



SITE NAME: **CSP US24 BYPASS**
 PROJECT SMR - ANTMO - ERICSSON RRH
 SITE I.D.#: 301
 PROJECT #: 20191903362
 LOCATION #: 119055
 SITE ADDRESS: 2864 SOUTH CIRCLE DR. STE. 1310
 COLORADO SPRINGS, CO 80906

verizon
 VERIZON WIRELESS SERVICES
 3131 S. VAUGHN WAY, SUITE 550
 AURORA, CO 80014
 PROJECT INFORMATION
 SITE NAME
CSP US24 BYPASS
 SITE I.D.
301
 2864 SOUTH CIRCLE DR. STE. 1310
 COLORADO SPRINGS, CO 80906
 CONSULTANT

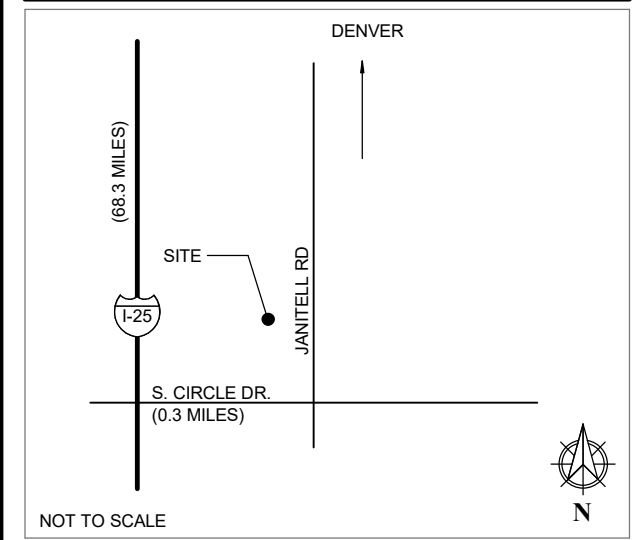
EXISTING CONDITIONS



PROJECT DESCRIPTION

- REMOVE & REPLACE (6) ANTENNAS ATTACHED TO BUILDING
- ADD NEW EQUIPMENT AT (E) EQUIPMENT SHELTER & NEAR ANTENNAS ATTACHED TO THE INTERIOR OF (E) WALLS

VICINITY MAP



DIRECTIONS

- FROM DENVER, CO
- I-25 SOUTH TO COLORADO SPRINGS (68.3 MILES)
 - EXIT 138 FOR LAKE AVENUE
 - LEFT ONTO LAKE AVENUE
 - CONTINUE ONTO CIRCLE DRIVE (0.3 MILES)
 - LEFT ONTO JANITELL ROAD
 - SITE WILL BE ON THE RIGHT (SHELTER LOCATED ON ROOF TOP)

PROJECT DATA

JURISDICTION	EL PASO COUNTY, PPRBD
APN	6428300011
ZONING DESIGNATION	CC - COMMERCIAL COMMUNITY
<u>EXISTING BUILDING</u>	
OCCUPANCY GROUP	B
CONSTRUCTION TYPE	I-B
FULLY SPRINKLERED	YES
NO. STORIES	12
<u>EQUIPMENT SHELTER</u>	
OCCUPANCY GROUP	U
CONSTRUCTION TYPE	V-B
FULLY SPRINKLERED	NO
NO. STORIES	1
GOVERNING CODES: 2015 IBC, 2015 IFC, 2015 IMC, 2015 IECC, 2017 NEC, & 2017 PPRBC	
A.D.A. COMPLIANCE THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION	

DRAWING INDEX

SHEET	DESCRIPTION
T1.00	TITLE SHEET
G1.00	GENERAL NOTES
A1.00	SITE PLAN & HYBRID CABLE DIAGRAM
A2.00	EQUIPMENT SHELTER FLOOR PLAN
A2.10	EQUIPMENT SHELTER RCP
A2.20	ANTENNA PLANS
A2.30	ANTENNA PLANS & NOTES
A3.00	NORTH ELEVATION
A3.10	EAST ELEVATION
A4.00	DETAILS
A6.00	GROUNDING SCHEMATIC

ATTACHMENTS

STRUCTURAL CALCULATIONS
 BY: OTEGUI STRUCTURAL SERVICES, LLC
 DATE: 05/08/19

PENETRATIONS
 ANTENNAS
 LEASE AREA
 EXISTING EASEMENT
 ACCESS/UTILITY EASEMENT
 GEN. CONST. UTILITY EASEMENT
 OVP/ELEC. EQ.
 POWER/GROUNDING
 MW/FIBER EQ.
 FIBER
 BB/URR/H
 HYBRID & COAX CABLES

PROJECT TEAM

OWNER TOMA ALLIANCE GROUP LLC 2204 EAST MAIN STREET CORTEZ, CO 81321-4222	CLIENT VERIZON WIRELESS MATT DEUTSCH CONSTRUCTION ENGINEER 3131 S. VAUGHN WAY SUITE 550 AURORA CO. 80014 PHONE: 303.817.4716	RF ENGINEER VERIZON WIRELESS BRYAN EICENS 3131 S. VAUGHN WAY SUITE 550 AURORA, CO 80014 PHONE: 303.704.1723	SITE ACQUISITIONIST RETFERFORD ENTERPRISES, INC. PAM GOSS PHONE: 303.884.1179	ARCHITECT CSAI CHARLES STECKLY, AIA 5935 S. ZANG STREET SUITE 280 LITTLETON, CO 80127 CELL: 303.210.8972 OFFICE: 303.932.9974	STRUCTURAL OTEGUI STRUCTURAL SERVICES, LLC MICHAEL OTEGUI 8842 WEST POWERS PLACE LITTLETON, CO 80123 PHONE: 720.981.5333
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A	02/21/19	CD REVIEW	JT
0	05/16/19	CD ISSUE	JT

1st REVIEW GOB 2nd REVIEW MKC

CHARLES STECKLY
ARCHITECTURE
 5935 SOUTH ZANG STREET, SUITE 280
 LITTLETON, COLORADO 80127
 OFFICE: 303.932.9974



TITLE SHEET

T1.00



VERIZON WIRELESS SERVICES
3131 S. VAUGHN WAY, SUITE 550
AURORA, CO 80014

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LITTLETON, COLORADO 80127
OFFICE: 303.932.9974



GENERAL NOTES

G1.00

1. DRAWINGS ARE NOT TO BE SCALED, WRITTEN DIMENSIONS TAKE PRECEDENCE, AND THIS SET OF PLANS IS INTENDED TO BE USED FOR DIAGRAMMATIC PURPOSES ONLY, UNLESS NOTED OTHERWISE. THE GENERAL CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND ANYTHING ELSE DEEMED NECESSARY TO COMPLETE INSTALLATIONS AS DESCRIBED HEREIN. REFER TO BID PACKAGE FOR MORE DATA.

2. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT WITH THE CONSTRUCTION AND CONTRACT DOCUMENTS, FIELD CONDITIONS AND CONFIRM THAT THE PROJECT MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY ERRORS, OMISSIONS, OR DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/CONSTRUCTION ENGINEER IN WRITING.

3. THE GENERAL CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.

4. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

5. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S, VENDOR'S, & SPECIFIC CARRIER SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE NOTIFY CONSTRUCTION ENGINEER.

6. ALL WORK PERFORMED ON PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK.

7. THE STRUCTURAL COMPONENTS OF THIS PROJECT SITE/FACILITY ARE NOT TO BE ALTERED BY THIS CONSTRUCTION PROJECT UNLESS NOTED OTHERWISE.

8. NEW TOWERS ARE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION SUBCONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF PERSONNEL AND PROPERTY FROM HAZARDOUS EXPOSURE TO OVERHEAD DANGERS.

9. GENERAL CONTRACTOR SHALL PROVIDE AT THE PROJECT SITE A FULL SET OF PERMITTED CONSTRUCTION DOCUMENTS UPDATED WITH THE LATEST REVISIONS AND ADDENDA OR CLARIFICATIONS FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

10. DETAILS INCLUDED HEREIN ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS OR SITUATIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE SCOPE OF WORK.


11. THE FACILITY IS CELLULAR RADIO EQUIPMENT, ANTENNAS, & SUPPORTING UTILITIES.

12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION UPON COMPLETION OF WORK. CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

13. CONTRACTOR SHALL ENSURE THE GENERAL WORK AREA IS KEPT CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY, PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

14. THE ARCHITECTS/ENGINEERS HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. CONTRACTORS BIDDING THE JOB ARE NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. THE BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE CONSTRUCTION ENGINEER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL.

15. SPECIAL INSPECTION TESTING REQUIRING SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT SPECIAL INSPECTOR PER SECTION 1704 OF THE INTERNATIONAL BUILDING CODE (IBC) FOR ITEMS NOTED ON S1.00 IF INCLUDED IN CONSTRUCTION DOCUMENTS. THE INSPECTOR SHALL BE HIRED BY THE CONTRACTOR & COORDINATION SHALL BE ARRANGED BY THE CONTRACTOR FOR REQUIRED INSPECTIONS.



UNDERGROUND SERVICE ALERT
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
WWW.UNCC.ORG
3 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

ABBREVIATIONS

°@	AT	H.M.	HOLLOW METAL
∅	CENTERLINE	HORZ.	HORIZONTAL
	DEGREES	HR.	HOUR
	DIAMETER	HT.	HEIGHT
A/C	AIR CONDITIONER	ILC	INTEGRATED LOAD CENTER
APPROX.	APPROXIMATE	INT.	INTERIOR
ARCH.	ARCHITECTURAL		
A.F.F.	ABOVE FINISH FLOOR	L.F.	LINEAR FEET
A.F.G.	ABOVE FINISH GRADE	LTE	LIMIT TO EXTEND
ALU	ALCATEL LUCENT		
ATS	AUTOMATIC TRANSFER SWITCH	MAX.	MAXIMUM
AWS	ADVANCED WIRELESS SYSTEM	MECH.	MECHANICAL
		MFR.	MANUFACTURER
BBU	BASE BAND UNIT	MGB	MAIN GROUND BAR
BCEM	BASE CHANNEL ELEMENT	MIN.	MINIMUM
	MODULE	MSDS	MATERIAL SAFETY DATA SHEET
BLDG.	BUILDING	MTL.	METAL
B.O.	BOTTOM OF	MTS	MANUAL TRANSFER SWITCH
CLG.	CEILING	N.T.S.	NOT TO SCALE
COL.	COLUMN		
CONC.	CONCRETE	O.C.	ON CENTER
		O.D.	OUTSIDE DIAMETER
DBL.	DOUBLE	OVP	OVER VOLTAGE PROTECTION
DIA.	DIAMETER		
DIM.	DIMENSION	PCS	PERSONAL COMMUNICATIONS SERVICE
DISC.	DISCONNECT		
DN.	DOWN		
DWG.	DRAWING	RAD.	RADIUS
		R.O.	ROUGH OPENING
(E)	EXISTING	RRH	REMOTE RADIO HEAD
EA.	EACH		
ELEV.	ELEVATION	SHTG.	SHEATHING
ELEC.	ELECTRICAL	SIM.	SIMILAR
EQ.	EQUAL	SPEC.	SPECIFICATION
EXT.	EXTERIOR	S.S.	STAINLESS STEEL
		STL.	STEEL
F.E.	FIRE EXTINGUISHER	STRUCT.	STRUCTURAL
FIN.	FINISH		
FLR.	FLOOR	T.C.	TEMPERATURE CONTROL
FUT.	FUTURE	TELCO	TELECOMMUNICATIONS
		T.O.	TOP OF
GA.	GAUGE	TYP.	TYPICAL
GALV.	GALVANIZED		
GEN.	GENERATOR	U.G.	UNDERGROUND
GPS	GLOBAL POSITIONING SYSTEM	U.N.O.	UNLESS NOTED OTHERWISE
GWB.	GYPSUM WALLBOARD		
		VERT.	VERTICAL
		V.I.F.	VERIFY IN FIELD
		W/	WITH

SYMBOLS LEGEND

---	EASEMENT		ENLARGED VIEW
---	LEASE LINE		ELEVATION MARKER
---	PROPERTY LINE		SPOT ELEVATION
---	WOODEN FENCE		SECTION CUT
X	CHAIN LINK FENCE		EXTERIOR ELEVATION
OH	(E) OVERHEAD UTILITY		INTERIOR ELEVATION
OHE	(E) OVERHEAD ELEC.		REVISION NUMBER
SS	(E) SANITARY SEWER		
W	(E) WATER LINE		
T	(E) TELCO CABLE		
FIBER	(E) FIBER CABLE		
E	(E) ELECTRICAL		
COAX	(E) COAX CABLE		

NEW WORK COLOR LEGEND

GENERAL CONSTRUCTION SOW	
HYBRID & COAX CABLES	
DC POWER	
FIBER	
ANTENNAS	
RRH/BBU	
PENETRATIONS	

4 - ABBREVIATIONS, SYMBOLS AND LEGEND

3 - NOT USED

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

THESE DRAWINGS ARE TO SCALE WHEN PLOTTED ON 11X17 SHEET.

CALL BEFORE YOU DIG - COLORADO LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE.

THESE DRAWINGS MAY NOT SHOW ALL UNDERGROUND PIPING AND UTILITIES. THE CONTRACTOR SHALL EXERCISE EXTREME CARE DURING ALL EXCAVATION AND OTHER CONSTRUCTION ACTIVITIES.

UTILITY NOTIFICATION CENTER OF COLORADO - 1-800-922-1987

THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY LOCATES AND UTILITY RELOCATIONS REQUIRED FOR THIS INSTALLATION. THE CONTRACTOR WILL SCHEDULE AND COORDINATE ALL WORK WITH THE OWNER TO ENSURE NO DISRUPTION TO OWNERS OPERATIONS.

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

2 - GENERAL CONTRACTOR NOTES

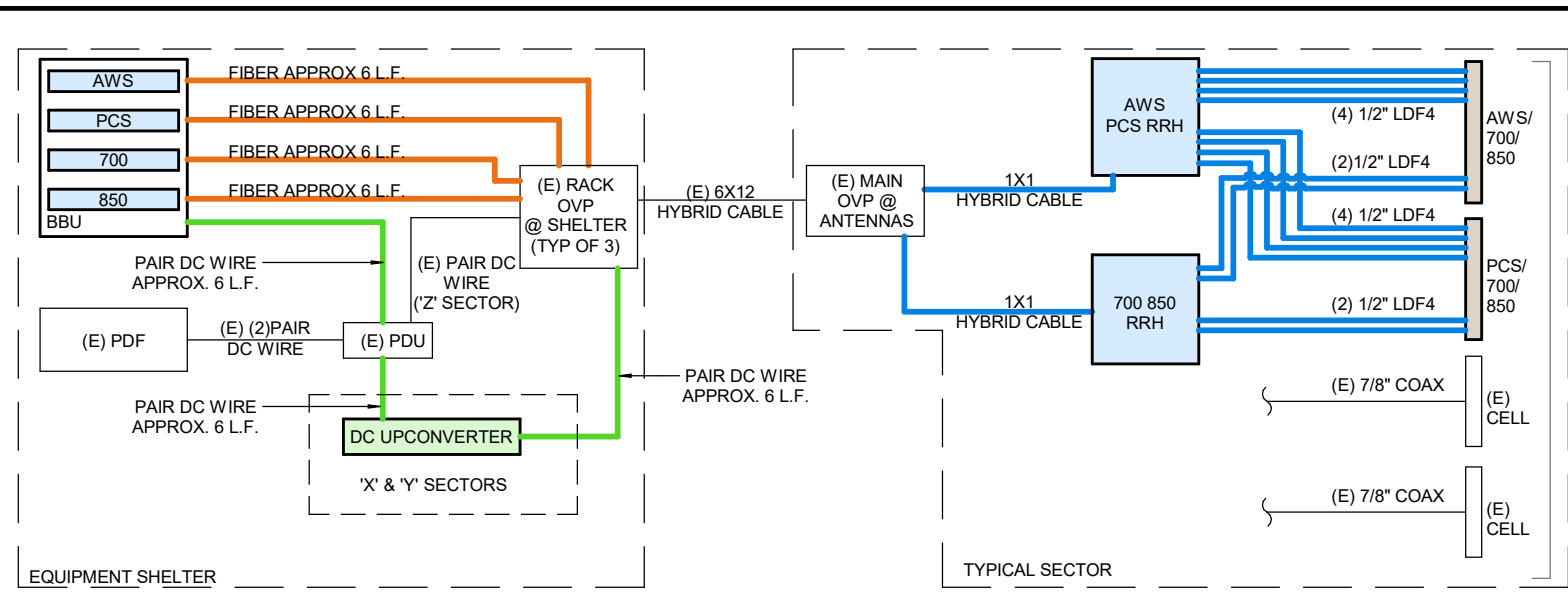
1 - GENERAL NOTES



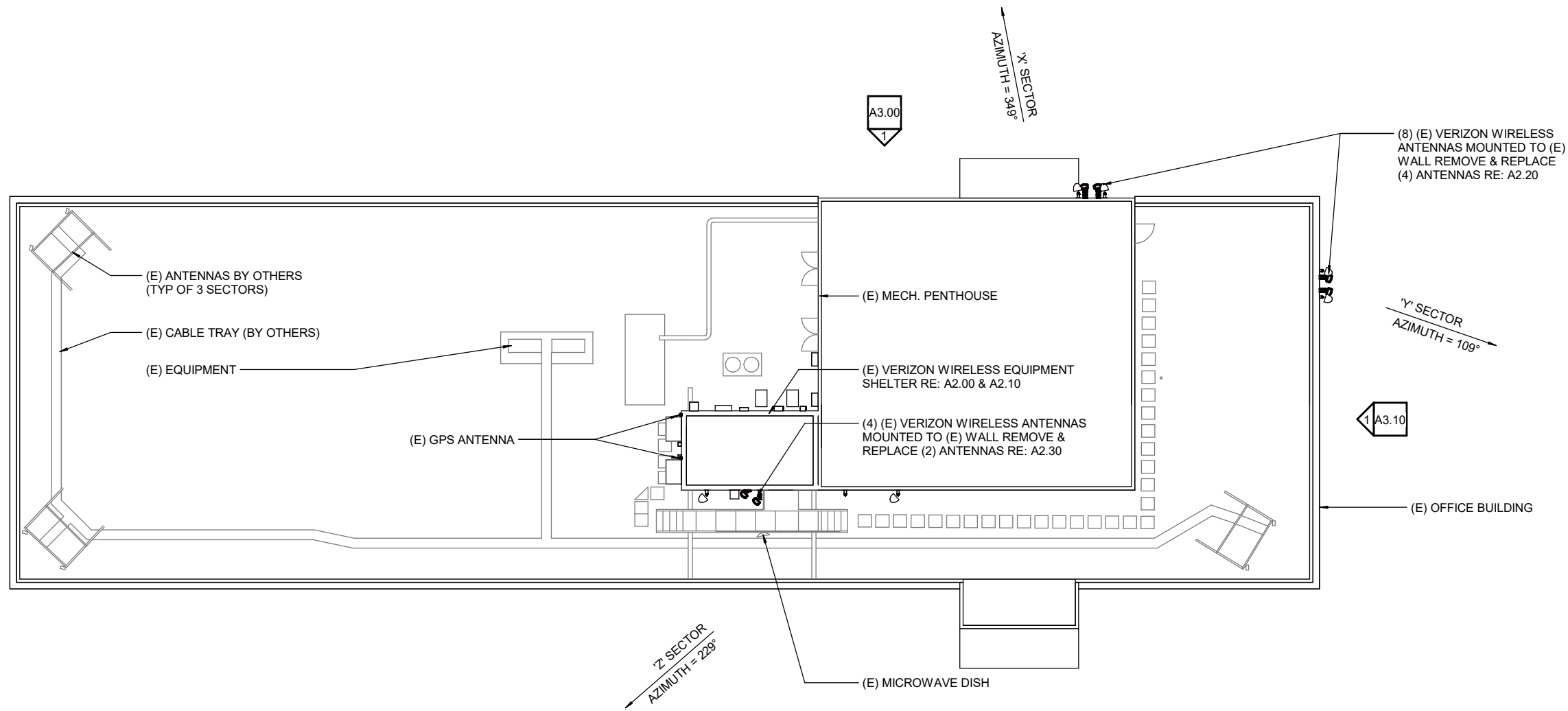
1" = 20'-0"

		RACK OVP @ EQUIPMENT SHELTER TO MAIN OVP @ ANTENNAS				MAIN OVP TO RRH CONNECTION			
SECTOR	QTY.	LENGTH	QTY.	TOTAL WEIGHT	QTY.	LENGTH	QTY.	QTY.	QTY.
X	N/A	N/A	N/A	N/A	N/A	14'-0"	(1)	(1)	(1)
Y	N/A	N/A	N/A	N/A	N/A	14'-0"	(1)	(1)	(1)
Z	N/A	N/A	N/A	N/A	N/A	14'-0"	(1)	(1)	(1)

NOTES:
1. RE: A2.20 & A2.30 FOR ANTENNA CONFIGURATION AND RRH AND MAIN OVP LOCATIONS
2. ADD NEW DC UPCONVERTER FOR 'X' & 'Y' SECTORS



2 - HYBRID CABLE DIAGRAM



1 - SITE PLAN

PENETRATIONS
 ANTENNAS
 LEASE AREA
 EXISTING EASEMENT
 ACCESS/UTILITY EASEMENT
 GEN. CONST./UTILITY EASEMENT
 OVP/ELEC. EQ.
 POWER/GROUNDING
 MW/FIBER EQ.
 FIBER
 BB/RRH
 HYBRID & COAX CABLES

A	02/21/19	CD REVIEW	JT
0	05/16/19	CD ISSUE	JT

1st REVIEW GOB 2nd REVIEW MKC



5935 SOUTH ZANG STREET, SUITE 280
LITTLETON, COLORADO 80127
OFFICE: 303.932.9974

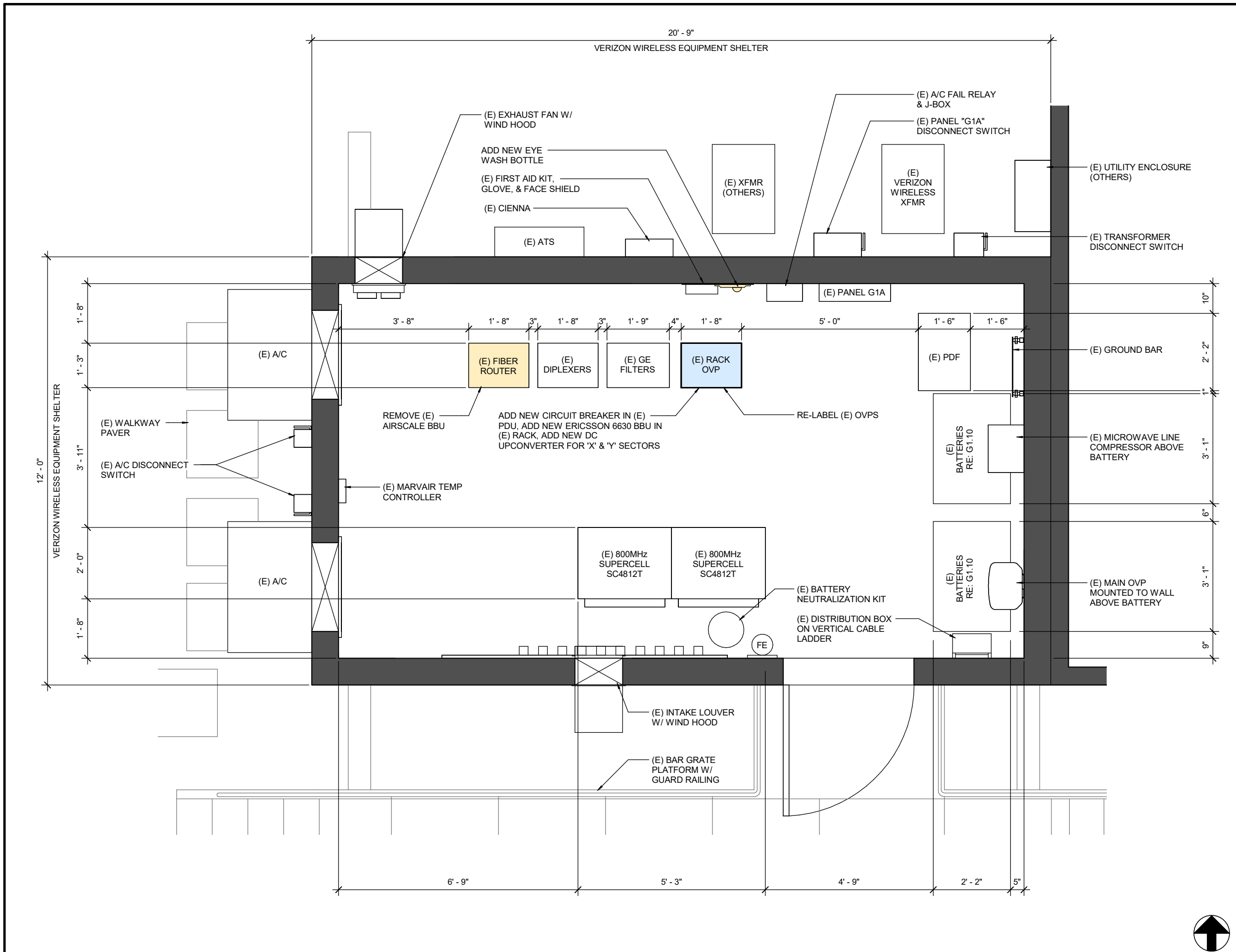


EQUIPMENT SHELTER
FLOOR PLAN

A2.00



3/8" = 1'-0"



LEGEND:

- BBU/RRH HYBRID & COAX CABLES
- MW/FIBER EQ.
- FIBER
- OVP/ELEC. EQ. POWER/GROUNDING
- ACCESS/UTILITY EASEMENT GEN. CONST. UTILITY EASEMENT
- LEASE AREA EXISTING EASEMENT
- ANTENNAS
- PENETRATIONS

1 - EQUIPMENT SHELTER FLOOR PLAN

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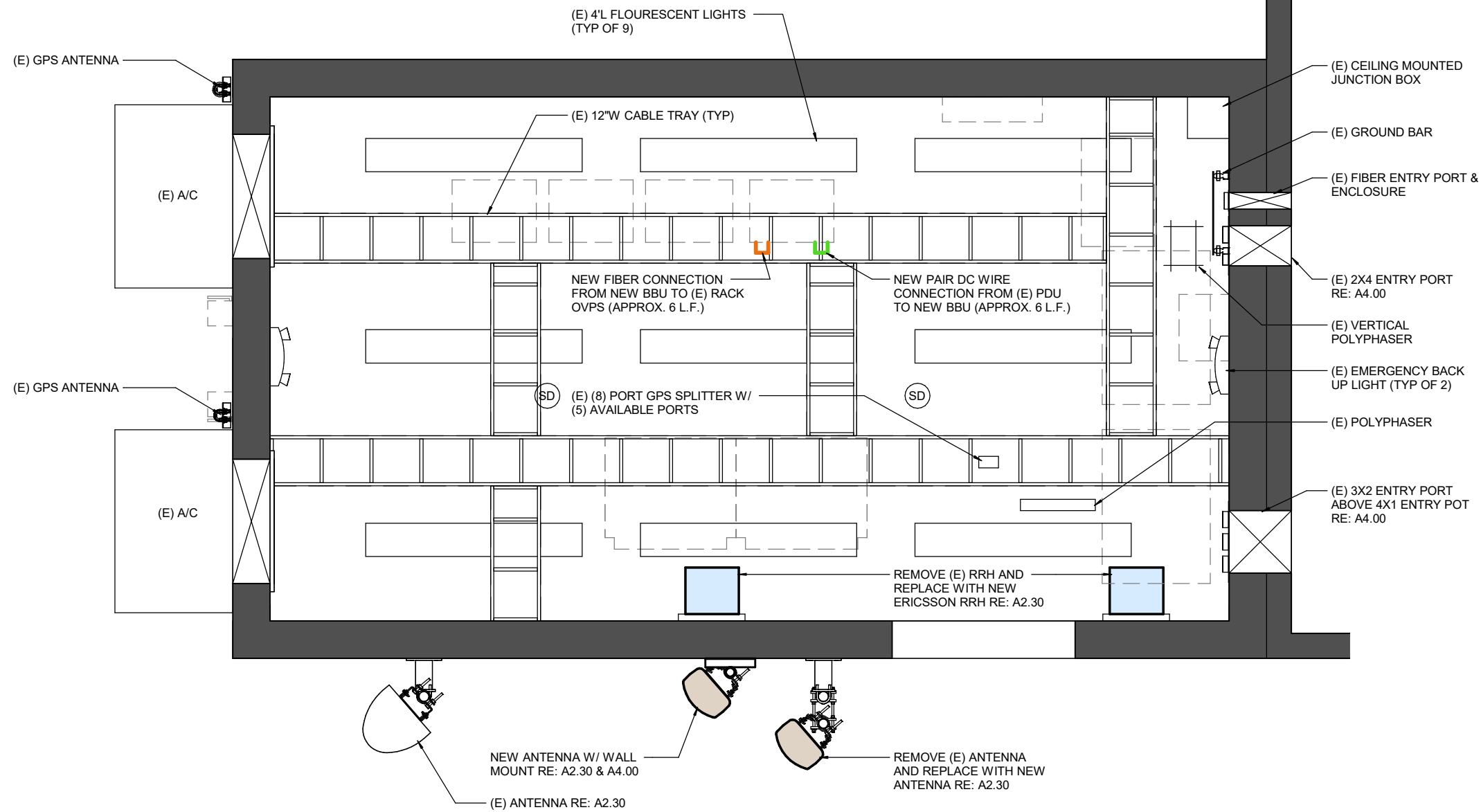
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**EQUIPMENT SHELTER
RCP**

A2.10

- BBU/RRH HYBRID & COAX CABLES
- MW/FIBER EQ. FIBER
- OV/IELEC. EQ. POWER/GROUNDING
- ACCESS/UTILITY EASEMENT GEN. CONST. UTILITY EASEMENT
- LEASE AREA EXISTING EASEMENT
- ANTENNAS
- PENETRATIONS



NOTE:
EXHAUST FAN TO RUN CONTINUOUSLY.
UPON FAN FAILURE OR LOSS OF POWER,
GENERATE ALARM TO ANNUNCIATE TO
VERIZON N.O.C.



1 - EQUIPMENT SHELTER REFLECTED CEILING PLAN

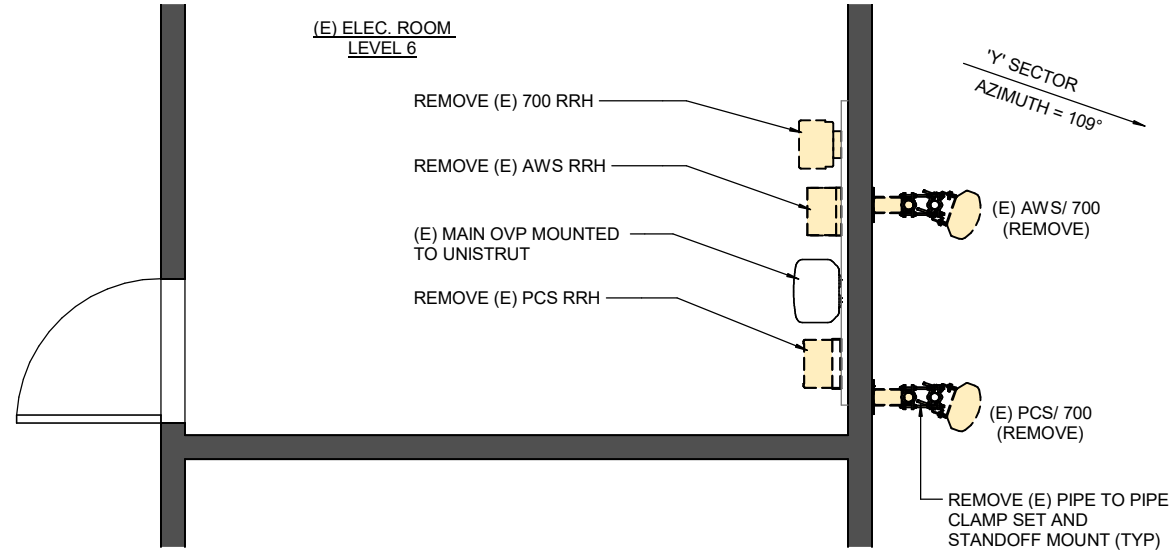
3/8" = 1'-0"

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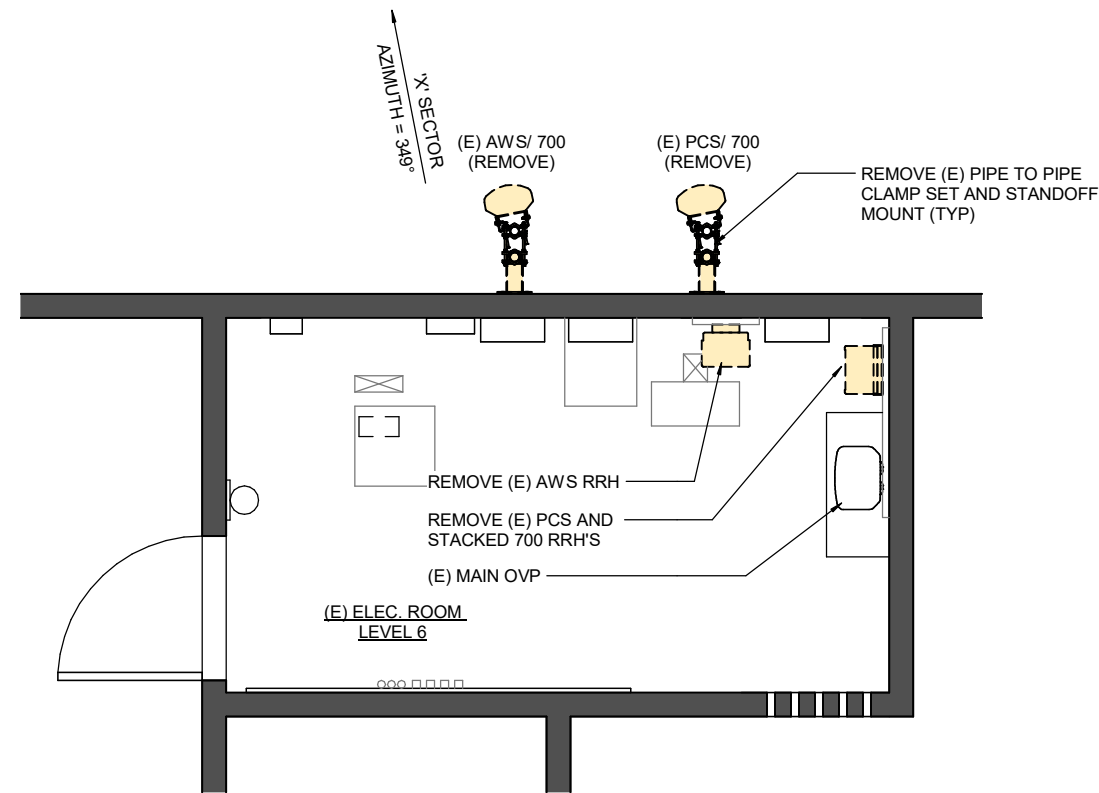


PENETRATIONS
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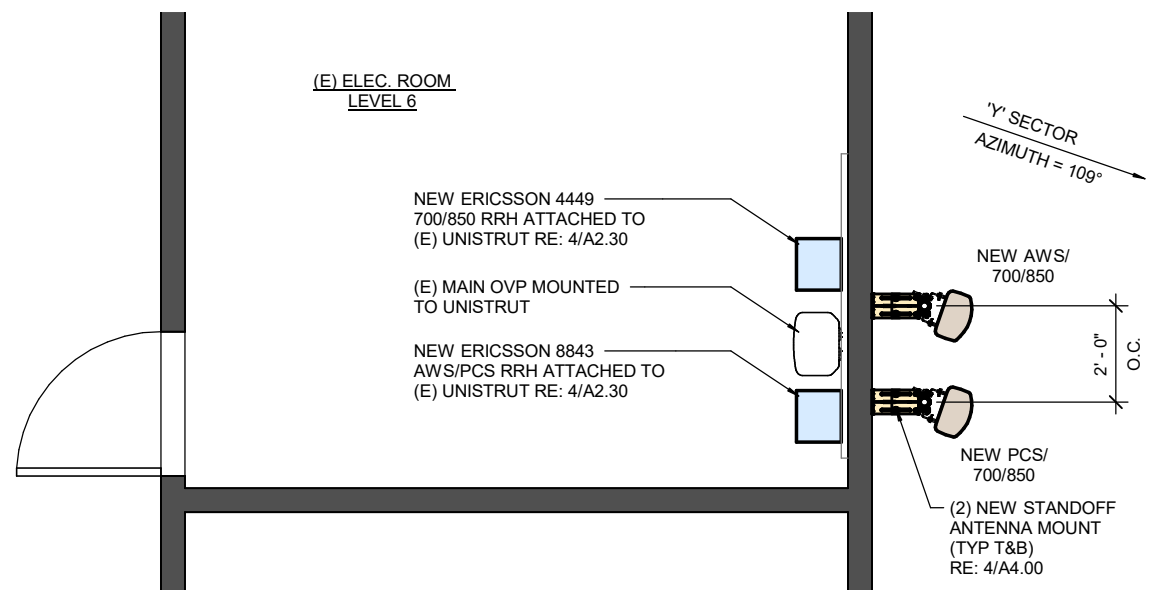
4 - 'Y' SECTOR DEMO ANTENNA PLAN

1/4" = 1'-0"



2 - 'X' SECTOR DEMO ANTENNA PLAN

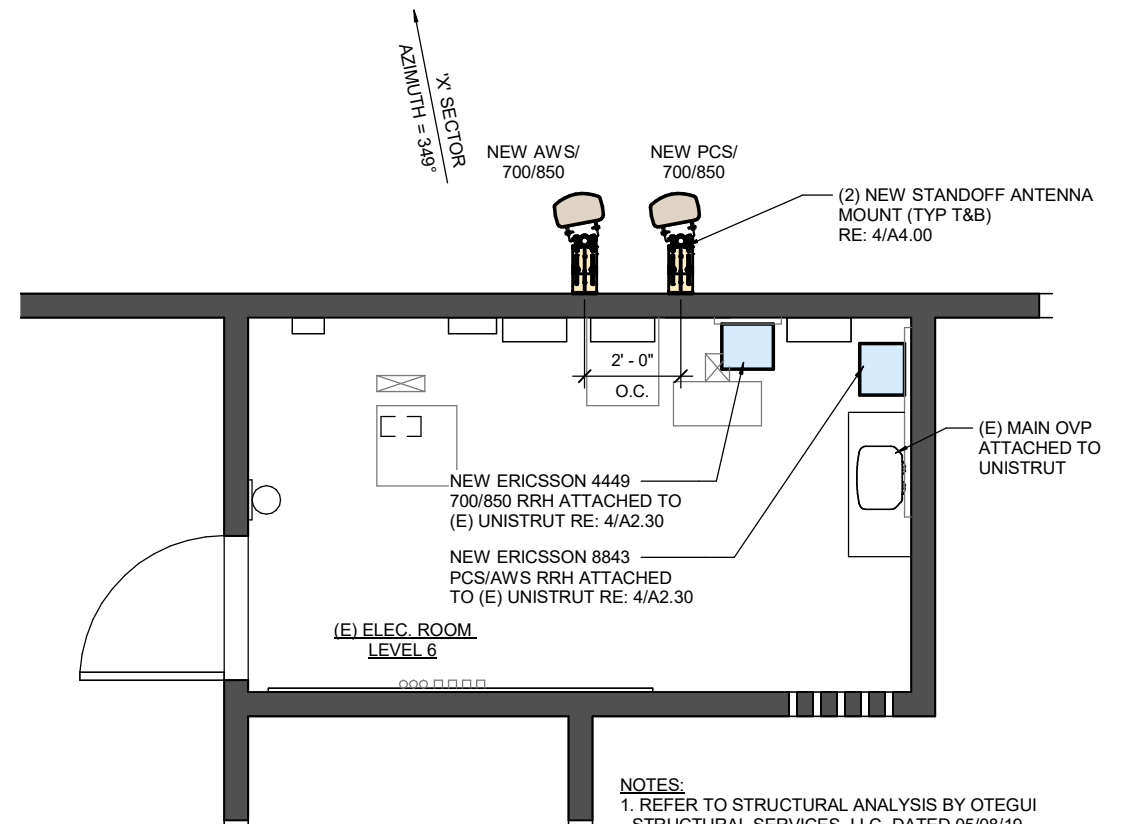
1/4" = 1'-0"



3 - 'Y' SECTOR NEW ANTENNA PLAN

1/4" = 1'-0"

NOTES:
1. REFER TO STRUCTURAL ANALYSIS BY OTEGUI STRUCTURAL SERVICES, LLC, DATED 05/08/19.
2. (2) UNCHANGED CELL ANTENNAS (ABOVE) NOT SHOWN FOR CLARITY RE: A3.00 & A3.10



1 - 'X' SECTOR NEW ANTENNA PLAN

1/4" = 1'-0"

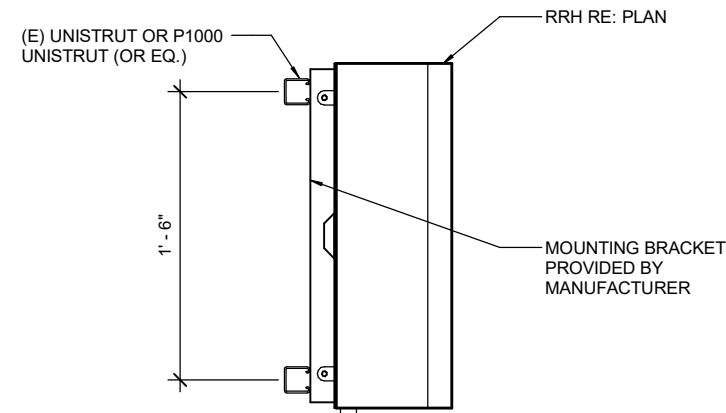
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 HYBRID & COAX CABLES



- NOTES:**
1. GROUND RRH PER VERIZON WIRELESS SPECIFICATIONS RE: A6.00
 2. OTHER RRH MOUNTING SIMILAR

4 - RRH MOUNTING DETAIL

1" = 1'-0"

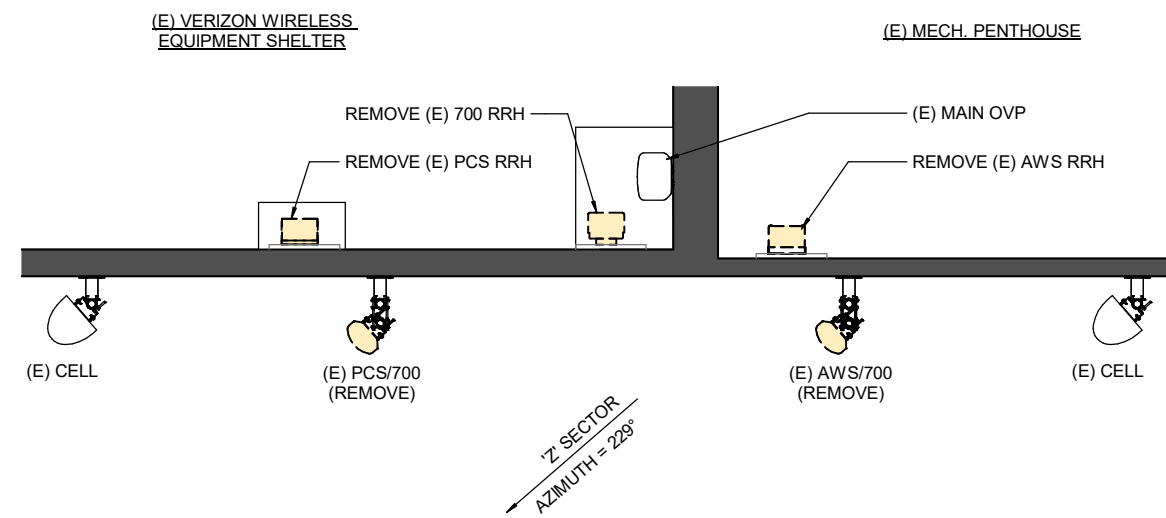
1. GENERAL:
PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR RECEIVING, INSTALLING, TESTING AND ADJUSTING ANTENNA CABLES FROM THE ANTENNA TO THE CONNECTORS AT THE BASE TRANSMISSION SYSTEM (BTS). THIS SHALL INCLUDE ALL EQUIPMENT SHOWN OR REQUIRED FOR A COMPLETE OPERATING SYSTEM. ANTENNA, ANTENNA CABLES, CONNECTORS, AND FITTINGS SHALL BE THIRD PARTY FURNISHED COMPONENTS AS SHOWN ON THE BILL OF MATERIALS.
2. MATERIALS:
A. RE: HYBRID CABLE DIAGRAM FOR ADDITIONAL INFORMATION
B. CABLE HANGERS: INSTALLED AT MAXIMUM 4' SPACING
C. GROUND EQUIPMENT PER VERIZON WIRELESS SPECS
3. INSTALLATION:
A. ANTENNA CABLE LENGTHS SHALL BE FIELD MEASURED PRIOR TO PURCHASE OF CABLE. INSTALLER SHALL NOTIFY VERIZON WIRELESS OF THE OVERALL LENGTH REQUIRED.
B. CABLES SHALL BE LABELED IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS.
C. ALL OUTSIDE CABLE CONNECTIONS SHALL BE COVERED WITH WEATHERPROOFING TAPE.
D. THE MINIMUM BENDING RADIUS FOR ALL ANTENNA CABLES SHALL BE AS SHOWN BELOW OR AS PER THE MANUFACTURER, WHICHEVER IS MORE CONSERVATIVE:

ANTENNAS CABLE	IN AIR/ CABLE TRAY	IN CONDUIT
1/2"	5"	10"
7/8"	10"	18"
1 5/8"	20"	28"
1X1 HYBRID	5"	10"
6X12 HYBRID	12"	16"
MW CABLE ELLIPTICAL WAVEGUIDE	WITHOUT REBENDING 6" E PLAN 13" H PLAN	WITH REBENDING 7" E PLAN 19" H PLAN

E. CABLES SHALL BE INSTALLED WITH THE MINIMUM NUMBER OF BENDS. CABLES SHALL NOT BE LEFT UNTERMINATED IN THE FIELD.

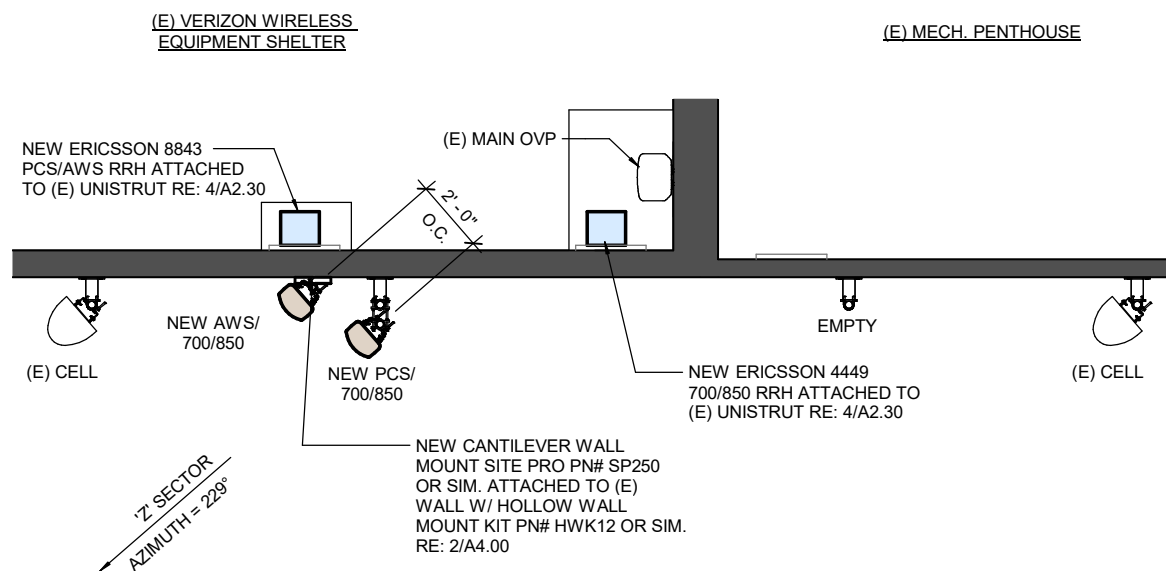
F. GROUNDING KITS - AFTER INSTALLATION OF GROUND STRAPS, THE CONNECTION SHALL BE MADE WEATHER TIGHT USING WEATHERPROOFING KITS AS IDENTIFIED ABOVE. GROUND PIGTAILS SHALL BE BROUGHT OUT IN THE DOWNWARD DIRECTION FROM THE CONNECTIONS TO THE ANTENNA CABLE WITHOUT ANY SHARP BENDS (MINIMUM BEND RADIUS 10") AND CONNECTION SHALL BE MADE TO GROUNDING SYSTEM

3 - ANTENNA NOTES



2 - 'Z' SECTOR DEMO ANTENNA PLAN

3/16" = 1'-0"



1 - 'Z' SECTOR NEW ANTENNA PLAN

3/16" = 1'-0"

- NOTES:**
- REFER TO STRUCTURAL ANALYSIS BY OTEGUI STRUCTURAL SERVICES, LLC, DATED 05/08/19.



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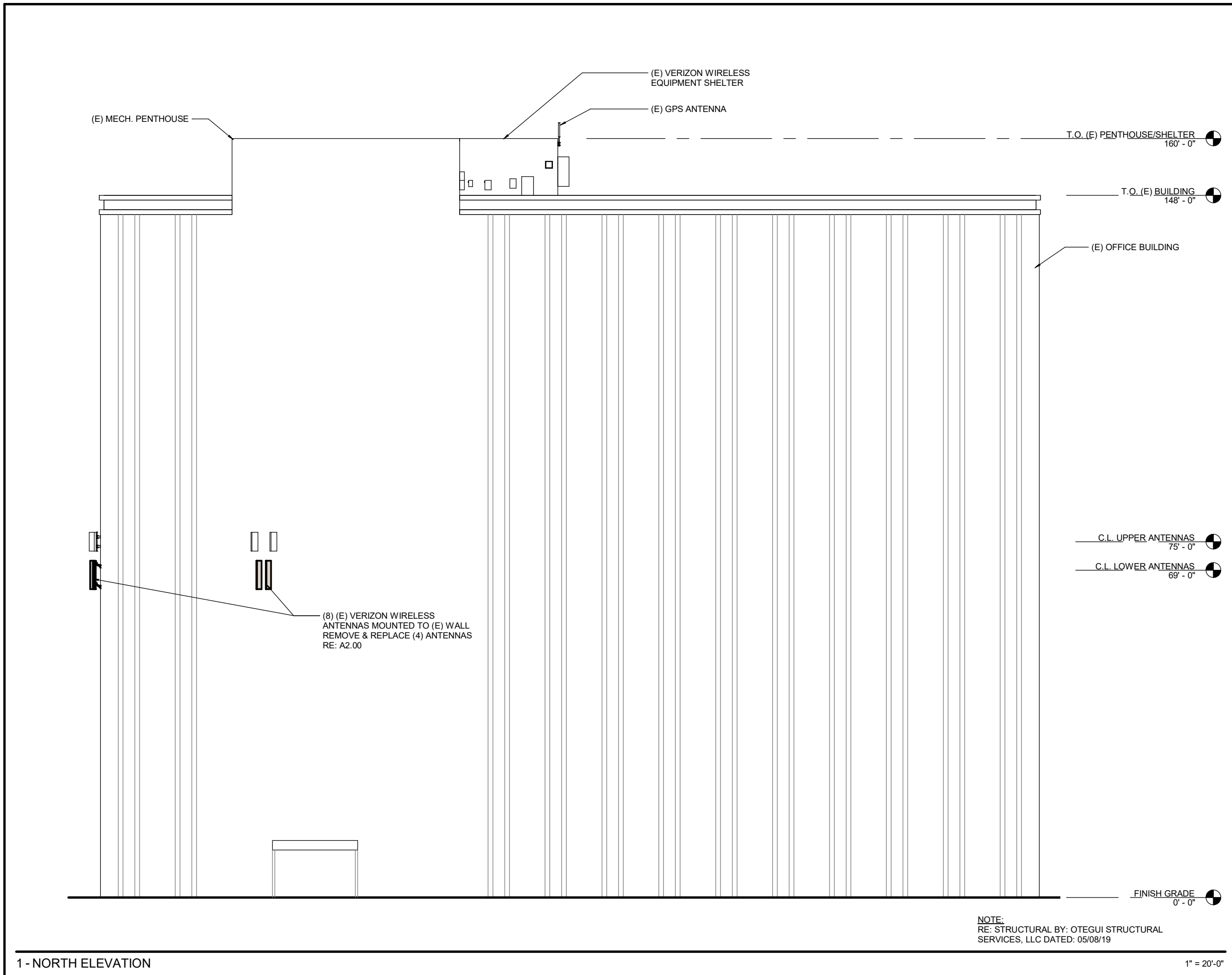
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NORTH ELEVATION

A3.00

- BBU/RRH HYBRID & COAX CABLES
- MW/FIBER EQ. FIBER
- OV/PELEC. EQ. POWER/GROUNDING
- ACCESS/UTILITY EASEMENT GEN. CONST./UTILITY EASEMENT
- LEASE AREA EXISTING EASEMENT
- ANTENNAS
- PENETRATIONS



NOTE:
RE: STRUCTURAL BY: OTEGUI STRUCTURAL SERVICES, LLC DATED: 05/08/19

1 - NORTH ELEVATION

1" = 20'-0"

A	02/21/19	CD REVIEW	JT
0	05/16/19	CD ISSUE	JT

1st REVIEW GOB 2nd REVIEW MKC



5935 SOUTH ZANG STREET, SUITE 280
LITTLETON, COLORADO 80127
OFFICE: 303.932.9974



EAST ELEVATION

A3.10

- BBU/RRH HYBRID & COAX CABLES
- MW/FIBER EQ. FIBER
- OV/PELEC. EQ. POWER/GROUNDING
- ACCESS/UTILITY EASEMENT GEN. CONST./UTILITY EASEMENT
- LEASE AREA EXISTING EASEMENT
- ANTENNAS
- PENETRATIONS

(4) (E) VERIZON WIRELESS ANTENNAS MOUNTED TO (E) WALL REMOVE & REPLACE (2) ANTENNAS RE: A2.10

(E) MECH. PENTHOUSE

T.O. (E) PENTHOUSE/SHELTER 160' - 0"

C.L. PENTHOUSE ANTENNAS 156' - 0"

T.O. (E) BUILDING 148' - 0"

(E) OFFICE BUILDING

(8) (E) VERIZON WIRELESS ANTENNAS MOUNTED TO (E) WALL REMOVE & REPLACE (4) ANTENNAS RE: A2.00

C.L. UPPER ANTENNAS 75' - 0"

C.L. LOWER ANTENNAS 69' - 0"

FINISH GRADE 0' - 0"

NOTE:
RE: STRUCTURAL BY: OTEGUI STRUCTURAL SERVICES, LLC DATED: 05/08/19

A	02/21/19	CD REVIEW	JT
0	05/16/19	CD ISSUE	JT

1st REVIEW GOB 2nd REVIEW MKC

CHARLES STECKLY

ARCHITECTURE

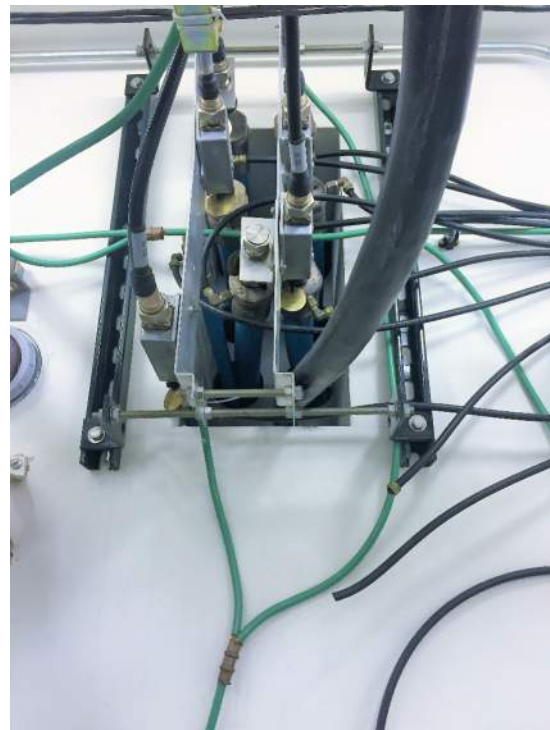
5935 SOUTH ZANG STREET, SUITE 280
LITTLETON, COLORADO 80127
OFFICE: 303.932.9974



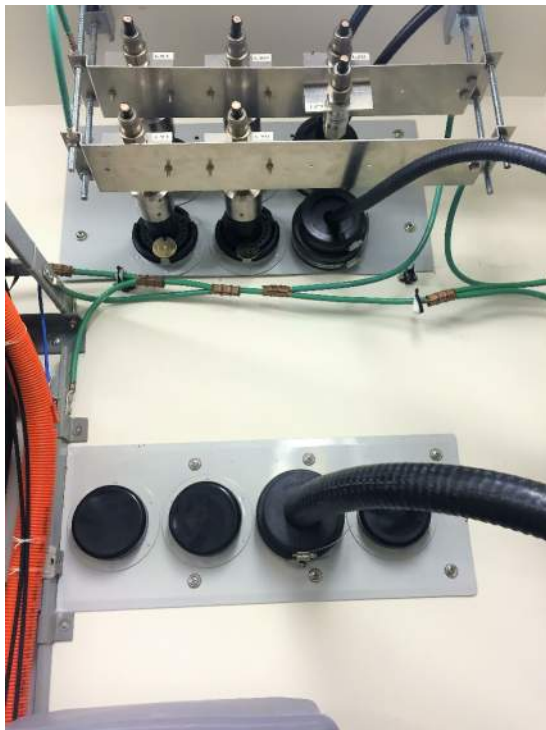
DETAILS

A4.00

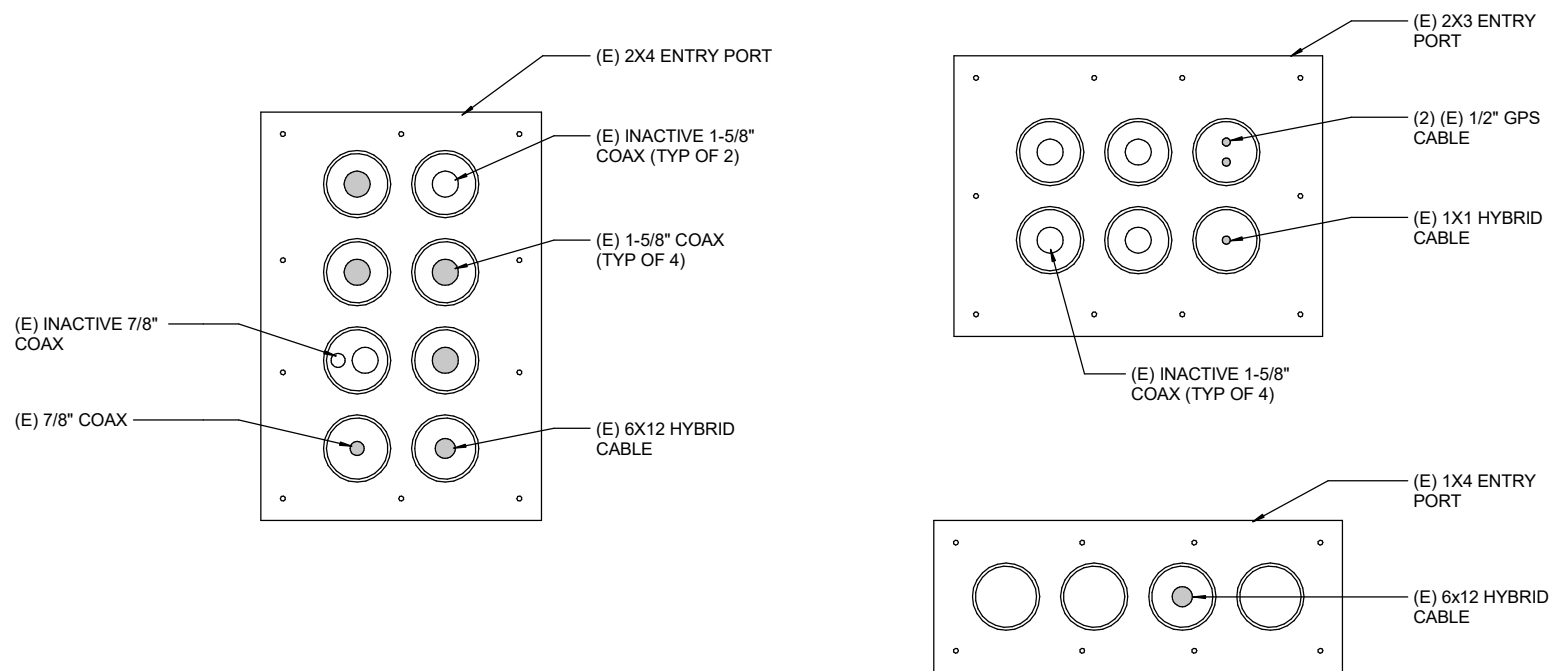
- LEASE AREA
- EXISTING EASEMENT
- ACCESS/UTILITY EASEMENT
- GEN. CONST./UTILITY EASEMENT
- OV/PELEC. EQ. POWER/GROUNDING
- MW/FIBER EQ. FIBER
- BBU/RRH HYBRID & COAX CABLES
- ANTENNAS
- PENETRATIONS



INTERIOR VIEW



INTERIOR VIEW

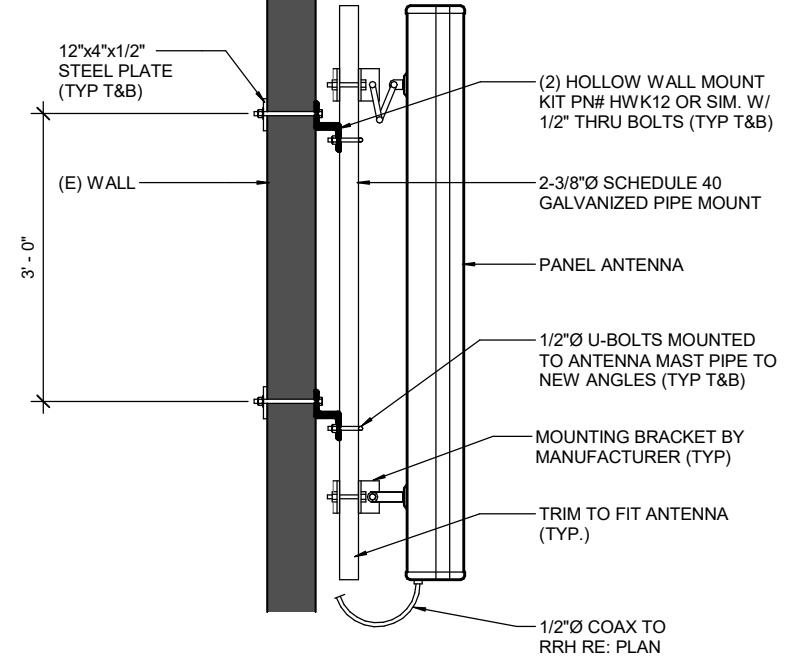


NOTE:
G.C. TO REMOVE UNUSED COAX



3 - COAX ENTRY PORT DETAIL

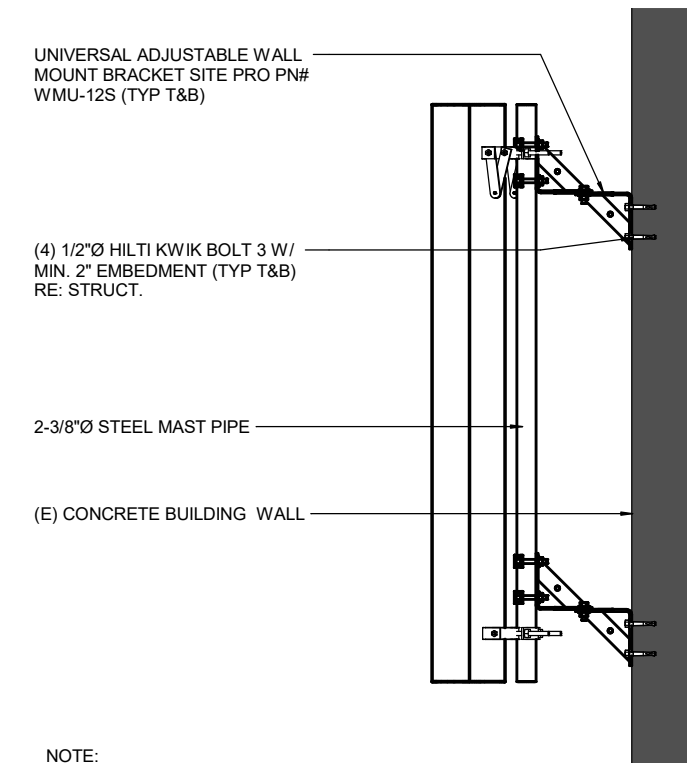
1" = 1'-0"



NOTE:
REFER TO ANTENNA MANUFACTURER SPEC FOR QUANTITY OF MOUNTING BRACKETS REQUIRED.

2 - ANTENNA MOUNTING DETAIL

1/2" = 1'-0"



NOTE:
REFER TO SHEET A2.20 FOR ANTENNA LOCATION

1 - NEW STANDOFF MOUNT ANTENNA DETAIL

1/2" = 1'-0"

PROPERTY DESCRIPTION:

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 28 IN TOWNSHIP 14 SOUTH, RANGE 66 WEST OF THE 6TH P.M., IN THE CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 28, THENCE N 00 DEGREES 28 MINUTES 30 SECONDS W 84.00 FEET ON THE WEST LINE OF SAID SOUTHWEST QUARTER, THENCE N 89 DEGREES 31 MINUTES 30 SECONDS E 20.00 FEET TO INTERSECT THE EAST RIGHT-OF-WAY LINE OF JANITELL ROAD AND THE POINT OF BEGINNING OF THE TRACT HEREBY DESCRIBED, THENCE S 87 DEGREES 20 MINUTES 30 SECONDS E 137.30 FEET; THENCE S 80 DEGREES 28 MINUTES 00 SECONDS E 208.80 FEET, THENCE N 01 DEGREES 23 MINUTES 30 SECONDS E 750.00 FEET, THENCE S 89 DEGREES 31 MINUTES 30 SECONDS W 80.714 FEET TO INTERSECT THE EAST RIGHT-OF-WAY LINE OF SAID JANITELL ROAD, THENCE S 00 DEGREES 28 MINUTES 30 SECONDS E 565.80 FEET ON SAID RIGHT-OF-WAY LINE; THENCE N 89 DEGREES 31 MINUTES 30 SECONDS E 100.00 FEET; THENCE S 00 DEGREES 28 MINUTES 30 SECONDS E 100.00 FEET; THENCE S 89 DEGREES 31 MINUTES 30 SECONDS W 100.00 FEET TO INTERSECT THE EAST RIGHT-OF-WAY LINE OF SAID JANITELL ROAD, THENCE S 00 DEGREES 28 MINUTES 30 SECONDS E 40.00 FEET ON THE EAST RIGHT-OF-WAY LINE OF SAID JANITELL ROAD TO THE POINT OF BEGINNING.

NOTES:

1. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY CLARK LAND SURVEYING, INC. TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD. TITLE REPORT WAS PROVIDED BY LAND TITLE GUARANTEE COMPANY WITH AN ORDER NO. SC55016927, DATED 03-06-2007. THIS IS NOT A BOUNDARY SURVEY. OBSERVATIONS ARE TIED TO NGS CONTROL.
2. ALL BEARINGS ARE RELATIVE TO GEODETIC NORTH BASED ON GPS OBSERVATIONS ON WGS 84 DATUM.
3. ELEVATIONS ARE BASED ON NAVD 83 DATUM.
4. FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 080410741 F, EFFECTIVE DATE MARCH 17, 1997, INDICATES THE AREA IN THE VICINITY OF THIS PARCEL OF LAND TO BE A ZONE X (AREA DETERMINED TO BE OUTSIDE THE 500 YEAR FLOODPLAIN).

SURVEYOR'S STATEMENT:

ON THE BASIS OF MY KNOWLEDGE, INFORMATION AND BELIEF, I HEREBY STATE AND DECLARE THAT THIS DRAWING WAS PREPARED UNDER MY DIRECT SUPERVISION AND THAT THE INFORMATION SHOWN HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

W. RUSSELL CLARK
COLORADO PROFESSIONAL LAND SURVEYOR NO. 31548
FOR AND ON BEHALF OF CLARK LAND SURVEYING, INC.

VERIZON WIRELESS PROJECT

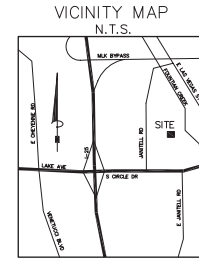
SITE NAME: CSP-US24 BYPASS
SITE LOCATION: 2864 SOUTH CIRCLE DRIVE
COLORADO SPRINGS, EL PASO COUNTY, COLORADO

CELL TOWER INFORMATION BINDER LTC POLICY NO. LTAQ55016927

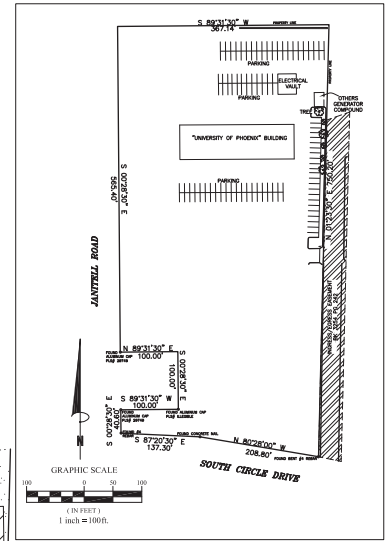
- ITEM:
1. EASEMENT FOR ELECTRIC SERVICE LINES AS GRANTED TO CITY OF COLORADO SPRINGS BY INSTRUMENT RECORDED JULY 27, 1974 IN BOOK 2608 AT PAGE 471, THE EXACT LOCATION OF SAID EASEMENT NOT BEING SPECIFICALLY DEFINED.
 2. EASEMENT FOR ELECTRIC SERVICE LINES AS GRANTED TO CITY OF COLORADO SPRINGS BY INSTRUMENT RECORDED NOVEMBER 19, 1973, BOOK 2637 AT PAGE 656, THE EXACT LOCATION OF SAID EASEMENT NOT BEING SPECIFICALLY DEFINED.
 3. NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS AS SET FORTH IN DEED RECORDED NOVEMBER 21, 1979 IN BOOK 3254 AT PAGE 242, AND RECORDED NOVEMBER 13, 1979 IN BOOK 3251 AT PAGE 860. AFFECTS PARENT PARCEL AND IS PLOTTED HEREON.
 4. EASEMENT AND RESERVATION AS SET FORTH IN WARRANTY DEED RECORDED JULY 17, 1979 IN BOOK 3202 AT PAGE 341, AS FOLLOWS: RESERVING TO THE GRANTEE WATER WELLS LOCATED ON THE ABOVE PROPERTY AND

WATER RIGHTS APPURTENANT THERETO, TOGETHER WITH EASEMENTS TO BE DETERMINED TO TRANSPORT WATER FROM SAID WELLS TO ADJOINING PROPERTIES, EASEMENTS TO BE CONVEYED TO GARDEN VALLEY WATER AND SANITATION DISTRICT; AFFECTS PARENT PARCEL AND IS BLANKET IN NATURE.

ITEMS NOT LISTED IN AFFECTS OF LAND HAVE BEEN DETERMINED NON-SURVEY RELATED ITEMS AND ARE NOT PLOTTED HEREON.

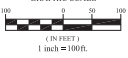
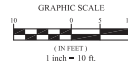
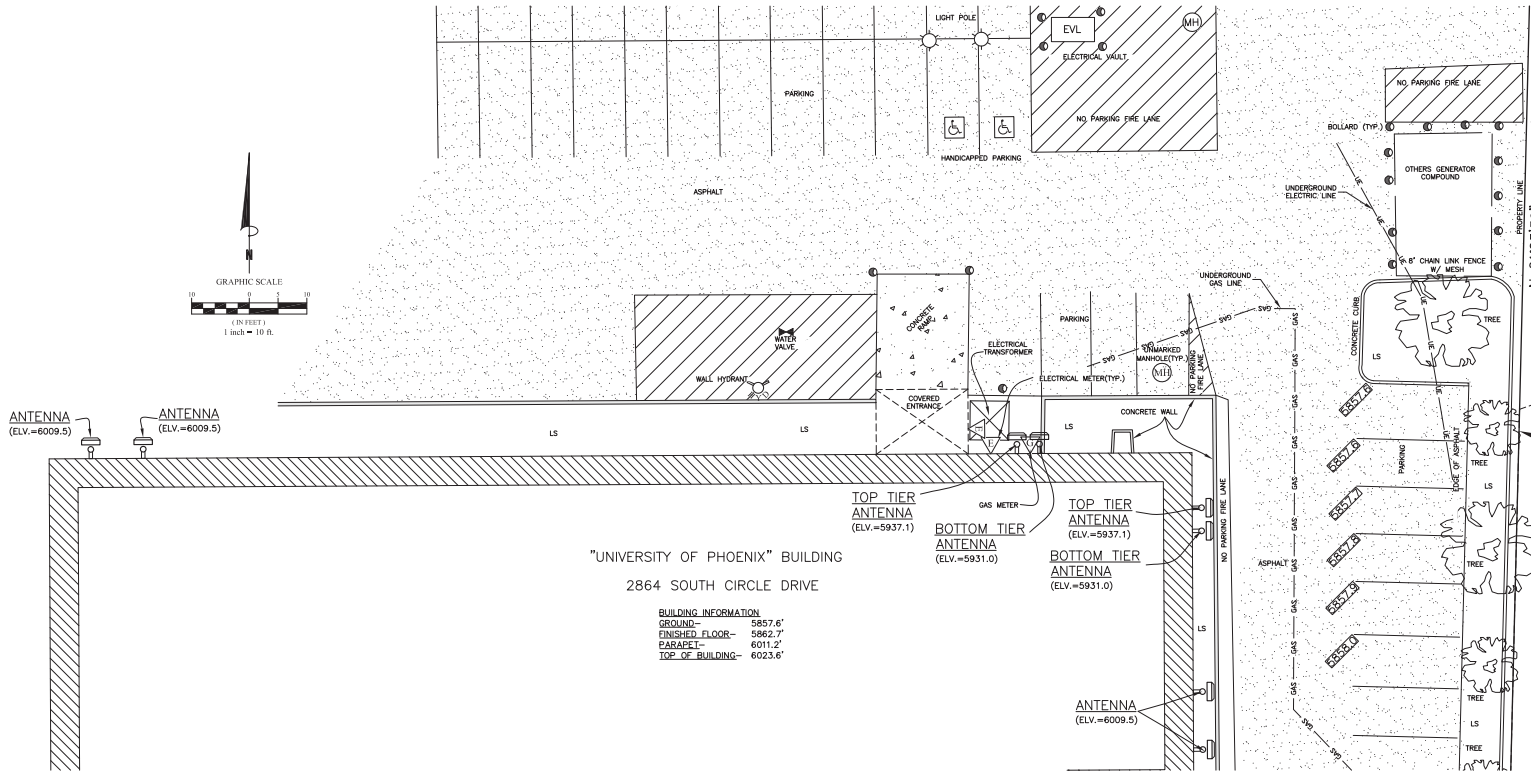


ENLARGED EXHIBIT



DETAILED EXHIBIT

NOTE: NO WATERLINE MARKINGS WERE PRESENT AT THE TIME OF SURVEY.



Clark Land Surveying, Inc.
Boundary - GPS Mapping
119 North Wabasha Avenue
Colorado Springs, CO 80903
719.623.8533 FAX 719.633.8922

REVISIONS			
No.	Description	By	Date
1	ADDED UNDERGROUND UTILITIES	AIN	9.25.2007

Notice: According to Colorado law, you must commence any legal action based upon any defect in this survey within three years after the first discovery and defect. In no event may any action based upon any defect in this survey be commenced more than five years from the date of the certification shown herein.

Clark Land Surveying, Inc. (CLS) limits the certification shown herein to the following:
• Observations and measurements only.
• Information applicable to land survey related matters only. CLS is not liable for this certification any matters that are beyond the professional land surveyor's competence, training or education.
• Records provided to CLS and those obtained by CLS from county zoning records only.
• Apparent observable encroachments as shown hereon. CLS excludes possession determinations.
• Flood information is derived from the Federal Emergency Mapping agency maps.

Certification defined: For the Rules and Rules of the Colorado State Board of Examiners for Professional Engineers and Professional Land Surveyors, Certification is defined as an assurance that includes the following:
• (a) the signed and sealed by a professional land surveyor representing that the surveying services performed hereon have been performed by the professional land surveyor or under the professional land surveyor's responsible charge.
• (b) based upon the professional land surveyor's knowledge, information and belief.
• (c) in accordance with applicable standards of practice.
• (d) not a warranty, either expressed or implied.

VERIZON WIRELESS PROJECT
SITE NAME: CSP-US24 BYPASS
SITE LOCATION: 2864 SOUTH CIRCLE DRIVE

Project No. CSP-US 24	Drawn By: DJT	Date: 4.6.2007
	Checked By: WRC	Sheet: 1 of 1

A	02/21/19	CD REVIEW	JT
0	05/16/19	CD ISSUE	JT

1st REVIEW GOB 2nd REVIEW MKC



5935 SOUTH ZANG STREET, SUITE 280
LITTLETON, COLORADO 80127
OFFICE: 303.932.9974



GROUNDING SCHEMATIC

A6.00

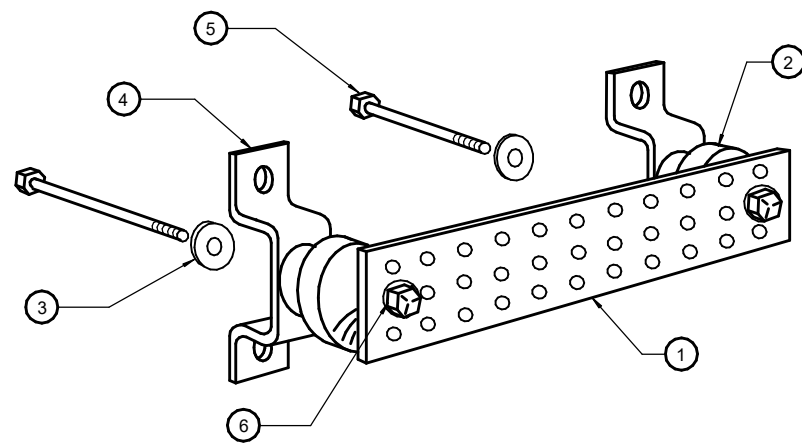
PENETRATIONS
 ANTENNAS
 EXISTING EASEMENT
 LEASE AREA
 ACCESS/UTILITY EASEMENT
 GEN. CONST. UTILITY EASEMENT
 POWER/GROUNDING
 MV/FIBER EQ.
 FIBER
 BB/RRH
 HYBRID & COAX CABLES

GROUNDING NOTES

- REFER TO VERIZON WIRELESS GROUNDING SPECIFICATIONS FOR ALL GROUNDING REQUIREMENTS.
- BOND AND GROUND ANY PROPOSED STRUCTURAL STEEL, CONCRETE REINFORCING AND OTHER METALLIC BUILDING ELEMENTS, REFER TO VERIZON WIRELESS SPECIFICATIONS FOR EXACT REQUIREMENTS.
- THE ELECTRICAL CONTRACTOR SHALL PERFORM ALL BONDING AND GROUNDING TO THE SITE'S OUTER GROUNDING SYSTEM DURING THE CONSTRUCTION PHASE OF THE BUILDING.
- CONTRACTOR IS TO CONDUCT FREQUENT INSPECTIONS DURING THE CONSTRUCTION PHASE TO ENSURE THAT ALL GROUNDING ARRANGEMENTS ARE MADE ACCORDING TO THE GROUNDING DESIGN SPECIFICATIONS.
- DO NOT RETROFIT (OR UPGRADE) ESTABLISHED SITES THAT DO NOT MEET ALL THE REQUIREMENTS OF VERIZON WIRELESS GROUNDING STANDARD UNLESS THERE ARE DOCUMENTED OCCURRENCES OF EQUIPMENT DAMAGES AND/OR SERVICE AFFECTING CONDITIONS.
- USE ONLY VERIZON WIRELESS-APPROVED MATERIALS SUCH AS COPPER FOR MOST ELECTRICAL WORK AND ALUMINUM FOR CERTAIN APPLICATIONS FOR SITE GROUNDING SYSTEM, ELECTRICAL PROTECTION COMPONENTS AND AC WIRING.
- USE THE SAME METAL THROUGHOUT THE GROUND SYSTEM WHEN POSSIBLE.
- IF DIFFERENT METALS MUST BE CONNECTED, BOND THEM BY EXOTHERMICALLY WELDING THEM TOGETHER.
- USE TINNED COPPER WHEN CONNECTING TO GALVANIZED STEEL.
- DO NOT BOND COPPER AND ALUMINUM TOGETHER UNLESS USING SPECIFICALLY DESIGNED EXOTHERMIC MATERIALS DESIGNED FOR THIS APPLICATION ARE USED OR A BIMETALLIC TRANSITIONAL CONNECTION IS UTILIZED.
- MAKE ALL BONDING ATTACHMENTS TO CLEAN, UNPAINTED METAL SURFACES OR USE APPROVED PAINT PIERCING WASHERS.
- PAINTED SURFACES MUST BE SCRAPPED, CLEANED, AND LIGHTLY COATED WITH THE APPLICABLE COMPOUND.
- ALL INDOOR OR OUTDOOR POWER OR GROUNDING CONNECTIONS SHALL BE PROTECTED AGAINST CORROSION BY USE OF A THIN COATING OF ANTI-OXIDATION COMPOUND. A COPPER COSMOLINE GREASE BASED COMPOUND (NO OX-ID) SHALL BE USED ON ALL COPPER TO COPPER CONNECTIONS. A ZINC BASED (GREY COLORED) COMPOUND SHALL BE USED ON ALL COPPER TO STEEL CONNECTIONS. WHERE OTHER COMPOUNDS SUCH AS KOPPER-SHIELD ETC EXIST, THEY MAY BE 'GRANDFATHERED' IN PLACE. PENTROX GREASE OR AN APPROVED EQUAL SHALL BE USED ON ALUMINUM CONNECTIONS.
- DO NOT WELD GROUNDING CONDUCTORS TO THE STRUCTURAL MEMBERS OF TOWERS, INCLUDING DOWN GUYS AND ANCHOR RODS.
- BOND ALL METALLIC OBJECTS (SUCH AS WATER PIPES, CONDUITS, METAL FUEL TANKS WITHOUT CATHODIC PROTECTION, METAL FENCES, HVAC, ETC.) THAT ARE WITHIN 6 FEET (1.8 M) OF THE GROUND RING, OR FROM ANY OTHER GROUNDED CONDUCTOR, TO GROUND RING OR TO THE GROUNDED CONDUCTOR. HARDWARE
- ALL OUTDOOR HARDWARE (BOLTS, SCREWS, NUTS, WASHERS) SHALL BE 18-8 STAINLESS STEEL TYPE GRADE. INDOORS, GRADE 5 STEEL HARDWARE MAY BE USED. CHOOSE BOLT LENGTH TO ALLOW THE EXPOSURE OF AT LEAST TWO THREADS.
- WHEN BONDING TO A METALLIC OBJECT WHERE ACCESS IS LIMITED TO ONLY ONE SURFACE, USE DRILLING & TAPPING OR SELF DRILLING SCREWS. DO NOT USE SHEET METAL SCREWS.
- ALL GROUNDING CONDUCTORS SHOULD PRESERVE A DOWNWARD TO HORIZONTAL COURSE AND BE AS STRAIGHT AS POSSIBLE AND AVOID SHARP TURNS.
- DO NOT USE U-SHAPED GROUNDING CONDUCTOR RUNS (U-TURNS IN THE WIRING) OR BONDING LAYOUTS TO REDUCE ARC-OVERS
- ALL GROUNDING CONDUCTS MUST BE RUN IN NONMETALLIC CONDUIT. ROUTE ALL CONDUCTORS THROUGH NONMETALLIC SLEEVES WHEN PENETRATING FLOORS, CEILINGS, AND WALLS.
- IF THE USE OF METALLIC CONDUIT CANNOT BE AVOIDED, BOND BOTH ENDS OF THE CONDUIT TO THE GROUNDING CONDUCTOR BEING ROUTED THROUGH THE CONDUIT
- KEEP LENGTHS OF CONDUCTORS TO A MINIMUM
- USE MULTIPLE CONDUCTING PATHS. PARALLEL PATHS ARE ONLY DESIRABLE WHEN SENSITIVE ELECTRONIC EQUIPMENT IS NOT PART OF THE CONDUCTOR PATH
- KEEP BENDS IN CONDUCTORS TO A MINIMUM.
- THE MINIMUM INSIDE BENDING RADIUS IS:
 - 6 INCHES (0.15M) FOR CONDUCTORS UP TO #6 GAUGE.
 - 12 INCHES (0.3M) FOR CONDUCTORS #6 TO #4/0 GAUGE.
 - 24 INCHES (0.6M) FOR CONDUCTORS #4/0 GAUGE AND LARGER
- GROUND CONDUCTORS MUST NEVER BE ENCIRCLED WITH FERROUS METAL CLAMPS, PLACED THROUGH METAL WALLS, METAL PLATES, OR SHORT SECTIONS OF METAL CONDUIT, AND MUST NEVER BE PLACE IN THE SAME CABLE RACK AS DC POWER CABLES, HIGH FREQUENCY CABLES, ETC.
- WHEN ATTACHING PVC CONDUITS TO ANY SURFACE UTILIZE NONCONDUCTIVE FASTENERS OR NONFERROUS FASTENERS ONLY.
- IF CONNECTIONS BETWEEN ALUMINUM CONDUCTORS AND STEEL OBJECTS MUST BE MADE, TINNED LUGS AND PENTROX SHALL BE USED. WHERE THERE ARE CONCERNS THAT THE PENTROX MAY NOT PROVIDE ADEQUATE INTERFACING, THEN A BIMETAL SPLICE BETWEEN THE ALUMINUM CONDUCTOR AND A SHORT LENGTH OF COPPER CONDUCTOR MAY BE USED.
- ALL OF THE BONDING AND GROUNDING CONDUCTORS SPECIFIED FOR ROOFTOP CELL AND MICROWAVE SYSTEMS IS BARE WIRE. INSULATED WIRE SHALL NOT BE SPECIFIED OR SUBSTITUTED FOR THE BONDING AND GROUNDING CONDUCTORS OF ROOFTOP INSTALLATIONS.

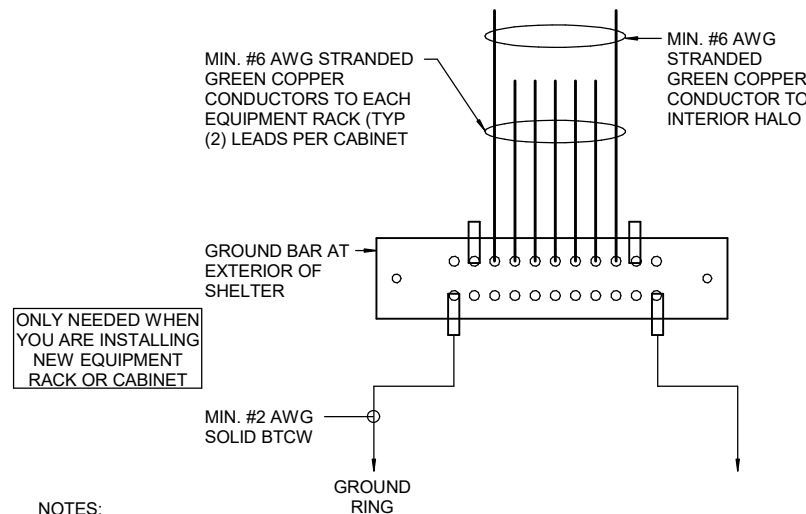
4 - GROUNDING NOTES N.T.S.

- KEY NOTES:**
- 1) COPPER GROUND BAR OR APPROVED EQUAL, 1/4" x 4" X 12". HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
 - 2) SPACERS AS REQUIRED
 - 3) 5/8" LOCKWASHERS
 - 4) WALL MOUNTING BRACKET
 - 5) 5/8" -11 H.H.C.S. BOLTS (VERIFY LENGTH)
 - 6) USE TAMPER RESISTANT MOUNTING HARDWARE



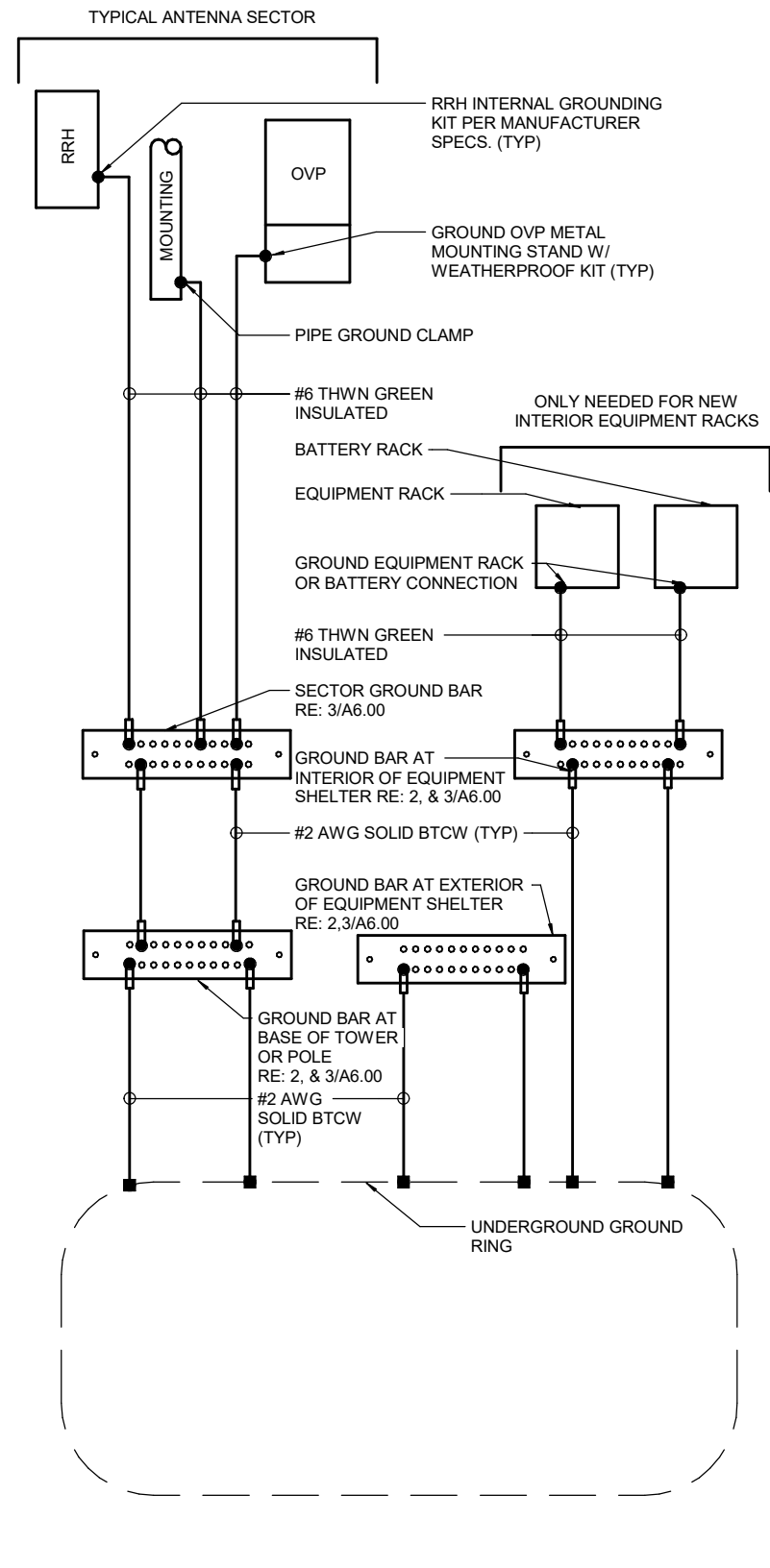
- NOTES:**
1. THE DISTANCE BETWEEN COAXIAL CABLE SHIELD CIGBE BARS SHALL NOT EXCEED 100'. THIS MAY REQUIRE BONDING AT THE TOP, BOTTOM AND TWO LOCATIONS IN THE MIDDLE OF THE TOWER FOR TALLER TOWERS. EACH RF CABLE SHIELD SHALL BE BONDED AT A MINIMUM OF TWO (2) POINTS ON THE TOWER (TOP AND BOTTOM).

3 - GROUND BAR DETAIL N.T.S.



- NOTES:**
1. VERIFY EXISTING INTERIOR GROUNDING IS SUFFICIENT FOR NEW EQUIPMENT INSTALLATION AND GROUND ALL NEW INSTALLED EQUIPMENT AS REQUIRED BY VERIZON WIRELESS STANDARDS
 2. CONNECT THE EQUIPMENT FRAMES TO THE MGB/FGB, USING A MINIMUM OF #6 AWG STRANDED COPPER, GREEN-INSULATED CONDUCTOR. TO ASSURE A GOOD CONNECTION AT THE FRAME, CLEAN THE CONNECTION POINT ON THE FRAME TO BARE METAL, APPLY AN ANTI-OXIDATION COMPOUND, AND CONNECT USING A TWO-HOLE, LONG-BARREL COMPRESSION LUG. SOME EXISTING SITES MAY BE USING SINGLE HOLE LUGS FOR THESE PURPOSES. THESE CONNECTIONS SHOULD NOT BE REPLACED "IF" THE RUNS ARE TO SHORT AND THERE IS NO LIKELIHOOD OF MECHANICAL STRESS ON THE CABLE THAT WOULD LOOSEN THESE CONNECTIONS.
 3. DC DISTRIBUTION PANELS, CHASSIS, BATTERY RACKS, FRAMES AND CHASSIS OF RECTIFIERS AND RECTIFIERS SHOULD BE BONDED DIRECTLY TO THE MGB/FGB. WHEN UTILIZING AN INTEGRATED DC/DC CONVERTER SYSTEM, THE 48-VOLT RETURN DISTRIBUTION BAR SHALL BE BONDED TO THE 24-VOLT RETURN DISTRIBUTION BAR WITH A MINIMUM CONDUCTOR SIZE OF A #2, STRANDED COPPER CONDUCTOR, IN A WIRELESS SHELTER WITH A DEDICATED 48-VOLT PLANT, THE 48-VOLT RETURN DISTRIBUTION BAR SHALL BE BONDED TO THE MGB. ALL BATTERY FRAMES SHALL BE BONDED TO THE MGB WITH A #6 GREEN THWN INSULATED CONDUCTOR. (ONLY APPLICABLE WHEN MODIFICATIONS ARE REQUIRED TO THE BATTERY OR POWER PLANT.)
 4. VERIFY (E) SYSTEM IS PER ATTACHED NOTES AND DETAILS AND IF NOT NOTIFY P.M. FOR REQUIRED UPGRADES.

2 - INTERIOR GROUNDING N.T.S.



- COMPRESSION TYPE CONNECTION
- EXOTHERMIC WELD

NOTE:
GROUNDING SCHEMATIC IS DIAGRAMMATIC AND DOES NOT REFLECT ACTUAL EQUIPMENT LAYOUT ORIENTATION. REFER TO PLANS FOR DIRECTION.

1 - GROUNDING SCHEMATIC N.T.S.