



## DEVELOPMENT APPLICATION

### PROJECT INFORMATION

Title: NM14-149 Grand Slam-NM4 Overlook

Project Address: 580 OVERLOOK RD. WHITE ROCK, NM 87544 (Overlook Park)

Description:

Sun State Tower is proposing a new multi-tenant concealed 80' Wireless Telecommunications Facility (WCF). The new WCF is needed to provide capacity relief from Verizon's existing WCF in White Rock.

Check all application types, if applicable:

- Administrative Deviation ... \$25
- Administrative Wireless Telecom ... \$250
- Encroachment Permit ... \$25
- Temporary Use Permit ... \$25
- Comprehensive Plan Adoption & Amendment\*... \$250
- Conditional Use Permit\* ... \$300
- County Landmark or Historic District Adoption/Amendment\* ... \$250
- Development Plan\* ... \$500
- Major Development Plan Amendment\* ... \$500
- Minor Development Plan Amendment ... \$250
- Summary Plat... \$100 plus \$25 lot; \$10 / acre for non-residential
- Sketch Plat, Subdivision\*... \$250 plus  
\$175/lot (1-10 lots)  
\$125/lot (11-30 lots)  
\$75/lot (30+ lots)
- Preliminary Plat, Subdivision\* ... \$250 plus  
\$175/lot (1-10 lots)  
\$125/lot (11-30 lots)  
\$75/lot (30+ lots)
- Final Plat, Subdivision\* ... \$250 plus  
\$175/lot (1-10 lots)  
\$125/lot (11-30 lots)  
\$75/lot (30+ lots)
- Landscaping Plan ...\$500
- Lighting Plan ...\$500
- Site Plan\* ... \$500 plus  
\$75 per/Million \$ estimated construction cost  
**Estimated Construction Cost:** \_\_\_\_\_
- Major Site Plan Amendment\* ... \$500
- Minor Site Plan Amendment ... \$250
- Major Zone Map Amendment\* ... \$150  
*No fee if initiated by County Council or County Manager*
- Minor Zone Map Amendment\* ... \$150  
*No fee if initiated by County Council or County Manager*
- Master Plans\* (Major, Minor) ...\$250
- Text Amendment\* ... \$150  
*No fee if initiated by County Council or County Manager*
- Variance ... \$250  
*No fee if application is a part of a Site Plan review*
- Administrative Wireless Telecommunication Facility ... \$250
- Discretionary Wireless Telecommunication Facility\* ... \$500
- Small Wireless Facility ...\$250
- Major Historic Demolition\* ... \$250
- Major Historic Property Alteration Certification\* ... \$250
- Minor Historic Property Alteration Certificate ... \$250

**\* Application reviews require a pre-application meeting.**

**PROPERTY & OWNER INFORMATION**

Property Address:	580 OVERLOOK RD <small>Address</small>	WHITE ROCK <small>City</small>	NM <small>State</small>	87544 <small>ZIP</small>
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Zoning District: OS-PP	Lot Size - Acres / Sq. Ft.: 5.73
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Existing Structure(s) Sq. Ft.: 0.00	Lot Coverage: .002
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Property Owner(s) Name: LOS ALAMOS COUNTY

Owner(s) Email: anne.laurent@lacnm.us

Owner(s) Phone(s)#: (505) 662-8400

Owner's Address same as Property Address

Owner(s) Address:	1000 Central Avenue <small>Address</small>	Los Alamos <small>City</small>	NM <small>State</small>	87544 <small>ZIP</small>
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**APPLICANT / OWNER'S AGENT INFORMATION**

Applicant is same as Owner

Applicant Name: Pinnacle Consulting (aka Sun State Tower) Co-Applicant Verizon Wireless

Applicant Address:	1426 N Marvin St, Suite 101 <small>Address</small>	Gilbert <small>City</small>	AZ <small>State</small>	85233 <small>ZIP</small>
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Applicant Email: Scott.Hopper@pinnacleco.net

Applicant Phone(s)#: (602) 743-9439

**ASSOCIATED APPLICATONS**

Application Type: **CUP & Variance (Height)**

Case Number: TBD

*I hereby certify and affirm, under penalty of perjury, that the information I have provide in this application is true and accurate to the best of my knowledge, information, and belief. [NMSA 1978, §30-25-1]*

Signature: <i>Scott Hopper</i>	Date: 01/29/25
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**STAFF USE ONLY**

Date Received:	Staff:
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Case No.#:	Meeting Date:
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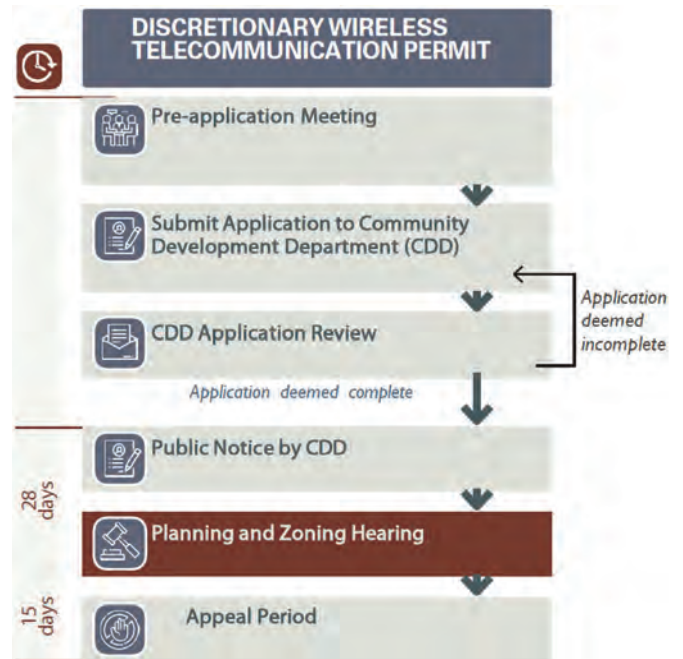
**SUBMITTALS**

<input type="checkbox"/> Proof of Ownership or Letter of Authorization from Owner	<input type="checkbox"/> Complete Application – Date: _____
<input type="checkbox"/> Items from associated Application Checklist	<input type="checkbox"/> Payment – Accepted upon verification of a complete application - Date: _____

# DISCRETIONARY WIRELESS TELECOMMUNICATION CHECKLIST

Applicants for all development application reviews must complete this checklist and submit it with the Development Application. Refer to the referenced code sections for additional information. Contact the Planning Division with questions regarding these requirements: [planning@lacnm.us](mailto:planning@lacnm.us).

PRE-APPLICATION MEETING	
Date Held:	07/08/2024
SITE PLAN	
Site Plat at a minimum scale of 1" = 100' that illustrates the following:	
<input type="checkbox"/> Graphic Scale and North Arrow <input type="checkbox"/> Property Lines according to recorded survey <input type="checkbox"/> Existing and proposed structures <input type="checkbox"/> Existing and proposed easements <input type="checkbox"/> Existing and proposed setbacks <input type="checkbox"/> Existing and proposed utility lines <input type="checkbox"/> Means of access <input type="checkbox"/> Landscaping, if the facility is freestanding <input type="checkbox"/> Proposed lighting	
ELEVATIONS	
Elevation drawing(s) at a minimum scale of 1/8" = 1' that indicates:	
<input type="checkbox"/> Height (above existing grade) of all four sides. <input type="checkbox"/> Materials and colors <input type="checkbox"/> Proposed lighting	
LOT COVERAGE	
Existing (%):	0.00
Proposed (%):	2.00
ADDITIONAL SUBMITTALS	
Based on staff's review and Interdepartmental Review Committee's recommendation – additional submittals may be required and will be communicated to the applicant by the assigned Case Manager.	



See Reverse.

**DECISION CRITERIA 16-74-(c)(3)**

a. The proposed telecommunications facilities are necessary to close a demonstrated significant gap in service coverage of the applicant based on actual signal strength data for the area where the gap is claimed and for the type of gap claimed. Explain.

Please see attached

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- Staff finds that this criterion has been met*
- Staff finds that this criterion has not been met – more information is needed*

b. The applicant has demonstrated that no other less intrusive means or alternative to the proposed telecommunications facilities design is practicable. Explain.

Please see attached

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- Staff finds that this criterion has been met*
- Staff finds that this criterion has not been met – more information is needed*

c. The applicant has demonstrated that no higher priority location per Sec. 16-1-(j)(2) is practicable. Explain.

Please see attached

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- Staff finds that this criterion has been met*
- Staff finds that this criterion has not been met – more information is needed*

**Attach additional sheets, if needed.**

Case No. \_\_\_\_\_

**OWNER AFFIDAVIT**

*(Authorizing an agent to act on behalf of a property owner when making a land development application.)*

STATE OF NEW MEXICO )  
 ) ss.  
COUNTY OF LOS ALAMOS )

I, (We) County of Los Alamos being duly sworn, depose and

say that (*I am*) (*we are*) the owner(s) of property located at:

580 OVERLOOK RD. WHITE ROCK, NM 87544 (Overlook Park), legally described as:  
TRACT N, WHITE ROCK SUBDIVISION, AS SHOWN ON PLAT RECORDED  
SEPTEMBER 3, 1965 IN BOOK 1, PAGE 62, AND AFFIDAVIT OF CORRECTION  
RECORDED ON AUGUST 30, 1966 IN BOOK 7, PAGE 141, RECORDS OF LOS ALAMOS  
COUNTY, NEW MEXICO, for which (*I am*) (*we are*) requesting a:

Telecommunication Facility (*conditional use permits; sketch, preliminary and final plats; site plan;  
variance; zone change; subdivision; summary plat; temporary use permit; telecommunication facility;  
historic property; or development plans*) through the County of Los Alamos, New Mexico.

Furthermore, (*I*) (*we*) hereby appoint Scott Hopper of Pinnacle Consulting as our agent to act on our  
behalf in all matters pertaining to this application.

Signed: *[Signature]* Anne Laurent

Signed: \_\_\_\_\_

Address: 1000 Central Ave. Ste. 350  
Los Alamos, NM 87544

Address: \_\_\_\_\_  
\_\_\_\_\_

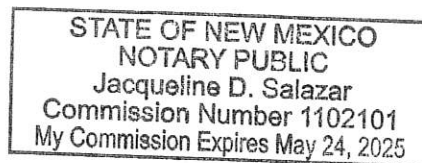
Telephone: 505-663-1750

Telephone: \_\_\_\_\_

*Subscribed and sworn to before me this*

26<sup>th</sup> day of August, 2024.

*[Signature]*  
Notary Public



My Commission Expires: May 24, 2025



a. The proposed telecommunications facilities are necessary to close a demonstrated significant gap in service coverage of the applicant based on actual signal strength data for the area where the gap is claimed and for the type of gap claimed. Explain.

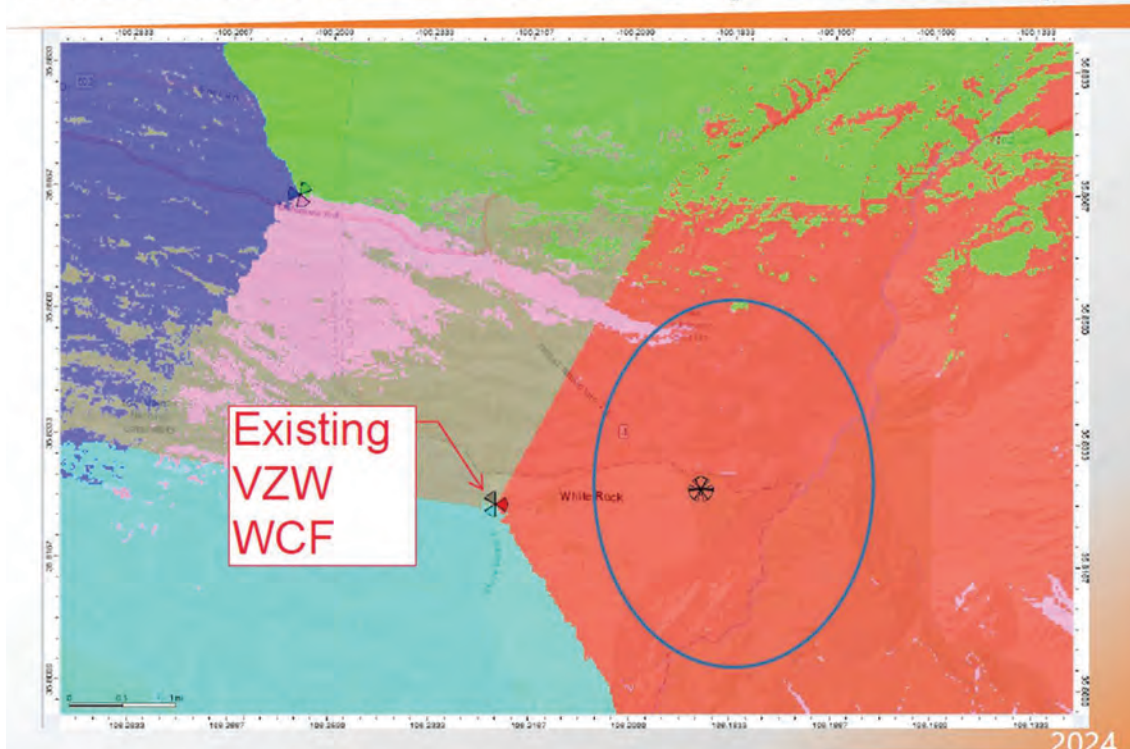
**The proposed 80' concealed WCF is needed to provide capacity relief from Verizon's existing WCF in the White Rock area, due to users in this area are demanding higher data rates for services. Verizon's measurements show a low throughput per user and the existing Verizon neighboring WCF are alarming/alerting that they are running out of capacity.**

**Verizon's RF engineers identified a specific geographic area, "search ring", where a new WCF is needed to provide effective capacity service (Overlook Park). RF engineer (Steven Kennedy) performed an RF Design Analysis, to provide the planning department with propagation maps and data showing the need for the WCF.**

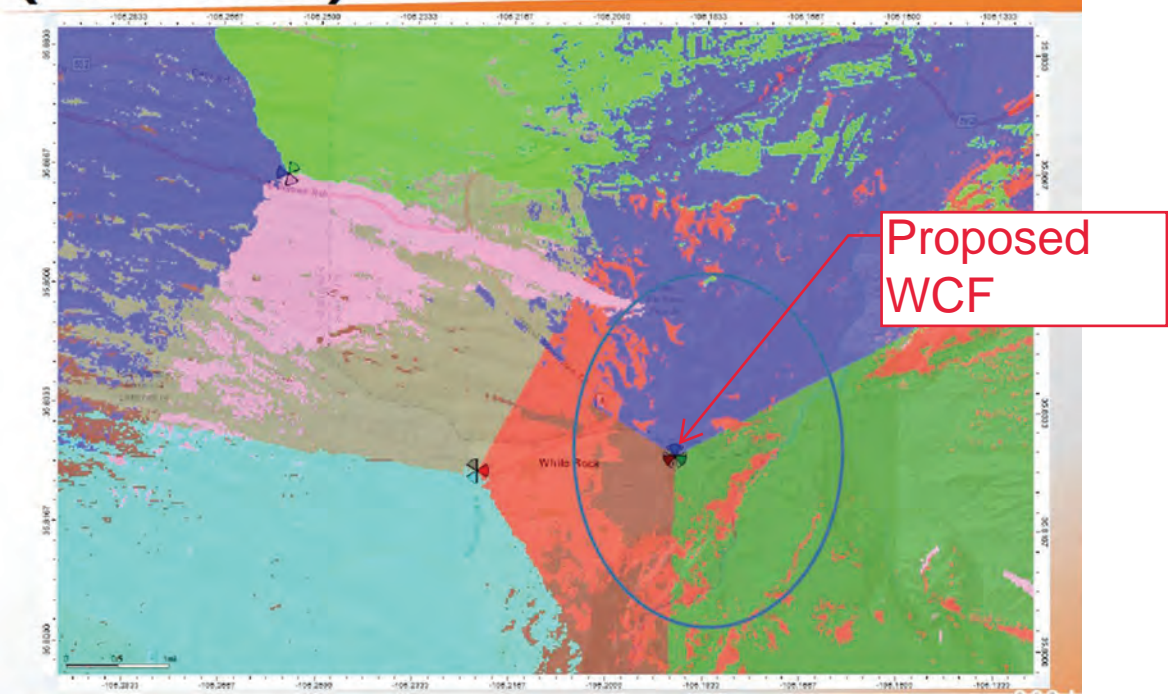
**Page 13 of the RF Design Analysis and the 1st snippet below "Current" shows the existing WCF service (capacity) area in RED. Page 14 of the RF Design Analysis or 2nd snippet below "New", has less red, since the new WCF (shown in blue/green/brown) will provide new service/capacity in that area.**

**Since this is a capacity need, locating more antennas on the existing WCF 1.93 miles to the West that Verizon is already on will not resolve the capacity/coverage issues for the residents near Overlook Park and community events at Overlook Park.**

## Best Server - Current (-120dbm)



# Best Server – with new site (-120dbm)



b. The applicant has demonstrated that no other less intrusive means or alternative to the proposed telecommunications facilities design is practicable. Explain.

A search was performed using antennaSearch.com, which lists (3) existing towers, but was only able to confirm (2) visually during a site visit on 07/07/2024. 190' Non-concealed SBA Tower (this is the location Verizon has an existing WCF that is running out of capacity) the other 360 Degrees Non-concealed 65' Tower, is too close to Verizon's existing WCF to meet Verizon Capacity objectives. The distance between Verizon's existing WCF and the proposed Sun State proposed concealed WCF is approximately two (2) miles (Please see snippets below).



Sun State / Verizon considered the existing 80' light poles owned by Los Almos County at Overlook Park, but due to interference / shadowing issues that can be caused by the antennas, the separation requirements would be approximately 20' or more below the bottom of the light fixtures, therefore, would not meet Verizon height requirement (76') for Capacity / coverage objective and would limit Sun State's ability to add additional carriers. (Please see Alternative Site & Height Analysis)

The Proposed concealed 80' WCF (Antennas will be housed in a stealth canister shroud), meets and or exceeds all setback requirements, is approximately 1,000 feet from existing residential properties (Please refer to Photo Sims)



c. The applicant has demonstrated that no higher priority location per Sec. 16-1-(j)(2) is practicable. Explain.

**Higher priority locations;** The locations zoned WRTC & GC are too close to Verizon's existing WCF to meet Verizon Capacity objectives. (Please see snippets below)





# PROJECT NARRATIVE

## Conditional Use Permit (CUP) and Height Variance for Wireless Telecommunication Facility (WCF)

**Applicant:** Pinnacle Consulting (aka Sun State Towers)

**Applicant site Name:** NM14-149 Grand Slam

**Co-applicant:** Verizon Wireless

**Co-applicant site name:** NM4 Overlook WCF

**Property-Owner:** Los Alamos County

**Project address:** 580 Overlook Road White Rock, NM 87544 (Overlook Park)

**APN:** 104-01-0825-1495

**Zoning Classification:** OS-PP





**Purpose of Application:**

Sun State Towers develops, owns and maintains Wireless Communication Facilities (WCF) throughout the southwest with a focus on providing multi-tenant WCF for collocation by all Cell Phone Providers.

Applicant Pinnacle Consulting (aka Sun State Towers) agrees to shared use of the proposed WCF by any additional providers.

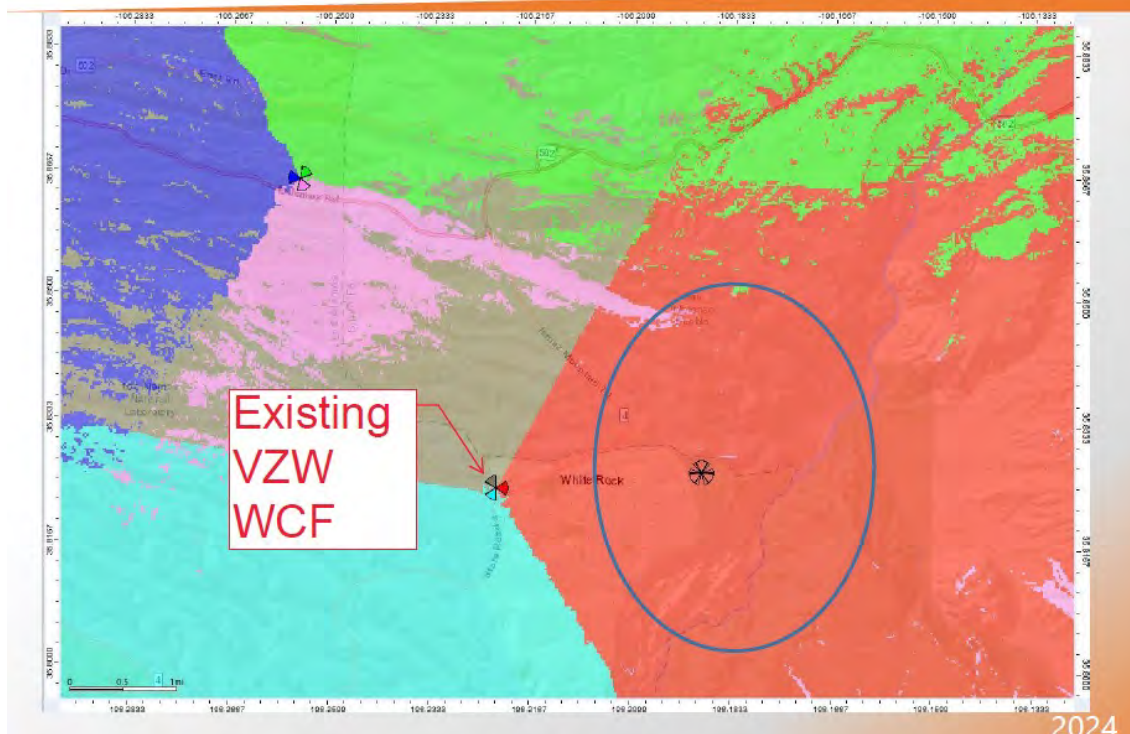
The proposed WCF is needed to provide capacity relief from Verizon’s existing WCF in the White Rock Community, due to users in this area are demanding higher data rates for services. Verizon’s measurements show a low throughput per user and the existing Verizon neighboring WCF are alarming/alerting that they are running out of capacity.

Verizon’s RF engineers identified a specific geographic area, “search ring”, where a new WCF is needed to provide effective capacity service (Overlook Park). RF engineer (Steven Kennedy) performed an RF Design Analysis, to provide the planning department with propagation maps and data showing the need for the WCF.

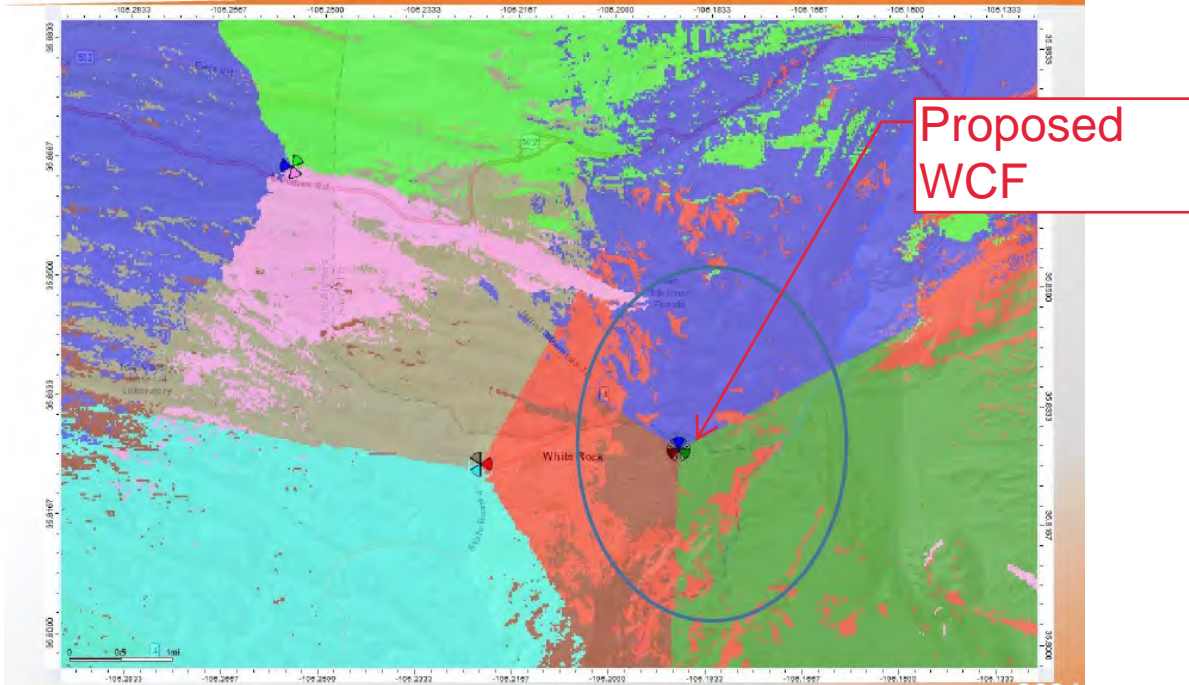
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Since this is a capacity need, locating more antennas on the existing WCF to the West that Verizon is already on, will not resolve the capacity/coverage issues for the residents near Overlook Park and community events at Overlook Park.

## Best Server - Current (-120dbm)



# Best Server – with new site (-120dbm)



## Higher priority locations, per Los Alamos Code Sec. 16-17(j)(2):

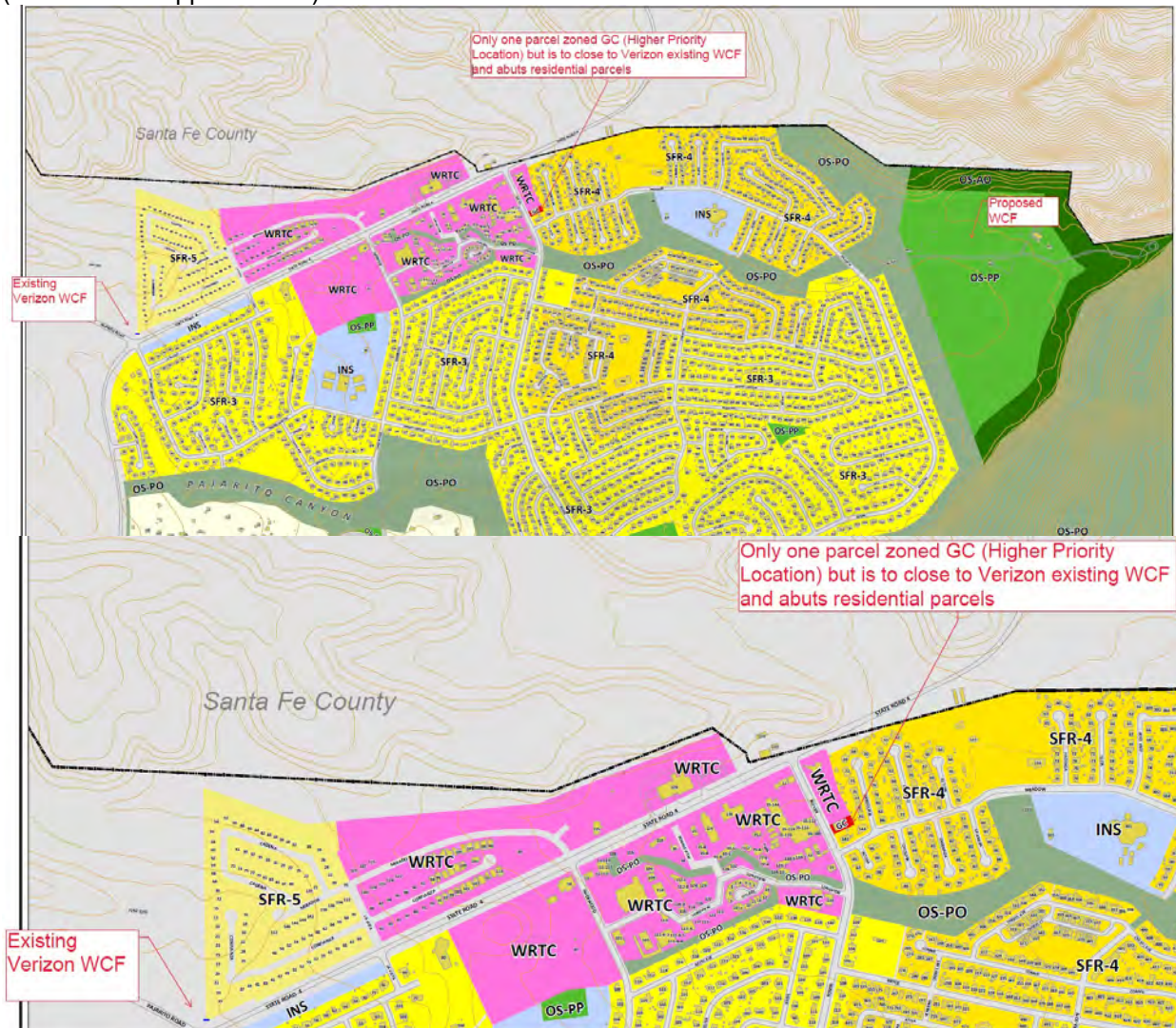
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The locations zoned WRTC & GC are too close to Verizon's existing WCF to meet Verizon Capacity objectives. (Please see snippets below)



As a capacity objective site, denial of this request would continue the reliance on existing facilities. As technology and usage increases, as is the trend, Emergency services and customers utilizing Verizon Wireless will experience slower connections and more dropped calls as more devices are connecting to the limited number of existing facilities.

Solid voice communications are an important necessity related to everyday public safety and are especially critical in the event of emergencies or unplanned events. Voice communication requires robust data capacity to ensure reliability. Additionally, with the proliferation of Smartphones – apps, photography and video streaming demand a persistent connection to the network, as the phones connect to the “Cloud” and do not release from it, even when not in use. This creates an unprecedented demand on the capacity of the network, particularly at large scale events where users are congregated in one place (4th of July at Overlook Park etc.) and utilizing these streaming features non-stop. This proposed WCF will help to maintain an adequate level of network capacity.

**Height, per Los Alamos Code Sec. 16-17 (j)(4):**

OS-PP allows 35' building Height max + 15' = 50'. The height limit is insufficient for reasonable collocation for Verizon and or future carriers to resolve the capacity/coverage objectives in this area. A height Variance application will be submitted, requesting a height increase to 80' that matches several existing Ballfield light poles near the WCF. (Please refer to Alternative Site & Height Analysis)

**Best technologically feasible site:**

Proposed location has existing commercial power and telco/fiber connection available on property with existing paved access from public ROW to proposed WCF. The WCF is unmanned and will not require sewer or water services.

The proposed WCF will not generate significant trips once construction is complete, as tech maintenance will only occur about once a month to the site, usually during normal business hours. No additional parking spaces will be required.

**Least Intrusive Design:**

The proposed WCF will be located on a large property (Overlook Park) The nearest residential homes are approximately 1,000 feet to the west. The Proposed concealed 80' WCF (Antennas will be housed in a stealth canister shroud). Overlook Park has several existing 80' tall Ballfield light poles that area residents are accustomed to and will have minimal effect on surrounding views. The site will be unmanned, and will have no impacts to pedestrian or vehicular transit, and the facility will not emit odor, dust, gas, noise, vibration, smoke, heat or glare. After construction, a site Tech will visit the site approximately once a month. (Please refer to Zoning Drawings for tower and ground equipment size & details)

**Federal Law**, primarily found in the Telecommunications Act of 1996 ("Telecom Act"), acknowledges a local jurisdiction's zoning authority over proposed wireless facilities but limits the exercise of that authority in several important ways.

**Local jurisdictions**, may not materially limit or inhibit. The Telecom Act prohibits a local jurisdiction from taking any action on a wireless siting permit that "prohibit[s] or [has] the effect of prohibiting the provision of personal wireless services." 47 U.S.C. § 332(c)(7)(B)(i)(II). According to the Federal Communications Commission ("FCC") Order adopted in September 2018.

"A state or local legal requirement will have the effect of prohibiting wireless telecommunications services if it materially inhibits the provision of such services...[A]n effective prohibition occurs where a state or local legal requirement materially inhibits a provider's ability to engage in any of a variety of activities related to its provision of a covered service. This test is met not only when filling a coverage gap but also when densifying a wireless network, introducing new services or otherwise improving service capabilities. Under the California Payphone standard, a state or local legal requirement could materially inhibit service in numerous ways—not only by rendering a service provider unable to provide an existing service in a new geographic area or by restricting the entry of a new provider in providing service in a particular area, but also by materially inhibiting the introduction of new services or the improvement of existing services. Thus, an effective prohibition includes materially inhibiting additional services or improving existing services."<sup>2</sup>

**Under the FCC Order**, an applicant need not prove it has a significant gap in coverage; it may demonstrate the need for a new wireless facility in terms of adding capacity, updating to new technologies, and/or maintaining high quality service.<sup>3</sup>

The proposed WCF is necessary for Verizon to provide additional capacity/ coverage needed to provide the evolution in the wireless services demanded by customers, including emergency services and quality in-building coverage. Although an applicant is no longer required to show a significant gap in service coverage under the FCC Order, in the Ninth Circuit, a local jurisdiction clearly violates section 332(c)(7)(B)(i)(II) when it prevents a wireless carrier from using the least intrusive means to fill a significant gap in service coverage. T-Mobile U.S.A., Inc. v. City of Anacortes, 572 F.3d 987, 988 (9th Cir. 2009).

**Significant Gap.** Reliable in-building coverage is now a necessity and every community's expectation. Consistent with the abandonment of land line telephones and reliance on only wireless communications, federal courts now recognize that a "significant gap" can exist based on inadequate in-building coverage. See, e.g., T-Mobile Central, LLC v. Unified Government of Wyandotte County/Kansas City, 528 F. Supp. 2d 1128, 1168-69 (D.Kan. 2007), affirmed in part, 546 F.3d 1299 (10th Cir. 2008); MetroPCS, Inc. v. City and County of San Francisco, 2006 WL 1699580, \*10-11 (N.D. Cal. 2006).

• Least Intrusive Means. The least intrusive means standard "requires that the provider 'show that the manner in which it proposes to fill the significant gap in service is the least intrusive on the values that the denial sought to serve.'" 572 F.3d at 995, quoting MetroPCS, Inc. v. City of San Francisco, 400 F.3d 715, 734 (9th Cir. 2005). These values are reflected by the local code's preferences and siting requirements.

Here, the proposed WCF has been designed as an 80' concealed monopole (Canister) in order to screen the antennas from public view.

**Environmental and health effects prohibited from consideration.** The Telecom Act also prohibits a jurisdiction from considering the environmental effects of RF emissions (including health effects) of the proposed site if the site will operate in compliance with federal regulations. 47 U.S.C. § 332(c)(7)(B)(iv). the proposed WCF will operate in accordance with the Federal Communications Commission's RF emissions regulations. Considering public comments or denying CUP approval based upon this issue would be preempted under federal law.

### **Closing:**

Citizens will not be unduly affected by this WCF, and will benefit by the improved dependability, coverage, and high-quality wireless communications for personal, business and emergency uses. Sun State Towers is committed to developing the best WCF for this area while working cooperatively with Los Alamos County.

*Thanks for all your help!!!*  
**Scott Hopper-Site Acquisition**



1426 N Marvin St, Suite 101

Gilbert, AZ 85233

E: [Scott.Hopper@pinnacleco.net](mailto:Scott.Hopper@pinnacleco.net)

M: 602-743-9439





# SUN STATE TOWERS

## NM14-149 GRAND SLAM / NM4 OVERLOOK

APN: 104-01-0825-1495

580 OVERLOOK RD.

LOS ALAMOS, NM 87544

LOS ALAMOS COUNTY

PREPARED FOR  
**SUN STATE  
TOWERS**  
1426 NORTH MARVIN STREET #101  
GILBERT, AZ 85233  
PHONE: 480-664-9588 - FAX 480-664-9850

CARRIER  
**verizon**  
2600 W. GERONIMO PL., CHANDLER, AZ 85224  
PHONE: (480) 777-4360  
FAX: (480) 777-4391

A&E CONSULTING FIRM & SITE ACQUISITION  
**PINNACLE  
CONSULTING, INC.**  
Site Acquisition | Engineering | Construction  
1426 NORTH MARVIN STREET # 101  
GILBERT, AZ 85233

PROJECT NO: NM14-149 GRAND SLAM  
DRAWN BY: CS  
CHECKED BY: KF

REV	DATE	DESCRIPTION	BY
4	02/18/25	FINAL ZONING	CS
5	03/12/25	FINAL ZONING	CS

**SITE DIRECTIONS**

DEPART ALBUQUERQUE INTERNATIONAL AIRPORT. HEAD SOUTH ON YALE BLVD SE. SLIGHT LEFT TO STAY ON YALE BLVD SE. MERGE ONTO SUNPORT BLVD. SLIGHT RIGHT TO STAY ON SUNPORT BLVD. KEEP LEFT TO STAY ON SUNPORT BLVD. USE THE LEFT LANE TO MERGE ONTO SUNPORT LOOP SE. KEEP LEFT TO CONTINUE ON SUNPORT BLVD. USE THE RIGHT 2 LANES TO MERGE ONTO I-25 N VIA THE RAMP TO I-40 N/DOWNTOWN/SANTA FE. MERGE ONTO I-25 N. TAKE EXIT 276 FOR NM-599 S TOWARD MADRID. USE THE LEFT 2 LANES TO TURN LEFT ONTO NM-599 N. TAKE THE US-84 N/US-285 EXIT ON THE LEFT TOWARD ESPAÑOLA. MERGE ONTO US-285 N/US-84 W. TAKE THE NM-502 W/LOS ALAMOS EXIT. MERGE ONTO LOS ALAMOS HWY. CONTINUE ONTO NM-502. USE THE RIGHT 2 LANES TO TAKE THE NM-4 RAMP TO WHITE ROCK/BANDELIER NATL MON. CONTINUE ONTO NM-4 W. TURN LEFT ONTO ROVER BLVD. TURN LEFT ONTO MEADOW LN. TURN LEFT ONTO OVERLOOK RD. DESTINATION WILL BE ON THE LEFT.

**PROJECT DESCRIPTION**

**SCOPE OF WORK**

- INSTALL PROPOSED 80'-0" SUN STATE TOWERS GALVANIZED STEEL MONOPOLE
- INSTALL PROPOSED 20'-0"X30'-0" SPLIT FACE CMU WALL W/ SLOPPED SECURITY TOPPER
- INSTALL PROPOSED 4'-0"X12'-0" CONCRETE PAD
- INSTALL PROPOSED BATTERY CABINET
- INSTALL PROPOSED RF CABINET
- INSTALL PROPOSED GPS ANTENNA
- INSTALL (9) PROPOSED 4" UNDERGROUND CONDUITS
- INSTALL PROPOSED ELECTRICAL SERVICE
- INSTALL PROPOSED TELCO SERVICE
- INSTALL PROPOSED ANTENNA FRAME
- INSTALL (9) PROPOSED ANTENNAS
- INSTALL (9) PROPOSED REMOTE RADIO HEADS
- INSTALL (1) PROPOSED 12-PORT OVP
- INSTALL (2) PROPOSED HYBRIFLEX CABLES

**CONTACT INFORMATION**

**CLIENT / TOWER OWNER:**  
SUN STATE TOWERS  
1426 N. MARVIN STREET #101  
GILBERT, AZ 85233  
CONTACT: CHAD WARD  
PHONE: [480] 664-9588

**PROPERTY OWNER:**  
LOS ALAMOS COUNTY  
1000 CENTRAL AVE.  
LOS ALAMOS, NM 87544  
PHONE: [505] 662-8333

**CARRIER:**  
VERIZON WIRELESS  
6955 W MORELOS PL  
CHANDLER, AZ 85226  
CONTACT: JEFF DEWALT  
PHONE: [505] 332-6007

**SITE ACQUISITION:**  
PINNACLE CONSULTING, INC.  
1426 N. MARVIN STREET #101  
GILBERT, AZ 85233  
CONTACT: MICHELLE JOHNSON  
PHONE: (480) 664-9588 ext. 230

**ENGINEERING FIRM:**  
PINNACLE CONSULTING, INC.  
1426 N. MARVIN STREET #101  
GILBERT, AZ 85233  
ENGINEER: KYLE FORTIN, PE  
PHONE: [623] 217-4235

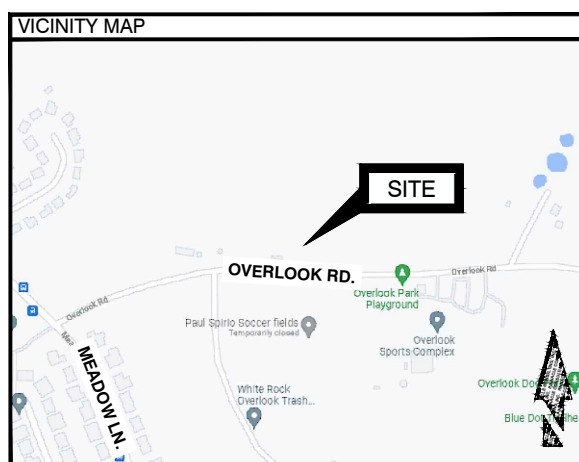
**PROJECT DATA**

**ZONING:** OS-PP  
**PARCEL #:** 104-01-0825-1495  
**USE:** UNMANNED COMMUNICATIONS  
**NEW LEASE AREA:** 2200 SQ. FT  
**JURISDICTION:** LOS ALAMOS COUNTY  
**GOVERNING CODES:** 2021 IBC, 2021 NMBC, 2015 NFPA 1, 2020 NMEC

ALL BUILDING CODES LISTED ABOVE SHALL INCLUDE AMENDMENTS BY THE GOVERNING JURISDICTION

**GENERAL NOTES**

- THIS WIRELESS TELECOMMUNICATIONS FACILITY WILL MEET THE HEALTH AND SAFETY STANDARDS FOR ELECTROMAGNETIC FIELD EMISSIONS AS ESTABLISHED BY THE FEDERAL COMMUNICATIONS COMMISSION OR ANY SUCCESSOR THEREOF, AND ANY OTHER FEDERAL OR STATE AGENCY.
- THIS WIRELESS TELECOMMUNICATIONS FACILITY WILL MEET THE REGULATIONS OF THE FEDERAL COMMUNICATIONS COMMISSION REGARDING PHYSICAL AND ELECTROMAGNETIC INTERFERENCE.
- LIGHTING OR SIGNS WILL BE PROVIDED ONLY AS REQUIRED BY FEDERAL OR STATE AGENCIES.
- DEVELOPMENT AND CONSTRUCTION OF THIS PROJECT WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES.
- EXISTING PARKING IS NOT AFFECTED BY THIS PROJECT.
- THIS PROJECT DOES NOT INCLUDE WATER OR SEWER.
- THIS PROJECT INCLUDES C-BAND INSTALLATION.
- NO ABANDONMENT OF A SMALL WIRELESS FACILITY SHALL BE PERMITTED. ALL SMALL WIRELESS FACILITIES NOT IN SERVICE SHALL BE PHYSICALLY MAINTAINED AS IF IN SERVICE FOR THE PROTECTION AND SAFETY OF THE PUBLIC.



**SHEET INDEX**

T-1	PROJECT INFORMATION
Z-1	OVERALL SITE PLAN
Z-2	OVERALL SETBACK PLAN
Z-3	EXISTING SITE PLAN
Z-4	PROPOSED SITE PLAN
Z-5	ENLARGED SITE PLAN AND ANTENNA PLAN
Z-6	ELEVATIONS
Z-7	ELEVATIONS
Z-8	ELEVATIONS
Z-9	COMPOUND ENCLOSURE DETAIL

**COORDINATES**

**TOWER COORDINATES:**  
TOWER LATITUDE 35.826752° 35° 49' 36.31" N [NAD83]  
TOWER LONGITUDE -106.188301° -106° 11' 17.89" W [NAD83]  
TOWER GROUND ELEVATION 6292.8' [NAVD88]

**FIBER MMP (MEET ME POINT) COORDINATES:**  
MMP LATITUDE 35.826074° 35° 49' 33.87" N [NAD83]  
MMP LONGITUDE -106.188313° -106° 11' 17.93" W [NAD83]

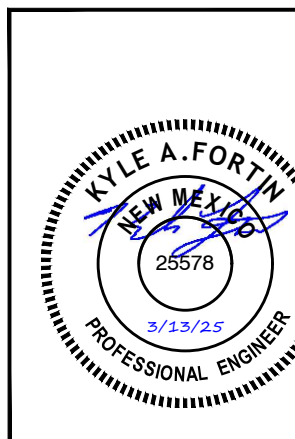
**APPROVALS**

[RF]: \_\_\_\_\_ DATE: \_\_\_\_\_

[CONST.]: \_\_\_\_\_ DATE: \_\_\_\_\_

[RE]: \_\_\_\_\_ DATE: \_\_\_\_\_

LANDLORD: \_\_\_\_\_ DATE: \_\_\_\_\_



NM14-149 GRAND SLAM /  
NM4 OVERLOOK  
580 OVERLOOK RD.  
LOS ALAMOS, NM 87544  
LOS ALAMOS COUNTY

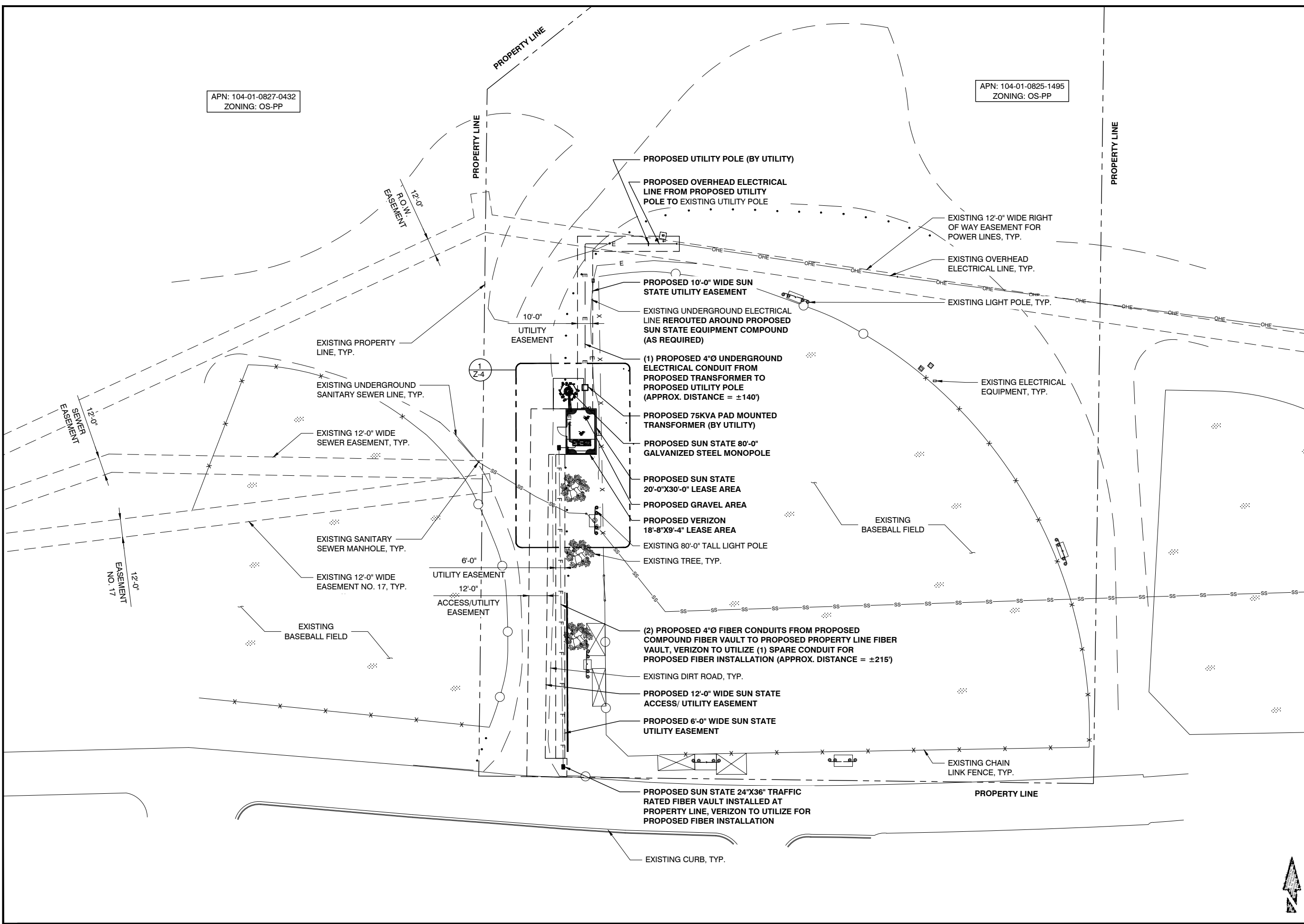
SHEET TITLE  
**PROJECT INFORMATION**

SHEET NUMBER  
**T-1**




APN: 104-01-0827-0432  
ZONING: OS-PP

APN: 104-01-0825-1495  
ZONING: OS-PP



PREPARED FOR



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CARRIER



2600 W. GERONIMO PL., CHANDLER, AZ 85224  
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FAX: (480) 777-4391


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PROJECT NO:	NM14-149 GRAND SLAM
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CHECKED BY:	KF

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4	02/18/25	FINAL ZONING	CS
5	03/12/25	FINAL ZONING	CS



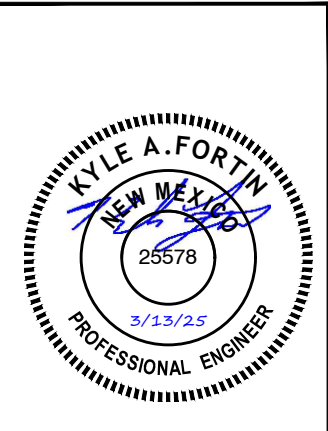
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580 OVERLOOK RD.  
LOS ALAMOS, NM 87544  
LOS ALAMOS COUNTY

SHEET TITLE  
**OVERALL SITE PLAN**

SHEET NUMBER  
**Z-1**

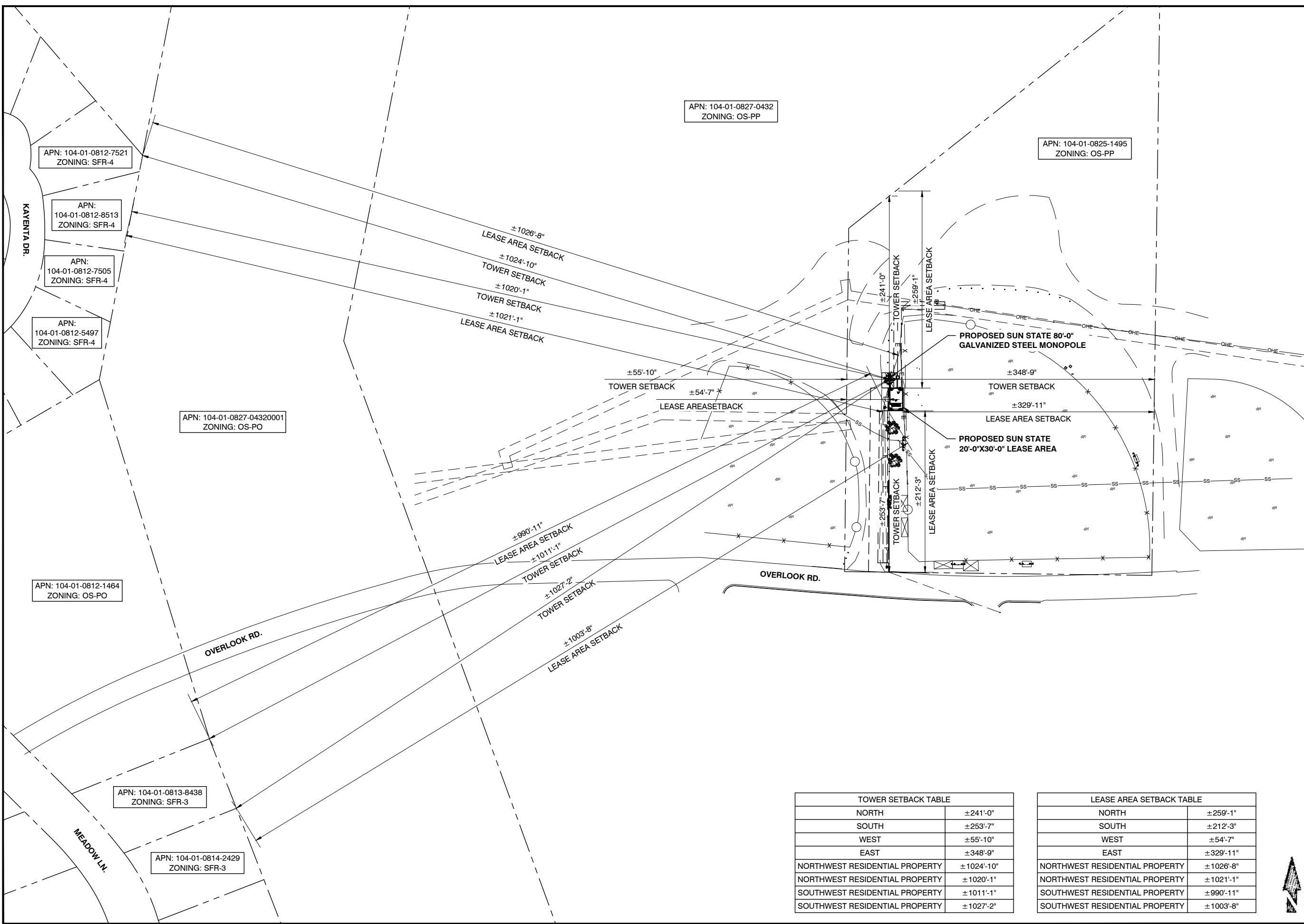
REV	DATE	DESCRIPTION	BY
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5	03/12/25	FINAL ZONING	CS



NM14-149 GRAND SLAM /  
 NM4 OVERLOOK  
 580 OVERLOOK RD.  
 LOS ALAMOS, NM 87544  
 LOS ALAMOS COUNTY

SHEET TITLE  
**OVERALL SETBACK PLAN**

SHEET NUMBER  
**Z-2**



APN: 104-01-0827-0432  
 ZONING: OS-PP

APN: 104-01-0825-1495  
 ZONING: OS-PP

APN: 104-01-0812-7521  
 ZONING: SFR-4

APN: 104-01-0812-8513  
 ZONING: SFR-4

APN: 104-01-0812-7505  
 ZONING: SFR-4

APN: 104-01-0812-5497  
 ZONING: SFR-4

APN: 104-01-0827-04320001  
 ZONING: OS-PO

APN: 104-01-0812-1464  
 ZONING: OS-PO

APN: 104-01-0813-8438  
 ZONING: SFR-3

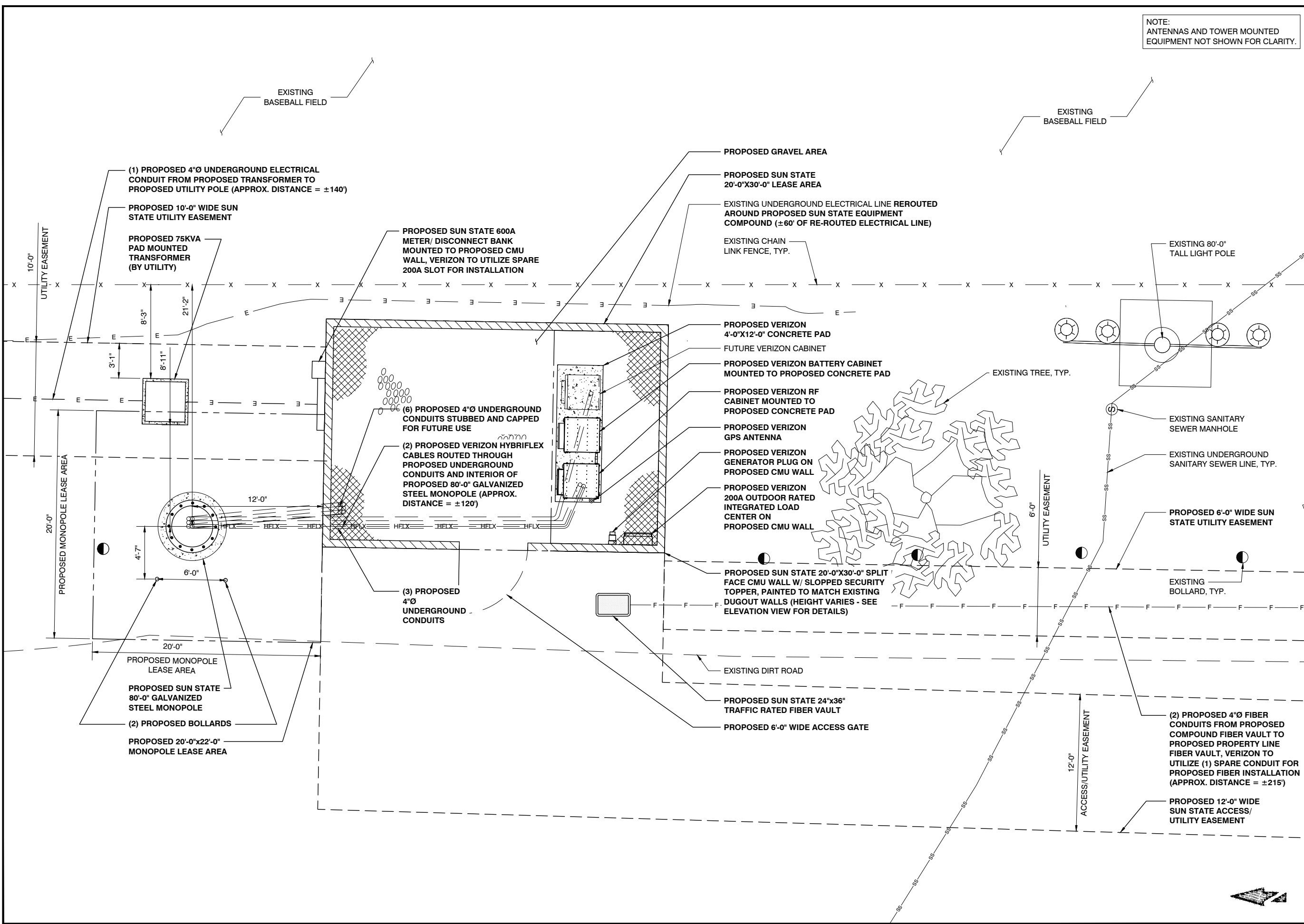
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 ZONING: SFR-3

TOWER SETBACK TABLE	
NORTH	±241'-0"
SOUTH	±253'-7"
WEST	±55'-10"
EAST	±348'-9"
NORTHWEST RESIDENTIAL PROPERTY	±1024'-10"
NORTHWEST RESIDENTIAL PROPERTY	±1020'-1"
SOUTHWEST RESIDENTIAL PROPERTY	±1011'-1"
SOUTHWEST RESIDENTIAL PROPERTY	±1027'-2"

LEASE AREA SETBACK TABLE	
NORTH	±259'-1"
SOUTH	±212'-3"
WEST	±54'-7"
EAST	±329'-11"
NORTHWEST RESIDENTIAL PROPERTY	±1026'-8"
NORTHWEST RESIDENTIAL PROPERTY	±1021'-1"
SOUTHWEST RESIDENTIAL PROPERTY	±990'-11"
SOUTHWEST RESIDENTIAL PROPERTY	±1003'-8"



NOTE:  
ANTENNAS AND TOWER MOUNTED  
EQUIPMENT NOT SHOWN FOR CLARITY.



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**NM14-149 GRAND SLAM /  
NM4 OVERLOOK**  
580 OVERLOOK RD.  
LOS ALAMOS, NM 87544  
LOS ALAMOS COUNTY

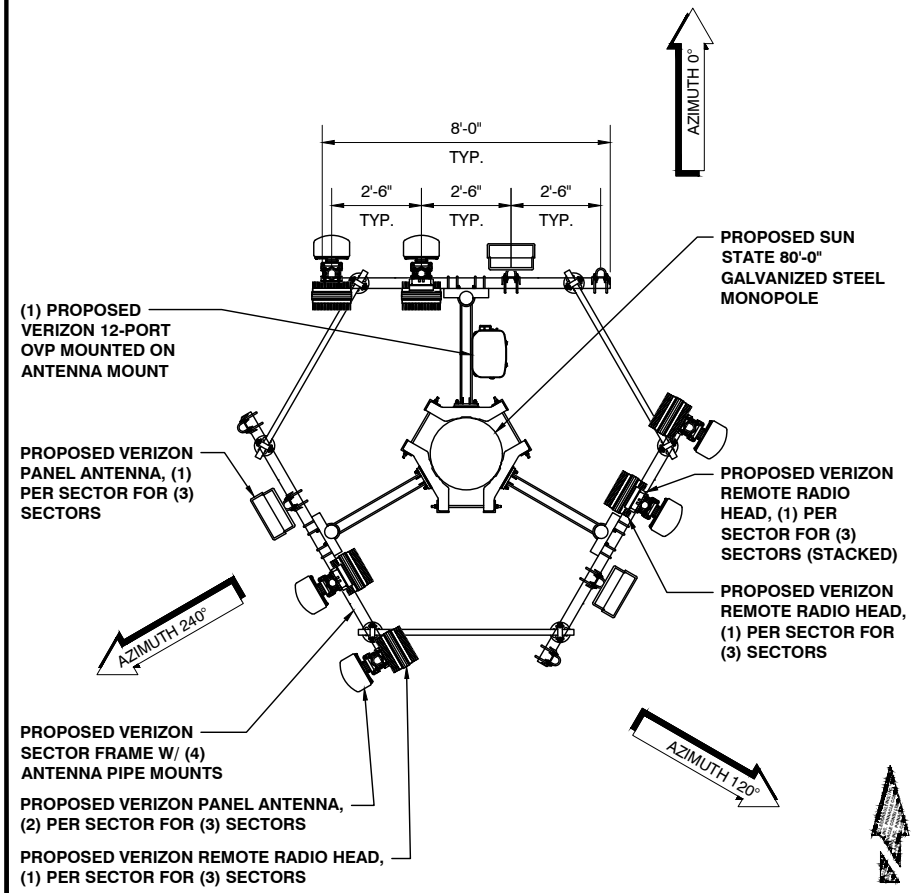
SHEET TITLE  
**PROPOSED SITE PLAN**

SHEET NUMBER  
**Z-4**



NEW HYBRID CABLE SCHEDULE					
SECTOR	AZIMUTH	LENGTH	QTY.	SIZE	TYPE
ALPHA	0°	±120'	2	2"Ø	6X12 HYBRIFLEX CABLE
BETA	120°	-	-	-	-
GAMMA	240°	-	-	-	-

**CABLING DETAIL**



**ANTENNA PLAN**

24"x36" SCALE: 3/8" = 1'-0"  
11"x17" SCALE: 3/16" = 1'-0"

NOTE:  
ANTENNAS AND  
TOWER MOUNTED  
EQUIPMENT NOT  
SHOWN FOR  
CLARITY.

(2) PROPOSED BOLLARDS  
PROPOSED 20'-0"x20'-0"  
MONOPOLE LEASE AREA  
PROPOSED SUN STATE 80'-0"  
GALVANIZED STEEL MONOPOLE

PROPOSED SUN STATE  
ACCESS/ UTILITY EASEMENT

(6) PROPOSED 4"Ø UNDERGROUND CONDUITS  
STUBBED AND CAPPED FOR FUTURE USE  
(2) PROPOSED VERIZON HYBRIFLEX CABLES  
ROUTED THROUGH (3) PROPOSED 4"Ø  
UNDERGROUND CONDUITS AND INTERIOR OF  
PROPOSED 80'-0" GALVANIZED STEEL  
MONOPOLE (APPROX. DISTANCE = ±120')

PROPOSED SUN STATE 20'-0"x30'-0" SPLIT FACE CMU  
WALL W/ SLOPPED SECURITY TOPPER, PAINTED TO  
MATCH EXISTING DUGOUT WALLS (HEIGHT VARIES -  
SEE ELEVATION VIEW FOR DETAILS)

(3) PROPOSED 4"Ø  
UNDERGROUND CONDUITS

PROPOSED 6'-0" WIDE ACCESS GATE

PROPOSED VERIZON GPS ANTENNA

PROPOSED VERIZON GENERATOR  
PLUG ON PROPOSED CMU WALL

(1) PROPOSED 4"Ø UNDERGROUND FIBER  
CONDUIT FROM PROPOSED FIBER VAULT  
TO PROPOSED VERIZON RF CABINET  
(APPROX. DISTANCE = ±15')

PROPOSED VERIZON 200A OUTDOOR  
RATED INTEGRATED LOAD CENTER  
ON PROPOSED CMU WALL

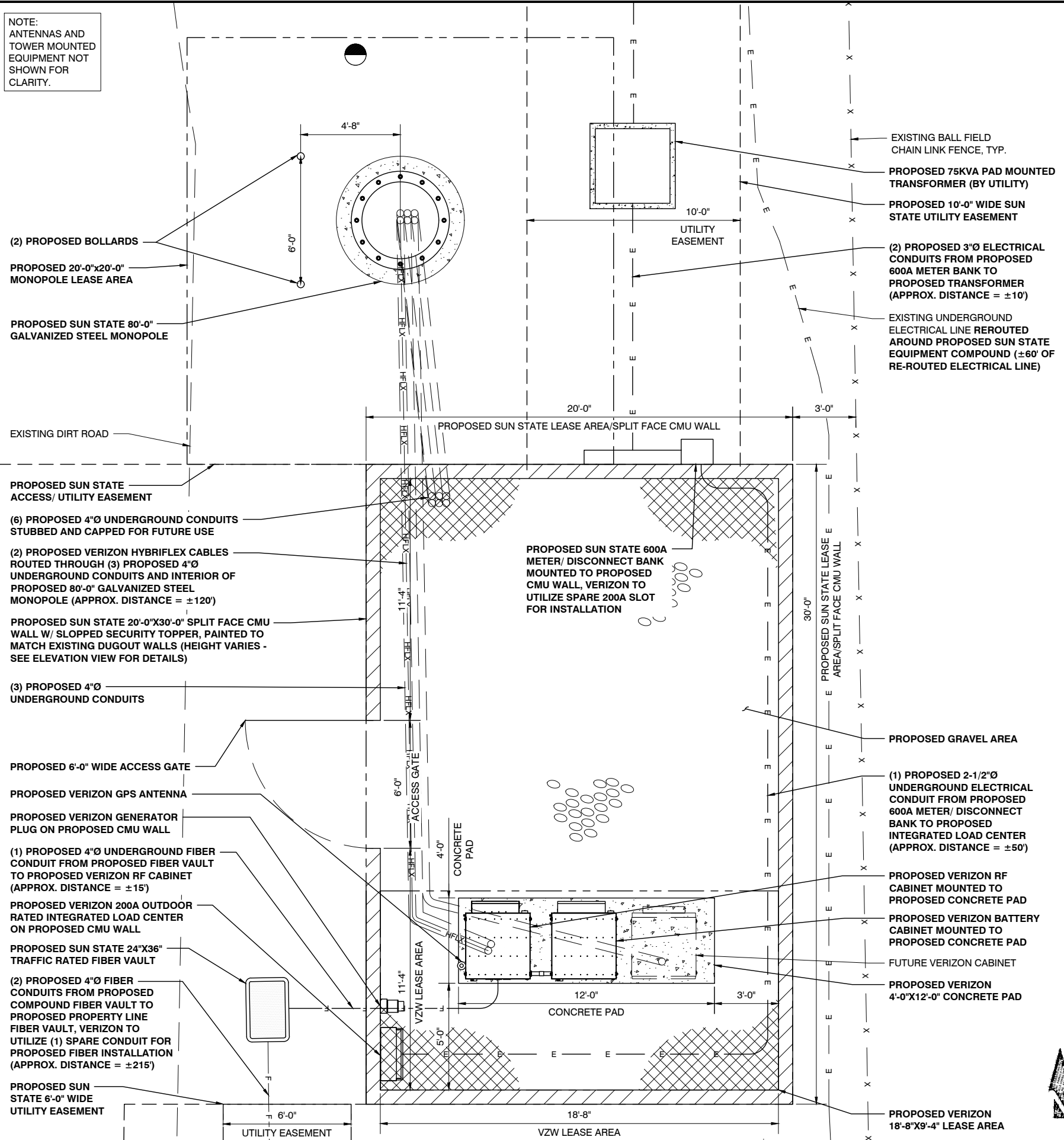
PROPOSED SUN STATE 24"x36"  
TRAFFIC RATED FIBER VAULT

(2) PROPOSED 4"Ø FIBER  
CONDUITS FROM PROPOSED  
COMPOUND FIBER VAULT TO  
PROPOSED PROPERTY LINE  
FIBER VAULT, VERIZON TO  
UTILIZE (1) SPARE CONDUIT FOR  
PROPOSED FIBER INSTALLATION  
(APPROX. DISTANCE = ±215')

PROPOSED SUN  
STATE 6'-0" WIDE  
UTILITY EASEMENT

**2 ENLARGED SITE PLAN**

**ATTACHMENT A**



EXISTING BALL FIELD  
CHAIN LINK FENCE, TYP.  
PROPOSED 75KVA PAD MOUNTED  
TRANSFORMER (BY UTILITY)  
PROPOSED 10'-0" WIDE SUN  
STATE UTILITY EASEMENT  
(2) PROPOSED 3"Ø ELECTRICAL  
CONDUITS FROM PROPOSED  
600A METER BANK TO  
PROPOSED TRANSFORMER  
(APPROX. DISTANCE = ±10')  
EXISTING UNDERGROUND  
ELECTRICAL LINE REROUTED  
AROUND PROPOSED SUN STATE  
EQUIPMENT COMPOUND (±60' OF  
RE-ROUTED ELECTRICAL LINE)

PROPOSED SUN STATE 600A  
METER/ DISCONNECT BANK  
MOUNTED TO PROPOSED  
CMU WALL, VERIZON TO  
UTILIZE SPARE 200A SLOT  
FOR INSTALLATION

PROPOSED GRAVEL AREA

(1) PROPOSED 2-1/2"Ø  
UNDERGROUND ELECTRICAL  
CONDUIT FROM PROPOSED  
600A METER/ DISCONNECT  
BANK TO PROPOSED  
INTEGRATED LOAD CENTER  
(APPROX. DISTANCE = ±50')

PROPOSED VERIZON RF  
CABINET MOUNTED TO  
PROPOSED CONCRETE PAD

PROPOSED VERIZON BATTERY  
CABINET MOUNTED TO  
PROPOSED CONCRETE PAD

FUTURE VERIZON CABINET

PROPOSED VERIZON  
4'-0"x12'-0" CONCRETE PAD

PROPOSED VERIZON  
18'-8"x9'-4" LEASE AREA

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**KYLE A. FORTIN**  
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25578  
3/13/25  
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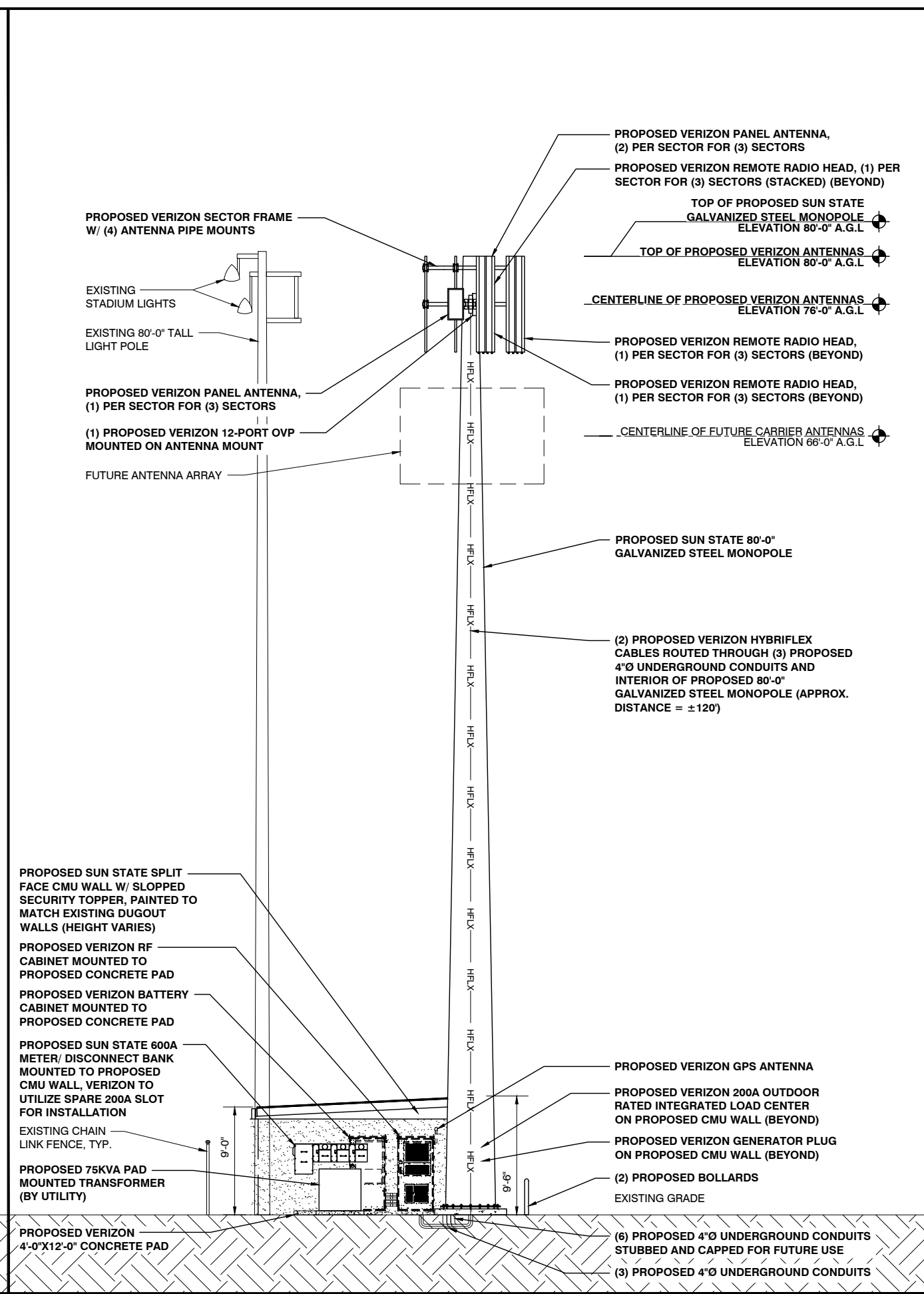
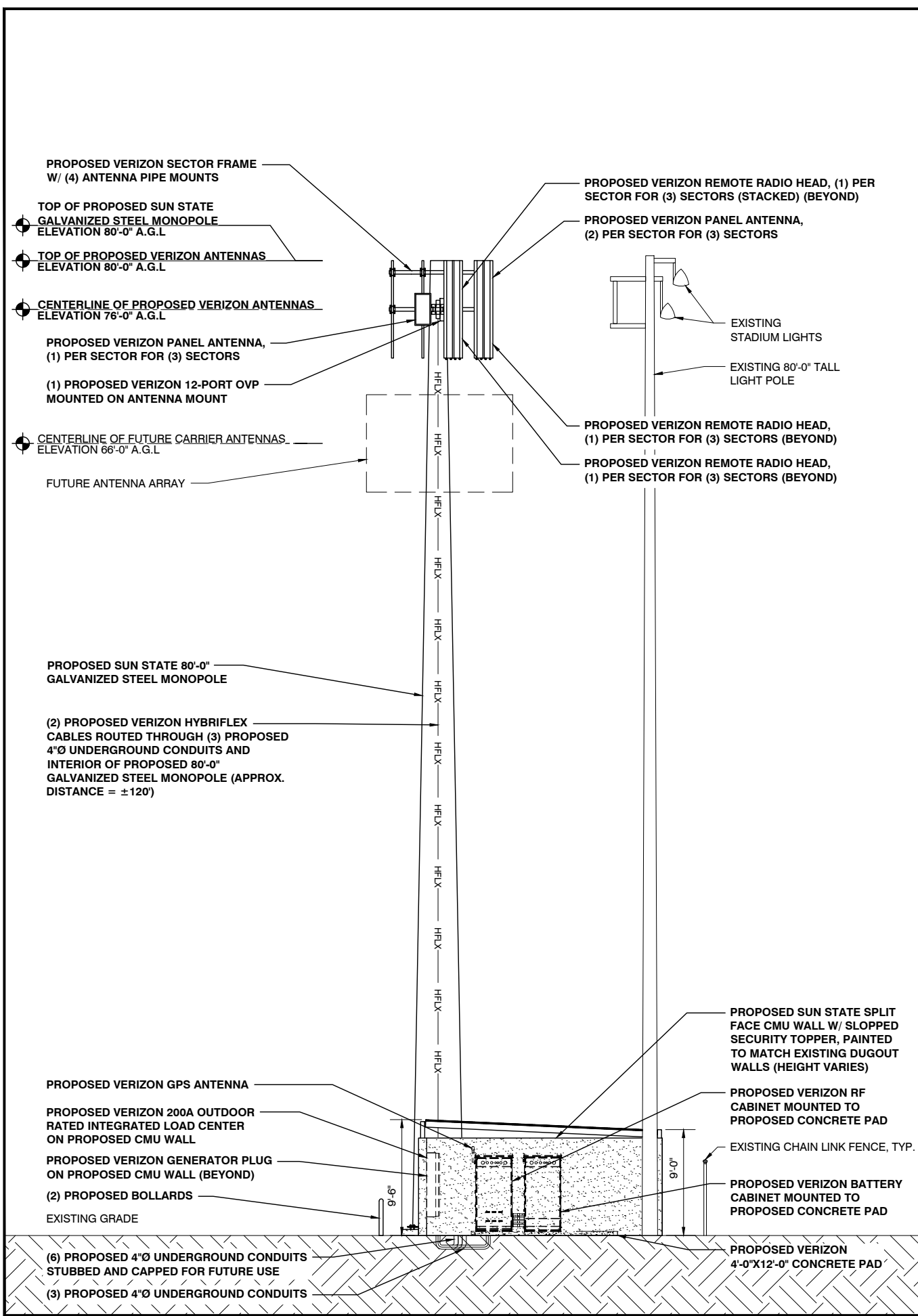
NM14-149 GRAND SLAM /  
NM4 OVERLOOK  
580 OVERLOOK RD.  
LOS ALAMOS, NM 87544  
LOS ALAMOS COUNTY

SHEET TITLE  
**ENLARGED SITE PLAN  
AND ANTENNA PLAN**

SHEET NUMBER  
**Z-5**

24"x36" SCALE: 3/8" = 1'-0"  
11"x17" SCALE: 3/16" = 1'-0"

**3**



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NM14-149 GRAND SLAM / NM4 OVERLOOK  
 580 OVERLOOK RD.  
 LOS ALAMOS, NM 87544  
 LOS ALAMOS COUNTY

SHEET TITLE  
**ELEVATIONS**

SHEET NUMBER  
**Z-6**

**PROPOSED SOUTH ELEVATION**

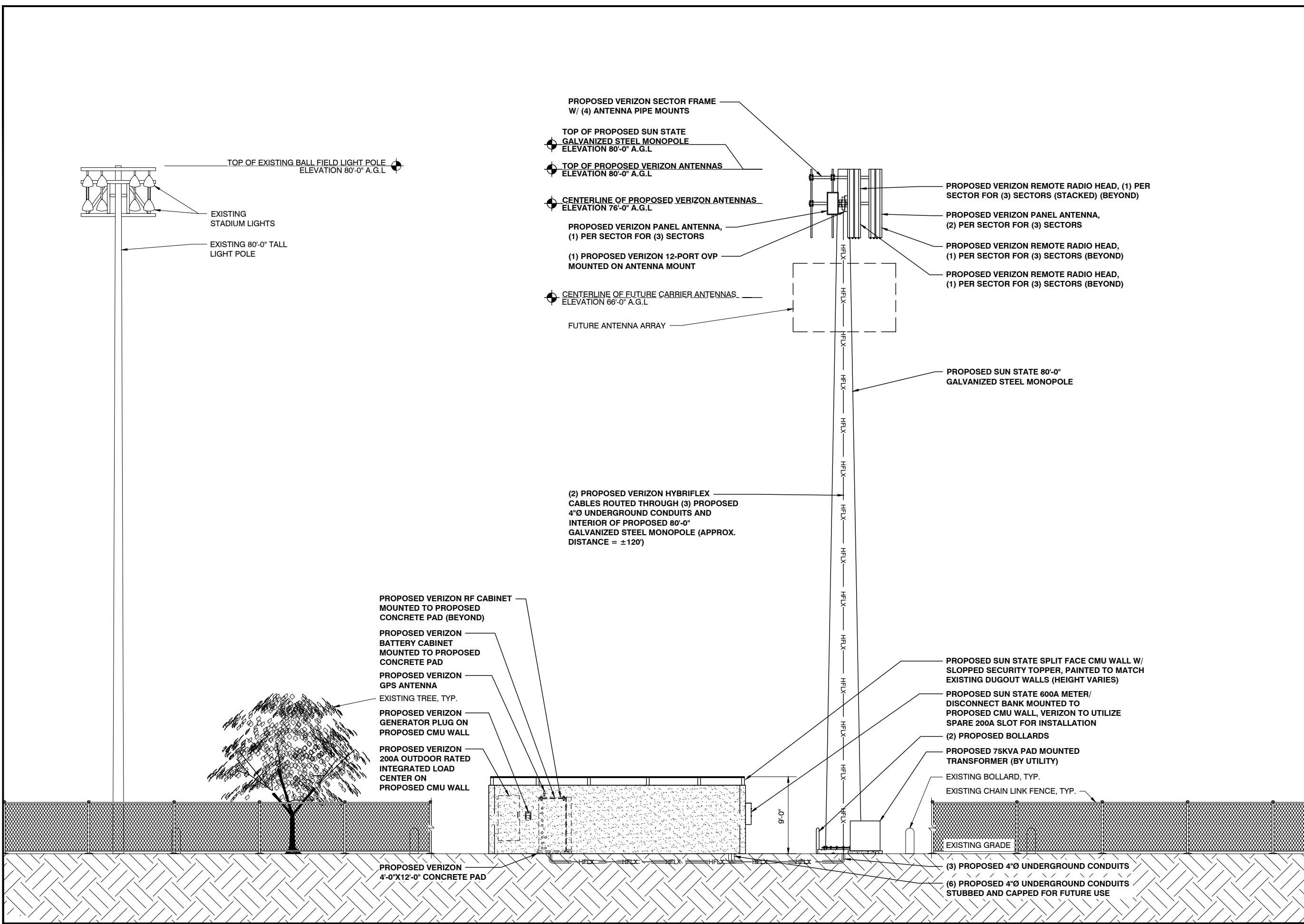
24"x36" SCALE: 3/16" = 1'-0"  
 11"x17" SCALE: 3/32" = 1'-0"

1

**PROPOSED NORTH ELEVATION**

24"x36" SCALE: 3/16" = 1'-0"  
 11"x17" SCALE: 3/32" = 1'-0"

2



PROPOSED EAST ELEVATION

ATTACHMENT A

24"x36" SCALE: 3/16" = 1'-0"  
 11"x17" SCALE: 3/32" = 1'-0"

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5	03/12/25	FINAL ZONING	CS

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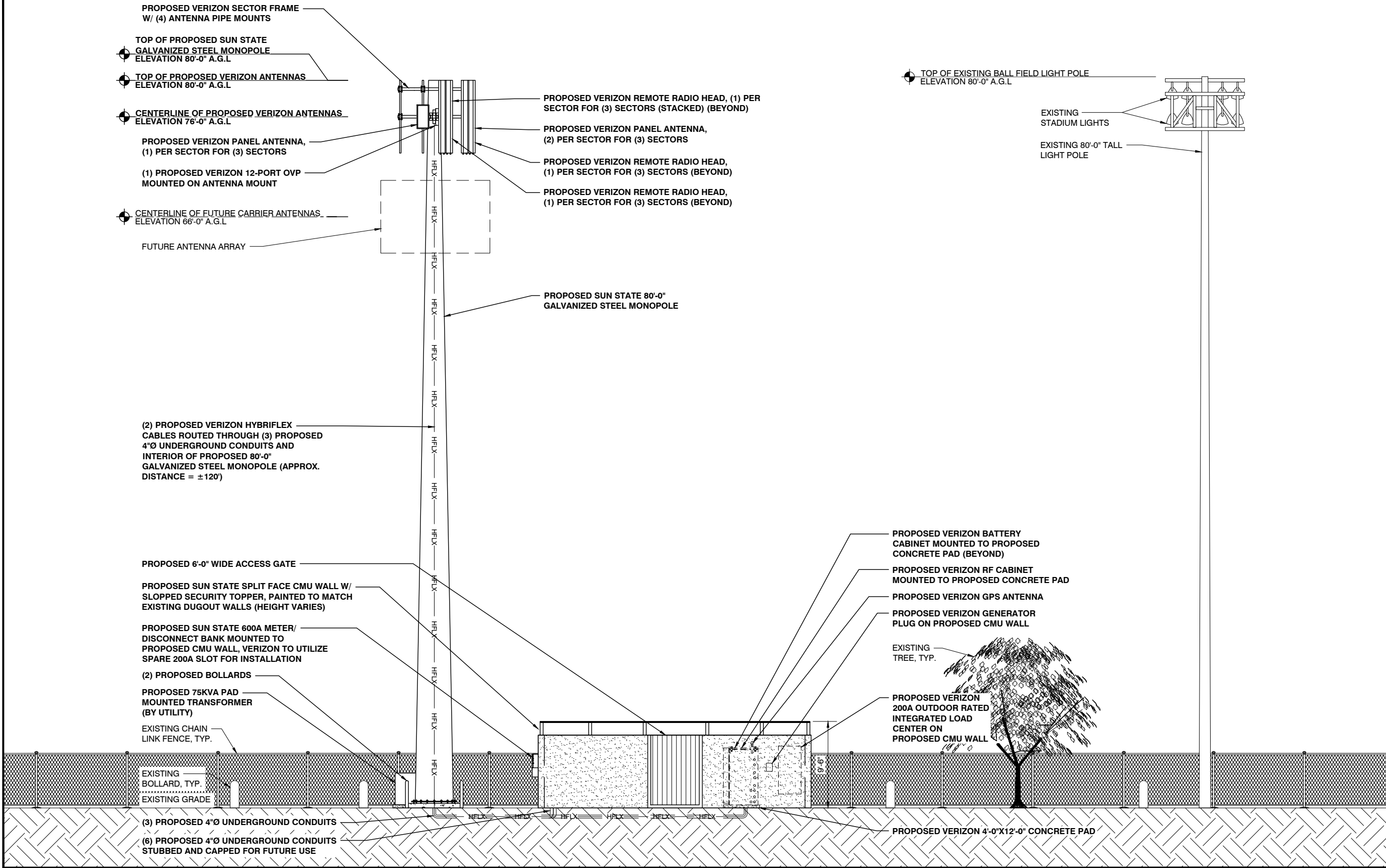
NM14-149 GRAND SLAM / NM4 OVERLOOK  
 580 OVERLOOK RD.  
 LOS ALAMOS, NM 87544  
 LOS ALAMOS COUNTY

SHEET TITLE  
**ELEVATIONS**

SHEET NUMBER  
**Z-7**



REV	DATE	DESCRIPTION	BY
4	02/18/25	FINAL ZONING	CS
5	03/12/25	FINAL ZONING	CS





**MASONRY NOTES:**

**MASONRY WALL GENERAL NOTES**

**CODE:**  
2021 NEW MEXICO COMMERCIAL BUILDING CODE

**WIND:**  
104 MPH ULTIMATE DESIGN WIND SPEED (RISK CATEGORY II)  
EXPOSURE C

**SEISMIC:**  
RISK CATEGORY II  
SITE CLASS: C  
SEISMIC DESIGN CATEGORY C  
S<sub>s</sub> = 0.495  
S<sub>1</sub> = 0.161

**GEOTECHNICAL:**  
FOUNDATION DESIGN IN ACCORDANCE WITH RECOMMENDATIONS PROVIDED IN GEOTECHNICAL REPORT NO. :2022130.36  
BY GDP GROUP  
DATED JANUARY 24, 2023  
ALLOWABLE BEARING PRESSURE = 3000PSF  
AT 2'-6" BELOW LOWEST ADJACENT FINISHED GRADE. REFER TO SOILS REPORT FOR ADDITIONAL INFORMATION.

**CONCRETE:**  
CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. VIBRATE REINFORCED CONCRETE DURING PLACEMENT.

DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL REINFORCING SHALL BE SECURELY TIED TO PREVENT MOVEMENT WHILE PLACING CONCRETE. WELDING OF REINFORCING IS NOT ALLOWED. LAP REINFORCING 48 BAR DIAMETERS (30" FOR #5, 24" FOR #4). BEND REINFORCING OR PROVIDE CORNER BARS WHERE FOOTING CHANGES DIRECTION.

MINIMUM CONCRETE COVER FOR REINFORCING STEEL CAST IN CONCRETE (UNO):  
CAST AGAINST EARTH: 3"  
PERMANENTLY EXPOSED TO EARTH OR WEATHER: 1 1/2" (#5 AND SMALLER)  
2" (#6 AND LARGER)

**MASONRY:**  
CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90, LOAD BEARING WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI (NET AREA).

MORTAR SHALL CONFORM TO ASTM C-270, TYPE S.

FILL ALL REINFORCED CELLS WITH 2000 PSI GROUT OR GROUT CONFORMING TO ASTM C476. MAXIMUM GROUT POUR IS 5'-4" WITHOUT CLEANOUTS. MECHANICALLY CONSOLIDATE GROUT AFTER PLACEMENT AND RECONSOLIDATE AFTER APPROXIMATELY 5 MINUTES. SOLID GROUT ALL CELLS BELOW FINISHED GRADE

PROVIDE MASONRY CONTROL JOINTS AT 24' O.C. MAXIMUM WITH A MINIMUM WALL SEGMENT LENGTH OF 8'.

DEFORMED BAR REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60. LAP 48 BAR DIAMETERS (30" FOR #5, 24" FOR #4).

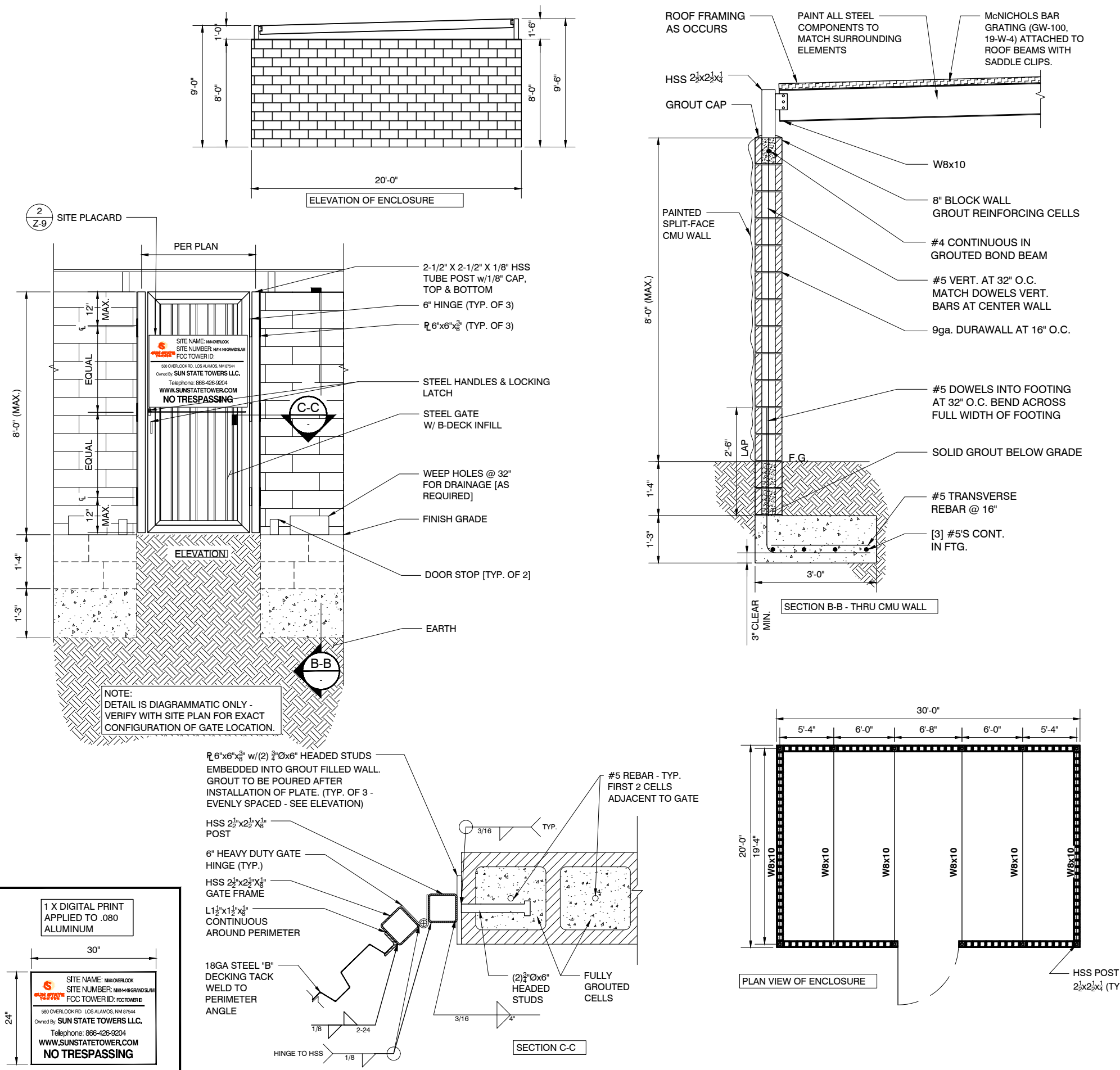
VERTICAL REINFORCING SHALL BE #5, CENTERED IN CELL AT SPACING NOTED ON DRAWING OR AT 48" O.C. MINIMUM. PROVIDE VERTICAL BARS AT ALL WALL ENDS, CORNERS, INTERSECTIONS AND EACH SIDE OF CONTROL JOINTS. ALL VERTICAL BARS SHALL BE DOWELED INTO CONCRETE FOOTING WITH A MINIMUM 30" PROJECTION ABOVE TOP OF FOOTING.

HORIZONTALLY REINFORCE WALLS WITH (1) #5 IN 8" DEEP SOLID GROUTED BOND BEAM AT TOP OF WALL. PROVIDE BENT CORNER BARS TO MATCH BOND BEAM REINFORCING AT ALL CORNERS. PROVIDE 9 GAUGE (W1.7) GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCING CONFORMING TO ASTM A951 AT 16" O.C. VERTICALLY MAXIMUM.

**SPECIAL INSPECTIONS:**  
SPECIAL INSPECTIONS REQUIRED PER IBC CHAPTER 17 FOR THE FOLLOWING ITEMS:

- CONCRETE:**
- PERIODIC INSPECTION TO VERIFY FOUNDATION SIZE AND REINFORCING SIZE & PLACEMENT

- MASONRY:**
- PERIODIC INSPECTION TO VERIFY CMU CONSTRUCTION AND REINFORCING SIZE & PLACEMENT
  - CONTINUOUS INSPECTION DURING PLACEMENT OF GROUT



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PROFESSIONAL ENGINEER

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SHEET TITLE  
**COMPOUND ENCLOSURE DETAIL**

SHEET NUMBER  
**Z-9**

# WIRELESS NETWORK CONSULTING



NM14-149 Grand Slam / Verizon NM4\_OVERLOOK  
Capacity Cell Split

## RF DESIGN ANALYSIS

# Coverage vs Capacity

- † **Capacity is providing bandwidth or processing capacity to service the customers in the area.**
  - Areas where large numbers of users are in a specific geographic areas
  - Areas where users are demanding higher data rates for services
  - Areas with a large amount of indoor users
- † **Coverage is Providing Service where service does not exist, calls drop, or “no service”.**
  - Areas where sites are farther apart
  - Areas where terrain or buildings block signals
  - Areas where indoor service is low or nonexistent

# Objective of new site

## Capacity

- Provide additional bandwidth for customers in the area surrounding the proposed site
- Provide better throughput for indoor users in the area
- Offload surrounding sites that are over capacity that cover Hwy 4 and White Rock Area

## Coverage

- Provide service in surrounding residential and commercial areas
- Provide service on Hwy 4 and feeder roads
- Provide indoor service for the population surrounding the proposed site

## Why is this site important?

- 96% of Americans own a Cellular Phone
- 57% of American Homes rely exclusively on cellular phones
- 84% or more of 9-1-1 emergency calls are made from wireless devices



# Proposed Site

## † 80' Monopole Tower

- 580 Overlook Road White Rock, NM 87544
  - Latitude: 35.826074 N (NAD83)
  - Longitude: --106.188313 W (NAD83)
  - Ground Elevation:6292.8' (NAVD88)
- Anchor tenant is Verizon
  - Antenna Centerline at 76' AGL

# Why here?

- † Existing sites are overloaded with capacity (low throughput per user). A Cell Split is needed to increase the capacity in the area the proposed will offload existing Verizon sites that provide service
- † Since this is a capacity need locating more antennas on the existing site 1.93 miles to the West that Verizon is already located on will not resolve the capacity issues in the area
- † A new site is needed to resolve the issues hence the proposed site.
- † Provide Indoor service to area around proposed
- † Mobiles are reporting low quality connections for multiple carriers around the proposed

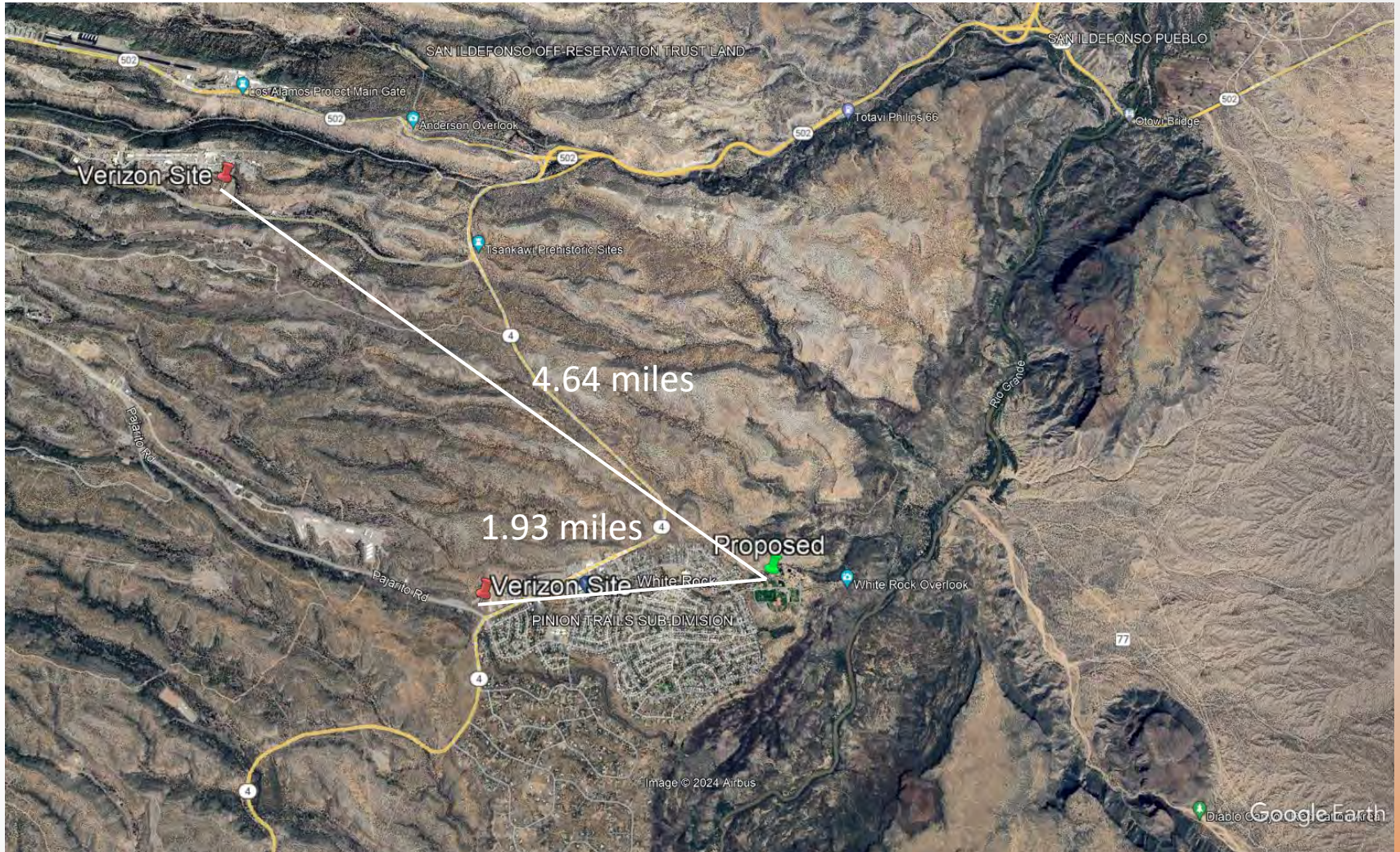


# Zoom – proposed site



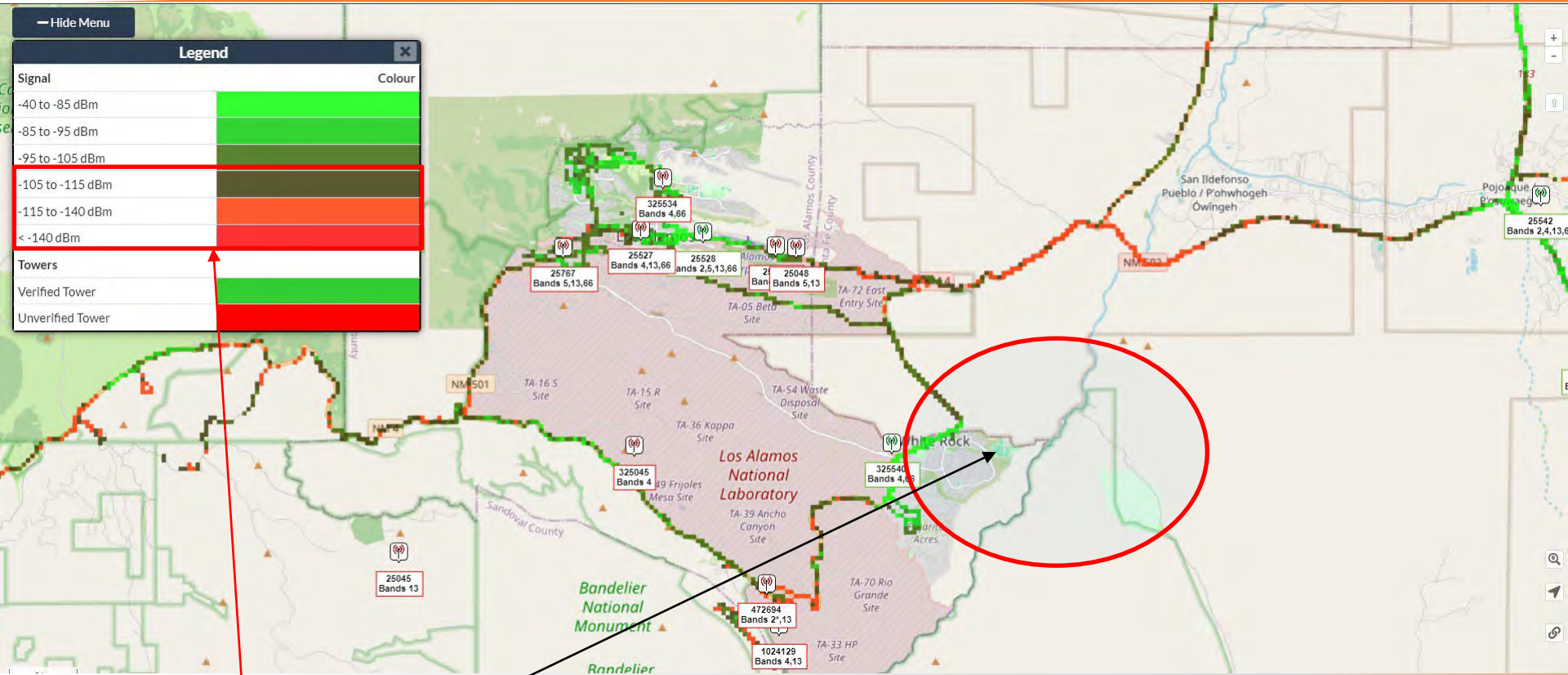


# Verizon Sites





# Verizon CellMapper



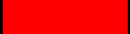


Poor Service Quality      Proposed Site

The area in the red circle is what the proposed site impacts.

This map is showing good coverage on the Southern area of Hwy 4

# Ookla Verizon 4G RSRP data

LEGEND	
	Indoor $\geq$ -85 dbm
	In-Vehicle $\geq$ -95 dbm
	On-Street $\geq$ -106 dbm

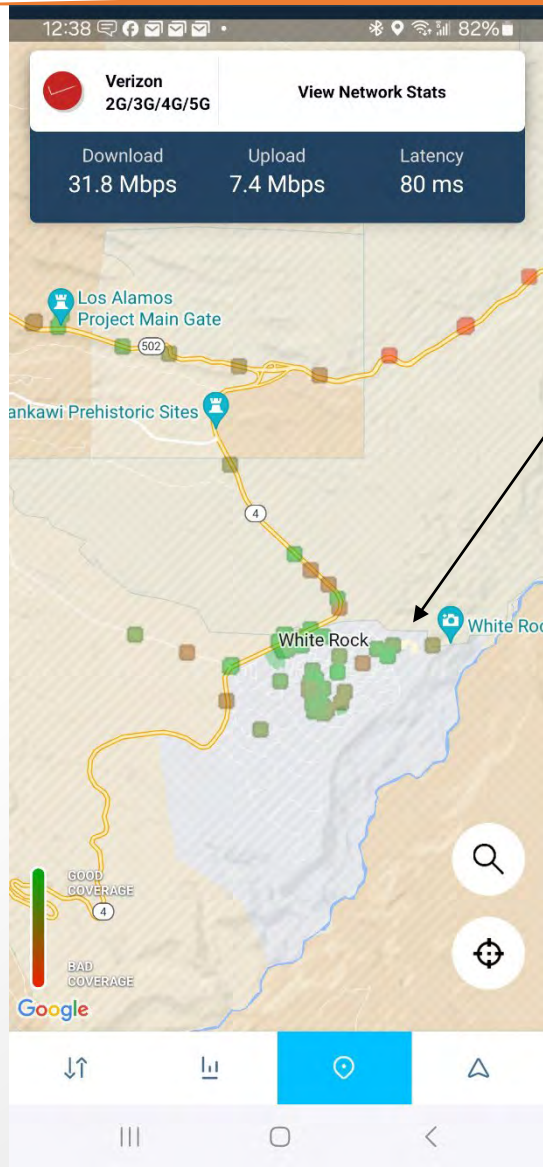


The red circle show the areas where the carriers are providing in vehicle and on street coverage, but indoor service is limited

This area is lacking in indoor and some in-vehicle service where the proposed is located



# Open Signal Verizon Quality Map



This map show mobiles reporting quality of their connections to the network. This is crowdsource data from Verizon users made available by the OpenSignal App:



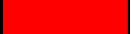
<https://www.opensignal.com/apps#section-os-app>

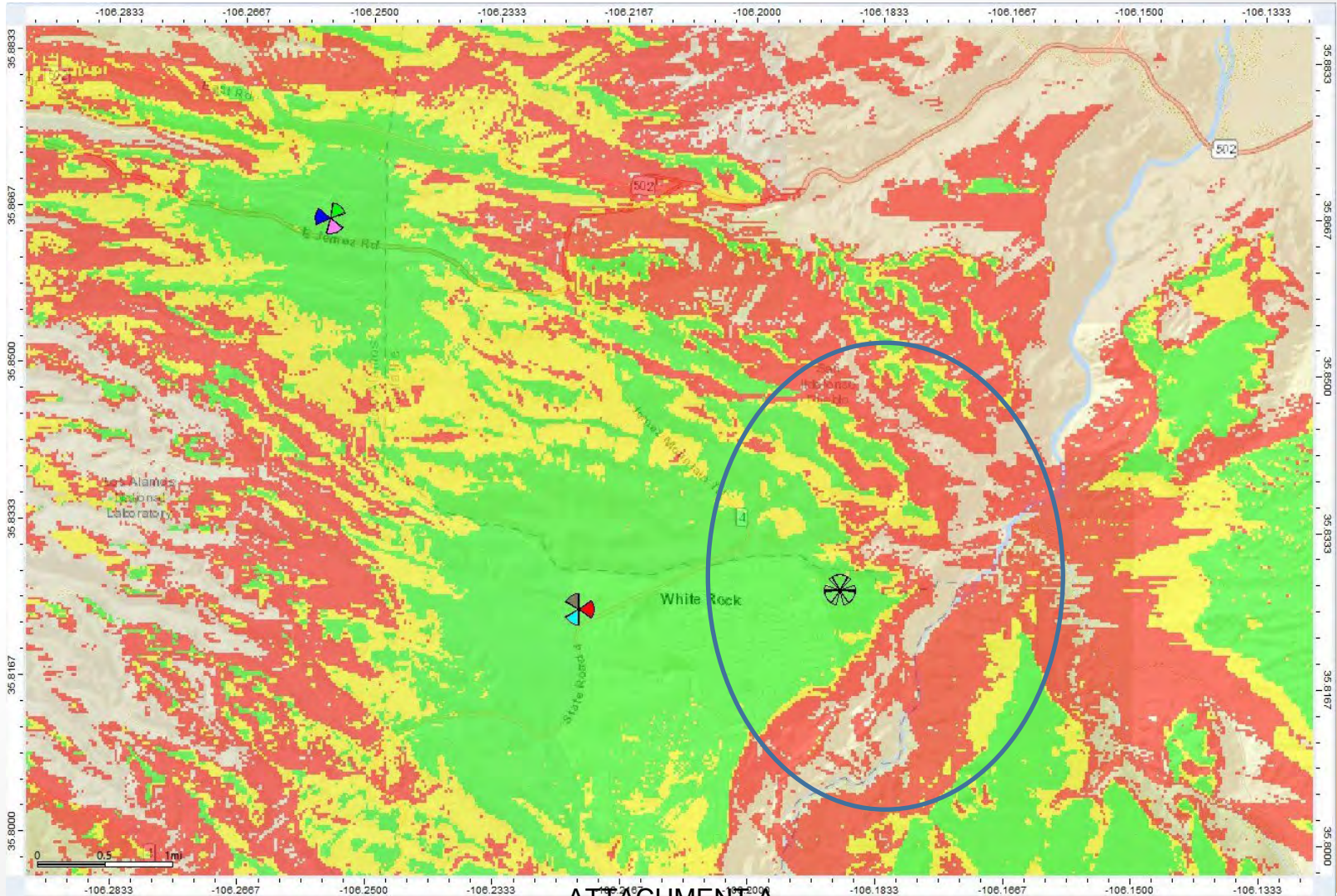
Green data points show good coverage and red data points show bad coverage and lack of data points show no coverage



ATTACHMENT A

# Verizon RSRP Current Coverage

LEGEND	
	Indoor $\geq -85$ dbm
	In-Vehicle $\geq -95$ dbm
	On-Street $\geq -106$ dbm






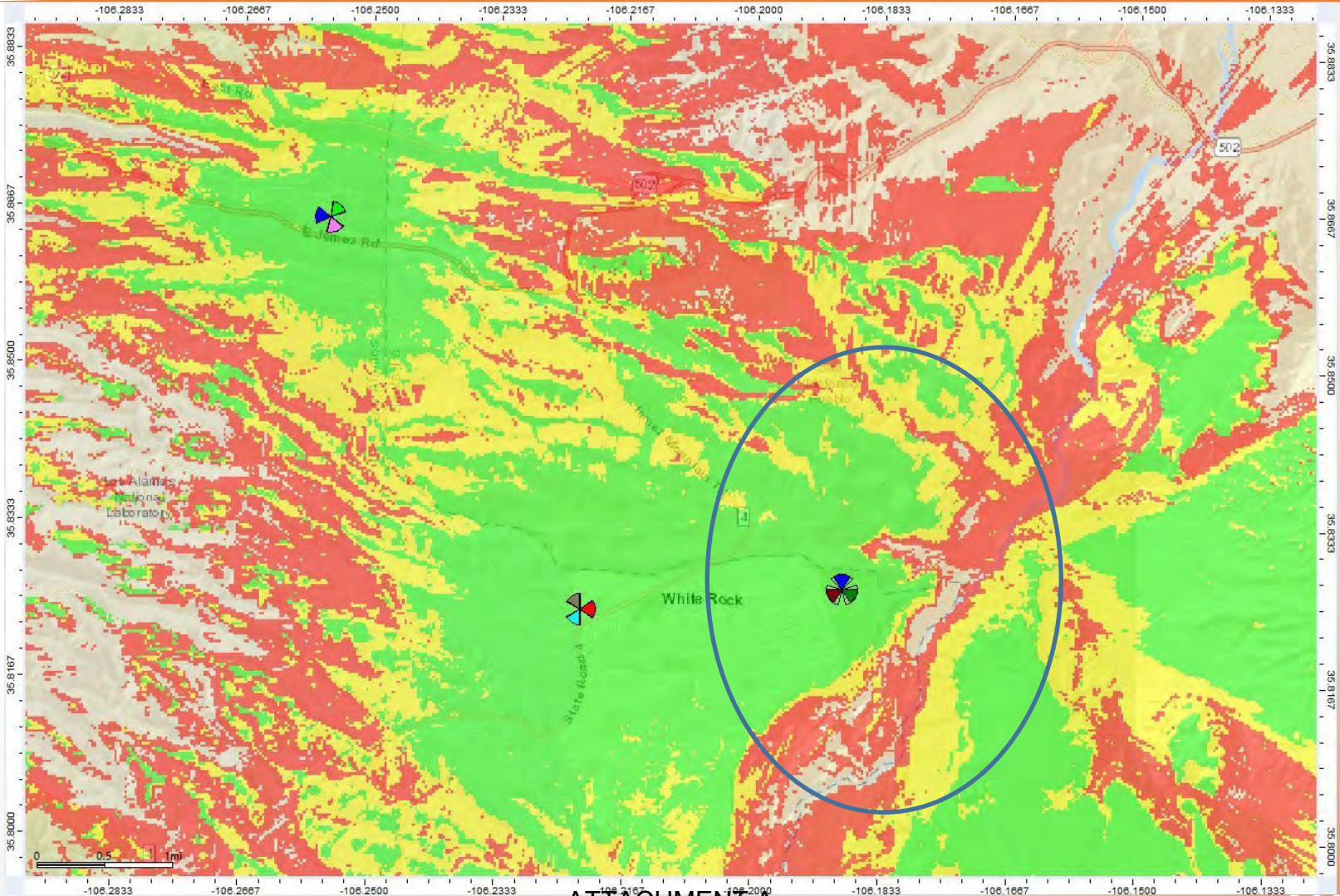
ATTACHMENT A

2024



# Verizon RSRP Proposed Coverage

LEGEND	
	Indoor $\geq$ -85 dbm
	In-Vehicle $\geq$ -95 dbm
	On-Street $\geq$ -106 dbm

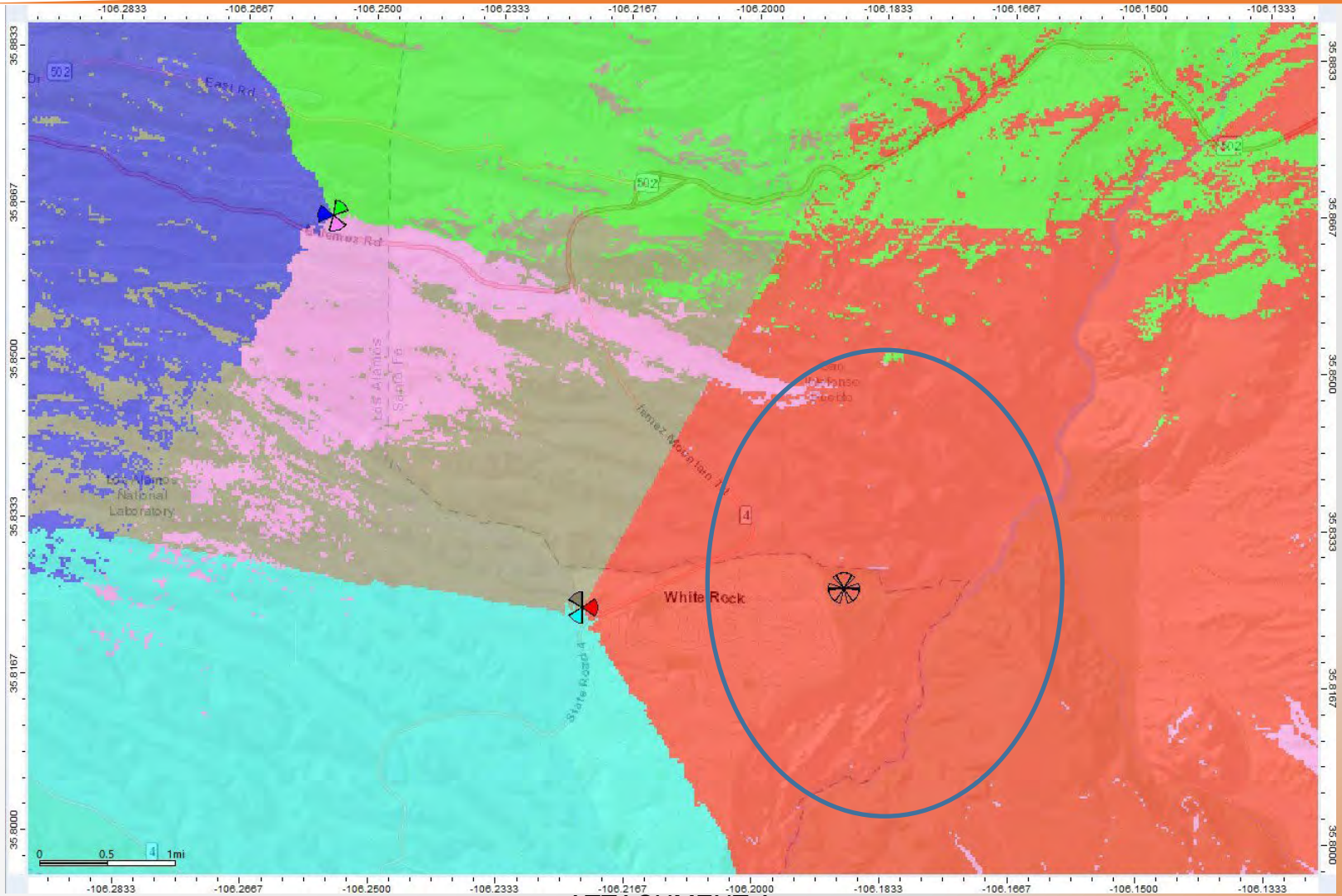


ATTACHMENT A

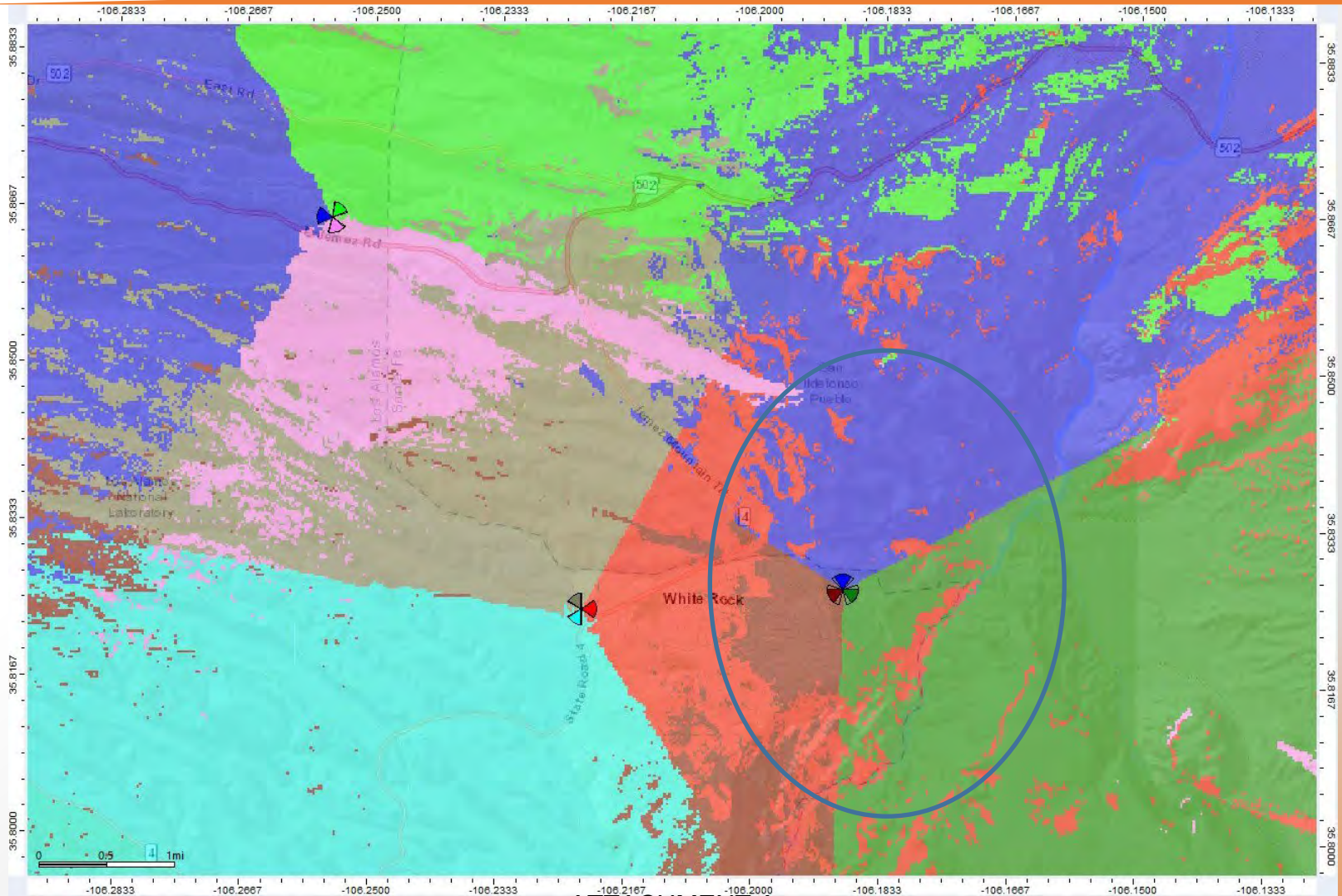
2024



# Best Server - Current (-120dbm)



# Best Server – with new site (-120dbm)





# Ionizing vs Non-Ionizing

- † There are two (2) types of Energy/Radio Waves
- **Ionizing**
    - These are waves that can effect human DNA
    - Examples are:
      - Gamma rays
      - X-Rays
    - This is one of the reasons the nurse steps out of the room and you wear a lead overcoat when you get X-Rays at the dentist.
  - **Non- Ionizing**
    - These are waves do not effect human DNA
    - Examples are:
      - Car Radios
      - Television
      - Wi-Fi Access points and routers
      - Bluetooth headsets
      - Cellphones and Smartphones
      - Lightbulbs
      - Wireless Baby Monitors
      - TV remotes
    - Absorption of waves is proximity based, the closer you are to the antenna the more non-ionizing energy is absorbed. You will absorb 50% of the FCC's General Public limit with your smartphone next to your ear versus less than 10% of the FCC's General Public limit from the antennas when you are standing 20' away from the proposed tower.
    - The further you walk away from the tower it decreases even more.



# General Public & Occupational limits

† The FCC isolated two (2) groups relative to access around wireless antennas

† The first group is called Occupational

- This refers to areas where workers would be allowed (general public cannot access) but the workers would not have knowledge about antennas (An example would be an Air Conditioner Repair Technician). Barriers or signage may be needed to alert the worker when close to the antennas.
  - Examples are:
    - Rooftop access behind a locked door
    - Compound access behind a locked gate
  - The FCC determined the safe value and then lowered by a factor of 10 and that is the value the wireless carriers use in the studies
  - The exposure levels are averaged over 6 minutes

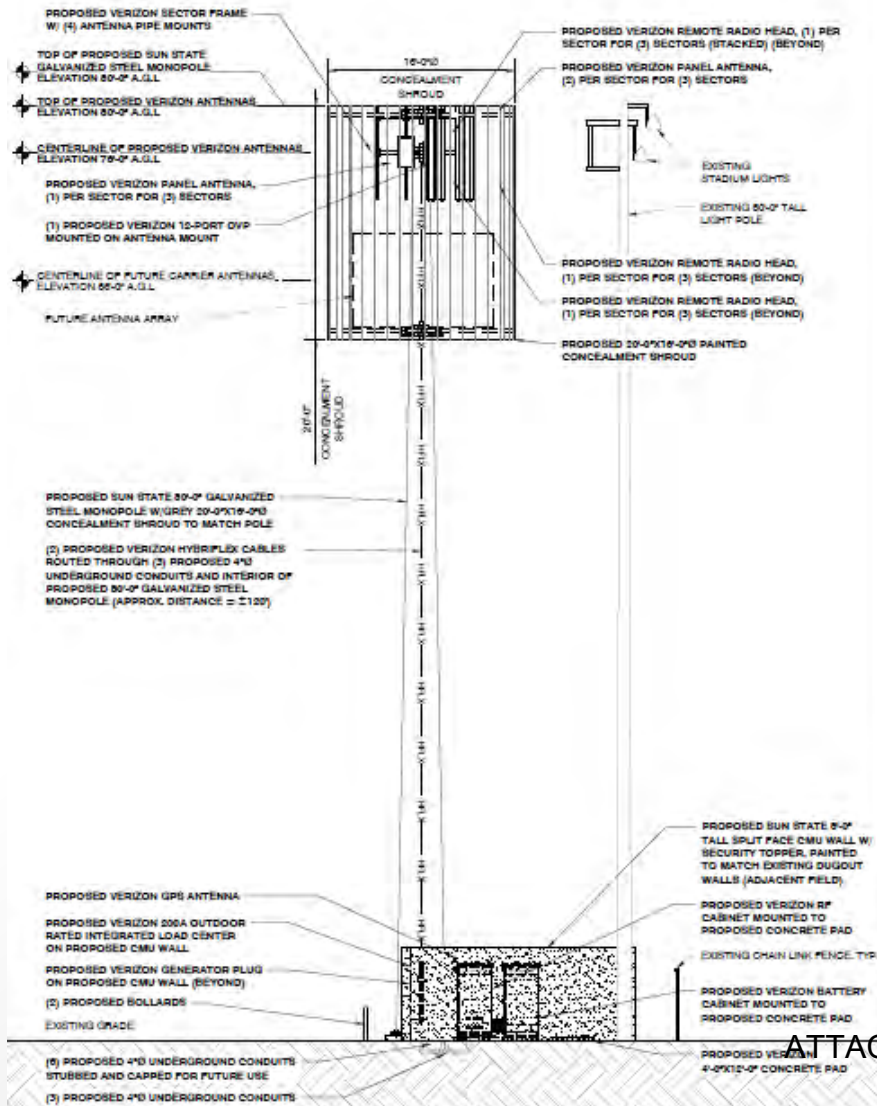
† The second group is called General Public

- Uncontrolled access (General Public)
  - This group is for areas with general public access, the public would not have a knowledge of an antenna being close to them
  - Examples are:
    - Sidewalks
    - Parks
    - Public accessed buildings
  - The FCC determined the safe value and then lowered by a factor of 50 and that is the value the wireless carriers use in the studies
  - The exposure levels are averaged over 30 minutes

† Compare the value for a tower which is 10mW to the power of a smartphone which is 200mW of power.

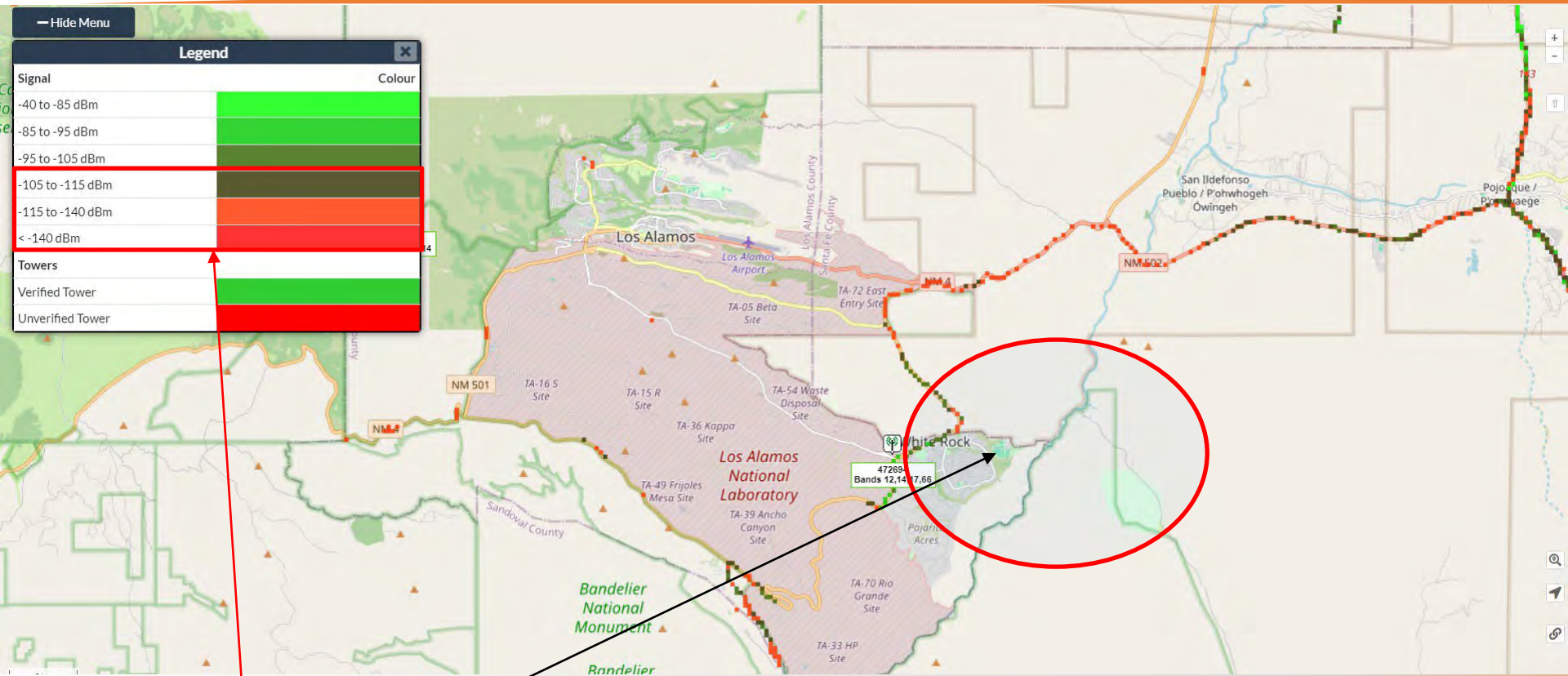
# Power Levels below a tower

Main beam of the antenna



- Power levels on the ground around the tower are much less than what is at the antennas
  - Power on the ground adjacent to the tower is 1/1000 of the power compared to what is at the antenna
- 1/1000 of the power on the ground around the site

# AT&T CellMapper






Poor Service Quality Proposed Site

The area in the red circle is what the proposed site impacts.

This area is showing less than in-vehicle and less than indoor service



# Ookla AT&T 4G RSRP data

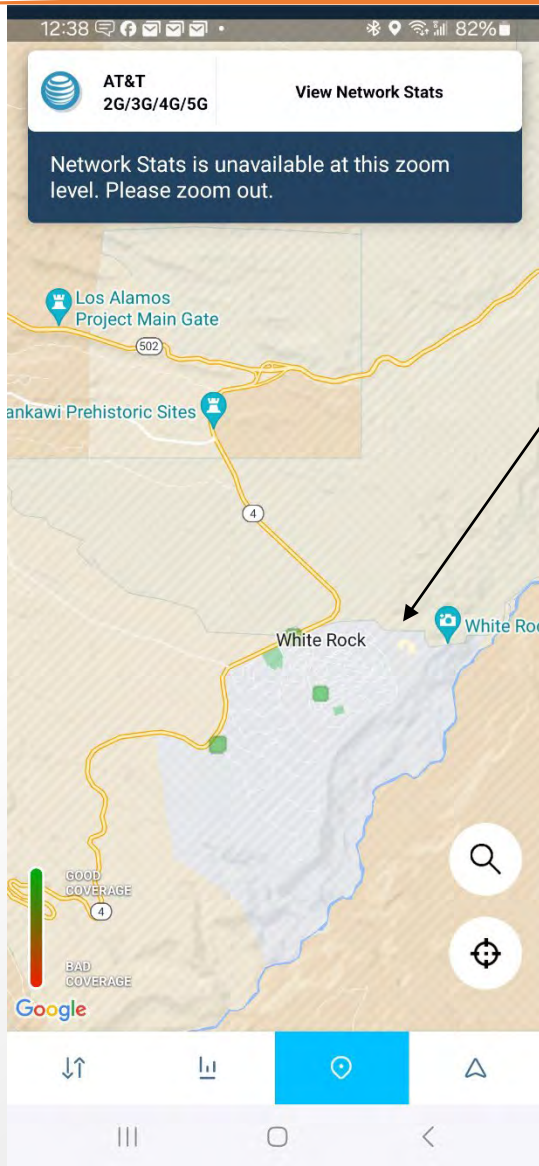
LEGEND	
	Indoor $\geq$ -85 dbm
	In-Vehicle $\geq$ -95 dbm
	On-Street $\geq$ -106 dbm



The red circle shows the areas where the carriers are outdoor service

This area is lacking indoor services and in-vehicle services

# Open Signal AT&T Quality Map



This map show mobiles reporting quality of their connections to the network. This is crowdsource data from AT&T users made available by the OpenSignal App:

<https://www.opensignal.com/apps#section-os-app>

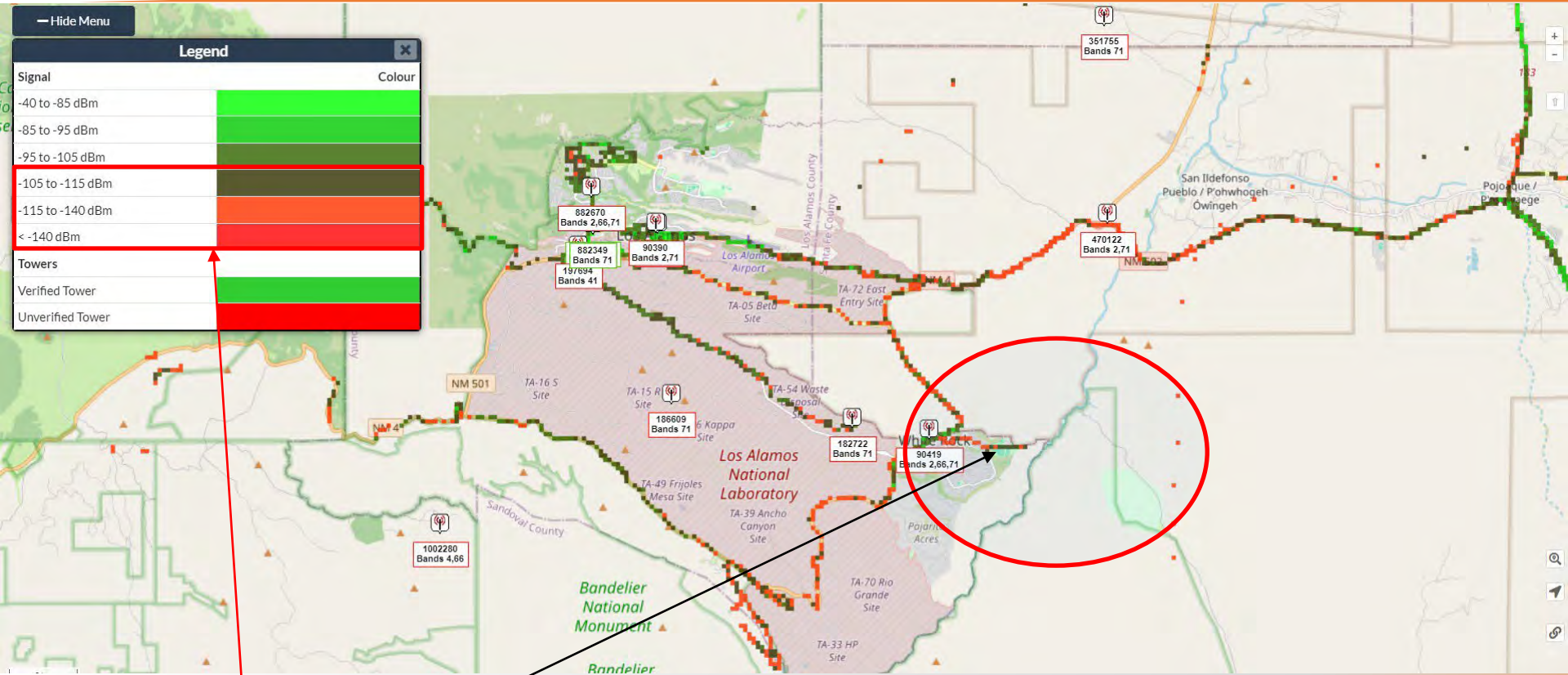
Green data points show good coverage and red data points show bad coverage and lack of data points show no coverage



ATTACHMENT A



# T-Mobile CellMapper





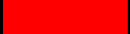
Poor Service Quality Proposed Site

The area in the red circle is what the proposed site impacts.

This area is showing outdoor and indoor service



# Ookla T-Mobile 4G RSRP data

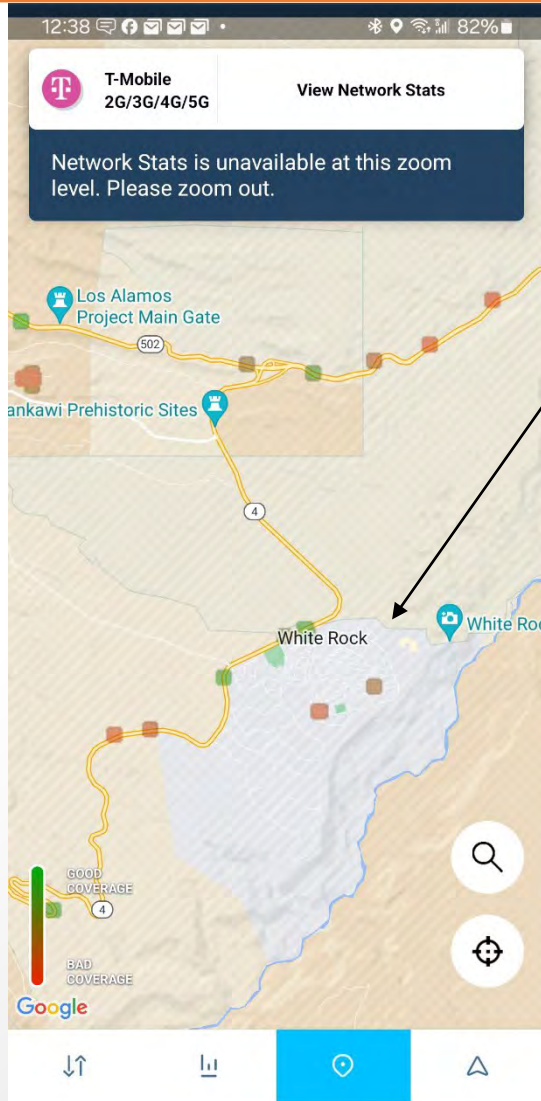
LEGEND	
	Indoor $\geq$ -85 dbm
	In-Vehicle $\geq$ -95 dbm
	On-Street $\geq$ -106 dbm



The red circle show the areas where the carriers are outdoor service and no service

This area is lacking indoor and in-vehicle services

# Open Signal T-Mobile Quality Map



This map show mobiles reporting quality of their connections to the network. This is crowdsource data from T-Mobile users made available by the OpenSignal App:

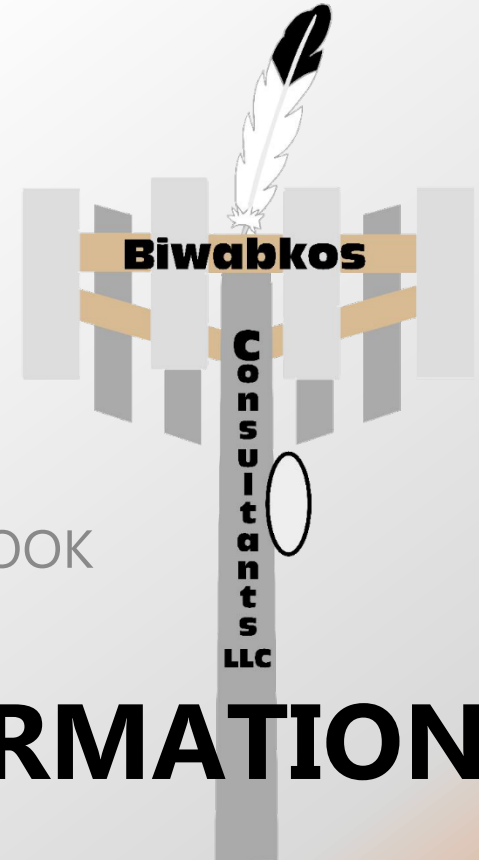
<https://www.opensignal.com/apps#section-os-app>

Green data points show good coverage and red data points show bad coverage and lack of data points show no coverage



ATTACHMENT A

# WIRELESS NETWORK CONSULTING



NM14-149 Grand Slam / Verizon NM4\_OVERLOOK  
Capacity site

## **1<sup>ST</sup> RESPONDER INFORMATION**



# Emergency Responder P.25 Protocol

- † P.25 is a suite of standards for interoperable digital 2-way radio services and products, this standard was created by public safety professionals in North America and has gained worldwide acceptance.
- † P.25 allows for higher capacity voice codecs and Time Domain Multiple Access (TDMA)-1.5G technology that allows for higher capacity in the same frequency bandwidth versus that of analog radio's
- † P.25 has low speed data capabilities (caller identification/encryption, text messaging etc.) and has broadband network support via LTE networks

# Emergency Responder Broadband requirements

- † While P.25 provides for data service it is very low throughput
- † Updated systems utilized by 1<sup>st</sup> responders require significant amounts of bandwidth that is provided by Commercial Wireless Carriers
- † The following applications require the higher bandwidth data
  - Active 911 dispatches
  - Routing and Mapping through Active 911 (Google/Apple maps embed)
  - (12) lead transmission to hospital to activate cath labs for heart attack victims
  - Emergency patient care reports (ECPR's)
  - 3AM software for tracking personnel and units (required by Department of Homeland Security for Certificate of Necessity)

# Staff Feedback

- † Community events that draw large numbers of attendees have significant increase in capacity needs which causes network to get overloaded
- † Staff has made statements about the 4<sup>th</sup> of July event talking about poor quality cell service during that time that is significantly worse than normal
- † This is the negative impact of not having enough capacity in the area
- † This also negatively impacts Emergency responder broadband requirements