoration services in the event the fiber backbone is cut, damaged or needs to be relocated. Access (New Builds) – MdBC Members may require additional fiber spurs, referred to as laterals, to be built from existing MdBC access points or Node buildings. Depending on Member needs and future growth potential, MdBC operations staff will work with the member to determine route selection, capital requirements and possible MdBC funding to complete the build. MdBC can leverage its existing right-of-way agreements to build new cost-effective open-access fiber spurs into end-customer premises. APPLICANT QUALIFICATIONS From its inception in 2006, the MdBC staff has, with an extremely lean organization, made considerable progress in actually installing a portion of the planned fiber optic network. Under the direction of the President & CEO and in collaboration with the expertise of broadband consultants, the MdBC has assumed responsibility for the planning, design and construction of the network. For this project, the MdBC has assembled a team demonstrating proficiency in the areas of telecommunications, information technology, project management and business development. In collaboration with contractors skilled in broadband installation and maintenance, highly experienced personnel will be dedicated to this effort to ensure project scope and schedule adherence. Collectively, the MdBC team has over 100 years of experience in telecommunications, finance, business development and broadband installation/construction. COMMUNITY ANCHOR INSTITUTIONS The MdBC is building a 144 count fiber backbone throughout the State. The MdBC will be able to build more quickly and less costly because State legislation has granted the MdBC perpetual access to all Maryland “Rights of Way” without cost or imposition. In consideration of this access, MdBC has set aside 12 fibers of the 144 count backbone exclusively for the use of State facilities. The 12 fibers were divided among three Maryland State organizations (1) the Maryland Department of Transportation (MDOT); (2) the State Highway Administration (SHA); and (3) the Department of Internet Technology (DoIT). The MdBC has also entered into a partnership agreement with the University System of Maryland (USM), to provide fiber connectivity to all campus locations that are located along the fiber path. Within these fifteen counties, the MdBC network will reach 309 public schools, 56 public libraries, five colleges, twelve specialized schools, 15 health departments, 14 State Highway Administration facilities and 62 police departments. In addition, the network will reach 150 more critical community facilities, community anchor institutions and public safety entities not otherwise classified, such as the Department of Juvenile Services, the Salvation Army, Social Services, Economic Development Offices, etc. PROPOSED FUNDED SERVICE AREAS This project seeks to service the rural regions of Maryland including the Eastern Shore, Southern Maryland and Western Maryland. The proposed fiber-optic broadband network will physically touch 8,029 contiguous unserved and underserved census blocks along the network route; however, these

spans will enable our members to bring last mile services to 27,536 census blocks. Our fifteen county service area represent a population of 913,862, including 403,854 households and 25,090 businesses. The network spans 5,952 of Maryland's 9,844 square miles.

NON-DISCRIMINATION AND INTERCONNECTION OBLIGATIONS The MdBC provides open access network to all members that fall into one of the five categories of membership implemented by the original five Tri-county council members: (1) Class A- consisting of the original five tri-county council members; (2) Class B – telecommunications providers; (3) Class C – Government and public sector agencies; (4) Class D – commercial and industrial users and (5) Class E – joint user or shared resource (e.g., utility companies).

NUMBER OF HOUSEHOLDS AND BUSINESSES Southern Maryland: Population, 281,320 (91,545 in unserved/underserved census blocks); Households, 105,530 (34,034 located in unserved/underserved census blocks); Businesses, 6,451 Eastern Shore: Population, 395,843 (83,821 in unserved/underserved census blocks); Households, 195,607 (34,898 located in unserved/underserved census blocks); Businesses, 12,419 Western Maryland: Population, 236,699 (58,415 in unserved/underserved census blocks); Households, 102,717 (23,377 located in unserved/underserved census blocks); Businesses, 6,220 Total: Population, 913,862 (233,781 in unserved/underserved census blocks); Households, 403,854 (92,309 located in unserved/underserved census blocks); Businesses, 25,090

OVERALL INFRASTRUCTURE COST OF THE BROADBAND SYSTEM A statewide build-out is requesting \$126,370,000 in funding as outlined in the following: Network & Access, \$7,983,544; Outside Plant, \$96,529,946; Buildings and Land, \$4,870,780; Billing and Operational, \$826,892; Operating Equipment, \$867,963; Professional Services, \$12,262,980; Site Prep, \$488,376; Other, \$2,539,519.

EXPECTED SUBSCRIBER PROJECTIONS Forty-six Internet Service Providers throughout the State are currently members of the MdBC. As the MdBC is a middle-mile provider, these 46 companies represent our expected subscribers. Over the next five years, subscriber projections for the fifteen county region is expected to reach 230,500 households and 14,456 businesses.

JOB CREATION/RETENTION According to Connected Nations, it is estimated that this project will fuel \$2.8 billion in economic growth and will create and retain approximately 44,000 jobs in health care, education, national security and other technology sectors.