Applicant Name: NATIVE AMERICAN DEVELOPMENT CORP

Project Title: Montana Inter-Tribal Telecommunication Consortium

Project Type: Comprehensive Community Infrastructure

Executive Summary

The Montana Inter-Tribal Telecommunication Consortium is a partnership between the Native American Development Corporation and the tribal governments of Montana's Reservations to develop middle mile fiber optic network connecting the Blackfeet, Crow, Flathead-Salish and Kootenai, Fort Peck, Fort Belknap, N.Cheyenne and Rocky Boys Reservations. The Consortium will seek bids from qualified entities to perform the installation and day-to-day maintenance and administration of the middle mile infrastructure to be developed. The development of broadband infrastructure in Montana has been impacted by the high cost of construction in this challenging terrain and the realities of the population density, which has resulted in a middle mile hole that is immediately evident on any national broadband map. The ARRA broadband stimulus funding represents an opportunity to fill that hole and the merits of this application are organized below according to the applications directions. a) Tribal communities are among the nation's most challenged and vulnerable populations. Montana has seven Reservations where it simply has not been affordable for any entity to build a broadband network. The availability of broadband stimulus funds would allow these communities to connect to the rest of the world, improving the economies and lives of their residents. The Consortium has the full support and participation of Montana's seven Tribal governments as well as State government for this project. The State has identified broadband on the Reservations as a top priority for Montana. The Consortium will seek bids from qualified entities to build a fully redundant, carrier class, 96 count fiber middle mile backbone to connect 7 Reservations. The proposed project advances virtually every objective of the broadband provisions of the ARRA and will provide affordable broadband services to government, public safety, healthcare, education, corporate, institutional and carrier/service provider customers. The project will create immediate and long term employment and economic growth. The project will also allow for, among other things, distance learning and telemedicine. By significantly enhancing and expanding Montana's limited middle-mile broadband infrastructure, the proposed project will serve as an important infrastructure and economic development catalyst in the target communities. Because the Reservations within the state are remote, few middle mile access points exist to bring faster internet speeds to those areas. To bring affordable broadband access to reservations and remote areas first requires the establishment of a middle mile broadband network. This is the first step in the long term plan that will include the establishment of cost effective last mile solutions to be deployed once the fiber network, capable of affordable backhaul, is in place. Furthermore, the project will make transmission and Internet access services available for wholesale purchase by other carriers/service providers, allowing for expansion of advanced services. b) The Project will create a 1,193.73 mile fiber optic network connecting seven Reservations which are historically unserved and underserved
communities. The project will pass 3,794 total unserved reservation homes and 3,959 total reservation underserved homes. c) The network will also pass 101 businesses which reside in unserved areas and 804 businesses in underserved areas. d) The Project will include a range of anchor institutions from 23 Montana reservation communities including approximately 21 educational institutions, 26 hospitals & clinics, 3 libraries, 3 police/fire departments and 24 community support agencies. e) The Project will provide community-wide access to residential and business broadband service. In addition, schools, libraries, hospitals, and public safety entities will have access to a wide range of communications and information applications. In particular, the network will enable broadband access for Public Computer Centers sought by the State of Montana. f) The Consortium will adhere to the principles contained in the FCC’s Internet Policy Statement; It does not favor any lawful Internet applications and content over others, it will display network management policies in a prominent location on its web page and provides notice to customers on any changes to these policies, it connects to the public Internet directly or indirectly on this grant funded network will offer interconnection, where technically feasible without exceeding current or reasonably anticipated limitations, on reasonable rates and terms to be negotiated in good faith with requesting parties. The Consortium’s practices will meet the principles contained in the FCC Policy Statement by encouraging broadband deployment while preserving and promoting the open and interconnected nature of the public Internet. The Consortium will not prevent consumers from running applications and using services of their choice. g) The Consortium’s network is based on 96 count fiber next-generation 10G fiber optic technology and uses the most advanced platform from vendors such as Juniper Networks, Cisco and Alcatel. Juniper is used as an example for this application. The Juniper MX480 core router and M120 Edge router platforms would be the key components of our Network. The MX480 is the latest of technologically advanced routers and it leverages years of expertise in delivering advanced IP/MPLS services at scale. MX480 provides up to 480 Gbps of switching and routing capacity - enabling reduced costs and capable of scaling to support growth. It is purpose built for demanding carrier applications offering unmatched scalability, performance, reliability, and quality of service. The M120 Multiservice Edge Router delivers support for 128 GE subscriber ports, with 10 GB Ethernet or OC 192 uplink capability. Ideal for supporting high-bandwidth converged edge routing applications, the M120 is designed to facilitate service aggregation for the multiplay needs of service providers and enterprise users. The Layered Scalable Architecture approach provides ‘five nines availability (99.999% uptime) by providing complete redundancy to avoid any service interruption from route, hardware or software failures. The layered network is comprised of 3 segregated layers; core, distribution and aggregation. The basic fundamental behind this approach is to have the flexibility and simplicity, but yet provide the highest availability of the overall network. The security aspect of the network is a critical component of the design and will incorporate a secure transmission protocol by employing advanced technologies to manage authentication, authorization and access to the network and content. Scalability is a key component of the overall design with a layered network approach providing highly scalable IP and optical infrastructure to support various applications such as IP transport, Metro Ethernet services, wavelength services, and dark fiber solutions, among others. The standard based platform and management suite are capable of supporting multiplay services such as voice, video, data and wireless. h) Montana’s seven federally-recognized Tribal governments are sophisticated entities who individually operate and manage a broad array of governmental services, resource management and business operations. Some of the Tribes are already involved in Last Mile
business ventures. The Blackfeet Tribe for example, via its economic development agency, owns 51% of Oki Communications, a Last Mile provider on their reservation. Their partner is Ronan Telephone Company. The Native American Development Corporation is likewise responsible for the proper operation and management of local, State and Federal resources. The Consortium is currently in discussion with a wide variety of broadband technical and provider groups. If the proposed project is funded, the Consortium will seek proposals from these groups and any other interested parties. The Consortium invites participation from Federal BTOP staff and/or contractors to assist in this effort. We are confident that highly skilled and qualified contractor(s) will be found to develop and manage the proposed infrastructure, including long-term sustainability. The contractor(s) will be required to train Tribal members for long-term management, operations & technical support jobs that may one day allow the Consortium to assume full management & administration of the proposed infrastructure and any other projects that might be developed by the consortium. Although no exact timetable exists, we anticipate that it could take 8-12 years to fully prepare for that transition. I)The anticipated total cost of the proposed middle mile infrastructure is $46,724,600. J)Approximately 75 business customers are projected by 2014. K)The project could create 150-200 direct jobs, and more indirect jobs over the next few years.