Broadband USA Applications Database

Applicant Name: TelAlaska Long Distance, Inc.

Project Title: Enabling Rural Alaska

Project Type: Middle Mile

_____Executive Summary_____

The Enabling Rural Alaska (ERA) proposal is a satellite network designed to bring affordable and sustainable Middle Mile transport to 52 unserved and two (2) underserved rural Alaska communities. The network would compensate for the lack of infrastructure normally provided by government to support rural development. The need for such infrastructure is particularly acute due to high costs related to geography, topography, climate and sparse population. Scores of state and federal studies have for years documented the adverse economic conditions of 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, diminishes the quality of life, especially in terms of health and education; and increases the need for public assistance. It also inhibits Native expression and reinforcement of cultural traditions which jeopardizes sustainability of the culture of Native First Alaskans. Access to the Internet and other advanced, broadband communications can compensate for missing or inadequate infrastructure in rural areas. Advanced broadband services can (i) open commercial opportunities through distance marketing and sales; (ii) create access to virtual libraries composed 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. Facilities that deliver affordable Internet service become essential to Alaska communities, institutions, businesses, families and individuals given remote rural Alaska's lack of basic community facilities to otherwise deliver information-age opportunities. The ERA proposal is a joint venture of TelAlaska Long Distance (TALD) and its JV Partners: Arctic Slope Telephone Association Cooperative, Inc., OTZ Telephone Cooperative, Inc., Bristol Bay Telephone Cooperative, Inc., Yukon Telephone Company, and Summit Telephone Company. TALD, as the lead applicant, will be managing the joint venture's projects and assisting other JV Partners with training, construction and project management, supervision and oversight. Each JV Partner will own, maintain and operate the earth station facilities to be constructed in the rural communities in which the JV Partner has historically delivered telecommunications services. A total of 54 sites are included in the plan, 52 of which are by federal definition unserved and two (2) are underserved. TALD and its JV Partners collectively have 235 years rural Alaska experience. Projected penetration rates for stimulus-enabled broadband are 51.1%, households; 53.7%, businesses; and 53.9%, strategic institutions. Satellite service represents the only proven, practical way to deliver communications services to the broad, far-flung, and isolated communities of the 49th state. Satellites 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 project will construct satellite facilities in 54 of these isolated communities which are spread across the North Slope region along the Arctic Ocean to the Northwest Arctic above the Arctic Circle and down to the Seward Peninsula, a large land mass that projects 200 miles into the Bering Sea; the Yukon-Koyukuk area which is the size of Montana; Bristol Bay Borough on Bristol Bay, southwest along the western most point of the Aleutians and Kodiak Island. This proposal will bring affordable broadband access to over 9,100 households and 1,300 businesses; of which nearly 400 are critical community organizations (e.g., health care, education, public safety, etc.). 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 educational, 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 digital packet-switching 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, most of which are off the road system and accessible only by air. In Little Diomede, for example, access is available only by helicopter and for fewer than six months of the year when 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 its JV Partners will provide Internet connectivity capacity in the 45 Mbps (receive) and 20 Mbps (transmit) speeds to the ILEC central office 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 network will support IP, MPLS, VoIP, TDM-cellular, voice, and video conferencing services. Total cost of the broadband network will be $38,331,404. TelAlaska Long Distance (TALD) has the technical and operational staff experience to sufficiently provide timely installation and ongoing management of the proposed satellite infrastructure. Our expertise with C-Band, KU and KA networks, from both a management and terminal installation perspective, dates back to 2003. We have a strong understanding of the nuances associated with the specialized construction techniques unique to our remote and harsh rural environment. TALD currently supports a total of 12 C-Band terminals located throughout Alaska maintaining system availability well beyond 99%. 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 Anchorage, AK 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. 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. By making Internet and other advance telecommunications services more accessible by - 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 opportunities and will concomitantly reduce dependency on government assistance programs. Information access and availability created by the ERA program will serve public purposes by employing information age technologies to compensate for absent physical infrastructure that is fundamental to the American way of life. Middle-America is not only thousands of miles away from some rural Alaskans; it is also generations away in terms of access to opportunity. For decades communications entities have struggled to provide advanced services to rural Alaska. Without a seed grant, TALD and its JV Partners will be unable to provide affordable broadband Internet services to Alaska's rural and remote communities and the gap between the information "haves" and "have-nots" will continue to widen.