



DISH WIRELESS L.L.C. SITE ID:

SFSFO00115A

DISH WIRELESS L.L.C. SITE ADDRESS:

4900 SONOMA HWY.
SANTA ROSA, CA 95409

CALIFORNIA - CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS 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:

CODE TYPE	CODE
BUILDING	2022 CALIFORNIA BUILDING CODE (CBC)/2021 IBC
MECHANICAL	2022 CALIFORNIA MECHANICAL CODE (CMC)/2021 UMC
ELECTRICAL	2022 CALIFORNIA ELECTRICAL CODE (CEC)/2020 NEC
FIRE	2022 CALIFORNIA FIRE CODE (CFC)/2021 IFC

SHEET INDEX

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
LS1	SITE SURVEY
A-1	OVERALL AND ENLARGED SITE PLAN
A-2.1	ELEVATION
A-2.2	ANTENNA LAYOUT AND SCHEDULE
A-3	EQUIPMENT PAD AND H-FRAME DETAILS
A-4	EQUIPMENT DETAILS
A-5	EQUIPMENT DETAILS
A-6	EQUIPMENT DETAILS
A-7	EQUIPMENT DETAILS
E-1	ELECTRICAL/FIBER ROUTE PLAN AND NOTES
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL ONE-LINE, FAULT CALCS, & PANEL SCHEDULE
G-1	GROUNDING PLANS AND NOTES
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS
RF-1	RF CABLE COLOR CODE
GN-1	LEGEND AND ABBREVIATIONS
GN-2	RF SIGNAGE
GN-3	GENERAL NOTES
GN-4	GENERAL NOTES
GN-5	GENERAL NOTES

RECEIVED

By Christian Candelaria at 8:29 am, Aug 17, 2023

SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

TOWER SCOPE OF WORK:

- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (3) PROPOSED ANTENNA T-ARM MOUNT
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED RRHs (2 PER SECTOR)
- INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
- INSTALL (1) PROPOSED HYBRID CABLE (LENGTH: 137'-0")

GROUND SCOPE OF WORK:

- REMOVE EXISTING FENCE SECTION
- INSTALL PROPOSED FENCE AND GATE EXPANSION
- INSTALL (1) PROPOSED CONCRETE PAD
- INSTALL (1) PROPOSED ICE BRIDGE
- INSTALL (1) PROPOSED PPC CABINET
- INSTALL (1) PROPOSED EQUIPMENT CABINET
- INSTALL (1) PROPOSED POWER CONDUIT
- INSTALL (1) PROPOSED TELCO CONDUIT
- INSTALL (1) PROPOSED TELCO-FIBER BOX
- INSTALL (1) PROPOSED GPS UNIT
- INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)
- INSTALL (2) PROPOSED METER MAINS (1 DISH, 1 FUTURE SERVICE)
- INSTALL (1) PROPOSED PULL SECTION AND SERVICE GUTTER ON PROPOSED UTILITY FRAME
- INSTALL (2) POLARIM SLB49-200-228-1U BATTERIES IN PROPOSED EQUIPMENT CABINET
- INSTALL (1) PROPOSED BATTERY SAFETY SWITCH

SITE PHOTO



UNDERGROUND SERVICE ALERT
UTILITY NOTIFICATION CENTER OF CALIFORNIA
(800) 642-2444
WWW.CALIFORNIA811.ORG

CALL 2-14 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION



GENERAL NOTES

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

11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE, AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

SITE INFORMATION

PROPERTY OWNER: GRANT W. PATRICK, DVM (1)
ADDRESS: 4900 SONOMA HWY
SANTA ROSA, CA 95409

TOWER TYPE: MONOPINE

TOWER CO SITE ID: 815755

TOWER APP NUMBER: 562062

COUNTY: SONOMA

LATITUDE (NAD 83): 38° 27' 47.3" N
38.463139° N

LONGITUDE (NAD 83): 122° 39' 56" W
122.665556° W

ZONING JURISDICTION: CITY OF SANTA ROSA, CA

ZONING DISTRICT: COMMERCIAL

PARCEL NUMBER: 032-300-008

OCCUPANCY GROUP: U

CONSTRUCTION TYPE: II-B

POWER COMPANY: PG&E

TELEPHONE COMPANY: TBD

PROJECT DIRECTORY

APPLICANT: DISH WIRELESS L.L.C.
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120
(303) 706-5008

TOWER OWNER: CROWN CASTLE USA, INC.
2000 CORPORATE DRIVE
CANONSBURG, PA 15317
(877) 486-9377

SITE DESIGNER: FULLERTON ENGINEERING
1100 E WOODFIELD, STE 500
SCHAUMBURG, IL 60173
(847) 908-8400

SITE ACQUISITION: JEFF MELVIN
JEFF.MELVIN@CROWNCastle.COM

CONSTRUCTION MANAGER: TIMOTHY BROESSEL
TIMOTHY.BROESSEL@DISH.COM

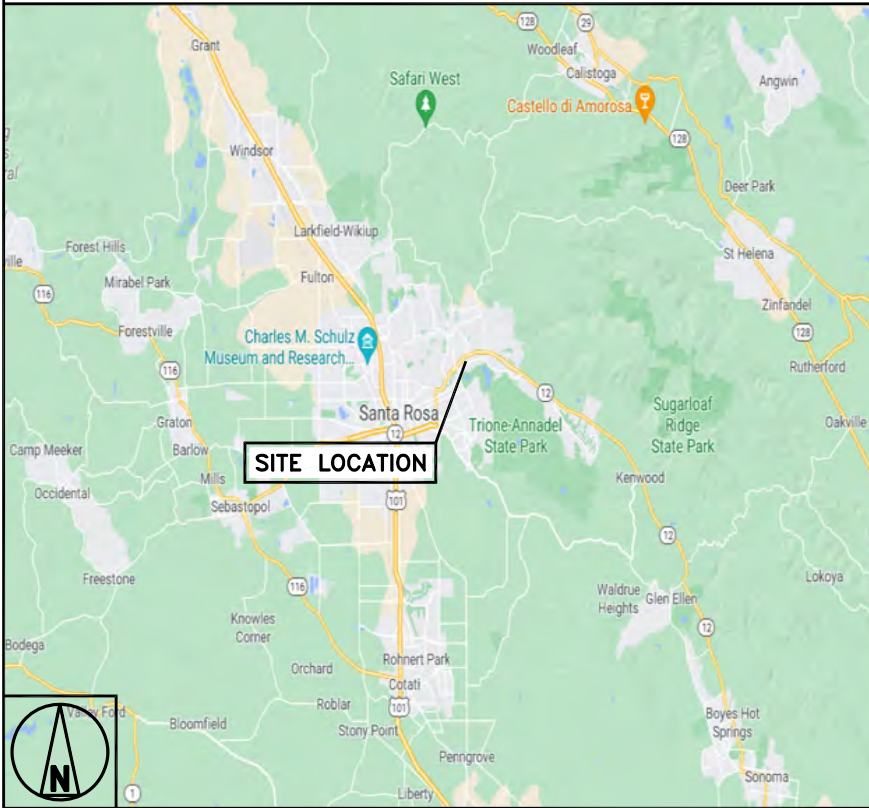
RF ENGINEER: CAROLINA MORALES
CAROLINA.MORALES@DISH.COM

DIRECTIONS

DIRECTIONS FROM CHARLES M. SCHULZ-SONOMA COUNTY AIRPORT:

HEAD SOUTHEAST ON AIRPORT BLVD, TURN RIGHT TO STAY ON AIRPORT BLVD, TURN RIGHT TO MERGE ONTO US-101 S, MERGE ONTO US-101 S, USE THE 2ND FROM THE RIGHT LANE TO TAKE EXIT 490 FOR COLLEGE AVE, USE THE LEFT 2 LANES TO TURN LEFT ONTO COLLEGE AVE, USE ANY LANE TO TURN LEFT ONTO 4TH ST, TURN RIGHT, DESTINATION WILL BE ON THE RIGHT.

VICINITY MAP



NO SCALE



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com



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.

DRAWN BY: CHECKED BY: APPROVED BY:

JES CJ CJ

RFDS REV #: 2

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
3	11/22/2022	LEASE AREA UPDATE
4	12/12/2022	ELEVATION UPDATE
5	02/02/2023	JDX REVISION
6	02/10/2023	JDX REVISION
7	04/19/2023	ADDED SURVEY
8	05/24/2023	UTILITY REVISION
9	07/28/2023	UTILITY REVISION

A&E PROJECT NUMBER
2021.0025.815755

DISH WIRELESS L.L.C.
PROJECT INFORMATION
SFSFO00115A
CA-CCI-T-815755
4900 SONOMA HWY.
SANTA ROSA, CA 95409

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

AS-BUILT SURVEY

815755

RINCON VALLEY

4900 SONOMA HWY
SANTA ROSA, CA 95409
SONOMA COUNTY

LEGEND

Additional Land Building	IP / Rebar Monu	Transformers
Asphalt Pavement	IP / Rebar Monu- Found	Transformer Pad
Contour - Major	Cased Monu	Catch Basin
Contour - Minor	Cased Monu - Found	Inlet
Easement	Traverse Point	Culvert
Guidrail	Survey Point	Utility Vault
Jurisdiction Line	Gravel	Manhole
Property Line	Dirt	Handhole
Property Tie	Concrete	Pull box
Right of Way	Retaining Wall	Pedestal
Setback	Stairs	Riser
Treeline	Door / Gate	Meter
Wetland	Double Door / Gate	Valve
Railroad Tracks	Gate - Sliding	Cleanout
Centerline	Signs	Junction Box
Road Centerline	Mailbox	Pump Station
Stream	Column	Utility Box
Stream (Directional)	Utility Pole	Controller
Ditch	Guyed Pole	HVAC
Channel	Pole	Generator
Fence	Bollard	
Cable TV	Flag Pole	
Cable Underground	Shrub	
Combined Sewer	Tree - Palm	
Cable TV & Elec	Tree - Coniferous	
Cable, Elec, & TV	Tree - Deciduous	
Electric	Metal Platform	
Electric Underground	Fuel Tanks	
Fiber	Traffic Signal Controller	
Fiber Underground		
Gas		
Sewer		
Storm		
Telephone		
Telephone Underground		
Unknown Utility		
Water		
Topo - High Point		
Topo - Low Point		
Breakline		
Match line		
Property Tie		

VICINITY MAP



AREA SUMMARY

AREA	SQ. FT	ACRES
PARENT PARCEL	±24,067	±0.553
TOWER LEASE AREA	±1,463	±0.033
ADDITIONAL LEASE AREA	±124	±0.002
ACCESS & UTILITY EASEMENT	±2,744	±0.063
UTILITY EASEMENT	±425	±0.009

SHEET INDEX

SHEET NAME	TITLE
V-01	COVER SHEET
V-02	PROPERTY OVERVIEW
V-03	SITE BOUNDARY
V-04	SITE DETAIL
V-05	LEGAL DESCRIPTIONS

SURVEY PROCEDURES & EQUIPMENT

The Accuracy Of This Survey Meets Or Exceeds The Minimum Standards As Required By [CA Requirements For Boundary Surveys].
Instruments Used:
-SPECTRA PRECISION SP80 W/ SMARTNET VIRTUAL NETWORK
-TOPCON TOTAL STATION GPT-3005

COORDINATES

LABEL	LAT, LONG
FD. MON.	38° 27' 47.01", 122° 39' 54.79"
FD. MON.	38° 27' 44.38", 122° 39' 54.03"

For internal use:

SURVEY PERFORMED FOR:



1500 Corporate Drive
Canonsburg, PA 15317

SURVEY COORDINATED BY:

GEOLINE SURVEYING, INC.
13430 NW 10th Terrace, Suite A, Alachua, FL 32615
Tele: (386) 418-0506 | Fax: (386) 462-9986

SURVEY PERFORMED BY:

SMITHCO SURVEYING ENGINEERING
2005 AIRPORT DRIVE, BAKERSFIELD, CA 93308
Tele: (805) 393-1217 | Fax: (805) 393-1218

DRWN BY: EJ | QW BY: DA | JOB NO.: 71-618

SURVEYOR'S CERTIFICATION:

I hereby certify to Crown Castle GT Company LLC, Crown Castle USA Inc., including its parents, subsidiaries and affiliated entities, and Westcoast Land Title Insurance Company.

SURVEYOR NAME: DARIAN ALBA



SIGNATURE

DATE

LEASE AREA ZONING:

CG GENERAL COMMERCIAL

LEASE AREA FLOOD NOTE:

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD RATE MAP FOR COMMUNITY NO. 067381, PANEL NO. 0733E, DATED DECEMBER 2, 2008 SHOWS THAT THE LOCATION OF THIS SITE FALLS WITHIN ZONE "X". AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

BASIS OF NORTH:

ALL BEARINGS SHOWN HEREON ARE GRID BEARINGS BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 ZONE 2.

NOTES:

1. SURVEY PERFORMED ON 05/10/21.
2. HORIZONTAL DATA PROJECTED IN CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE 2 (INTERNATIONAL ASSOCIATION OF OIL & GAS PRODUCERS' EPSG CODE 3226) ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVDS88).
3. THE UNDERGROUND UTILITIES (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN LOCATED AND MARKED ON THE SURFACE BY AN INDEPENDENT PRIVATE UNDERGROUND LOCATING SERVICE. THESE MARKINGS HAVE BEEN SURVEYED AND SHOWN HEREON.
4. ALL VISIBLE TOWNSHIP AND IMPROVEMENTS ARE CAPTURED WITHIN THE DESCRIBED AREA.
5. NOT ALL SYMBOLS ARE DEPICTED TO SCALE.
6. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

REV	DATE	DESCRIPTION	DRWN
00	05/13/21	PRELIMINARY	EJ
09	08/05/22	REV. A/U	LA
10	08/19/22	REV. A/U	EJ
11	02/08/23	REVISIONS	EJ

SITE INFORMATION:

Name: RINCON VALLEY
BUN: 815755
Address: 4900 SONOMA HWY
SANTA ROSA, CA 95409
County: SONOMA COUNTY

SITE LOCATED IN:
RANCHO CABEZA DE SANTA ROSA

AS-BUILT SURVEY

SHEET TITLE: COVER SHEET

SHT NAME: V-01 | SHT NO: 1 | OF 5

PROPERTY INFORMATION

PARENT PARCEL

- ① GRANT W. PATRICK, TRUSTEE OF THE
GRANT W. PATRICK TRUST
APN: 032-300-008

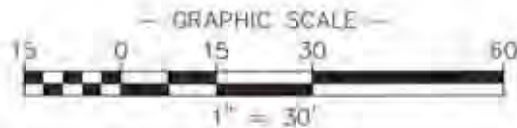
ADDRESS:
4900 SONOMA HWY
SANTA ROSA, CA 95409

ADJACENT PARCELS

- ② LOGAN ROBERT ELLIS TR & LOGAN JARET
ELAINE TR
APN: 032-300-004

- ③ STENGER JADINE L TOR
APN: 032-300-013

- ④ 4890 SONOMA HIGHWAY LLC
APN: 032-300-009



STATE HWY 12
(PUBLIC ROAD)

APN: 032-300-009

APN: 032-300-008
OWNER: GRANT W. PATRICK,
TRUSTEE OF THE
GRANT W. PATRICK TRUST
DEED REF.: DOC. NO. 2010079089

APN: 032-300-013

APN: 032-300-004

STREET LIGHT VAULT
STREET LIGHT POWER POLE
#15223
12" GAS LID

FIRE HYDRANT

PG&E VAULT

WATER VAULT

TRANS.

VAULT

POWER POLE
#120251577

BUILDING

N34°50'27"E 24.35'

ELEC. VAULT

POINT "B"

POWER POLE

SURVEY PERFORMED FOR:



1500 Corporate Drive
Canonsburg, PA 15317

SURVEY COORDINATED BY:

GEOLINE SURVEYING, INC.
13430 NW 10th Terrace, Suite A, Alachua, FL 32615
Tele: (386) 418-0500 | Fax: (386) 462-9886

SURVEY PERFORMED BY:

SMITHCO SURVEYING ENGINEERING
3005 AIRPORT DRIVE, BAKERSFIELD, CA 93306
Tele: (805) 393-1217 | Fax: (805) 393-1218

DRAWN BY: EJ | CHK. BY: DA | JOB NO.: 71-816

SURVEYOR'S CERTIFICATION:

I hereby certify to Crown Castle GT Company LLC, Crown
Castle USA Inc. including its parents, subsidiaries and affiliated
entities, and Westcor Land Title Insurance Company,

SURVEYOR NAME: D'ARTAGHAN ALBY



SIGNATURE

DATE

LEASE AREA ZONING:

CC: GENERAL COMMERCIAL

LEASE AREA FLOOD NOTE:

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD RATE
MAP FOR COMMUNITY NO. 060301, PANEL NO. 0733E, DATED
DECEMBER 2, 2008 SHOWS THAT THE LOCATION OF THIS
SITE FALLS WITHIN ZONE "X". AREAS DETERMINED TO BE
OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

BASIS OF NORTH:

ALL BEARINGS SHOWN HEREON ARE GRID BEARINGS BASED
ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 ZONE 2.

NOTES:

1. SURVEY PERFORMED ON 05/10/21.
2. HORIZONTAL DATA PROJECTED IN CALIFORNIA COORDINATE
SYSTEM OF 1983 (CCS83) ZONE 2 (INTERNATIONAL
ASSOCIATION OF OIL & GAS PRODUCER'S EPSG
CODE: 1224). ELEVATIONS SHOWN HEREON ARE BASED ON
THE NORTH AMERICAN VERTICAL DATUM OF 1988
(NAVD88).
3. THE UNDERGROUND UTILITIES (IF ANY) THAT APPEAR ON
THIS MAP HAVE BEEN LOCATED AND MARKED ON THE
SURFACE BY AN INDEPENDENT PRIVATE UNDERGROUND
LOCATING SERVICE. THESE MARKINGS HAVE BEEN
SURVEYED AND SHOWN HEREON.
4. ALL VISIBLE TOWER EQUIPMENT AND IMPROVEMENTS ARE
CONTAINED WITHIN THE DESCRIBED AREA.
5. NOT ALL SYMBOLS ARE DEPICTED TO SCALE.
6. THIS SURVEY DOES NOT REPRESENT A BOUNDARY
SURVEY OF THE PARENT PARCEL.

REV	DATE	DESCRIPTION	DRWN
00	05/13/21	PRELIMINARY	EJ
09	08/05/23	REV. A/10	LA
10	08/16/23	REV. A/11	CJ
11	02/06/23	REVISIONS	CJ

SITE INFORMATION:

Name: RINCON VALLEY

BUN: 815755

Address: 4900 SONOMA HWY
SANTA ROSA, CA 95409

County: SONOMA COUNTY

SITE LOCATED IN:

RANCHO CABEZA DE SANTA ROSA

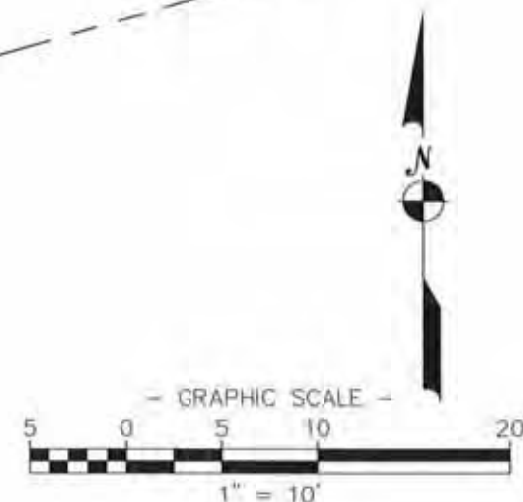
AS-BUILT SURVEY

SHEET TITLE: PROPERTY OVERVIEW

SHT NAME: V-02 | SHT NO: 2 | OF 5



APN: 032-300-008
 OWNER: GRANT W. PATRICK,
 TRUSTEE OF THE GRANT W. PATRICK TRUST
 DEED REF.: DOC. NO. 2010079089



SURVEY PERFORMED FOR:
CROWN CASTLE
 1500 Corporate Drive,
 Canonsburg, PA 15317

SURVEY COORDINATED BY:
 GEOLINE SURVEYING, INC.
 13430 NW 10th Terrace, Suite A, Alachua, FL 32615
 Tele: (386) 418-0500 | Fax: (386) 482-9086

SURVEY PERFORMED BY:
 SMITHCO SURVEYING ENGINEERING
 2005 AIRPORT DRIVE, BAKERSFIELD, CA 93308
 Tele: (661) 393-1217 | Fax: (661) 393-1218

DRAWN BY: [] **CHECKED BY:** [] **DATE:** 02/06/23

SURVEYOR'S CERTIFICATION:
 I hereby certify to Crown Castle GT Company LLC, Crown Castle USA Inc., including its parents, subsidiaries and affiliated entities, and Western Land Title Insurance Company,

SURVEYOR NAME: D'ARTAGNAN ALBA

LICENSED LAND SURVEYOR
 D'ARTAGNAN ALBA
 L.S. 9052
 2.13.23
 SIGNATURE
 DATE

LEASE AREA ZONING:
 CO. GENERAL COMMERCIAL

LEASE AREA FLOOD NOTE:
 THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD RATE MAP FOR COMMUNITY NO. 080381, PANEL NO. 0733E, DATED DECEMBER 2, 2000 SHOWS THAT THE LOCATION OF THIS SITE FALLS WITHIN ZONE "X". AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

BASIS OF NORTH:
 ALL BEARINGS SHOWN HEREON ARE GRID BEARINGS BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 2.

NOTES:
 1. SURVEY PERFORMED ON 15/10/21
 2. HORIZONTAL DATA PROJECTED IN CALIFORNIA COORDINATE SYSTEM OF 1983 (CES83) ZONE 2 (INTERNATIONAL ASSOCIATION OF OIL & GAS PRODUCERS' EPSG CODE 1226). ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 3. THE UNDERGROUND UTILITIES (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN LOCATED AND MARKED ON THE SURFACE BY AN INDEPENDENT PRIVATE UNDERGROUND LOCATING SERVICE. THESE MARKINGS HAVE BEEN SURVEYED AND SHOWN HEREON.
 4. ALL VISIBLE TOWER EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.
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REV	DATE	DESCRIPTION	DRWN
00	05/13/21	PRELIMINARY	EJ
09	08/05/22	REV. A/11	LA
10	08/18/22	REV. A/11	CJ
11	02/06/23	REVISIONS	CJ

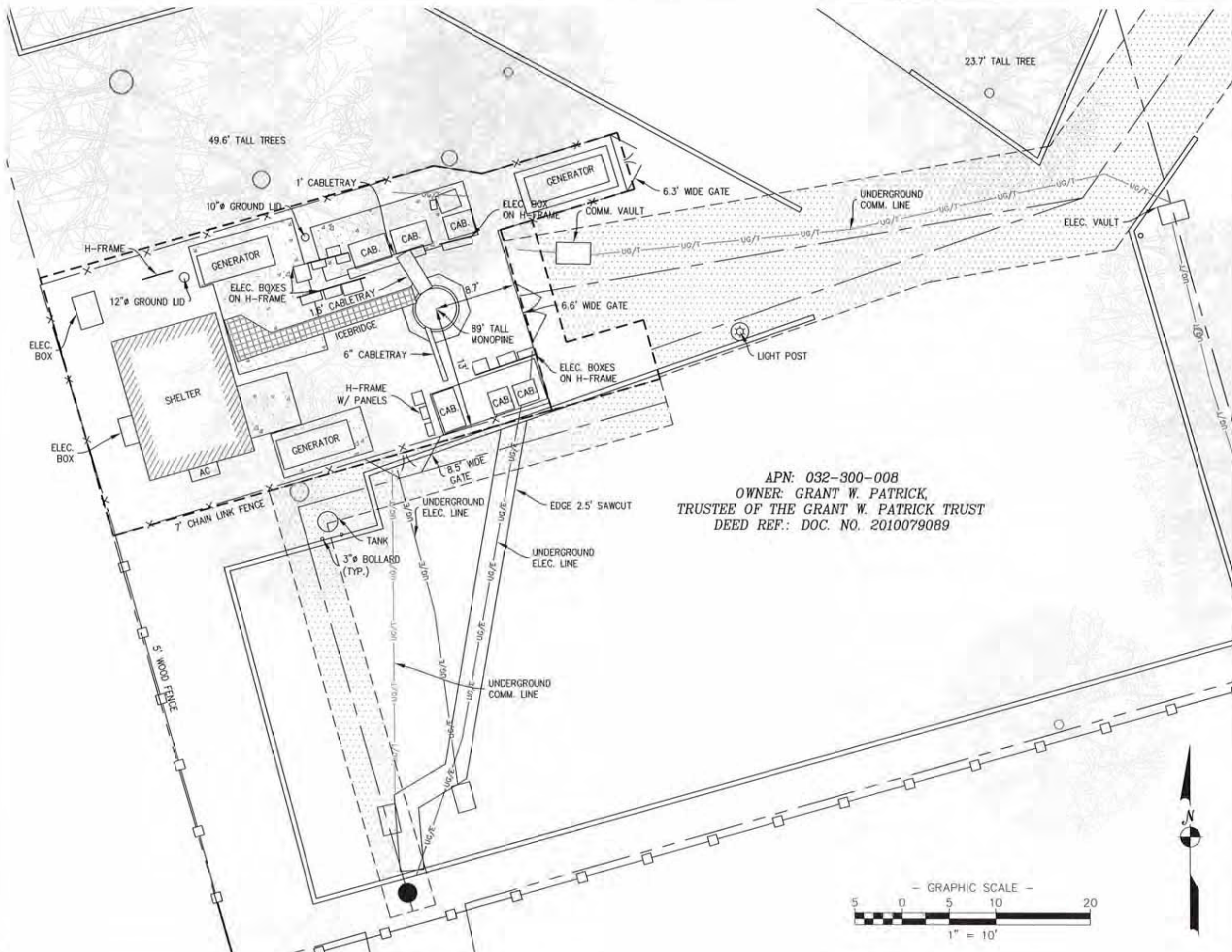
SITE INFORMATION:
 Name: RINCON VALLEY
 BUN: 815755
 Address: 4900 SONOMA HWY
 SANTA ROSA, CA 95409
 County: SONOMA COUNTY

SITE LOCATED IN:
 RANCHO CABEZA DE SANTA ROSA

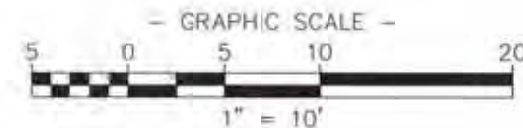
AS-BUILT SURVEY

SHEET TITLE: SITE BOUNDARY

SHT NAME: V-63 **SHT NO:** 3 **OF** 5



APN: 032-300-008
 OWNER: GRANT W. PATRICK,
 TRUSTEE OF THE GRANT W. PATRICK TRUST
 DEED REF.: DOC. NO. 2010079089



SURVEY PERFORMED FOR:

CROWN CASTLE

1500 Corporate Drive
 Canonsburg, PA 15317

SURVEY COORDINATED BY:

GEOLINE SURVEYING, INC.
 13430 NW 10th Terrace, Suite A, Alachua, FL 32615
 Tele: (386) 418-0500 | Fax: (386) 462-9986

SURVEY PERFORMED BY:

SMITHCO SURVEYING ENGINEERING
 2009 AIRPORT DRIVE, BAKERSFIELD, CA 93308
 Tele: (805) 393-1217 | Fax: (805) 393-1218

DRAWN BY: EJ

CHK BY: DA

JOB NO.: 71-815

SURVEYOR'S CERTIFICATION:

I hereby certify to Crown Castle GT Company LLC, Crown Castle USA Inc., including its parents, subsidiaries and affiliated entities, and Westcoast Land Title Insurance Company.

SURVEYOR NAME: D'ANTAGHAN ALB



SIGNATURE

DATE

LEASE AREA ZONING:

CC GENERAL COMMERCIAL

LEASE AREA FLOOD NOTE:

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD RATE MAP FOR COMMUNITY NO. 060381, PANEL NO. 0733E, DATED DECEMBER 2, 2008 SHOWS THAT THE LOCATION OF THIS SITE FALLS WITHIN ZONE 'A', AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

BASIS OF NORTH:

ALL BEARINGS SHOWN HEREOF ARE GRID BEARINGS BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983 ZONE 2.

NOTES:

1. SURVEY PERFORMED ON 05/10/21.
2. HORIZONTAL DATA PROJECTED IN CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE 2 (INTERNATIONAL ASSOCIATION OF OIL & GAS PRODUCER'S E750 CODE 2226) ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. THE UNDERGROUND UTILITIES (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN LOCATED AND MARKED ON THE SURFACE BY AN INDEPENDENT PRIVATE UNDERGROUND LOCATING SERVICE. THESE MARKINGS HAVE BEEN SURVEYED AND SHOWN HEREON.
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6. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

REV	DATE	DESCRIPTION	DRWN
09	05/13/21	PRELIMINARY	EJ
09	08/05/22	REV. A/E	LA
10	08/19/22	REV. A/E	CJ
11	02/06/23	REVISIONS	CJ

SITE INFORMATION:

Name: RINCON VALLEY

BUN: 815755

Address: 4900 SONOMA HWY
SANTA ROSA, CA 95409

County: SONOMA COUNTY

SITE LOCATED IN:

RANCHO CABEZA DE SANTA ROSA

AS-BUILT SURVEY

SHEET TITLE: SITE DETAIL

SHT NAME: V-01

SHT NO: 4 OF 5

PARENT PARCEL LEGAL DESCRIPTION

PER QUITCLAIM DEED, DOCUMENT NO. 2010079089:

THE LAND HEREIN REFERRED TO IS SITUATED IN THE STATE OF CALIFORNIA, COUNTY OF SONOMA, CITY OF SANTA ROSA AND IS DESCRIBED AS FOLLOWS:

PARCEL ONE

LYING WITHIN RANCHO CABEZA DE SANTA ROSA AND BEING A PORTION OF THE LANDS CONVEYED TO HAROLD T. GUSTAFSON AND WIFE, BY DEED RECORDED JULY 30, 1952 UNDER RECORDER'S SERIAL NO. D-73125, SONOMA COUNTY RECORDS, SAID PORTION BEING DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE CENTER OF THE STATE HIGHWAY LEADING FROM SANTA ROSA TO SONOMA, SAID POINT BEING NORTH 16°36'-12" WEST, 30 FEET FROM THE NORTHWESTERLY CORNER OF THE 2 ACRE PARCEL OF LAND CONVEYED TO JAMES W. WHITEFORD AND WIFE, BY DEED RECORDED JUNE 28, 1944 IN BOOK 513 OF OFFICIAL RECORDS, PAGE 7, SONOMA COUNTY RECORDS, AND THE NORTHEASTERLY CORNER OF SAID LANDS CONVEYED TO HAROLD T. GUSTAFSON AND WIFE, SAID POINT BEING KNOWN AS STATION "P" 131+08.0 POINT ON TANGENT OF THE SURVEY OF SAID HIGHWAY; THENCE SOUTH 16° 36' 30" EAST A DISTANCE OF 20 FEET TO AN IRON PIPE SET IN THE SOUTHERN LINE OF SAID HIGHWAY; THENCE SOUTH 73° 20' 30" WEST AND ALONG THE SOUTHERN LINE OF SAID HIGHWAY, A DISTANCE OF 100 FEET TO AN IRON PIPE AND THE TRUE POINT OF BEGINNING; THENCE SOUTH 16° 36' 30" EAST AND ALONG THE WESTERN BOUNDARY LINE OF THE LAND CONVEYED BY HAROLD T. GUSTAFSON AND WIFE TO WALTER CEDARBERG, A SINGLE MAN, BY DEED DATED MARCH 9, 1953 AND RECORDED MARCH 18, 1953 IN THE OFFICE OF THE COUNTY RECORDER OF SONOMA COUNTY UNDER RECORDER'S SERIAL NO. D-90508, A DISTANCE OF 200 FEET TO AN IRON PIPE; THENCE SOUTH 73° 20' 30" WEST A DISTANCE OF 92.70 FEET TO AN IRON PIPE; THENCE SOUTH 12° 56' EAST A DISTANCE OF 43 FEET TO AN IRON PIPE; THENCE SOUTH 73° 20' 30" WEST A DISTANCE OF 11 FEET TO AN IRON PIPE; THENCE NORTH 12° 56' WEST A DISTANCE OF 43 FEET TO AN IRON PIPE; THENCE SOUTH 73° 20' 30" WEST A DISTANCE OF 14.3 FEET TO AN IRON PIPE; THENCE NORTH 16° 36' 30" WEST A DISTANCE OF 200 FEET TO THE SOUTHERN LINE OF SAID HIGHWAY; THENCE NORTH 73° 20' 30" EAST, 118.0 FEET TO THE TRUE POINT OF BEGINNING. A.P. NO. 32-300-08

PARCEL TWO

AN EASEMENT FOR UNDERGROUND SEWER, DRAINAGE AND SURFACE WATER RUN OFF OVER THE WESTERLY 10 FEET OF PARCELS 2 AND 3 AS SHOWN ON CITY OF SANTA ROSA PARCEL MAP NO. 43, FILED AUGUST 17, 1972 IN BOOK 177 OF MAPS, PAGE 18, EXCEPTING THEREFROM THAT PORTION LYING WITHIN THE LANDS DESCRIBED IN DEED RECORDED JANUARY 25, 1978 IN BOOK 3345 OF OFFICIAL RECORDS, PAGE 985, SONOMA COUNTY RECORDS

PARCEL THREE

AN EASEMENT FOR UNDERGROUND SEWER, WATER RUN OFF AND DRAINAGE OVER THE SOUTHERLY 10 FEET OF PARCEL 1, AS SHOWN ON CITY OF SANTA ROSA PARCEL MAP NO. 43, FILED AUGUST 17, 1972 IN BOOK 177 OF MAPS, PAGE 18.

PARCEL FOUR

A NON-EXCLUSIVE EASEMENT AND RIGHT OF WAY FOR INGRESS AND EGRESS OF VEHICLES OVER THE WESTERLY 20 FEET OF THE LANDS OF ALBERTINE S. HARVEY, AS SAID EASEMENT AND LANDS ARE DESCRIBED IN DOCUMENT RECORDED DECEMBER 5, 1985 AS DOCUMENT NO. 85081688 AND RERECORDED JANUARY 28, 1986 AS DOCUMENT NO. 85005783, SONOMA COUNTY RECORDS

ITEMS OF RECORD

PER TOWER TITLE INSURANCE COMPANY, TITLE FILE NO. CCI-130702-PR, DATED APRIL 8, 2022:

- EASEMENT DEED BETWEEN GRANT W. PATRICK AND THE CITY OF SANTA ROSA, A MUNICIPAL CORPORATION, DATED APRIL 21, 1988 AND RECORDED APRIL 27, 1988 IN (INSTRUMENT) 88032981, IN SONOMA COUNTY, CALIFORNIA. >>> PLOTTED AS SHOWN HEREON<<<
- MEMORANDUM OF LEASE BETWEEN GRANT W. PATRICK AND GTE MOBILNET OF CALIFORNIA LIMITED PARTNERSHIP, A CALIFORNIA LIMITED PARTNERSHIP BY GTE MOBILNET INCORPORATED ITS GENERAL PARTNER, DATED JANUARY 2, 1997 AND RECORDED MARCH 18, 1997 IN (INSTRUMENT) 1997 0021841, IN SONOMA COUNTY, CALIFORNIA

AFFECTED BY A(N) ASSIGNMENT AND ASSUMPTION AGREEMENT BETWEEN GTE MOBILNET OF CALIFORNIA LIMITED PARTNERSHIP, A CALIFORNIA LIMITED PARTNERSHIP DB/A VERIZON WIRELESS, AND CROWN CASTLE GT COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED JUNE 13, 2001 AND RECORDED OCTOBER 8, 2001 IN (INSTRUMENT) 2001 136992, IN SONOMA COUNTY, CALIFORNIA.

AFFECTED BY A(N) MEMORANDUM OF SECOND AMENDMENT TO LAND LEASE AGREEMENT BETWEEN GRANT W. PATRICK AND CROWN CASTLE GT COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED JULY 16, 2001 AND RECORDED MARCH 6, 2002 IN (INSTRUMENT) 2002033380, IN SONOMA COUNTY, CALIFORNIA.

AFFECTED BY A(N) MEMORANDUM OF FOURTH AMENDMENT TO LAND LEASE AGREEMENT BETWEEN GRANT W. PATRICK, AN INDIVIDUAL DEALING WITH HIS SOLE AND SEPARATE PROPERTY, AND CROWN CASTLE GT COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED SEPTEMBER 5, 2008 AND RECORDED SEPTEMBER 15, 2011 IN (INSTRUMENT) 2011078708, IN SONOMA COUNTY, CALIFORNIA.

AFFECTED BY A(N) MEMORANDUM OF FIFTH AMENDMENT TO LAND LEASE AGREEMENT BETWEEN GRANT W. PATRICK, TRUSTEE OF THE GRANT W. PATRICK TRUST AGREEMENT DATED SEPTEMBER 9, 2010, AND CROWN CASTLE GT COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED NOVEMBER 18, 2016 AND RECORDED FEBRUARY 7, 2017 IN (INSTRUMENT) 2017010036, IN SONOMA COUNTY, CALIFORNIA. >>> LEASE IS ASSOCIATED WITH TOWER LEASE AREA <<<

- EASEMENT AGREEMENT BETWEEN AMELIO FABBRI AND SILVIA LEONAVICIUS-FABBRI AND GTE MOBILNET OF CALIFORNIA LIMITED PARTNERSHIP, BY GTE MOBILNET INCORPORATED, ITS GENERAL PARTNER, DATED APRIL 16, 1997 AND RECORDED JUNE 26, 1997 IN (INSTRUMENT) 1997 0054354, IN SONOMA COUNTY, CALIFORNIA. >>> PLOTTED AS SHOWN HEREON<<<

- GRANT OF EASEMENT BETWEEN GRANT W. PATRICK AND CABLE ONE, DATED FEBRUARY 19, 1998 AND RECORDED FEBRUARY 18, 1998 IN (INSTRUMENT) 1998 0016185, IN SONOMA COUNTY, CALIFORNIA. >>> NOT PLOTTABLE EXACT LOCATION CANNOT BE DETERMINED FROM THE REFERENCE DOCUMENT <<<

TOWER LEASE AREA

PREPARED BY THIS OFFICE

BEING A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF PARCEL 1 OF PARCEL MAP NO. 43, RECORDED IN BOOK 177 OF PARCEL MAPS, AT PAGE 18, SONOMA COUNTY RECORDS, THENCE ALONG THE EAST LINE OF SAID PARCEL 1, N 15°58'51" W (SHOWN ON SAID MAP AS S 16°36'30" E), A DISTANCE OF 47.54 FEET TO THE POINT OF BEGINNING:

COURSE 1) THENCE CONTINUING ALONG SAID EAST LINE N 15°58'51" W, A DISTANCE OF 28.32 FEET;
COURSE 2) THENCE LEAVING SAID EAST LINE, N 74°01'09" E, A DISTANCE OF 43.54 FEET;
COURSE 3) THENCE S 81°23'23" E, A DISTANCE OF 5.31 FEET;
COURSE 4) THENCE N 73°04'26" E, A DISTANCE OF 14.97 FEET;
COURSE 5) THENCE S 18°55'35" E, A DISTANCE OF 6.27 FEET;
COURSE 6) THENCE S 73°04'26" W, A DISTANCE OF 14.86 FEET;
COURSE 7) THENCE S 15°58'51" E, A DISTANCE OF 7.28 FEET TO THE HEREINAFTER DESCRIBED POINT "A";
COURSE 8) THENCE S 15°58'51" E, A DISTANCE OF 12.57 FEET;
COURSE 9) THENCE S 74°01'09" W, A DISTANCE OF 48.58 FEET TO THE POINT OF BEGINNING.

CONTAINING 1.453 SQUARE FEET (0.033 ACRES), MORE OR LESS.

APN: 032-300-008
OWNER(S): GRANT W. PATRICK, TRUSTEE OF THE GRANT W. PATRICK TRUST
DEED REFERENCE: DOCUMENT NO. 2010079089

ADDITIONAL LEASE AREA

PREPARED BY THIS OFFICE

BEING A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF PARCEL 1 OF PARCEL MAP NO. 43, RECORDED IN BOOK 177 OF PARCEL MAPS, AT PAGE 18, SONOMA COUNTY RECORDS, THENCE ALONG THE EAST LINE OF SAID PARCEL 1, N 15°58'51" W (SHOWN ON SAID MAP AS S 16°36'30" E), A DISTANCE OF 47.54 FEET; THENCE LEAVING SAID EAST LINE, N 74°01'09" E, A DISTANCE OF 48.58 TO THE POINT OF BEGINNING.

COURSE 1) THENCE CONTINUING N 15°58'51" W, A DISTANCE OF 19.85 FEET;
COURSE 2) THENCE N 73°04'25" E, A DISTANCE OF 3.46 FEET;
COURSE 3) THENCE S 15°58'52" E, A DISTANCE OF 13.91 FEET;
COURSE 4) THENCE N 74°01'09" E, A DISTANCE OF 8.54 FEET;
COURSE 5) THENCE S 15°58'51" E, A DISTANCE OF 6.50 FEET;
COURSE 6) THENCE S 74°01'09" W, A DISTANCE OF 12.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 124 SQUARE FEET (0.002 ACRES), MORE OR LESS.

APN: 032-300-008
OWNER(S): GRANT W. PATRICK, TRUSTEE OF THE GRANT W. PATRICK TRUST
DEED REFERENCE: DOCUMENT NO. 2010079089

ACCESS & UTILITY EASEMENT

PREPARED BY THIS OFFICE

A 12.00 FOOT WIDE STRIP OF LAND OVER, ACROSS AND THROUGH A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, LYING 6.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF PARCEL 1 OF PARCEL MAP NO. 43, RECORDED IN BOOK 177 OF PARCEL MAPS, AT PAGE 18, SONOMA COUNTY RECORDS, THENCE ALONG THE EAST LINE OF SAID PARCEL 1, N 15°58'51" W (SHOWN ON SAID MAP AS S 16°36'30" E), A DISTANCE OF 47.54 FEET; THENCE LEAVING SAID EAST LINE, N 74°01'09" E, A DISTANCE OF 48.58 FEET; THENCE S 15°58'61" E, A DISTANCE OF 12.57 FEET TO POINT "A" AND TO THE POINT OF BEGINNING:

COURSE 1) THENCE N 80°04'53" E, A DISTANCE OF 60.88 FEET TO POINT "B";
COURSE 2) THENCE N 34°50'27" E, A DISTANCE OF 24.35 FEET;
COURSE 3) THENCE N 15°58'51" W, A DISTANCE OF 131.05 FEET TO THE SOUTH LINE OF STATE HIGHWAY NO. 12 AND THE TERMINUS OF THIS DESCRIPTION.

A 4.00 FOOT WIDE STRIP OF LAND OVER, ACROSS AND THROUGH A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, LYING 3.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE ABOVE MENTIONED POINT "B":

COURSE 1) THENCE S 70°35'49" W, A DISTANCE OF 48.63 FEET TO THE TERMINUS OF THIS DESCRIPTION.

CONTAINING 2.744 SQUARE FEET (0.063 ACRES), MORE OR LESS.

APN: 032-300-008
OWNER(S): GRANT W. PATRICK, TRUSTEE OF THE GRANT W. PATRICK TRUST
DEED REFERENCE: DOCUMENT NO. 2010079089

APN: 032-300-004
OWNER(S): ROBERT ELLIS LOGAN & JANET ELAINE LOGAN
DEED REFERENCE:

UTILITY EASEMENT

PREPARED BY THIS OFFICE

A 5.00 FOOT WIDE STRIP OF LAND OVER, ACROSS AND THROUGH A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, LYING 2.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF PARCEL 1 OF PARCEL MAP NO. 43, RECORDED IN BOOK 177 OF PARCEL MAPS, AT PAGE 18, SONOMA COUNTY RECORDS, THENCE ALONG THE EAST LINE OF SAID PARCEL 1, N 15°58'51" W (SHOWN ON SAID MAP AS S 16°36'30" E), A DISTANCE OF 0.77 FEET; THENCE LEAVING SAID EAST LINE, N 74°01'09" E, A DISTANCE OF 19.77 FEET TO THE POINT OF BEGINNING.

COURSE 1) THENCE N 15°58'51" E, A DISTANCE OF 44.27 FEET;
COURSE 2) THENCE N 74°01'09" E, A DISTANCE OF 40.81 FEET;
COURSE 3) THENCE N 15°58'51" W, A DISTANCE OF 131.05 FEET TO THE TERMINUS OF THIS DESCRIPTION.

CONTAINING 425 SQUARE FEET (0.009 ACRES), MORE OR LESS.

APN: 032-300-008
OWNER(S): GRANT W. PATRICK, TRUSTEE OF THE GRANT W. PATRICK TRUST
DEED REFERENCE: DOCUMENT NO. 2010079089

APN: 032-300-004
OWNER(S): ROBERT ELLIS LOGAN & JANET ELAINE LOGAN
DEED REFERENCE:

SURVEY PERFORMED FOR:



1500 Corporate Drive
Canonsburg, PA 15317

SURVEY COORDINATED BY:

GEOLINE SURVEYING, INC.
13430 NW 10th Terrace, Suite A, Alachua, FL 32615
Tele: (386) 418-0500 | Fax: (386) 462-9985

SURVEY PERFORMED BY:

SMITHCO SURVEYING ENGINEERING
2005 AIRPORT DRIVE, BAKERSFIELD, CA 93308
Tele: (661) 393-1217 | Fax: (661) 393-1218

DRAWN BY: EJ

CHK BY: DA

JOB NO.: 71-818

SURVEYOR'S CERTIFICATION:

I hereby certify to Crown Castle GT Company LLC, Crown Castle USA Inc., including its parents, subsidiaries and affiliated entities, and Wireless Land Title Insurance Company,

SURVEYOR NAME: RYNNIGHAN ALBA



SIGNATURE

DATE

LEASE AREA ZONING:

CC: GENERAL COMMERCIAL

LEASE AREA FLOOD NOTE:

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD RATE MAP FOR COMMUNITY NO. 060351, PANEL NO. 07331, DATED DECEMBER 2, 2005 SHOWS THAT THE LOCATION OF THIS SITE FALLS WITHIN ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN

BASIS OF NORTH:

ALL BEARINGS SHOWN HEREON ARE GRID BEARINGS BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 2.

NOTES:

- SURVEY PERFORMED ON 05/10/23
- HORIZONTAL DATA PROJECTED IN CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE 2 (INTERNATIONAL ASSOCIATION OF OIL & GAS PRODUCER'S EPSG CODE 3226) ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83)
- THE UNDERGROUND UTILITIES (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN LOCATED AND MARKED ON THE SURFACE BY AN INDEPENDENT PRIVATE UNDERGROUND LOCATING SERVICE. THESE MARKINGS HAVE BEEN SURVEYED AND SHOWN HEREON.
- ALL WIRELESS TOWER EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.
- NOT ALL SYMBOLS ARE EXPECTED TO SCALE.
- THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

REV	DATE	DESCRIPTION	DRWN
00	05/13/23	PRELIMINARY	EJ
01	08/05/23	REV. A/D	JA
10	08/15/23	REV. A/D	ICJ
11	02/06/23	REVISIONS	ICJ

SITE INFORMATION:

Name: RINCON VALLEY

BUN: 815755

Address: 4900 SONOMA HWY
SANTA ROSA, CA 95409

County: SONOMA COUNTY

SITE LOCATED IN:
RANCHO CABEZA DE SANTA ROSA

AS-BUILT SURVEY

SHEET TITLE: LEGAL DESCRIPTION

SHT NAME: V-05 SHT NO: 5 OF 5

815755
Rincon Valley

TOWER LEASE AREA (PREPARED BY THIS OFFICE):

BEING A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF PARCEL 1 OF PARCEL MAP NO. 43, RECORDED IN BOOK 177 OF PARCEL MAPS, AT PAGE 18, SONOMA COUNTY RECORDS, THENCE ALONG THE EAST LINE OF SAID PARCEL 1, N 15°58'51" W (SHOWN ON SAID MAP AS S 16°36'30" E), A DISTANCE OF 47.54 FEET TO THE POINT OF BEGINNING:

COURSE 1) THENCE CONTINUING ALONG SAID EAST LINE N 15°58'51" W, A DISTANCE OF 28.32 FEET;

COURSE 2) THENCE LEAVING SAID EAST LINE, N 74°01'09" E, A DISTANCE OF 43.54 FEET;

COURSE 3) THENCE S 81°23'23" E, A DISTANCE OF 5.31 FEET;

COURSE 4) THENCE N 73°04'25" E, A DISTANCE OF 14.97 FEET;

COURSE 5) THENCE S 16°55'35" E, A DISTANCE OF 6.27 FEET;

COURSE 6) THENCE S 73°04'25" W, A DISTANCE OF 14.86 FEET;

COURSE 7) THENCE S 15°58'51" E, A DISTANCE OF 7.28 FEET TO THE HEREINAFTER DESCRIBED POINT "A";

COURSE 8) THENCE S 15°58'51" E, A DISTANCE OF 12.57 FEET;

COURSE 9) THENCE S 74°01'09" W, A DISTANCE OF 48.58 FEET TO THE POINT OF BEGINNING.

CONTAINING 1,463 SQUARE FEET (0.033 ACRES), MORE OR LESS.

APN: 032-300-008

OWNER(S): GRANT W. PATRICK, TRUSTEE OF THE GRANT W. PATRICK TRUST

DEED REFERENCE: DOCUMENT NO. 2010079089



815755
Rincon Valley

ADDITIONAL LEASE AREA (PREPARED BY THIS OFFICE):

BEING A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF PARCEL 1 OF PARCEL MAP NO. 43, RECORDED IN BOOK 177 OF PARCEL MAPS, AT PAGE 18, SONOMA COUNTY RECORDS, THENCE ALONG THE EAST LINE OF SAID PARCEL 1, N 15°58'51" W (SHOWN ON SAID MAP AS S 16°36'30" E), A DISTANCE OF 47.54 FEET; THENCE LEAVING SAID EAST LINE, N 74°01'09" E, A DISTANCE OF 48.58 TO THE POINT OF BEGINNING:

COURSE 1) THENCE CONTINUING N 15°58'51" W, A DISTANCE OF 19.85 FEET;

COURSE 2) THENCE N 73°04'25" E, A DISTANCE OF 3.46 FEET;

COURSE 3) THENCE S 15°58'52" E, A DISTANCE OF 13.91 FEET;

COURSE 4) THENCE N 74°01'09" E, A DISTANCE OF 8.54 FEET;

COURSE 5) THENCE S 15°58'51" E, A DISTANCE OF 6.50 FEET;

COURSE 6) THENCE S 74°01'09" W, A DISTANCE OF 12.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 124 SQUARE FEET (0.002 ACRES), MORE OR LESS.

APN: 032-300-008

OWNER(S): GRANT W. PATRICK, TRUSTEE OF THE GRANT W. PATRICK TRUST

DEED REFERENCE: DOCUMENT NO. 2010079089



815755
Rincon Valley

ACCESS & UTILITY EASEMENT DESCRIPTION (PREPARED BY THIS OFFICE):

A 12.00 FOOT WIDE STRIP OF LAND OVER, ACROSS AND THROUGH A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, LYING 6.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF PARCEL 1 OF PARCEL MAP NO. 43, RECORDED IN BOOK 177 OF PARCEL MAPS, AT PAGE 18, SONOMA COUNTY RECORDS, THENCE ALONG THE EAST LINE OF SAID PARCEL 1, N 15°58'51" W (SHOWN ON SAID MAP AS S 16°36'30" E), A DISTANCE OF 47.54 FEET; THENCE LEAVING SAID EAST LINE, N 74°01'09" E, A DISTANCE OF 48.58 FEET; THENCE S 15°58'51" E, A DISTANCE OF 12.57 FEET TO POINT "A" AND TO THE POINT OF BEGINNING:

COURSE 1) THENCE N 80°04'53" E, A DISTANCE OF 60.88 FEET TO POINT "B";
COURSE 2) THENCE N 34°50'27" E, A DISTANCE OF 24.35 FEET;
COURSE 3) THENCE N 15°58'51" W, A DISTANCE OF 131.05 FEET TO THE SOUTH LINE OF STATE HIGHWAY NO. 12 AND THE TERMINUS OF THIS DESCRIPTION.

A 6.00 FOOT WIDE STRIP OF LAND OVER, ACROSS AND THROUGH A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, LYING 3.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE ABOVE MENTIONED POINT "B":

COURSE 1) THENCE S 70°35'49" W, A DISTANCE OF 48.63 FEET TO THE TERMINUS OF THIS DESCRIPTION.

CONTAINING 2,744 SQUARE FEET (0.063 ACRES), MORE OR LESS.

APN: 032-300-008
OWNER(S): GRANT W. PATRICK, TRUSTEE OF THE GRANT W. PATRICK TRUST
DEED REFERENCE: DOCUMENT NO. 2010079089

APN: 032-300-004
OWNER(S): ROBERT ELLIS LOGAN & JANET ELAINE LOGAN
DEED REFERENCE:



815755
Rincon Valley

UTILITY EASEMENT DESCRIPTION (PREPARED BY THIS OFFICE):

A 5.00 FOOT WIDE STRIP OF LAND OVER, ACROSS AND THROUGH A PORTION OF THE LAND AS DESCRIBED IN THE QUITCLAIM DEED, RECORDED SEPTEMBER 17, 2010 AS DOCUMENT NO. 2010079089, LYING 2.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF PARCEL 1 OF PARCEL MAP NO. 43, RECORDED IN BOOK 177 OF PARCEL MAPS, AT PAGE 18, SONOMA COUNTY RECORDS, THENCE ALONG THE EAST LINE OF SAID PARCEL 1, N 15°58'51" W (SHOWN ON SAID MAP AS S 16°36'30" E), A DISTANCE OF 0.77 FEET; THENCE LEAVING SAID EAST LINE, N 74°01'09" E, A DISTANCE OF 19.77 FEET TO THE POINT OF BEGINNING:

COURSE 1) THENCE N 15°58'51" E, A DISTANCE OF 44.27 FEET;
COURSE 2) THENCE N 74°01'09" E, A DISTANCE OF 40.81 FEET;
COURSE 3) THENCE N 15°58'51" W, A DISTANCE OF 131.05 FEET TO THE TERMINUS OF THIS DESCRIPTION.

CONTAINING 425 SQUARE FEET (0.063 ACRES), MORE OR LESS.

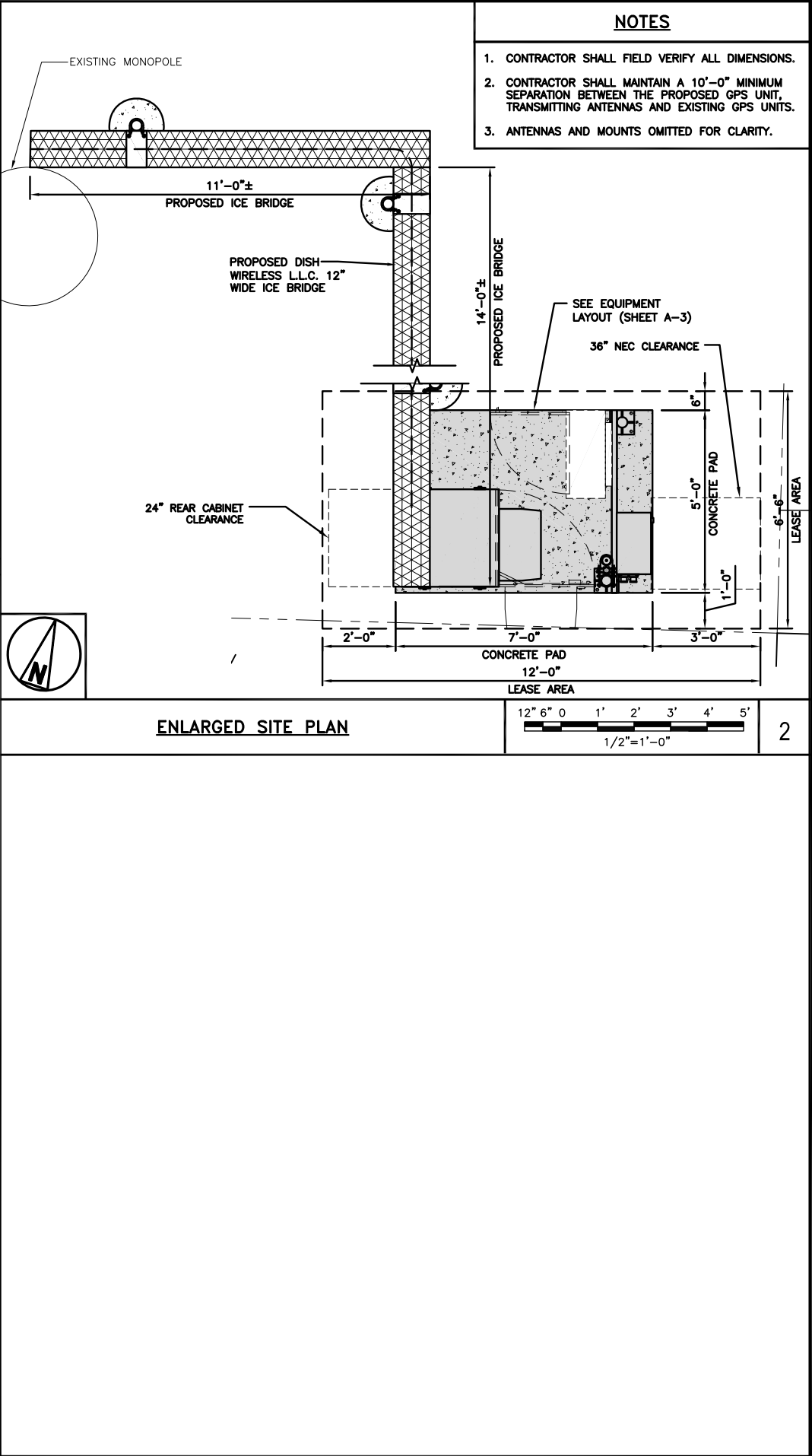
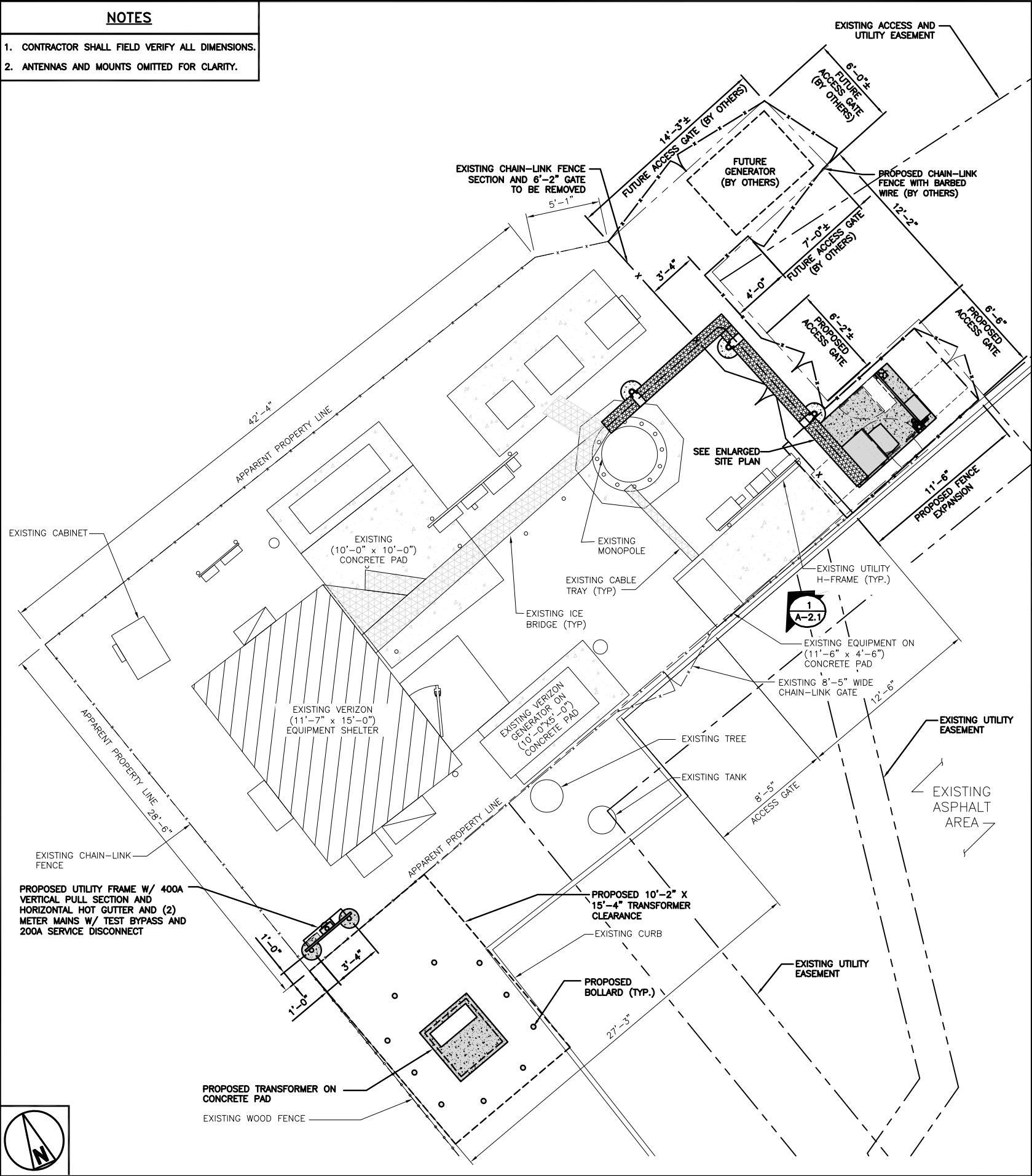
APN: 032-300-008
OWNER(S): GRANT W. PATRICK, TRUSTEE OF THE GRANT W. PATRICK TRUST
DEED REFERENCE: DOCUMENT NO. 2010079089

APN: 032-300-004
OWNER(S): ROBERT ELLIS LOGAN & JANET ELAINE LOGAN
DEED REFERENCE:



- NOTES
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com



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.

DRAWN BY:	CHECKED BY:	APPROVED BY:
JES	CJ	CJ

RFDS REV #: 2

CONSTRUCTION DOCUMENTS

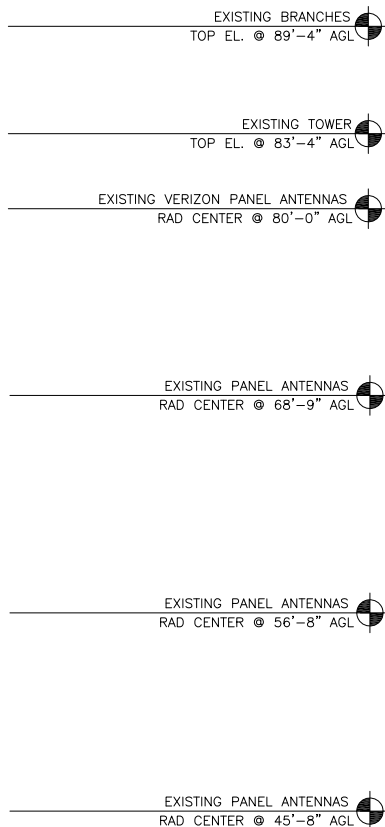
SUBMITTALS		
REV	DATE	DESCRIPTION
3	11/22/2022	LEASE AREA UPDATE
4	12/12/2022	ELEVATION UPDATE
5	02/02/2023	JDX REVISION
6	02/10/2023	JDX REVISION
7	04/19/2023	ADDED SURVEY
8	05/24/2023	UTILITY REVISION
9	07/28/2023	UTILITY REVISION

A&E PROJECT NUMBER
2021.0025.815755

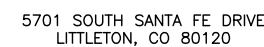
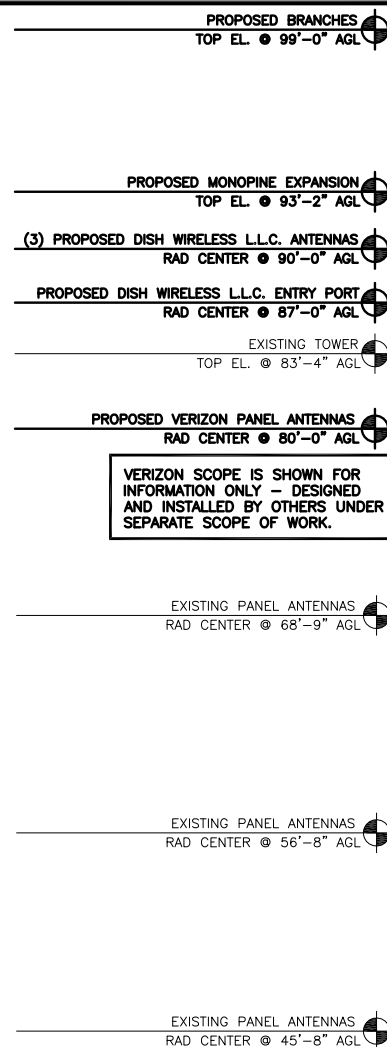
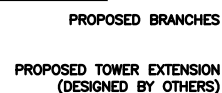
DISH WIRELESS L.L.C.
PROJECT INFORMATION
SFSF000115A
CA-CCI-T-815755
4900 SONOMA HWY.
SANTA ROSA, CA 95409

SHEET TITLE
OVERALL AND ENLARGED
SITE PLAN

SHEET NUMBER
A-1



1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



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TO ALTER THIS DOCUMENT.

DRAWN BY:	CHECKED BY:	APPROVED BY:
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JES	CJ	CJ
-----	----	----

RFDS REV #: 2

CONSTRUCTION
DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
3	11/22/2022	LEASE AREA UPDATE
4	12/12/2022	ELEVATION UPDATE
5	02/02/2023	JDX REVISION
6	02/10/2023	JDX REVISION
7	04/19/2023	ADDED SURVEY
8	05/24/2023	UTILITY REVISION
9	07/28/2023	UTILITY REVISION

A&E PROJECT NUMBER
2021.0025.815755

DISH WIRELESS L.L.C.
PROJECT INFORMATION
SFSF000115A
CA-CCI-T-815755
4900 SONOMA HWY.
SANTA ROSA, CA 95409

SHEET TITLE
EXISTING AND
PROPOSED ELEVATIONS

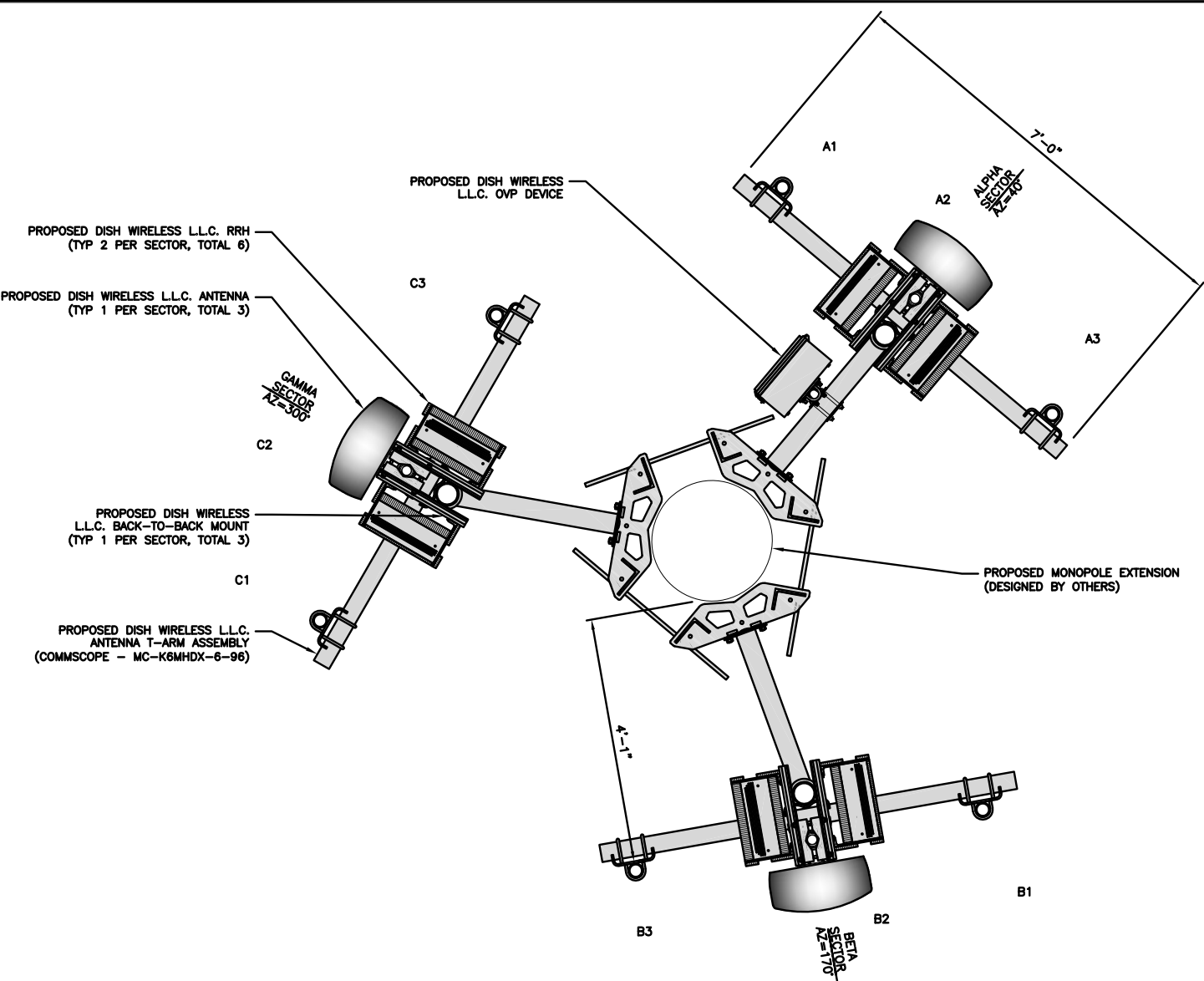
SHEET NUMBER

A-2.1

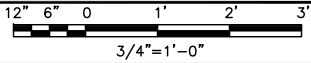
- NOTES
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

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3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



ANTENNA LAYOUT



1

SECTOR POS.	ANTENNA					TRANSMISSION CABLE	RRH			OVP
	EXISTING OR PROPOSED	MANUFACTURER – MODEL NUMBER	TECH	AZIMUTH	RAD CENTER	FEED LINE TYPE AND LENGTH	MANUFACTURER – MODEL NUMBER	TECH	POS.	MANUFACTURER MODEL
A1	--	--	--	--	--	(1) HIGH-CAPACITY HYBRID CABLE (137' LONG)	FUJITSU – TA08025-B604	MULTI	A2	RAYCAP – RDIDC-9181 –PF-48
A2	PROPOSED	JMA – MX08FRO665-20	NR	40°	90'-0"		FUJITSU – TA08025-B605	MULTI	A2	
A3	--	--	--	--	--		--	--	--	
B1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU – TA08025-B604	MULTI	B2	SHARED W/ALPHA
B2	PROPOSED	JMA – MX08FRO665-20	NR	170°	90'-0"		FUJITSU – TA08025-B605	MULTI	B2	
B3	--	--	--	--	--		--	--	--	
C1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU – TA08025-B604	MULTI	C2	SHARED W/ALPHA
C2	PROPOSED	JMA – MX08FRO665-20	NR	300°	90'-0"		FUJITSU – TA08025-B605	MULTI	C2	
C3	--	--	--	--	--		--	--	--	
NOTES										
1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.										
2. ANTENNA AND RRH MODELS MAY CHANGE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES.										
3. VERIFY AZIMUTHS WITH LATEST DISH RFDS PRIOR TO INSTALLATION.										

ANTENNA SCHEDULE

NO SCALE

2



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
www.FullertonEngineering.com



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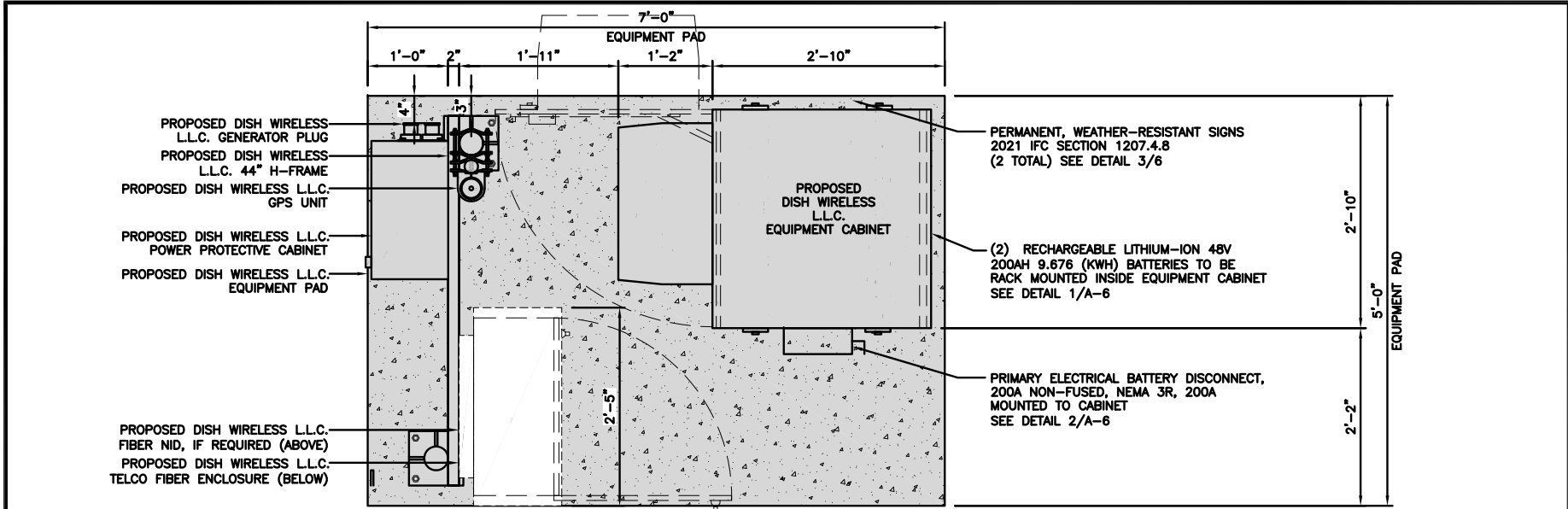
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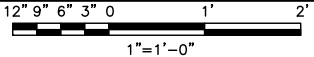
SHEET TITLE
ANTENNA LAYOUT
AND SCHEDULE

SHEET NUMBER

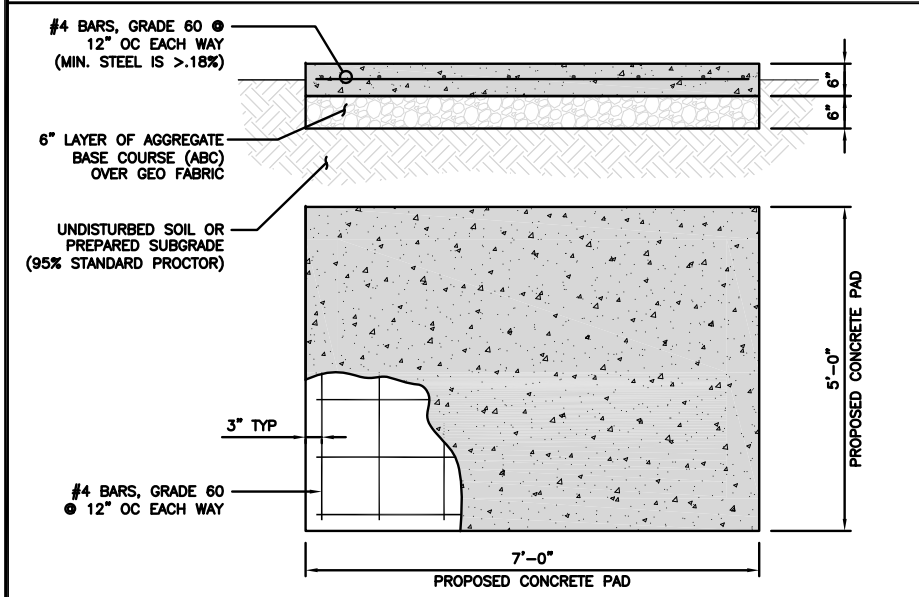
A-2.2



CONCRETE PAD EQUIPMENT PLAN



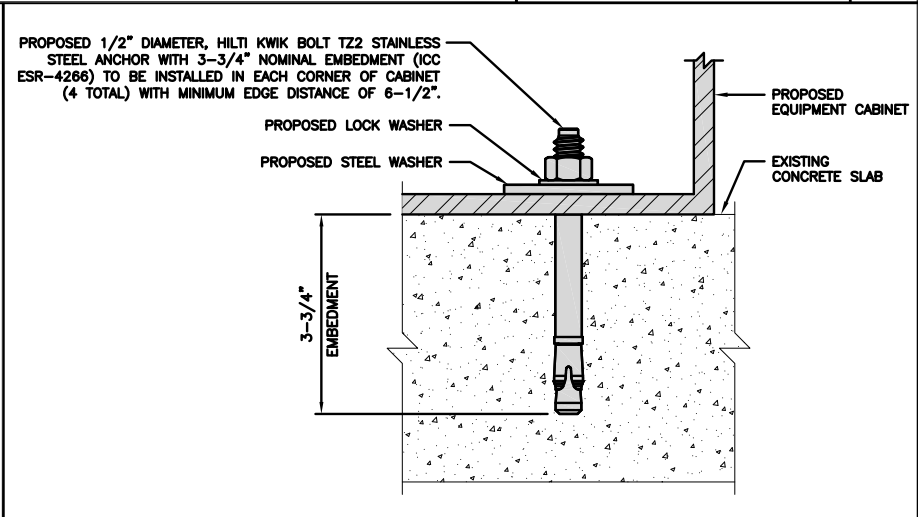
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TYPICAL CONCRETE PAD DETAIL

NO SCALE

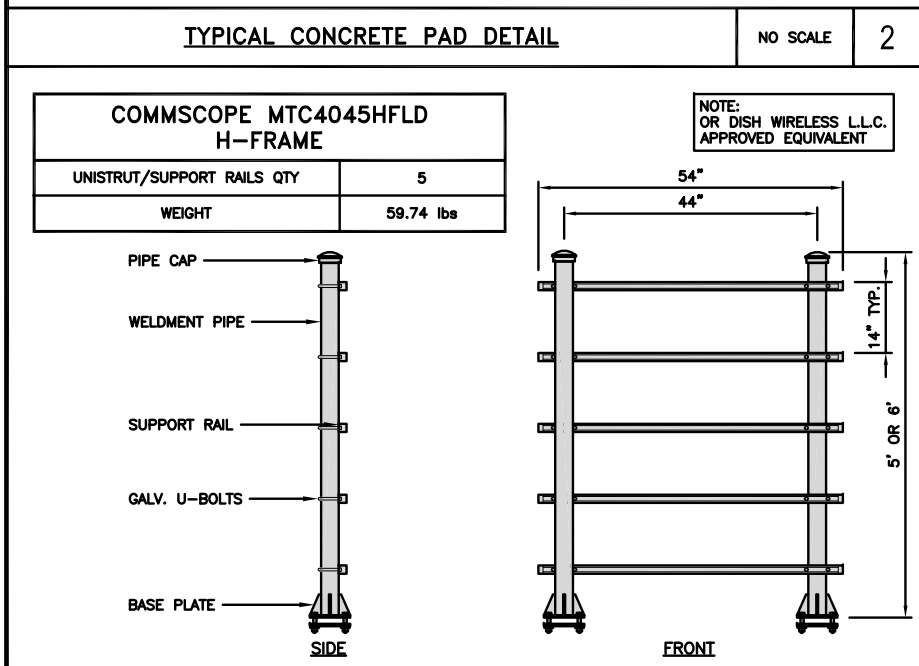
2



TYPICAL OUTDOOR EQUIPMENT CABINET TO
CONCRETE SLAB ANCHORAGE

NO SCALE

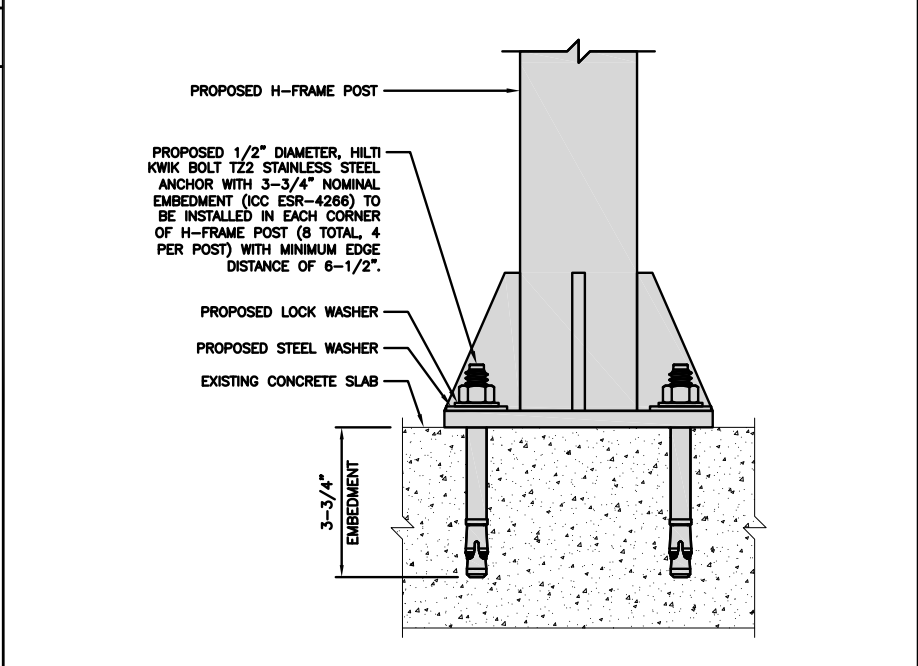
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H-FRAME DETAIL

NO SCALE

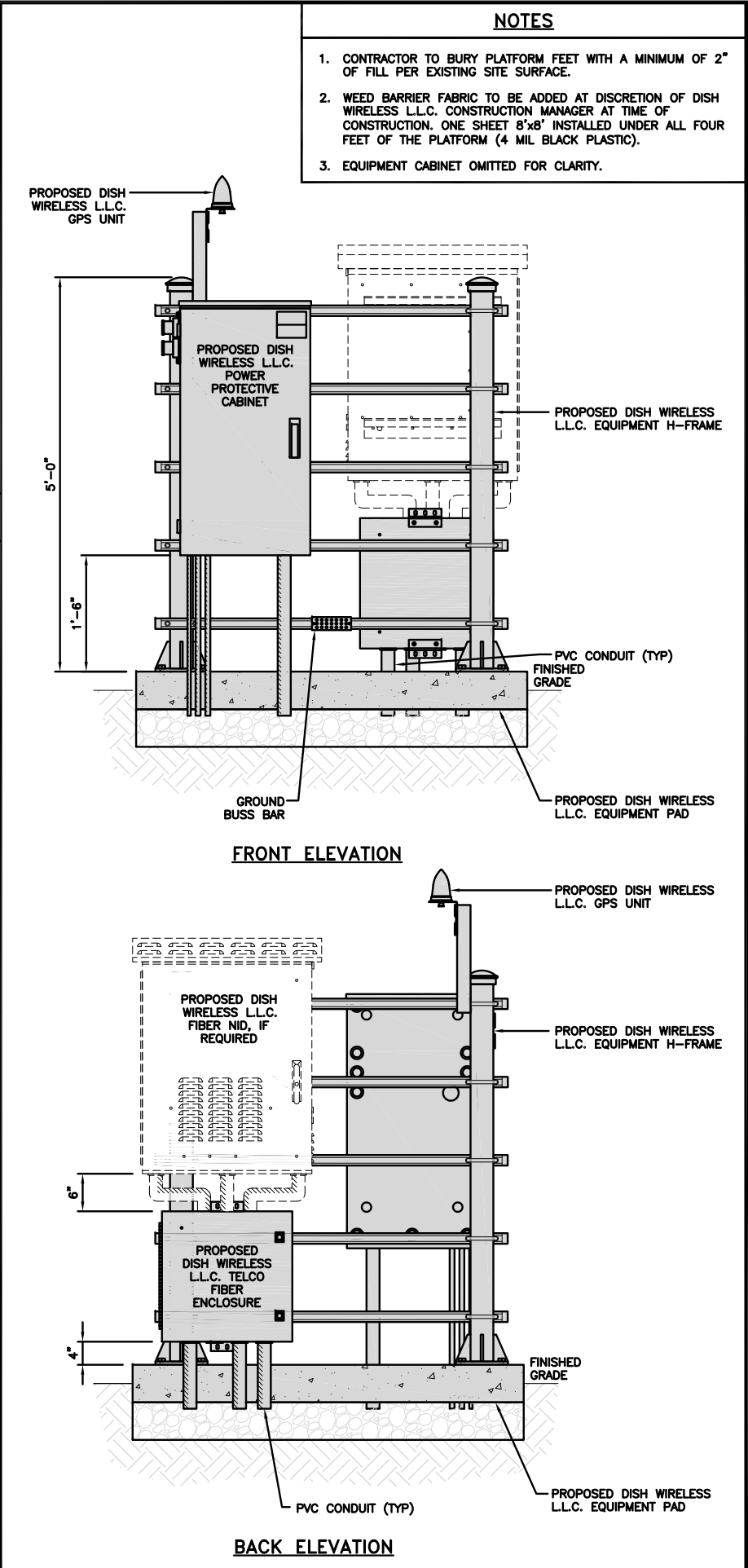
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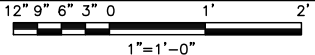
TYPICAL H-FRAME POST TO
CONCRETE SLAB ANCHORAGE

NO SCALE

5



H-FRAME EQUIPMENT ELEVATION



6



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LITTLETON, CO 80120



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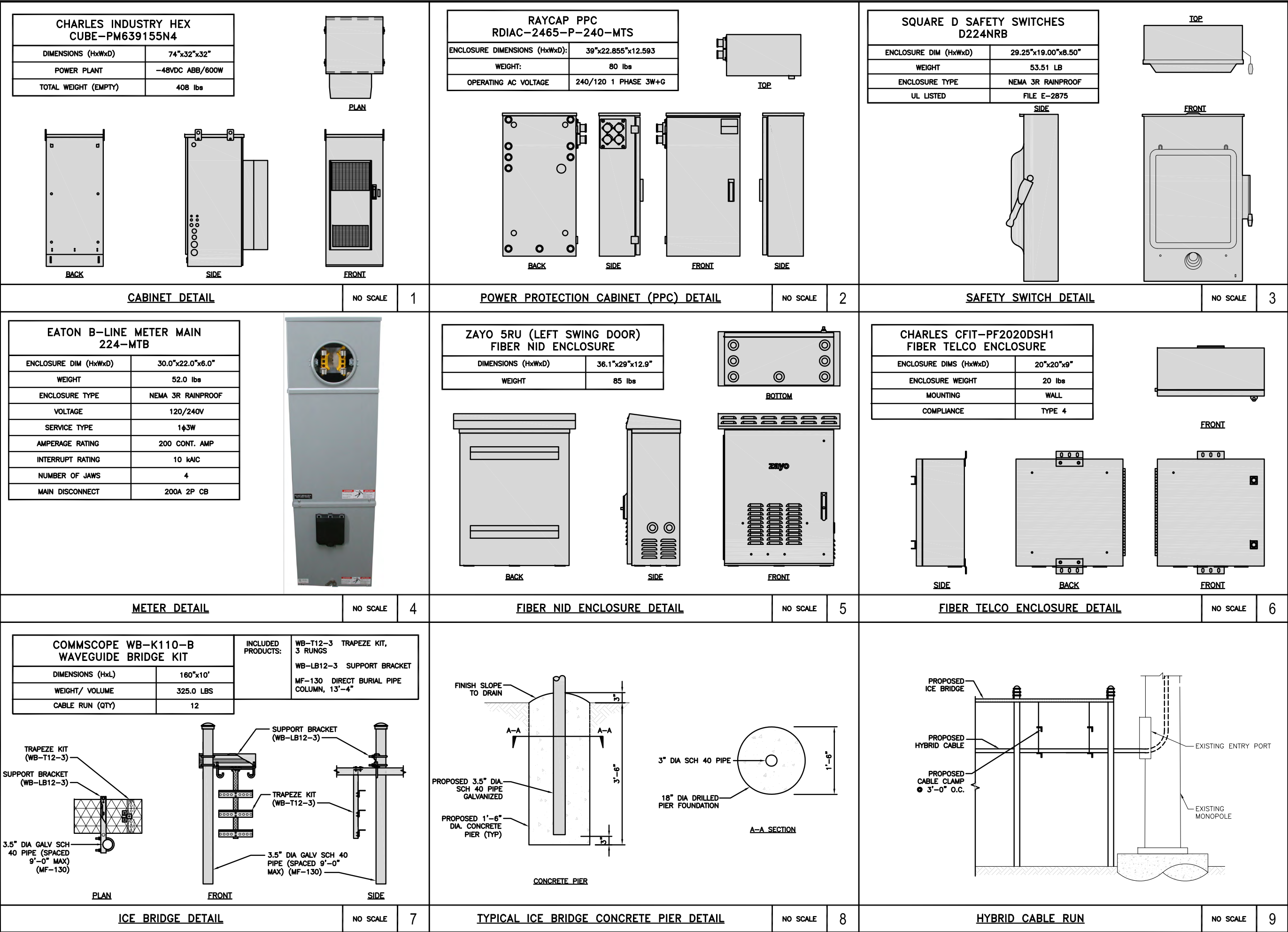
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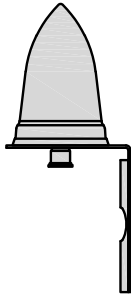
SHEET TITLE
EQUIPMENT PLATFORM AND
H-FRAME DETAILS

SHEET NUMBER

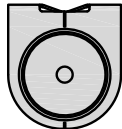
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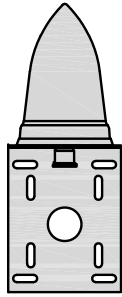
PCTEL GPSGL-TMG-SPI-40NCB	
DIMENSIONS (DIAxH) MM/INCH	81x184mm 3.2"x7.25"
WEIGHT W/ACCESSORIES	075 lbs
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1590 ± 30MHz



SIDE



TOP



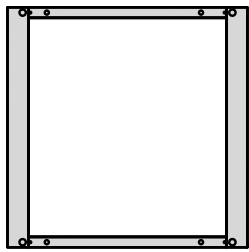
FRONT

GPS DETAIL

NO SCALE

1

CHARLES INDUSTRY LT-97-002422 PLINTH KIT	
DIMENSIONS (HxWxD):	6"x 32"x 32"
NOTE: GASKET AND MOUNTING HARDWARE INCLUDED	



PLAN



FRONT/BACK

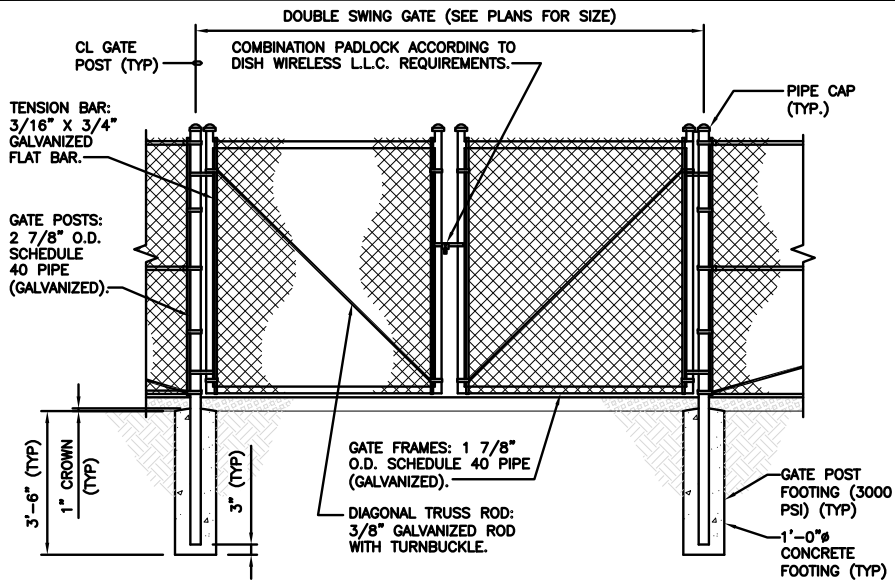


SIDE

CABINET DETAIL

NO SCALE

4



TYPICAL GATE ELEVATION DETAIL

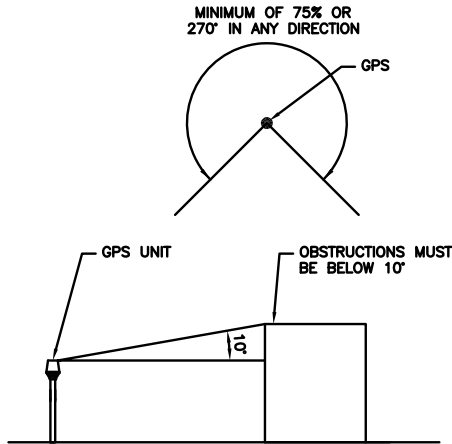
NO SCALE

6

GPS MINIMUM SKY VIEW REQUIREMENTS

NO SCALE

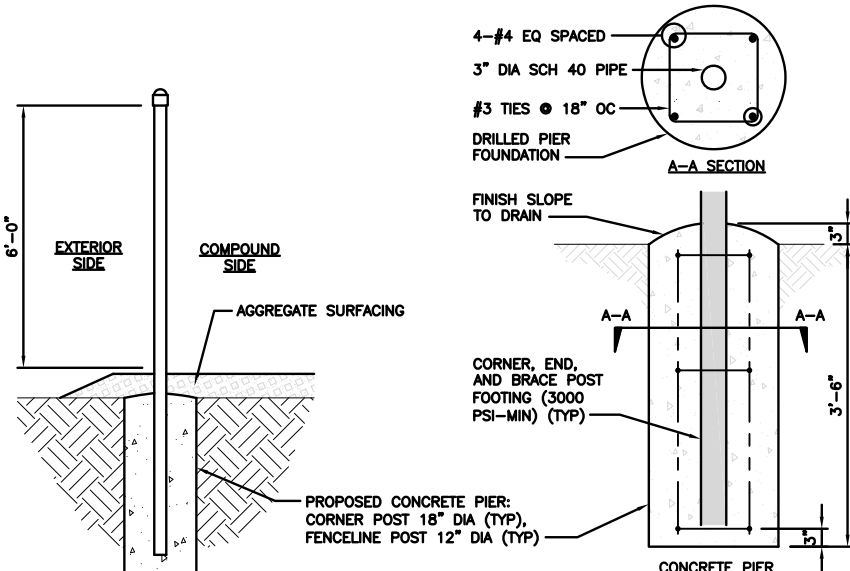
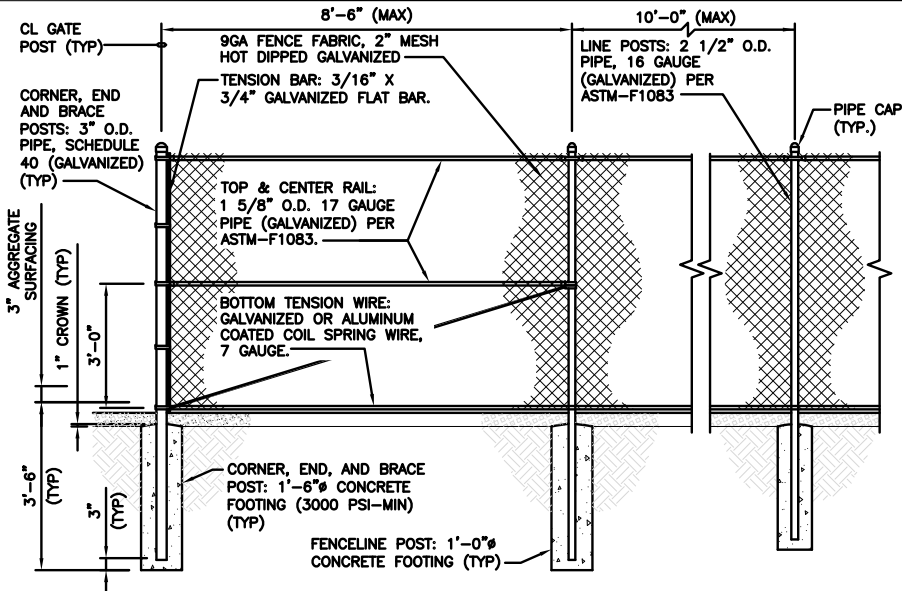
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TYPICAL FENCE DETAIL

NO SCALE

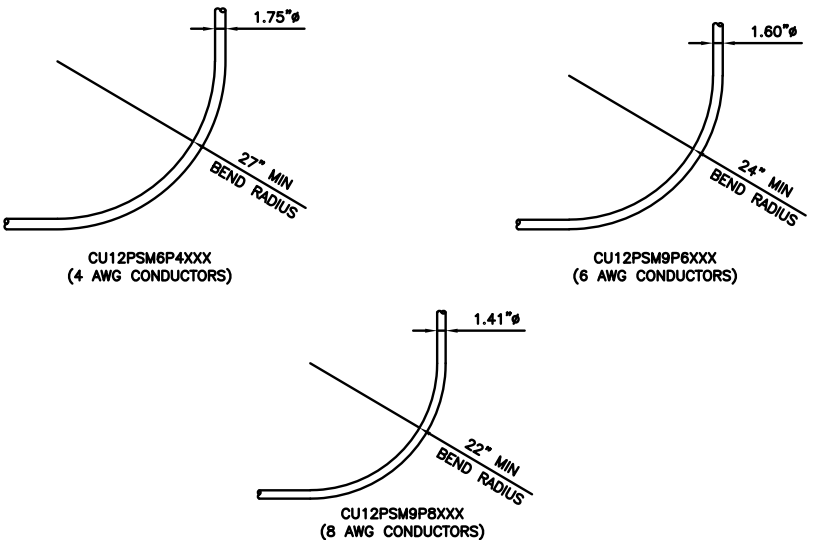
5



TYPICAL FENCE & CONCRETE PIER SECTION

NO SCALE

7



CABLES UNLIMITED HYBRID CABLE
MINIMUM BEND RADIUS

NO SCALE

3

- 1 LINE POSTS: 2 1/2" O.D. PIPE, 16 GAUGE (GALVANIZED) PER ASTM-F1083.
- 2 CORNER, END AND BRACE POSTS: 3" O.D. PIPE, SCHEDULE 40 (GALVANIZED).
- 3 TOP RAIL: 1 5/8" O.D. 17 GAUGE PIPE (GALVANIZED) PER ASTM-F1083.
- 4 BRACE RAIL: 1 5/8" O.D. 17 GAUGE PIPE (GALVANIZED).
- 5 DIAGONAL TRUSS ROD: 3/8" GALVANIZED ROD WITH TURNBUCKLE.
- 6 TENSION BAR: 3/16" X 3/4" GALVANIZED FLAT BAR.
- 7 BOTTOM TENSION WIRE: GALVANIZED OR ALUMINUM COATED COIL SPRING WIRE, 7 GAUGE.
- 8 GATE POSTS: 2 7/8" O.D. SCHEDULE 40 PIPE (GALVANIZED).
- 9 COMBINATION PADLOCK ACCORDING TO DISH Wireless L.L.C. REQUIREMENTS.
- 10 GATE FRAMES: 1 7/8" O.D. SCHEDULE 40 PIPE (GALVANIZED).
- 11 BARBED WIRE SUPPORT ARM: SINGLE ARM TYPE (GALVANIZED). ARM SHALL BE INCLINED OUTWARD AT AN ANGLE OF 45 DEGREES.
- 12 9GA FENCE FABRIC, 2" MESH HOT DIPPED GALVANIZED
- 13 MISCELLANEOUS:
 - A. RAIL COUPLINGS: SLEEVE TYPE, 6" LONG EXPANSION SPRING EVERY FIFTH COUPLING.
 - B. POST TOPS: PRESSED STEEL, MALLEABLE IRON WITH PRESSED STEEL EXTENSION ARM, OR ONE-PIECE ALUMINUM CASTING; WITH HOLE FOR TOP, ALL DESIGNED TO FIT OVER THE OUTSIDE OF THE POSTS AND TO PREVENT ENTRY OF MOISTURE INTO TUBULAR POSTS.
 - C. LATCHES SHALL BE FORKED TYPE AND SHALL BE ARRANGED FOR PADLOCKING WITH THE PADLOCK ACCESSIBLE FROM BOTH SIDES OF THE GATE.
 - D. KEEPERS SHALL CONSIST OF MECHANICAL DEVICES FOR SECURING AND SUPPORTING THE FREE END OF THE GATES WHEN IN THE FULL OPEN POSITION. KEEPERS SHALL BE MOUNTED ON 2 7/8" O.D. PIPE POSTS FILLED WITH CONCRETE AND SET IN CONCRETE FOUNDATIONS.
 - E. INSTALL FENCING PER ASTM-F567.
 - F. INSTALL SWING GATES PER ASTM-F900.
 - G. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLETED IF REQUIRED.
 - H. USE GALVANIZED HOG RING WIRE TO MOUNT ALL SIGNS.
 - I. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE.

MATERIAL DESCRIPTION

NO SCALE

8

dish
wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

FULLERTON

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RFDS REV #: 2

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PROJECT INFORMATION
SFSF000115A
CA-CCI-T-815755
4900 SONOMA HWY.
SANTA ROSA, CA 95409

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-5

POLARIUM SLB48-200-228-1U	
ENCLOSURE SIZE	23" 2U
RATED VOLTAGE	48 V
DIMENSIONS (WxDxH)	21.4"x28.5"x3.4"
WEIGHT	APPROX. 53KG(116.8 LBS)
BATTERY TYPE	NMC
RATED ENERGY (kwh) PER BATTERY	9.676 KWH

BATTERY INFORMATION

- NUMBER OF BATTERIES = 2
- (2) BATT IN ECAB
- VOL. ELECTROLYTE = 4.04 GALLON
- CLASSIFICATION = VRLA VALUE
- REGULATED LEAD ACID, HEALTH RATING 3, FIRE RATING 0, REACTIVE RATING 2
- MODEL# POLARIUM SLB48-200-228-1U



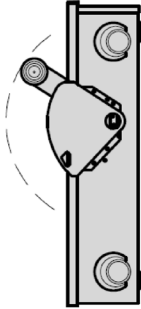
BATTERY

NO SCALE

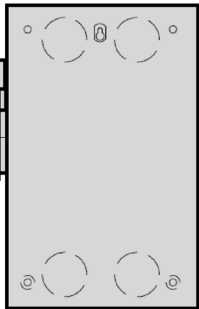
1

EATON DG224URK-NPS
SAFETY SWITCHES

ENCLOSURE DIM (HxWxD)	19.56"x11.25"x9.5"
TOTAL WEIGHT (EMPTY)	67.00 LBS
VOLTAGE/AMPS/WATT	240VAC/250VDC/200A
ENCLOSURE RATING	OUTDOOR NEMA 3R



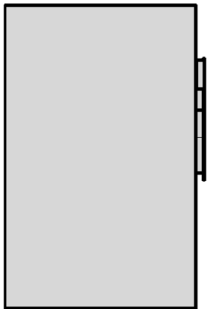
SIDE



BACK



PLAN



FRONT

BATTERY SAFETY SWITCH

NO SCALE

2

NOTICE

This area contains energized battery systems
This area contains energized electrical circuits
The battery electrolyte solutions are corrosive liquids
No smoking, spark producing devices or flames

BATTERY STORAGE SYSTEM SIGN



NFPA 704 HAZARD
IDENTIFICATION PLACARD

COMPLIANCE SIGNAGE

NO SCALE

3

NOT USED

NO SCALE

4

NOT USED

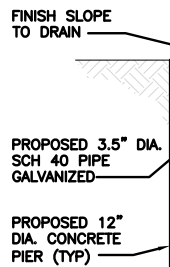
NO SCALE

5

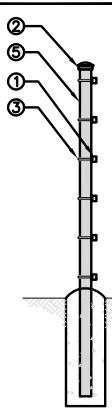
H-FRAME

UNISTRUT/SUPPORT RAIL	6
WEIGHT	273

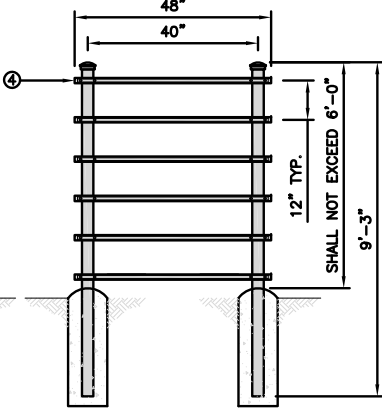
NOTE: PIPE (5) SHALL NOT EXCEED 6'-0"



CONCRETE PIER



SIDE

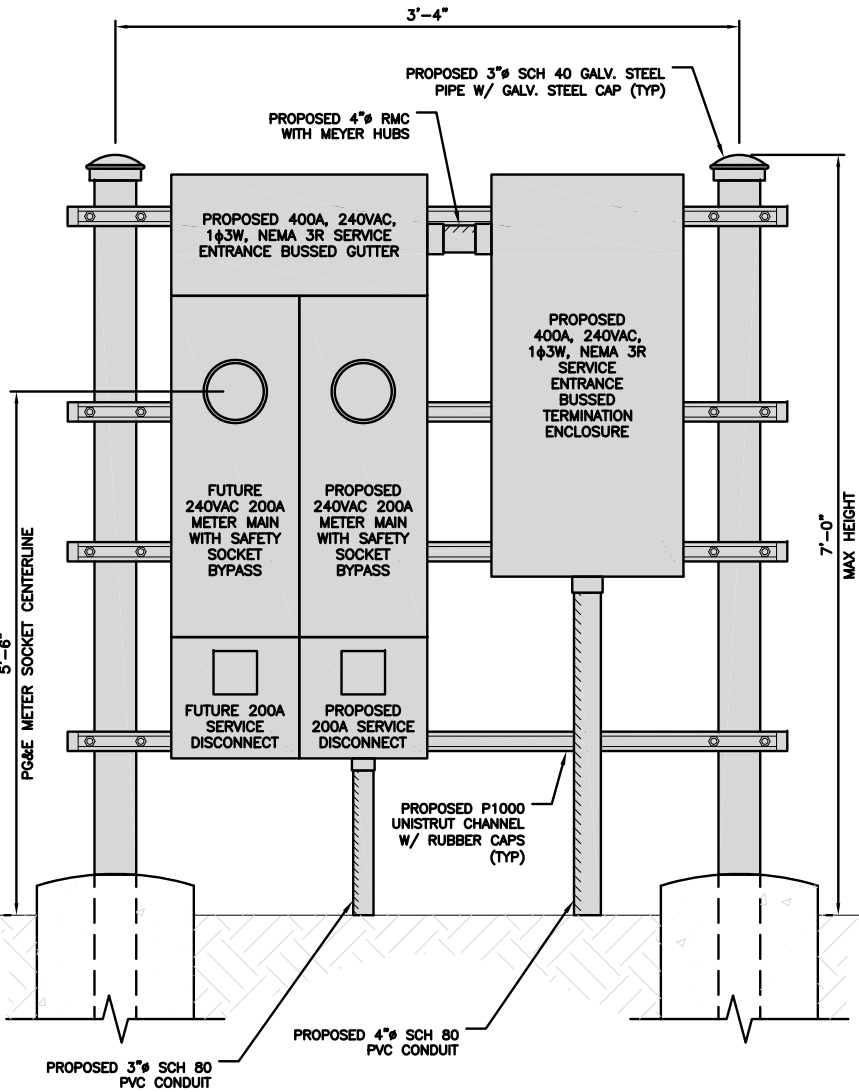


FRONT

H-FRAME CONCRETE PIER INSTALLATION DETAIL

NO SCALE

7



METER FRAME DETAIL

NO SCALE

8

dish
wireless.

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SANTA ROSA, CA 95409

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER

A-6

FUJITSU TRIPLE BAND
TA08025-B605

DIMENSIONS (HxWxD)	14.9"x15.7"x9"
WEIGHT	74.95 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V

BACK

SIDE

FRONT

FUJITSU DUAL BAND
TA08025-B604

DIMENSIONS (HxWxD)	14.9"x15.7"x7.8"
WEIGHT	63.9 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V

BACK

SIDE

FRONT

SABRE DOUBLE Z-BRACKET
C10123155

DIMENSIONS (HxWxD) (1 BRACKET)	5"x20"x1-13/16"
WEIGHT (FULL ASSEMBLY)	35.79 lbs
PACKAGE QUANTITY	4

#	DESCRIPTION
1	PLATE, CHANNEL BRACKET
2	RRH Z BRACKET, 3/16"
3	THREADED ROD ASSEMBLY 1/2"x12"

NOTE:
OR DISH WIRELESS L.L.C.
APPROVED EQUIVALENT

RRH DETAIL

NO SCALE

1

JMA
MX08FRO665-21

DIMENSIONS (HxWxD)	72"x20.0"x8.0"
RF PORTS, CONNECTOR TYPE	8 x 4.3-10 FEMALE
WEIGHT	64.5 lbs
WEIGHT WITH BRACKETS	82.5 lbs

PLAN

SIDE

FRONT

NOT USED

NO SCALE

5

RAYCAP RDIDC-9181-PF-48
DC SURGE PROTECTION (OVP)

DIMENSIONS (HxWxD)	18.98"x14.39"x8.15"
WEIGHT	21.82 LBS

SIDE

BACK

FRONT

COMMSCOPE XP-2040
CROSSOVER PLATE

DIMENSIONS (HxW)	10"x12"
WEIGHT	11 lbs

PLAN PLATE

SIDE PLATE

PLAN U-BOLT

SIDE U-BOLT

NOTE:
OR DISH WIRELESS L.L.C.
APPROVED EQUIVALENT

RRH/OVP MOUNT DETAIL

NO SCALE

8

COMMSCOPE
MC-K6MHDX-9-96

FACE WIDTH	7'-0"
WEIGHT	1203.31 Lbs

NOTE: 15" TO 50" O.D.

NOTE:
OR DISH WIRELESS L.L.C.
APPROVED EQUIVALENT

I-ARM MOUNT DETAIL

NO SCALE

9

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EQUIPMENT DETAILS

SHEET NUMBER
A-7

DISH WIRELESS L.L.C. TEMPLATE VERSION 37 - 07/09/2021

1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.
3. DUE TO UTILITY EASEMENT RIGHTS SPECIFIED IN THE GROUND LEASE, CUSTOMER MAY INSTALL EQUIPMENT WITHIN SPECIFIED UTILITY EASEMENT AREA. "PWR" AND "FBR" PATHS DEPICTED ON A-1 AND E-1 ARE NOTED ON BEST AVAILABLE INFORMATION INCLUDING BUT NOT LIMITED TO A SURVEY, EXHIBITS, MEETS AND BOUNDS OF THE UTILITY EASEMENT, FIELD VERIFICATION, RECORD PROJECTS, RECORDS, OTHER RECORDS, REAL PROPERTY RECORDS, RECORDS, AND RECORDS. IF INSTALLING THE UTILITIES, PLEASE LOCATE AND FOLLOW EXISTING PATH. IF EXISTING PATH IS MATERIALLY INCONSISTENT WITH THE "PWR" AND "FBR" PATH DEPICTED ON A-1 AND E-1 AND SAID VARIANCE IS NOT NOTED ON CDs, PLEASE NOTIFY CCRS AS FURTHER COORDINATION MAY BE NEEDED.

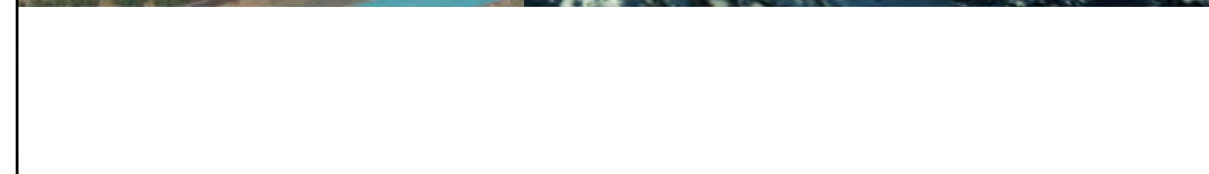


1

1. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
2. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODES AND ALL STATE AND LOCAL CODES, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC STANDARDS.
3. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO CONSTRUCTION.
4. CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION CONFLICTS. VERIFY WITH THE MECHANICAL EQUIPMENT CONTRACTOR AND COMPLY AS REQUIRED.
5. CONTRACTOR SHALL PROVIDE ALL BREAKERS, CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETE SYSTEM.
6. CONTRACTOR SHALL PROVIDE PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NEC ARTICLE 314.
7. CONTRACTOR SHALL PROVIDE ALL STRAIN RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. ALL DISCONNECTS AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED PHENOLIC NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM.
9. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC 250. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, AND EQUIPMENT CABINETS.
10. ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
11. PANEL SCHEDULE LOADING AND CIRCUIT ARRANGEMENTS REFLECT POST-CONSTRUCTION EQUIPMENT.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR AS-BUILT PANEL SCHEDULE AND SITE DRAWINGS.
13. ALL TRENCHES IN COMPOUND TO BE HAND DUG.

NO SCALE

2

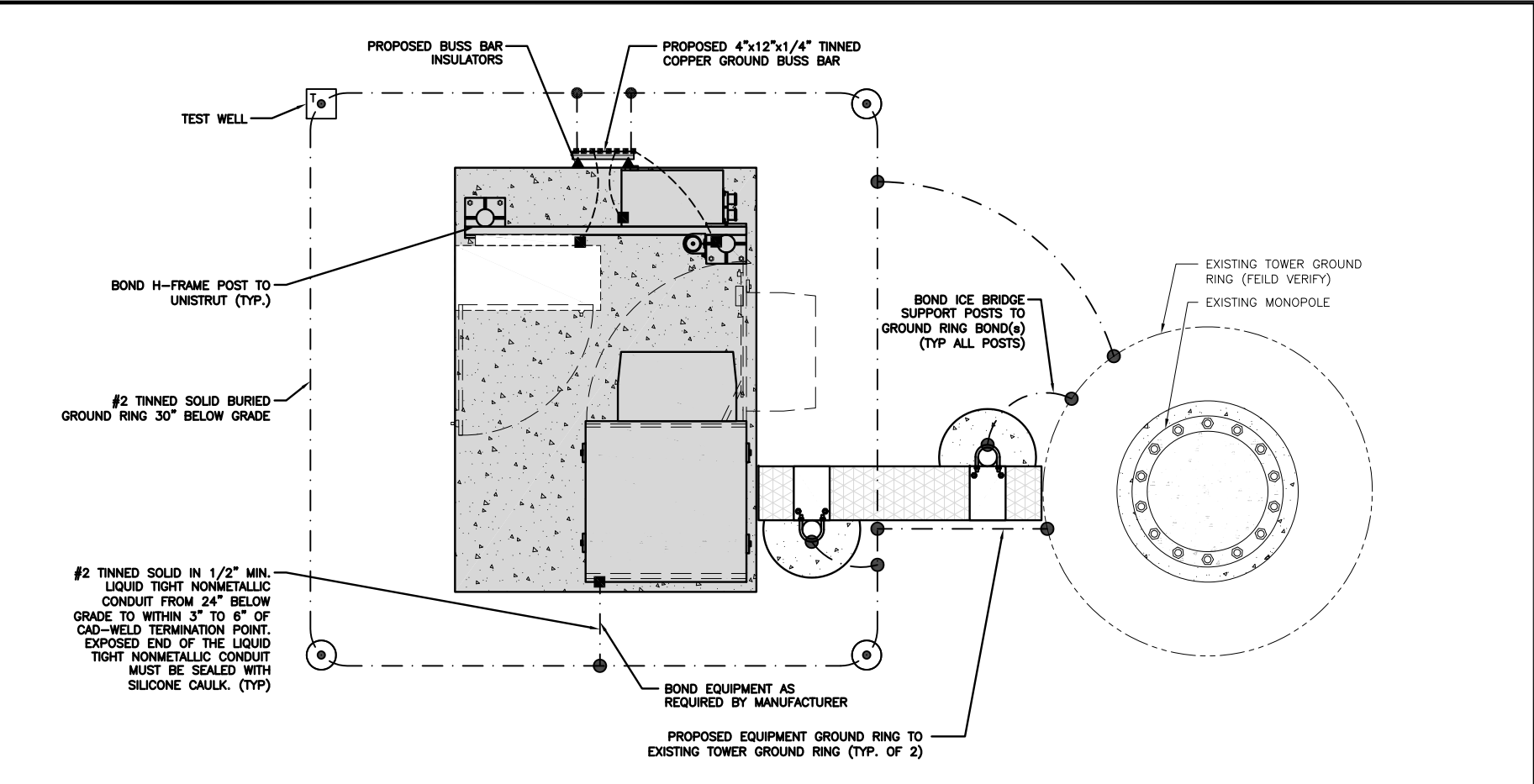


NO SCALE

3

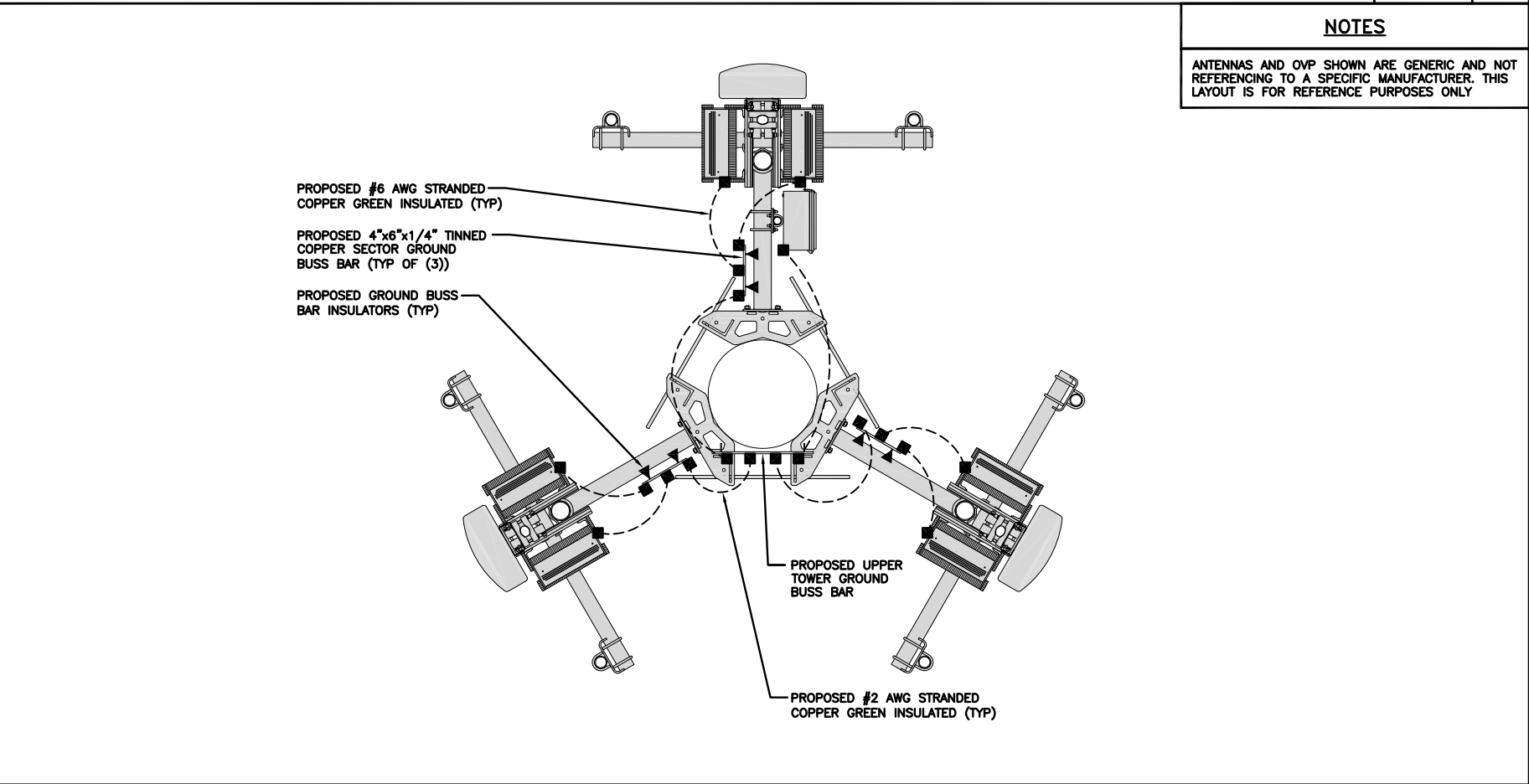
SHEET NUMBER

E-1



TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE 1



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2

- EXOTHERMIC CONNECTION

■

 MECHANICAL CONNECTION

▬

 GROUND BUS BAR

○

 GROUND ROD
- T

 TEST GROUND ROD WITH INSPECTION SLEEVE

 #6 AWG STRANDED & INSULATED

 #2 AWG SOLID COPPER TINNED

▲

 BUSS BAR INSULATOR

GROUNDING LEGEND

1. GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
2. CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND DISH WIRELESS, LLC. GROUNDING AND BONDING REQUIREMENTS AND MANUFACTURER'S SPECIFICATIONS.
3. ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.

GROUNDING KEY NOTES

- A

EXTERIOR GROUND RING: #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.
- B

TOWER GROUND RING: THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS. WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING, AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.
- C

INTERIOR GROUND RING: #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUNDED TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.
- D

BOND TO INTERIOR GROUND RING: #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.
- E

GROUND ROD: UL LISTED COPPER CLAD STEEL. MINIMUM 1/2" DIAMETER BY EIGHT FEET LONG. GROUND RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR.
- F

CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE. STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.
- G

HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CRGB MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS EACH.
- H

EXTERIOR CABLE ENTRY PORT GROUND BARS: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.
- I

TELCO GROUND BAR: BOND TO BOTH CELL REFERENCE GROUND BAR OR EXTERIOR GROUND RING.
- J

FRAME BONDING: THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK.
- K

INTERIOR UNIT BONDS: METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITH THE AREA OF THE INTERIOR GROUND RING REQUIRE A #6 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING.
- L

FENCE AND GATE GROUNDING: METAL FENCES WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS.
- M

EXTERIOR UNIT BONDS: METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING. USING #2 TINNED SOLID COPPER WIRE
- N

ICE BRIDGE SUPPORTS: EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING.
- O

DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICE CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH A MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR
- P

TOWER TOP COLLECTOR BUSS BAR IS TO BE MECHANICALLY BONDED TO PROPOSED ANTENNA MOUNT COLLAR. REFER TO DISH WIRELESS, LLC. GROUNDING NOTES.

GROUNDING KEY NOTES

NO SCALE 3



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JES	CJ	CJ

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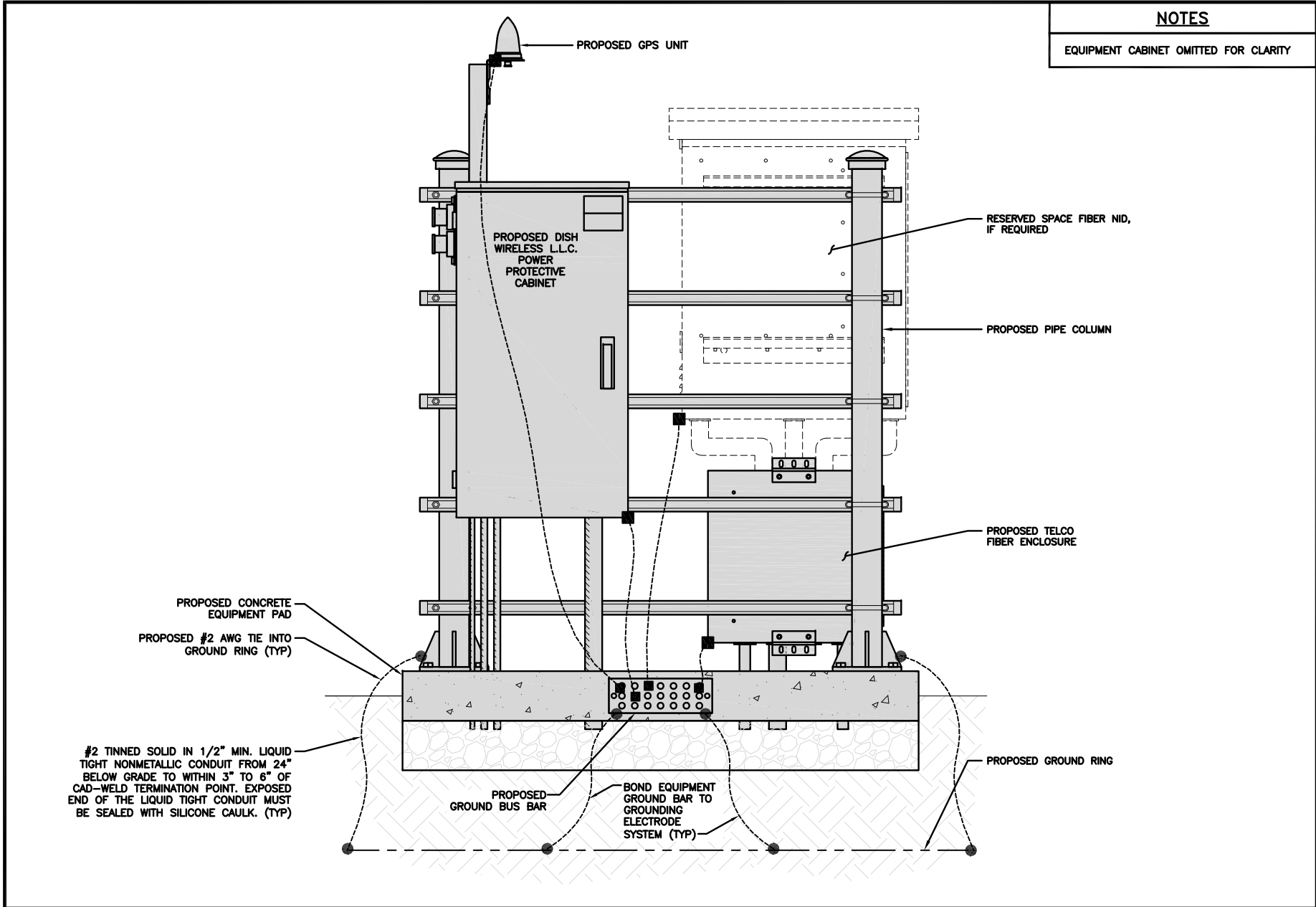
A&E PROJECT NUMBER
2021.0025.815755

DISH WIRELESS L.L.C.
PROJECT INFORMATION
SFSF000115A
CA-CCI-T-815755
4900 SONOMA HWY.
SANTA ROSA, CA 95409

SHEET TITLE
GROUNDING PLANS
AND NOTES

SHEET NUMBER

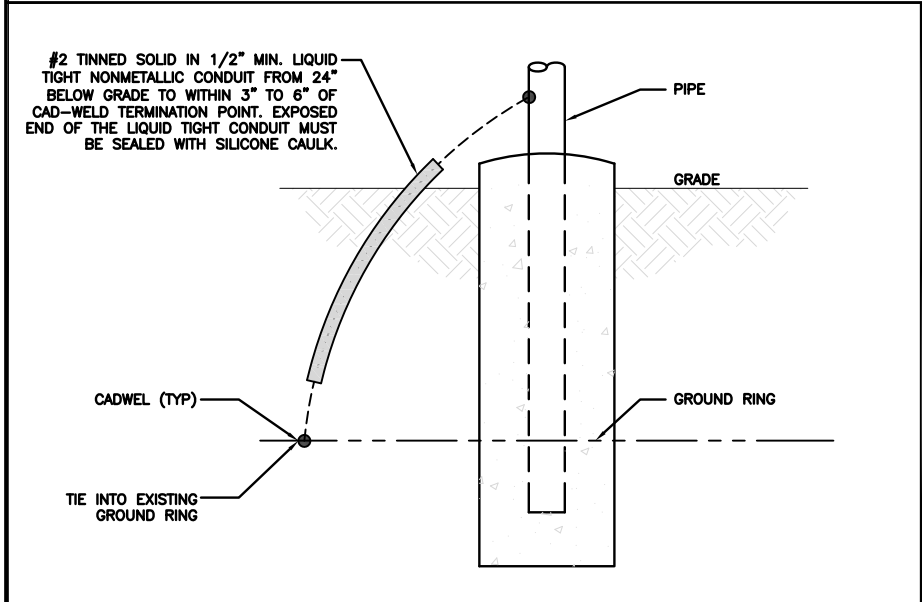
G-1



H-FRAME GROUNDING DETAIL

NO SCALE

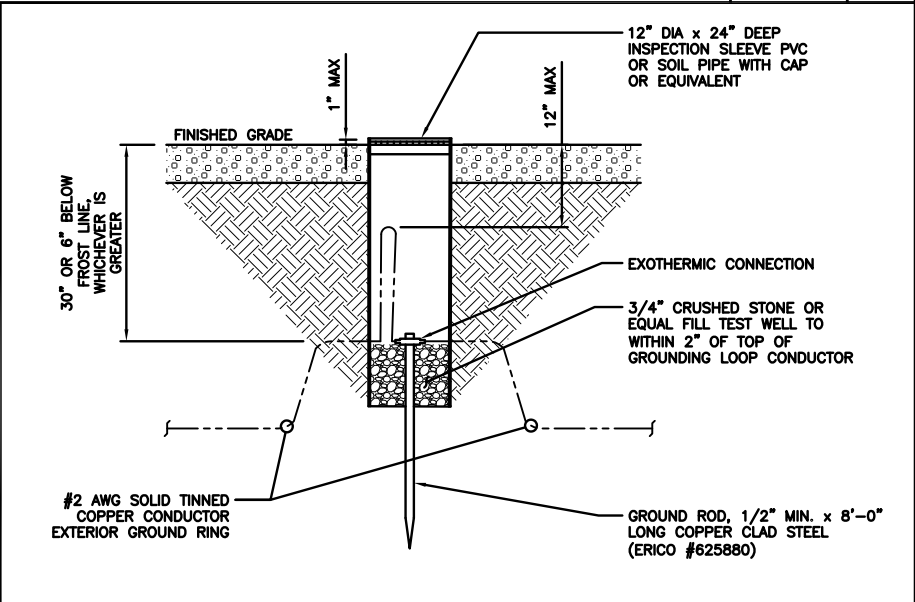
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TRANSITIONING GROUND DETAIL

NO SCALE

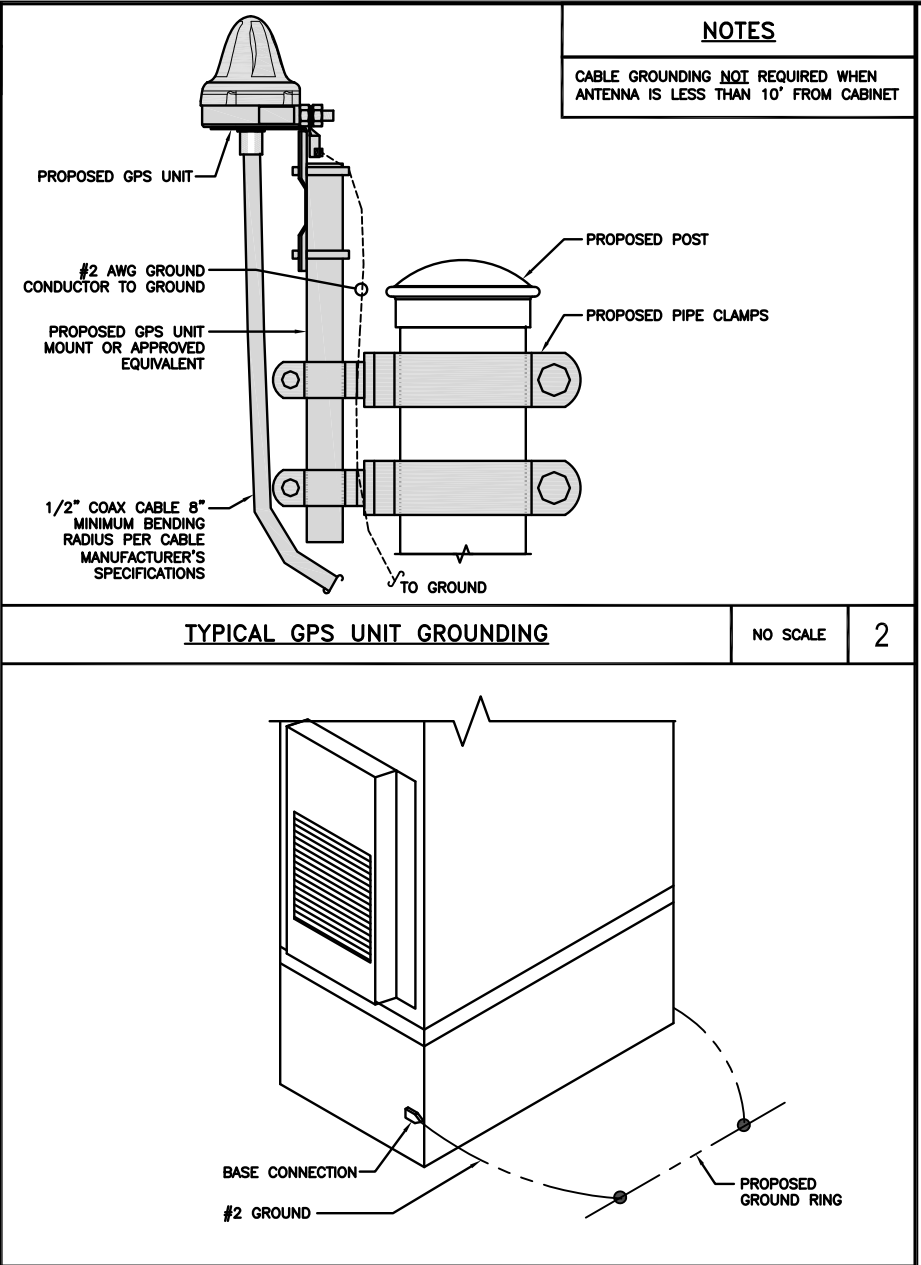
4



TYPICAL TEST GROUND ROD WITH INSPECTION SLEEVE

NO SCALE

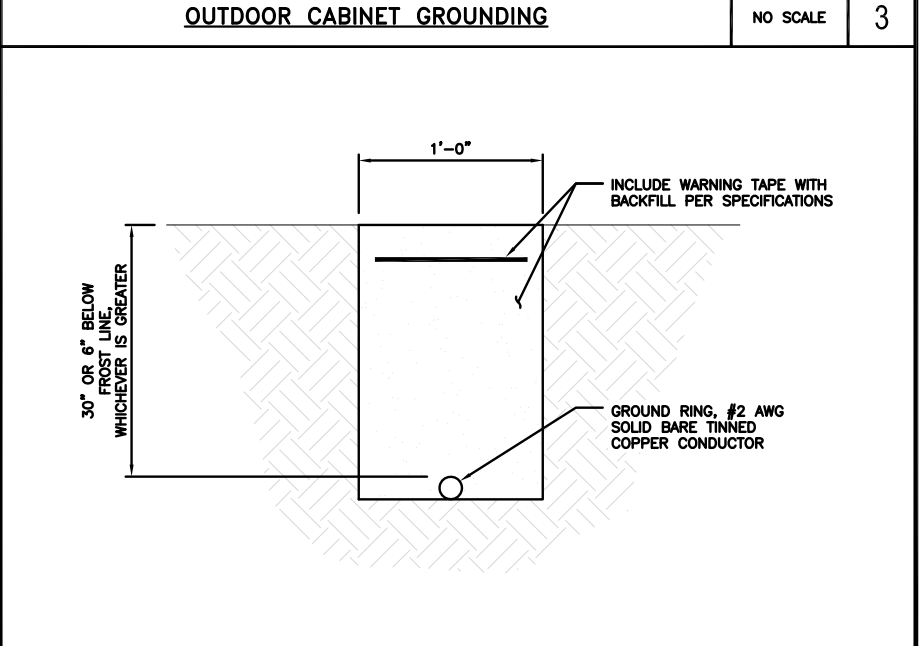
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TYPICAL GPS UNIT GROUNDING

NO SCALE

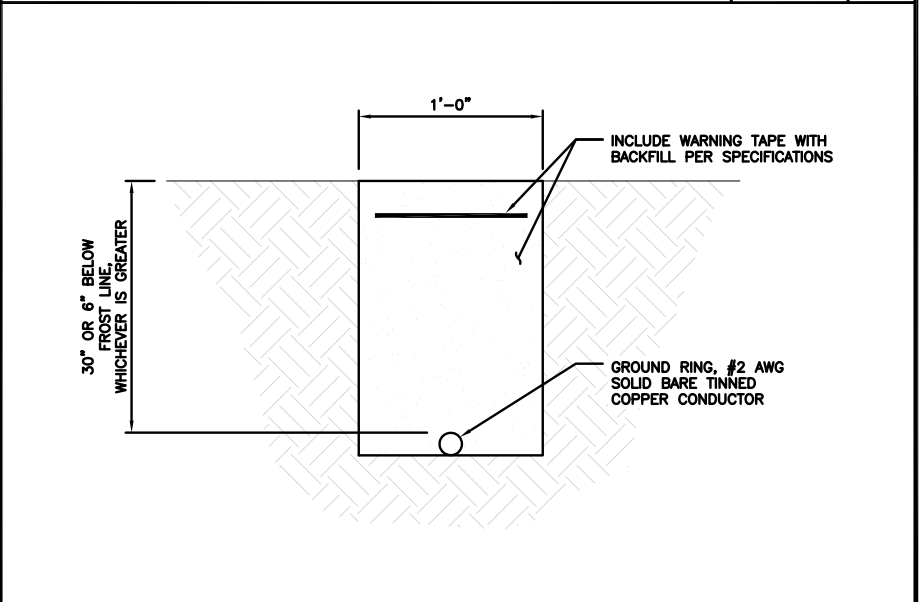
2



OUTDOOR CABINET GROUNDING

NO SCALE

3



TYPICAL GROUND RING TRENCH

NO SCALE

6

dish
wireless.

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JES CJ CJ

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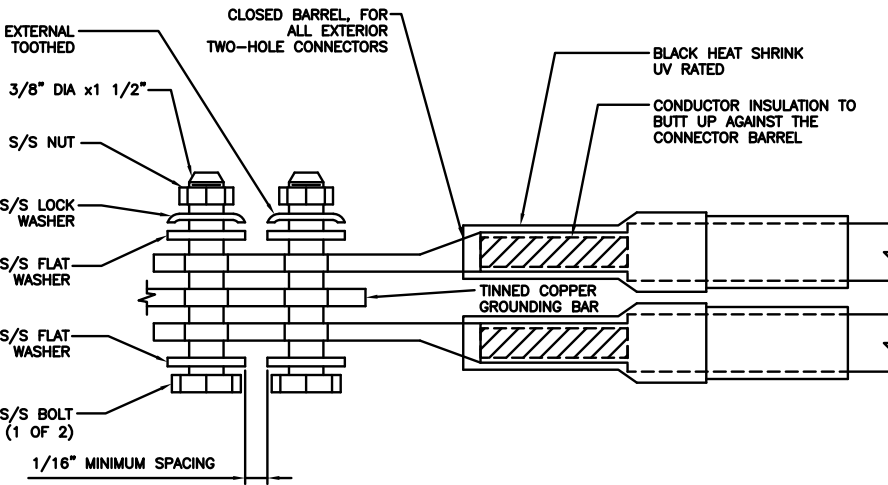
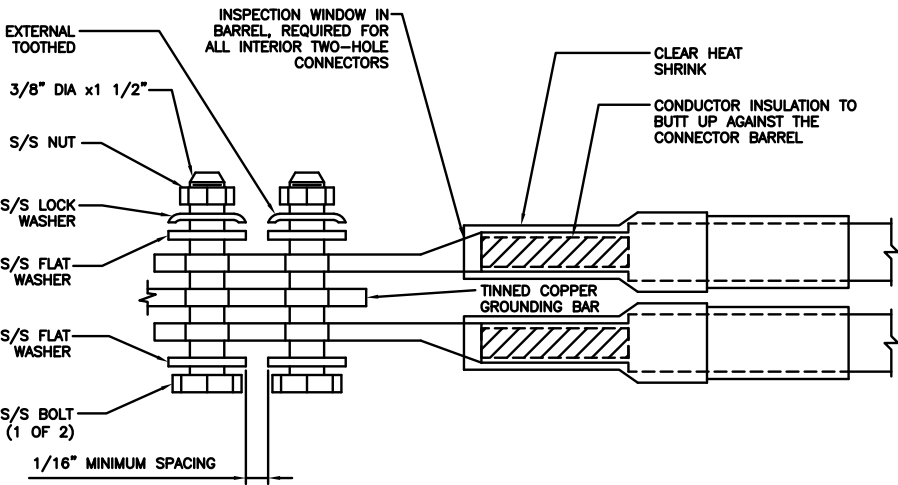
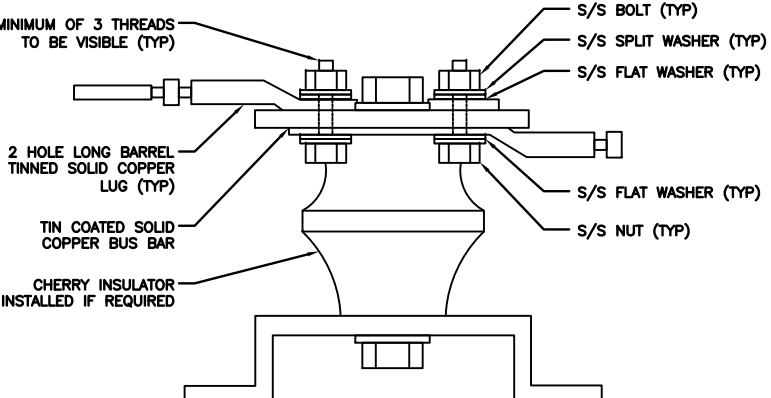
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SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER

G-2

1. EXOTHERMIC WELD (2) TWO, #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR. ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD. 2. ALL EXTERIOR GROUNDING HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. 3. FOR GROUND BOND TO STEEL ONLY: COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. 4. DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUNDING BUS. 5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE. 6. ALL GROUNDING PARTS AND EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR. 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED. 8. ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).														
TYPICAL GROUNDING NOTES			NO SCALE	1	TYPICAL EXTERIOR TWO HOLE LUG			NO SCALE	2	TYPICAL INTERIOR TWO HOLE LUG			NO SCALE	3
 NOTE: MINIMUM OF 3 THREADS TO BE VISIBLE (TYP)														
LUG DETAIL			NO SCALE	4	NOT USED			NO SCALE	5	NOT USED			NO SCALE	6
NOT USED			NO SCALE	7	NOT USED			NO SCALE	8	NOT USED			NO SCALE	9



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DISH WIRELESS L.L.C. PROJECT INFORMATION SFSF000115A CA-CCI-T-815755 4900 SONOMA HWY. SANTA ROSA, CA 95409		
SHEET TITLE GROUNDING DETAILS		
SHEET NUMBER G-3		

HYBRID/DISCREET CABLES		3/4" TAPE WIDTHS WITH 3/4" SPACING											
LOW-BAND RRH (600 MHz N71 BASEBAND) + (850 MHz N26 BAND) + (700 MHz N29 BAND) – OPTIONAL PER MARKET ADD FREQUENCY COLOR TO SECTOR BAND (CBRS WILL USE YELLOW BAND)	ALPHA RRH				BETA RRH				GAMMA RRH				
	PORT 1 + SLANT	PORT 2 – SLANT	PORT 3 + SLANT	PORT 4 – SLANT	PORT 1 + SLANT	PORT 2 – SLANT	PORT 3 + SLANT	PORT 4 – SLANT	PORT 1 + SLANT	PORT 2 – SLANT	PORT 3 + SLANT	PORT 4 – SLANT	
	RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN	GREEN	GREEN	
	ORANGE	ORANGE	RED	RED	ORANGE	ORANGE	BLUE	BLUE	ORANGE	ORANGE	GREEN	GREEN	
MID-BAND RRH (AWS BANDS N66+N70) ADD FREQUENCY COLOR TO SECTOR BAND (CBRS WILL USE YELLOW BANDS)													
HYBRID/DISCREET CABLES		EXAMPLE 1	EXAMPLE 2	EXAMPLE 3	CANISTER	COAX #1	COAX #2	(ALPHA)					
INCLUDE SECTOR BANDS BEING SUPPORTED ALONG WITH FREQUENCY BANDS.													
EXAMPLE 1 – HYBRID, OR DISCREET, SUPPORTS ALL SECTORS, BOTH LOW-BANDS AND MID-BANDS.													
EXAMPLE 2 – HYBRID, OR DISCREET, SUPPORTS CBRS ONLY, ALL SECTORS.													
EXAMPLE 3 – MAIN COAX WITH GROUND MOUNTED RRHs.													
FIBER JUMPERS TO RRHs		LOW BAND RRH	MID BAND RRH	LOW BAND RRH	MID BAND RRH	LOW BAND RRH	MID BAND RRH						
LOW-BAND HHR FIBER CABLES HAVE SECTOR STRIPE ONLY.													
POWER CABLES TO RRHs		LOW BAND RRH	MID BAND RRH	LOW BAND RRH	MID BAND RRH	LOW BAND RRH	MID BAND RRH						
LOW-BAND RRH POWER CABLES HAVE SECTOR STRIPE ONLY													
RET MOTORS AT ANTENNAS		ANTENNA 1 MID BAND	ANTENNA 1 LOW BAND	ANTENNA 1 MID BAND	ANTENNA 1 LOW BAND	ANTENNA 1 MID BAND	ANTENNA 1 LOW BAND						
RET CONTROL IS HANDLED BY THE MID-BAND RRH WHEN ONE SET OF RET PORTS EXIST ON ANTENNA.													
SEPARATE RET CABLES ARE USED WHEN ANTENNA PORTS PROVIDE INPUTS FOR BOTH LOW AND MID BANDS.													
MICROWAVE RADIO LINKS		FORWARD AZIMUTH OF 0–120 DEGREES PRIMARY	SECONDARY	FORWARD AZIMUTH OF 120–240 DEGREES PRIMARY	SECONDARY	FORWARD AZIMUTH OF 240–359 DEGREES PRIMARY	SECONDARY						
LINKS WILL HAVE A 1.5–2 INCH WHITE WRAP WITH THE AZIMUTH COLOR OVERLAPPING IN THE MIDDLE. ADD ADDITIONAL SECTOR COLOR BANDS FOR EACH ADDITIONAL MW RADIO.													
MICROWAVE CABLES WILL REQUIRE P-TOUCH LABELS INSIDE THE CABINET TO IDENTIFY THE LOCAL AND REMOTE SITE ID's.													

RF CABLE COLOR CODES

NO SCALE

1

NOT USED

NO SCALE

4

LOW BANDS (N71+N26)
OPTIONAL – (N29)

ORANGE

AWS
(N66+N70+H-BLOCK)

PURPLE

CBRS TECH
(3 GHz)

YELLOW

NEGATIVE SLANT PORT
ON ANT/RRH

WHITE

ALPHA SECTOR

RED

BETA SECTOR

BLUE

GAMMA SECTOR

GREEN

COLOR IDENTIFIER

NO SCALE

2

NOT USED

NO SCALE

3

dish
wireless.

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SANTA ROSA, CA 95409

SHEET TITLE
RF
CABLE COLOR CODE

SHEET NUMBER

RF-1

EXOTHERMIC CONNECTION

MECHANICAL CONNECTION

BUSS BAR INSULATOR

CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

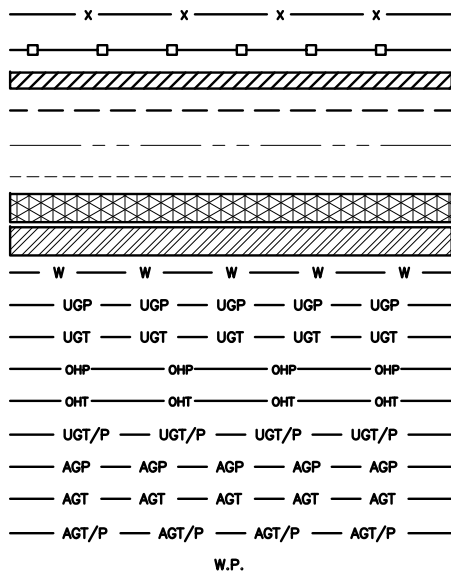
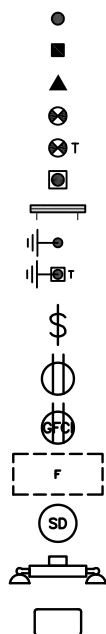
TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

EXOTHERMIC WITH INSPECTION SLEEVE

GROUNDING BAR

GROUND ROD

TEST GROUND ROD WITH INSPECTION SLEEVE



AB	ANCHOR BOLT	IN	INCH
ABV	ABOVE	INT	INTERIOR
AC	ALTERNATING CURRENT	LB(S)	POUND(S)
ADDL	ADDITIONAL	LF	LINEAR FEET
AFF	ABOVE FINISHED FLOOR	LTE	LONG TERM EVOLUTION
AFG	ABOVE FINISHED GRADE	MAS	MASONRY
AGL	ABOVE GROUND LEVEL	MAX	MAXIMUM
AIC	AMPERAGE INTERRUPTION CAPACITY	MB	MACHINE BOLT
ALUM	ALUMINUM	MECH	MECHANICAL
ALT	ALTERNATE	MFR	MANUFACTURER
ANT	ANTENNA	MGB	MASTER GROUND BAR
APPROX	APPROXIMATE	MIN	MINIMUM
ARCH	ARCHITECTURAL	MISC	MISCELLANEOUS
ATS	AUTOMATIC TRANSFER SWITCH	MTL	METAL
AWG	AMERICAN WIRE GAUGE	MTS	MANUAL TRANSFER SWITCH
BATT	BATTERY	MW	MICROWAVE
BLDG	BUILDING	NEC	NATIONAL ELECTRIC CODE
BLK	BLOCK	NM	NEWTON METERS
BLKG	BLOCKING	NO.	NUMBER
BM	BEAM	#	NUMBER
BTC	BARE TINNED COPPER CONDUCTOR	NTS	NOT TO SCALE
BOF	BOTTOM OF FOOTING	OC	ON-CENTER
CAB	CABINET	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CANT	CANTILEVERED	OPNG	OPENING
CHG	CHARGING	P/C	PRECAST CONCRETE
CLG	CEILING	PCS	PERSONAL COMMUNICATION SERVICES
CLR	CLEAR	PCU	PRIMARY CONTROL UNIT
COL	COLUMN	PRC	PRIMARY RADIO CABINET
COMM	COMMON	PP	POLARIZING PRESERVING
CONC	CONCRETE	PSF	POUNDS PER SQUARE FOOT
CONSTR	CONSTRUCTION	PSI	POUNDS PER SQUARE INCH
DBL	DOUBLE	PT	PRESSURE TREATED
DC	DIRECT CURRENT	PWR	POWER CABINET
DEPT	DEPARTMENT	QTY	QUANTITY
DF	DOUGLAS FIR	RAD	RADIUS
DIA	DIAMETER	RECT	RECTIFIER
DIAG	DIAGONAL	REF	REFERENCE
DIM	DIMENSION	REINF	REINFORCEMENT
DWG	DRAWING	REQ'D	REQUIRED
DWL	DOWEL	RET	REMOTE ELECTRIC TILT
EA	EACH	RF	RADIO FREQUENCY
EC	ELECTRICAL CONDUCTOR	RMC	RIGID METALLIC CONDUIT
EL	ELEVATION	RRH	REMOTE RADIO HEAD
ELEC	ELECTRICAL	RRU	REMOTE RADIO UNIT
EMT	ELECTRICAL METALLIC TUBING	RWY	RACEWAY
ENG	ENGINEER	SCH	SCHEDULE
EQ	EQUAL	SHT	SHEET
EXP	EXPANSION	SIAD	SMART INTEGRATED ACCESS DEVICE
EXT	EXTERIOR	SIM	SIMILAR
EW	EACH WAY	SPEC	SPECIFICATION
FAB	FABRICATION	SQ	SQUARE
FF	FINISH FLOOR	SS	STAINLESS STEEL
FG	FINISH GRADE	STD	STANDARD
FIF	FACILITY INTERFACE FRAME	STL	STEEL
FIN	FINISH(ED)	TEMP	TEMPORARY
FLR	FLOOR	THK	THICKNESS
FDN	FOUNDATION	TMA	TOWER MOUNTED AMPLIFIER
FOC	FACE OF CONCRETE	TN	TOE NAIL
FOM	FACE OF MASONRY	TOA	TOP OF ANTENNA
FOS	FACE OF STUD	TOC	TOP OF CURB
FOW	FACE OF WALL	TOF	TOP OF FOUNDATION
FS	FINISH SURFACE	TOP	TOP OF PLATE (PARAPET)
FT	FOOT	TOS	TOP OF STEEL
FTG	FOOTING	TOW	TOP OF WALL
GA	GAUGE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
GEN	GENERATOR	TYP	TYPICAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UG	UNDERGROUND
GLB	GLUE LAMINATED BEAM	UL	UNDERWRITERS LABORATORY
GLV	GALVANIZED	UNO	UNLESS NOTED OTHERWISE
GPS	GLOBAL POSITIONING SYSTEM	UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
GND	GROUND	UPS	UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
GSM	GLOBAL SYSTEM FOR MOBILE	VIF	VERIFIED IN FIELD
HDG	HOT DIPPED GALVANIZED	W	WIDE
HDR	HEADER	W/	WITH
HGR	HANGER	WD	WOOD
HVAC	HEAT/VENTILATION/AIR CONDITIONING	WP	WEATHERPROOF
HT	HEIGHT	WT	WEIGHT
IGR	INTERIOR GROUND RING		



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RFDS REV #:

CONSTRUCTION
DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
3	11/22/2022	LEASE AREA UPDATE
4	12/12/2022	ELEVATION UPDATE
5	02/02/2023	JDX REVISION
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A&E PROJECT NUMBER
2021.0025.815755

DISH WIRELESS L.L.C.
PROJECT INFORMATION
SFSF000115A
CA-CCI-T-815755
4900 SONOMA HWY.
SANTA ROSA, CA 95409

SHEET TITLE
LEGEND AND
ABBREVIATIONS

SHEET NUMBER

GN-1

LEGEND

ABBREVIATIONS

SIGN TYPES		
TYPE	COLOR	COLOR CODE PURPOSE
INFORMATION	GREEN	"INFORMATIONAL SIGN" TO NOTIFY OTHERS OF SITE OWNERSHIP & CONTACT NUMBER AND POTENTIAL RF EXPOSURE.
NOTICE	BLUE	"NOTICE BEYOND THIS POINT" RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
CAUTION	YELLOW	"CAUTION BEYOND THIS POINT" RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
WARNING	ORANGE/RED	"WARNING BEYOND THIS POINT" RF FIELDS AT THIS SITE EXCEED FCC RULES FOR HUMAN EXPOSURE. FAILURE TO OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS COULD RESULT IN SERIOUS INJURY. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)

SIGN PLACEMENT:

- RF SIGNAGE PLACEMENT SHALL FOLLOW THE RECOMMENDATIONS OF AN EXISTING EME REPORT, CREATED BY A THIRD PARTY PREVIOUSLY AUTHORIZED BY DISH Wireless L.L.C.
- INFORMATION SIGN (GREEN) SHALL BE LOCATED ON EXISTING DISH Wireless L.L.C. EQUIPMENT.
 - A) IF THE INFORMATION SIGN IS A STICKER, IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C. EQUIPMENT CABINET.
 - B) IF THE INFORMATION SIGN IS A METAL SIGN IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C. H-FRAME WITH A SECURE ATTACH METHOD.
- IF EME REPORT IS NOT AVAILABLE AT THE TIME OF CREATION OF CONSTRUCTION DOCUMENTS; PLEASE CONTACT DISH Wireless L.L.C. CONSTRUCTION MANAGER FOR FURTHER INSTRUCTION ON HOW TO PROCEED.

NOTES:

1. FOR DISH Wireless L.L.C. LOGO, SEE DISH Wireless L.L.C. DESIGN SPECIFICATIONS (PROVIDED BY DISH Wireless L.L.C.)
2. SITE ID SHALL BE APPLIED TO SIGNS USING "LASER ENGRAVING" OR ANY OTHER WEATHER RESISTANT METHOD (DISH Wireless L.L.C. APPROVAL REQUIRED)
3. TEXT FOR SIGNAGE SHALL INDICATE CORRECT SITE NAME AND NUMBER AS PER DISH Wireless L.L.C. CONSTRUCTION MANAGER RECOMMENDATIONS.
4. CABINET/SHELTER MOUNTING APPLICATION REQUIRES ANOTHER PLATE APPLIED TO THE FACE OF THE CABINET WITH WATER PROOF POLYURETHANE ADHESIVE
5. ALL SIGNS WILL BE SECURED WITH EITHER STAINLESS STEEL ZIP TIES OR STAINLESS STEEL TECH SCREWS
6. ALL SIGNS TO BE 8.5"x11" AND MADE WITH 0.04" OF ALUMINUM MATERIAL

INFORMATION

This is an access point to an area with transmitting antennas.

Obey all signs and barriers beyond this point.
Call the DISH Wireless L.L.C. NOC at 1-866-624-6874

Site ID: _____



THIS SIGN IS FOR REFERENCE PURPOSES ONLY

NOTICE



Transmitting Antenna(s)

Radio frequency fields beyond this point MAY EXCEED the FCC Occupational exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

Call the DISH Wireless L.L.C. NOC at 1-866-624-6874 prior to working beyond this point.

Site ID: _____



THIS SIGN IS FOR REFERENCE PURPOSES ONLY

CAUTION



Transmitting Antenna(s)

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WARNING



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JES	CJ	CJ

RFDS REV #: 2

CONSTRUCTION DOCUMENTS

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PROJECT INFORMATION
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SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-2

SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED – NO WORK SHALL COMMENCE PRIOR TO CONTRACTOR RECEIVING A WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE DISH Wireless L.L.C. AND TOWER OWNER NOC & THE DISH Wireless L.L.C. AND TOWER OWNER CONSTRUCTION MANAGER.
2. "LOOK UP" – DISH Wireless L.L.C. AND TOWER OWNER SAFETY CLIMB REQUIREMENT:

THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR DISH Wireless L.L.C. AND DISH Wireless L.L.C. AND TOWER OWNER POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND DISH Wireless L.L.C. AND TOWER OWNER STANDARDS, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH DISH Wireless L.L.C. AND TOWER OWNER INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON DISH Wireless L.L.C. AND TOWER OWNER TOWER SITE AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY DISH Wireless L.L.C. AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER’S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES INCLUDING PRIVATE LOCATES SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND DISH PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF DISH Wireless L.L.C. AND TOWER OWNER, AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER’S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR’S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS AND RADIOS REMOVED SHALL BE RETURNED TO THE OWNER’S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

- 1.FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTOR:GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION

CARRIER:DISH Wireless L.L.C.

TOWER OWNER:TOWER OWNER
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CARRIER POC AND TOWER OWNER.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER’S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION, BEFORE SUBMITTING BIDS, TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR’S EXPENSE TO THE SATISFACTION OF DISH Wireless L.L.C. AND TOWER OWNER
13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER’S DESIGNATED LOCATION.
14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.



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SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-3

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
#4 BARS AND SMALLER 40 ksi
#5 BARS AND LARGER 60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

• CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"

• CONCRETE EXPOSED TO EARTH OR WEATHER:

• #6 BARS AND LARGER 2"

• #5 BARS AND SMALLER 1-1/2"

• CONCRETE NOT EXPOSED TO EARTH OR WEATHER:

• SLAB AND WALLS 3/4"

• BEAMS AND COLUMNS 1-1/2"

• AGGREGATE SIZE NOT TO EXCEED 3/4 INCH

• SLUMP IS TO BE 2" TO 5"

• CONCRETE CROWNED WITH BROOM FINISH

7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- ELECTRICAL INSTALLATION NOTES:
1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.

2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.

3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.

4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.

4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.

4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.

5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.

6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).

7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.

8. TIE WRAPS ARE NOT ALLOWED.

9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.

10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.

11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.

12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.

13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).

14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.

18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.

20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.

21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).

22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).

23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.

24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3 (OR BETTER) FOR EXTERIOR LOCATIONS.

25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.

26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.

27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR DISH Wireless L.L.C. AND TOWER OWNER BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.

29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "DISH Wireless L.L.C.".

30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.
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| DRAWN BY: | CHECKED BY: | APPROVED BY: |
| JES | CJ | CJ |
- RFDS REV #: 2
- CONSTRUCTION DOCUMENTS
- | SUBMITTALS | | |
|------------|------------|-------------------|
| REV | DATE | DESCRIPTION |
| 3 | 11/22/2022 | LEASE AREA UPDATE |
| 4 | 12/12/2022 | ELEVATION UPDATE |
| 5 | 02/02/2023 | JDX REVISION |
| 6 | 02/10/2023 | JDX REVISION |
| 7 | 04/19/2023 | ADDED SURVEY |
| 8 | 05/24/2023 | UTILITY REVISION |
| 9 | 07/28/2023 | UTILITY REVISION |
- A&E PROJECT NUMBER
2021.0025.815755
- DISH WIRELESS L.L.C.
PROJECT INFORMATION
SFSF000115A
CA-CCI-T-815755
4900 SONOMA HWY.
SANTA ROSA, CA 95409
- SHEET TITLE
GENERAL NOTES
- SHEET NUMBER
GN-4
- DISH WIRELESS L.L.C. TEMPLATE VERSION 37 – 07/09/2021

GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES’S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON–ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON–METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4” NON–METALLIC, FLEXIBLE CONDUIT FROM 24” BELOW GRADE TO WITHIN 3” TO 6” OF CAD–WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY). DO NOT ATTACH GROUNDING TO FIRE SPRINKLER SYSTEM PIPES.



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JES	CJ	CJ

RFDS REV #: 2

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GENERAL NOTES

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