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Case Study: A Tower for Public Safety and Public Good

By Ed Myers

A public-private partnership can be customized to achieve telecommunications infrastructure improvements on a grand scale.

Skagit County is a growing economic center in northwest Washington, relying on a geographically strategic network of rivers and accessible ports to maximize the economic potential of the region's natural resources of agriculture, fishing and timber. Other factors have encouraged recent economic growth of the 1,950-square-mile county that include a rise in ecotourism, international trade and specialized manufacturing. Economic expansion has led to a surging population in Skagit County, which exceeded 120,000 last year.

As a population grows and technology adoption increases, the demand for wireless voice and data services inevitably grows by exponential proportions, not only from consumer demands but also from the increase in public sector requirements. Skagit County's rapid growth brought to light that existing public safety services and E-911 coverage required expansion and updating. It had become critical to extend and enhance first-responder coverage to address the needs of the entire county, not merely the densely populated areas. Public safety agencies — especially the sheriff and fire departments — required increased wireless service coverage along the North Cascades Highway and in the towns of Hamilton and Lyman, located on the north banks of the Skagit River.

At the same time Skagit County was exploring the expansion of its emergency management services coverage, a major wireless carrier was addressing new regional demand for its LTE services. For both parties, the existing wireless infrastructure (consisting of towers) was inadequate to meet suitable density and size requirements. The towers were either not sufficient for the demands of the carrier's LTE deployment, were served by constrained backhaul connections, or weren't constructed everywhere they would be needed. New wireless infrastructure was required to meet the ever-increasing coverage and capacity demand.

Solution

Skagit County engaged Parallel Infrastructure, a national build-to-suit tower and wireless telecommunications infrastructure development company, to build, own and operate a new 195-foot self-support tower to meet the growing demands of local and regional public safety offices.

Working with Sierra Pacific Industries, a large landowner in the region recognized for its commitment to area-wide growth initiatives and economic expansion, Parallel Infrastructure's team of site acquisition and telecommunications real estate professionals leased property in an ideal location with ready access to utilities and backhaul service north of Hamilton, Washington.

Having secured the land with the private owner, the developer then leveraged its end-to-end rapid telecom tower development capabilities to get the structure zoned, permitted, constructed and ready for tenant occupancy. As the owner and operator of the tower, the developer provided all of the required capital for the construction with no required monetary contributions from either the county government or the wireless carrier tenants.

45 Days

The locally focused and engaged landlord made it possible for Parallel Infrastructure to develop the tower into a tenant-ready facility in less than 45 days from receipt of the building permit.

The infrastructure company handled the design, financing, zoning, permitting and development and leasing of the new tower. This self-contained development model in effect lightened the bureaucratic load for Skagit County officials and allowed them to focus on what matters most — serving the residents of Skagit County.

Another advantage for the county came in the way of a new revenue stream. The tower was considered an improvement to the existing property. As such, the owner of that improvement, Parallel Infrastructure, will pay tax to Skagit County based on the value of the improvement.

Future-proofing and Backhaul

In addition to bolstering Skagit County's emergency communications network and local tax base, the new tower met the wireless carrier's objectives to provide more service. The new tower has modern backhaul facilities, allowing the carrier to construct a new LTE coverage site. The location also serves as a fiber exchange hub site, consolidating the backhaul from surrounding carrier installations and providing high-capacity access to the carrier's next-generation voice and data services.

This type of future-proofing tower and backhaul solution is key to long-term carrier tenancy. As network access technologies evolve and end-user data demands grow, the wireless framework Parallel Infrastructure has put in place in Skagit County allows the carrier to meet both its internal network design requirements and customer expectations for fast, reliable, high-capacity wireless service.

Conclusion

A growing population that is accelerating the demand for wireless service spells new opportunities for wireless carriers and municipalities alike. Wireless carriers may expand coverage, provide next generation services and deepen their customer relationships. Government agencies can address their community's critical emergency management wireless communications and enhance critical public safety networks in the process. Yet, even though such opportunities abound all over the country and entities find themselves scrambling to catch up with the demand, a one-size-fits-all approach to tower development may

Parallel Infrastructure's newly stacked tower in Skagit County, Washington.

not be in everyone's best interest.

Municipalities must remain mindful of finding and customizing the right solutions that benefit all parties involved. In this case, Parallel Infrastructure was able to design, build, own, operate and maintain a new tower facility meeting the requirements for both public safety systems and modern wireless technology. Skagit County did not have to contribute any capital to the tower project, effectively saving tax-generated revenue to be used for other projects, while gaining access to new infrastructure required for expanded emergency services. The carrier was able to bring its expanded LTE technology to a growing portion of Washington, thereby increasing the region's ability to grow its economy and attract new business and tourism, all while offering residents of the area competitive and modern wireless services.

If done right, the concept of a public-private partnership — as was the case with Parallel Infrastructure, Skagit County, Sierra Pacific Industries and the national wireless carrier — can be customized into an "everybody wins" means to achieve telecommunications infrastructure improvements on a grand scale.

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