

Broadband USA Applications Database

Applicant Name: Mid-State Education District

Project Title: Central Minnesota Rural Broadband Access

Project Type: Last Mile Non-Remote

Executive Summary

The Mid State Education District (MSED) proposes to expand and manage a combined fiber and wireless broadband system to provide more than 1,600 square miles of 4G (WiMax) coverage and 150 miles of fiber optic for the counties of Todd, Morrison & Mille Lacs in central Minnesota. This project will not only deliver network access for business and consumer Internet applications enabling direct and indirect job creation through market expansion and the development of IT enabled services (ITES) industries, it will also enable the implementation advanced broadband solutions for government, education, public safety, cultural organizations. This system will be operated by MidCom, a non-profit entity comprised of MSED, Counties, Cities and Schools. MidCom brings together more than 20 years of experience operating more than 150 miles of fiber optic network serving the community today. In addition to the core members, MidCom maintains an advisory board of health care facilities and higher education institutions which provide valuable insight to the drivers of the healthcare and user communities. Through their experience and active engagement of key stakeholders across the community MidCom is well positioned to effectively manage the service relationships necessary to maximize network monetization. The revenues generated through MidCom will contribute to future network expansion, upgrades and advanced applications for the user communities including Government, MLB Ojibwe, Education, Healthcare providers, public safety agencies and the subscriber community. Our private partners, including three local Internet Service Providers, will accelerate access and use of services by residents, businesses and others across central Minnesota under a Community Benefits Agreement, leveraging their community brand awareness. Partnerships with the Regional Economic Development Councils (Region 5 and East Central RDC) will also facilitate opportunities to promote economic development through shared awareness campaigns and outreach efforts. Solution Logix, a woman-owned SDB enterprise specializing in telecommunications design and operation, will provide network operations center services including advanced technical support, centralized intelligence inference and analytics platforms, interoperability and archival of digital surveillance evidence for law enforcement agencies. Critically, MSED's proposed service area includes broadband services for two Tribal Lands of the Mille Lacs Band of Ojibwe, which are currently underserved and unserved communities. Additionally, a significant portion of the proposed coverage area is considered remote; the most remote point of the network stands at almost 100 miles from an urban area. MSED is driving broadband adoption through applications supporting our Institutional subscribers. We propose an innovative blend of broadband applications, key to the improved operations of our healthcare, government and critical infrastructure services to our communities. A few key benefits: Strategic network design: (1) Capital and operating costs are reduced by leveraging existing fiber backbone & tower facilities from state/county,

and by implementing a centralized network operations center for institutional and application support;

(2) Service availability maximized by implementing licensed 3.65GHz to obtain greatest reach in licensed frequencies. Applications: (1) Cost reductions for institutional subscribers by enabling the implementation of technologies such as VoIP, Video Conferencing, etc.; (2) Collaboration enabled through the use of new social network tools by community members, institutions and businesses.

Education: (1) Educational technology reach expanded for both K-12 and Higher Education Interactive TV (ITV) from 10 to 47 schools, almost a 5-fold increase. This expansion allows thousands of additional students to access enhanced learning environments and educational content not previously available within these communities; (2) Expanded ITV platforms provide capabilities for remote parent-teacher conferences and the ability to deliver required second language courses to non-native American students. The following respond to the specific required topics in order: Opportunities the proposed system seeks to address: - Streamline the delivery of government services for County and City Government, leveraging a 21st century infrastructure to promote regional economic development, cost reduction and future cost avoidance (need to define) - Provide the advantages of Distance Learning opportunities, and the educational and social benefits of Community Broadband access for the Mille Lacs Band of Ojibwe - Expand innovation of Educational services for K-12 & Higher Education Institutions while also enhancing student and school safety - Improve remote access to Healthcare, and enhancing patient care outcomes by increasing the data and video capabilities of Healthcare providers - Increase public safety through improved fixed and mobile Broadband connectivity to facilities and vehicles and through enhanced data and video transfer among public safety agencies - Stimulate community broadband access and adoption through improved e-Government applications and increased Civic participation with on-line access to community, cultural and Arts programming

General description: The Mid State Education District service area is the Central Minnesota region; comprised of Todd, Morrison & Mille Lacs counties: Number of households and businesses: 36 communities - Employers - Mille Lacs: 726, Morrison: 970, Todd: 580 (2008 County) Self Employed - Mille Lacs: 2,318, Morrison: 2,472, Todd: 1,465 (2006 County) Population - Mille Lacs: 15,543, Morrison: 31,036, Todd: 24,426 (2000 County) Households - Mille Lacs: 7,734, Morrison: 13,994, Todd: 11,900 (2000 County) Unserved Households: 9,567 Underserved Households: 18,913 Number of community anchor institutions: 3 County Government Centers, 36 city/town halls, 47 Schools, 3 hospitals, 12 Primary Healthcare Centers, 11 Police Departments, 3 Sheriff's Offices, 17 Fire Departments

Proposed Services and applications: 1600+ square miles of 4G / WiMax coverage, 36 communities, 150 miles of new fiber supporting: 3 Tiers of consumer (residential) fixed broadband access and up to 3 tiers of business fixed broadband access - Voice services - Mobile broadband for first responders & law enforcement - Fiber To The Home (FTTH)/Staples only - ITV - Fixed & portable surveillance for law enforcement, healthcare & schools - Interoperability platform for healthcare eRecords - Search Engine for police databases - Centralized surveillance monitoring and archival

Approach to addressing the non-discrimination and interconnection obligations: We maintain neutrality and provide an unbiased approach to service partners based on our non-profit ownership through MSED and our operational management by Mid-Com, who represents all the stakeholders as a joint-powers organization. This organizational structure, transparency and stakeholder involvement will foster an open network environment to provide choice among last mile service providers, end user services and applications available to the tri-county coverage area. In leveraging Mid-Com as the entity for engaging and contracting for both wired/wireless service providers

and application providers. MSED already has two service providers currently engaged to provide last mile broadband wireless services to the entire broadband footprint. Type of broadband system that will be deployed: Fiber backbone will provide 90% of the middle mile layer - Augmented with point to point wireless backhaul (5.8GHz licensed) in several locations to provide redundant paths for the middle mile layer - FTTH within the city of Staples - - 3.65GHz fixed and mobile wireless broadband - Fiber interconnection to schools, healthcare facilities, city / town halls, police&fire departments, libraries and government facilities

Qualifications of the applicant: MSED has been operating approximately 150 miles of fiber infrastructure serving the tri-county school districts and various last mile service providers for over 20 years. The service providers engaged to provide last mile services have been delivering services to their communities for 15+ years

Overall infrastructure cost of the broadband system: The overall cost for the Mid State Minnesota Community Broadband Project is estimated at \$65M. Overall expected subscriber projections for the project: By Year 5, the project is projected to support 8,358 residential subscribers and 164 business subscribers. Number of jobs estimated to be created or saved: The proposed business model offers maximum impact to job creation through direct jobs associated with the network's deployment and on-going operation and in-direct job creation and enhancement through the business and community services it will support: Direct: Total: 79; Construction Phase: Tower build: 15, Fiber install: 10, Equip Config: 4, Equip Install: 6, Nextera installers: 10, Install support engineers: 2, Operations Phase: MSED: 1 Exec, 3 Program Mgrs; Network Operations/Solution Logix: 2 Execs, 2 Mgrs, 4 Program Mgrs., 9 Network Support Staff, 3 System Engineers, 3 Account Managers; Nextera 1 Engineer, 2 Repair Technicians, 2 Customer service Reps, Indirect: Total: 11 FTEs (est.) Healthcare: 2-3 FTEs increasing the use of the Medisys platform for new services (on-ambulance diagnosis) – Law Enforcement: 2-3 FTEs utilizing the network for county, city, educational and tribal security monitoring – Community Services: 3-5 FTEs supporting employment, educational and social service outreach support in the communities and tribal population.