COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: May 16, 2024

TO: Zoning Hearing Officer

FROM: Planning Staff

SUBJECT: Consideration of a Use Permit Renewal, pursuant to Sections 6500 and 6512.6 of the San Mateo County Zoning Regulations, to allow the continued operation of an existing telecommunications facility. The project is located at the Half Moon Bay Airport, 9850 Cabrillo Highway, in the unincorporated Half Moon Bay area of San Mateo County.

County File Number: PLN2001-00521 (T-Mobile)

PROPOSAL

The project applicant, Eric Hale on behalf of T-Mobile, is proposing to renew an existing Use Permit to allow the continued operation of a wireless communications facility located at Half Moon Bay Airport. The facility includes two (2) panel antennas located at a height of approximately 70 feet on the existing 81-foot tower, and existing equipment located within a fenced area at ground level.

RECOMMENDATION

That the Zoning Hearing Officer approve the Use Permit Renewal, County File No. PLN2001-00521, by making the required findings and adopting the conditions of approval listed in Attachment A.

BACKGROUND

Report Prepared By: Samuel Becker, Project Planner, sbecker@smcgov.org

Applicant: Eric Hale of Network Connex, on behalf of T-Mobile

Owner: County of San Mateo

Public Notification: Ten (10) day advanced notification for the hearing was mailed to property owners within 300 feet of the project parcel and a notice for the hearing posted in the San Mateo County Times.

Location: 9850 Cabrillo Highway, Moss Beach, CA. 94038

APN: 037-292-030

Size: 319 acres

Existing Zoning: M-1/DR/CD (Light Industrial District/Design Review District/Coastal Development District). The southwest end of the parcel is also included in the AO (Airport Overlay District). However, this zoning district doesn't cover the telecommunications facility.

General Plan/Local Coastal Plan Designation(s): Airport

Sphere-of-Influence: City of Half Moon Bay

Existing Land Use: Half Moon Bay Airport and existing telecommunications facilities.

Water/Sewer Supply: The project property is currently served by Montara Water and Sanitary District. However, water and sewer service are not necessary for the project as the wireless telecommunications facility is unmanned and does not include elements which require such services.

Flood Zone: FEMA Flood Zone X (Area of Minimal Flood Hazard), Community Panel No. 06081C0138F, dated August 2, 2017.

Environmental Evaluation: The project is categorically exempt pursuant to Section 15301, Class 1, of the California Environmental Quality Act (CEQA) Guidelines for the continued operation of existing public or private facilities involving little or no physical changes or expansion of use.

Setting: The subject parcel is located within the Half Moon Bay Airport facility, directly adjacent and West of Cabrillo Highway, and between Seal Cove to the north and Princeton by the Sea to the south. A road labeled as "Gravel Access Road" on plans provides access off Cabrillo Highway to a gate secured entrance onto airport parcel(s). Two lattice towers are located about 400 feet to the southwest of the main airport terminal building. Directly south of the access road is an existing path created for access to the telecommunications facilities on site. There is an existing leased area for T-Mobile and the cell site related equipment along with cell tower about 150 feet west of Cabrillo Highway, also located in this area is another carrier's equipment shelter area and telecommunications tower.

Chronology:

Date		Action
1996	-	Original Use Permit 96-0049 approved.
June 2006	-	Use Permit renewal approved.

June 2011	-	Use Permit renewal application submitted.
October 13, 2011	-	Staff level approval of minor modifications to replace one cabinet, four antennas and four tower-mounted amps, BLD2011-01542.
February 15, 2012	-	Staff level approval of a minor modification to install a “ciena” equipment box, fiber optics, to the site, BLD2012-00201.
March 15, 2012	-	Zoning Hearing Officer hearing and approval of Use Permit renewal.
March 15, 2022	-	Expiration of Use Permit.
April 27, 2022	-	Staff level approval of minor modifications for generator and related equipment, storage, BLD2021-00371.
December 12, 2023	-	Use Permit renewal application received.
January 12, 2024	-	Modifications proposed current with renewal deemed as minor modifications by Planning Department. Includes adding two (2) new antennas and two (2) new radios to the existing array for a new total of four (4) antennas and four (4) radio units, and replacement of two (2) cabinets within the same footprint without any trenching or expansion of leased equipment area.
January 12, 2024	-	Application deemed complete.
May 16, 2024	-	Zoning Hearing Officer public hearing.

DISCUSSION

A. KEY ISSUES

1. Conformance with San Mateo County General Plan

Staff has determined that the project complies with all applicable General Plan policies, with specific discussion of the following:

a. Chapter 4 – Visual Quality

The project continues to conform with the applicable General Plan policies for Visual Quality as the facility will largely remain as currently constructed, with the exception of proposed minor modifications. These modifications include the addition of antennas and radios, and

replacement of equipment, with the proposed scope of work not substantially changing the physical dimension of tower or base, it shall qualify for Federal preemption. The changes described and reflected in submitted renewal plans have not yet been installed but have been reviewed to confirm that the proposed changes are negligible regarding visual impact and maintaining the condition of approval that antenna equipment be installed with a cool grey color to blend in with the tower structure and cabinet equipment with a natural finish or earth-tone color to match the other ground-level equipment. This equipment color has been maintained in this way to continue to minimize visibility of the site and its associated equipment.

b. Chapter 7 – General Land Use

The project is consistent with Policy 7.16 (*Land Use Objectives for Urban Areas*), maximization of efficiency of public facilities, services, and utilities, because it is utilizing an already-developed site to continue filling in coverage gaps that existed previous to its inception as an essential service. Continuing the use on this site meets the land use objectives for the area and eliminates the need to introduce this use at a new location.

2. Conformance with the Zoning Regulations

The existing T-Mobile project site is located within M-1/DR/CD zoning districts (Light Industrial District/Design Review District/Coastal Development District), AO (Airport Overlay) does exist on within southwest end of parcel, but this zoning district doesn't cover the telecommunications facility. Wireless Telecommunications Facilities are allowed in any zoning district pursuant to a Use Permit per Section 6500(b) of the San Mateo County Zoning Regulations, when found to be necessary for the public health, safety, convenience, or welfare, and this project has prior Use Permit approval with the renewal subject to this staff report and associated hearing. No changes other than those deemed minor modifications are proposed as part of this renewal for this facility. Therefore, this facility's continued use qualifies as a public service and the proposed renewal to continue operating may be granted for this location in the M-1/DR/CD Zoning Districts. The minor modifications noted on plans provided for this Use Permit Renewal, show the non-substantial changes that will not contribute to any new lot coverage, floor area, or impact required setbacks.

3. Conformance with the Local Coastal Program (LCP)

The project site is located within the Coastal Zone and the approval of the original Use Permit included a Coastal Development Permit. The existing facility was found to be compliant with the applicable policies of the LCP

(8.5a and 8.23) at the time of its original approval and subsequent modifications remain consistent. The proposed modifications continue to be compliant and qualify under the exemption criteria listed in Chapter 20B of the Zoning Regulations; issuance of a new Coastal Development Permit is not required.

4. Conformance with Wireless Telecommunications Facilities Regulations

Staff has determined that the project continues to conform with the applicable standards of the Wireless Telecommunication Facilities (WTF) Ordinance, as discussed below:

a. Development and Design Standards.

Section 6512.2 of the WTF ordinance discusses location, minimizing visual impacts, maximum height, and future co-location of wireless facilities. The project area is located within the Cabrillo Highway State Scenic Corridor. Although the project site is located on the west side of Cabrillo Highway approximately 150 feet from the roadway, the facility is not visually obtrusive since its located among other similar facilities customarily associated with airports, the towers/antennas are painted a grey color to blend in with the sky, and some trees and vegetation are located intermittently along Cabrillo Highway and offer visual screening of the facility. Based on the Radio Frequency emissions analysis completed by Sumit Rana of Telnet Inc., composite exposure levels are at a spatial average of less than 1% of the Federal Communications Commission (FCC) general public exposure at public accessible areas for all facilities at this location. There are other carriers present on the site but there are currently no further expansions for those carriers planned or anticipated at this time.

b. Performance Standards

The existing facility continues to be compliant with the required performance standards of Section 6512.3 for lighting, licensing, provision of a permanent power source, timely removal of the facility, visual resource protection, and generator use and maintenance. There is no lighting proposed, proper licenses have been obtained from both the FCC and CPUC, power for the facility is provided by PG&E (existing service), there is minimal visual impact, and conditions of approval continue to require maintenance and/or removal of the facility when necessary.

5. Conformance with Use Permit Findings

In order to approve the subject Use Permit Renewal, the Zoning Hearing Officer must make the following findings:

a. *That the establishment, maintenance and/or conducting of the use will not, under the circumstances of the particular case, result in a significant adverse impact to coastal resources, or be detrimental to the public welfare or injurious to property or improvements in the neighborhood.*

The subject antenna facility has been in operation since 1996, has not resulted in any adverse impacts to coastal resources, and has not resulted in any adverse impacts to the surrounding area. The electromagnetic energy analysis submitted with the Use Permit renewal application indicates that the facility continues to comply with the FCC's current prevailing standards for limiting human exposure to Radio Frequency energy. As this is an unmanned communication facility, the operation does not create additional traffic, noise, or intensity of use of the property.

b. *That the telecommunication facilities are necessary for the public health, safety, convenience or welfare of the community.*

Staff found that the continued operation of the existing cellular facility at this location will allow for continued cellular communication coverage for private citizens and businesses. The existing wireless telecommunication facility has been in existence for many years and the community has come to rely on the coverage provided by this site. The site facilitates both routine daily conversation but also communication services in emergency situations.

6. Conformance with Conditions of Last Use Permit Approvals

Staff has reviewed the previous Use Permit conditions of approval for T-Mobile (PLN2001-00521), last approved March 15, 2012, and has determined that the commercial carrier is in compliance with all previous conditions (see Attachment E). No physical changes are proposed as part of the renewal, although minor modifications have been shown on plans for streamlined building permit submittal due to meeting Federal preemption. Previous conditions that remain relevant, along with new conditions, are included in Attachment A of this staff report.

B. ENVIRONMENTAL REVIEW

The project is categorically exempt pursuant to Section 15301, Class 1, of the California Environmental Quality Act (CEQA) Guidelines for the continued operation of existing public or private facilities involving little or no physical changes or expansion of use.

C. REVIEWING AGENCIES

Building Inspection Section
Coastside Fire Protection District

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Location Map
C. Plans
D. Site Photos
E. RF Report
F. PLN2001-00521 Conditions from the 2012 Use Permit Approval

Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN2001-00521 Hearing Date: May 16, 2024

Prepared By: Sam Becker, Project Planner For Adoption By: Zoning Hearing Officer

RECOMMENDED FINDINGS

For the Environmental Review, Find:

1. The project is categorically exempt pursuant to Section 15301, Class 1, of the California Environmental Quality Act (CEQA) Guidelines for the continued operation of existing public or private facilities involving little or no physical changes or expansion of use.

For the Use Permit Renewal, Find:

2. That the establishment, maintenance and/or conducting of the proposed use will not, under the circumstances of this particular case, result in a significant adverse impact to coastal resources, or be detrimental to the public welfare or injurious to property or improvements in said neighborhood as a search of County records has shown that the site has operated in full compliance with the previous conditions of approval, is in compliance with the Federal Communications Commission (FCC)'s current prevailing standards for limiting human exposure to Radio Frequency energy, and is compliant with the County's Wireless Telecommunication Facilities Ordinance due to the design, location, and available opportunities for future co-locations.

3. That the approval of this use permit renewal for an existing cellular telecommunication facility is necessary for the public health, safety, convenience, or welfare of the community as the site provides telecommunications coverage to the surrounding community, which serves as a benefit to both private and public users.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. This approval applies only to the proposal, documents and plans described in this report and submitted to and approved by the Zoning Hearing Officer on May 16, 2024. Minor revisions or modifications to the project may be approved by the Director of Planning and Building if they are consistent with the intent of and in substantial conformance with this approval.

2. The Use Permit shall be valid for a period of ten (10) years from the date of approval. The applicant shall apply for the renewal of this permit six (6) months prior to expiration and shall submit the renewal application and applicable fees to the Planning and Building Department at that time.

3. Any change in use or intensity shall require an amendment to the Use Permit. Amendment to this Use Permit requires an application for amendment, payment of applicable fees, and consideration at a public hearing.

4. The applicant shall maintain approval from the FCC and the CPUC with regard to the operation of this facility. The applicant, upon request by the Planning Department, shall submit proof of approval. If these approvals are ever revoked, the applicant shall inform the Director of Planning and Building of the revocation, at which time an administrative review will commence.

5. The facility shall maintain compliance with the performance standards contained with the County's Wireless Telecommunication Facilities Ordinance.

6. The applicant shall maintain the approved color scheme from previous Conditions of Approval associated with the last Use Permit Renewal approved in March 2012. The panel antenna(s) shall be maintained with a cool grey color. The ground-level storage cabinet(s) shall continue to be maintained with a natural finish or an earth-tone color. Future modifications to equipment on site must match the color scheme previously conditioned.

Building Inspection Section

7. The applicant shall apply for and obtain a building permit from the Building Inspection Section prior to the commencement of any physical changes to the facility.

Coastside Fire Protection District

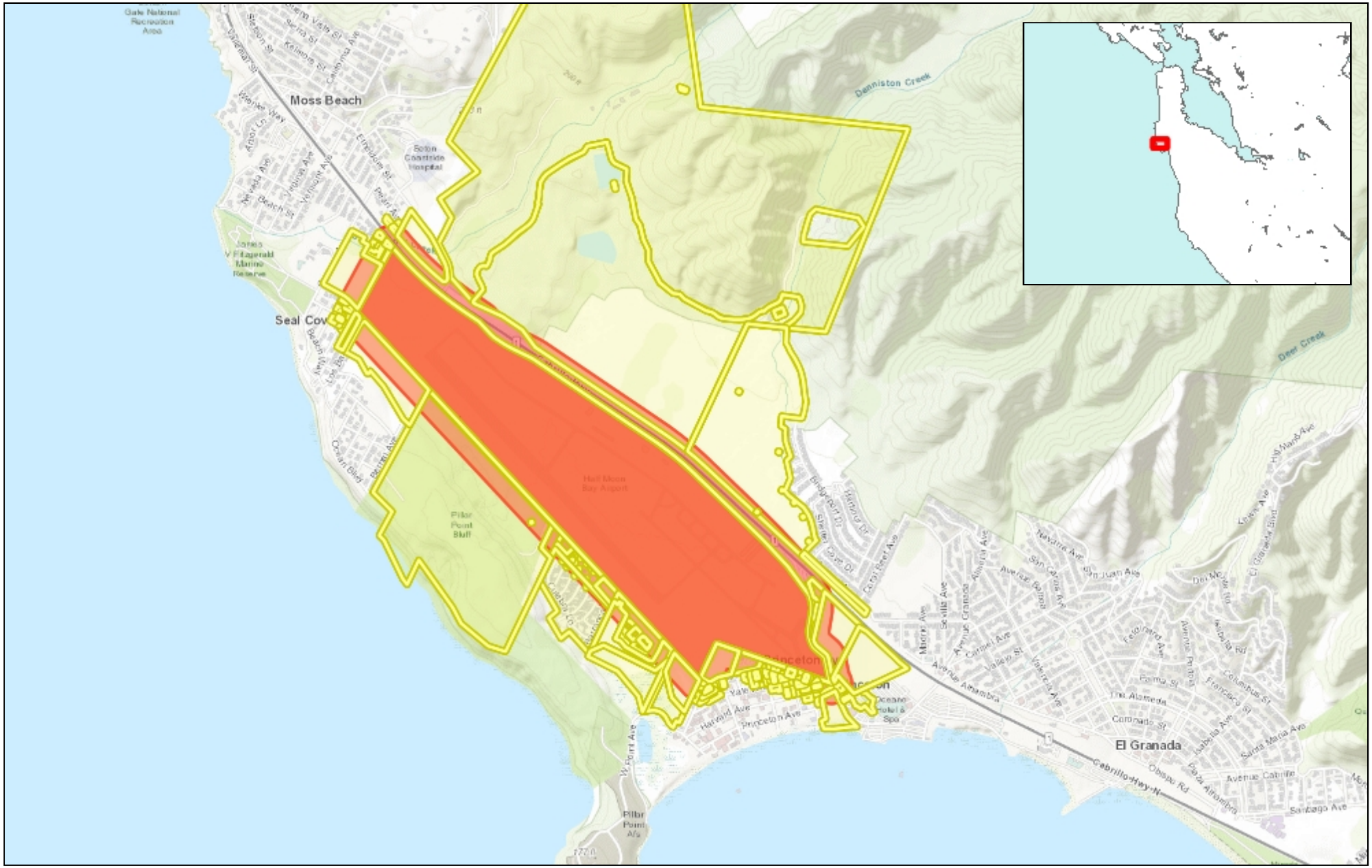
8. The applicant shall maintain and operate the site in accordance with all Coastside Fire Protection District requirements previously conditioned under PLN2001-00521, including conditions that were met under the last Use Permit renewal dated March 15, 2012.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

San Mateo County

PLN2001-00521 300' Notification Map



0.92 0 0.46 0.92 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

1: 29,180

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C

SITE NUMBER: **SF03106A**
SITE NAME: SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY, HALF MOON BAY, CA 94019
COUNTY: SAN MATEO
SITE TYPE: LATTICE TOWER
PROJECT TYPE: ANCHOR PROJECT

CODE COMPLIANCE

CONSTRUCTION WORKS AND MATERIALS MUST COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY LOCAL JURISDICTION, INCLUDING BUT NOT LIMITED TO:

- CALIFORNIA CODE OF REGULATIONS
- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA ELECTRIC CODE
- CALIFORNIA EXISTING BUILDING CODE,
- CALIFORNIA HISTORICAL BUILDING CODE,
- CALIFORNIA RESIDENTIAL CODE
- CALIFORNIA GREEN BUILDING CODE
- 2022 EDITION OF TITLE 24 ENERGY STANDARDS
- ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
- CITY / COUNTY ORDINANCES

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

SITE INFORMATION

PROPERTY OWNER: ADDRESS:	COUNTY OF SAN MATEO 555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CA 94063
APPLICANT: ADDRESS:	T-MOBILE USA 1200 CONCORD AVE., 5th FLOOR CONCORD, CA 94520
LATITUDE:	37° 30' 47.85" N (37.513292)
LONGITUDE:	122° 29' 37.96" W (-122.493878)
LAT/LONG TYPE:	NAD 83
GROUND ELEVATION:	±53.8' AMSL
APN #:	037-292-030
ZONING JURISDICTION:	COUNTY OF SAN MATEO
CURRENT ZONING:	M-1/DR/CD (AIRPORT)
PROPOSED USE:	UNMANNED TELECOMMUNICATIONS FACILITY
TELEPHONE:	AT¢T
POWER:	PG¢E

PROJECT TEAM

PROJECT MANAGER:
NETWORK CONNEX
416 AVIATION BLVD. STE. B
SANTA ROSA, CA 95403
CONTACT: ERIC HALE
PHONE: (916) 805-6801
EMAIL: ehale@networkconnex.com

APPLICANT:
T-MOBILE
1855 GATEWAY BLVD. STE. 900
CONCORD, CA 94520
CONTACT: JAMIE LISLE
PHONE: (702) 808-9995

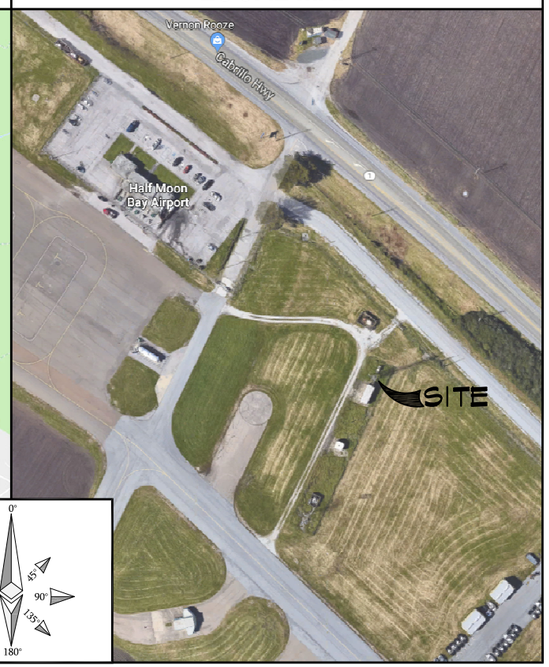
ENGINEER:
ZALZALI & ASSOCIATES INC.
dba ALL STATES ENGINEERING & SURVEYING
23675 BIRTCHER DR.
LAKE FOREST, CA 92630
OFFICE: (949) 273-0996
PRINCIPAL: WISSAM ZALZALI (C-71655)
CELL: (949) 609-9559
PM: KRYSTIAN MARSHALL
CELL: (949) 690-7975
EMAIL: krystian@zalzali.com

USE QR CODE FOR SITE DIRECTIONS

LOCATION MAPS

VICINITY MAP

LOCAL MAP



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811 **Dig Alert**
Know what's below.
Call before you dig.
1-800-344-7483

DO NOT SCALE DRAWINGS

SUBCONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

RFDS VERSION 7 DATE: 04/25/2023

CONSTRUCTION DRAWINGS

IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

PROJECT DESCRIPTION

T-MOBILE WIRELESS PROPOSES TO MODIFY AN EXISTING WIRELESS COMMUNICATION SITE. THE SCOPE WILL CONSIST OF THE FOLLOWING:

CABINET SOW

- REMOVE (1) EXISTING RBS 6201 CABINET
- REMOVE (1) EXISTING PTS8003 ODE CABINET
- INSTALL (1) RBS 6160 AND (1) B160 BATTERY CABINET ON AN EXISTING CONCRETE PAD
- INSTALL (1) RP6651 FOR B41
- RETAIN BB6630 FOR LB
- RETAIN BB6630 FOR MB
- INSTALL (1) IXRE ROUTER
- INSTALL (2) 6/24 HCS 30M

ANTENNA (ANCHOR) SOW

- RETAIN (2) OCTO ANTENNAS AND (2) RADIO 4449
- REMOVE (2) TMAs AND UNUSED COAX CABLES
- INSTALL (2) RADIO 4460 FOR MB
- INSTALL (2) AIR 6419 FOR B41
- REMOVE GROUND RADIOS

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GN-3	BATTERY DATA SHEET
A-1	OVERALL SITE PLAN & EQUIPMENT EQUIPMENT LAYOUT PLANS
A-2	ANTENNA LAYOUT PLANS & SCHEDULE
A-3	ELEVATIONS
A-4	ELEVATIONS
D-1	DETAILS
D-2	DETAILS
D-3	DETAILS
E-1	ONE-LINE DIAGRAM, PANEL SCHEDULE & ELECTRICAL NOTES
G-1	GROUNDING SCHEMATIC NOTES & DETAILS
G-2	GROUNDING DETAILS

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.

T-MOBILE RF ENGINEER: _____ DATE: _____
T-MOBILE OPERATIONS: _____ DATE: _____
SITE ACQUISITION: _____ DATE: _____
CONSTRUCTION MANAGER: _____ DATE: _____
PROPERTY OWNER: _____ DATE: _____
ZONING: _____ DATE: _____
PROJECT MANAGER: _____ DATE: _____

T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

REGISTERED PROFESSIONAL ENGINEER
WISSAM ZALZALI
71655
CIVIL
STATE OF CALIFORNIA

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

GENERAL CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE, THE LATEST EDITION AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
2. CONTRACTOR SHALL CONSTRUCT SITE IN ACCORDANCE WITH THESE DRAWINGS AND CONSTRUCTION SPECIFICATIONS 80-T1196-1 REV H. THE SPECIFICATION IS THE RULING DOCUMENT AND ANY DISCREPANCIES BETWEEN THE SPECIFICATION AND THESE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION
3. CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OF FIELD CONDITIONS
4. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. OWNER PROVIDED MATERIALS WILL INCLUDE THE FOLLOWING, UNLESS NOTED OTHERWISE:
   A) TRANSMITTER
   B) RF FILTER
   C) MFTS RACK
   D) AUXILIARY EQUIPMENT IN MFTS RACK
   E) PUMP ASSEMBLY
   F) HEAT EXCHANGER
   G) HOSE AND HOSE MANIFOLDS (ANY COPPER OR STEEL SECTIONS PROVIDE BY CONTRACTOR)
   H) UHF ANTENNA AND MOUNTING BRACKETS, GPS ANTENNAS AND KU ANTENNAS
   I) UHF COAX AND HANGERS
   K) 480-208 ∉ 208-400 ELECTRICAL TRANSFORMERS (RE: E-2 FOR SPECIALIZED TRANSFORMERS PROVIDED BY CONTRACTOR)
   L) AUTOMATIC TRANSFER SWITCH AND GENERATOR
   M) EQUIPMENT SHELTER (SHELTERS FURNISHED IN FACTORY W/ HVAC EQUIPMENT AND ELECTRICAL DISTRIBUTION PANEL)
   N) INTEGRATED LOAD CENTER
5. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE WORK.
6. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
7. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
8. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST CONSTRUCTION SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.
10. CONTRACTOR SHALL COORDINATE HIS WORK WITH THE SUPERINTENDENT OF BUILDINGS ∉ GROUNDS AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.
12. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
13. MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING ETC. AND IMMEDIATELY REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.
14. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL SHALL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES (UNLESS NOTED OTHERWISE). LOCATIONS OF REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT.
15. REPAIR ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND IN WITH ADJACENT SURFACES.
16. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS.
17. KEEP CONTRACT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.
18. MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS RECOMMENDATIONS.
19. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO APPLICABLE REGULATORY AUTHORITIES
20. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION SHALL BE IN CONFORMANCE WITH JURISDICTIONAL OR STATE AND LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL AND COORDINATED WITH LOCAL REGULATORY AUTHORITIES.
21. ALL CONSTRUCTION IS TO ADHERE TO T-MOBILE'S INTEGRATED CONSTRUCTION STANDARDS UNLESS CALIFORNIA CODE IS MORE STRINGENT.
22. THE INTENT OF THE PLANS AND SPECIFICATIONS IS TO PERFORM THE CONSTRUCTION IN ACCORDANCE WITH THE CALIFORNIA BUILDING STANDARDS CODE, TITLES 19 AND 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE JURISDICTION BEFORE PROCEEDING WITH THE WORK.

ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY 'CONSTRUCTION MANAGER' AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE 'CONSTRUCTION MANAGER' HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
2. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER ∉ TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
   C - NATIONAL FIRE CODES
   A. UL - UNDERWRITERS LABORATORIES
   B. NEC - NATIONAL ELECTRICAL CODE
   C. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
   D. OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
   E. SBC - STANDARD BUILDING CODE
4. DO NOT SCALE ELECTRICAL DRAWINGS, REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH 'CONSTRUCTION MANAGER' ANY SIZES AND LOCATIONS WHEN NEEDED.
5. EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
6. CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.
7. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.
8. CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
9. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION.
10. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
11. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
12. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY T-MOBILE.
13. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION AND APPROVAL BY CONSTRUCTION MANAGER.
14. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
15. CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
16. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
17. ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
18. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
19. DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION. REFER TO NOTES AND REQUIREMENTS 'EXCAVATION, AND BACKFILLING.
20. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IECE.
21. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURES CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
22. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE 'CONSTRUCTION MANAGER' UPON FINAL ACCEPTANCE.
23. THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
24. DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
25. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
26. RACEWAYS: CONDUIT SHALL BE SCHEDULE 40 PVC MEETING OR EXCEEDING NEMA TC2 - 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'GOLD GALV'.
27. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
28. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, 800 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
29. CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
30. SERVICE: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. OWNER OR OWNERS AGENT WILL APPLY FOR POWER.
31. TELEPHONE SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
32. ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2' DEPTH.
33. CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOMM".
34. ALL BOLTS SHALL BE STAINLESS STEEL

GROUNDING NOTES

1. COMPRESSION CONNECTIONS (2), 2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. EC SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "N", "I") WITH 1" HIGH LETTERS.
3. ALL HARDWARE 18-8 STAINLESS STEEL, INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.
4. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
5. NUT ∉ WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE.
6. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
7. WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER,THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE TOWER.
8. ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.

ADDITIONAL NOTES:

9. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
10. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURERS PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.
11. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE SOLID TIN COATED OR STRANDED GREEN INSULATED WIRE.
12. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE, 5 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE T-MOBILE REPRESENTATIVE.
13. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
14. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN TINNED COPPER SIZES AS NOTED ON PLAN.
15. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 12" BELOW GRADE/FROST-LINE IN TRENCH, U.N.O., AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT.
16. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.
17. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" (OR DIRECTLY TO GROUND-RING).
18. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
   a. BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR INDOOR USE OR AS APPROVED BY T-MOBILE PROJECT MANAGER.
   b. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
   c. TWO -(2) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS (BUS BAR CONNECTIONS).
19. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES).
20. PRIOR TO ANY LUG-BUSSBAR CONNECTIONS, THE BUSSBAR SHALL BE CLEANED BY USE OF "SCOTCH-BRITE' OR PLAIN STEEL WOOL AS TO REMOVE ALL SURFACE OXIDATION AND CONTAMINANTS. A COATING OF "NO-OX-ID" SHALL BE APPLIED TO THE CONNECTION SURFACES.
21. ALL CONNECTION HARDWARE SHALL BE TYPE 316 SS (NOT ATTRACTED TO MAGNETS).
22. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.
23. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE, COLD WATER CONNECTIONS MUST BE MADE ON THE STREET SIDE OF MAIN SHUT-OFF VALVE.

T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1

SITE WORK NOTES

1. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
2. DO NOT SCALE BUILDING DIMENSIONS FROM DRAWING.
3. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
4. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
5. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL DIGGER HOT LINE FOR UTILITY LOCATIONS 48 HOURS PRIOR TO START OF CONSTRUCTION.
6. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
7. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO EXISTING GRADES AT THE GRADING LIMITS.
8. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
9. STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY.
10. NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
11. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.
12. ANY FILLS PLACED ON EXISTING SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE EXISTING SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
13. CONTRACTOR SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO PAPERS, TRASH, WEEDS, BRUSH OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
14. ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.
15. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.

ENVIRONMENTAL NOTES

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.
2. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES WITH SILT AND EROSION CONTROL MEASURES MAINTAINED ON THE DOWNSTREAM SIDE OF SITE DRAINAGE. ANY DAMAGE TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
7. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
8. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
10. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES

FOUNDATION, EXCAVATION AND BACKFILL NOTES

1. ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL.
2. ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
3. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF INADEQUATE BEARING CAPACITY IS REACHED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
4. ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2" MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
5. ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6"THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557.
6. NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HRS PRIOR TO BACK FILLING.
7. FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.
8. NEWLY GRADED SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY "CONSTRUCTION MATERIAL 1-800-239-3841" OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICH EVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FDOT TYPE No. 57 FOR FENCED COMPOUND; FDOT TYPE No. 67 FOR ACCESS DRIVE AREA.
9. IN ALL AREAS TO RECEIVE FILL, REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH EXISTING/PREPARED SOIL SURFACE.
10. WHEN SUB GRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RECOMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OF FILLS.
11. IN AREAS WHICH EXISTING GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.
12. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED WITH THE CONDITION THAT ANY UNFAVORABLE AMOUNTS OF ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ANY ADDITIONAL GRAVEL RESURFACING MATERIAL AS NEEDED TO PROVIDE A FULL DEPTH COMPACTED SURFACE THROUGHOUT SITE.
13. GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUB GRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUB GRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUB GRADE.
14. PROTECT EXISTING GRAVEL SURFACING AND SUB GRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING 'MATTS' OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.
15. DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/ OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.
16. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.

STRUCTURAL STEEL NOTES

1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM AS INDICATED BELOW:
   W-SHAPES: ASTM A992, 50 KSI
   ANGLES, BARS, CHANNELS: ASTM A36, 36 KSI
   HSS SECTIONS: ASTM 500, 46 KSI
   PIPE SECTIONS: ASTM A53-E, 35 KSI
2. ALL EXTERIOR EXPOSED STEEL AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.
3. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC.WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
4. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE 3/4"ø CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
6. FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.

CONCRETE MASONRY NOTES

1. CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90, GRADE N-I, (F'M=1,500 PS). MEDIUM WEIGHT (115 PCF).
2. MORTAR SHALL BE TYPE "S" (MINIMUM 1,800 PSI AT 28 DAYS).
3. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS.
4. ALL CELLS CONTAINING REINFORCING STEEL OR EMBEDDED ITEMS AND ALL CELLS IN RETAINING WALLS AND WALLS BELOW GRADE SHALL BE SOLID GROUTED.
5. ALL HORIZONTAL REINFORCEMENT SHALL BE PLACED IN BOND BEAM OR LINTEL BEAM UNITS.
6. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1-1/2" BELOW TOP OF THE UPPERMOST UNIT.
7. ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.
8. PROVIDE INSPECTION AND CLEAN-OUT HOLES AT BASE OF VERTICAL CELLS HAVING GROUT LIFTS IN EXCESS OF 4'-0" OF HEIGHT.
9. ALL GROUT SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR.
10. CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
11. REINFORCING BARS – SEE NOTES UNDER "REINFORCING STEEL" FOR REQUIREMENTS.
12. PROVIDE ONE BAR DIAMETER (A MINIMUM OF 1/2") GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.
13. LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FEET.
14. HIGH LIFT GROUTED CONSTRUCTION MAY BE USED IN CONFORMANCE WITH PROJECT SPECIFICATIONS AND SECTION 2104A.5.1.2.3 OF U.B.C.
15. ALL CELLS IN CONCRETE BLOCKS SHALL BE FILLED SOLID WITH GROUT, EXCEPT AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.
16. CELLS SHALL BE IN VERTICAL ALIGNMENT, DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.
17. REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE.
18. SAND SHALL BE CLEAN, SHARP AND WELL GRADED, FREE FROM INJURIOUS AMOUNTS OF DUST, LUMPS, SHALE, ALKALI OR ORGANIC MATERIAL.
19. BRICK SHALL CONFORM TO ASTM C-62 AND SHALL BE GRADE MW OR BETTER.

STRUCTURAL CONCRETE NOTES

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301-10, ACI 318-08 AND THE SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH fc'=2,500 PSI AT 28 DAYS UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES CLASS "B" AND ALL HOOKS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER.....2 IN.
   #5 AND SMALLER & WWF .....1-1/2 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....3/4 IN.
   BEAMS AND COLUMNS.....1-1/2 IN.
5. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE U.N.O. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLT, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS.
7. USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICC ER# & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.

FIRE DEPARTMENT NOTES

1. THE T-MOBILE PROJECT MANAGER'S DIRECTION, THE CONTRACTOR SHALL PROVIDE "HILTI" HIGH PERFORMANCE INTUMESCENT FIRE STOP SEALANT #FS-ONE (OR APPROVED EQUIVALENT) AT ALL FIRE RATED PENETRATION INSTALLED PER MANUFACTURER'S LATEST INSTALLATION SPECIFICATION.
2. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE CONSTRUCTED SO AS TO MAINTAIN AN EQUAL OR GREATER FIRE RATING.
3. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CFC ARTICLE 87. [CFC 8701]
4. ADDRESS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A POSITION AS TO BE PLAINLY SEEN VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY [CFC 901.4.4, FHPS POLICY P-00-6]
5. DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RETARDANT CONDITION. [CALIF. CODE OF REGS., TITLE 19, 3.08, 3.21, CEC 2501.5]
6. ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEM AND WATER-FLOW SWITCHES ON AL SPRINKLER SYSTEMS SHALL BE ELECTRICALLY MONITORED WHERE THE NUMBER OF SPRINKLERS IS A 100 OR MORE. [CBC 904.3.1, CFC 1003.3.1]
7. INSTALLATION OF FIRE ALARM SYSTEMS SHALL BE IN ACCORDANCE WITH CFC 1007.
8. AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2A-10BC SHALL BE PROVIDED WITHIN 75 FT. MAXIMUM TRAVEL DISTANCE FOR EACH 6,000 SQ. FT. OR PORTION THEREOF ON EACH FLOOR [CFC 1002, UFC STANDARD 10-1, CALIF. CODE OF REGS., TITLE 19, 3.29]
9. CONTRACTOR SHALL VERIFY IN FIELD THE EXISTENCE OR INSTALLATION OF A FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2A-10BC, WITH A CHARGE STATUS ACCEPTABLE TO THE LOCAL FIRE AUTHORITY HAVING JURISDICTION.
10. COMPLETE PLANS AND SPECIFICATIONS FOR ALARM SYSTEMS: FIRE-EXTINGUISHING SYSTEMS, INCLUDING AUTOMATIC SPRINKLERS AND OTHER FIRE-PROTECTION SYSTEMS SHALL BE SUBMITTED TO FIRE AND LIFE SAFETY FOR REVIEW AND APPROVAL TO INSTALLATION. [CFC 100.3]

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1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

REGISTERED PROFESSIONAL ENGINEER
HASAM ZAZAAI
71655
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-2

NSB 100FT *Silver Battery™*

Specifically designed for **semi stable mains**

Designed for **high power and superior cyclic capability** - built to be reliable, even when the power mains are not.

- High cycle capability, high energy density
- Fast recharge performance
- 10 year float life at 25°C (77°F)
- EUROBAT design life definition: Long Life (12+ years)
- State-of-the-art automated manufacturing ensures consistency and reliability
- Advanced 3 stage terminal design to ensure leak-free operation
  - Female M8 brass terminals provide maximum performance
- Operating temperature range: -40°C to +65°C (-40°F to 149°F)
- High modulus Polyphenylene Oxide (PPO) plastic materials designed to withstand extended elevated operating temperatures and maintain high battery compression essential for reliable operation
  - Non-halogenated, thermally sealed plastic casing and cover
  - Flame retardant (UL 94 V0) and LOI of at least 28%
- Integral handles and front access terminals ensure ease of installation and maintenance
- Approved as non-hazardous cargo for ground, sea, and air transport
  - DOT 49CFR173.159(d), (i) and (ii)

Visit our **website** to find out more **www.northstarbattery.com**

NorthStar

Form: SBS-542-04-04 Issued: 12-01-11 ECO: 1871-611

NSB 100FT *Silver Battery™*

Technical Specifications

Electrical

	International Standard 20°C (68°F)	North American Standard 25°C (77°F)
8 hour capacity to 1.75 Volts/Cell	99 Ah	101 Ah
10 hour capacity to 1.80 Volts/Cell	100 Ah	101 Ah
Float Voltage	2.29 +/- 0.02	2.27 +/- 0.02
Nominal Voltage	12 V	
Impedance (1kHz)	3.4 mΩ @ 25°C (77°F)	
Conductance	1452 S	
Short Circuit Current	3,500 A	

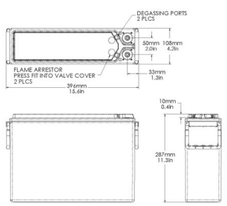
Dimensions

Height	287 mm (11.3 in)	Weight	34 kg (74 lbs)
Width	108 mm (4.2 in)	Terminal	Female M8 x 1.25
Depth	396 mm (15.6 in)	Terminal Torque	8.0 Nm (71 in-lbs)

Ah Capacity Ratings @ 25°C (77°F)

Capacity Discharge (hours)	1	2	4	8	10
Capacity @ 25°/ Ah	77	85	94	101	101
End of Discharge	1.70	1.75	1.75	1.75	1.80

Drawings



All NorthStar batteries are compliant with: Telcordia SR4228, IEC 60896; Bellcore GR-63-Core, Issue 1; British, German, and Russian telecom standards; UL approved. NorthStar is registered to ISO 9001 and ISO 14001.

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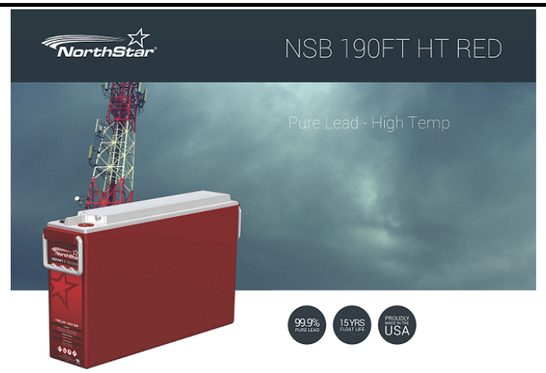
NorthStar

Form: SBS-542-04-04 Issued: 12-01-11 ECO: 1871-611

EXISTING BATTERIES (VRLA)

24"x36" SCALE: NTS
11"x17" SCALE: NTS

4



The NSB HT RED Battery® delivers long life in unreliable grid conditions even at high temperatures.

- Pure lead electrochemistry greatly increases temp and corrosion resistance while reducing component aging
- Thin plates deliver large surface area high power density and low resistance
- Design life 15+ years at 20°C (68°F)
- Extra long life at high temp operation 40°C (104°F)
- EUROBAT design life definition: Very Long Life (12+ years)
- Advanced 3 stage terminal design to ensure leak-free operation - brass terminals provide maximum performance
- Approved as non-hazardous cargo for ground, sea and air transport DOT 49CFR173.159(d), (i) and (ii)
- Fast recharging
- High cycle performance
- Flame retardant (UL 94 V0) and LOI of at least 28%
- Shelf life of up to 24 months
- Operating temperature range -40°C to +65°C (-40°F to 149°F)
- State-of-the-art automated manufacturing ensures consistency and reliability
- High modulus Polyphenylene Oxide (PPO) plastic materials designed to withstand extended elevated operating temperatures and maintain high battery compression essential for reliable operation
- Non-halogenated thermally sealed plastic casing

Release date: 2017-03-03

NorthStar northstarbattery.com

NSB 190FT HT RED

Nominal Technical Specifications

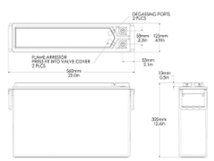
Dimensions

Height	12.6 in	Width	4.9 in
Length	22 in	Weight	132 lbs

Electrical

Terminal	Female M8 x 1.25
Terminal torque	8.0 Nm (71 in-lbs)
1 hr capacity to 1.70VPC @ 20/25°C (68/77°F)	140 / 146 Ah
3 hr capacity to 1.75VPC @ 20/25°C (68/77°F)	167 / 172 Ah
8 hr capacity to 1.75VPC @ 20/25°C (68/77°F)	185 / 188 Ah
10 hr capacity to 1.80VPC @ 20/25°C (68/77°F)	187 / 190 Ah
Float voltage @ 20/25°C (68/77°F)	2.28 / 2.27 VPC
Impedance (1Khz)	2.3 mΩ @ 25°C (77°F)
Conductance	2366 S
Short circuit current	6000 A
Operation temperature range	-40°C to +65°C
Nominal voltage	12 V

Technical Drawing



All NorthStar batteries are compliant with Telcordia SR4228, IEC 60896, Bellcore GR-63-Core, Issue 1; British, German, and Russian telecom standards; UL approved and UN3800 certified. NorthStar is registered to ISO 9001 and ISO 14001.

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Release date: 2017-03-03

NEW BATTERIES (FLOODED)

24"x36" SCALE: NTS
11"x17" SCALE: NTS

3

EXISTING BATTERIES:

BATTERY TYPE:	NORTHSTAR NSB100FT SILVER
NUMBER OF BTS UNITS W/ BATTERIES:	1
NUMBER OF BATTERIES PER BTS:	4 BATTERIES (VRLA)
WEIGHT PER BATTERY:	74 LBS
MATERIAL:	ELECTROLYTE
VOLUME:	1.20 GALLONS (13.4 LBS) / PER BATTERY
SITE TOTAL:	4.80 GALLONS
MATERIAL:	LEAD
VOLUME:	37 LBS / BATTERY
SITE TOTAL:	148 LBS
MATERIAL:	LEAD OXIDE
VOLUME:	14.8 LBS / PER BATTERY
SITE TOTAL:	59.2 LBS

NOTE:
A SEPARATE PERMIT SHALL BE REQUIRED IF COMBINED (FLOODED AND VRLA) LEAD-ACID BATTERY SYSTEM EXCEEDS 70KWH CAPACITY (CFC SECTION 1207).

CALIFORNIA FIRE CODE SECTION 1207 COMPLIANCE (TABLE 1207.1.1)

SYSTEM VOLT-AMP-HOURS (QTY. x VOLTS x Ah) /1,000 = TOTAL SYSTEM CAPACITY (KWh)

BATTERY QUANTITY	BATTERY VOLTAGE	BATTERY AMP-HOURS	SYSTEM CAPACITY
4	12	100	4.8 KWh

4 Batteries x 12 Volts x 100 Ah ÷ 1,000 = 4.8 KWh

4.8 KWH TOTAL BATTERY SYSTEM CAPACITY < 70 KWH BATTERY SYSTEM CAPACITY OR <50 GAL. OF ELECTROLYTES REGULATION/COMPLIANCE THRESHOLD.

NEW BATTERIES:

BATTERY TYPE:	NORTHSTAR NSB190FT HT RED
NUMBER OF BATTERY CABINETS:	1
NUMBER OF BATTERIES PER CAB:	12 BATTERIES (FLOODED)
WEIGHT PER BATTERY:	132 LBS
MATERIAL:	ELECTROLYTE
VOLUME:	2.04 GALLONS (22.44 LBS) / PER BATTERY
SITE TOTAL:	24.48 GALLONS
MATERIAL:	LEAD
VOLUME:	66 LBS / BATTERY
SITE TOTAL:	792 LBS
MATERIAL:	LEAD OXIDE
VOLUME:	26.4 LBS / PER BATTERY
SITE TOTAL:	316.8 LBS

NOTE:
A SEPARATE PERMIT SHALL BE REQUIRED IF COMBINED (FLOODED AND VRLA) LEAD-ACID BATTERY SYSTEM EXCEEDS 70KWH CAPACITY (CFC SECTION 1207).

CALIFORNIA FIRE CODE SECTION 1207 COMPLIANCE (TABLE 1207.1.1)

SYSTEM VOLT-AMP-HOURS (QTY. x VOLTS x Ah) /1,000 = TOTAL SYSTEM CAPACITY (KWh)

BATTERY QUANTITY	BATTERY VOLTAGE	BATTERY AMP-HOURS	SYSTEM CAPACITY
12	12	190	27.36 KWh

12 Batteries x 12 Volts x 190 Ah ÷ 1,000 = 27.36 KWh

27.36 KWH TOTAL BATTERY SYSTEM CAPACITY < 70 KWH BATTERY SYSTEM CAPACITY OR <50 GAL. OF ELECTROLYTES REGULATION/COMPLIANCE THRESHOLD.

COMBINED BATTERY SYSTEMS:

SYSTEM BATTERY TYPES:	(4) VRLA + (12) FLOODED
NUMBER OF CABINETS W/ CELLS:	2
TOTAL NUMBER OF BATTERIES:	16 BATTERIES
TOTAL BATTERY WEIGHT ON SITE:	1,880 LBS
MATERIAL:	ELECTROLYTE
VOLUME:	29.28 GALLONS
WEIGHT:	322.88 LBS
MATERIAL:	LEAD
SITE TOTAL:	940 LBS
MATERIAL:	LEAD OXIDE
SITE TOTAL:	376 LBS

NOTE:
A SEPARATE PERMIT SHALL BE REQUIRED IF COMBINED (FLOODED AND VRLA) LEAD-ACID BATTERY SYSTEM EXCEEDS 70KWH CAPACITY (CFC SECTION 1207.1.1).

CALIFORNIA FIRE CODE SECTION 1207 COMPLIANCE (TABLE 1207.1.1)

SYSTEM VOLT-AMP-HOURS (QTY. x VOLTS x Ah) /1,000 = TOTAL SYSTEM CAPACITY (KWh)

BATTERY QUANTITY	BATTERY VOLTAGE	BATTERY AMP-HOURS	SYSTEM CAPACITY
16	12	100/190	32.16 KWh

32.16 KWH TOTAL BATTERY SYSTEM CAPACITY < 70 KWH BATTERY SYSTEM CAPACITY OR <50 GAL. OF ELECTROLYTES REGULATION/COMPLIANCE THRESHOLD.

CFC 2022 SECTION 1207.1.1 DOES NOT APPLY

COMBINED BATTERY DATA

24"x36" SCALE: NTS
11"x17" SCALE: NTS

2

1207.1 General.
The provisions in this section are applicable to stationary and mobile electrical energy storage systems (ESS).

Exception: ESS in Group R-3 and R-4 occupancies shall comply with Section 1207.11.

1207.1.1 Scope.
ESS having capacities exceeding the values shown in Table 1207.1.1 shall comply with this section.

TABLE 1207.1.1 ENERGY STORAGE SYSTEM (ESS) THRESHOLD QUANTITIES

TECHNOLOGY	ENERGY CAPACITY[a]
Capacitor ESS	3 kWh
Flow batteries[b]	20 kWh
Lead-acid batteries, all types	70 kWh[c]
Lithium-ion batteries	20 kWh
Nickel metal hydride (Ni-MH)	70 kWh
Nickel-cadmium batteries (Ni-Cd)	70 kWh
Other battery technologies	10 kWh
Other electrochemical ESS technologies	3 kWh

FOR SI: 1 KILOWATT HOUR = 3.6 MEGAJOULES.

A. ENERGY CAPACITY IS THE TOTAL ENERGY CAPABLE OF BEING STORED (NAMEPLATE RATING), NOT THE USABLE ENERGY RATING. FOR UNITS RATED IN AMP-HOURS, KWH SHALL EQUAL RATED VOLTAGE TIMES AMP-HOUR RATING DIVIDED BY 1,000.

B. SHALL INCLUDE VANADIUM, ZINC-BROMINE, POLYSULFIDE-BROMIDE AND OTHER FLOWING ELECTROLYTE-TYPE TECHNOLOGIES.

C. FIFTY GALLONS OF LEAD-ACID BATTERY ELECTROLYTE SHALL BE CONSIDERED EQUIVALENT TO 70 KWH.

NORTHSTAR NSB 190FT HT RED
NEW RBS-B160 BATTERIES

12 VOLTS x 190 AMP-HOURS = 2,280 VOLT-AMP-HOURS (WATT-HOURS)

2,280 WATT-HOURS / 1000 = 2.280 KILOWATT-HOURS (KWH) PER BATTERY

2.28 KWH x 12 BATTERIES = **27.36 KWH** TOTAL NEW BATTERY CABINET CAPACITY

NORTHSTAR NSB 100FT
EXISTING ACTIVE RBS-6131 BATTERIES

12 VOLTS x 100 AMP-HOURS = 1,200 VOLT-AMP-HOURS (WATT-HOURS)

1,200 WATT-HOURS / 1000 = 1.2 KWH (KILOWATT-HOURS) PER BATTERY

1.2 KWH x 4 BATTERIES = **4.8 KWH** TOTAL EXISTING BATTERY SYSTEM CAPACITY

EXISTING & NEW NORTHSTAR BATTERY SYSTEMS COMBINED CAPACITIES

27.36 KWH TOTAL NEW BATTERY SYSTEM CAPACITY

4.8 KWH TOTAL EXISTING BATTERY SYSTEM CAPACITY

27.36 KWH (NEW SYSTEM) + 4.8 KWH (EXISTING SYSTEM) = **32.16 KWH** TOTAL COMBINED SYSTEM CAPACITY.

32.16 KWH < 70 KWH BATTERY SYSTEM CAPACITY REGULATORY THRESHOLD. COMBINED BATTERY SYSTEMS ARE COMPLIANT WITH CFC 608.1 (608.1.2 THROUGH 608.6.6) WHEN TABULATED TOGETHER AS ONE SYSTEM.

BATTERY COMPLIANCE (CFC SECTION 1206)

1

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416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

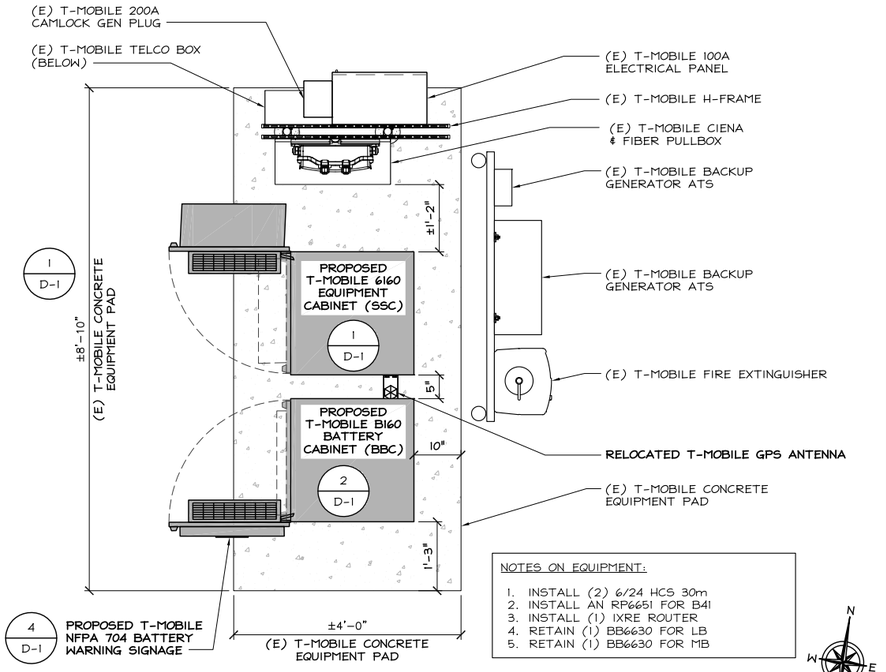
REGISTERED PROFESSIONAL ENGINEER
WISSAM ZALZALI
71655
CIVIL
STATE OF CALIFORNIA

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
BATTERY DATA SHEET

SHEET NUMBER
GN-3



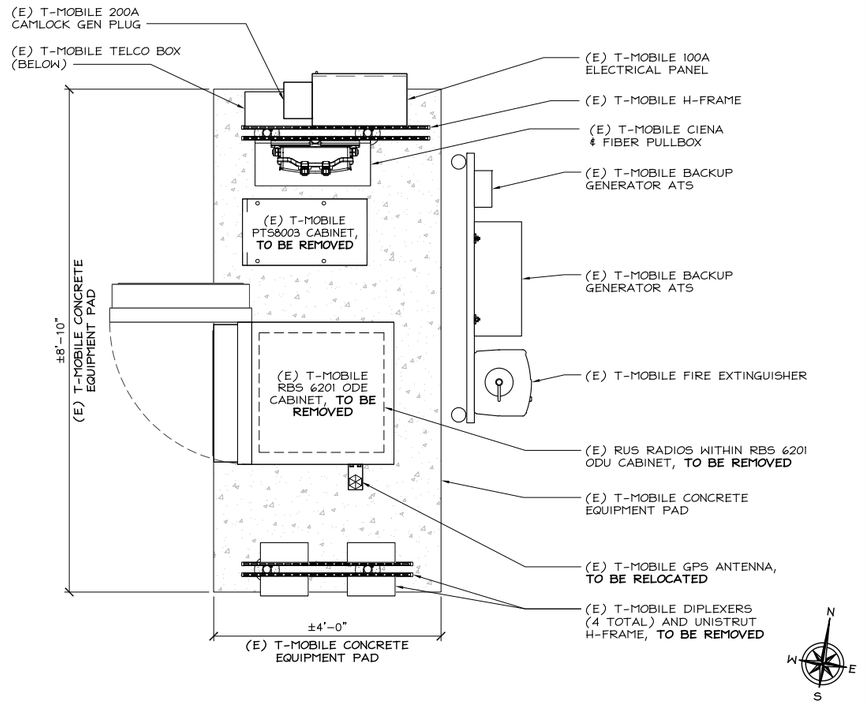
NOTES ON EQUIPMENT:

1. INSTALL (2) 6/24 HCS 30m
2. INSTALL AN RP6651 FOR B41
3. INSTALL (1) IXRE ROUTER
4. RETAIN (1) BB6630 FOR LB
5. RETAIN (1) BB6630 FOR MB

PROPOSED EQUIPMENT PLAN

24"x36" SCALE: 3/4" = 1'-0"
11"x17" SCALE: 3/8" = 1'-0"
1' 6" 0" 1'

2

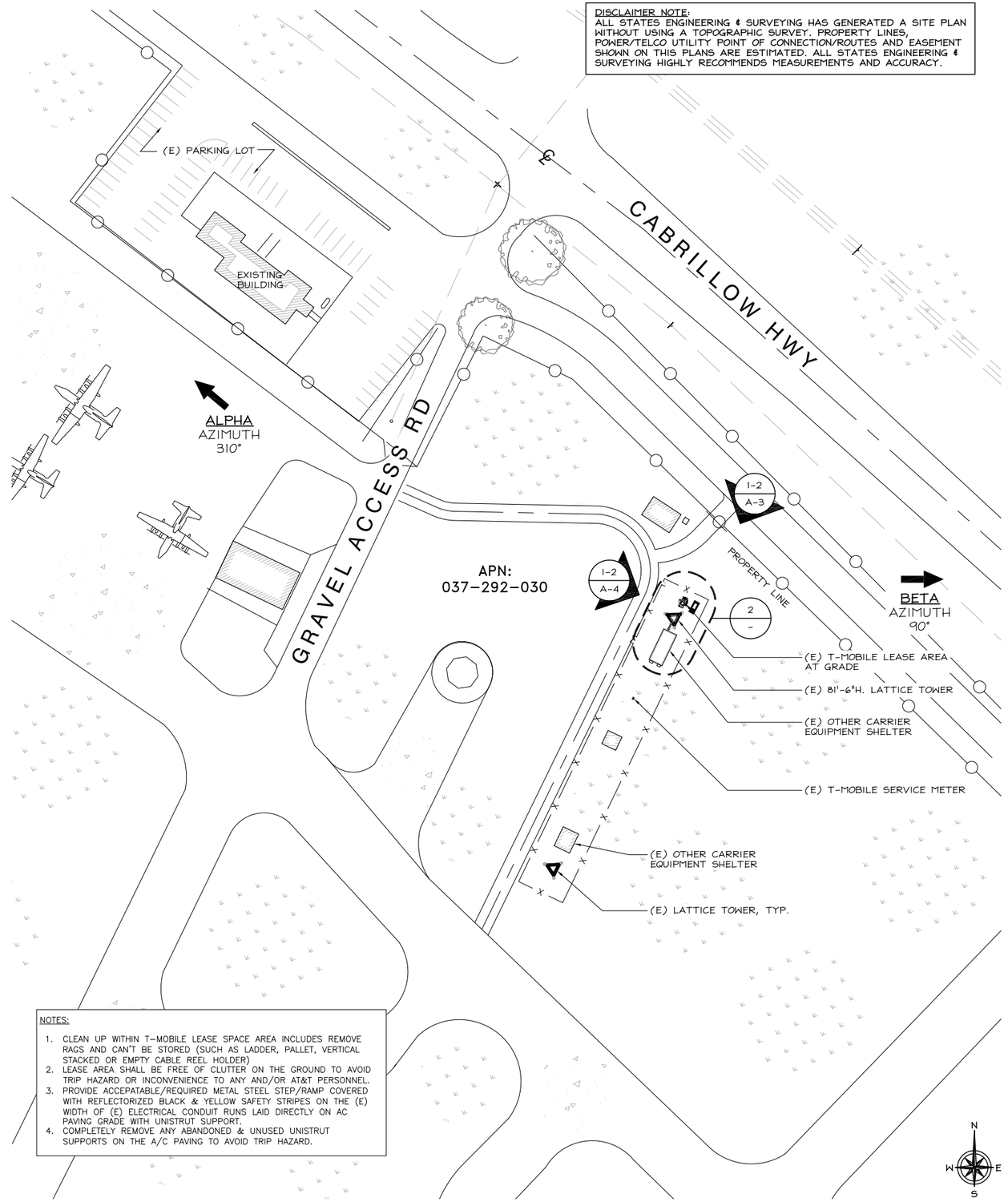


EXISTING EQUIPMENT PLAN

24"x36" SCALE: 3/4" = 1'-0"
11"x17" SCALE: 3/8" = 1'-0"
1' 6" 0" 1'

2

DISCLAIMER NOTE:
ALL STATES ENGINEERING & SURVEYING HAS GENERATED A SITE PLAN WITHOUT USING A TOPOGRAPHIC SURVEY. PROPERTY LINES, POWER/TELCO UTILITY POINT OF CONNECTION/ROUTES AND EASEMENT SHOWN ON THIS PLANS ARE ESTIMATED. ALL STATES ENGINEERING & SURVEYING HIGHLY RECOMMENDS MEASUREMENTS AND ACCURACY.



NOTES:

1. CLEAN UP WITHIN T-MOBILE LEASE SPACE AREA INCLUDES REMOVE RAGS AND CAN'T BE STORED (SUCH AS LADDER, PALLET, VERTICAL STACKED OR EMPTY CABLE REEL HOLDER)
2. LEASE AREA SHALL BE FREE OF CLUTTER ON THE GROUND TO AVOID TRIP HAZARD OR INCONVENIENCE TO ANY AND/OR AT&T PERSONNEL.
3. PROVIDE ACCEPATABLE/REQUIRED METAL STEEL STEP/RAMP COVERED WITH REFLECTORIZED BLACK & YELLOW SAFETY STRIPES ON THE (E) WIDTH OF (E) ELECTRICAL CONDUIT RUNS LAID DIRECTLY ON AC PAVING GRADE WITH UNISTRUT SUPPORT.
4. COMPLETELY REMOVE ANY ABANDONED & UNUSED UNISTRUT SUPPORTS ON THE A/C PAVING TO AVOID TRIP HAZARD.

OVERALL SITE PLAN

24"x36" SCALE: 1" = 50'-0"
11"x17" SCALE: 1" = 100'-0"
50' 25' 0" 50'

1

T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

REGISTERED PROFESSIONAL ENGINEER
WISSAM ZALZALI
71655
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
OVERALL SITE PLAN & EQUIPMENT EQUIPMENT LAYOUT PLANS

SHEET NUMBER
A-1

NOTE TO CONTRACTOR:

CONTRACTOR IS TO REFER TO T-MOBILE's MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION

PROPOSED ANTENNA KEY

SECTOR	STATUS	ANTENNA NUMBER	BEAM WIDTH	ANTENNA VENDOR	ANTENNA MODEL	AZIMUTH	ELECTRICAL DOWNTILT	MECHANICAL DOWNTILT	RAD CENTER	TYPE	COAXIAL FEEDER		FIBER/HYBRID CABLE FEEDER	
											SIZE	LENGTH	SIZE	LENGTH
ALPHA	EXISTING	A-1	65°	COMMSCOPE	FFHH-65A-R3 (OCTO)	310°	2/2	0	69'-0"	L700/N600/ N1900/ L2100/L1900	(4) COAX JUMPERS	16'	(4) FIBER JUMPER	32'
	PROPOSED	A-2	65°	ERICSSON	AIR5419 B41 – MASSIVE MIMO	310°	2/2	0	69'-0"	N2500	–	–	FIBER JUMPER	32'
	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BETA	EXISTING	B-1	65°	COMMSCOPE	FFHH-65A-R3 (OCTO)	90°	2/2	0	69'-0"	L700/N600/ N1900/ L2100/L1900	(8) COAX JUMPERS	16'	(4) FIBER JUMPER	32'
	PROPOSED	B-2	65°	ERICSSON	AIR5419 B41 – MASSIVE MIMO	90°	2/2	0	69'-0"	N2500	–	–	FIBER JUMPER	32'
	–	–	–	–	–	–	–	–	–	–	–	–	–	–

EXISTING ANTENNA KEY

SECTOR	STATUS	ANTENNA NUMBER	BEAM WIDTH	ANTENNA VENDOR	ANTENNA MODEL	AZIMUTH	ELECTRICAL DOWNTILT	MECHANICAL DOWNTILT	RAD CENTER	TYPE	COAXIAL FEEDER		HYBRID CABLE FEEDER	
											SIZE	LENGTH	SIZE	LENGTH
ALPHA	EXISTING	A-1	65°	COMMSCOPE	FFHH-65A-R3 (OCTO)	310°	2/2/2	0	69'-0"	L700/N600/ L600	(4) 7/8" COAX	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BETA	EXISTING	B-1	65°	COMMSCOPE	FFHH-65A-R3 (OCTO)	90°	2/2/2	0	69'-0"	L700/N600/ L600	(4) 7/8" COAX	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–	–	–

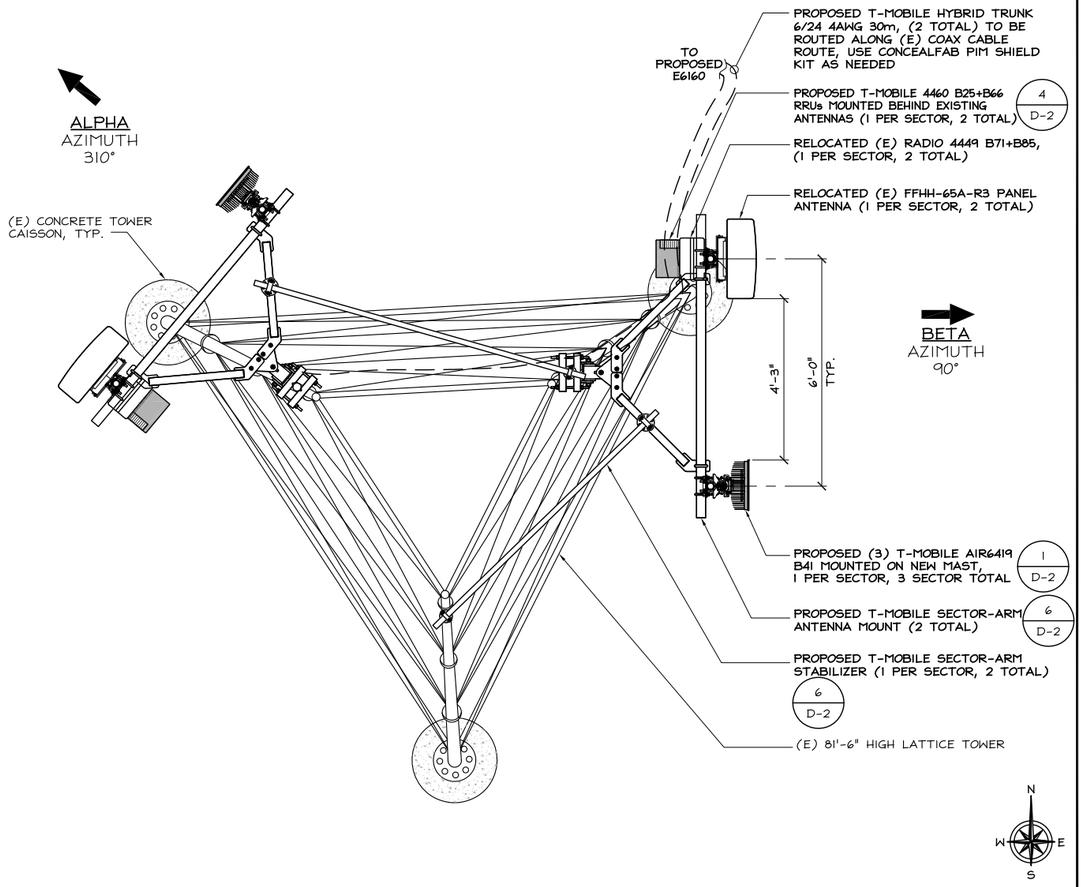
PROPOSED RRU KEY

RRU SECTOR	RRU VENDOR	EQUIP.	MODEL NO.	EQUIP. CENTER	QTY.	STATUS
1-2	ERICSSON	RRU	4449 B71+B85	ANTENNA	2	EXISTING
1-2	ERICSSON	RRU	4460 B25+B66	ANTENNA	2	PROPOSED

EXISTING RRU KEY

RRU SECTOR	RRU VENDOR	EQUIP.	MODEL NO.	EQUIP. CENTER	QTY.	STATUS
1-2	ERICSSON	RRU	4449 B71+B85	ANTENNA	2	EXISTING

NOTE:
EXISTING OTHER CARRIER ANTENNAS AND ASSOCIATED EQUIPMENT NOT SHOWN FOR CLARITY.

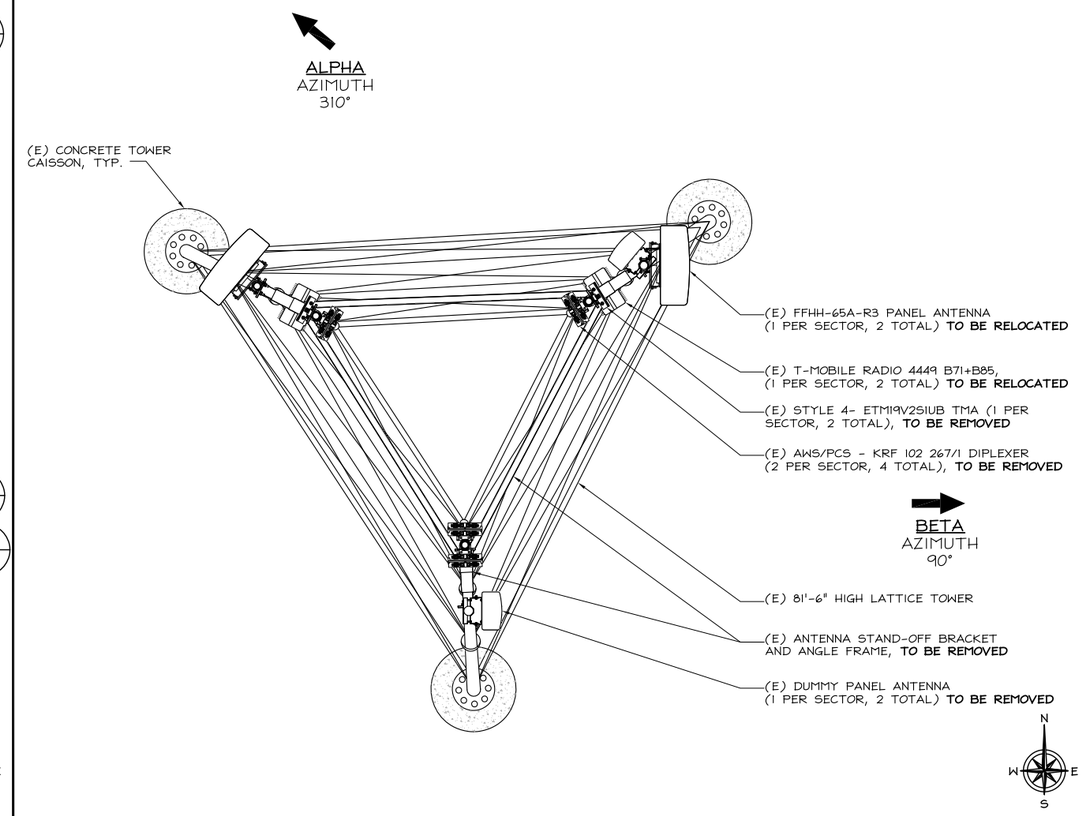


PROPOSED ANTENNA LAYOUT

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"
2' 1' 0" 2'

2

NOTE:
EXISTING OTHER CARRIER ANTENNAS AND ASSOCIATED EQUIPMENT NOT SHOWN FOR CLARITY.



EXISTING ANTENNA LAYOUT

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"
2' 1' 0" 2'

1

T-Mobile
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NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
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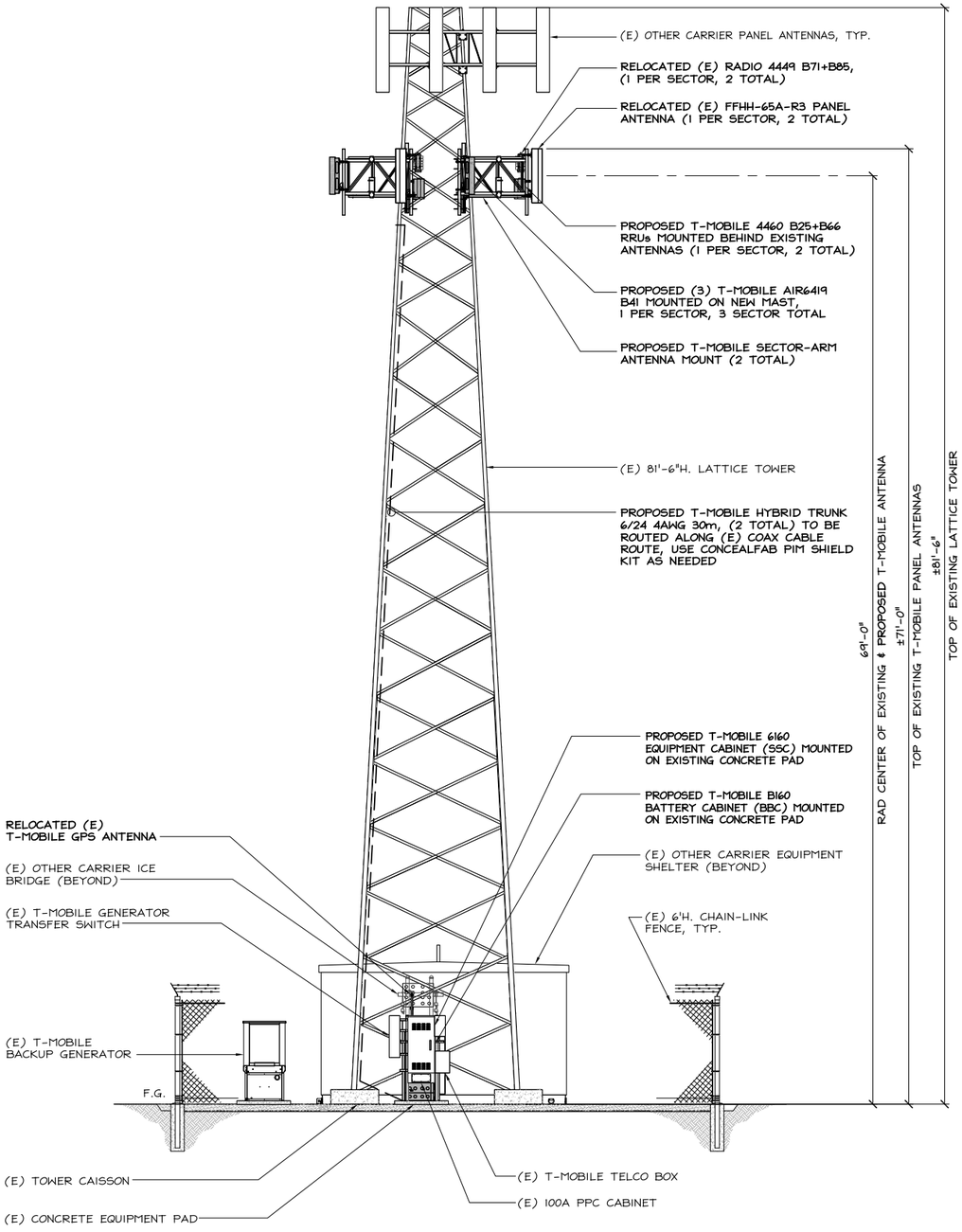
REGISTERED PROFESSIONAL ENGINEER
WISSAM ZALZALI
71655
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
ANTENNA LAYOUT PLANS & SCHEDULE

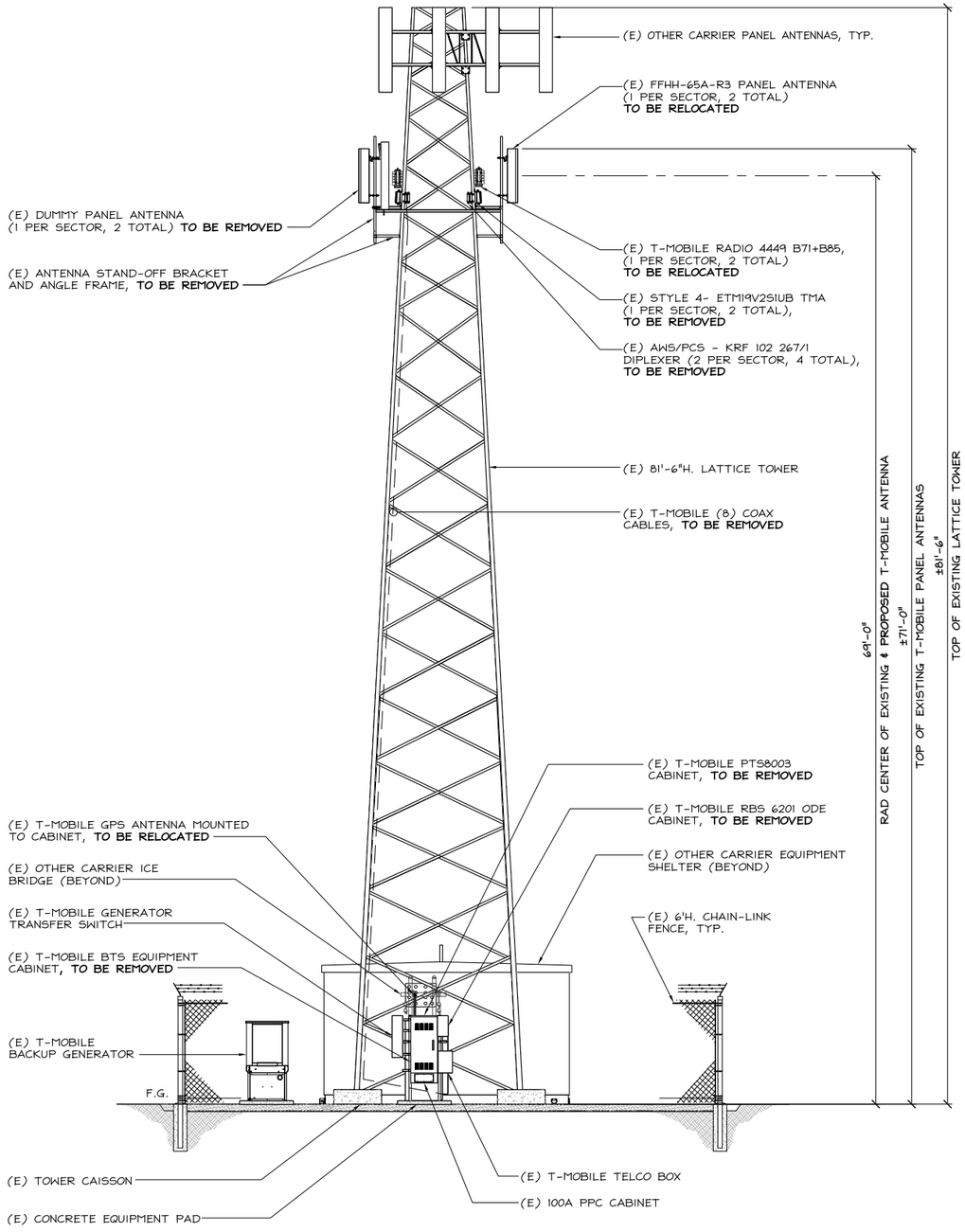
SHEET NUMBER
A-2



PROPOSED NORTHEAST ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'

2



EXISTING NORTHEAST ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'

1

T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

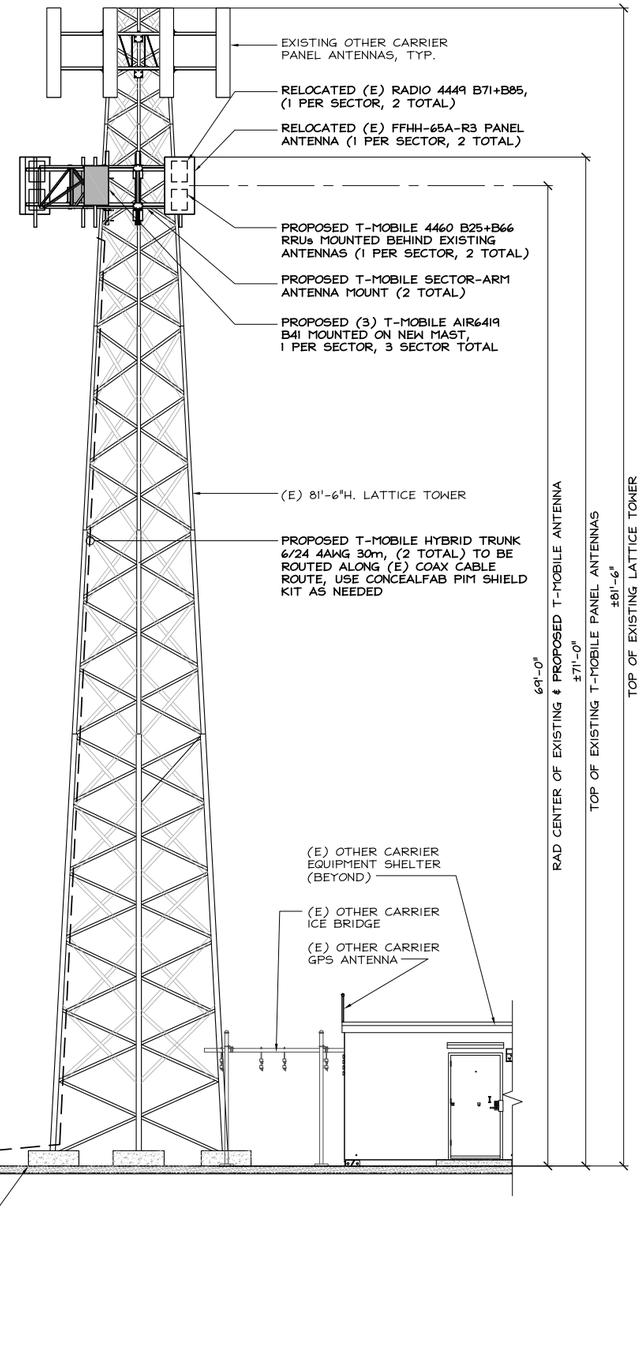
REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

REGISTERED PROFESSIONAL ENGINEER
WISAM ZALZALI
71655
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
ELEVATIONS

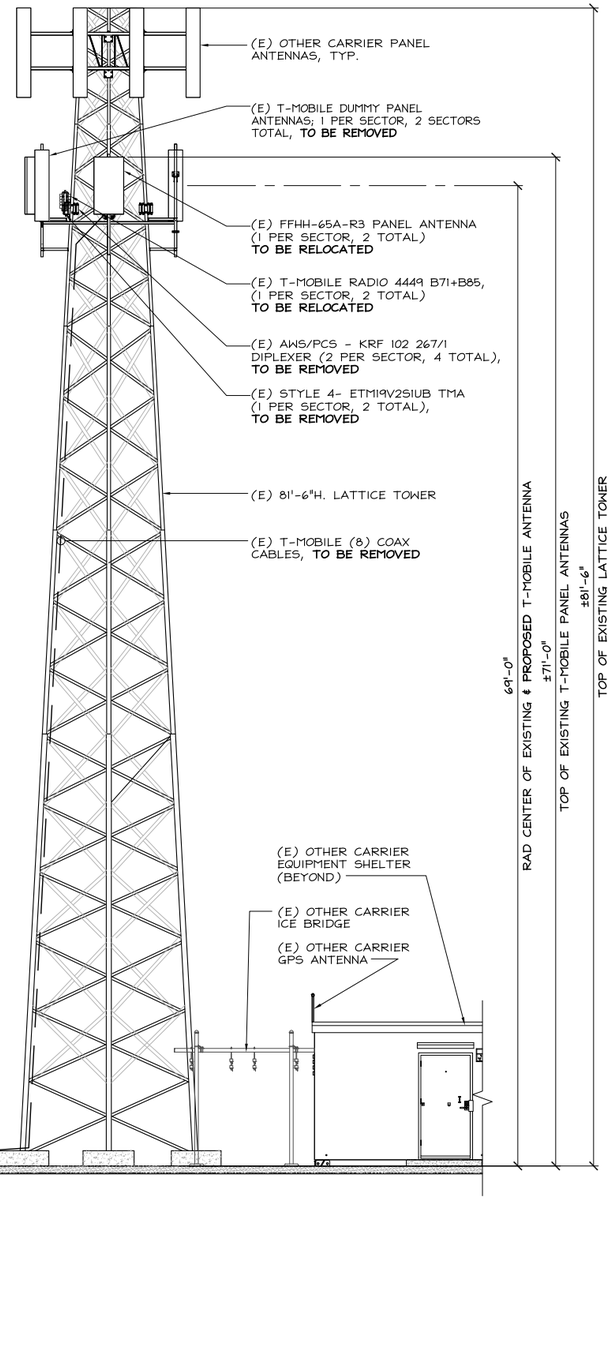
SHEET NUMBER
A-3



PROPOSED NORTHWEST ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'

2



EXISTING NORTHWEST ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'

1

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1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
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B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

REGISTERED PROFESSIONAL ENGINEER
WESAM ZAZZALI
71655
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
ELEVATIONS

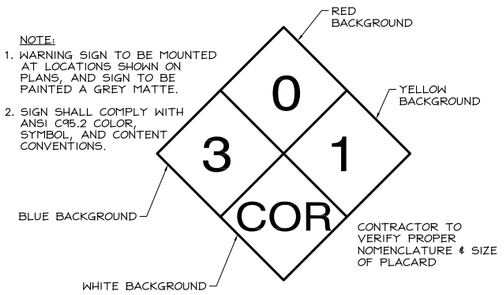
SHEET NUMBER
A-4

NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

5

NOTE:
1. WARNING SIGN TO BE MOUNTED AT LOCATIONS SHOWN ON PLANS, AND SIGN TO BE PAINTED A GREY MATTE.
2. SIGN SHALL COMPLY WITH ANSI C95.2 COLOR, SYMBOL, AND CONTENT CONVENTIONS.



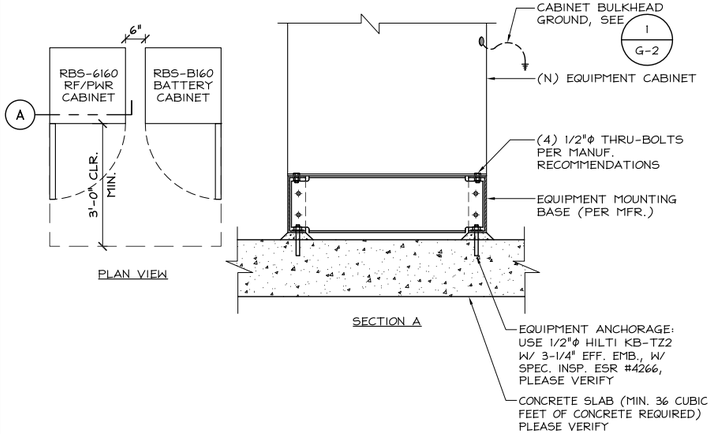
NFPA 704 PLACARD

NOTE:
SIGNAGE REQUIREMENTS MAY INCLUDE, BUT MAY NOT BE LIMITED TO ABOVE EXAMPLE. SEE SHEET GN-3 FOR BATTERY SPECIFICATIONS/INFORMATION.

SIGNAGE REQUIREMENTS

24"x36" SCALE: NTS
11"x17" SCALE: NTS

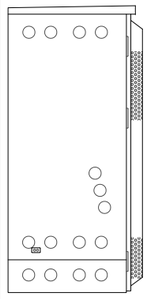
4



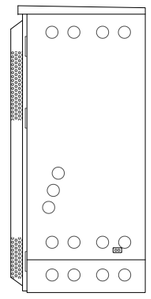
EQUPMENT CABINET MOUNTING

24"x36" SCALE: NTS
11"x17" SCALE: NTS

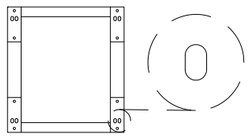
3



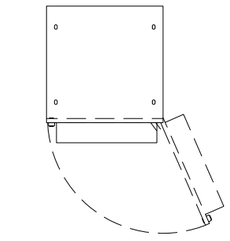
LEFT VIEW



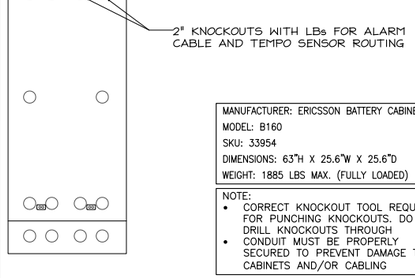
RIGHT VIEW



INSTALLATION HOLE PATTERN



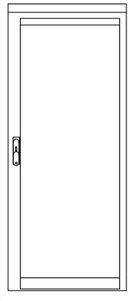
PLAN VIEW



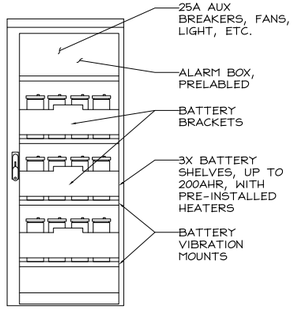
REAR VIEW

MANUFACTURER: ERICSSON BATTERY CABINET
MODEL: B160
SKU: 33954
DIMENSIONS: 63"H X 25.6"W X 25.6"D
WEIGHT: 1885 LBS MAX. (FULLY LOADED)

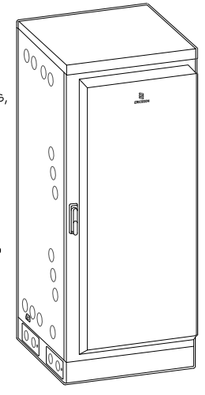
NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL KNOCKOUTS THROUGH
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND/OR CABLING



FRONT VIEW



FRONT VIEW (OPEN)

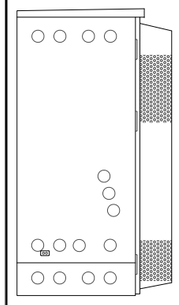


ISOMETRIC VIEW

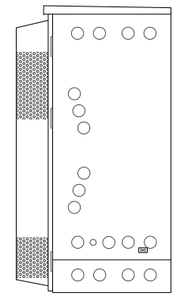
RBS-B160 BATTERY CABINET

24"x36" SCALE: NTS
11"x17" SCALE: NTS

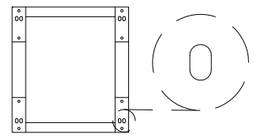
2



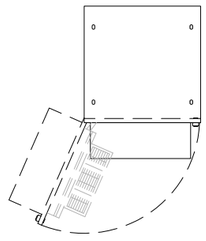
LEFT VIEW



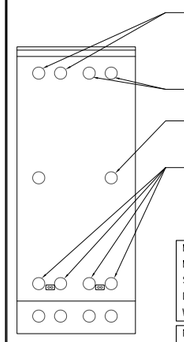
RIGHT VIEW



INSTALLATION HOLE PATTERN



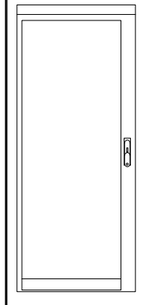
PLAN VIEW



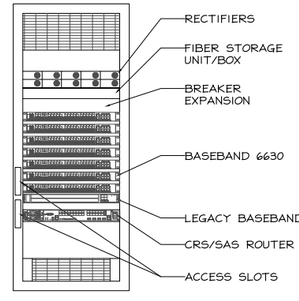
REAR VIEW

MANUFACTURER: ERICSSON SITE SUPPORT CABINET
MODEL: 6160
SKU: 33953
DIMENSIONS: 63"H x 25.6"W x 25.6"D
WEIGHT: 1000 LBS MAX. (FULLY LOADED)

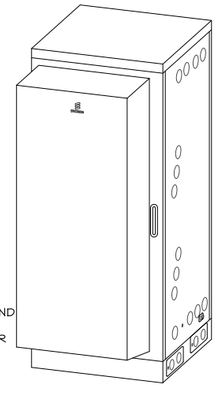
NOTE:
- CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL KNOCKOUTS THROUGH
- CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND/OR CABLING



FRONT VIEW



FRONT VIEW (OPEN)



ISOMETRIC VIEW

RBS-6160 RF/POWER CABINET

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

REGISTERED PROFESSIONAL ENGINEER
WISSAM ZALZALI
71655
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
DETAILS

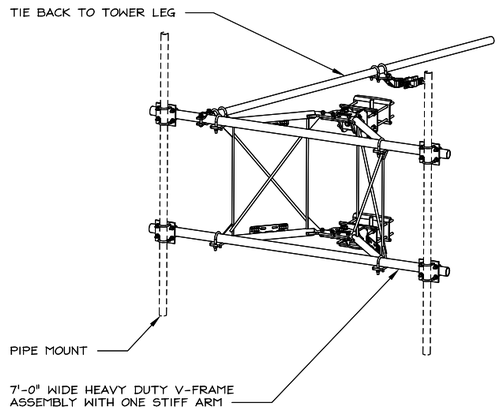
SHEET NUMBER
D-1

NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

9

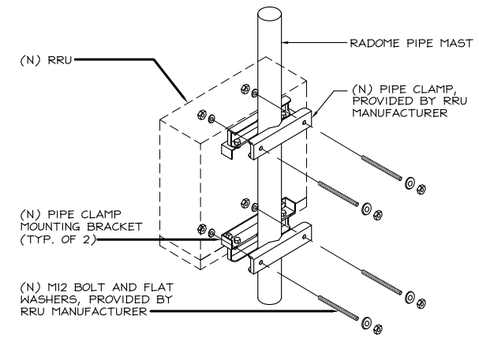
SITE POR | VFA6-HD-S



CROSS-ARM DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

6

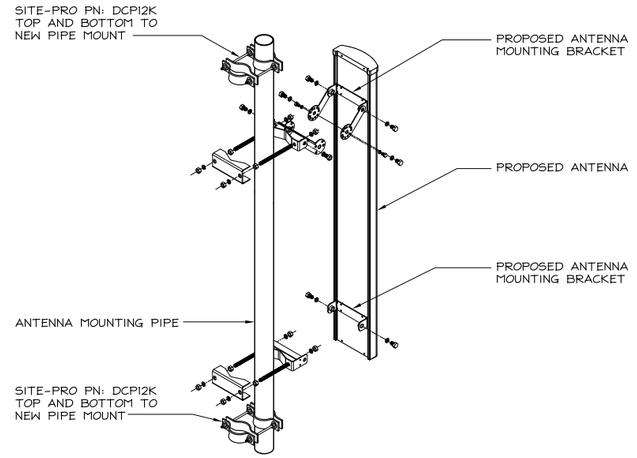


NOTES:
1. ALL PIPES BRACKETS AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.
2. INSERT M12 BOLTS/RODS AND M12 FLAT WASHERS INTO PIPE CLAMP PRIOR TO ATTACHING TO RRU MOUNT BRACKET

ANTENNA MOUNTING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

3



NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

8

RADIO MOUNTING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

5

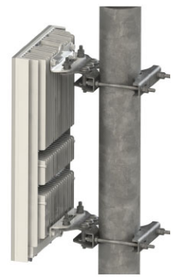
AIR LIGHT BRACKETS

24"x36" SCALE: NTS
11"x17" SCALE: NTS

2

ERICSSON SXK 109 2015/1

PACKAGE DIMENSIONS, HxWxD:	7.9INx7.9"x3.9"
WEIGHT:	9.9 LBS.
MAXIMUM EQUIPMENT WEIGHT:	44.1 LBS.
PIPE MOUNTING:	3 IN. - 5.5 IN.



RADIO TO PIPE MONT

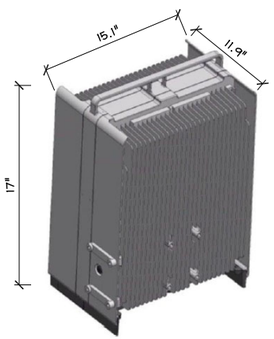
NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

7

RRU 4460 REMOTE RADIO UNIT

MODEL:	RRU 4460 (B25/B66)
HEIGHT:	17.0 IN
WIDTH:	15.1 IN
DEPTH:	11.9 IN
WEIGHT:	104 LBS



ERICSSON RRU 4460

24"x36" SCALE: NTS
11"x17" SCALE: NTS

4

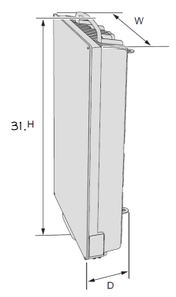
ANTENNA SPECIFICATION

24"x36" SCALE: NTS
11"x17" SCALE: NTS

2

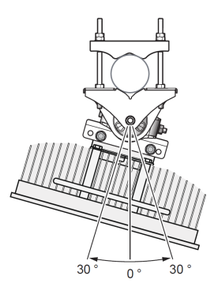
ERICSSON ANTENNA – AIR 6419 B41(BAND)

RADIO:	64T64R
ANTENNA COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	31.1"x16"x7.3"
WEIGHT, W/OUT PRE-MOUNTED BRACKETS:	41.9 lbs
WEIGHT, W/ PRE-MOUNTED BRACKETS:	53.4 lbs
SPLIT MODE:	HORIZONTAL / VERTICAL



ISO VIEW

2
-
MOUNTING



T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

REGISTERED PROFESSIONAL ENGINEER
WISSAM ZALZALI
71655
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
DETAILS

SHEET NUMBER
D-2

NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

8

NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

5

REFERENCE ONLY

MECHANICAL PROPERTIES:

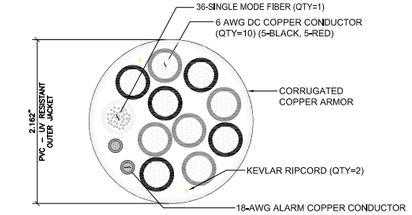
NUMBER, SIZE (AWG)	10/C #6+2/C #18
VOLTAGE	600
OUTER JACKET	PVC
SHIELDING	CORRUGATED COPPER
DRAIN	N/A
RIPCORD	KEVLAR
DC CONDUCTOR MATERIAL	COPPER
DC CONDUCTOR SIZE (AWG)	6
COLOR CODE	BLACK/RED
ALARM CONDUCTOR MATERIAL	COPPER
ALARM CONDUCTOR SIZE (AWG)	18
WEIGHT (LB/FT)	1,614
MINIMUM BENDING RADIUS (IN.)	19
BEND MOMENT (LB/FT)	N/A
TENSILE STRENGTH (LB)	340
CRUSH RESISTANCE, FOTP-41 (N/mm)	22
STRENGTH MEMBER	NO
OPERATION TEMPERATURE RANGE (LOW)	-40° C
OPERATION TEMPERATURE RANGE (HIGH)	+80° C

ELECTRICAL PROPERTIES:

VOLTAGE	600
MAX SHIELD RESISTANCE (Ω/FT @ 20° C)	0.0035
MAX DC-RESISTANCE OUTER CONDUCTOR DC (Ω/1000 FT @ 20° C)	0.411
MAX DC-RESISTANCE OUTER CONDUCTOR ARMOR (Ω/1000 FT)	6.7

FIBER OPTIC PROPERTIES:

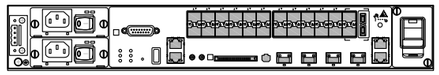
TYPE	LOW WATER PEAK, SINGLE MODE, LOOSE TUBE
FIBER STANDARD COMPLIANCE	ITU-T REC. G.652.E, G657.A2
	IEC 60793-2-50 TYPE B.1.3 & TYPE B.6 A&B
FIBER COATING DIAMETER (UM)	.242 ± 0.007mm 0.9 ± 0.005mm
FIBER COUNT	36
NUMBER OF FIBER SUBUNITS	1
FIBER COUNT EACH UNITS	36
FIBER OUTER JACKETS	FR JACKET
MAX ATTENUATION 1310 mm (dB/Km)	≤ 0.5
MAX ATTENUATION 1550 mm (dB/Km)	≤ 0.5



CABLE TYPE: 10/#6, 2/#18, 36 FIBER
HIGH CAPACITY

IXER ROUTER

MANUFACTURER: NOKIA
MODEL: 7210 SAS-MXP
DIMENSIONS: 2.64"x17.17"x9.96" (UNIT ONLY)
WEIGHT: TBD (UNIT ONLY)



NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

7

ROUTER UNIT

24"x36" SCALE: NTS
11"x17" SCALE: NTS

4

HIGH CAPACITY HYBRID CABLE

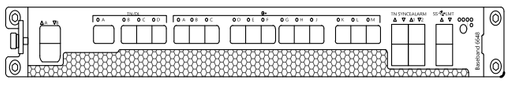
24"x36" SCALE: NTS
11"x17" SCALE: NTS

2

ERICSSON BASEBAND UNIT 6651

DC POWER SUPPLY

NOMINAL VOLTAGE:	-48VDC
TEMPERATURE:	0 TO + 55 DEG C
DIMENSION:	19" W X 13.86"D
WEIGHT:	16.53 lbs



NOT USED

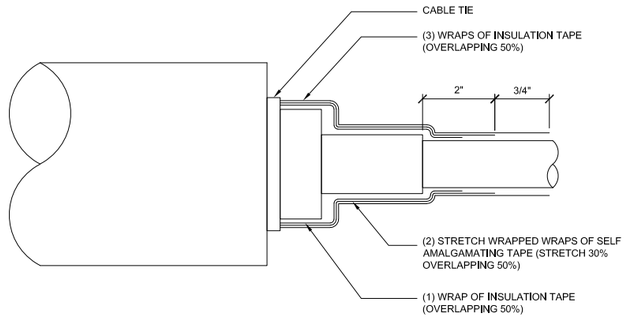
24"x36" SCALE: NTS
11"x17" SCALE: NTS

6

BASEBAND 6651 SPECIFICATION

24"x36" SCALE: NTS
11"x17" SCALE: NTS

3



RF JUMPER CONNECTION DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
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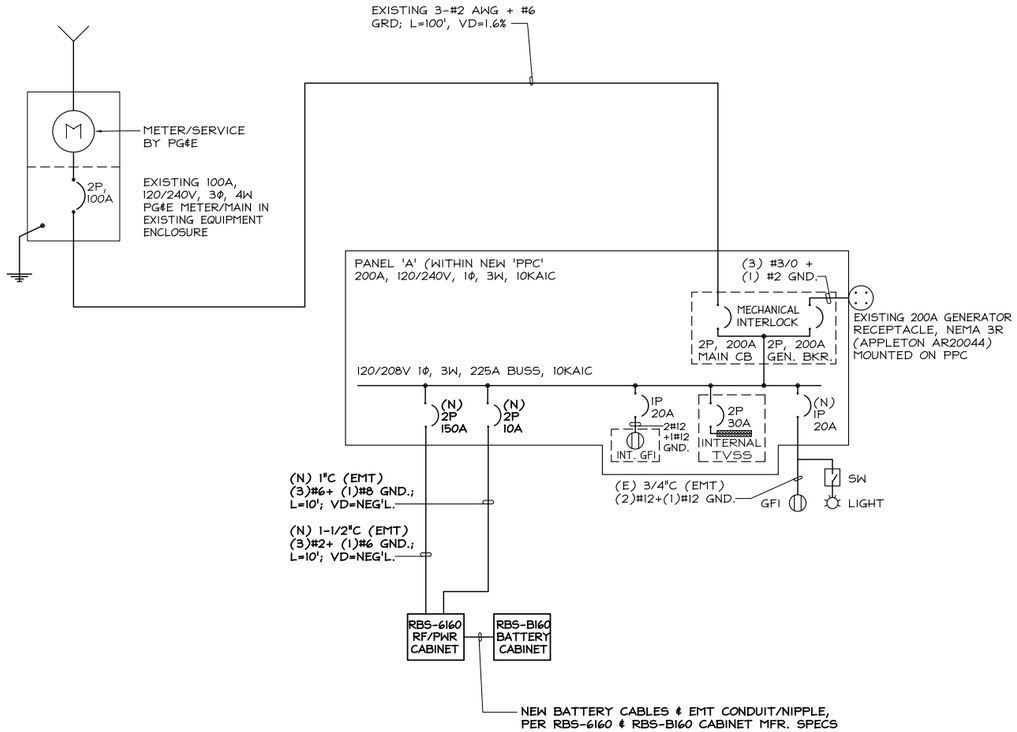
REGISTERED PROFESSIONAL ENGINEER
WESAM ZAZZALI
71655
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
DETAILS

SHEET NUMBER
D-3



ONE LINE DIAGRAM

3

PROPOSED PANEL SCHEDULE

PANEL 'A'

SITE NAME: SF03106A - SF106 HALF M.B. AIRPORT

PANEL DESIGNATION: AC PANEL 'A'

VOLTAGE: 120/240 V
PHASE: 1
WIRE: 3
MAIN BREAKER: 200 AMP
BUSS RATING: 225 AMP
LOCATION: SURFACE - EXTERIOR

CKT	LOAD DESCRIPTION	BREAKER AMPS	BREAKER POLES	BREAKER STATUS	SERVICE LOAD VA	USAGE FACTOR	PHASE A VA	PHASE B VA	PHASE A VA	PHASE B VA	USAGE FACTOR	SERVICE LOAD VA	BREAKER STATUS	BREAKER POLES	BREAKER AMPS	LOAD DESCRIPTION	CKT
1	TVSS	60	2	ON	400	1.25	500		0							SPACE	2
3					400	1.25		500		0							4
5	RBS-6160 RF/POWER CABINET	150	2	OFF	6500	1.25	8125		0							SPACE	6
7					6500	1.25		8125		0							8
9	ADDITIONAL BREAKER	10	1	ON	400	1.25	500		450		1.25	360	ON	1	20	GFCI REC	10
11								0		375	1.25	300	ON	1	20	LIGHT	12

NORTHERN TECH. (#NTI-MINI-PPC) 200A PANEL W/ 225A BUSS CONTRACTOR TO LABEL WITH CARRIER I.D.: **'T-MOBILE'** AND SVC. RATING/SOURCE: **'200A, 120/240V, 1PH, 3W - PGE MTR #'.**

PHASE A TOTAL VA	9575
PHASE B TOTAL VA	9000
TOTAL KVA	18.58
TOTAL AMPS	77.40

NOTES:
1. ALL LOADS CALCED AS LCL/MCL LOADS (OK TO DESIGN TO 100% CAPACITY)
2. UNUSED BREAKERS SHALL BE IN 'OFF' POSITION AND LABELED 'SPARE'
3. PG&E SERVICE: 200A, 120/240V, 1PH, 3W FROM (E) METER/MAIN

EXISTING PANEL SCHEDULE

PANEL 'A'

SITE NAME: SF03106A - SF106 HALF M.B. AIRPORT

PANEL DESIGNATION: AC PANEL 'A'

VOLTAGE: 120/240 V
PHASE: 1
WIRE: 3
MAIN BREAKER: 200 AMP
BUSS RATING: 225 AMP
LOCATION: SURFACE - EXTERIOR

CKT	LOAD DESCRIPTION	BREAKER AMPS	BREAKER POLES	BREAKER STATUS	SERVICE LOAD VA	USAGE FACTOR	PHASE A VA	PHASE B VA	PHASE A VA	PHASE B VA	USAGE FACTOR	SERVICE LOAD VA	BREAKER STATUS	BREAKER POLES	BREAKER AMPS	LOAD DESCRIPTION	CKT
1	TVSS	30	2	ON	400	1.25	500		0				OFF	1	20	SPARE	2
3					400	1.25		500		450	1.25	360	ON	1	15	GFCI REC	4
5	RBS-6201-ODE CABINET	100	2	ON	4200	1.25	5250		0				OFF	1	15	SPARE	6
7					4200	1.25		5250		0							8
9	SPARE	20	2	OFF			0		0								10
11								0		0							12

NORTHERN TECH. (#NTI-MINI-PPC) 200A PANEL W/ 225A BUSS CONTRACTOR TO LABEL WITH CARRIER I.D.: **'T-MOBILE'** AND SVC. RATING/SOURCE: **'200A, 120/240V, 1PH, 3W - PGE MTR #'.**

PHASE A TOTAL VA	5750
PHASE B TOTAL VA	6200
TOTAL KVA	11.95
TOTAL AMPS	49.79

NOTES:
1. ALL LOADS CALCED AS LCL/MCL LOADS (OK TO DESIGN TO 100% CAPACITY)
2. UNUSED BREAKERS SHALL BE IN 'OFF' POSITION AND LABELED 'SPARE'
3. PG&E SERVICE: 200A, 120/240V, 1PH, 3W FROM (E) METER/MAIN

PANEL SCHEDULE

2

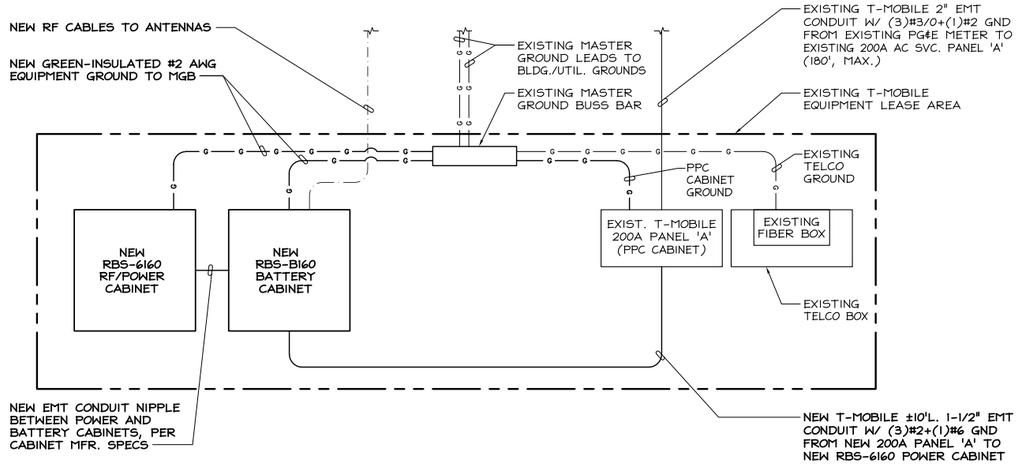
NOTES:

1. SUBCONTRACTOR SHALL PROVIDE "200"AMP, SINGLE PHASE, 120/240 VAC, 60HZ SERVICE FOR THIS T-MOBILE SITE
2. SUBCONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY BEFORE THE START OF CONSTRUCTION. POWER AND TELEPHONE CONDUIT SHALL BE PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS
3. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY PPC MANUFACTURER.
4. ALL SERVICE EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE N.E.C. AND UTILITY COMPANY AND LOCAL CODE REQUIREMENTS
5. SUBCONTRACTOR SHALL INSTALL 36" OF FLEX CONDUIT WITH ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC.) NECESSARY FOR CONNECTION TO THE BTS CABINET
6. SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY
7. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT. SHALL BE SINGLE CONDUCTOR (#14 AWG AND LARGER), 600V, OIL RESISTANT. THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED
8. CUT, COIL AND TAPE A 10 FOOT PIGTAIL FROM END OF NEW EQUIPMENT CONDUIT FOR TERMINATING BY SUBCONTRACTOR.
9. SUBCONTRACTOR SHALL FURNISH AND INSTALL A 16"X16"X6" NEMA 3R ENCLOSURE WITH INTERNAL 5/8"THICK PLYWOOD BACKBOARD. SUBCONTRACTOR SHALL COORDINATE WITH LOCAL TELCO UTILITY PRIOR TO PROCURING AND INSTALLATION OF ENCLOSURE AND COMPONENTS. SUBCONTRACTOR SHALL FURNISH AND INSTALL SURGE PROTECTION DEVICES (BY:ATLANTIC SCIENTIFIC; ZONE BARRIER SERIES; PART NO.90700 WITH MOUNTING DIN RAIL PART NO. 21607). BOND SURGE PROTECTION DEVICE RAIL TO THE ENCLOSURE WITH #6 AWG INSULATED WIRE. BOND ENCLOSURE TO THE SITE GROUND RING OR BAR WITH #2 AWG COPPER WIRE

MI = MECHANICAL INTERLOCK
RU = RELAY TO MONITOR UTILITY POWER
RGI = RELAY TO MONITOR GENERATOR #1 POWER

ELECTRICAL PLAN DIAGRAM NOTES:

1. PLAN IS DIAGRAMMATIC, AND IS INTEDED TO CONVEY THE REQUIREMENTS OF THE SCOPE OF WORK. SEE EQUIPMENT LAYOUT IN CIVIL/ ARCHITECTURAL PAGES FOR ACTUAL EQUIPMENT LAYOUT/CONFIGURATION.
2. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.
3. SERVICE TO AC PANEL SHALL BE 120/240VAC, 200A, 1-PHASE.
4. SERVICE TO NEW RBS-6160 RF/POWER CABINET SHALL BE 120/240VAC, 100A, 1-PHASE.
5. SERVICE TO EXISTING ACTIVE EQUIPMENT CABINET SHALL BE 120/240VAC, 60A, 1-PHASE.
6. SUBCONTRACTOR SHALL COORDINATE WITH LANDLORD'S BUILDING MANAGER FOR ACCESS & WORK POLICIES.
7. THE SUBCONTRACTOR SHALL VERIFY POWER CONDUIT ROUTING AND ALL RF CABLING REQUIRED PRIOR TO START OF CONSTRUCTION.
8. ALL CONDUCTORS SHALL BE THWN, COPPER 600V. 75° C; U.G. CONDUCTORS SHALL BE WET-RATED
9. REFER TO PANEL SCHEDULE(S) (2/-) AND ONE-LINE DIAGRAM (3/-) FOR CIRCUIT ARRANGEMENT & WIRING CONNECTION.
10. REFER TO SITE GROUNDING SCHEMATIC (1/G-1) FOR NEW AND EXISTING EQUIPMENT, ANTENNA/CABLE GROUNDING STANDARDS.
11. ALL WORK TO COMPLY WITH TITLE 24 - CAL. CODE OF REGULATIONS, NFPA 70E (CURRENT NEC) AND OSHA TITLE 29.



ELECTRICAL PLAN (DIAGRAMMATIC)

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

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416 AVIATION BLVD, SUITE B
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REGISTERED PROFESSIONAL ENGINEER
WISSAM ZALZALI
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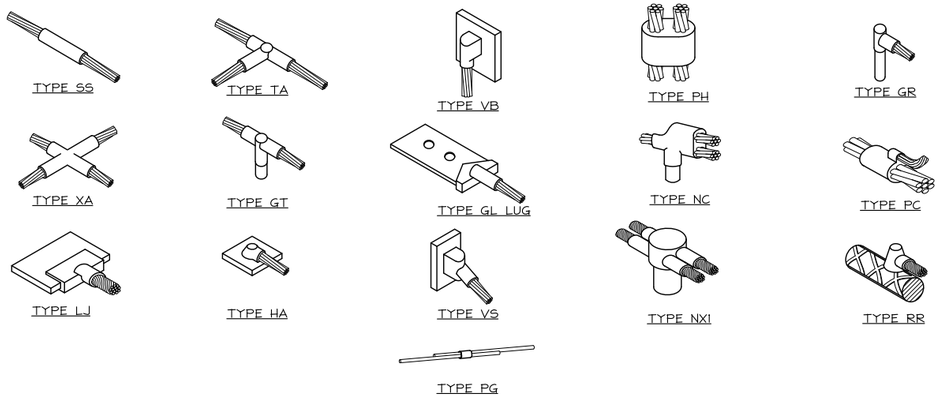
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
ONE-LINE DIAGRAM, PANEL SCHEDULE & ELECTRICAL NOTES

SHEET NUMBER
E-1



TYPICAL CADWELD TYPES

24"x36" SCALE: NTS
11"x17" SCALE: NTS

5

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.

2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURERS PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.

3. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE SOLID TIN COATED OR STRANDED GREEN INSULATED WIRE.

4. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE, 5 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE T-MOBILE REPRESENTATIVE.

5. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

6. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN TINNED COPPER SIZES AS NOTED ON PLAN.

7. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 12" BELOW GRADE/FROST-LINE IN TRENCH, U.N.O., AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT.

8. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.

9. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" (OR DIRECTLY TO GROUND-RING).

10. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
    a. BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR INDOOR USE OR AS APPROVED BY T-MOBILE PROJECT MANAGER.
    b. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
    c. TWO -(2) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS (BUS BAR CONNECTIONS).

11. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES).

12. PRIOR TO ANY LUG-BUSSBAR CONNECTIONS, THE BUSSBAR SHALL BE CLEANED BY USE OF "SCOTCH-BRITE' OR PLAIN STEEL WOOL AS TO REMOVE ALL SURFACE OXIDATION AND CONTAMINANTS. A COATING OF "NO-OX-ID" SHALL BE APPLIED TO THE CONNECTION SURFACES.

13. ALL CONNECTION HARDWARE SHALL BE TYPE 316 SS (NOT ATTRACTED TO MAGNETS).

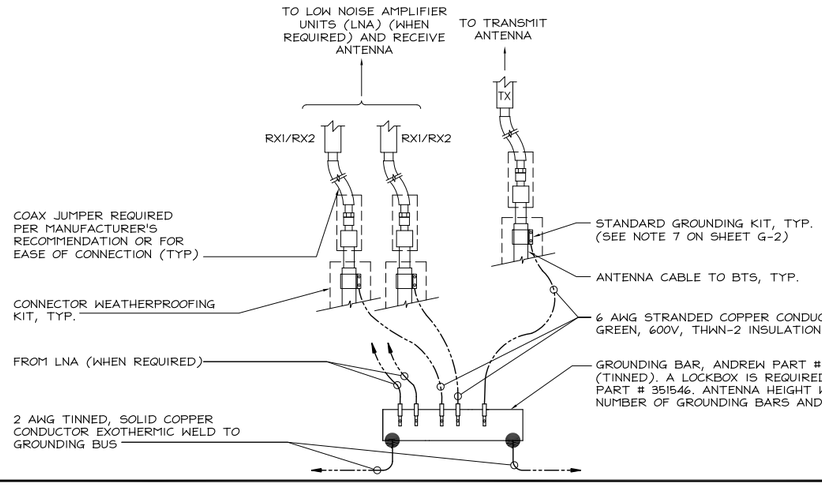
14. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.

15. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE, COLD WATER CONNECTIONS MUST BE MADE ON THE STREET SIDE OF MAIN SHUT-OFF VALVE.

GROUNDING NOTES

24"x36" SCALE: NTS
11"x17" SCALE: NTS

2



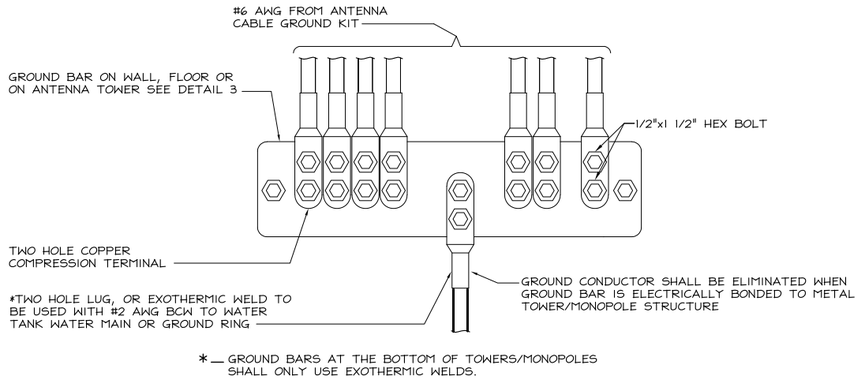
GROUNDING BAR CONNECTION

24"x36" SCALE: NTS
11"x17" SCALE: NTS

4

NOTES:

1. "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS AND TO BE APPLIED PRIOR TO ADDING HARDWARE.

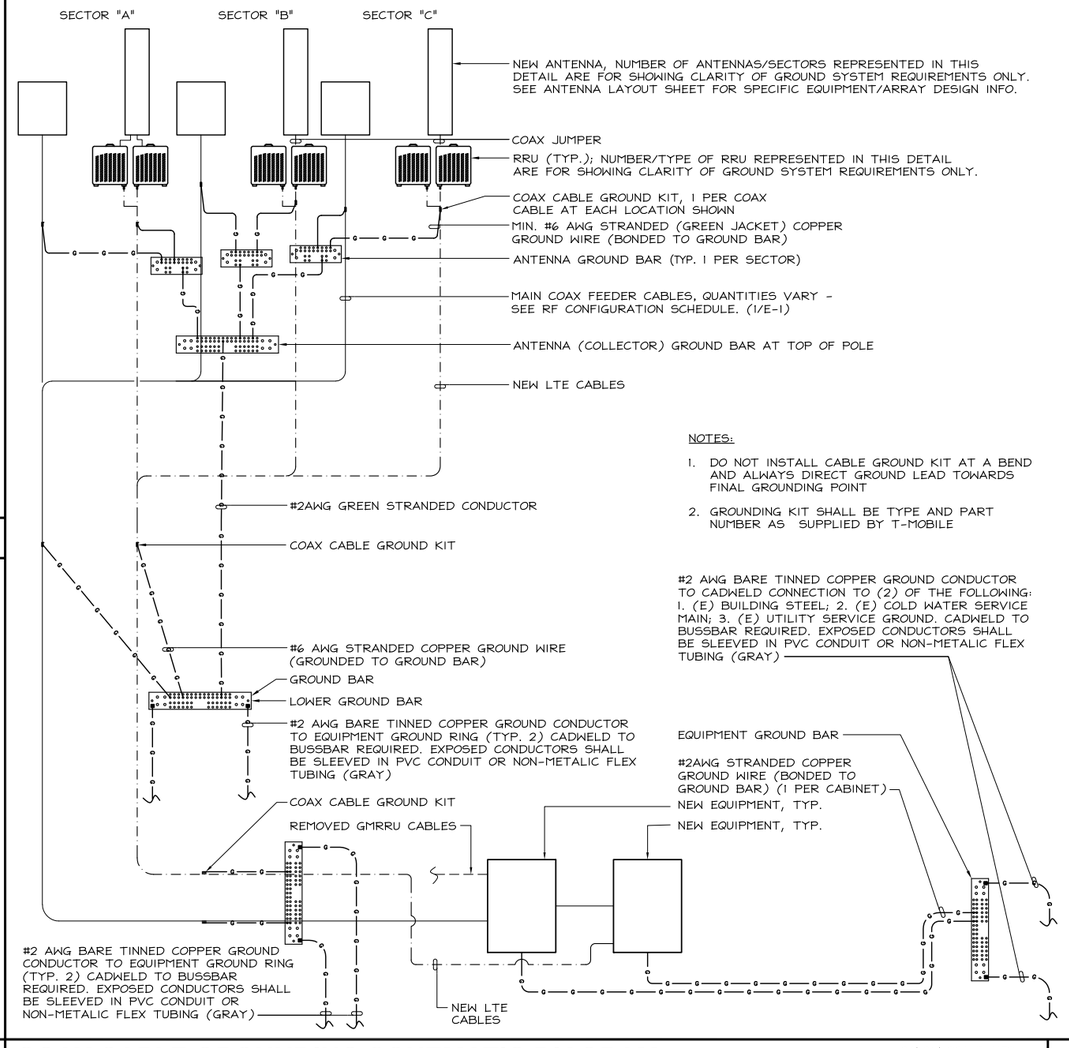


* GROUND BARS AT THE BOTTOM OF TOWERS/MONOPOLES SHALL ONLY USE EXOTHERMIC WELDS.

WIRE TO GROUND BAR CONNECTION

24"x36" SCALE: NTS
11"x17" SCALE: NTS

3



COAX CABLE GROUNDING SCHEMATIC DIAGRAM

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

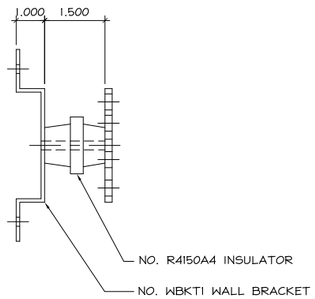
SHEET TITLE
GROUNDING SCHEMATIC NOTES & DETAILS

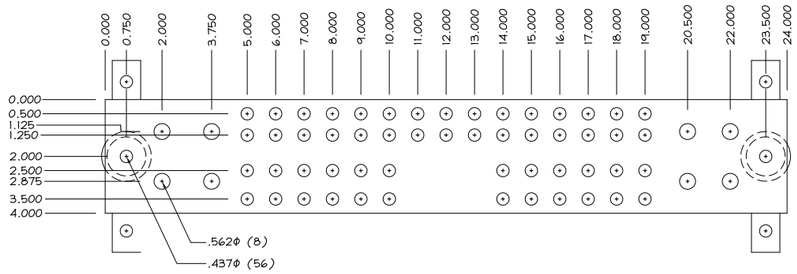
SHEET NUMBER
G-1

NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

6



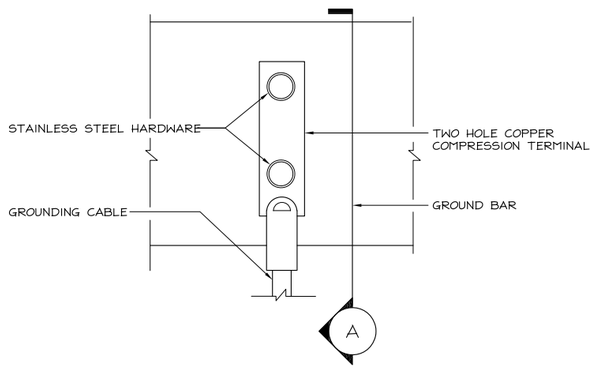


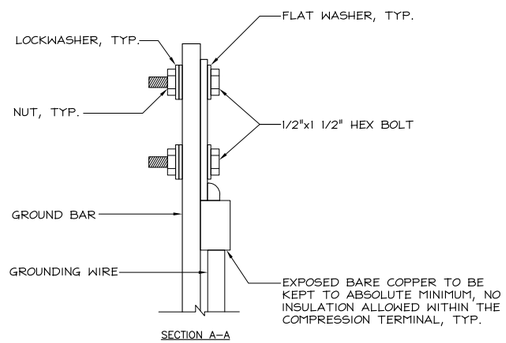
MANUFACTURER: HARGER

24" GROUND BAR

24"x36" SCALE: NTS
11"x17" SCALE: NTS

5





SECTION A–A

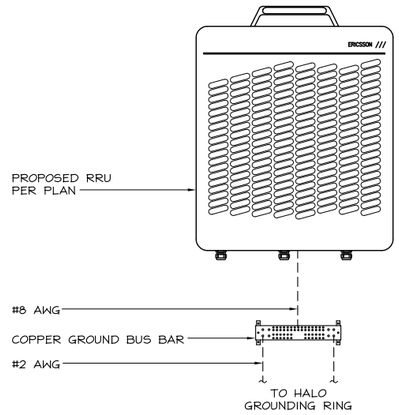
NOTES:

1. "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS AND TO BE APPLIED PRIOR TO ADDING HARDWARE.

TYPICAL GROUND BAR CONNECTION

24"x36" SCALE: NTS
11"x17" SCALE: NTS

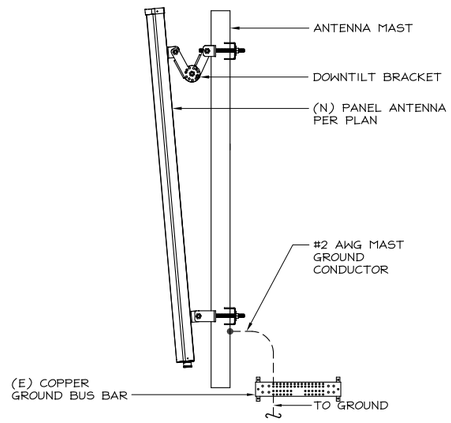
4



RRU GROUNDING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

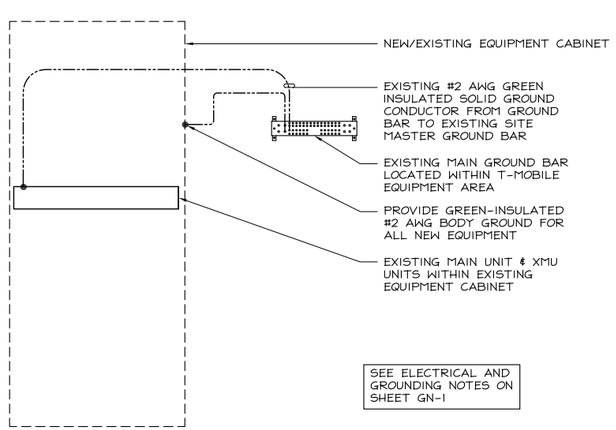
3



ANTENNA/RRU GROUNDING

24"x36" SCALE: NTS
11"x17" SCALE: NTS

2



EQUIPMENT GROUNDING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

T-Mobile
1200 CONCORD AVE., 5th FLOOR
CONCORD, CA 94520

NETWORK CONNEX
416 AVIATION BLVD, SUITE B
SANTA ROSA, CA 95403

ALLSTATES ENGINEERING & SURVEYING
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630

PROJECT ID:	SF03106A
DRAWN BY:	RF
CHECKED BY:	DW

REV	DATE	DESCRIPTION	
0	10/16/2023	100% CD'S FOR SUBMITTAL	RF
B	09/11/2023	100% CD'S FOR APPROVAL	RF
A	08/04/2023	90% CD'S FOR REVIEW	RF

REGISTERED PROFESSIONAL ENGINEER
WISSAM ZALZALI
71655
CIVIL
STATE OF CALIFORNIA

SF03106A
SF106 HALF M.B. AIRPORT
9850 CABRILLO HWY
HALF MOON BAY, CA 94019
ANCHOR PROJECT

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-2

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D

SF03106A SF106 Half M.B Airport
9850 Cabrillo Highway, Half Moon Bay, CA
Photosims Produced on 11-1-2023

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Shot Point Map

Existing

Proposed

view from Airport Street looking northeast at site

T-Mobile

SF03106A SF106 Half M.B Airport
9850 Cabrillo Highway, Half Moon Bay, CA
Photosims Produced on 11-1-2023

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Existing

Proposed

view from Cabrillo Hwy looking south at site

T-Mobile

SF03106A SF106 Half M.B Airport
9850 Cabrillo Highway, Half Moon Bay, CA
Photosims Produced on 11-1-2023

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Existing

Proposed

view from unnamed road looking northwest at site

T-Mobile

SF03106A SF106 Half M.B Airport
9850 Cabrillo Highway, Half Moon Bay, CA
Photosims Produced on 11-1-2023

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT E

Electromagnetic Energy (EME)
FCC Compliance Report

Site ID	SF03106A	**Site Name**	SF106 Half M.B. Airport
Street Address	9850 Cabrillo Hwy	**Latitude**	37°30'47.84"N
City, State, Zip	Half Moon Bay, CA 94019	**Longitude**	122°29'38.00"W
Site Type	Self-Support Lattice Tower	**Collocation Status**	☒ **Collocated** ☐ **Not Collocated**
Area Classification	General Population	**Max MPE by TMO**	0.54 %
Access Method	Access Gate	**Report Type**	Pre-Study
Report Creation	Sumit Rana	**Report Review**	Anil Kumar S M
Report Date	10/27/2023		
T-Mobile Compliance Status	☐ **Compliant** ☒ **Proposed Configuration will be compliant following the recommendations in Section 4**		

Telnet, Inc.
7630 Standish Place, Rockville, MD 20855 | Office (301) 840-7110 ext. 61062 or 61608 | Fax (301) 840-0162 | www.Telnet-Inc.com

Table of Contents

Telnet, Inc.
7630 Standish Place, Rockville, MD 20855 | Office (301) 840-7110 ext. 61062 or 61608 | Fax (301) 840-0162 | www.Telnet-Inc.com

1 Executive Summary

The Antenna Inventory Table (Section 2) shows all transmitting antennas on the site. The use of "Unknown" for an operator means the information with regard to the carrier, their FCC license and / or antenna information was not available. Generic values used as estimation for Effective Radiated Power (ERP) and antenna characteristics for unknown antennas. Z reference specifies the centerline of the antenna to the indicated level.

In this report, it is assumed that all antennas are operating at full power at all times. Software modeling was performed for all transmitting antennas located on the site. Telnet Inc. has further assumed a 100% duty cycle and maximum radiated power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the measurement conclusions. The modeling software that Telnet Inc. used to create this report is Roofmaster.

Statement of Compliance (Section 4) indicated detailed actions required to bring the site compliant to FCC and OSHA rules and regulations with regard to Human Exposure to Radio Frequency Radiation by use of T-Mobile RF signage, barriers and Demarcation Policy. The whole report is true and accurate to the best of Report Creator and Report Reviewer's (mentioned in first page) knowledge.

Additional information about how the report is created and modeled is located in Appendix A and Appendix B of this report.

Site Predictive RF Modeling Summary (General Public Limits)

Max Predictive Spatial Average MPE% - Ground level	0.54 %
Overall Proposed Configuration Compliance	Will be compliant following the recommendations in Section 4.2 of this report

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2 Antenna Inventory Table

Antenna ID	Operator	Antenna Type	Frequency (MHz)	Technology	Input Power (Watts)	Gain (dBd)	Manufacturer	Model	Azimuth (deg.)	Aperture (ft.)	H-BW (deg.)
1	TMO	Panel	600	NR	120	9.93	CommScope	FFHH-65A-R3 (Octo)	310	4.00	66
1	TMO	Panel	700	LTE	40	10.62	CommScope	FFHH-65A-R3 (Octo)	310	4.00	63
1	TMO	Panel	1900	LTE	120	14.43	CommScope	FFHH-65A-R3 (Octo)	310	4.00	62
1	TMO	Panel	1900	NR	80	14.43	CommScope	FFHH-65A-R3 (Octo)	310	4.00	62
1	TMO	Panel	2100	LTE	160	15.24	CommScope	FFHH-65A-R3 (Octo)	310	4.00	57
2	TMO	Panel	2500	NR	210	22.05	Ericsson	AIR 6419 B41	310	2.86	13
2	TMO	Panel	2500	NR	40	22.05	Ericsson	AIR 6419 B41	310	2.86	13
3	TMO	Panel	600	NR	120	9.93	CommScope	FFHH-65A-R3 (Octo)	90	4.00	66
3	TMO	Panel	700	LTE	40	10.62	CommScope	FFHH-65A-R3 (Octo)	90	4.00	63
3	TMO	Panel	1900	LTE	120	14.43	CommScope	FFHH-65A-R3 (Octo)	90	4.00	62
3	TMO	Panel	1900	NR	80	14.43	CommScope	FFHH-65A-R3 (Octo)	90	4.00	62
3	TMO	Panel	2100	LTE	160	15.24	CommScope	FFHH-65A-R3 (Octo)	90	4.00	57
4	TMO	Panel	2500	NR	210	22.05	Ericsson	AIR 6419 B41	90	2.86	13
4	TMO	Panel	2500	NR	40	22.05	Ericsson	AIR 6419 B41	90	2.86	13
5	UNK	Panel	700	-	160	12.00	Unknown	Unknown	0	5.00	65
6	UNK	Panel	850	-	160	12.00	Unknown	Unknown	0	5.00	65
7	UNK	Panel	1900	-	160	15.00	Unknown	Unknown	0	5.00	65
8	UNK	Panel	2100	-	160	15.00	Unknown	Unknown	0	5.00	65
9	UNK	Panel	700	-	160	12.00	Unknown	Unknown	120	5.00	65
10	UNK	Panel	850	-	160	12.00	Unknown	Unknown	120	5.00	65
11	UNK	Panel	1900	-	160	15.00	Unknown	Unknown	120	5.00	65
12	UNK	Panel	2100	-	160	15.00	Unknown	Unknown	120	5.00	65

Antenna ID	X (ft.)	Y (ft.)	Z Ground (ft)
1	117.40	98.500	69.00
2	120.70	94.800	69.00
3	131.10	96.300	69.00
4	131.10	101.10	69.00
6	122.20	97.800	79.00
7	123.70	97.400	79.00
8	125.60	97.800	79.00
9	127.00	97.800	79.00
10	128.90	99.300	79.00
11	128.10	101.10	79.00
12	127.00	102.60	79.00

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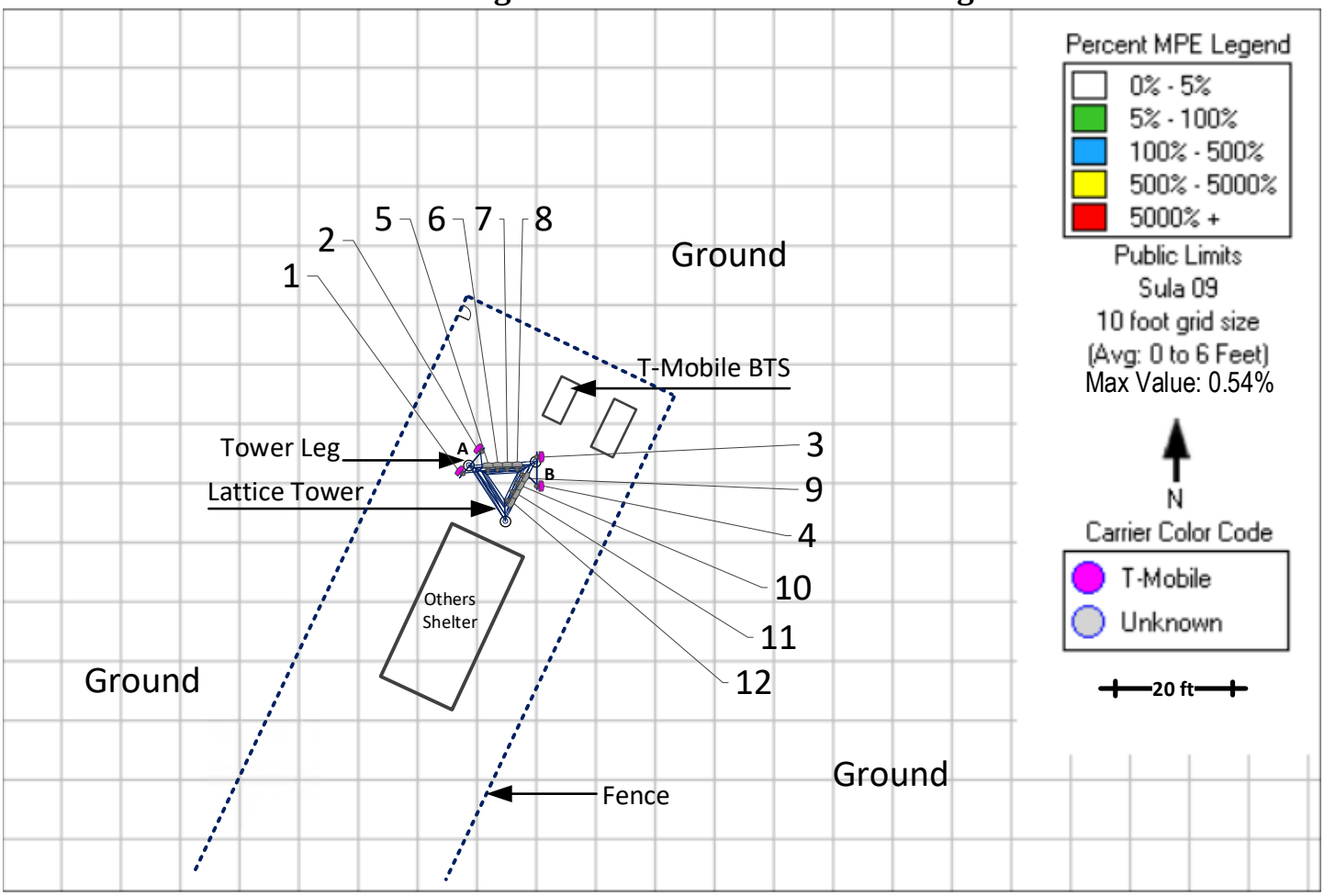
3 RF-EME Emissions Diagrams / Modeling

3.1 Ground Level Modeling with All Carriers Transmitting



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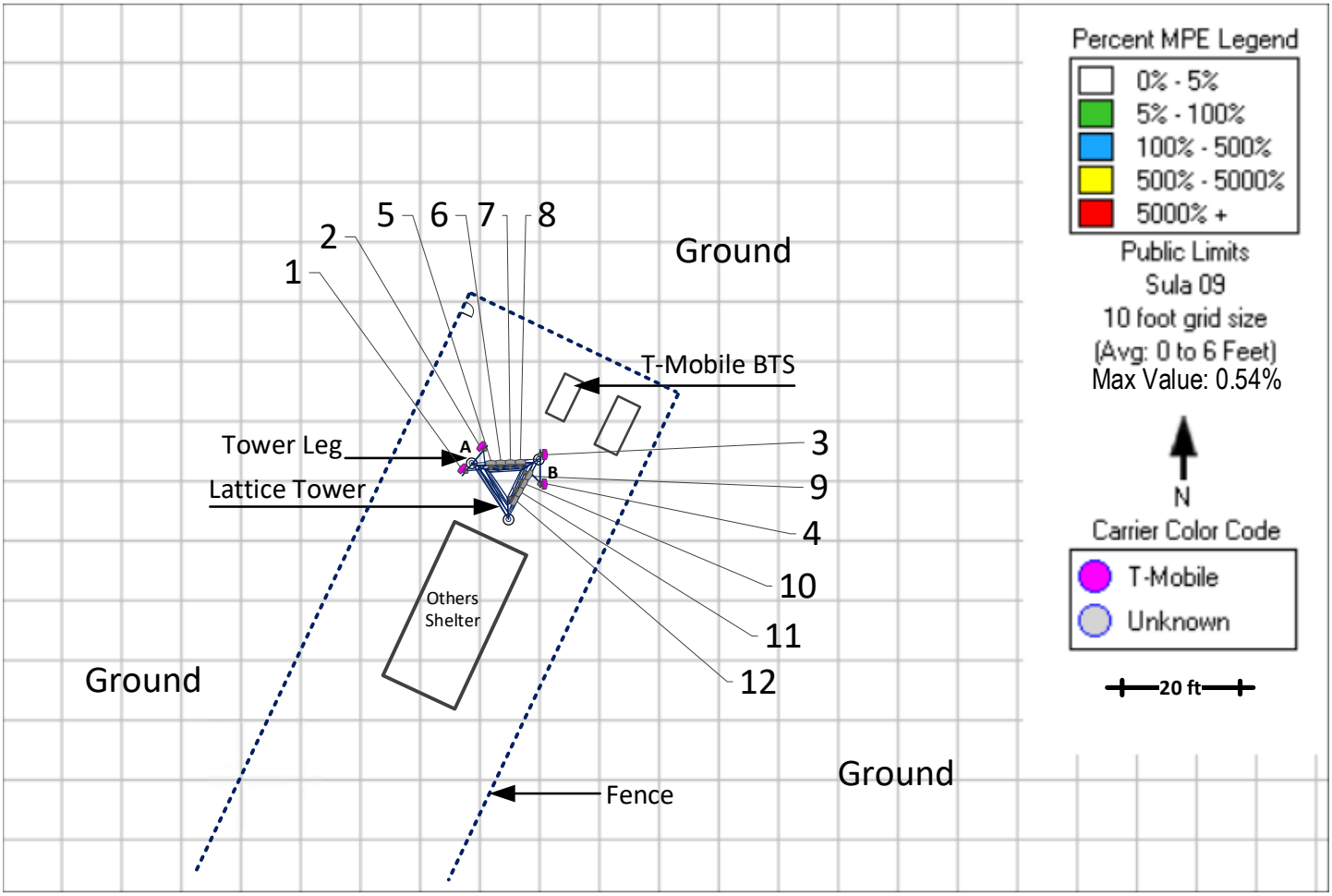
3.2 Ground Level Modeling with only T-Mobile Transmitting



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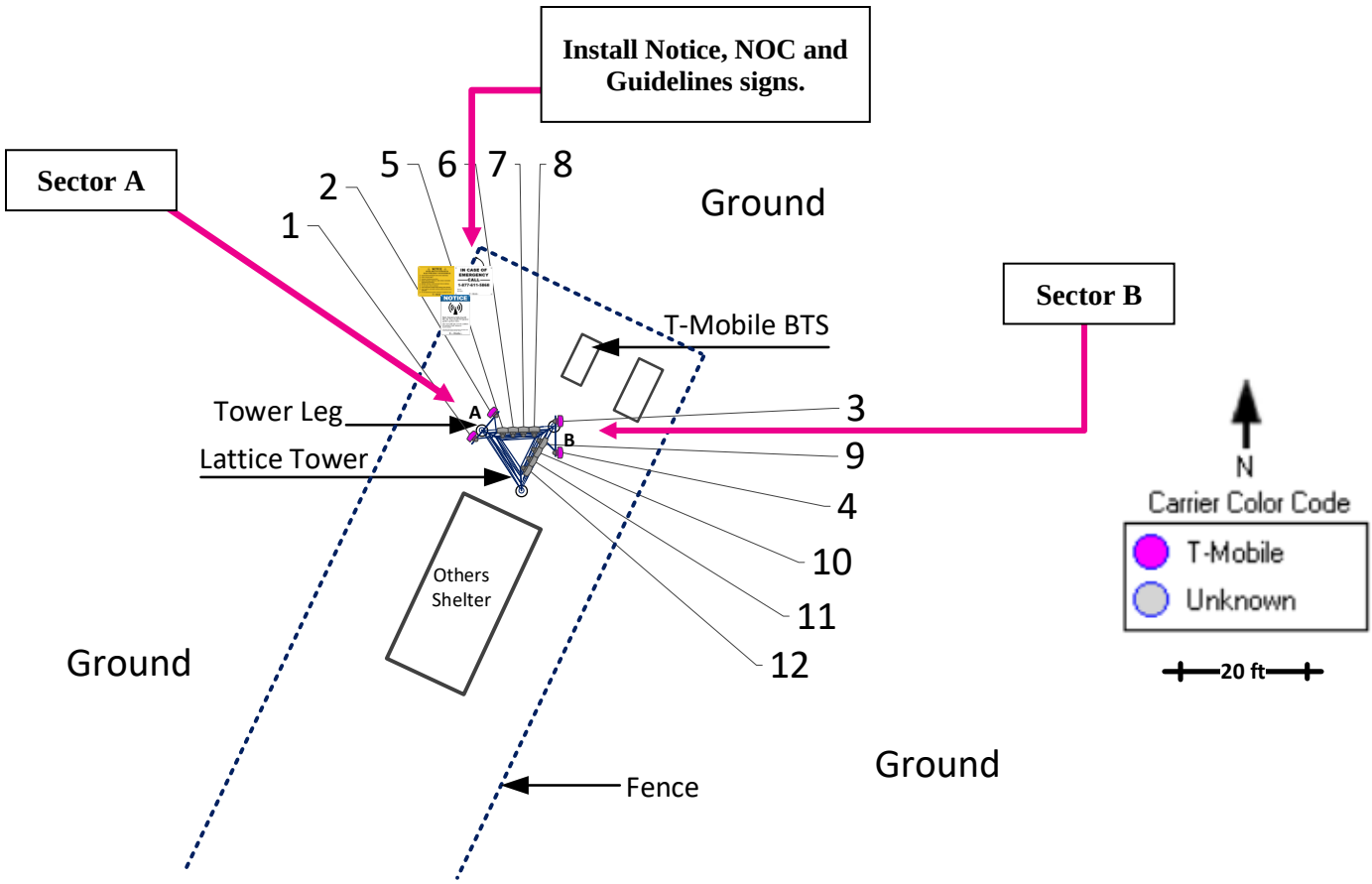
4 Statement of Compliance

4.1 Site Scale Map



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4.2 Proposed Configuration Action requirements.

Proposed Configuration Compliance will be achieved by installing signs and barriers as shown in the drawings at Section 4.1 of this report and summarized below:

Site's Access Gate	Install Notice, NOC and Guidelines signs.
Sector Alpha	NA
Sector Beta	NA
T-Mobile BTS	NA

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5 Appendix A

5.1 FCC Rules and Regulations

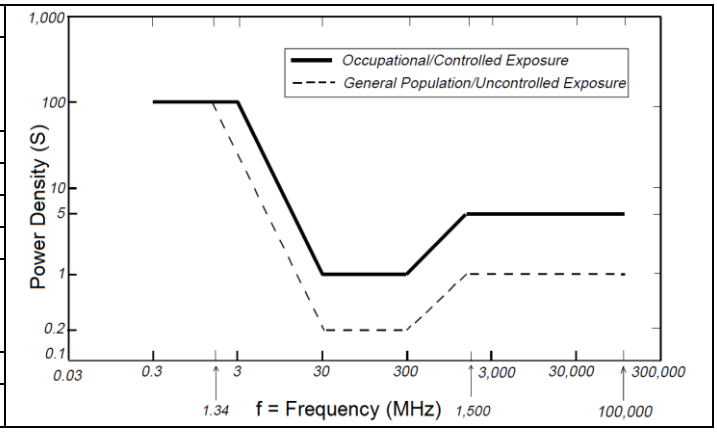
This appendix summarizes the policies, guidelines and requirements that were adopted by the FCC on August 1, 1996, amending Part 1 of Title 47 of the Code of Federal Regulations, and further amended by action of the Commission on August 25, 1997 (see 47 CFR Sections 1.1307(b), 1.1310, 2.1091 and 2.1093, as amended from FCC "OET Bulletin 65"). Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA), as described in 47 CFR Section 1.1311, if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency (RF) electromagnetic fields in excess of these limits. For exact language, see the relevant FCC rule sections.

The FCC-adopted limits for Maximum Permissible Exposure (MPE) are generally based on recommended exposure guidelines published by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," NCRP Report No. 86, Sections 17.4.1, 17.4.1.1, 17.4.2 and 17.4.3. Copyright NCRP, 1986, Bethesda, Maryland 20814. In the frequency range from 100 MHz to 1500 MHz, exposure limits for field strength and power density are also generally based on the MPE limits found in Section 4.1 of, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1-1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017, and approved for use as an American National Standard by the American National Standards Institute (ANSI). The exposure guidelines are based on thresholds for known adverse effects and they incorporate appropriate margin of safety. The federal health and safety agencies such as: the Environmental Protection Agency ("EPA"), the Food and Drug Administration ("FDA"), the National Institute on Occupational Safety and Health ("NIOSH") and the Occupational Safety and Health Administration ("OSHA") have also been actively involved in monitoring and investigating issues related to RF exposure.

The formulas used in Roofmaster for calculating Power density is based on FCC "OET Bulletin 65", Section 2: PREDICTION METHODS, August 1997, Edition 97-01. Power density is converted to Maximum Permissible Exposure Limits (MPE Limits) based on Limits of General population/Uncontrolled Exposure and Limits of Occupational/Controlled Exposure presented in the following table generated from Appendix A of "OET Bulletin 65"

Limits for Occupational/Controlled Exposure		
Frequency Range (MHz)	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$, or S (minutes)**
300-1500	f/300	6
1500-100,000	5	6

Limits for General Population/Uncontrolled Exposure		
Frequency Range (MHz)	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$, or S (minutes)**
300-1500	f/1500	30
1500-100,000	1	30



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5.2 Safety Recommendations

5.2.1 Occupational Safety and Health Administration (OSHA) Requirements

OSHA requires that those in the Occupational classification must complete training in RF Safety, RF Awareness, and Utilization of Personal Protective Equipment. OSHA also provides options for Hazard Prevention and Control:

Hazard Prevention	Control
• Utilization of good equipment • Enact control of hazard areas • Limit exposures • Employ medical surveillance and accident response	• Employ Lockout/Tag out • Utilize personal alarms & protective clothing • Prevent access to hazardous locations • Develop or operate an administrative control program

5.2.2 RF Signage and Barriers

RF signs and preventive barriers have an important role in appropriately alerting a worker before entering into a potential RF exposure area. All RF signs should be abided by at all times.

				
NOC	**Guidelines**	**Notice**	**Caution**	**Warning**
This sign indicates T-Mobile emergency call number along with site Name and Number	This sign will inform anyone of the basic precautions to follow when entering an area with transmitting radiofrequency equipment.	This sign indicates that transmitters operated by T-Mobile are in full compliance with FCC regulations	This sign indicates that RF emissions may exceed the FCC General Population or Occupational MPE limits	This sign indicates that RF emissions may exceed the FCC General Population or Occupational MPE limits

Telnet, Inc. recommends coordinating with all wireless tenants before performing services in front of or near any transmitting antennas. During these activities, it may be appropriate to utilize Lockout/Tagout Procedures, "RF Exposure: Responsibilities, Procedures & Guidelines" for scheduled outages to eliminate RF hazards during these activities.

6 Appendix B

6.1 Contribution to Co-Located areas

Any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible taking corrective actions to bring the site into compliance.

6.2 Occupational limits

Apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

6.3 General population limits

Apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure. (Those without significant and documented RF Safety & Awareness training)

6.4 Controlled Environment

Applies to environments that are restricted or "controlled" in order to prevent access from members of the General Population classification.

6.5 Uncontrolled Environment

Applies to environments that are unrestricted or "uncontrolled" that allow access from members of the General Population classification.

6.6 Generic Values

The use of "Unknown" for an operator means the information with regard to the carrier, their FCC license and / or antenna information was not available. Generic values used as estimation for Effective Radiated Power (ERP) and antenna characteristics for unknown antennas.

7 Engineering Certification

I Kenneth D Gilbert, P.E. State:

The stamp and signature on this page certify the following:

- I am a Registered Professional Engineer in the state of California, license # E20159 expiration date 12/31/2024.
- That I am familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio-frequency Radiation.
- I reviewed the RFE-EME Compliance Report for the T-Mobile site

Site Name	SF106 Half M. B. Airport
Site ID	SF03106A
Street Address	9850 CABRILLO HWY N Half Moon Bay, CA 94308

and based on supplied data and to the best of my knowledge I believe the Report to be true and accurate.

Kenneth D Gilbert, P.E., PMP
Registered Professional Engineer
California License # E20159

Date: 10/31/2023

Telnet, Inc.
7630 Standish Place, Rockville, MD 20855 | Office (301) 840-7110 ext. 61062 or 61608 | Fax (301) 840-0162 | www.Telnet-Inc.com

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT F

County of San Mateo

Planning & Building Department

455 County Center, 2nd Floor
Redwood City, California 94063
650/363-4161 Fax: 650/363-4849

Mail Drop PLN122
plngbldg@co.sanmateo.ca.us
www.co.sanmateo.ca.us/planning

PROJECT FILE

Please reply to: Lisa Aozasa
650/363-4852

March 15, 2012

T-Mobile
c/o Alex Morin
1428 Grant Street
Berkeley, CA 94703

Subject: **PLN PLN2001-00521**
Location: **9850 Cabrillo Highway, Moss Beach**
APN: **037-292-030**

On March 15, 2012, the Zoning Hearing Officer considered your request for a Use Permit renewal, pursuant to Chapter 24.5 of the County Zoning Regulations, for the continued operation of an existing cellular communications facility located at the Half Moon Bay Airport, 9850 Cabrillo Highway, in the unincorporated Moss Beach area of San Mateo County.

The Zoning Hearing Officer made the findings and approved this project subject to the conditions of approval as attached.

Any interested party aggrieved by the determination of the Zoning Hearing Officer may appeal this decision to the Planning Commission within ten (10) working days from such date of determination. The appeal period for this project will end on **March 29, 2012, at 5:00 p.m.**

If you have any questions concerning this item, please contact the Project Planner above.

Very truly yours,

Matthew Seubert
Zoning Hearing Officer
Zhd0315w_5_dr

cc: Assessor's Office
Midcoast Community Council
San Mateo County Real Property
Building Inspection Section
Public Works Department

Attachment A

County of San Mateo
Planning and Building Department

FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2001-00521 Hearing Date: March 15, 2012

Prepared By: Lisa Aozasa, Project Planner Adopted By: Zoning Hearing Officer

FINDINGS

For the Environmental Review, Found:

1. That the project is categorically exempt under provisions of Class 1(b), Section 15301 of the California Environmental Quality Act Guidelines, as a continued operation of an existing facility.

For the Use Permit, Found:

2. That the continued operation of the existing telecommunications facility will not result in a significant adverse impact to coastal resources, or be detrimental to the public welfare or injurious to property or improvements in the neighborhood.

   Staff has reviewed the project file, referred the project to appropriate parties for comments, conducted a site inspection, and found no issues concerning non-compliance with permit and zoning requirements or issues regarding compatibility with neighboring parcels in the vicinity.

3. That the continued operation is necessary for the public health, safety, convenience or welfare.

   The facility will continue to allow for cellular communications coverage for private citizens and public agencies that have come to rely on coverage provided by this site to facilitate daily conversation and to provide assistance in emergency situations. Furthermore, there is no evidence to suggest that the operation of this facility has been a detriment to the public health or safety since its establishment.

CONDITIONS OF APPROVAL

Current Planning Section

1. The 4-panel antennas shall be maintained with a cool grey color. The ground-level storage cabinet shall continue to be maintained with a natural finish or an earth-tone color.

2. The applicant is advised that "all activities, construction, storage of materials, and movement on the airport property are to be coordinated with and have the permission of the Airport Manager or their representative."

3. The applicant shall continue to maintain and upon request, provide the County Planning and Building Department with a copy of the executed lease agreement between the applicant and the County of San Mateo.

4. The use permit shall be valid for a period of ten (10) years through March 15, 2022. If the applicant wishes to renew this use permit, an application for renewal must be submitted to the Planning and Building Department prior to the expiration date and shall be accompanied by the fees applicable at that time. An administrative review for compliance with conditions will be required to be completed after five (5) years by March 15, 2017.

5. The wireless telecommunication facility and all equipment associated with it shall be removed in its entirety by the applicant within 90 days if the FCC and/or CPUC license and registration are revoked or the facility is abandoned or no longer needed, and the site shall be restored and revegetated to blend with the surrounding area. The owner and/or operator of the wireless telecommunication facility shall notify the County Planning Department upon abandonment of the facility. Restoration and revegetation shall be completed within two months of the removal of the facility.

6. The applicant shall not enter into a contract with the landowner or lessee which reserves for one company exclusive use of the tower structure or the site for telecommunications facilities.

7. The applicant shall file, receive, and maintain all necessary licenses and registrations from the Federal Communications Commission (FCC), the California Public Utilities Commission (CPUC) and any other applicable regulatory bodies prior to initiating the operation of the wireless telecommunication facility. The applicant shall supply the Planning and Building Department with evidence of these licenses and registrations. If any required license is ever revoked, the applicant shall inform the Planning and Building Department of the revocation within ten (10) days of receiving notice of such revocation.

Coastside Fire Protection District

Note: The applicant has completed the following conditions as required by the Fire District – see photos, Attachment H.

8. Emergency Building Access: The proposed project will require the installation of "Knox Boxes." These emergency key boxes are required when access to or within a structure or an area is unduly difficult because of secured openings or where immediate access is necessary for life saving or fire-fighting purposes. The Chief will determine the location for the key box and provide an authorized order form. All security gate systems controlling vehicular access shall be equipped with a "Knox"; key operated emergency entry device. Applicant shall contact the Fire Prevention Bureau for specifications and approvals prior to installation.

9. Address Numbers: Building identification shall be conspicuously posted and visible from the street. (TEMPORARY ADDRESS NUMBERS SHALL BE POSTED PRIOR TO COMBUSTIBLES BEING PLACED ON-SITE.) The letters/numerals for permanent address numbers shall be of 6-inch height with a minimum 3/4-inch stroke and of a color, which is contrasting with the background. Such letters/numerals shall be illuminated and facing the direction of access.

10. Vegetation Management: The Half Moon Bay Fire District Ordinance 2002-01, the 2001 California Fire Code and Public Resources Code 4291 require a minimum clearance of 100 feet or to the property line of all flammable vegetation to be maintained around all structures by the property owner. This does not include species of ornamental shrubs and landscaping.

11. Fire Extinguishers: There must be at least one 2A10BC fire extinguisher for each 3,000 sq. ft., travel distance not to exceed 75 feet, with at least one extinguisher per floor per Title 19, California Code of Regulations.