

ATTACHMENT 1-5(a)

RC Technologies ("RCT") began providing telephone service to members as Roberts County Telephone Cooperative in 1956. It began consumer broadband services in 2002. RCT completed an all-fiber network in six exchanges and are currently in the process of converting the final two exchanges to FTTH, with plans to be completed by the end of 2021. RCT is providing service in eight (8) ILEC exchanges in three (3) South Dakota counties and two (2) North Dakota counties which covers approximately 947 square miles with 748.2 miles of fiber.

RCT was awarded 118 locations within two census block groups in Roberts County in South Dakota in the RDOF Phase 1 Auction. This design assumes that the FCC's Connect America Model locations may vary from actual real-world locations, and final engineering designs will address discrepancies, while maintaining the same design criteria in terms of equipment used, oversubscription rates, design fundamentals etc. All awarded census block groups were bid with T&L in the Gigabit tier with Low Latency.

County	Census Block	FCC Locations	Tier
Roberts	461099504001	4	Gigabit
Roberts	461099504002	114	Gigabit
TOTAL		118	

RCT will be utilizing Calix E7 GPON FTTH technology over an extension of existing last-mile buried fiber facilities to reach all awarded locations within the RDOF deployment window. New passive optical network (PON) splitters will be placed in cabinets or central office locations within 120,000 feet of served locations. At the access node locations, new ports on existing GPON electronics will be utilized to provide the service. All network hardware is carrier-grade with performance which will meet or exceed gigabit capacity with latency below 100ms to the Tier 1 Internet point of presence. This hardware is the same hardware currently deployed throughout the existing RCT FTTH network. Calix 803G optical network terminals (ONTs) will be installed at the customer premise for all subscribers who choose to purchase services.

Because the number of new locations is relatively small, the peak bandwidth impact to the existing Calix middle-mile and core/Internet networks is anticipated to be minimal. Therefore, the existing E7 10Gb/s middle-mile network, Cisco ASR9K core and Internet networks will remain relatively unchanged. The same is true for voice services. Existing connections to the Genband C15 voice switch and existing trunking will not require augmentation to accommodate the small number of new customers.

Latency and speed compliance testing and reporting via the Calix Support Cloud / GigaSpire product will be provided using procedures already in place and utilized for other program compliance testing. Network facilities will be augmented as needed using existing methods for threshold monitoring.