Streamline Engineering and Design, Inc

County of Washoe Planning Department

Applicant: Crown Castle on behalf of T-Mobile

Applicant Contact: Lisa Elliott Lisa @streamlineeng.com 209.605.2736

17180 Sycamore Ave
Patterson Ca 95363
209.605.2736

Dear Planning,

Crown Castle respectfully submits this Application for a Review. This existing wireless facility is located at 18400 Joy Lake Washoe. The design is a stealth and will blend with the surrounding area. There is a need to upgrade the existing technologies and Crown Castle is proposing the following scope.

Scope:

- REMOVING & REPLACING (2) (E) 6201 CABINETS W/ (N) T-MOBILE ENCLOSURE 6160 CABINET
- REMOVING & REPLACING (2) (E) 8003 BATTERY CABINETS W/ (N) B160 BATTERY CABINET
- REMOVING (2) (E) DIPLEXERS
- REMOVING (2) (E) TMAS @ ANTENNAS
- REMOVING (2) (E) ANTENNAS
- REMOVING & REPLACING (E) CROWN CASTLE MONOPOLE W/ (N) 80' CROWN CASTLE MONOPINE
- INSTALLING (N) DOUBLE TRI-SECTOR COLLAR W/ T-ARMS
- INSTALLING (4) (N) T-MOBILE ANTENNAS
- INSTALLING (2) (N) RRUS-4480 B71/B85 UNITS @ ANTENNAS
- INSTALLING (2) (N) RRUS-4460 B25/B66 UNITS @ ANTENNAS
- INSTALLING (2) (N) 6X24 HYBRID CABLES

Lisa Elliott
Streamline EngineeringReal Estate License # 02004947Site Acquisition Specialist 209.605.2736

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

Project Information	**Staff Assigned Case No.:**
Project Name: 827182	
Project Description: WIRELESS UPGRADES THAT INVOLVE A DROP & SWAP SEE T-1 OF PLANS FOR FULL SCOPE OF WORK.	
Project Address: 18400 JOY LAKE WASHOE VALLEY	
Project Area (acres or square feet):	
Project Location (with point of reference to major cross streets **AND** area locator): SEE VICINITY MAP PAGE T1 OF PLANS	

Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
04608019			

Indicate any previous Washoe County approvals associated with this application:
Case No.(s).

Applicant Information (attach additional sheets if necessary)

Property Owner:		**Professional Consultant:**	
Name: NEVADA BELL		Name: CROWN CASTLE ON BEHALF OF T-MOBILE	
Address: 5000 EXECUTIVE PARKWAY		ddress: 3718 R ST #6	
SAN RAMON/CA	Zip: 94583	MERCED CA	Zip: 95348
Phone: NA	Fax:	Phone: 209 605 2736	Fax:
Email:NA		Email:LISA@STREAMLINEENG.COM	
Cell: NA	Other:	Cell: SAME	Other:
Contact Person: NA		Contact Person: LISA ELLIOTT	
Applicant/Developer:		**Other Persons to be Contacted:**	
Name:		Name:	
Address:		Address:	
	Zip:		Zip:
Phone:	Fax:	Phone:	Fax:
Email:		Email:	
Cell:	Other:	Cell:	Other:
Contact Person:		Contact Person:	

For Office Use Only

Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Special Use Permit Application
Supplemental Information

(All required information may be separately attached)

1. What is the project being requested?

This is an existing wireless facility proposing upgrades which involves a drop and swap.

2. Provide a site plan with all existing and proposed structures (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.)

ATTACHED SITE PLAN

3. What is the intended phasing schedule for the construction and completion of the project?

A COUPLE OF WEEKS

4. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

STEALTH TREE POLE TO BLEND

5. What are the anticipated beneficial aspects or affects your project will have on adjacent properties and the community?

better coverage/capcity of wireless services for the area.

6. What are the anticipated negative impacts or affect your project will have on adjacent properties? How will you mitigate these impacts?

NONE

7. Provide specific information on landscaping, parking, type of signs and lighting, and all other code requirements pertinent to the type of use being purposed. Show and indicate these requirements on submitted drawings with the application.

NO CHANGE

8. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that apply to the area subject to the special use permit request? (If so, please attach a copy.)

❑ Yes	☒ No

9. Utilities:

a. Sewer Service	
b. Electrical Service	
c. Telephone Service	
d. LPG or Natural Gas Service	
e. Solid Waste Disposal Service	
f. Cable Television Service	
g. Water Service	

For most uses, Washoe County Code, Chapter 110, Article 422, Water and Sewer Resource Requirements, requires the dedication of water rights to Washoe County. Please indicate the type and quantity of water rights you have available should dedication be required.

h. Permit #		acre-feet per year	
i. Certificate #		acre-feet per year	
j. Surface Claim #		acre-feet per year	
k. Other #		acre-feet per year	

Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources).

NA

10. Community Services (provided and nearest facility):

a. Fire Station	
b. Health Care Facility	
c. Elementary School	
d. Middle School	
e. High School	
f. Parks	
g. Library	
h. Citifare Bus Stop	

CROWN CASTLE

SA344 395 & WASHOE CITY/O
18400 JOY LAKE RD, WASHOE VALLEY, NV 89704
BUN 827182

T-MOBILE WEST LLC

T-Mobile

SA344 395 & WASHOE CITY/O
PROJECT - CELL TOWER REPLACEMENT
& T-MOBILE EQUIPMENT UPGRADE
18400 JOY LAKE RD, WASHOE VALLEY, NV 89704
SC09344A

RFDS VER#: 3

PROJECT DESCRIPTION

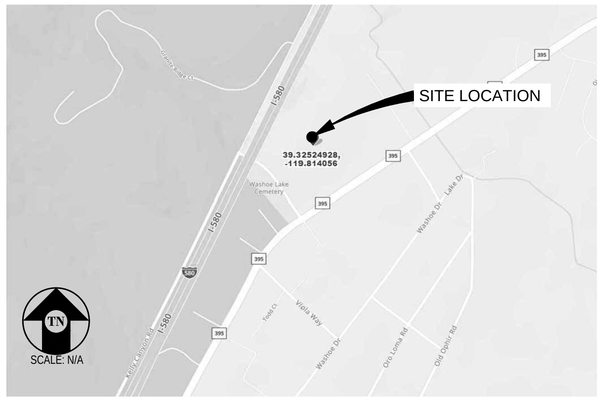
A MODIFICATION TO AN (E) UNMANNED CROWN CASTLE TELECOMMUNICATION FACILITY CONSISTING OF:

- REMOVING & REPLACING (2) (E) 6201 CABINETS W/ (N) T-MOBILE ENCLOSURE 6160 CABINET
- REMOVING & REPLACING (2) (E) 8003 BATTERY CABINETS W/ (N) B160 BATTERY CABINET
- REMOVING (2) (E) DIPLEXERS
- REMOVING (2) (E) TMAS @ ANTENNAS
- REMOVING (2) (E) ANTENNAS
- REMOVING & REPLACING (E) CROWN CASTLE MONOPOLE W/ (N) 80' CROWN CASTLE MONOPINE
- INSTALLING (N) DOUBLE TRI-SECTOR COLLAR MOUNT W/ T-ARMS
- INSTALLING (4) (N) T-MOBILE ANTENNAS
- INSTALLING (2) (N) RRUS-4480 B71/B85 UNITS @ ANTENNAS
- INSTALLING (2) (N) RRUS-4460 B25/B66 UNITS @ ANTENNAS
- INSTALLING (2) (N) 6X24 HYBRID CABLES

PROJECT INFORMATION

SITE NAME:	SA344 395 & WASHOE CITY/O
COUNTY:	WASHOE
APN:	046-080-19
SITE ADDRESS:	18400 JOY LAKE RD WASHOE VALLEY, NV 89704
CURRENT ZONING:	PSP
CONSTRUCTION TYPE:	II-B
OCCUPANCY TYPE:	U, (UNMANNED COMMUNICATIONS FACILITY)
PROPERTY OWNER:	ASHLAN PARK SHOPPING CENTER 390 BRIDGE PARKWAY, STE C REDWOOD CITY, CA 94065
APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
CROWN CASTLE PROJECT MANAGER:	ATTN: BELINDA LIVINGSTON (801) 362-8720
CROWN CASTLE D&S PROJECT MANAGER:	ATTN: BRIAN LEEGWATER (925) 737-1016
ZONING CONTACT:	STREAMLINE ENGINEERING & DESIGN, INC ATTN: LISA ELLIOTT (209) 605-2736
CONSTRUCTION CONTACT:	CROWN CASTLE ATTN: JAMES SJOTVEDT (916) 532-7545
CROWN BU#:	823574
JURISDICTION:	COUNTY OF WAHOSE, NV
POWER:	PG&E
TELEPHONE:	AT&T
LATITUDE:	N 39° 19' 30.90" NAD 83 N 39.325249
LONGITUDE:	W 119° 48' 50.60" NAD 83 W 119.814056
AMSL:	±5101.7'

VICINITY MAP



DRIVING DIRECTIONS

FROM: ONE PARK PLACE, SUITE 300, DUBLIN, CA 94568
TO: 18400 JOY LAKE RD, WASHOE VALLEY, NV 89704

1.	HEAD SOUTH ON PARK PL TOWARD DUBLIN BLVD	240 FT
2.	TURN LEFT ONTO DUBLIN BLVD	0.1 MI
3.	USE THE RIGHT 2 LANES TO TURN RIGHT ONTO HACIENDA DR	0.2 MI
4.	USE THE RIGHT 2 LANES TO TAKE THE INTERSTATE 580 W RAMP TO OAKLAND	0.2 MI
5.	MERGE ONTO I-580 W	1.4 MI
6.	TAKE THE EXIT TOWARD SACRAMENTO	0.5 MI
7.	MERGE ONTO I-680 N	18.8 MI
8.	KEEP LEFT TO STAY ON I-680 N	1.4 MI
9.	KEEP LEFT AT THE FORK TO STAY ON I-680 N	5.9 MI
10.	KEEP LEFT AT THE FORK TO CONTINUE ON I-680	14.4 MI
11.	TAKE EXIT 71A TOWARD I-80 E/SACRAMENTO	0.4 MI
12.	MERGE ONTO I-80 E	41.0 MI
13.	TAKE THE I-80 EXIT TOWARD RENO	0.7 MI
14.	CONTINUE ONTO I-80 E	136 MI
15.	TAKE EXIT 15 TO MERGE ONTO I-580 S/US-395 S TOWARD CARSON CITY	0.8 MI
16.	KEEP LEFT TO CONTINUE ON I-580 S	0.2 MI
17.	KEEP LEFT TO STAY ON I-580 S	9.0 MI
18.	TAKE EXIT 25B FOR VIRGINIA ST SOUTH	0.5 MI
19.	CONTINUE ONTO US-395 ALT S/S VIRGINIA ST	8.1 MI
20.	TURN RIGHT ONTO JOY LAKE RD	0.1 MI

END AT: 18400 JOY LAKE RD, WASHOE VALLEY, NV 89704

ESTIMATED TIME: 3 HOURS 50 MINUTES ESTIMATED DISTANCE: 240 MILES

CODE COMPLIANCE

ALL WORK & MATERIALS SHALL BE PERFORMED & INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

1. 2018 INTERNATIONAL BUILDING CODE AND NECESSARY ADMINISTRATIVE PROVISIONS
2. 2018 INTERNATIONAL RESIDENTIAL CODE AND NECESSARY ADMINISTRATIVE PROVISIONS
3. 2018 INTERNATIONAL EXISTING BUILDING CODE AND NECESSARY ADMINISTRATIVE PROVISIONS
4. 2018 INTERNATIONAL ENERGY CONSERVATION CODE
5. 2018 INTERNATIONAL FUEL GAS CODE
6. 2018 INTERNATIONAL MECHANICAL CODE AND NECESSARY ADMINISTRATIVE PROVISIONS
7. 2018 UNIFORM PLUMBING CODE AND NECESSARY ADMINISTRATIVE PROVISIONS
8. 2018 UNIFORM MECHANICAL CODE AND NECESSARY ADMINISTRATIVE PROVISIONS
9. 2017 NATIONAL ELECTRICAL CODE
10. 2018 INTERNATIONAL FIRE CODE
11. 2012 WILDLAND URBAN INTERFACE CODE
12. 2018 NORTHERN NEVADA AMENDMENTS
13. CITY/COUNTY ORDINANCES
14. ANSI/EIA-TIA-222-H

ALONG WITH ANY OTHER APPLICABLE LOCAL & STATE LAWS AND REGULATIONS.

SHEET INDEX

SHEET	DESCRIPTION	REV
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APPROVAL

RF

LEASING

ZONING

CONSTRUCTION

T-MOBILE

SA344 395 & WASHOE CITY/O
827182
18400 JOY LAKE RD
WASHOE VALLEY, NV 89704

ISSUE STATUS

△	DATE	DESCRIPTION	BY
	05/03/22	CD 90%	C.T.C
	09/29/22	CD 95%	S.V.
	09/06/23	CLIENT REV	C.C.
	-	-	-
	-	-	-
	-	-	-

DRAWN BY: C. COLSTON
CHECKED BY: S. SAVIG
APPROVED BY: -
DATE: 09/06/23

Streamline Engineering and Design, Inc.
8445 Sierra College Blvd. Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1930
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

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PRELIMINARY:
NOT FOR
CONSTRUCTION

KEVIN R. SORENSEN
S4469

CROWN CASTLE
ONE PARK PLACE, SUITE 300
DUBLIN, CA 94568

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1

PROJECT GENERAL NOTES

1. THIS FACILITY IS AN UNOCCUPIED WIRELESS TELECOMMUNICATION FACILITY.
2. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE.
3. THE SCOPE OF WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
4. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, AND CONFIRM THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PAY FOR PERMIT FEES, AND TO OBTAIN SAID PERMITS AND TO COORDINATE INSPECTIONS.
6. THE CONTRACTOR SHALL RECEIVE, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
7. CALL BEFORE YOU DIG. CONTRACTOR IS REQUIRED TO CALL 811 (NATIONWIDE "CALL BEFORE YOU DIG" HOTLINE) AT LEAST 72 HOURS BEFORE DIGGING.
8. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
9. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. CONTRACTOR SHALL ALSO COORDINATE ALL PORTIONS OF THE WORK UNDER THE CONTRACT; INCLUDING CONTACT AND COORDINATION WITH THE CONSTRUCTION MANAGER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
10. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, PAVING, CURBS, GALVANIZED SURFACES, ETC., AND UPON COMPLETION OF WORK, REPAIR ANY DAMAGE THAT OCCURRED DURING CONSTRUCTION TO THE SATISFACTION OF THE PROJECT MANAGER.
11. KEEP GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS AND RUBBISH. REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
12. 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 DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
13. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND ALL OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK SHALL BE PROTECTED AT ALL TIMES.
14. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
15. THE CONTRACTOR SHALL PROVIDE A TOILET FACILITY DURING ALL PHASES OF CONSTRUCTION.
16. SUFFICIENT MONUMENTATION WAS NOT RECOVERED TO ESTABLISH THE POSITION OF THE BOUNDARY LINES SHOWN HEREON. THE BOUNDARY REPRESENTED ON THIS MAP IS BASED ON COMPILED RECORD DATA AND BEST FIT ONTO EXISTING IMPROVEMENTS. IT IS POSSIBLE FOR THE LOCATION OF THE SUBJECT PROPERTY TO SHIFT FROM THE PLACEMENT SHOWN HEREON WITH ADDITIONAL FIELD WORK AND RESEARCH. THEREFORE ANY SPATIAL REFERENCE MADE OR SHOWN BETWEEN THE RELATIONSHIP OF THE BOUNDARY LINES SHOWN HEREON AND EXISTING GROUND FEATURES, EASEMENTS OR LEASE AREA IS INTENDED TO BE APPROXIMATE AND IS SUBJECT TO VERIFICATION BY RESOLVING THE POSITION OF THE BOUNDARY LINES.
17. THE CONTRACTOR TO VERIFY THE LATEST/CURRENT RF DESIGN.
18. WHERE APPLICABLE, CONTRACTOR SHALL PROVIDE SEPARATE PLANS, SPECIFICATIONS, FEES AND PERMITS FOR ANY REVISION TO ANY FIRE SPRINKLER AND/OR ALARM SYSTEM ON THE PREMISES AS MAY BE NEEDED TO COMPLETE THE WORK DEPICTED HEREIN, USING A C-10 LICENSED SUBCONTRACTOR FOR ALL SUCH WORK.

CONSTRUCTION NOTES

1. EXISTING BUILDING CONSTRUCTION CONDITIONS INDICATED ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO PROCEEDING WITH CONSTRUCTION OR ORDERING OF MATERIALS. IF EXISTING CONDITIONS DO NOT ALLOW FOR DETAILS OF CONSTRUCTION AS SHOWN ON THESE DRAWINGS, NOTIFY ENGINEER OF RECORD FOR RESOLUTION PRIOR TO PROCEEDING. CONTRACTOR SHALL EXPOSE AND REVIEW EXISTING CONDITIONS IN A TIMELY MANNER SUCH THAT ALTERNATE DESIGNS OR DETAILS, IF REQUIRED, MAY BE GENERATED WITHOUT DELAY TO THE PROJECT.
2. DURING CONSTRUCTION, THE CONTRACTOR SHALL NOT ALTER, DAMAGE OR REMOVE ANY PART OF THE EXISTING STRUCTURE UNLESS SPECIFICALLY DETAILED ON THESE DRAWINGS.
3. THE INTENT OF THESE DRAWINGS IS THAT THE WORK OF THE ADDITION, ALTERATION, REHABILITATION, OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH THE 2019 CBC. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH THE 2019 CBC, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE PREPARED AND SUBMITTED TO AND APPROVED BY THE BUILDING DEPARTMENT PRIOR TO PROCEEDING WITH THE WORK.
4. ALL WORK AND MATERIALS SHOWN ARE NEW UNLESS INDICATED AS EXISTING (E).
5. IT MAY BE NECESSARY TO REMOVE ARCHITECTURAL FINISHES, PLUMBING PIPES AND FIXTURES, ELECTRICAL CONDUIT, FIXTURES, PANELS, BOXES, TELEPHONE OR FIRE ALARM WIRING AND FIXTURES OR OTHER NON-STRUCTURAL ITEMS TO INSTALL STRUCTURAL WORK AND MATERIALS SHOWN ON THESE DRAWINGS. SUCH ITEMS SHALL BE REMOVED, REPAIRED AND/OR REPLACED TO MATCH PRE-CONSTRUCTION CONDITIONS AT THE CONTRACTORS EXPENSE.
6. ALL WEATHER PROOFING. INCLUDING BUT NOT LIMITED TO TORCH DOWN, CAULKING, Z-FLASHING OR ANY OTHER MATERIAL THAT MAY BE ALTERED DURING INSTALLATION SHALL BE REPAIRED REPLACED AND/OR MODIFIED TO ENSURE THE BUILDING AT THE INSTALLATION SITE IS WEATHER PROOF.
7. ANY PROPOSED SUBSTITUTIONS FOR STRUCTURAL MEMBERS, HARDWARE, ANCHOR TYPES, OR DETAILING INDICATED IN THESE DRAWINGS SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO ORDERING MATERIALS. SUCH REVIEW SHALL BE BILLED ON A TIME AND MATERIALS BASIS TO THE CONTRACTOR WITH NO GUARANTEE THAT THE SUBSTITUTION WILL BE ALLOWED.
8. CONTRACTOR SHALL ENSURE ALL ROOF AREAS HAVE POSITIVE SLOPE TO ALL EXISTING ROOF DRAINS. PROVIDE ADDITIONAL CRICKETS OR BUILD UP ROOFING AS REQUIRED TO PROVIDE POSITIVE DRAINAGE AROUND ALL NEW CONSTRUCTION INCLUDING ANY CURBS, SLEEPERS, SUPPORT BASES, ETC.

CONCRETE CORE/DRILLING NOTES

1. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED OR POST-TENSIONED REINFORCED CONCRETE (MILD REINFORCED), USE CARE & CAUTION TO AVOID CUTTING OR DAMAGING THE (E) REINFORCING BARS. WHEN INSTALLING ANCHORS INTO (E) PRE-STRESSED OR POST-TENSIONED CONCRETE LOCATE THE PRE-STRESSED OR POST-TENSIONED TENDONS BY USING A NON-DESTRUCTIVE METHOD, SUCH AS X-RAY, AT POINT OF PENETRATION, PRIOR TO INSTALLATION. EXERCISE EXTREME CARE & CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF TWO INCHES BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.
2. WHEN CORING EXISTING REINFORCED CONCRETE OF ANY CONSTRUCTION TYPE (PRE-STRESSED, POST-TENSIONED OR MILD REINFORCED), LOCATE THE EXISTING REINFORCING BY USING A NON-DESTRUCTIVE METHOD, SUCH AS X-RAY, PRIOR TO CORING. EXERCISE EXTREME CARE & CAUTION TO AVOID CUTTING OR DAMAGING ANY REINFORCING DURING CORING. MAINTAIN A MINIMUM CLEARANCE OF TWO INCHES BETWEEN REINFORCEMENT AND THE CORE. THE MAXIMUM SIZE OF ANY CORE IS TO BE 6" DIAMETER AND THE MINIMUM SPACING BETWEEN CORES IS TO BE TWICE THE CORE DIAMETER (I.E. 12" SPACING FOR A 6" DIAMETER CORE).
3. INSPECTOR IS TO BE PRESENT DURING ALL CORE DRILLING OPERATIONS TO VERIFY THAT NO REINFORCING CABLES, TENDONS, OR REBAR HAVE BEEN CUT. (SEE NOTE 5 BELOW)
4. THE INSPECTOR SHALL SUBMIT A WRITTEN REPORT TO THE OWNER.
5. THE INSPECTIONS INDICATED IN NOTES 3 AND 4 ABOVE ARE NOT REQUIRED FOR A CONCRETE FILL OVER METAL DECK APPLICATION WHERE INDICATED ON THE CONSTRUCTION DRAWINGS.

STRUCTURAL STEEL NOTES

1. ALL STEEL CONSTRUCTION INCLUDING FABRICATION, ERECTION AND MATERIALS SHALL COMPLY WITH ALL REQUIREMENTS OF THE 2016 AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND THE 2019 CBC.
2. ALL STRUCTURAL STEEL SHALL BE ASTM A36 UNLESS OTHERWISE NOTED. ALL WF (WIDE FLANGE) & WT (TEE) SHAPES TO BE ASTM A992 (F_Y=50,000 PSI) UNLESS NOTED OTHERWISE. ALL STRUCTURAL TUBING (TS OR HSS) SHALL BE ASTM A500 GRADE B (F_Y=46,000 PSI). ALL STEEL PIPE SHALL BE ASTM A53 (TYPE E OR S, GRADE B (F_Y=35,000 PSI)) SCHEDULE 40 WITH OUTSIDE DIAMETERS GIVEN UNLESS OTHERWISE NOTED.
3. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES UNLESS OTHERWISE NOTED AND SHALL CONFORM TO AISC & AWS D1.4. WHERE FILLET WELD SIZES ARE NOT SHOWN PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC SPECIFICATION. PAINTED SURFACES SHALL BE TOUCHED UP.
4. ALL WELDING SHALL BE PERFORMED BY QUALIFIED, CERTIFIED WELDERS.
5. BOLTS SHALL BE GALVANIZED ASTM F3125/F3125M GRADE A325 MINIMUM. BOLTED CONNECTIONS SHALL BE BEARING TYPE. SEE PLANS FOR LOCATION, NUMBER, & SIZE OF BOLTS. SPECIAL INSPECTION IS REQUIRED FOR HIGH STRENGTH BOLTS.
6. THREADED RODS SHALL BE ASTM F1554, GR 36 U.O.N. BOLTED CONNECTIONS SHALL BE BEARING TYPE. SEE PLANS FOR LOCATION, NUMBER, & SIZE OF BOLTS.
7. ALL HOLES FOR BOLTED CONNECTIONS SHALL BE 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER. USE STANDARD AISC GAGE AND PITCH FOR BOLTS EXCEPT AS NOTED OTHERWISE. HOLES FOR ANCHOR BOLTS IN BASE PLATES MAY BE AISC "OVERSIZE" HOLES WHERE ACCOMPANIED BY OVERSIZED HARDENED HOT DIPPED GALVANIZED WASHERS.
8. ALL SHOP FABRICATED STEEL STRUCTURAL MEMBERS FOR EXTERIOR USE SHALL BE HOT DIP GALVANIZED PER ASTM A123 AFTER FABRICATION & PAINTED PER CUSTOMER SPECIFICATIONS AS REQUIRED. STEEL FOR INTERIOR USE SHALL BE SHOP COAT OR GALVANIZED & PAINTED PER PLAN.
9. ALL FIELD FABRICATED GALVANIZED STEEL THAT IS CUT, GROUND, DRILLED, WELDED OR DAMAGED SHALL BE TREATED WITH "ZINC RICH" COLD GALVANIZING SPRAY OR COATING. NO RAW STEEL SHALL BE EXPOSED.
10. AT ALL WEB STIFFENER PLATES LEAVE ¾"ø (OR K, WHICHEVER IS LARGER) HOLE @ WEB/FLANGE INTERSECTION UNLESS NOTED OTHERWISE.
11. BOLTS AND NUTS AT ANTENNA & RRU MOUNTS TO BE ASTM F3125/F3125M GRADE A325 WITH A194M NUTS U.O.N.
12. ALL NUTS SHALL BE ASTM A563/A563M ALL WASHERS SHALL BE ASTM F436/F436M.
13. ALL STRUT MEMBERS USED IN EXTERIOR APPLICATIONS SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 OR ASTM A153.
14. ALL STAINLESS STEEL BOLTED CONNECTIONS SHALL BE ASTM F593-17 ALLOY GROUP 1 OR 2 AND STAINLESS STEEL NUTS SHALL BE ASTM F594-09 (2015).

EXPANSION & EPOXY ANCHORS

1. EXPANSION AND EPOXY ANCHORS SHALL BE IN CONFORMANCE WITH ALL REQUIREMENTS OF THE 2019 CALIFORNIA BUILDING CODE (CBC).
2. ALL ANCHORS PROVIDED SHALL BE INCLUDED IN EVALUATION REPORTS OF THE INTERNATIONAL CODE COUNCIL (ICC), AND SHALL BE EVALUATED FOR 2018 IBC MINIMUM REQUIREMENTS IN THE ICC REPORT
3. CONCRETE EXPANSION ANCHORS SHALL BE KWIK BOLT TZ2 BY HILTI, INC., TULSA, OKLAHOMA AS PER ICC REPORT NO. ESR-4266 OR APPROVED EQUIVALENT.
4. CMU EXPANSION ANCHORS SHALL BE KWIK BOLT TZ2 BY HILTI, INC., TULSA, OKLAHOMA AS PER ICC REPORT NO. ESR-4561 OR APPROVED EQUIVALENT. ANCHORS SHALL BE INSTALLED A MINIMUM OF 1⅜" FROM ANY VERTICAL MORTAR JOINT TYPICAL. ANCHORS TO BE SPACED 8 INCHES ON CENTER MINIMUM AND LIMITED TO ONE ANCHOR PER CELL.
5. CONCRETE ADHESIVE EPOXY ANCHORS SHALL BE HIT RE-500 V3 BY HILTI, INC., TULSA, OKLAHOMA AS PER ICC REPORT NO. ESR-3814 OR APPROVED EQUIVALENT.
6. GROUT FILLED CMU ADHESIVE EPOXY ANCHORS SHALL BE HIT-HY 200 BY HILTI, INC., TULSA, OKLAHOMA AS PER ICC REPORT NO. ESR-3963 OR APPROVED EQUIVALENT.
7. INSTALL EXPANSION AND EPOXY ANCHORS WITH SPECIAL INSPECTION IN ACCORDANCE WITH THE 2019 CBC, TABLE 1705.3, AND ALL REQUIREMENTS OF THE MANUFACTURER, THE MANUFACTURER'S ICC APPROVAL AND THESE DRAWINGS.
8. EXPANSION ANCHORS SHALL BE 304/316 STAINLESS STEEL U.O.N. EPOXY ANCHOR THREADED ROD SHALL BE ASTM F593 CW1 (316) (¼" TO ⅝") OR F593 CW2 (316) (¾" TO 1½") STAINLESS STEEL U.O.N.
9. LOCATE AND AVOID REINFORCEMENT AND OTHER EMBEDDED ITEMS WHEN INSTALLING ANCHORS, TYPICAL. SEE CONCRETE CORE DRILLING NOTES FOR ADDITIONAL INFORMATION.
10. THE SPECIAL INSPECTOR MUST MAKE PERIODIC INSPECTIONS DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE AND DIMENSIONS, CONCRETE MEMBER THICKNESS, ANCHOR SPACING, EDGE DISTANCES, TIGHTENING TORQUE, HOLE DIAMETER, DEPTH AND CLEANLINESS, ANCHOR EMBEDMENT AND ADHERENCE TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. SEE NOTE 11 BELOW FOR FREQUENCY OF INSPECTIONS.
11. 50% OF ALL ANCHORS, INCLUDING ALTERNATE BOLTS IN A GROUP OF ANCHORS, SHALL BE INSPECTED PER NOTE 10 ABOVE AND TORQUE TESTED PER THE ICC REPORT TEST VALUES NOTED BELOW:

KB TZ2:

CONCRETE TORQUE TEST VALUES:
⅜"=30 FT LB ½"=40 FT LB ⅝"=60 FT LB ¾"=125 FT LB

CMU TORQUE TEST VALUES:
⅜"=15 FT LB ½"=25 FT LB ⅝"=35 FT LB ¾"=50 FT LB

EPOXY ANCHOR:

CONCRETE TORQUE TEST VALUES:
½"=30 FT LB
(CONCRETE TENSION TEST VALUES TO BE DETERMINED AS NEEDED. A RFI WILL BE ISSUED IF NEEDED DURING CONSTRUCTION TO ESTABLISH THE REQUIRED TENSION TEST VALUES)

CFC CHAPTER 12 COMPLIANCE

TOTAL = 12 BATTERIES X 2.28 kWh/BATTERY = 27.36 kWh

(SINCE LESS THAN 70kWh OF CAPACITY, CFC CHAPTER 12, SECTIONS 1206.2.1-1206.2.12.6 NOT APPLICABLE)

BATTERY INFORMATION (BATTERY CAPACITY DATA-12V MONOBLOCKS)

BATTERY MODEL	TOTAL # OF BATTERY UNITS INSTALLED	AMP HOURS PER UNIT	TOTAL VOLTS PER UNIT	TOTAL kWh # OF BATTERIES x AMP HOURS PER UNIT x VOLTS PER UNIT / 1000
NORTHSTAR 210FT	12	210Ah	12V	12 x 210Ah x 12V/1000 = 27.36 kWh < 70kWh

BATTERY DATA CHART

ANTENNA SCHEDULE

		ANTENNA				RADIO UNIT		CABLING						
	SECTOR	TECHNOLOGY	ANTENNA MODEL	RAD CENTER	AZIMUTH	RRU MODEL	NO. OF RRU'S	NO. OF JUMPERS	JUMPER LENGTH	NO. OF HYBRID CABLES	HYBRID CABLE LENGTH	NO. OF COAX CABLES	COAX DIA.	COAX LENGTH
ALPHA SECTOR	A1	L600/L700/N600/ L2100/L1900/G1900	RFS-APXVAALL24_43-U-NA20	70'-0"	60°	RRUS-4480 B71/B85 RRUS-4460 B25/B66	2	8	10'	1	80'	–	–	–
	A2	L2500/N2500	ERICSSON AIR6419 B41	70'-0"	60°	–	–	–	–	–	–	–	–	–
BETA SECTOR	B1	L600/L700/N600/ L2100/L1900/G1900	RFS-APXVAALL24_43-U-NA20	70'-0"	180°	RRUS-4480 B71/B85 RRUS-4460 B25/B66	2	8	10'	1	80'	–	–	–
	B2	L2500/N2500	ERICSSON AIR6419 B41	70'-0"	180°	–	–	–	–	–	–	–	–	–

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CHECKED BY: S. SAVIG
APPROVED BY: –
DATE: 09/06/23

Streamline Engineering and Design, Inc.
8445 Sierra College Blvd. Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1941
E-Mail: kevin@streamlineeng.com Fax: 916-660-1930

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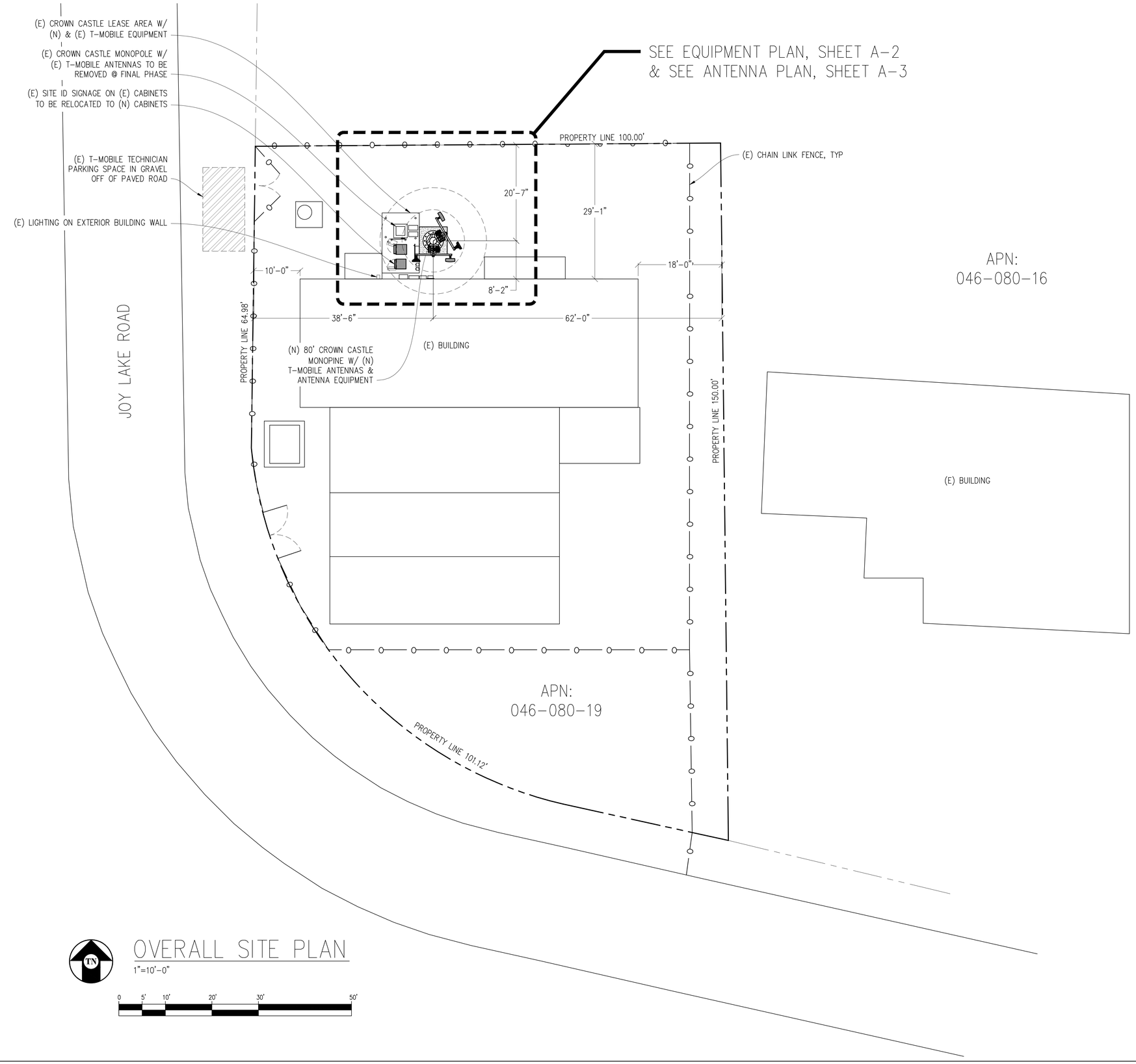
KEVIN R. SORENSEN
S4469

CROWN CASTLE
ONE PARK PLACE, SUITE 300
DUBLIN, CA 94568

SHEET TITLE:
NOTES

SHEET NUMBER:
T-2



OVERALL SITE PLAN

1"=10'-0"

0 5' 10' 20' 30' 50'

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S4469

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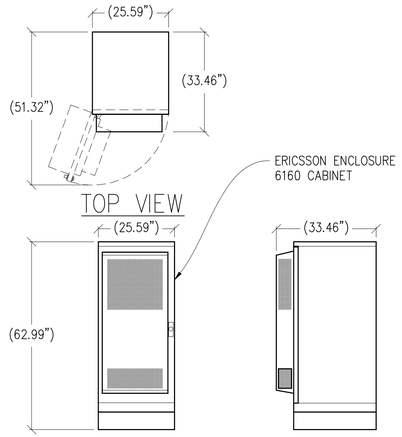
ONE PARK PLACE, SUITE 300
DUBLIN, CA 94568

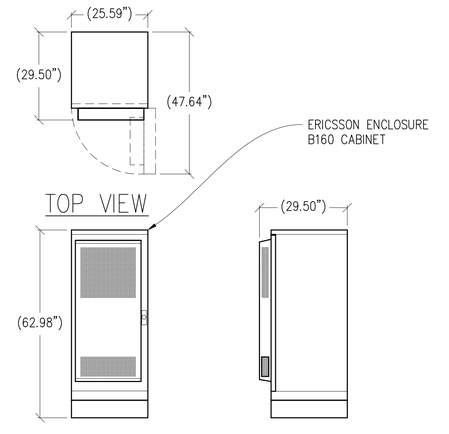
SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
A-1



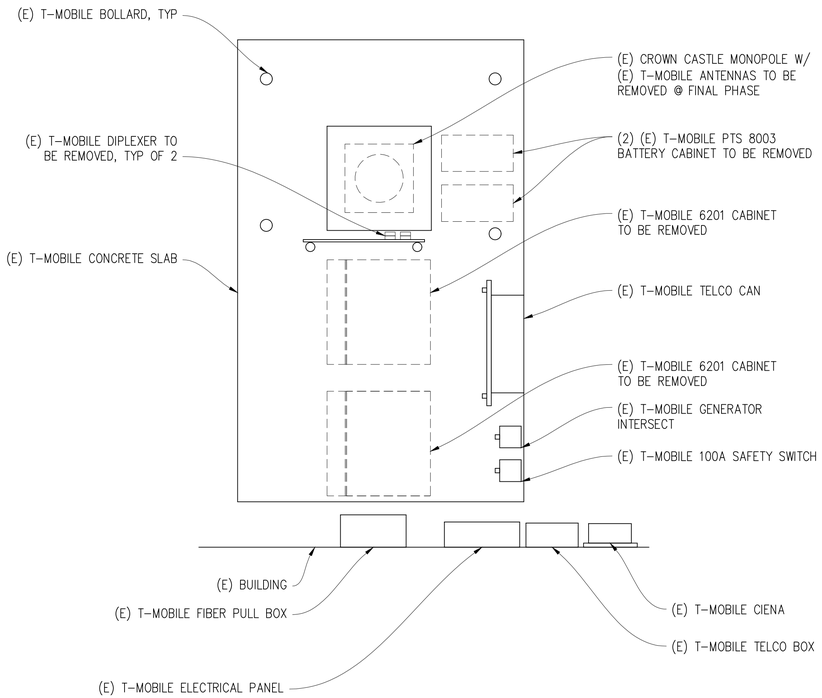
1 6160 CABINET DETAIL

½"=1'-0" WEIGHT = 750 LBS W/ POWER EQUIPMENT



2 B160 CABINET DETAIL

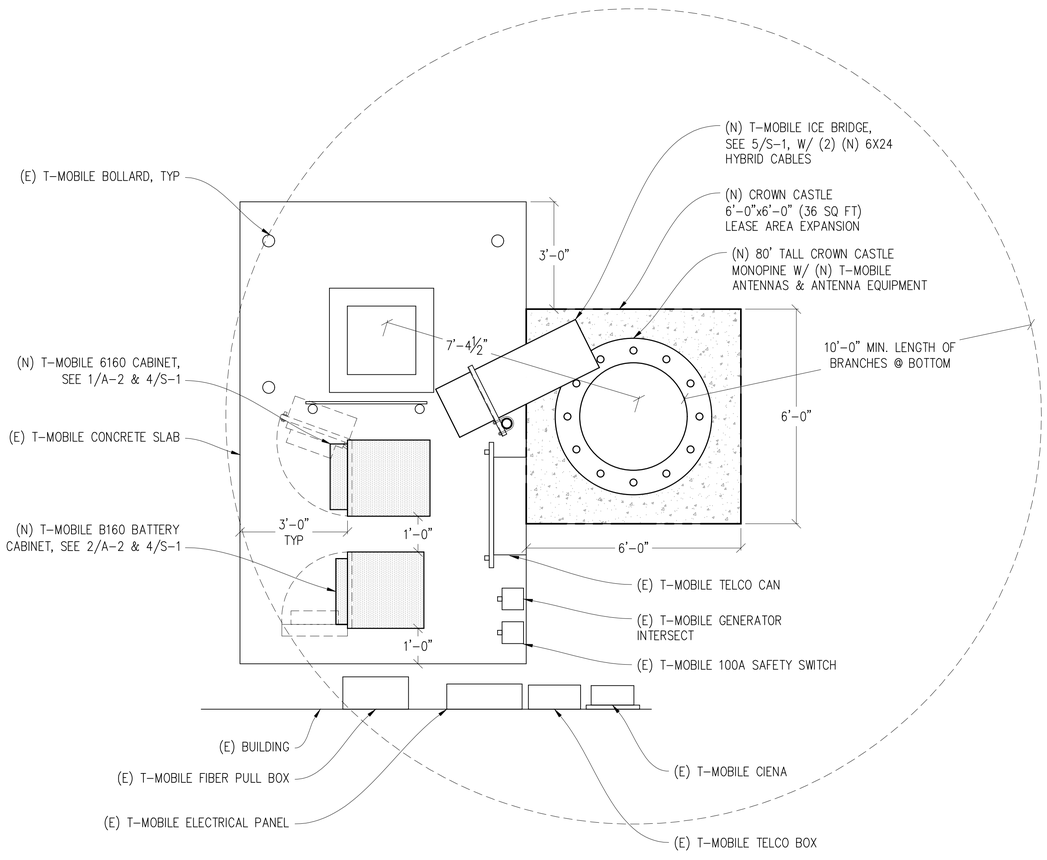
½"=1'-0" WEIGHT = 2,081 LBS W/ (12) 133 LBS BATTERIES



(E) EQUIPMENT PLAN

½"=1'-0"

0 6" 1' 2' 3' 5' 7' 10'



(N) EQUIPMENT PLAN

½"=1'-0"

0 6" 1' 2' 3' 5' 7' 10'

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S4469

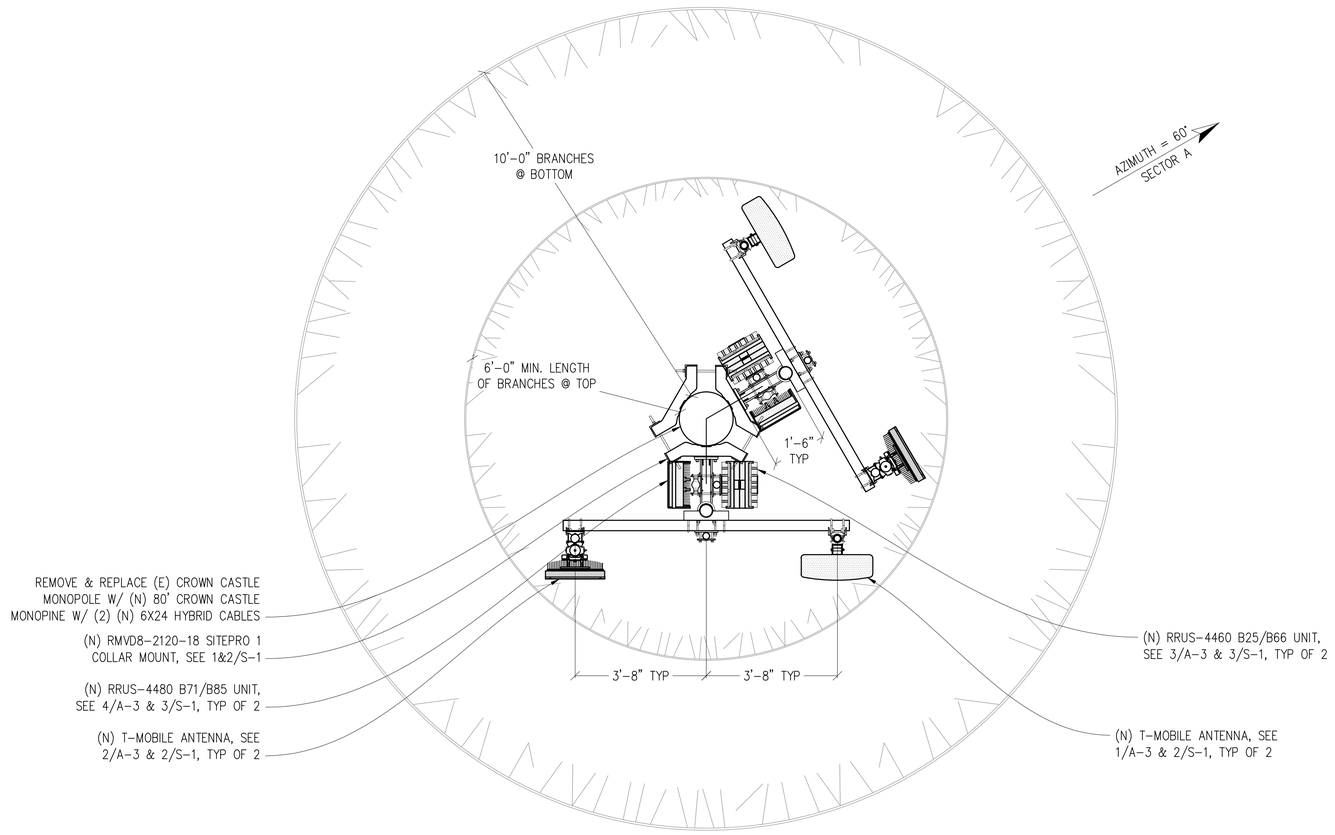
CROWN CASTLE
ONE PARK PLACE, SUITE 300
DUBLIN, CA 94568

SHEET TITLE:

EQUIPMENT PLAN & DETAILS

SHEET NUMBER:

A-2



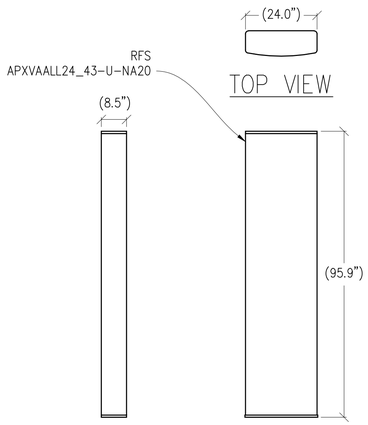
(N) ANTENNA PLAN

½"=1'-0"

NOTICE

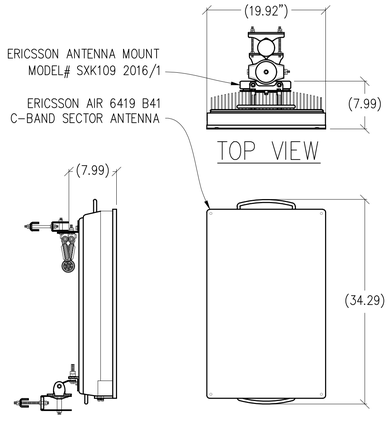
NEW MONOPOLE TO BE ANALYZED BY OTHERS. STREAMLINE ENGINEERING & DESIGN INC. IS NOT RESPONSIBLE FOR THE EVALUATION OF THE NEW POLE, BASE PLATE, ANCHOR BOLTS, FOUNDATION OR ANTENNA/RRU MOUNT FRAMING & CONNECTIONS FOR THE NEW LOADING CONDITIONS.

NOTE:
1. ALL (N) ANTENNA MOUNTS, & EXPOSED CABLES TO BE PAINTED TO MATCH (E) MONOPINE & BE FULLY WITHIN MONOPINE BRANCH RADIUS.
2. PAINT OR 3M FILM WRAP ALL (N) ANTENNAS TO MATCH (E) MONOPINE



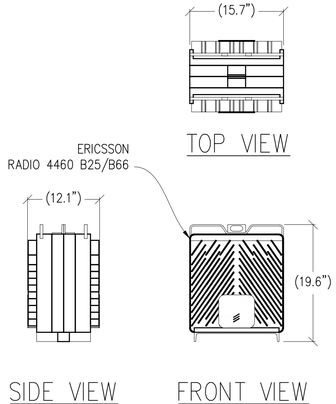
1 ANTENNA DETAIL

½"=1'-0" MAX WEIGHT: 117.9 LBS



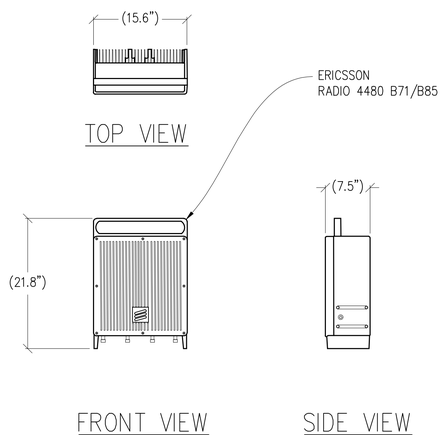
2 ANTENNA DETAIL

1"=1'-0" MAX WEIGHT W/ MOUNT: 76.5 LBS



3 RADIO 4460 B25/B66 DETAIL

1"=1'-0" MAX WEIGHT: 109 LBS



4 RADIO 4480 B71/B85 DETAIL

1"=1'-0" MAX WEIGHT: 93 LBS

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CHECKED BY: S. SAVIG
APPROVED BY: –
DATE: 09/06/23

Streamline Engineering and Design, Inc.
8445 Sierra College Blvd, Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1941
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

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KEVIN R. SORENSEN
S4469

CROWN CASTLE

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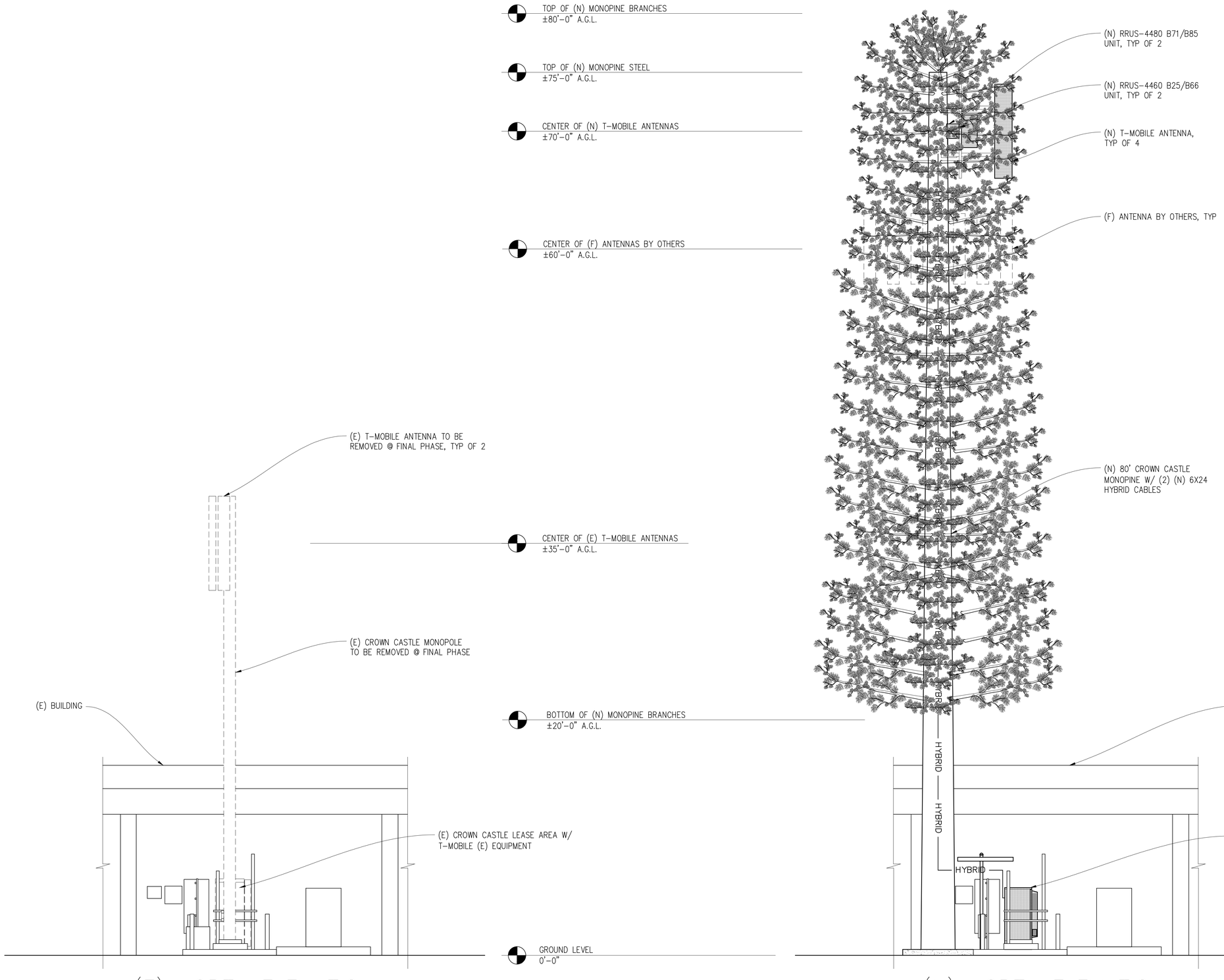
DUBLIN, CA 94568

SHEET TITLE:
ANTENNA PLAN & DETAILS

SHEET NUMBER:
A-3



(E) NORTH ELEVATION

¼"=1'-0"

(N) NORTH ELEVATION

¼"=1'-0"

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S4469

CROWN CASTLE

ONE PARK PLACE, SUITE 300
DUBLIN, CA 94568

SHEET TITLE:

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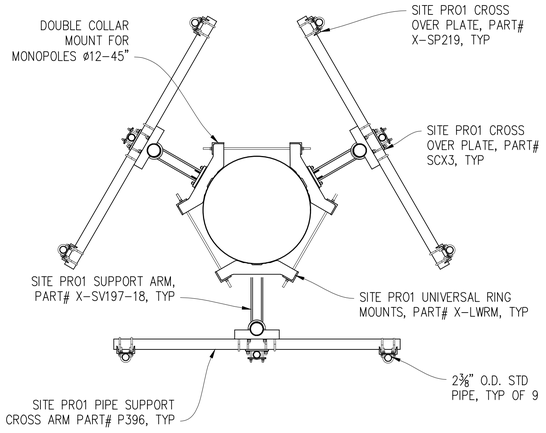
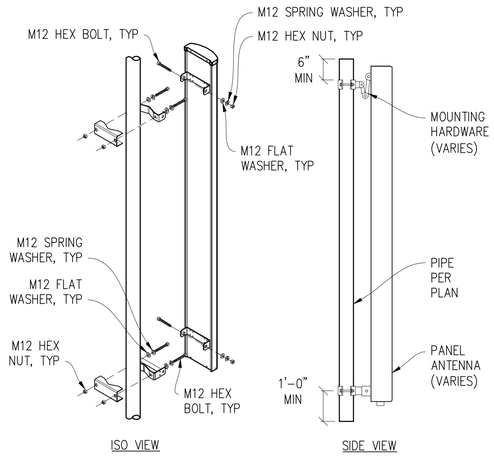
SHEET NUMBER:

A-4



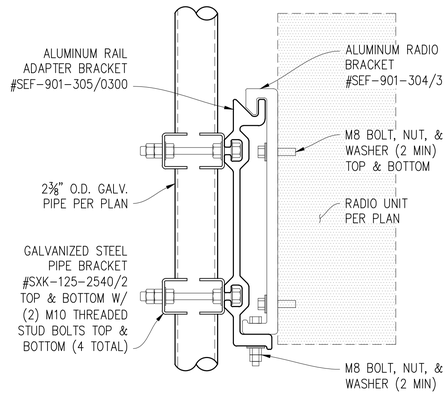
1 RMVD8-2120-18 MOUNT

½"=1'-0"



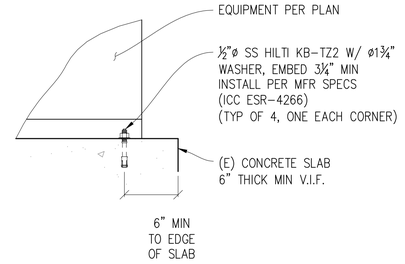
2 ANTENNA MOUNT

1"=1'-0"



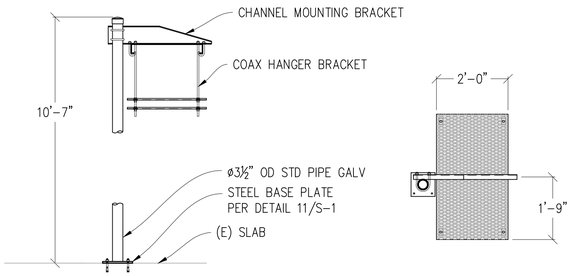
3 RADIO UNIT MOUNTING

3"=1'-0"



4 CABINET TO CONC

1½"=1'-0"



FRONT VIEW

TOP VIEW

5 ICE BRIDGE DETAIL

½"=1'-0"

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KEVIN R. SORENSEN
S4469

CROWN CASTLE

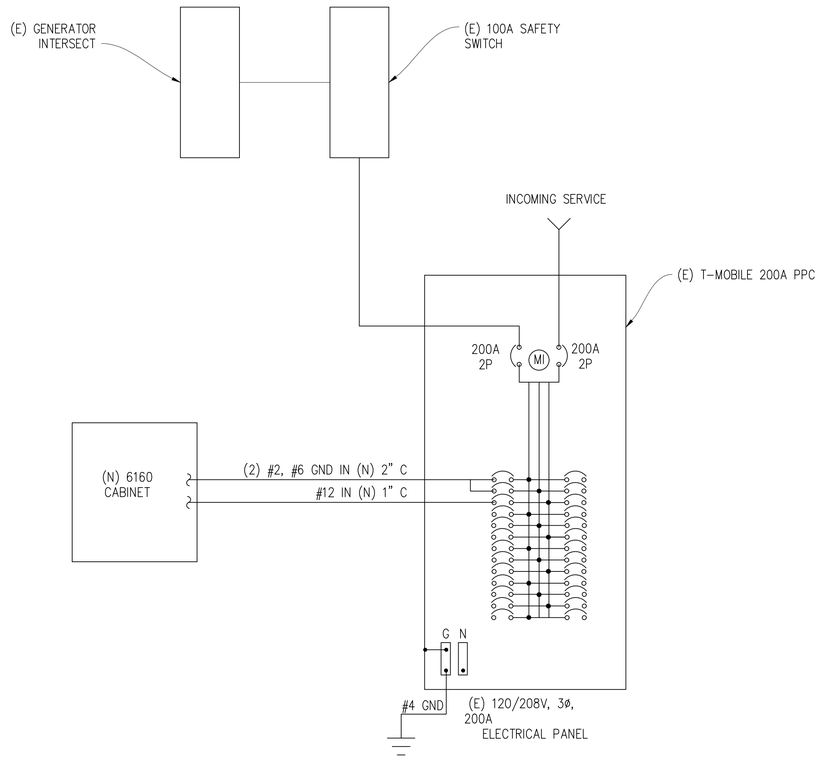
ONE PARK PLACE, SUITE 300
DUBLIN, CA 94568

SHEET TITLE:

STRUCTURAL DETAILS

SHEET NUMBER:

S-1



SINGLE LINE DIAGRAM

ELECTRIC LEGEND

- MI — MECHANICAL INTERLINK
- M — METER
- CIRCUIT BREAKER
- SERVICE GROUND
- WIRED CONNECTION
- TIMER SWITCH, WATERPROOF
- OUTDOOR LIGHT
- GFI OUTLET, WATERPROOF

ELECTRICAL NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE 2019 CEC AS WELL AS ALL ADOPTED STANDARDS, APPLICABLE STATE AND LOCAL CODES.
2. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, CONDUCTORS, PULL BOXES, TRANSFORMER PADS, POLE RISERS, AND PERFORM ALL TRENCHING AND BACKFILLING REQUIRED IN THE PLANS.
3. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER PLAN SPECIFICATIONS.
4. ALL CIRCUIT BREAKERS, FUSES, AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTION RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED WITH A MINIMUM OF 10,000 A.I.C. OR AS REQUIRED.
5. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
6. ELECTRICAL WIRING SHALL BE COPPER #12 AWG MIN WITH TYPE THHN, THWN-2 OR THW-2, INSULATION RATED FOR 90°C DRY OR 70°C WET.
7. ALL OUTDOOR EQUIPMENT SHALL HAVE NEMA 3R ENCLOSURE.
8. ALL BURIED WIRE SHALL RUN THROUGH SCHEDULE 40 PVC CONDUIT UNLESS OTHERWISE NOTED.
9. A GROUND WIRE IS TO BE PULLED IN ALL CONDUITS.
10. WHERE ELECTRICAL WIRING OCCURS OUTSIDE A STRUCTURE AND HAS THE POTENTIAL FOR EXPOSURE TO WEATHER, WIRING SHALL BE IN WATERTIGHT GALVANIZED RIGID STEEL OR FLEXIBLE CONDUIT.
11. WHERE PLANS CALL FOR A NEW ELECTRICAL SERVICE, PRIOR TO SUBMITTING BID, CONTRACTOR SHALL VERIFY PLAN DETAILS WITH THE UTILITY'S SERVICE PLAN & REQ'MTS INCLUDING SERVICE VOLTAGE, METER LOCATION, MAIN DISCONNECTING MEANS, AND AIC REQ'MT, AND SHALL OBTAIN CLARIFICATION FROM THE PROJECT ENGINEER ON ANY DEVIATIONS FOUND IN THESE PLANS.
12. WHERE THESE PLANS SHOW A DC POWER PLANT, THE INSTALLATION OPERATING AT LESS THAN 50 VDC UNGROUNDED, 2-WIRE, SHALL COMPLY WITH ARTICLE 720, AS FOLLOWS:
    A. POWER PLANT SHALL BE SUPPLIED BY THE WIRELESS CARRIER AS A PULL-TAG ITEM AND INSTALLED BY THE CONTRACTOR.
    B. CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG COPPER MIN, CONDUCTORS FOR BRANCH CIRCUITS SUPPLYING MORE THAN ONE APPLIANCE SHALL BE 10 AWG CU MIN; CONTRACTOR SHALL SIZE CONDUCTORS BASED ON MFGR'S DATA FOR THE APPLIANCES SERVED.
    C. THERE ARE NO DC RECEPTACLES OR LUMINARIES ALLOWED ON THIS PROJECT. ALL CIRCUITS SHALL ORIGINATE AT AN INTEGRATED DOUBLE LUG TAP OR SOCKET TERMINATION ON AN INTEGRATED DC CIRCUIT BREAKER AT AN INDIVIDUAL RECTIFIER MODULE AND TERMINATE AT THE SPECIALIZED LUG ON THE RESPECTIVE APPLIANCE AS A SINGLE RUN OF WIRE WITHOUT SPLICES. ALL DC WIRING SHALL BE LABELED AT THE DC PLANT WITH THE APPLIANCE SERVED AND THE DC VOLTAGE.
    D. ALL CABLING SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND SUPPORTED BY BUILDING STRUCTURE, EG. (N) CABLE TRAY OVERHEAD, IN SUCH A MANNER THAT THE CABLE WILL NOT BE DAMAGED BY NORMAL USE.

PANEL SCHEDULE

NAMEPLATE : PANEL A				SC LEVEL : 10,000				VOLTS: 120V/208V, 3ø			
LOCATION : OUTSIDE								BUS AMPS: 200A			
MOUNTING : WALL								MAIN CB: 200A			
ØA	ØB	ØC	LOAD DESCRIPTION	BKR AMP/ POLE	CIRCUIT NO		BKR AMP/ POLE	LOAD DESCRIPTION	ØA	ØB	ØC
LOAD VA	LOAD VA	LOAD VA							LOAD VA	LOAD VA	LOAD VA
6500			(N) 6160 CABINET	125/2	1	2	–	BLANK			
	6500		" "	" "	3	4	–	" "			
		300	(N) SERVICE OUTLET	15/1	5	6	–	MAIN			0
			BLANK	–	7	8	–	" "	0		
			" "	–	9	10	–	BLANK			
			" "	–	11	12	–	" "			
			" "	–	13	14	–	" "			
			" "	–	15	16	–	" "			
			" "	–	17	18	–	" "			
			" "	–	19	20	–	" "			
			" "	–	21	22	–	" "			
			" "	–	23	24	–	" "			
			" "	–	25	26	–	" "			
6500	6500	300	PHASE TOTALS					PHASE TOTALS	0	0	0
TOTAL VA =	13300		TOTAL AMPS =	37							

NOTE: EXISTING LOADS HAVE NOT BEEN FIELD VERIFIED. THEY ARE APPROXIMATE BASED ON EXISTING CB SIZES. CONTACT THE ENGINEER IF THE LOADS DIFFER FROM THAT WHICH IS SHOWN ON THE PLANS

SA344 395 & WASHOE CITY/O

827182

18400 JOY LAKE RD
WASHOE VALLEY, NV 89704

ISSUE STATUS

△	DATE	DESCRIPTION	BY
	05/03/22	CD 90%	C.T.C
	09/29/22	CD 95%	S.V.
	09/06/23	CLIENT REV	C.C.
	–	–	–
	–	–	–
	–	–	–

DRAWN BY:	C. COLSTON
CHECKED BY:	S. SAVIG
APPROVED BY:	–
DATE:	09/06/23

Streamline Engineering and Design, Inc.
8445 Sierra College Blvd. Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1941
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

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PRELIMINARY: NOT FOR CONSTRUCTION

KEVIN R. SORENSEN
S4469

CROWN CASTLE

ONE PARK PLACE, SUITE 300
DUBLIN, CA 94568

SHEET TITLE:

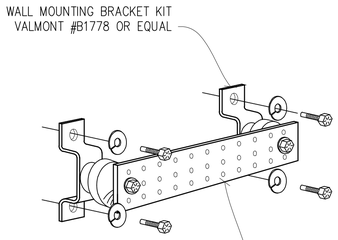
ELECTRICAL PLAN

SHEET NUMBER:

E-1

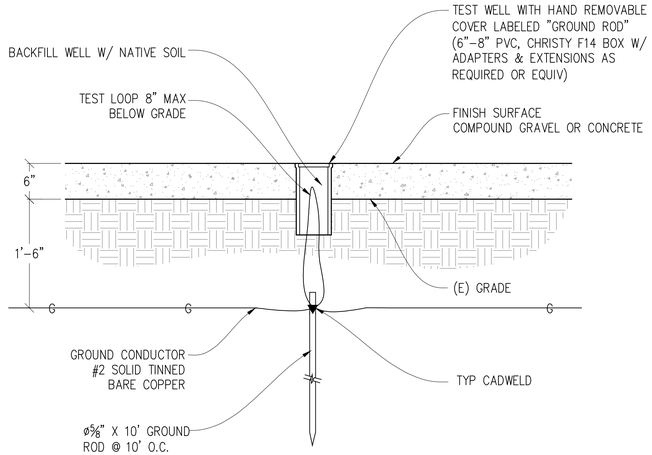
GROUND LEGEND

- MECHANICAL CONNECTION
- EXOTHERMIC CADWELD
- TYP. CADWELD INSPECTION WELL
- TYP ⅝" DIA. X 10'-0" LONG COPPER CLAD GROUND ROD @ 10' O.C. MAX & 18" MIN BELOW FINISH GRADE
- GATE GROUNDING STRAP
- —G— TYP #2 TINNED BCW UNDERGROUND GND RING @ 18" MIN BELOW FINISH GRADE
- —SGI— GROUND WIRE #2 STRANDED GREEN INSULATED WIRE



1 GROUND BUSS DETAIL

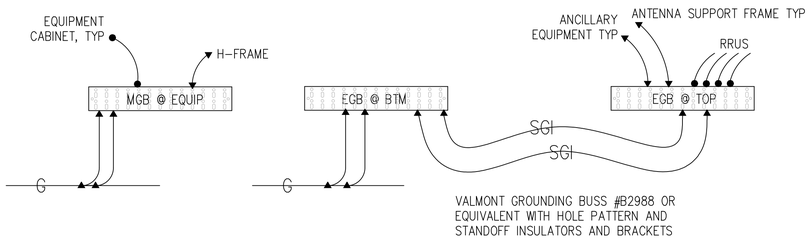
NOT TO SCALE

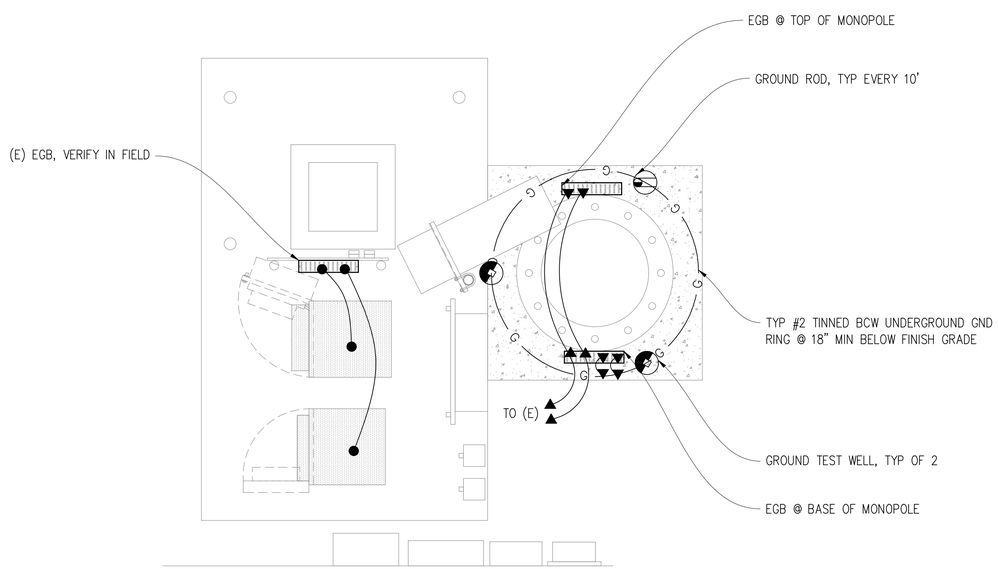


2 TEST WELL DETAIL

1"=1'

NOTE: THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS. THE GROUND RODS SHALL BE ⅝" X 10' COPPER CLAD STEEL SPACED AT 10' INTERVALS MAX. RODS SHALL BE INTERCONNECTED WITH #2 SOLID TINNED BARE COPPER GROUND WIRE BURIED A MINIMUM 18" BELOW GRADE. AN ONSITE INSPECTION BY THE OWNER SHALL BE REQUIRED PRIOR TO ANY BACKFILL.





GROUNDING PLAN

½"=1'-0"

SA344 395 & WASHOE CITY/O

827182

18400 JOY LAKE RD
WASHOE VALLEY, NV 89704

ISSUE STATUS

△	DATE	DESCRIPTION	BY
	05/03/22	CD 90%	C.T.C
	09/29/22	CD 95%	S.V.
	09/06/23	CLIENT REV	C.C.
	–	–	–
	–	–	–
	–	–	–

DRAWN BY:	C. COLSTON
CHECKED BY:	S. SAVIG
APPROVED BY:	–
DATE:	09/06/23

Streamline Engineering and Design, Inc.
8445 Sierra College Blvd. Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1930
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

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PRELIMINARY: NOT FOR CONSTRUCTION

KEVIN R. SORENSEN
S4469

CROWN CASTLE
ONE PARK PLACE, SUITE 300
DUBLIN, CA 94568

SHEET TITLE:

GROUNDING PLAN & DETAILS

SHEET NUMBER:

E-2

CHAPPEL, BRITIAN H

From: MILLER, BRIAHNA J
Sent: Friday, February 10, 2023 3:10 PM
To: CHAPPEL, BRITIAN H; MONTEZ, REBECCA
Cc: TURNER, MICHAEL L
Subject: RE: REQUEST SIGNATURE SC09344 827182 18400 JOY LAKE ROAD WASHOE VALLEY ANCHOR | D&S RT-114866

Hi Brit and Rebecca,

Since there is no impact to the building or land, there are no concerns from GRE to sign this document allowing the project to proceed.

If there are any changes in scope that may impact the building or land, please let me know so we can ensure there is no impact to our assets.

Thank you,
Briahna

From: CHAPPEL, BRITIAN H <bc2892@att.com>
Sent: Monday, January 30, 2023 2:14 PM
To: MILLER, BRIAHNA J <bm0934@att.com>; MONTEZ, REBECCA <rx235e@att.com>
Cc: TURNER, MICHAEL L <mt0932@att.com>
Subject: RE: REQUEST SIGNATURE SC09344 827182 18400 JOY LAKE ROAD WASHOE VALLEY ANCHOR | D&S RT-114866

Briahna,

I see nothing that would impact our building or land and willing to sign the document once approved to proceed. Thanks

Brit Chappel
SR Manager Planning, Design & Construction
AT&T Global Real Estate Operations
Office (775)858-7531
Cell (775)200-6438
Fax (775)858-1842

From: MILLER, BRIAHNA J <bm0934@att.com>
Sent: Monday, January 30, 2023 12:48 PM
To: CHAPPEL, BRITIAN H <bc2892@att.com>; MONTEZ, REBECCA <rx235e@att.com>

SiteSafe
A QUALTEK Company

8618 Westwood Center Drive, Suite 315, Vienna, VA 22182
703.276.1100 ● 703.276.1169 fax
info@sitesafe.com ● www.sitesafe.com

Crown Castle on behalf of T-Mobile
Site BU Number – 827182
Application ID – 593627
Site Name – SA344 395 & Washoe City/O
Site Compliance Report

18400 Joy Lake Road
Washoe Valley, NV 89704

Latitude: N39-19-30.90
Longitude: W119-48-50.60
Structure Type: Monopine

Report generated date: June 17, 2022
Report by: Leo Romero
Customer Contact: Brian Leegwater

T-Mobile will be compliant upon completion of the remediation identified in Section 2.2.

© 2022 Site Safe, LLC, Vienna, VA

sealed 20jun2022 mike@h2dc.com
H2DC PLLC NV CoA#: 24139

Crown Castle on behalf of T-Mobile
SA344 395 & Washoe City/O - 827182
Radio Frequency (RF) Site Compliance Report

18400 Joy Lake Road, Washoe Valley, NV 89704

8618 Westwood Center Drive • Suite 315 • Vienna, VA 22182
703.276.1100 • info@sitesafe.com

Table of Contents

1 Executive Summary

Crown Castle on behalf of T-Mobile has contracted with Site Safe, LLC (Sitesafe), an independent Radio Frequency (RF) regulatory and engineering consulting firm, to determine whether the proposed communications site, 827182 - SA344 395 & Washoe City/O, located at 18400 Joy Lake Road, Washoe Valley, NV, is in compliance with the Federal Communications Commission (FCC) Rules and Regulations for RF exposure.

This report contains a detailed summary of the RF environment at the site including:

- Diagram of the site
- Inventory of the make / model of all antennas
- Theoretical MPE based on modeling

This report addresses exposure to radio frequency electromagnetic fields in accordance with the FCC Rules and Regulations for all individuals, classified in two groups, "Occupational or Controlled" and "General Public or Uncontrolled."

T-Mobile will be compliant with the FCC Rules and Regulations, as described in OET Bulletin 65, **upon implementation of the proposed remediation.** The corrective actions needed to make this site compliant are located in Section 2.2.

T-Mobile proposes to make modifications to an existing site. The proposed antennas are noted as "Proposed" in the antenna table under Section 4.

This document and the conclusions herein are based on the information provided by Crown Castle on behalf of T-Mobile.

If you have any questions regarding RF safety and regulatory compliance, please do not hesitate to contact Sitesafe's Customer Support Department at (703) 276-1100.

2 Site Compliance

2.1 Site Compliance Statement

Upon evaluation of the cumulative RF exposure levels from all operators at this site, Sitesafe has determined that:

T-Mobile will be compliant with the FCC Rules and Regulations, as described in OET Bulletin 65, **upon implementation of the proposed remediation.** The corrective actions needed to make this site compliant are located in Section 2.2.

The compliance determination is based on theoretical modeling, RF signage placement recommendations, proposed antenna inventory and/or the level of restricted access to the antennas at the site. Any deviation from the proposed T-Mobile deployment plan could result in the site being rendered non-compliant upon further evaluation.

2.2 Actions for Site Compliance

Based on common industry practice and our understanding of FCC and OSHA requirements, this section provides a statement of recommendations for site compliance. If required, RF alert signage recommendations have been proposed based on theoretical analysis of MPE levels. Where applicable, barriers can consist of locked doors, fencing, railing, rope, chain, paint striping or tape, combined with RF alert signage.

T-Mobile will be compliant if the following changes are implemented:

Base of Monopine (Proposed)

(1) Warning sign required.

Note: The compound gate or the monopine access/climbing point must be locked/restricted for the site to be in compliance.

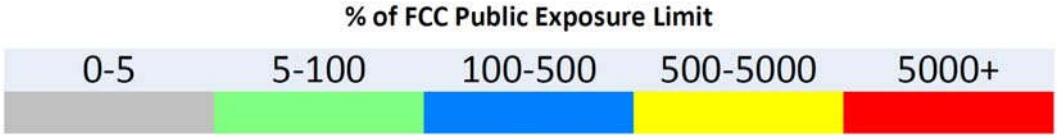
Note: Ensure all existing signage documented in this report still exist on site unless otherwise indicated.

3 Analysis

3.1 RF Exposure Diagram

The RF diagram(s) below display theoretical percentage of the Maximum Permissible Exposure for all systems at the site. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix B.

The key at the bottom of each diagram indicates if percentages displayed are referenced to FCC **General Public** Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:



This table displays the maximum theoretical percentage of the FCC's General Public MPE limits:

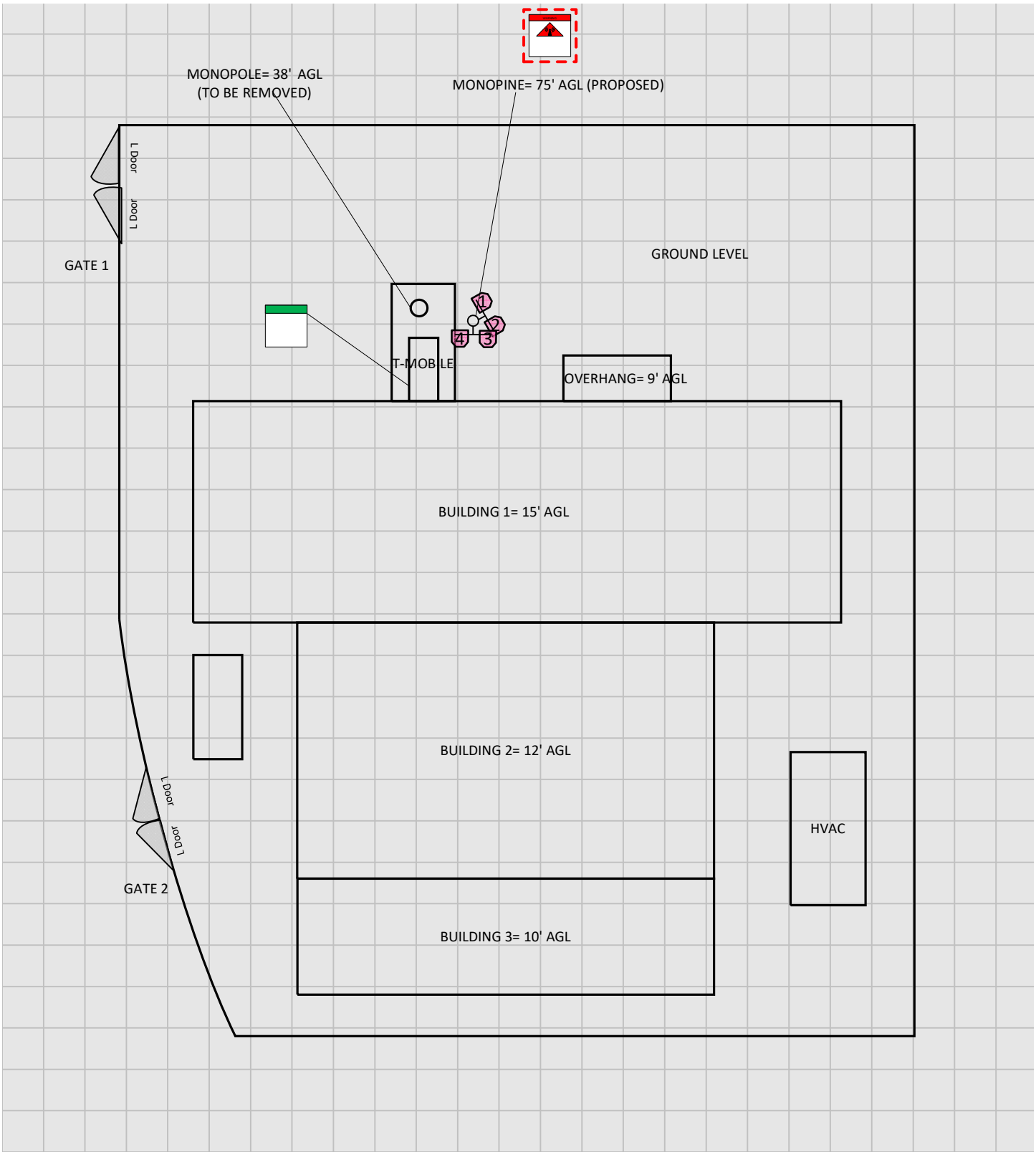
	General Public Levels:	
Exposure Type:	**Maximum**	**Spatial Average**
Reference Level:	**Antenna**	**Nearby Buildings / Ground**
T-Mobile:	80,120.0%	<1%
Composite:	80,120.0%	<1%

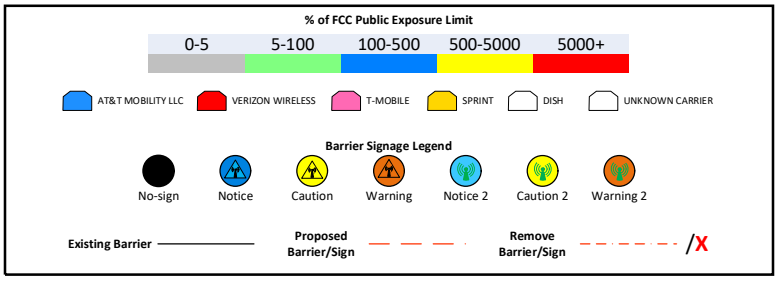
Note: On the diagrams shown below, each level is marked with a height. For all diagrams that are marked as *Spatially Averaged*, the modeling program will spatially average the exposure within the area six feet above each set level. This provides an accurate spatial average of the percentage of the FCC's MPE limits within an accessible area.

In the RF exposure simulations below, all heights are reflected with respect to ground level. Each different area, rooftop, or platform level is labeled with its height relative to the main site level. Exposure is calculated appropriately based on the relative height and location of that area to all antennas. The analyzed elevations in the RF exposure simulations are as follows:

- Ground Level = 0'
- Building 1 = 15'
- Building 2 = 13'
- Building 3 = 10'
- Overhang = 9'

RF Exposure Simulation For: SA344 395 & Washoe City/O
Composite View





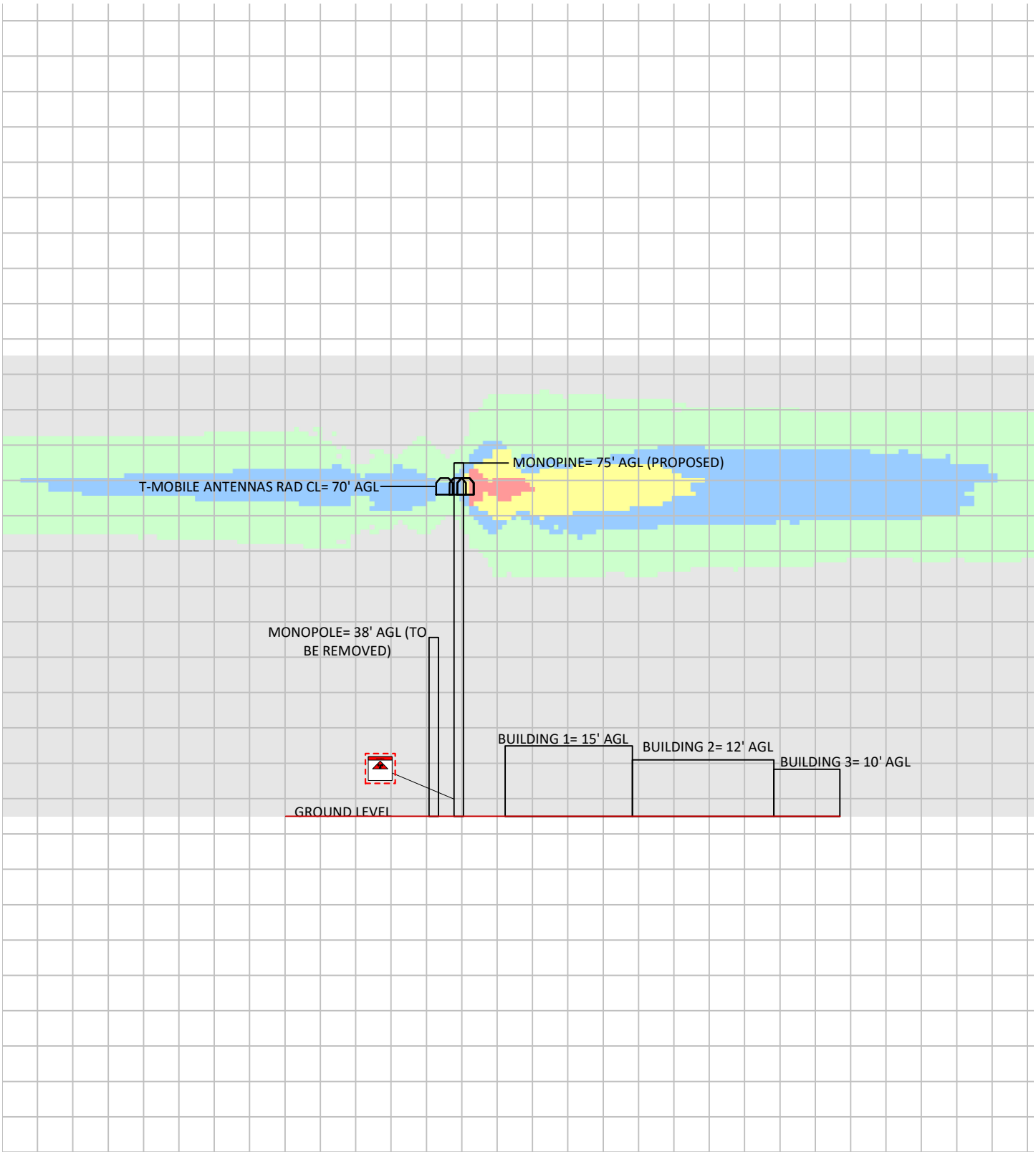
(Feet)

0 8.3 16.6

www.sitesafe.com
6/17/2022 2:08:53 PM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Spatially Averaged

RF Exposure Simulation For: SA344 395 & Washoe City/O
Elevation View



% of FCC Public Exposure Limit

0-5	5-100	100-500	500-5000	5000+

AT&T MOBILITY LLC | VERIZON WIRELESS | T-MOBILE | SPRINT | DISH | UNKNOWN CARRIER

Proposed Barrier/Sign — — — Remove Barrier/Sign - - - - /X

(Feet)

0 14.6 29.2

www.sitesafe.com
6/17/2022 2:41:40 PM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Single Level (0)

4 Antenna Inventory

The Antenna Inventory shows all transmitting antennas at the site. This inventory was provided by the customer and was utilized by Sitesafe to perform theoretical modeling of RF exposure. The inventory coincides with the site diagrams in this report, identifying each antenna's location at 827182 - SA344 395 & Washoe City/O. The antenna information collected includes the following information:

- Licensee or wireless operator name
- Frequency or frequency band
- Transmitter power – Transmitter Power Output ("TPO"), Effective Radiated Power ("ERP"), or Equivalent Isotropic Radiated Power ("EIRP")
- Antenna manufacturer make, model, and gain

The following antenna inventory was provided by the customer and was utilized to create the site model diagrams:

Ant ID	Operator	Antenna Make and Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	Power	Power Type	Power Units	TX Count	Misc Loss	Total ERP (Watts)	Z (ft) (AGL)	MDT (Deg)	EDT (Deg)
1	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	600	LTE	60	62.8	8	13.35	120.00	TPO	Watt	1	0.00	2595.26	70	0	0
1	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	600	5G	60	62.8	8	13.35	120.00	TPO	Watt	1	0.00	2595.26	70	0	0
1	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	700	LTE	60	63.7	8	13.75	160.00	TPO	Watt	1	0.00	3794.2	70	0	0
1	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	1900	GSM	60	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	70	0	0
1	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	1900	LTE	60	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	70	0	0
1	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	2100	LTE	60	59.4	8	16.45	280.00	TPO	Watt	1	0.00	12363.97	70	0	0
2	T-MOBILE (Proposed)	Ericsson AIR6419	Panel	2500	LTE	60	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	70	0	0
2	T-MOBILE (Proposed)	Ericsson AIR6419	Panel	2500	5G	60	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	70	0	0
3	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	600	LTE	180	62.8	8	13.35	120.00	TPO	Watt	1	0.00	2595.26	70	0	0
3	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	600	5G	180	62.8	8	13.35	120.00	TPO	Watt	1	0.00	2595.26	70	0	0
3	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	700	LTE	180	63.7	8	13.75	160.00	TPO	Watt	1	0.00	3794.2	70	0	0
3	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	1900	GSM	180	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	70	0	0
3	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	1900	LTE	180	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	70	0	0
3	T-MOBILE (Proposed)	RFS APXVAALL24_43-U-NA20	Panel	2100	LTE	180	59.4	8	16.45	280.00	TPO	Watt	1	0.00	12363.97	70	0	0
4	T-MOBILE (Proposed)	Ericsson AIR6419	Panel	2500	LTE	180	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	70	0	0
4	T-MOBILE (Proposed)	Ericsson AIR6419	Panel	2500	5G	180	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	70	0	0

Note: The Z reference indicates antenna height above ground level (AGL). ERP values provided by the client and used in the modeling may be greater than are currently deployed. For additional modeling information, refer to Appendix B. Proposed equipment is tagged as *(Proposed)* under *Operator* or *Antenna Make and Model*.

5 Engineer Certification

The professional engineer whose seal appears on the cover of this document hereby certifies and affirms:

That I am registered as a Professional Engineer in the jurisdiction indicated in the professional engineering stamp on the cover of this document; and

That I, Michael A. McGuire, P.E., am currently and actively licensed to provide (in this state/jurisdiction as indicated within the professional electrical engineering seal on the cover of this document) professional electrical engineering services, as an employee of Hurricane Hill Development Company, PLLC, a duly authorized/registered engineering firm (in this state, as applicable) on behalf of Site Safe, LLC; and

That I am thoroughly 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 Electromagnetic Fields; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Leo Romero.

June 17, 2022

Appendix A – Statement of Limiting Conditions

Sitesafe will not be responsible for matters of a legal nature that affect the site or property.

Due to the complexity of some wireless sites, Sitesafe performed this analysis and created this report utilizing best industry practices and due diligence. Sitesafe cannot be held accountable or responsible for anomalies or discrepancies due to actual site conditions (i.e. mislabeling of antennas or equipment, inaccessible cable runs, inaccessible antennas or equipment, etc.) or information or data supplied by T-Mobile, the site manager, or their affiliates, subcontractors or assigns.

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, observed during the survey of the subject property or that Sitesafe became aware of during the normal research involved in performing this survey. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data provided by a second party and physical data collected by Sitesafe, the physical data will be used.

Appendix B – Assumptions and Definitions

General Model Assumptions

In this site compliance 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. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The site has been modeled with these assumptions to show the maximum RF energy density. Sitesafe believes this to be a *worst-case* analysis, based on best available data. Areas modeled to predict exposure exposure greater than 100% of the applicable MPE level may not actually occur but are shown as a *worst-case* prediction that could be realized real time. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Thus, at any time, if power density measurements were made, we believe the real-time measurements would indicate levels below those depicted in the RF exposure diagram(s) in this report. By modeling in this way, Sitesafe has conservatively shown exclusion areas – areas that should not be entered without the use of a personal monitor, carriers reducing power, or performing real-time measurements to indicate real-time exposure levels.

Definitions

5% Rule – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, 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 for taking corrective actions to bring the site into compliance.

Compliance – The determination of whether a site complies with FCC standards with regards to Human Exposure to Radio Frequency Electromagnetic Fields from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to a half-wave dipole antenna.

Gain (of an antenna) – The ratio, usually expressed in decibels, of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. Gain may be considered for a specified polarization. Gain may be referenced to an isotropic antenna (dBi) or a half-wave dipole (dBd) antenna.

General Population/Uncontrolled Environment – Defined by the FCC as an area where RF exposure may occur to persons who are *unaware* of the potential for exposure and who have no control over their exposure. General Population is also referenced as General Public.

Generic Antenna – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use its industry specific knowledge of antenna models to select a worst-case scenario antenna to model the site.

Isotropic Antenna – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

Maximum Measurement – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

Maximum Permissible Exposure (MPE) – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC as an area where RF exposure may occur to persons who are **aware** of the potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of RF exposure on humans. The guideline was published in August 1997.

OSHA (Occupational Safety and Health Administration) – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit www.osha.gov.

Radio Frequency Exposure or Electromagnetic Fields – Electromagnetic waves that are propagated from antennas through space.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy a 6-foot tall human body will absorb while present in an electromagnetic field of energy.

Transmitter Power Output (TPO) – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.

Appendix C – Rules & Regulations

Explanation of Applicable Rules and Regulations

The FCC has set forth guidelines in OET Bulletin 65 for human exposure to radio frequency electromagnetic fields. Specific regulations regarding this topic are listed in Part 1, Subpart I, of Title 47 in the Code of Federal Regulations. Currently, there are two different levels of MPE - General Public MPE and Occupational MPE. An individual classified as Occupational can be defined as an individual who has received appropriate RF training and meets the conditions outlined below. General Public is defined as anyone who does not meet the conditions of being Occupational. FCC and OSHA Rules and Regulations define compliance in terms of total exposure to total RF energy, regardless of location of or proximity to the sources of energy.

It is the responsibility of all licensees to ensure these guidelines are maintained at all times. It is the ongoing responsibility of all licensees composing the site to maintain ongoing compliance with FCC rules and regulations. Individual licensees that contribute less than 5% MPE to any total area out of compliance are not responsible for corrective actions.

OSHA has adopted and enforces the FCC's exposure guidelines. A building owner or site manager can use this report as part of an overall RF Health and Safety Policy. It is important for building owners/site managers to identify areas in excess of the General Population MPE and ensure that only persons qualified as Occupational are granted access to those areas.

Occupational Environment Explained

The FCC definition of Occupational exposure limits apply to persons who:

- are exposed to RF energy as a consequence of their employment;
- have been made aware of the possibility of exposure; and
- can exercise control over their exposure.

OSHA guidelines go further to state that persons must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

In order to consider this site an Occupational Environment, the site must be controlled to prevent access by any individuals classified as the General Public. Compliance is also maintained when any non-occupational individuals (the General Public) are prevented from accessing areas indicated as Red or Yellow in the attached RF exposure diagram. In addition, a person must be aware of the RF environment into which they are entering. This can be accomplished by an RF Safety Awareness class, and by appropriate written documentation such as this Site Compliance Report.

All T-Mobile employees who require access to this site must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

Appendix D – General Safety Recommendations

The following are *general recommendations* appropriate for any site with accessible areas in excess of 100% General Public MPE. These recommendations are not specific to this site. These are safety recommendations appropriate for typical site management, building management, and other tenant operations.

1. All individuals needing access to the main site (or the area indicated to be in excess of General Public MPE) should wear a personal protective monitor (PPM), successfully complete proper RF Safety Awareness training, and have and be trained in the use of appropriate personal protective equipment.

2. All individuals needing access to the main site should be instructed to read and obey all posted placards and signs.

3. The site should be routinely inspected and this or similar report updated with the addition of any antennas or upon any changes to the RF environment including:

- adding new antennas that may have been located on the site
- removing of any existing antennas
- changes in the radiating power or number of RF emitters

4. Post the appropriate **NOTICE**, **CAUTION,** or **WARNING** sign at the main site access point(s) and other locations as required. Note: Please refer to RF Exposure Diagrams in Section 3.1 to inform <u>everyone</u> who has access to this site that beyond posted signs there may be levels in excess of the limits prescribed by the FCC. In addition to RF Advisory Signage, a RF Guideline Signage is recommended to be posted at the main site access point(s). The signs below are examples of signs meeting FCC guidelines.

5. Ensure that the site door remains locked (or appropriately controlled) to deny access to the general public if deemed as policy by the building/site owner.

6. For a General Public environment the five color levels identified in this analysis can be interpreted in the following manner:

- Gray represents areas predicted to be at 5% or less of the General Public MPE limits. *The General Public can access these areas with no restrictions.*

- Green represents areas predicted to be between 5% and 100% of the General Public MPE limits. *The General Public can access these areas with no restrictions.*
- Blue represents areas predicted to be between 100% and 500% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- Yellow represents areas predicted to be between 500% and 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- Red represents areas predicted to be greater than 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*

7. For an Occupational environment the five color levels identified in this analysis can be interpreted in the following manner:

- Gray represents areas predicted to be at 1% or less of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- Green represents areas predicted to be between 1% and 20% of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- Blue represents areas predicted to be between 20% and 100% of the Occupational MPE limits. Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure.
- Yellow represents areas predicted to be between 100% and 1000% of the Occupational MPE limits. Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure. Transmitter power reduction and/or time-averaging may be required.
- Red represents areas predicted to be greater than 1000% of the Occupational MPE limits. These areas are not safe for workers to be in for prolonged periods of time. Special procedures must be adhered to, such as lockout/tagout or transmitter power reduction, to minimize worker exposure to EME.

8. Use of a Personal Protective Monitor (PPM): When working around antennas, Sitesafe strongly recommends the use of a PPM. Wearing a PPM will properly forewarn the individual prior to entering an RF exposure area.

Keep a copy of this report available for all persons who must access the site. They should read this report and be aware of the potential hazards with regards to RF and MPE limits.

Additional Information

Additional RF information is available at the following sites:
https://www.fcc.gov/general/radio-frequency-safety-0
https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety

OSHA has additional information available at:
https://www.osha.gov/SLTC/radiofrequencyradiation/index.html

Appendix E – Regulatory Basis

FCC Rules and Regulations

In 1996, the Federal Communications Commission (FCC) adopted regulations for evaluating the effects of RF exposure in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 ("OET Bulletin 65"), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

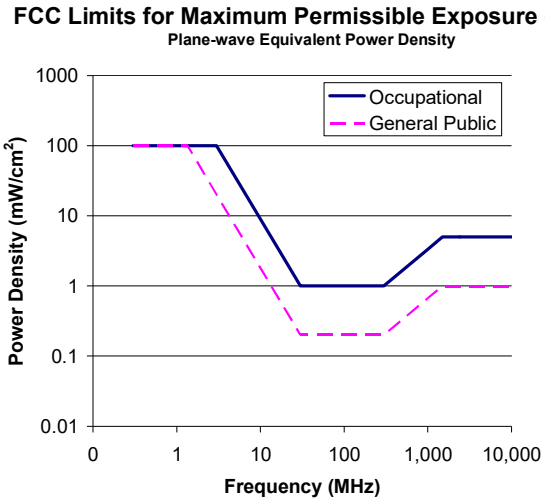
FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled environment" and General Public or "Uncontrolled environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limits. The General Public limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF hazard signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF hazard signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:



Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

Appendix F – Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

General Maintenance Work: Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

Training and Qualification Verification: All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a worker's understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet-based courses).

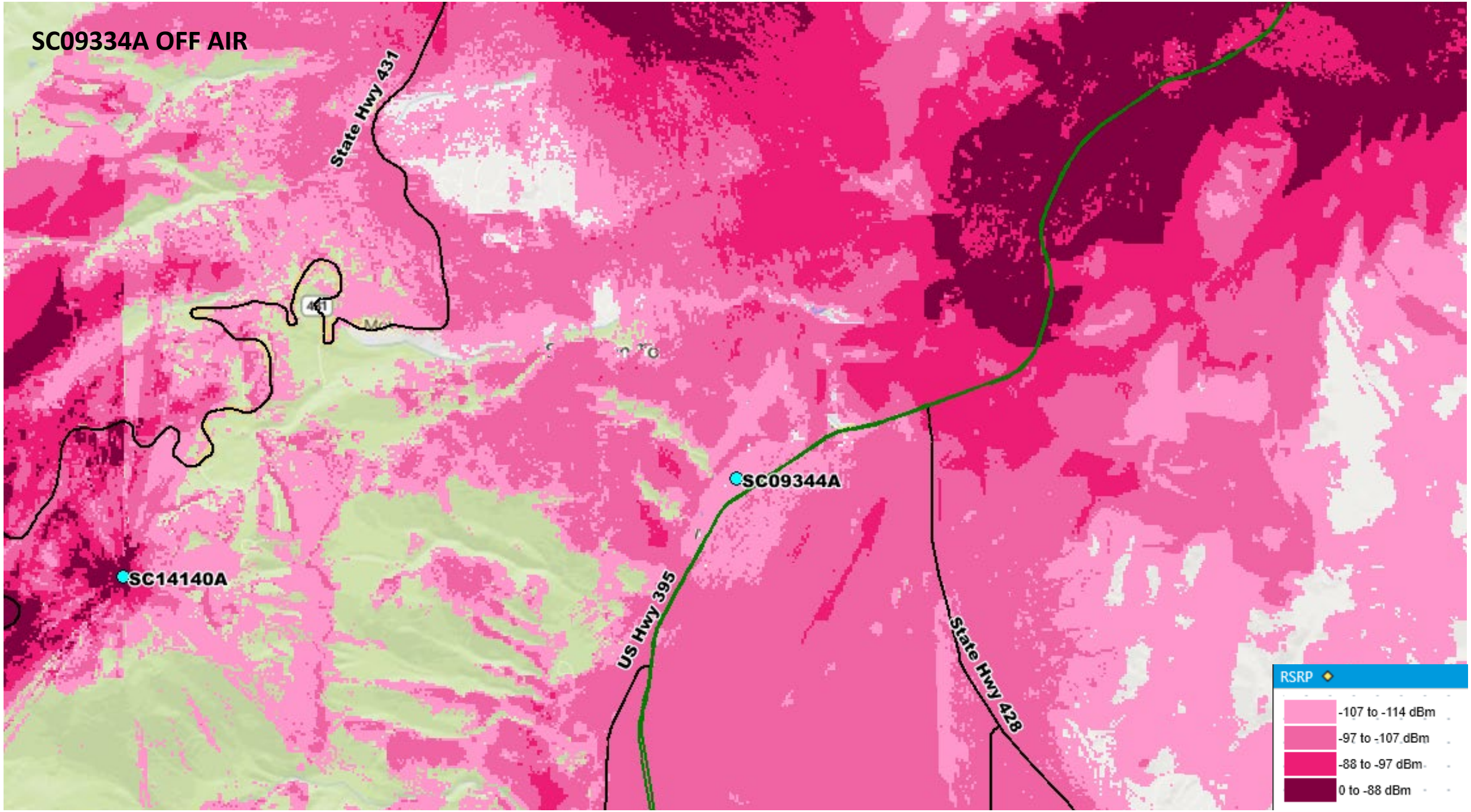
Physical Access Control: Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

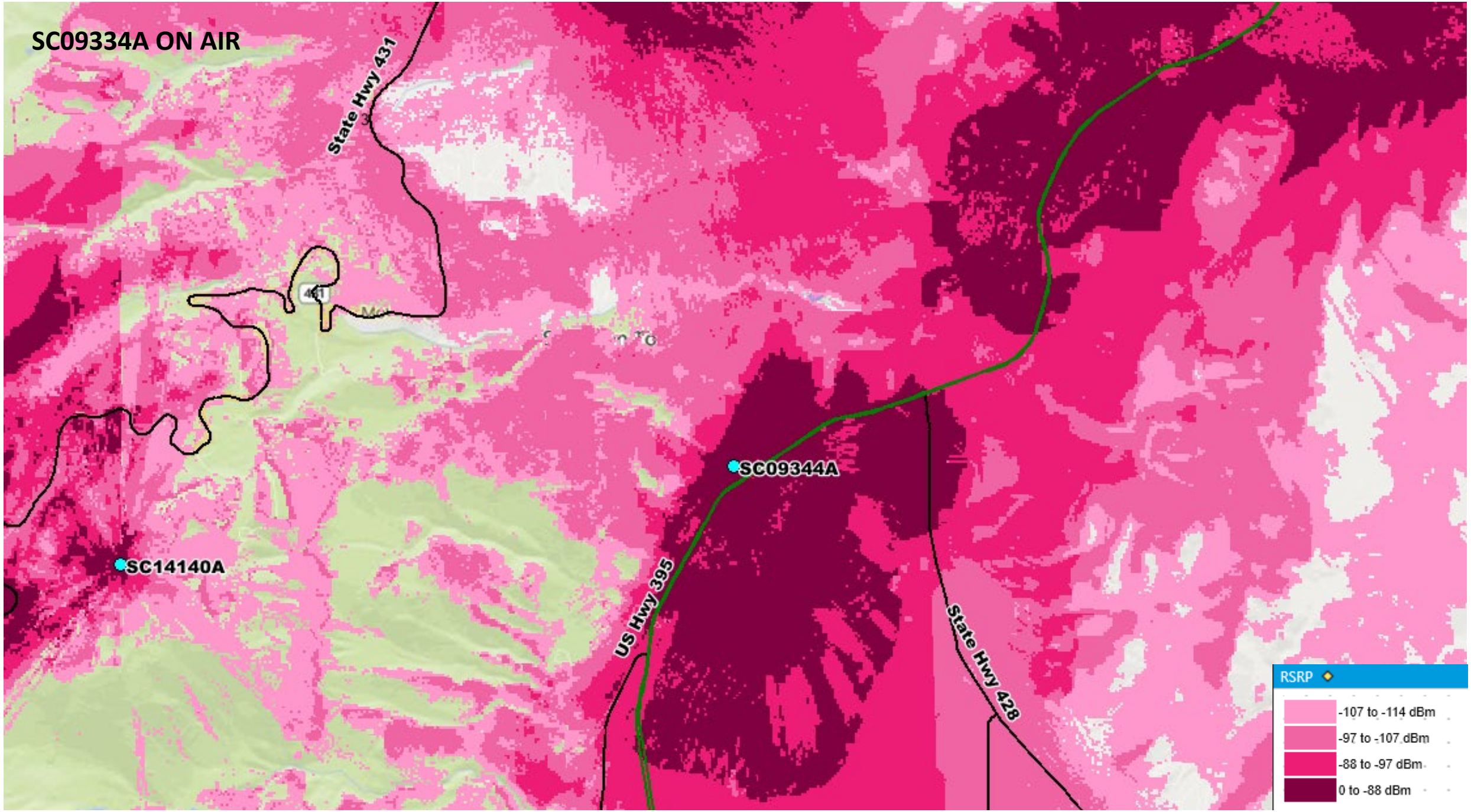
- Locked door or gate
- Alarmed door
- Locked ladder access
- Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

RF Signage: Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

Assume all antennas are active: Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

Site RF Exposure Diagram(s): Section 3 of this report contains RF Diagram(s) that outline various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst-case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.


SC09334A OFF AIR
State Hwy 431
SC09344A
SC14140A
US Hwy 395
State Hwy 428
RSRP
-107 to -114 dBm
-97 to -107 dBm
-88 to -97 dBm
0 to -88 dBm


SC09334A ON AIR
State Hwy 431
SC09344A
SC14140A
US Hwy 395
State Hwy 428
RSRP
-107 to -114 dBm
-97 to -107 dBm
-88 to -97 dBm
0 to -88 dBm

CROWN CASTLE

5/26/22

SA344 395 & Washoe City /O Site # 827182

18400 Joy Lake Road
Washoe Valley, NV

Aerial Map

Applied Imagination 510 914-0500