Broadband USA Applications Database

Applicant Name: TRANSPORTATION, OREGON DEPARTMENT OF

Project Title: Oregon Public Safety Broadband Network (OPSBN)

Project Type: Comprehensive Community Infrastructure

_______________________ Executive Summary _______________________

The State of Oregon is the ninth largest state in the United States, covering an area of 98,386 square miles, significantly larger than the states of Maine, Vermont, New Hampshire, New Jersey, Connecticut, Massachusetts, Maryland, Delaware, and Rhode Island combined. Oregon's geography is diverse, spanning from the Pacific Ocean in the west, to the high desert plateau in the east. It encompasses two major mountain ranges rivaling the Alps in ruggedness, three massive river systems, canyons, valleys, buttes, rocky coastlines, long beaches, farmland, and vast forests. Oregonians face a plethora of natural hazards including tsunami, volcanic activity, earthquake, floods, wind storms, and wild land and forest fire. The Port of Portland, massive hydroelectric dams, and major national arterials including I-5 are subject to disruption by man-made activity including terrorism. Population demographics vary from an urban area security initiative (UASI) city to a vastly rural component with mountainous topography. Access to fixed and wireless broadband services (2G & 3G) varies significantly across the State from excellent coverage in the metropolitan areas to areas thousands of miles across with no broadband access. Public safety providers currently have no access to Long Term Evolution (LTE) or equivalent 4G data services. Commercial and government broadband service providers face significant difficulties in rural parts of the state due to the vast distances and extremes of terrain. The availability of middle mile services is lacking in large segments of the State. The Oregon Public Safety Broadband Network (OPSBN) will be distributed throughout the State of Oregon, with some overlapping coverage in the neighboring states of California, Idaho, Nevada, and Washington. Last-mile services will cover approximately 40% of the State's land area and more than 85% of the population. While not directly funded with this project, the entire OWIN network also will be available for partnerships with government, tribal, and non-profit and for-profit agencies as a middle-mile network to allow build out to unserved-and underserved areas of the State. OPSBN has received over seventy letters in support of this BTOP grant application. This a result of the strong partnership relationships developed between state and local officials. This is a dedicated effort that has been developed through the OWIN Project and commitment from Public Safety Officials in Oregon to improving communications interoperability within the state. The Oregon Statewide Interoperability Council (SIEC) has been a centerpiece for public safety communications progress in Oregon and strongly stands behind this opportunity to provide broadband communications to our deserving Public Safety Officials. In this application we have support letters from the Oregon Congressional Representatives, five Tribes within Oregon, and over fifty dedicated partners in public safety communications advancement. 531 public safety community anchor agencies are included in the project area. The OPSBN will provide last-mile, LTE services to public safety entities, employing the waiver granted by the FCC to the State of Oregon for operation in the 763-768 MHz and 793-798 MHz
bands. The State's FCC waiver mandates the use of the LTE standard. OPSBN will be constructed using
four types of locations: * 225 existing OWIN radio sites will be upgraded with LTE equipment. These sites
will use the existing OWIN microwave and/or fiber optic cable backhaul. * 27 Greenfield sites will be
constructed and will use fiber and, where necessary, short haul microwave for backhaul. * 86 sites will
be collocated on existing commercial cellular sites, and will lease additional commercial backhaul to
ensure adequate capacity to manage disaster situations. * 50 micro-cell sites will be constructed in
highway rights of way. These will be linked with fiber and/or microwave as is most appropriate and cost
effective. This will be accomplished by releasing an RFP and awarding one or more bids to partner with
commercial providers to construct, operate, and maintain the OPSBN. This arrangement will save costs,
but, more importantly, it will allow public safety agencies in Oregon to purchase access to both the
OPSBN and the commercial carriers' full network coverage seamlessly. Thus, during normal operations,
public safety users will be able to roam throughout the entire commercial and public safety LTE
networks. During a natural or man- made disaster, when commercial networks often become
overloaded, having a public safety exclusive network will allow for uninterrupted emergency response
communications. The widely distributed nature of the OWIN network also provides an opportunity to
deliver critical data connectivity to extremely rural portions of the State. Adding LTE equipment to each
OWIN radio site where the LTE coverage intersects one or more major roads means responders to forest
fire, wild land fire, search and rescue, and other rural emergencies can establish their command posts
within broadband coverage and take full advantage of these advanced capabilities. Access to the OPSBN
system itself is limited to public safety agencies, the only authorized users of this piece of spectrum.
Oregon will require other use of its middle-mile system to be open with respect to carriers and services.
OWIN is housed with the Major Projects Division of the Oregon Department of Transportation (ODOT).
ODOT is uniquely qualified to carry out large projects of the type envisioned by the OPSBN.
OWIN/ODOT's strong history of mutually beneficial partnerships with government and private industry,
as demonstrated by the large number of letters of support and intent attached to this application, put it
in a strong position for success. OWIN intends to partner with one or more commercial entities who will
bring their telecommunications specific construction and operations experience to the table. Together,
the State and Commercial partners will provide the best of both worlds and demonstrate a successful
model which can be replicated in other portions of the country. Oregon is requesting $150,000,000 in
federal BTOP funding, to which it will add $64,285,714 in Cash Match, for a total project budget of
$214,785,714. At project build-out, the State of Oregon will add 15,000 public safety subscribers to the
system. Within the first five years, Oregon estimates there will be at least another 10,000 federal, tribal
and local public safety users of the system. Using the Council of Economic Advisor's job creation
methodology, Oregon estimates 1,630 job years will be created or saved with this project.