

Zorro Ranch Voice and Internet Communications Proposal

1.0 Communication Proposal Goals:

The Primary focus of this proposal is to eliminate the need for a new licensed microwave link between Sandia Crest and a new 50 foot tower required on Zorro Ranch to replace the existing unlicensed microwave link.

- Relocate carrier services from Sandia Crest to the pedestal near Highway 41
- Extended carrier services to the Fire Station
- Provide VoIP and internet at Ranch Central
- Eliminate buried copper wires at Ranch Central
- Extend an analog T-1 and internet to the main house

2.0 Communications System Equipment Description:

- Install a Centurylink voice T-1 PRI and three data T-1 circuits at telco pedestal near Highway 41
- Install 12 Pairs of single mode fiber from the pedestal to the Fire Station and terminate
- Install T-1 to fiber MUX's to extend the 4 T-1 circuits to the Fire Station
- Install aggregation router at the Fire Station for 3 data circuits (internet)
- Install a T-1 PRI interface to generate an analog and a PRI T-1 circuit for the main house and for Ranch Central
- Install unlicensed wireless link radio between the Fire Station and the main house
- Transport an analog voice T-1 and internet to the main house over wireless link
- Install an IP PBX at the Fire Station to provide voice and data to Ranch Central
- Install a Ruckus Wi-Fi system at the Fire Station to deliver VoIP and internet at Ranch Central
- Install wireless gateway and IP phone specific locations at Ranch Central for VoIP and internet access
- Connect the new voice services to the Adtran TSU600e at the HVAC building
- Connect the internet services to the existing router at the main house.
- Test and optimize all of the communications equipment provided under this proposal