



800 MHz TAC Meeting

September 15th, 2022



Nevada Shared Radio System Update

Agenda Item #5

System Status Update-
Core Upgrade

WCRCS &
L3Harris
conducted an
Upgrade to the
System Core to
SR10A.7





Microwave Deployment

- Microwave Deployment was delayed by one month due to L3Harris Subcontracting issues. Original Installer lack required Nevada business license and insurance waivers.
- New Deployment started 15 August 2022
 - Edison- Spectrum was cut over on August 23rd, 2022
 - Ophir – Spectrum was cut over on August 24th, 2022
 - Slide – Ophir was cut over on September 6th, 2022
 - Slide – Rose was cut over on September 8th, 2022
- Within 3 days of installation tasks, 3 microwave links came up with Zero pressurization within the Waveguide. Washoe County has asked L3harris to pause work for all remediation to take place and correct the installation issues. Had Mt Rose Microwave not completed failed the day before installations, we would have called the pause work a day sooner.



System Status Update- Microwave

- Planned Outages
 - Microwave Installation:
 - Spectrum- Edison: On Tuesday, August 23rd, WCRCS in conjunction with MasTec, Nokia and L3Harris Cut-over new microwave equipment between our Network Operation Center (NOC) at Spectrum to our Communications Office at Edison Way. The first cut over was extended by two hours to accommodate low level design changes made in the field. It was suppose to be a NO OUTAGE event but ended up taking down All Washoe County Consoles, between the PSAPs (Public Safety Answering Points), and other entities that had Symphony consoles. It was the first of many activities that will begin our P25 Radio Upgrade.
 - Ophir- Spectrum- On Wednesday, August 24th, The teams tested the links between Ophir and Spectrum. This particular Link is a new microwave service link that will provide connection to our new OPHIR communication site. As part of the P25 Upgrade, WCRCS is adding new sites to help with areas with poor Radio Coverage. Ophir Communications site seeks to add coverage into Virginia City, South Reno, Washoe Valley, Interstate 580 heading towards Carson City. While teams are working to fix the issues from the Low Level design, teams continue to focus on ensuring outages are not service impacting.





System Status Update- Microwave

- Slide – Ophir: Microwave Installation occurred without an outage window because this is a new link.
- Slide – Mt. Rose: On September 8, Mastec continued the microwave installation from Slide to Mt Rose. RFC Testing and Radio Alignment fell late into the evening before we had to halt activities to call a safety stop, and order for outage activities to complete on September 9th. L3Harris and WCRCS worked on a timing solution that continue to supply timing to the EDACS equipment, in order to restore Public Safety Radio Traffic to these links. Pressure line still needs to be installed at Mt Rose, and wasn't completed due to part Shortages.





Microwave Deployment- Paused

- Installation Quality Issues: Zero Pressure within waveguide after installation reported for the following:
 - Ophir to Spectrum link
 - Ophir to Slide link
 - Edison to Spectrum link.
 - Mt Rose to Slide (Pressure line needs to be installed)*
- Field Personnel and Engineers are not in alignment for what it takes to complete the installation tasks for the approved DDR, including **missing of critical parts and components**. Washoe County has requested the following:
 - Determine parts and scope match associated tasks to provide a working microwave system. So far it appears the initial site walks and investigations were poorly conducted resulting in field, and engineering disconnects, and needs for field changes.
 - Validate the length of waveguide needed per site.
 - Correct parts lists and get all missing parts on Order including DSX patch panels, shelves for dehydrators, 7705 copper SFP's, any specialized cables, cable lengths, and associated parts and port assignments with the low level design. Prove parts are ready and available for installation at all sites, by providing team with Complete bill of material delineating responsible party, checklists for installations
 - Verify Timing has been appropriately understood to keep EDACS system functioning properly.
 - Verify that the design keeps all DS1 circuits operable per the Scope of Work.
 - Go over the deployment plan to reassess changes like Biltmore and the impacts they present to the overall Microwave system (Backhaul), and the Operations systems: EDACS and P25 System.
- Communication break downs between contractor and subcontractors.
- Resources are spread too thin, limited knowledge requiring much on the job training.
- Scheduling and outage sequencing continually changes. The PSAP (Public Safety Answering Point)'s have requested for the following:
 - All outages be conducted on Wednesday due to staffing.
 - PSAP's also refuse to allow an outage on a Monday or Friday.
 - PSAPs request minimum of 72 hours notice but prefer all coordination to be conducted 3-4 weeks prior.
 - Minimize Outage windows: Both service affecting outages lasted more than 12 hours, where Scope of work for Nokia shows that no outage would exceed 7 hours.





Microwave Deployment

- L3Harris is working with Nokia on Remediation efforts. These efforts are to take place, prior to starting up the remaining Microwave Deployment activities.
- Microwave Remaining Installations:
 - Incline - Snow Flake 7 hour OUTAGE Expected Tahoe Region
 - Poito – Fox No OUTAGE Expected
 - Fox- Virginia 1 hour OUTAGE Expected Gerlach/Pyramid Lake
 - Virginia Peak – Peavine 1 hour OUTAGE Expected Reno/Sparks/Pyramid/Cold Springs,
Spanish Springs, RSIC,
 - Peavine -Spark's Dispatch 1 hour OUTAGE Expected Sparks Dispatch
 - Peavine – Cold Springs **No outage Expected**





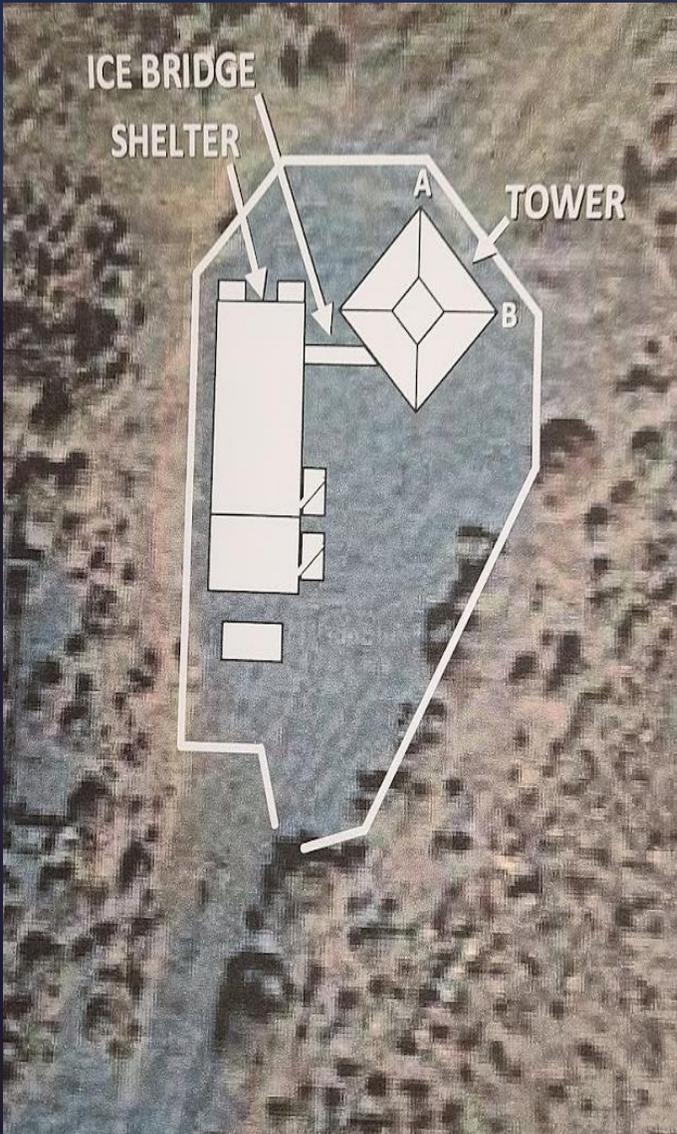
P25 Project Update- Greenfield Sites

- Greenfield Site builds Northern Washoe Area
 - **Seven Lakes Communication Site**
 - BLM registration number assigned,
 - Geotechnical Study completed.
 - NEPA & Archaeological Reports underway
 - BLM resource limitations causing program not to move forward until their new budget year – October 2022
 - **Ash Springs Communication Site**
 - Lease Agreement returned back from Risk Management and the District attorney's office. Once Land owner reviews final changes the Lease will be brought before the JOC for approval.





P25 Project Update- Greenfield Sites



- Greater Reno-Sparks Green field Site
 - Red Peak
 - working on Lease agreement
 - This site will be part of the Washoe County Metro Simulcast System
 - Smokey Quartz
 - NVE Working power design
 - Working with City of Sparks on Administrative review.
 - BLM Process- at NEPA & Archaeological study underway, Another resource Limitation, with BLM resource being assign after October 2022.
 - This site will provide radio coverage for city of Sparks around the Pah Rah Interloop, where coverage was limited.





P25 Project Update- Greenfield Sites

- Cold Springs New Construction has Started!
 - Construction Kick-off held on August 25th, 2022
 - Site staked out for grading work, and pre-construction activities.
 - Building Permit Approved for Cold Springs on September 7th, 2022.
 - Grading & staking work started
 - Trenches dug and Cad welds for Site grounding ring being installed
 - Tower Foundation framing started
 - WCRCs conducted site visit to inspect work Progress on 13 September. ITL provided and excellent safety brief and demonstrated ground grid Cad welding.





P25 Project Update- P25 Install



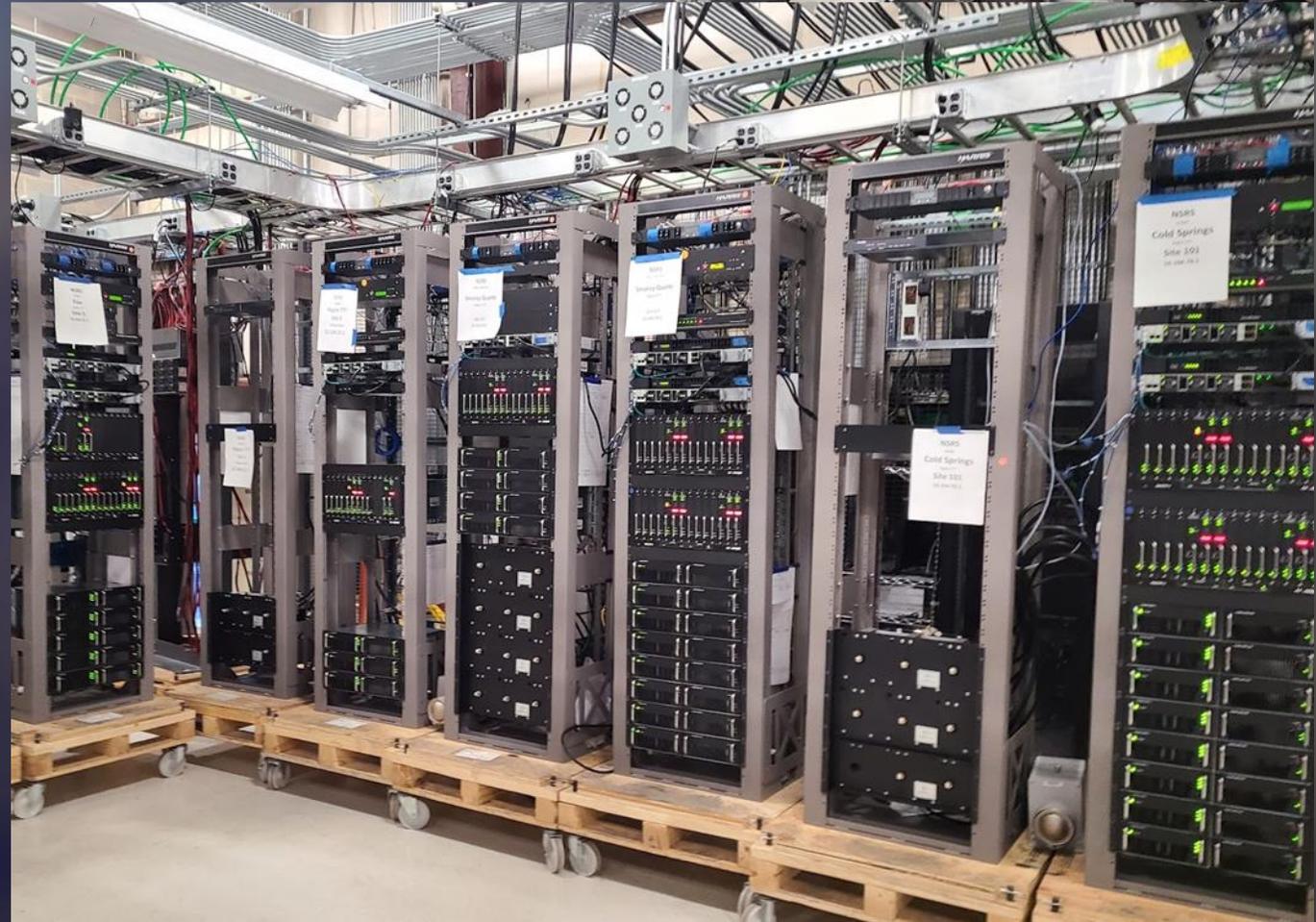
• P25 Equipment Installation

• 2022

- Ophir
- Cold Springs
- Snowflake
- Slide Mountain
- Mount Rose

• 2023

- Poito Mountain (7/12/2023 -7/14/2023)
- Marble Bluff (7/12/2023 - 7/14/2022)
- Virginia Peak (7/24/2023 - 7/27/2023)
- Red Peak (7/31/2023 - 8/2/2022)
- Smokey Quartz (7/31/2023 - 8/1/2023)
- Peavine (8/4/2023 - 8/9/2023)
- Seven Lakes (8/4/2023-8/11/2023)
- Fox Mountain (8/10/2023 - 8/15/2023)
- Ash Fields (8/10/2023 - 8/15/2023)
- Biltmore (11/15/2024 - 11/19/2024)**





P25 Project Update- Misc.

- Washoe County Dispatch January 2023-March 2023
 - Airport
 - Sparks PD
 - Washoe County Court Complex
 - Washoe County Detention
 - WCRCs Radio Shop (*Started**)
 - Washoe County School District
 - Washoe County Sheriffs Office
 - Surveys have been conducted on some of the dispatch centers. Work to include upgrading all Dispatch consoles to Windows 10, as well as add information to cut over to new P25 System.
- **Radio shop move into Building 224 Edison Way next to WCRCs is underway.**
- Fleet Mapping September 2022- October 2022
- Personality development October 2022- November 2022
- Programming November 2022- October 2023
- Mobile Installation November 2022- October 2023
 - **Agencies will want to make sure they purchase any mobile radios prior to this date in order to have mobile radios installed by Harris on site.**
 - **New portable radios should also be purchased in this time frame to make sure radios have the P25 “touch-up” programming completed. YOU ARE PAYING for “Touch up” with every purchase.**



Radio Shop Move Almost Complete!

- Radio Shop should be finished with move to 224 Edison by Middle October.
- New Space is the old Records Office next to the WCRCs office.





P25 Project Update- Training

- Train-the-Trainer Program Training
 - System Admin Training October 6, 2023- October 23, 2023
 - Radio Infrastructure Training October 23, 2023- November 20, 2023
 - Radio Subscriber Training November 21, 2023 – December 5, 2023
 - Console Configuration, O&M Training December 6, 2023 – January 11, 2024
 - User Radio Equipment Training January 12, 2024 – January 23, 2024
- On-line training Available now
 - (Please contact Melissa Lawney mlawney@washoecounty.us for Usernames and Passwords for online training)
- Functional Testing June 26, 2023- November 14, 2023
- Coverage Testing September 7, 2023- March 11, 2024
- Region #2 Cut-Over March 11, 2024 - April 12, 2024
- Reliability Testing April 12, 2024 – July 11, 2024



P25 Project Update- Future

- Region 3-
 - DDR (January 2023 - March 2023)
 - Implementation (August 2023 - October 2023)
 - Subscribers (November 2023 - January 2025)
 - Acceptance Testing (April 2024 - March 2025)
 - Training (November 2024 - January 2025)
 - Reliability & System acceptance (April 2025 - July 2025)
- Members Acceptance
 - Region 1 (April 2024)
 - Region 2 (July 2024)
 - Region 3 (July 2025)
 - Contract Close (July 2025-October 2025)



Questions?

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