



# P25 TAC Meeting

March 16th, 2023



# Nevada Shared Radio System Update

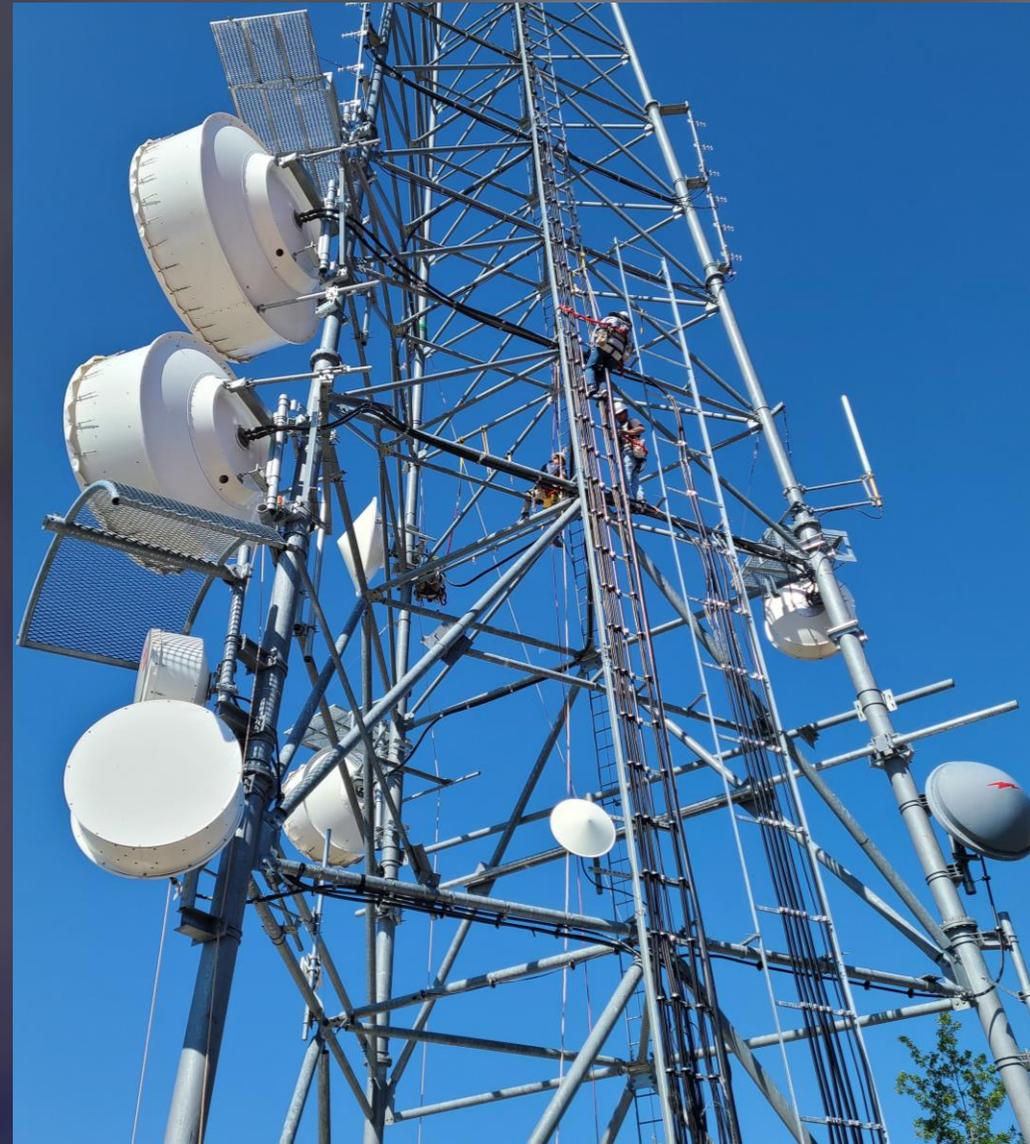
Agenda Item #4



# Microwave Deployment

- Planned Outage Ranges

- Peavine -Spark's Dispatch: 5/17/23-5/19/23
- Peavine – Cold Springs: 5/22/23-5/23/23
- Fox- Virginia: 6/6/23-6/12/23
- Spectrum- Red Peak: 6/22/23-6/27/23
- Red Peak- Virginia Peak: 6/28/23-7/3/23
- Virginia Peak – Marble Bluff: 7/4/23-7/11/23
- Marble Bluff- Poito: 7/14/23-7/17/23
- Poito – Fox: 7/18/23-7/24/23
- Fox – Ash Fields: 9/5/23-9/11/23





# P25 Line & Antenna Installs

- P25 Line/Antenna
  - Cold Springs: 3/27/23-3/31/23
  - Red Peak: 6/15/23-6/20/23
  - Fox: 6/22/23-6/28/23
  - Snowflake: 6/12/23-6/15/23
  - Peavine: 5/17/23-5/31/23
  - Rose: 7/10/23-7/14/23
  - Poito: 7/25/23-8/1/23
  - Marble Bluff: 7/18/23-7/21/23
  - Ash Field: 9/13/23-9/18/23





# P25 Rack & Equipment Installations

- P25 Rack & Equipment Installations
  - Cold Springs: 4/24/2023-4/27/2023
  - Red Peak: 6/22/23-6/27/23
  - Fox: 6/22/23-6/28/23
  - Peavine: 5/17/23-5/23/23
  - Poito: 7/25/23-8/1/23
  - Marble Bluff: 7/18/23-7/21/23
  - Ash Field: 9/13/23-9/18/23



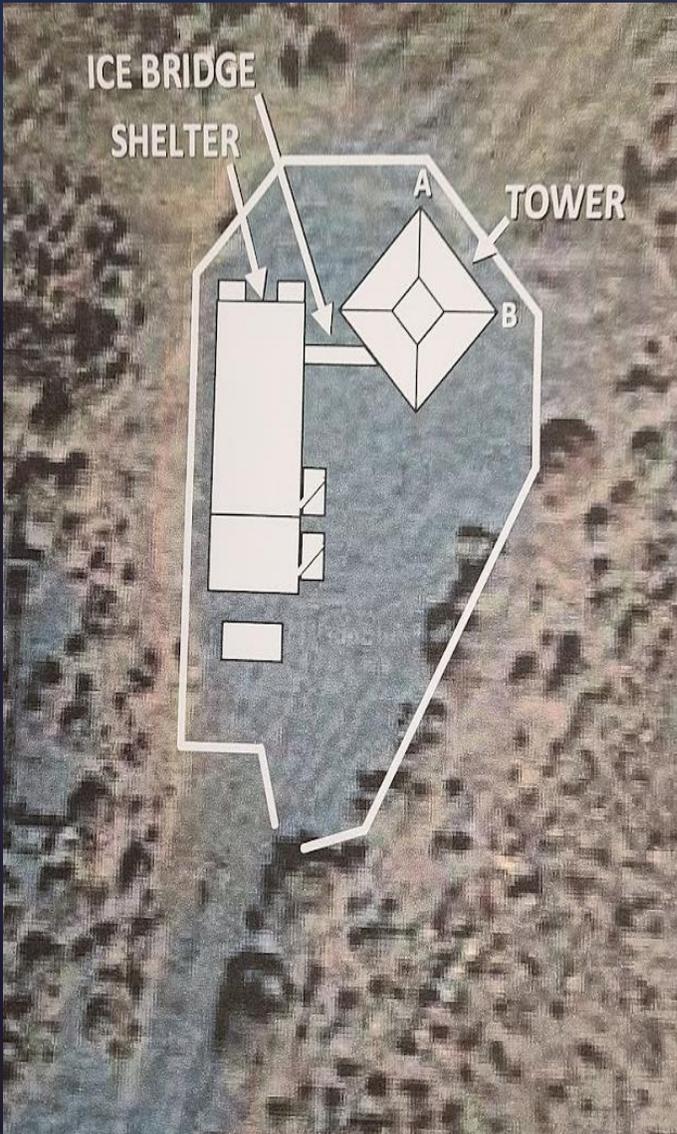
# P25 Project Update- Greenfield Sites

- 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 – NDOT engaged BLM regarding Master Service Agreement.
  - **Ash Fields Communication Site**
    - Lease Agreement awaiting JOC 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, Will be included in NDOT Master Agreement with BLM.
    - 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 site has been built.
  - Construction Kick-off August 25<sup>th</sup>, 2022
  - Building Permit Approved September 7<sup>th</sup>, 2022.
  - Tower Stacked October 14<sup>th</sup>, 2022
  - Shelter installed October 20<sup>th</sup>, 2022
- Awaiting NV Energy Power Pole installation
  - Incremental weather has prevented task from moving forward.





# P25 Project Update- Misc.

- Washoe County Dispatch
  - 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.*
- Fleet Mapping January 2023 – February 2023\*\*
- Personality development March 2023 – April 2023
- Programming May 2023 - April 2024
- Mobile Installation May 2023 – April 2024
  - *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.*
  - **\*\* All dates have shifted and may change a few more times**



# “One Touch” Programming

Agenda Item #5



# "One Touch" Programming

- EVERY Radio in the system needs to be touched
  - New Sites, New System ID's, etc.
- Harris is scheduled to conduct Mobile Programming and "One Touch" Services for 12-18 Months based off the Schedule
- WCRCs is requiring all Radio Personality builds to be standardized prior to conducting the one touch.
- Radio Shop is beginning to schedule agencies now.



# WASHOE COUNTY ONE TOUCH PROGRAMMING P25

Agency:					
Point of Contact:	Name	Phone	Email	Alternate	Phone
Available Dates for Mobile Installations and Programming:					
	XG-75	XL-200	XL-185	UNITY Mobile	Other: please specify
# of Portables					
# of Mobiles					
	Vehicle Type	Make	Model	Year	Identifying mark, name or #
Location for Installation:	If other, Please specify:				
	<b><u>224 EDISON, Reno, NV</u></b>				
	Power				
	Internet				
	Tables/chairs				
	Covered bays or work area				



# Mobile Installation Locations

- Washoe County Radio Shop
  - 224 Edison Way, Reno, NV 89502
- Washoe County Sheriff's Office
  - 911 Par Blvd, Reno, NV
- Reno Fire Department Station 21
  - 2501 Mill St, Reno, NV 89502
- Reno Public Works Corporation Yard
  - 1640 E Commercial Row, Reno, NV 89512
- Washoe County
  - Longley Lane
- North Lake Tahoe Fire Protection District



# Radio Shop Direction

- Radio is open in a new Location @ 224 Edison Way.
  - Door 4 is where all Mobile Radio Shop need to go
  - Door 1 is WCRCs area for work vehicles- you can physically enter but do not block that driveway, do not bring you vehicle there.
- Radio Shop Phone number is (775) 858-5964
  - Don Thornberry 858-5963
  - Dan Foster 858-5962
- Please call when you arrive.



# NSRS - Mobile Installations (LuAnn)



## Overview of Deployment

- Advance screening of facilities – L3H Team Leader and/or Site Manager (Ongoing)
  - Understanding of working environment; number of bays, sheltered workspace, etc.
  - Available onsite storage (tools/radios)
  - In addition, survey type of fleet vehicles
- Mobilization: two to three days prior to the start of the installation
  - Familiarize with area
  - Organize materials/tools
    - Pickup of radios (L3H and/or NSRS Member)
  - Develop general installation logistics
- Installation Days: number days estimated prior to the start
  - Estimation of days can be influenced by several factors
    - Number of bays and upon type of fleet vehicle.
      - One-Bay = 3-Units per day
    - NSRS Member maintaining vehicle flow and turnover (receipt of vehicles to/from install team)
    - Installers will “NOT” operate member vehicles.
    - Various configurations are expected, which can influence productivity times.
  - Next Slide shows tasks during installation process.

Vehicle Category Type	Admin Time	Single Installer Time	Double Installer Time
Sedan	18min	3hr	1.5-2.5hr
1/2 Ton Truck Ford, Chevy, Dodge	18min	3-4hr	2.5-3.5hr
3/4 Ton Truck Ford, Chevy, Dodge	18min	3-4hr	2.5-3.5hr
1 Ton Truck Ford, Chevy, Dodge	18min	3-4hr	2.5-3.5hr
Van	18min	3-4hr	2.5-3.5hr
Water Blasters	18min	4-6hr	3.5-4.5hr
Dump Trucks	18min	4-6hr	3.5-4.5hr
Paint Strippers	18min	4-6hr	3.5-4.5hr
Street Sweepers	18min	4-6hr	3.5-4.5hr
Snowplows	18min	4-6hr	3.5-4.5hr
Concrete Trucks	18min	4-6hr	3.5-4.5hr
Bulldozer	18min	4-6hr	3.5-4.5hr
Compactor	18min	4-6hr	3.5-4.5hr
Front loader/Backhoe	18min	4-6hr	3.5-4.5hr
Cranes	18min	4-6hr	3.5-4.5hr
Excavators	18min	4-6hr	3.5-4.5hr
Trenchers	18min	4-6hr	3.5-4.5hr
Other	18min	4-8hr	4-7.5hr

### Current Benchmark

- > 5-8min pre-checks
- > 2-6hr installation time (vehicle type dependent)
- > 5-10min post-check and vehicle turn over



# In-Building Coverage Infrastructure Update

Agenda item # 6



## Washoe County Regional Communication System

NSRS P25 Updates   In-Building Coverage

# Washoe County Regional Communication System

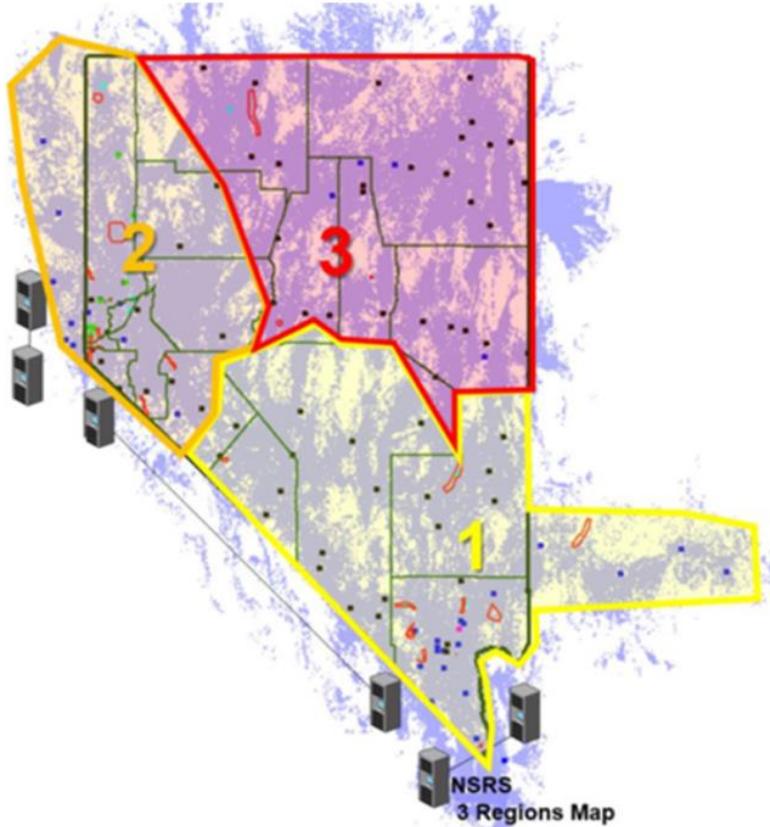
Supporting Communications throughout Washoe County and beyond

The Washoe County Regional Communication System (WCRCS), in partnership with the State of Nevada and NV Energy, provides public safety communications to twenty partner and user agencies in Northwestern Nevada. The WCRCS is currently undergoing a major overhaul, upgrading from an Enhanced Digital Access Communication System (EDACS) technology to Project 25 (P25) Technology. This upgrade includes construction of five new (greenfield) radio sites and a new microwave backhaul system.

This site provides access to information updates related to Washoe County's portion of the NSRS project and information related to In-Building radio systems needed to connect to the new P25 Radio System. The FCC requires Washoe County to register all In-Building systems within Washoe County. Please see the In-Building coverage page for more information.



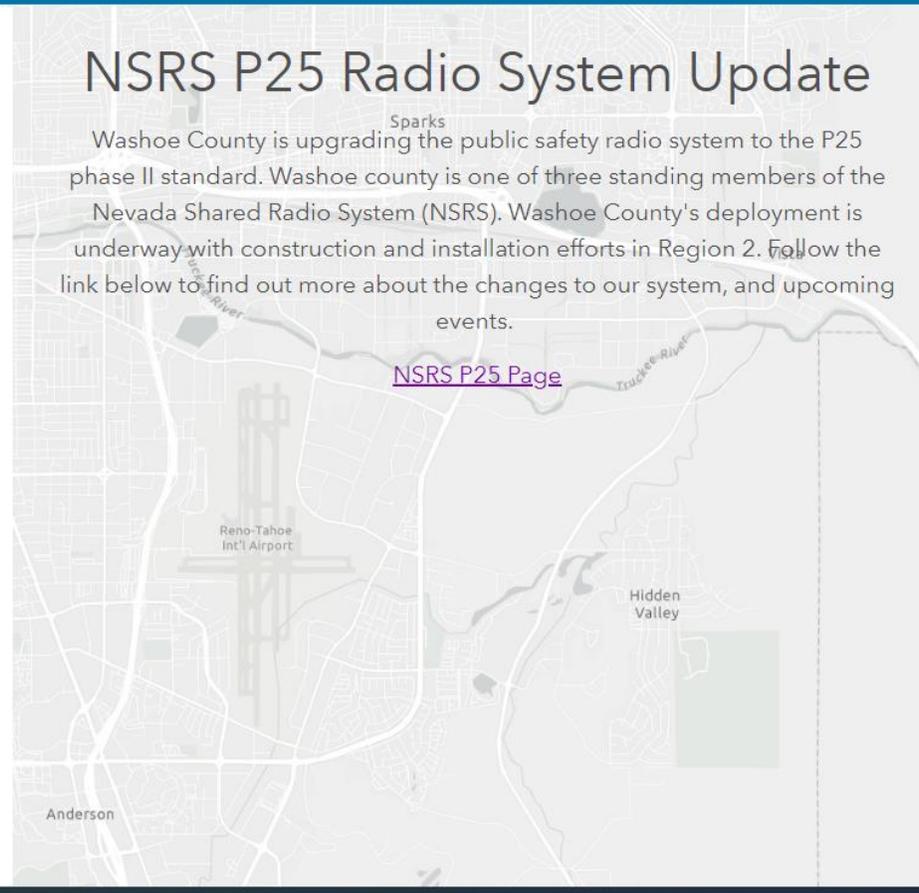
# WCRCRS Main Page



## NSRS P25 Radio System Update

Washoe County is upgrading the public safety radio system to the P25 phase II standard. Washoe county is one of three standing members of the Nevada Shared Radio System (NSRS). Washoe County's deployment is underway with construction and installation efforts in Region 2. Follow the link below to find out more about the changes to our system, and upcoming events.

[NSRS P25 Page](#)





# WCRCRS Main Page

## Regional Broadband Initiative

Washoe County is actively working on strengthening our communications infrastructure through various initiatives throughout the county, and partnering with State of Nevada Department of Transportation, along with the State of Nevada Office of Science, Innovation and Technology to provide better access to Broadband services for our communities. [Click here to find out more.](#)

[Broadband Initiative Page](#)

**DTS FIBER IS HERE.**

Connecting your community at the speed of light!

## Interference Updates & In-Building Coverage: Registering you BDA's

As we upgrade the public safety radio system, all in-building repeater systems, bi-directional amplifiers, and signal amplifiers will need to be inspected, and tested by the Washoe County Regional Communications





## Meet The Teams

### WCRCS

This is the Washoe County Regional Communication Systems Team, better known as WCRCS. WCRCS supports the infrastructure or system side of the house, providing maintenance and operational support of the backhaul that supports the existing EDACS radios system, along with all the servers, routers, switches, network components and RF Interfaces that make up the radio system. The picture below is one of the 3AM ventures at Spectrum/ NOC Datacenter where we are working with L3harris on upgrading the Vida core software to it's newest revision. From left to right: James Davis, John Byerly, John Rees (Larry Blankenship -L3Harris sitting down) and Melissa Lawney.

WCRCS is composed of 4 Team Members: John Byerly, John Rees, James Davis and Tyler Gerber-Winn.





# WCRCS Main Page

## Radio Shop

The Washoe County Radio Shop Team consists of three Network engineers: Don Thornberry, Daniel Foster and Daniel Bale. Radio Shop supports the end-user side of the house, providing maintenance and operational support of the portable and mobile radios. Although Radio Shop is dedicated to Washoe County, All agency member that are part of the Washoe County Regional System or have an existing interlocal agreement can utilize the radio shops services, with understanding all service rendered are billable.

Repair Labor is set for \$85/hour with a per service Administrative fee of \$30.

Picture below depicts the entire team in 2022: Radio Shop & WCRCS

Left to Right: Dan Foster, Don Thornberry, James Davis, John Byerly, (on the ground) John Rees.



Melissa Lawney is the **Washoe County Regional Communications Coordinator** responsible for the Public Safety Radio System.

- [Mlawney@washoecounty.gov](mailto:mlawney@washoecounty.gov)
- 775-771-4241



# NSRS P25 Update Page

NSRS P25 Updates In-Building Coverage

## NSRS P25 Updates

Washoe County microwave installation have been moved to Spring/Summer of 2023.

1

### Site Remediation's

Permitting, Grounding and initial Engineering was completed July 2019.

2

### Microwave Deployment

Deployments 1 & 2 equipment set to begin installs mid-July 2022. Microwave deployments 3 & 4 set to begin summer 2023.

3

### P25 Equipment Installation

P25 Equipment installations on select site begins August 2022, and remaining sites expected to be deployed Fall 2023.

4

### Testing, Verification and Validation

Microwave testing to be conducted after each microwave deployment. P25 RF Interface testing to begin after P25 Commissioning dates.

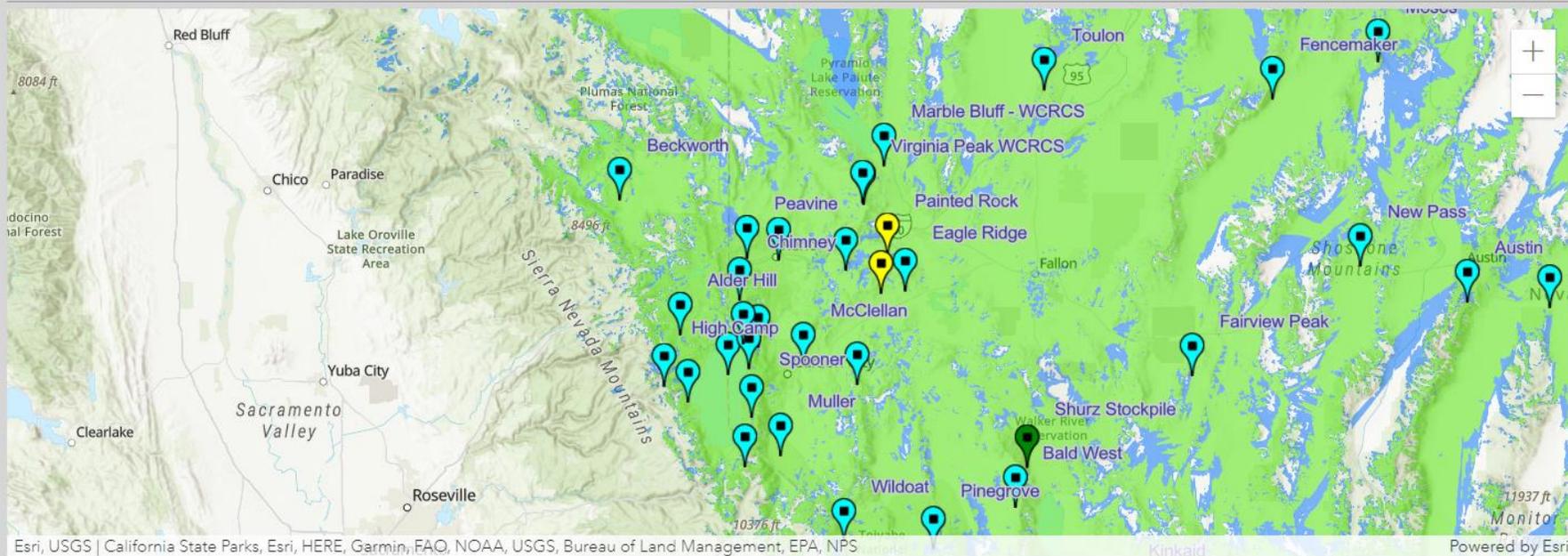


# NSRS P25 Update Page

NSRS P25 Updates In-Building Coverage

dates.

NSRS P25 Expected Coverage Map (pending final design {green- portable coverage, blue- mobile coverage overlapped})



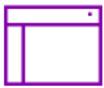


# NSRS P25 Updates

NSRS P25 Updates In-Building Coverage

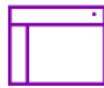
## Washoe County Regions

There are five regions with towers under development within Washoe County.



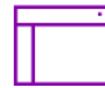
### Dispatch Center Information

NOC, Sparks Dispatch, and WCRCS



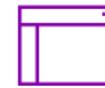
### Northern Washoe County

Fox, Marble, Poito, Seven Lakes, and Ash Fields



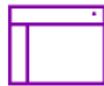
### Cold Springs Peavine Region

Cold Springs, Chimney Peak, Peavine Peak



### Reno/Sparks Metro

Ophire, Red Peak, Smokey Quartz, Virginia Peak



### Tahoe Region

Biltmore, Mt. Rose, Slide, and Snowflake



## Washoe County In-Building Coverage

Registering your BDA's

### Washoe County In-Building Coverage & BDA Initiative

Welcome to the Washoe County In-Building Coverage section. In order to adhere to the FCC Registration as defined in 47 CFR Part 90. Washoe County requires registration for all Buildings that has a Bi-directional Amplifiers (BDA), or any in-building amplification that uses a Washoe County Regional Communications System (WCRCS) or Nevada Shared Radio System (NSRS) Site.

Certificate of Occupancy is based off of the National Fire Protection Association (NFPA). This is a higher standard that defines minimum run-times, painting requirements, AC-power cuts, -95dBm, 95%. These standards constantly evolve.

The link below will take you to BDA Registration.

[https://gis.washoecounty.us/rsd\\_development/public/radioregistration](https://gis.washoecounty.us/rsd_development/public/radioregistration)



# In-Building Coverage Page



## FCC information

[FCC Signal Booster Registration - Part 90 Class B Signal Booster Registration & Discovery](#)

For registration of Signal Boosters requires the following information from each entity:

- FCC FRN
- Booster ID #
- Company
- Location

[Go to the Data](#)



# NSRS In-Building Coverage & BDA Initiative

[Back to Washoe County In-Building Coverage & BDA Initiative](#)

## WCRCS Initial Assessment Request

Please complete all sections.

Property Information

Contact Information

Acknowledge and Submit

### Property Information

Project Name

Permit Application Number

Site Street Address

City

State

Zip Code

Project Information

Building Status

Total Building SQ. FT.

Number of Floors

Escort Name

Escort Number



# NSRS In-Building Coverage & BDA Initiative

[Back to Washoe County In-Building Coverage & BDA Initiative](#)

## WCRCS Initial Assessment Request

Please complete all sections.

Property Information

**Contact Information**

Acknowledge and Submit

### Contact Information

Contact Name

Contact Title

Contact Email

Contact Phone Number

Extension

Company Name

Street Address

City

State

Zip Code

Washoe County Regional Services Department

1001 E. 9th Street

Reno, NV 89512



Please complete all sections.

Property Information

Contact Information

Acknowledge and Submit

# WCRCS Initial Assessment Request

## Building Owner Responsibilities

- Must comply with 47 CFR 90.219, FCC rules governing use of signal boosters
- Installer must have **FCC General Radiotelephone Operator License or Professional Engineering License with the State of Nevada**
- Must adhere to National Fire Prevention Code 2018 understanding the adopted requirements from NFPA 72 and NFPA 1221.
- The in-building radio system shall use a channelized BDA. The BDA shall be certified Class "A" FCC-type accepted and must operate in accordance with FCC rules. The system must also be compatible and fully operational with both P25 Phase 1 and P25 Phase 2 for all channels.
- Provide design plans that complies with the In-Building Radio Communications Enhancement System Technical requirements. Documentation should include:
  - Sealed floor plans showing radio coverage for critical and general areas using industry-standard radio frequency computer-generated propagation modeling.
  - System is upgradable for frequency band coverage changes, including at a minimum both 700/800 MHz.
  - Record of all appropriate signal levels after the system implementation, as previously detailed.
  - Provide a floor plans heat map that color-codes the received levels.

## Evaluator Responsibilities

- Generate Testing documents that Satisfy TMFPD requirements for Public Safety in-building Coverage
- Generate Test documents that Satisfy WCRCS requirements for Public Safety Coverage
- Conduct Signal Testing Documentation
- Compile Testing Results and provide Recommendations to TMFPD

## Acknowledgements

(Check Box to acknowledge reading.)

By submitting this form, the building owner acknowledges that if signal enhancements are required; no Certificate of Occupancy, Certificate of Completion, or Project Finals will be issued or approved until an TMFPD approved signal enhancement system is implemented and a Retransmission Authorization form is issued by Washoe County WCRCS



## Acknowledgements

(Check Box to acknowledge reading.)

By submitting this form, the building owner acknowledges that if signal enhancements are required; no Certificate of Occupancy, Certificate of Completion, or Project Finals will be issued or approved until an TMFPD approved signal enhancement system is implemented and a Retransmission Authorization form is issued by Washoe County WCRCS Radio Division.

All enhancement systems must meet the currently adopted NFPA standards for coverage and installation unless otherwise stated in writing by the AHJ.

It is the sole responsibility of the building owner to fund the testing, equipment purchase, and system installation required to satisfy NFPA requirements

Submit

Cancel/Clear Form



# Questions?

**Melissa Lawney**

**[Mlawney@washoecounty.gov](mailto:Mlawney@washoecounty.gov)**

**775-771-4241**

**775-858-5952**

