



MARIN COUNTRY CLUB

1110 HIGHLAND DRIVE, NOVATO, CA 94949
MDG LOCATION ID: 5000001534

Issued For:

MARIN COUNTRY CLUB

1110 HIGHLAND DRIVE
NOVATO, CA 94949

PREPARED FOR



2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:



MDG LOCATION ID: 5000001534

PROJECT ID: 2013447

DRAWN BY: C. CODY

CHECKED BY: J. GRAY

APPROVED BY: J. SPORE

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	05/08/24	CD 100%	C.C.
2	03/07/24	CLIENT REV	C.C.
1	01/31/24	CD 95%	C.C.
0	10/09/23	CD 90%	C.C.

Licensee:



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

ENGINEER:



SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

T-1.1

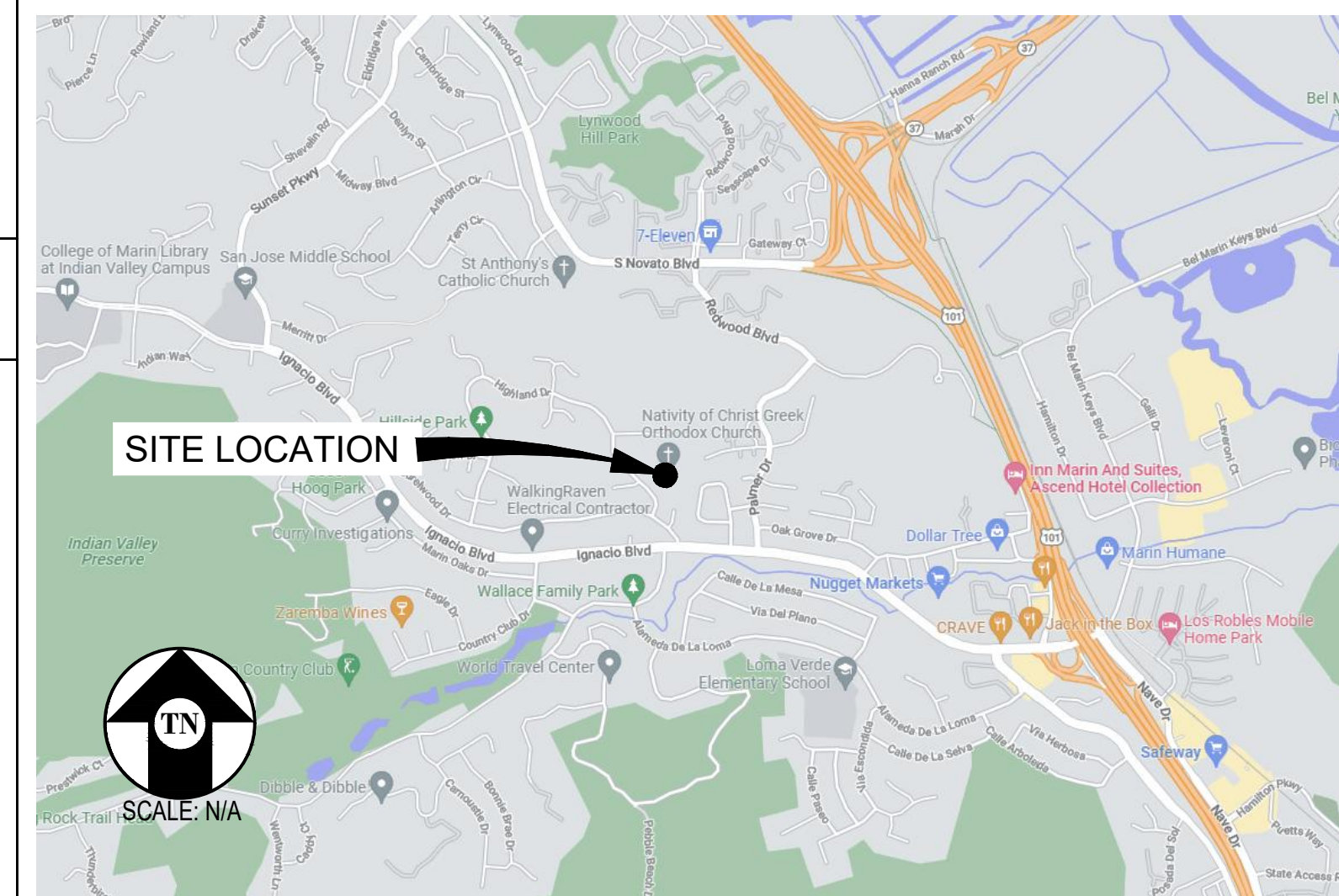
PROJECT DESCRIPTION

- A (N) VERIZON WIRELESS UNMANNED TELECOMMUNICATION FACILITY CONSISTING OF:
- (N) EQUIPMENT LEASE AREA ON GRADE BELOW DECK W/ (N) GROUND MOUNTED EQUIPMENT & (N) UTILITIES TO (N) SITE LOCATION
 - (N) ANTENNA LEASE AREAS ON BUILDING W/ (N) FRP SCREENS & (N) ANTENNAS & ANTENNA EQUIPMENT

PROJECT INFORMATION

SITE NAME:	MARIN COUNTRY CLUB	SITE ACQUISITION COMPANY:	COMPLETE WIRELESS CONSULTING 2009 V STREET SACRAMENTO, CA 95818
MDG LOCATION ID:	5000001534	LEASING CONTACT:	ATTN: MARK LEPAGE (916) 217-9219 MLEPAGE@COMPLETEWIRELESS.NET
COUNTY:	MARIN	ZONING CONTACT:	ATTN: KEVIN GALLAGHER (916) 764-2632 KGALLAGHER@COMPLETEWIRELESS.NET
JURISDICTION:	CITY OF NOVATO	CONSTRUCTION CONTACT:	ATTN: SEAN WALLIN (916) 591-8574 SWALLIN@COMPLETEWIRELESS.NET
APN:	160-150-03 & 160-920-24		
SITE ADDRESS:	1110 HIGHLAND DRIVE NOVATO, CA 94949		
CURRENT ZONING:	PD (PLANNED DISTRICT)		
CONSTRUCTION TYPE:	V-B		
OCCUPANCY TYPE:	U, (UNMANNED COMMUNICATIONS FACILITY)		
POWER:	PG&E		
LATITUDE:	N 38° 04' 15.20" NAD 83 N (38.070889°) NAD 83		
LONGITUDE:	W 122° 33' 11.66" NAD 83 W (-122.553239°) NAD 83		
GROUND ELEVATION:	110.8' AMSL		
PROPERTY OWNER:	NATIVITY OF CHRIST GREEK ORTHODOX CHURCH 1110 HIGHLAND DRIVE NOVATO, CA 94949		
APPLICANT:	VERIZON WIRELESS 2770 SHADELANDS DR, BLDG 11 WALNUT CREEK, CA 94598		

VICINITY MAP



CODE COMPLIANCE

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

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

ALONG WITH ANY OTHER APPLICABLE LOCAL & STATE LAWS AND REGULATIONS

DISABLED ACCESS REQUIREMENTS

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

SHEET INDEX

SHEET	DESCRIPTION	REV	SHEET	DESCRIPTION	REV
T-1.1	TITLE SHEET	-	FRP DRAWINGS BY OTHERS (DATED: 04/30/2024)		
T-1.2	GENERAL NOTES	-	T1	TITLE SHEET	-
T-1.3	SIGNAGE DETAILS	-	N1	NOTES & SPECIFICATIONS	-
C-1	TOPOGRAPHIC SURVEY	-	N2	NOTES & SPECIFICATIONS	-
C-2	TOPOGRAPHIC SURVEY	-	S1	SECTOR A ASSEMBLY-ELEVATIONS	-
C-3	TOPOGRAPHIC SURVEY	-	S2	SECTOR A ASSEMBLY-ELEVATIONS	-
A-1.1	OVERALL SITE PLAN	-	S3	SECTOR C ASSEMBLY-ELEVATIONS	-
A-1.2	ENLARGED SITE PLAN	-	S4	SECTOR B ASSEMBLY-ELEVATIONS	-
A-1.2.1	UTILITY SITE PLAN	-	S5	SECTOR B ASSEMBLY-ELEVATIONS	-
A-1.3	EQUIPMENT PLAN	-	S6	STEEL DETAILS	-
A-1.4	ELECTRICAL PLANS	-			
A-2.1	ANTENNA PLANS	-			
A-2.2	ANTENNA PLAN & ELEVATION	-			
A-3.1	ELEVATIONS	-			
A-3.2	ELEVATIONS	-			
A-3.3	ELEVATIONS	-			
A-4.1	DETAILS	-			
A-5.1	BATTERY SPECIFICATIONS	-			
S-1.1	STRUCTURAL DETAILS	-			
S-1.2	STRUCTURAL DETAILS	-			
S-1.3	STRUCTURAL DETAILS	-			
S-1.4	STRUCTURAL DETAILS	-			
S-1.5	STRUCTURAL DETAILS	-			
E-1.1	ELECTRICAL PLAN & DETAIL	-			
G-1.1	GROUNDING PLANS & DETAILS	-			

DESIGN CRITERIA

RISK CATEGORY: II	ROOF LIVE LOAD: N/A	FLOOR LIVE LOAD: N/A	ALLOW SOIL BEARING: N/A
WIND EXPOSURE: C	DESIGN WIND SPEED: 92 MPH	GROUND ELEVATION: 119'	TOPOGRAPHIC CATEGORY: I
SEISMIC SITE CLASS: D	SEISMIC DESIGN CATEGORY: D	SEISMIC COMPONENT I _p : 1.0	q _p : 1.0 R _p : 2.5
S _{ps} : 1.2	S _{pf} : N/A	S _s : 1.5	S _f : 0.6

TESTS AND SPECIAL INSPECTIONS

STREAMLINE ENGINEERING & DESIGN, INC. DOES NOT REQUIRE ANY STRUCTURAL OBSERVATION OR SPECIAL INSPECTION OF ANY STRUCTURAL COMPONENT ABOVE & BEYOND WHAT IS LISTED BELOW UNLESS OTHERWISE REQUIRED BY JURISDICTION.

PROVIDE COMPLETE TESTING AND INSPECTIONS IN ACCORDANCE WITH THE CBC, CHAPTER 17 AS NOTED BELOW:

- POST INSTALLED ANCHORS IN ACCORDANCE WITH CURRENT ICC REPORTS FOR THE SPECIFIED ANCHORAGES.



PROJECT GENERAL NOTES

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

CONCRETE CORE/DRILLING NOTES

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

CONSTRUCTION NOTES

- EXISTING BUILDING CONSTRUCTION CONDITIONS INDICATED ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO PROCEEDING WITH CONSTRUCTION OR ORDERING OF MATERIALS. IF EXISTING CONDITIONS DO NOT ALLOW FOR DETAILS OF CONSTRUCTION AS SHOWN ON THESE DRAWINGS, NOTIFY ENGINEER OF RECORD FOR RESOLUTION PRIOR TO PROCEEDING. CONTRACTOR SHALL EXPOSE AND REVIEW EXISTING CONDITIONS IN A TIMELY MANNER SUCH THAT ALTERNATE DESIGNS OR DETAILS, IF REQUIRED, MAY BE GENERATED WITHOUT DELAY TO THE PROJECT.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL NOT ALTER, DAMAGE OR REMOVE ANY PART OF THE EXISTING STRUCTURE UNLESS SPECIFICALLY DETAILED ON THESE DRAWINGS.
- THE INTENT OF THESE DRAWINGS IS THAT THE WORK OF THE ADDITION, ALTERATION, REHABILITATION, OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH THE 2022 CBC. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH THE 2022 CBC, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE PREPARED AND SUBMITTED TO AND APPROVED BY THE BUILDING DEPARTMENT PRIOR TO PROCEEDING WITH THE WORK.
- ALL WORK AND MATERIALS SHOWN ARE NEW UNLESS INDICATED AS EXISTING (E).
- IT MAY BE NECESSARY TO REMOVE ARCHITECTURAL FINISHES, PLUMBING PIPES AND FIXTURES, ELECTRICAL CONDUIT, FIXTURES, PANELS, BOXES, TELEPHONE OR FIRE ALARM WIRING AND FIXTURES OR OTHER NON-STRUCTURAL ITEMS TO INSTALL STRUCTURAL WORK AND MATERIALS SHOWN ON THESE DRAWINGS. SUCH ITEMS SHALL BE REMOVED, REPAIRED AND/OR REPLACED TO MATCH PRE-CONSTRUCTION CONDITIONS AT THE CONTRACTORS EXPENSE.
- ALL WEATHER PROOFING, INCLUDING BUT NOT LIMITED TO TORCH DOWN, CAULKING, Z-FLASHING OR ANY OTHER MATERIAL THAT MAY BE ALTERED DURING INSTALLATION SHALL BE REPAIRED REPLACED AND/OR MODIFIED TO ENSURE THE BUILDING AT THE INSTALLATION SITE IS WEATHER PROOF.
- ANY PROPOSED SUBSTITUTIONS FOR STRUCTURAL MEMBERS, HARDWARE, ANCHOR TYPES, OR DETAILING INDICATED IN THESE DRAWINGS SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO ORDERING MATERIALS. SUCH REVIEW SHALL BE BILLED ON A TIME AND MATERIALS BASIS TO THE CONTRACTOR WITH NO GUARANTEE THAT THE SUBSTITUTION WILL BE ALLOWED.
- CONTRACTOR SHALL ENSURE ALL ROOF AREAS HAVE POSITIVE SLOPE TO ALL EXISTING ROOF DRAINS. PROVIDE ADDITIONAL CRICKETS OR BUILD UP ROOFING AS REQUIRED TO PROVIDE POSITIVE DRAINAGE AROUND ALL NEW CONSTRUCTION INCLUDING ANY CURBS, SLEEPERS, SUPPORT BASES, ETC.

CONCRETE NOTES

- ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-19. CONCRETE MIX DESIGN SHALL BE REVIEWED BY AN INDEPENDENT TESTING LABORATORY AND SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW.
- CONTRACTOR SHALL VERIFY SITE CONDITIONS & ALL DIMENSIONS PRIOR TO STARTING WORK. NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES FOR RESOLUTION PRIOR TO PROCEEDING.
- ALL CONCRETE SHALL BE A MINIMUM 5 SACK MIX WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.
- CEMENT SHALL CONFORM TO ASTM C150, TYPE II.
- CONCRETE AGGREGATES SHALL CONFORM TO ASTM C33.
- ALL REINFORCING STEEL SHALL BE GRADE 60 AND CONFORM TO ASTM A615 UNLESS OTHERWISE NOTED. SEE PLAN FOR SIZE AND PLACEMENT.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064.
- REINFORCING STEEL SHALL BE FABRICATED ACCORDING TO "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION".
- MINIMUM LAP SPICE SHALL BE 56 BAR DIAMETERS UNLESS OTHERWISE NOTED.
- MINIMUM BEND DIAMETER SHALL BE 6 BAR DIAMETERS UNLESS OTHERWISE NOTED.
- MINIMUM REINFORCING COVERAGE IS 3" UNLESS OTHERWISE NOTED.
- CONCRETE SHALL BE PLACED AGAINST FIRM UNDISTURBED NON EXPANSIVE SOIL AT DEPTH SHOWN. WHERE OTHER CONDITIONS ARE ENCOUNTERED DURING EXCAVATION THE ENGINEER SHALL BE NOTIFIED AND REMEDIAL MEASURES PRESCRIBED PRIOR TO PROCEEDING WITH WORK.
- BOTTOM OF ALL FOOTING TRENCHES SHALL BE CLEAN AND LEVEL. REMOVE ALL DEBRIS BEFORE PLACING ANY CONCRETE.
- ALL ANCHOR BOLTS & THREADED ROD SHALL BE ASTM F1554, GR.36 MINIMUM UNLESS OTHERWISE NOTED, NEW, & WITHOUT SIGNIFICANT RUST.
- A ¼" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE UNLESS OTHERWISE NOTED.
- REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE SHALL BE SECURELY POSITIONED BEFORE PLACING CONCRETE.
- ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY MOTORIZED VIBRATORY MEANS AND THOROUGHLY WORKED AROUND REINFORCEMENT, EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

ROOFING & WATERPROOFING NOTES:

- CONTRACTOR SHALL JOINTLY GUARANTEE THE FINISHED INSTALLATION AS WEATHER TIGHT AND FREE DRAINING ON COMPLETION DIRECTLY TO THE BUILDING OWNER & TO THE WIRELESS CARRIER FOR ALL WORK SHOWN HEREIN.
- ALL WORK SHALL BE PERFORMED IN SUB-UNITS SUCH THAT CUT OPEN WEATHERPROOFING SYSTEMS ARE REPAIRED PERMANENTLY OR TEMPORARILY IN DEFENSE OF ANY INCLEMENT WEATHER AS MAY OCCUR DURING CONSTRUCTION.
- WHEREVER PENETRATION OF PROPRIETARY WEATHERPROOFING SYSTEMS OCCURS, THE CONTRACTOR SHALL EMPLOY SUBCONTRACTORS APPROVED FOR APPLICATION OF SAID SYSTEM AND WITH MINIMUM OF 3 YEARS EXPERIENCE WITH THE APPLICABLE PRODUCT(S) AND ITS(THEIR) APPLICATION (E.G. DRY-VIT, GAKO-FLEX DECKING &/OR ROOFING, SINGLE-PLY ROOFING SYSTEMS (VARIOUS), ETC.).
- WHERE APPLICABLE THE CONTRACTOR SHALL EMPLOY THE BUILDING OWNER'S ROOFING CONTRACTOR FOR ALL PATCHWORK.
- CONTRACTOR IS RESPONSIBLE TO INVESTIGATE ALL WEATHERPROOFING REQUIREMENTS FOR THE WORK SHOWN HEREIN PRIOR TO SUBMITTING A BID, AND SHALL NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES IN DETAILS SHOWN THAT MAY RESULT IN SUBSTANDARD WEATHERPROOFING IN THE FINISHED ASSEMBLY.
- CONTRACTOR SHALL ENSURE ALL ROOF AREAS HAVE POSITIVE SLOPE TO ALL EXISTING ROOF DRAINS. PROVIDE ADDITIONAL CRICKETS OR BUILD UP ROOFING AS REQUIRED TO PROVIDE POSITIVE DRAINAGE AROUND ALL NEW CONSTRUCTION INCLUDING ANY CURBS, SLEEPERS, SUPPORT BASES, ETC.

STRUCTURAL STEEL NOTES

- ALL STEEL CONSTRUCTION INCLUDING FABRICATION, ERECTION AND MATERIALS SHALL COMPLY WITH ALL REQUIREMENTS OF THE 2016 AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND THE 2022 CBC.
- ALL STRUCTURAL STEEL SHALL BE ASTM A36 UNLESS OTHERWISE NOTED. ALL WF (WIDE FLANGE) & WT (TEE) SHAPES TO BE ASTM A992 (F_y=50,000 PSI) UNLESS NOTED OTHERWISE. ALL STRUCTURAL TUBING (TS OR HSS) SHALL BE ASTM A500 GRADE B (F_y=46,000 PSI). ALL STEEL PIPE SHALL BE ASTM A53 (TYPE E OR S, GRADE B (F_y=35,000 PSI)) SCHEDULE 40 WITH OUTSIDE DIAMETERS GIVEN UNLESS OTHERWISE NOTED.
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES UNLESS OTHERWISE NOTED AND SHALL CONFORM TO AISC & AWS D1.4. WHERE FILLET WELD SIZES ARE NOT SHOWN PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC SPECIFICATION. PAINTED SURFACES SHALL BE TOUCHED UP.
- ALL WELDING SHALL BE PERFORMED BY QUALIFIED, CERTIFIED WELDERS.
- HIGH STRENGTH BOLTS SHALL BE GALVANIZED ASTM F3125/F3125M GRADE A325 MINIMUM. BOLTED CONNECTIONS SHALL BE BEARING TYPE. SEE PLANS FOR LOCATION, NUMBER, & SIZE OF BOLTS.
- HIGH STRENGTH BOLT NUTS SHALL BE ASTM A563/A563M AND WASHERS SHALL BE ASTM F436/ F436M.
- THREADED RODS SHALL BE SAE J429, GRADE 2 U.O.N.
- ALL HOLES FOR BOLTED CONNECTIONS SHALL BE 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER. USE STANDARD AISC GAGE AND PITCH FOR BOLTS EXCEPT AS NOTED OTHERWISE. HOLES FOR ANCHOR BOLTS IN BASE PLATES MAY BE AISC "OVERSIZE" HOLES WHERE ACCOMPANIED BY OVERSIZED HARDENED HOT DIPPED GALVANIZED WASHERS.
- ALL SHOP FABRICATED STEEL STRUCTURAL MEMBERS FOR EXTERIOR USE SHALL BE HOT DIP GALVANIZED PER ASTM A123 AFTER FABRICATION & PAINTED PER CUSTOMER SPECIFICATIONS AS REQUIRED. STEEL FOR INTERIOR USE SHALL BE SHOP COAT OR GALVANIZED & PAINTED.
- ALL FIELD FABRICATED GALVANIZED STEEL THAT IS CUT, GROUND, DRILLED, WELDED OR DAMAGED SHALL BE TREATED WITH "ZINC RICH" COLD GALVANIZING SPRAY OR COATING. NO RAW STEEL SHALL BE EXPOSED.
- AT ALL WEB STIFFENER PLATES LEAVE ¾"Ø (OR K, WHICHEVER IS LARGER) HOLE @ WEB/FLANGE INTERSECTION UNLESS NOTED OTHERWISE.
- U-BOLTS AT ANTENNA & RRU MOUNT TO BE GALVANIZED SAE J429, GRADE 2 WITH J995 NUTS U.O.N.
- ALL STRUT MEMBERS USED IN EXTERIOR APPLICATIONS SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 OR ASTM A153.
- ALL STAINLESS STEEL BOLTED CONNECTIONS SHALL BE ASTM F593-17 ALLOY GROUP 1 OR 2 AND STAINLESS STEEL NUTS SHALL BE ASTM F594-09 (2015).

EXPANSION & EPOXY ANCHORS

- EXPANSION AND EPOXY ANCHORS SHALL BE IN CONFORMANCE WITH ALL REQUIREMENTS OF THE 2022 CALIFORNIA BUILDING CODE (CBC).
- ALL ANCHORS PROVIDED SHALL BE INCLUDED IN EVALUATION REPORTS OF THE INTERNATIONAL CODE COUNCIL (ICC), AND SHALL BE EVALUATED FOR 2021 IBC MINIMUM REQUIREMENTS IN THE ICC REPORT
- CONCRETE EXPANSION ANCHORS SHALL BE KWIK BOLT T22 BY HILTI, INC., TULSA, OKLAHOMA AS PER ICC REPORT NO. ESR-4266 OR APPROVED EQUIVALENT.
- CMU EXPANSION ANCHORS SHALL BE KWIK BOLT T22 BY HILTI, INC., TULSA, OKLAHOMA AS PER ICC REPORT NO. ESR-4561 OR APPROVED EQUIVALENT. ANCHORS SHALL BE INSTALLED A MINIMUM OF 1½" FROM ANY VERTICAL MORTAR JOINT TYPICAL. ANCHORS TO BE SPACED 8 INCHES ON CENTER MINIMUM AND LIMITED TO ONE ANCHOR PER CELL.
- CONCRETE ADHESIVE EPOXY ANCHORS SHALL BE HIT RE-500 V3 BY HILTI, INC., TULSA, OKLAHOMA AS PER ICC REPORT NO. ESR-3814 OR APPROVED EQUIVALENT.
- GROUT FILLED CMU ADHESIVE EPOXY ANCHORS SHALL BE HIT-HY 200 BY HILTI, INC., TULSA, OKLAHOMA AS PER ICC REPORT NO. ESR-3963 OR APPROVED EQUIVALENT.
- INSTALL EXPANSION AND EPOXY ANCHORS WITH SPECIAL INSPECTION IN ACCORDANCE WITH THE 2022 CBC, TABLE 1705.3, AND ALL REQUIREMENTS OF THE MANUFACTURER, THE MANUFACTURER'S ICC APPROVAL AND THESE DRAWINGS.
- EXPANSION ANCHORS SHALL BE 304/316 STAINLESS STEEL U.O.N. EPOXY ANCHOR THREADED ROD SHALL BE ASTM F593 CW1 (316) (¼" TO ¾") OR F593 CW2 (316) (¾" TO 1½") STAINLESS STEEL U.O.N.
- LOCATE AND AVOID REINFORCEMENT AND OTHER EMBEDDED ITEMS WHEN INSTALLING ANCHORS, TYPICAL. SEE CONCRETE CORE DRILLING NOTES FOR ADDITIONAL INFORMATION.
- THE SPECIAL INSPECTOR MUST MAKE PERIODIC INSPECTIONS DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE AND DIMENSIONS, CONCRETE MEMBER THICKNESS, ANCHOR SPACING, EDGE DISTANCES, TIGHTENING TORQUE, HOLE DIAMETER, DEPTH AND CLEANLINES, ANCHOR EMBEDMENT AND ADHERENCE TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. SEE NOTE 11 BELOW FOR FREQUENCY OF INSPECTIONS.
- 50% OF ALL ANCHORS, INCLUDING ALTERNATE BOLTS IN A GROUP OF ANCHORS, SHALL BE INSPECTED PER NOTE 10 ABOVE AND TORQUE TESTED PER THE ICC REPORT TEST VALUES NOTED BELOW:

KB T22:

CONCRETE TORQUE TEST VALUES:

¾"=30 FT LB ½"=40 FT LB ⅜"=60 FT LB ¼"=125 FT LB

CMU TORQUE TEST VALUES:

¾"=15 FT LB ½"=25 FT LB ⅜"=35 FT LB ¼"=50 FT LB

EPOXY ANCHOR:

CONCRETE TORQUE TEST VALUES:

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

WOOD

- ALL SAWN LUMBER SHALL BE DOUGLAS FIR-LARCH AS GRADED BY THE WEST COAST LUMBER INSPECTION BUREAU (WCLBI) IN ACCORDANCE WITH STANDARD GRADING RULES NO. 17 TYPICAL UNLESS NOTED OTHERWISE. ALL 2X AND 4X FRAMING LUMBER SHALL BE DOUGLAS FIR #1 OR BTR, ALL 6X FRAMING LUMBER SHALL BE SELECT STRUCTURAL.
- ALL STRUCTURAL SHEATHING USED FOR SHEARWALLS AND ROOF SHEATHING SHALL BE MANUFACTURED IN ACCORDANCE WITH PRODUCT STANDARDS OF APA - THE ENGINEERED WOOD ASSOCIATION. SHEATHING SHALL MEET PS2-92 PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL-USE PANELS AND SHALL BE STAMPED WITH APA TRADEMARK.
- ALL FOUNDATION PLATES OR SILLS ON CONCRETE SLABS WHICH ARE IN DIRECT CONTACT WITH EARTH, AND PLATES OR SILLS ON CONCRETE OR MASONRY FOUNDATIONS, SHALL BE PRESSURE TREATED.
- ALL WOOD SHALL HAVE A MOISTURE CONTENT OF NOT MORE THAN 19% WHEN SHEATHING IS APPLIED.
- 6" MINIMUM CLEARANCE SHALL BE MAINTAINED AT ALL EXTERIOR WALLS BETWEEN FINISH GRADE AND BOTTOM OF WOOD WALLS.
- BEARING AND SHEARWALLS SHALL HAVE DOUBLE TOP PLATES LAPPED AT WALL CORNERS AND INTERSECTIONS AND PLATES SHALL BE INTERNALED WITH 3-16D AT SUCH LOCATIONS. FOR PLATE SPLICE DETAILS, SEE DRAWINGS.
- SILL PLATE ANCHOR BOLTS SHALL BE INSTALLED WITH PLATE WASHERS 3X3X0.229" BETWEEN NUT AND PLATE.
- PROVIDE SOLID BLOCKING BETWEEN JOISTS AND RAFTERS AT ALL SUPPORTS.
- PROVIDE BLOCKING AT ALL CEILING LEVELS.
- JOISTS UNDER AND PARALLEL TO PARTITIONS SHALL BE DOUBLED AND NAILED TOGETHER.
- HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT PLUS ¼".
- HOLES FOR LAG SCREWS SHALL BE BORED AS FOLLOWS:
a.) THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK.
b.) THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 60% TO 75% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
- LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. SOAP MAY BE USED TO LUBRICATE THE SCREWS.
- ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD APPLIES ALSO TO INSERTED EXPANDING FASTENERS, RED HEAD, ETC.

BOLT DIAMETER	ML WASHER	STEEL WASHER
ø½"	ø2¼"X¾"	2½"X2½"X¼"
ø¾"	ø3"X¾"	3"X3"X½"
ø⅞"	ø3½"X¾"	3½"X3½"X¾"
ø1"	ø4"X¾"	3¾"X3¾"X¾"

- ALL BOLTS AND LAG SCREWS SHALL BE TIGHTENED AT INSTALLATION AND RETIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
- LAY ALL STRUCTURAL SHEATHING ON ROOF AND FLOORS WITH FACE GRAIN PERPENDICULAR TO SUPPORT TYPICAL UNLESS NOTED OTHERWISE. USE PLY-CLIPS AT UNSUPPORTED SHEATHING EDGES.
- CONNECTOR HARDWARE MODEL NUMBER ARE THOSE FOR SIMPSON STRONG-TIE COMPANY. ALL JOIST HANGERS SHALL BE SIMPSON U SERIES UNLESS NOTED OTHERWISE. EQUIVALENT CONNECTORS WITH ICC ACCEPTANCE MAY BE SUBMITTED FOR REVIEW AS AN ALTERNATE.
- NOTIFY STRUCTURAL ENGINEER AFTER WALL, FLOOR, AND ROOF SHEATHING NAILING HAS BEEN COMPLETED AND A MINIMUM OF 48 HOURS PRIOR TO CONCEALING SHEATHING.

FRAMING NOTES

- ALL JOINTS AND PENETRATIONS SHALL BE CAULKED AND SEALED.
- ALL 2X OR 4X FRAMING LUMBER SHALL BE DOUGLAS FIR #2 OR BTR, 6X DOUGLAS FIR #1 OR BTR UNLESS OTHERWISE NOTED.
- ALL EXTERIOR USE LUMBER SHALL BE PRESSURE TREATED W/ FASTENERS HDG & METAL CONNECTORS G135 OR BETTER AS REQUIRED FOR CORROSION RESISTANCE TO THE PRESERVATIVE TYPE USED.
- ALL STRUCTURAL CONNECTORS SHALL BE AS SPECIFIED OR AN EQUIVALENT.
- NAILING SHALL CONFORM WITH THE REQUIREMENTS OF THE 2022 CBC UNLESS OTHERWISE NOTED. DRAWING SPECIFIC CALLOUTS SUPERCEDE CODE NAILING REQUIREMENTS
- HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT PLUS ¼".
- HOLES FOR LAG SCREWS ø⅜" OR GREATER SHALL BE BORED AS FOLLOWS:
A. THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK.
B. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 75% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
C. LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. PROVIDE LIQUID SOAP AS REQUIRED TO LUBRICATE LAG SCREWS DURING INSTALLATION.
- LAG SCREWS SHALL BE GALVANIZED ASTM A307 MINIMUM. BOLTED CONNECTIONS SHALL BE BEARING TYPE. SEE PLANS FOR LOCATION, NUMBER, & SIZE OF BOLTS.

TRENCHING NOTES

- CALL BEFORE YOU DIG. CONTRACTOR IS REQUIRED TO CALL 811 (NATIONWIDE "CALL BEFORE YOU DIG" HOTLINE) AT LEAST 72 HOURS BEFORE DIGGING.
- VERIFY ALL TRENCHING REQUIREMENTS WITH SERVING UTILITIES.
- RESTORE GRADE TO ORIGINAL CONDITION OR BETTER.
- RETURN FILL TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM STANDARDS.
- RESTORE CUT CONCRETE OR ASPHALT TO ORIGINAL CONDITION OR BETTER.

At all services & grounding trenches, provide "WARNING" tape at 12" below grade.



CALL
"CALL BEFORE YOU DIG"

811

NATIONWIDE UNDERGROUND SERVICE ALERT

Issued For:

MARIN
COUNTRY CLUB

1110 HIGHLAND DRIVE
NOVATO, CA 94949

PREPARED FOR

verizon

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:



MDG LOCATION ID: 5000001534

PROJECT ID: 2013447

DRAWN BY: C. CODY

CHECKED BY: J. GRAY

APPROVED BY: J. SPORE

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	05/08/24	CD 100%	C.C.
2	03/07/24	CLIENT REV	C.C.
1	01/31/24	CD 95%	C.C.
0	10/09/23	CD 90%	C.C.

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ENGINEER:



SHEET TITLE:

GENERAL
NOTES

SHEET NUMBER:

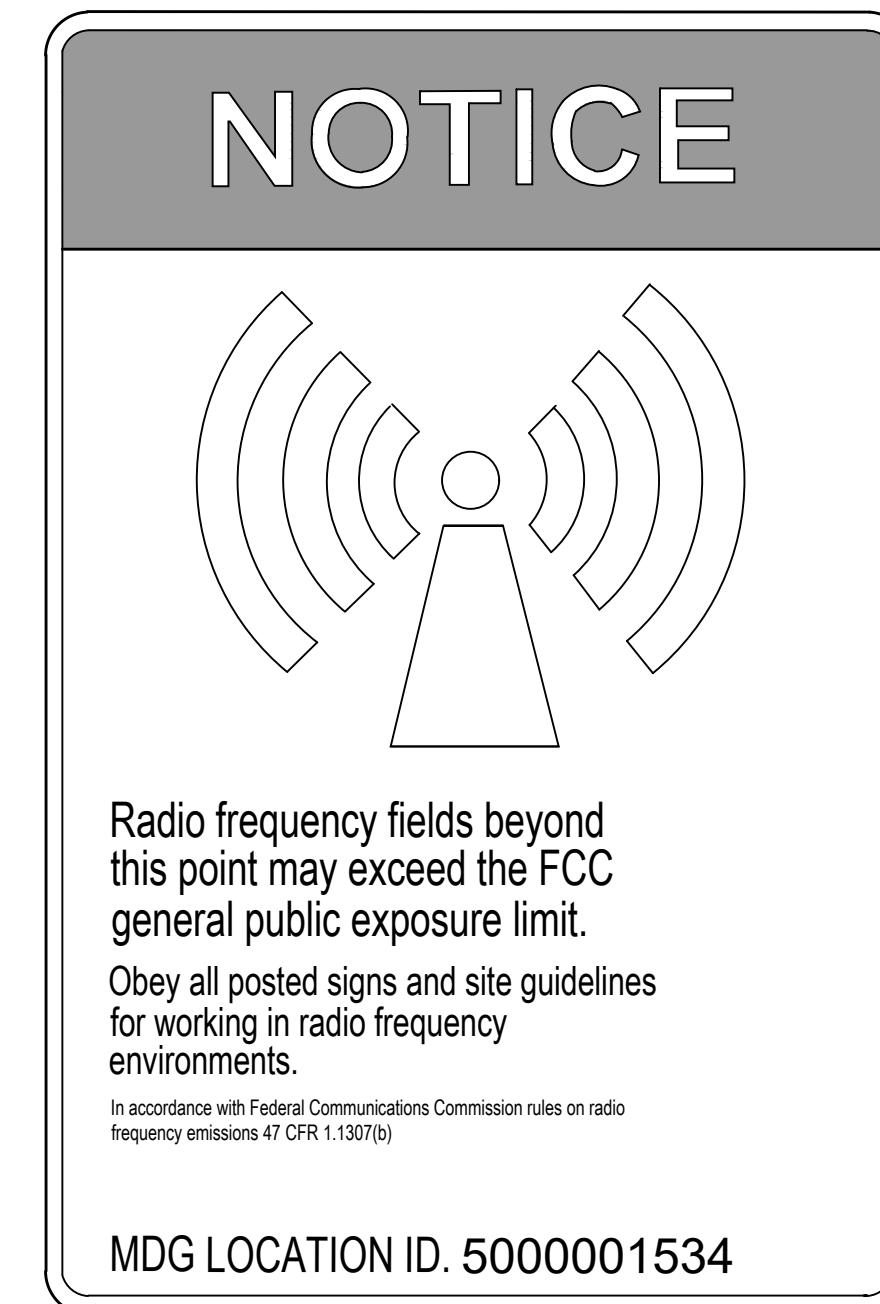
T-1.2

SIGNAGE AND STRIPING INFORMATION

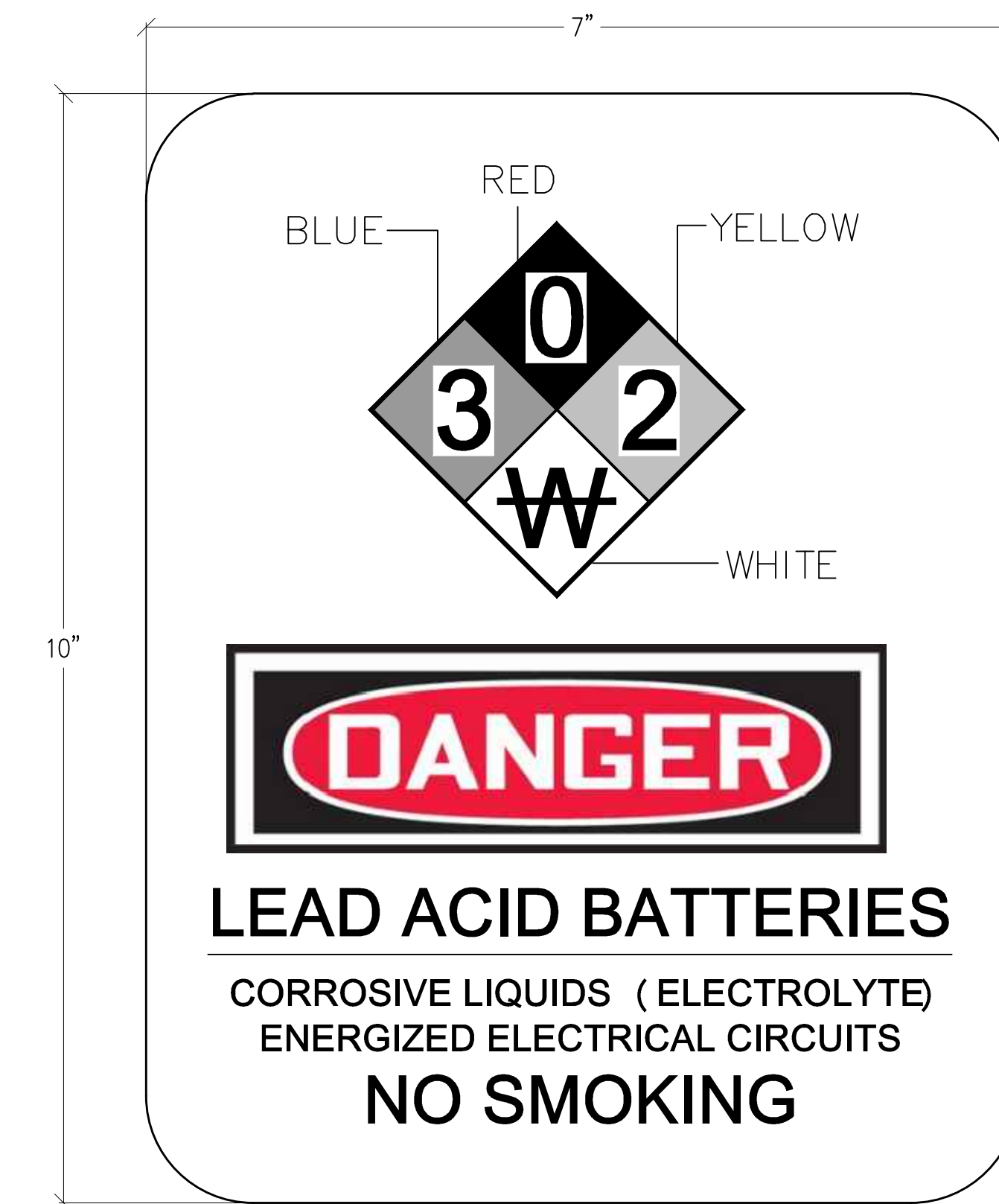
1. THE FOLLOWING INFORMATION IS A GUIDELINE WITH RESPECT TO PREVAILING STANDARDS LIMITING HUMAN EXPOSURE TO RADIO FREQUENCY ENERGY AND SHOULD BE USED AS SUCH. IF THE SITE'S EMF REPORT OR ANY LOCAL, STATE OR FEDERAL GUIDELINES OR REGULATION SHOULD BE IN CONFLICT WITH ANY PART OF THESE NOTES OR PLANS, THE MORE RESTRICTIVE GUIDELINE OR REGULATION SHALL BE FOLLOWED AND OVERRIDE THE LESSER.
2. THE PUBLIC LIMIT OF RF EXPOSURE ALLOWED BY VERIZON WIRELESS IS 1mWcm^2 AND THE OCCUPATIONAL LIMIT OF RF EXPOSURE ALLOWED BY VERIZON WIRELESS IS 5mWcm^2
3. IF THE BOTTOM OF THE ANTENNA IS MOUNTED (8) EIGHT FEET ABOVE THE GROUND OR ROOF LINE OF THE PERSONAL COMMUNICATION SYSTEM (PCS) AND DOES NOT EXCEED THE PUBLIC LIMIT OF RF EXPOSURE LIMIT THEN NO STRIPING OR BARRICADES SHOULD BE NEEDED.
4. IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS EXCEEDED AND THE AREA IS PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR CANNOT BE LOCKED OR THERE IS AN EXISTING FIRE EGRESS), THEN BOTH BARRICADES AND STRIPING WILL BE NEEDED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE BARRICADES AND STRIPING WILL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER THE CONSTRUCTION OF THE SITE. USE THE PLANS AS A GUIDELINE FOR PLACEMENT OF SUCH BARRICADES AND STRIPING.
5. IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS NOT EXCEEDED AND THE AREA IS NOT PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR IS LOCKED), THEN JUST STRIPING OUT TO THE PUBLIC LIMIT WILL BE NEEDED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE STRIPING WILL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER THE CONSTRUCTION OF THE SITE. USE THE PLANS AS A GUIDELINE FOR PLACEMENT OF SUCH STRIPING.
6. ALL TRANSMIT ANTENNAS REQUIRE A (3) THREE LANGUAGE WARNING SIGN WRITTEN IN ENGLISH, SPANISH, AND CHINESE. THIS SIGN WILL BE PROVIDED TO THE CONTRACTOR BY THE VERIZON WIRELESS CONSTRUCTION MANAGER AT THE TIME OF CONSTRUCTION. THE LARGER SIGN SHALL BE PLACED AT ALL ROOF ACCESS LOCATIONS AND ON ALL BARRICADES IN PLAIN SIGHT AND THE SMALLER SIGN SHALL BE PLACED ON THE ANTENNAS THEMSELVES OR ON THE OUTSIDE OF THE ANTENNA ENCLOSURES IN A MANNER THAT IS EASILY SEEN BY ANY PERSON ON THE ROOF. WARNING SIGNS SHALL COMPLY WITH ANSI C95.2 COLOR, SYMBOL, AND CONTENT CONVENTIONS. ALL SIGNS WILL HAVE VERIZON WIRELESS'S NAME AND THE COMPANY CONTACT INFORMATION (e.g. TELEPHONE NUMBER) TO ARRANGE FOR ACCESS TO THE RESTRICTED AREAS. THIS TELEPHONE NUMBER WILL BE PROVIDED TO THE CONTRACTOR BY THE VERIZON WIRELESS CONSTRUCTION PROJECT MANAGER AT THE TIME OF CONSTRUCTION.
7. PHOTOS OF ALL STRIPING, BARRICADES, AND SIGNAGE WILL BE PART OF THE CONTRACTORS CLOSE OUT PACKAGE AND WILL BE TURNED INTO THE VERIZON WIRELESS CONSTRUCTION PROJECT MANAGER AT THE END OF CONSTRUCTION. STRIPING SHALL BE DONE WITH FADE RESISTANT YELLOW SAFETY PAINT IN A CROSS HATCH PATTERN. ALL BARRICADES SHALL BE MADE OF AN RF FRIENDLY MATERIAL SO THAT THEY DO NOT BLOCK OR INTERFERE WITH THE OPERATION OF THE SITE AND SHALL BE PAINTED WITH FADE RESISTANT YELLOW SAFETY PAINT. THE CONTRACTOR SHALL PROVIDE ALL RF FRIENDLY BARRICADES NEEDED AND SHALL PROVIDE THE VERIZON WIRELESS CONSTRUCTION PROJECT MANAGER WITH A DETAILED SHOP DRAWING OF EACH BARRICADE.
8. ALL REQUIRED SIGNAGE WILL BE INSTALLED AS NEEDED AND FIELD VERIFIED.



1 TYPICAL ADDRESS SIGN DETAIL
(@ LEASE AREA ACCESS DOOR)



2 TYPICAL CAUTION SIGN
NOTE: SIGN TO BE PERMANENTLY MOUNTED AT ANTENNA LOCATIONS.



3 BATTERY SIGN

Issued For:
MARIN COUNTRY CLUB
1110 HIGHLAND DRIVE
NOVATO, CA 94949

PREPARED FOR
verizon
2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:
COMPLETE
Wireless Consulting, Inc.

MDG LOCATION ID: 5000001534
PROJECT ID: 2013447
DRAWN BY: C. CODY
CHECKED BY: J. GRAY
APPROVED BY: J. SPORE

ISSUE STATUS			
REV	DATE	DESCRIPTION	CAD
3	05/08/24	CD 100%	C.C.
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0	10/09/23	CD 90%	C.C.

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ENGINEER:

3843 TAYLOR ROAD, SUITE A, Loomis, CA 95660
Contact: Kevin Sorenson Phone: 916-860-1800
E-Mail: kevin@streamlineeng.com Fax: 916-660-1941
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SHEET TITLE:
**SIGNAGE
DETAILS**

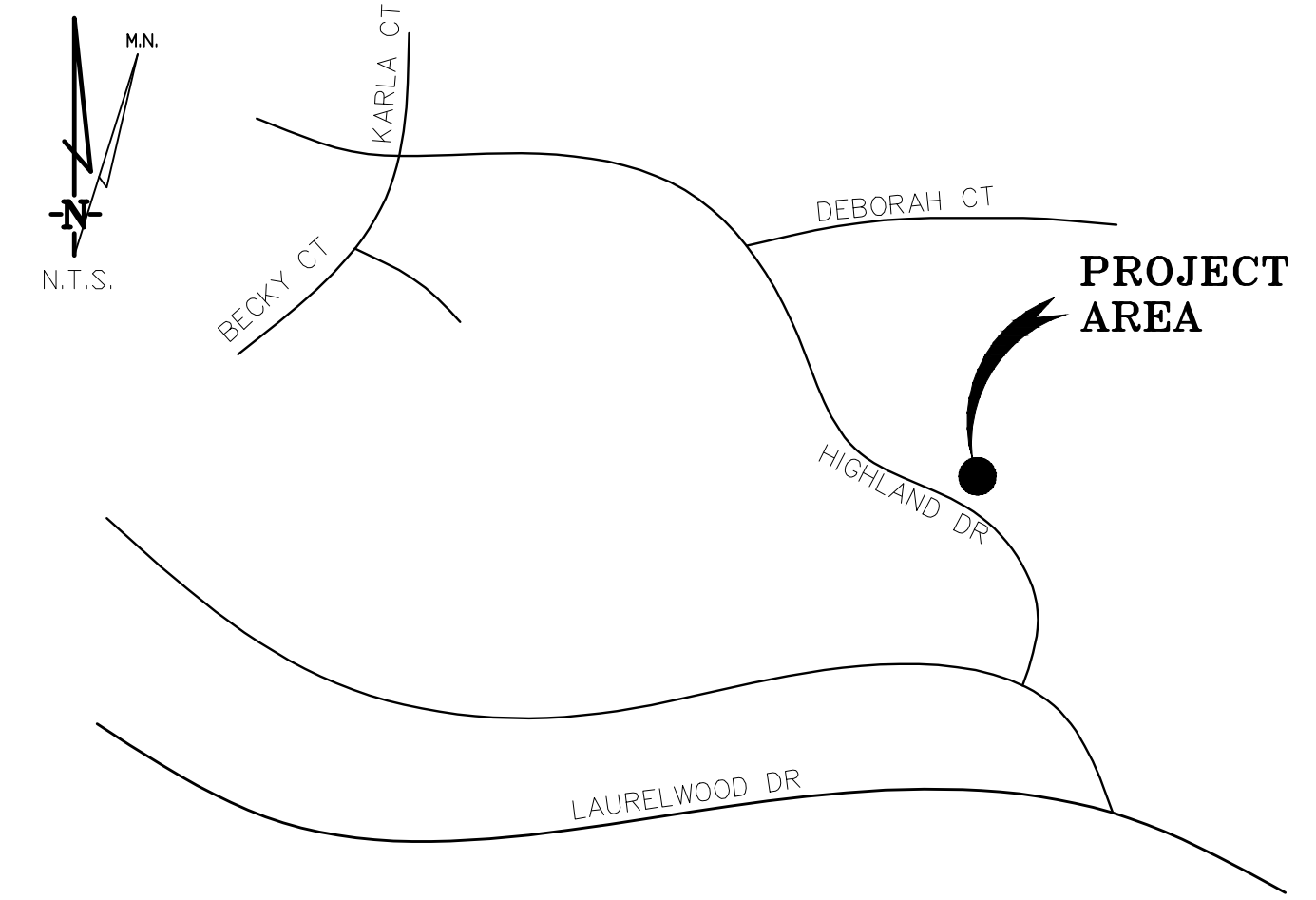
SHEET NUMBER:
T-1.3

LEGEND

- PARCEL BOUNDARY
- NEIGHBORING PARCEL BOUNDARY
- LEASE AREA BOUNDARY
- UTILITIES
- (E) EASEMENTS
- (P) EASEMENTS
- FENCE LINE
- JP JOINT UTILITY POLE
- TP TELEPHONE POLE
- EP ELECTRICAL POLE
- 6" OAK TREE WITH DIAMETER BREST HEIGHT (DBH)
- W WATER VALVE
- W WATER BOX
- SSMH SANITARY SEWER MANHOLE
- SDMH STORM DRAIN MANHOLE
- DI DROP INLET

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 Phone: (530) 885-9226
 Fax: (530) 885-1009

NOVATO, CA

VICINITY MAP

DATE OF SURVEY: 05-15-18

SURVEYED BY OR UNDER DIRECTION OF: KENNETH D. GEIL, RCE 14803 LOCATED IN THE COUNTY OF MARIN, STATE OF CALIFORNIA

CONTRACTOR IS RESPONSIBLE TO VERIFY LEASE AREA PRIOR TO CONSTRUCTION.

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

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

N.G.V.D. 1929 CORRECTION: SUBTRACT 2.70' FROM ELEVATIONS SHOWN.

CONTOUR INTERVAL: 1 FT.

ASSESSOR'S PARCEL NUMBER: 160-150-03

LANDLORD(S): NATIVITY OF CHRIST GREEK ORTHO. CHURCH
 1110 HIGHLAND DR.
 NOVATO, CA 94949

Date of Observation: 05-15-18

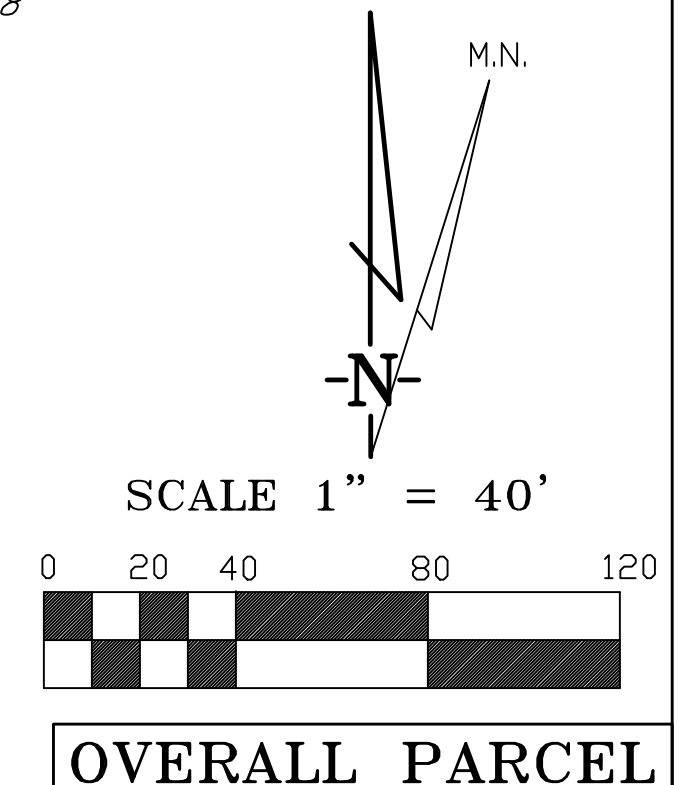
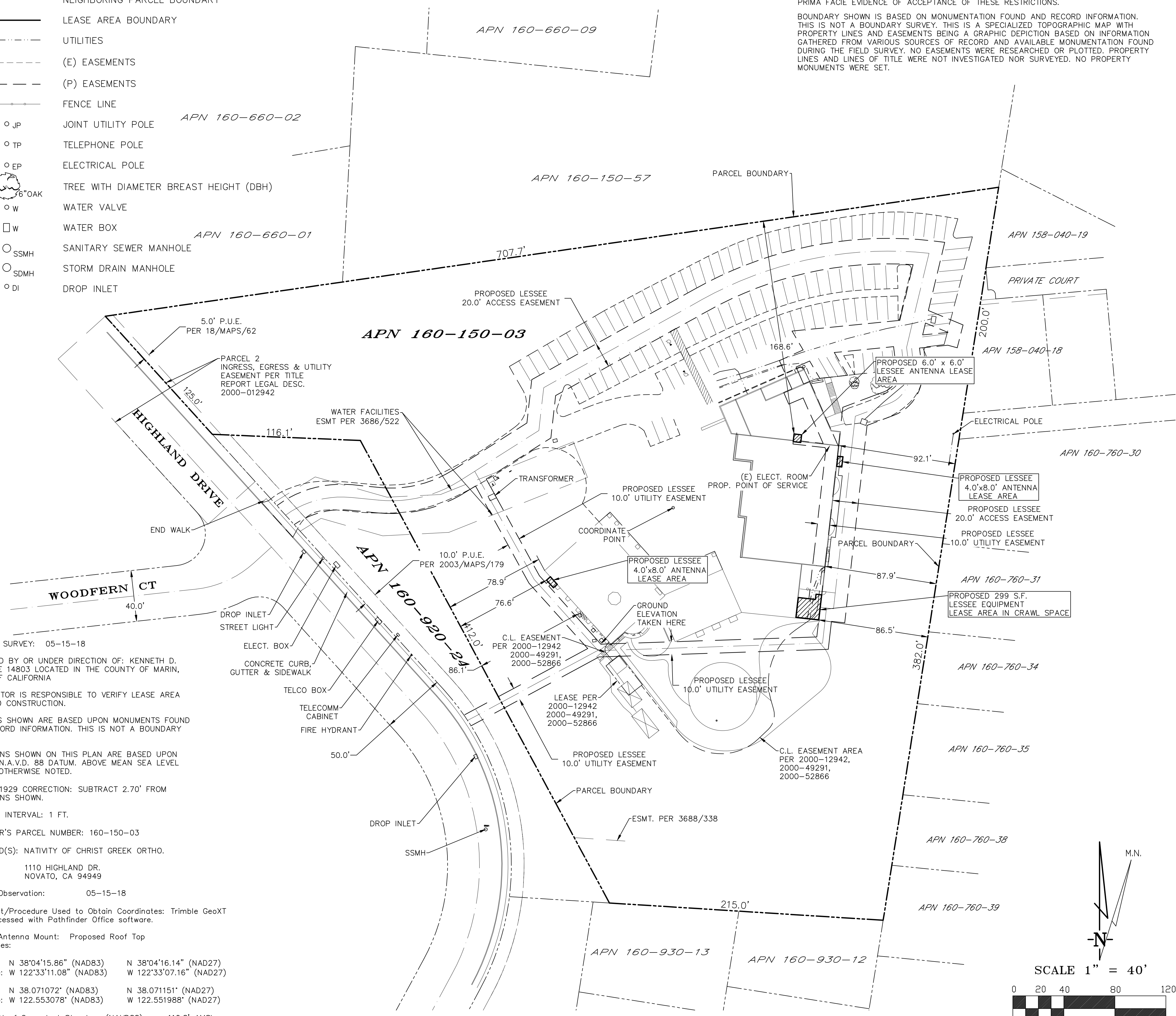
Equipment/Procedure Used to Obtain Coordinates: Trimble GeoXT post processed with Pathfinder Office software.

Type of Antenna Mount: Proposed Roof Top
 Coordinates:

Latitude: N 38°04'15.86" (NAD83) N 38°04'16.14" (NAD27)
 Longitude: W 122°33'11.08" (NAD83) W 122°33'07.16" (NAD27)

Latitude: N 38.071072° (NAD83) N 38.071151° (NAD27)
 Longitude: W 122.553078° (NAD83) W 122.551988° (NAD27)

ELEVATION of Ground at Structure (NAVD88) 110.8' AMSL
 Height of Structure: (Roof Ridge) 44.8' AGL
 Overall Height: (Religious Symbol) 54.9' AGL



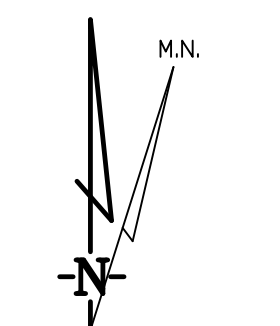
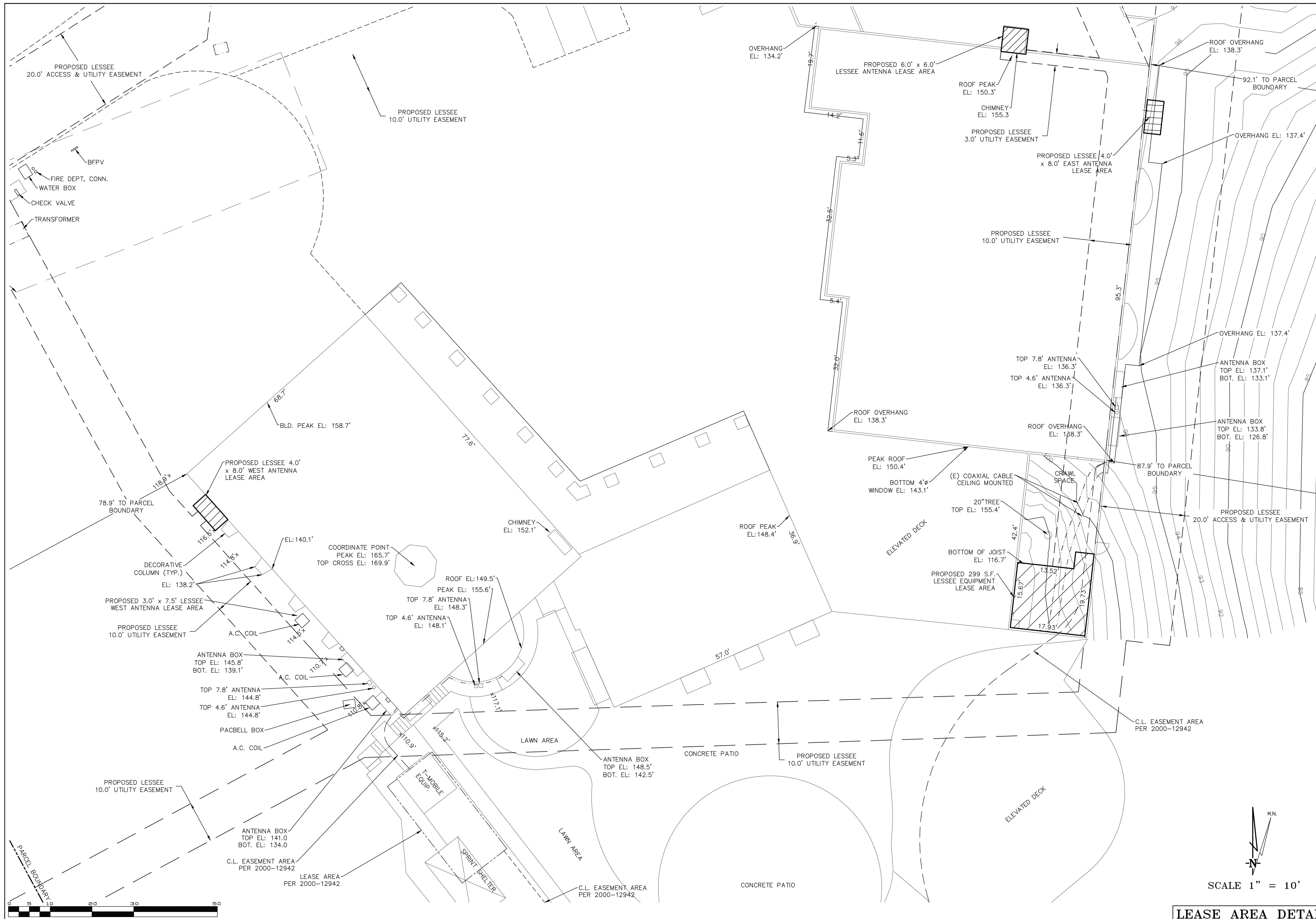
verizon

Marin Country Club
 1110 Highland Drive
 Novato, CA 94949

PLOT PLAN AND
 SITE TOPOGRAPHY

05-27-18	Preliminary Drawing	DG
10-27-19	rev. lease areas	DG
12-26-19	rev. lease areas/esmts	DG
07-22-20	lease desc. added	DG
07-28-20	redlines	DG
10-30-20	doc. callouts added	DG
02-08-21	doc. callouts added	DG
05-21-21	rev. lease areas	DG
09-13-21	rev. lease areas	DG
10-20-21	rev. esmts.	DG
03-16-22	c.l. shown	DG
09-15-23	added lease/rev. esmts.	DG
09-19-23	rev. lease	DG
03-28-24	rev. lease areas	DG
04-16-24	lease areas added	DG

Sheet
C-1

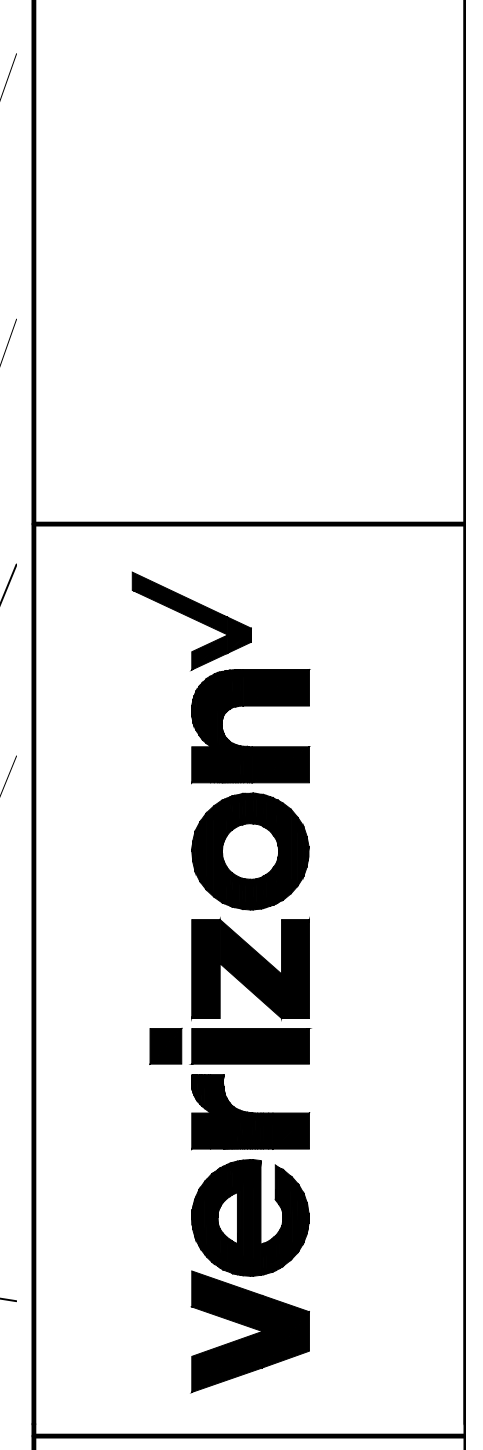


SCALE 1" = 10'

LEASE AREA DETAIL

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

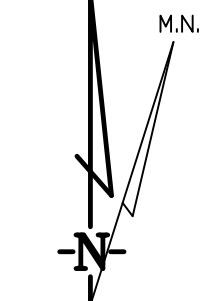
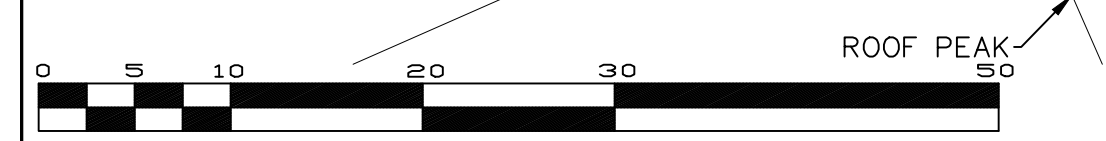
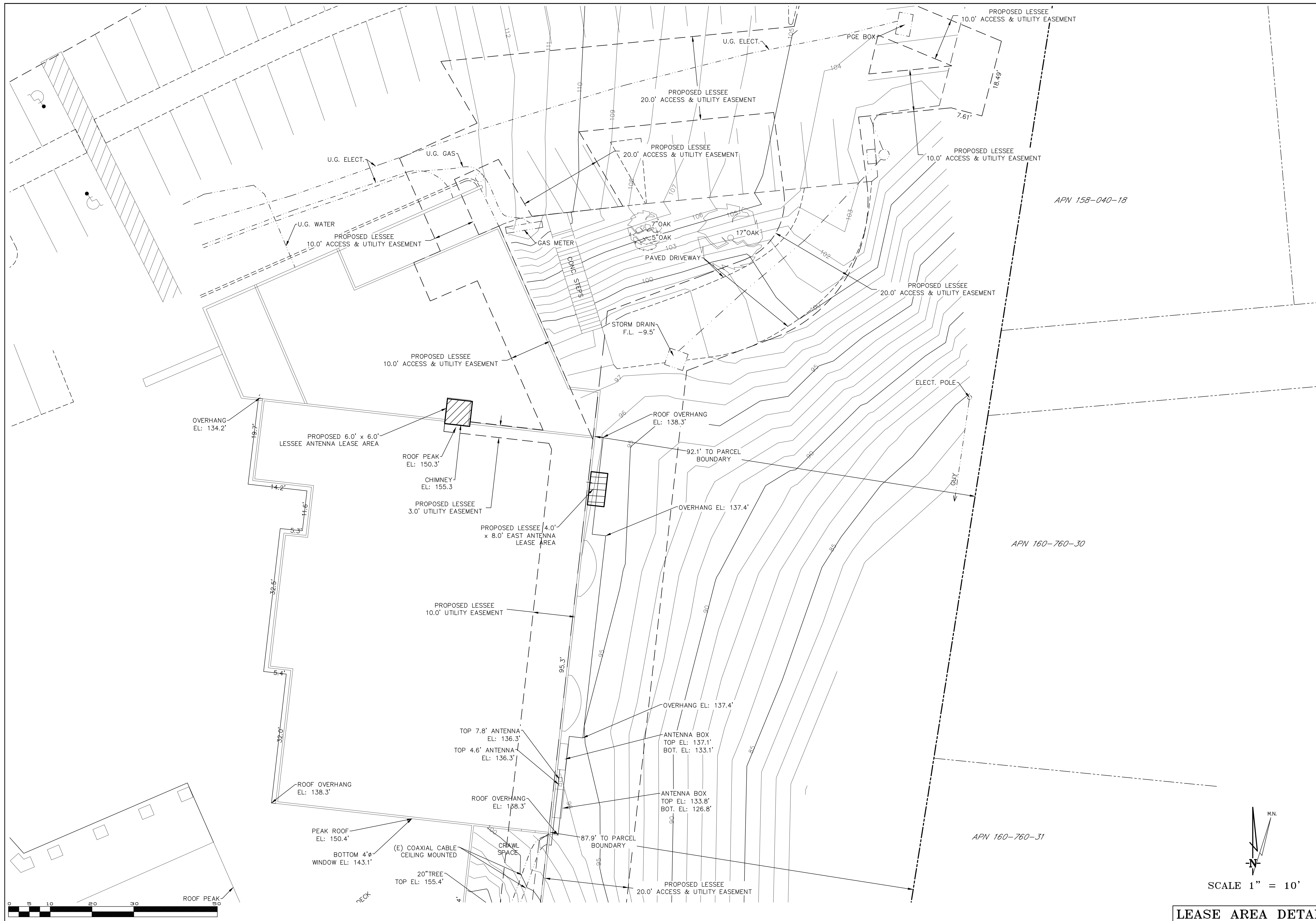
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**PLOT PLAN AND
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Sheet

C-2

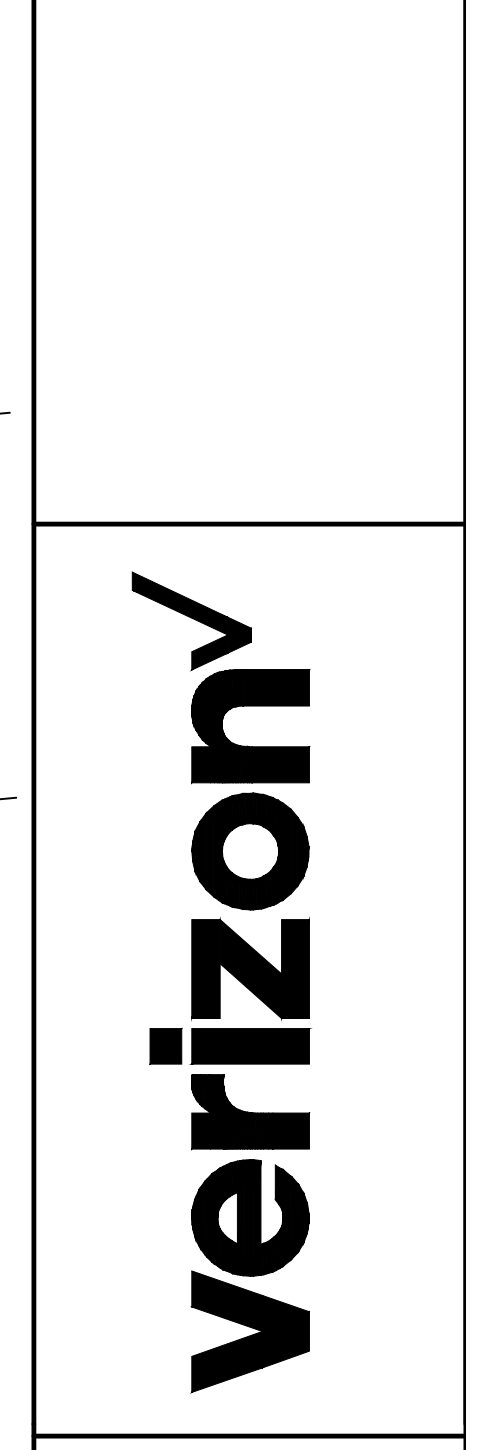


SCALE 1" = 10'

LEASE AREA DETAIL

DEPT	APPROVED	DATE
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RE		
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EE\OUT		

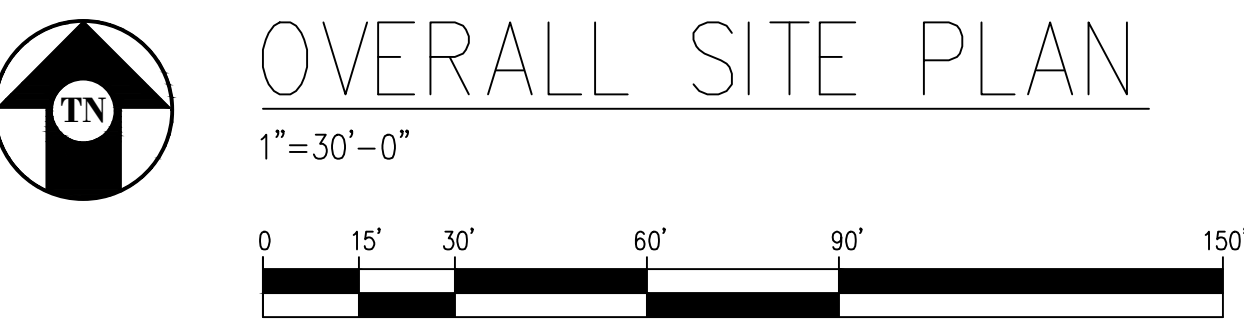
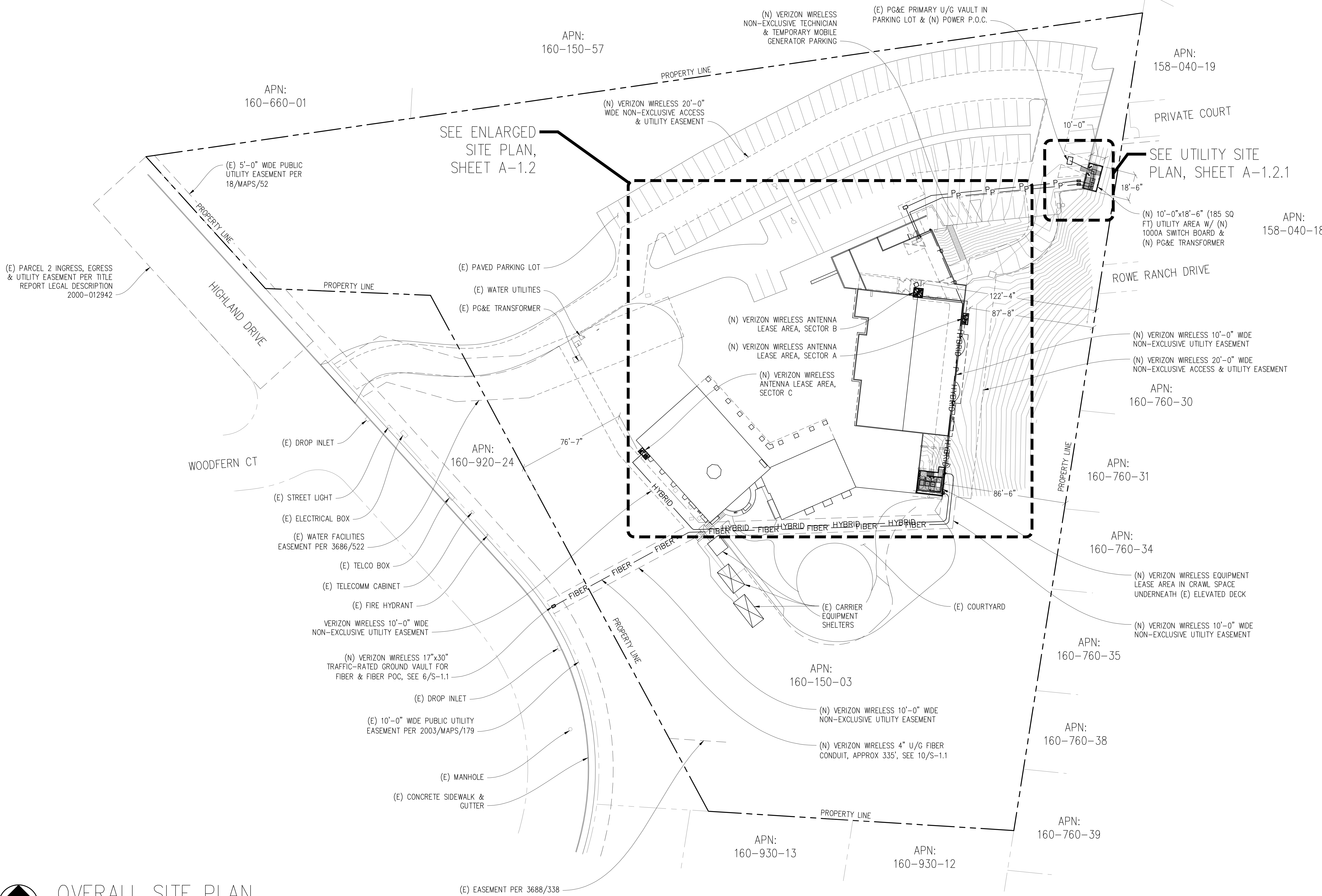
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**PLOT PLAN AND
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C-3



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 NOVATO, CA 94949

PREPARED FOR
verizon
 2770 SHADELANDS DR, BLDG 11
 WALNUT CREEK, CA 94598

Vendor:

COMPLETE
 Wireless Consulting, Inc.

MDG LOCATION ID: 5000001534
 PROJECT ID: 2013447
 DRAWN BY: C. CODY
 CHECKED BY: J. GRAY
 APPROVED BY: J. SPORE

ISSUE STATUS			
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3	05/08/24	CD 100%	C.C.
2	03/07/24	CLIENT REV	C.C.
1	01/31/24	CD 95%	C.C.
0	10/09/23	CD 90%	C.C.

Licensee:

 REGISTERED PROFESSIONAL ENGINEER
 JAMES R. SPORE
 S6336
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA

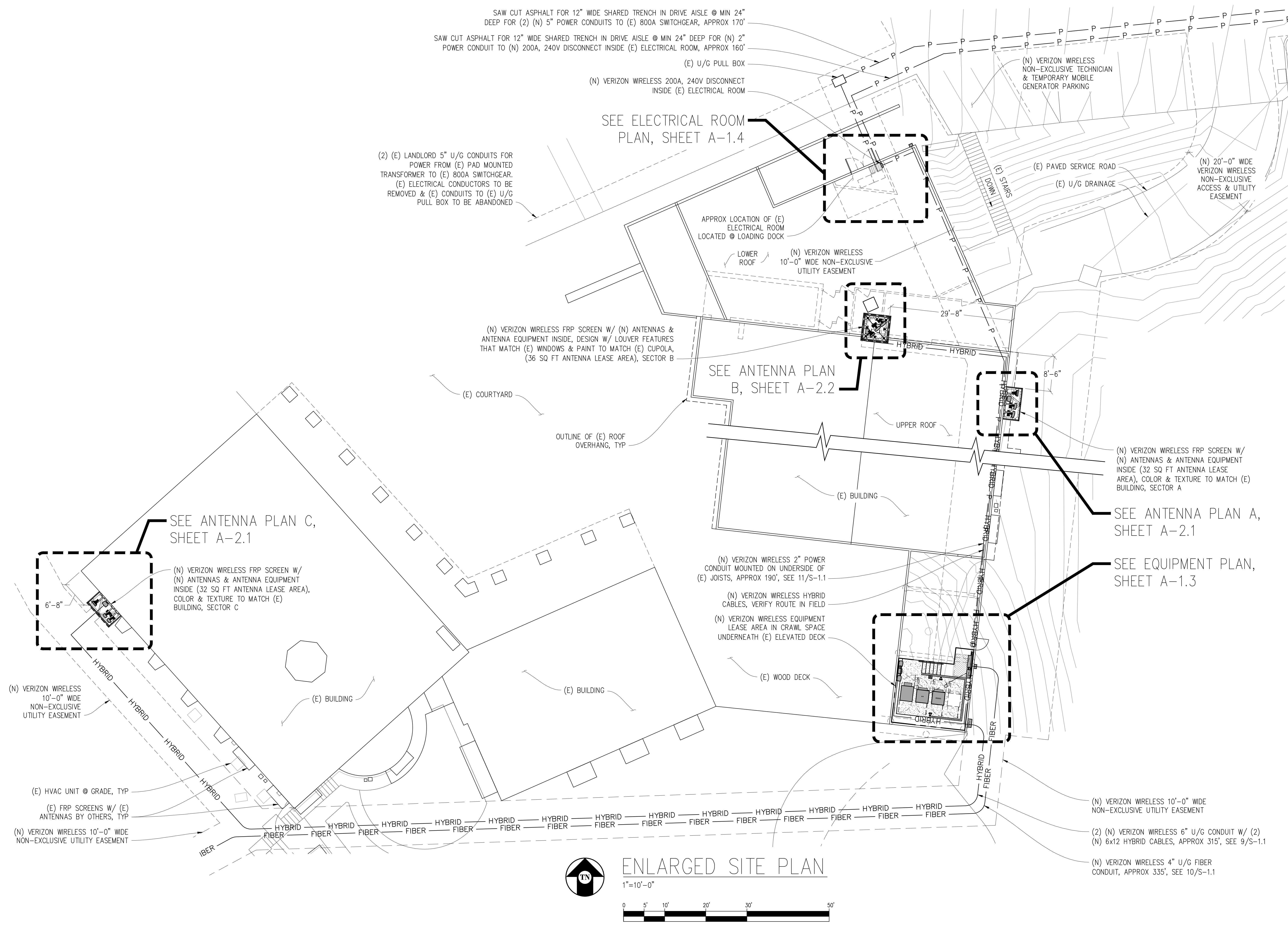
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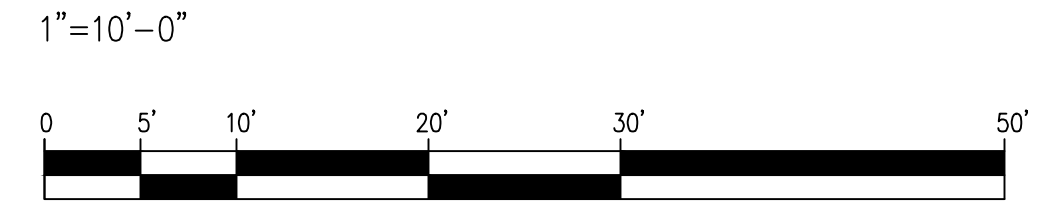
Streamline Engineering
 3843 TAYLOR ROAD, SUITE A, LOOMIS, CA 95660
 Contact: Kevin Spore Phone: 916-660-1800
 E-Mail: kevin@streamlineeng.com Fax: 916-660-1941
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SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
A-1.1



ENLARGED SITE PLAN



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 1110 HIGHLAND DRIVE
 NOVATO, CA 94949

PREPARED FOR
verizon
 2770 SHADELANDS DR, BLDG 11
 WALNUT CREEK, CA 94598

Vendor:

COMPLETE
 Wireless Consulting, Inc.

MDG LOCATION ID: 5000001534
 PROJECT ID: 2013447
 DRAWN BY: C. CODY
 CHECKED BY: J. GRAY
 APPROVED BY: J. SPORE

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 S6336
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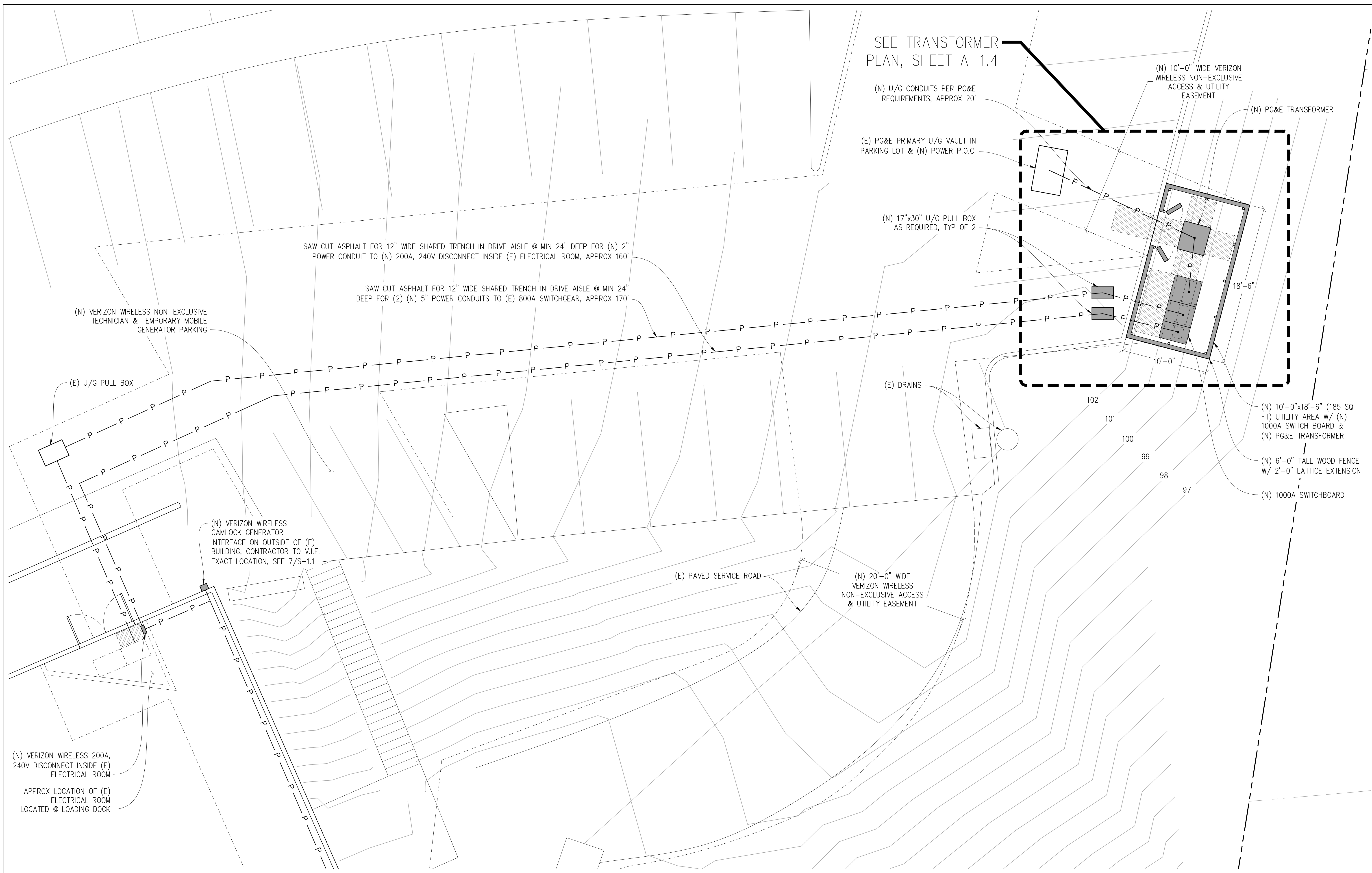
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SHEET TITLE:
ENLARGED SITE PLAN

SHEET NUMBER:
A-1.2



Issued For:
MARIN COUNTRY CLUB
 1110 HIGHLAND DRIVE
 NOVATO, CA 94949

PREPARED FOR
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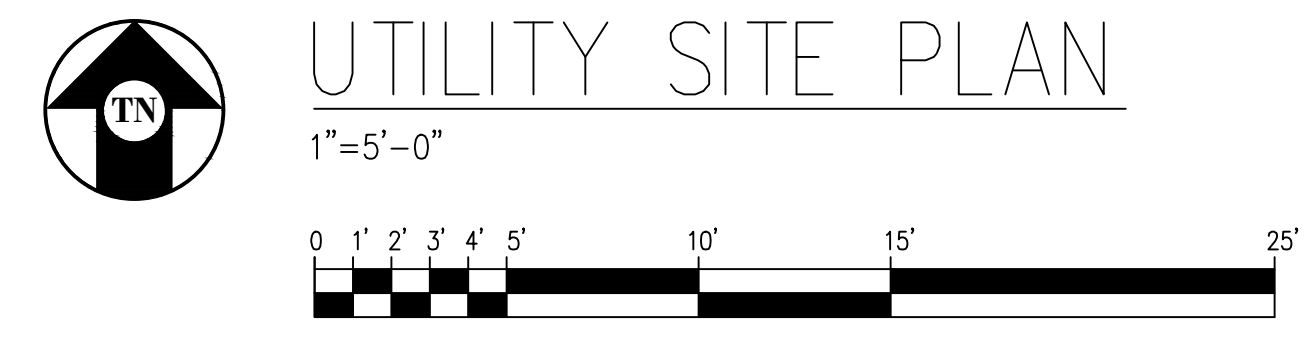
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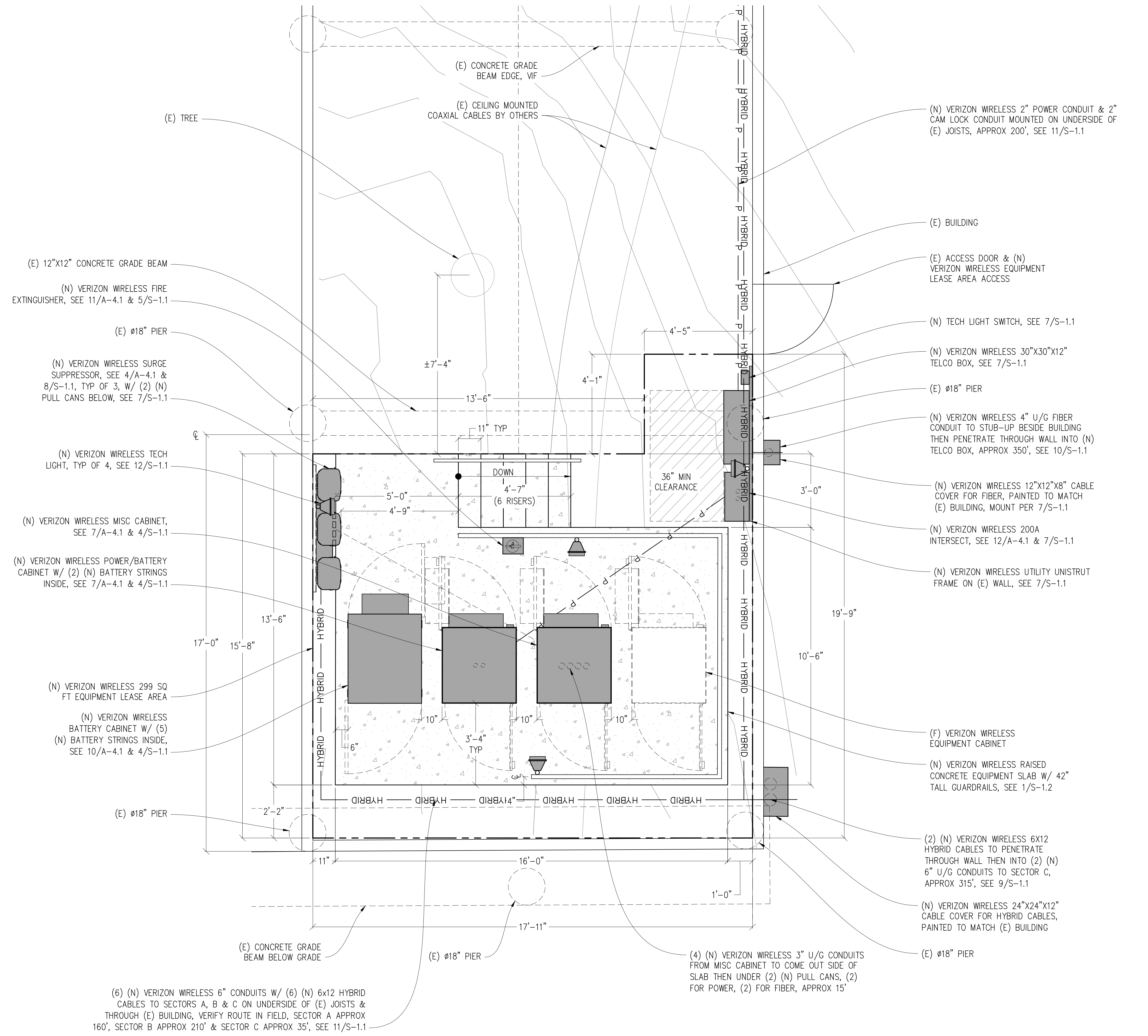
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SHEET TITLE:
UTILITY SITE PLAN

SHEET NUMBER:
A-1.2.1





(E) 12"x12" CONCRETE GRADE BEAM
 (N) VERIZON WIRELESS FIRE EXTINGUISHER, SEE 11/A-4.1 & 5/S-1.1
 (E) Ø18" PIER
 (N) VERIZON WIRELESS SURGE SUPPRESSOR, SEE 4/A-4.1 & 8/S-1.1, TYP OF 3, W/ (2) (N) PULL CANS BELOW, SEE 7/S-1.1

(N) VERIZON WIRELESS TECH LIGHT, TYP OF 4, SEE 12/S-1.1
 (N) VERIZON WIRELESS MISC CABINET, SEE 7/A-4.1 & 4/S-1.1
 (N) VERIZON WIRELESS POWER/BATTERY CABINET W/ (2) (N) BATTERY STRINGS INSIDE, SEE 7/A-4.1 & 4/S-1.1

(N) VERIZON WIRELESS 299 SQ FT EQUIPMENT LEASE AREA
 (N) VERIZON WIRELESS BATTERY CABINET W/ (5) (N) BATTERY STRINGS INSIDE, SEE 10/A-4.1 & 4/S-1.1

(E) Ø18" PIER

(6) (N) VERIZON WIRELESS 6" CONDUITS W/ (6) (N) 6x12 HYBRID CABLES TO SECTORS A, B & C ON UNDERSIDE OF (E) JOISTS & THROUGH (E) BUILDING, VERIFY ROUTE IN FIELD, SECTOR A APPROX 160', SECTOR B APPROX 210' & SECTOR C APPROX 35', SEE 11/S-1.1

(E) CONCRETE GRADE BEAM EDGE, VF
 (E) CEILING MOUNTED COAXIAL CABLES BY OTHERS

(N) VERIZON WIRELESS 2" POWER CONDUIT & 2" CAM LOCK CONDUIT MOUNTED ON UNDERSIDE OF (E) JOISTS, APPROX 200', SEE 11/S-1.1

(E) BUILDING

(E) ACCESS DOOR & (N) VERIZON WIRELESS EQUIPMENT LEASE AREA ACCESS

(N) TECH LIGHT SWITCH, SEE 7/S-1.1

(N) VERIZON WIRELESS 30"x30"x12" TELCO BOX, SEE 7/S-1.1

(E) Ø18" PIER

(N) VERIZON WIRELESS 4" U/G FIBER CONDUIT TO STUB-UP BESIDE BUILDING THEN PENETRATE THROUGH WALL INTO (N) TELCO BOX, APPROX 350', SEE 10/S-1.1

(N) VERIZON WIRELESS 12"x12"x8" CABLE COVER FOR FIBER, PAINTED TO MATCH (E) BUILDING, MOUNT PER 7/S-1.1

(N) VERIZON WIRELESS 200A INTERSECT, SEE 12/A-4.1 & 7/S-1.1

(N) VERIZON WIRELESS UTILITY UNISTRUT FRAME ON (E) WALL, SEE 7/S-1.1

(F) VERIZON WIRELESS EQUIPMENT CABINET

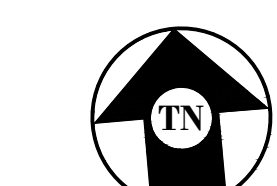
(N) VERIZON WIRELESS RAISED CONCRETE EQUIPMENT SLAB W/ 42" TALL GUARDRAILS, SEE 1/S-1.2

(2) (N) VERIZON WIRELESS 6x12 HYBRID CABLES TO PENETRATE THROUGH WALL THEN INTO (2) (N) 6" U/G CONDUITS TO SECTOR C, APPROX 315', SEE 9/S-1.1

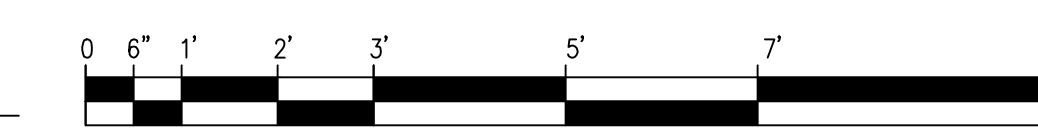
(N) VERIZON WIRELESS 24"x24"x12" CABLE COVER FOR HYBRID CABLES, PAINTED TO MATCH (E) BUILDING

(E) Ø18" PIER

(4) (N) VERIZON WIRELESS 3" U/G CONDUITS FROM MISC CABINET TO COME OUT SIDE OF SLAB THEN UNDER (2) (N) PULL CANS, (2) FOR POWER, (2) FOR FIBER, APPROX 15'



EQUIPMENT PLAN
 1/2" = 1'-0"



Issued For:
MARIN COUNTRY CLUB
 1110 HIGHLAND DRIVE
 NOVATO, CA 94949

PREPARED FOR
verizon
 2770 SHADELANDS DR, BLDG 11
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Vendor:

COMPLETE
 Wireless Consulting, Inc.

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SHEET TITLE:
EQUIPMENT PLAN


SHEET NUMBER:
A-1.3

ISSUE STATUS				
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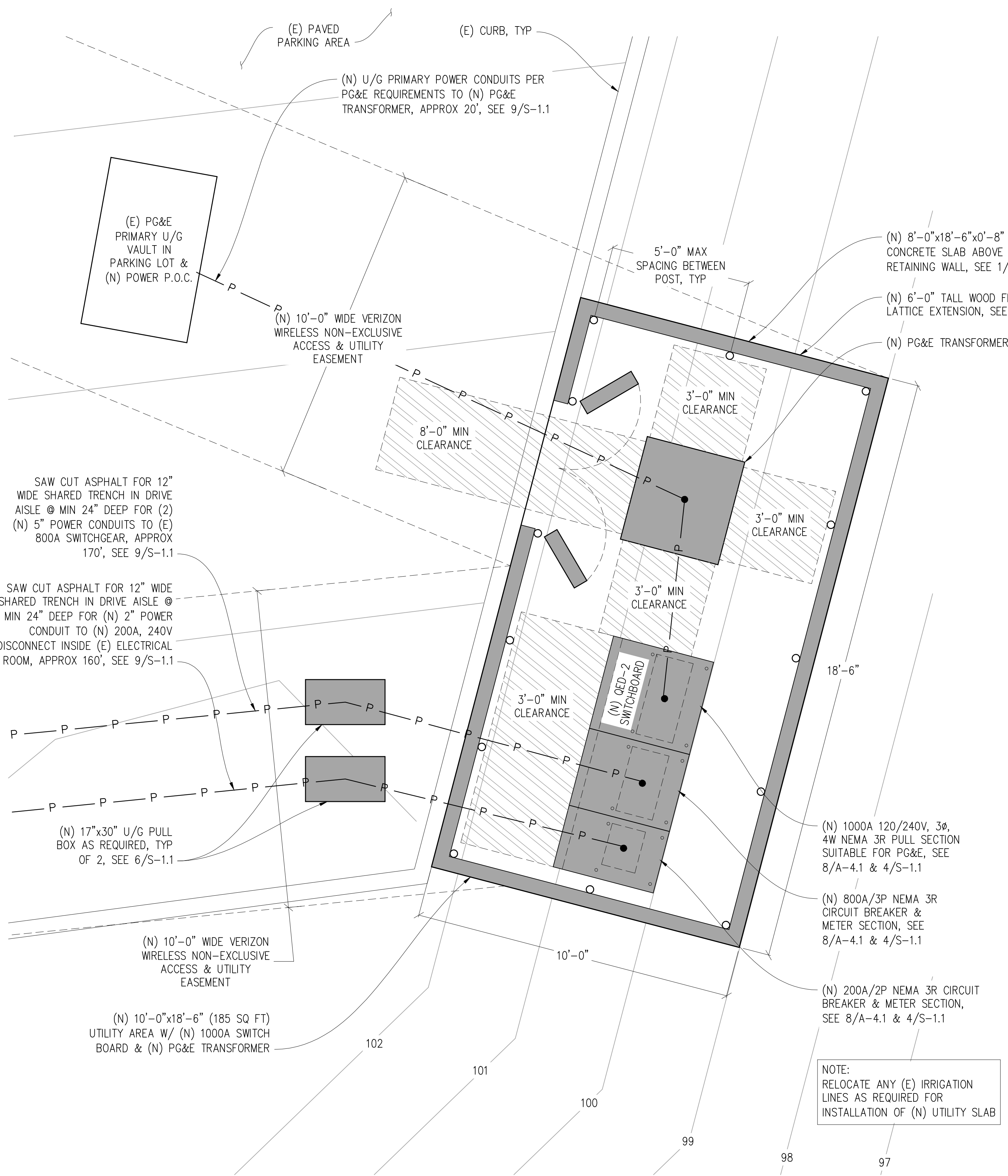
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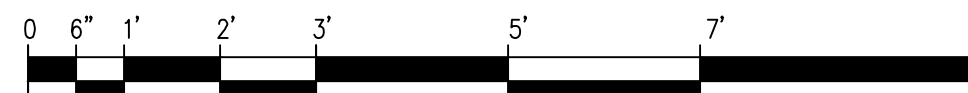
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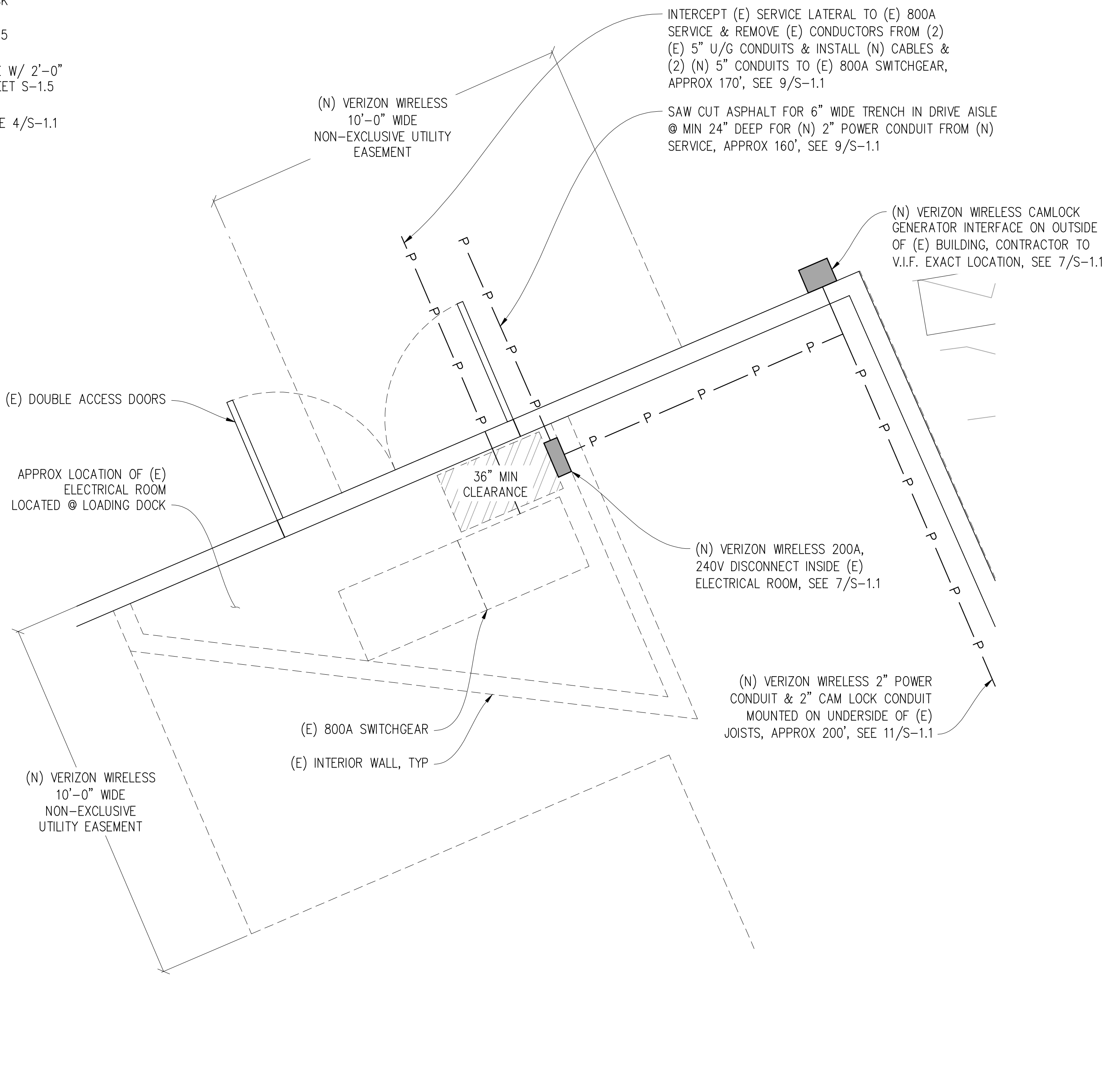


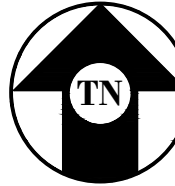
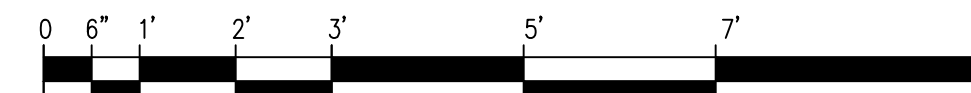
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 **TRANSFORMER PLAN**
 1/2" = 1'-0"




 **ELECTRICAL ROOM PLAN**
 1/2" = 1'-0"


Issued For:

MARIN COUNTRY CLUB

1110 HIGHLAND DRIVE
NOVATO, CA 94949

PREPARED FOR



2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:



MDG LOCATION ID: 5000001534

PROJECT ID: 2013447

DRAWN BY: C. CODY

CHECKED BY: J. GRAY

APPROVED BY: J. SPORE

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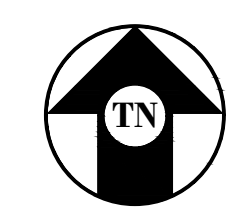
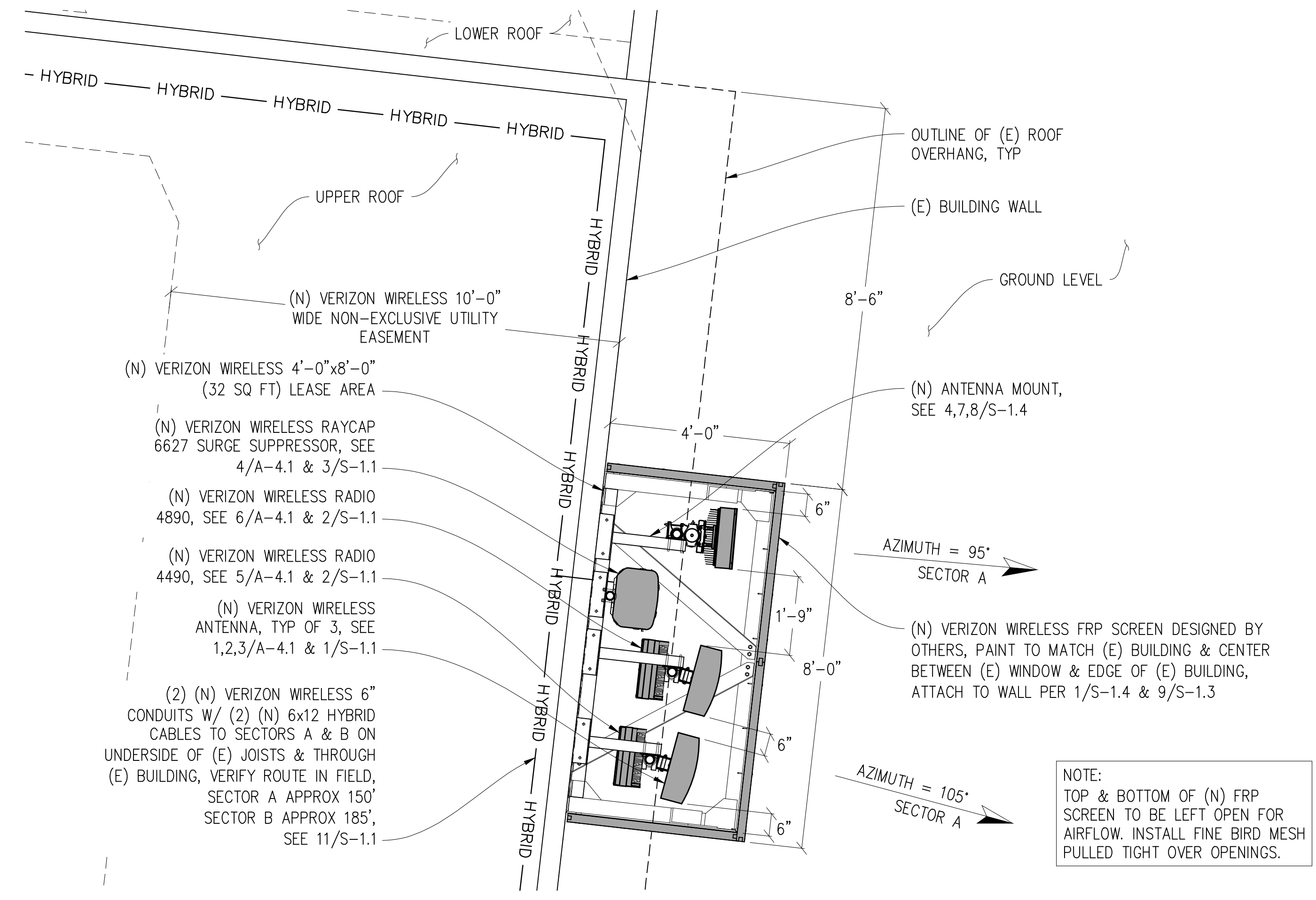
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SHEET TITLE:

ANTENNA PLANS

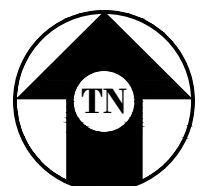
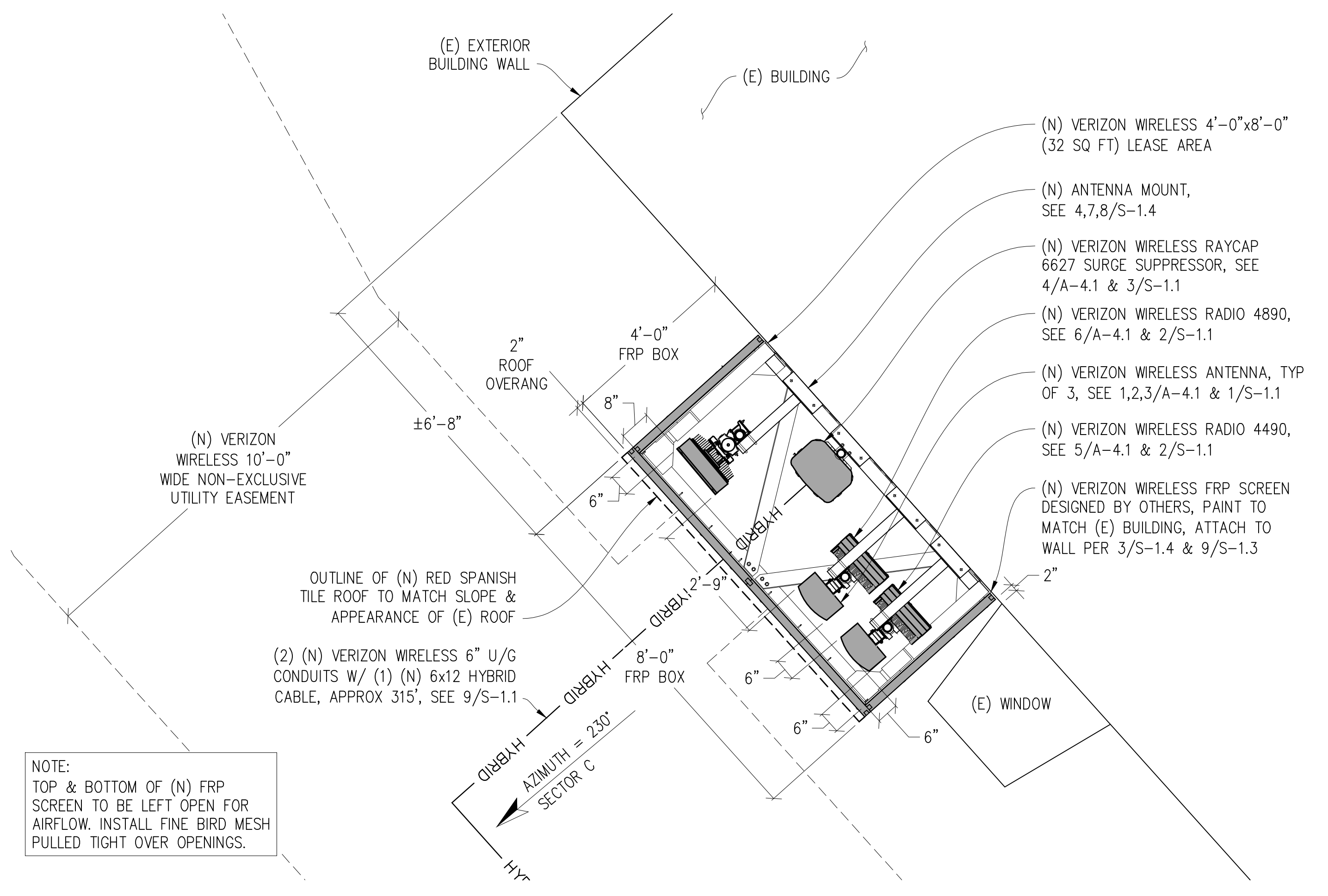
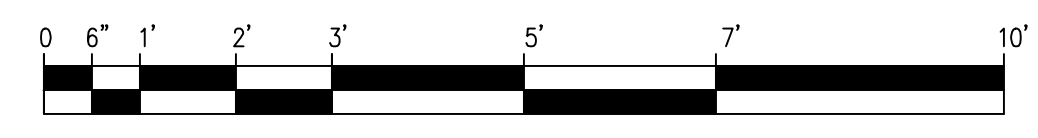
SHEET NUMBER:

A-2.1



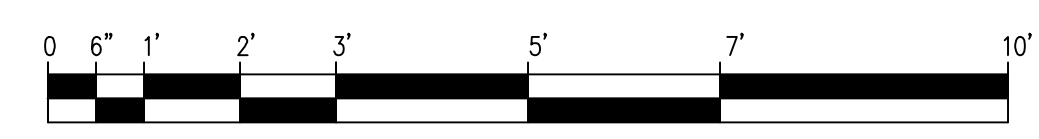
ANTENNA PLAN A

1/2"=1'-0"



ANTENNA PLAN C

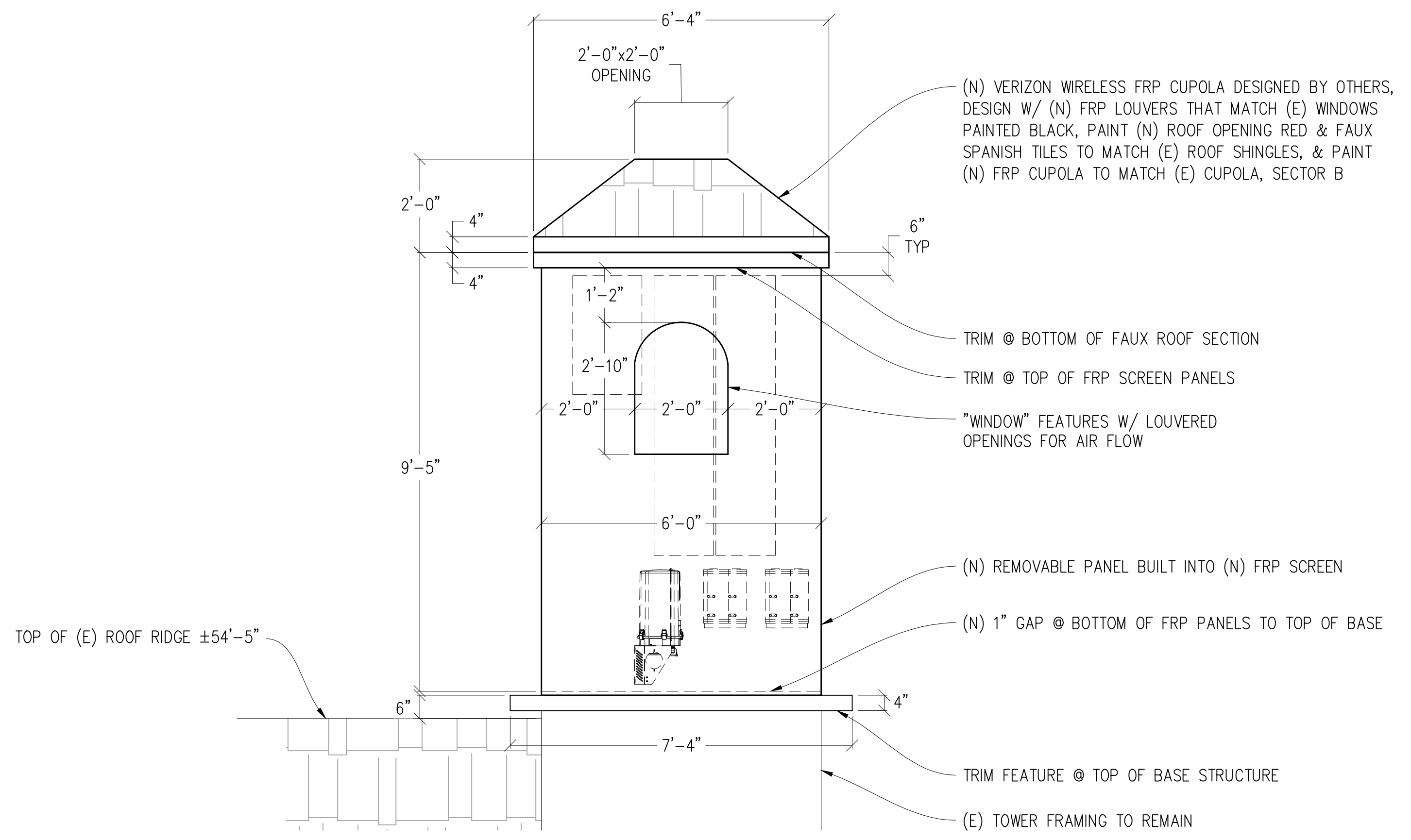
1/2"=1'-0"



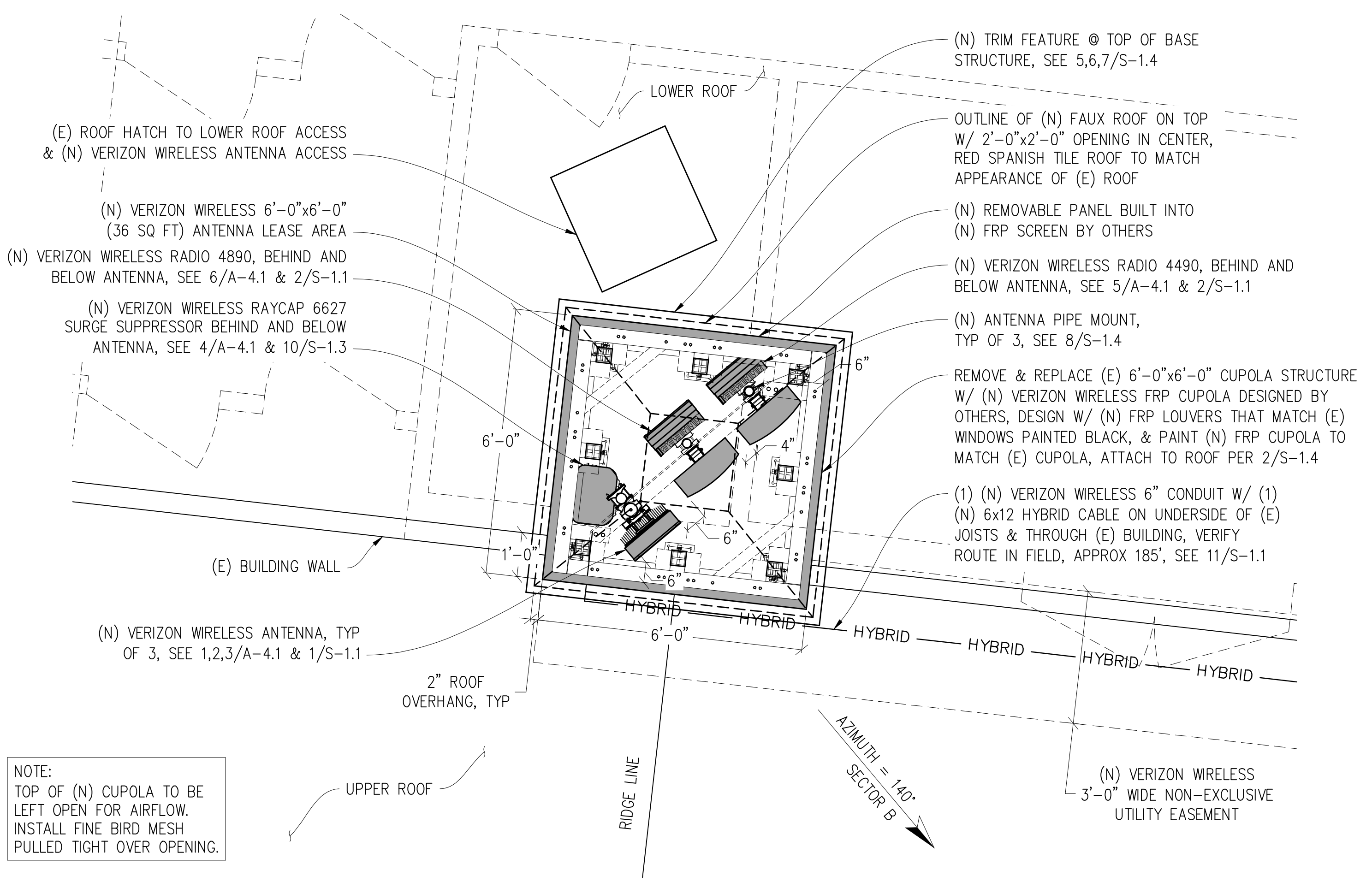
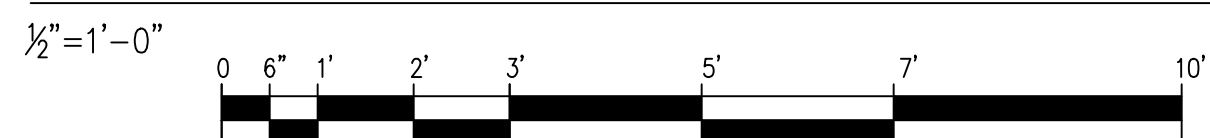
ANTENNA & CABLE SCHEDULE (PRELIMINARY & SUBJECT TO CHANGE)

SECTOR	ANTENNA MODEL NO.	AZIMUTH	CENTERLINE	RRU NO'S & MODEL #	# OF HYBRID CABLES	LENGTH OF CABLES	SURGE SUPPRESSOR	NO. OF DIPLEXERS	NO. OF COMBINERS
ALPHA	A1	95°	±40'-0"	INTEGRATED	(1) 6x12	±150'	(1) 6627	0	0
	A2	105°	±38'-4"	(1) RADIO 4890	SHARED	-	SHARED	0	0
	A3	105°	±38'-4"	(1) RADIO 4490	SHARED	-	SHARED	0	0
BETA	B1	140°	±60'-11"	(1) RADIO 4490	SHARED	-	SHARED	0	0
	B3	140°	±62'-8"	INTEGRATED	(1) 6x12	±185'	(1) 6627	0	0
GAMMA	C1	230°	±31'-3"	(1) RADIO 4490	SHARED	-	SHARED	0	0
	C2	230°	±31'-3"	(1) RADIO 4890	SHARED	-	SHARED	0	0
	C3	230°	±32'-11"	INTEGRATED	(1) 6x12	±350'	(1) 6627	0	0

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

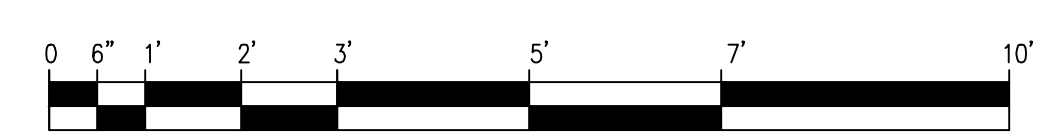
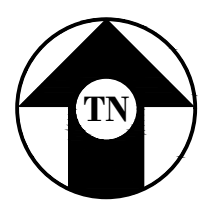


ENLARGED CUPOLA ELEVATION



NOTE:
TOP OF (N) CUPOLA TO BE LEFT OPEN FOR AIRFLOW. INSTALL FINE BIRD MESH PULLED TIGHT OVER OPENING.

ANTENNA PLAN B



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NOVATO, CA 94949

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verizon
2770 SHADELANDS DR, BLDG 11
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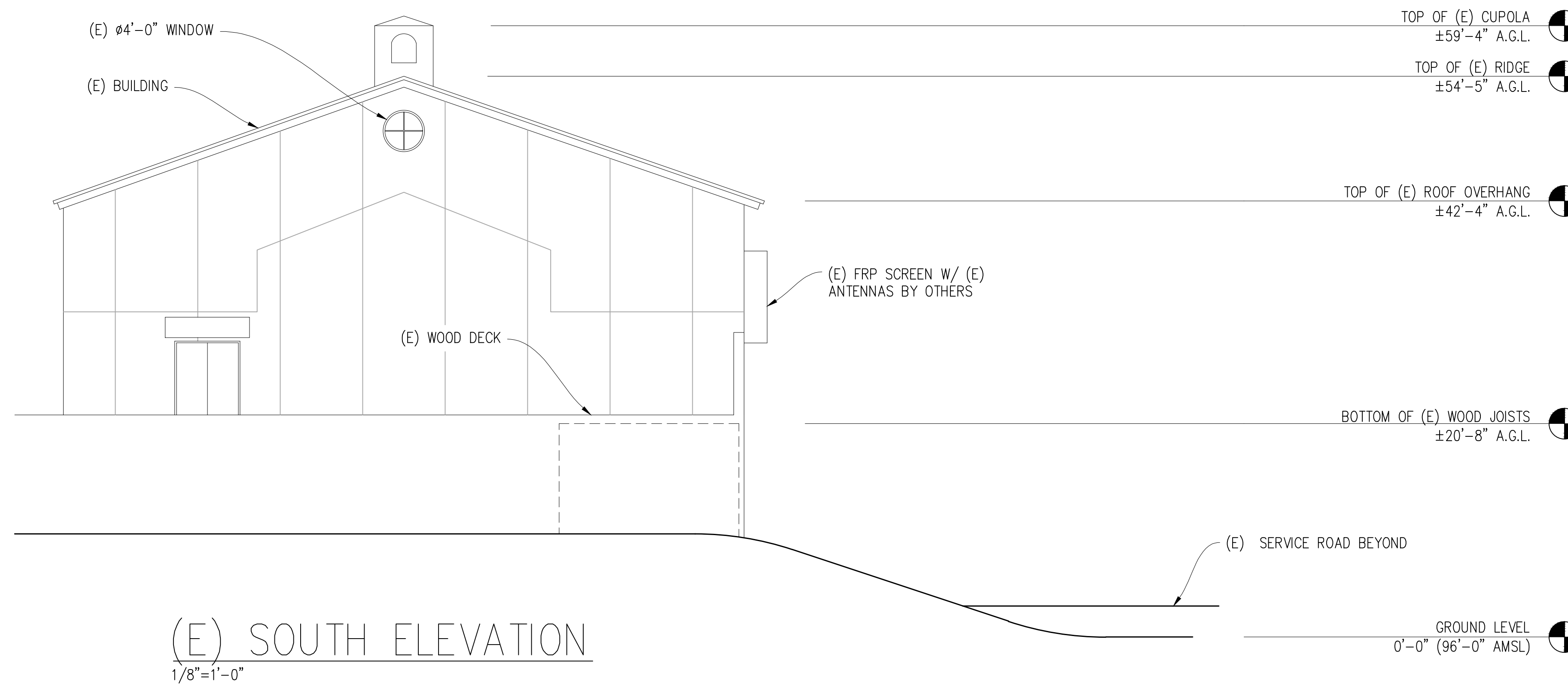


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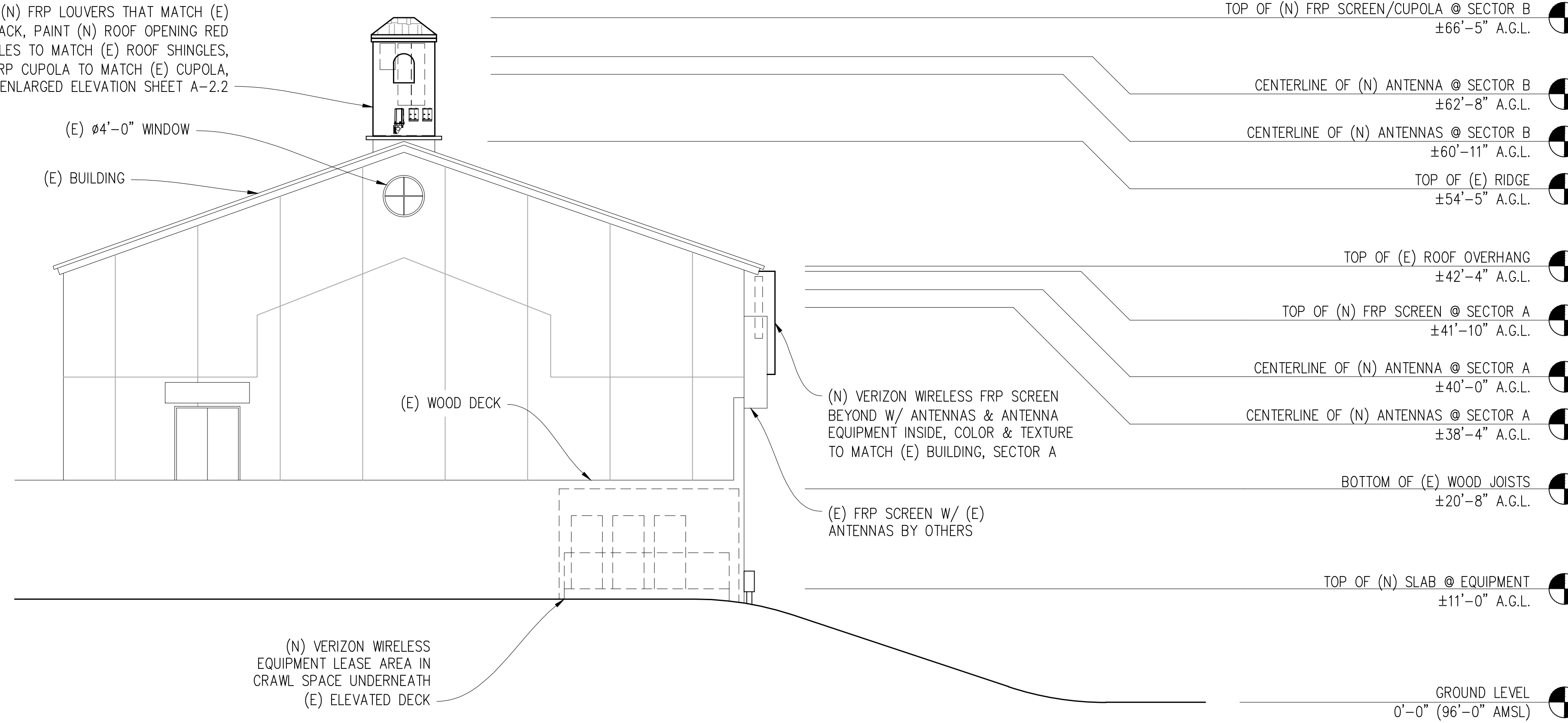
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SHEET TITLE:
ANTENNA PLAN & ELEVATION

SHEET NUMBER:
A-2.2



(N) VERIZON WIRELESS FRP CUPOLA DESIGNED BY OTHERS, DESIGN W/ (N) FRP LOUVERS THAT MATCH (E) WINDOWS PAINTED BLACK, PAINT (N) ROOF OPENING RED & FAUX SPANISH TILES TO MATCH (E) ROOF SHINGLES, & PAINT (N) FRP CUPOLA TO MATCH (E) CUPOLA, SECTOR B. SEE ENLARGED ELEVATION SHEET A-2.2



(N) SOUTH ELEVATION
1/8"=1'-0"



NOTE:
 TOP OF (N) CUPOLA, & TOP & BOTTOM OF (N) FRP SCREEN, TO BE LEFT OPEN FOR AIRFLOW. INSTALL FINE BIRD MESH PULLED TIGHT OVER OPENINGS.

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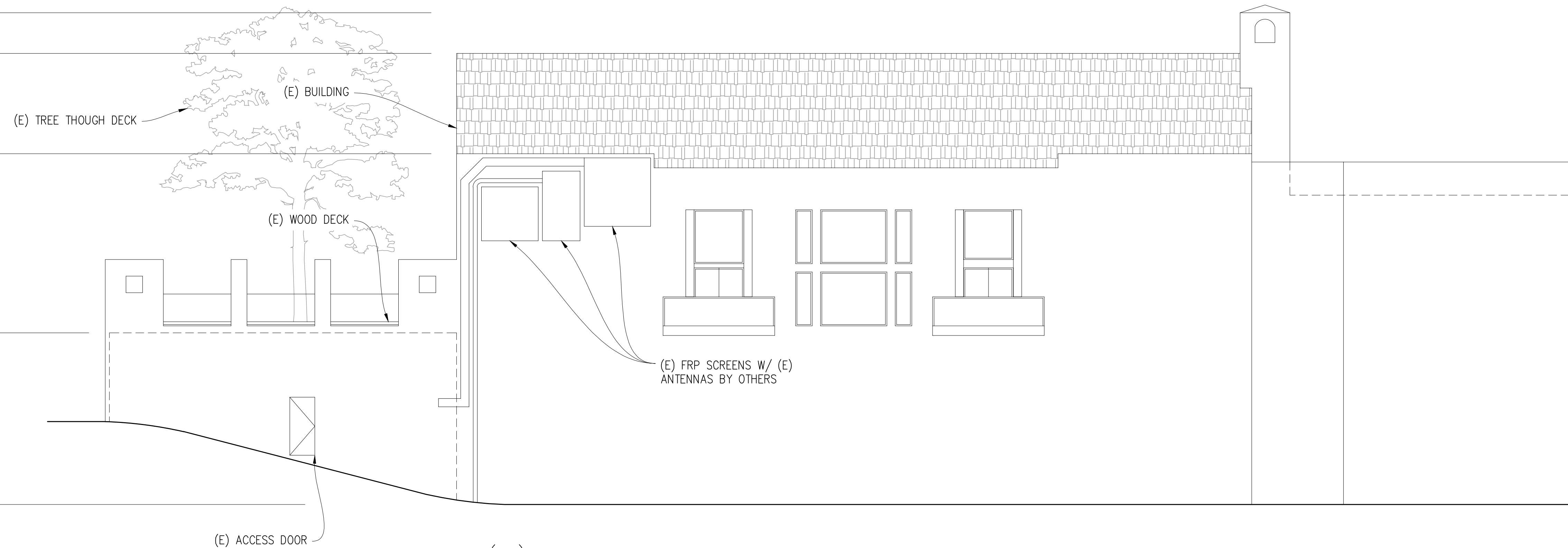
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SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-3.1

- TOP OF (E) CUPOLA
±59'-4" A.G.L.
- TOP OF (E) RIDGE
±54'-5" A.G.L.
- TOP OF (E) ROOF OVERHANG
±42'-4" A.G.L.
- BOTTOM OF (E) WOOD JOISTS
±20'-8" A.G.L.
- GROUND LEVEL
0'-0" (96'-0" AMSL)



(E) EAST ELEVATION

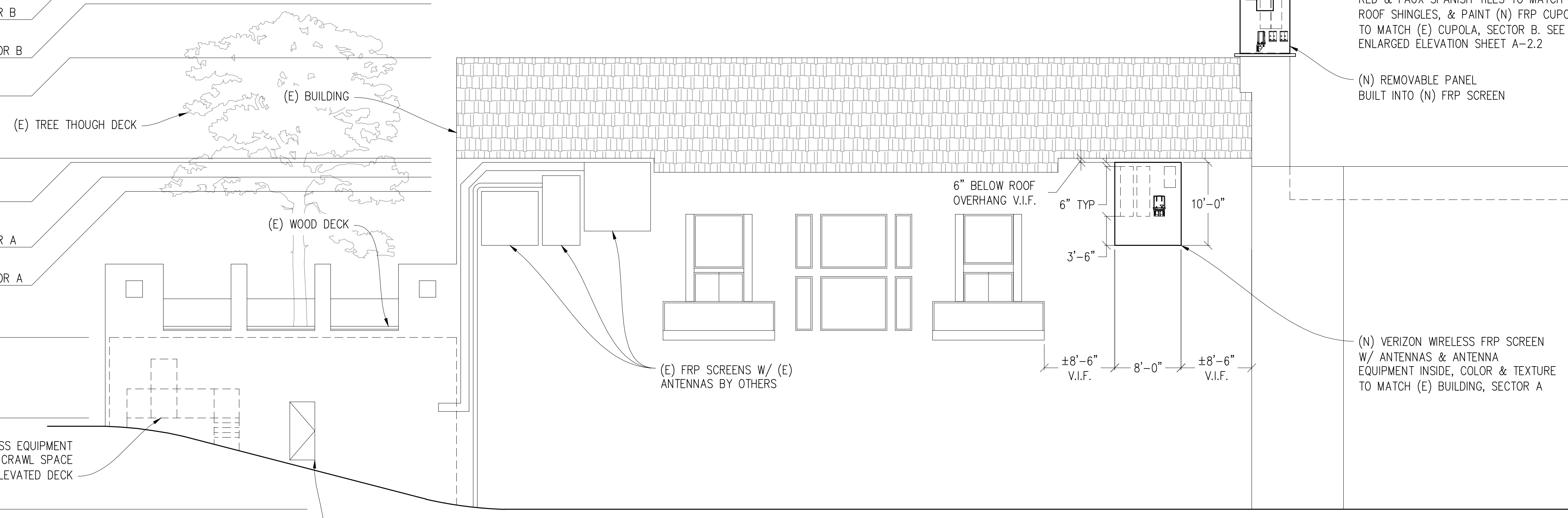
1/8"=1'-0"



- TOP OF (N) FRP SCREEN/CUPOLA @ SECTOR B
±66'-5" A.G.L.
- CENTERLINE OF (N) ANTENNA @ SECTOR B
±62'-8" A.G.L.
- CENTERLINE OF (N) ANTENNAS @ SECTOR B
±60'-11" A.G.L.
- TOP OF (E) RIDGE
±54'-5" A.G.L.
- TOP OF (E) ROOF OVERHANG
±42'-4" A.G.L.
- TOP OF (N) FRP SCREEN @ SECTOR A
±41'-10" A.G.L.
- CENTERLINE OF (N) ANTENNA @ SECTOR A
±40'-0" A.G.L.
- CENTERLINE OF (N) ANTENNAS @ SECTOR A
±38'-4" A.G.L.
- BOTTOM OF (E) WOOD JOISTS
±20'-8" A.G.L.
- TOP OF (N) SLAB
±11'-0" A.G.L.
- GROUND LEVEL
0'-0" (96'-0" AMSL)

(N) VERIZON WIRELESS EQUIPMENT LEASE AREA IN CRAWL SPACE UNDERNEATH (E) ELEVATED DECK

(E) ACCESS DOOR & (N) VERIZON WIRELESS EQUIPMENT LEASE AREA ACCESS



(N) EAST ELEVATION

1/8"=1'-0"



NOTE:
TOP OF (N) CUPOLA, & TOP & BOTTOM OF (N) FRP SCREEN, TO BE LEFT OPEN FOR AIRFLOW. INSTALL FINE BIRD MESH PULLED TIGHT OVER OPENINGS.

(N) VERIZON WIRELESS FRP CUPOLA DESIGNED BY OTHERS, DESIGN W/ (N) FRP LOUVERS THAT MATCH (E) WINDOWS PAINTED BLACK, PAINT (N) ROOF OPENING RED & FAUX SPANISH TILES TO MATCH (E) ROOF SHINGLES, & PAINT (N) FRP CUPOLA TO MATCH (E) CUPOLA, SECTOR B. SEE ENLARGED ELEVATION SHEET A-2.2

(N) REMOVABLE PANEL BUILT INTO (N) FRP SCREEN

(N) VERIZON WIRELESS FRP SCREEN W/ ANTENNAS & ANTENNA EQUIPMENT INSIDE, COLOR & TEXTURE TO MATCH (E) BUILDING, SECTOR A

Issued For:

MARIN COUNTRY CLUB

1110 HIGHLAND DRIVE
NOVATO, CA 94949

PREPARED FOR

verizon

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:



MDG LOCATION ID: 5000001534

PROJECT ID: 2013447

DRAWN BY: C. CODY

CHECKED BY: J. GRAY

APPROVED BY: J. SPORE

ISSUE STATUS

REV	DATE	DESCRIPTION	CAD
3	05/08/24	CD 100%	C.C.
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1	01/31/24	CD 95%	C.C.
0	10/09/23	CD 90%	C.C.

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Streamline Engineering
AMERICAN INSTITUTE OF ARCHITECTS

3843 TAYLOR ROAD, SUITE A, LOOMIS, CA 95660
Contact: Kevin Spore, Phone: 916-860-1800
E-Mail: kevin@streamlineeng.com Fax: 916-860-1941

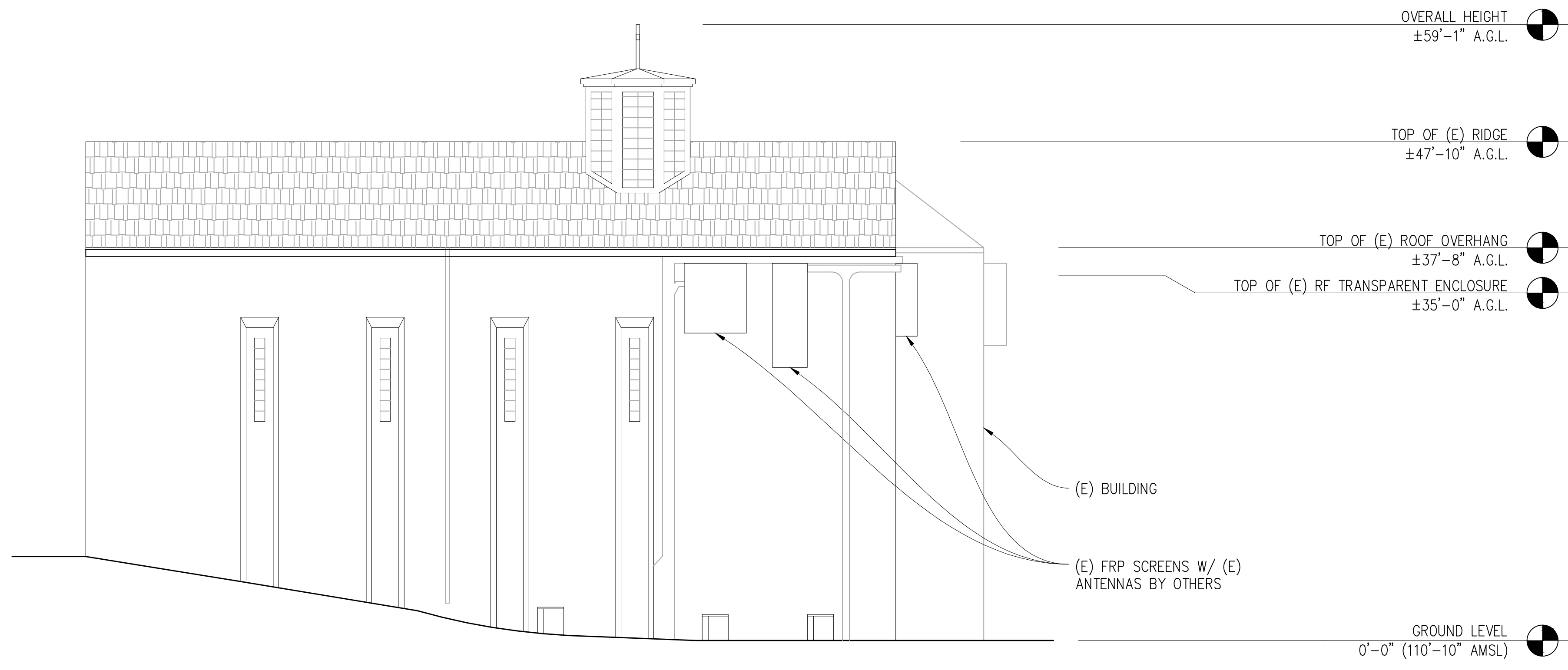
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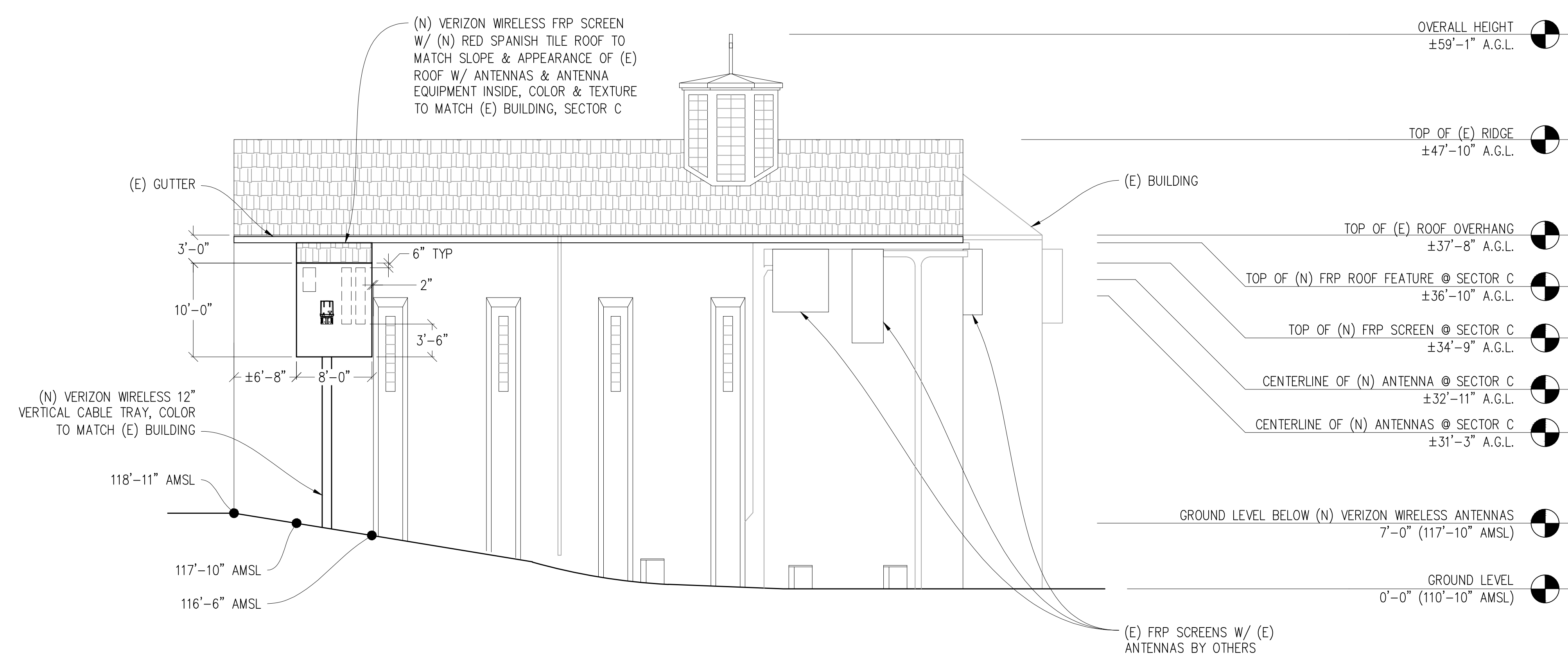
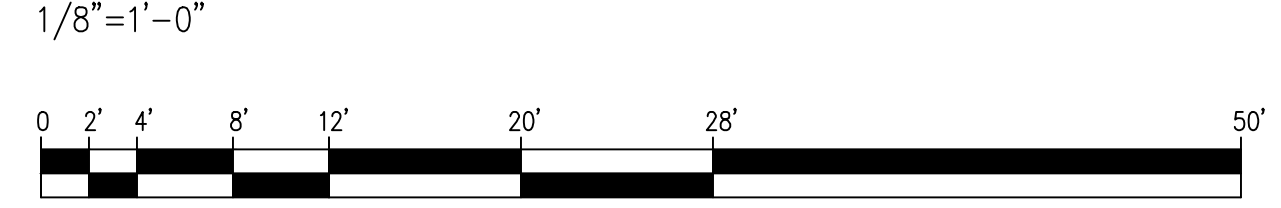
ELEVATIONS

SHEET NUMBER:

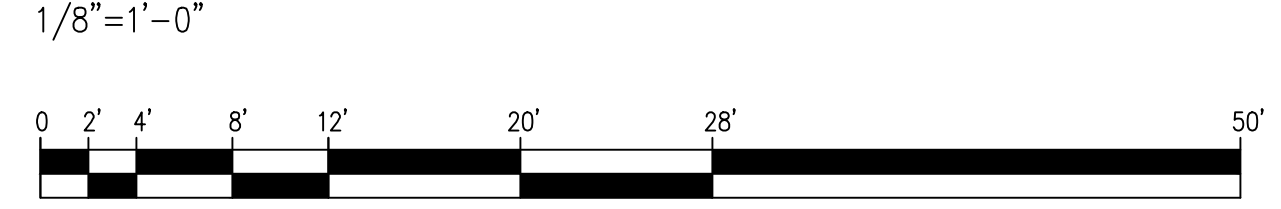
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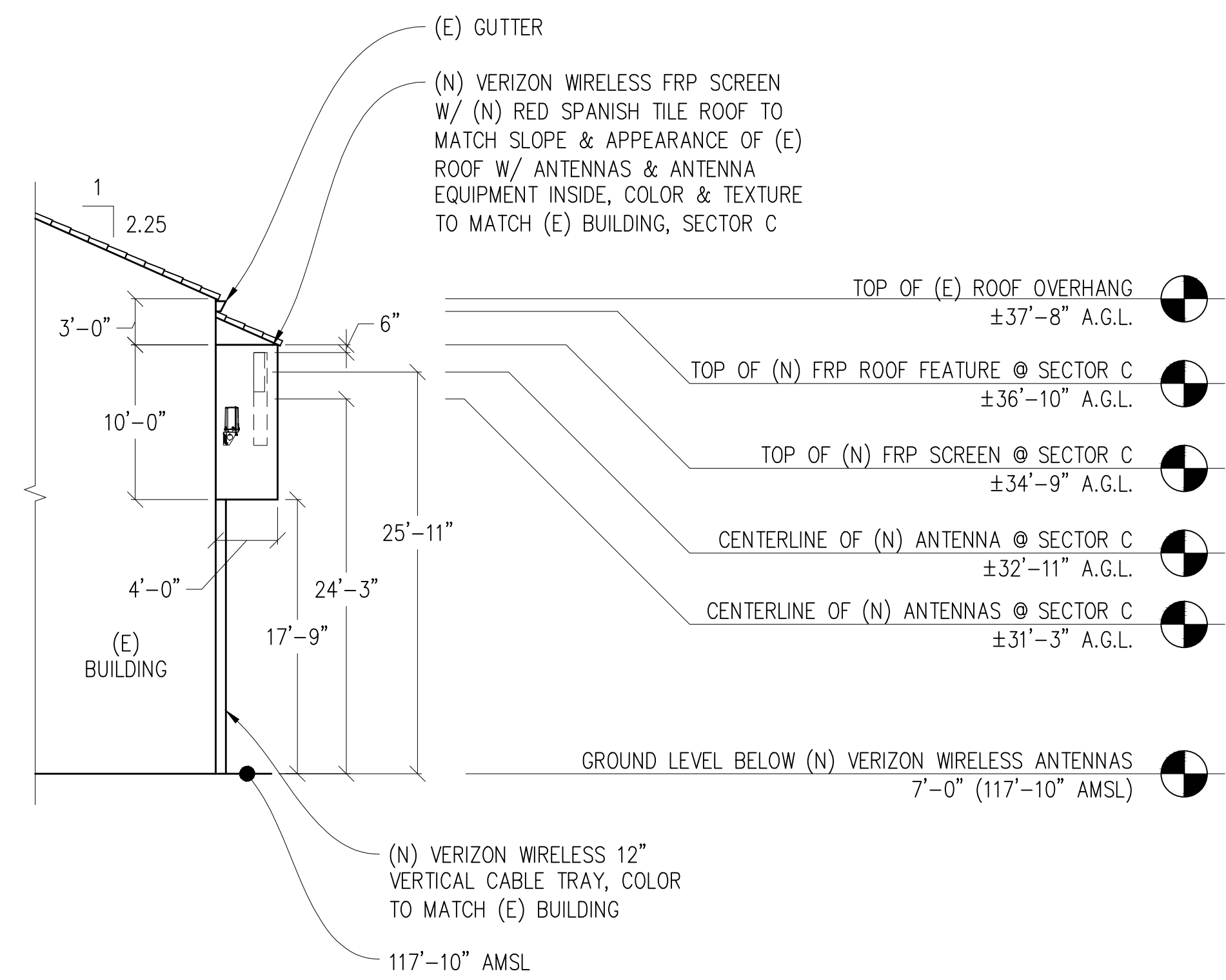
(E) WEST ELEVATION



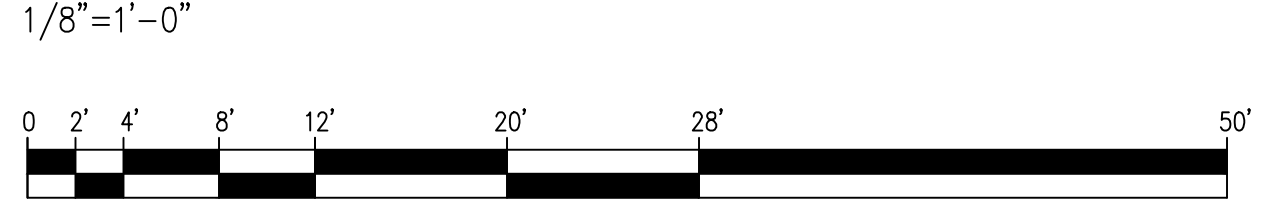
(N) WEST ELEVATION



NOTE:
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(N) NORTH ELEVATION



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1110 HIGHLAND DRIVE
NOVATO, CA 94949

PREPARED FOR
verizon
2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:
COMPLETE
Wireless Consulting, Inc.

MDG LOCATION ID: 5000001534
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DRAWN BY: C. CODY
CHECKED BY: J. GRAY
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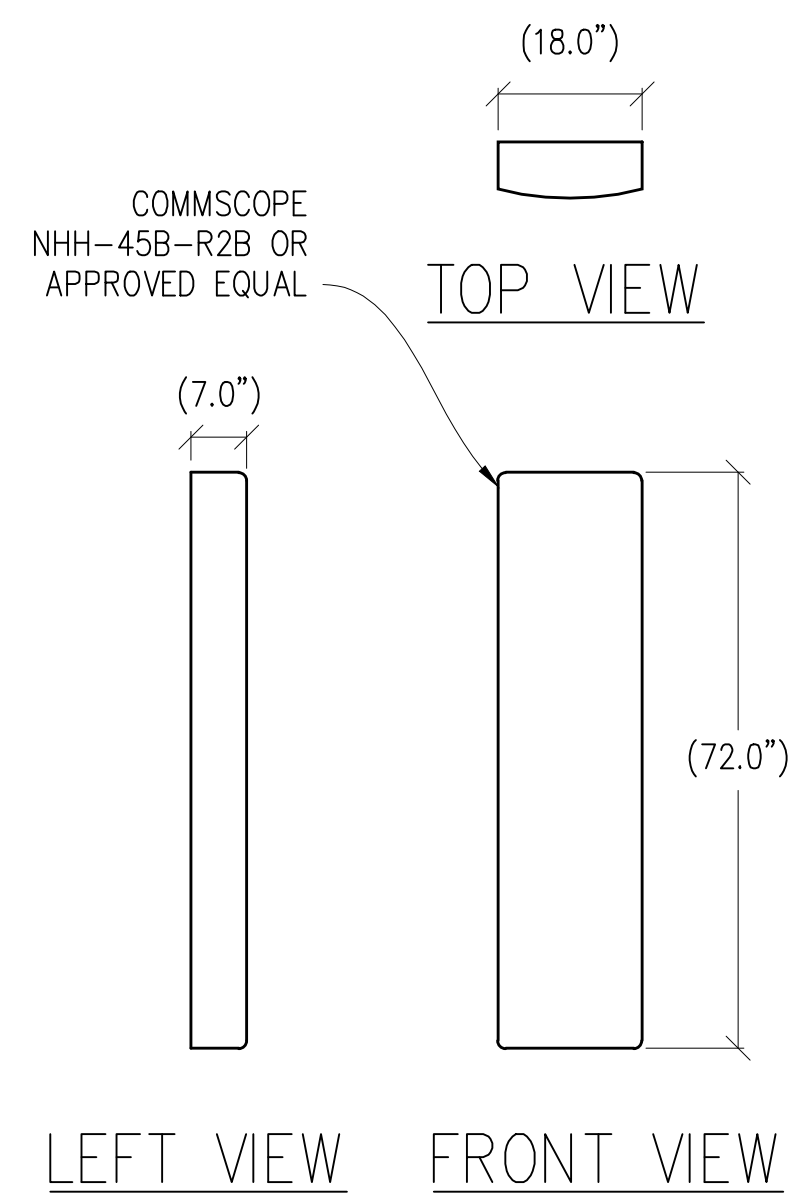
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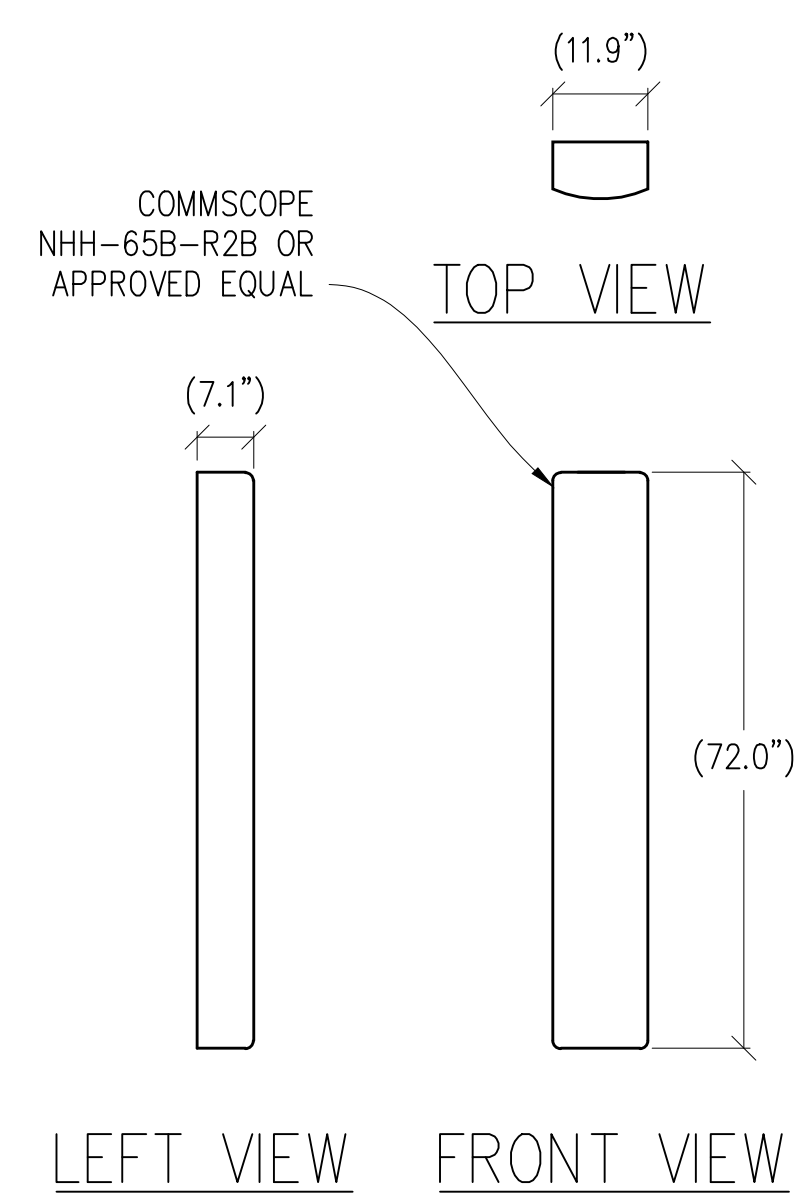
ENGINEER:
Streamline Engineering
AMERICAN INSTITUTE OF PROFESSIONAL ENGINEERS
3843 TAYLOR ROAD, SUITE A, LOOMIS, CA 95660
Contact: Kevin Spore Phone: 916-860-1800
E-Mail: kevin@streamlineeng.com Fax: 916-860-1941
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SHEET TITLE:
ELEVATIONS

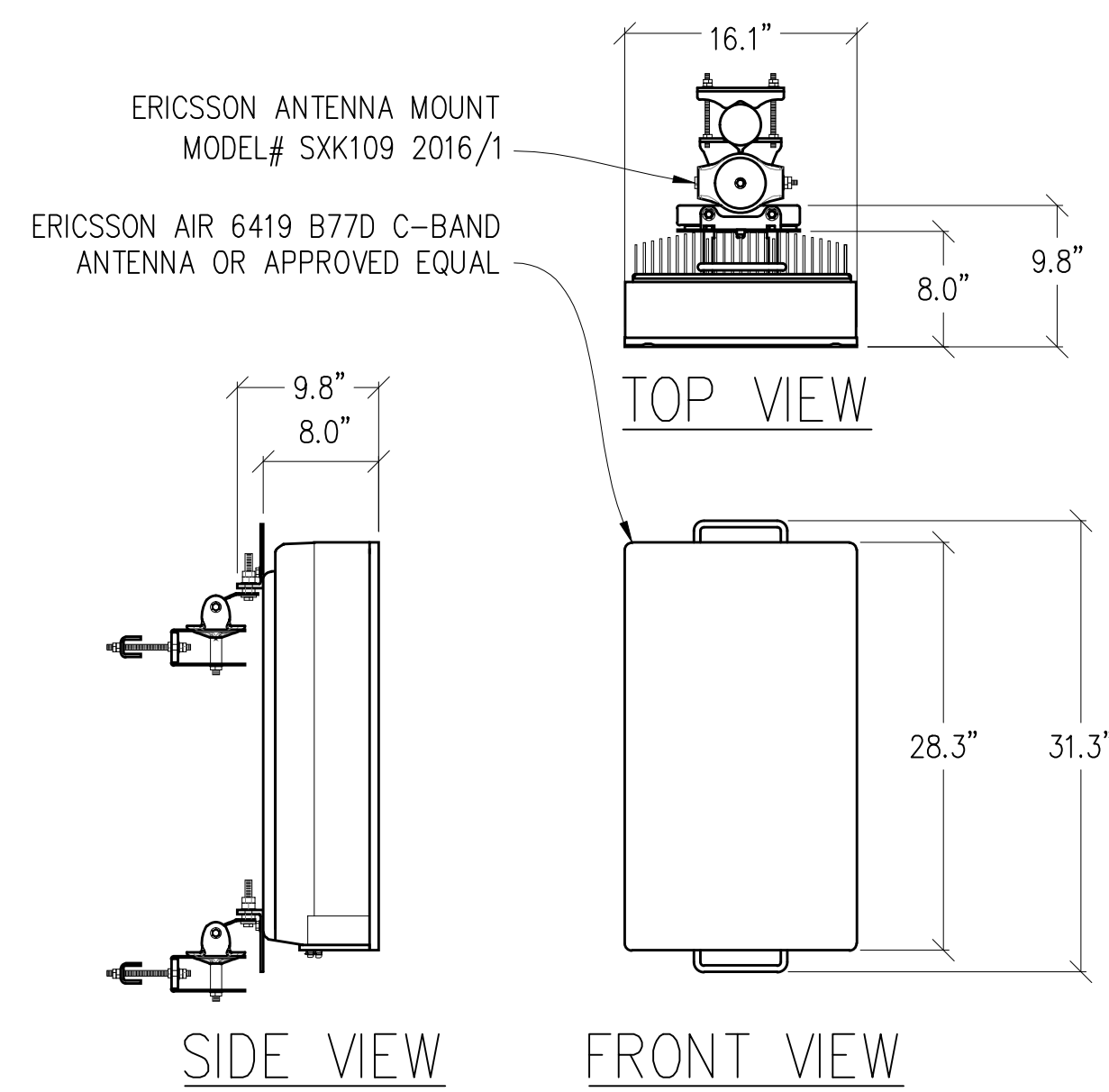
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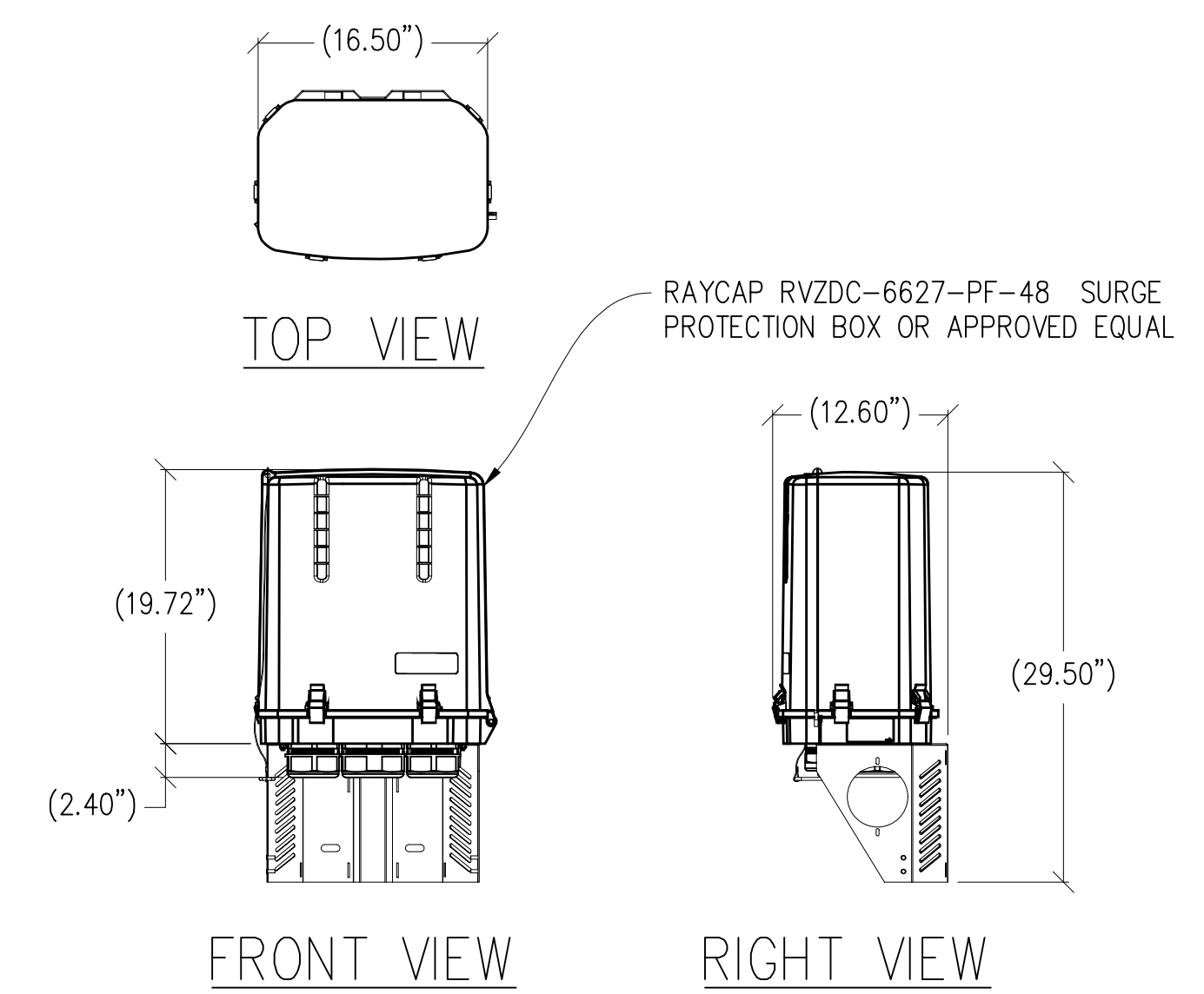
1 ANTENNA DETAIL
 1/2"=1" MAX WEIGHT: 73.6 LBS



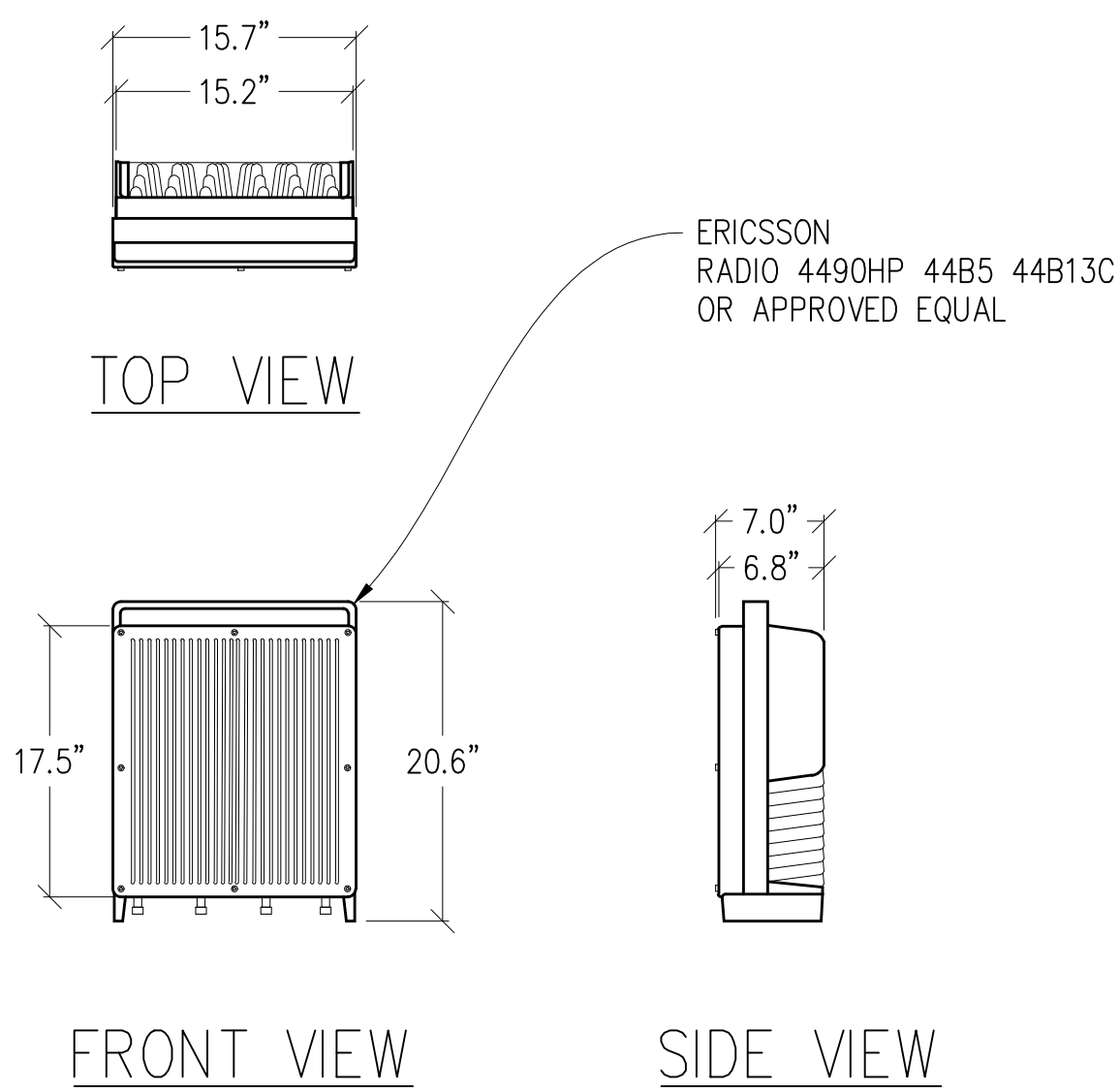
2 ANTENNA DETAIL
 1/2"=1" MAX WEIGHT: 43.7 LBS



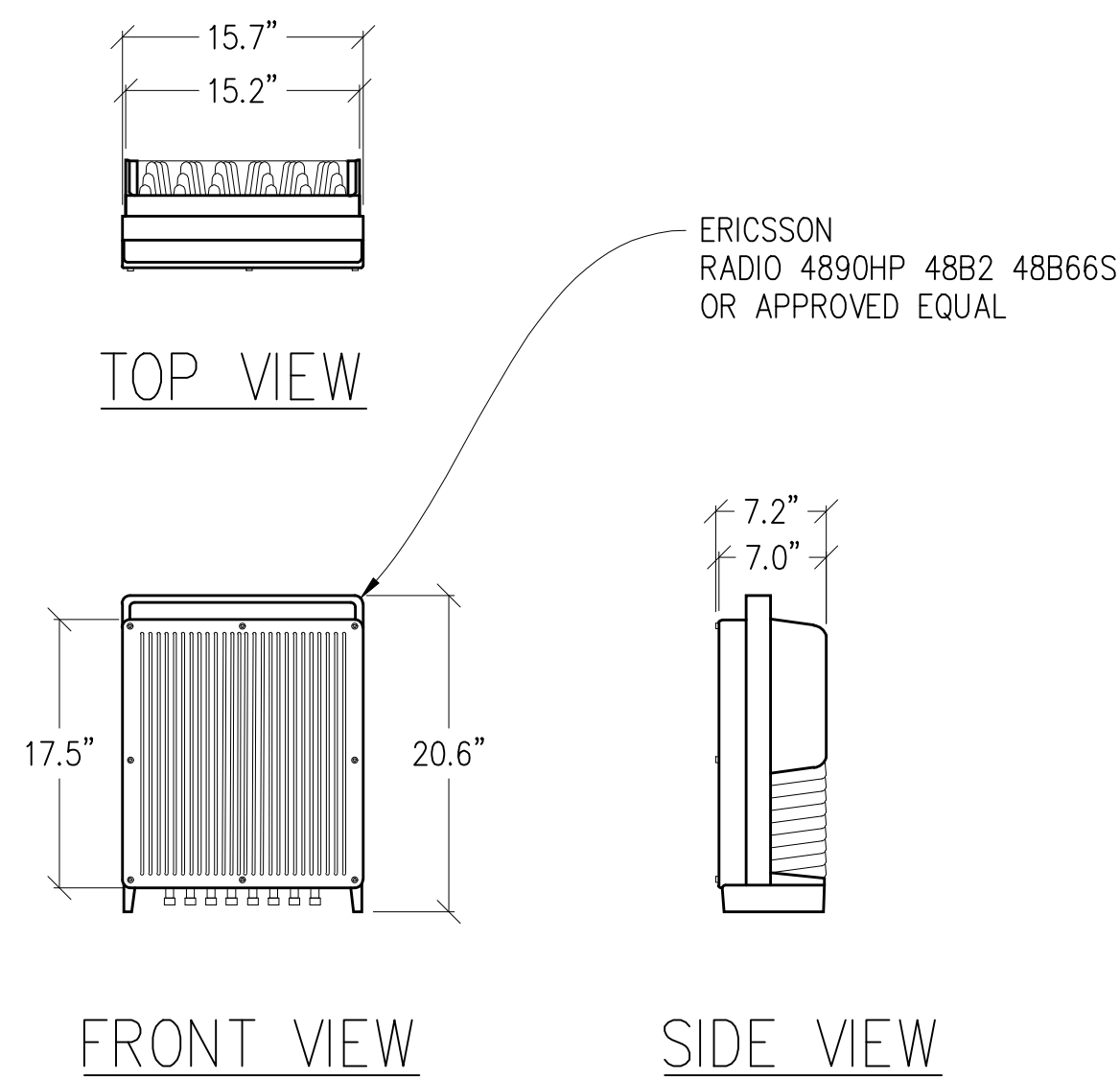
3 ANTENNA DETAIL
 1"=1'-0" MAX WEIGHT: 71 LBS



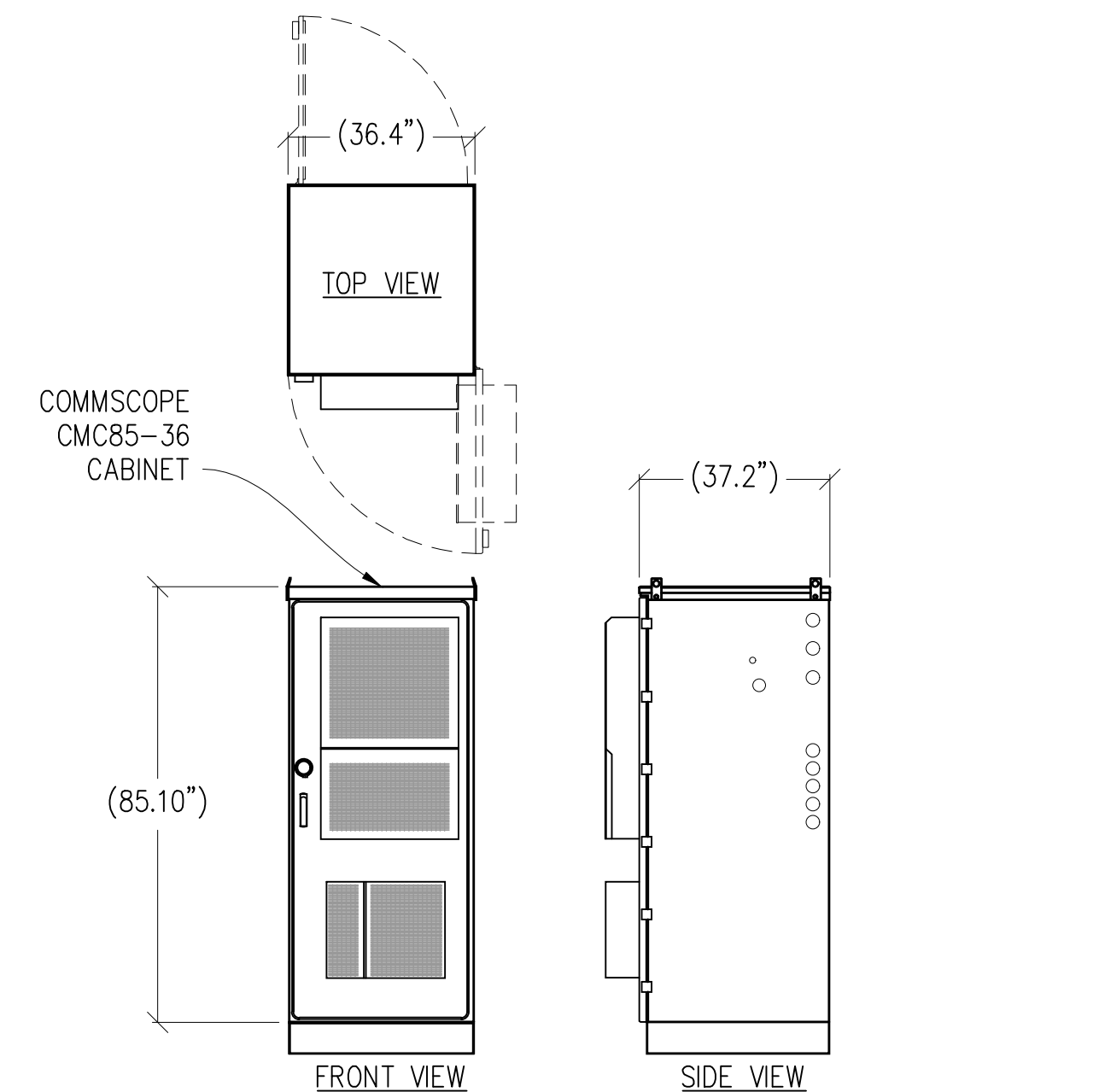
4 SURGE PROTECTION BOX
 1"=1'-0" MAX WEIGHT: 32.0 LBS



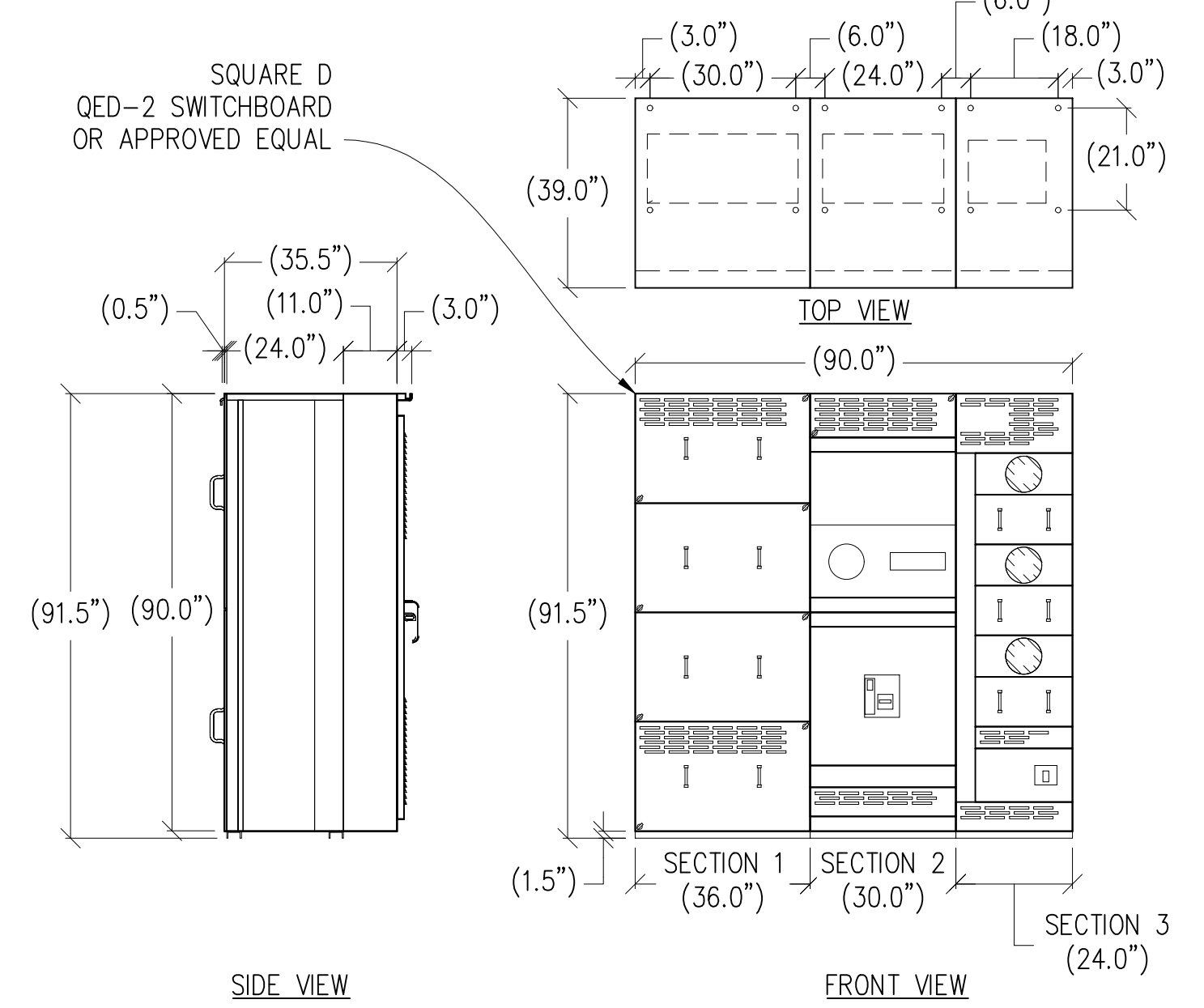
5 RADIO 4490HP DETAIL
 1"=1'-0" MAX WEIGHT: 68.4 LBS



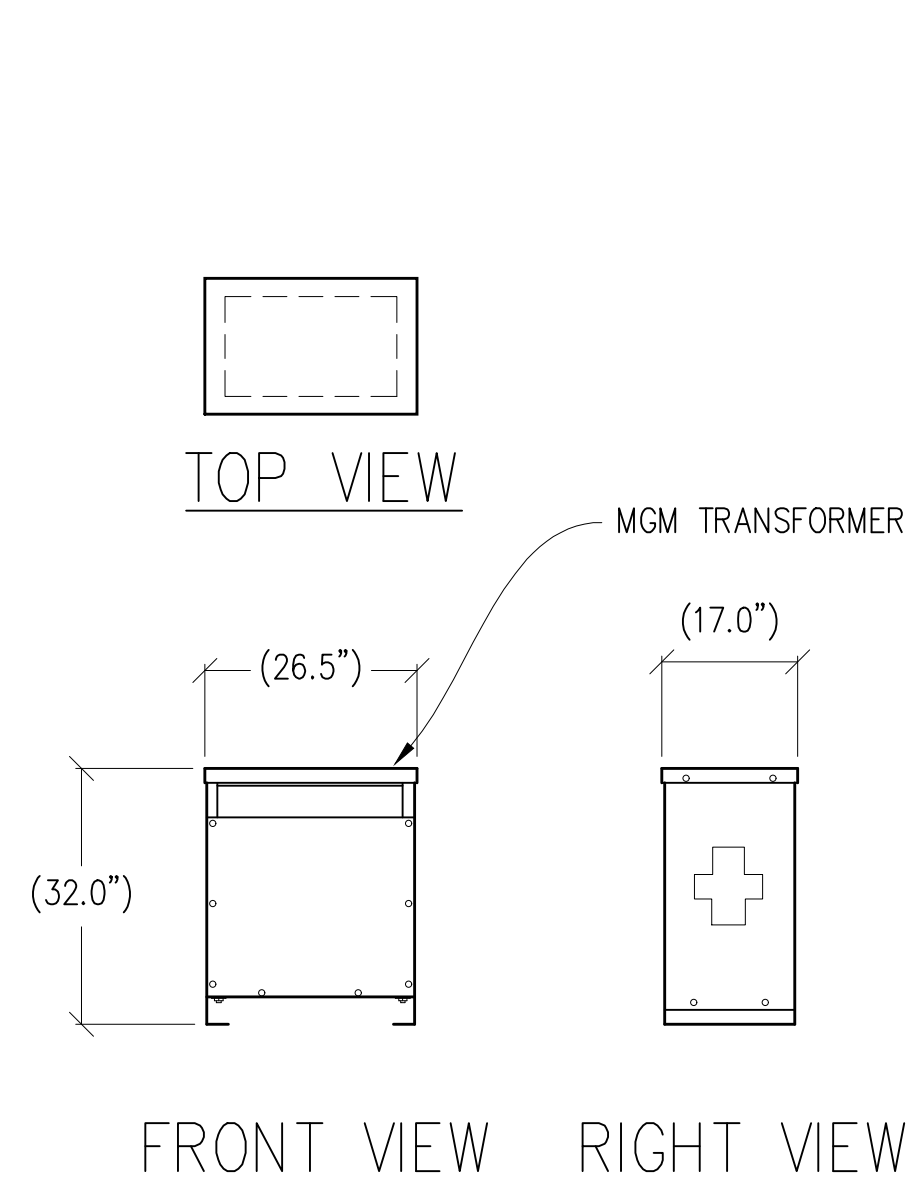
6 RADIO 4890HP DETAIL
 1"=1'-0" MAX WEIGHT: 69.5 LBS



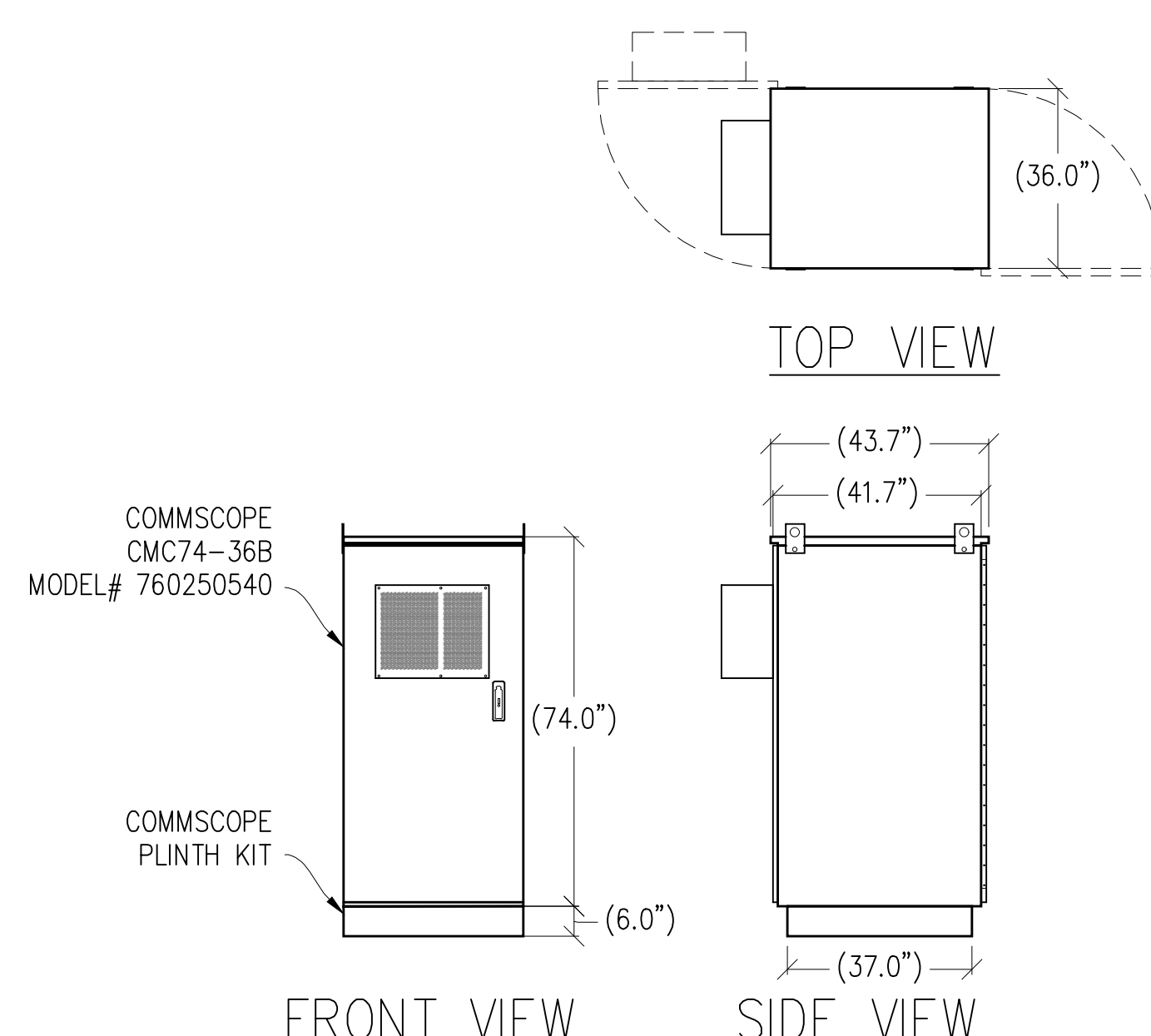
7 EQUIPMENT CABINET DETAIL
 3/8"=1'-0" MAX WEIGHT: 2352 LBS



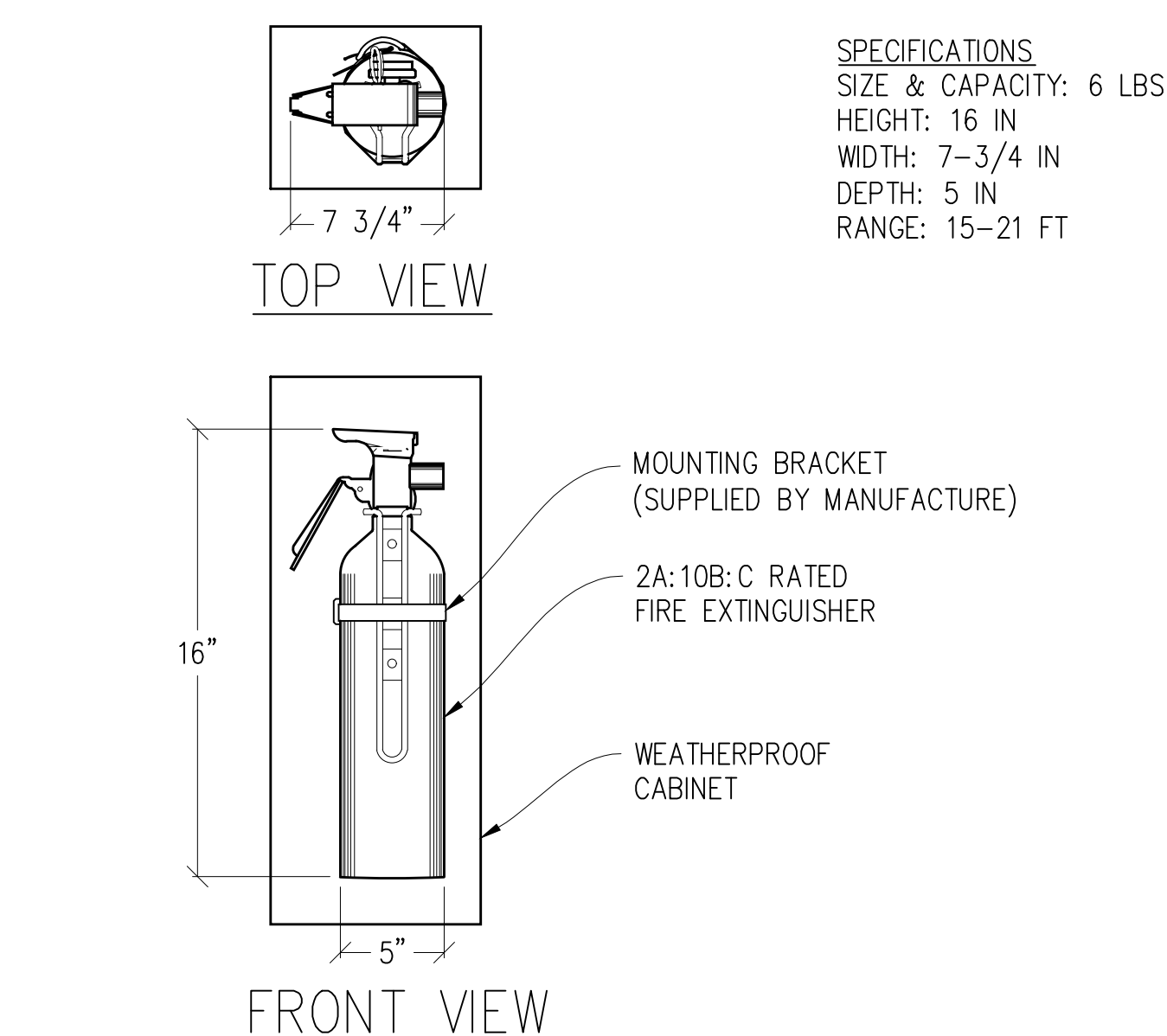
8 QED-2 SWITCHBOARD
 3/8"=1'-0" MAX WEIGHT: 2,113 LBS



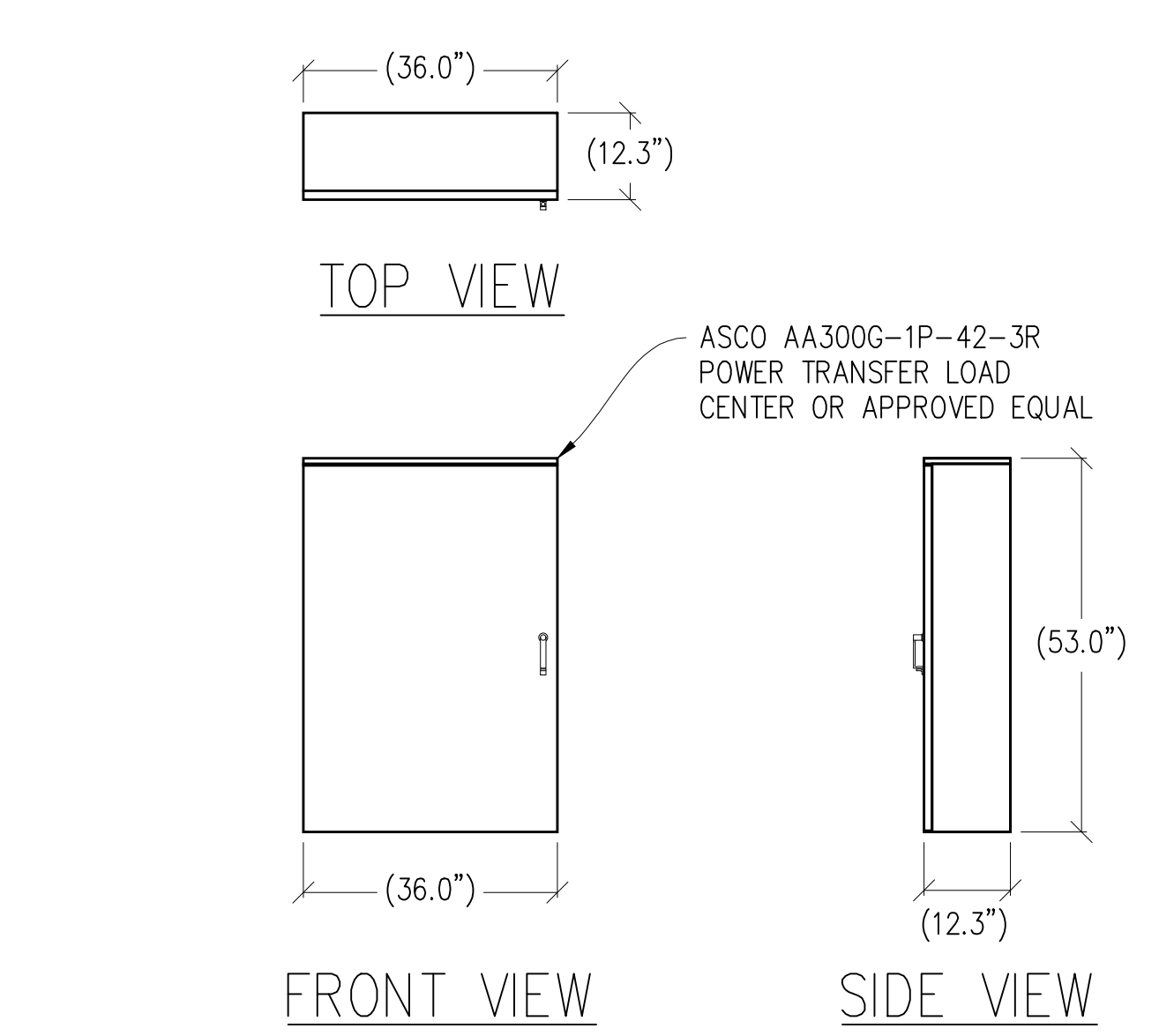
9 TRANSFORMER DETAIL
 1/2"=1'-0" WEIGHT: 345 LBS



10 BATTERY CABINET DETAIL
 3/8"=1'-0" WEIGHT W/ BATTERIES: 4,340.4 LBS



11 FIRE EXTINGUISHER DETAIL
 N.T.S.



12 ILC CABINET DETAIL
 1/2"=1'-0" MAX WEIGHT: 210 LBS

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MARIN COUNTRY CLUB
 1110 HIGHLAND DRIVE
 NOVATO, CA 94949

PREPARED FOR
verizon
 2770 SHADELANDS DR, BLDG 11
 WALNUT CREEK, CA 94598

Vendor:
COMPLETE
 Wireless Consulting, Inc.

MDG LOCATION ID: 5000001534
 PROJECT ID: 2013447
 DRAWN BY: C. CODY
 CHECKED BY: J. GRAY
 APPROVED BY: J. SPORE

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SHEET TITLE:
DETAILS

SHEET NUMBER:
A-4.1



PowerSafe SBS Front Terminal

Telecommunications NEBS™ Certified

Battery Range Summary

The PowerSafe™ SBS™ Front Terminal battery further extends the technical leadership of PowerSafe SBS battery product line: not only do PowerSafe SBS Front Terminal monoblocks retain the benefits typically associated with Thin Plate Pure Lead (TPPL) Technology such as long life, high energy density, superior shelf life, etc., they also deliver exceptional cyclic performance in both float and fast charge applications, even in the hottest and harshest operating environments.

Where conventional Valve Regulated Lead Acid (VRLA)/Absorbed Glass Mat (AGM) batteries struggle to cope with harsh conditions and frequent power outages, cutting edge (TPPL) technology makes PowerSafe 12V batteries the perfect solution for the challenging operating conditions of today's telecommunication networks.

PowerSafe SBS batteries are designed to high quality standards and a unique manufacturing methods means superior energy and power, high performance and proven reliability, there is no substitute to PowerSafe SBS Front Terminal batteries.

Features and Benefits

- Capacity range 31-190Ah
- 12V monobloc configurations
- Multiple string configurations available
- Two year shelf life
- SR4228 compliant
- Proven long service life
- High energy density and cycling capability



Publication No: US-SBSF-RS-004 - January 2014

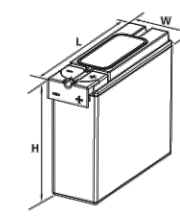
- Construction**
- Robust positive plates are designed to prolong service life and enhance corrosion resistance
 - Separators are low resistance microporous (AGM). The electrolyte is absorbed within the AGM, preventing acid spills in case of accidental damage
 - Container and cover in flame retardant UL94-V0 material, highly resistant to shock and vibration
 - Terminals are stainless steel front access with top access copper alloy insert. Top and front access terminations provide maximum conductivity
 - Self-regulating one way pressure relief valves prevents ingress of atmospheric oxygen

- Installation and Operation**
- Space efficient footprint
 - VRLA design, reduces maintenance requirements
 - Lifting handles for easy handling
 - Greater than 10 year life expectancy in float service at 77°F (25°C)
 - Increased active material surface area yields great cycling capability
 - Operating temperature: -40°F (-40°C) to 122°F (50°C)
Recommended temperature: 68°F (20°C) to 86°F (30°C)

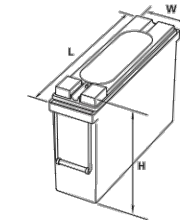
- Standards**
- Meets criteria for "non-spillable" batteries
 - Complies with Telcordia SR-4228, Network Equipment Building System (NEBS™) Criteria Levels
 - The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified

General Specifications

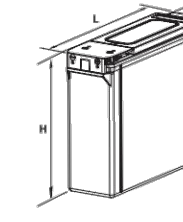
Cell Type	Nominal Capacity (Ah)		Nominal Dimensions			Weight - Volume		
	10 hr rate to 1.80Vpc @20°C	8 hr rate to 1.75Vpc @77°F	Length in mm	Width in mm	Height in mm	Unpacked lbs	kg	
SBS B8F	31	31	11.9	303	3.8	97	6.3	159
SBS B10F	38	38	11.9	303	3.8	97	7.2	184
SBS B14F	62	62	11.9	303	3.8	97	10.4	264
SBS C11F	92	91	16.4	417	4.1	105	10.1	256
SBS 100F	100	100	15.6	395	4.3	108	11.3	287
SBS 112F	112	112	22.1	561	4.9	125	9.0	228
SBS 145F	145	145	17.9	455	6.8	173	9.4	238
SBS 165F	165	165	17.9	455	6.8	173	10.8	273
SBS 170F	170	170	22.1	561	4.9	125	11.1	283
SBS 190F	190	190	22.1	561	4.9	125	12.4	316



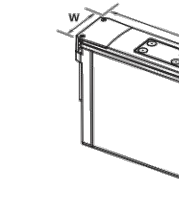
SBS B8F-B14F



SBS C11F



SBS 100F-112F



SBS 145F-190F



Battery Services for Backup Power

- Battery Installation
- Capacity and Acceptance
- Preventative Maintenance

connect@alpinepowersystems.com
877-993-8855

backup power | telecom | motive power
www.alpinepowersystems.com

CFC CHAPTER 12 COMPLIANCE

TOTAL = 28 BATTERIES X 2.28 kWh/BATTERY = 63.84 kWh

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

BATTERY INFORMATION (BATTERY CAPACITY DATA-12V MONOBLOCKS)

BATTERY MODEL	TOTAL # OF BATTERY UNITS INSTALLED	AMP HOURS PER UNIT	TOTAL VOLTS PER UNIT	TOTAL kWh # OF BATTERIES x AMP HOURS PER UNIT x VOLTS PER UNIT / 1000
ENERSYS POWERSAFE SBS 190F	28	190Ah	12V	28 x 190Ah x 12V/1000 = 63.84 kWh < 70kWh

BATTERY DATA CHART

NEW BATTERIES

BATTERY TYPE:	ENERSYS POWERSAFE SBS 190F		
NUMBER OF UNITS W/BATTERIES	28		
NUMBER OF BATTERIES :	28		
MATERIAL:	ELECTROLYTE	VOLUME: 2.34 GALLONS	BATTERY TOTAL: 65.52 GALLONS
MATERIAL:	ACID	WEIGHT: 10.1 LBS	BATTERY TOTAL: 282.8 LBS
MATERIAL:	LEAD	WEIGHT: 95.8 LBS	BATTERY TOTAL: 2682.4 LBS
TOTAL KWH:	190AH X 12V X 28 / 1000 = 63.84 KWH		

Issued For:

MARIN COUNTRY CLUB

1110 HIGHLAND DRIVE
NOVATO, CA 94949

PREPARED FOR



2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:



MDG LOCATION ID: 5000001534

PROJECT ID: 2013447

DRAWN BY: C. CODY

CHECKED BY: J. GRAY

APPROVED BY: J. SPORE

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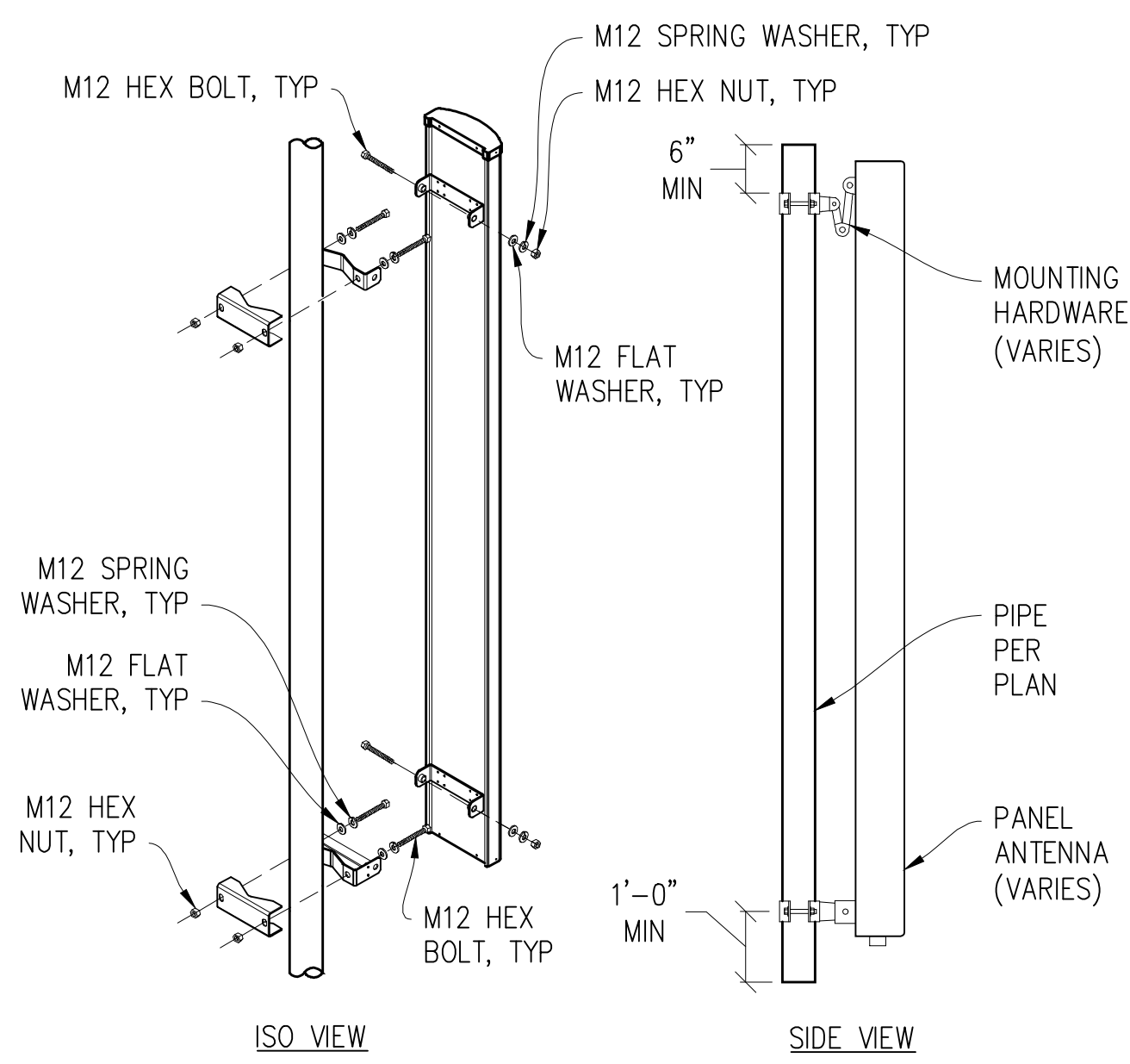


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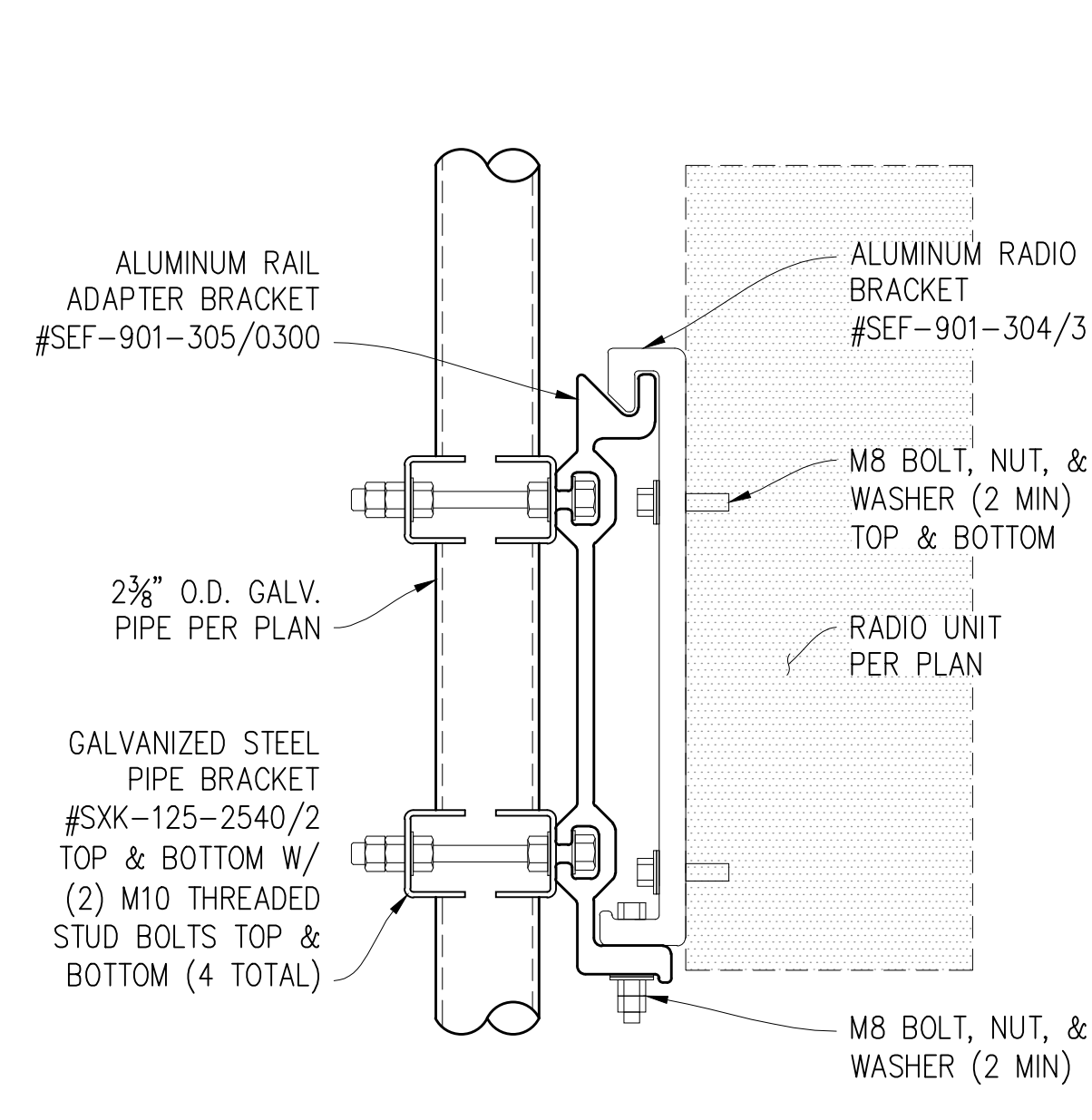
BATTERY SPECIFICATIONS

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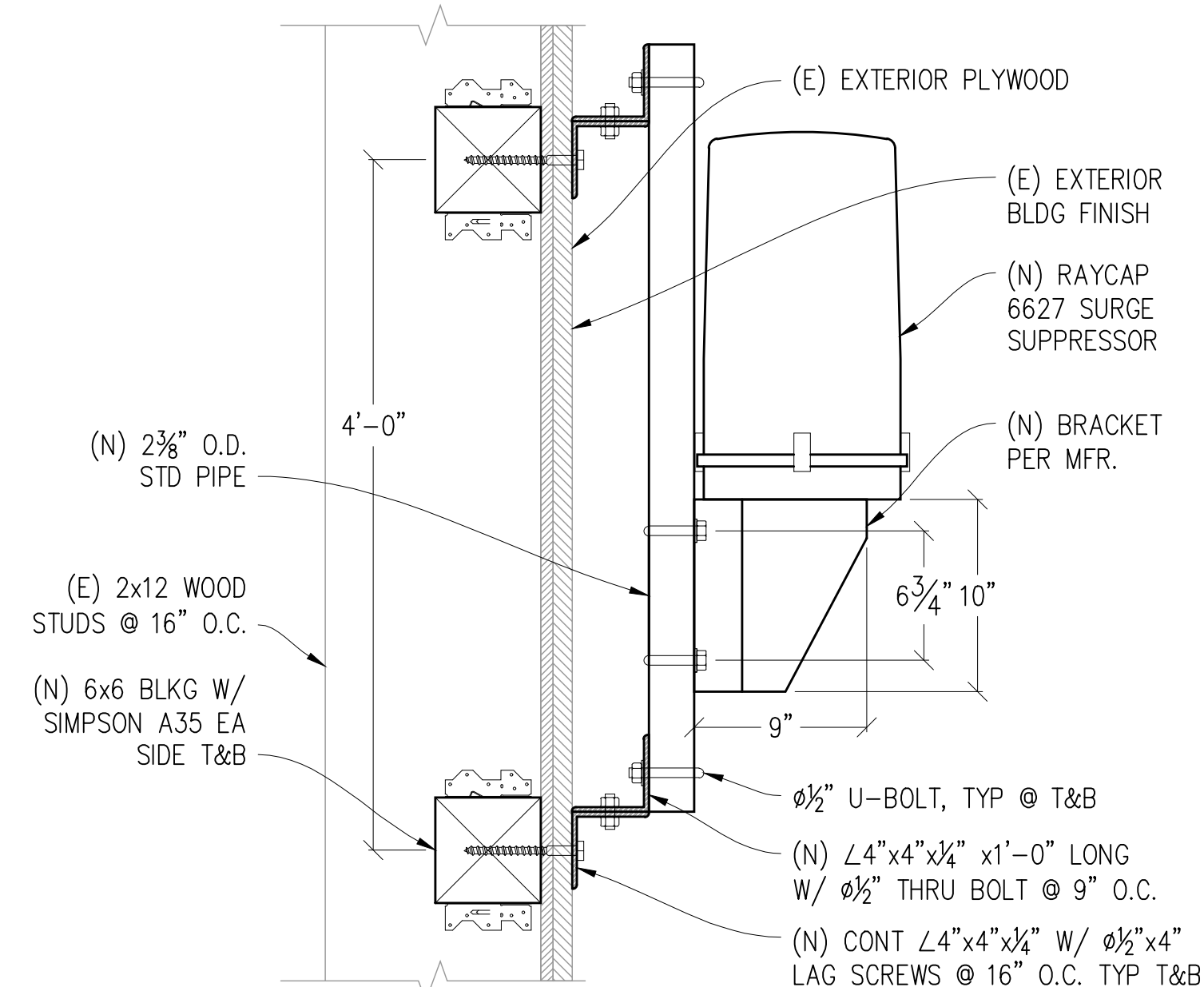
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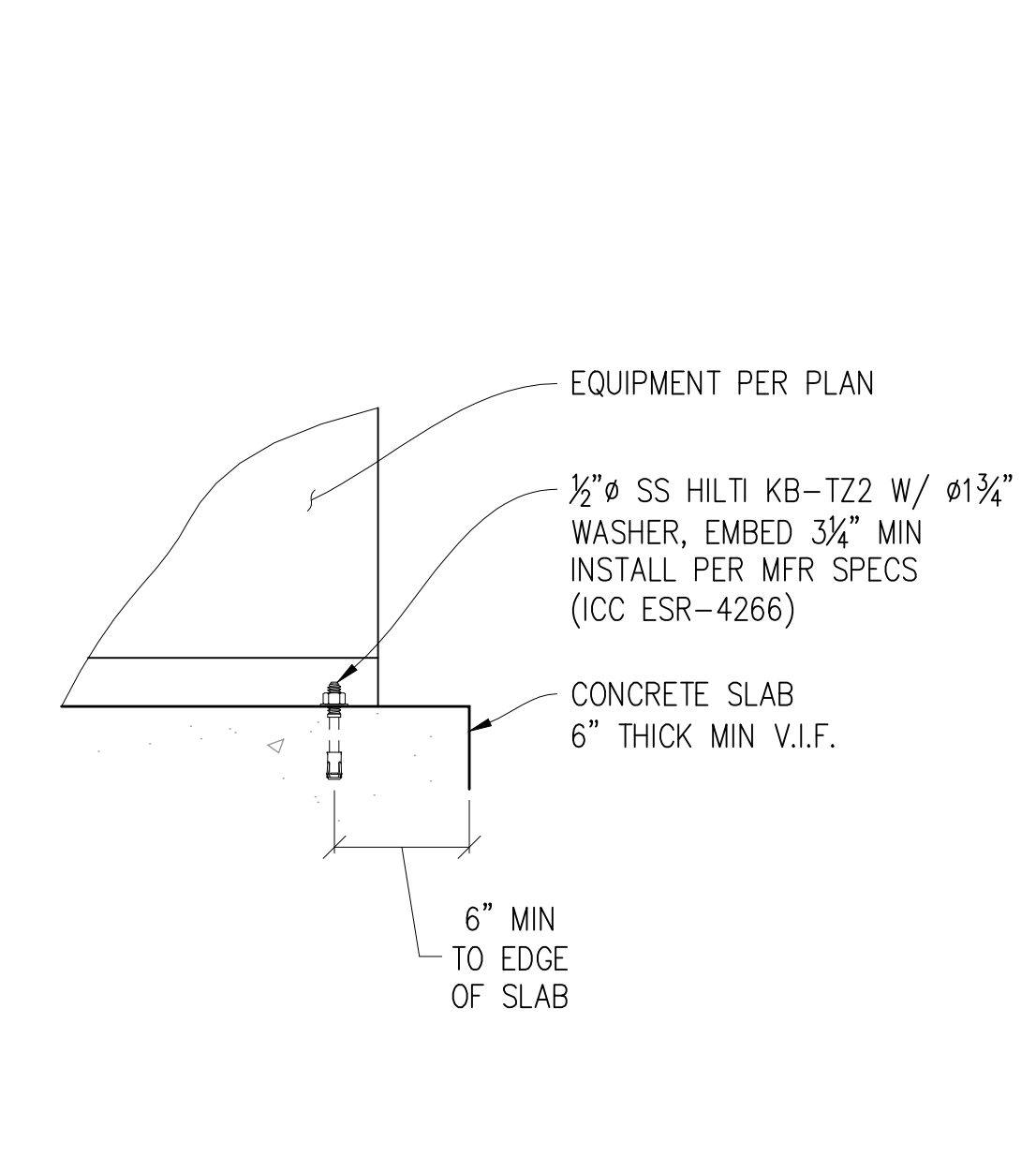
1 ANTENNA MOUNT
1"=1'-0"



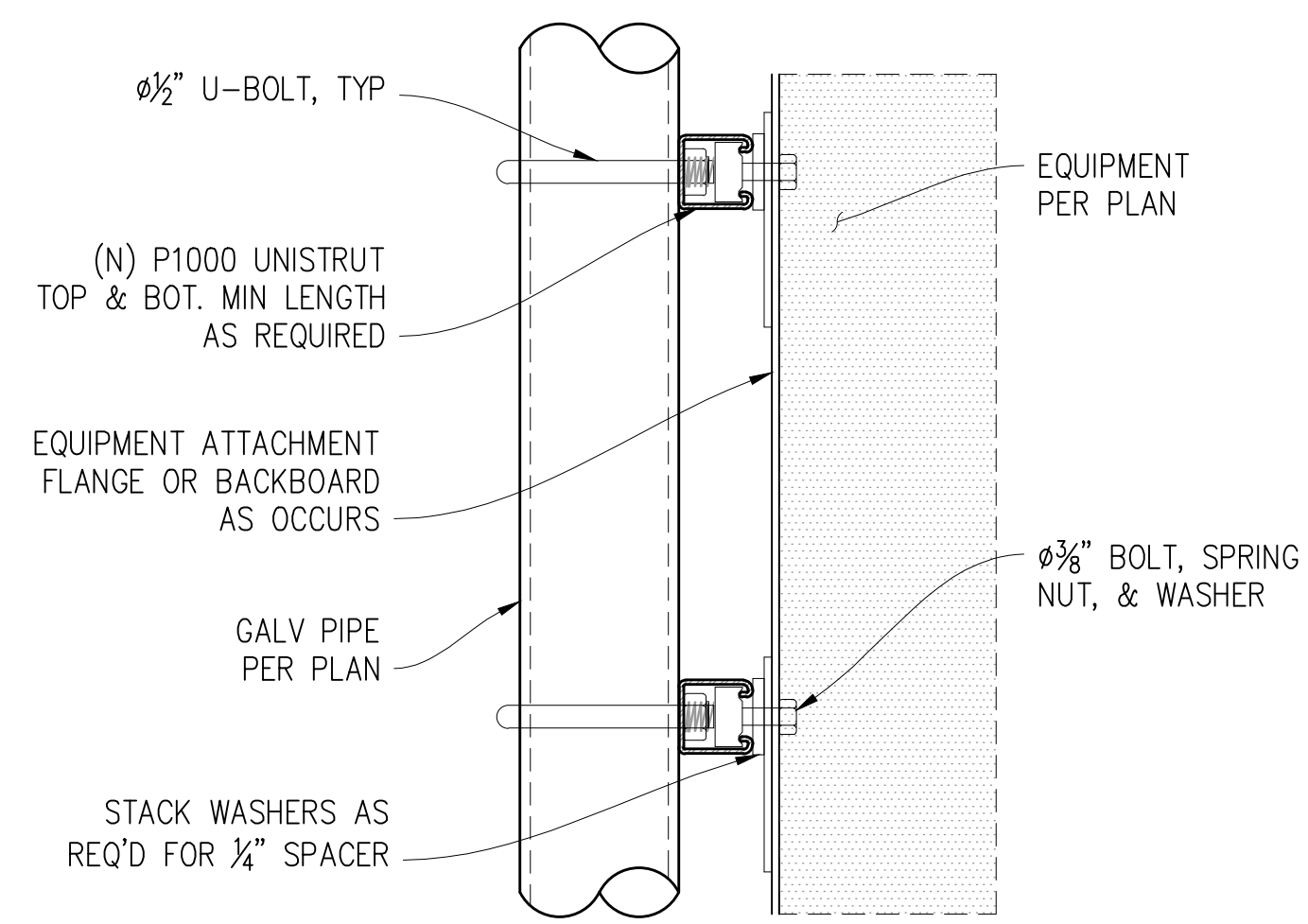
2 RADIO UNIT MOUNTING
3"=1'-0"



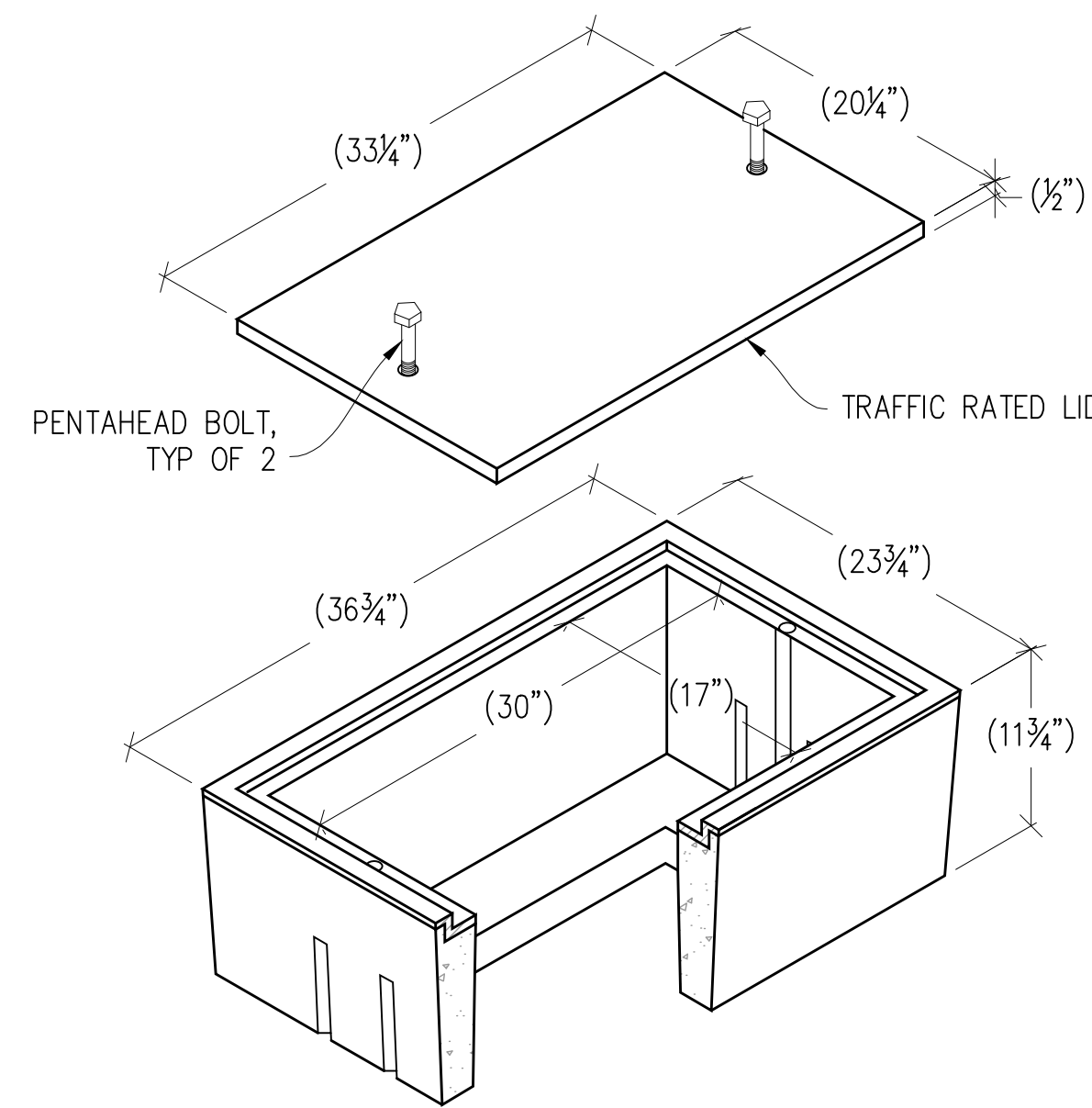
3 SURGE PIPE MOUNT
1 1/2"=1'-0"



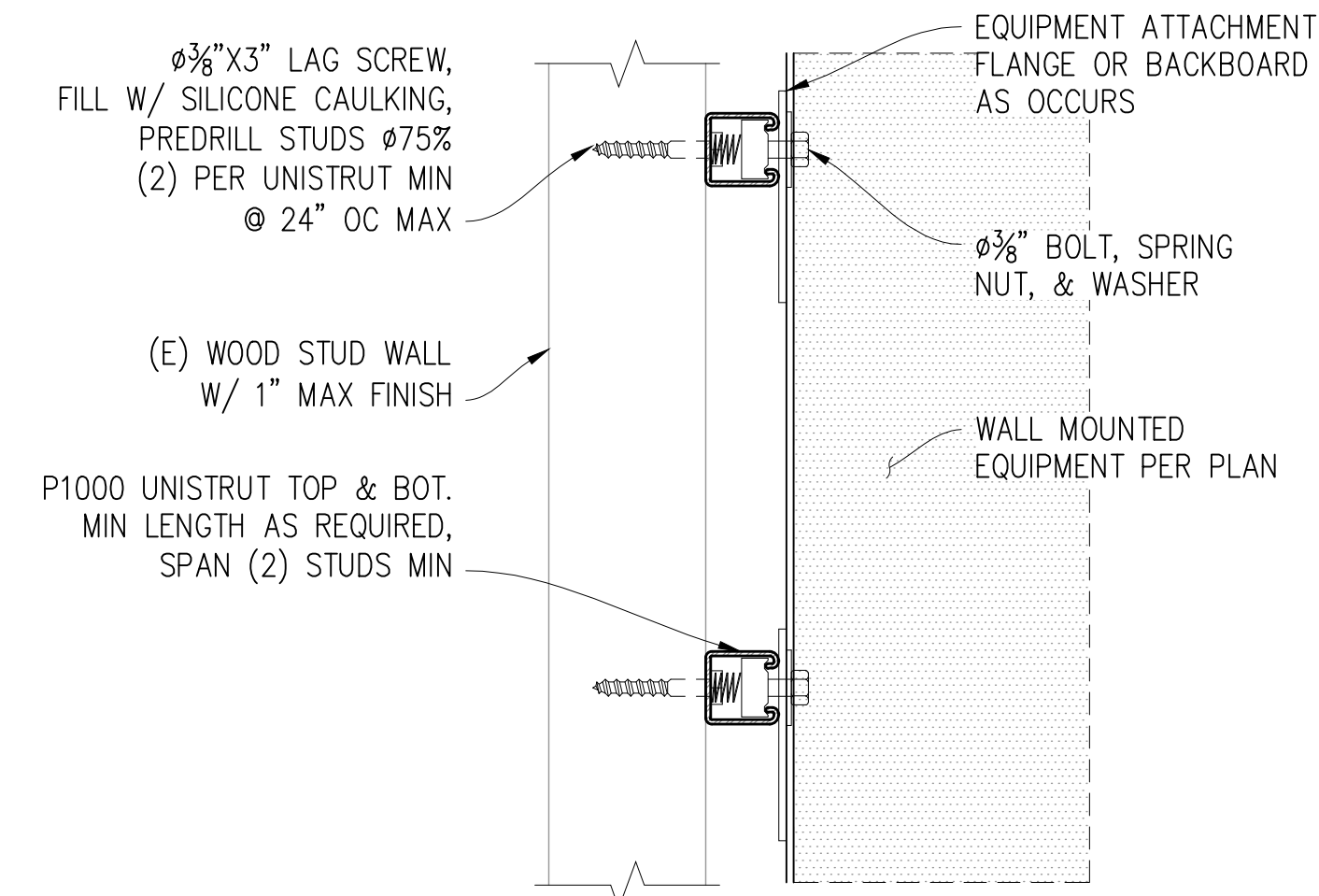
4 CABINET TO CONC
1 1/2"=1'-0"



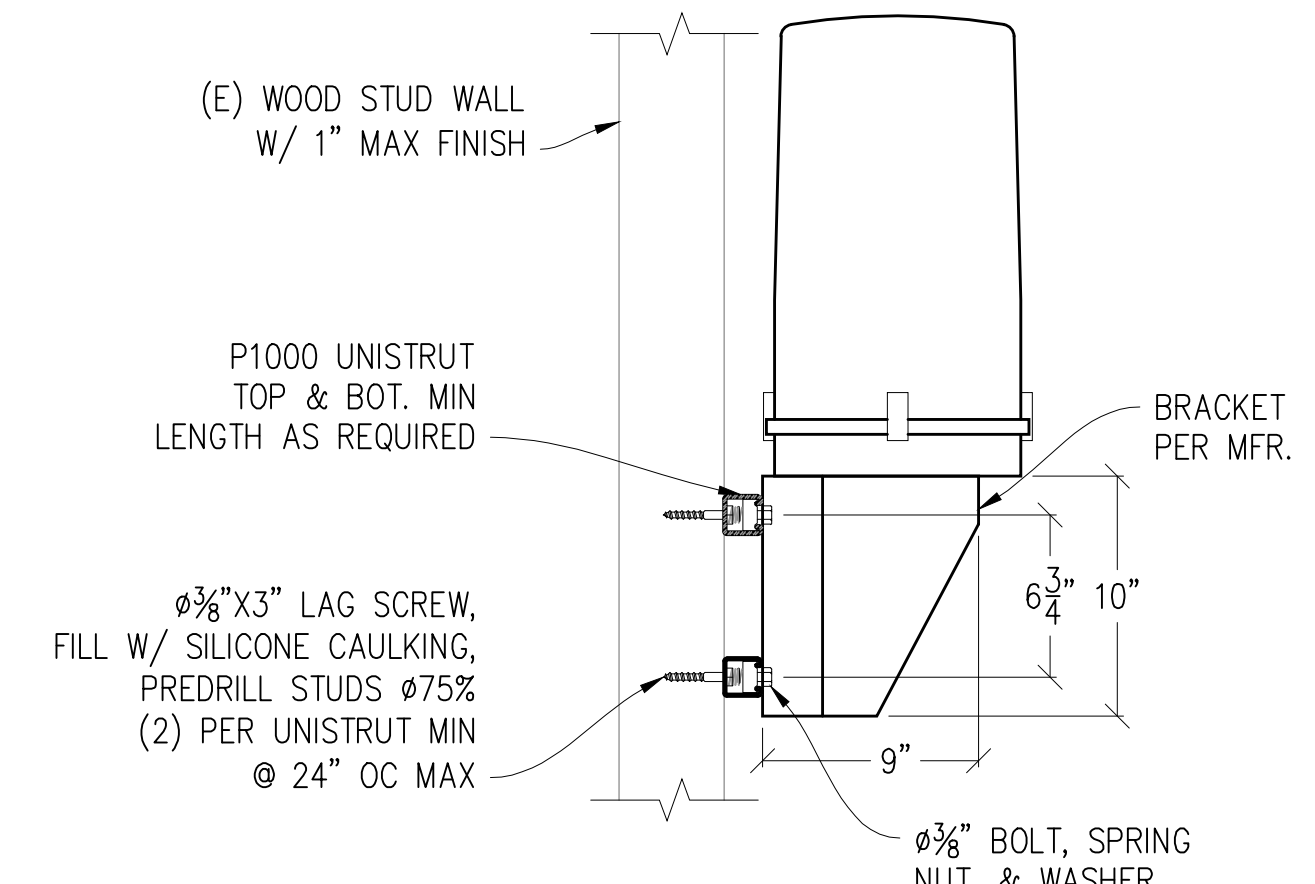
5 EQUIPMENT MOUNTING
3"=1'-0"



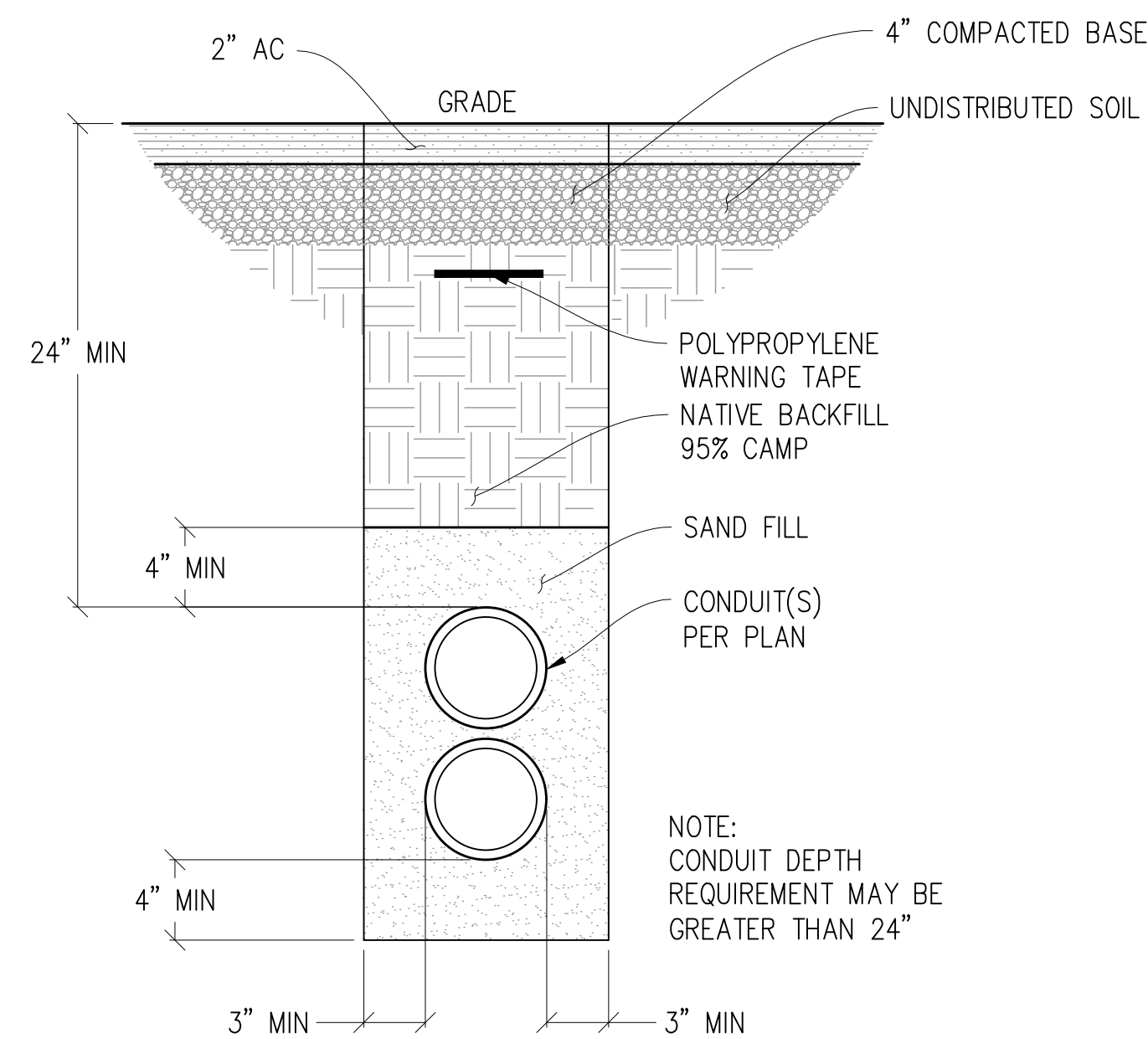
6 B1730 HANDHOLE DETAIL
NOT TO SCALE



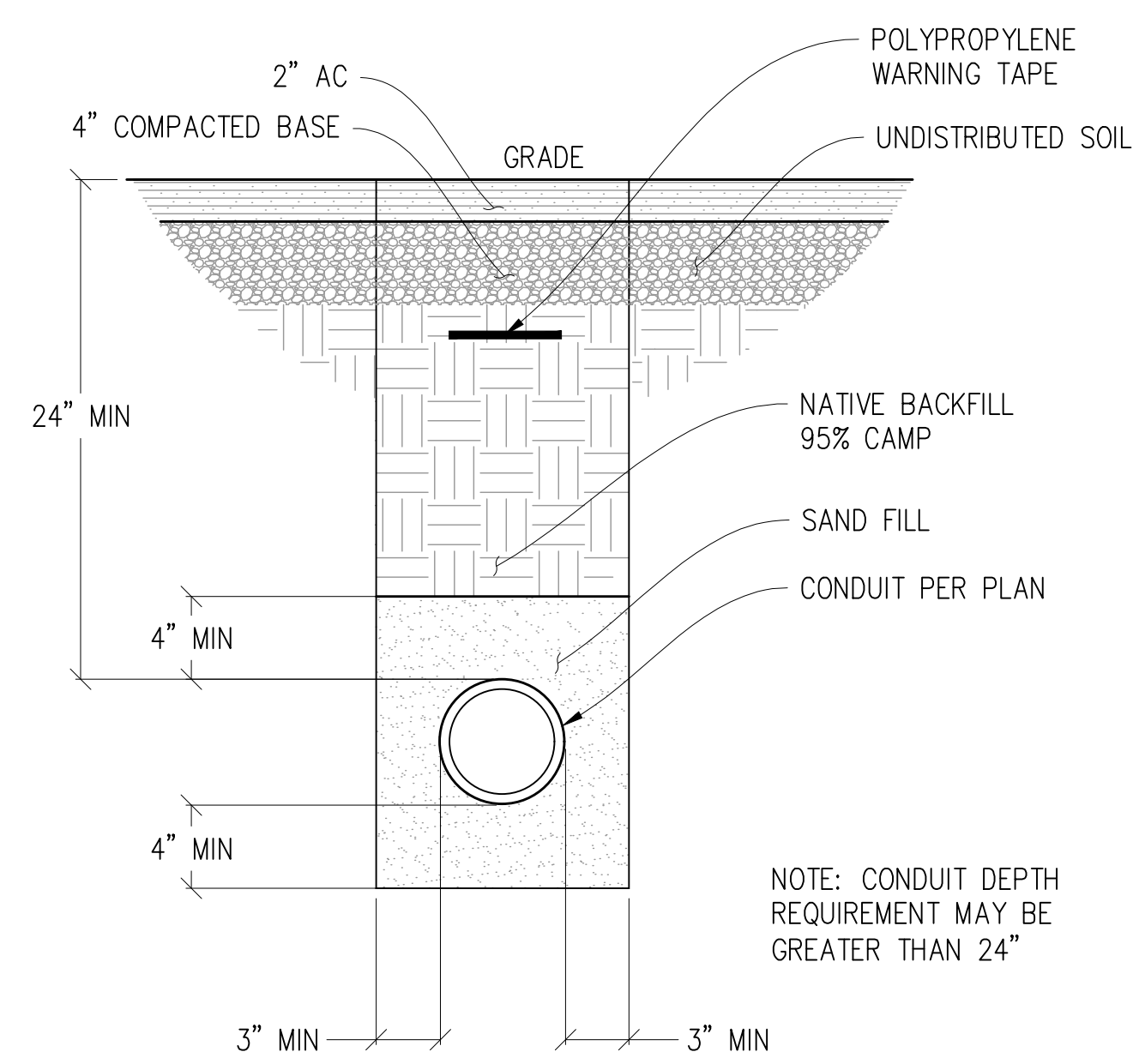
7 EQUIPMENT MOUNTING DETAIL
3"=1'-0"



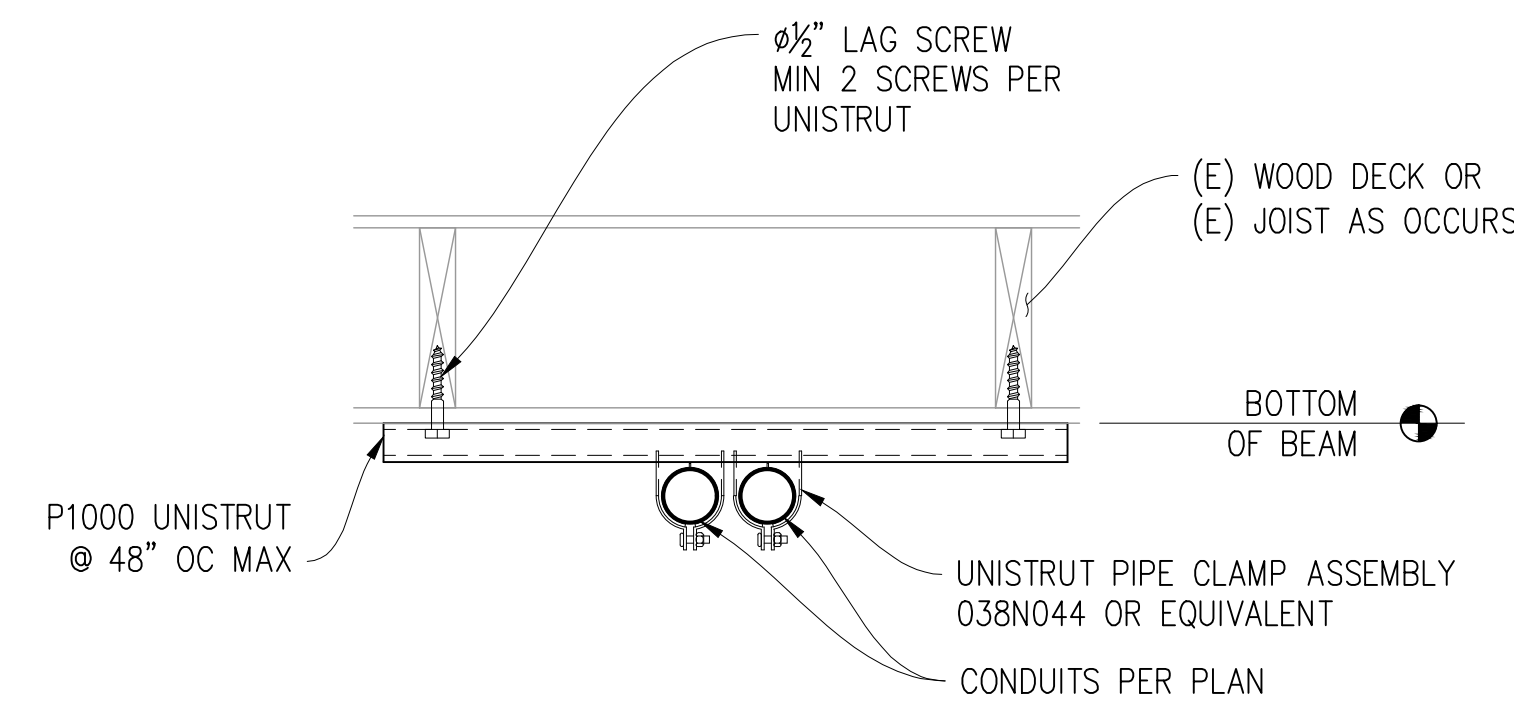
8 SURGE WALL MOUNT
1 1/2"=1'-0"



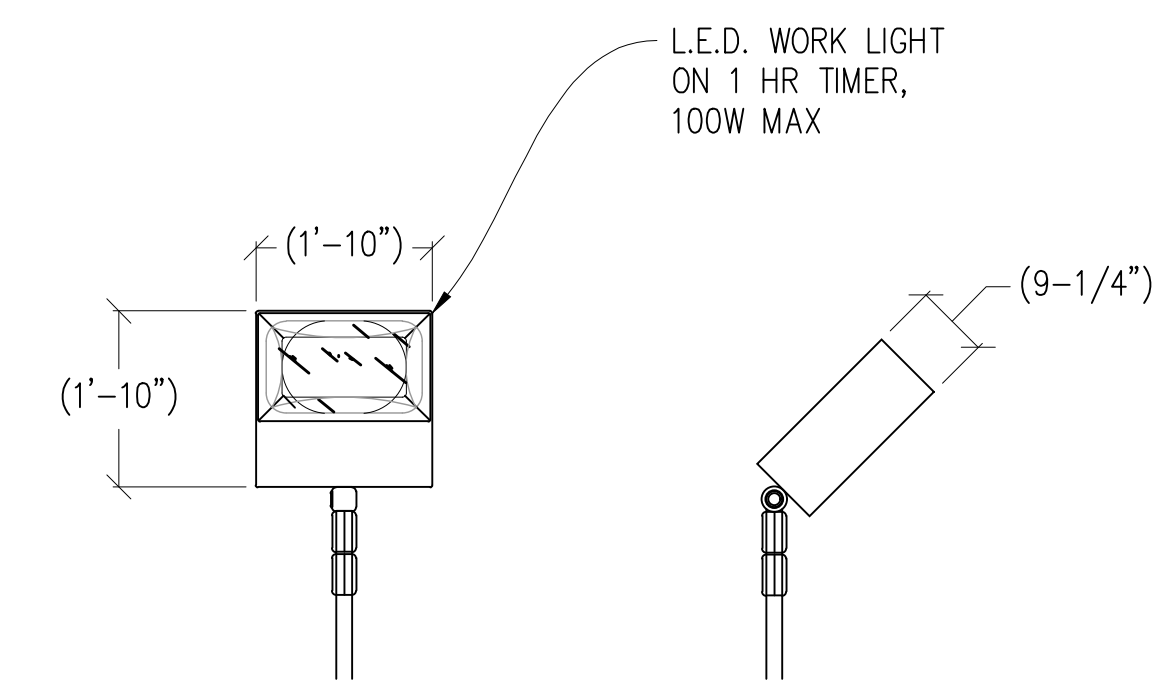
9 CONDUIT TRENCH DETAIL
1 1/2"=1'-0"



10 CONDUIT TRENCH DETAIL
1 1/2"=1'-0"



11 CONDUIT MOUNT DETAIL
1 1/2"=1'-0"



12 TECH LIGHT DETAIL
1 1/2"=1'-0"

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PREPARED FOR

verizon

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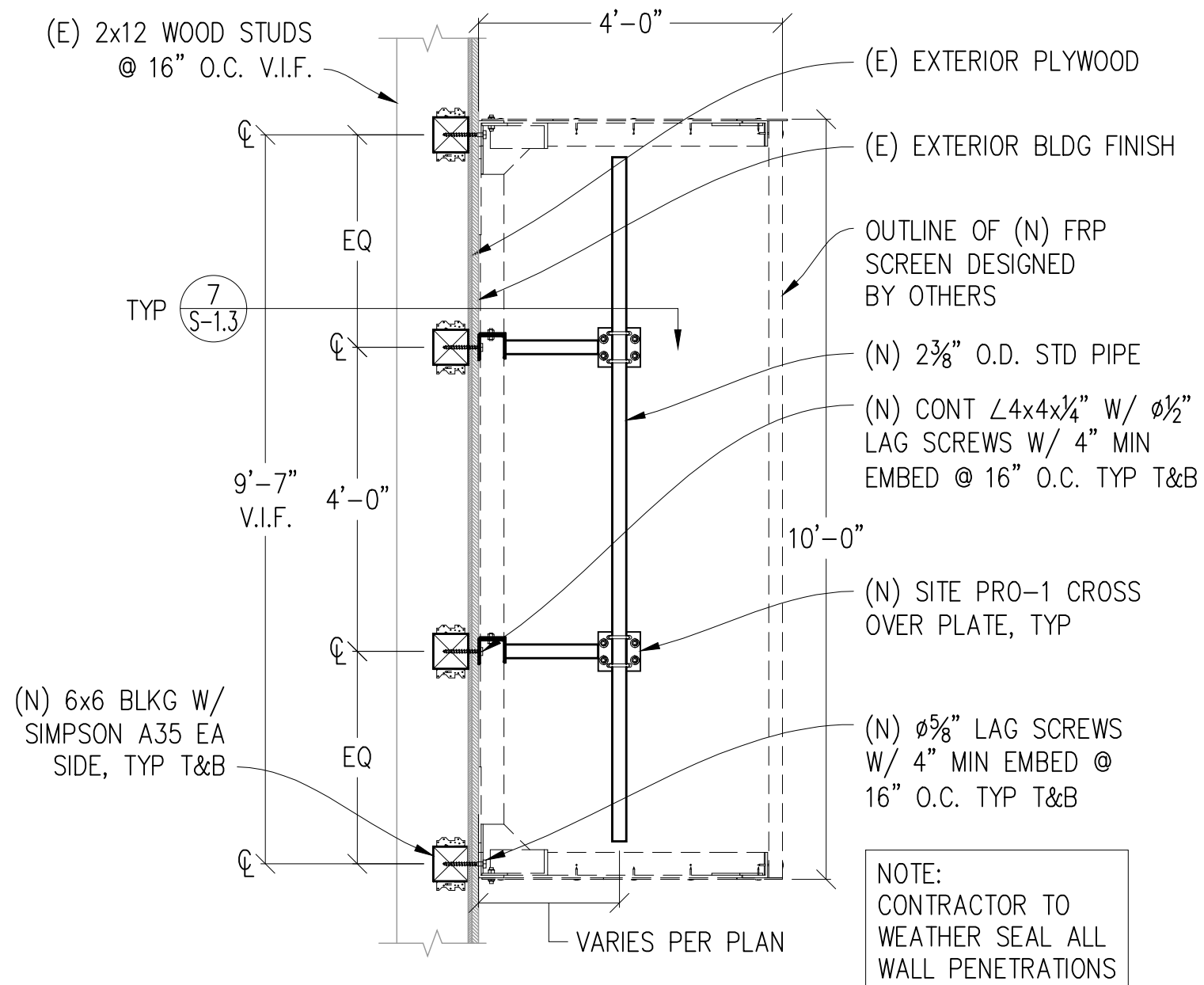
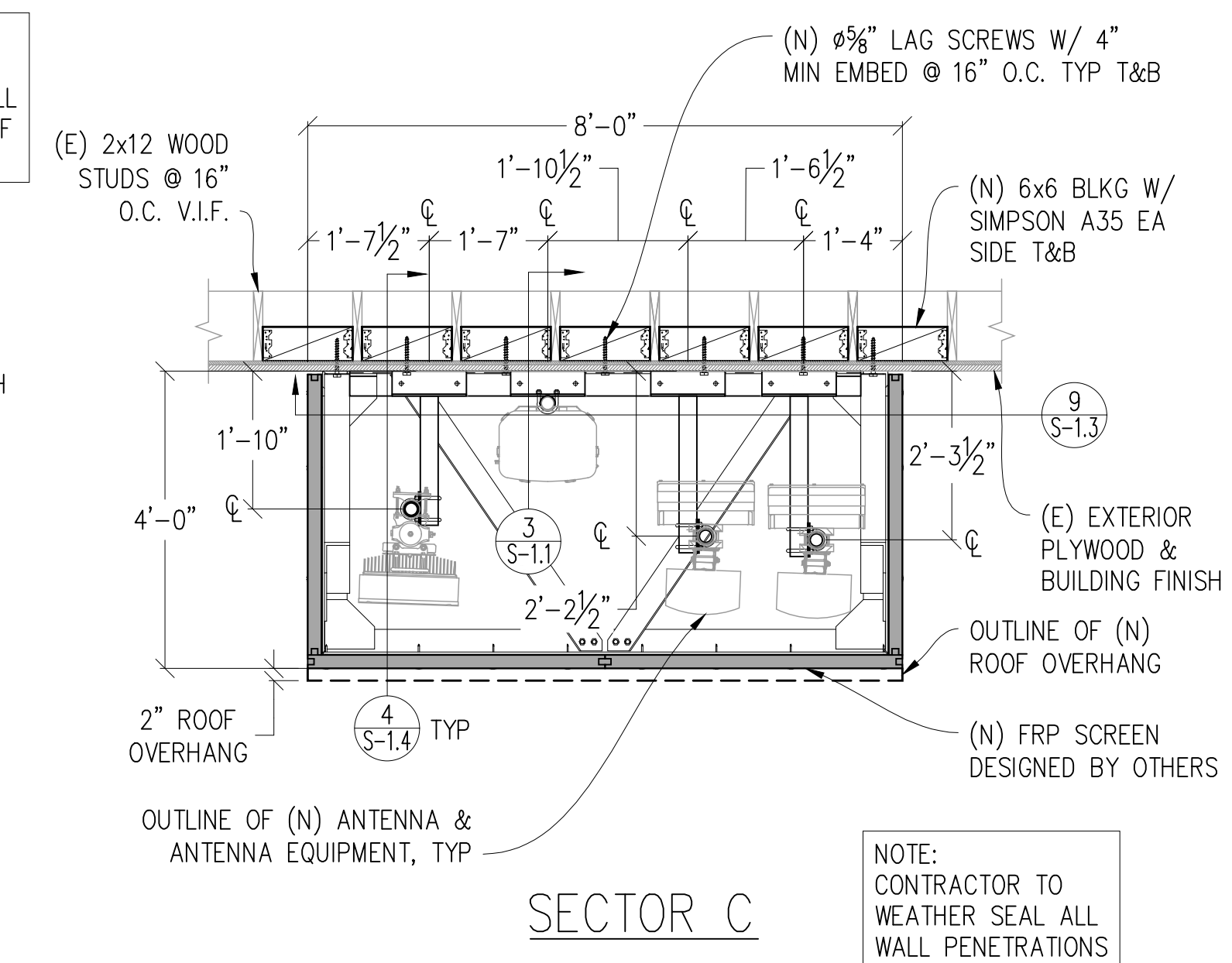
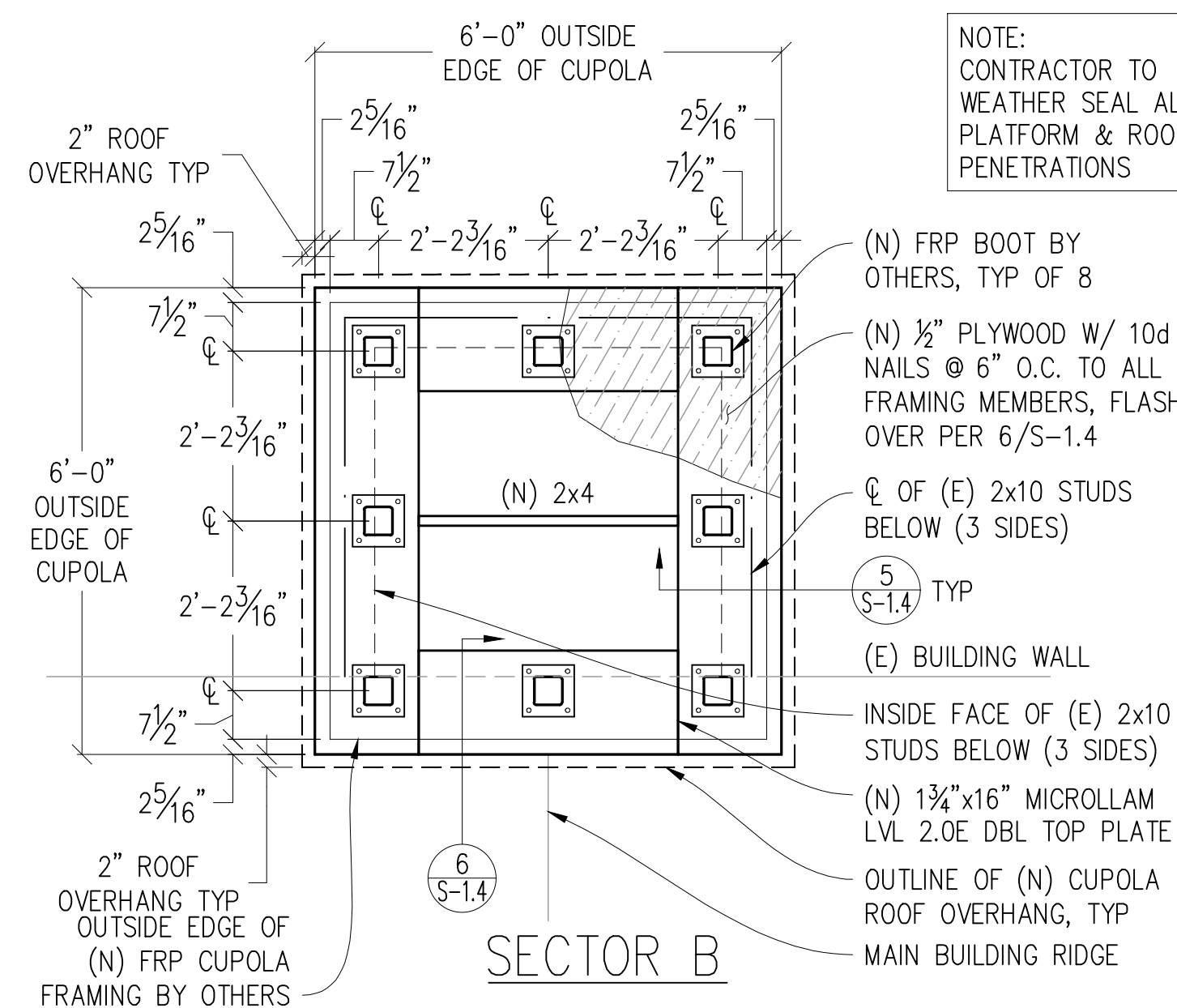
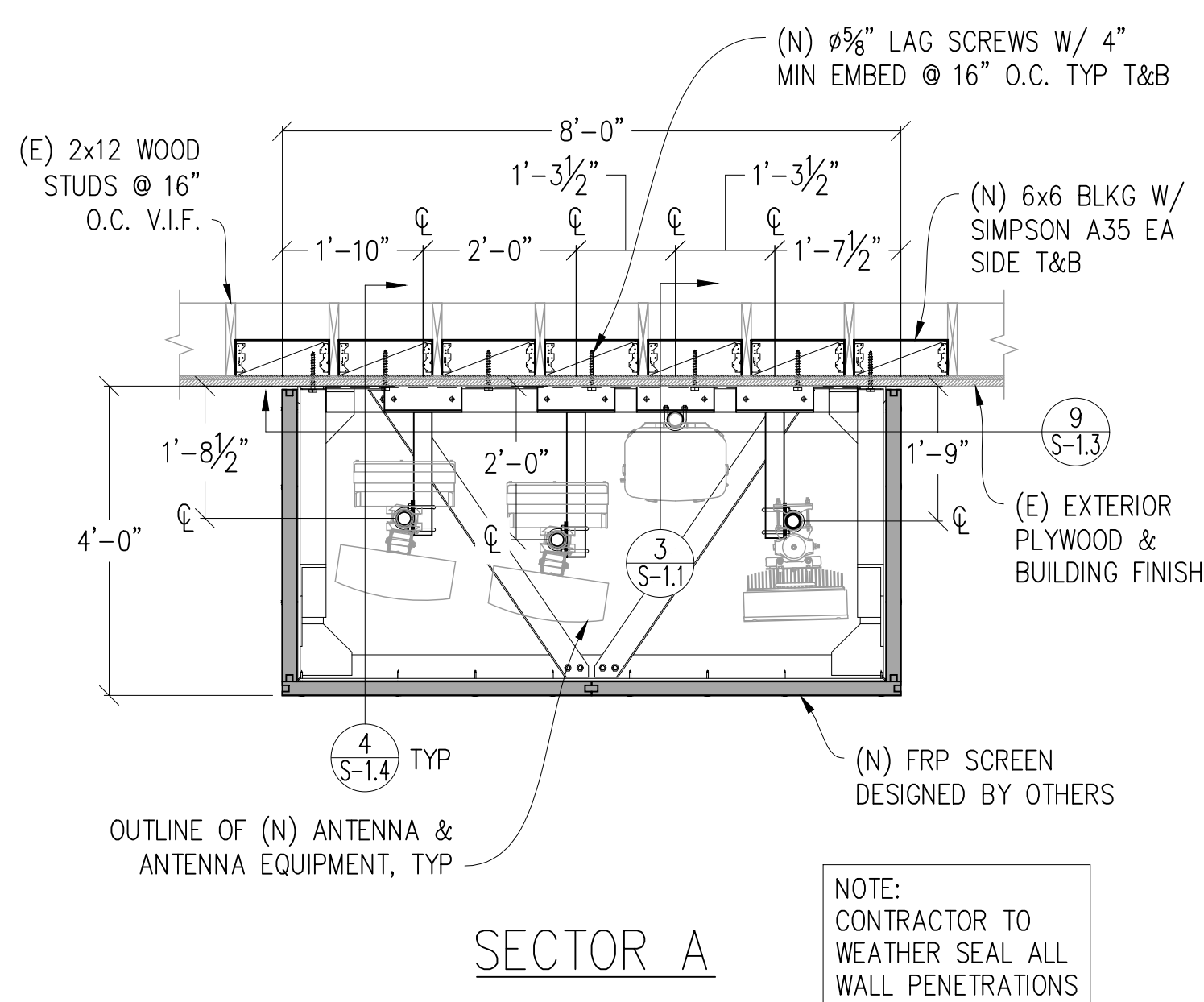
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STRUCTURAL DETAILS

SHEET NUMBER:

S-1.1

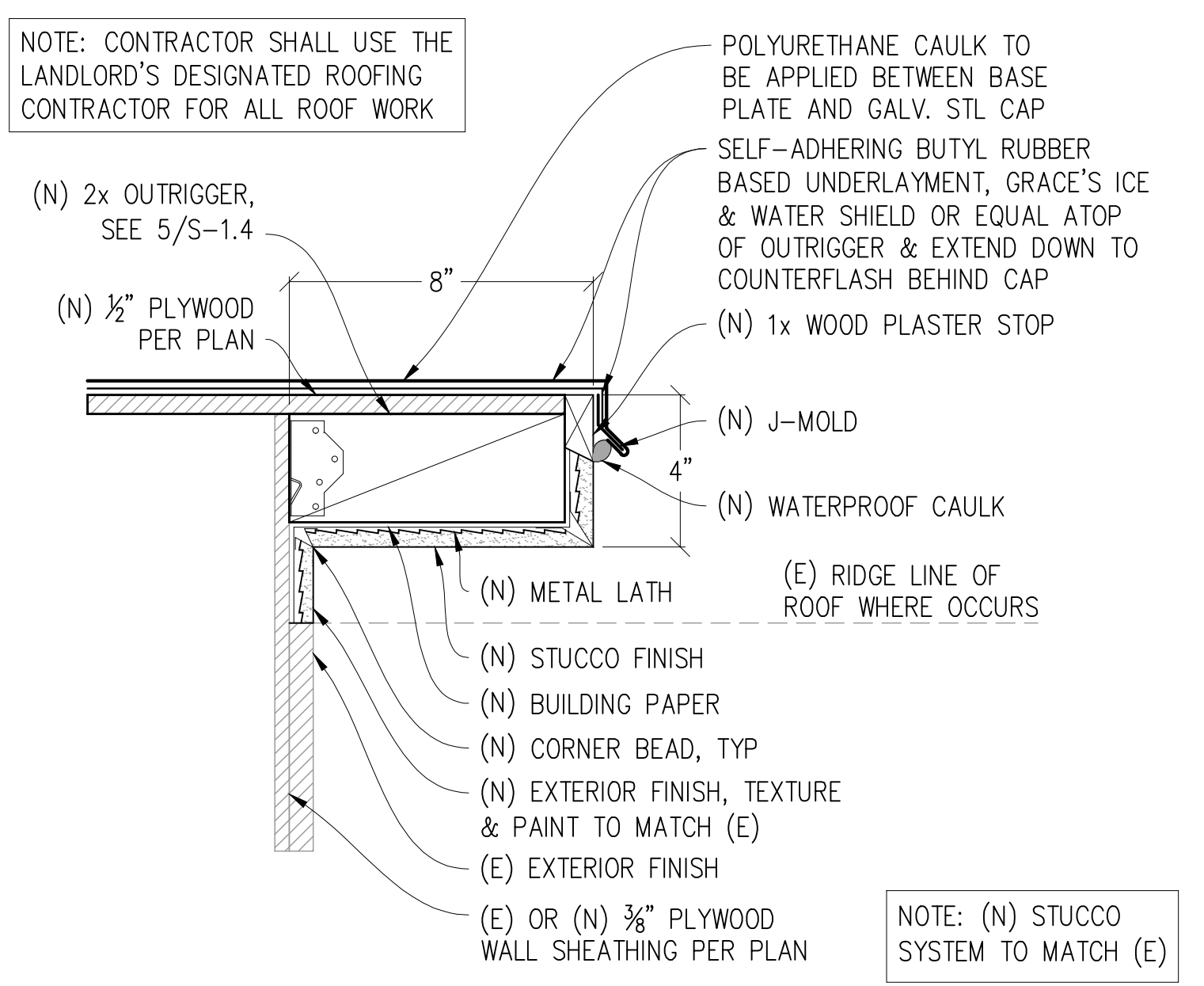
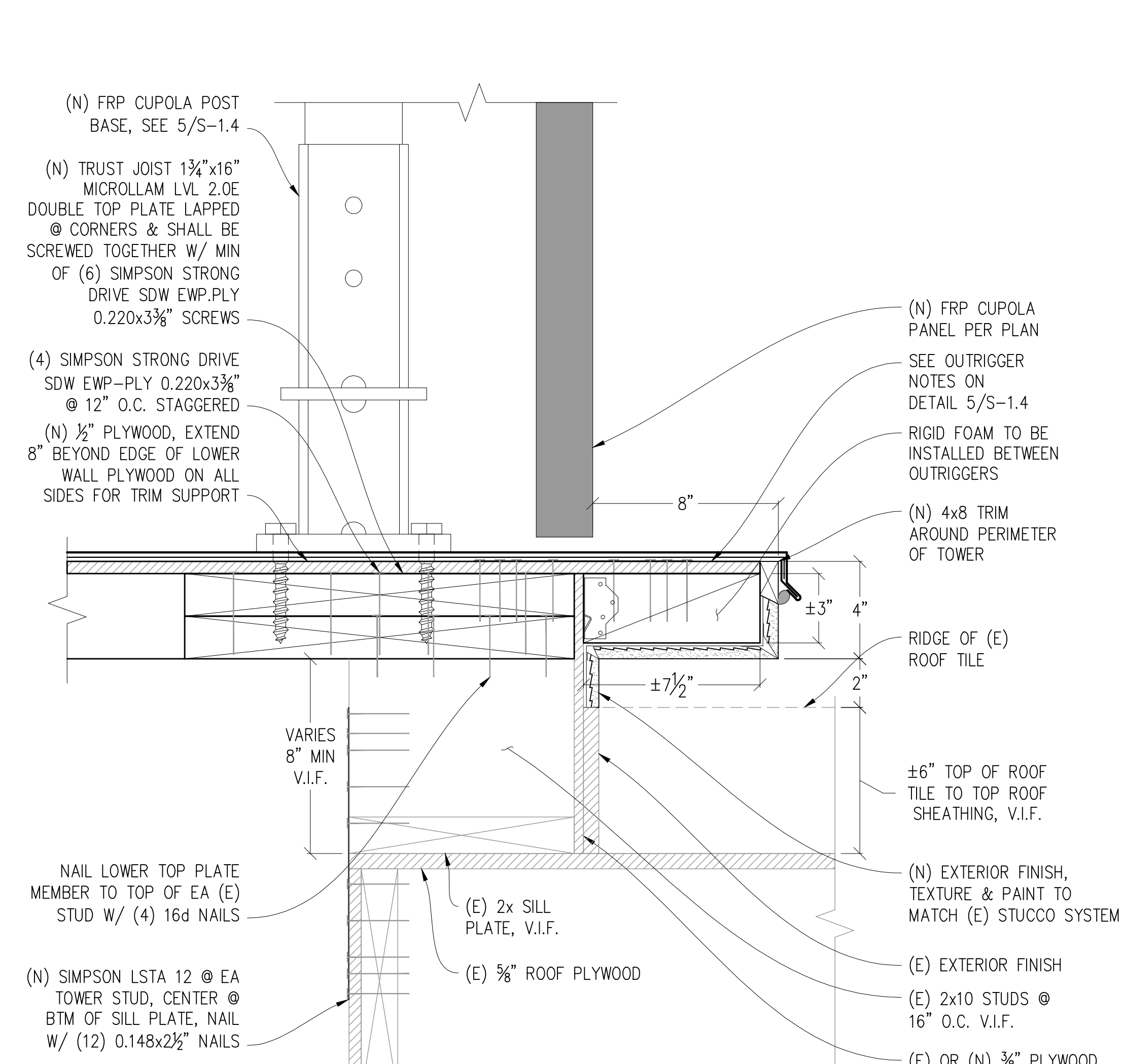
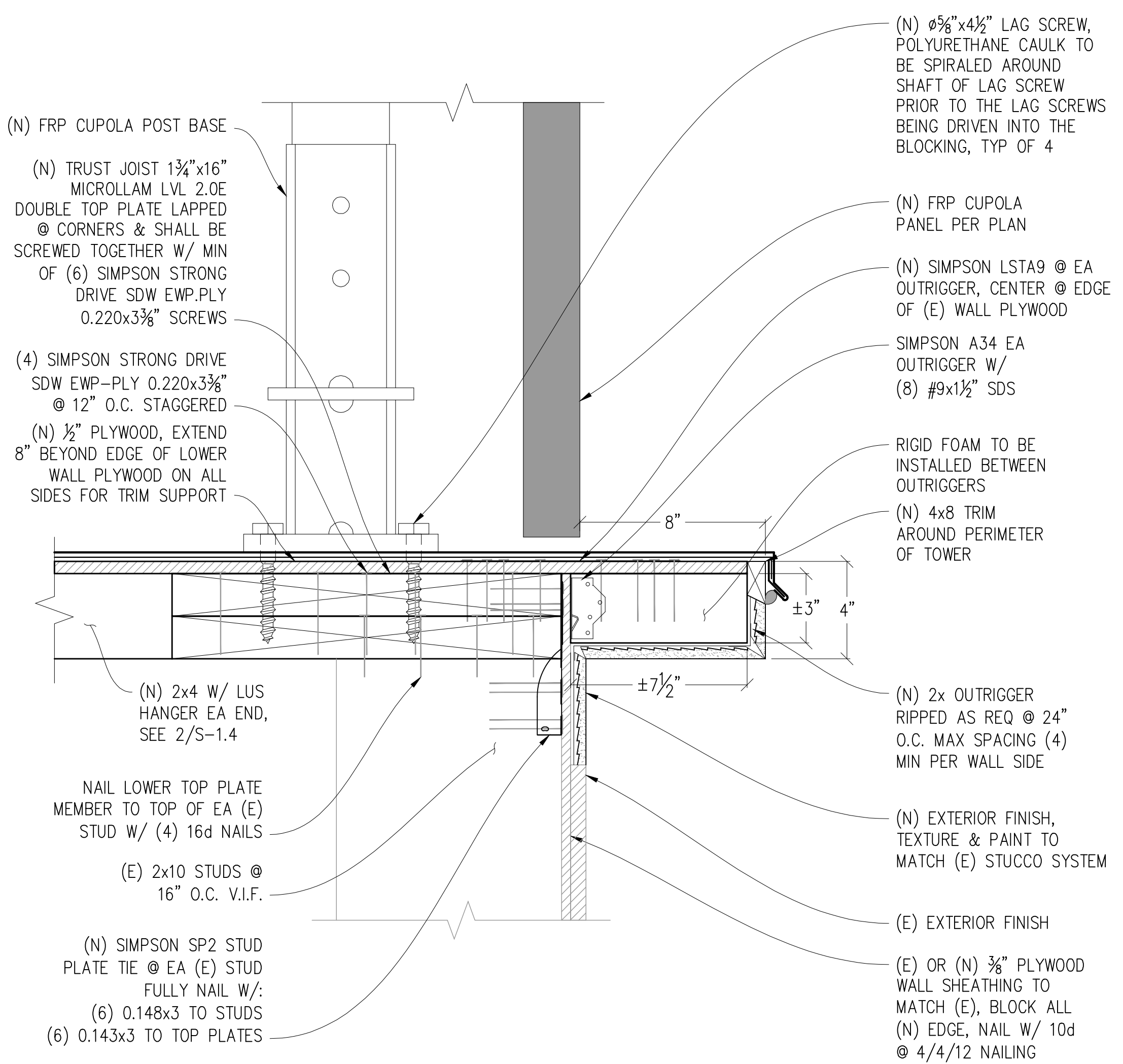


1 1/2"=1'-0" FRP SCREEN ATTACHMENT

2 1/2"=1'-0" FRP CUPOLA ATTACHMENT

3 1/2"=1'-0" FRP SCREEN ATTACHMENT

4 1/2"=1'-0" ANTENNA MOUNT SECTORS A&C



5 3"=1'-0" FRP ATTACHMENT SECTOR B

6 3"=1'-0" FRP SECTION SECTOR B

8 1"=1'-0" ANTENNA MOUNT SECTOR B

Issued For:
MARIN COUNTRY CLUB
1110 HIGHLAND DRIVE
NOVATO, CA 94949

PREPARED FOR
verizon
2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:
COMPLETE
Wireless Consulting, Inc.

MDG LOCATION ID: 5000001534
PROJECT ID: 2013447
DRAWN BY: C. CODY
CHECKED BY: J. GRAY
APPROVED BY: J. SPORE

ISSUE STATUS			
REV	DATE	DESCRIPTION	CAD
3	05/08/24	CD 100%	C.C.
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1	01/31/24	CD 95%	C.C.
0	10/09/23	CD 90%	C.C.

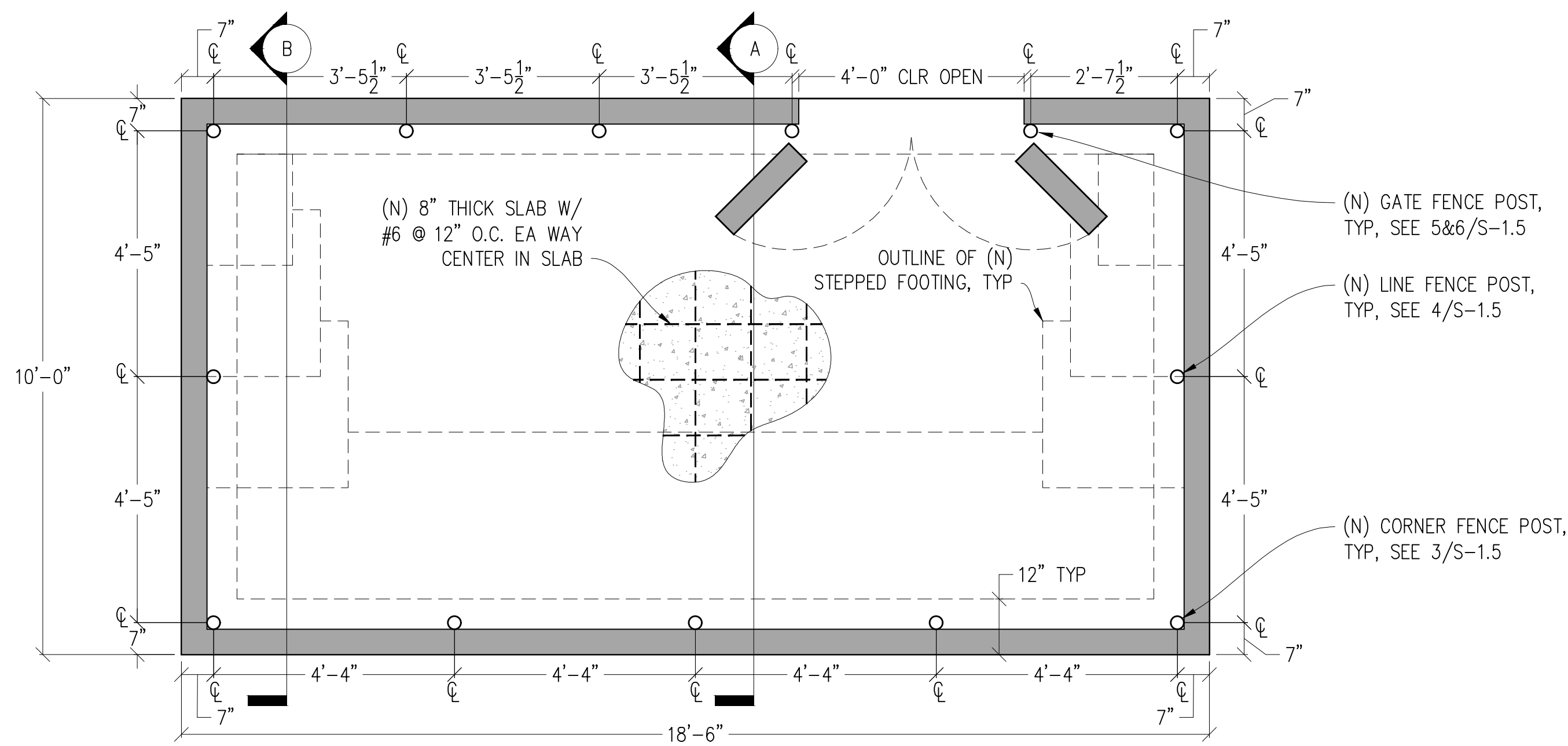
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REGISTERED PROFESSIONAL ENGINEER
S6336
STRUCTURAL
STATE OF CALIFORNIA

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3843 TAYLOR ROAD, SUITE A, LOOMIS, CA 95660
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E-Mail: kevin@streamlineeng.com Fax: 916-860-1941
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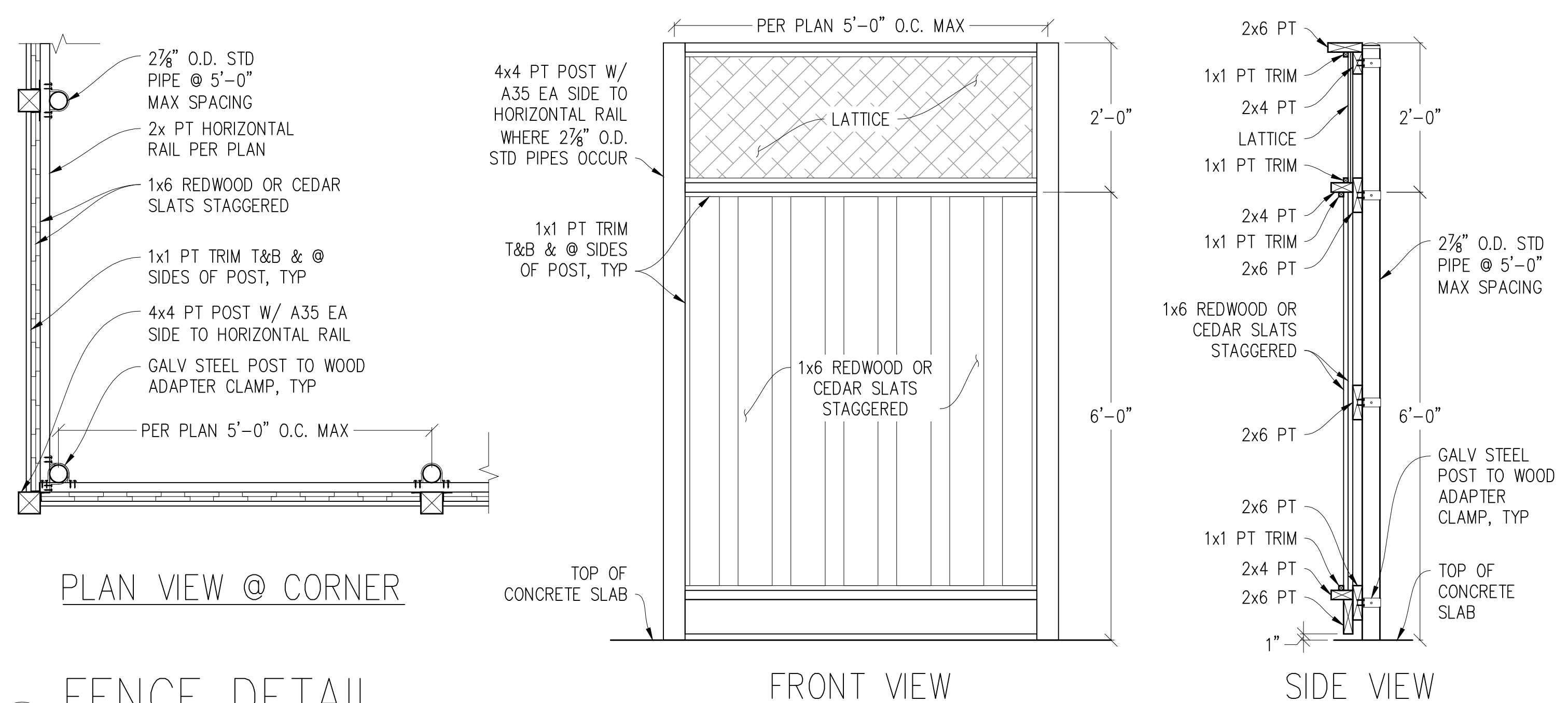
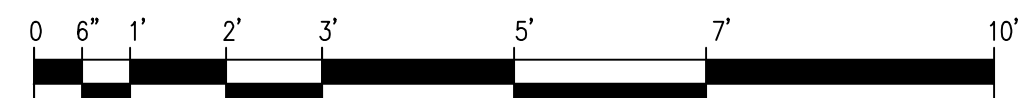
SHEET TITLE:
STRUCTURAL DETAILS

SHEET NUMBER:
S-1.4



1 TRANSFORMER FOUNDATION PLAN

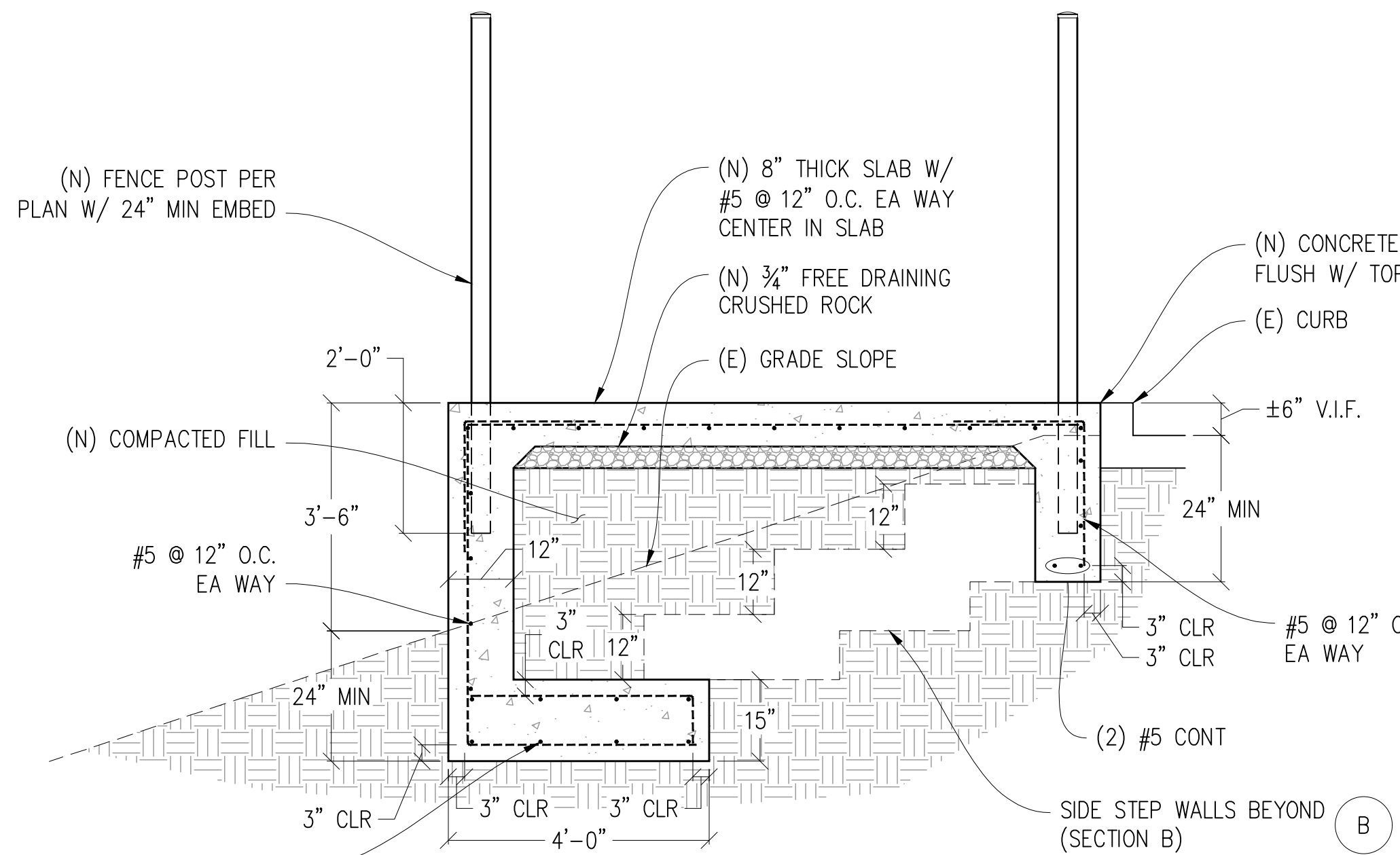
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2 FENCE DETAIL

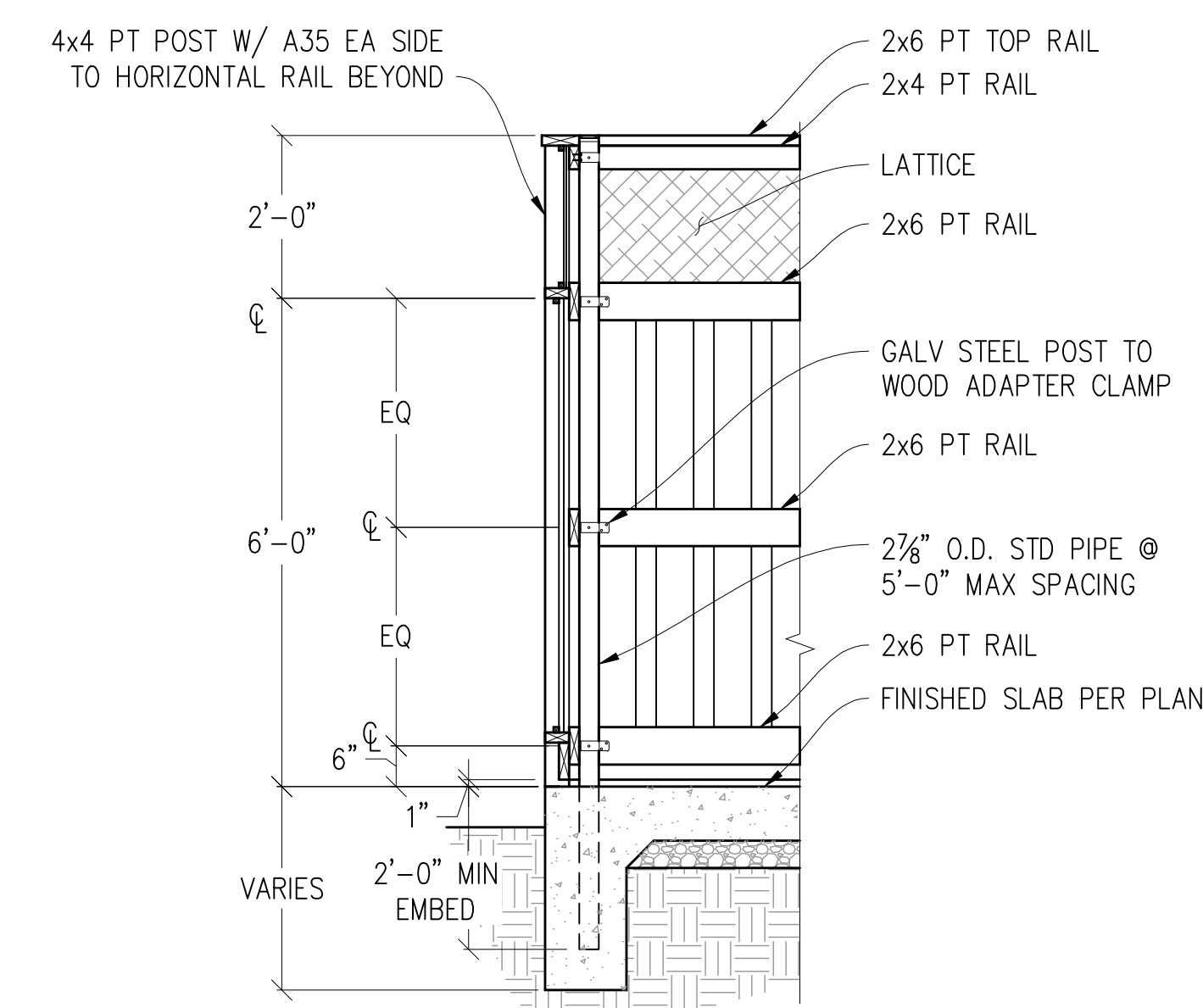
1/4"=1'-0"

© TRANSFORMER



SECTION A

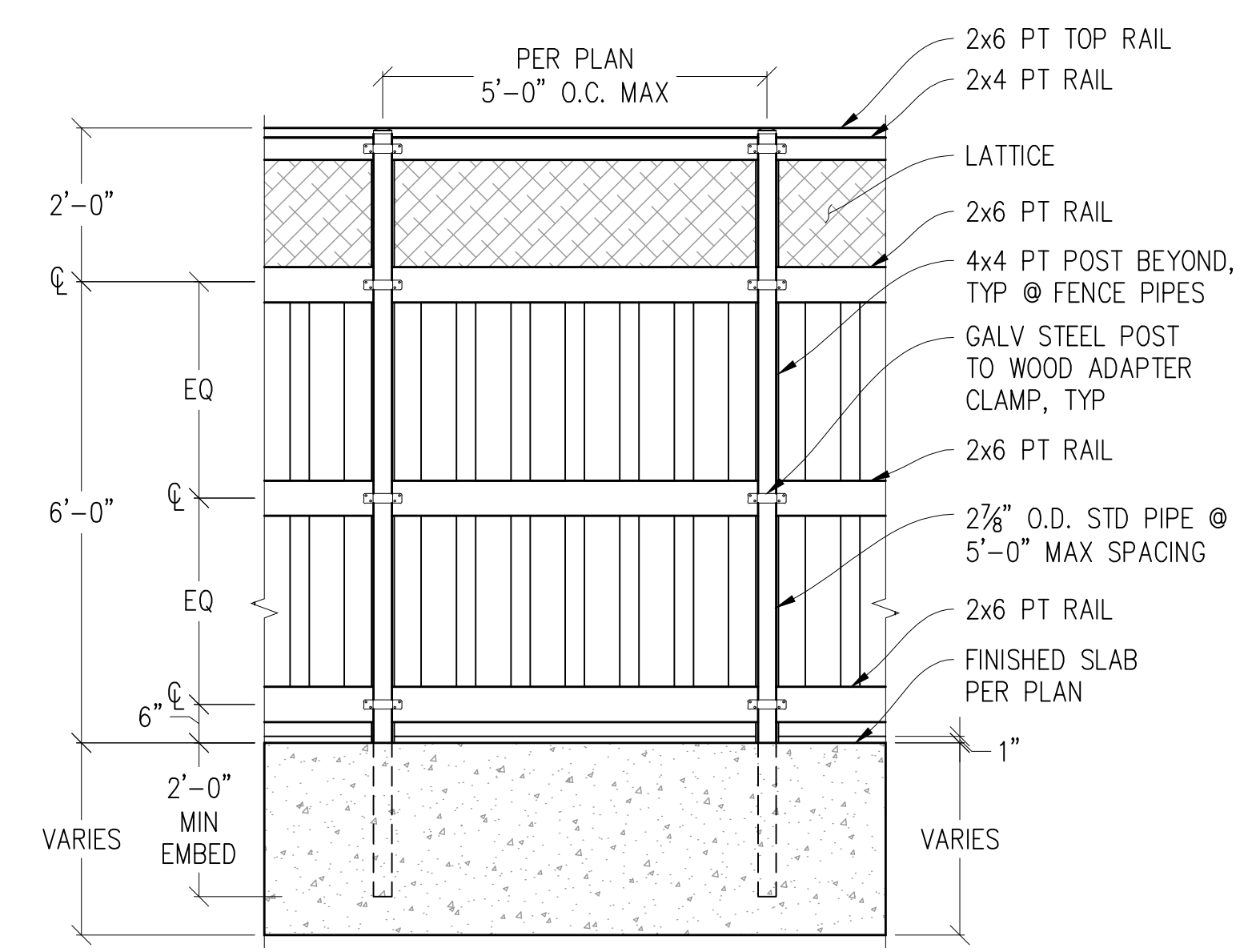
1/2"=1'-0" © TRANSFORMER



3 CORNER POST DETAIL

1/2"=1'-0"

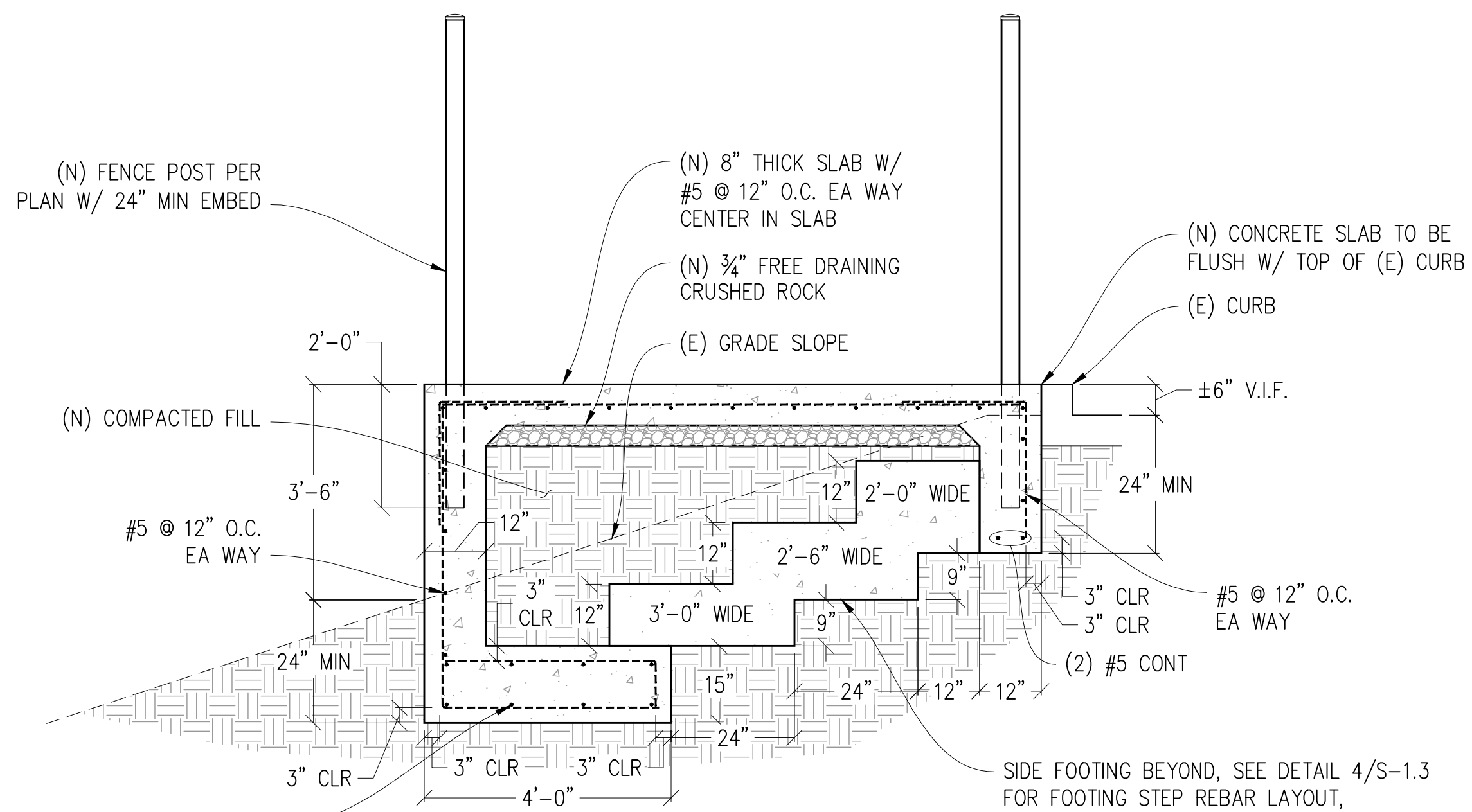
VIEW FROM INSIDE COMPOUND



4 LINE POST DETAIL

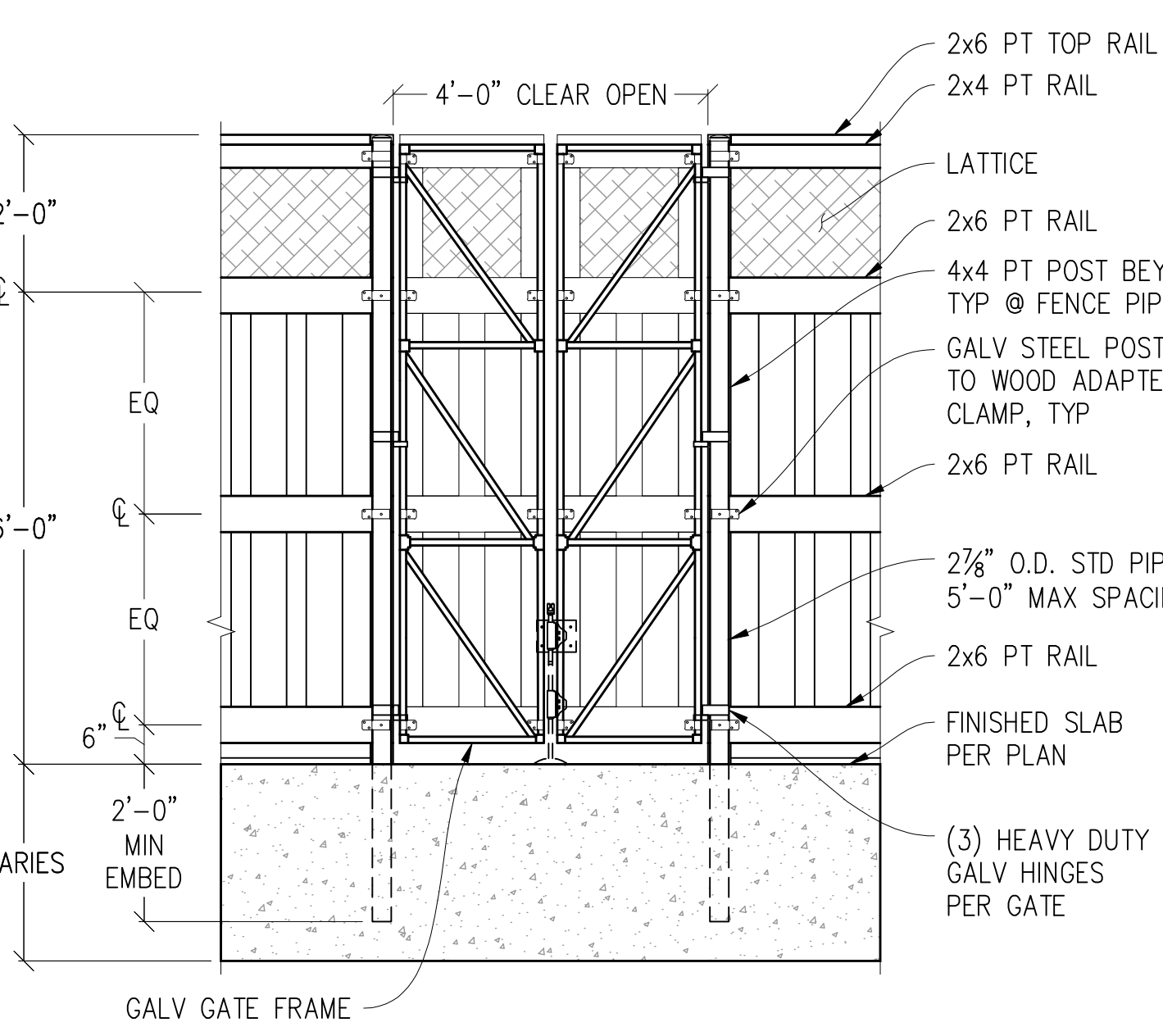
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VIEW FROM INSIDE COMPOUND



SECTION B

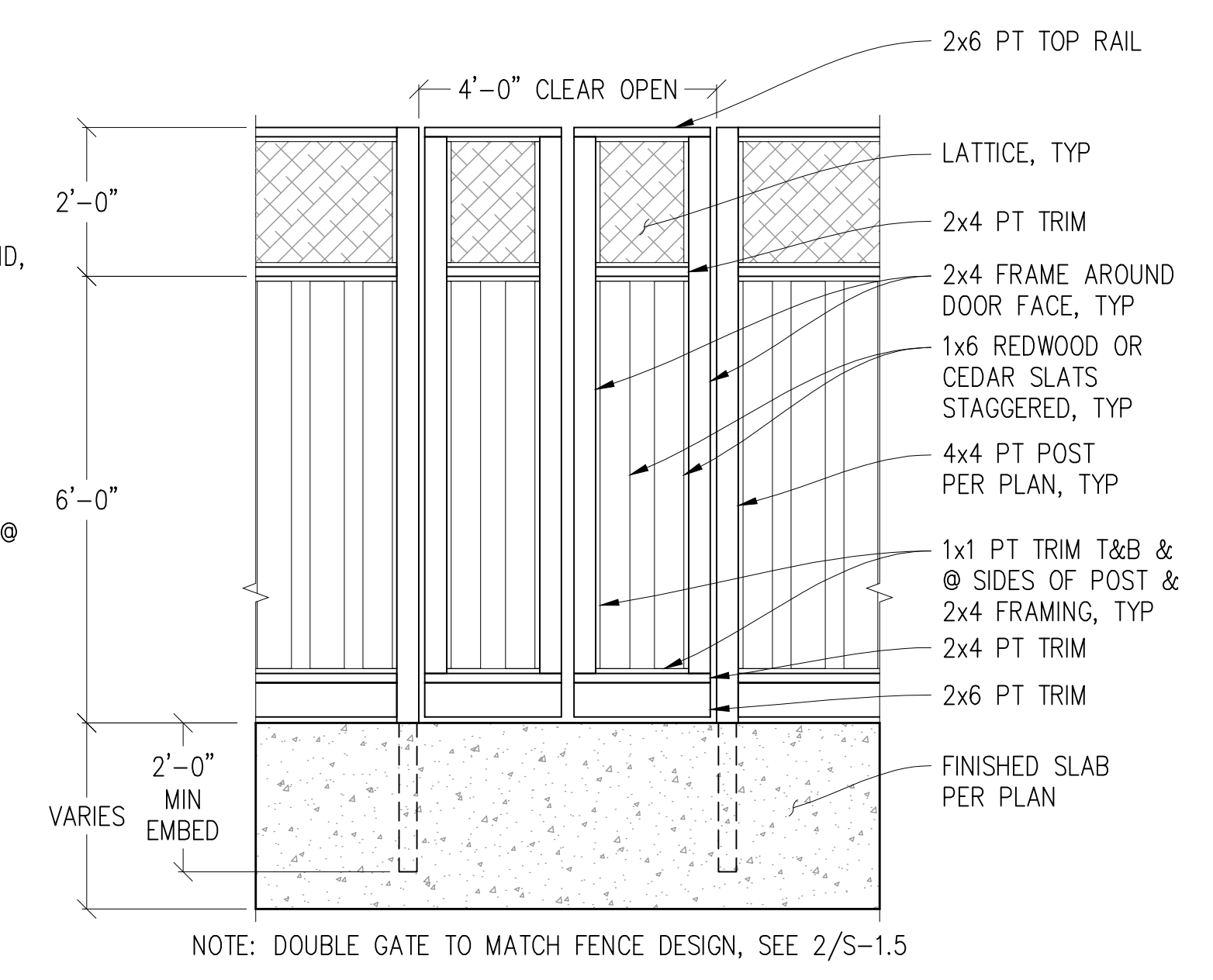
1/2"=1'-0" © TRANSFORMER



5 DOUBLE GATE DETAIL

1/2"=1'-0"

VIEW FROM INSIDE COMPOUND



6 DOUBLE GATE DETAIL

1/2"=1'-0"

VIEW FROM OUTSIDE COMPOUND

NOTE: DOUBLE GATE TO MATCH FENCE DESIGN, SEE 2/S-1.5

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NOVATO, CA 94949

PREPARED FOR
verizon
2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:
COMPLETE
Wireless Consulting, Inc.

MDG LOCATION ID: 5000001534
PROJECT ID: 2013447
DRAWN BY: C. CODY
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Licensee:

REGISTERED PROFESSIONAL ENGINEER
JAMES R. SPORE
S6336
STRUCTURAL
STATE OF CALIFORNIA

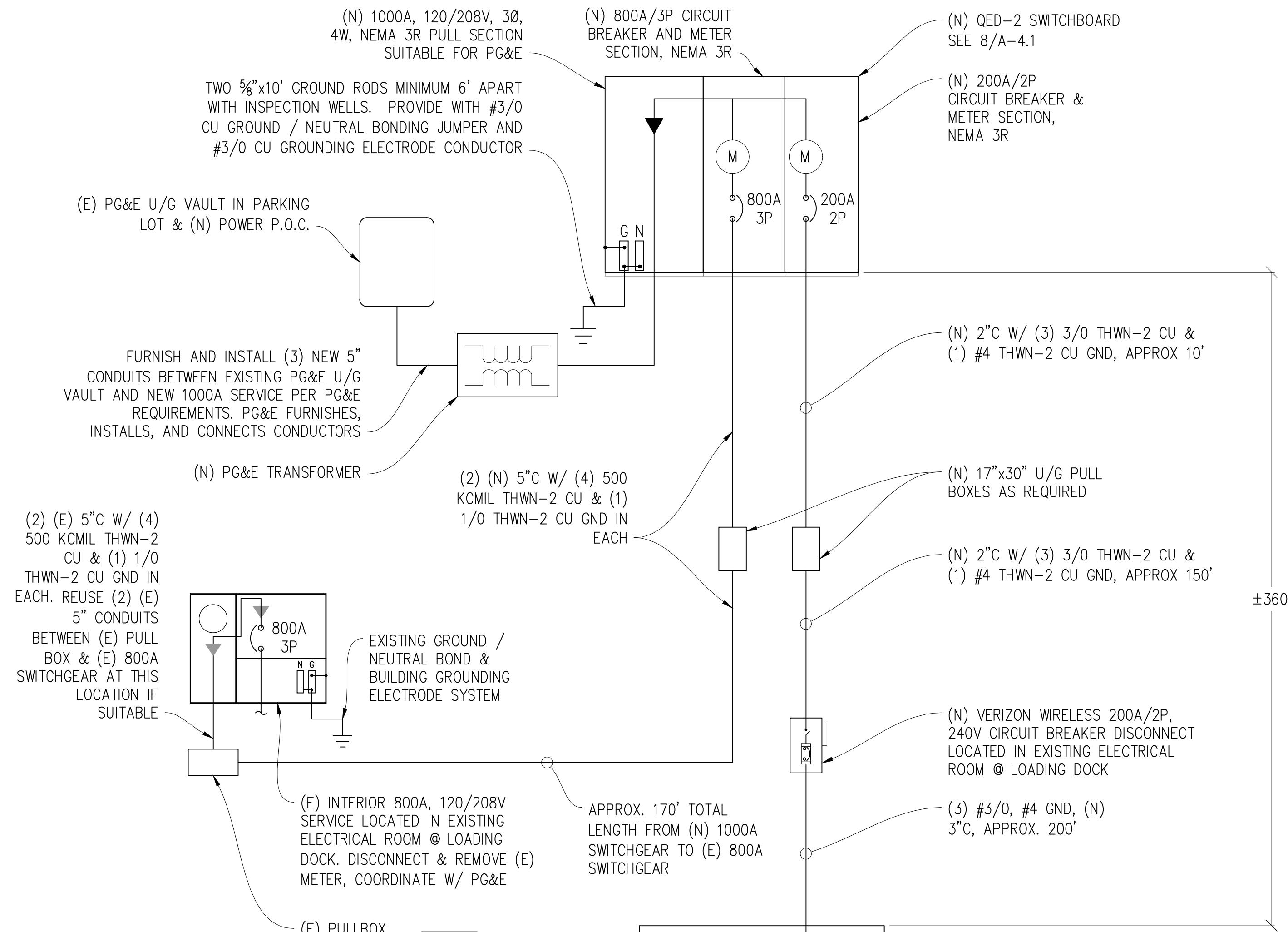
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SHEET TITLE:
STRUCTURAL DETAILS

SHEET NUMBER:
S-1.5

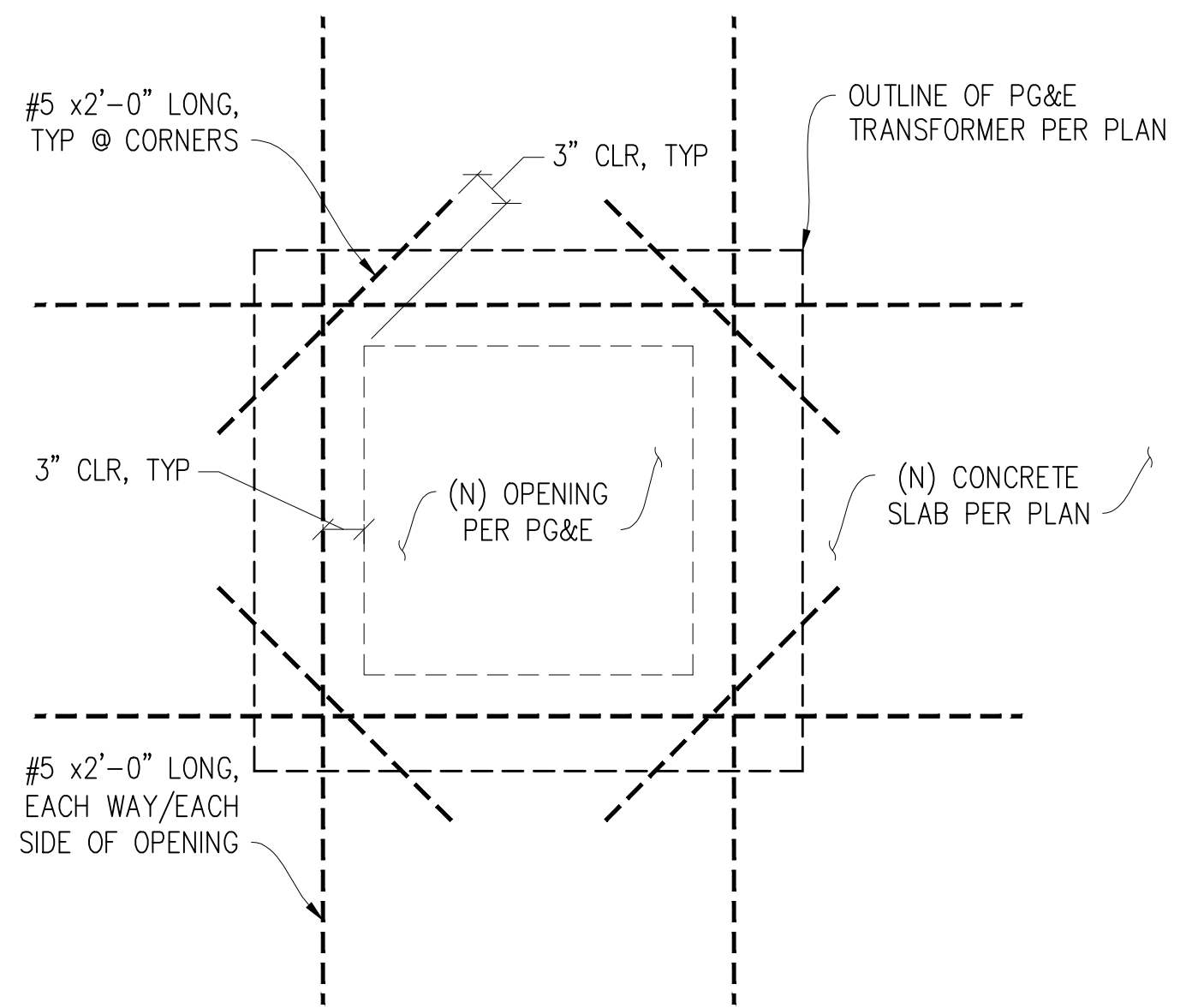


ELECTRICAL LABELING REQUIREMENTS

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

ELECTRICAL NOTES

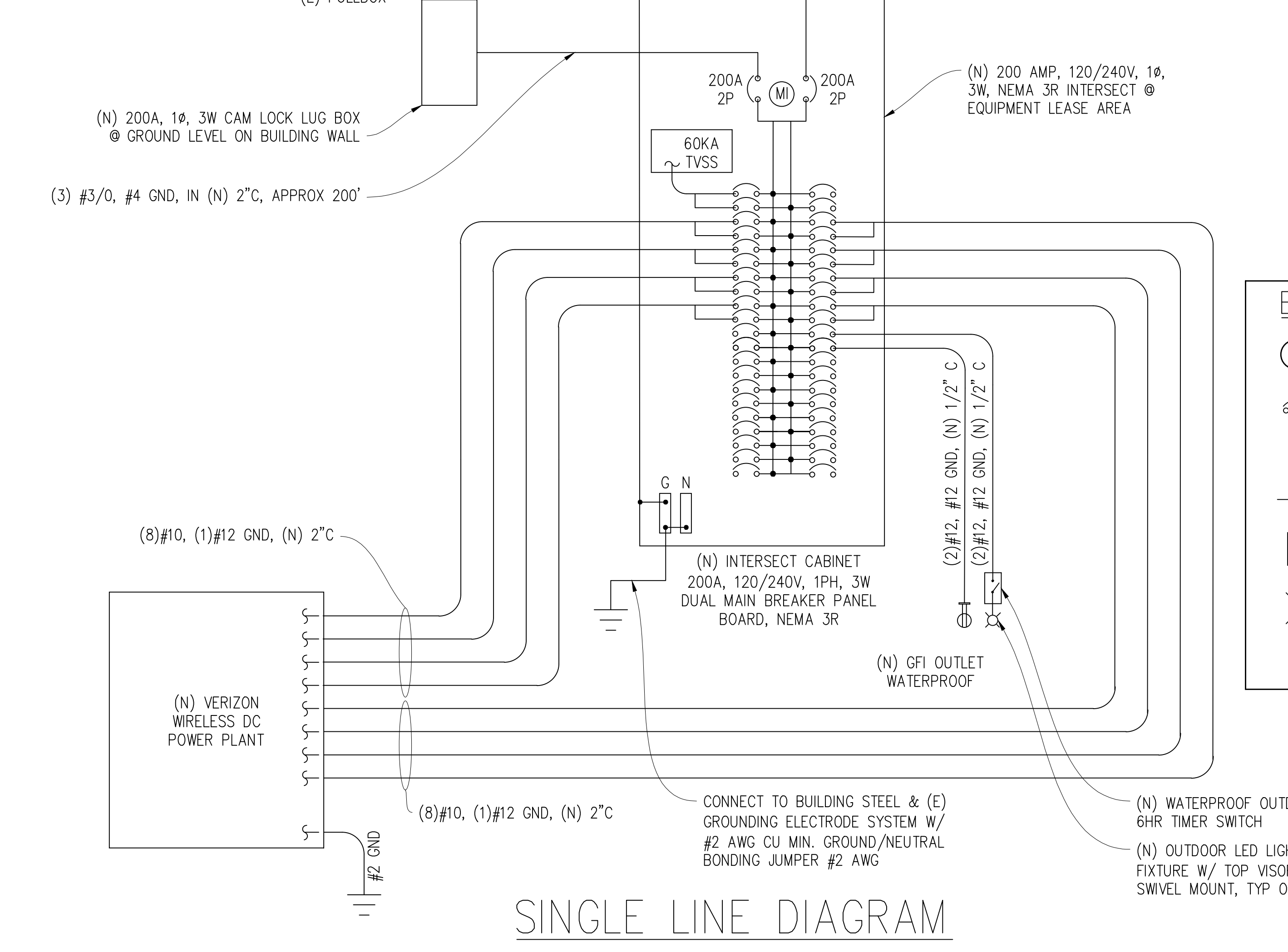
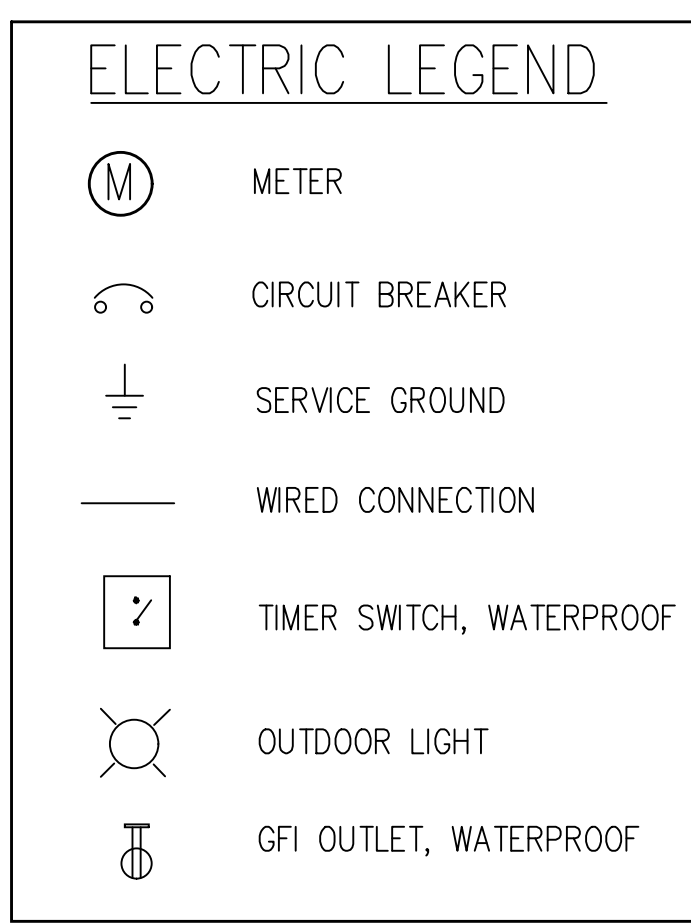
1. ALL ELECTRICAL WORK SHALL CONFORM TO THE 2022 CEC AS WELL AS ALL ADOPTED STANDARDS, APPLICABLE STATE AND LOCAL CODES.
2. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, CONDUCTORS, PULL BOXES, TRANSFORMER PADS, POLE RISERS, AND PERFORM ALL TRENCHING AND BACKFILLING REQUIRED IN THE PLANS.
3. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER PLAN SPECIFICATIONS.
4. ALL CIRCUIT BREAKERS, FUSES, AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTION RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED WITH A MINIMUM OF 10,000 A.I.C. OR AS REQUIRED.
5. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
6. ELECTRICAL WIRING SHALL BE COPPER #12 AWG MIN WITH TYPE THHN, THWN-2 OR THW-2, INSULATION RATED FOR 90°C DRY OR 70°C WET.
7. ALL OUTDOOR EQUIPMENT SHALL HAVE NEMA 3R ENCLOSURE.
8. ALL BURIED WIRE SHALL RUN THROUGH SCHEDULE 40 PVC CONDUIT UNLESS OTHERWISE NOTED.
9. A GROUND WIRE IS TO BE PULLED IN ALL CONDUITS.
10. WHERE ELECTRICAL WIRING OCCURS OUTSIDE A STRUCTURE AND HAS THE POTENTIAL FOR EXPOSURE TO WEATHER, WIRING SHALL BE IN WATERTIGHT GALVANIZED RIGID STEEL OR FLEXIBLE CONDUIT.
11. WHERE PLANS CALL FOR A NEW ELECTRICAL SERVICE, PRIOR TO SUBMITTING BID, CONTRACTOR SHALL VERIFY PLAN DETAILS WITH THE UTILITY'S SERVICE PLAN & REQ'TS INCLUDING SERVICE VOLTAGE, METER LOCATION, MAIN DISCONNECTING MEANS, AND AIC REQ'T, AND SHALL OBTAIN CLARIFICATION FROM THE PROJECT ENGINEER ON ANY DEVIATIONS FOUND IN THESE PLANS.
12. WHERE THESE PLANS SHOW A DC POWER PLANT, THE INSTALLATION OPERATING AT LESS THAN 50 VDC UNGROUNDED, 2-WIRE, SHALL COMPLY WITH ARTICLE 720, AS FOLLOWS:
 - A. POWER PLANT SHALL BE SUPPLIED BY THE WIRELESS CARRIER AS A PULL-TAG ITEM AND INSTALLED BY THE CONTRACTOR.
 - B. CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG COPPER MIN, CONDUCTORS FOR BRANCH CIRCUITS SUPPLYING MORE THAN ONE APPLIANCE SHALL BE 10 AWG CU MIN; CONTRACTOR SHALL SIZE CONDUCTORS BASED ON MFGR'S DATA FOR THE APPLIANCES SERVED.
 - C. THERE ARE NO DC RECEPTACLES OR LUMINARIES ALLOWED ON THIS PROJECT. ALL CIRCUITS SHALL ORIGINATE AT AN INTEGRATED DOUBLE LUG TAP OR SOCKET TERMINATION ON AN INTEGRATED DC CIRCUIT BREAKER AT AN INDIVIDUAL RECTIFIER MODULE AND TERMINATE AT THE SPECIALIZED LUG ON THE RESPECTIVE APPLIANCE AS A SINGLE RUN OF WIRE WITHOUT SPLICES. ALL DC WIRING SHALL BE LABELED AT THE DC PLANT WITH THE APPLIANCE SERVED AND THE DC VOLTAGE.
 - D. ALL CABLING SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND SUPPORTED BY BUILDING STRUCTURE, EG. (N) CABLE TRAY OVERHEAD, IN SUCH A MANNER THAT THE CABLE WILL NOT BE DAMAGED BY NORMAL USE.



① OPENING FOR PG&E TRANSFORMER
1"=1'-0"

PANEL SCHEDULE

NAMEPLATE : PANEL A		SC LEVEL : 22,000		VOLTS: 120V/240V, 1Ø				
LOCATION : OUTDOOR				BUS AMPS: 200A				
MOUNTING : WALL				MAIN CB: 200A				
ØA	ØB	LOAD DESCRIPTION	BKR AMP/POLE	CIRCUIT NO	BKR AMP/POLE	LOAD DESCRIPTION	ØA	ØB
30	30	SURGE ARRESTOR	60/2	1 2	30/2	(N) DC POWER PLANT	2292	2292
2292	2292	(N) DC POWER PLANT	30/2	5 6	30/2	" "	2292	2292
2292	2292	" "	" "	7 8	" "	" "	2292	2292
2292	2292	" "	30/2	9 10	30/2	" "	2292	2292
2292	2292	" "	" "	11 12	" "	" "	2292	2292
2292	2292	" "	30/2	13 14	30/2	" "	2292	2292
2292	2292	" "	" "	15 16	" "	" "	2292	2292
2292	2292	" "	30/2	17 18	20/1	TECH LIGHT	300	180
		" "	" "	19 20	20/1	GFI RECEPTACLE		
		BLANK	-	21 22	-	BLANK		
		" "	-	23 24	-	" "		
		" "	-	25 26	-	" "		
		" "	-	27 28	-	" "		
		" "	-	29 30	-	" "		
		" "	-	31 32	-	" "		
		" "	-	33 34	-	" "		
		" "	-	35 36	-	" "		
		" "	-	37 38	-	" "		
		" "	-	39 40	-	" "		
		" "	-	41 42	-	" "		
9198	9198	PHASE TOTALS				PHASE TOTALS	9468	9348
TOTAL VA =	37212	TOTAL AMPS =	155					
TOTAL KVA =	37.21							



SINGLE LINE DIAGRAM

Issued For:

MARIN COUNTRY CLUB

1110 HIGHLAND DRIVE
NOVATO, CA 94949

PREPARED FOR

verizon

2770 SHADELANDS DR, BLDG 11
WALNUT CREEK, CA 94598

Vendor:

COMPLETE
Wireless Consulting, Inc.

MDG LOCATION ID: 5000001534

PROJECT ID: 2013447

DRAWN BY: C. CODY

CHECKED BY: J. GRAY

APPROVED BY: J. SPORE

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RICHARD A. MALDRE
No. 15161
STATE OF CALIFORNIA

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amandastrom, inc.

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E-Mail: kevin@streamlineeng.com Fax: 916-660-1941

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SHEET TITLE:

ELECTRICAL PLAN & DETAIL

SHEET NUMBER:

E-1.1

GROUNDING NOTES

- GROUNDING SHALL COMPLY WITH CEC ARTICLE 250.
- USE #2 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.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- EXPOSED GROUNDING CONNECTIONS SHALL BE MADE WITH BURNDY HYGROD COMPRESSION TYPE CONNECTORS OR EXOTHERMIC WELDS AS SPECIFIED IN THE PLANS.
- CONNECTIONS TO EQUIPMENT SHALL BE MADE USING STAINLESS STEEL HARDWARE.
- APPLY BUTYL & ELECTRICAL TAPE OVER COLD SHRINK AT ALL LOCATIONS FOR WEATHER PROOFING OVER COAX GROUND KITS.
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS WITH STAR WASHERS AND NO-OX OR EQUIVALENT PLACED BETWEEN CONNECTOR AND GROUND BAR.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLES. ALWAYS MAKE A 12" RADIUS BEND, HOWEVER, #6 WIRE CAN BE BENT AT A 6" RADIUS WHEN NECESSARY.
- THE SYSTEM GROUND RESISTANCE MUST BE 10 OHMS OR LESS. TO ACHIEVE THIS LEVEL OF RESISTANCE THE CONTRACTOR SHALL PURSUE ONE OF THE FOLLOWING FOUR OPTIONS:
 - CONNECT TO EXISTING GROUNDING SYSTEMS
 - CONNECT TO BUILDING STEEL COLUMNS
 - INSTALL A NEW GROUNDING SYSTEM

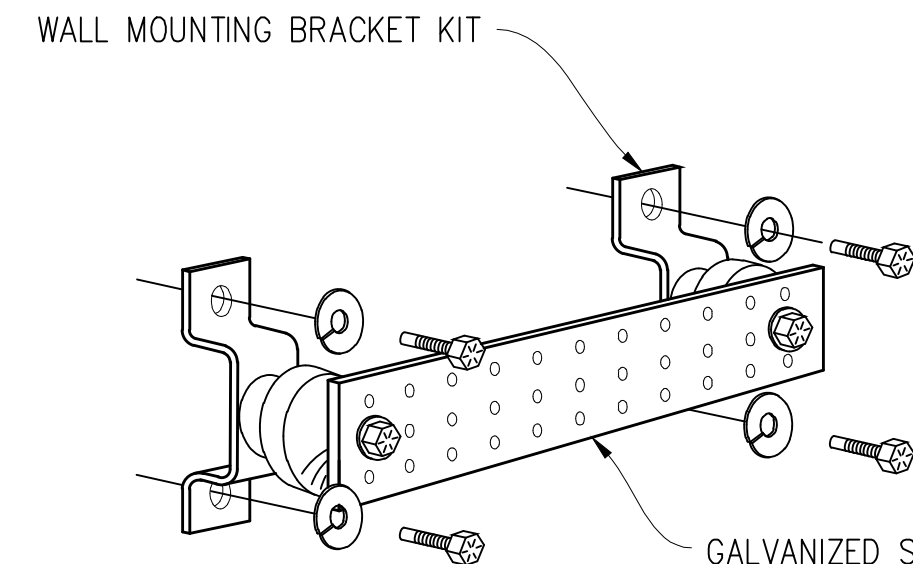
UPON COMPLETION OF THE GROUNDING INSTALLATION THE CONTRACTOR SHALL EMPLOY AN OWNER APPROVED 3RD PARTY TO CONDUCT A "FALL OF POTENTIAL" TEST AND SUBMIT A REPORT OF SUCH TEST FOR APPROVAL TO EITHER THE OWNER OR CONSTRUCTION MANAGER.

- CONNECT TO EXISTING GROUNDING SYSTEMS
- CONNECT TO BUILDING STEEL COLUMNS
- INSTALL A NEW GROUNDING SYSTEM

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GROUNDING LEGEND

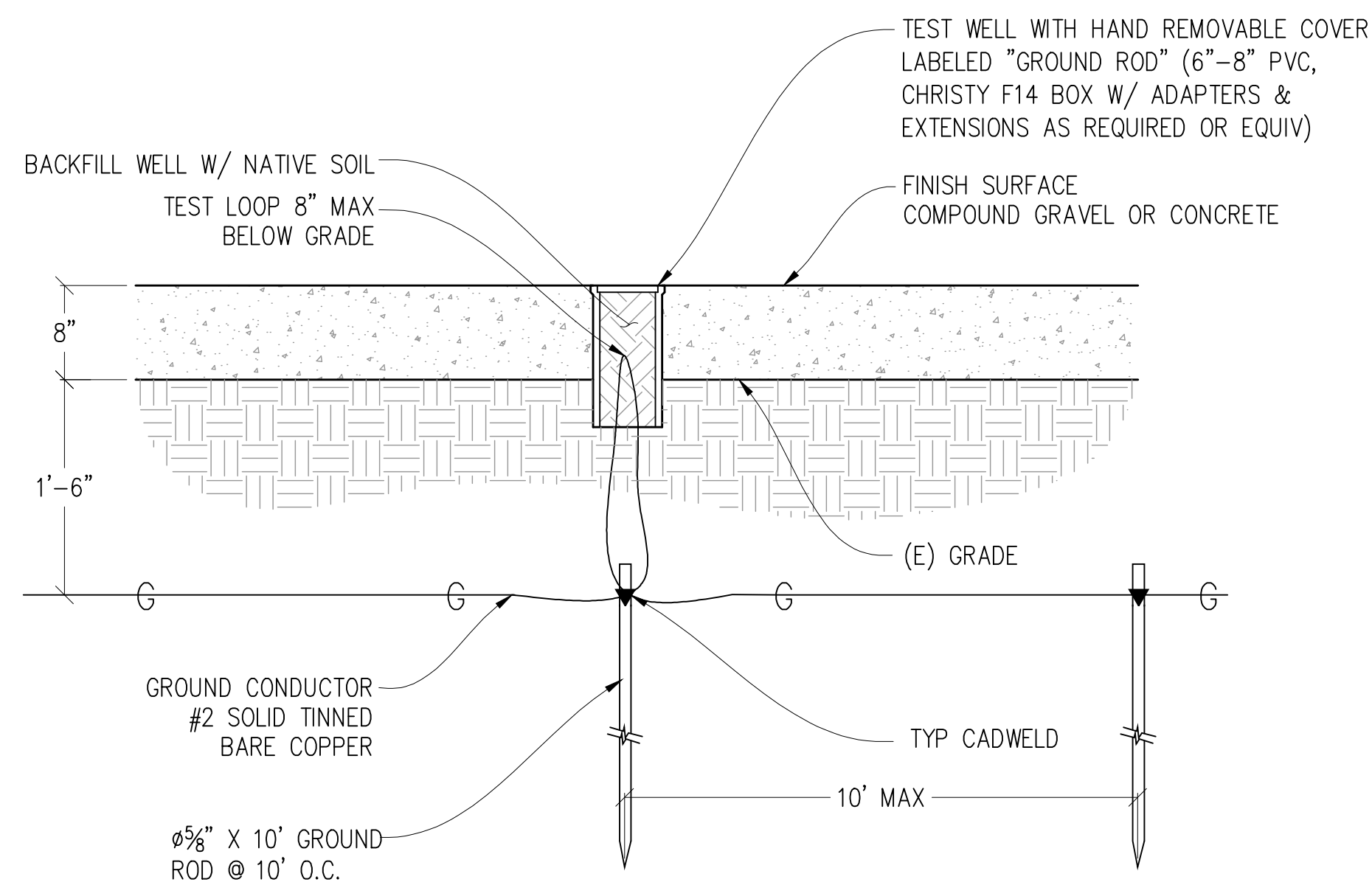
- MECHANICAL CONNECTION
- ▼ EXOTHERMIC CADWELD
- ⊕ TYP. CADWELD INSPECTION WELL
- ⊕ TYP 5/8" DIA. X 10'-0" LONG COPPER CLAD GROUND ROD @ 10' O.C. MAX & 18" MIN BELOW FINISH GRADE
- ⌒ GATE GROUNDING STRAP
- G— TYP #2 TINNED BCW UNDERGROUND GND RING @ 18" MIN BELOW FINISH GRADE
- SGI— GROUND WIRE #2 STRANDED GREEN INSULATED WIRE



WALL MOUNTING BRACKET KIT
GALVANIZED STEEL GROUND BUSS 1/4"X4"X24" VALMONT #HDG42463-K OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BUSS SIZES WILL VARY BASED ON THE NUMBER OF GROUND CONNECTIONS)

1 GROUND BUSS DETAIL

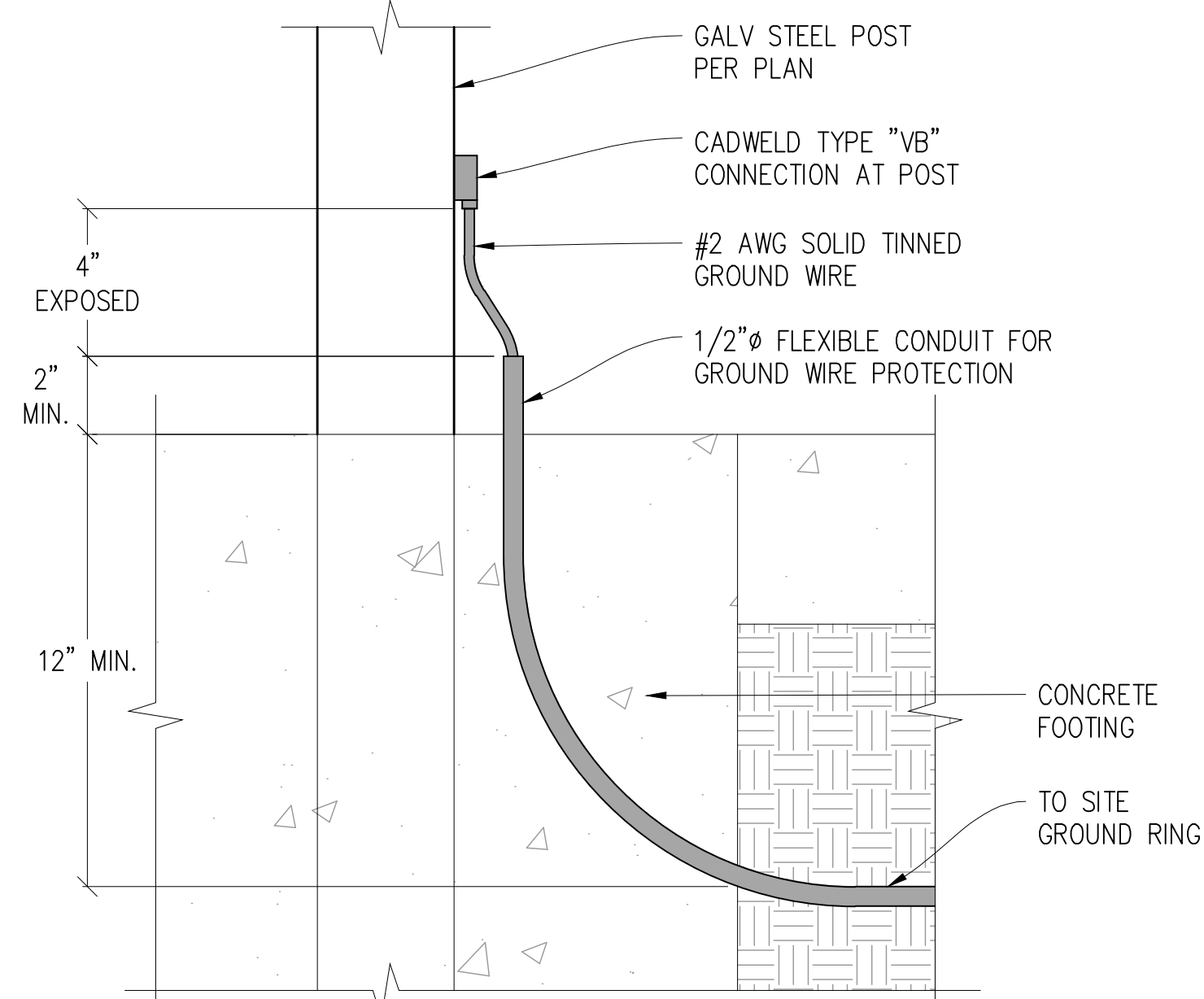
NOT TO SCALE



2 TEST WELL & GROUND ROD DETAIL

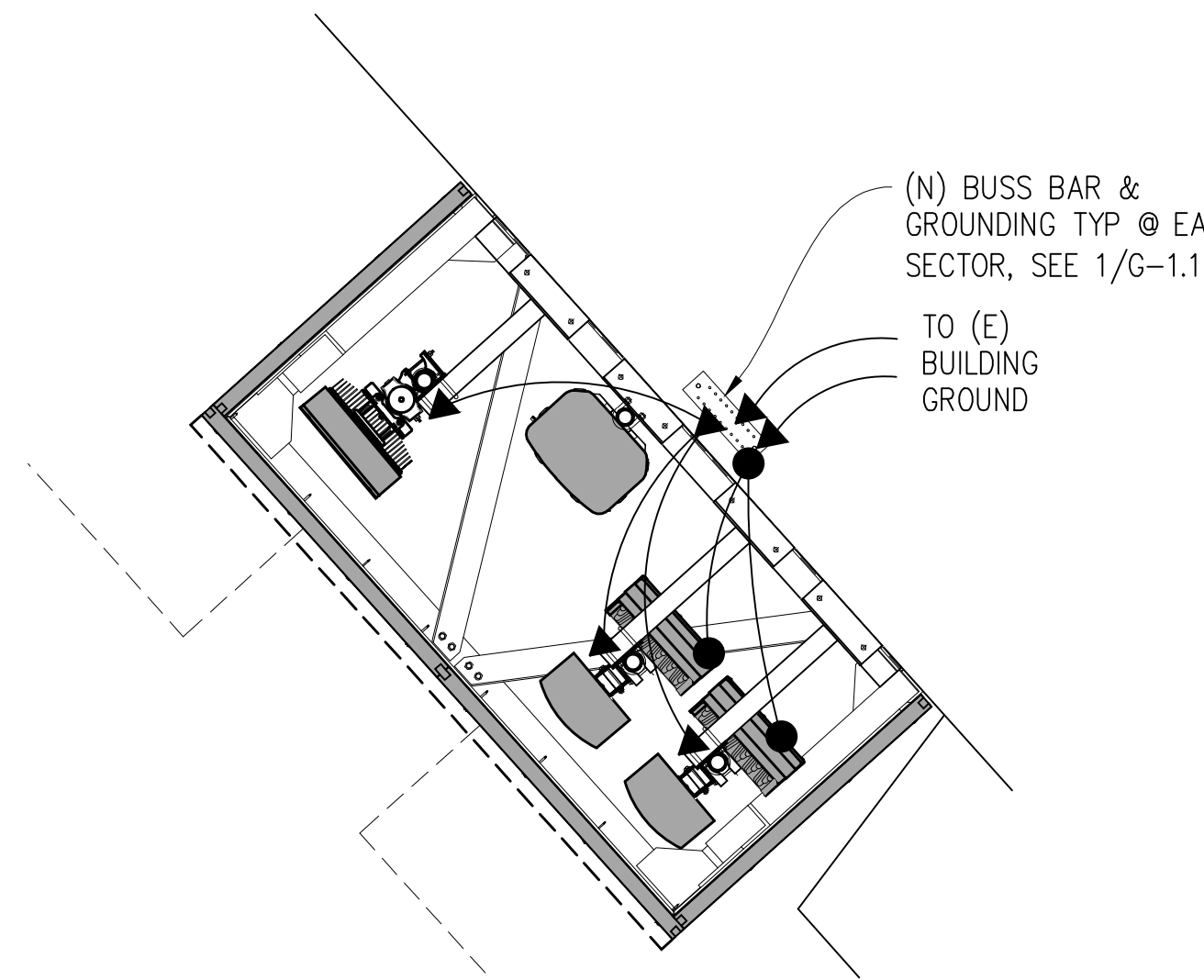
1"=1'-0"

NOTE: THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS. THE GROUND RODS SHALL BE 5/8" X 10' COPPER CLAD STEEL SPACED AT 10' INTERVALS MAX. RODS SHALL BE INTERCONNECTED WITH #2 SOLID TINNED BARE COPPER GROUND WIRE BURIED A MINIMUM 18" BELOW GRADE. AN ONSITE INSPECTION BY THE OWNER SHALL BE REQUIRED PRIOR TO ANY BACKFILL.



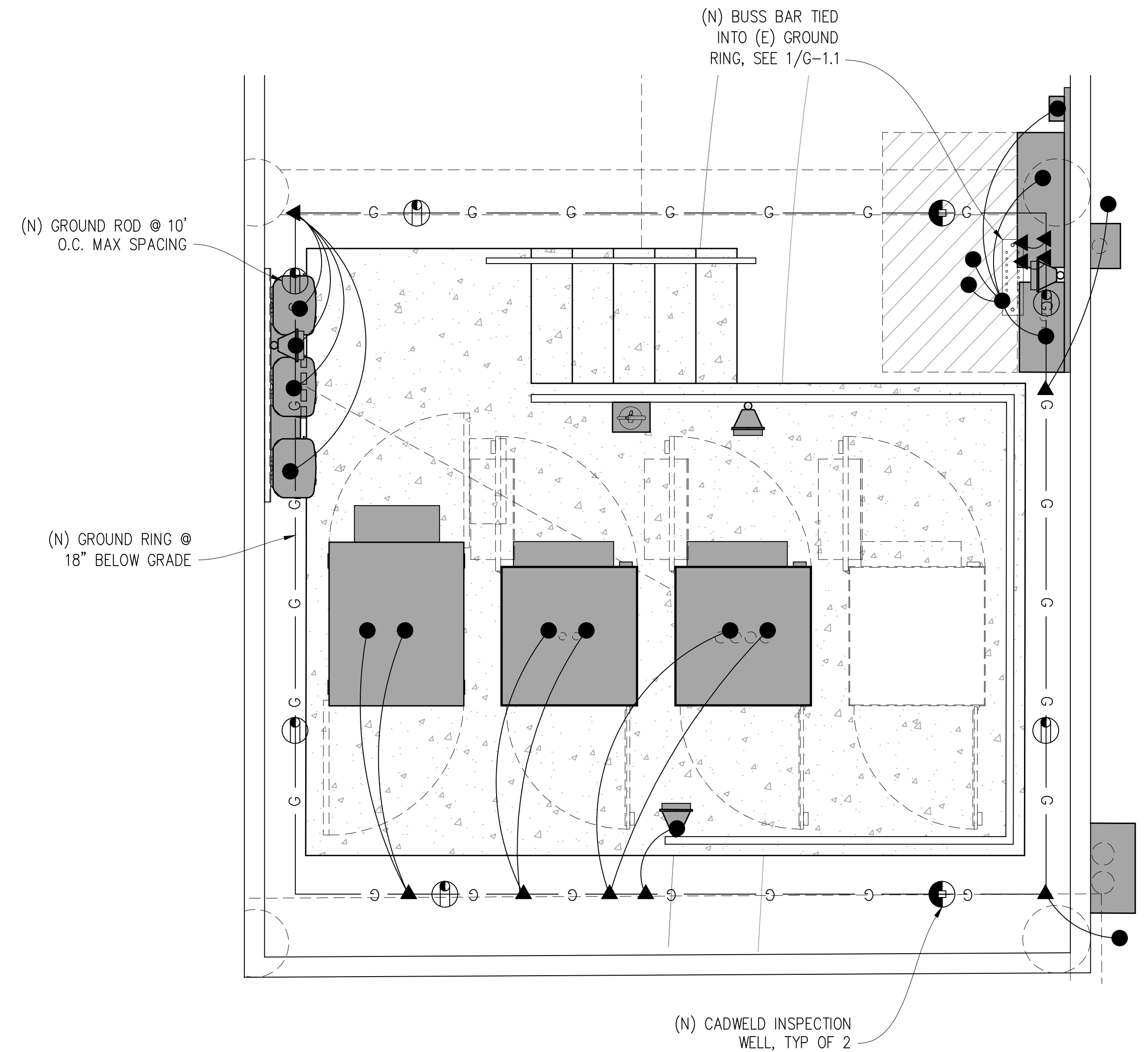
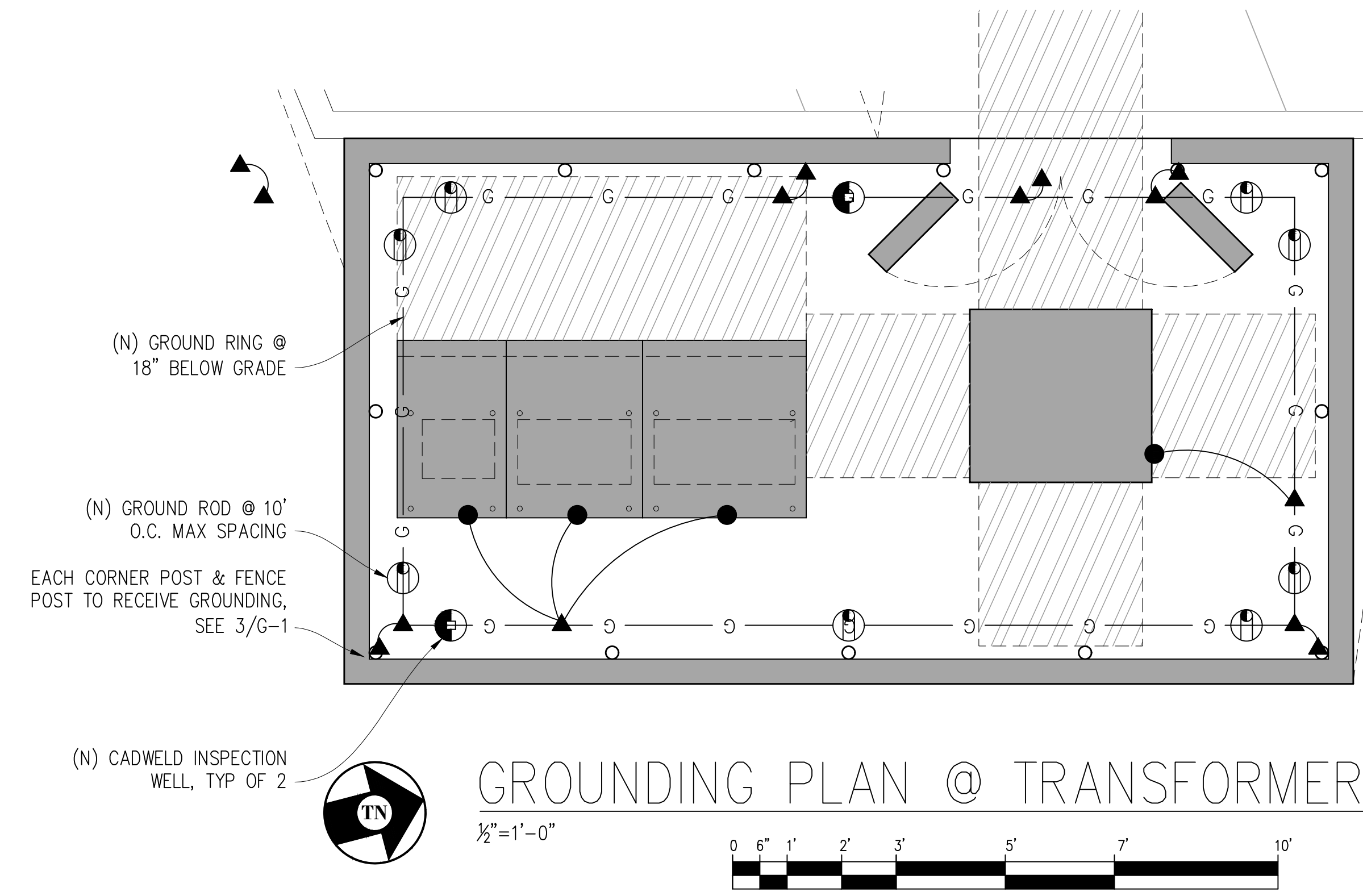
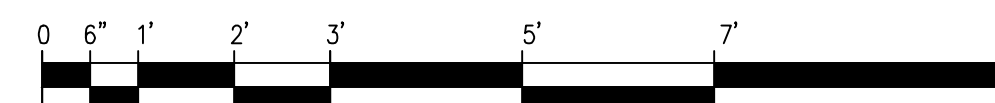
3 POST GROUNDING DETAIL

3"=1'-0"



GROUNDING PLAN @ ANTENNAS

1/2"=1'-0"



GROUNDING PLAN @ EQUIPMENT

1/2"=1'-0"



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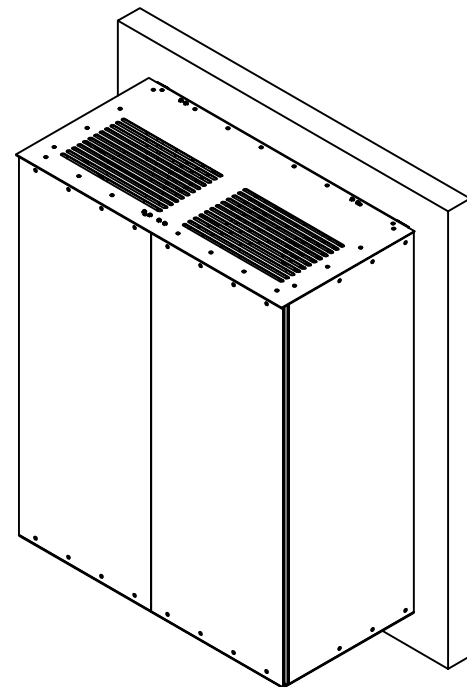


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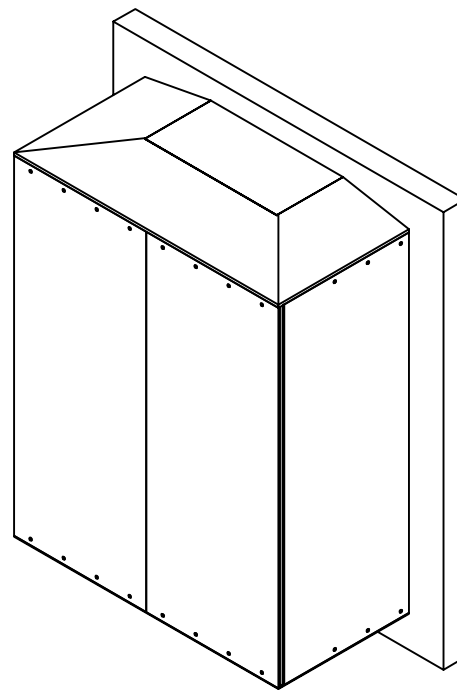
GROUNDING PLANS
& DETAILS

SHEET NUMBER:

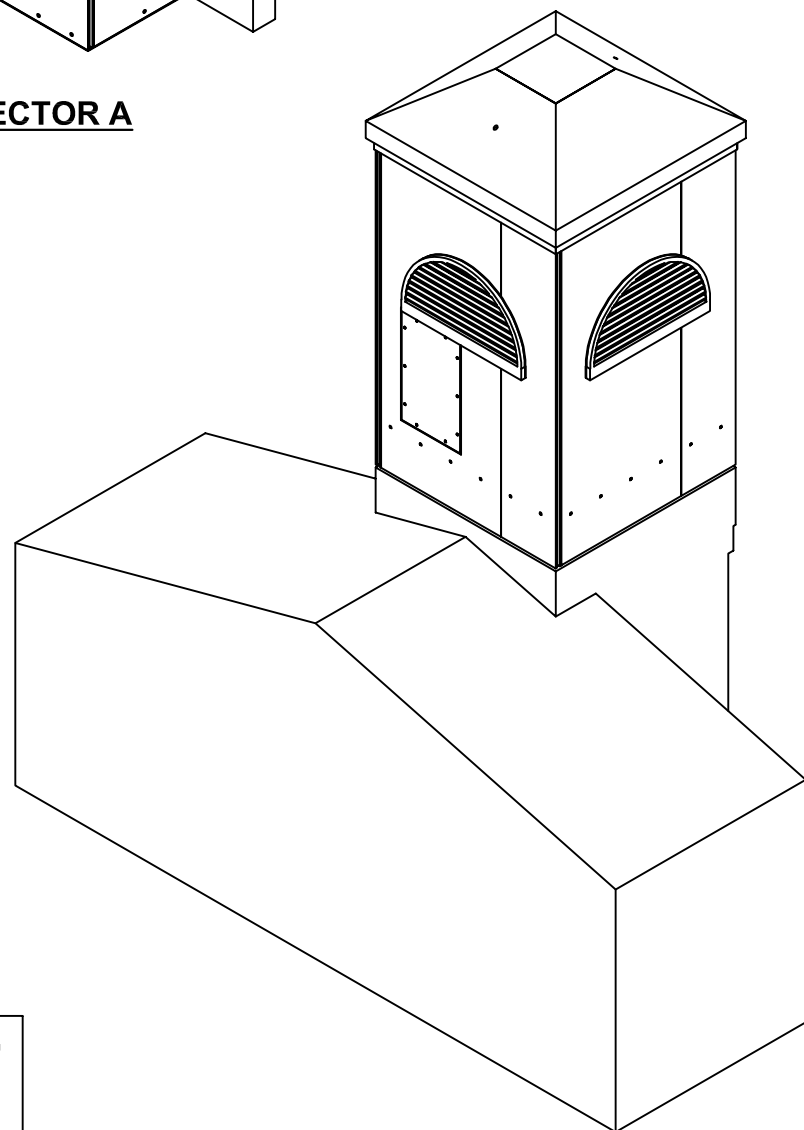
G-1.1



SECTOR A



SECTOR C



SECTOR B

Raycap

7555-A PALMETTO COMMERCE PARKWAY

NORTH CHARLESTON, SC 29420 USA

P: (800)-755-0689 / F: (843)-207-0207

WWW.RAYCAP.COM

PROJECT MANAGER: BRANDON NEWTON ; 843-473-6111

FINAL ENGINEERING

COMPLETE WIRELESS CONSULTING
MARIN COUNTRY CLUB
1110 HIGHLAND DRIVE
NOVATO, CA 94949

JOB #: VZ16-00154H-29R8

DRAWING INDEX

T1	TITLE SHEET
N1-N2	NOTES & SPECIFICATIONS
S1-S2	SECTOR A ASSEMBLY - ELEVATIONS
S3	SECTOR C ASSEMBLY - ELEVATIONS
S4-S5	SECTOR B ASSEMBLY - ELEVATIONS
S6	STEEL DETAILS



Tyler M. Barker, PE
TKK Engineering Corp.
PE #: C-80327 Exp: 09/30/2024

NB+C
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.
6095 MARSHALEE DRIVE, SUITE 300
ELK RIDGE, MD 21075
410-712-7092

T1
REVISION
04-30-2024
L

GENERAL

- THIS PRODUCT IS SOLD PURSUANT TO RAYCAP, INC. TERMS AND CONDITIONS, WHICH ARE INCORPORATED HEREIN BY REFERENCE.
- THESE SHALL APPLY FOR ALL CASES UNLESS NOTED OTHERWISE (U.N.O.).
- ANY ITEMS REFERENCED AS BEING ON "HOLD" ARE TO BE INCLUDED IN THE WORK AS SHOWN. HOWEVER, CONSTRUCTION OR FABRICATION IS NOT TO BEGIN UNTIL THE "HOLD" REFERENCE IS REMOVED.
- IN THE CASE WHERE DIMENSIONS CONTAINED WITHIN ARE LABELED TO BE VERIFIED IN FIELD (V.I.F.), THEY MUST BE FIELD VERIFIED AND/OR CUSTOMER APPROVED PRIOR TO FABRICATION OF MATERIALS.
- IN THE CASE THAT THE PROPOSED IS TO BE PLACED ON AN EXISTING STRUCTURE, THE MODIFICATIONS DEPICTED IN THESE DRAWINGS ARE INTENDED TO PROVIDE STRUCTURAL SUPPORT FOR THE ADDITION OF THE TELECOM STRUCTURE OUTLINED WITHIN. THE EXISTING STRUCTURE, WHETHER IT BE A FOUNDATION, POLE, OR BUILDING (IF APPLICABLE) SHALL BE ANALYZED AND RETROFITTED AS REQUIRED, BY OTHERS, TO WITHSTAND THE LOADS IMPOSED BY THE NEW RAYCAP STRUCTURE SHOWN ON THE DRAWINGS.
- TELECOM PRODUCTS SHALL BE INSTALLED BY A CONTRACTOR EXPERIENCED IN SIMILAR WORK. CARE SHALL BE TAKEN IN THE INSTALLATION OF ANY AND ALL MEMBERS IN ACCORDANCE WITH RECOGNIZED INDUSTRY STANDARDS AND PROCEDURES. ALL APPLICABLE OSHA SAFETY GUIDELINES ARE TO BE FOLLOWED. RAYCAP IS NOT PROVIDING FIELD INSTALLATION SUPERVISION.
- NOTES FOR CONTRACTOR/INSTALLER: ALL BIDS FOR THE INSTALLATION/ERECTION OF THIS PRODUCT SHALL INCLUDE, BUT NOT LIMITED TO THE FOLLOWING MINIMUM REQUIRED TRADES: RIGGING, STEEL ERECTION, STEEL FABRICATION/MODIFICATION, WELDING, ELECTRICAL, CONCRETE, EXCAVATION AND WATERPROOFING. CONTRACTOR MAY, IN CONTRACTOR'S SOLE AND ABSOLUTE DISCRETION, DETERMINE ADDITIONAL TRADES ARE NECESSARY TO INSTALL/ERECT THE PRODUCT.
- THESE DRAWINGS INDICATE THE MAJOR OPERATIONS TO BE PERFORMED, BUT DO NOT SHOW EVERY FIELD CONDITION THAT MAY BE ENCOUNTERED. THEREFORE, PRIOR TO BEGINNING OF WORK THE CONTRACTOR SHOULD SURVEY THE JOB SITE THOROUGHLY TO MINIMIZE FIELD PROBLEMS.
- PROTECTION OF EXISTING STRUCTURES DURING THE COURSE OF THE CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- THE STRUCTURAL INTEGRITY OF THIS STRUCTURE IS DESIGNED TO BE ATTAINED IN ITS COMPLETED STATE. WHILE UNDER CONSTRUCTION ANY TEMPORARY BRACING OR SHORING WHICH MAY BE REQUIRED TO MAINTAIN STABILITY PRIOR TO COMPLETION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- THE PLANS AND DETAILS WITHIN DO NOT INCLUDE DETAILS OR DESIGN FOR DRAINAGE FROM OR WATERPROOFING OF EXTERIOR OR INTERIOR SURFACES OF THE STRUCTURE. THESE DETAILS MUST BE COMPLETED BY OTHERS.
- CONTRACTOR TO SHIM BASE PLATES AND MATING FLANGES AS REQUIRED TO ENSURE LEVEL SURFACE.

STRUCTURAL STEEL AND ALUMINUM

- STEEL FABRICATION AND INSTALLATION SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL AND SPECIFICATIONS.
- STEEL I-SHAPE, ANGLE, CHANNEL, AND MISCELLANEOUS MEMBERS SHALL CONFORM TO ASTM A36 (36 KSI MIN. YIELD STRENGTH) STEEL SPECIFICATIONS, U.N.O.
- STEEL PLATE MEMBERS SHALL CONFORM TO MINIMUM ASTM A36 (36 KSI MIN. YIELD STRENGTH) STEEL SPECIFICATIONS U.N.O.
- STEEL PIPE AND ROUND TUBE MEMBERS SHALL CONFORM TO ASTM A500 GRADE B (42 KSI MIN. YIELD STRENGTH) STEEL SPECIFICATIONS, U.N.O.
- STEEL RECTANGULAR AND SQUARE TUBE MEMBERS SHALL CONFORM TO ASTM A500 GRADE B (46 KSI MIN. YIELD STRENGTH) STEEL SPECIFICATIONS, U.N.O.
- STEEL WIDEFLANGE MEMBERS SHALL CONFORM TO ASTM A992 (50 KSI MIN, YIELD STRENGTH) STEEL SPECIFICATIONS U.N.O.
- STEEL TAPERED POLES SHALL CONFORM TO ASTM A572 GR50 FOR 11 GA AND ASTM A572 GR65 FOR .188" and .25" WALL THICKNESS.
- ALUMINUM PLATE MEMBERS SHALL BE GRADE 5052-H34. EXCEPTION FOR 3/8" OR THICKER UNBENT MEMBERS TO BE GRADE 6061-T6.
- ALUMINUM PIPE TO BE GRADE 6061-T6.
- ALUMINUM TAPERED POLES TO BE GRADE 6063-T6.
- ALL STRUCTURAL BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325 SPECIFICATIONS, U.N.O. A325N AND A325X ALLOWED. ALL BOLTS ARE RECOMMENDED TO BE ORIENTED WITH THREADS UP AND OUT UNLESS SITE SPECIFIC CONDITIONS WARRANT OTHERWISE.
- STRUCTURAL BOLTS SHALL BE TIGHTENED PER THE "TURN OF THE NUT" METHOD.
- STRUCTURAL BOLT HOLE EDGE DISTANCES SHALL BE PER AISC SECTION J3
- ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS AND PROCEDURES OF THE AMERICAN WELDING SOCIETY (AWS) BY CERTIFIED WELDERS PER AWS D1.1 FOR STEEL, AWS D1.2 FOR ALUMINUM AND AWS D1.6 FOR STAINLESS STEEL. STEEL WELDS SHALL BE BY E70XX, LOW HYDROGEN ELECTRODE. ALUMINUM WELDS SHALL UTILIZE 4043 FILLER OR APPROVED ALTERNATIVES. VERIFY FILLER MATERIAL IS COMPATIBLE WITH BASE METAL FOR EACH WELDED JOINT.
- UNCOATED STEEL SHALL BE HOT DIP GALVANIZED PER ASTM A123 SPECIFICATIONS AFTER FABRICATION OR PAINTED WITH RUST INHIBITIVE PRIMER.
- STEEL HARDWARE SHALL BE HOT DIP GALVANIZED PER ASTM F2329, U.N.O.
- AFTER ANY FIELD HOLE PUNCHING / DRILLING OR CUTTING HAS BEEN COMPLETED, OR FOR ANY DAMAGED STRUCTURAL MEMBER, THE GALVANIZING MUST BE REPAIRED ACCORDING TO ASTM A780.
- ALL WELDED STEEL ASSEMBLIES AND INDIVIDUAL STEEL PARTS SHOULD HAVE THE PART NUMBER WELDED OR TAGGED ONTO THE PART OR ASSEMBLY. IF WELDED, THE PART NUMBERS SHOULD BE LOCATED CONSISTENTLY AND AWAY FROM ANY CONNECTION POINT TO AVOID ANY INTERFERENCE ISSUES WITH THE WELD.
- DISSIMILAR METALS IN CONTACT SHALL BE INSULATED WITH PAINT OR OTHER APPROVED COATING TO PREVENT GALVANIC CORROSION.

STEALTHSKIN PANELS:

- FASTENER HOLES IN STEALTHSKIN FOAM COMPOSITE PANELS ARE NOT FACTORY DRILLED AND MUST BE DRILLED IN THE FIELD.
- PANEL FASTENERS TO BE SPACED 12" O.C. MAX. AND LOCATED 6" MAX. HORIZONTALLY FROM EACH EDGE AT TOP AND BOTTOM OF PANEL, UNLESS NOTED OTHERWISE. MAINTAIN 1 1/2" MIN. EDGE DISTANCE FROM ALL EDGES. 4' WIDE PANELS REQUIRE (4) FASTENERS TOP AND BOTTOM. 5' WIDE PANELS REQUIRE (5) FASTENERS TOP AND BOTTOM.
- WHEN FASTENER BOLT HEAD OR NUT BEARS DIRECTLY ON SURFACE OF STEALTHSKIN PANEL, TIGHTEN PANEL BOLTS ONLY 1/2 TURN PAST SNUG. APPLY THREAD LOCK COMPOUND TO THE THREADS OF METAL BOLTS. USE THIN BEAD OF EPOXY TO LOCK THE NUTS OF FRP BOLTS AND STEALTH; STAINLESS STEEL PANEL BOLTS. USE WASHER OR FLANGED HEAD BOLT, OR FASTENER WITH LARGE BEARING SURFACE.
- PANELS WILL EXPAND AND CONTRACT DUE TO TEMPERATURE. WHEN INSTALLING PANELS IN COLD TEMPERATURES, EVENLY SPACE PANELS ALONG LENGTH OF SCREEN WALL WITH EQUAL GAPS BETWEEN PANELS TO ALLOW FOR EXPANSION DURING WARM TEMPERATURES.
- ADJACENT FLAT PANELS ARE JOINED BY A VERTICAL FOAM SPLINE THAT IS INSERTED INTO GROOVES CUT INTO THE SIDE OF EACH PANEL. DO NOT LIFT PANELS BY GROOVES. PANELS MUST BE LIFTED WITH FORCE DIRECTED ONTO PANEL SURFACE.
- ADJACENT RADIUS PANELS ARE JOINED BY A VERTICAL H-CHANNEL. INSERT PANELS INTO EACH SIDE OF H-CHANNEL.
- RADIUS PANELS MUST BE EVENLY SPACED ALONG RADIUS SUPPORT. CONTRACTOR TO MEASURE LENGTH OF RADIUS SUPPORT AND DIVIDE BY THE NUMBER OF RADIUS PANELS TO DETERMINE PROPER SPACING. H-CHANNEL CONNECTORS ARE USED TO COVER THE GAP BETWEEN PANELS AND TO ALLOW FOR PANEL EXPANSION AND CONTRACTION.
- SURFACES OF PANELS SHALL BE COATED WITH SUITABLE PAINT FOR UV PROTECTION. TOP EDGE OF PANEL MUST BE COVERED TO PREVENT WATER TRAVEL BETWEEN PANELS. USE SHERWIN WILLIAMS "COROTHANE II" OR PRE APPROVED EQUIVALENT.
- EXPOSED TOP AND SIDE FOAM EDGES OF PANELS MUST BE COVERED OR COATED FOR UV PROTECTION. RAYCAP, INC. WILL PROVIDE PANEL EDGE CAPS (VERTICAL AND HORIZONTAL) TO BE FIELD APPLIED FOR THIS PURPOSE FOR MOST APPLICATIONS. HORIZONTAL AND VERTICAL PANEL EDGE CAPS TO BE SECURED TO THE EXPOSED EDGES OF THE PANELS WITH PROVIDED TEK SCREWS INSTALLED @ 12" MAXIMUM SPACING ON THE INSIDE FACE OF THE PANEL. IN RF SENSITIVE LOCATIONS, CONTRACTOR WILL APPLY (2) BEADS OF ADHESIVE TO EACH INSIDE CORNER OF THE EDGE CAP AND SECURE CAP TO PANEL WITH TAPE WHILE ADHESIVE CURES.
- AT CORNER APPLICATIONS, VERTICAL PANEL EDGE CAPS ARE TO BE USED TO CAP BOTH EXPOSED EDGES (1 PER CUT EDGE OF PANELS). THESE EDGE CAPS ARE TO BE CUT 1" SHORTER THAN THE PANEL AND LEAVE 1" GAP AT THE TOP TO ALLOW ROOM FOR THE THE HORIZONTAL PANEL EDGE CAP AT THE TOP. CONTRACTOR TO APPLY (2) BEADS OF ADHESIVE TO EACH EDGE CAP (INSIDE CORNERS OF CAP), AND SECURE WITH TAPE AND/OR PROVIDED SCREWS (16 TOTAL PER CORNER) WHILE THE ADHESIVE CURES. IF CORNERS ARE IN NON-RF AREAS, EDGE CAP SCREWS CAN BE LEFT IN PLACE.
- AT CORNER APPLICATIONS WITH SSV PANEL ONLY, CORNER CHANNELS ARE TO BE USED TO JOIN PANELS TOGETHER. BOTH ADJOINING PANELS WILL BE INSERTED INTO THE CORNER CHANNEL AND SECURED USING PROVIDED NYLON PUSHPINS. THE PUSHPINS ARE TO BE PLACED ON THE INSIDE OF ONE OF THE PANELS ONLY @ 12" MAXIMUM SPACING.

DISCLAIMERS:

- ALL STRUCTURAL COMPONENTS TO BE CONNECTED TOGETHER SHALL BE COMPLETELY FIT UP ON THE GROUND OR OTHERWISE VERIFIED FOR COMPATIBILITY PRIOR TO LIFTING ANY COMPONENT INTO PLACE. REPAIRS REQUIRED DUE TO FIT-UP OR CONNECTION COMPATIBILITY PROBLEMS AFTER PARTIAL ERECTION ARE THE FINANCIAL RESPONSIBILITY OF THE CONTRACTOR.
- SOME TELECOMMUNICATION STRUCTURES ARE SUSCEPTIBLE TO WIND-INDUCED OSCILLATIONS. OSCILLATIONS MAY OCCUR AT LOW OR MODERATE WIND SPEEDS AND MAY CAUSE STRUCTURAL DAMAGE. TIA PROVIDES NO PRACTICAL ANALYTICAL METHOD TO PREDICT AND PREVENT WIND-INDUCED STRUCTURAL OSCILLATIONS. RAYCAP, INC. RECOMMENDS FREQUENT MONITORING TO IDENTIFY WIND-INDUCED OSCILLATION AND REGULAR CONDITION ASSESSMENTS TO IDENTIFY FATIGUE CRACKING, LOOSE OR MISSING BOLTS, AND ANY OTHER STRUCTURAL DEFECTS. ANY OSCILLATION OR DEFECTS OBSERVED SHALL BE IMMEDIATELY REPORTED TO RAYCAP, INC. FOR FURTHER EVALUATION AND POSSIBLE REPAIRS OR MODIFICATIONS WHICH MAY BE REQUIRED AT THE OWNERS EXPENSE.
- WHERE EFFECTIVE PROJECTED AREAS (EPA) ARE USED, IT IS THE RESPONSIBILITY OF OTHERS TO VERIFY INSTALLED EQUIPMENT DOES NOT EXCEED LISTED EPA.

SPECIAL INSPECTIONS & STRUCTURAL OBSERVATION:

- STEEL FABRICATION SHALL BE DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED AS REQUIRED BY THE BUILDING CODE TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. ALTERNATIVELY, SPECIAL INSPECTION OF MATERIALS, WELDING, AND FABRICATION PROCEDURES SHALL BE REQUIRED FOR FABRICATION BY AN UNAPPROVED FABRICATOR.
- NO FIELD WELDING SHALL BE PERMITTED.
- THE FOLLOWING SPECIAL INSPECTIONS (WHERE APPLICABLE) SHALL BE REQUIRED PER CHAPTER 17 OF THE BUILDING CODE.
 - SPECIAL INSPECTION OF HIGH-STRENGTH BOLTING (WHEN APPLICABLE):
 - PERIODIC SPECIAL INSPECTION IF BOLTS ARE PRETENSIONED WITH MATCH-MARKING TECHNIQUES.
 - CONTINUOUS SPECIAL INSPECTION OF ALL OTHER HIGH-STRENGTH BOLTING.
- SPECIAL INSPECTION IS NOT REQUIRED FOR WORK OF A MINOR NATURE OR AS WARRANTED BY CONDITIONS IN THE JURISDICTION AS APPROVED BY THE BUILDING OFFICIAL. THUS, SPECIAL INSPECTION ITEMS ABOVE MAY BE WAIVED AS DEEMED APPROPRIATE BY THE BUILDING OFFICIAL.
- NO STRUCTURAL OBSERVATION IS REQUIRED.



FRP

- FRP STRUCTURAL SHAPES SHALL BE BEDFORD FRP SERIES 1525, MANUFACTURED USING THE PULTRUSION PROCESS
- IF PREFABRICATED MEMBERS DO NOT ASSEMBLE PER PLAN, CONTACT RAYCAP, INC. BEFORE CUTTING OR ALTERING FABRICATED MEMBERS.
- FRP STRUCTURAL MEMBERS SHALL BE FABRICATED AND ASSEMBLED AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL PROTECT THE FRP STRUCTURAL MEMBERS FROM ABUSE TO PREVENT BREAKAGE, NICKS, GOUGES, ETC. DURING FABRICATION, HANDLING, AND INSTALLATION.
- FRP BOLTS SHOULD BE TIGHTENED 1/2 TURN PAST SNUG AND LOCKED WITH EPOXY.
- FRP OR STEEL BOLTS THROUGH FRP MEMBERS SHALL MEET THE FOLLOWING SPACING AND EDGE DISTANCE REQUIREMENTS, MEASURED FROM BOLT CENTERS:
 - MIN. BOLT SPACING = 4 TIMES BOLT DIA
 - MIN. EDGE DIST = 3 TIMES BOLT DIA. IN DIRECTION OF PULTRUSION
 - MIN. EDGE DIST = 2 TIMES BOLT DIA. PERPENDICULAR TO DIRECTION OF PULTRUSION

DESIGN NOTES:

STRUCTURAL DESIGN IS BASED ON THE 2022 CALIFORNIA BUILDING CODE & ASCE 7-16



SITE LOCATION:

NOVATO, CA

DESIGN LOADS:

WIND:
 ULTIMATE WIND SPEED: 92 MPH (3-SEC GUST)
 RISK CATEGORY: II
 EXPOSURE: C

SEISMIC:

IMPORTANCE FACTOR: 1.0
 RISK CATEGORY: II
 SITE CLASS: C
 MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss = 1.5g S1 = 0.6g
 SPECTRAL RESPONSE COEFFICIENTS: Sds = 1.2g Sd1 = N/A

DESIGN WIND PRESSURE: 18.00 psf (0.6W)

COLUMN REACTIONS (CUPOLA):

SHEAR REACTION: V= 500 lbs
 AXIAL REACTION: R= 2300 lbs

WALL CONNECTION REACTION:

SHEAR REACTION: V= 400 lbs
 AXIAL REACTION: R= 800 lbs



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DRAWN	DSP	Raycap 7555-A PALMETTO COMMERCE PARKWAY NORTH CHARLESTON, SC 29420 USA
DESIGNED	ARS	
REVISED	NB+C	
DRAWING NOT TO SCALE. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED		COMPLETE WIRELESS CONSULTING MARIN COUNTRY CLUB 1110 HIGHLAND DRIVE NOVATO, CA 94949
TOLERANCES: DECIMAL: .X ±0.1 .XX ±0.03 .XXX ±0.01 ANGLES ±5° FRACTIONAL: X/X ± 1/16 ALL BENDING TOLERANCES: ± 1.0° THIRD ANGLE PROJECTION		
		NOTES & SPECIFICATIONS
		JOB #VZ16-00154H-29R8
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REVISION TABLE			
REVISION	DESIGNER	DATE	SCOPE OF REVISION
0	MSG	10-05-20	FINAL ENGINEERING
A	PS	06-14-22	PRELIMINARY DRAWINGS ISSUED
B	NB+C	07-22-2022	FINAL ENGINEERING
D	LH	11-02-23	REVISED DESIGN
E	PS	12-14-23	REVISED PER 12-07-23 CUSTOMER COMMENTS; BASE PLATE DESIGN CHANGED TO PITCH POCKET BASE PLATE AND ADDED 3x3x3/8" ANGLE BRACING
F	PS	12-18-23	REVISED ANTENNA MOUNTING ANGLE LAYOUT
G	PS	02-26-24	REVISED PER UPDATED PWS AND CD'S
H	PS	03-20-24	REVISED PER 03-11-24 CUSTOMER COMMENTS; DECREASE BOX HEIGHT, ADD BOTTOM COVER TO SMB, INCREASED PANEL HEIGHT ON CUPOLA AND ADDED BIRD SCREEN.
J	PS	03-27-24	REVISED PANEL HEIGHT PER 03-22-24 CUSTOMER COMMENTS
K	PS	04-24-24	REVISED STRUCTURES PER 04-16-24 CUSTOMER COMMENTS
L	NB+C	04-30-2024	REVISED FINAL ENGINEERING

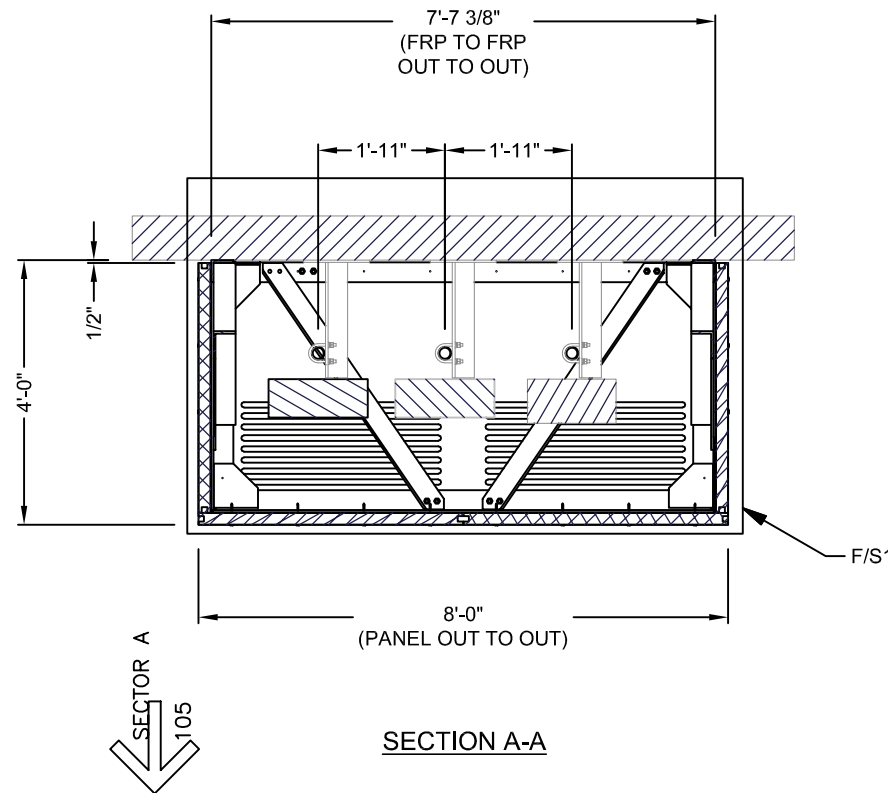


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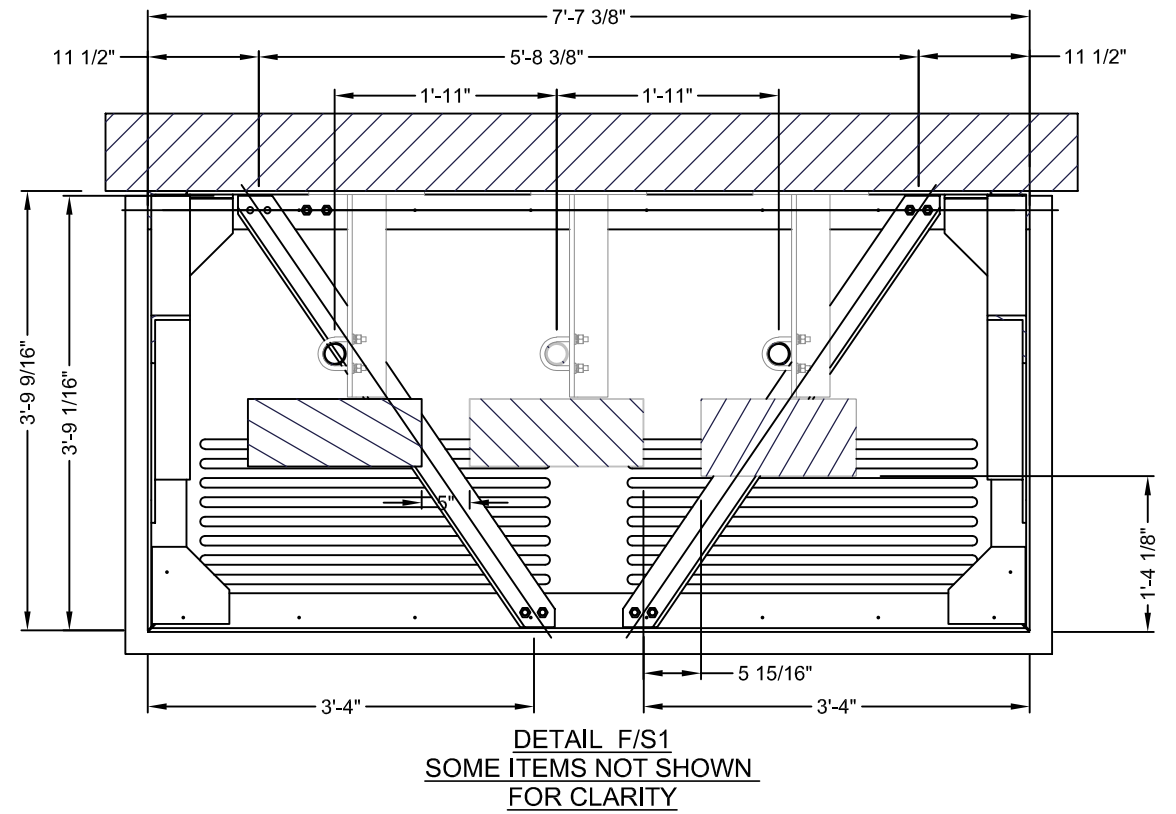
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DESIGNED	ARS	
REVISED	NB+C	
DRAWING NOT TO SCALE. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED		COMPLETE WIRELESS CONSULTING MARIN COUNTRY CLUB 1110 HIGHLAND DRIVE NOVATO, CA 94949
TOLERANCES: DECIMAL: .X ± 0.1 .XX ± 0.03 .XXX ± 0.01 FRACTIONAL: X/X ± 1/16 ANGLES ± 5°		
ALL BENDING TOLERANCES: ± 1.0°		NOTES & SPECIFICATIONS
THIRD ANGLE PROJECTION		
		SHEET # N2
		REVISION L
		JOB #VZ16-00154H-29R8
		DATE: 04-30-2024



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SECTION A
QUANTITY (1) REQUIRED

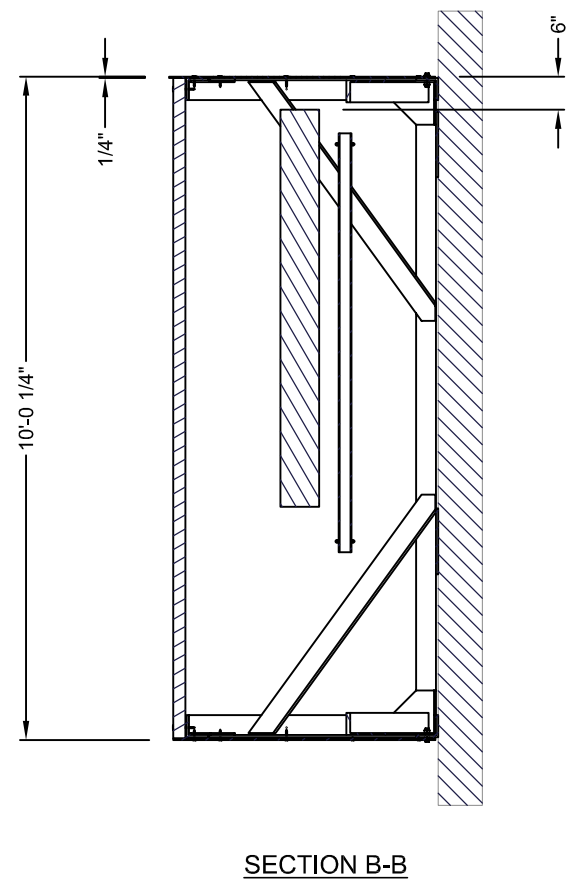
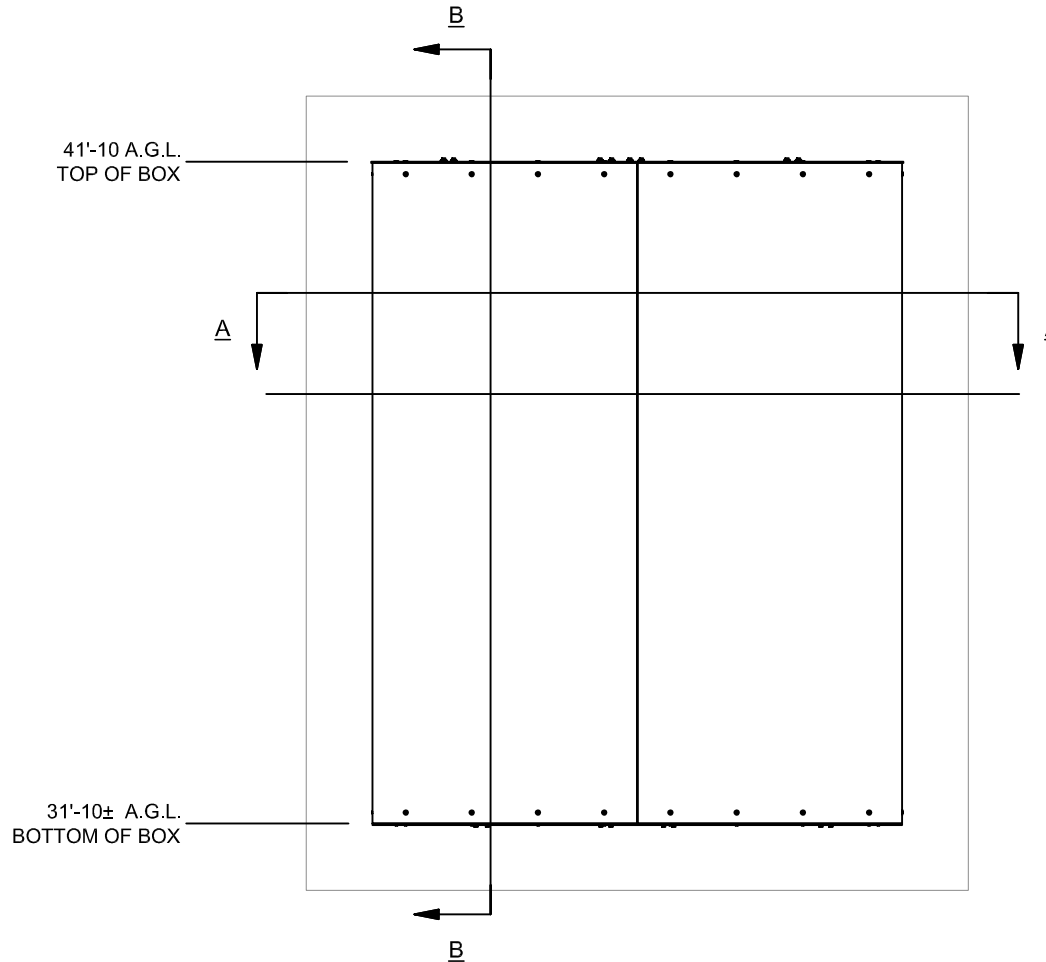


DETAIL F/S1
SOME ITEMS NOT SHOWN
FOR CLARITY

NOTES:

1. THE INTEGRITY OF THE EXISTING STRUCTURE MUST BE VERIFIED BY OTHERS.
2. DIMENSIONS OF THE EXISTING STRUCTURE ARE BASED UPON DRAWINGS BY MST ARCHITECTS DRAWING REV 5 DATED 04-16-24 AND HAVE NOT BEEN PHYSICALLY VERIFIED BY RAYCAP. VERIFICATION OF THESE DIMENSIONS IS THE RESPONSIBILITY OF THE CUSTOMER.
3. THE ATTACHMENT TO EXISTING (DESIGN AND FASTENERS) MUST BE PROVIDED BY OTHERS. RAYCAP WILL ONLY SUPPLY FASTENER SIZE AND QUANTITY REQUIRED, FOR ATTACHMENT TO EXISTING.
4. THE PANELS ARE TO BE PAINTED / TEXTURED ACCORDING TO THE CUSTOMER APPROVED SAMPLE(S).
5. THIS CONCEALMENT WAS DESIGNED TO ACCEPT THE FOLLOWING ANTENNA AIR6449 & NHH -45B-R2B. IT IS THE CUSTOMERS RESPONSIBILITY TO ENSURE THE FIT OF THE ANTENNA AND COAX WITH THEIR SPECIFIC MOUNTING EQUIPMENT.
6. IT IS STRONGLY RECOMMENDED THAT THE CUSTOMER REVIEWS THE RF CONSIDERATIONS IN THIS DESIGN.
7. DUE TO THE USE OF NON-CONVENTIONAL MATERIALS FOR RF PERFORMANCE, THIS CONCEALMENT WAS NOT DESIGNED TO BE WATERPROOF. A WATERPROOF MEMBRANE OR CONNECTION METHOD MUST BE INSTALLED BELOW CONCEALMENT BY CONTRACTOR TO PREVENT WATER INTRUSION TO THE EXISTING STRUCTURE IS REQUIRED.
8. FINAL CAULKING AND SEALING OF THE CONCEALMENT IS THE RESPONSIBILITY OF THE INSTALLATION CONTRACTOR TO PREVENT WATER INTRUSION.

ALL CUPOLA AND STEEPLE UNITS ARE DESIGNED TO BE ERECTED ON A COMPLETED ROOFING SYSTEM AND ARE NOT GUARANTEED TO BE LEAK PROOF.



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DRAWN	DSP
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REVISED	NB+C
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ALL BENDING TOLERANCES: ±1.0°	
THIRD ANGLE PROJECTION	

Raycap	
7555-A PALMETTO COMMERCE PARKWAY NORTH CHARLESTON, SC 29420 USA	
COMPLETE WIRELESS CONSULTING MARIN COUNTRY CLUB 1110 HIGHLAND DRIVE NOVATO, CA 94949	
SECTOR A ASSEMBLY - ELEVATIONS	
SHEET #	REVISION
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JOB #VZ16-00154H-29R8	
DATE: 04-30-2024	

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FULLY FACTORY BONDED

1/4" THK. VENTILATED FRP PANEL TOP & BOTTOM. ATTACHED WITH #14 SCREWS AND 3/8" SS FW, TYP.

ESSV PANELS w/ STUCCO APPEARANCE

(2) Ø5/8" FRP BOLTS, TYP.

ALL FRP-TO-FRP CONNECTIONS

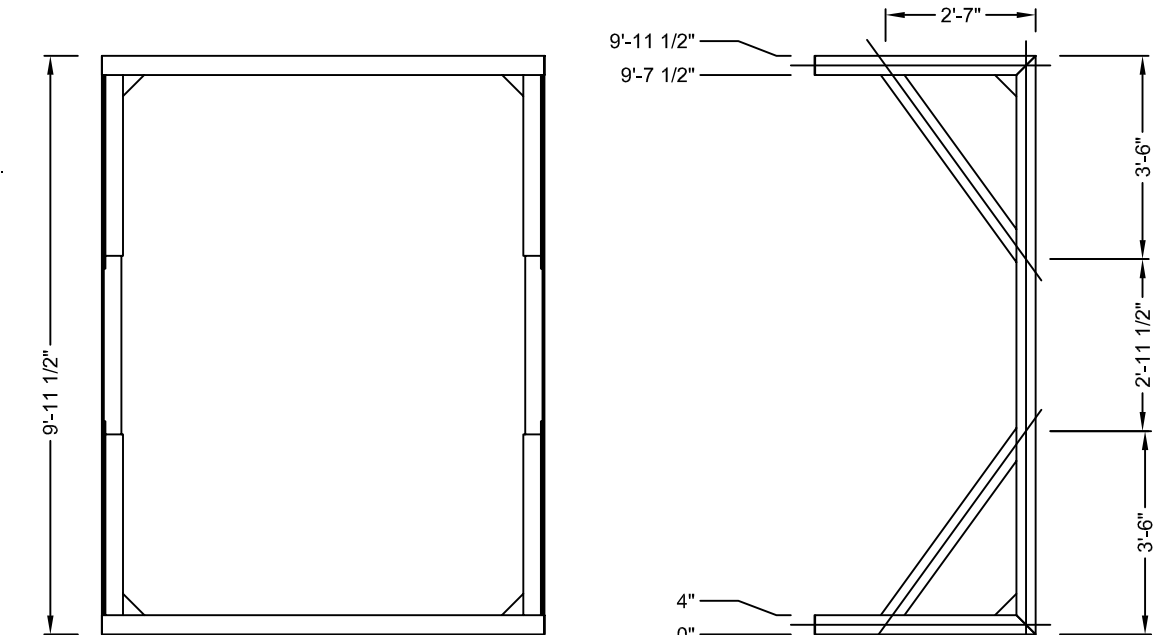
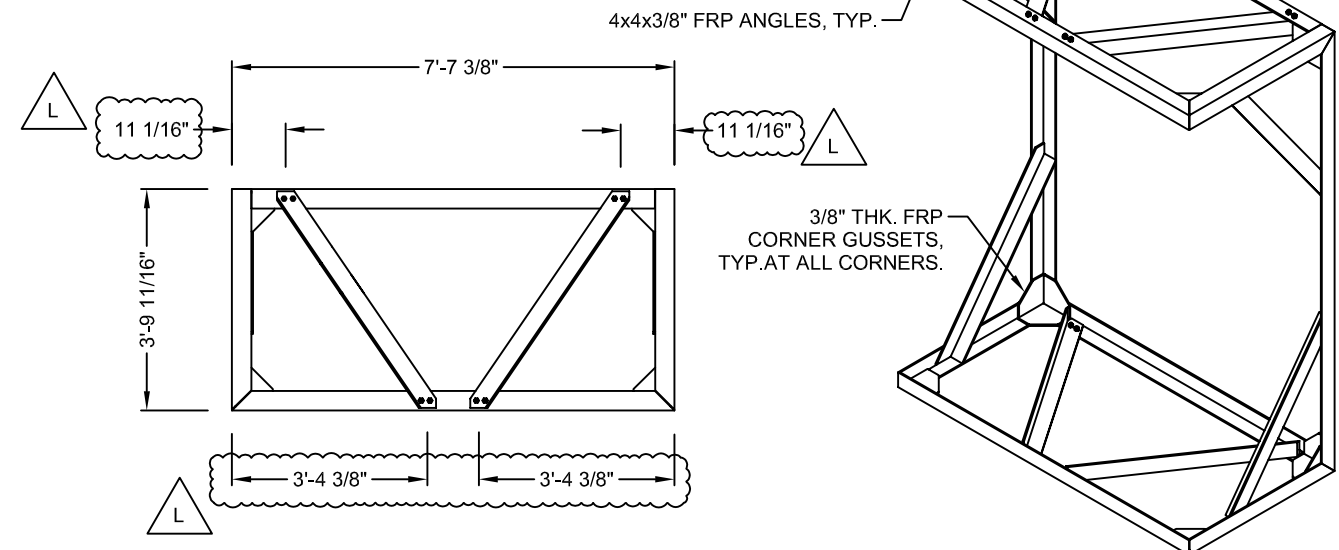
FACTORY BONDED FRP FRAME ASSEMBLY. ATTACHMENT AND HARDWARE TO EXISTING IS DESIGNED BY OTHERS.

(6) ANTENNA STEEL OUTRIGGER SUPPORT TO EXISTING WALL IS DESIGNED & PROVIDED BY OTHERS.

(3) 2" STD. PIPES, TYP.

Ø1/2" U-BOLTS, TYP.

#14 SS SCREWS w/ 3/8" SS FW OR 3/8" ISOPLAST BOLTS WITH FLANGED NUT IN RF AREAS @ 12" O.C. MAX.



SMB FRAME ASSEMBLY DETAILS

4x4x3/8" FRP BRACING ANGLE, TYP.



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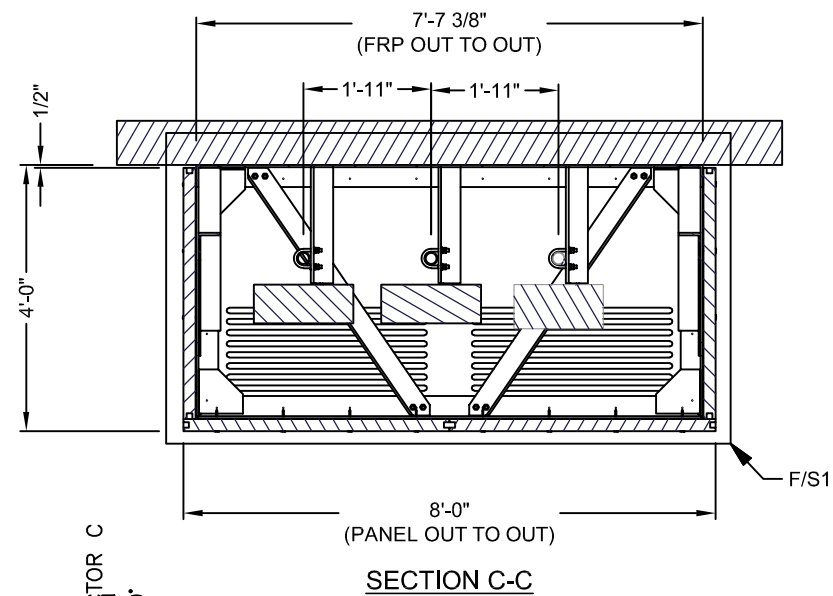
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DESIGNED	ARS
REVISED	NB+C
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TOLERANCES:	
DECIMAL:	FRACTIONAL:
.X ±0.1	X/X ±1/16
.XX ±0.03	
.XXX ±0.01	
ANGLES ±5°	
ALL BENDING TOLERANCES: ±1.0°	
THIRD ANGLE PROJECTION	

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NORTH CHARLESTON, SC 29420 USA

COMPLETE WIRELESS CONSULTING
MARIN COUNTRY CLUB
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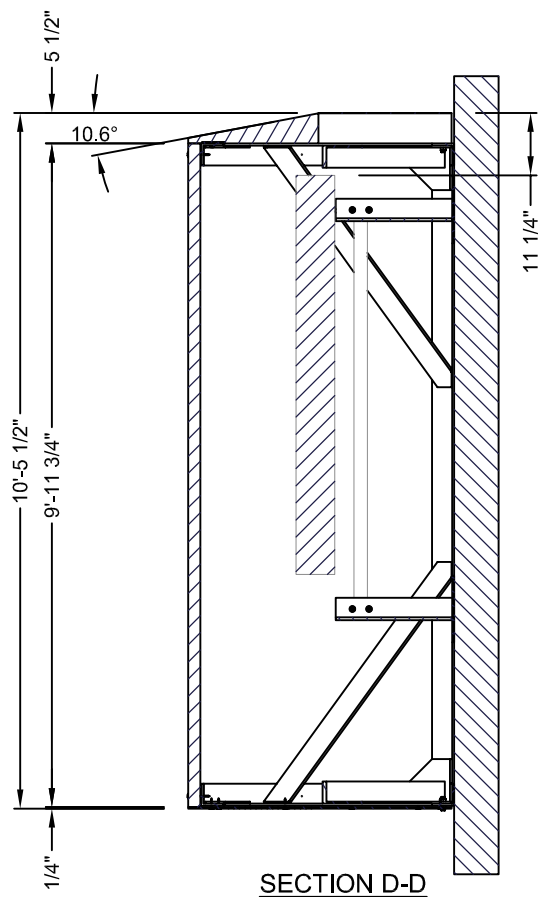
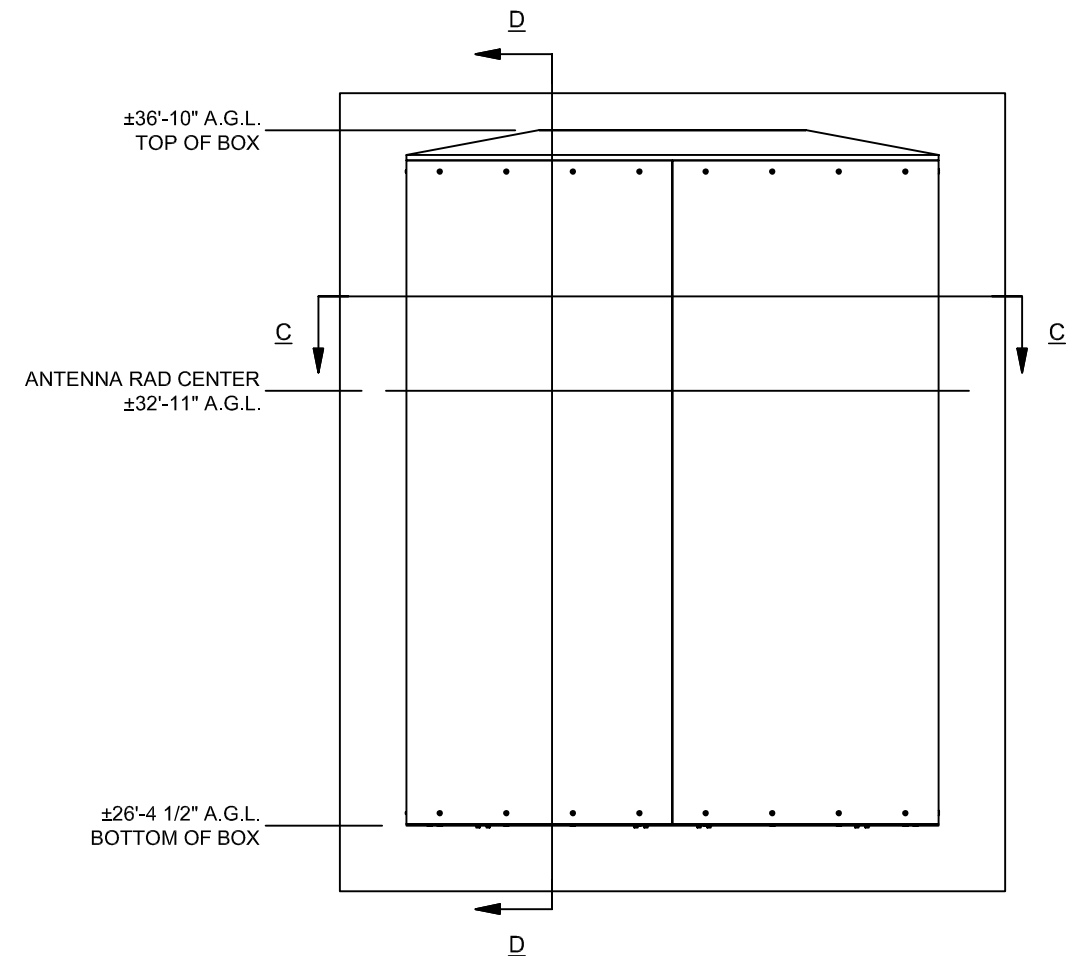
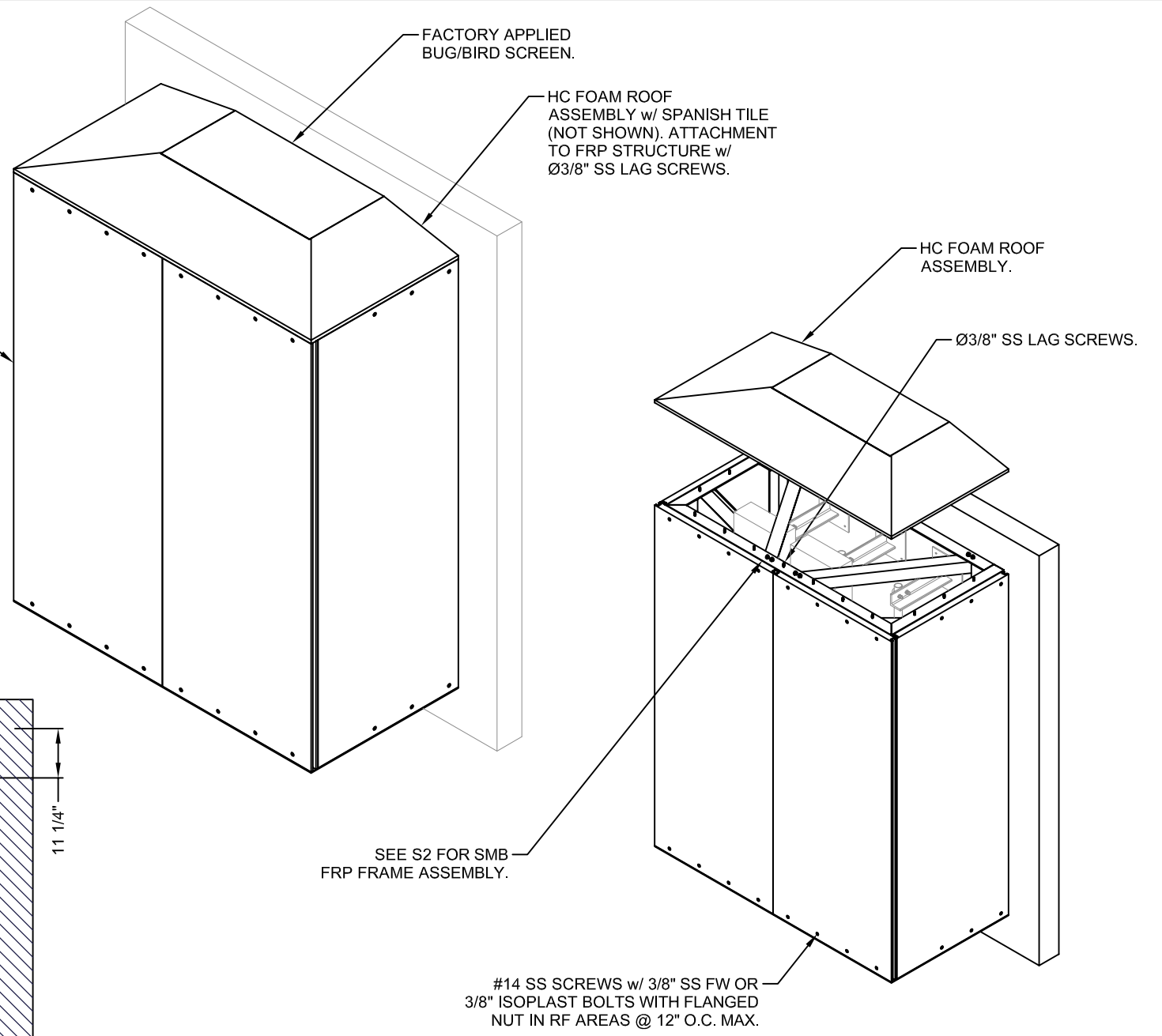
SECTOR A ASSEMBLY - ELEVATIONS	SHEET #	REVISION
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JOB #VZ16-00154H-29R8	DATE: 04-30-2024	

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**SECTOR C
QUANTITY (1) REQUIRED**

ESSV PANELS w/
STUCCO APPEARANCE



Tyler M. Barker, PE
TKK Engineering Corp.
PE #: C-80327 Exp: 09/30/2024

NB+C
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.
6095 MARSHALEE DRIVE, SUITE 300
ELK RIDGE, MD 21075
410-712-7092

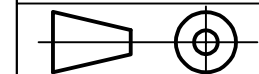
DRAWN	DSP
DESIGNED	ARS
REVISED	NB+C

DRAWING NOT TO SCALE.
ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SPECIFIED

TOLERANCES:	
DECIMAL:	FRACTIONAL:
.X ±0.1	X/X ±1/16
.XX ±0.03	
.XXX ±0.01	
ANGLES ±5°	

ALL BENDING TOLERANCES:
± 1.0°

THIRD ANGLE PROJECTION



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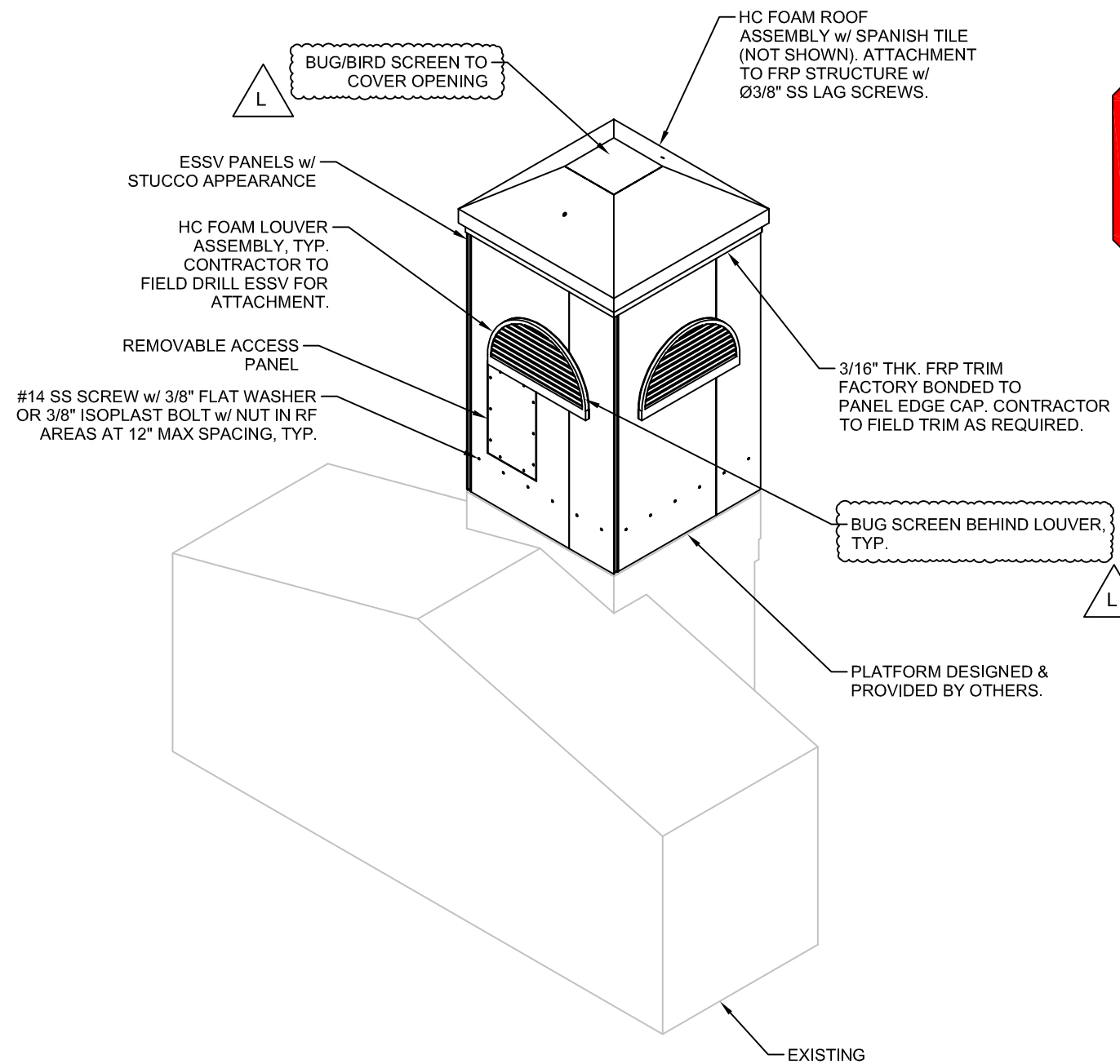
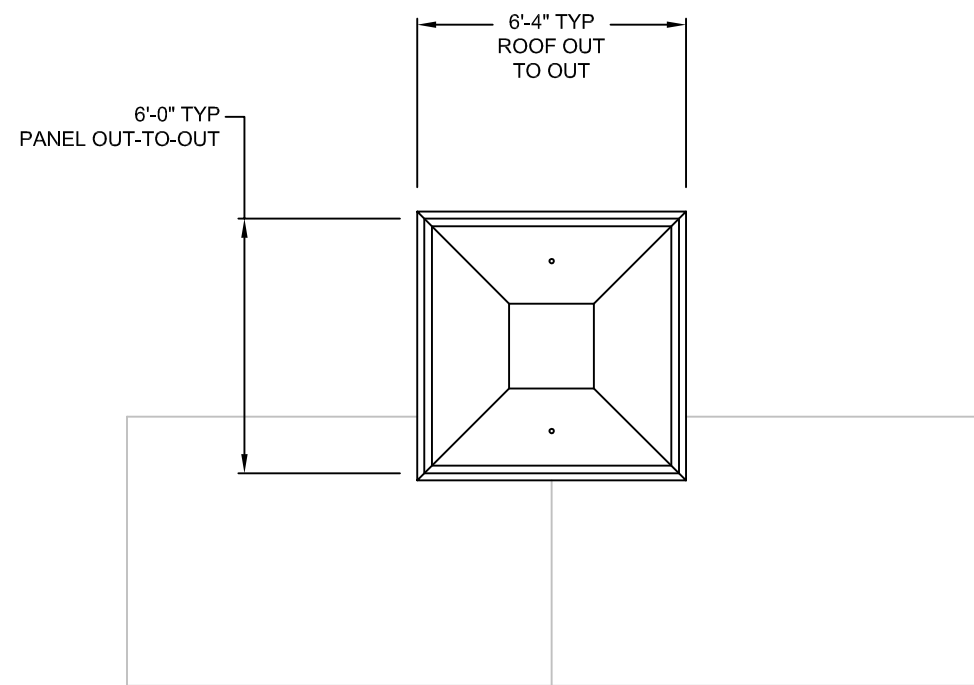
Raycap
7555-A PALMETTO COMMERCE PARKWAY
NORTH CHARLESTON, SC 29420 USA

COMPLETE WIRELESS CONSULTING
MARIN COUNTRY CLUB
1110 HIGHLAND DRIVE
NOVATO, CA 94949

SECTOR C ASSEMBLY -
ELEVATIONS

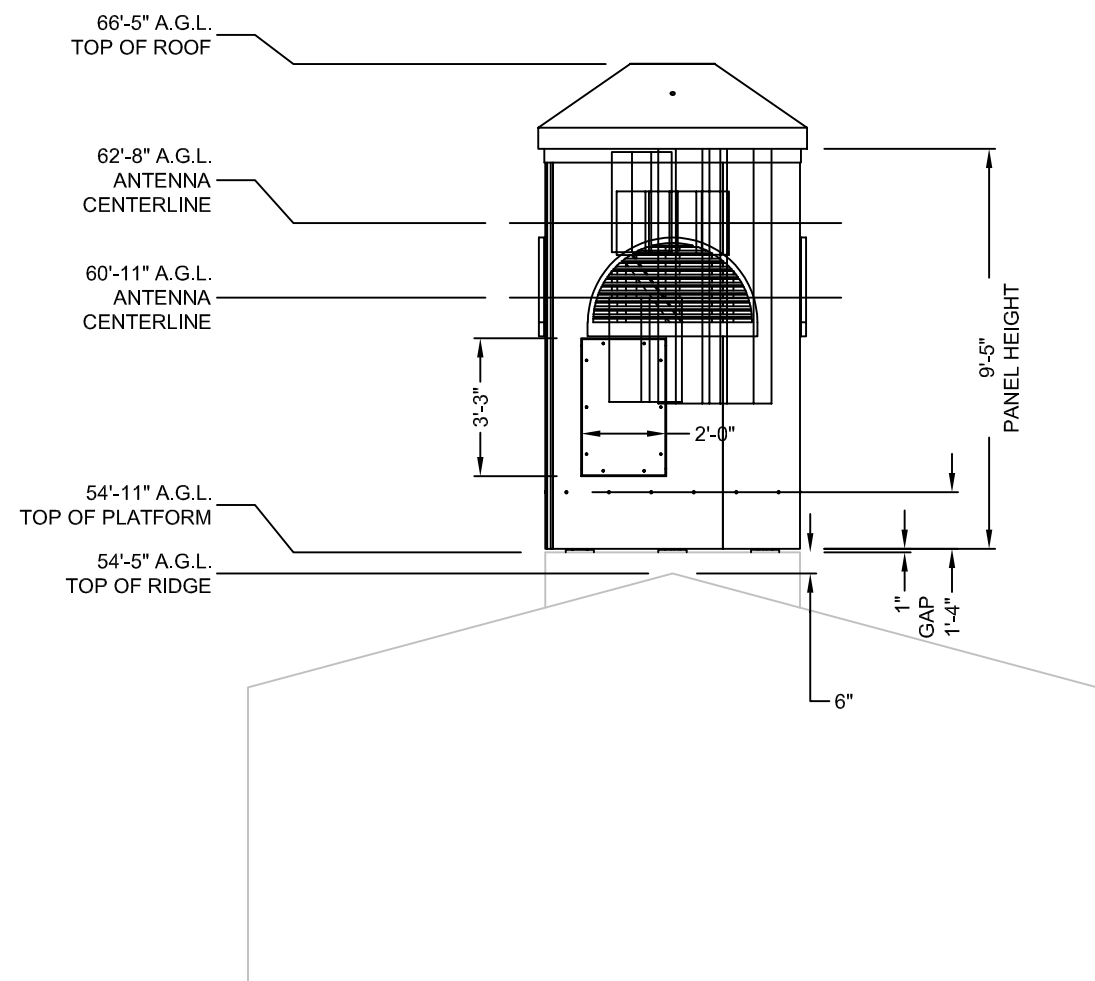
JOB #VZ16-00154H-29R8

SHEET #	REVISION
S3	L
DATE: 04-30-2024	



DIMENSION CRITICAL DESIGN

THE DIMENSIONS OF EXISTING CONDITIONS REFERENCED IN THESE DRAWINGS ARE CRITICAL TO THE SUCCESS OF THE PROJECT. PLEASE VERIFY THAT THE DIMENSIONS LISTED ARE ACCURATE BEFORE APPROVING.



Tyler M. Barker, PE
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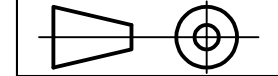
DRAWING NOT TO SCALE. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED

TOLERANCES:

DECIMAL:	FRACTIONAL:
.X ± 0.1	X/X ± 1/16
.XX ± 0.03	
.XXX ± 0.01	
ANGLES ± 5°	

ALL BENDING TOLERANCES: ± 1.0°

THIRD ANGLE PROJECTION

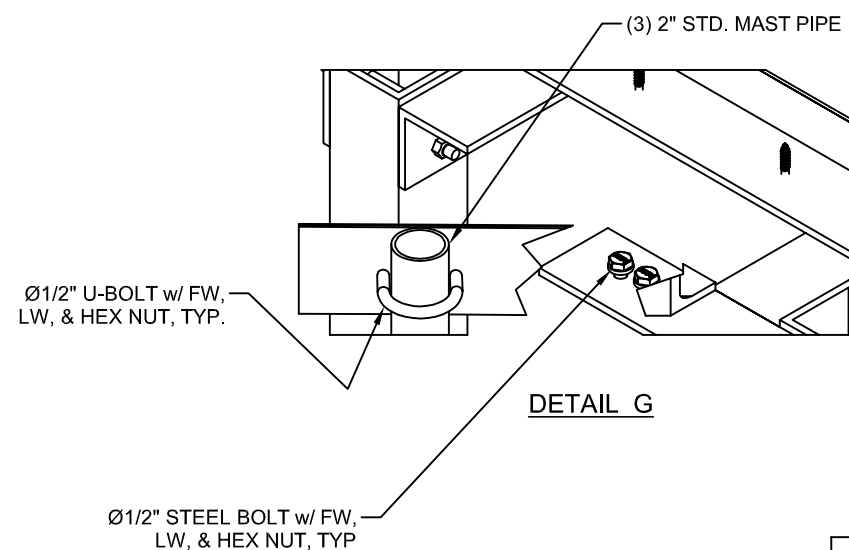
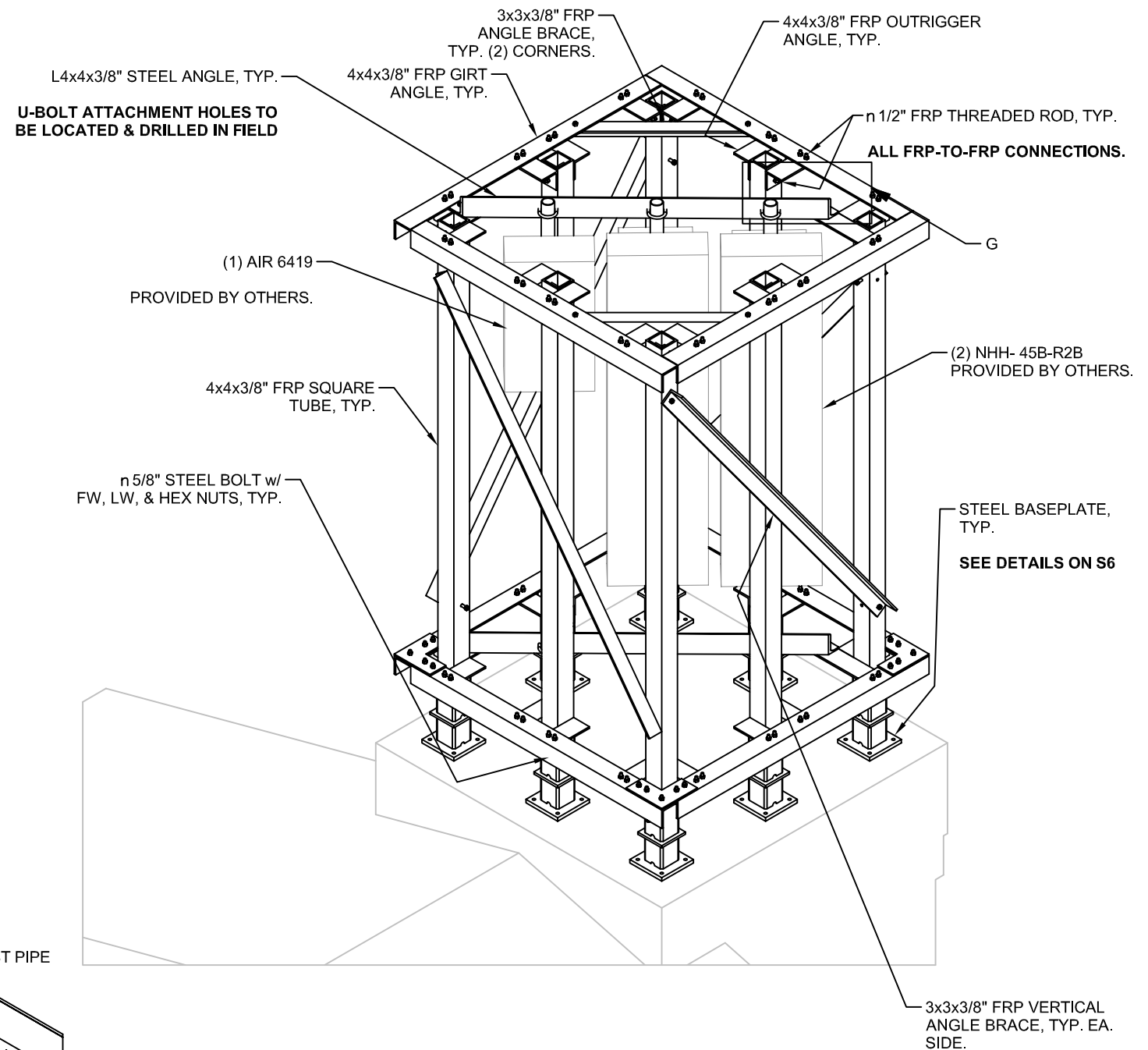
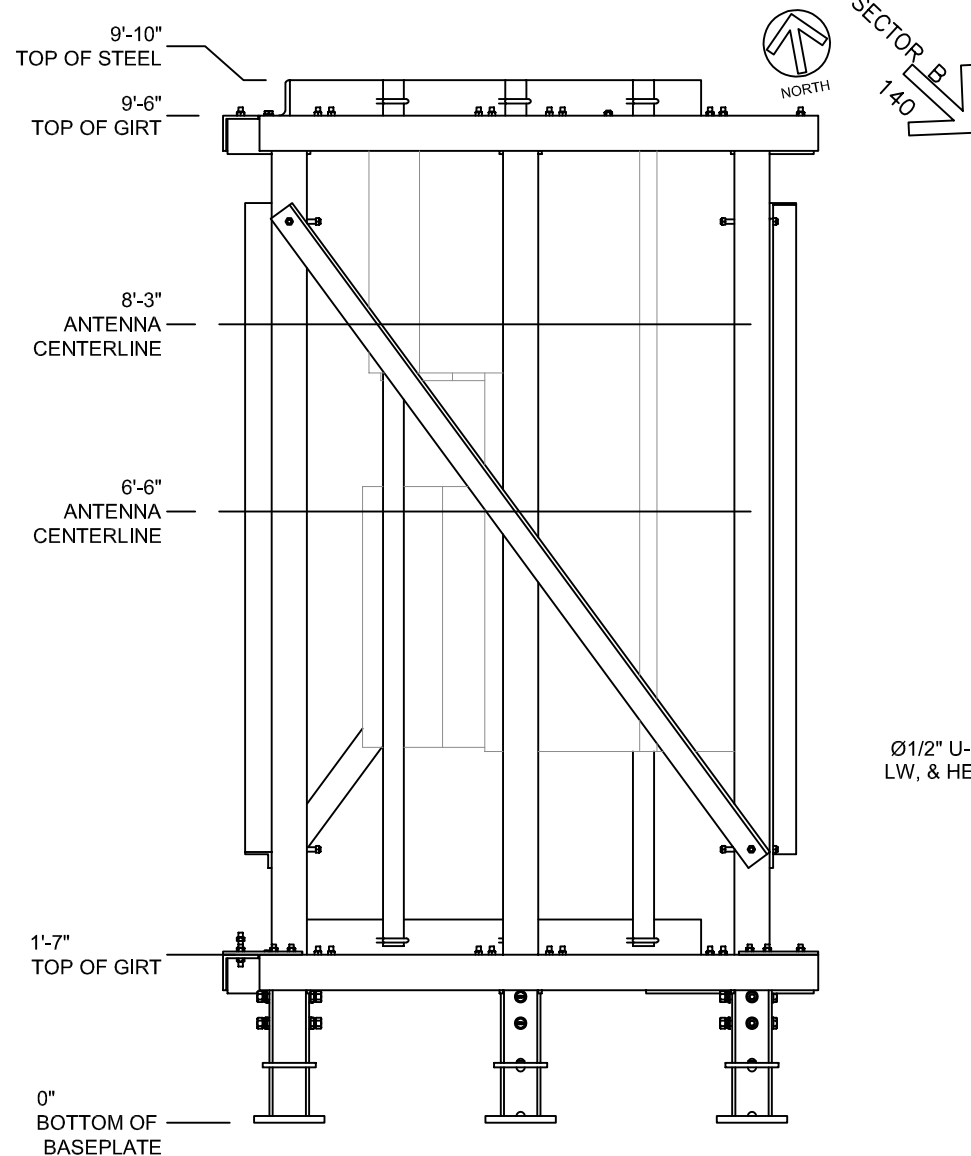
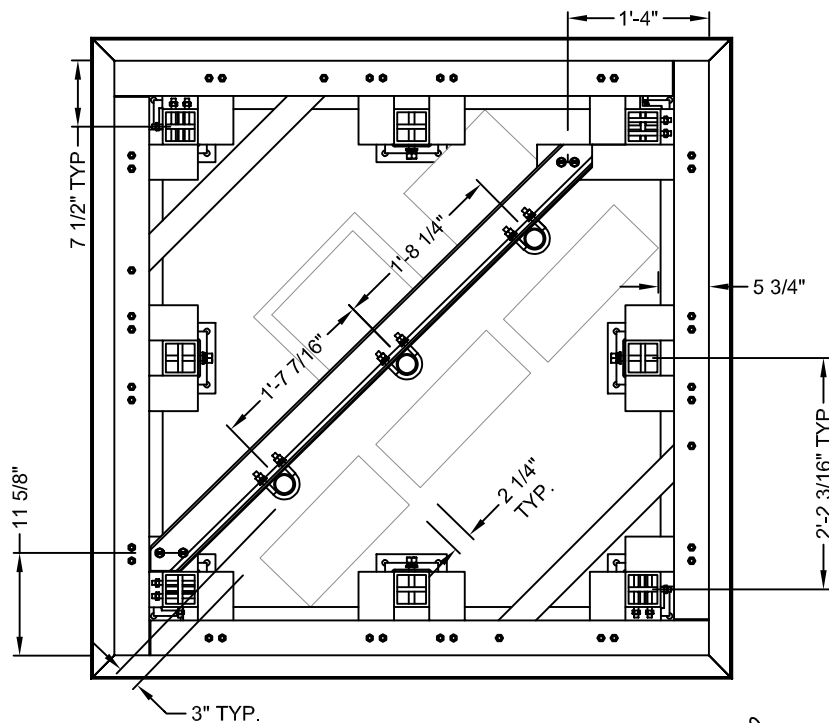


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NOVATO, CA 94949

SECTOR B ASSEMBLY - ELEVATIONS	SHEET #	S4	REVISION	L
	JOB #VZ16-00154H-29R8		DATE: 04-30-2024	



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PE #: C-80327 Exp: 09/30/2024



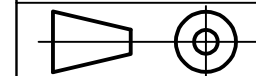
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DESIGNED	ARS
REVISED	NB+C

DRAWING NOT TO SCALE.
ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SPECIFIED

TOLERANCES:	
DECIMAL:	FRACTIONAL:
.X ±0.1	X/X ±1/16
.XX ±0.03	
.XXX ±0.01	
ANGLES ±.5°	

ALL BENDING TOLERANCES:
± 1.0°

THIRD ANGLE PROJECTION



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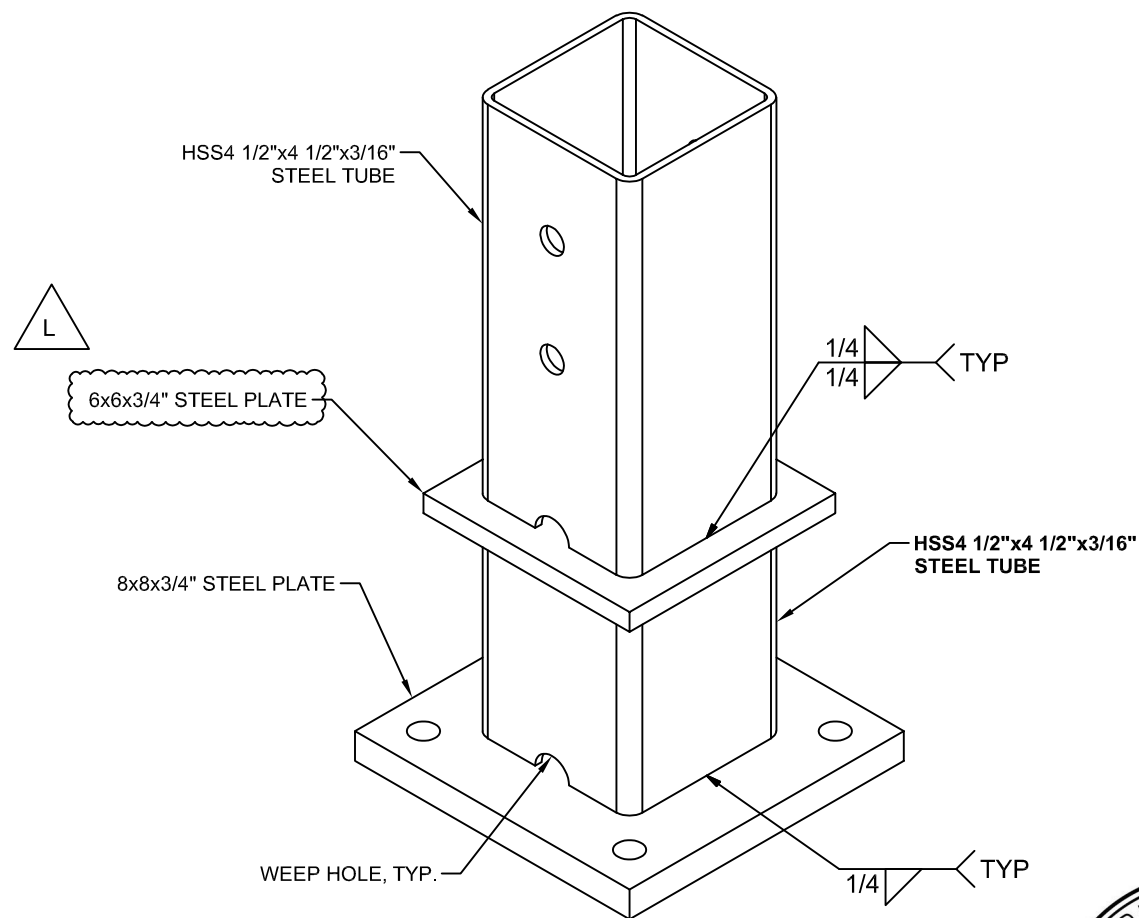
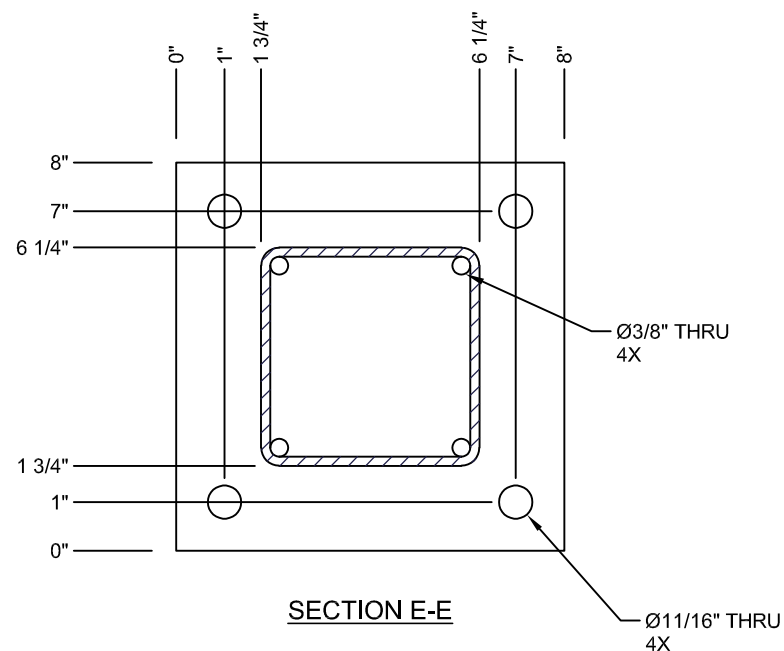
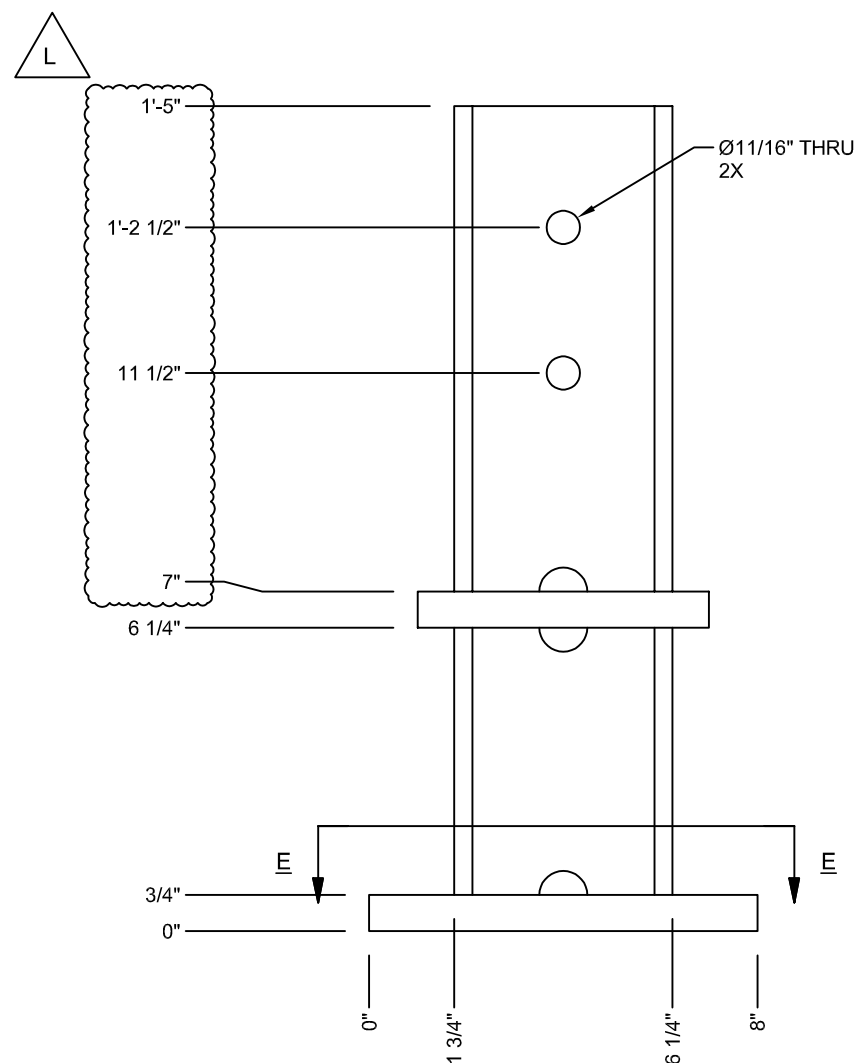
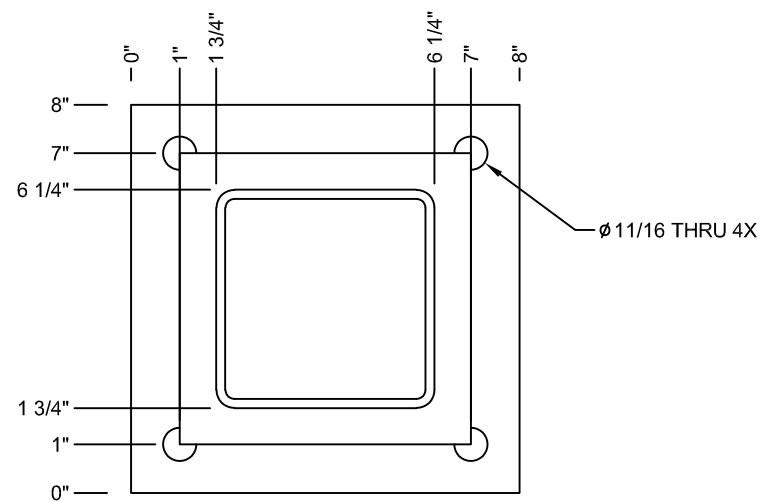
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SECTOR B ASSEMBLY -
ELEVATIONS

JOB #VZ16-00154H-29R8

SHEET #	REVISION
S5	L
DATE: 04-30-2024	

SOME ITEMS NOT SHOWN FOR CLARITY



Tyler M. Barker, PE
TKK Engineering Corp.
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DRAWN	DSP	Raycap 7555-A PALMETTO COMMERCE PARKWAY NORTH CHARLESTON, SC 29420 USA	COMPLETE WIRELESS CONSULTING MARIN COUNTRY CLUB 1110 HIGHLAND DRIVE NOVATO, CA 94949	
DESIGNED	ARS			
REVISED	NB+C			
DRAWING NOT TO SCALE. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED		STEEL DETAILS	SHEET #	REVISION
TOLERANCES: DECIMAL: FRACTIONAL: .X ± 0.1 X/X ± 1/16 .XX ± 0.03 .XXX ± 0.01 ANGLES ± 5°			S6	L
ALL BENDING TOLERANCES: ± 1.0°				
THIRD ANGLE PROJECTION			DATE: 04-30-2024	
		JOB #VZ16-00154H-29R8	DATE: 04-30-2024	
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