



# P25 JOC Meeting

P25 Joint Operating Committee

July 15, 2022





# NSRS Project Update

Agenda Item #6



# Outage Updates

- Microwave Installation Schedule has been delayed- August 15th, 2022 new microwave Installation schedule starts
  - Subcontractors lacked the appropriate State of Nevada Contractors license, and Tower climbing certificates in order to conduct work required.
- 19 July SR10A.7 Core Upgrade will occur at 3AM to 5AM
  - Operators around the state will need to convert to manual Procedures during this time frame (Hand held Radio Operations)
  - Expected Downtime will be from 3AM- 5AM.
  - Conference bridge will be open for each outage event in case of major issues.

## CONFERENCE BRIDGE

Bowers, John (US) - PSPC is inviting you to a scheduled ZoomGov meeting.

Topic: NSRS L3Harris A7 Upgrade Support

Time: This is a recurring meeting Meet anytime

Join ZoomGov Meeting

<https://L3Harris.zoomgov.com/j/1615407961?pwd=ckN1ZUNYa2EyVVJFY2ZzM2pGVm5vdz09>

Meeting ID: 161 540 7961

Passcode: 415081

One tap mobile

+16692545252,,1615407961#,,,,\*415081# US (San Jose)

+16468287666,,1615407961#,,,,\*415081# US (New York)

Dial by your location

+1 669 254 5252 US (San Jose)

+1 646 828 7666 US (New York)

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+1 551 285 1373 US

Meeting ID: 161 540 7961

Passcode: 415081

Find your local number: <https://L3Harris.zoomgov.com/u/avj1Oqkye>

Join by SIP

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# SR10A.7 Core Upgrade

Task	Start Date	End Date	Time	Service Impacting?	Member needed?	L3Harris
7/17/2022 – UAS Lockdown – until 07/27/22	Sunday, July 17, 2022	Wednesday, July 27, 2022	0000-2400	No UAS Changes	NO	NO
7/18/2022 – 7/19/2022 Day (No impact on service)	Monday, July 18, 2022	Tuesday, July 19, 2022	0700-2400	NO	NO	Remote
•System wide Software/Hardware Audit				NO	NO	Remote
•Begin system Backup procedure (UAS, VMs, etc)				NO	NO	Remote
7/19/2022 Morning (Required outage 3am to 5 am.)	Tuesday, July 19, 2022	Tuesday, July 19, 2022	0300-0500	YES - Entire period	YES	Remote, local backup
•System Fail over from Secondary cores to Primary cores.						Remote, local backup
•Begin IOS upgrade on Core network gear. Expected outage of 2 hours for Router/Switch connecting EMG and existing cores.						Remote, local backup
7/20/2022 (No impact to service)	Wednesday, July 20, 2022	Friday, July 22, 2022		NO		Remote, local backup
•Begin Secondary Core Upgrades (Application software)						Remote, local backup
•Expected 2 days						Remote, local backup
•Complete Secondary Core Updates.	Friday, July 22, 2022	Friday, July 22, 2022		NO		Remote, local backup
7/25/2022 (Brief impact during Core failover)	Monday, July 25, 2022	Monday, July 25, 2022	0700-0800	Yes - brief, no end user impact because these are the .7 cores, not .1	Recommended, on-call	Remote, local backup
•Fail Primary Cores to Secondary Cores						Remote, local backup
•Begin Primary Core Upgrade (Application Software)						Remote, local backup
•Fail over Secondary Cores back to Primary Cores (brief impact during this failover)	Wednesday, July 27, 2022	Wednesday, July 27, 2022	0700-0800	Yes - brief, no end user impact because these are the .7 cores, not .1	Recommended, on-call	Remote, local backup
•System Upgrade complete						Remote, local backup
System will be monitored over the next two weeks on a daily basis for any issues						Remote, local backup



# Site Updates

- Lease for Ash Field site
- Cold Springs SUP approval
  - Next Step: Right-of-way approval
  - Scheduled to begin construction in August
- Still working on Smokey Quartz & Seven Lakes BLM permitting.
- Microwave system (partially) delivered and scheduled to start install in mid-late august.



# P25 System Construction Cost Increases

Agenda Item #7





# Overview

- Funding history and payments to date
- Cost increase discussion
  - Sites
  - Impact
  - Timeline - Need additional funds in FY24
- Relevant WCRCs P25 Interlocal provisions
- Next steps
  - Work with L3Harris on Change Order
  - Determine cost increase by agency
  - Discuss with agency finance representatives
    - Discuss Strategies for payment



# Funding and Payments History

- Washoe County obtained General Obligation Bond financing in September 2020.
  - Par amount \$9,135,00 + premium \$1,411,219.95 = **\$10,546,220**
  - Interest rate 1.38%
  - Debt + interest: \$11,663,962 ← *Agency debt service payments repay debt over 15 years*
    - Fifteen-year repayment schedule
- P25 Radio System Interlocal Agreement
  - Agency Pre-payments: **\$3,190,942**
  - Agency Debt Service payments
    - **Total - \$11,663,962:** Payments are proportional to agency use of the system as of May 1, 2020.





# Funding and Payments History

## Two "Buckets" for **project** budget

	Site Civil Allowance payments	Milestone Payments	Total
Total paid	\$803,115	\$6,228,741	\$7,031,856
To be paid	\$6,230,108	\$1,731,311	\$7,961,419
Total	\$7,033,223*	\$7,960,052	\$14,993,275

- **Milestone Payments** are dependent on L3Harris performing certain actions as defined in the System Purchase Agreement. Generally related to Radio System equipment/technology.
- **Site Civil Allowance Payments** require a **Change Order** to access the available funds or to proceed with actions that would require the funds. Generally related to green- or brown-field site construction and existing site remediation.
- \* Original Budget



# Project payment Sources

	Funding Source				
Fiscal Year	Washoe County	WCRCS Infrastructure	Partner Agency Pre-payments	Bond Proceeds	Total
FY19	\$ 533,981				\$533,981
FY20	\$ 275,243	\$750,000			\$1,025,243
FY21			\$800,000	\$685,474	\$1,301,539
FY22				\$4,171,092	\$4,171,092
Total payments				\$4,856,566	\$7,031,857
		Remaining funds	\$2,390,942	\$5,689,654	\$8,080,596

*The table above reflects all payments to date and remaining funds by source. All remaining project payments will be made from Partner Agency Pre-payments and Bond Proceeds.*



# Project Milestone payments

1. System Purchase Agreement Signing: **\$533,981.25 (September 2018)**
2. Commence Network Switching Center (NSC) Install: **\$796,005.24 (November 2019)**
3. NSC Install Complete: **\$1,194,007.86 (January 2020)**
4. Approval of Detailed Design Review: **\$918,728.31 (November 2021)**
5. Region 2 Factory Staging: **\$1,194,007.86 (February 2022)**
6. Region 2 shipment of Radio System Equipment: **\$1,592,010.48 (February 2022)**
7. Region 2 Radio System Installation complete & accepted: \$1,194,007.86
8. Final System Acceptance: \$537,303.54





# P25 Site Infrastructure Cost Increases

Washoe County Sites	Change Order #11 Costs	New Cost Estimate	Variance
Ash Fields	\$ 996,631.85	\$ 1,830,458.08	\$ 833,826.00
Biltmore	\$ 273,188.00	\$ 608,015.00	\$ 334,827.00
Cold Springs	\$ 554,118.71	\$ 752,900.54	\$ 198,782.00
Red Peak	\$ 637,876.52	\$ 1,236,431.28	\$ 598,555.00
Seven Lakes	\$ 996,631.85	\$ 2,179,581.83	\$ 1,182,950.00
Smokey Quartz	\$ 554,118.71	\$ 1,188,148.30	\$ 634,030.00
Site Development Total	\$ 4,012,565.64	\$ 7,795,535.03	<b>\$ 3,782,970.00</b>



# P25 Site Infrastructure Cost Increases

- Remaining project funds: \$8,080,596
- Remaining costs:
  - Milestones: \$1,731,311
  - Civils: \$9,908,343
  - **Total: \$11,639,654**
- Difference between remaining project funds and projected reimagining costs: **\$3,559,058**



# Cold Springs

Cold Springs	Booked Value	Civils True-UP	Variance
Tower Steel	128,633.76	\$ 51,948.75	\$ (76,685.00)
Shelter Fabrication and Delivery	206,397.49	\$ 158,947.50	\$ (47,450.00)
Site Development	73,590.00	\$ <b>458,933.00</b>	\$ 385,343.00
Generator	41,025.00	\$ 29,975.00	\$ (11,050.00)
48 VDC Plant	60,252.46	13,247.30	\$ (47,005.00)
A&E	44,220.00	\$ 39,849.48	\$ (4,371.00)
<b>Total</b>	<b>554,118.71</b>	<b>\$ 752,900.54</b>	<b>\$ 198,782.00</b>

Cold Springs Site Development Cost Breakdown	
Labor	148,521.60
Lodging	33,210.00
Meals & Incidentals	12,054.00
Vehicle Mileage	22,755.00
Materials	115,200.00
Equipment & Vehicles	12,180.00
Third Party Services (Subcontracts)	27,000.00
<b>Total</b>	<b>370,920.60</b>
Washoe County Price with Contract Mark-Ups	
Labor / 3rd Party Services	231,689.00
T&L	68,019.00
Materials	159,225.00
	<b>458,933.00</b>



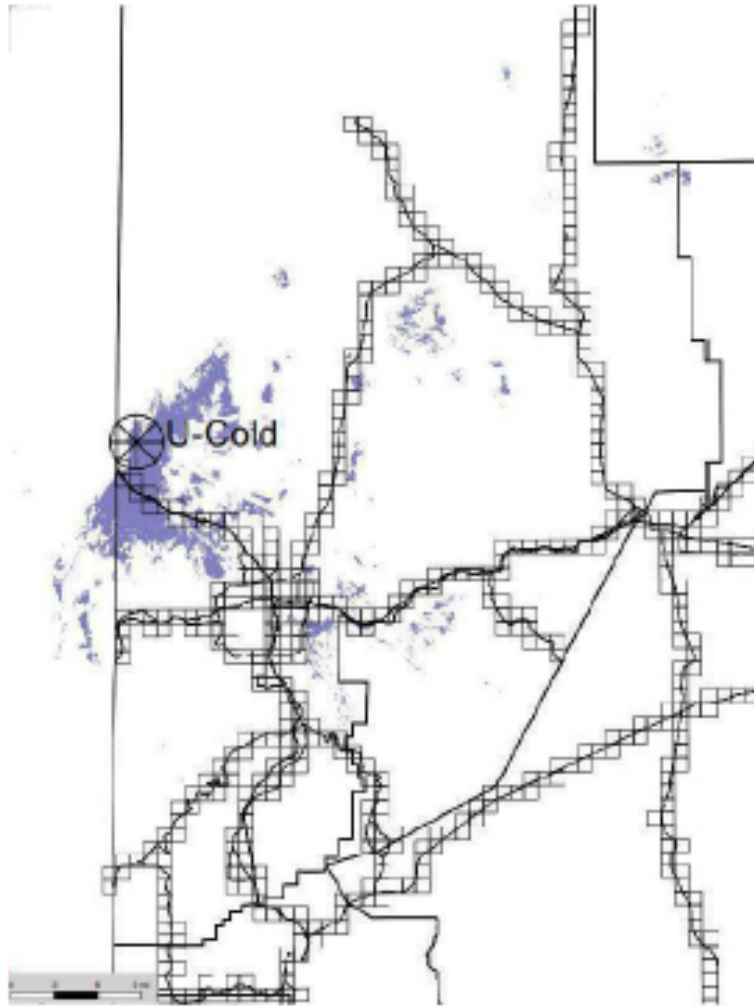




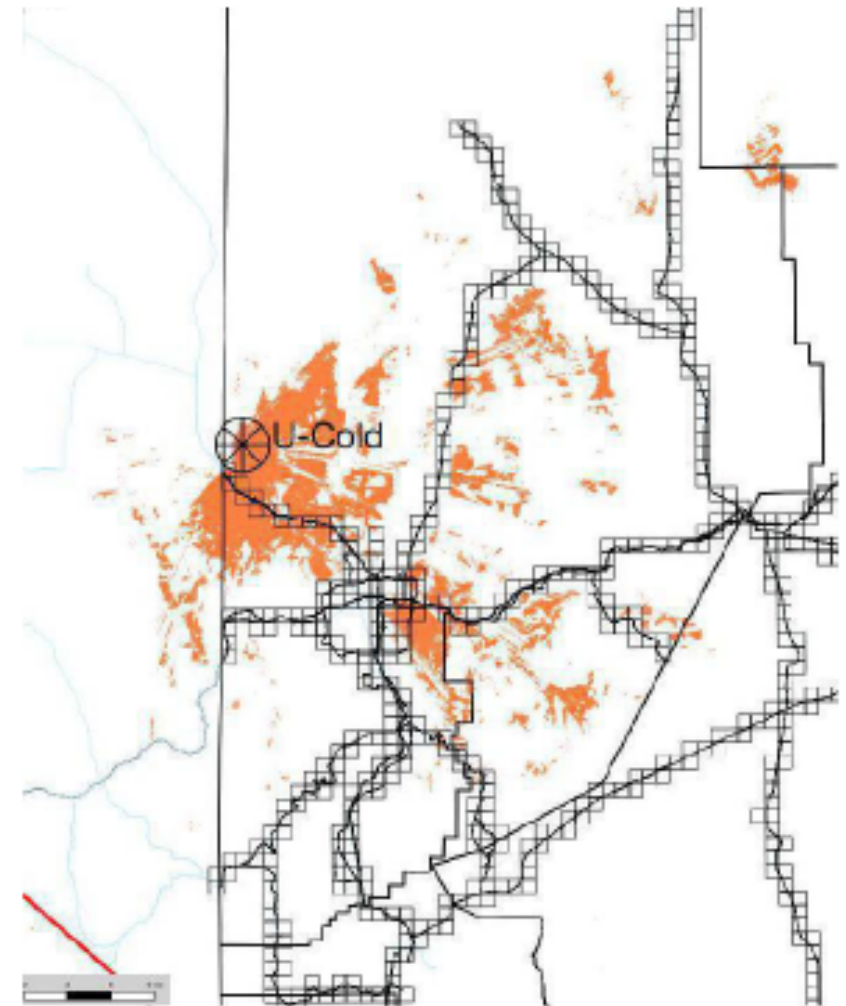
# Cold Springs RF Coverage

## COVERAGE OVERVIEW

Portable Talk Out



Mobile Talk Out





# Biltmore

Biltmore	Booked Value	Civils True-UP	Variance
<b>Tower Steel</b>	-		\$ -
<b>Shelter Fabrication and Delivery</b>	206,397.49	\$ 312,500.00	\$ 106,102.51
<b>Site Development</b>	-	\$ 271,600.00	\$ 271,600.00
<b>Generator</b>	-	\$ -	\$ -
<b>48 VDC</b>	60,252.46	15,995.00	\$ (44,257.46)
<b>A&amp;E</b>	6,538.05	\$ 7,920.00	\$ 1,381.95
<b>Total</b>	273,188.00	\$ 608,015.00	\$ 334,827.00

## \*Indicates ROM Pricing

Additional Engineering Design Effort for Temporary Shelter Solution, Temporary and Permanent Cable Routing / Ice Bridge Solution, Permanent Foundation, Heavy Equipment for Shelter move / final setting





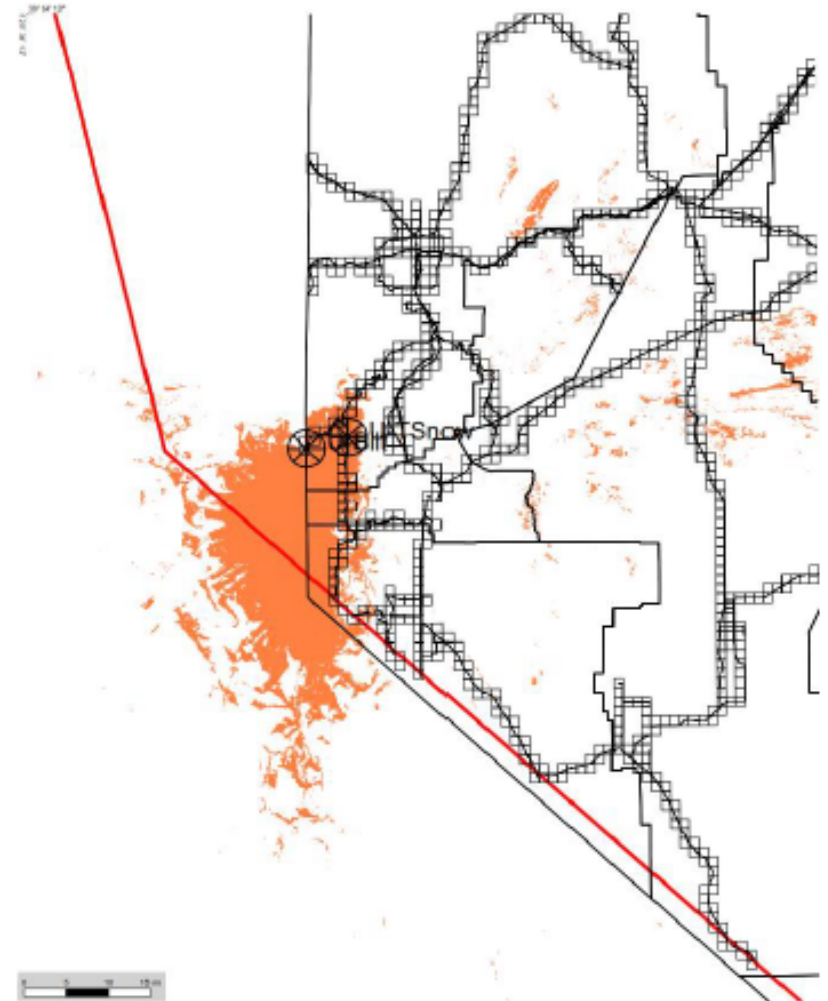
# Biltmore RF Coverage

SIMULCAST PORTABLE TALK OUT



COVERAGE OVERVIEW

SIMULCAST MOBILE TALK OUT







# Red Peak

Red Peak	Booked Value	Civils True-Up	Variance
Tower Steel	160,792.20	\$ 103,788.75	\$ (57,003.00)
Shelter Fabrication and Delivery	257,996.86	\$ 195,327.50	\$ (62,669.00)
Site Development	73,590.00	\$ <b>847,356.00</b>	\$ 773,766.00
Generator	41,025.00	\$ 34,918.75	\$ (6,106.00)
48 VDC Plant	60,252.46	15,994.68	\$ (44,258.00)
A&E	44,220.00	\$ 39,045.60	\$ (5,174.00)
<b>Total</b>	<b>\$ 637,876.52</b>	<b>\$ 1,236,431.28</b>	<b>\$ 598,556.00</b>

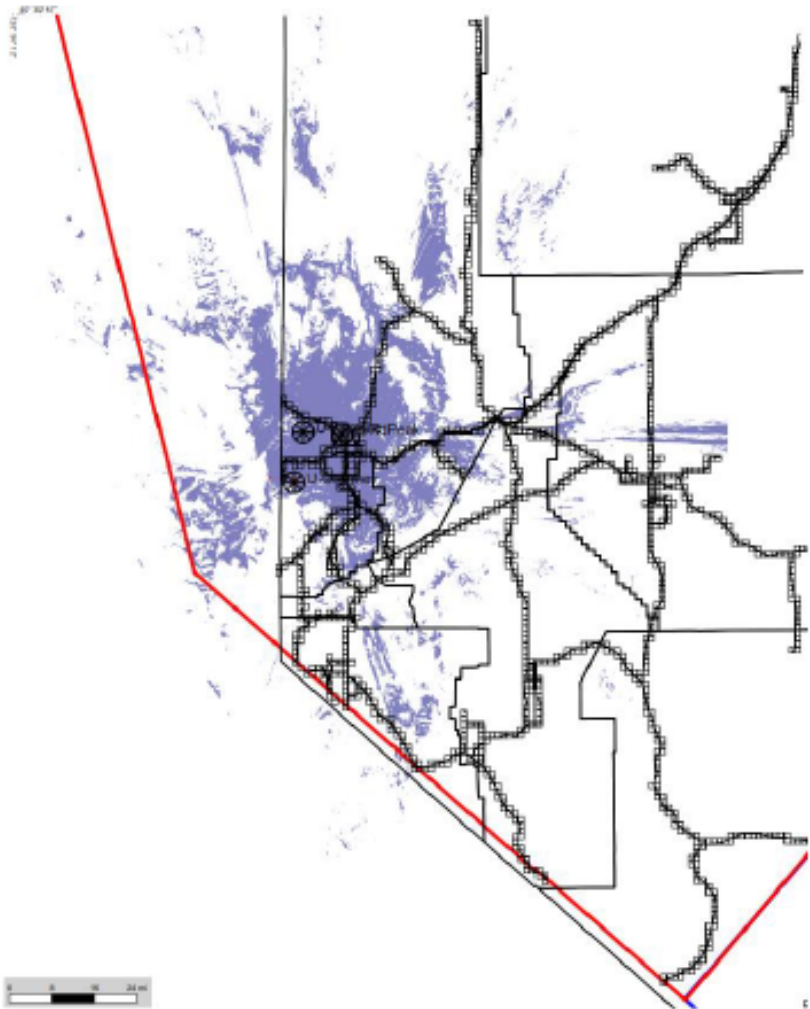
Red Peak Site Development Cost Breakdown	
Labor	262,453.00
Lodging	67,500.00
Meals & Incidentals	24,500.00
Vehicle Mileage	46,250.00
Materials	160,194.00
Equipment & Vehicles	85,588.00
Third Party Services (Subcontracts)	42,000.00
<b>Total</b>	<b>688,485.00</b>
Washoe County Price with Contract Mark-Ups	
Labor / 3rd Party Services	401,878.00
T&L	138,250.00
Materials	307,228.00
	<b>847,356.00</b>





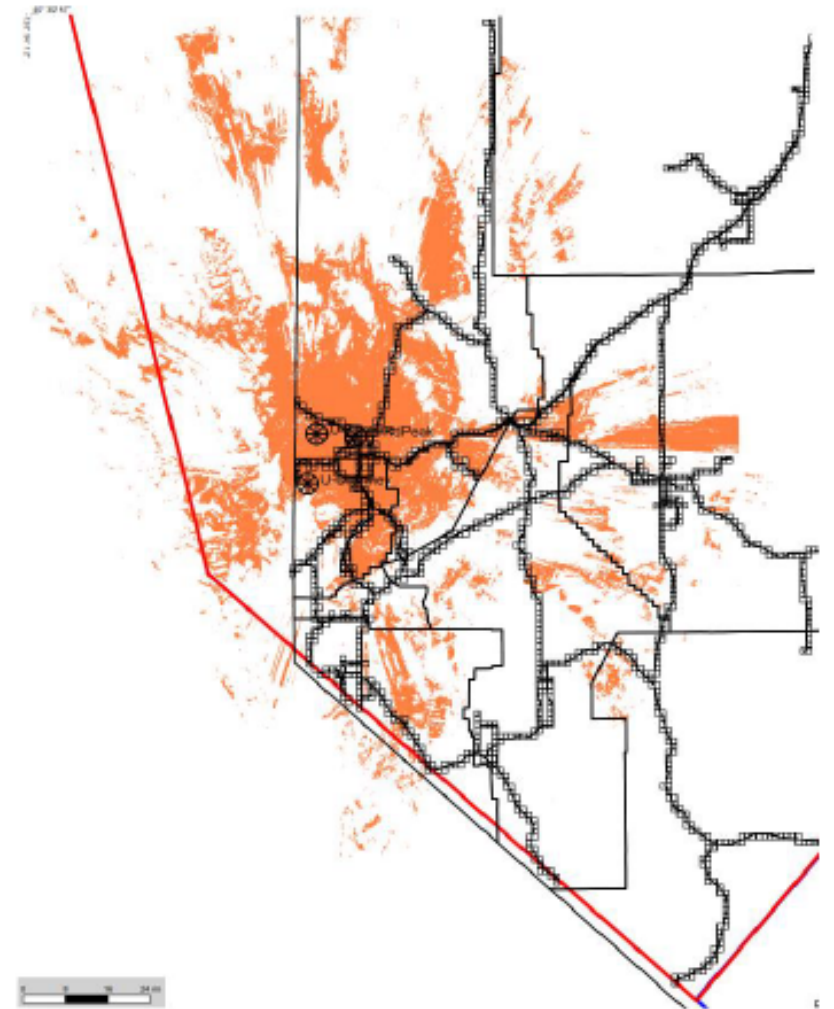
# Red Peak RF Coverage

SIMULCAST PORTABLE TALK OUT



COVERAGE OVERVIEW

SIMULCAST MOBILE TALK OUT







# Seven Lakes

Seven Lakes	Booked Value	Civils True-UP	Variance
Tower Steel	128,633.76	\$ 74,576.25	\$ (54,057.51)
Shelter Fabrication and Delivery	206,397.49	\$ 416,250.00	\$ 209,852.51
Site Development	54,780.00	\$ 1,097,355.50	\$ 1,042,575.50
Generator	41,025.00	\$ 29,975.00	\$ (11,050.00)
Backup Power System	521,575.60	521,575.60	\$ -
A&E	44,220.00	\$ 39,849.48	\$ (4,370.52)
Total	996,631.85	\$ 2,179,581.83	\$ 1,182,949.98

\* Indicates ROM Pricing

Estimates include Build on Site (BOS) shelter, road improvements, and general increase in construction materials and labor

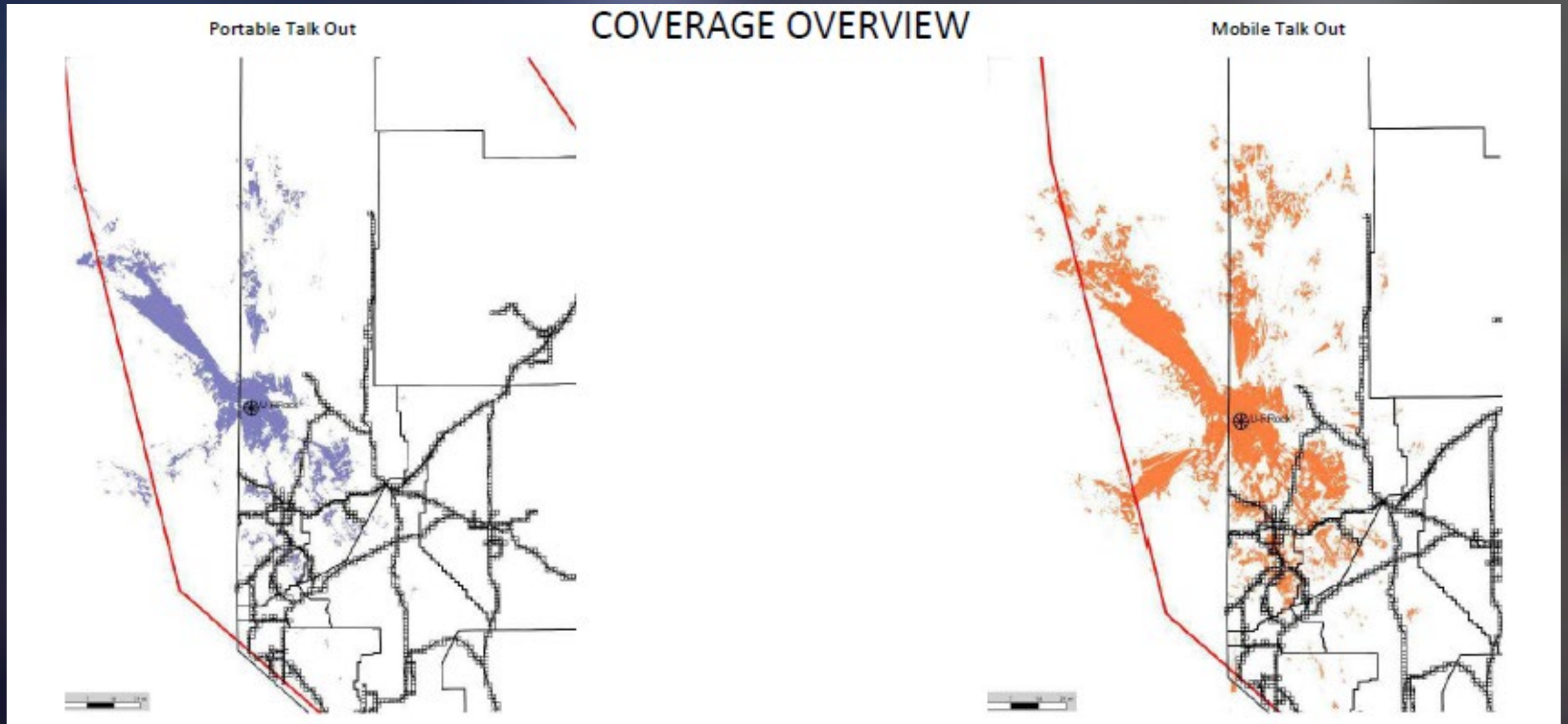
Seven Lakes Site Development Cost Breakdown	
Labor	262,453.00
Lodging	67,500.00
Meals & Incidentals	24,500.00
Vehicle Mileage	46,250.00
Materials	160,194.00
Equipment & Vehicles	85,588.00
Third Party Services (Subcontracts)	42,000.00
Access Road Improvements	200,000.00
Total	888,485.00
Washoe County Price with Contract Mark-Ups	
Labor / 3rd Party Services	401,878.00
T&L	138,250.00
Materials	557,227.50
	1,097,355.50







# Seven Lakes RF Coverage



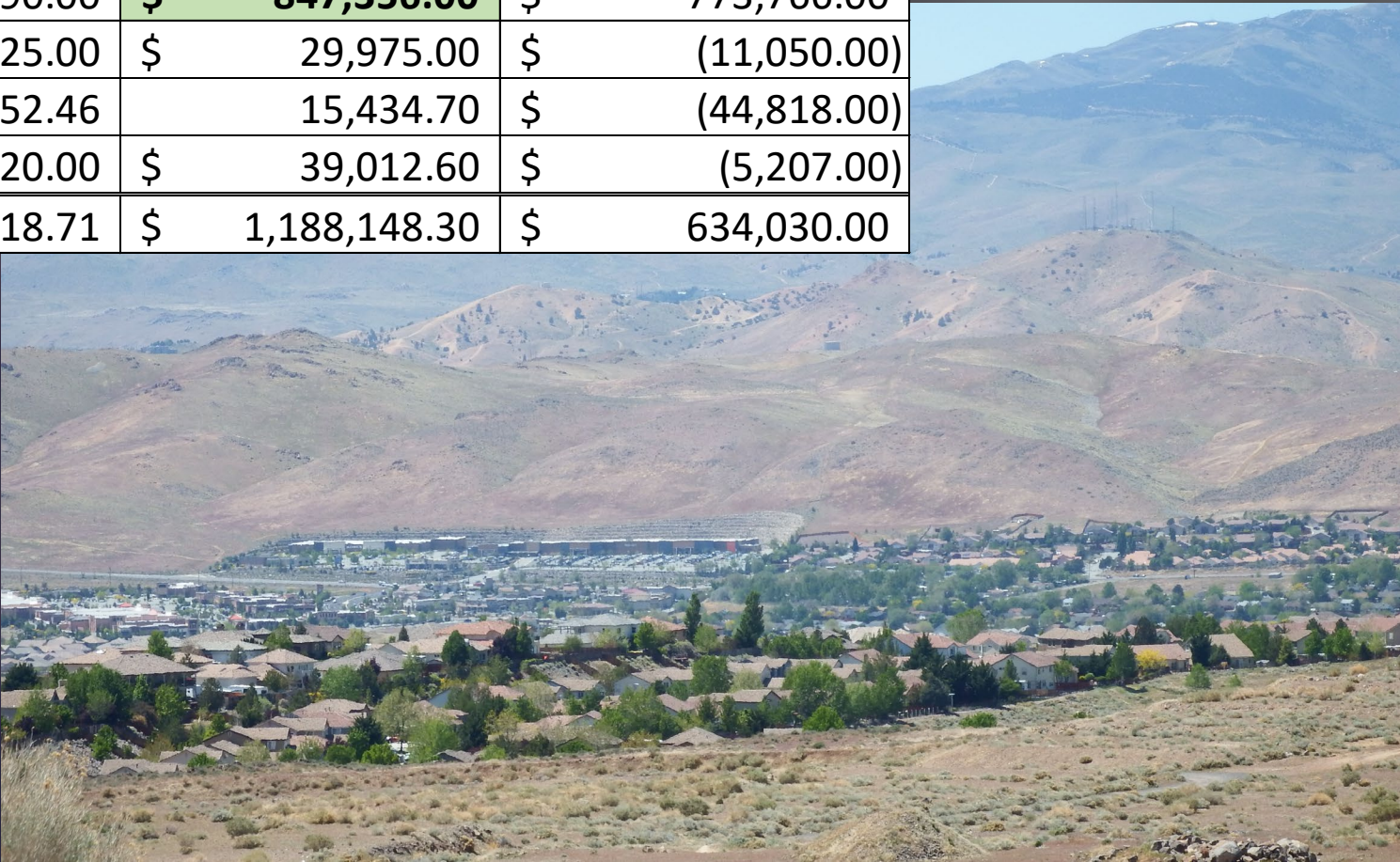


# Smokey Quartz

Smokey Quartz	Booked Value	Civils True-Up	Variance
Tower Steel	128,633.76	\$ 95,650.00	\$ (32,984.00)
Shelter Fabrication and Delivery	206,397.49	\$ 160,720.00	\$ (45,677.00)
Site Development	73,590.00	\$ <b>847,356.00</b>	\$ 773,766.00
Generator	41,025.00	\$ 29,975.00	\$ (11,050.00)
48 VDC Plant	60,252.46	15,434.70	\$ (44,818.00)
A&E	44,220.00	\$ 39,012.60	\$ (5,207.00)
Total	554,118.71	\$ 1,188,148.30	\$ 634,030.00

\* Indicates ROM Pricing  
Estimate based off Red Peak quote for site construction

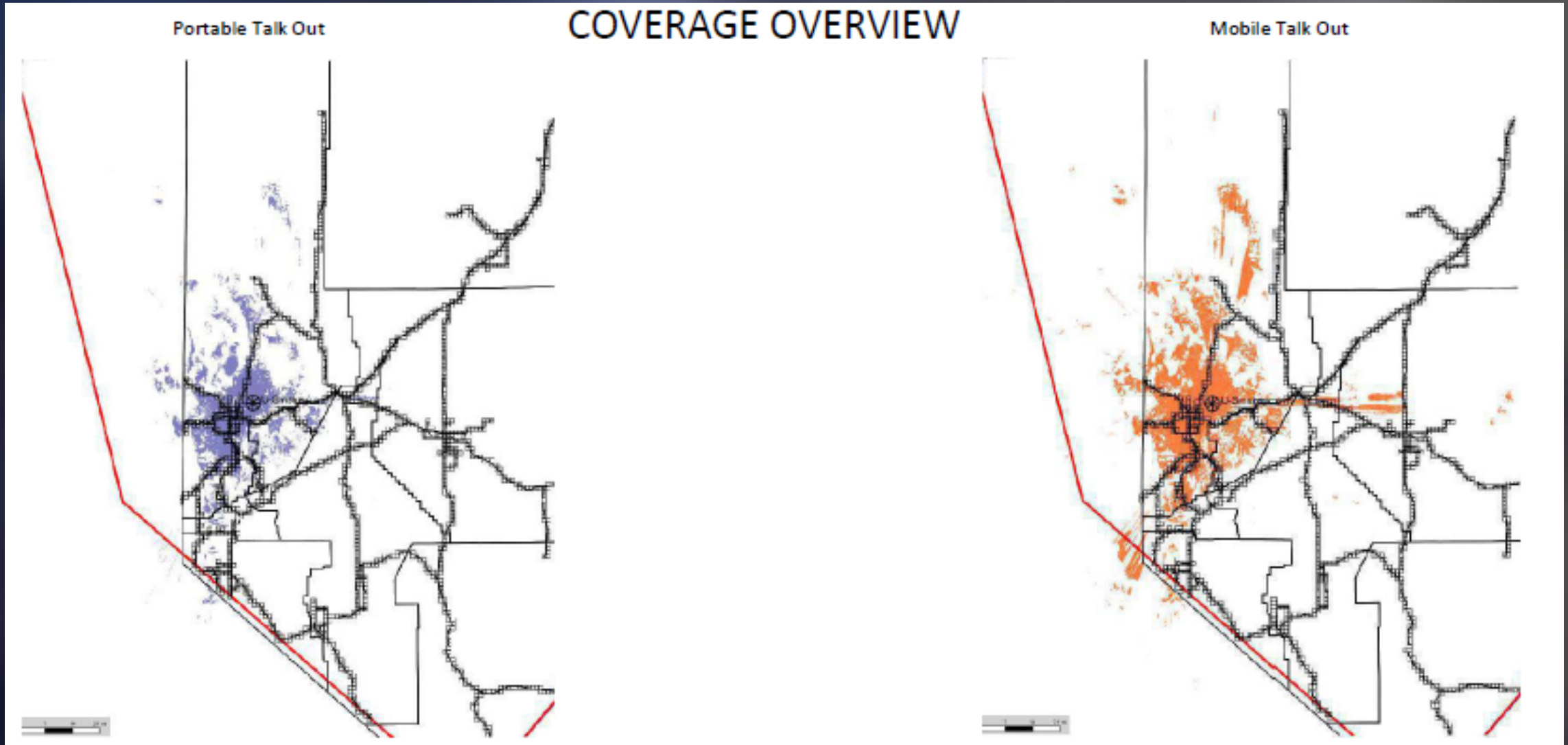
Smokey Quartz Site Development Cost Breakdown	
Labor	262,453.00
Lodging	67,500.00
Meals & Incidentals	24,500.00
Vehicle Mileage	46,250.00
Materials	160,194.00
Equipment & Vehicles	85,588.00
Third Party Services (Subcontracts)	42,000.00
Total	688,485.00
Washoe County Price with Contract Mark-Ups	
Labor / 3rd Party Services	401,878.00
T&L	138,250.00
Materials	307,228.00
	<b>847,356.00</b>







# Smokey Quartz RF Coverage







# Ash Fields

Ash Fields	Booked Value	Civils True-UP	Variance
Tower Steel	128,633.76	\$ 80,206.25	\$ (48,427.51)
Shelter Fabrication and Delivery	206,397.49	\$ 308,691.25	\$ 102,293.76
Site Development	54,780.00	\$ 847,355.50	\$ 792,575.50
Generator	41,025.00	\$ 29,975.00	\$ (11,050.00)
Backup Power System	521,575.60	521,575.60	\$ -
A&E	44,220.00	\$ 42,654.48	\$ (1,565.52)
Total	996,631.85	\$ 1,830,458.08	\$ 833,826.23

\*Indicates ROM Pricing

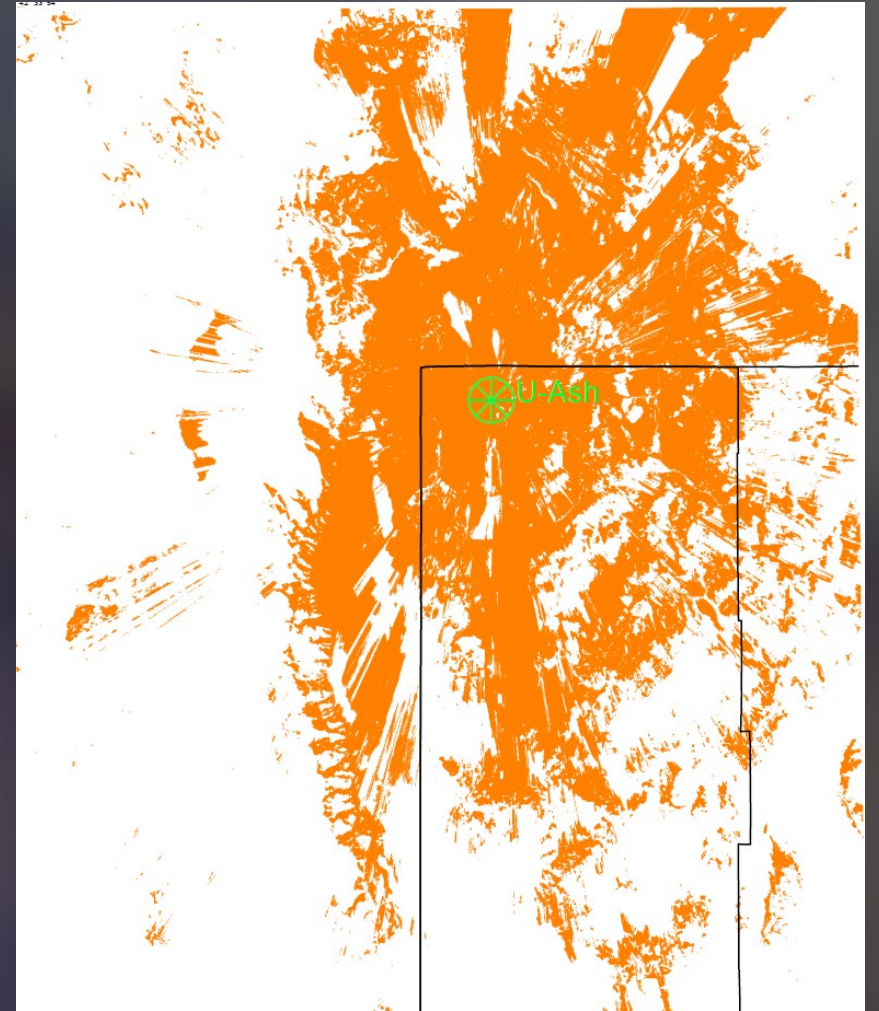
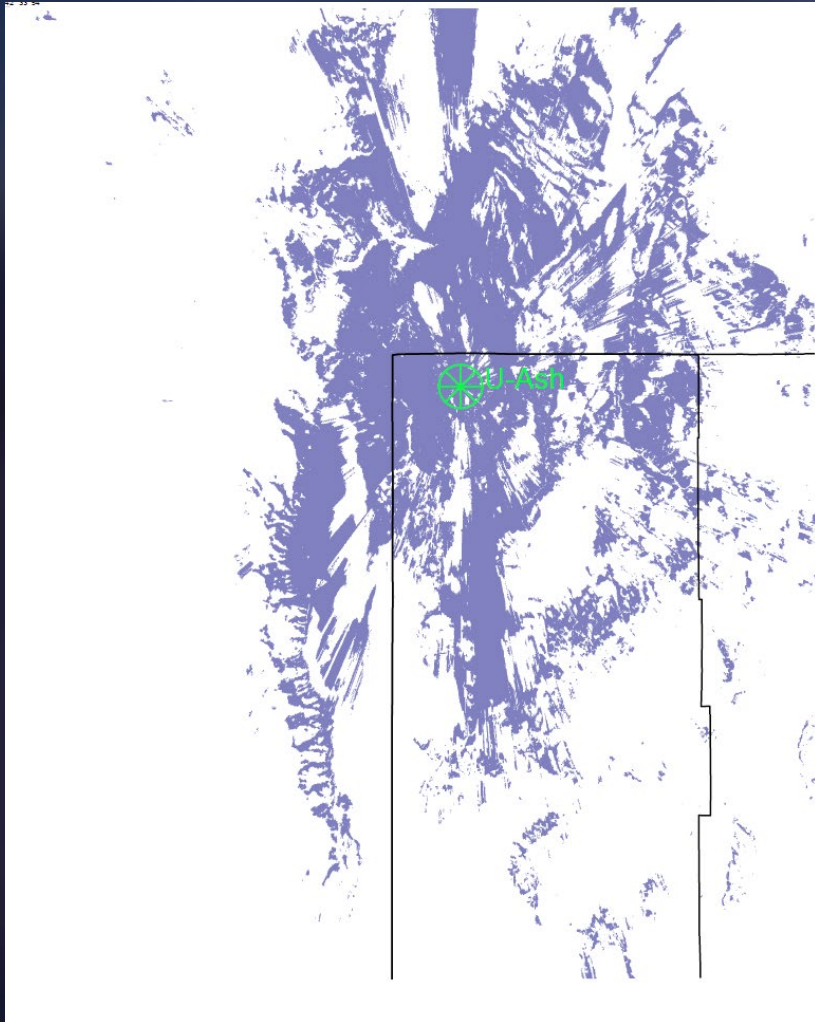
ROM price for two-mod shelter, addt'l heavy equipment for shelter transport to site, additional site development cost based on Red Peak quote.

Bally Mtn Site Development Cost Breakdown	
Labor	262,453.00
Lodging	67,500.00
Meals & Incidentals	24,500.00
Vehicle Mileage	46,250.00
Materials	160,194.00
Equipment & Vehicles	85,588.00
Third Party Services (Subcontracts)	42,000.00
Total	688,485.00
Washoe County Price with Contract Mark-Ups	
Labor / 3rd Party Services	401,878.00
T&L	138,250.00
Materials	307,227.50
	847,355.50





# Ash Fields RF Coverage Plot







# P25 Interlocal Provisions Related to Cost Sharing

- Section 13: Agency Costs – P25 System Infrastructure
  - **13.1** Each of the Partner Agencies agrees to pay a proportionate share of the total amount of the purchase and construction cost of the P25 System...Costs of financing include, without limitation, ... any other costs of any kind incurred by Washoe County to finance the purchase and construction of the P25 System.
  - **13.1.3** The rate of contribution shall not be adjusted except in the case that a new Partner Agency is accepted into the system...
- Agency Pre-payment
  - **13.2.2** If an agency pre-pays, the agency shall not be required to make any of the additional payments required by sections 13 .1.1 or 13.1.3 of this agreement.





# P25 System Construction Cost Increase – Next Steps

- Next steps – Additional funds will be needed starting in Fiscal Year 24 (July 1, 2023)
  - Work with L3Harris on Change Order
    - Currently some of the estimates are rough order of magnitude (ROM)
    - Washoe County will explore alternatives to reduce cost while still maintaining the planned sites and/or coverage.
  - Determine cost increase by agency
    - Cost distribution would be proportionate to use of the system – same as Interlocal agreement.
  - Discuss with agency finance representatives
    - Determine best strategies to cover the additional costs.



# Questions?

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