Enabling Rural Alaska (ERA) offers a broadband network solution designed to provide affordable and sustainable Middle Mile transport to one (1) underserved and 21 unserved rural Alaska communities. The network would bring into the American mainstream 4,102 Alaska households, 412 businesses, and 198 anchor institutions, linking them to worldwide information-age resources for mutual personal and institutional benefit. Middle-America is not only thousands of miles away from rural Alaskans, it is also generations away in terms of access to opportunity and integration of Alaska cultural traditions and other unique assets into the American profile. Satellite service arguably represents the only proven, practical alternative to deliver communications services to Alaska's sparsely populated, broad, far-flung, and isolated communities. Satellites now deliver telecommunications to about 50,000 rural Alaskans situated in more than 200 communities, spread out over a land mass equal to one-fifth of the contiguous 48 states. The ERA proposal offers a reasonable and affordable investment to the American taxpayer, while adequately serving critical needs of Alaska for the foreseeable future and beyond. TALD will operate the network on a financially self-sustaining basis, with allowance for reserves adequate to replace transponder facilities as existing satellite facilities reach the end of their useful life. Thus, the economic improvements in rural Alaska achieved through this initial grant can be sustained indefinitely. The network would compensate for lack of physical infrastructure traditionally provided by government to support remote rural America. By making robust Internet and other advanced telecommunications services more accessible and affordable to rural consumers and businesses, commercial activity will increase within, to, and from Alaska's most remote communities. This, in turn, will stimulate job creation and employment and will concomitantly reduce dependency on government assistance programs. The project will generate 295 job years; of those, 189 represent direct or indirect affects of ERA and 106 are residual affects. Advanced broadband services will (i) open commercial opportunities through distance marketing and sales; (ii) create access to virtual libraries composed of tens of thousands of sites for books, art, and music; (iii) improve public safety by enhancing fire, law enforcement and rescue communication and coordination; and (iv) secure prompt health and medical information, including preventive and wellness advice and timely access to urban Alaska resources in emergency care situations. The ERA proposal is a joint venture of TelAlaska Long Distance (TALD) and its JV Partner, BBN Inc (BBN). TALD, as the lead applicant, will be managing the joint venture's projects and assisting BBN with training, construction and project management, supervision and oversight. TALD and BBN will own, maintain and operate the earth station facilities to be constructed in the rural communities in which it has historically delivered telecommunications services. Services will be delivered to the last mile via TALD's ILEC and CATV affiliates and BBN's ILEC and CATV affiliates. TALD and BBN collectively have 72
years of rural Alaska experience. Projected penetration rates for stimulus-enabled broadband are 70 percent in TelAlaska service areas in western Alaska along the coast of the Chukchi Sea and Norton Sound, in Interior Alaska, and on the Alaska Peninsula; and 65 percent in BBN service areas in Interior Alaska. The earth station facilities to be established in each rural community will be linked by two (2) satellite transponders to the Internet backbone, connecting these rural communities with education, medical, cultural, and economic opportunities throughout Alaska, the nation and the world. These essential community facilities also will give the outside world a connection to the people, culture, art, commerce, and ingenuity of rural Alaska. New avenues for advancing education, cultural understanding and commerce will help these communities overcome disadvantages caused by the almost impenetrable confines of their geography and topography. The ERA network will incorporate state-of-the-art technology based on a IP packet based architecture. This technology will offer thousands of rural Alaskans access to the Internet simultaneously over the same network spectrum. As a result, high quality access to modern telecommunications and information services will be delivered to rural areas, all of which are off the road system and accessible only by air. In Little Diomede, for example, access is available only by helicopter year-round and fixed wing aircraft for fewer than six months of the year when the sea is frozen to accommodate an ice runway and weather permits safe travel. Travel by water is an unsafe alternative. Results from a recent nationwide study reveal that the State of Alaska rounds out the bottom five states with the slowest median Internet download rates: 0.8 Mbps. The ERA project will alleviate the current financial and technical constraints in delivering cost effective high speed access into project communities. TALD and BBN will provide Internet connectivity capacity in the 45 Mbps (receive) and 20 Mbps (transmit) speeds to the ILEC central office and CATV head-end sites and end locations. The Middle Mile solution is based on the utilization of exclusive and non-contended use of C-band satellite transponder capacity, which provides a highly reliable and affordable network transport medium. Utilizing current state-of-the-art technology; redundant networks, shared hardware elements, RF modulation and traffic prioritization, continuous operation can be specified by the availability number approaching 99.99%. The IP network will support MPLS, VoIP, TDM, cellular, voice, and video conferencing services. Total cost of the broadband network will be $27,158,938. TelAlaska Long Distance (TALD) has the technical and operational staff experience to sufficiently provide timely installation and ongoing management of the proposed satellite infrastructure. Its expertise with C-Band, KU and KA networks, from both a management and terminal installation perspective, dates back to 2003. It understands nuances associated with the specialized construction techniques unique to remote and harsh rural environments. TALD currently supports a total of 12 C-Band and two KU-Band terminals located throughout Alaska maintaining system availability well beyond 99% and it employs a staff of certified network engineers and technicians to maintain and manage its network, and designates services of X2nSat, its satellite provider, for network support services. X2nSat supports an existing network segment between 14 TALD Alaska sites and the California earth station teleport in Richmond, CA. This places X2nSat in a position to assume the role of network management. TALD will operate the network for the benefit of the public at large without discrimination. Accordingly, TALD (i) promotes Network Openness and adheres to the principles contained in the FCC’s Internet Policy Statement (FCC 05'151, adopted August 5, 2005); (ii) will not favor any lawful Internet applications and content over others; (iii) will display any network management policies in a prominent location on the service provider’s web page and provide notice to customers of changes to these policies (awardees must
describe any business practices or technical mechanisms they employ, other than standard best-effort Internet delivery, to allocate capacity; differentiate among applications, providers, or sources; limit usage; and manage illegal or harmful content); (iv) will connect to the public Internet directly or indirectly, such that its broadband stimulus project is not an entirely private closed network; and (v) will offer interconnection, where technically feasible without exceeding current or reasonably anticipated capacity limitations, at reasonable rates and terms to be negotiated with requesting parties. This includes both the ability to connect to the public Internet and physical interconnection for the exchange of traffic. Scores of state and federal studies have for years documented the adverse economic conditions of remote rural Alaska communities. The absence of publicly-financed facilities and infrastructure elements as fundamental as highways, libraries, and hospitals compromises rural development and stalls economic growth, reduces job opportunities, and diminishes quality of life - especially in terms of health and education. It increases the need for public assistance. And, significantly, it inhibits Native expression and reinforcement and sustainability of First Alaskans' cultural traditions. A valuable and unique aspect of our homogenous American character is at risk.