Executive Summary

The One Maryland middle mile fiber optic network will interconnect over 800 community anchor institutions across a wide swath of the state of Maryland. The proposed network seeks to address an opportunity to unite rural, urban, and suburban communities in one contiguous local government network across the state. The benefits of this interconnection are numerous and substantial, especially as they relate to sharing resources and knowledge among public schools, libraries, and public safety entities. One Maryland has attached 28 letters of support to this application from public sector partners in this initiative. The proposed One Maryland network will leverage the extensive capabilities and decades of experience of its participating local governments in operating fiber optic networks. It will create a stable and sustainable network that will focus on connecting anchor institutions that serve vulnerable communities and the public interest, while creating the middle mile infrastructure necessary to enable private operators to develop innovative last-mile networks throughout the state. Recognizing the participating jurisdictions’ unique geographic position adjacent to Washington, D.C, the proposed One Maryland project also seeks to facilitate an interoperable homeland security network that extends from the National Capital Region (NCR) to the Pennsylvania border. This aspect of the proposed project represents a significant regional and national imperative: • Given the many federal institutions located in the jurisdictions, and the tens of thousands of federal employees who live there, the One Maryland network could play a key role in ensuring a more robust continuity of operations plan for federal government agencies. • Many of the rural and suburban areas within the service area are first- and second-line evacuation routes in the event of a terrorist attack or natural disaster (e.g., a flu pandemic) in Washington, D.C. Given that public school buildings would be called into service as evacuation shelters, connecting those buildings and all hospitals and public health clinics in the service area would substantially improve the success of current evacuation plans. Likewise, connecting all emergency operations centers in the service area would improve the federal and jurisdictional approach to these challenges and needs. Proposed Service Area and Applications The proposed funded service area comprises 10 governmental jurisdictions across the National Capital Region (adjacent to Washington, D.C.), the Baltimore area, and central Maryland, including the cities of Annapolis and Baltimore. It covers approximately 4,200 square miles, including rural, urban, and suburban communities. In total, the project would pass about 1.8 million households (for a total of 4.7 million people), and roughly 71,000 businesses. In addition, the project will directly connect 866 community anchor institutions, public safety entities, and critical community organizations. The One Maryland middle mile project will significantly lower the barriers to entry for companies that are interested in offering last-mile service to unserved and underserved residents throughout the service area. In addition to that key role, the
The proposed network includes a variety of proposed services and applications for the proposed funded service areas and users, touching education, public safety, healthcare, and other key needs. The services and applications include:  

- **Education:** The One Maryland network will connect over 400 schools and hundreds of thousands of children to untold educational resources over fiber optics, bringing the world into the classroom in an interactive, high-capacity way through partnerships with Maryland Public Television, and other educational content providers. One Maryland will also interconnect with Mid-Atlantic Crossroads (MAX), a GigaPoP consortium of 38 participants, including the University System of Maryland Academic Telecommunications System (UMATS), bringing those schools a range of innovative content from colleges and universities in Maryland and beyond.  

- **Public safety:** The proposed One Maryland network will enhance emergency communications, interconnect operations centers and enable critical videoconferencing for regional emergency communications including training, and day-to-day operations. Given the One Maryland jurisdictions’ proximities to Washington, D.C., and their important collective role as first-line evacuation routes in the event of a major disaster or terrorist attack, these services are critical for federal and regional homeland security.  

- **Healthcare:** One Maryland seeks to connect hospitals and health care professionals and medical parks in the proposed service area. In addition to addressing a critical need, such connections will also help the jurisdictions meet the requirements of the ARRA’s Health Information Technology for Economic and Clinical Health (HITECH) Act.  

- **Support for Other ARRA applications:** The One Maryland network would also directly support two other proposed ARRA projects. One is a public computer center application from Montgomery County, Maryland—a scalable project that would expand successful computer labs in libraries, workforce training centers, and public housing. Another is Howard County, Maryland’s Energy Efficiency Conservation Block Grant which in part puts sub-meters on every government building to enable data collection and energy-savings dashboards that would lead to more efficient, cost-effective operations.

Project Technology and Community Impact
The One Maryland jurisdictions commit to meeting the non-discrimination and interconnection obligations outlined in the ARRA. In addition, the jurisdictions have designed the network such that there will be significant excess fiber available for Network Maryland, The Maryland Broadband Cooperative and private carriers to utilize for whatever commercial purposes they may desire. The type of broadband network that will be deployed (network type and technology standard) will include both ring topology and point to point and consist of Ethernet MPLS Network, Sonet, CWDM, and DWDM. The One Maryland consortium has significant qualifications that demonstrate its ability to implement and operate a broadband infrastructure, and to be a sustainable broadband services provider:  

- Each of the consortium’s 10 jurisdictions has successfully operated its own municipal fiber optic network for 10 years or more, and each has a well-qualified network technology staff that has experience planning, implementing, operating, and maintaining broadband infrastructure.  

- In addition, the proposed network will be operated by the One Maryland governance committee, established with the involvement of the chief information officers (CIOs) of each of the jurisdictions, and commitments from each for all necessary staffing and funding.  

- From the angle of organizational sustainability, the consortium’s 10 jurisdictions also represent the most solid of all service providers. Unlike non-profit organizations or public companies, the counties and municipalities cannot default on their obligations or cease their operations. One Maryland jurisdictions either have AA or AAA bond ratings, too, which essentially guarantees its sustainability.  

- The One Maryland consortium will also accrue significant savings that will further help ensure sustainability. For example,
Howard County currently pays roughly $2,500 per month per school for connectivity. Further, consortium members must sometimes pay $20,000 or more to private carriers for fiber installation to key community anchors. By alleviating some of these costs, this creates a multiplier effect for the requested ARRA grant funding: The grant funding would create infrastructure that enables cost savings—which in turn would enable the consortium to pursue its long-term vision of expanding the One Maryland network to interconnect all 24 Maryland jurisdictions. One Maryland is requesting $99 million for the cost of the Plan including all reasonable and appropriate permitting, construction, equipment expenses equipment expenses and administrative fees. The consortium will be providing a 22.4% match comprised of $20 million dollars in cash and $5.8 million dollars in equipment and in-kind services. The total cost including the match is $125,716 million dollars. As a middle mile project, the overall expected subscriber projections for the project includes all of the anchor institutions, government buildings, and public safety facilities that will be connected by the network—a total of over 800 schools, hospitals, libraries, emergency communications centers, and other sites in the proposed rural, urban, and suburban service area. The number of jobs estimated to be created or saved as a result of the project is roughly 1,300. This is based on a conservative methodology that equates each $92,000 of investment with the creation of one new job-year (per the President’s Council of Economic Advisers and OMB guidance for job creation estimates for Recovery Act grants). Connected Nation released a chart depicting that Maryland will save or create over 44,000 jobs just with increased broadband penetration and capacity. We recognize that this is an inflated number estimate that cannot be substantiated. However, the potential for economic development is substantial both on the private sector side with the open access commitments and through construction and other contracts. Overall, the One Maryland Consortium has submitted 14 letters from private sector companies interested in economic development opportunities. One Maryland has also submitted 28 letters of support and collaboration from other Maryland State and local government partners. This shows the extent, scope, and sustainability of this project that is unparalleled in Maryland and in the nation.