Applicant Name: HORIZON TELCOM, INC.

Project Title: Connecting Appalachian Ohio Middle Mile Consortium

Project Type: Comprehensive Community Infrastructure

Executive Summary

The Connecting Appalachian Ohio ' Middle Mile Consortium (CAO-MMC) proposes a comprehensive plan to fill gaping and persistent holes in broadband coverage across 34 impoverished rural counties. Today, in our 16,998 square mile service area an astounding 58.9% of the geography lacks even the most rudimentary broadband services. It is no surprise then that 31 of the 34 counties qualify as underserved. Of the 705,000 households passed in these southeastern Ohio foothills, 457,000 are underserved and 125,000 remain unserved. Further, the high-speed reliable fiber-optic services required for today's business, educational and health care applications are unavailable in all but a handful of locations. With 31 of our 34 counties classified as Economically Distressed Areas, we cannot afford the lost opportunities the lack of broadband imposes on our 1.86 million citizens. The public-private CAO-MMC offers a cost-effective and sustainable solution by expanding existing fiber-optic networks to provide metropolitan-class broadband throughout the service area. Agreements with last-mile providers will bring broadband to the region's 10,000 unserved square miles. This combination of new fiber and related expansion by last-mile providers will extend the CAO-MMC impact across the entirety of the 34-county region. With broadband in place, the united action of the CAO-MMC partners will create new jobs, open critical educational avenues, improve public safety coordination, advance health care innovation and reignite tourism. The project cannot proceed without BTOP CCI funding. The CAO-MMC leadership represents all categories of the 3,424 community anchor institutions passed in the service area. 592 of these sites have been included in the project for direct connection to the fiber network including: - 25 community colleges, 15 university campuses and 4 career training centers - 34 county 911 public safety answering points (PSAP) - 32 State of Ohio Multi-Agency Radio Communications System (MARCS) towers - 212 health care facilities - 231 K-12 school buildings - 34 industrial parks - 5 State park conference centers The remaining community anchor institutions will have the opportunity to build direct fiber spurs or contract with a participating last-mile provider. The CAO-MMC plan includes construction of 1,960 new miles of fiber-optic network. 1,097 miles of high-count backbone fiber will add 10 rings to existing networks. The backbone paths were designed to pass as closely as possible to community anchor institutions, wireless towers, business centers and electric company substations. An additional 863 miles of lateral fiber-optic cables will directly connect the 592 community anchors institutions. To 'light the fiber' the CAO-MMC will deploy state-of-the-art Cisco optical equipment complemented by a robust routing core to provide a wide set of metropolitan-class services. To support last-mile expansion, the CAO-MMC will work with commercial providers, county governments and port authorities to expand both wireless and fiber-to-the-home services. The existing 300 foot MARCS towers are spaced evenly across the unserved and underserved areas, providing a cost-effective last-mile
expansion option. We have received letters of intent from several ISPs to use our network for backhaul, including: - Omnicity, an Indiana-based wireless internet service provider expanding operations in Ohio - GMN Inc., an Ohio-based non-profit ISP serving three counties - JB-Nets, an Ohio-based wireless ISP - Vinton Hocking Perry Broadband Advisory Council - Horizon Telcom, a last-mile provider as well as the lead applicant, submitted a Round 2 BIP proposal that would provide 4G wireless services passing over 120,000 underserved households and extending broadband to 2,500 unserved square miles. The CAO-MMC will enter into any reasonable interconnection agreements. Community points-of-presence and numerous 'meet me' points in all fiber routes will facilitate cost-effective expansion of the network. Our proposal includes interconnection with the Ohio Academic Resources Network (OARnet) providing access to educational networks including BTOP Round 1 winners. As a member of the Ohio Middle Mile Consortium, interconnection with the other members will create a unified statewide network. High-speed links to urban 'carrier hotels' will provide backhaul to the global commercial networks. CAO-MMC management practices will be non-discriminatory, using only industry standard best practices to manage service levels. During the past 2 years, the public-private CAO-MMC has built an unprecedented level of support across the region including our partners: - Horizon Telcom [lead applicant] is a 115-year-old rural, independent telephone company located in the heart of Appalachian Ohio operating an existing 1,140-mile fiber-optic network serving 13 of our 34 counties. - OARnet [sub-recipient] provides statewide backbone services to its primary constituents: community colleges, higher education and public broadcasting. Established by the Ohio Board of Regents in 1987, OARnet operates a 1,850 mile fiber-optic network and serves as the state's Internet2 connector. - The service area's three Economic Development Districts of the U.S. Department of Commerce's Economic Development Administration [partners] represent the 321 city and 34 county governments. - The service area's three K-12 Information Technology Centers (ITCs) [partners] represent the interests of and provide a broad set of IT services to 622 K-12 schools. - The Southern Ohio Health Care Network (SOHCN) [partner] is a non-profit representing 353 health care facilities and two FCC Rural Health Care Pilot projects. The CAO-MMC has drawn such unified support from the region because the broadband gap in the area perpetuates and exacerbates our historic economic disadvantages. Of our 34-counties: - 31 are Economically Distressed - 15 are ARC 'distressed' or 'at-risk' - 13 endure unemployment 3.5% or more above the national average - 15 suffer from poverty rates 5% or more above the national average The region includes the 11 poorest counties in Ohio, and also supports above-average population concentrations of veterans, aged, disabled, impoverished, unemployed and medically underserved. Beyond the 464 direct/indirect jobs and 261 induced jobs created by the project, the broadband services delivered by the CAO-MMC will propel job creation by providing a key catalyst in the growth of the existing 157,980 businesses passed by this network including: - 37,414 businesses with multiple employees - 120,566 businesses with no employees other than the owner - 25,459 farms For the community colleges, the direct fiber connections from the CAO-MMC will provide high-speed access to the OARnet backbone, linking these institutions to the premier research and education networks nationwide. For public safety, the CAO-MMC fiber connections to PSAPs and MARCS towers will enable collaboration between county and municipal law enforcement and first responders, state-level agencies, and federal Homeland Security operations. The SOHCN's mission to improve health outcomes will take leaps forward as broadband enables widespread adoption of high-definition immersive telemedicine, electronic health records, health information exchange, distance learning and research. Extending broadband to the state park
conference centers will create tourism jobs by bringing back the group retreats and family vacationers they have lost due to the lack of broadband. By the end of year 5, we project region wide that the CAO-MMC will directly or indirectly serve: - 1,438 community anchor fiber subscribers assuming a 42% take rate - 8,231 business fiber subscribers based on a 22% penetration of the existing businesses with multiple employees - 101,025 new residential and small business last-mile subscribers elevating adoption in the service area to 57%, equal to Ohio's average adoption level today. The CAO-MMC partners' 30% cash match will magnify the impact of federal funds. The CAO-MMC project needs $66.5 million in BTOP CCI funding to begin its $95 million mission. The internal rate of return (IRR) would be -1.66% without grant funding, making it impossible to justify the investment. With the requested BTOP funding, however, the IRR improves to an investment worthy 22.8%. The importance of expanding broadband availability in our service area cannot be overstated. The CAO-MMC's comprehensive and holistic planning among the community anchor partners will maximize the impact of this new connectivity, creating jobs and improving the health of the society. With BTOP CCI funding, our public-private partnership buoyed by the experience and expertise of the project team will seize the opportunity to transform Appalachian Ohio.