

Broadband USA Applications Database

Applicant Name: AMERICAN FIBER SYSTEMS, INC.

Project Title: Metro-INET/AFS Community Broadband Network in Anoka, Ramsey, Washington & Hennepin counties in MN

Project Type: Comprehensive Community Infrastructure

Executive Summary

Opening Statement American Fiber Systems, Inc. ('AFS') in partnership with Metro-INET, Roseville, North Saint Paul, Mounds View, Maplewood and 10 other partner communities, seeks \$12,166,927 in BTOP Middle Mile Infrastructure funding from the ARRA to complete a fiber-based network in the state of Minnesota. The 'shovel ready' build out of the Metro-INET/AFS Community Broadband Network ('INET/AFS-Net') will connect 40 public safety entities, 16 city, county, and state government facilities, 10 schools, and 11 other community anchor institutions in Washington, Ramsey, Hennepin, and Anoka counties. In addition, INET/AFS-Net will provide advanced fiber-based broadband services to the communities, CAIs, and businesses along and near the project route. The project is a collaborative public-private effort establishing partnerships between multiple municipal, community organizations, and AFS, an industry leading fiber service carrier, to provide reliable, scalable, and cost-effective high-speed middle mile broadband connectivity. The INET/AFS-Net is a complementary network to the Ramsey Broadband Community Fiber Network (Easygrants ID: 5397) which we endorse. The projects are separate, independent and will deliver separately to each of their partners. Problem Statement Minnesota's government facilities and public safety entities are exposed to potential connectivity failures given current limited points of access as well as bandwidth constraints on the existing network. These critical facilities need a high-speed communications network with route diversity available at a reasonable cost to communicate, coordinate, and respond more effectively. In fact, Minnesota's public safety agencies are facing the daunting challenge of adhering to regional interoperability mandates from the Federal government by 2012 while saddled with the handicap of having far less core fiber network than other parts of the USA. Metro-INET is made up of 20 communities which are Partners to this project, they have deployed about 25 miles of fiber on a point-to-point network with previous taxpayer funding. This INET/AFS project leverages these communities' prior investments by deploying fiber to areas they previously could not afford but are critical and architected in a multiple ring configuration to provide protection and needed capacity. The route design was developed to reach many more CAIs and businesses thus enabling economic development well into the future. The communities yield cost savings now, increased needed capacity and future expansion at only incremental cost. Proposed Solution INET/AFS-Net will provide a fiber-optic platform that provides the proposed funded service area with a future-proofed, technology-agnostic platform with a lifespan of well over 40 years. It will build 121 miles of new fiber utilizing the local labor force connecting 77 CAIs. In addition, INET/AFS-Net will connect with 11 interconnection points along the fiber route ensuring middle mile fiber is available to other communities, CAIs, and businesses. The CAIs connected initially are the highest bandwidth and

greatest need facilities defined by project partners. More CAIs will be connected after the funding period as the needs arise. It is expected that the project will be complete within 30 months and create 165 jobs. Proof of Readiness Since 2000 AFS has successfully designed and deployed middle mile fiber-based networks in 9 metro markets across the USA, including over 1,110 route miles and 1,764 on-net locations including customer facilities, carrier hotels, central offices, data centers and cell towers. Over the last 5 years AFS has significantly and successfully expanded the networks in all of its markets and completed over 100 fiber projects of varying scale and complexity. For example, AFS and its partners successfully implemented a project for the State of Nevada to connect all of its critical facilities with intercity connectivity between Reno and Carson City. The company's core competency is the successful design, implementation, and operation of fiber networks, which it has demonstrated continuously since its inception. Project Impact The project will connect ~31% of all government facilities and public safety sites in the proposed service area, providing these institutions reliable and route-diversified access to the critical data that they require. The fiber connectivity will enhance planning, coordination, and responsiveness of first responders across all communities and enable more coordinated and efficient law enforcement and emergency response. The project will create immediate jobs and the bandwidth capacity will enable the creation high-paying 'knowledge jobs' in years to come. INET/AFS-Net will dramatically improve last mile broadband access particularly for underserved communities along the fiber route (10 of the communities within the service area are underserved). To accomplish this, INET/AFS-Net will enable further competition and investment for Fiber-To-The-Home (FTTH) companies. It will make available 24 strands of dark fiber from its existing backbone along with 24 strands from this proposal to FTTH providers at a lease cost of \$1 for 40 years of use. This will make available, at virtually no cost, more than 150 route miles of backbone fiber to FTTH providers, thus eliminating millions of dollars of costs typically incurred in a network build. This proposal will enable and encourage competition to enter the market, resulting in lower prices, better choices, and increased service reliability. Proposed Funded Service Area & Project Budget The project application contains one proposed funded service area consisting of 121 miles of new fiber build in St. Paul, Maplewood, Roseville, Mounds View, and other communities in the greater Northern Minneapolis/St Paul area. The new fiber build passes communities that include 297,533 households, 25,836 businesses, and 1,893 CAIs. The project includes existing AFS fiber miles and equipment as in-kind contributions, but these figures are associated only with the new fiber build. AFS will be providing a cash match equal to 17% of the Total Project Cost cost plus an in-kind contribution of existing fiber facilities and equipment equal to 16%; therefore, the total AFS match is 33%. The Federal BTOP grant request is for \$12,166,927, 67% of the total project cost. Network Components & Service Availability The project will use fiber-optic network cables and equipment from manufactures including Nokia-Siemens and Ciena, which were selected based on quality and reliability. For CAIs and businesses along the fiber, AFS will make the following transport services available: Ethernet private line, virtual private line, virtual LAN, internet access; managed wavelength service; TDM / SONET transport; dark fiber. Bandwidth available ranges from 10Mb to 10Gb and soon 100Gb. AFS is a non-discriminatory open access provider of wholesale transport services to any party interested in purchasing capacity, including carriers, last mile providers, businesses, and institutions. AFS does not discriminate against potential customers and makes available dark fiber strand leases on a non-discriminatory basis to any party. AFS' approach to selling bandwidth adheres to the non-discrimination and interconnection requirements of the BTOP NOFA. Partners &

Community Support The project is a public-private partnership with Ramsey County/City of St Paul and AFS. The project has received overwhelming support from state, county, and city agencies and community anchor institutions in City of Roseville, City of North Saint Paul, City of Mounds View, City of Maplewood, and others. The attached letters of support highlight the key benefits of the project. Below is short sampling of quotes from project partners and supporters.

- ' Connect anchor institutions: the project will 'result in a community infrastructure to meet the needs of the local government partners and address the needs of the community for high speed 'open-access' fiber to support next generation applications' CIO, Ramsey County
- ' Spur job creation: 'by providing an increasingly vital service to underserved households, AFS will both increase commerce levels across the nation and provide jobs' U.S. Senator Kirsten Gillibrand
- ' Enable better security and public safety: 'the project will enable secure interagency communications for public safety organizations' White Bear Township