verizon

DIAMOND SPRINGS

961 PLEASANT VALLEY ROAD, DIAMOND SPRINGS, CA 95619

MDG LOCATION ID: 5000168151

PROJECT ID: 17126026

EL DORADO COUNTY CALIFORNIA

APPROVED
EL DORADO COUNTY
PLANNING COMMISSION
DATE: October 10, 2024
BY: Director Karen Garner

PROJECT DESCRIPTION

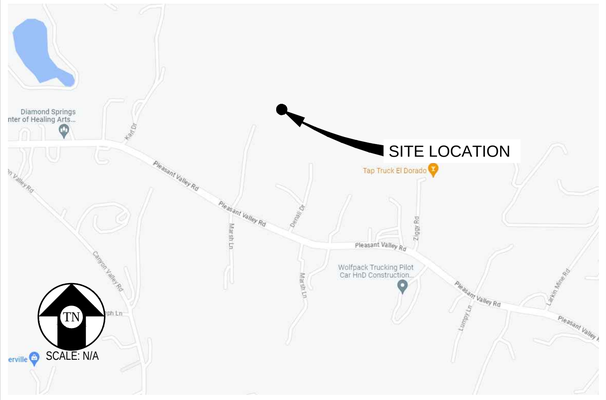
A (N) VERIZON WIRELESS UNMANNED TELECOMMUNICATION FACILITY CONSISTING OF INSTALLING:

- (N) LEASE AREA W/ (N) GROUND MOUNTED CABINETS & (N) DIESEL GENERATOR & (N) UTILITIES TO (N) SITE LOCATION
- (N) MONOPINE W/ (N) ANTENNAS & ANTENNA EQUIPMENT

PROJECT INFORMATION

SITE NAME:	DIAMOND SPRINGS
MDG LOCATION ID:	5000168151
COUNTY:	EL DORADO
JURISDICTION:	EL DORADO COUNTY
APN:	097-030-038
SITE ADDRESS:	961 PLEASANT VALLEY ROAD DIAMOND SPRINGS, CA 95619
CURRENT ZONING:	GENERAL COMMERCIAL (GC)
CONSTRUCTION TYPE:	V-B
OCCUPANCY TYPE:	U, (UNMANNED COMMUNICATIONS FACILITY)
POWER:	PG&E
LATITUDE:	N 38° 41' 43.85" NAD 83 N 38.695514° NAD 83
LONGITUDE:	W 120° 47' 50.58" NAD 83 W 120.797383° NAD 83
GROUND ELEVATION:	1963.5' AMSL
PROPERTY OWNER:	ZELLER GLOYD D JR & ZELLER ELIA S P.O. BOX 64 DIAMOND SPRINGS, CA 95619
APPLICANT:	VERIZON WIRELESS 2770 SHADELANDS DR, BLDG 11 WALNUT CREEK, CA 94598
SITE ACQUISITION COMPANY:	COMPLETE WIRELESS CONSULTING 2009 V STREET SACRAMENTO, CA 95818
LEASING CONTACT:	ATTN: PAUL BARNES (916) 217-2309 PBARNES@COMPLETEWIRELESS.NET
ZONING CONTACT:	ATTN: KEVIN GALLAGHER (916) 764-2632 KGALLAGHER@COMPLETEWIRELESS.NET
CONSTRUCTION CONTACT:	ATTN: DAN JEFFERSON (916) 224-5578 DJEFFERSON@COMPLETEWIRELESS.NET

VICINITY MAP



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:

2022 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, VOLUME 1&2, TITLE 24 C.C.R.
(2021 INTERNATIONAL BUILDING CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
(2020 NATIONAL ELECTRICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R.
(2021 UNIFORM MECHANICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
(2021 UNIFORM PLUMBING CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
(2021 INTERNATIONAL FIRE CODE AND 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.
2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
ANSI/EIA-TIA-222-H

ALONG WITH ANY OTHER APPLICABLE LOCAL & STATE LAWS AND REGULATIONS

DISABLED ACCESS REQUIREMENTS

THIS FACILITY IS UNMANNED & NOT FOR HUMAN HABITATION. DISABLED ACCESS & REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH CALIFORNIA STATE BUILDING CODE, TITLE 24 PART 2, SECTION 11B-203.5

SHEET INDEX

Issued For:

DIAMOND SPRINGS

961 PLEASANT VALLEY ROAD
DIAMOND SPRINGS, CA 95619

PREPARED FOR

verizon

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:

COMPLETE Wireless Consulting, Inc.

MDG LOCATION ID:	5000168151
PROJECT ID:	17126026
DRAWN BY:	-
CHECKED BY:	N. GEORGE
APPROVED BY:	-

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	01/17/24	CLIENT REV	D.H.
2	11/09/23	ZD 100%	A.A.
1	08/21/23	CLIENT REV	A.A.
0	08/16/23	ZD 90%	-

Licensee:

PRELIMINARY: NOT FOR CONSTRUCTION

KEVIN R. SORENSEN
S4469

ENGINEER:

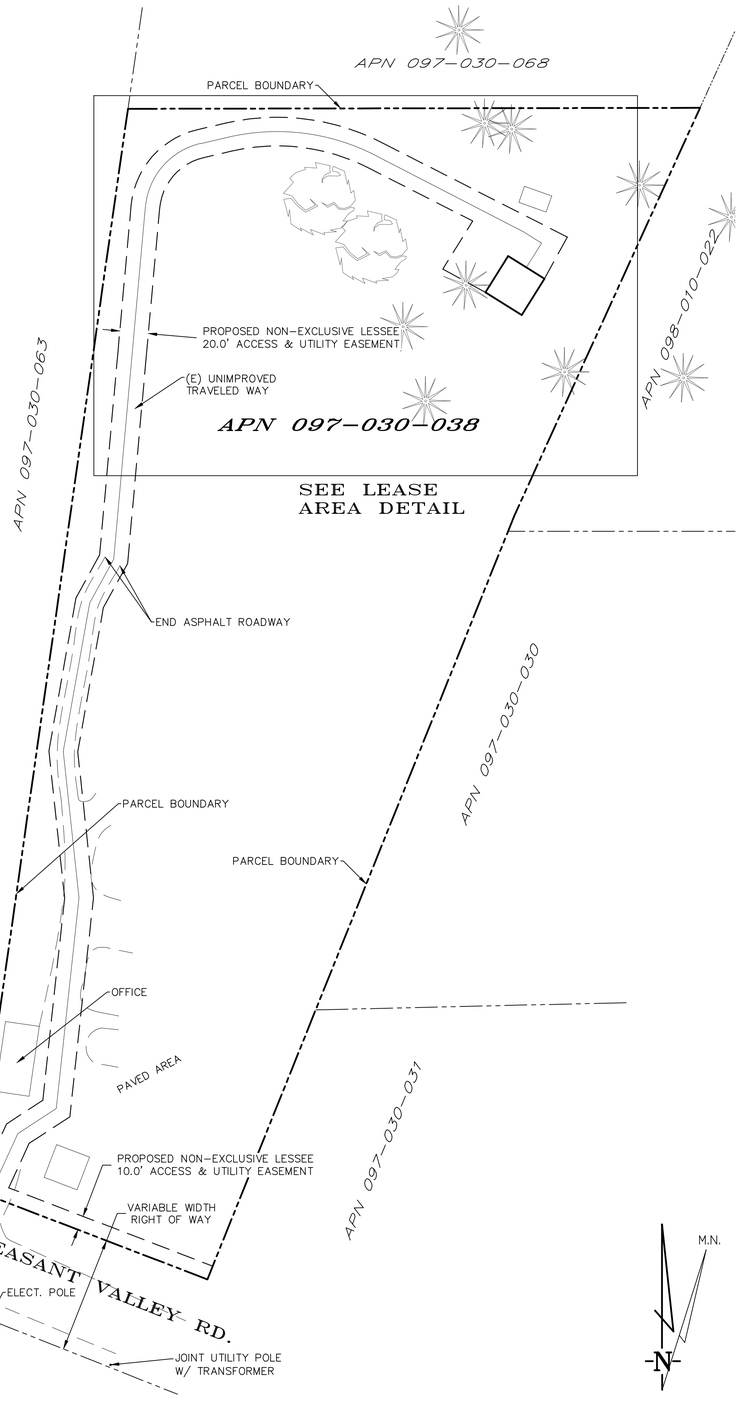
Streamline Engineering and Design, Inc.
8445 Sierra College Blvd. Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1940
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

T-1.1



SCALE 1" = 50'

OVERALL PROJECT AREA

All that certain lease area being located in the unincorporated area of the County of El Dorado, State of California, and being a portion of the "El Dorado" Mining Claim, Mineral Survey No. 6178, situate in the Northeast quarter of Section 30, Township 10 North, Range 11 East, M-D.B. & M., more particularly described as follows: Commencing at a point on the East line of the Concordia Claim which in the Northwest corner of the parcel herein described from thence the Northwest corner of the El Dorado Claim, a 1 inch brass capped iron pipe Survey 6178, bears South 89° 54' 00" West 138.89 feet; thence from said point of beginning along the Northerly boundary of the El Dorado Claim North 89° 54' 00" East 399.70 feet to the Westerly line of the Superior Claim; thence South 24° 28' 20" West 313.07 feet to a 1 inch open iron pipe found at a fence corner; thence South 21° 53' 30" West 575.35 feet to the Northerly edge of a County Road; thence North 69° 00' 10" West 174.38 feet along the Northerly edge of said County Road; thence North 08° 05' 00" East 763.19 feet to the point of beginning.

Said lease area beginning at a point which bears North 21°53'30" East, a distance of 575.35 feet, North 24°28'20" East, a distance of 159.39 feet and North 65°34'14" West, a distance of 49.40 feet from the Southeast most corner of the above described parcel of land; thence North 57°58'50" West, a distance of 30.00 feet; thence from said point of beginning South 32°01'10" West, a distance of 30.00 feet; thence South 57°58'50" East, a distance of 30.00 feet; thence North 32°01'10" East, a distance of 30.00 feet to the point of beginning.

Together with an easement for access and utility purposes, twenty feet in width, the center line of which is described as follows: Beginning at a point on the Northerly edge of a County Road which bears North 68°59'52" West, a distance of 163.11 feet from the Southeast corner of the above described parcel of land; thence from said point of beginning North 24°34'01" East, a distance of 47.69 feet; thence North 56°51'15" East, a distance of 32.15 feet; thence North 6°08'59" East, a distance of 148.14 feet; thence North 6°06'37" West, a distance of 102.97 feet; thence North 10°04'32" East, a distance of 105.34 feet; thence North 28°41'35" East, a distance of 34.79 feet; thence North 5°08'57" East, a distance of 247.20 feet to the point of curvature of a tangent curve, concave to the southeast, having a radius of 50.00 feet and a central angle of 75°41'48"; thence northerly along said curve, a distance of 62.63 feet; thence North 76°54'45" East, a distance of 20.14 feet to the point of curvature of a tangent curve, concave to the south, having a radius of 150.00 feet and a central angle of 40°23'41"; thence easterly along said curve, a distance of 105.75 feet; thence South 62°41'34" East, a distance of 116.10 feet; thence South 57°58'50" East, a distance of 15.00 feet to a point hereafter referred to as Point A.

Also together with an easement for access and utility purposes, thirty feet in width, the center line of which is described as follows: Beginning at the above described Point A and running thence South 32°01'10" West, a distance of 20.00 feet to the above described lease area.

Also together with an easement for access and utility purposes, over and across the Southwesterly 10.0 feet of the above described parcel of land.

Project Name: Diamond Springs

Project Site Location: 961 Pleasant Valley Road
Diamond Springs, CA 95619
El Dorado County

Parcel Number: 097-030-038

Date of Observation: 08-01-23

Equipment/Procedure Used to Obtain Coordinates: Trimble Pathfinder GeoXT post processed with Pathfinder Office software.

Type of Antenna Mount: Proposed Monopine

Coordinates
Latitude: N 38°41'43.85" (NAD83) N 38°41'44.20" (NAD27)
Longitude: W 120°47'50.58" (NAD83) W 120°47'46.81" (NAD27)

Latitude: N 38.695514° (NAD83) N 38.695611° (NAD27)
Longitude: W 120.797383° (NAD83) W 120.796337° (NAD27)

ELEVATION of Ground at Structure (NAVD88) 1963.5' AMSL

DATE OF SURVEY: 08-01-23

SURVEYED BY OR UNDER DIRECTION OF: KENNETH D. GEIL, R.C.E. 14803

LOCATED IN THE COUNTY OF EL DORADO, STATE OF CALIFORNIA

BEARINGS SHOWN ARE BASED UPON MONUMENTS FOUND AND RECORD INFORMATION. THIS IS NOT A BOUNDARY SURVEY.

ELEVATIONS SHOWN ON THIS PLAN ARE BASED UPON U.S.G.S. N.A.V.D. 88 DATUM. ABOVE MEAN SEA LEVEL UNLESS OTHERWISE NOTED.

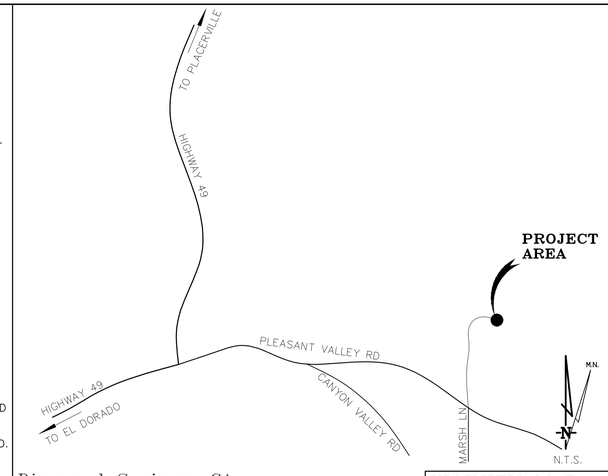
FEMA FIRM ZONE "X" PER FIRM 06017C0775E DATED 09/26/2008.

N.G.V.D. 1929 CORRECTION: SUBTRACT 2.76' FROM ELEVATIONS SHOWN.

CONTOUR INTERVAL: 1 FT.

ASSESSOR'S PARCEL NUMBER: 097-030-038

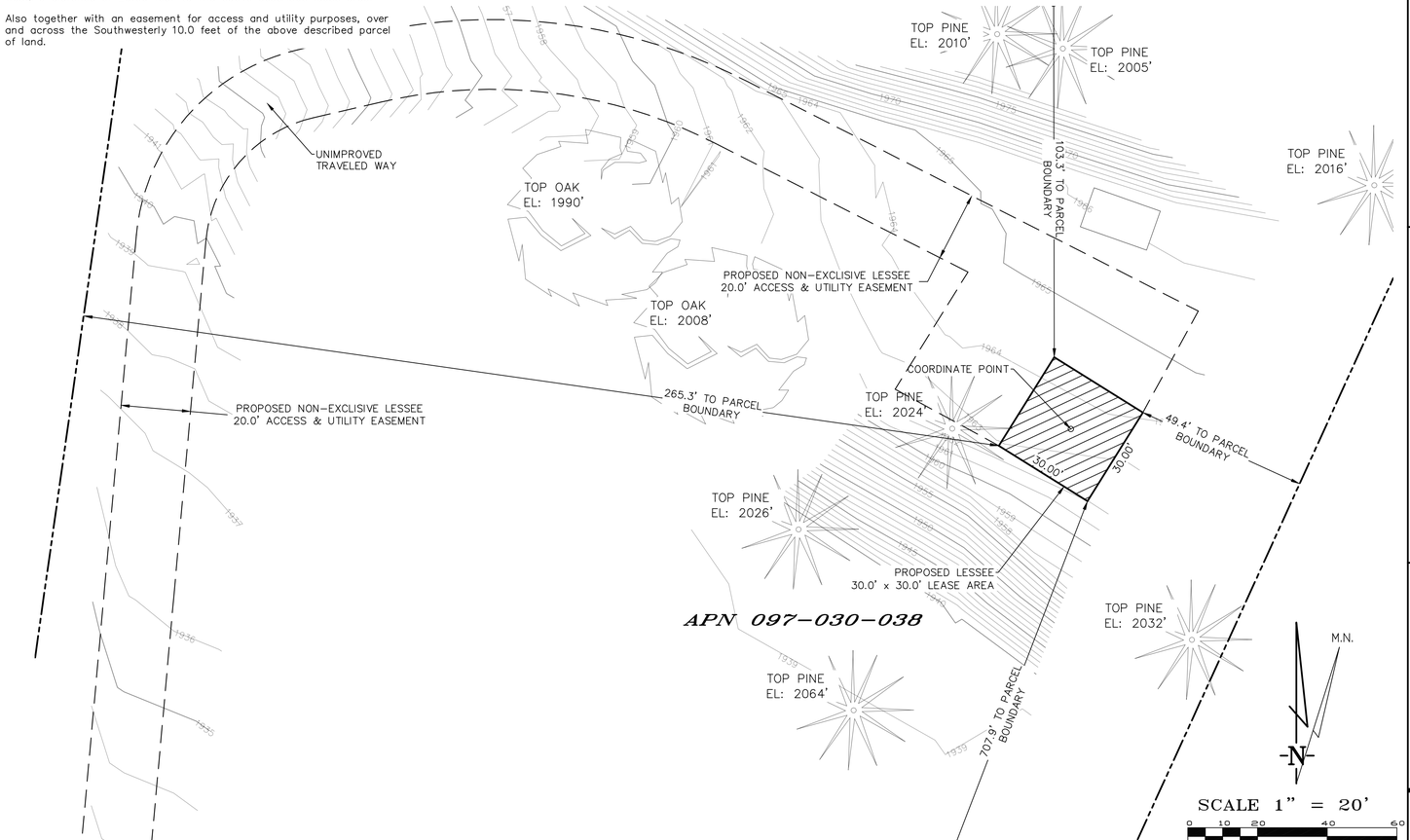
LANDLORD(S): ZELLER GLOYD D JR. / ZELLER ELIA S
PO BOX 64
DIAMOND SPRINGS, CA 95619



Diamond Springs, CA

VICINITY MAP

BOUNDARY SHOWN IS BASED ON MONUMENTATION FOUND AND RECORD INFORMATION. THIS IS NOT A BOUNDARY SURVEY. THIS IS A SPECIALIZED TOPOGRAPHIC MAP WITH PROPERTY LINES AND EASEMENTS BEING A GRAPHIC DEPICTION BASED ON INFORMATION GATHERED FROM VARIOUS SOURCES OF RECORD AND AVAILABLE MONUMENTATION FOUND DURING THE FIELD SURVEY. NO EASEMENTS WERE RESEARCHED OR PLOTTED. PROPERTY LINES AND LINES OF TITLE WERE NOT INVESTIGATED NOR SURVEYED. NO PROPERTY MONUMENTS WERE SET.



SCALE 1" = 20'

0 10 20 40 60

LEASE AREA DETAIL

DEPT	APPROVED	DATE
A&C		
RE		
RF		
INT		
EE\IN		
OPS		
EE\OUT		

Surveyor
GEIL ENGINEERING
ENGINEERING • SURVEYING • PLANNING
1228 HIGH STREET
AUBURN, CALIFORNIA 95603
phone: (530) 885-0426
fax: (530) 823-1309

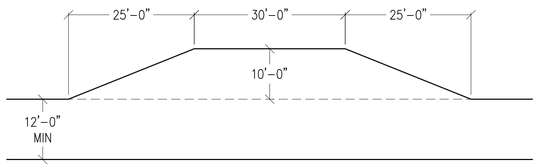
verizon

Diamond Springs
961 Pleasand Valley Road
Diamond Springs, CA 95619

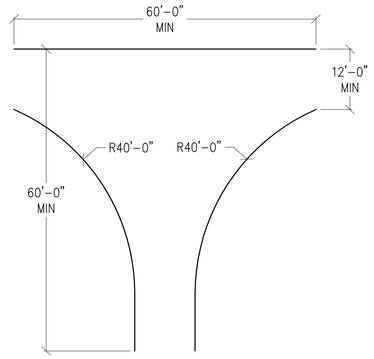
PLOT PLAN AND
SITE TOPOGRAPHY

REVISIONS		
08-09-23	Preliminary Drawing	DG
11-07-23	Lease Desc Added	DG
01-25-24	rev. esmt.	DG

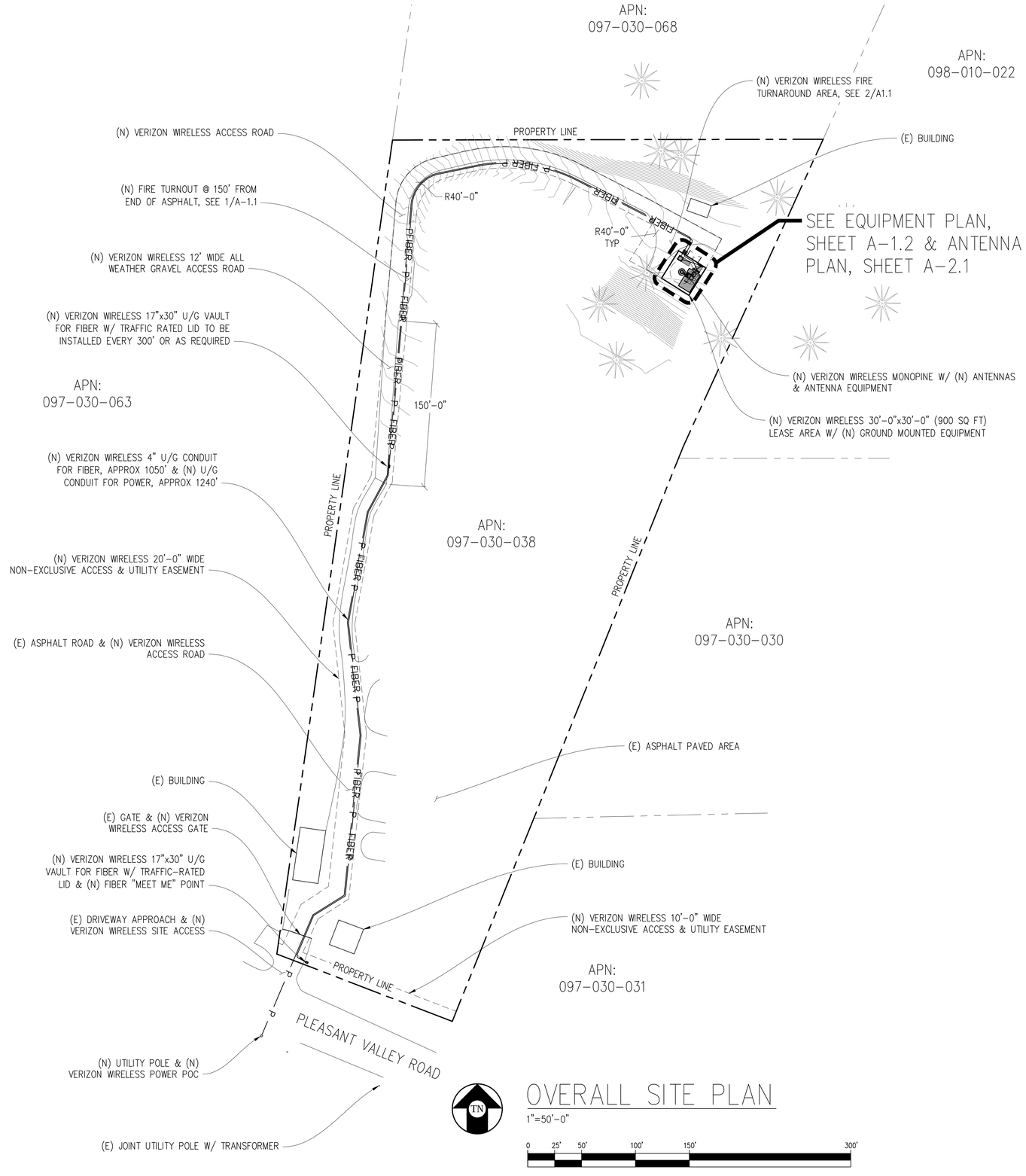
Sheet
C-1



1 TURNOUT DETAIL
N.T.S.



2 TURNAROUND DETAIL
N.T.S.



OVERALL SITE PLAN
1"=50'-0"

0 25' 50' 100' 150' 300'

Issued For:

DIAMOND SPRINGS

961 PLEASANT VALLEY ROAD
DIAMOND SPRINGS, CA 95619

PREPARED FOR

verizon

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:

COMPLETE Wireless Consulting, Inc.

MDG LOCATION ID:	5000168151
PROJECT ID:	17126026
DRAWN BY:	-
CHECKED BY:	N. GEORGE
APPROVED BY:	-

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	01/17/24	CLIENT REV	D.H.
2	11/09/23	ZD 100%	A.A.
1	08/21/23	CLIENT REV	A.A.
0	08/16/23	ZD 90%	-

Licensee:

PRELIMINARY: NOT FOR CONSTRUCTION

KEVIN R. SORENSEN
S4469

ENGINEER:

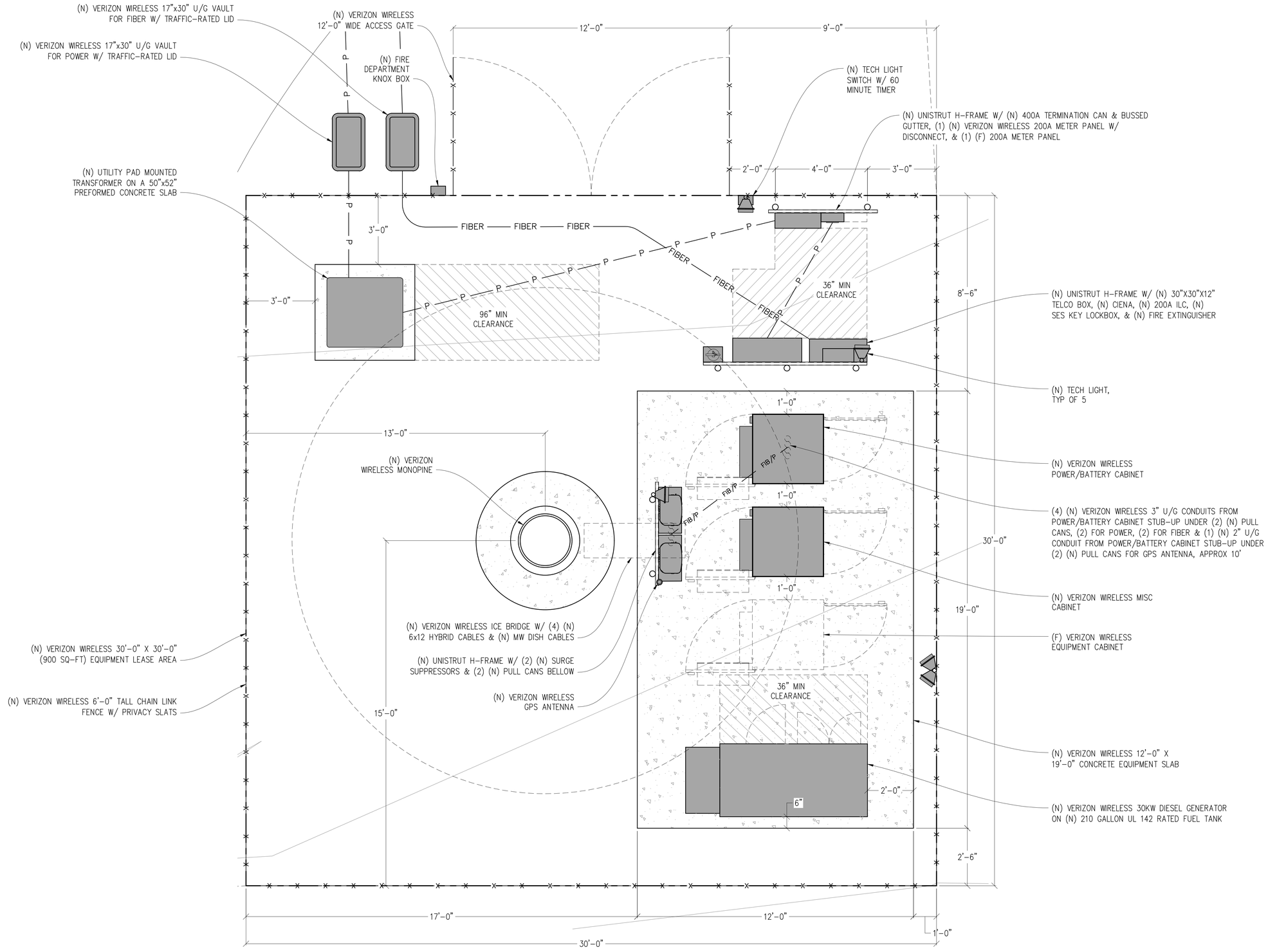
Streamline Engineering and Design, Inc.
8445 Sierra College Blvd. Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1930
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

SHEET TITLE:

OVERALL SITE PLAN

SHEET NUMBER:

A-1.1



EQUIPMENT PLAN

½"=1'-0"

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

Issued For:

DIAMOND SPRINGS

961 PLEASANT VALLEY ROAD
DIAMOND SPRINGS, CA 95619

PREPARED FOR

verizon

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:

COMPLETE Wireless Consulting, Inc.

MDG LOCATION ID:	5000168151
PROJECT ID:	17126026
DRAWN BY:	-
CHECKED BY:	N. GEORGE
APPROVED BY:	-

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	01/17/24	CLIENT REV	D.H.
2	11/09/23	ZD 100%	A.A.
1	08/21/23	CLIENT REV	A.A.
0	08/16/23	ZD 90%	-

Licensee:

PRELIMINARY: NOT FOR CONSTRUCTION

KEVIN R. SORENSEN
S4469

ENGINEER:
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

SHEET TITLE:

EQUIPMENT PLAN

SHEET NUMBER:

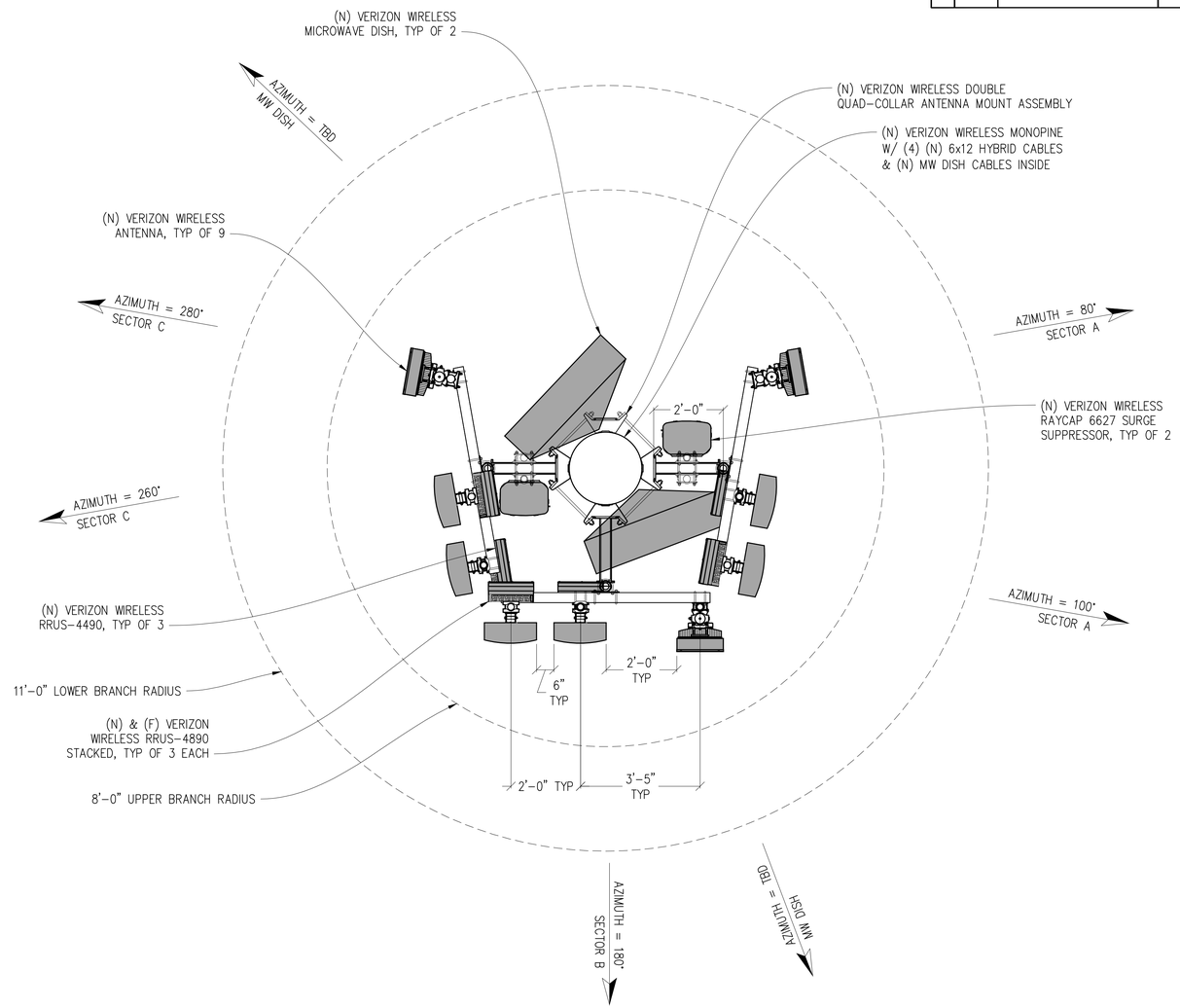
A-1.2

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

NOTE:
1. ANTENNA POSITIONS ARE LEFT TO RIGHT FROM BACK OF SECTOR.
2. EQUIPMENT IS PRELIMINARY & SUBJECT TO CHANGE.

ANTENNA & CABLE SCHEDULE (PRELIMINARY & SUBJECT TO CHANGE)

SECTOR		ANTENNA MODEL NO.	AZIMUTH	CENTERLINE	RRU NO'S & MODEL #	# OF HYBRID CABLES	LENGTH OF CABLES	SURGE SUPPRESSOR
ALPHA	A1	ERICSSON AIR6419	80°	±122'-9"	–	(2) 6x12	±125'	(1) 6627
	A2	COMMSCOPE NHH-45C-R2B	100°	±120'-0"	(1) RRUS 4490	SHARED	–	SHARED
	A3	COMMSCOPE NHH-45C-R2B	100°	±120'-0"	(1) RRUS-4890, (1) (F) RRUS 4890	SHARED	–	SHARED
BETA	B1	ERICSSON AIR6419	180°	±122'-9"	–	SHARED	–	SHARED
	B2	COMMSCOPE NHH-45C-R2B	180°	±120'-0"	(1) RRUS-4490	SHARED	–	SHARED
	B3	COMMSCOPE NHH-45C-R2B	180°	±120'-0"	(1) RRUS 4890, (1) (F) RRUS 4890	SHARED	–	SHARED
GAMMA	C1	COMMSCOPE NHH-45C-R2B	260°	±120'-0"	(1) RRUS-4490	SHARED	–	SHARED
	C2	COMMSCOPE NHH-45C-R2B	260°	±120'-0"	(1) RRUS 4890, (1) (F) RRUS 4890	(2) 6x12	±135'	(1) 6627
	C3	ERICSSON AIR6419	280°	±122'-9"	–	SHARED	–	SHARED



TN

ANTENNA PLAN

½"=1'-0"

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

Issued For:

DIAMOND SPRINGS

961 PLEASANT VALLEY ROAD
DIAMOND SPRINGS, CA 95619

PREPARED FOR

verizon

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:

COMPLETE Wireless Consulting, Inc.

MDG LOCATION ID:	5000168151
PROJECT ID:	17126026
DRAWN BY:	-
CHECKED BY:	N. GEORGE
APPROVED BY:	-

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	01/17/24	CLIENT REV	D.H.
2	11/09/23	ZD 100%	A.A.
1	08/21/23	CLIENT REV	A.A.
0	08/16/23	ZD 90%	-

Licensee:

PRELIMINARY: NOT FOR CONSTRUCTION

KEVIN R. SORENSEN
S4469

ENGINEER:

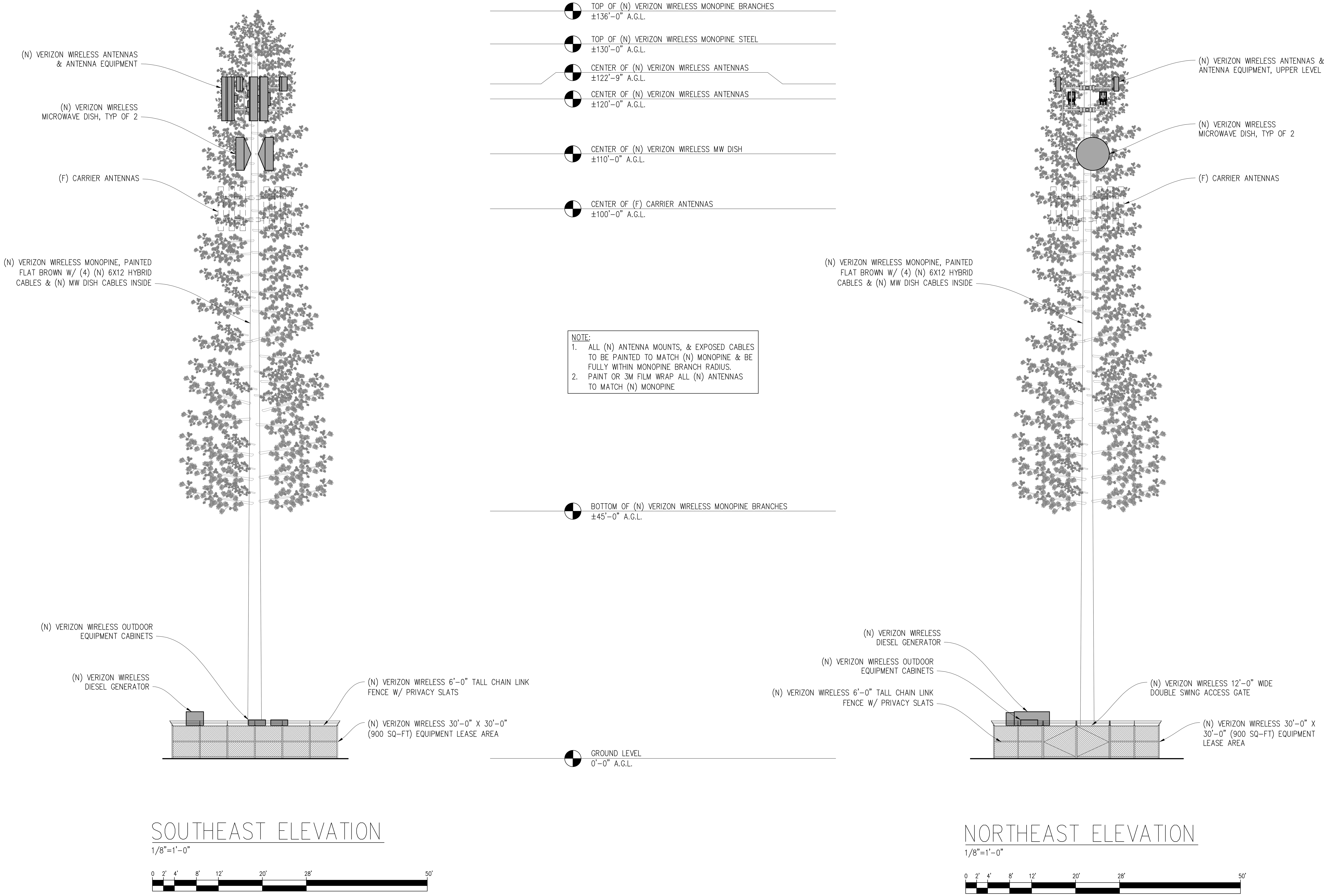
Streamline Engineering and Design, Inc.
8445 Sierra College Blvd. Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1930
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

SHEET TITLE:

ANTENNA PLAN

SHEET NUMBER:

A-2.1



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

Issued For:

DIAMOND SPRINGS

961 PLEASANT VALLEY ROAD
DIAMOND SPRINGS, CA 95619

PREPARED FOR

verizon✓

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:

COMPLETE
Wireless Consulting, Inc.

MDG LOCATION ID: 5000168151
PROJECT ID: 17126026
DRAWN BY: -
CHECKED BY: N. GEORGE
APPROVED BY: -

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	01/17/24	CLIENT REV	D.H.
2	11/09/23	ZD 100%	A.A.
1	08/21/23	CLIENT REV	A.A.
0	08/16/23	ZD 90%	-

Licensee:

PRELIMINARY: NOT FOR CONSTRUCTION

KEVIN R. SORENSEN
S4469

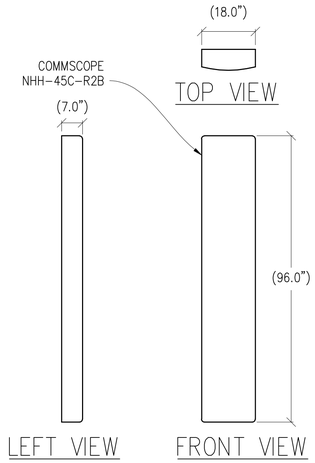
ENGINEER:
Streamline Engineering and Design, Inc.
8445 Sierra College Blvd, Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1930
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

SHEET TITLE:

ELEVATIONS

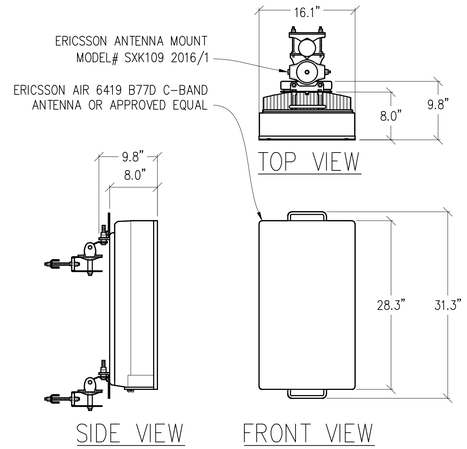
SHEET NUMBER:

A-3.1



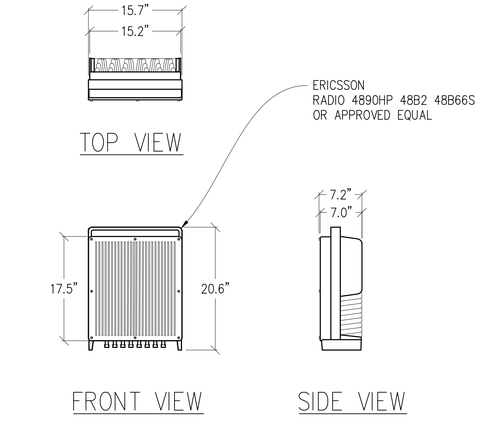
1 ANTENNA DETAIL

½"=1' MAX WEIGHT: 85 LBS



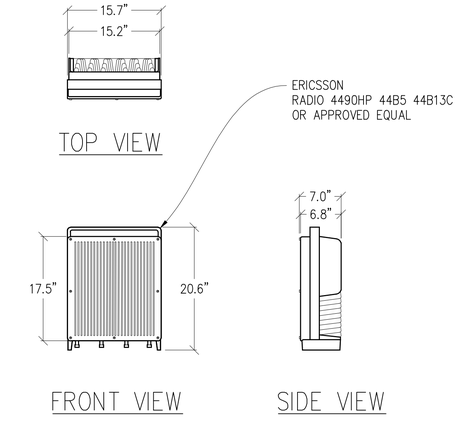
2 ANTENNA DETAIL

1"=1'-0" MAX WEIGHT: 71 LBS



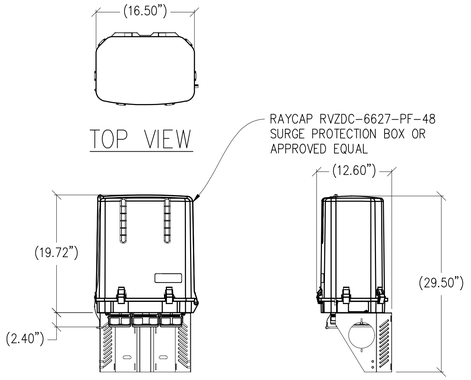
3 RADIO 4890HP DETAIL

1"=1'-0" MAX WEIGHT: 69.5 LBS



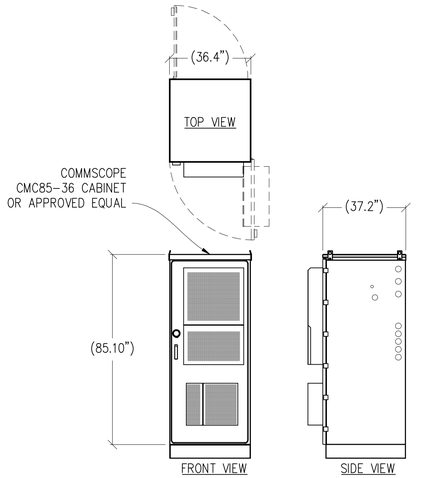
4 RADIO 4490HP DETAIL

1"=1'-0" MAX WEIGHT: 68.4 LBS



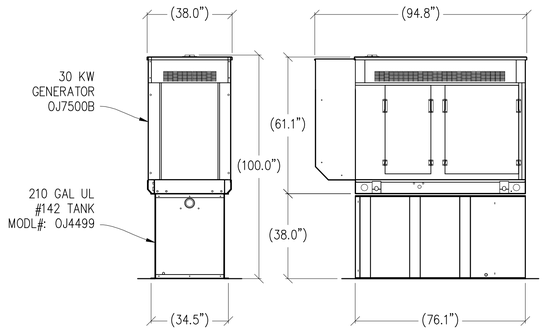
5 SURGE PROTECTION BOX

1"=1'-0" MAX WEIGHT: 32.0 LBS



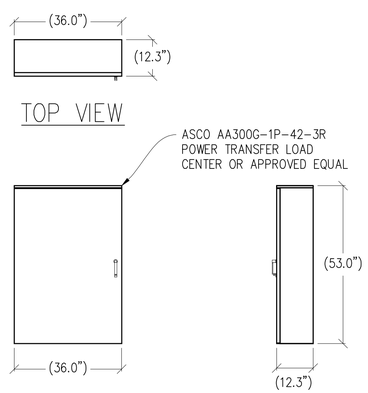
6 CABINET DETAIL

⅜"=1'-0" MAX WEIGHT: 2352 LBS



7 30KW GENERATOR DETAIL

⅜"=1'-0" MAX WEIGHT: 3,119 LBS



8 ILC CABINET DETAIL

½"=1'-0" MAX WEIGHT: 210 LBS

Issued For:

DIAMOND SPRINGS

961 PLEASANT VALLEY ROAD
DIAMOND SPRINGS, CA 95619

PREPARED FOR

verizon

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:

COMPLETE Wireless Consulting, Inc.

MDG LOCATION ID:	5000168151
PROJECT ID:	17126026
DRAWN BY:	-
CHECKED BY:	N. GEORGE
APPROVED BY:	-

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	01/17/24	CLIENT REV	D.H.
2	11/09/23	ZD 100%	A.A.
1	08/21/23	CLIENT REV	A.A.
0	08/16/23	ZD 90%	-

Licensee:

PRELIMINARY: NOT FOR CONSTRUCTION

KEVIN R. SORENSEN
S4469

ENGINEER:

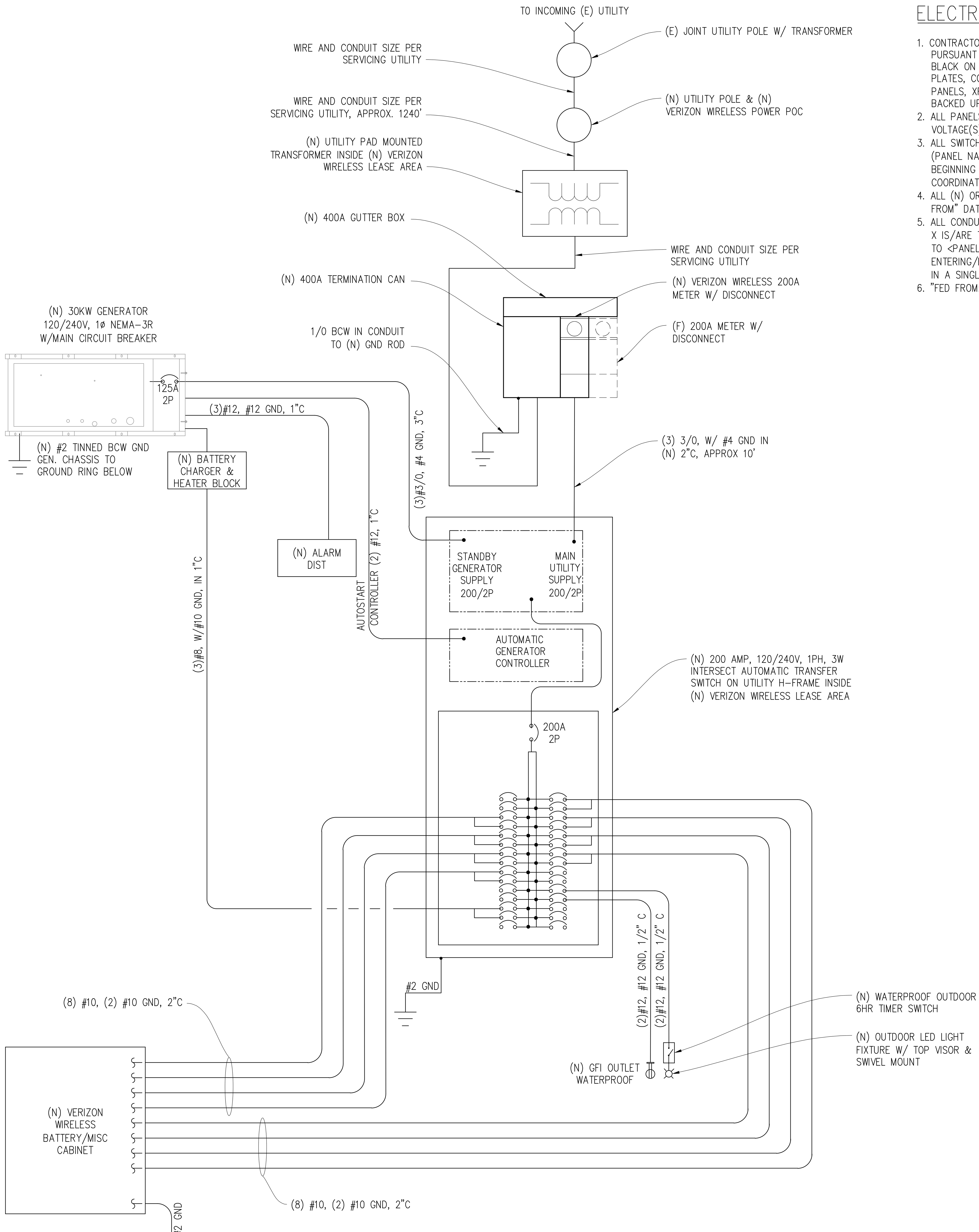
Streamline Engineering and Design, Inc.
8445 Sierra College Blvd, Suite E Granite Bay, CA 95746
Contact: Kevin Sorensen Phone: 916-660-1930
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

SHEET TITLE:

DETAILS

SHEET NUMBER:

A-4.1



SINGLE LINE DIAGRAM

ELECTRICAL LABELING REQUIREMENTS

1. CONTRACTOR SHALL LABEL ALL ELECTRICAL DEVICES INSTALLED OR ALTERED PURSUANT TO THIS CONTRACT PER THE FOLLOWING. LABELS SHALL BE PERMANENT BLACK ON WHITE PEEL & STICK LABEL MAKER TYPE FOR ALL SWITCH & OUTLET PLATES, CONDUITS AND CEILING FIXTURES, AND SHALL BE PHENOLIC TAG TYPE FOR PANELS, XFMR's, PULL BOXES, ETC.; PHENOLIC TAGS SHALL BE RED IN COLOR WHERE BACKED UP BY GENERATOR
2. ALL PANELS, XFMR's AND PULL BOXES SHALL BE LABELED WITH DEVICE 'NAME', VOLTAGE(S), RATING FOR XFMR's, AND "FED FROM" DATA.
3. ALL SWITCH & OUTLET PLATES SHALL BE LABELED WITH "FED FROM" CIRCUIT DATA (PANEL NAME & CIRCUIT#); ALL GANG SWITCHES SHALL BEAR SWITCH NUMBERS BEGINNING W/#1 ON LEFT OF THE MAIN LIGHTING SWITCH FOR EACH ROOM FOR COORDINATION W/FIXTURE LABELS.
4. ALL (N) OR RETROFITTED LIGHTING FIXTURES SHALL BE LABELED WITH THE "FED FROM" DATA (SWITCH#)
5. ALL CONDUITS EXITING A PANEL BOARD SHALL BE LABELED "CIRCUIT(S) 'X'..." WHERE X IS/ARE THE BREAKER#(S). CONDUITS EXITING XFMR'S SHALL BE LABELED "FEEDER TO <PANEL, DEVICE>", E.G. "FEEDER TO PANEL <panel name>. CONDUITS ENTERING/EXITING A ROOM OR FLOOR SHALL BE LABELED AT THE ENTRY & EXIT (OR IN A SINGLE LOCATION IF OBVIOUS) W/"FED FROM..." & "TO PANEL/XFMR/..."DATA.
6. "FED FROM: DATA = <panel name> <brkr#> EG: "PANEL X/1,3,5")

ELECTRIC LEGEND

- 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 2017 IEC 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 WIRELESS CARRIER'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.

NEW PANEL SCHEDULE

NAMEPLATE : PANEL A			SC LEVEL : 65,000				VOLTS: 120V/240V, 1ø		
LOCATION : OUTSIDE							BUS AMPS: 200A		
MOUNTING : H-FRAME							MAIN CB: 200A		
ØA LOAD VA	ØB LOAD VA	LOAD DESCRIPTION	BKR AMP/POLE	CIRCUIT NO		BKR AMP/POLE	LOAD DESCRIPTION	ØA LOAD VA	ØB LOAD VA
		BLANK	–	1	2	30/2	(N) BATTERY/MISC CABINET	1320	
		" "	–	3	4	" "	" "		1320
		" "	–	5	6	30/2	" "	1320	
		" "	–	7	8	" "	" "		1320
1320		(N) BATTERY/MISC CABINET	30/2	9	10	30/2	" "	1320	
	1320	" "	" "	11	12	" "	" "		1320
1320		" "	30/2	13	14	30/2	" "	1320	
	1320	" "	" "	15	16	" "	" "		1320
1320		" "	30/2	17	18	–	BLANK		
	1320	" "	" "	19	20	–	" "		
1320		" "	30/2	21	22	–	" "		
	1320	" "	" "	23	24	–	" "		
1000		BLOCK HEATER	20/1	25	26	–	" "		
	300	BATTERY CHARGER	20/1	27	28	20/1	LIGHT		300
		BLANK	–	29	30	20/1	GFI RECEPTACLE	180	
6280	5580	PHASE TOTALS					PHASE TOTALS	5460	5580
TOTAL VA =	22900	TOTAL AMPS =	95						

Issued For:

DIAMOND SPRINGS

961 PLEASANT VALLEY ROAD
DIAMOND SPRINGS, CA 95619

PREPARED FOR

verizon

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:

COMPLETE
Wireless Consulting, Inc.

MDG LOCATION ID:	5000168151
PROJECT ID:	17126026
DRAWN BY:	-
CHECKED BY:	N. GEORGE
APPROVED BY:	-

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	01/17/24	CLIENT REV	D.H.
2	11/09/23	ZD 100%	A.A.
1	08/21/23	CLIENT REV	A.A.
0	08/16/23	ZD 90%	-

Licensee:

PRELIMINARY: NOT FOR CONSTRUCTION

KEVIN R. SORENSEN
S4469

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.

ENGINEER:

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

SHEET TITLE:

ELECTRICAL PLAN

SHEET NUMBER:

E-1.1

CUP24-0002/Diamond Springs Verizon Monopine
Exhibit G - Photosimulations

verizon

Diamond Springs
961 Pleasant Valley Road, Diamond Springs, CA
Photosims Produced on 1-19-2024

APPROVED

EL DORADO COUNTY

PLANNING COMMISSION

DATE: October 10, 2024

BY: Director Karen Garner

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Shot Point Map

CUP24-0002/Diamond Springs Verizon Monopine
Exhibit G - Photosimulations

Existing

Proposed

view from Pleasant Valley Road looking northeast at site

verizon

Diamond Springs
961 Pleasant Valley Road, Diamond Springs, CA
Photosims Produced on 1-19-2024

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

CUP24-0002/Diamond Springs Verizon Monopine
Exhibit G - Photosimulations

Existing

Proposed

view from Pleasant Valley Road looking northeast at site

verizon

Diamond Springs
961 Pleasant Valley Road, Diamond Springs, CA
Photosims Produced on 1-19-2024

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

CUP24-0002/Diamond Springs Verizon Monopine
Exhibit G - Photosimulations

Existing

Proposed

view from Pleasant Valley Road looking northwest at site

verizon

Diamond Springs
961 Pleasant Valley Road, Diamond Springs, CA
Photosims Produced on 1-19-2024

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

CUP24-0002/Diamond Springs Verizon Monopine
Exhibit G - Photosimulations

Existing

Proposed

view from Lime Kiln Road looking southeast at site

verizon

Diamond Springs
961 Pleasant Valley Road, Diamond Springs, CA
Photosims Produced on 1-19-2024

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report

Site No. 451942
Diamond Springs
961 Pleasant Valley Road
Diamond Springs, California 95619
El Dorado County
38° 41' 43.85" N, -120° 47' 50.58" W NAD83

EBI Project No. 6224000086
January 16, 2024

Prepared for:

Verizon Wireless
c/o Complete Wireless Consulting, Inc.
2009 V Street
Sacramento, CA 95818

APPROVED

EL DORADO COUNTY

PLANNING COMMISSION

DATE: October 10, 2024

BY: Director Karen Garner

Prepared by:

EBI Consulting
environmental | engineering | due diligence

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Verizon Wireless ("Verizon") to conduct radio frequency electromagnetic (RF-EME) modeling for Verizon Site 451942 located at 961 Pleasant Valley Road in Diamond Springs, California to determine RF-EME exposure levels from proposed Verizon communications equipment at this site. As described in greater detail in Appendix C of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for the general public and for occupational activities. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

Statement of Compliance

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Additionally, there are areas where workers who may be elevated above the ground may be exposed to power densities greater than the occupational limits. Therefore, workers should be informed about the presence and locations of antennas and their associated fields.

At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately **6.86** percent of the FCC's general public limit (**1.37** percent of the FCC's occupational limit).

Furthermore, with the proposed Verizon Wireless antenna configuration in-service, the composite exposure from this facility in all areas at the Ground level will be well below the General Population MPE limit in publicly accessible areas.

Recommended control measures are outlined in Section 4.0 and within the Site Safety Plan (attached); Verizon should also provide procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol. Non-telecom workers who will be working in areas of exceedance are required to contact Verizon since only Verizon has the ability to lockout/tagout the facility, or to authorize others to do so.

1.0 INTRODUCTION

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per second (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by Verizon in this area will potentially operate within a frequency range of 700 to 5000 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they are designed to provide a substantial margin of safety. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size or health.

2.0 SITE DESCRIPTION

This project site includes the following proposed wireless telecommunication antennas on a monotree located at 961 Pleasant Valley Road in Diamond Springs, California.

Ant #	Sector	Operator	Antenna Make	Antenna Model	Technology and Frequency (MHz)	Azimuth (Degrees)	Mechanical Downtilt (Degrees)	Horizontal Beamwidth (Degrees)	Aperture (feet)	Total Power Input (Watts)	Transmitter Count	Antenna Gain (dBd)	Total ERP (Watts)	Total EIRP (Watts)
1	Alpha	Verizon	ERICSSON	SON_AIR6419 TB 03.21.2023 3700 VZW	LSub6 3700	80	0	11	2.4	320	1	23.45	70819.03	116143.21
2	Alpha	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 700	LTE 700	100	0	48	8.0	120	2	15.42	4180.05	6855.28
2	Alpha	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 850	LTE/5G 850	100	0	43	8.0	120	2	16.2	5002.43	8203.99
2	Alpha	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-08DT 1900	LTE 1900	100	0	38	8.0	240	4	17.39	13158.65	21580.18
3	Alpha	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 700	LTE 700	100	0	48	8.0	120	2	15.42	4180.05	6855.28
3	Alpha	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 850	LTE/5G 850	100	0	43	8.0	120	2	16.2	5002.43	8203.99
3	Alpha	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-08DT 2100	LTE 2100	100	0	41	8.0	240	4	17.84	14595.24	23936.19
4	Beta	Verizon	ERICSSON	SON_AIR6419 TB 03.21.2023 3700 VZW	LSub6 3700	180	0	11	2.4	320	1	23.45	70819.03	116143.21
5	Beta	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 700	LTE 700	180	0	48	8.0	120	2	15.42	4180.05	6855.28
5	Beta	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 850	LTE/5G 850	180	0	43	8.0	120	2	16.2	5002.43	8203.99
5	Beta	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-08DT 1900	LTE 1900	180	0	38	8.0	240	4	17.39	13158.65	21580.18
6	Beta	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 700	LTE 700	180	0	48	8.0	120	2	15.42	4180.05	6855.28
6	Beta	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 850	LTE/5G 850	180	0	43	8.0	120	2	16.2	5002.43	8203.99
6	Beta	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-08DT 2100	LTE 2100	180	0	41	8.0	240	4	17.84	14595.24	23936.19
7	Gamma	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 700	LTE 700	260	0	48	8.0	120	2	15.42	4180.05	6855.28

Ant #	Sector	Operator	Antenna Make	Antenna Model	Technology and Frequency (MHz)	Azimuth (Degrees)	Mechanical Downtilt (Degrees)	Horizontal Beamwidth (Degrees)	Aperture (feet)	Total Power Input (Watts)	Transmitter Count	Antenna Gain (dBd)	Total ERP (Watts)	Total EIRP (Watts)
7	Gamma	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 850	LTE/5G 850	260	0	43	8.0	120	2	16.2	5002.43	8203.99
7	Gamma	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-08DT 1900	LTE 1900	260	0	38	8.0	240	4	17.39	13158.65	21580.18
8	Gamma	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 700	LTE 700	260	0	48	8.0	120	2	15.42	4180.05	6855.28
8	Gamma	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-10DT 850	LTE/5G 850	260	0	43	8.0	120	2	16.2	5002.43	8203.99
8	Gamma	Verizon	COMMSCOPE	SON_NHH-45C-R2B 00DT-08DT 2100	LTE 2100	260	0	41	8.0	240	4	17.84	14595.24	23936.19
9	Gamma	Verizon	ERICSSON	SON_AIR6419 TB 03.21.2023 3700 VZW	LSub6 3700	280	0	11	2.4	320	1	23.45	70819.03	116143.21

• Note there are 3 proposed Verizon antennas at each Sector at this site. For clarity, the different frequencies for each antenna are entered on separate lines.

Ant #	NAME	X	Y	Antenna Radiation Centerline	Z-Height Adjacent Utility Pole	Z-Height Adjacent Building Roof	Z-Height Ground
1	Verizon	89.5	107.5	122.7	92.7	112.7	122.7
2	Verizon	89.3	104.5	120.0	90.0	110.0	120.0
3	Verizon	89.3	103.1	120.0	90.0	110.0	120.0
4	Verizon	86.5	99.9	122.7	92.7	112.7	122.7
5	Verizon	83.3	99.9	120.0	90.0	110.0	120.0
6	Verizon	82.1	99.9	120.0	90.0	110.0	120.0
7	Verizon	80.0	102.6	120.0	90.0	110.0	120.0
8	Verizon	80.0	104.0	120.0	90.0	110.0	120.0
9	Verizon	80.0	107.3	122.7	92.7	112.7	122.7

• Note the Z-Height represents the distance from the antenna centerline.

The above tables contain an inventory of proposed Verizon Antennas and other carrier antennas if sufficient information was available to model them. Note that EBI uses an assumed set of antenna specifications and powers for unknown and other carrier antennas for modeling purposes. The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. While access to this site is considered controlled, the analysis has considered exposures with respect to both controlled and uncontrolled limits as an untrained worker may access adjacent rooftop locations. Additional information regarding controlled/uncontrolled exposure limits is provided in Appendix C. Appendix B presents a site safety plan that provides a plan view of the monotree with antenna locations.

3.0 WORST-CASE PREDICTIVE MODELING

EBI has performed theoretical MPE modeling using RoofMaster™ software to estimate the worst-case power density at the site's nearby broadcast levels resulting from operation of the antennas. RoofMaster™ is a widely-used predictive modeling program that has been developed by Waterford Consultants to predict RF power density values for rooftop and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. Using the computational methods set forth in Federal Communications

Commission (FCC) Office of Engineering & Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields" (OET-65), RoofMaster™ calculates predicted power density in a scalable grid based on the contributions of all RF sources characterized in the study scenario. At each grid location, the cumulative power density is expressed as a percentage of the FCC limits. Manufacturer antenna pattern data is utilized in these calculations. RoofMaster™ models consist of the Far Field model as specified in OET-65 and an implementation of the OET-65 Cylindrical Model (Sula9). The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

For this report, EBI utilized antenna and power data provided by Verizon and compared the resultant worst-case MPE levels to the FCC's occupational/controlled exposure limits outlined in OET Bulletin 65. The assumptions used in the modeling are based upon information provided by Verizon and information gathered from other sources. The parameters used for modeling are summarized in the Site Description antenna inventory table in Section 2.0.

There are no other carrier antennas on the monotree.

Based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed Verizon antennas that exceed the FCC's occupational or general public exposure limits at this site. At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately 6.86 percent of the FCC's general public limit (1.37 percent of the FCC's occupational limit).

The Site Safety Plan also presents areas where Verizon Wireless antennas contribute greater than 5% of the applicable MPE limit for a site. A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

There are no modeled areas on the ground that exceed the FCC's limits for general public or occupational exposure in front of the other carrier antennas.

The inputs used in the modeling are summarized in the Site Description antenna inventory table in Section 2.0. A graphical representation of the RoofMaster™ modeling results is presented in Appendix B. Microwave dish antennas are designed for point-to-point operations at the elevations of the installed equipment rather than ground level coverage. The maximum power density generated by all carrier antennas, including microwaves and panel antennas, is included in the modeling results presented within this report.

4.0 MITIGATION/SITE CONTROL OPTIONS

EBI's modeling indicates that there are no areas in front of the Verizon antennas that exceed the FCC standards for occupational or general public exposure. All exposures above the FCC's safe limits require that individuals be elevated above the ground. In accordance with the official Verizon Wireless Signage and Demarcation Policy for tower structures, no signage is recommended at this site.

Barriers are recommended for installation when possible to block access to the areas in front of the antennas that exceed the FCC general public and/or occupational limits. Barriers may consist of rope, chain, or fencing. Painted stripes should only be used as a last resort. There are no barriers recommended on this site.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antennas and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the monotree should be provided with a copy of the attached Site Safety Plan, made aware of the posted signage, and signify their understanding of the Site Safety Plan.

To reduce the risk of exposure, EBI recommends that access to areas associated with the active antenna installation be restricted and secured where possible. All workers and individuals, including arborists and landscapers, accessing the monotree along with nearby elevated structures or trees within areas exceeding the general public MPE must be made aware of the presence and locations of antennas and their associated fields, where applicable.

5.0 SUMMARY AND CONCLUSIONS

EBI has prepared a Radiofrequency – Electromagnetic Energy (RF-EME) Compliance Report for telecommunications equipment installed by Verizon Site Number 451942 located at 961 Pleasant Valley Road in Diamond Springs, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the sections above, based on the FCC criteria, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site.

Workers should be informed about the presence and locations of antennas and their associated fields. Recommended control measures are outlined in Section 4.0 and within the Site Safety Plan (attached); Verizon should also provide procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol. Non-telecom workers who will be working in areas of exceedance are required to contact Verizon since only Verizon has the ability to lockout/tagout the facility, or to authorize others to do so.

6.0 LIMITATIONS

This report was prepared for the use of Verizon Wireless. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information provided by the client. The observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to EBI so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

Appendix A

Certifications

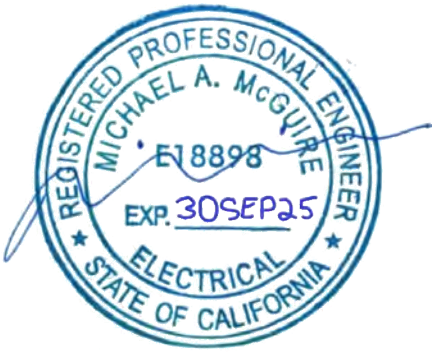
Preparer Certification

I, Kobi Thompson, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation.
- I have reviewed the data provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

Kobi Thompson

Reviewed and Approved by:



sealed 17jan2024

Michael McGuire
Electrical Engineer
mike@h2dc.com

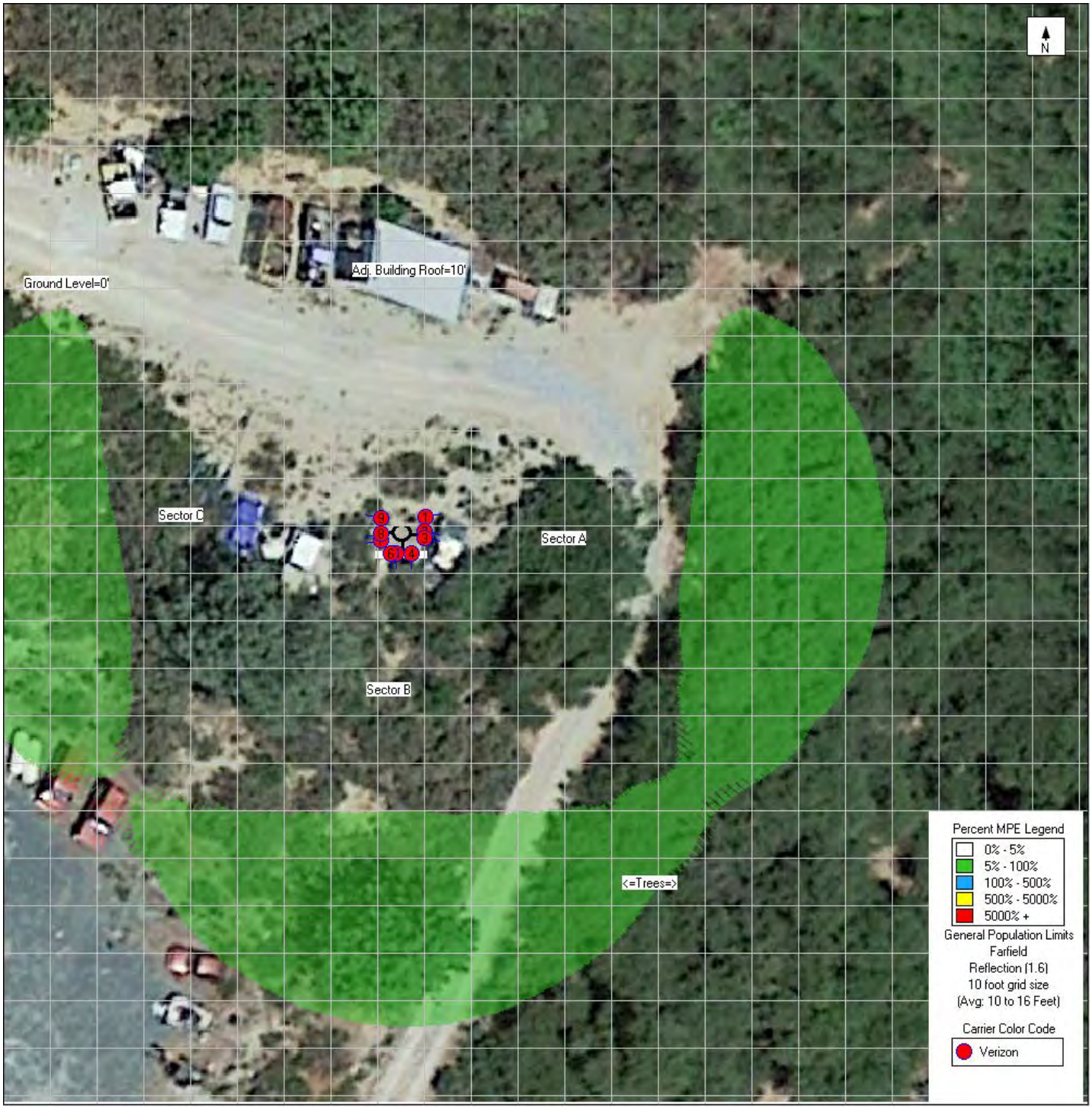
Note that EBI's scope of work is limited to an evaluation of the Radio Frequency – Electromagnetic Energy (RF-EME) field generated by the antennas and broadcast equipment noted in this report. The engineering and design of the building and related structures, as well as the impact of the antennas and broadcast equipment on the structural integrity of the building, are specifically excluded from EBI's scope of work.

Appendix B

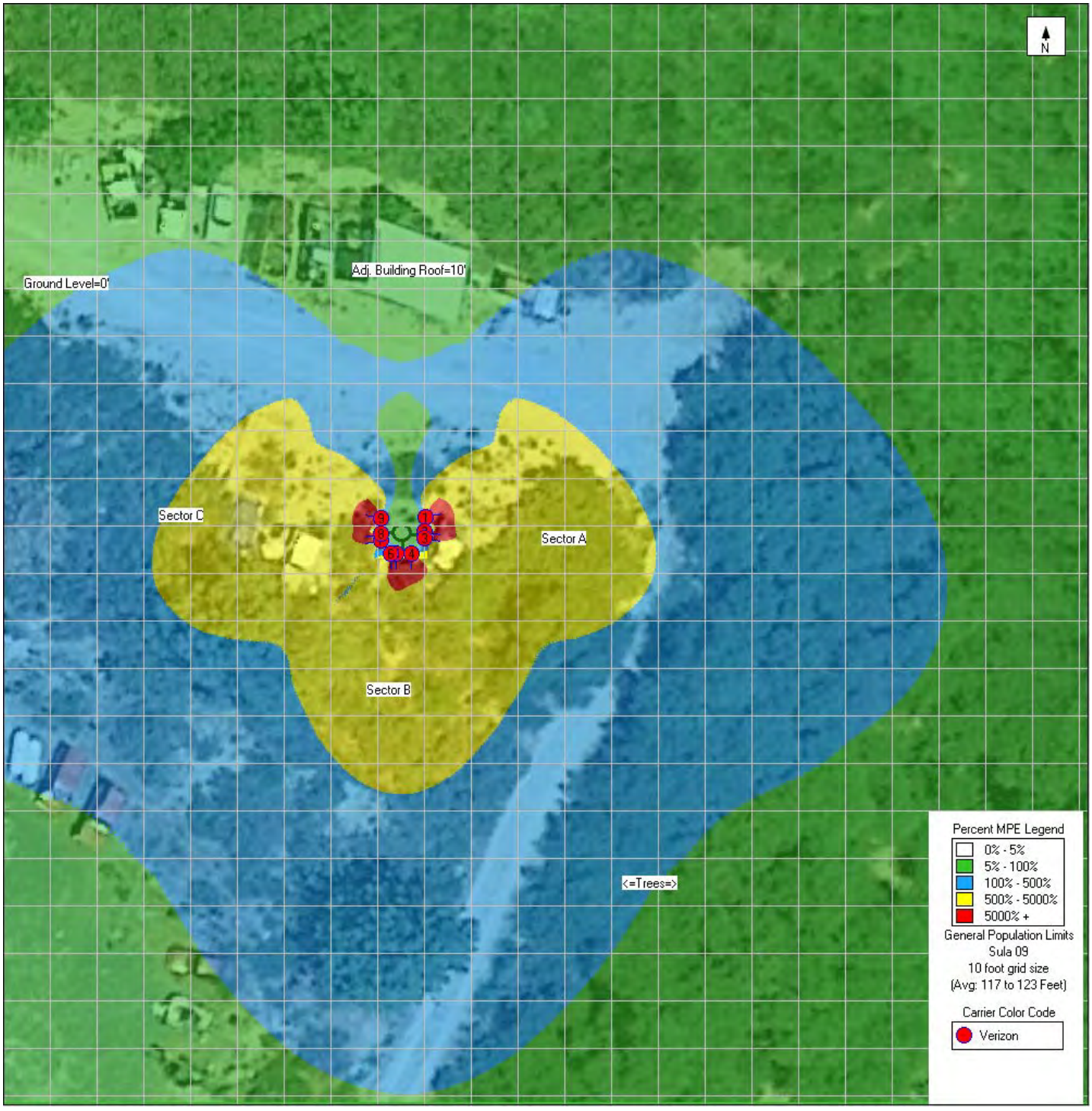
Radio Frequency Electromagnetic Energy

Safety Information and Signage Plans

Nearest Walking Surface (Adjacent Building Roof)

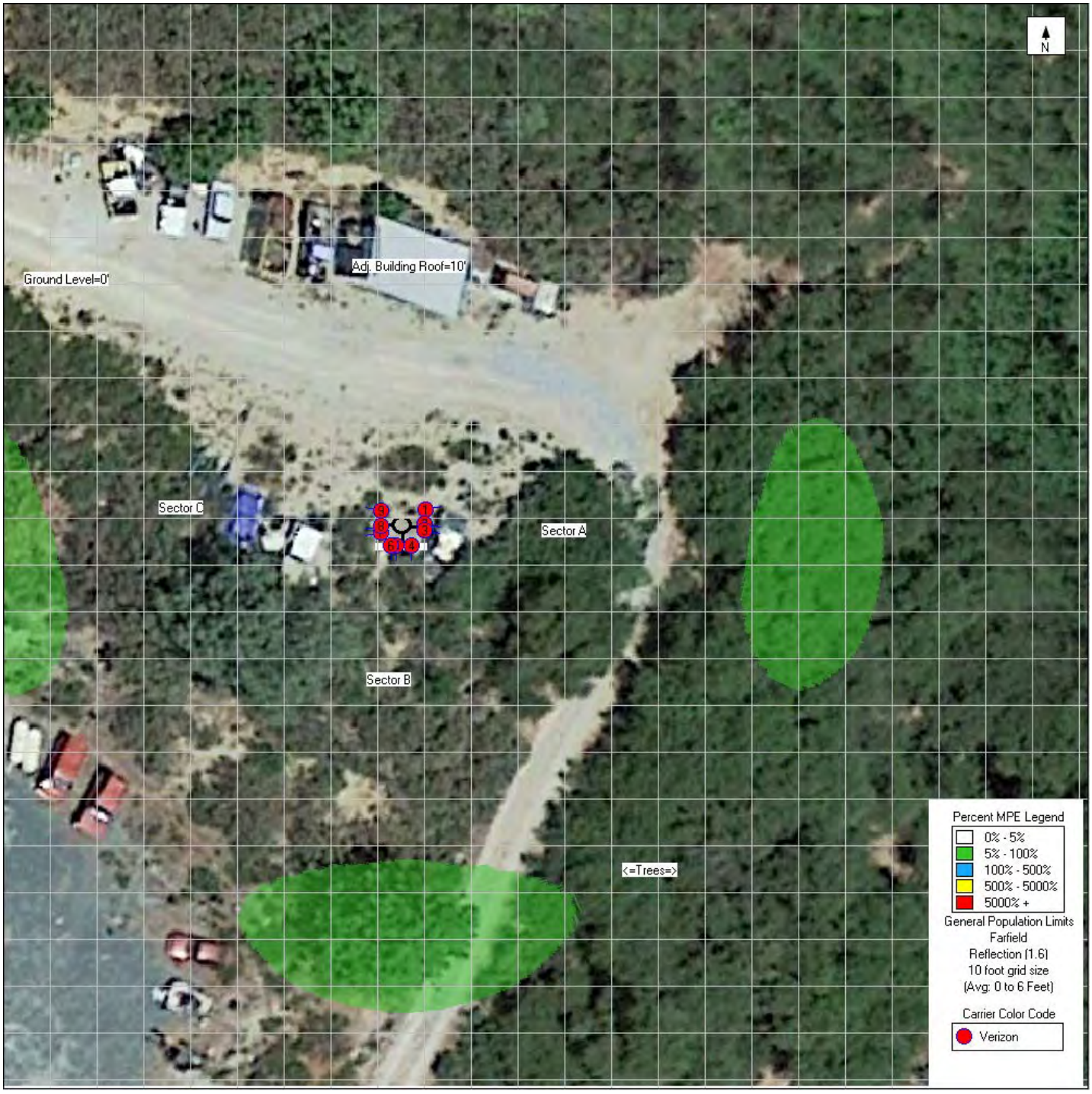


Verizon's Antenna Face Level

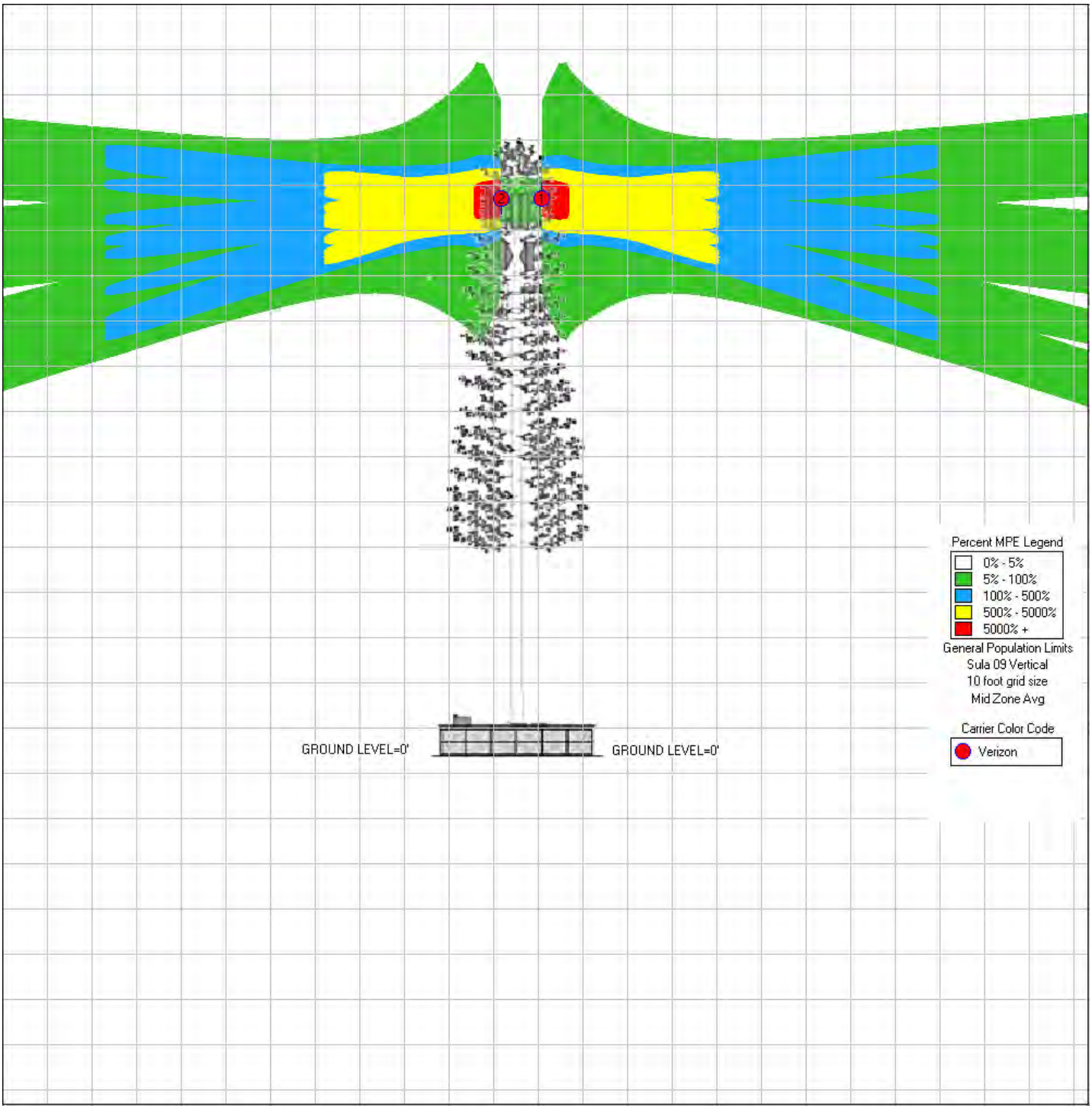


Adjacent Utility Pole Level

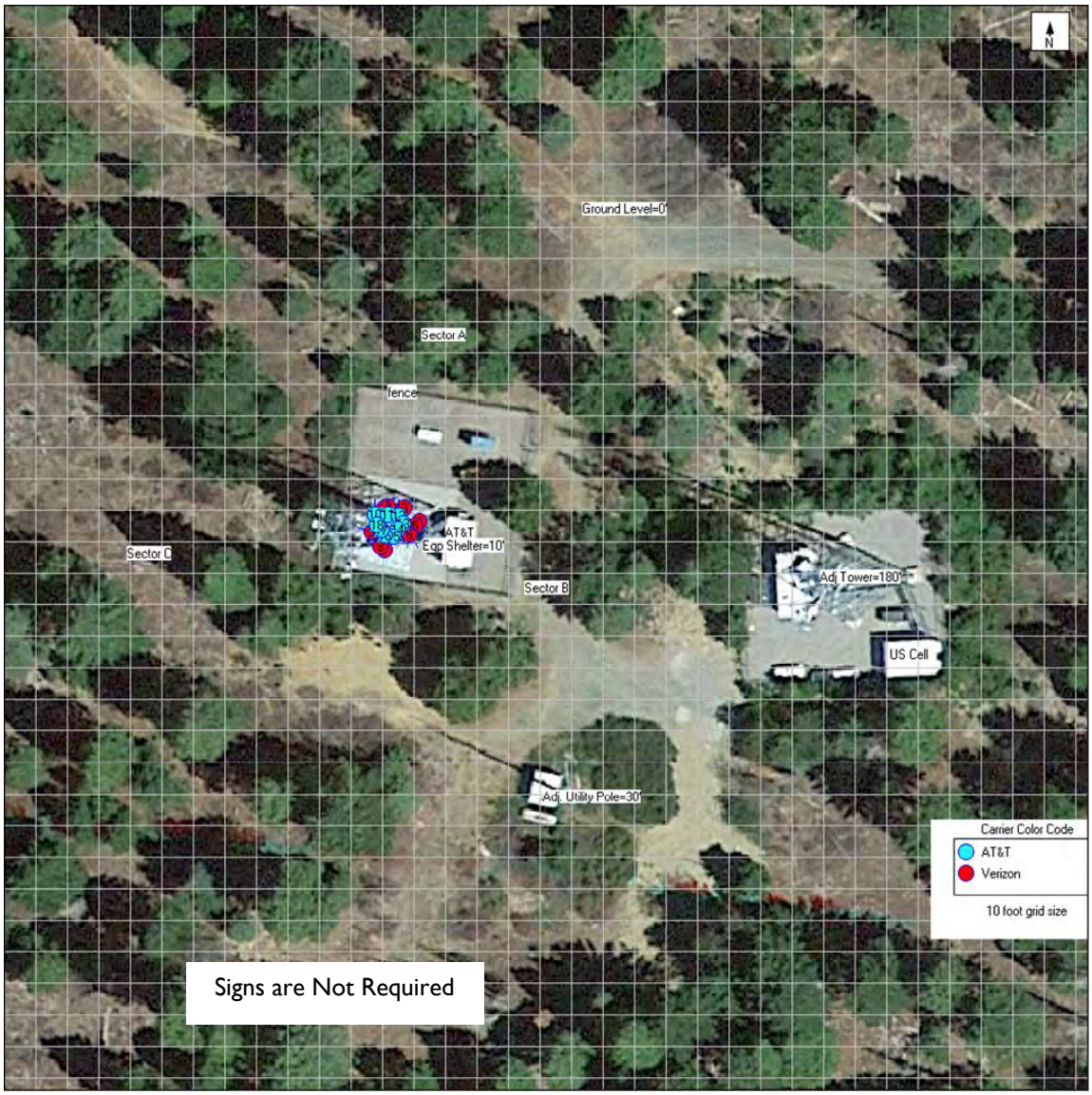
Ground Level

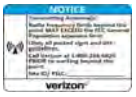
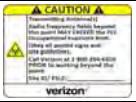


Elevation View



Verizon Signage Plan

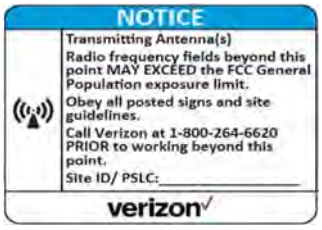


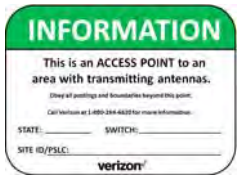
Sign	Posting Instructions	Required Signage / Mitigation
	Securely post at every point of access to the site in a manner conspicuous to all individuals entering thereon as indicated in the signage plan.	Signage not required.
	Securely post at every point of access to the site in a manner conspicuous to all individuals entering thereon as indicated in the signage plan.	Signage not required.
	Securely post in a manner conspicuous to all individuals entering thereon as indicated in the signage plan.	Signage not required.
	Securely post in a manner conspicuous to all individuals entering thereon as indicated in the signage plan.	Signage not required.
	Securely post in a manner conspicuous to all individuals entering thereon as indicated in the signage plan.	Signage not required.

RF Signage and Safety Information

RF Signage

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines. These areas must be demarcated by conspicuously posted signage that identifies the potential exposure. Signage MUST be viewable regardless of the viewer's position.

GUIDELINES	Category Two - Notice	Category Three - Caution	Category Four - Warning
This sign will inform anyone of the basic precautions to follow when entering an area with transmitting radiofrequency equipment.	This sign indicates that RF emissions may exceed the FCC General Population MPE limit. • Sign Color Blue • Sign Signal Word "Notice"	This sign indicates that RF emissions may exceed the FCC Occupational MPE limit. • Sign Color Yellow • Sign Signal Word "Caution"	This sign indicates that RF emissions may exceed at least 10x the FCC Occupational MPE limit. • Sign Color Orange for Warning • Sign Signal Word "Warning"
			

Category One - Information	
Information signs are used as a means to provide contact information for any questions or concerns. They will include specific cell site identification information and the Verizon Wireless Network Operations Center phone number. • Sign Color Green • Sign Signal Word "Information"	

Physical Barriers

Physical barriers are control measures that require awareness and participation of personnel. Physical barriers are employed as an additional administration control to complement RF signage and physically demarcate an area in which RF exposure levels may exceed the FCC General Population limit. **Example:** chain-connected stanchions

Indicative Markers

Indicative markers are visible control measures that require awareness and participation of personnel, as they cannot physically prevent someone from entering an area of potential concern. Indicative markers are employed as an additional administration control to complement RF signage and visually demarcate an area in which RF exposure levels may exceed the FCC General Population limit. **Example:** paint stripes

Occupational Safety and Health Administration (OSHA) Requirements

A formal adopter of FCC Standards, OSHA stipulates that those in the Occupational classification must complete training in the following: 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

Appendix C

Federal Communications

Commission (FCC) Requirements

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to Radiofrequency Electromagnetic (RF-EME) energy fields, based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/ controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general public/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

General public/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

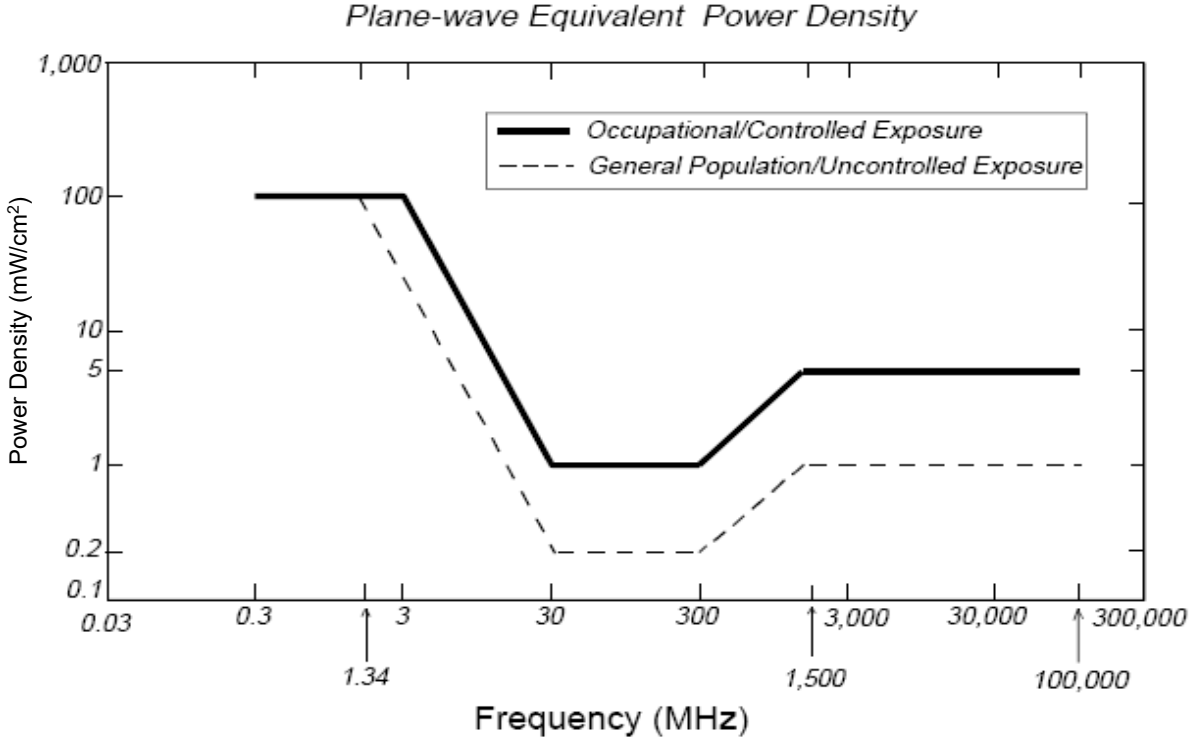
Table 1 and Figure 1 (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm^2). Known as the power density, the FCC has established for equipment operating at frequencies range from 300 Mhz to 1,500 Mhz the Occupational/Controlled limit of (f/300) mW/cm^2 where f is the Frequency in (MHz) and the General Population / Uncontrolled limit of (f/1500) mW/cm^2 where f is the Frequency in (MHz). For equipment operating at frequency ranges from 1900 MHz to 100,000 MHz, the FCC's occupational MPE is 5.0 mW/cm^2 and an uncontrolled MPE limit of 1.0 mW/cm^2. These limits are considered protective of these populations.

Table 1: Limits for Maximum Permissible Exposure (MPE)				
(A) Limits for Occupational/Controlled Exposure				
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
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Public/Uncontrolled Exposure				
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
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)
* Plane-wave equivalent power density

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)



MPE limits are designed to provide a substantial margin of safety. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

Personal Communication (PCS) facilities used by Verizon in this area will potentially operate within a frequency range of 700 to 2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

FCC Compliance Requirement

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.