



800 MHz JOC Meeting

June 9, 2022



Marble Bluff Communications Tower Replacement Update

Agenda Item #5



Marble Bluff Original Scope

- Replace existing Marble Bluff Tower
 - 230% overloaded, and Washoe County needs to add items to tower to better support Public Safety Initiatives
 - Towers this overloaded pose a safety risk to general public and anything within the surrounding area. Big Risk include:
 - Tower Collapse
 - Wind to carry the tower off the mountain
 - Out of Compliance with ANSI/TIA-222-H Safety Requirements
 - Tribe needs tower space for Internet circuits, & building fiber entrance
- Replace existing shelter
 - Shelter contains asbestos within brick walls and roof- Asbestos remediation expensive.
 - Need HVAC needed- which requires cutting into brick
 - Need Roof repairs
 - Need Generator Replacement
 - Cost of new shelter with these fixtures included is cheaper than the maintenance of replace of all the components combined.



Marble Bluff Update

- Hired a CMAR- Plenium Builders late 2021
- Engineering Design completed March 2022
 - Determine on top of original requirement- New NVE Transformer needs to be upgraded
 - New generator needed to support both buildings
 - New Battery Bank also needed
- Total Engineering and Design Costs \$920K with added scope
- Tribal Approval received in Tribal Council Meeting on April 15th, 2022

Estimate Totals

Description	Amount	Totals	Rate
Labor	65,280		
Material	7,080		
Subcontract	700,834		
Equipment	6,400		
Other			
	779,594	779,594	
General Liability	7,796		1.000 %
Builders Risk	9,201		1.000 %
	16,997	796,591	
CMAR Contingency	39,830		5.000 %
Fee	83,642		10.000 %
Total		920,063	



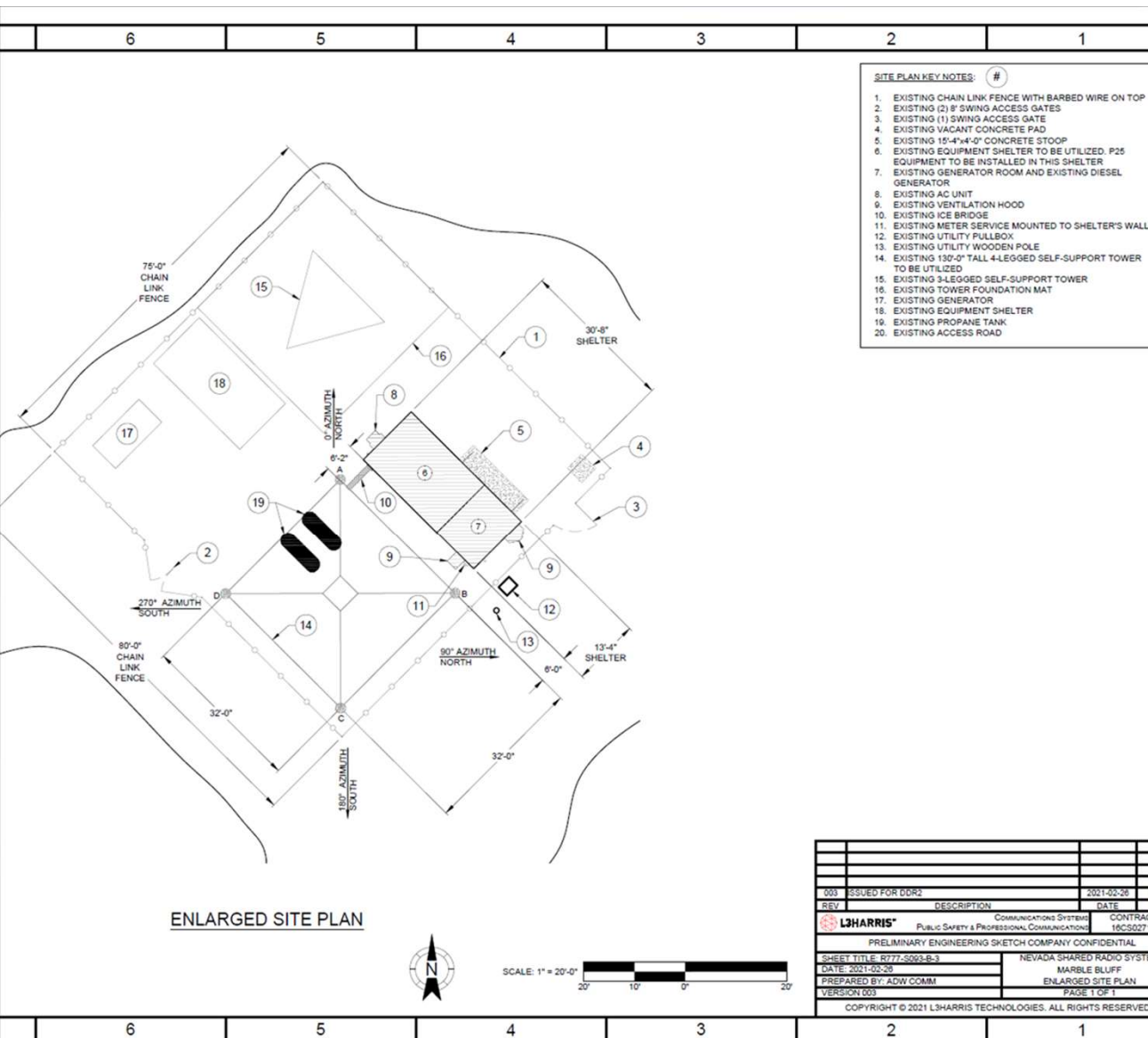
Cost Break Down

Description	Takeoff Quantity	Labor Hours	Labor Productivity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Price
GENERAL CONDITIONS								
PROJECT MANAGEMENT								
Project Administrator	4.00 MO	60	15.000 HR / MO	50.00 /HR	3,000	-	-	- /wk
FIELD PERSONNEL								
Project Superintendent	4.00 MO	692	173.000 HR / MO	90.00 /HR	62,280	-	-	-
CONSTRUCTION DOCUMENTS								
Blue Printing/Shop Drawings	2.00 SET			-	-	100.00 /SET	200	-
CONSTRUCTION FACILITIES								
Temporary Wash Stations	4.00 MO	693		/MO		150.00 /MO	600	-
Chemical Toilet (1/10/mo)	4.00 MO			-	-	320.00 /MO	1,280	-
Procure	1.00 EA			-	-	5,000.00 /EA	5,000	-
SITework								
SITE ELECTRIC STRUCTURES								
Communication on Wheels 100'	1.00 LS			-	-	-	-	30,334.00 /LS
Decommission Existing Tower	1.00 LS			-	-	-	-	67,370.00 /LS
Ground Ring & Grounding	1.00 LS			-	-	-	-	12,490.00 /LS
300Amp service & conduit building to building	1.00 LS			-	-	-	-	126,141.00 /LS
Remove & Replace Foundation	1.00 LS			-	-	-	-	121,128.00 /LS
F&I 130' 4-Legged Tower	1.00 LS			-	-	-	-	122,136.00 /LS
Foundation for 10'x20' building	1.00 LS			-	-	-	-	20,532.00 /LS
F&I 10'x20' precast building	1.00 LS			-	-	-	-	75,282.00 /LS
F&I Alpha CXPS-E3 power plant	1.00 LS			-	-	-	-	71,667.00 /LS
F&I Ice Bridge	1.00 LS			-	-	-	-	16,982.00 /LS
Move equipment from COW to new tower	1.00 LS			-	-	-	-	23,643.00 /LS
Repair existing fence	1.00 LS			-	-	-	-	9,529.00 /LS
Special Inspections	1.00 LS			-	-	-	-	3,600.00 /LS

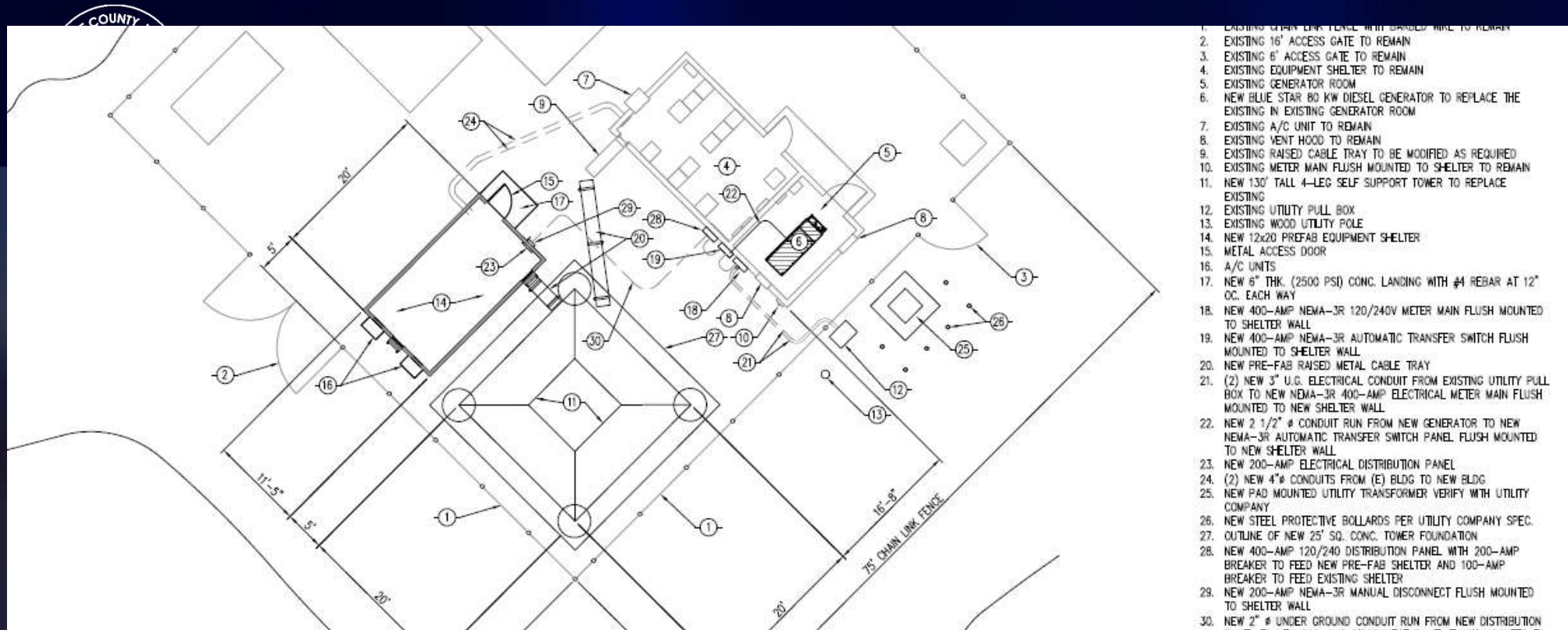


100% Design

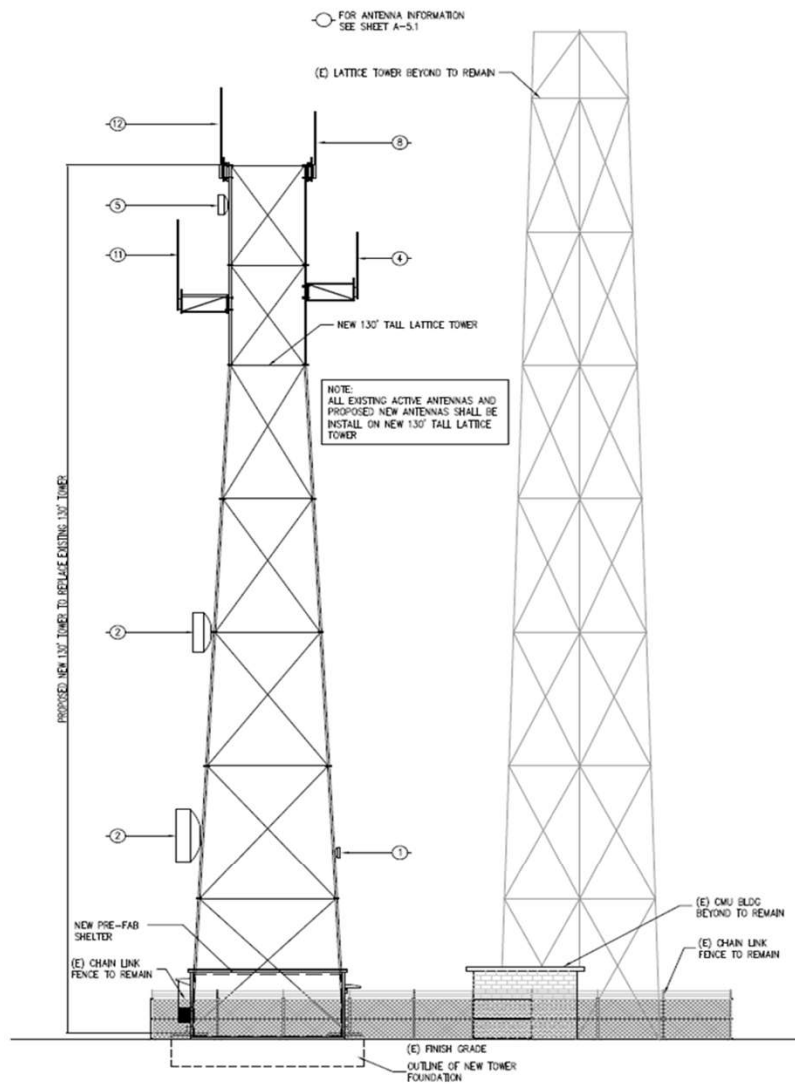
- Existing Building
 - New generator being installed to power both Old and New Shelter
 - Electrical Panel to be downgraded to 100A Panel only to serve equipment set for decommission 2026*
 - Fence to be repaired on East side, Grounding to be upgraded.
- New Building & Tower
 - Install new 200A Electrical Panel
 - New building set closer to fence to leave space for installing new ground ring, electrical conduit and Fiber entrance between buildings.
 - Washoe County looking to take over the NVE Electrical Bill upon completion of project.
- New Transformer to be installed by NVE
 - New Tower installed 15 feet from New transformer to meet code.



Existing Layout



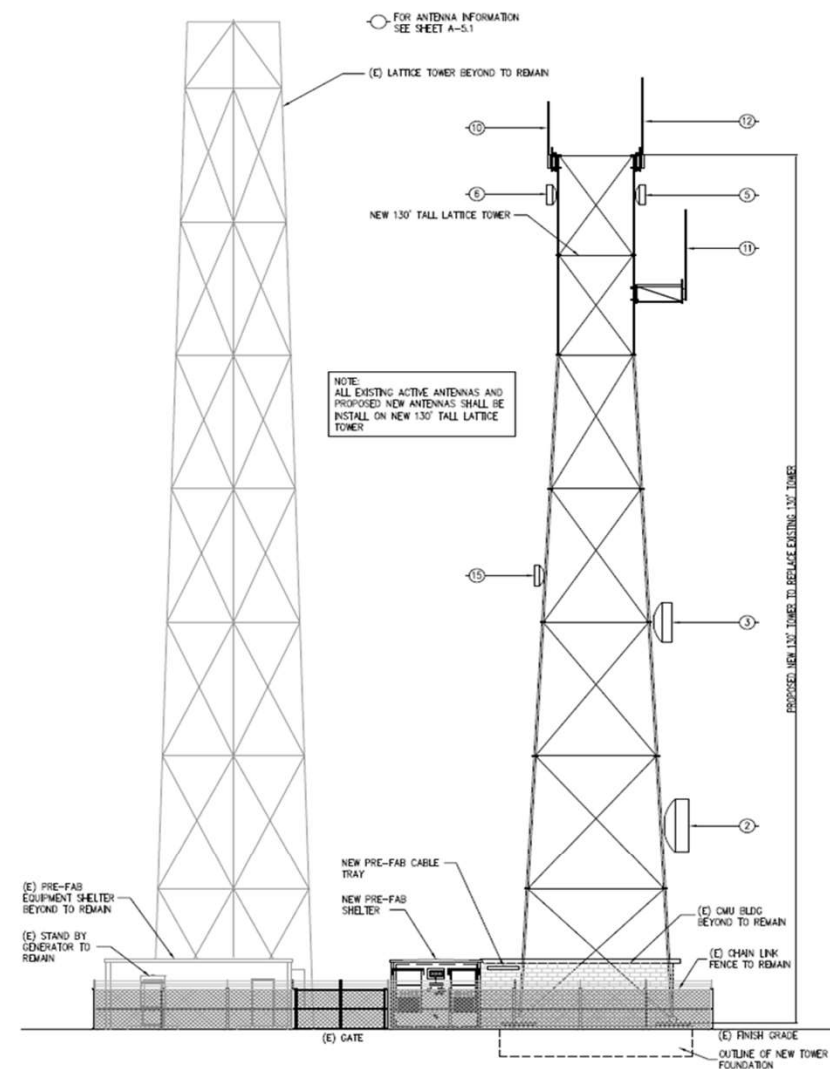
100% Design & New Layout



SOUTH EAST ELEVATION

0 4' 8' 16' 24'
SCALE: 1/8"=1'-0"

2



SOUTH WEST ELEVATION

0 4' 8' 16' 24'
SCALE: 1/8"=1'-0"

1



WCRCs Communication System Routers and Switch Replacement

Agenda Item #6



WCRCs Router & Switch Replacement

- WCRCs Network routers are 10+ years old, and need to be updated to prepare for the new system. These support our operational network for the WCRCs, which includes the cameras, environmental system alarms, and management and maintenance network used by the WCRCs team. <\$110K>
- In order to upgrade the Dispatch consoles, the old routers and switches need to be replaced. These routers support the system side but were not included in the original P25 system, as we have been adding more dispatch console over time. As we grow, we need to expand the network. <\$40K>



WCRCs Replacement of Slide Generator

Agenda Item #7



Slide Generator Replacement

- After a series of power outages in early January, the Slide generator panel stopped working. The teams had to refuel and keep the generator operating every three days in January while NVE troubleshoot the powerline issues in the Tahoe Region.
- After restoral of the power the Generator began failing regularly. Due to Long lead times, WCRCs team has ordered a generator to replace the one at Slide. These dollars will come out of this year's budget.
- We informally brought this issue up in the last JOC meeting, although it was not officially voted on, we are bringing this item up as an expenditure for formal review and approval.
- **WCRCs requests Approval to spend \$24,920 for the replacement of the Generator on Slide Mountain.**



Snowflake Lodge Conduit Installation

Agenda Item #8



Snowflake Lodge Conduit Issue

- COST INCREASED AGAIN!
- Snowflake lodge needs conduit installed from Equipment room (room next to ski patrol) over to the monopole. Current conduit is full of cable, with no ability to remove cables and install anything new.





Snowflake Conduit Options



Multiple quotes received only. Two quotes meet the county specification for the project; both design where similar but different:

- Design #1 was for (2) two 4 inch conduit with interduct connecting to NEMA 4 enclosures. (Cost: \$27,000 {approx. \$4K increase}) **INCREASED COST due to LOGISTICS/LONGER LEAD TIMES.**
- Design #2 included (1) One 6 inch conduit connecting to a doghouse enclosure. (Cost: \$60,400.00)
 - WCRCS team felt that design #1 provided for growth with installation of two conduits and weather rated enclosures that would help to protect cabling.





Questions?

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