Broadband USA Applications Database

Applicant Name: Adak Eagle Enterprises, LLC

Project Title: Aleutian Fiber Connection

Project Type: Middle Mile

_____**Executive Summary**_____

Executive Summary: Adak Eagle Enterprises is proposing to build an undersea fiber optic middle mile network to provide desperately needed backhaul to the entire 2000 mile Aleutian Island chain of rural Alaska. The entire Aleutian Island chain is classified as rural and unserved. This network will have landing sites at over 23 different communities along the chain. The communities of the Aleutians suffer today from a lack of adequate telecommunications backhaul. This limits the job and commerce opportunities that are so desperately needed in this region. Unemployment and under-employment is very high in this area, and much of it can be attributed to the lack of telecommunications infrastructure that attracts business as they simply cannot afford to establish businesses in these areas without appropriate services that makes them competitive with the rest of America. Given its remote nature, existing backhaul in the Aleutians is provided using satellite technology, which is very limited in its capabilities and very expensive. A typical T1 (1500k) backhaul pipe in the lower 48 can be purchased for as little as $200 per month. Using satellite, the only option available in the Aleutians of Alaska, typically runs about $15,000 per month. It is not only expensive, but limited. Even if you desire higher bandwidth, it may not be available because satellites can only handle a specific amount of data. Satellite backhaul also suffers from additional challenges such as unreliability and downtime in adverse weather conditions, which are frequent in this area of America, signal delays and no redundancy. Satellite transmission is not capable of serving the needs of the 21st century user. By having the fiber built in the ground, it is possible to eliminate the weather-related downtime. Due to its location in the Pacific Ocean, the Aleutian Islands provide an important role in Homeland Security by keeping possible threats from some far eastern countries in check. There are many military installations along the chain that have expressed a great need to have better broadband capabilities to assist in their assignments. The US Coast Guard is using the Aleutians as an important staging area for search and rescue operations. First Responders for fire and safety also lack adequate telecommunications, which hinders their ability to save and protect lives. Many other government agencies are also in similar situations. The current Gross Domestic Product (GDP) of the Aleutians region is currently on the verge of $400M per year, much of this due to the commercial fishing that exists in this region. In fact, the second largest fish processing plant in the world is located at Dutch Harbor in the Aleutians. Given the American dependence on foreign oil, it is also no surprise that this region is primed for oil and gas harvesting. Mining is also a huge potential revenue generator in the Aleutians with one operator predicting $1B worth of minerals from a single mine. The US Customs and Immigration has targeted the Aleutians to be a new port-of-entry into the US due to its closer proximity to Asian shipping routes and a possible Northwest Passage. At present, they have elected not to use the Aleutians because of the lack of necessary telecommunications infrastructure,

which resulted in lost jobs to the region. Having greater broadband capabilities is also a perfect match for many of the services that these remote areas rely on. Some of the higher bandwidth beneficiaries of this network include Distance Learning and Telemedicine, which are critical to life in these remote communities. The practices, requirements and capabilities are changing as technology availability makes their models more robust. Each community has its own Distance Learning and Telemedicine program. However, they need affordable, increased bandwidth to support them. First Responders and Emergency Services organizations as well as universities doing research unique to the area are all candidates for these much needed services. Adak Eagle Enterprises will build a fiber optic undersea network to service each community of the Aleutian Island chain. We are committed to not bypassing any of them. This network will bring landing sites on shore, with all network connection facilities including electronics, power and buildings that the local telephone companies can then collocate in and then take their fiber to the last mile end users. Each site will be provided with at least 1Gbps service, but with the capability of much more. Anchor institutions, such as the schools, military, the FAA, NOAA, health clinics, government agencies and universities, will also be open to meet us at our facilities, or to purchase their services in conjunction with the local phone companies. This fiber optic network will be built in a ring configuration to ensure optimal uptime for our clients. Access to the lower 48 will be provided by GCI, ACS, AT&T and/or Tata. It will support 12 fiber pairs and will be built mostly with non-repeater segments to help keep costs to a minimum. Much of the fiber will need to be buried below the sea floor to ensure that the large dragnet fishing fleets common to the area do not adversely affect the cable. The construction of the network will be done using all local labor for the landing sites and terrestrial network elements including site preparation, trenching, constructing buildings, bringing power to the site, bringing fiber cable on shore, building the Network Operations Center, securing permits, land surveys, and all other necessary items. The marine portion of the construction will be done by an experienced team of engineers who specialize in the laying of undersea fiber optic cables. They will be assisted by locals from the communities. We expect that during the construction phase alone, over 250 jobs will be affected or created. Post construction, we show the need for 5 permanent positions to help monitor and sustain the network on a 24X7 basis, help with billing, installations, customer service, accounting and with many other jobs created on an as-needed basis. However, more jobs will be created as business opportunities open up as a result of having the new network capabilities available at an affordable rate. The construction team is comprised of a team of seasoned and experienced companies and personnel. Adak Eagle Enterprises has been successful in providing next generation services to the remote area of the Aleutian Islands, Adak, for many years. These services include internet access, phone service, cell service and 300 channels of TV. The president, Larry Mayes, is a retired army telecommunications specialist with years of experience in the telecommunications business. IT Telecom, selected as the marine construction company, has a long resume of successful marine cable installations covering over 65 countries worldwide. They have extensive experience in the Alaskan environment as well. GVNW Consulting is a 40 year old telecommunications consulting firm that has successfully guided many of its clients in laying marine and terrestrial cables and building the associated business and financial models to make them a success. These 3 major players have all the experience necessary to ensure that the network gets built, within budget, on time and then has the sustainable business model to support it for years to come. The projected overall costs to build such a system are about $240M. The potential for new jobs and businesses for the area as a result of having adequate broadband is unlimited. The

Aleutians is a very unique place. It does not have a large population, but its current and future GDP potential is huge. The islands population is made up of over 80% Native Americans who have lived on the islands for thousands of years. The remoteness of these communities makes everything more costly to provide, yet the strategic importance of the region and those that live there warrants the investment. Without a grant for this project, a sustainable business model is not possible. The high cost to build in remote areas in relation to the lower 48 precludes us from using financing, paying on that financing and then being able to keep the pricing affordable for the end users. Satellite technology, the only available backhaul today, is not capable of delivering the bandwidth that is required in this the 21st century, for any amount of money. Fiber backhaul in the Aleutians is the only solution, and the right one for the ARRA program.