



MICROWAVE SYSTEM UPGRADE

BUDGETARY PROPOSAL FOR LEWIS COUNTY:

CREGO HILL TO LEWIS COUNTY JUSTICE BLDG
MW LINK REPLACEMENT

February 10, 2020



www.daywireless.com

26 Western Offices

200+ Tower Locations

SYSTEM DESCRIPTION

CUSTOMER OBJECTIVES:

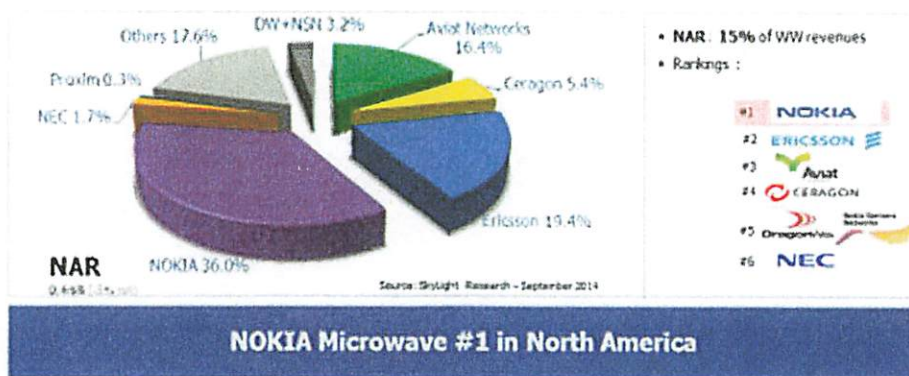
Currently Lewis County is looking into replacement of its existing link between Crego Hill and Lewis County Justice Building. This quote is based on the design of the existing Harris 6 GHz link and provides a full public safety grade, all indoor solution with Hot Stand By / Redundant module functionality.

SOLUTION OVERVIEW

This proposal outlines the purchase and installation public safety grade architecture MW system based on Nokia Wavence MW Product line. Nokia is one of worlds leading manufacturers of top quality wireless backhaul and other equipment including its flagship Wavence (formerly Alcatel/Nokia 9500) product. Nokia Key Differentiators:

- A proven solutions provider Nokia:
 - #1 in worldwide IP packet microwave solutions.
 - #1 in worldwide fully integrated IP based indoor (IDU) microwave.
 - #1 in North America microwave sales and market share.
- Nokia has a 36% North America microwave market share.
- Nokia has 10 years' experience in full-packet microwave.
- Nokia has three Research and Development Sites worldwide.

MARKET SHARE BY REGION North America



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NOKIA

- Nokia is uniquely positioned in the industry to bring together its industry-leading Wavence Microwave Packet Radio platforms to deliver a fully integrated, efficient solution for deploying IP backhaul over microwave links.
- The Wavence MPT-XP-HQAM provided is capable of scaling to support up to 60 MHz channels sizes and up to 2048 QAM. This will provide a scalable platform for higher capacity across the microwave links. Other competing solutions only support up to 256 QAM.
- *The Nokia Wavence (MPT-XP-HQAM) is a true IP packet base product looking toward the future.*

- Full separation of services (i.e. P25 vs Internet vs Surveillance vs CAD/RMS) so that each service has its own priority consistently throughout the network should Lewis County choose to utilize that in the future. This is specifically important during any failures in the Microwave network or Hardware.

EQUIPMENT LIST

The proposed solution is based around the following key equipment.

Rack and PDU
Power Distribution Panel with Fuse Alarm Card included
Microwave Service Switch (MSS)
MSS-8 Shelf w/ Fan Alarm Evo HSv3
MSS Shelf Cards
CorEvo Module
Ethernet Access Module Version 2
32xT1 TDM Module
Wavence 19 SW Electronic Delivery Kit
Wavence 19 uSD Card for CoreEvo-10G
Wavence 19 O&M Manual Electronic Delivery OLCS
Microwave Factory Test Certificate (Per NE)
Right To Use (RTU) Licenses
RTU 160Mbps TRX Capacity
9500 MPR MSP Ring RTU
Tributary Options Optical
Optics SFP GigE 850 NM Multimode 550 Meter
SFP Copper Cable, 2.0 M
Tributary Options DSX
32 E1/T1 Protection Panel - RJ45
E1/T1 SCSI-SCSI Interface Cable (16 T1/E1 per Cable)
Tributary Options Sync Cables
Sync In/Out SFP for MSS-1/CorEvo-10G
9500 MPR Sync Cable for Sync SFP
MPT-HL / HLC Shelf Kit
MPT-HL / HLC Shelf Kit Dual T-R
MPT-HLC Transceiver
MPT-HLC Transceiver 6 GHZ Standard Power
Diplexer Bracket Kits
6/11 GHz Single Shelf Repeater Diplexer Bracket
Diplexer Clamp and Isolator Kits – 6 GHz Ghz
11 GHz Single Shelf Repeater Diplexer Clamp and Isolator Kits
RF Diplexer Filters
RF Diplexer Filter 6 GHz, 30 MHz, Symmetrical
Waveguide Transition Kits
Diplexer Transition Assy A2 (6Ghz) Position Kit

Diplexer Transition Assy A3 (6Ghz) Position Kit
Diplexer Transition Cables - Table G3
Diplexer to Transition Cable Assy 304.8mm (A2M, A2D, A4D, A5M)
Flange Adapter Kit
Flange Adapter CPR-60 1PORT, 6Ghz
Antenna System
Antenna System (waveguide, dishes, etc.)

SYSTEM PRICING		
Equipment		
Description		Total
MW Equipment		\$58,800.00
Subtotal		\$58,800.00
Services and Other		
Description		Total
Implementation Services		\$28,400.00
Subtotal		\$87,200.00
GRAND TOTAL		\$87,200.00*

**Please note the following should be stated for this estimate:*

- No taxes are included
- All proposed sites, towers and shelters can accommodate all proposed new equipment. No improvements to those sites have been included. We are assuming we can just replace existing link with the new equipment
- No DC Plants are included or any AC work if required. If needed it is usually between 10k-20k per site equipment and services if it's only for proposed MW equipment and there's an available breaker on the site AC panel/AC Panel is within reasonable distance of proposed DC plant location
- Existing FCC license will be reused

PROFILE OF FIRM

Day Wireless Systems is a premier provider of wireless solutions for voice, data, and video. The company designs, installs, and supports systems for government, public safety, healthcare, commercial, and education customers. Founded in 1969, the company is based in the Portland OR metro area and now operates from 26 locations in four Western States. We have more than 300 employees including 175 technical staff made up of engineers, senior technicians and skilled installers. The company is privately held and led by third generation family members. Day Wireless Systems is affiliated with Reliance Connects, a provider of telephone, cable and Internet services founded in 1905 with operations in Oregon and Nevada.

Day Wireless Systems is one of the largest wireless service organizations in the USA and a major provider of the leading brands in wireless system applications. We are the largest wireless integrator in the Western USA.

