

PROJECT INFORMATION			SITE NUMBER: 4BV0382C SITE NAME: BV382/MACHIA 54 WOODS HILL ROAD SWANTON, VT 05488 FRANKLIN COUNTY PROJECT TYPE: EQUIPMENT UPGRADE SITE CLASS: SILO DESIGN CONFIGURATION: 67D998E 6160																																
SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS SITE ADDRESS: 54 WOODS HILL ROAD SWANTON, VT 05488 LATITUDE: 44.89631389° N LONGITUDE: -73.08281667° W JURISDICTION: NATIONAL, STATE & LOCAL CODES OR ORDINANCES CURRENT USE: TELECOMMUNICATIONS FACILITY PROPOSED USE: TELECOMMUNICATIONS FACILITY PROJECT TYPE: EQUIPMENT UPGRADE DESIGN CONFIGURATION: 67D998E 6160			DRAWING INDEX			REV	LOCUS MAP		GENERAL NOTES																										
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APPROVED By Bill Blake at 4:21 pm, May 06, 2025 APPROVED By SRandha5 at 11:10 am, Mar 11, 2025 APPROVED By Craig Koppang at 10:55 am, Mar 13, 2025 							 DIG SAFE SYSTEM, INC.  CALL BEFORE YOU DIG CALL TOLL FREE: 811 OR 888-DIG-SAFE																												
							UNDERGROUND SERVICE ALERT																												
					SITE NUMBER: 4BV0382C SITE NAME: BV382/MACHIA 54 WOODS HILL ROAD SWANTON, VT 05488 FRANKLIN COUNTY		T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766 OFFICE: (508) 286-2700 FAX: (508) 286-2893		<table><tr><td>NO.</td><td>DATE</td><td>REVISIONS</td><td>BY</td><td>CHK</td></tr><tr><td>0</td><td>02/03/25</td><td>ISSUED FOR REVIEW</td><td>CDC</td><td>SNA</td></tr><tr><td>1</td><td>03/05/25</td><td>ISSUED FOR CONSTRUCTION</td><td>CDC</td><td>SNA</td></tr><tr><td>2</td><td>04/02/25</td><td>REVISED</td><td>MER</td><td>SNA</td></tr><tr><td>3</td><td>04/25/25</td><td>REVISED</td><td>MER</td><td>SNA</td></tr></table>		NO.	DATE	REVISIONS	BY	CHK	0	02/03/25	ISSUED FOR REVIEW	CDC	SNA	1	03/05/25	ISSUED FOR CONSTRUCTION	CDC	SNA	2	04/02/25	REVISED	MER	SNA	3	04/25/25	REVISED	MER	SNA
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GENERAL NOTES

1. THE 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. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.

2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS 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.

3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.

4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.

5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.

7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

9. 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.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

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

13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA 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 CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.

15. THE CONTRACTOR SHALL NOTIFY THE LESEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESEE/LICENSEE REPRESENTATIVE.

16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.

17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233 CALL BEFORE YOU DIG (CT): 1-800-922-4455

18. ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECT THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH PROJECT OWNER PRIOR TO CONSTRUCTION.

19. NORTH ARROW SHOWN ON PLANS REFERS TO APPROXIMATE TRUE NORTH. PRIOR TO THE START OF CONSTRUCTION, ORDERING OR FABRICATING OF ANTENNA MOUNTS, CONTRACTOR SHALL CONSULT WITH PROJECT OWNER'S RF ENGINEER AND FIELD VERIFY ALL ANTENNA SECTOR LOCATIONS AND ANTENNA AZIMUTHS.

20. THE CONTRACTOR AND OR HIS SUB CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

21. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.

22. COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE PROJECT OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF PROJECT OWNER SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE EXHIBIT 3). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.

23. WHEN "PAINT TO MATCH" IS SPECIFIED FOR ANTENNA CONCEALMENT, PAINT PRODUCT FOR ANTENNA RADOME SHALL BE SHERWIN WILLIAMS COROTHANE II. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PROJECT OWNER'S GUIDELINE'S.

24. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

25. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.

26. 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 ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

27. 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 UTILITY COMPANY ENGINEERING. THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR LEASE AREA SHALL BE RESTORED TO ORIGINAL CONDITION.

28. GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES.

29. DURING CONSTRUCTION. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS.

30. FOR WIRELESS COMMUNICATIONS SYSTEMS. PROJECT OWNER'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. PROJECT OWNER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

31. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
BUILDING CODE:

2015 INTERNATIONAL BUILDING CODE
2015 VERMONT FIRE & SAFETY CODE
NFPA 780 2014
LOCAL CODE AS REQUIRED

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.

2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.

3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.

4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.

5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.

6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.

7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION.

8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.

9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE AND GREENLEE CONDUIT MEASURING TAPE IN EACH INSTALLED TELCO CONDUIT.

10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.

11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.

12. PPC SUPPLIED BY PROJECT OWNER.

13. GROUNDING SHALL COMPLY WITH NEC ART. 250.

14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.

ADDITIONAL NOTE:
GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".

15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.

16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.

17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.

18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.

19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.

20. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.

21. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ (E) MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.

22. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MAXIMUM RESISTANCE REQUIRED.

23. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.



ABBREVIATIONS

AAV	ALTERNATIVE ACCESS VENDOR	EG	EQUIPMENT GROUND	N.T.S.	NOT TO SCALE
AC	ALTERNATING CURRENT	EGB	EQUIPMENT GROUND BAR	REF	REFERENCE
AGL	ABOVE GRADE LEVEL	EGR	EQUIPMENT GROUND RING	REQ	REQUIRED
ATS	AUTOMATIC TRANSFER SWITCH	(F)	FUTURE	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	GALV.	GALVANIZED	RGS	RIGID GALVANIZED STEEL
AZ	AZIMUTH	G.C.	GENERAL CONTRACTOR	RRU	REMOTE RADIO HEAD
BCW	BARE COPPER WIRE	KW	KILOWATT	TBD	TO BE DETERMINED
BEP	BUILDING ENTRY POINT	MGB	MASTER GROUND BUS	TBR	TO BE REMOVED
BTS	BASE TRANSCEIVER STATION	MIN.	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
CSC	CELL SITE CONTROLLER	(P)	PROPOSED	TYP	TYPICAL
(E)	EXISTING	PPC	POWER PROTECTION CABINET	U/G	UNDERGROUND



ADVANCED
ENGINEERING GROUP, P.C.
Civil Engineering - Site Development - Surveying - Telecommunications
179 Swansea Mall Drive Phone: (508) 343-1414
Swansea, MA 02777 Fax: (401) 633-6354



J. LEE ASSOCIATES
420 NORTHBORO ROAD CENTRAL
MARLBOROUGH, MA 01752

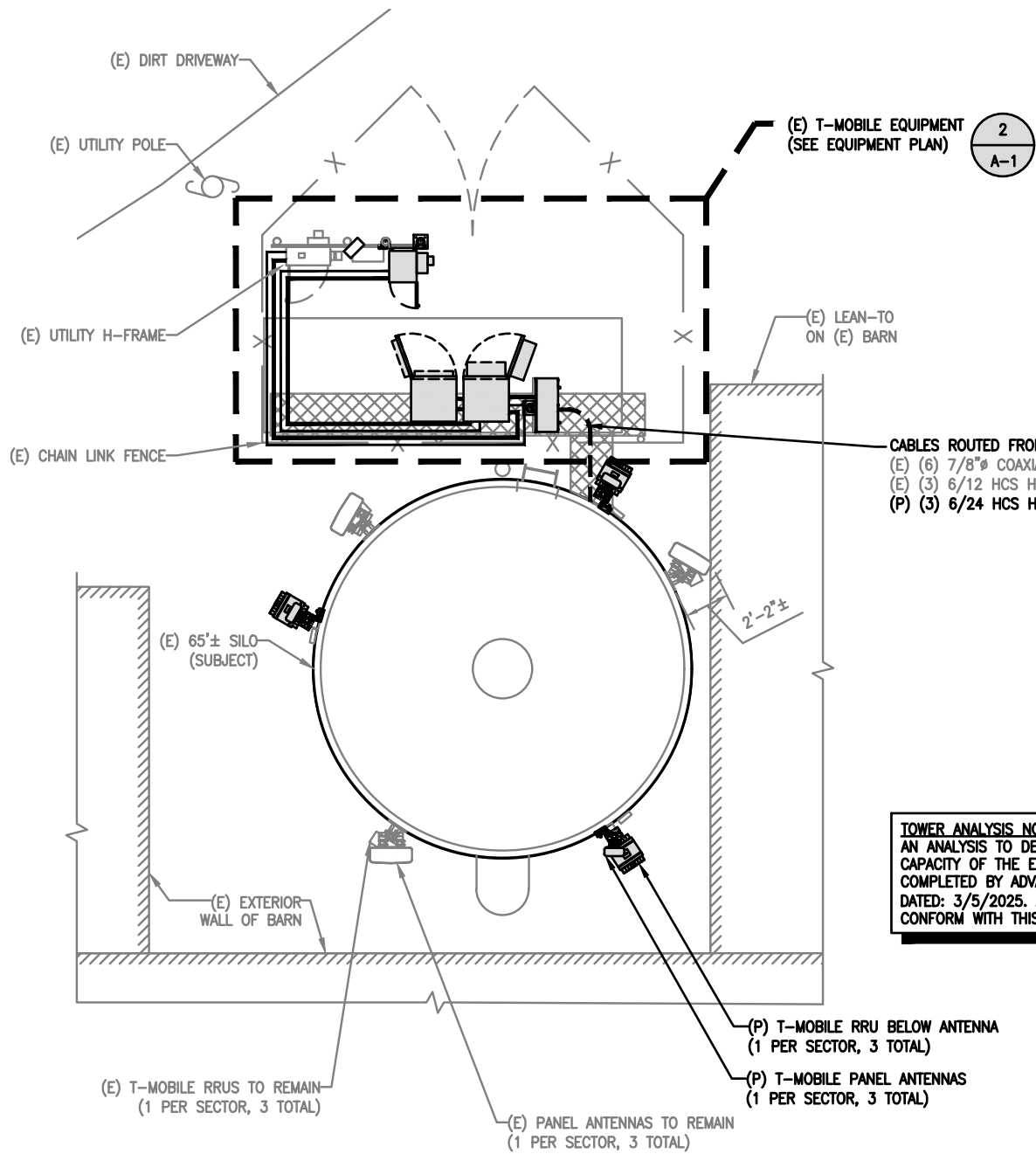
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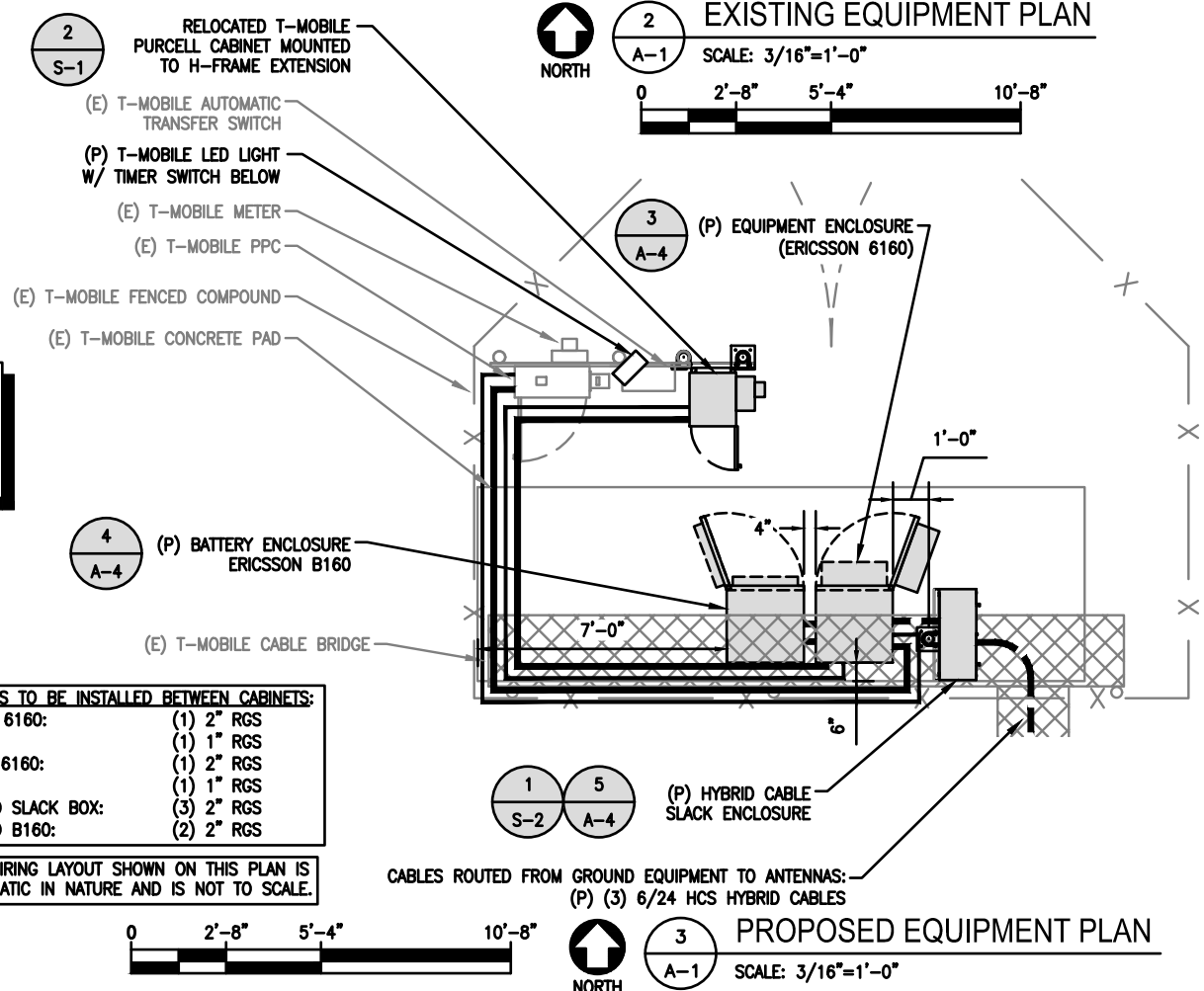
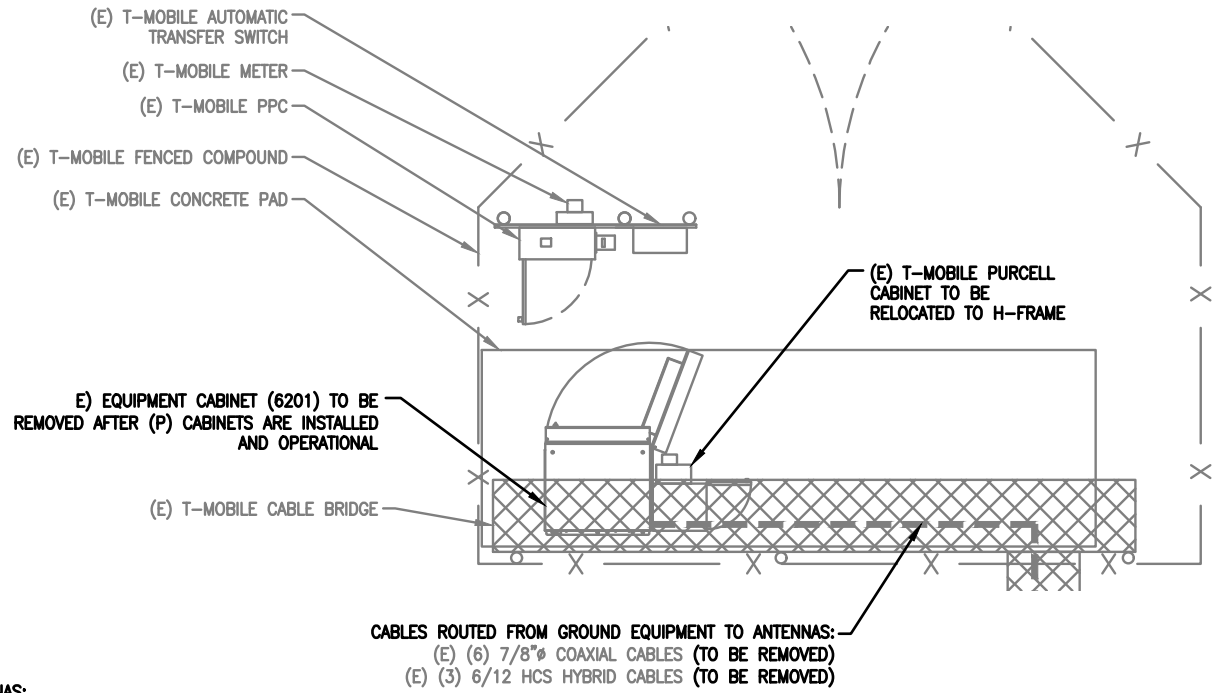
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GENERAL NOTES

SHEET NO. GN-1



TOWER ANALYSIS NOTE:
 AN ANALYSIS TO DETERMINE THE STRUCTURAL CAPACITY OF THE EXISTING TOWER HAS BEEN COMPLETED BY ADVANCED ENGINEERING GROUP, PC DATED: 3/5/2025. ALL PROPOSED WORK SHALL CONFORM WITH THIS ANALYSIS.



CONDUITS TO BE INSTALLED BETWEEN CABINETS:

PPC TO 6160:	(1) 2" RGS
	(1) 1" RGS
AAV TO 6160:	(1) 2" RGS
	(1) 1" RGS
6160 TO SLACK BOX:	(3) 2" RGS
6160 TO B160:	(2) 2" RGS

THE WIRING LAYOUT SHOWN ON THIS PLAN IS SCHEMATIC IN NATURE AND IS NOT TO SCALE.

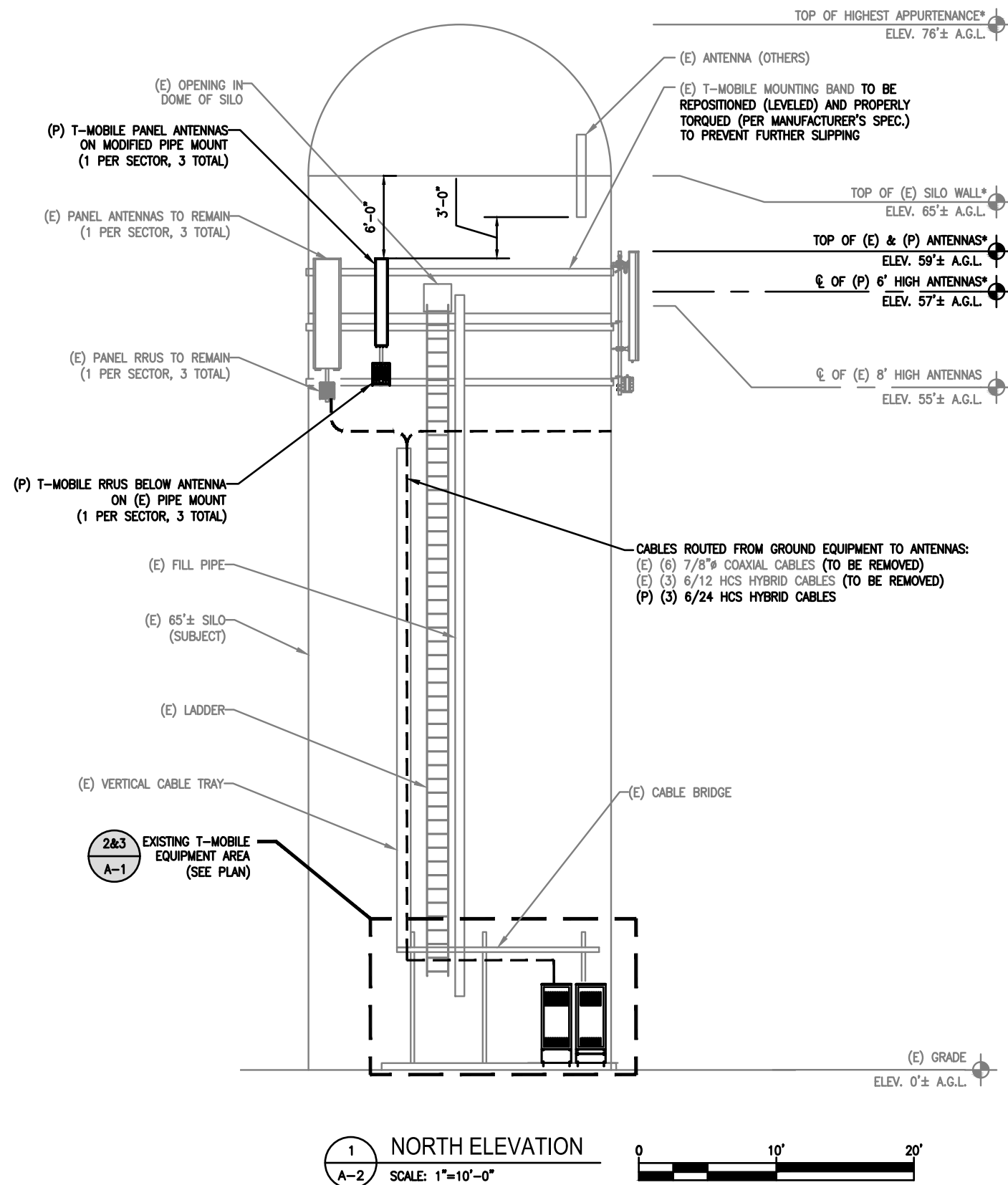
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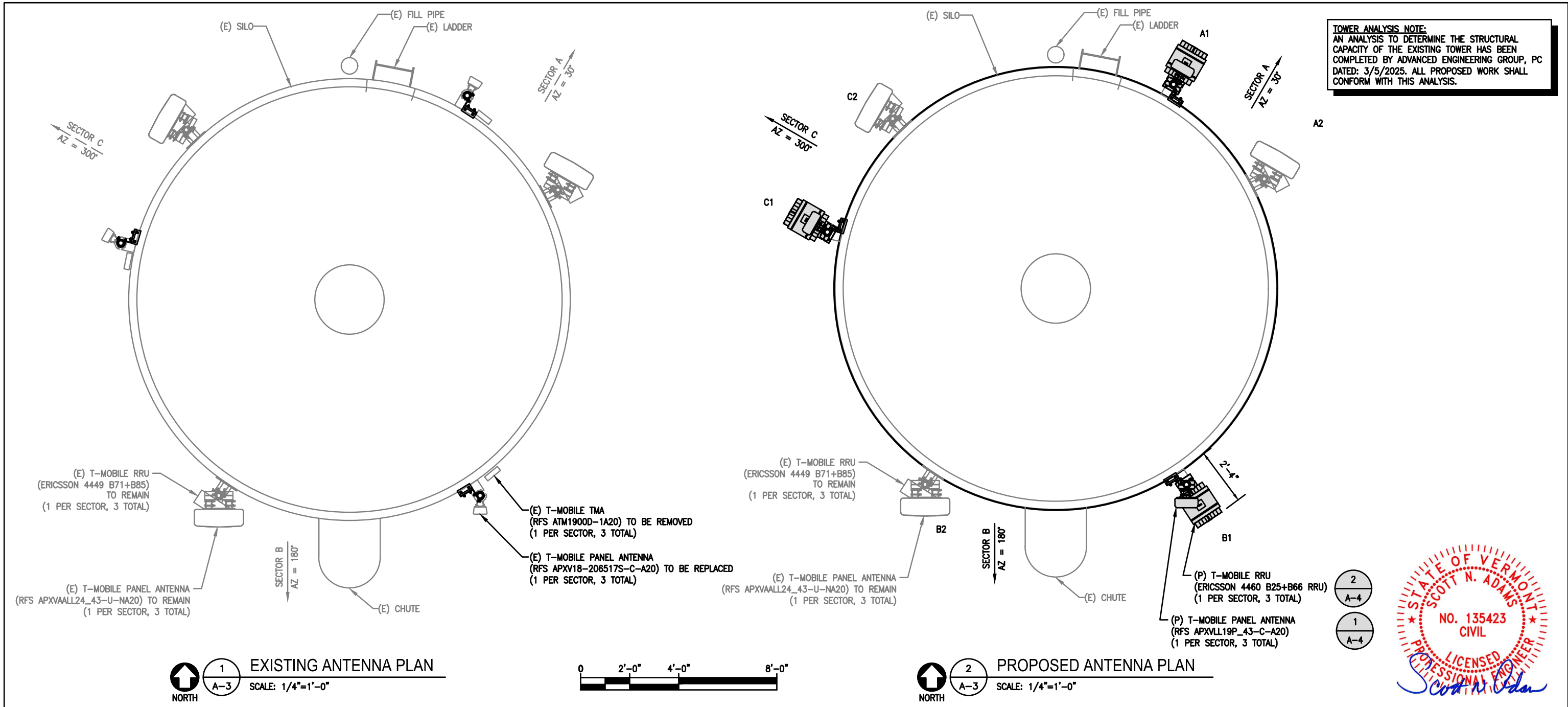
* NOTE:
DIMENSIONS FROM T-MOBILE ANTENNAS TO ADJACENT CARRIERS' ANTENNAS & HIGHEST APPURTENANCE IS APPROXIMATE AND IS BASED OFF OF HISTORIC INFORMATION PROVIDED BY CLIENT. A FIELD SURVEY TO CONFIRM EXACT ANTENNA SEPARATIONS, TOWER HEIGHT AND HIGHEST APPURTENANCE HAS NOT BEEN COMPLETED.

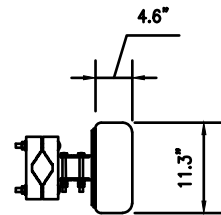
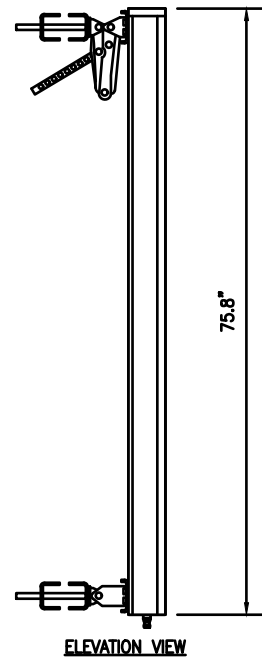
EXISTING EQUIPMENT						
ITEM	WIDTH	HEIGHT	SQ. INCH	SQ. FT	QUANTITY	TOTAL SQ. FT.
RFS APXVAALL24-43-U-NA20	24	95.9	2301.6	15.98333	3	47.95
ERICSSON 4449 B71+B85	14.9	13.2	196.68	1.365833	3	4.10
RFS APXV18-2065175-C-A20	6.8	72	489.6	3.4	3	10.20
RFS ATM1900D-1A20	10.1	8.7	87.87	0.610208	3	1.83
					existing total sq ft	62.25
PROPOSED EQUIPMENT						
ITEM	WIDTH	HEIGHT	SQ. INCH	SQ. FT	QUANTITY	TOTAL SQ. FT.
RFS APXVAALL24-43-U-NA20	24	95.9	2301.6	15.98333	3	47.95
ERICSSON 4449 B71+B85	14.9	13.2	196.68	1.365833	3	4.10
RFS APXVLL19P-43-C-A20	11.3	75.8	856.54	5.948194	3	17.84
ERICSSON 4460 B25+B66	15.7	19.6	307.72	2.136944	3	6.41
					proposed total sq ft	76.30
					CHANGE	14.06

MAX. VERTICAL EXTENSION ABOVE TOWER: 0'-0"±
MAX HORIZONTAL EXTENSION OFF TOWER: 2'-4"±
IMPERVIOUS SURFACE TO BE ADDED: 0 SQ. FT.



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PLAN VIEW

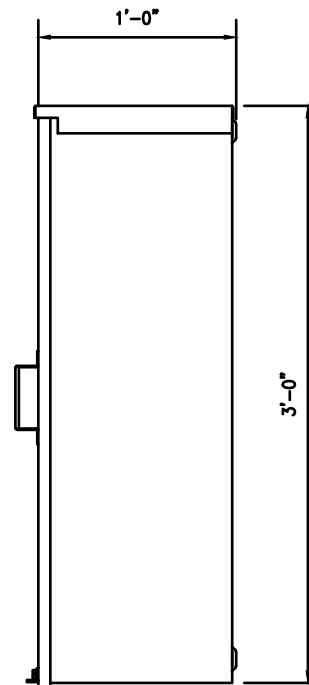
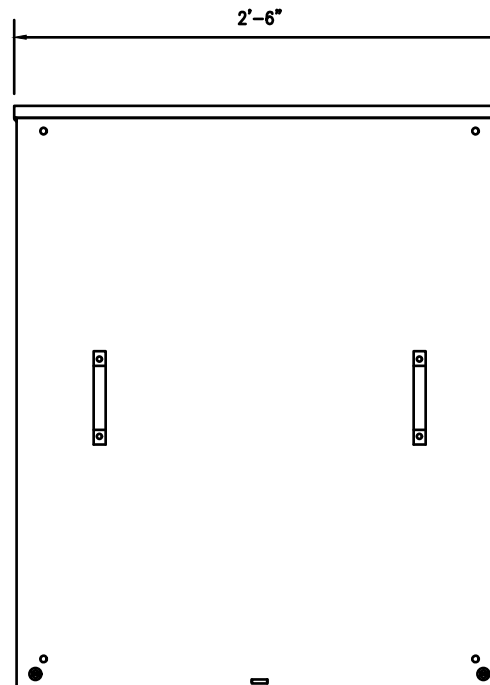
APXVLL19P-43-C-A20

MANUFACTURER: RFS
DIMENSIONS (HxWxD): 75.8"x11.3"x4.6"
WEIGHT: 40.9 LBS.
MNTG HARDWARE: 8.4 LBS.



RRUS-4460 B25+B66

MANUFACTURER: ERICSSON
DIMENSIONS (HxWxD): 19.6"x15.7"x12.1"
WEIGHT: 109 LBS



1 ANTENNA DETAIL

SCALE: N.T.S.



2 TYPICAL RRU DETAIL

SCALE: N.T.S.

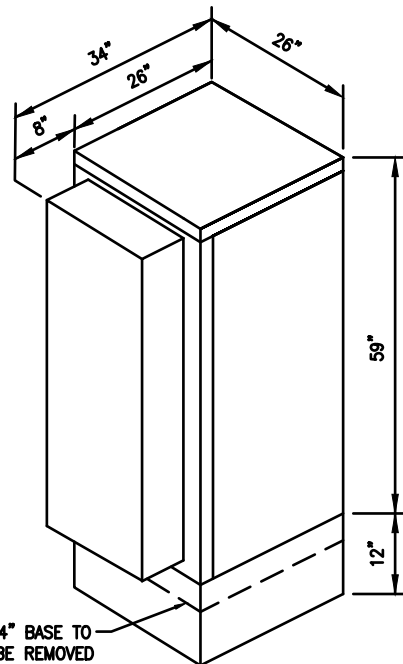
FIBER SLACK ENCLOSURE

MANUFACTURER: HOFFMAN*
MODEL: A-36R3012
MATERIAL: STEEL
DIMENSIONS (HxWxD): 36.0"x30.0"x12.0"
PROTECTION RATING: NEMA TYPE 3; N
(* OR AN APPROVED EQUAL)



5 FIBER SLACK ENCLOSURE

SCALE: N.T.S.



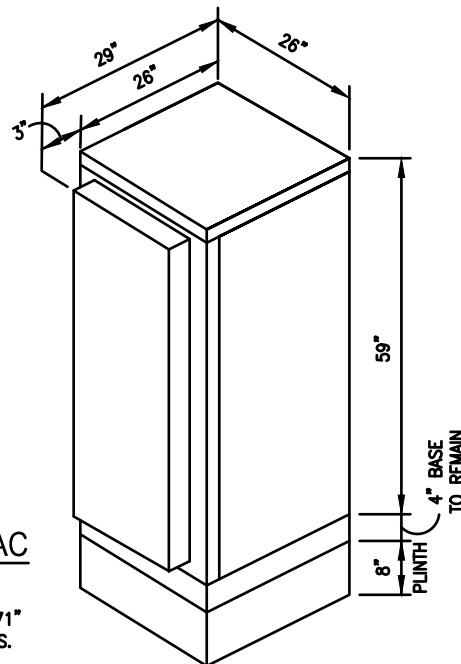
ENCLOSURE 6160 AC

*PRELIMINARY SPECIFICATIONS
MANUFACTURER: ERICSSON
DIMENSIONS: 34"x26"x71"
WEIGHT W/O EQUIPMENT: 320 LBS.
WEIGHT W/ EQUIPMENT: 605 LBS.



3 EQUIPMENT CABINET

SCALE: N.T.S.



ENCLOSURE B160

*PRELIMINARY SPECIFICATIONS
MANUFACTURER: ERICSSON
DIMENSIONS: 29"x26"x71"
WEIGHT W/O BATTERIES: 295 LBS.
WEIGHT W/ (2) STRINGS OF BATTERIES: 1,312 LBS.
WEIGHT W/ (3) STRINGS OF BATTERIES: 1,820 LBS.
TWO (2) OR THREE (3) STRINGS OF BATTERIES ALLOWED



4 BATTERY CABINET

SCALE: N.T.S.

EQUIPMENT SCHEDULE

CURRENT EQUIPMENT

QUANTITY	DESCRIPTION
3	RFS APXV18-206517S-C-A20 PANEL ANTENNAS
3	RFS APXVALL24_43-U-NA20 PANEL ANTENNAS
3	ERICSSON RADIO 4449 B71+B85 RRU
3	RFS TWIN STYLE 1A ATM1900D-1A20 TMA'S
1	ERICSSON RBS 6201 ODE EQUIPMENT CABINET
1	AAV CABINET
6	7/8" COAXIAL CABLES
3	6x12 HCS HYBRID CABLES

EQUIPMENT TO BE REMOVED

QUANTITY	DESCRIPTION
3	RFS APXV18-206517S-C-A20 PANEL ANTENNAS
3	RFS TWIN STYLE 1A ATM1900D-1A20 TMA'S
1	ERICSSON RBS 6201 ODE EQUIPMENT CABINET
6	7/8" COAXIAL CABLES
3	6x12 HCS HYBRID CABLES

EQUIPMENT TO BE ADDED

QUANTITY	DESCRIPTION
3	RFS APXVLL19P_43-C-A20 PANEL ANTENNAS
3	ERICSSON RADIO 4460 B25+B66 RRU
1	ERICSSON B160 BATTERY UNIT
1	ERICSSON 6160 EQUIPMENT CABINET
1	HOFFMAN FIBER SLACK BOX
3	6x24 HCS HYBRID CABLES

FINAL EQUIPMENT CONFIGURATION

QUANTITY	DESCRIPTION
3	RFS APXVALL24_43-U-NA20 PANEL ANTENNAS
3	RFS APXVLL19P_43-C-A20 PANEL ANTENNAS
3	ERICSSON RADIO 4460 B25+B66 RRU
3	ERICSSON RADIO 4449 B71+B85 RRU
1	ERICSSON B160 BATTERY UNIT
1	ERICSSON 6160 EQUIPMENT CABINET
1	HOFFMAN FIBER SLACK BOX
1	AAV CABINET
3	6x24 HCS HYBRID CABLES

RF CONFIGURATION

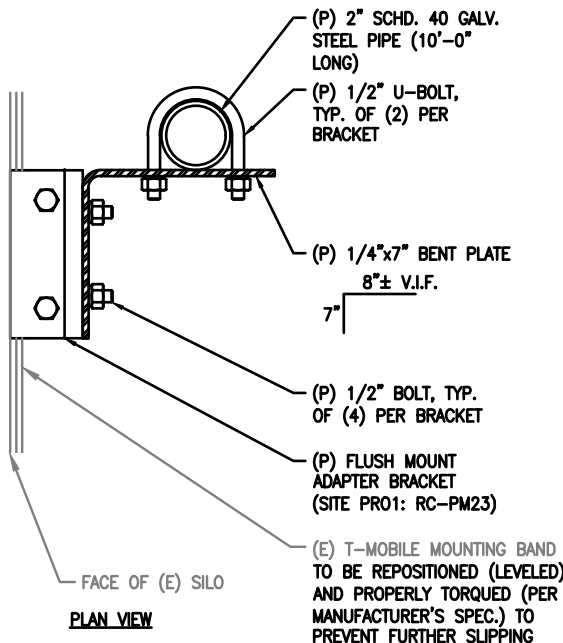
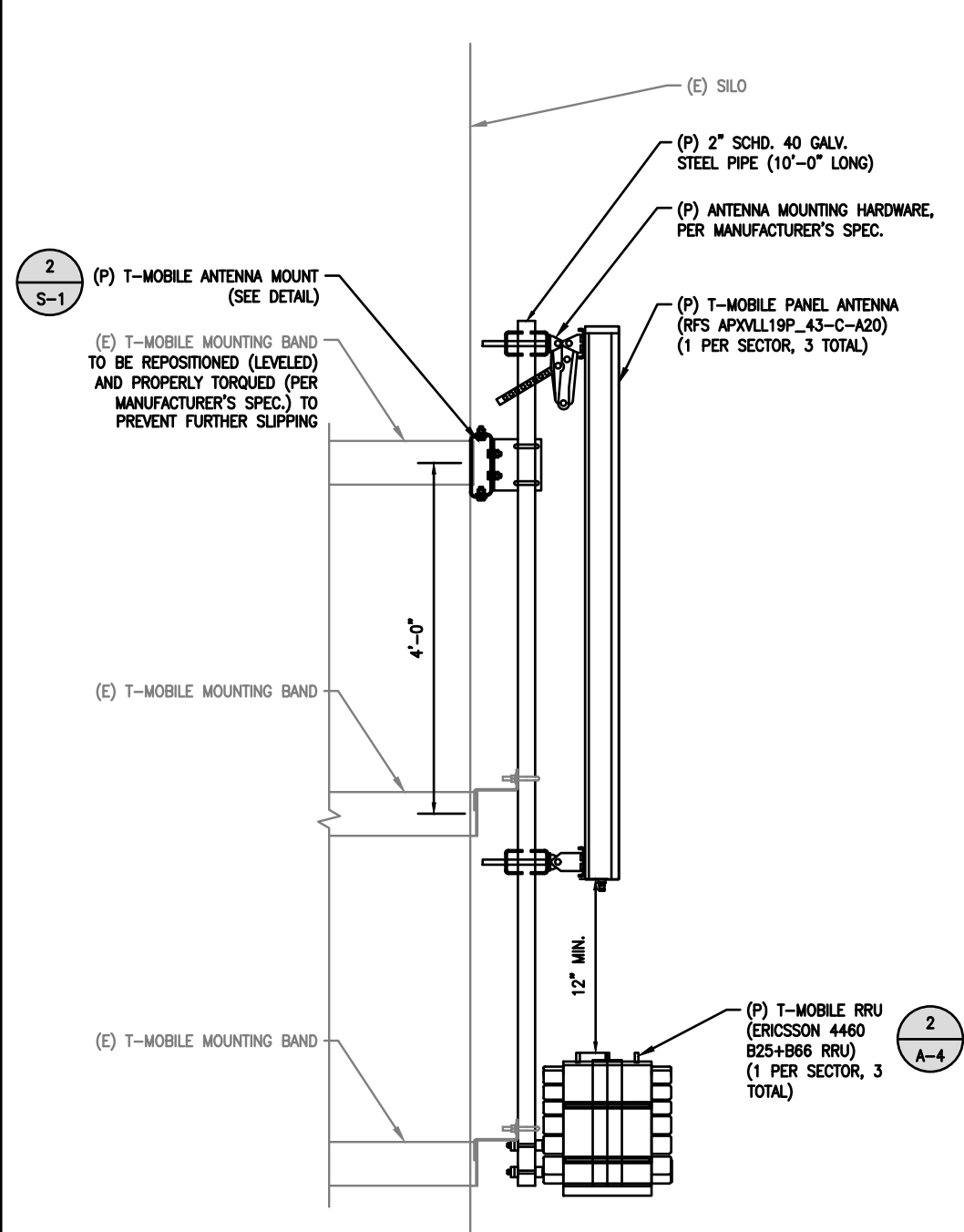
67D998E 6160

SCOPE OF WORK

1. REMOVE (3) PANEL ANTENNAS, (1) PER SECTOR
2. REMOVE (3) TMA'S, (1) PER SECTOR
3. REMOVE (1) EQUIPMENT CABINET
4. RELOCATE (1) AAV CABINET
5. INSTALL (1) NEW BATTERY CABINET
6. INSTALL (1) NEW EQUIPMENT CABINET
7. INSTALL (3) NEW PANEL ANTENNAS, (1) PER SECTOR
8. INSTALL (3) NEW RRU'S, (1) PER SECTOR
9. INSTALL (1) FIBER SLACK BOX
10. INSTALL (3) 6x24 HCS HYBRID CABLES



TOWER ANALYSIS NOTE:
AN ANALYSIS TO DETERMINE THE STRUCTURAL CAPACITY OF THE EXISTING TOWER HAS BEEN COMPLETED BY ADVANCED ENGINEERING GROUP, PC DATED: 3/5/2025. ALL PROPOSED WORK SHALL CONFORM WITH THIS ANALYSIS.



2
S-1
BRACKET DETAIL
SCALE: 1 1/2" = 1'-0"

1
S-1
ANTENNA/RRU MOUNT DETAIL
SCALE: 1/2" = 1'-0"

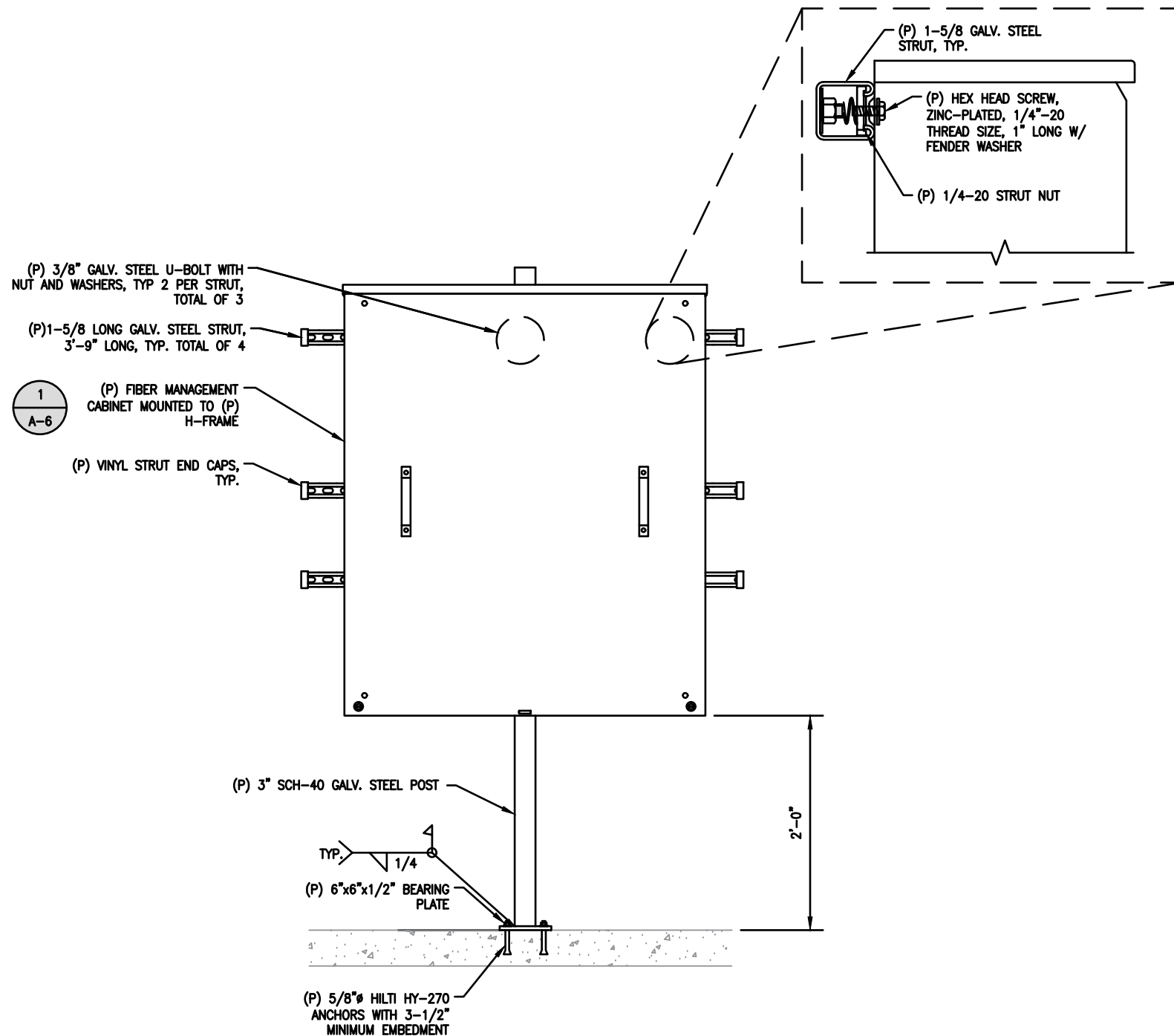
STRUCTURAL STEEL NOTES:

- FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, "MANUAL OF STEEL CONSTRUCTION, ASD (LATEST EDITION).
- ALL STEEL DETAILS AND CONNECTIONS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", LATEST EDITION
- STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED ON THE DRAWINGS:
 - ALL ROLLED SHAPES AND CHANNELS: ASTM A-572 OR A-992, MIN. YIELD STRENGTH OF 50 KSI
 - MISCELLANEOUS ANGLES: ASTM A-36, MIN YIELD STRENGTH OF 36 KSI
 - HOLLOW STRUCTURAL STEEL SECTIONS, (TUBES & PIPES): ASTM A500 GRADE B, MIN YIELD STRENGTH OF 42 KSI FOR PIPES AND 46 KSI FOR TUBES.
- ALL BOLTS SHALL CONFORM TO ASTM A325 OR A490, NUTS SHALL CONFORM TO ASTM A563 AND WASHERS SHALL CONFORM TO ASTM A-F436.
- ALL ANCHOR BOLTS/RODS SHALL CONFORM TO ASTM F-1554 GRADE 36 WITH WELD ABILITY SUPPLEMENT S1, UNLESS OTHERWISE NOTED. SUBMIT GRADE CERTIFICATIONS FOR RECORD. STEEL SUPPLIER SHALL SUPPLY RIGID STEEL TEMPLATES FOR ANCHOR ROD INSTALLATION.
- ALL SHOP OR FIELD BOLTED CONNECTIONS, SHALL BE BOLTED CONNECTIONS USING 1/2 INCH DIAMETER A325 N BOLTS IN STANDARD HOLES, UNLESS SPECIFICALLY NOTED OTHERWISE.
- OVERSIZED OR SLOTTED HOLES SHALL NOT BE USED FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED IN WRITING BY THE ENGINEER.
- ALL BUTT AND FULL PENETRATION WELDS SHALL BE MADE USING RUN OFF TABS WHICH SHALL BE REMOVED AND GROUND SMOOTH AFTER WELD IS COMPLETED.
- ALL WELD BACK UP BARS SHALL BE REMOVED AND GROUND SMOOTH AFTER WELD IS COMPLETED, UNLESS NOTED OTHERWISE.
- ALL WELDS INDICATED SHALL MEET THE MINIMUM WELD SIZE SPECIFIED BY THE AISC MANUAL OF STEEL DESIGN. (SINGLE PASS AS REQUIRED)
- ALL WELDS SHALL BE PERFORMED BY QUALIFIED WELDERS IN ACCORDANCE WITH A.W.S. SPECIFICATIONS, LATEST EDITIONS. ALL WELDING ELECTRODES SHALL CONFORM TO A.W.S. A5.1 GRADE E-70. BARE ELECTRODES AND GRANULAR FLUX SHALL CONFORM TO A.W.S. A5.17, F70 A.W.S. FLUX CLASSIFICATION.
- ALTERNATE CONNECTIONS WILL BE ACCEPTED ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER. HOWEVER, THE ENGINEER SHALL BE THE SOLE JUDGE OF THE ACCEPTABILITY AND THE CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THOSE SPECIFIC DETAILS SHOWN ON THE DRAWINGS. IN ANY EVENT THE CONTRACTOR SHALL BE

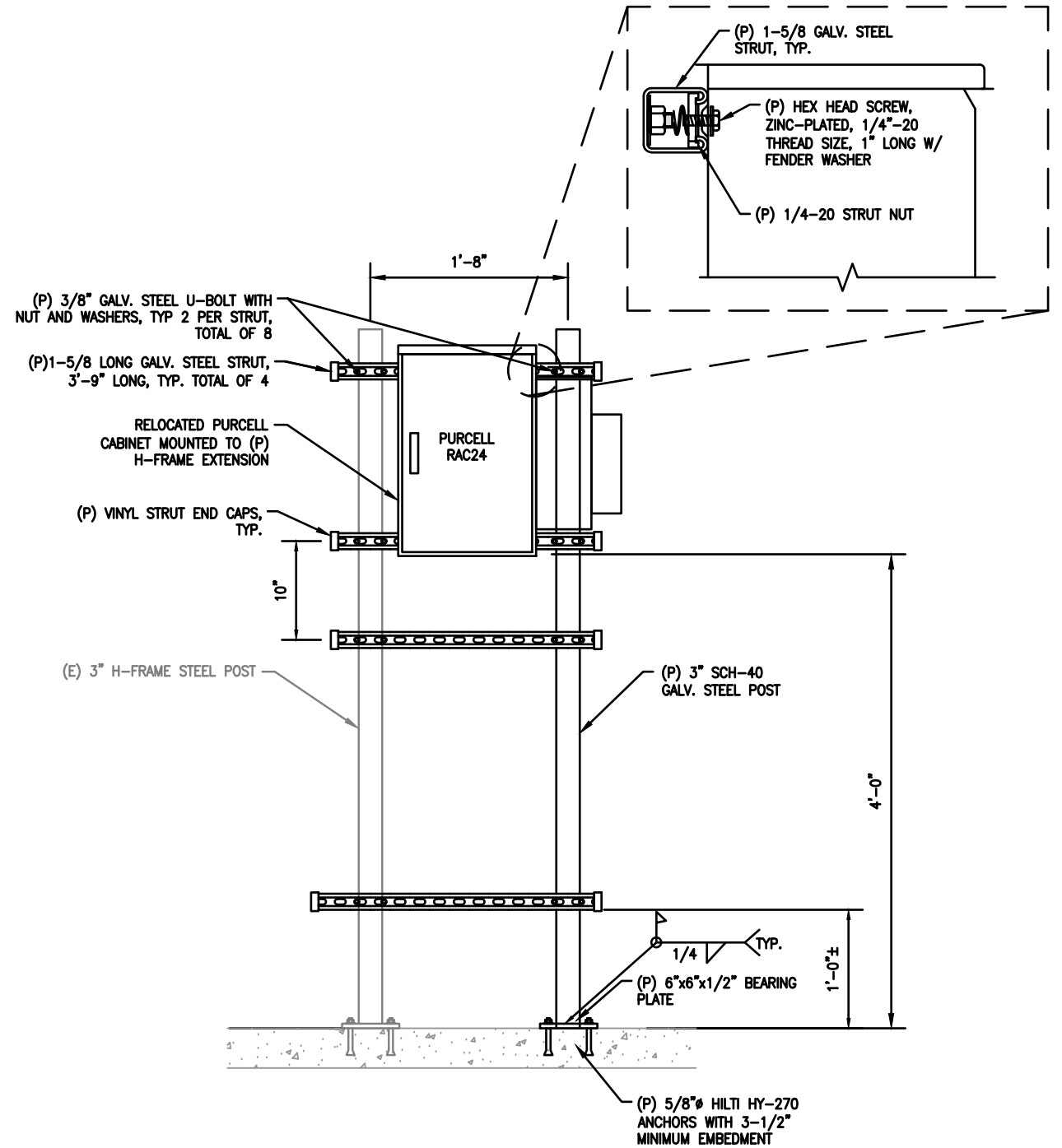
- RESPONSIBLE FOR THE DESIGN OF SUCH ALTERNATE DETAILS WHICH THEY PROPOSE.
- SHOP AND FIELD CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE BOLTED OR WELDED.
- WHEN NOT SPECIFICALLY DETAILED ELSEWHERE ON THE DRAWINGS, ALL BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS SHALL BE DETAILED AS SHOWN IN THE TYPICAL BEAM CONNECTION DETAILS.
- ALL BEAM AND GIRDERS SHALL BE CONNECTED FOR 115% OF THE REACTION DENOTED BY THE SYMBOL V ON THE PLAN. PROVIDE A MINIMUM 2 BOLT CONNECTION. IF NO REACTION IS GIVEN PROVIDE CONNECTION FOLLOWING NOTE 16.
- ALL BEAM AND GIRDER CONNECTIONS SHALL BE AT LEAST CAPABLE OF DEVELOPING THE UNIFORMLY DISTRIBUTED LOAD CAPACITY OF THE MEMBER USING THE REACTION FROM THE ALLOWABLE LOAD OF BEAM AS TABULATED IN THE AISC MANUAL OF STEEL CONSTRUCTION LATEST EDITION UNLESS NOTED OTHERWISE. FOR COMPOSITE BEAMS MULTIPLY THE REACTION BY THE RATIO S_{tr}/S WHERE S_{tr} = SECTION MODULUS OF THE TRANSFORMED COMPOSITE CROSS SECTION WITH RESPECT TO THE BOTTOM FLANGE, AND S = SECTION MODULUS OF THE STRUCTURAL STEEL ALONE.
- ALL HOLES AND CUTS SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTS OR BURNING OF HOLES IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED.
- PROVIDE ANY TEMPORARY BRACING OR GUYS TO PROVIDE LATERAL SUPPORT OF THE STRUCTURES AND INDIVIDUAL ELEMENTS UNTIL PERMANENT FRAME IS COMPLETELY INSTALLED.
- ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE GALVANIZED.
- ALL TUBE & PIPE SECTIONS EXPOSED TO WEATHER SHALL HAVE OPEN ENDS CAPPED WITH 1/4" PLATE.
- ALL STRUCTURAL STEEL TO RECEIVE SPRAY APPLIED FIRE PROTECTION SHALL BE LEFT UNCOATED.
- FOR EXPOSED INTERIOR STRUCTURAL STEEL, REFER TO DRAWINGS AND SPECIFICATIONS FOR SURFACE PREPARATION AND FINISH REQUIREMENTS.
- STEEL FABRICATOR SHALL COORDINATE ALL HOLE LOCATIONS FOR SIMPSON TIE DOWN ANCHORS. ALL HOLES SHALL BE SHOP DRILLED THROUGH BEAM FLANGES.



NO.	DATE	REVISIONS	BY	CHK
0	02/03/25	ISSUED FOR REVIEW	CDC	SNA
1	03/05/25	ISSUED FOR CONSTRUCTION	CDC	SNA
2	04/02/25	REVISED	MER	SNA
3	04/25/25	REVISED	MER	SNA



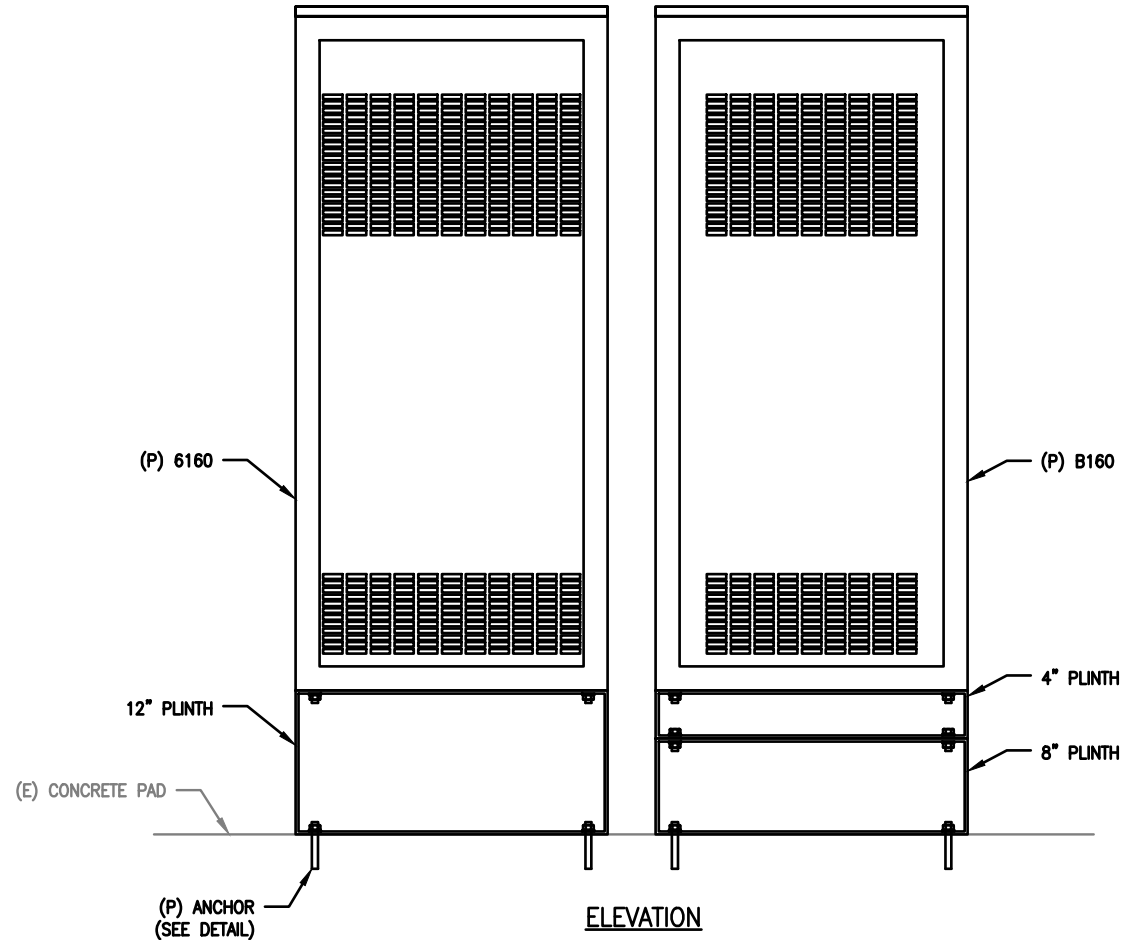
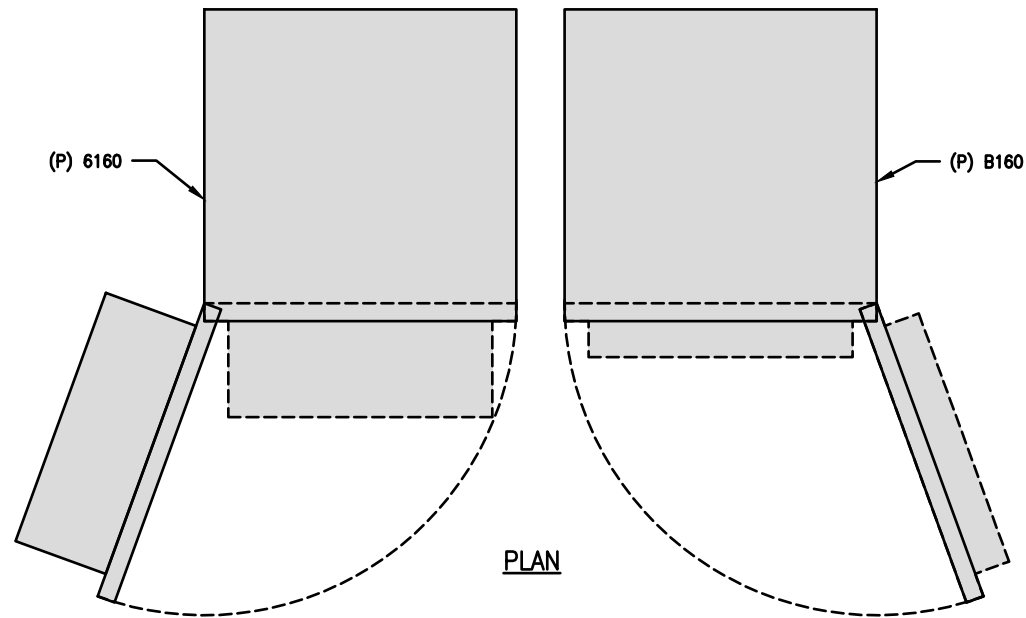
2 FIBER BOX MOUNTING DETAIL
S-2 SCALE: 1/2"=1'-0"



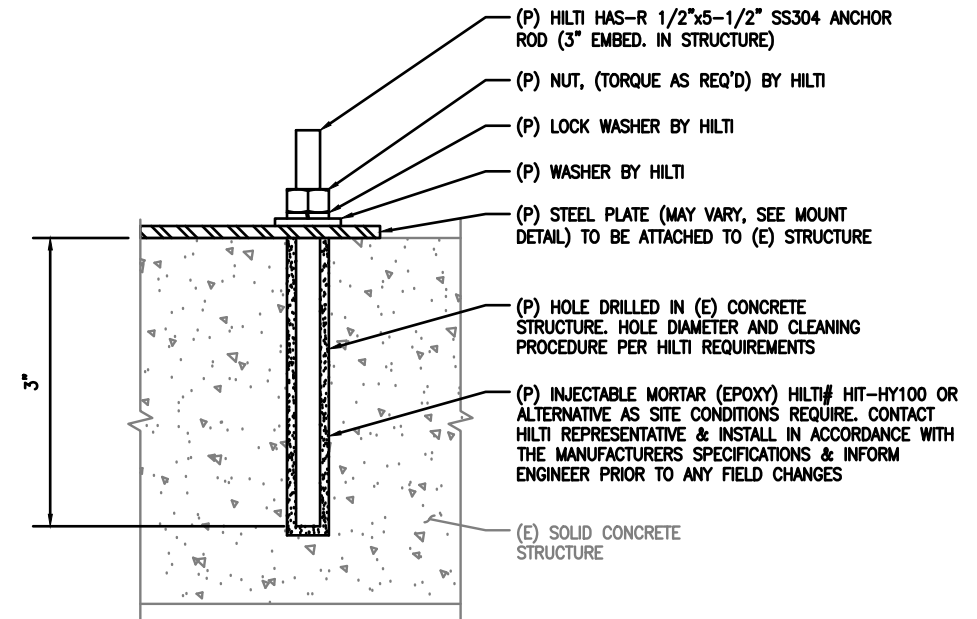
2 PURCELL MOUNTING DETAIL
S-2 SCALE: 1/2"=1'-0"



NO.	DATE	REVISIONS	BY	CHK
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1	03/05/25	ISSUED FOR CONSTRUCTION	CDC	SNA
2	04/02/25	REVISED	MER	SNA
3	04/25/25	REVISED	MER	SNA



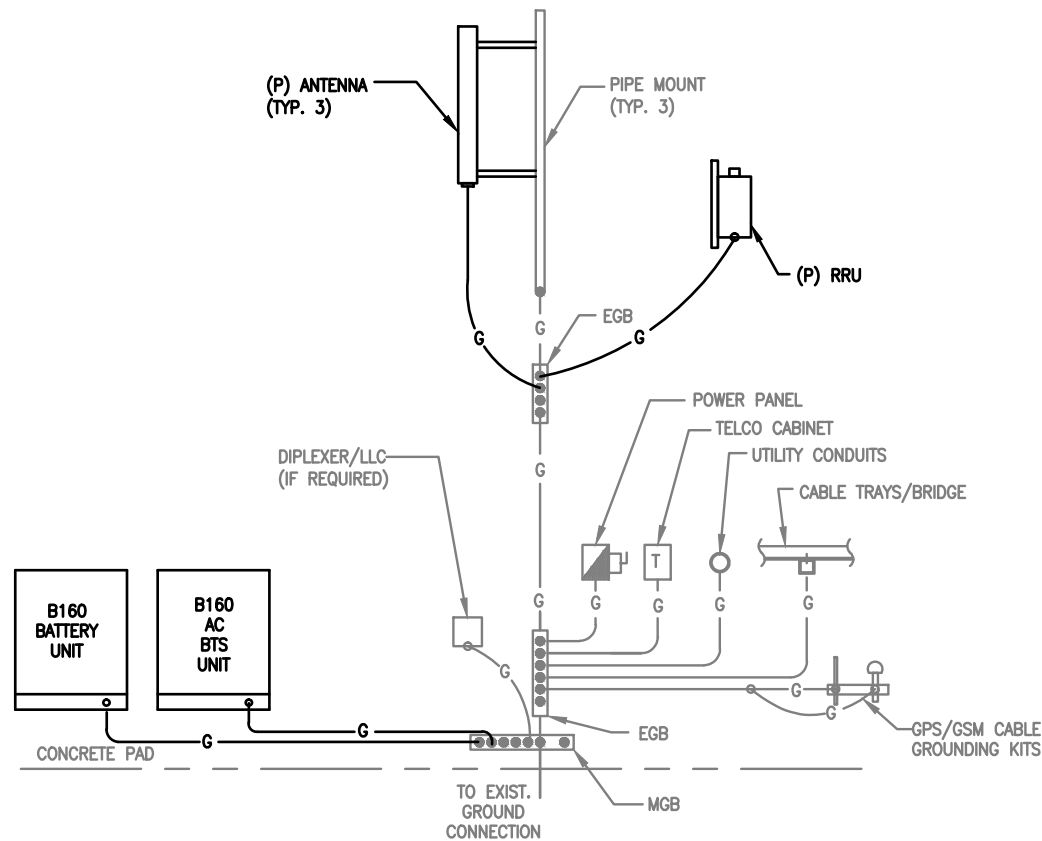
1 EQUIPMENT CABINET MOUNTING DETAILS
S-3 SCALE: 3/4" = 1'-0"



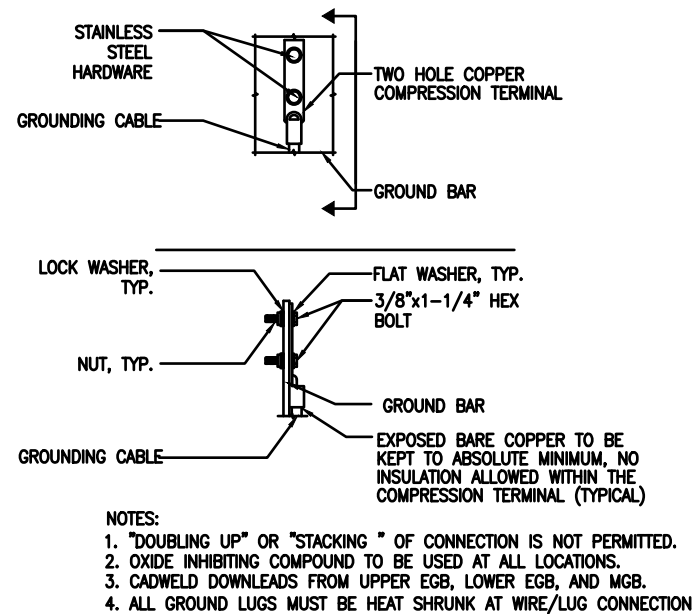
2 ANCHOR DETAIL
S-3 SCALE: N.T.S.



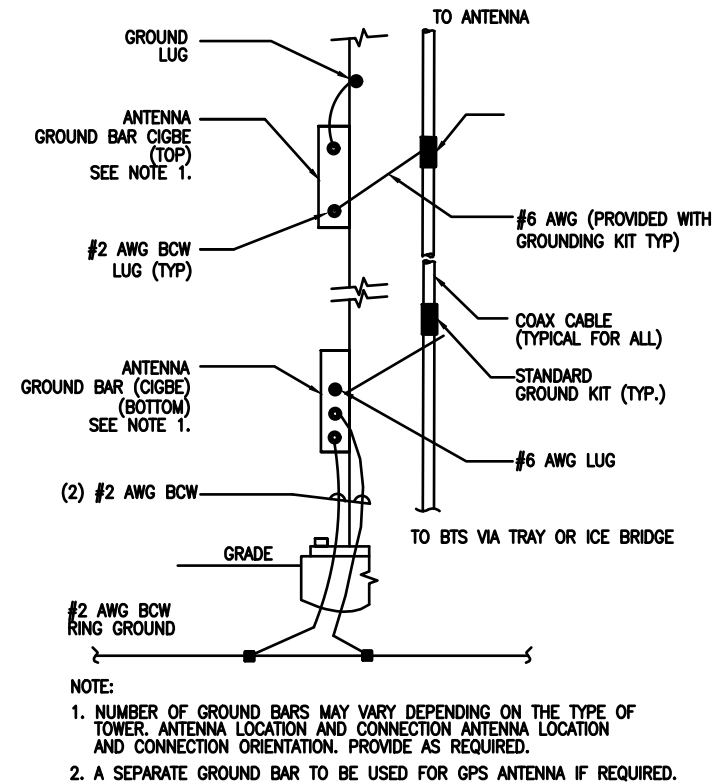
NO.	DATE	REVISIONS	BY	CHK
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1	03/05/25	ISSUED FOR CONSTRUCTION	CDC	SNA
2	04/02/25	REVISED	MER	SNA
3	04/25/25	REVISED	MER	SNA



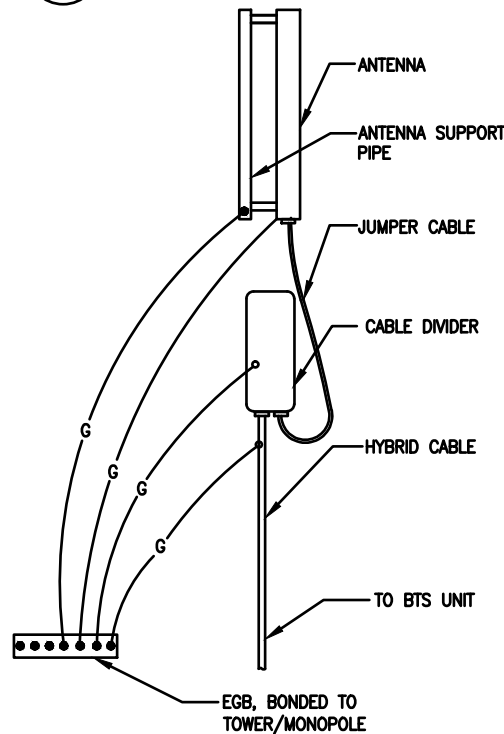
1 TYP. GROUNDING RISER DIAGRAM
G-1 SCALE: N.T.S.



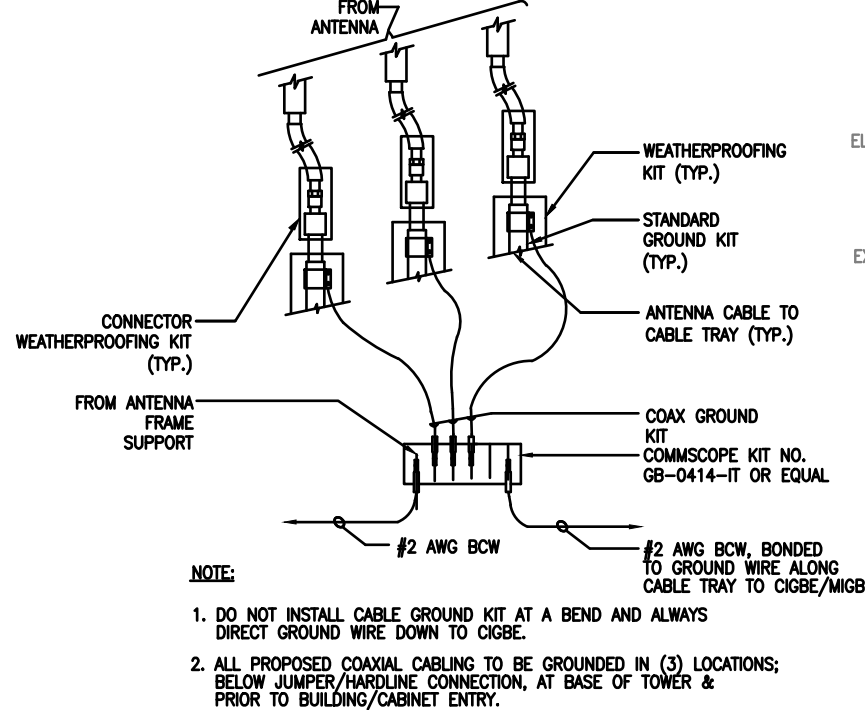
2 TYPICAL GROUND BAR CONNECTION DETAIL
G-1 SCALE: NOT TO SCALE



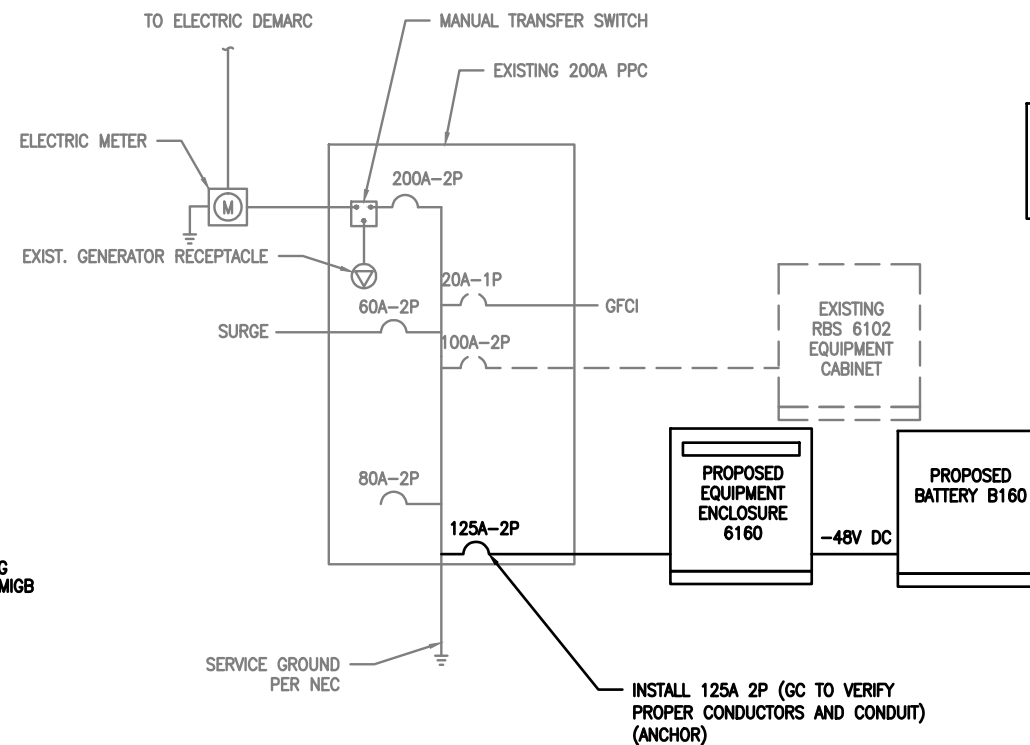
3 ANTENNA CABLE GROUNDING
G-1 SCALE: NOT TO SCALE



4 HYBRID CABLE CONNECTION & GROUNDING DETAIL
G-1 SCALE: NOT TO SCALE



5 GROUND WIRE TO GROUND BAR CONNECTION DETAIL
G-1 SCALE: NOT TO SCALE



6 ONE LINE DIAGRAM
G-1 SCALE: NOT TO SCALE

NOTE:
ALL WORK MUST BE PERFORMED BY
LICENSED ELECTRICIAN ADHERING TO THE
NEC AND LOCAL CODE REQUIREMENTS.



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1	03/05/25	ISSUED FOR CONSTRUCTION	CDC	SNA
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3	04/25/25	REVISED	MER	SNA