



VERIZON SITE NUMBER: 300189 **BUSINESS UNIT #:** 877196
VERIZON SITE NAME: MURPHY AVENUE - BATTAGLIA RANCH A - C **SITE ADDRESS:** 13145 MURPHY AVE
SITE TYPE: MONOPOLE **COUNTY:** SANTA CLARA **JURISDICTION:** COUNTY OF SANTA CLARA
TOWER HEIGHT: 35'-0" MODIFIED TO 50'-0" **VERIZON FUZE PROJECT#:** 16119501

verizon
 3245 158TH AVENUE MS 231
 BELLEVUE, WA 98008

CROWN CASTLE
 4301 HACIENDA DRIVE, SUITE 410
 PLEASANTON, CA 94588

TOWER ENGINEERING PROFESSIONALS
 4710 E ELWOOD ST, STE 9
 PHOENIX, AZ 85040
 OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
300189
BU #: 877196
101 AUTO REPAIR
 13145 MURPHY AVE
 SAN MARTIN, CA 95046
 EXISTING 35'-0" MODIFIED
 TO 50'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
3	11/17/22	KRS	CONSTRUCTION	JFJ
4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

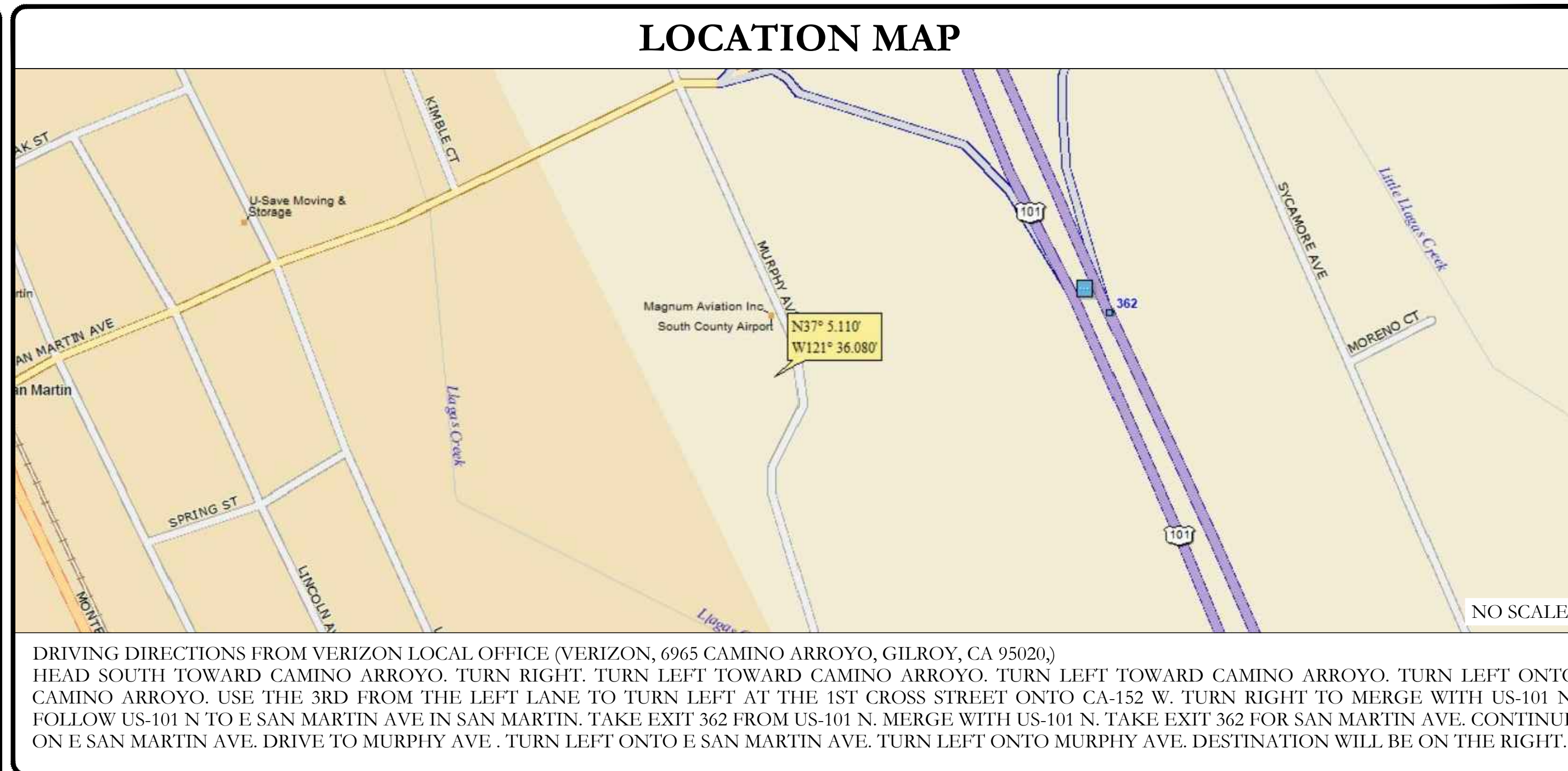
SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	101 AUTO REPAIR
SITE ADDRESS:	13145 MURPHY AVE SAN MARTIN, CA 95046
COUNTY:	SANTA CLARA
MAP/PARCEL #:	82537039
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	37° 5' 6.61"
LONGITUDE:	-121° 36' 4.79"
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	285 FT
CURRENT ZONING:	RR-5A
JURISDICTION:	COUNTY OF SANTA CLARA
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	II-C
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	SUMNER LEASING LLC 13145 MURPHY AVE SAN MARTIN, CA 95046
TOWER OWNER:	CROWN CASTLE 14301 HACIENDA DR SUITE 104 PLEASANTON, CA 94588
CARRIER/APPLICANT:	VERIZON WIRELESS 3245 158TH AVENUE MS 231 BELLEVUE, WA 98008
ELECTRIC PROVIDER:	PACIFIC GAS & ELECTRIC (800) 743-5000
TELCO PROVIDER:	TBD

DRAWING INDEX

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C-2	TOWER ELEVATION
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ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR FULL SIZE. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



PROJECT TEAM

A&E FIRM:	TOWER ENGINEERING PROFESSIONALS 4710 E ELWOOD ST, STE 9 PHOENIX, AZ 85040 OFFICE: (480) 285-0036
	JOSEPH CRESS - PROJECT MANAGER
	STEPHEN BUNTING - CIVIL ENGINEER
	MARK QUAKENBUSH - ELECTRICAL ENGINEER
CROWN CASTLE USA INC. DISTRICT CONTACTS:	---- - PROJECT MANAGER ---- ---- - CONSTRUCTION MANAGER ----
	SABRINA LANCASTER SABRINA.LANCASTER@CROWN CASTLE.COM

APPROVALS

SIGNATURE	DATE
_____	_____
_____	_____
_____	_____

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT	https://pmi.vxwsmart.com
SMART TOOL VENDOR	
PROJECT NUMBER	16119501
VzW LOCATION CODE (PSLC)	300189
*** PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT	

MOUNT MODIFICATION REQUIRED **Y**

VzW APPROVED SMART KIT VENDORS

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VzW SMART KIT APPROVED VENDORS

APPLICABLE CODES/REFERENCE DOCUMENTS

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

CODE TYPE	CODE
BUILDING	2022 CALIFORNIA BUILDING CODE/2021 IBC
MECHANICAL	2022 CALIFORNIA MECHANICAL CODE/2021 UMC
ELECTRICAL	2022 CALIFORNIA ELECTRICAL CODE/2020 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	BLACK & VEATCH CORP.
DATED:	08/23/2021
MOUNT ANALYSIS:	BY OTHERS
DATED:	
RFDS REVISION:	1
DATED:	05/13/2021
ORDER ID:	582266
REVISION:	1

CALL CALIFORNIA ONE CALL (800) 227-2600 CALL 3 WORKING DAYS BEFORE YOU DIG!

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:

- INSTALL (9) ANTENNAS
- INSTALL (6) RADIOS
- INSTALL (1) OVP BOX
- INSTALL (3) DUAL ANTENNA BRACKETS
- INSTALL (1) COMPACT MOUNT
- INSTALL (1) MOUNT ADAPTER
- INSTALL 15' TOWER EXTENSION

GROUND SCOPE OF WORK:

- REMOVE EXISTING CURB
- INSTALL (1) VERIZON 10'-0"X 7'-0" CONCRETE PAD
- INSTALL (1) VERIZON 11'-0"X 7'-0" CONCRETE PAD
- INSTALL (1) VERIZON RF CABINET
- INSTALL (1) VERIZON BATTERY CABINET
- INSTALL (1) VERIZON GPS ANTENNA
- INSTALL (2) VERIZON SERVICE LIGHTS
- INSTALL (1) VERIZON H-FRAME
- INSTALL (1) VERIZON FIBER DISTRIBUTION BOX
- INSTALL (1) VERIZON 200A ILC
- INSTALL (1) 200A VERIZON METER WITH 200A SERVICE DISCONNECT
- INSTALL (3) VERIZON 1-5/8" HYBRID LINE (SHARED)
- INSTALL (1) VERIZON DUS41 UNIT WITHIN RF CABINET
- INSTALL (1) VERIZON 2" CONDUIT FOR POWER
- INSTALL (2) VERIZON 4" CONDUIT FOR HYBRID
- INSTALL (1) VERIZON 30kW GENERATOR W/ 54 GAL FUEL TANK
- INSTALL (1) 4'-0" MAN GATE

Stephen Bunting P.E.
 Professional Engineer License: #91898
 01/02/24

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.

SHEET NUMBER: T-1	REVISION: 7
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CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

- 1. NOTICE TO PROCEED- NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" - CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT: THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED-STD-10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA-322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH QAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED-STD-10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS." IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL FURNISH AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
6. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
9. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
10. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS. LATEST APPROVED REVISION.
11. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
12. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
13. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
14. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
15. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
16. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
17. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
18. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
19. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
20. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
21. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

SANTA CLARA GROUNDING NOTES:

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

GENERAL NOTES:

- 1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION CARRIER: VERIZON TOWER OWNER: CROWN CASTLE USA INC.
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
4. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
5. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
6. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
7. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
10. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
11. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
13. GENERATOR ENCLOSURE WILL BE PROVIDED BY THE GENERATOR MANUFACTURER FOR WEATHER PROTECTION (SEE SHEET C-5.6). ENCLOSURE WILL ENCLOSE THE GENERATOR ONLY PER THE MANUFACTURER STANDARDS. NO OTHER EQUIPMENT WILL BE ENCLOSED BY THE GENERATOR ENCLOSURE.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°F AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS: #4 BARS AND SMALLER.....40 ksi #5 BARS AND LARGER.....60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3" CONCRETE EXPOSED TO EARTH OR WEATHER: #6 BARS AND LARGER.....2" #5 BARS AND SMALLER.....1-1/2" CONCRETE NOT EXPOSED TO EARTH OR WEATHER: SLAB AND WALLS.....3/4" BEAMS AND COLUMNS.....1-1/2"
7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

- 1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC. 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE. 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEC AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SNEW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEC AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (I.E. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "VERIZON".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE		
SYSTEM	CONDUCTOR	COLOR
120/240V, 1Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
120/208V, 3Ø	GROUND	GREEN
	A PHASE	BLACK
	B PHASE	RED
277/480V, 3Ø	C PHASE	BLUE
	NEUTRAL	WHITE
	GROUND	GREEN
DC VOLTAGE	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
	GROUND	GREEN
	POS (+)	RED**
	NEG (-)	BLACK**

APWA UNIFORM COLOR CODE:

- WHITE PROPOSED EXCAVATION
PINK TEMPORARY SURVEY MARKINGS
RED ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
YELLOW GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
BLUE POTABLE WATER
PURPLE RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN SEWERS AND DRAIN LINES

* SEE NEC 210.5(C)(1) AND (2)
** POLARITY MARKED AT TERMINATION

ABBREVIATIONS:

- ANT ANTENNA
(E) EXISTING
FIF FACILITY INTERFACE FRAME
GEN GENERATOR
GPS GLOBAL POSITIONING SYSTEM
GSM GLOBAL SYSTEM FOR MOBILE LONG TERM EVOLUTION
LTE MASTER GROUND BAR
MWB MICROWAVE
(N) NEW
NEC NATIONAL ELECTRIC CODE
(P) PROPOSED
PP POWER PLAN
QTY QUANTITY
RECT RECTIFIER
RBS RADIO BASE STATION
RETS REMOTE ELECTRIC TILT
RFDS RADIO FREQUENCY DATA SHEET
RRH REMOTE RADIO HEAD
RRU REMOTE RADIO UNIT
SIAD SMART INTEGRATED DEVICE
TMA TOWER MOUNTED AMPLIFIER
TYP TYPICAL
UMTS UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P. WORK POINT

3245 158TH AVENUE MS 231
BELLEVUE, WA 98008

4301 HACIENDA DRIVE, SUITE 410
PLEASANTON, CA 94588

TOWER ENGINEERING PROFESSIONALS
4710 E ELWOOD ST, STE 9
PHOENIX, AZ 85040
OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
300189

BU #: 877196
101 AUTO REPAIR

13145 MURPHY AVE
SAN MARTIN, CA 95046

**EXISTING 35'-0" MODIFIED
TO 50'-0" MONOPOLE**

ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
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4	05/19/23	KBA	CONSTRUCTION	JFJ
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6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

01/02/24

Stephen Bunting P.E.
Professional Engineer License: #91898

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SHEET NUMBER: T-2
REVISION: 7

TOWER SURVEY

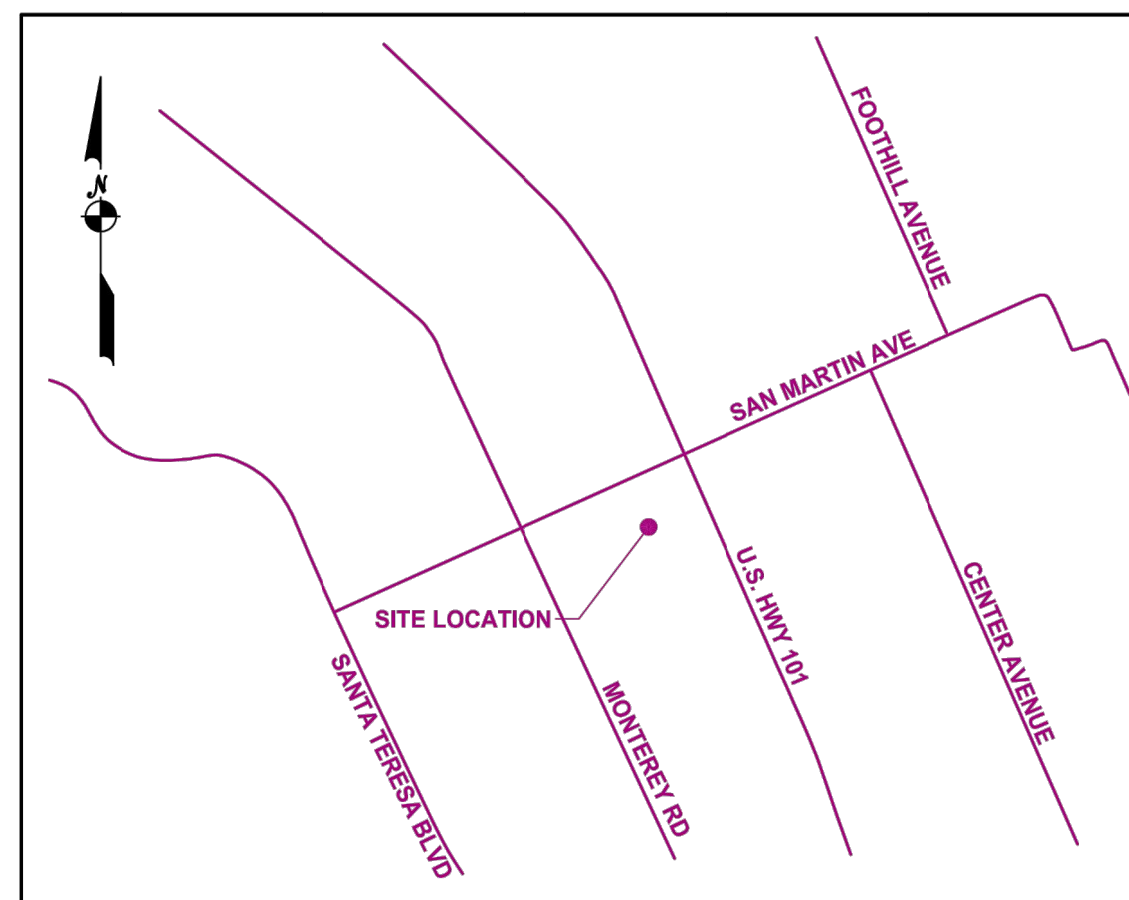
877196

101 AUTO REPAIR

13145 MURPHY AVENUE
SAN MARTIN, CA 95046
SANTA CLARA COUNTY

VICINITY MAP

NTS



AREA SUMMARY

AREA	SQ. FT.	ACRES
PARENT PARCEL	79,869	1.833
TOWER LEASE AREA	599	0.014
EQUIPMENT LEASE AREA NO. 1 (VERIZON)	77	0.002
EQUIPMENT LEASE AREA NO. 2 (VERIZON)	77	0.002
ACCESS & UTILITY EASEMENT	1,193	0.027

CONTENTS

COVER SHEET
PROPERTY OVERVIEW
EASEMENT OVERVIEW
SITE OVERVIEW
SITE OVERVIEW DETAIL (INTERNAL USE)
LEGAL DESCRIPTIONS

UTILITY NOTE

1. Surveyor does not guarantee that all utilities are shown or their locations are definite. It is the responsibility of the contractor and developer to contact any involved agencies to locate all utilities prior to construction, removal, relocation and/or replacement is the responsibility of the contractor.

Any underground utilities located and shown hereon were performed by GPRS.

SURVEY PROCEDURES & EQUIPMENT

The Accuracy Of This Survey Meets Or Exceeds The Minimum Standards As Required By The State of California.

Instruments Used:
Leica Global Positioning System
Leica Total Station

GRID-TO-GROUND SCALE FACTOR NOTE

ALL BEARINGS AND DISTANCES ARE BASED ON THE CALIFORNIA ZONE 3 STATE PLANE COORDINATE ZONE GRID. TO DERIVE GROUND DISTANCES DIVIDE BY 0.99998841

COORDINATES

For internal use

LABEL	LAT, LONG
MON #1 / POC	37°05'07.00", -121°36'03.60"
MON #2	37°05'15.95", -121°36'08.53"
POB - LEASE AREA	37°05'06.63", -121°36'04.64"
CENTER OF TOWER	37°05'06.62", -121°36'04.98"

ABBREVIATIONS

POC	POINT OF COMMENCEMENT
POB	POINT OF BEGINNING
ROW	RIGHT OF WAY
NFNS	NOTHING FOUND, NOTHING SET

LEGEND

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

SURVEY PERFORMED FOR:



SURVEY COORDINATED BY:

AMBIT CONSULTING
428 Main Street, Suite 206, Huntington Beach, CA 92648
Tele: (480) 659-4072

SURVEY PERFORMED BY:

AMBIT CONSULTING
428 Main Street, Suite 206, Huntington Beach, CA 92648
Tele: (480) 659-4072

DRAWN BY: CK | CHK BY: MF | JOB NO.: 877196

SURVEYOR'S CERTIFICATION:

I hereby certify CCTMO LLC, Crown Castle USA Inc., including its parents, subsidiaries and affiliated entities, and Tower Title and Closing, that this map was made under my direction as a licensed surveyor in the State of California; field effort was performed April of 2022.



DATE: 07/11/2022

JULY 11, 2022

DATE

LEASE AREA ZONING:

RR

LEASE AREA FLOOD NOTE:

THIS PROJECT APPEARS TO BE LOCATED WITHIN FLOOD ZONE "AO" ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP(S), MAP ID #06085C0628H, DATED 05/18/2009.

BEARING BASIS:

BEARINGS SHOWN HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM CALIFORNIA STATE PLANE COORDINATE THREE ZONE, DETERMINED BY GPS OBSERVATIONS.

NOTES:

1. SURVEY PERFORMED ON 04/27/2022.
2. DATA PROJECTED IN STATE PLANE COORDINATE SYSTEM CALIFORNIA ZONE THREE, WITH NAVD88 VERTICAL DATUM.
3. ALL VISIBLE TOWER EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA, UNLESS OTHERWISE NOTED HEREON.
4. NOT ALL SYMBOLS ARE DEPICTED TO SCALE.
5. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

REV	DATE	DESCRIPTION	DRWN
0	5/02/22	SUBMITAL	CK
1	7/08/22	TITLE/DESIGN (C)	CK

SITE INFORMATION:

Name: 101 AUTO REPAIR
BUN: 877196
Address: 13145 MURPHY AVENUE
SAN MARTIN, CA 95046
County: SANTA CLARA COUNTY

SITE LOCATED IN:
SAN MARTIN RANCH MAP 2, BOOK "G", PG 38-39

TOWER SURVEY

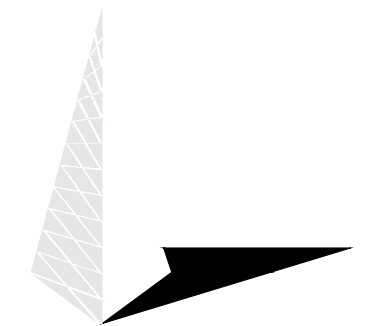
SHEET: COVER SHEET

verizon

3245 158TH AVENUE MS 231
BELLEVUE, WA 98008

CROWN CASTLE

4301 HACIENDA DRIVE, SUITE 410
PLEASANTON, CA 94588



TOWER ENGINEERING PROFESSIONALS
4710 E ELWOOD ST, STE 9
PHOENIX, AZ 85040
OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
300189

BU #: 877196
101 AUTO REPAIR

13145 MURPHY AVE
SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
TO 50'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
3	11/17/22	KRS	CONSTRUCTION	JFJ
4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

FOR REFERENCE ONLY

01/02/24

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SHEET NUMBER:

T-3

REVISION:

7

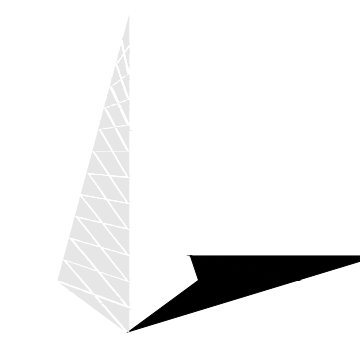
1 AS-BUILT SURVEY (BY OTHERS)
SCALE: NOT TO SCALE

verizon

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BELLEVUE, WA 98008

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SHEET NUMBER: REVISION:

T-4

7

PROPERTY INFORMATION

PARENT PARCEL

① Owner:
Rafael Gomez Gonzalez and Haydee G. Gonzalez
APN: 825-37-039
Deed: 23542220

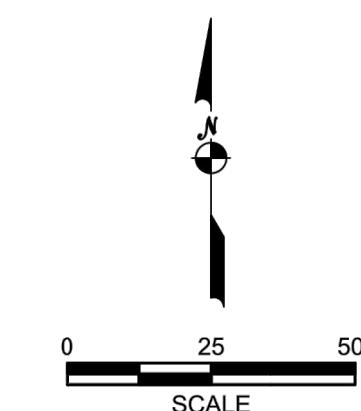
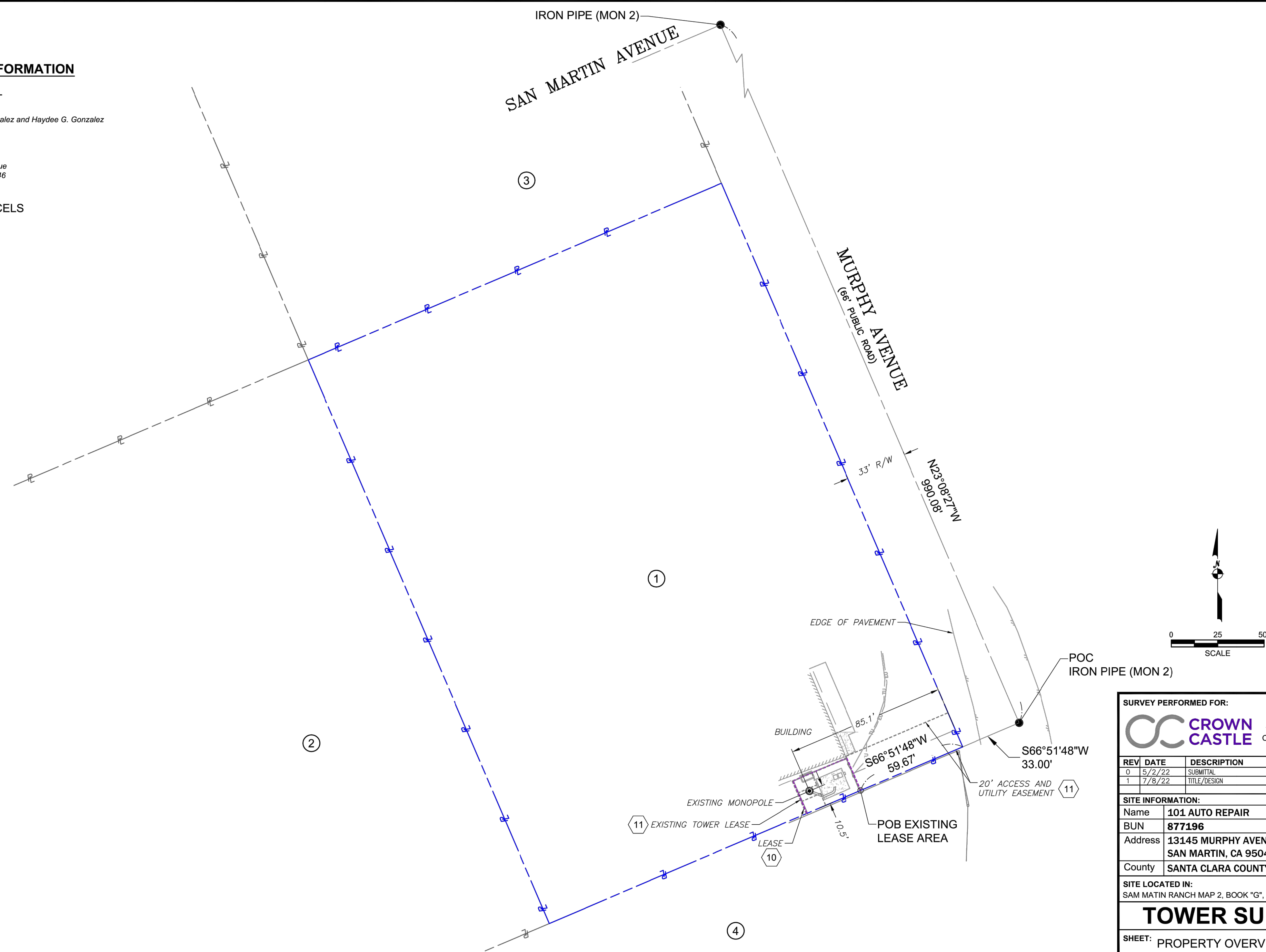
Address:
13145 Murphy Avenue
San Martin, CA 95046

ADJACENT PARCELS

② APN: 825-37-035

③ APN: 825-37-083

④ APN: 825-37-084



SURVEY PERFORMED FOR:

CROWN CASTLE 1500 Corporate Drive
Canonsburg, PA 15317

REV	DATE	DESCRIPTION	DRWN
0	5/2/22	SUBMITTAL	CK
1	7/8/22	TITLE/DESIGN	CK

SITE INFORMATION:

Name: 101 AUTO REPAIR
BUN: 877196
Address: 13145 MURPHY AVENUE
SAN MARTIN, CA 95046
County: SANTA CLARA COUNTY

SITE LOCATED IN:
SAM MARTIN RANCH MAP 2, BOOK "G", PG 38-39

TOWER SURVEY

SHEET: PROPERTY OVERVIEW

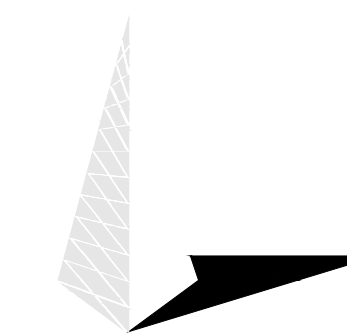
② AS-BUILT SURVEY (BY OTHERS)
SCALE: NOT TO SCALE

verizon

3245 158TH AVENUE MS 231
BELLEVUE, WA 98008

CROWN CASTLE

4301 HACIENDA DRIVE, SUITE 410
PLEASANTON, CA 94588



TOWER ENGINEERING PROFESSIONALS
4710 E ELWOOD ST, STE 9
PHOENIX, AZ 85040
OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
300189

BU #: 877196
101 AUTO REPAIR

13145 MURPHY AVE
SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
TO 50'-0" MONOPOLE

ISSUED FOR:

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FOR REFERENCE ONLY

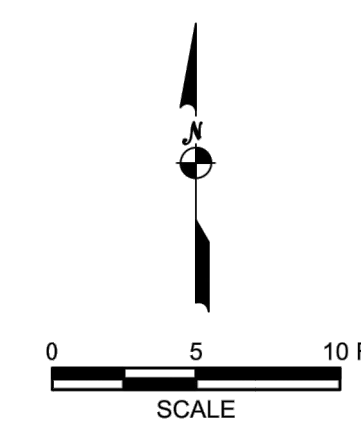
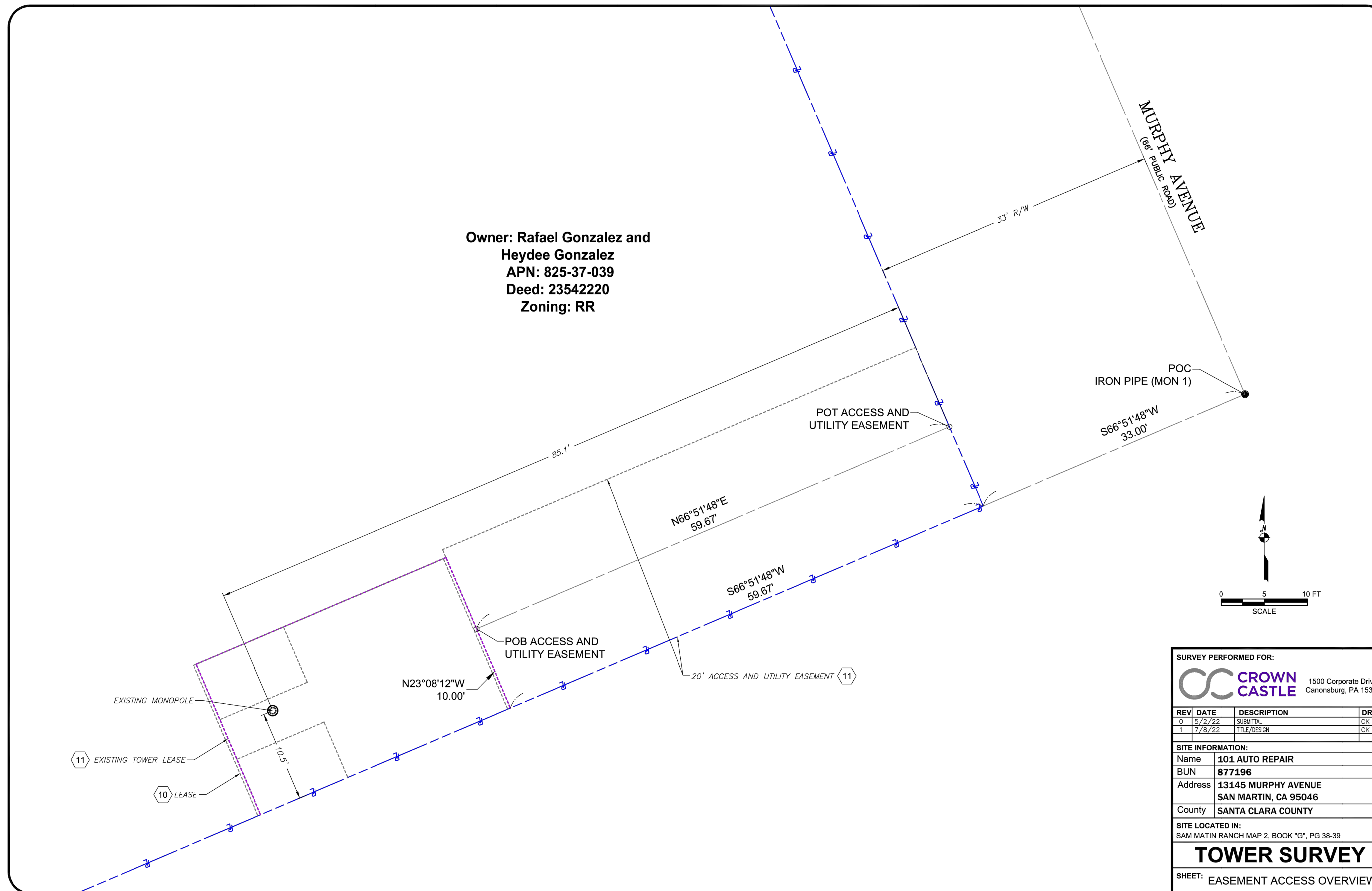
01/02/24

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T-5

7



SURVEY PERFORMED FOR:

CROWN CASTLE 1500 Corporate Drive
Canonsburg, PA 15317

REV	DATE	DESCRIPTION	DRWN
0	5/2/22	SUBMITTAL	CK
1	7/8/22	TITLE/DESIGN	CK

SITE INFORMATION:

Name	101 AUTO REPAIR
BUN	877196
Address	13145 MURPHY AVENUE SAN MARTIN, CA 95046
County	SANTA CLARA COUNTY

SITE LOCATED IN:
SAM MATIN RANCH MAP 2, BOOK "G", PG 38-39

TOWER SURVEY

SHEET: EASEMENT ACCESS OVERVIEW

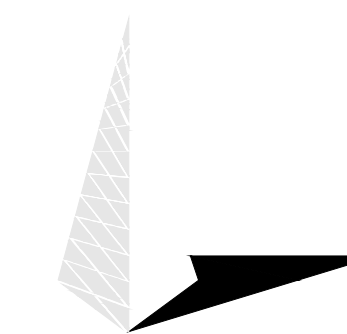
3 AS-BUILT SURVEY (BY OTHERS)
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verizon

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REV	DATE	DRWN	DESCRIPTION	DES./QA
3	11/17/22	KRS	CONSTRUCTION	JFJ
4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

FOR REFERENCE ONLY

01/02/24

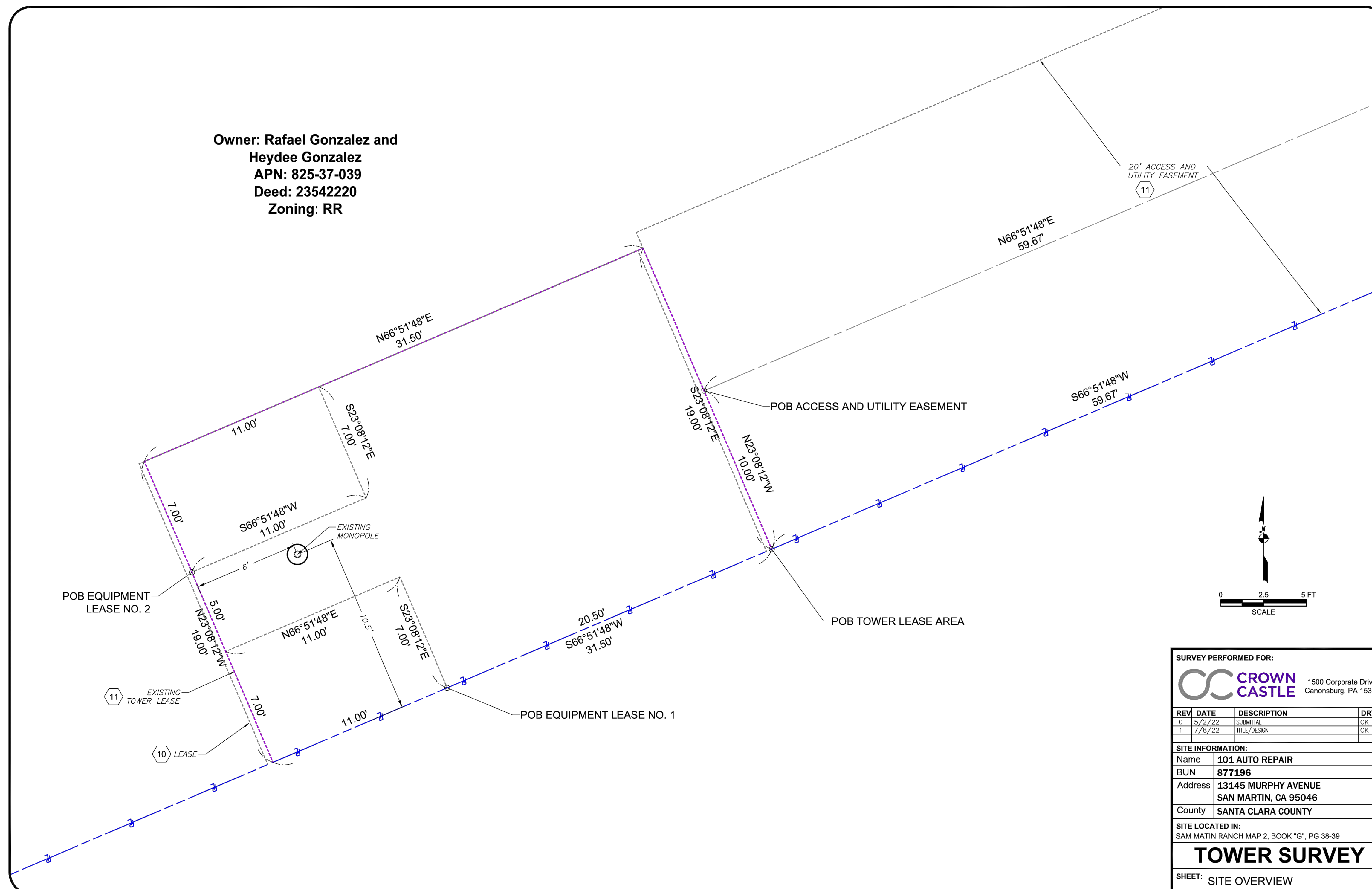
IT IS A VIOLATION OF LAW FOR ANY PERSON,
UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

SHEET NUMBER: REVISION:

T-6

7

Owner: Rafael Gonzalez and
Heydee Gonzalez
APN: 825-37-039
Deed: 23542220
Zoning: RR



SURVEY PERFORMED FOR:

CROWN CASTLE 1500 Corporate Drive
Canonsburg, PA 15317

REV	DATE	DESCRIPTION	DRWN
0	5/2/22	SUBMITTAL	CK
1	7/8/22	TITLE/DESIGN	CK

SITE INFORMATION:

Name: **101 AUTO REPAIR**
 BUN: **877196**
 Address: **13145 MURPHY AVENUE
SAN MARTIN, CA 95046**
 County: **SANTA CLARA COUNTY**

SITE LOCATED IN:
 SAM MATIN RANCH MAP 2, BOOK "G", PG 38-39

TOWER SURVEY

SHEET: SITE OVERVIEW

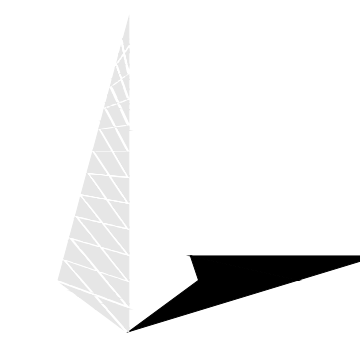
4 AS-BUILT SURVEY (BY OTHERS)
SCALE: NOT TO SCALE

verizon

3245 158TH AVENUE MS 231
BELLEVUE, WA 98008

CROWN CASTLE

4301 HACIENDA DRIVE, SUITE 410
PLEASANTON, CA 94588



TOWER ENGINEERING PROFESSIONALS
4710 E ELWOOD ST, STE 9
PHOENIX, AZ 85040
OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
300189

BU #: 877196
101 AUTO REPAIR

13145 MURPHY AVE
SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
TO 50'-0" MONOPOLE

ISSUED FOR:

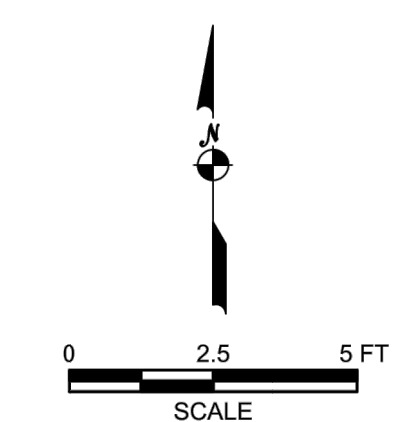
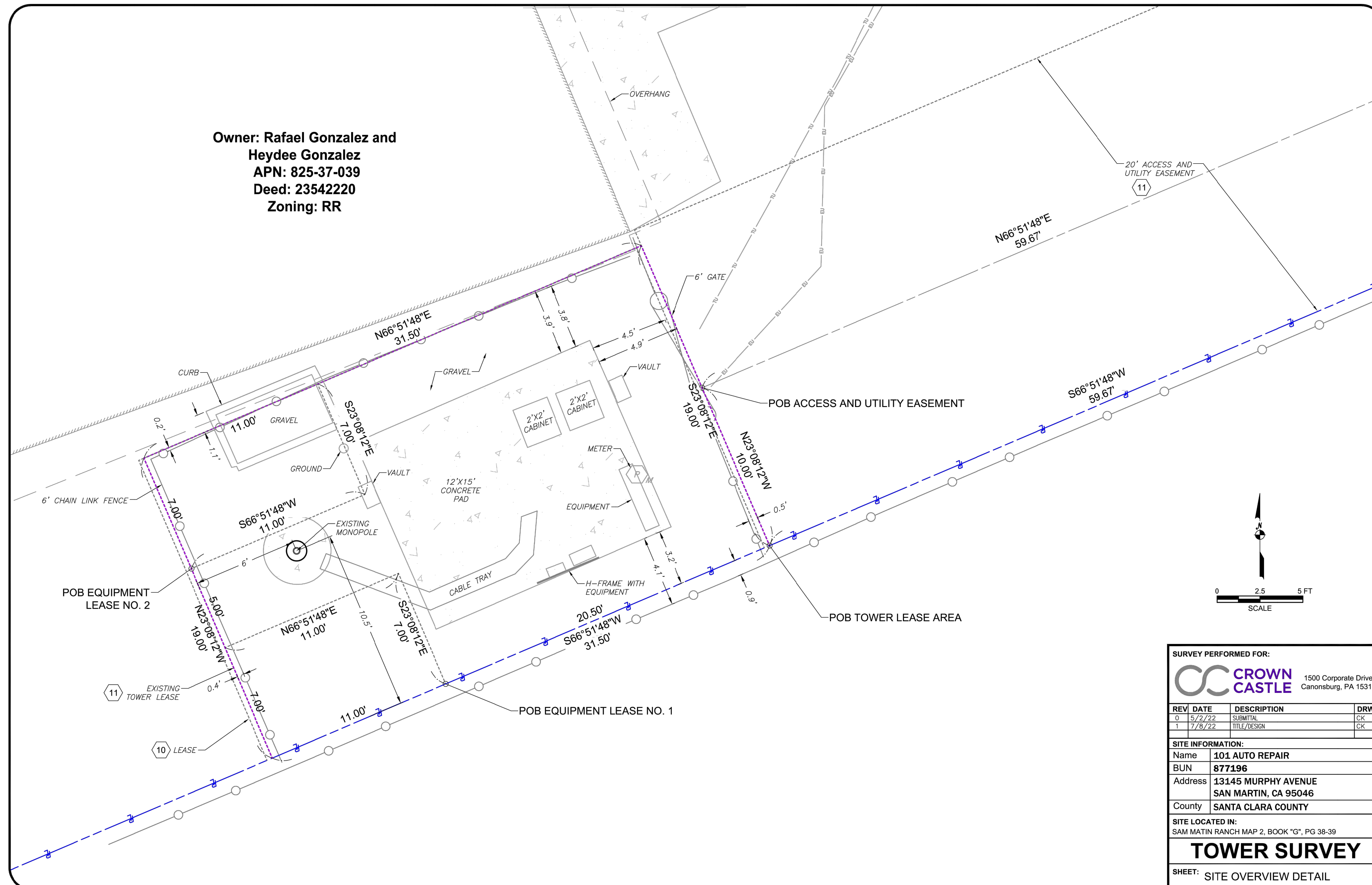
REV	DATE	DRWN	DESCRIPTION	DES./QA
3	11/17/22	KRS	CONSTRUCTION	JFJ
4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

FOR REFERENCE ONLY

01/02/24

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.

SHEET NUMBER: **T-7** REVISION: **7**



SURVEY PERFORMED FOR:

CROWN CASTLE 1500 Corporate Drive
Canonsburg, PA 15317

REV	DATE	DESCRIPTION	DRWN
0	5/2/22	SUBMITTAL	CK
1	7/8/22	TITLE/DESIGN	CK

SITE INFORMATION:

Name: **101 AUTO REPAIR**
 BUN: **877196**
 Address: **13145 MURPHY AVENUE
SAN MARTIN, CA 95046**
 County: **SANTA CLARA COUNTY**

SITE LOCATED IN:
SAM MATIN RANCH MAP 2, BOOK "G", PG 38-39

TOWER SURVEY

SHEET: SITE OVERVIEW DETAIL

5 AS-BUILT SURVEY (BY OTHERS)
SCALE: NOT TO SCALE

PARENT PARCEL DESCRIPTION

THE LAND REFERRED TO IS SITUATED IN THE UNINCORPORATED AREA OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:
 PORTION OF LOT 64, AS SHOWN UPON THE MAP ENTITLED, "SAN MARTIN RANCH MAP NO. 2", WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER, COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, ON JANUARY 27, 1893 IN BOOK G OF MAPS, AT PAGES 38 AND 39, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
 BEGINNING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF MURPHY AVENUE WITH THE DIVIDING LINE BETWEEN LOTS 63 AND 64, AS SAID AVENUE AND LOTS ARE SHOWN UPON THE MAP ABOVE REFERRED TO; THENCE FROM SAID POINT OF BEGINNING SOUTH 23 DEG. 49' EAST ALONG THE CENTER LINE OF MURPHY AVENUE FOR A DISTANCE OF 330.00 FEET TO THE SOUTHEASTERLY CORNER OF SAID LOT 64; THENCE SOUTH 66 DEG. 11' WEST ALONG THE SOUTHEASTERLY LINE OF SAID LOT 64, FOR A DISTANCE OF 275.00 FEET; THENCE NORTH 23 DEG. 49' WEST AND PARALLEL WITH THE CENTER LINE OF MURPHY AVENUE FOR A DISTANCE OF 330.00 FEET TO A POINT IN THE DIVIDING LINE BETWEEN SAID LOTS 63 AND 64; THENCE NORTH 66 DEG. 11' EAST ALONG SAID LAST MENTIONED DIVIDING LINE FOR A DISTANCE OF 275.00 FEET TO THE POINT OF BEGINNING.

TAX ID NO: 825-37-039

DERIVATION CLAUSE

BEING THE SAME PROPERTY CONVEYED TO RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTEE, FROM RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE WHO ACQUIRED TITLE AS GONZALEZ GOMEZ AND HAYDEE GONZALEZ GOMEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTOR, BY GRANT DEED, RECORDED 12/23/2016 AS INSTRUMENT NO. 23542220 OF SANTA CLARA COUNTY RECORDS.

COMMITMENT FOR TITLE REVIEW

REFERENCE IS MADE TO THE TITLE REPORT ORDER #TPE-133860-J, ISSUED BY TOWER TITLE AND CLOSING, DATED JUNE 7, 2022. ALL EASEMENTS CONTAINED WITHIN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED.

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS REPORT, INCLUDING:
 - A. TAXES OR ASSESSMENTS THAT ARE NOT SHOWN AS EXISTING LIENS BY THE RECORDS OF ANY TAXING AUTHORITY THAT LEVIES TAXES OR ASSESSMENTS ON REAL PROPERTY OR BY THE PUBLIC RECORDS;
 - B. PROCEEDINGS BY A PUBLIC AGENCY THAT MAY RESULT IN TAXES OR ASSESSMENTS, OR NOTICES OF SUCH PROCEEDINGS, WHETHER OR NOT SHOWN BY THE RECORDS OF SUCH AGENCY OR BY THE PUBLIC RECORDS. (EXCEPTION IS A STANDARD EXCEPTION AND NOT THE TYPE TO BE SHOWN HEREON)
2. THE LIEN OF SUPPLEMENTAL OR ESCAPED ASSESSMENTS OF PROPERTY TAXES, IF ANY. (EXCEPTION IS A STANDARD EXCEPTION AND NOT THE TYPE TO BE SHOWN HEREON)
3. ANY FACTS, RIGHTS, INTERESTS, OR CLAIMS THAT ARE NOT SHOWN BY THE PUBLIC RECORDS BUT THAT COULD BE ASCERTAINED BY AN INSPECTION OF THE LAND OR THAT MAY BE ASSERTED BY PERSONS IN POSSESSION OF THE LAND. (EXCEPTION IS A STANDARD EXCEPTION AND NOT THE TYPE TO BE SHOWN HEREON)
4. EASEMENTS, LIENS OR ENCUMBRANCES, OR CLAIMS THEREOF, NOT SHOWN BY THE PUBLIC RECORDS. (EXCEPTION IS A STANDARD EXCEPTION AND NOT THE TYPE TO BE SHOWN HEREON)
5. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND AND NOT SHOWN BY THE PUBLIC RECORDS, INCLUDING:
 - A. UNPATENTED MINING CLAIMS;
 - B. RESERVATIONS OR EXCEPTIONS IN PATENTS OR IN ACTS AUTHORIZING THE ISSUANCE THEREOF;
 - C. WATER RIGHT, CLAIMS OR TITLE TO WATER, WHETHER OR NOT THE MATTERS EXCEPTED UNDER (A), (B) OR (C) ARE SHOWN BY THE PUBLIC RECORDS. (EXCEPTION IS A STANDARD EXCEPTION AND NOT THE TYPE TO BE SHOWN HEREON)
6. ANY LIEN OR RIGHT TO LIEN FOR SERVICES, LABOR OR MATERIAL NOT SHOWN BY THE PUBLIC RECORDS. (EXCEPTION IS A STANDARD EXCEPTION AND NOT THE TYPE TO BE SHOWN HEREON)
7. TAXES FOR THE CURRENT FISCAL YEAR AND SUBSEQUENT YEARS, A LIEN NOT YET DUE AND PAYABLE. (EXCEPTION IS A STANDARD EXCEPTION AND NOT THE TYPE TO BE SHOWN HEREON)
8. RIGHTS OF FEE SIMPLE OWNERS IN AND TO THE SUBJECT PROPERTY. (EXCEPTION IS A STANDARD EXCEPTION AND NOT THE TYPE TO BE SHOWN HEREON)
9. ANY AND ALL MATTERS DISCLOSED ON THE MAP ENTITLED "PLAT MAP" DATED JANUARY 27, 1893 AND RECORDED JANUARY 27, 1893 IN (BOOK) G (PAGE) 38, IN SANTA CLARA COUNTY, CALIFORNIA. (NOTHING TO PLOT)

(10) TERMS AND CONDITIONS OF AN UNRECORDED LEASE, AS EVIDENCED BY A(N) MEMORANDUM OF PCS SITE AGREEMENT BETWEEN JOSE LUIS TELLEZ RAMOS AND GUADALUPE B. TELLEZ, HUSBAND AND WIFE AS COMMUNITY PROPERTY AS TO AN UNDIVIDED 3/4 INTEREST AND A AND CESAR O. FRANCO, WIFE AND AS COMMUNITY PROPERTY AND SPRINT SPECTRUM L.P., A DELAWARE LIMITED PARTNERSHIP, DATED MARCH 7, 1996 AND RECORDED MAY 19, 1999 IN (INSTRUMENT) 14819478, IN SANTA CLARA COUNTY, CALIFORNIA.
 AFFECTED BY A(N) MEMORANDUM OF FIRST AMENDMENT TO PCS SITE AGREEMENT BETWEEN RAFAEL G. GOMEZ AND HAYDEE G. GOMEZ, HUSBAND AND WIFE AS JOINT TENANTS AND STC FIVE LLC, A DELAWARE LIMITED LIABILITY COMPANY, BY AND THROUGH ITS ATTORNEY IN FACT, GLOBAL SIGNAL ACQUISITIONS II LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED AUGUST 31, 2011 AND RECORDED DECEMBER 29, 2011 IN (INSTRUMENT) 21478283, IN SANTA CLARA COUNTY, CALIFORNIA.
 AFFECTED BY A(N) MEMORANDUM OF SECOND AMENDMENT TO PCS SITE AGREEMENT BETWEEN LD ACQUISITION COMPANY 16 LLC, A DELAWARE LIMITED LIABILITY COMPANY AND STC FIVE LLC, A DELAWARE LIMITED LIABILITY COMPANY, BY AND THROUGH ITS ATTORNEY IN FACT, GLOBAL SIGNAL ACQUISITIONS II LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED MARCH 31, 2018 AND RECORDED MAY 29, 2018 IN (INSTRUMENT) 23943348, IN SANTA CLARA COUNTY, CALIFORNIA. (AS SHOWN ON SURVEY)

(11) EASEMENT AND ASSIGNMENT OF LEASE AGREEMENT BETWEEN RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GOMEZ, AS HUSBAND AND WIFE; AND LANDMARK INFRASTRUCTURE HOLDING COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED JANUARY 12, 2018 AND RECORDED FEBRUARY 21, 2018 IN (INSTRUMENT) 23872720, IN SANTA CLARA COUNTY, CALIFORNIA.
 AFFECTED BY A(N) ASSIGNMENT OF EASEMENT AND ASSIGNMENT OF LEASE AGREEMENT BETWEEN LANDMARK INFRASTRUCTURE HOLDING COMPANY LLC, A DELAWARE LIMITED LIABILITY COMPANY, AND LD ACQUISITION COMPANY 16 LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED FEBRUARY 15, 2018 AND RECORDED FEBRUARY 21, 2018 IN (INSTRUMENT) 23873048, IN SANTA CLARA COUNTY, CALIFORNIA. (AS SHOWN ON SURVEY)

EXISTING TOWER LEASE AREA AS CREATED BY THIS OFFICE

A PORTION OF THAT CERTAIN PROPERTY CONVEYED TO RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTEE, FROM RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE WHO ACQUIRED TITLE AS GONZALEZ GOMEZ AND HAYDEE GONZALEZ GOMEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTOR, BY GRANT DEED, RECORDED 12/23/2016 AS INSTRUMENT NO. 23542220 OF SANTA CLARA COUNTY RECORDS, STATE OF CALIFORNIA, BEING A PORTION OF LOT 64, AS SHOWN UPON THE MAP ENTITLED, "SAN MARTIN RANCH MAP NO. 2", WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER, OF SAID COUNTY, ON JANUARY 27, 1893 IN BOOK G OF MAPS, AT PAGES 38 AND 39, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF MURPHY AVENUE WITH THE SOUTHEAST CORNER OF LOT 64, AS SAID AVENUE AND LOTS ARE SHOWN UPON THE MAP ABOVE REFERRED TO FROM WHICH THE CENTERLINE INTERSECTION OF MURPHY AVENUE AND SAN MARTIAN AVENUE BEARS NORTH 23° 08' 27" WEST, 990.08 FEET;

THENCE FROM SAID POINT OF COMMENCEMENT SOUTH 66° 51' 48" WEST, 33.00 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY OF MURPHY AVENUE, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF SAID PROPERTY; THENCE SOUTH 66° 51' 48" WEST ALONG THE SOUTHERLY LINE OF SAID PROPERTY, 59.67 FEET TO THE POINT OF BEGINNING;

THENCE CONTINUING ALONG SAID SOUTH LINE SOUTH 66° 51' 48" WEST, 31.50 FEET; THENCE DEPARTING SAID SOUTH LINE NORTH 23° 08' 12" WEST, 19.00 FEET; THENCE NORTH 66° 51' 48" EAST, 31.50 FEET; THENCE SOUTH 23° 08' 12" EAST, 19.00 FEET TO A POINT ON THE SOUTH LINE OF SAID PROPERTY AND THE POINT OF BEGINNING.

CONTAINING 599 SQ. FT. OR 0.014 ACRES, MORE OR LESS.

EQUIPMENT LEASE AREA NO.1 AS CREATED BY THIS OFFICE

A PORTION OF THAT CERTAIN PROPERTY CONVEYED TO RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTEE, FROM RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE WHO ACQUIRED TITLE AS GONZALEZ GOMEZ AND HAYDEE GONZALEZ GOMEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTOR, BY GRANT DEED, RECORDED 12/23/2016 AS INSTRUMENT NO. 23542220 OF SANTA CLARA COUNTY RECORDS, STATE OF CALIFORNIA, BEING A PORTION OF LOT 64, AS SHOWN UPON THE MAP ENTITLED, "SAN MARTIN RANCH MAP NO. 2", WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER, OF SAID COUNTY, ON JANUARY 27, 1893 IN BOOK G OF MAPS, AT PAGES 38 AND 39, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF MURPHY AVENUE WITH THE SOUTHEAST CORNER OF LOT 64, AS SAID AVENUE AND LOTS ARE SHOWN UPON THE MAP ABOVE REFERRED TO FROM WHICH THE CENTERLINE INTERSECTION OF MURPHY AVENUE AND SAN MARTIAN AVENUE BEARS NORTH 23° 08' 27" WEST, 990.08 FEET;

THENCE FROM SAID POINT OF COMMENCEMENT SOUTH 66° 51' 48" WEST, 33.00 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY OF MURPHY AVENUE, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF SAID PROPERTY; THENCE SOUTH 66° 51' 48" WEST ALONG THE SOUTHERLY LINE OF SAID PROPERTY, 80.17 FEET TO THE POINT OF BEGINNING;

THENCE CONTINUING ALONG SAID SOUTH LINE SOUTH 66° 51' 48" WEST, 11.00 FEET; THENCE DEPARTING SAID SOUTH LINE NORTH 23° 08' 12" WEST, 7.00 FEET; THENCE NORTH 66° 51' 48" EAST, 11.00 FEET; THENCE SOUTH 23° 08' 12" EAST, 7.00 FEET TO A POINT ON THE SOUTH LINE OF SAID PROPERTY AND THE POINT OF BEGINNING.

CONTAINING 77 SQ. FT. OR 0.002 ACRES, MORE OR LESS.

EQUIPMENT LEASE AREA NO.2 AS CREATED BY THIS OFFICE

A PORTION OF THAT CERTAIN PROPERTY CONVEYED TO RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTEE, FROM RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE WHO ACQUIRED TITLE AS GONZALEZ GOMEZ AND HAYDEE GONZALEZ GOMEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTOR, BY GRANT DEED, RECORDED 12/23/2016 AS INSTRUMENT NO. 23542220 OF SANTA CLARA COUNTY RECORDS, STATE OF CALIFORNIA, BEING A PORTION OF LOT 64, AS SHOWN UPON THE MAP ENTITLED, "SAN MARTIN RANCH MAP NO. 2", WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER, OF SAID COUNTY, ON JANUARY 27, 1893 IN BOOK G OF MAPS, AT PAGES 38 AND 39, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF MURPHY AVENUE WITH THE SOUTHEAST CORNER OF LOT 64, AS SAID AVENUE AND LOTS ARE SHOWN UPON THE MAP ABOVE REFERRED TO FROM WHICH THE CENTERLINE INTERSECTION OF MURPHY AVENUE AND SAN MARTIAN AVENUE BEARS NORTH 23° 08' 27" WEST, 990.08 FEET;

THENCE FROM SAID POINT OF COMMENCEMENT SOUTH 66° 51' 48" WEST, 33.00 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY OF MURPHY AVENUE, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF SAID PROPERTY; THENCE SOUTH 66° 51' 48" WEST ALONG THE SOUTHERLY LINE OF SAID PROPERTY, 91.17 FEET; THENCE DEPARTING SAID SOUTH LINE NORTH 23° 08' 12" WEST, 12.00 FEET; TO THE POINT OF BEGINNING;

THENCE CONTINUING NORTH 23° 08' 12" WEST, 7.00 FEET; THENCE NORTH 66° 51' 48" EAST, 11.00 FEET; THENCE SOUTH 23° 08' 12" EAST, 7.00 FEET; THENCE SOUTH 66° 51' 48" WEST, 11.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 77 SQ. FT. OR 0.002 ACRES, MORE OR LESS.

ACCESS & UTILITY EASEMENT: NON-EXCLUSIVE AS CREATED BY THIS OFFICE

A PORTION OF THAT CERTAIN PROPERTY CONVEYED TO RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTEE, FROM RAFAEL GOMEZ GONZALEZ AND HAYDEE G. GONZALEZ, HUSBAND AND WIFE WHO ACQUIRED TITLE AS GONZALEZ GOMEZ AND HAYDEE GONZALEZ GOMEZ, HUSBAND AND WIFE AS JOINT TENANTS, GRANTOR, BY GRANT DEED, RECORDED 12/23/2016 AS INSTRUMENT NO. 23542220 OF SANTA CLARA COUNTY RECORDS, STATE OF CALIFORNIA, BEING A PORTION OF LOT 64, AS SHOWN UPON THE MAP ENTITLED, "SAN MARTIN RANCH MAP NO. 2", WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER, OF SAID COUNTY, ON JANUARY 27, 1893 IN BOOK G OF MAPS, AT PAGES 38 AND 39, AND BEING A STRIP OF LAND 20.00 FEET WIDE, 10.00 FEET ON BOTH SIDES OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE POINT OF INTERSECTION OF THE CENTER LINE OF MURPHY AVENUE WITH THE SOUTHEAST CORNER OF LOT 64, AS SAID AVENUE AND LOTS ARE SHOWN UPON THE MAP ABOVE REFERRED TO FROM WHICH THE CENTERLINE INTERSECTION OF MURPHY AVENUE AND SAN MARTIAN AVENUE BEARS NORTH 23° 08' 27" WEST, 990.08 FEET;

THENCE FROM SAID POINT OF COMMENCEMENT SOUTH 66° 51' 48" WEST, 33.00 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY OF MURPHY AVENUE, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF SAID PROPERTY; THENCE SOUTH 66° 51' 48" WEST ALONG THE SOUTHERLY LINE OF SAID PROPERTY, 59.67 FEET; THENCE DEPARTING SAID SOUTH LINE NORTH 23° 08' 12" WEST, 10.00 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 66° 51' 48" EAST, 59.67 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY MURPHY AVENUE AND THE POINT OF TERMINUS.

THE SIDELINES OF SAID STRIP OF LAND ARE TO INTERSECT AT ALL ANGLE POINTS TO PROVIDE THE SPECIFIED WIDTH THROUGHOUT AND ARE TO BE LENGTHENED OR SHORTENED TO TERMINATE ON SAID WEST LINE OF MURPHY AVENUE

CONTAINING 1,193 SQ. FT. OR 0.027 ACRES, MORE OR LESS.

SURVEY PERFORMED FOR:



1500 Corporate Drive
Canonsburg, PA 15317

REV	DATE	DESCRIPTION	DRWN
0	5/2/22	SUBMITAL	CK
1	7/8/22	TITLE/DESIGN	CK

SITE INFORMATION:

Name: **101 AUTO REPAIR**
 BUN: **877196**
 Address: **13145 MURPHY AVENUE**
SAN MARTIN, CA 95046
 County: **SANTA CLARA COUNTY**

SITE LOCATED IN:
 SAM MARTIN RANCH MAP 2, BOOK "G", PG 38-39

TOWER SURVEY

SHEET: LEGAL DESCRIPTIONS



3245 158TH AVENUE MS 231
BELLEVUE, WA 98008



4301 HACIENDA DRIVE, SUITE 410
PLEASANTON, CA 94588



TOWER ENGINEERING PROFESSIONALS
4710 E ELWOOD ST, STE 9
PHOENIX, AZ 85040
OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
300189

BU #: 877196
101 AUTO REPAIR

13145 MURPHY AVE
SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
TO 50'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
3	11/17/22	KRS	CONSTRUCTION	JFJ
4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

FOR REFERENCE ONLY

01/02/24

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.

SHEET NUMBER:
T-8

REVISION:
7

SITE PLAN DISCLAIMER:
 PROPERTY LINES AND STRUCTURES HAVE BEEN DIGITIZED FROM PREVIOUS PLAN SETS OR FROM ASSESSORS MAPS. CROWN CASTLE USA INC. HAS NOT COMPLETED A SITE SURVEY AND THEREFORE MAKES NO CLAIMS AS TO THE ACCURACY OF INFORMATION DEPICTED ON THIS SHEET

FLOODPLAIN NOTE:
 THE TOWER IS LOCATED IN ZONE "AO" AREAS OF UNDETERMINED FLOOD HAZARD ACCORDING TO FEMA COMMUNITY PANEL #06085C0628H, DATED 05/18/2009



20' NON EXCLUSIVE ACCESS & UTILITY EASEMENT DESCRIPTION (AS SURVEYED)

A 20.00 FOOT WIDE EASEMENT FOR INGRESS, EGRESS, PARKING, TURNAROUND PURPOSES & UTILITIES, OVER A PORTION OF LOT 64, AS SHOWN UPON THE MAP ENTITLED, "SAN MARTIN RANCH MAP NO. 2", FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER OF SANTA CLARA COUNTY, STATE OF CALIFORNIA, ON JANUARY 27, 1893 IN BOOK G OF MAPS AT PAGE 39, LYING 10.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF SAID LOT 64, THENCE ON AND ALONG THE SOUTHERLY LINE OF SAID LOT 64, S 66° 51' 48" W, A DISTANCE OF 59.67 FEET; THENCE LEAVING SAID SOUTHERLY LINE, N 23° 08' 12" W, A DISTANCE OF 10.00 FEET TO THE POINT OF BEGINNING.

COURSE 1) THENCE N 66°51'48" E, A DISTANCE OF 59.67 FEET TO THE WESTERLY RIGHT OF WAY LINE OF MURPHY AVENUE, A PUBLIC STREET, AND THE TERMINUS OF THIS DESCRIPTION.

CONTAINING 1,193 SQUARE FEET (0.0274 ACRES), MORE OR LESS.

EXISTING LEASE NO.1 DESCRIPTION:

A PORTION OF LOT 64, AS SHOWN UPON THE MAP ENTITLED, "SAN MARTIN RANCH MAP NO. 2", FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER OF SANTA CLARA COUNTY, STATE OF CALIFORNIA, ON JANUARY 27, 1893 IN BOOK G OF MAPS AT PAGE 39, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF SAID LOT 64, THENCE ON AND ALONG THE SOUTHERLY LINE OF SAID LOT 64, S 66° 51' 48" W, A DISTANCE OF 59.67; THENCE CONTINUING S 66° 51' 48" W, A DISTANCE OF 31.50 FEET; THENCE N 23° 08' 12" W, A DISTANCE OF 12.00 FEET TO THE POINT OF BEGINNING:

COURSE 1) THENCE CONTINUING N 23° 08' 12" W, A DISTANCE OF 7.00 FEET; COURSE 2) THENCE N 66° 51' 48" E, A DISTANCE OF 11.00 FEET; COURSE 3) THENCE S 23° 08' 12" E, A DISTANCE OF 7.00 FEET COURSE 4) THENCE S 66° 51' 48" W, A DISTANCE OF 11.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 77 SQUARE FEET (0.02 ACRES), MORE OR LESS.

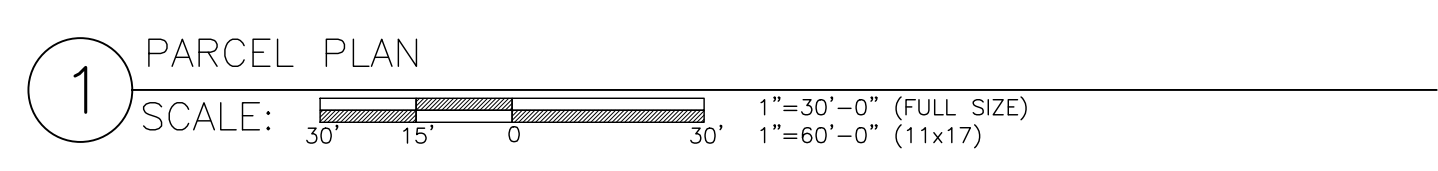
EXISTING LEASE NO.2 DESCRIPTION:

A PORTION OF LOT 64, AS SHOWN UPON THE MAP ENTITLED, "SAN MARTIN RANCH MAP NO. 2", FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER OF SANTA CLARA COUNTY, STATE OF CALIFORNIA, ON JANUARY 27, 1893 IN BOOK G OF MAPS AT PAGE 39, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEASTERLY MOST CORNER OF SAID LOT 64, THENCE ON AND ALONG THE SOUTHERLY LINE OF SAID LOT 64, S 66° 51' 48" W, A DISTANCE OF 59.67; THENCE CONTINUING S 66° 51' 48" W, A DISTANCE OF 20.50 FEET TO THE POINT OF BEGINNING:

COURSE 1) THENCE CONTINUING S 66° 51' 48" W, A DISTANCE OF 11.00 FEET; COURSE 2) THENCE N 23° 08' 12" W, A DISTANCE OF 7.00 FEET; COURSE 3) THENCE N 66° 51' 48" E, A DISTANCE OF 11.00 FEET; COURSE 4) THENCE S 23° 08' 12" E, A DISTANCE OF 7.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 77 SQUARE FEET (0.02 ACRES), MORE OR LESS.



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CROWN CASTLE
 4301 HACIENDA DRIVE, SUITE 410
 PLEASANTON, CA 94588

TOWER ENGINEERING PROFESSIONALS
 4710 E ELWOOD ST, STE 9
 PHOENIX, AZ 85040
 OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
300189

BU #: 877196
101 AUTO REPAIR

13145 MURPHY AVE
 SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
 TO 50'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
3	11/17/22	KRS	CONSTRUCTION	JFJ
4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

REGISTERED PROFESSIONAL ENGINEER
STEPHEN BUNTING
 91898
Stephen E. Bunting
 STATE OF CALIFORNIA

01/02/24

Stephen Bunting P.E.
 Professional Engineer License: #91898

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SHEET NUMBER:
C-1.1

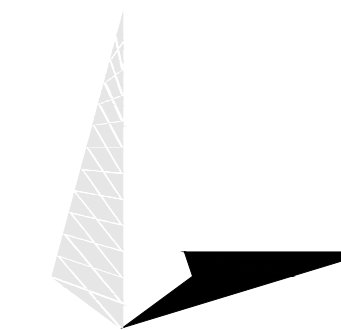
REVISION:
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6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

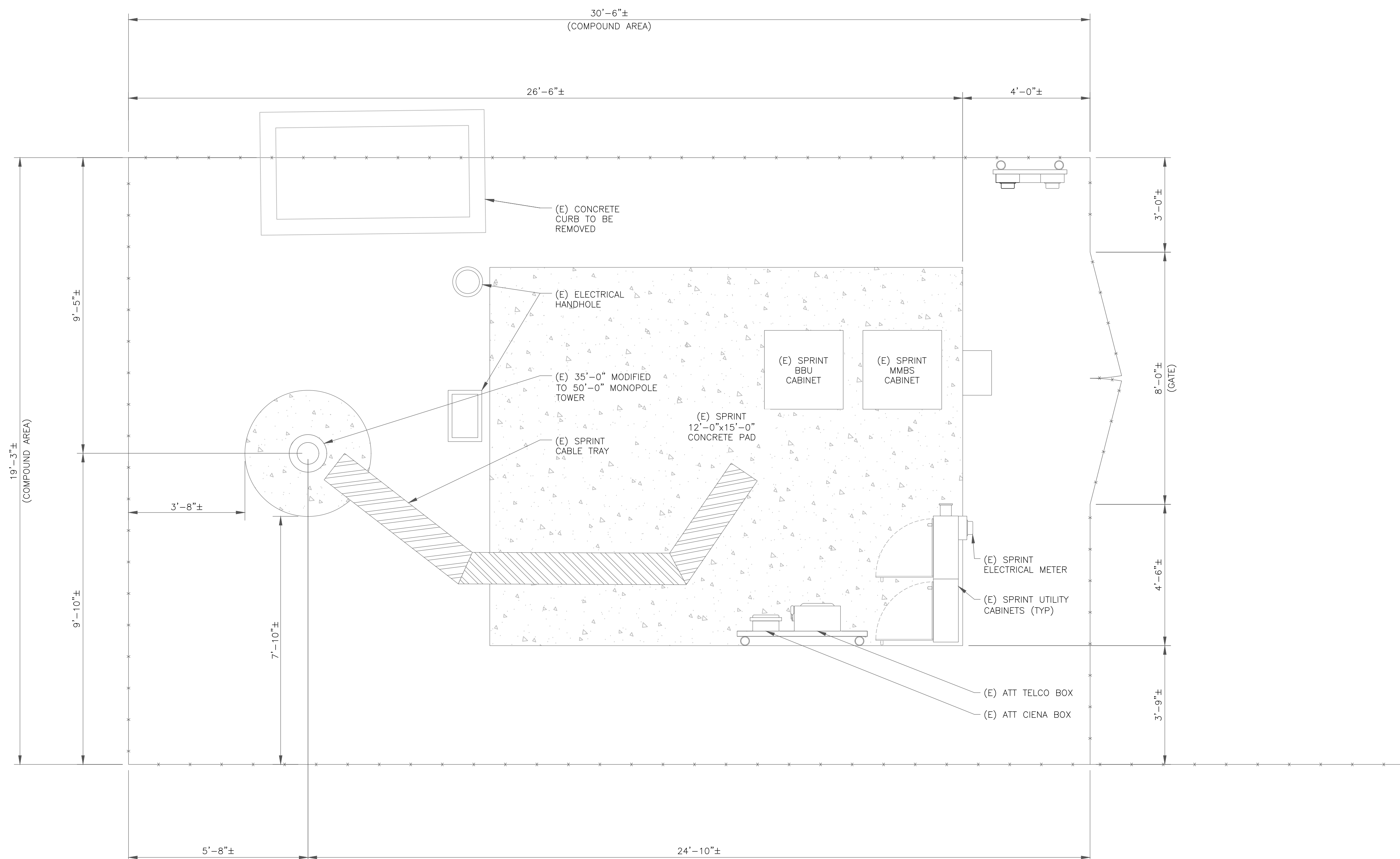


01/02/24

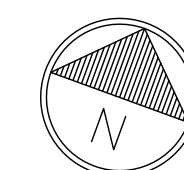
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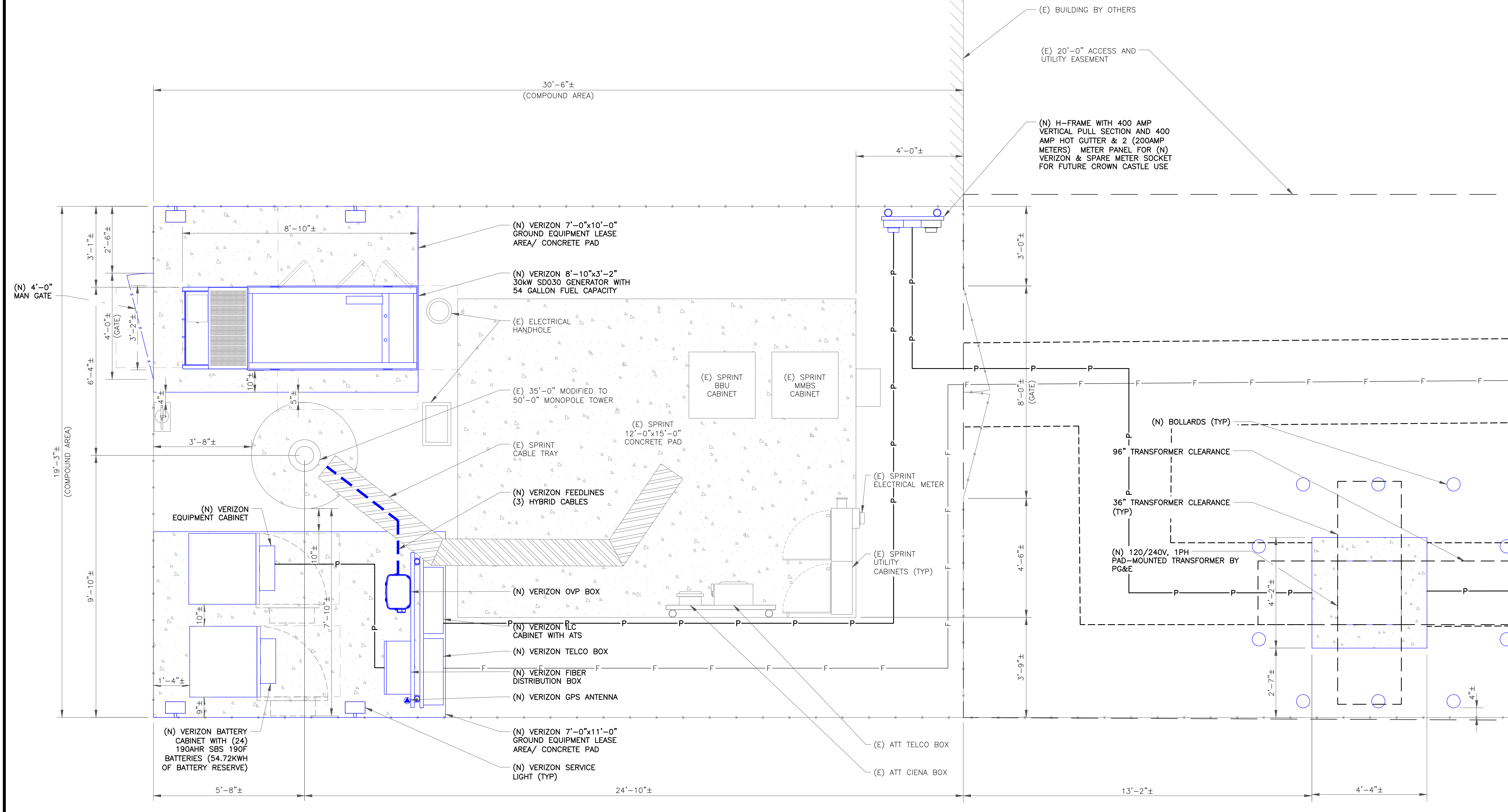
SHEET NUMBER: **C-1.2** REVISION: **7**



1 EXISTING COMPOUND PLAN
SCALE: 1/2"=1'-0" (FULL SIZE)
1/4"=1'-0" (11x17)



NOTE:
GENERATOR ENCLOSURE WILL BE PROVIDED BY THE GENERATOR MANUFACTURER FOR WEATHER PROTECTION (SEE SHEET C-5.6). ENCLOSURE WILL ENCLOSE THE GENERATOR ONLY PER THE MANUFACTURER STANDARDS. NO OTHER EQUIPMENT WILL BE ENCLOSED BY THE GENERATOR ENCLOSURE.



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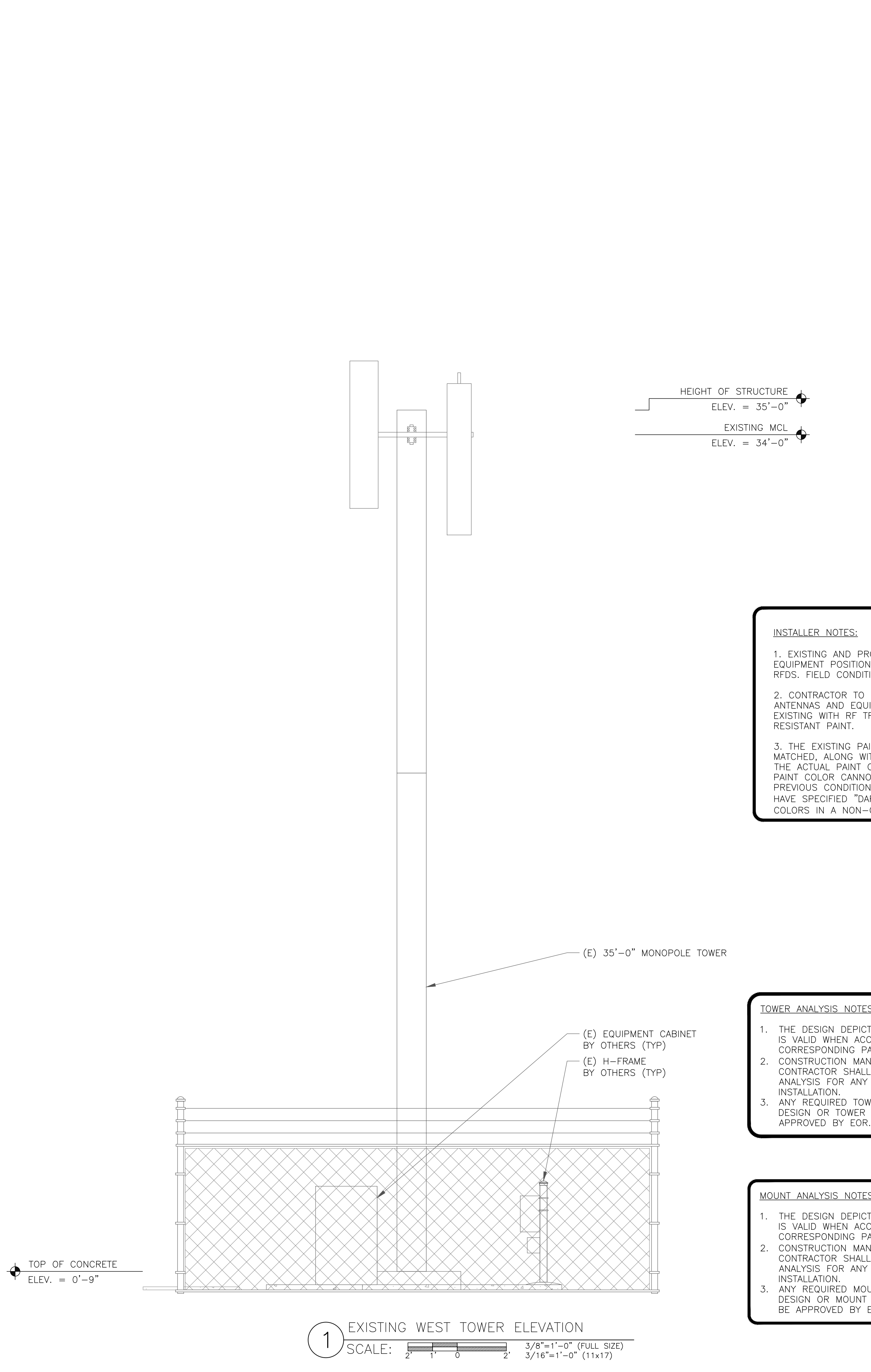


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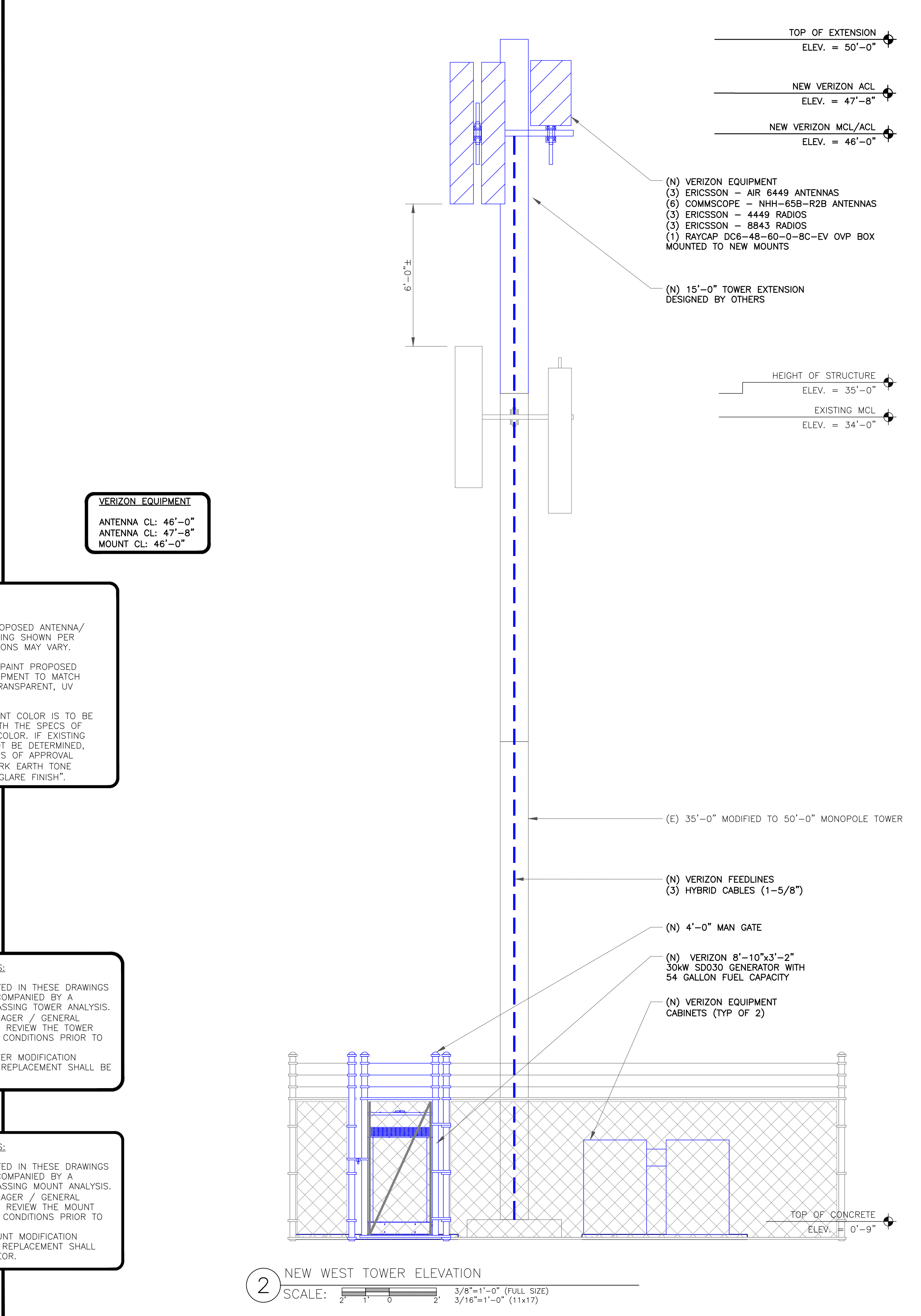
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1 EXISTING WEST TOWER ELEVATION
SCALE: 3/8"=1'-0" (FULL SIZE)
3/16"=1'-0" (11x17)



2 NEW WEST TOWER ELEVATION
SCALE: 3/8"=1'-0" (FULL SIZE)
3/16"=1'-0" (11x17)

INSTALLER NOTES:

- EXISTING AND PROPOSED ANTENNA/EQUIPMENT POSITIONING SHOWN PER RFDS. FIELD CONDITIONS MAY VARY.
- CONTRACTOR TO PAINT PROPOSED ANTENNAS AND EQUIPMENT TO MATCH EXISTING WITH RF TRANSPARENT, UV RESISTANT PAINT.
- THE EXISTING PAINT COLOR IS TO BE MATCHED, ALONG WITH THE SPECS OF THE ACTUAL PAINT COLOR. IF EXISTING PAINT COLOR CANNOT BE DETERMINED, PREVIOUS CONDITIONS OF APPROVAL HAVE SPECIFIED "DARK EARTH TONE COLORS IN A NON-GLARE FINISH".

TOWER ANALYSIS NOTES:

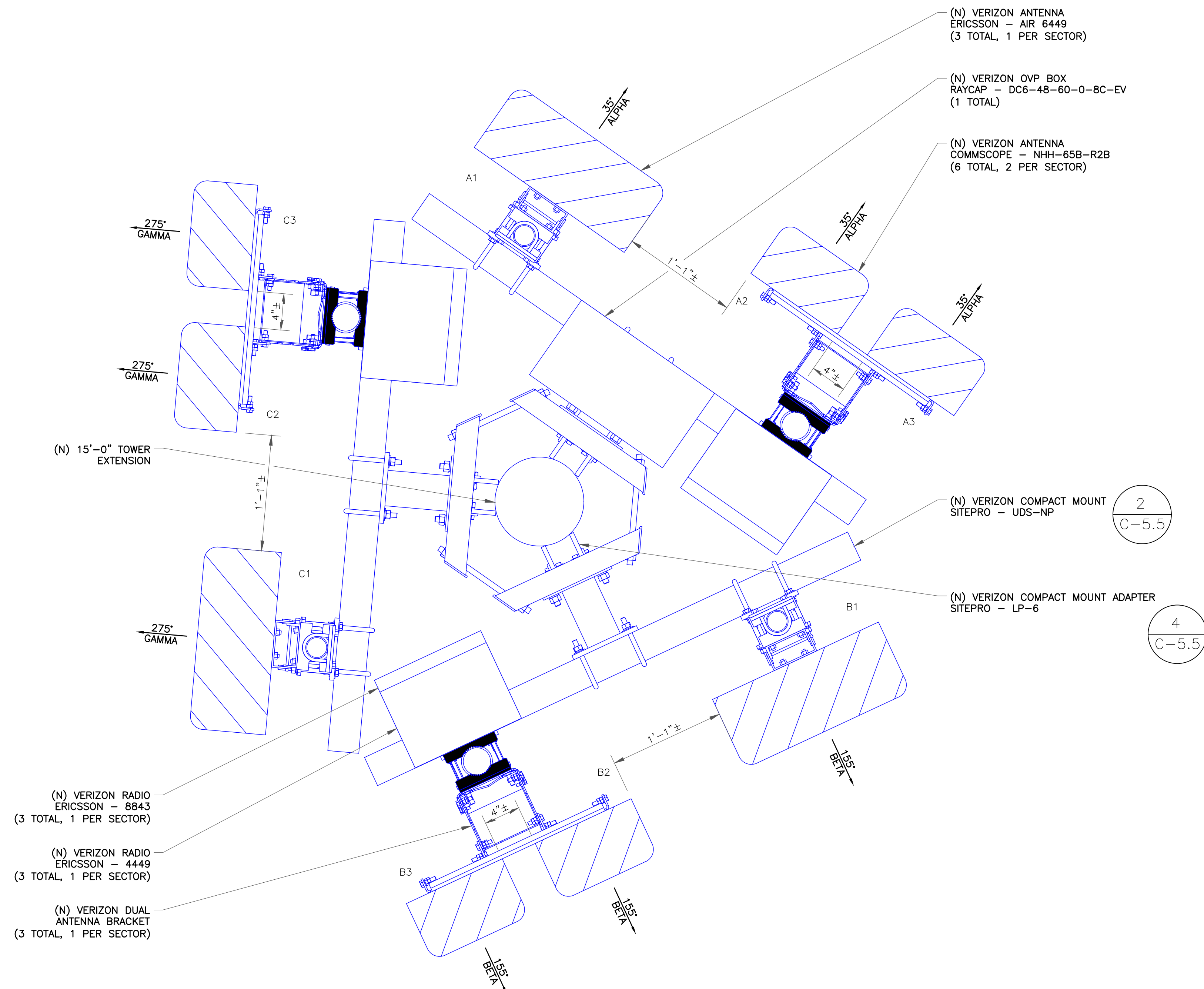
- THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING TOWER ANALYSIS.
- CONSTRUCTION MANAGER / GENERAL CONTRACTOR SHALL REVIEW THE TOWER ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
- ANY REQUIRED TOWER MODIFICATION DESIGN OR TOWER REPLACEMENT SHALL BE APPROVED BY EOR.

MOUNT ANALYSIS NOTES:

- THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING MOUNT ANALYSIS.
- CONSTRUCTION MANAGER / GENERAL CONTRACTOR SHALL REVIEW THE MOUNT ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
- ANY REQUIRED MOUNT MODIFICATION DESIGN OR MOUNT REPLACEMENT SHALL BE APPROVED BY EOR.

VERIZON EQUIPMENT

ANTENNA CL: 46'-0"
ANTENNA CL: 47'-8"
MOUNT CL: 46'-0"



"LOOK UP" - CROWN CASTLE USA INC.
SAFETY CLIMB REQUIREMENT:

THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.

- NOTES:
1. REFERENCE C-4 FOR FINAL EQUIPMENT SCHEDULE.
 2. REFERENCE C-5.1 THRU C-5.5 FOR NEW EQUIPMENT SPECIFICATIONS.
 3. CONTRACTOR TO VERIFY ALL ANTENNA TIP HEIGHTS DO NOT EXCEED BEACON BASE HEIGHT.
 4. TOWER DOES NOT HAVE CLIMBING FACILITIES. MANLIFT REQUIRED FOR ELEVATED WORK.
 5. NEW EQUIPMENT TO BE PAINTED WITH RF TRANSPARENT, UV RESISTANT, OUTDOOR RATED PAINT TO MATCH EXISTING.
 6. THE EXISTING PAINT COLOR IS TO BE MATCHED, ALONG WITH THE SPECS OF THE ACTUAL PAINT COLOR. IF EXISTING PAINT COLOR CANNOT BE DETERMINED, PREVIOUS CONDITIONS OF APPROVAL HAVE SPECIFIED "DARK EARTH TONE COLORS IN A NON-GLARE FINISH"

- MOUNT ANALYSIS NOTES:
1. THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING MOUNT ANALYSIS.
 2. CONSTRUCTION MANAGER / GENERAL CONTRACTOR SHALL REVIEW THE MOUNT ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
 3. ANY REQUIRED MOUNT MODIFICATION DESIGN OR MOUNT REPLACEMENT SHALL BE APPROVED BY EOR.

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EXISTING 35'-0" MODIFIED
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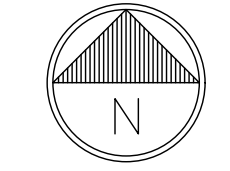
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1 NEW ANTENNA PLAN
SCALE: 1-1/2"=1'-0" (FULL SIZE)
3/4"=1'-0" (11x17)



SHEET NUMBER: **C-3** REVISION: **7**

ANTENNA/RRH SCHEDULE									
SECTOR	STATUS	ANTENNA MANUFACTURER	ANTENNA MODEL	ANTENNA CENTERLINE	AZIMUTH	MECHANICAL DOWNTILTS	ELECTRICAL DOWNTILTS	TOWER EQUIPMENT MANUFACTURER	TOWER EQUIPMENT QTY/MODEL
A1	NEW	ERICSSON	AIR 6449	47'-8"	35°	*	*	RAYCAP	(1) DC6-48-60-0-8C-EV
A2	NEW	COMMSCOPE	NHH-65B-R2B	46'-0"	35°	*	*	ERICSSON	(1) RADIO 4449
A3	NEW	COMMSCOPE	NHH-65B-R2B	46'-0"	35°	*	*	ERICSSON	(1) RADIO 8843
B1	NEW	ERICSSON	AIR 6449	47'-8"	155°	*	*	-	-
B2	NEW	COMMSCOPE	NHH-65B-R2B	46'-0"	155°	*	*	ERICSSON	(1) RADIO 4449
B3	NEW	COMMSCOPE	NHH-65B-R2B	46'-0"	155°	*	*	ERICSSON	(1) RADIO 8843
C1	NEW	ERICSSON	AIR 6449	47'-8"	275°	*	*	-	-
C2	NEW	COMMSCOPE	NHH-65B-R2B	46'-0"	275°	*	*	ERICSSON	(1) RADIO 4449
C3	NEW	COMMSCOPE	NHH-65B-R2B	46'-0"	275°	*	*	ERICSSON	(1) RADIO 8843

NOTE - NEW ANTENNA/EQUIPMENT SHOWN IN BOLD

* - CONTRACTOR TO REFERENCE MOST RECENT RFDS FOR MECHANICAL AND ELECTRICAL DOWNTILTS

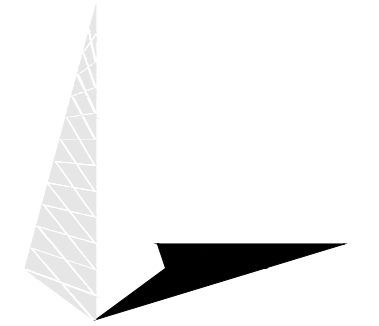
CABLE SCHEDULE				
STATUS	CABLE TYPE	SIZE	LENGTH	QTY
NEW	HYBRID	1-5/8"	96'-0"±	3
TOTAL CABLE QTY:				3

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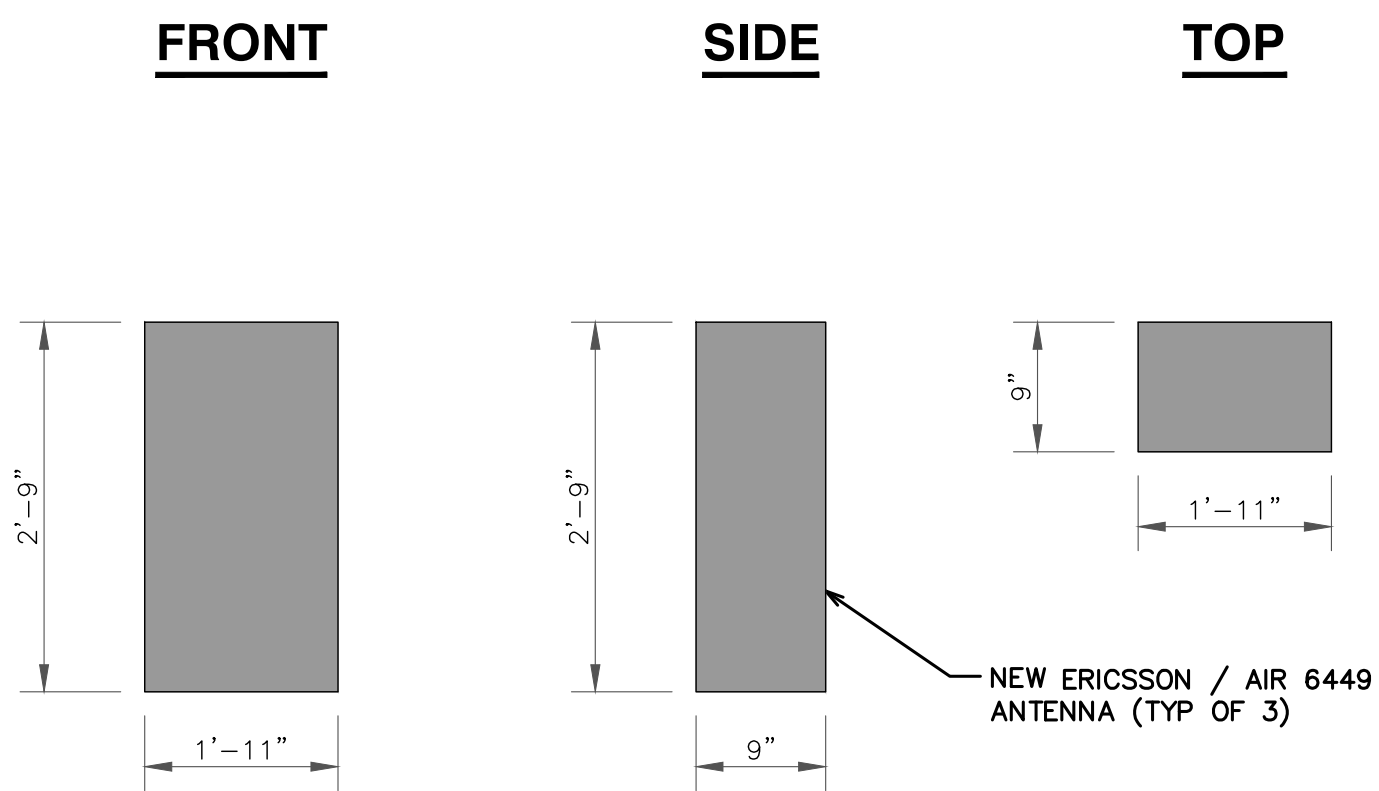
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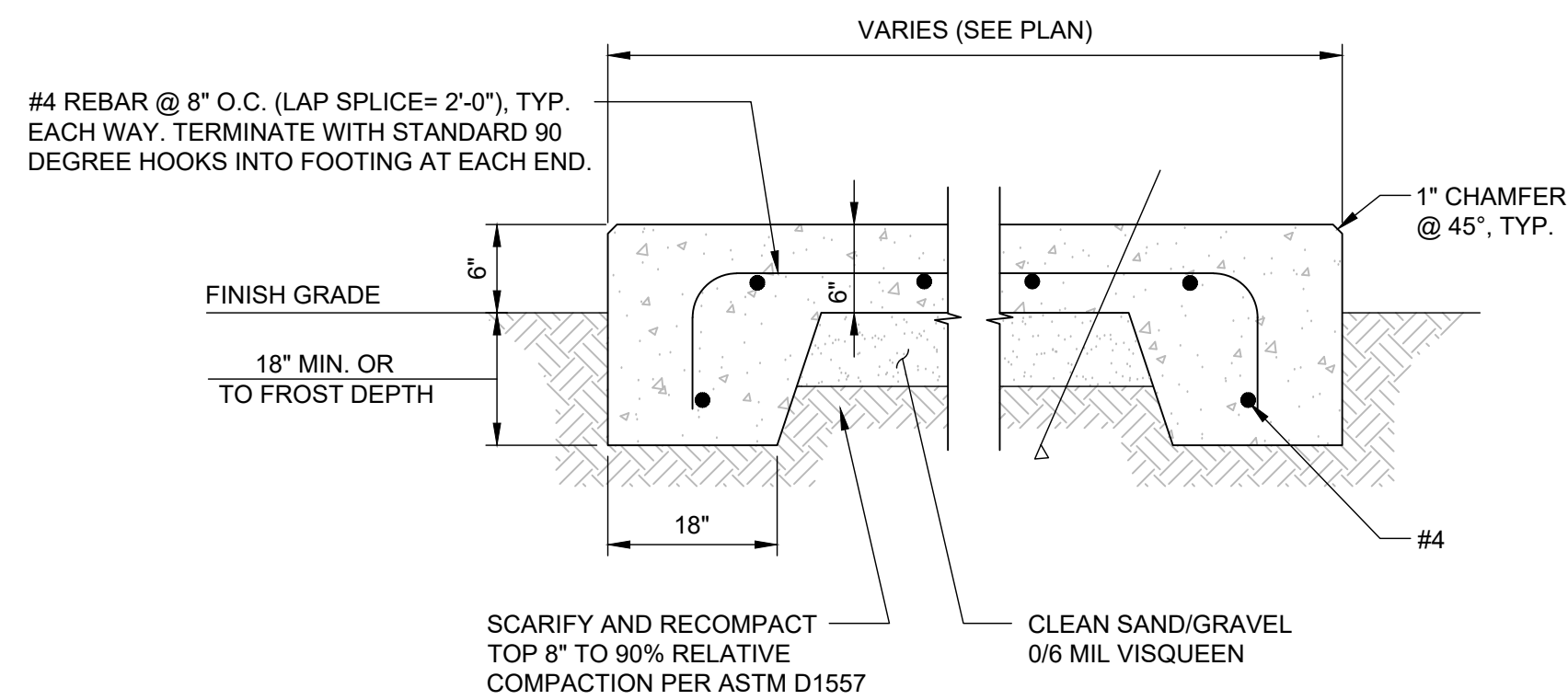
REVISION:

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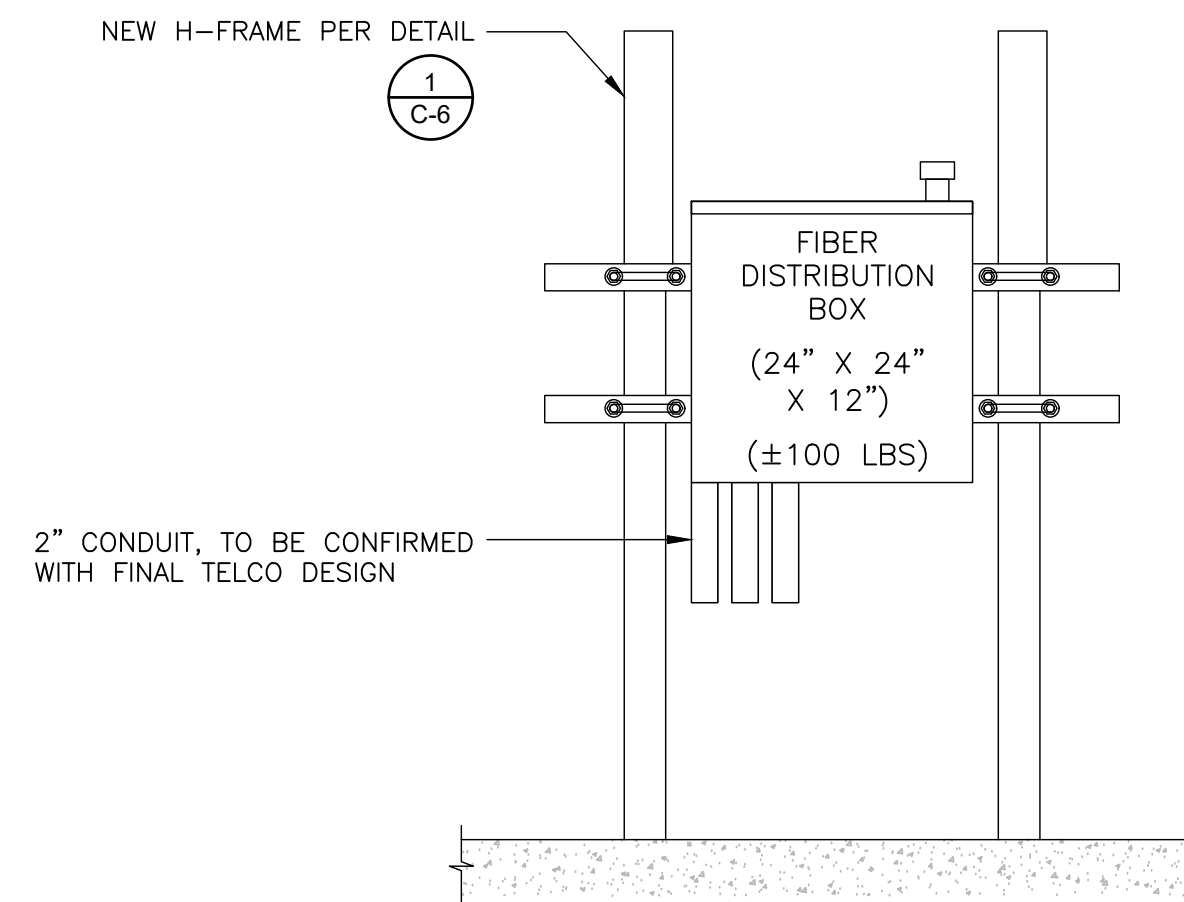
1 VERIZON TOWER EQUIPMENT SCHEDULE
SCALE: NOT TO SCALE



1 ERICSSON / AIR 6449
SCALE: NOT TO SCALE



2 CONCRETE PAD
SCALE: NOT TO SCALE

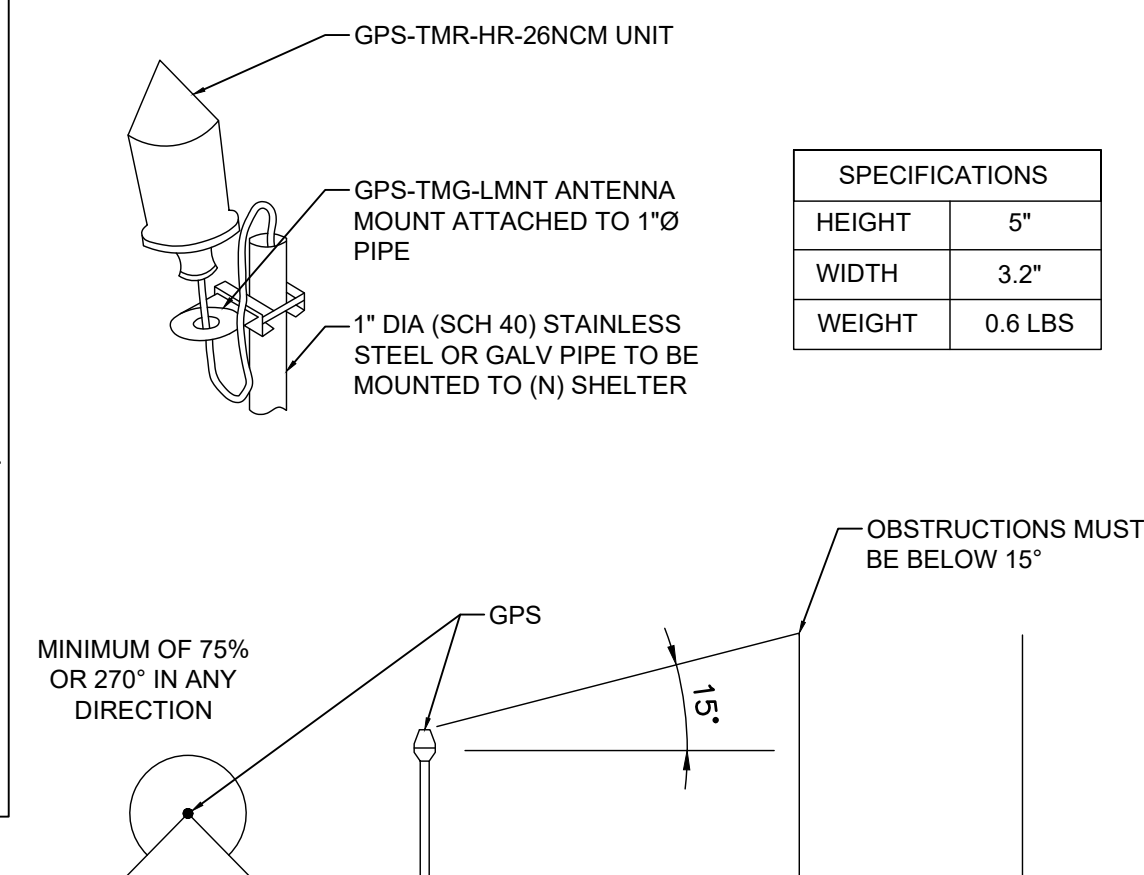


3 FIBER DISTRIBUTION BOX ON H-FRAME
SCALE: NOT TO SCALE

NOTE:
1. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1"Ø, SCH. 40, GALVANIZED S.S. STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQ'D LENGTH USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBARRED.

2. IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF VERTICAL AND THE BASE OF THE ANTENNA IS WITHIN 2" OF LEVEL.

3. DO NOT SWEEP TEST GPS ANTENNA.



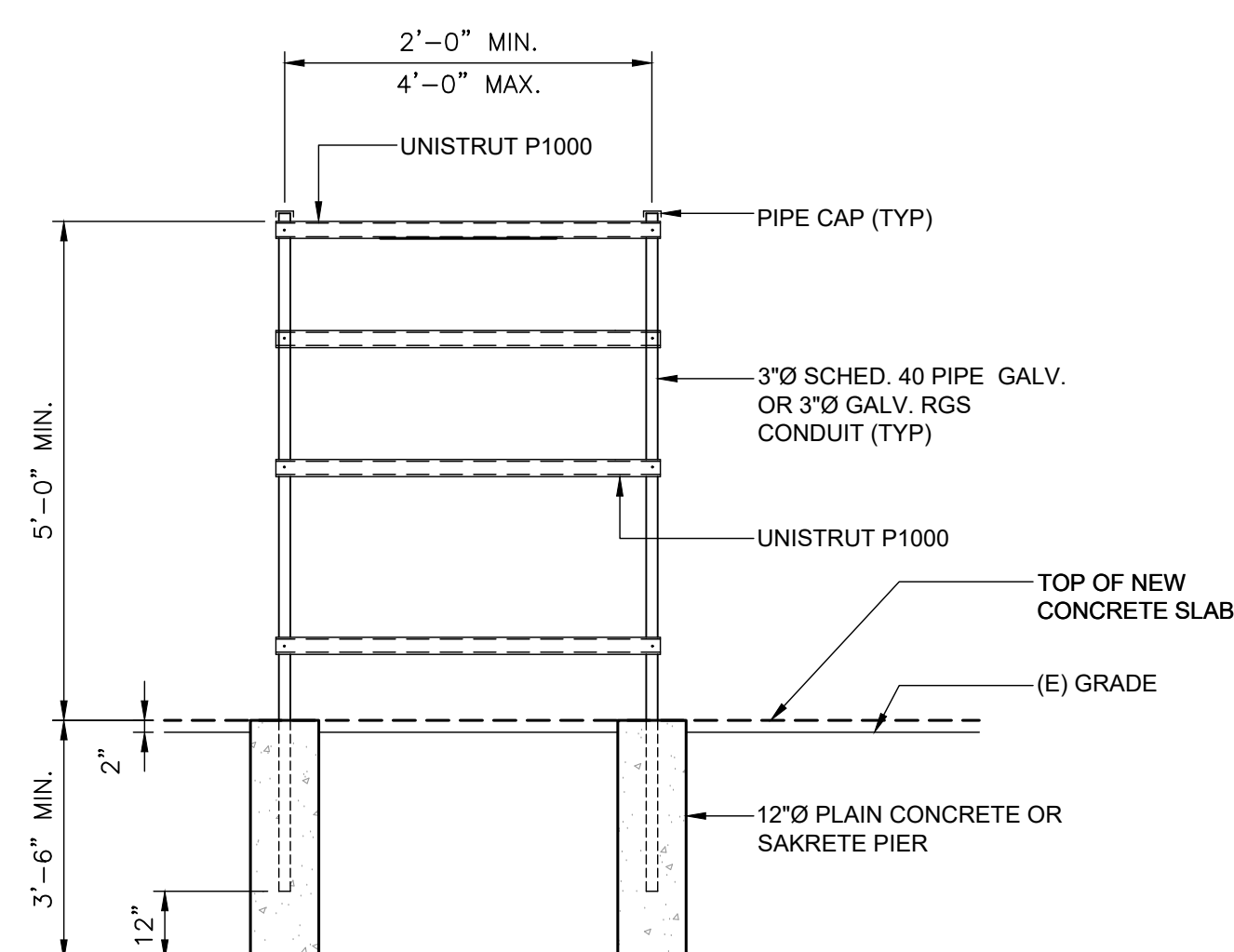
4 GPS DETAIL
SCALE: NOT TO SCALE

NOTES:

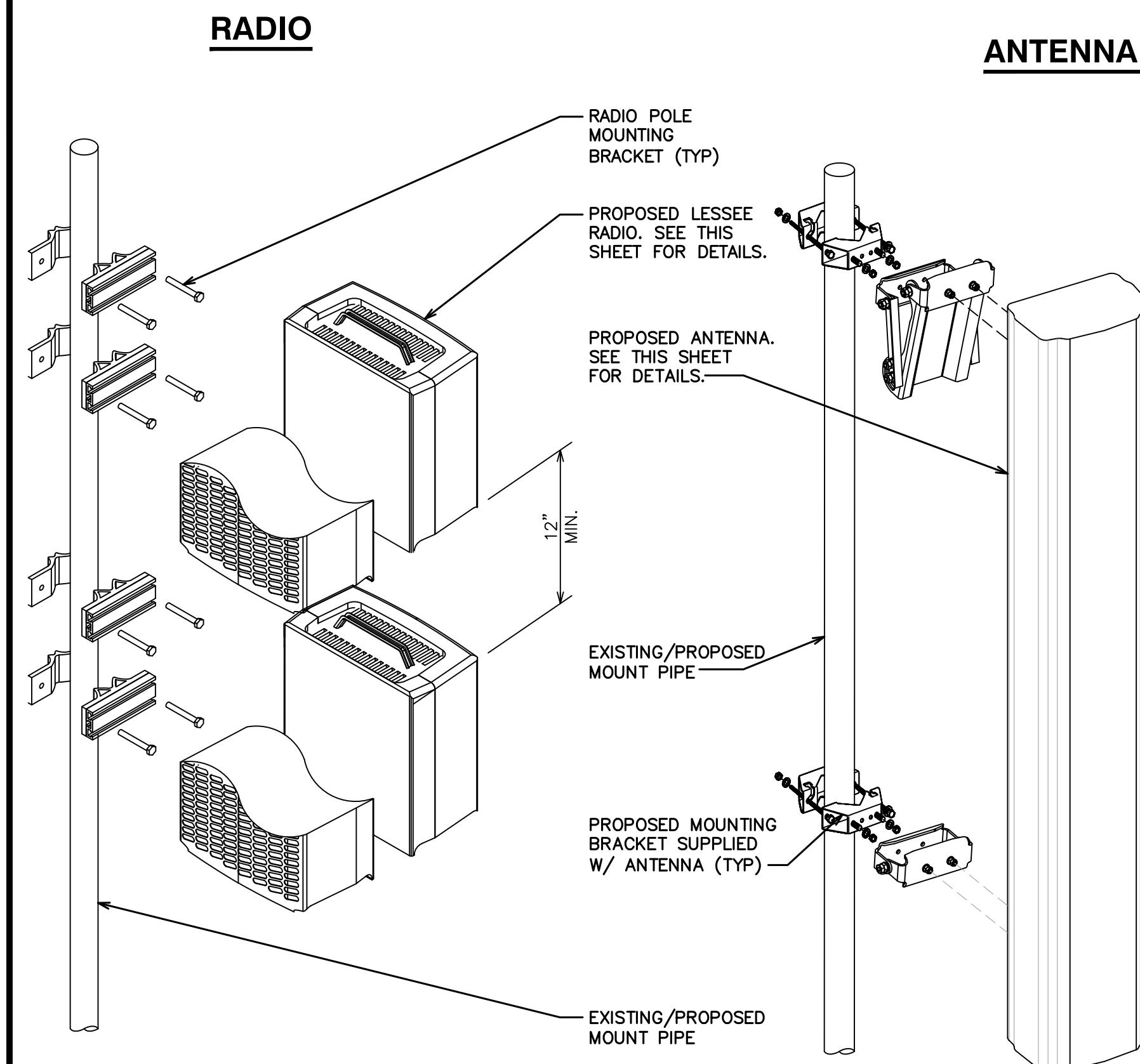
1. ALL CONCRETE MUST HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI @ 28 DAYS.

2. IF UTILITY FRAME NEEDS TO BE LONGER, ADD ANOTHER PIPE/S BETWEEN OUTER POSTS.

3. TOP OF NEW CAISSONS TO BE FLUSH AT TOP OF NEW CONCRETE PAD, IF APPLICABLE.



5 H-FRAME DETAIL
SCALE: NOT TO SCALE



6 EQUIPMENT MOUNTING DETAIL
SCALE: NOT TO SCALE

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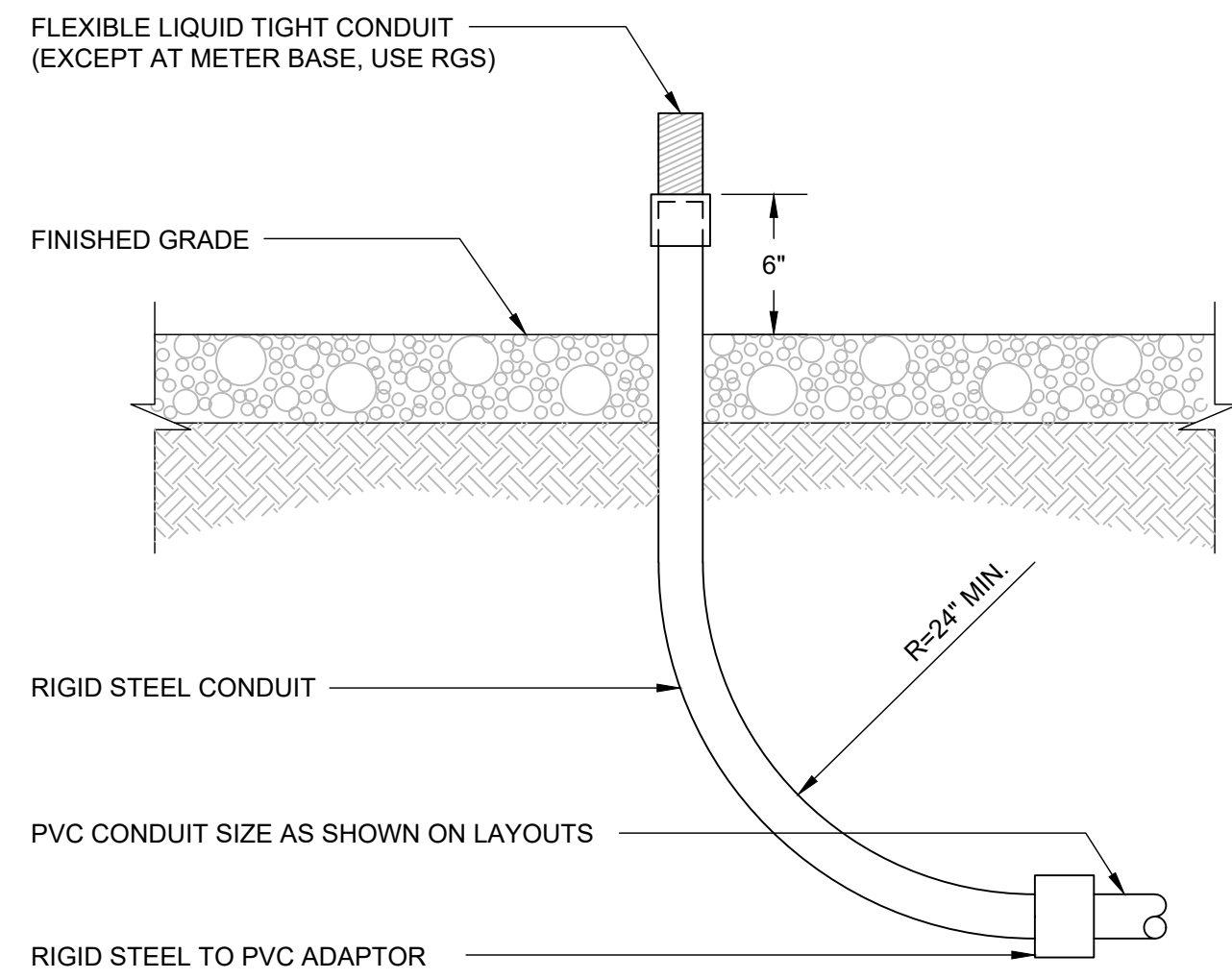
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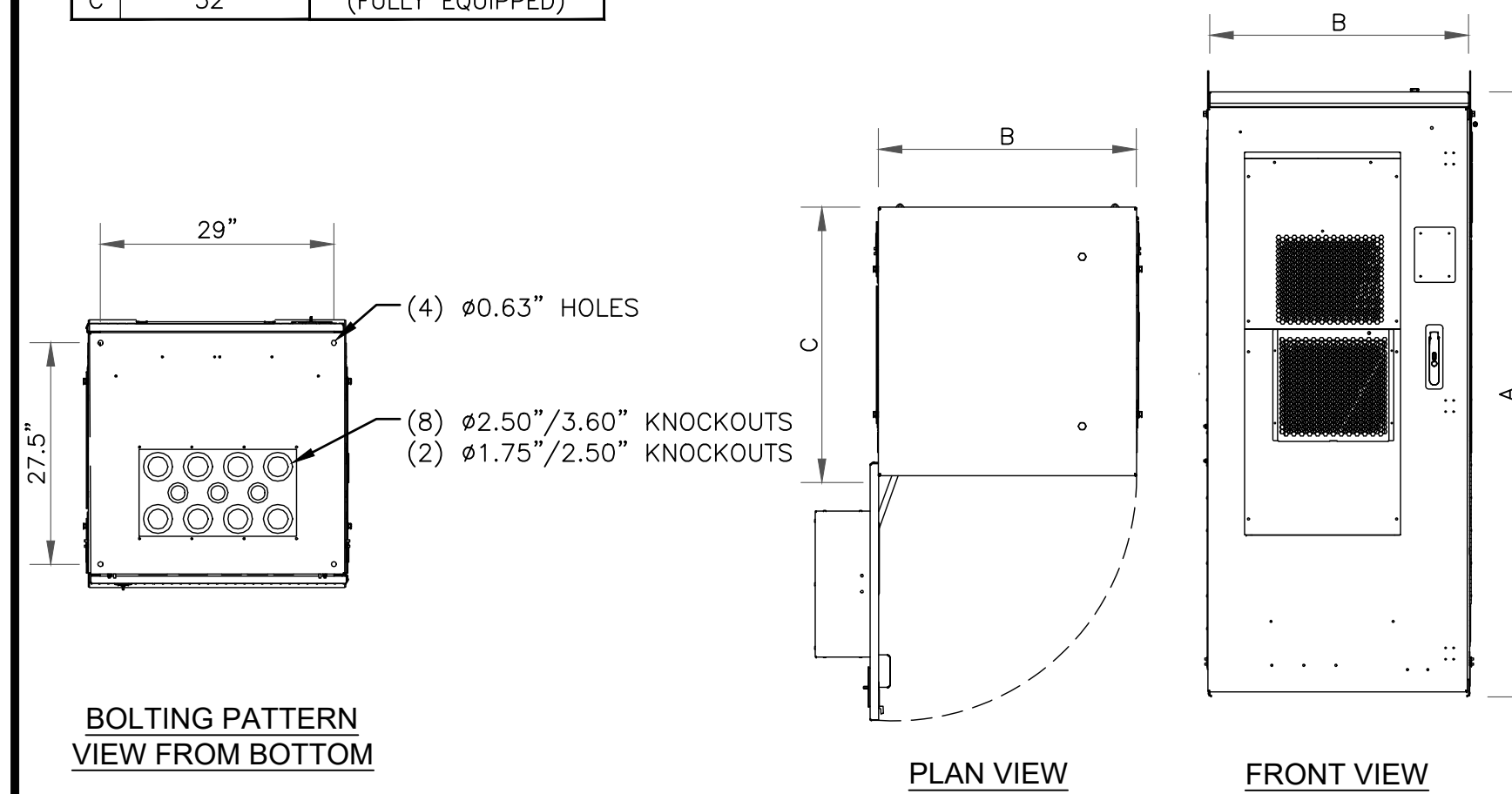
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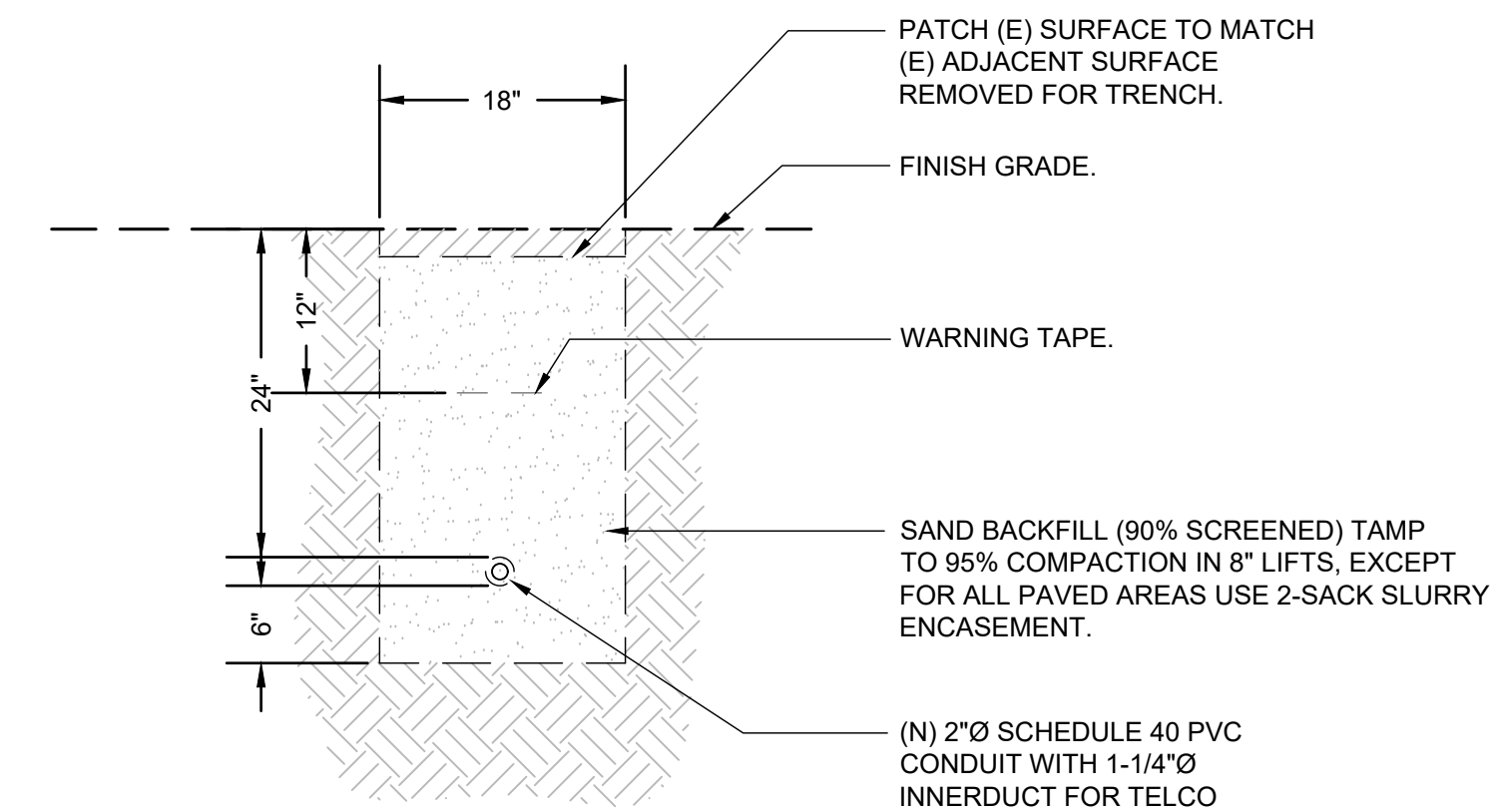


1 CONDUIT SNUB-UP DETAIL
SCALE: NOT TO SCALE

MANUFACTURER:	CHARLES
MODEL NO.:	CUBE-PM63915XXX
DIMENSIONS:	UNIT WEIGHT:
A 74"	±490 LBS (CABINET ONLY)
B 32"	±1800 LBS
C 32"	(FULLY EQUIPPED)



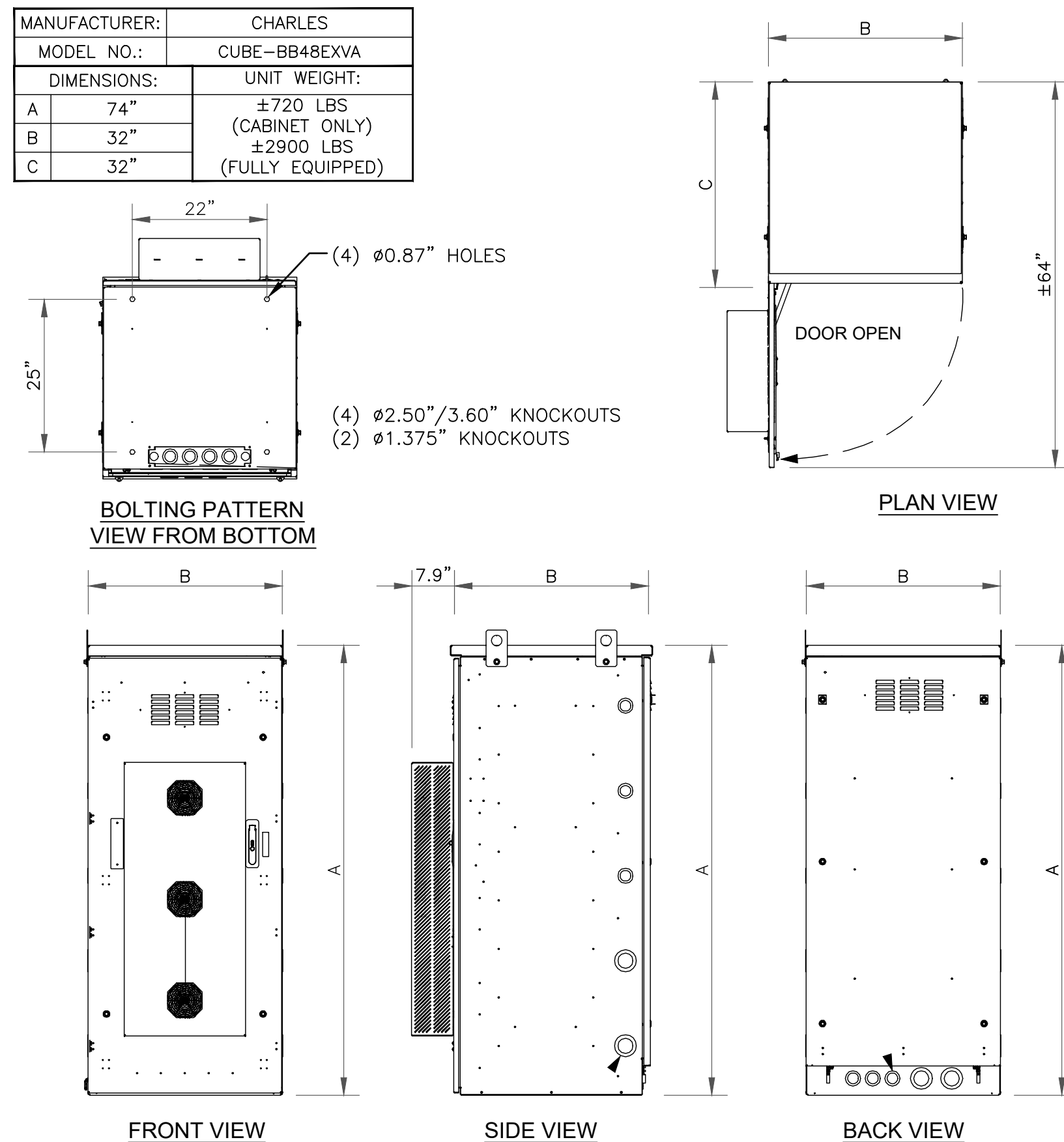
2 CHARLES CUBE PM63915XXX CABINET
SCALE: NOT TO SCALE



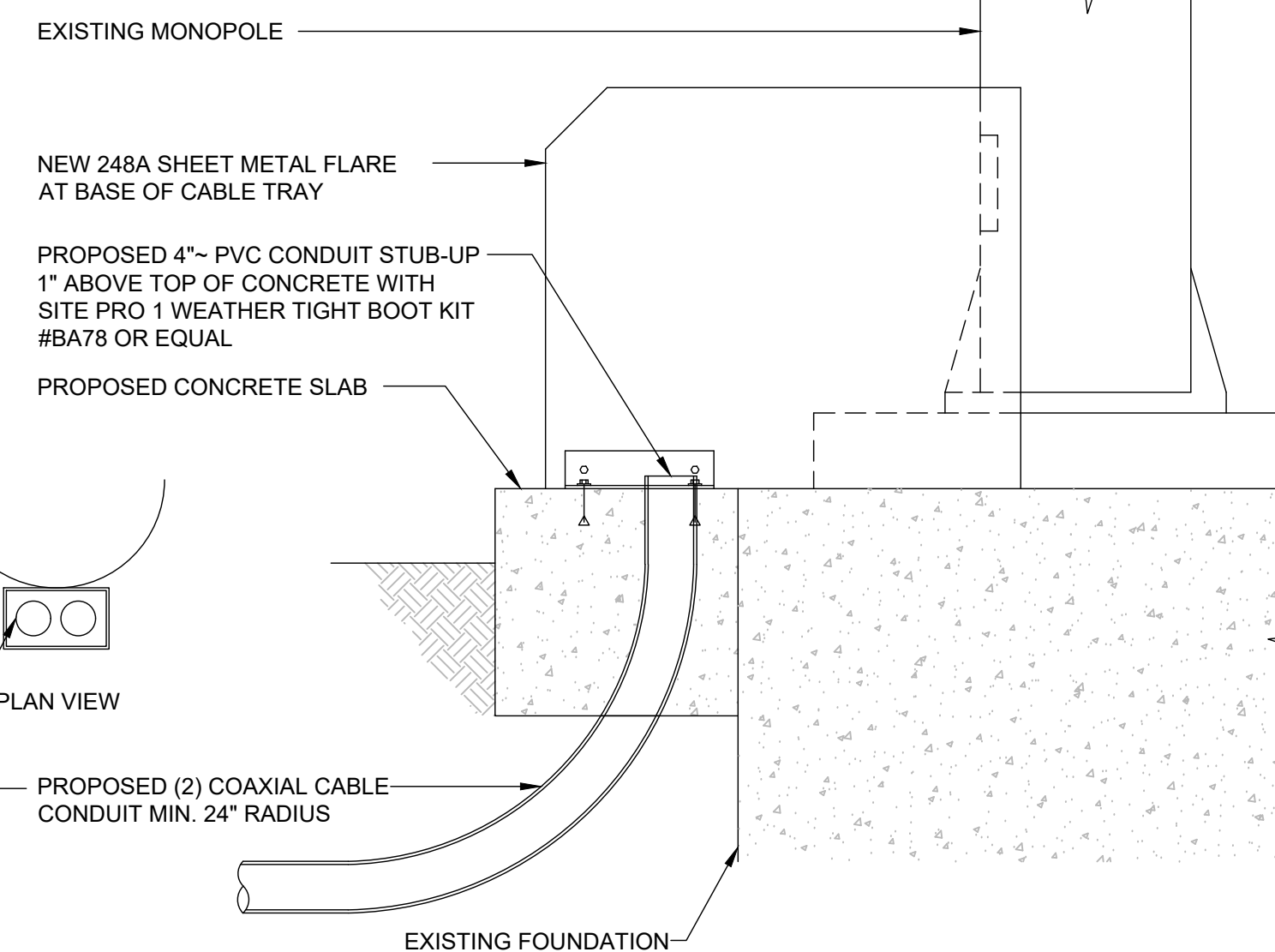
NOTES:
1. ALL DIMENSIONS SHOWN ARE MINIMUM CLEAR.
2. ELECTRICAL CONTRACTOR TO INCLUDE REMOVAL OF SPOILS.

3 TELECO TRENCH DETAIL
SCALE: NOT TO SCALE

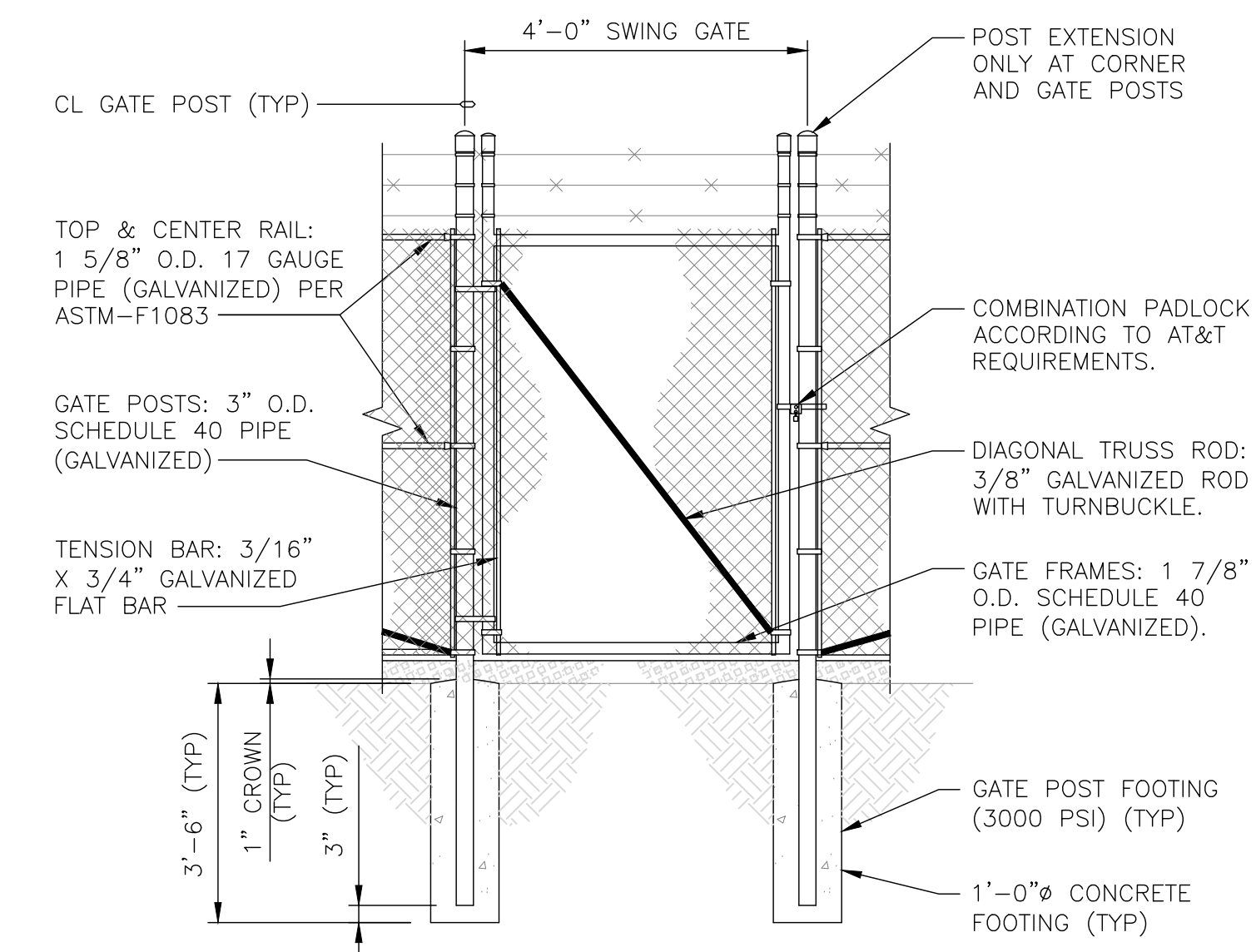
MANUFACTURER:	CHARLES
MODEL NO.:	CUBE-BB48EXVA
DIMENSIONS:	UNIT WEIGHT:
A 74"	±720 LBS (CABINET ONLY)
B 32"	±2900 LBS
C 32"	(FULLY EQUIPPED)



4 CHARLES CUBE BB48EXVA
SCALE: NOT TO SCALE



5 CONDUIT/TOWER STUB UP DETAIL
SCALE: NOT TO SCALE



6 TYPICAL MAN GATE DETAIL
SCALE: NOT TO SCALE

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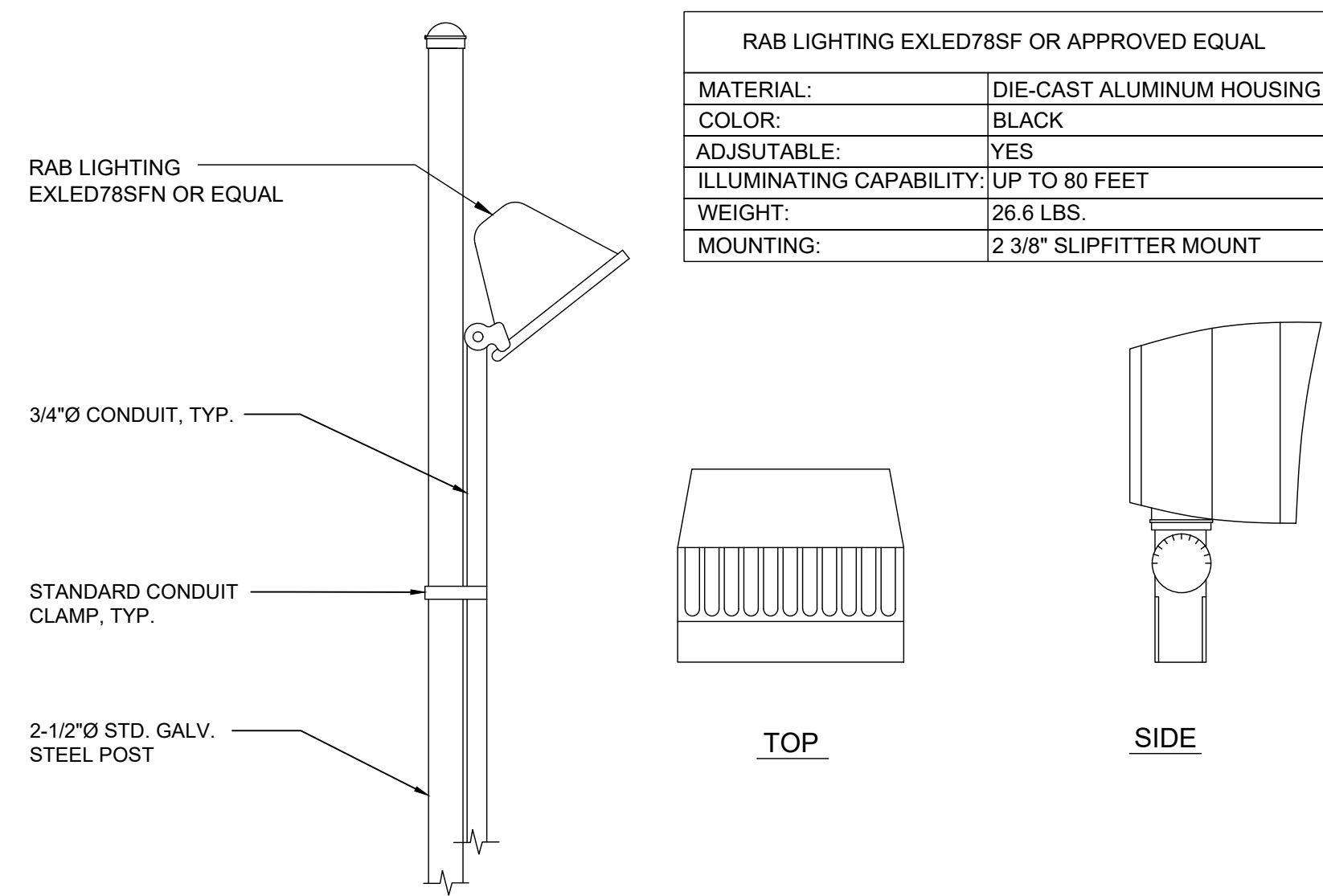
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SHEET NUMBER:

C-5.2

REVISION:

7



1 SERVICE LIGHT DETAIL
SCALE: NOT TO SCALE

AA-CL-T-3S PTLC Series

ATS Power Transfer Load Center with an Integrated Telco Chamber

The AA-CL-T-3S is an outdoor PTLC that features separate AC and Telco chambers. The AC chamber includes a 42kAIC main disconnect breaker for normal (utility) power. When the normal power source is not available, an ASCO® Series 300 automatic transfer switch connects to a permanent or temporary alternative power source. Mechanically interlocked 10kAIC main disconnect breakers allow manual transfer between the permanent and temporary sources.



The AA-CL-T-3S Series also features a Square D load center; Strikesorb® surge suppression; a utility voltage sensing relay; a Cam-Lok style engine generator connector panel, mounted on the left or right; and a ground fault circuit interrupter (GFCI) circuit breaker wired to a duplex outlet in the Telco chamber.

A double throw, single solenoid transfer mechanism and microprocessor controls in the ASCO Series 300 automatic transfer switch adjust to input from the primary power source or generator, depending on site conditions. The robust ASCO switch is UL 1008 Listed and complies with NFPA 110 for emergency and standby power systems.

To protect connected equipment, the AA-CL-T-3S PTLC safeguards critical loads from transients and load transfer spikes using Strikesorb® surge suppression. Strikesorb incorporates state of the art technological developments that ensure superior protection characteristics, which remain unchanged throughout its long service life. It is designed to withstand repeated surges providing cost-effective and maintenance-free operation in demanding environments. Critical loads are never left unprotected, as Strikesorb will operate to a short circuit and trip the main disconnect breaker in the event of a long duration, potentially catastrophic overvoltage event.

A 42-position Square D load center provides the flexibility to distribute 200 amp, 240/120 single-phase or 208/120 three-phase power to a variety of site equipment.

The Telco chamber has a plywood backboard with three knockouts for cable entry centered above the backboard. Included in the Telco chamber is a 20-amp duplex receptacle fed from a GFCI circuit breaker (located in the upper, AC chamber).

For more information about the AA-CL-T-3S Series panels, or other PTLC models, e-mail Intersect today at solutions@intersectinc.com.



2 AA-CL-T-3S PTLC DETAILS
SCALE: NOT TO SCALE

Series Number	Product Configuration
AA1220042-3R-CL-T-L	240/120; 1Ø; 200 amp; 42 kAIC utility and permanent or temporary power sources (3-sources); left-mount Cam-Lok style engine generator connector
AA1220042-3R-CL-T-R	240/120; 1Ø; 200 amp; 42 kAIC utility and permanent or temporary power sources (3-sources); right-mount Cam-Lok style engine generator connector
AA3320042-3R-CL-T-L	208/120; 3Ø; 200 amp; 42 kAIC utility and permanent or temporary power sources (3-sources); left-mount Cam-Lok style engine generator connector
AA3320042-3R-CL-T-R	208/120; 3Ø; 200 amp; 42 kAIC utility and permanent or temporary power sources (3-sources); right-mount Cam-Lok style engine generator connector

Option Number Description

Opt 1195 Programmable Engine Exerciser – seven-day electronic time switch provides automatic weekly or bi-weekly testing of the engine generator set either with or without load and offers relay contacts for remote status monitoring.

Other service voltages and amperages are available. Custom panels can be designed to your performance specifications. Contact solutions@intersectinc.com

General Data

Overall enclosure weight and dimensions
Varies by service voltage, amperage, and enclosure type. Request specific panel drawings for this product information.

AC cabinet dimensions (H x W x D)
53 x 29 x 12 inches

Telco cabinet dimensions (H x W x D)
20 x 29 x 12 inches

Enclosure type
• NEMA 3R
• 0.058 aluminum construction

Service voltage
• 200 amp
• 240/120
• 208/120

Voltage sensing relay
• Senses "utility" or normal source voltage
• Installed on "line" side of main disconnect breaker

UL certification
• UL 67 listed panel
• Service entrance rated

Cam-Lok Style Panel

Model
• Right or Intersect ICL

Color coded Cam-Lok Connectors
• Green – Ground
• White – Neutral
• Black – Line 1
• Red – Line 2
• Blue – Line 3

UL Certification
UL 1008 listed

Automatic Transfer Switch

Type
ASCO – 300L Series

Power transfer mechanism
• Single solenoid operation
• Microprocessor controller
• Double throw operation

Engine starting contact
Connect signal wires to auto-start engine generator set

Source circuit breaker
• Normal (utility power)
• 200 amp, 60 Hz

Engine exerciser
• Built-in, 20-minute exerciser
• See Option 1195 in table for further details

Withstand current rating (WCR)
42,000 amps

UL certification & other safety compliances
• UL 1008, standard for transfer switch equipment
• CSA standard C22.2 for automatic transfer switches
• NFPA 110 for emergency and standby power systems
• NEC Articles 700, 701, and 702

Suppression Technology

Technology type
Strikesorb 40-A1, 120 V modules

Surge Protection Levels
Response time
• <1 ns

Maximum surge current
• Surge current, Insa (8/20) NEMA LS-1: 140 kA
• Lightning current, Imp (10/350) IEC 61643-1: 75 kA

Let through voltage level
For surge current 10 kA (8/20) IEC 62-41-1: 435 V - actual surge current through Strikesorb

Long duration surge performance
500 A square waveform 2 ms IEC 62-11: 250 Hz

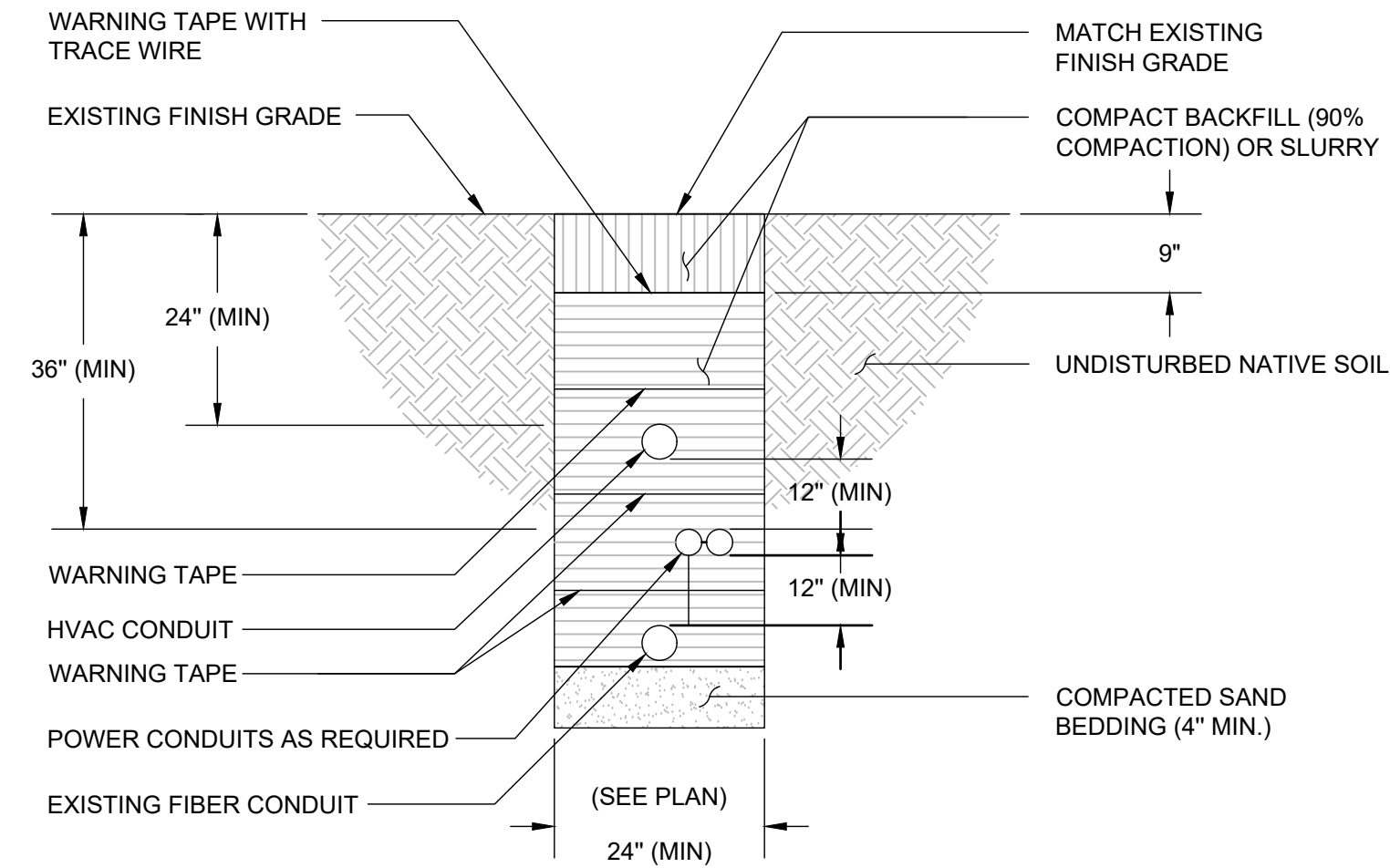
Voltage protection rating (VPR)
600 V per UL 1449 3rd edition

Short Circuit Current Rating
• Tested for safe installation behind a 4000 A Class I time delay fuse at available fault current 200 kA
• 3-cycle testing at 85 kA

Standards Compliance
• IEEE C62.41, IEEE C62-45, IEEE C62.11, NEMA LS-1
• IEC 61643-1 ed 2:2005, EN 61642-A1:2005, IEC 61643-12



All specifications subject to change without notice.
ASCO® is a registered trademark of ASCO Power Technologies.
Strikesorb® is a registered trademark of Bayco Corporation.
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Phone: 509.255.9570 - Fax: 509.255.6034
www.intersectinc.com



3 TRENCH DETAIL
SCALE: NOT TO SCALE

NOTICE

Radio frequency fields beyond this point may exceed the FCC general public exposure limit.

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

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

CAUTION

Beyond this point: Radio frequency fields at this site may exceed FCC rules for human exposure.

For your safety, obey all posted signs and site guidelines for working in radio frequency environments.

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

WARNING

Beyond this point: Radio frequency fields at this site exceed the FCC rules for human exposure.

Failure to obey all posted signs and site guidelines for working in radio frequency environments could result in serious injury.

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

WARNING

THIS FACILITY CONTAINS CORROSIVE LIQUID TOXIC LIQUID CLASS 1 WATER REACTIVE LIQUID

DANGER

HAZARDOUS MATERIAL STORAGE AREA

4 SIGNAGE DETAIL
SCALE: NOT TO SCALE

3245 158TH AVENUE MS 231
BELLEVUE, WA 98008

4301 HACIENDA DRIVE, SUITE 410
PLEASANTON, CA 94588

TOWER ENGINEERING PROFESSIONALS
4710 E ELWOOD ST, STE 9
PHOENIX, AZ 85040
OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
300189

BU #: 877196
101 AUTO REPAIR

13145 MURPHY AVE
SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
TO 50'-0" MONOPOLE

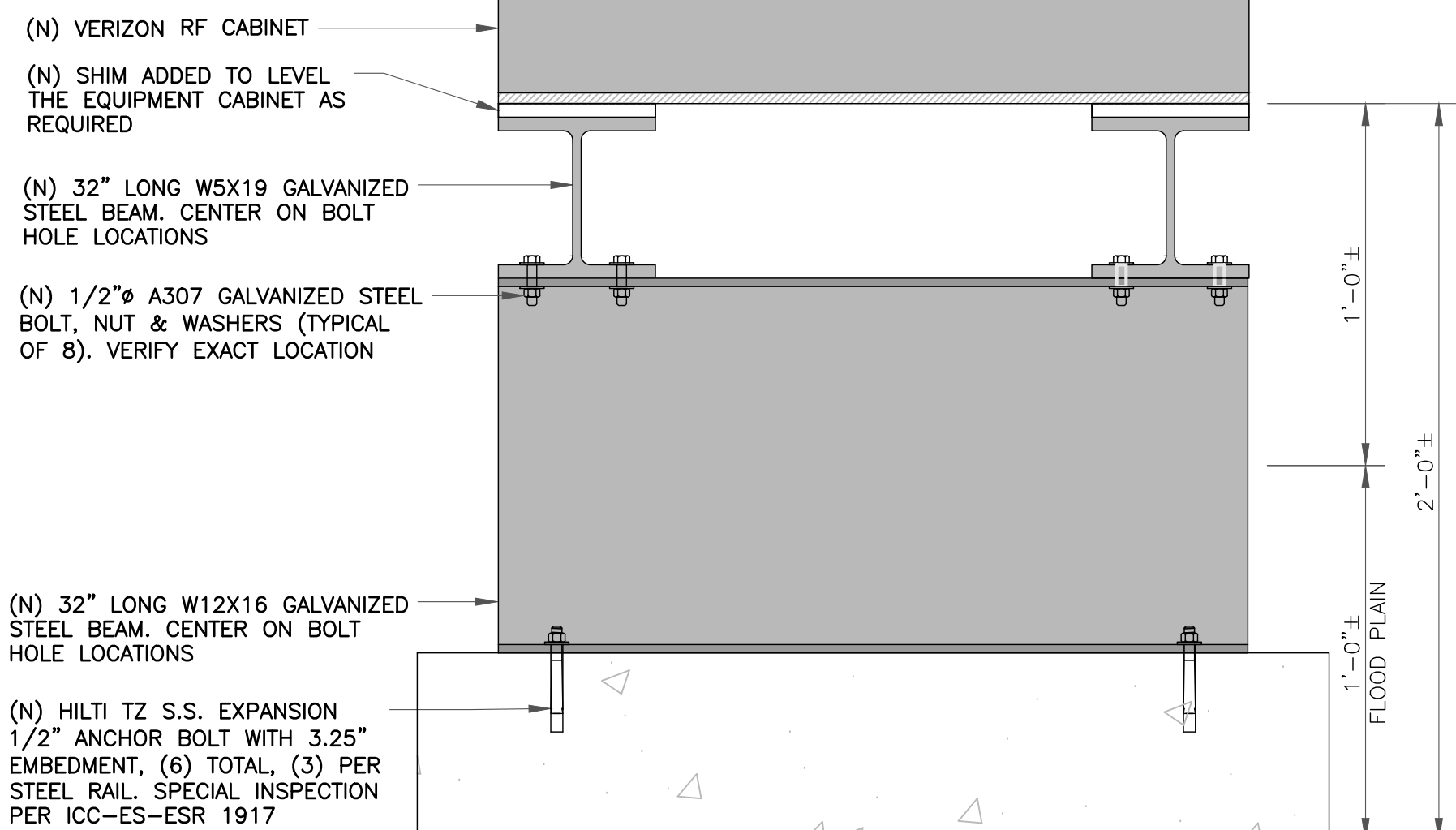
ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
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4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

01/02/24

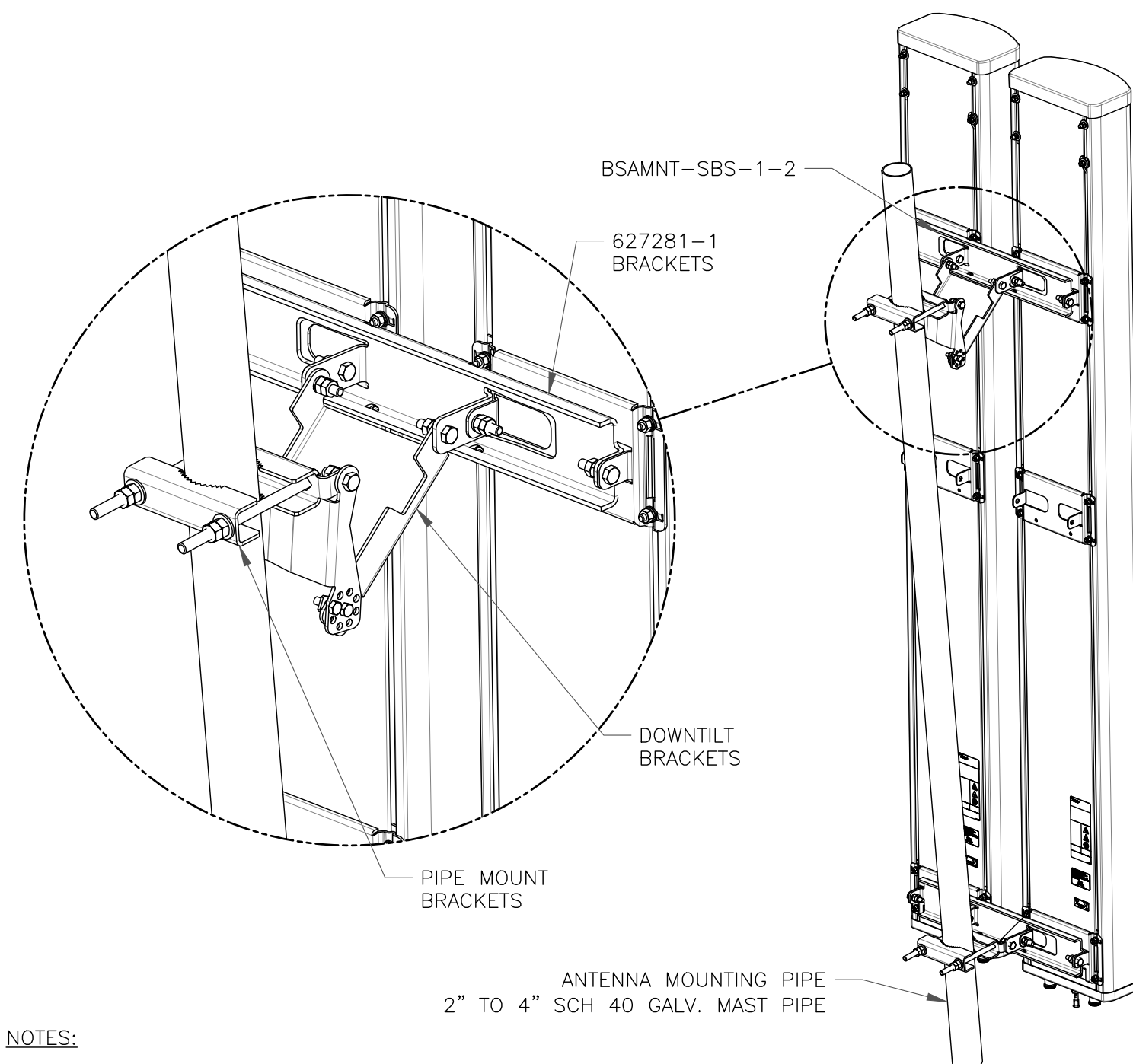
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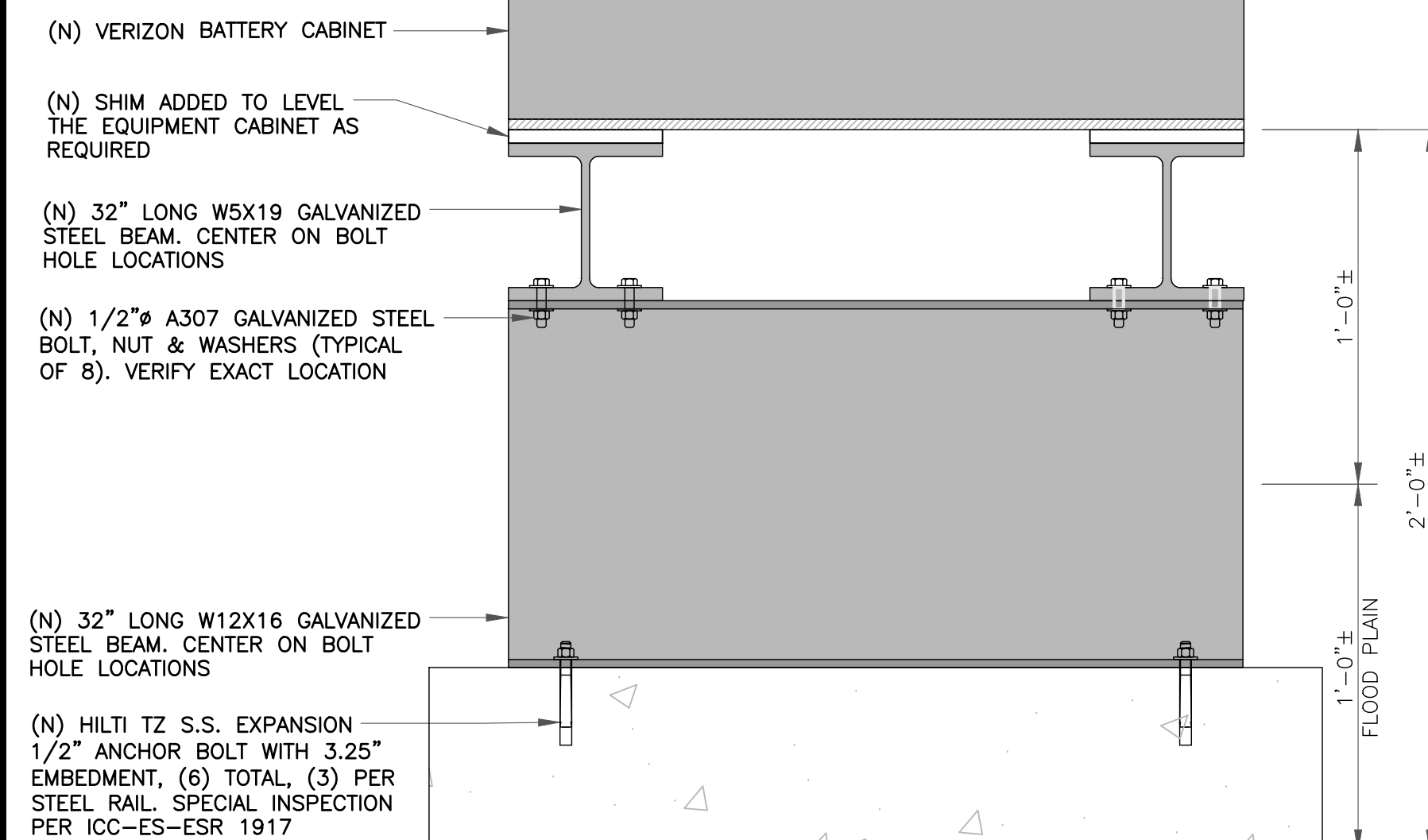
SHEET NUMBER: C-5.3	REVISION: 7
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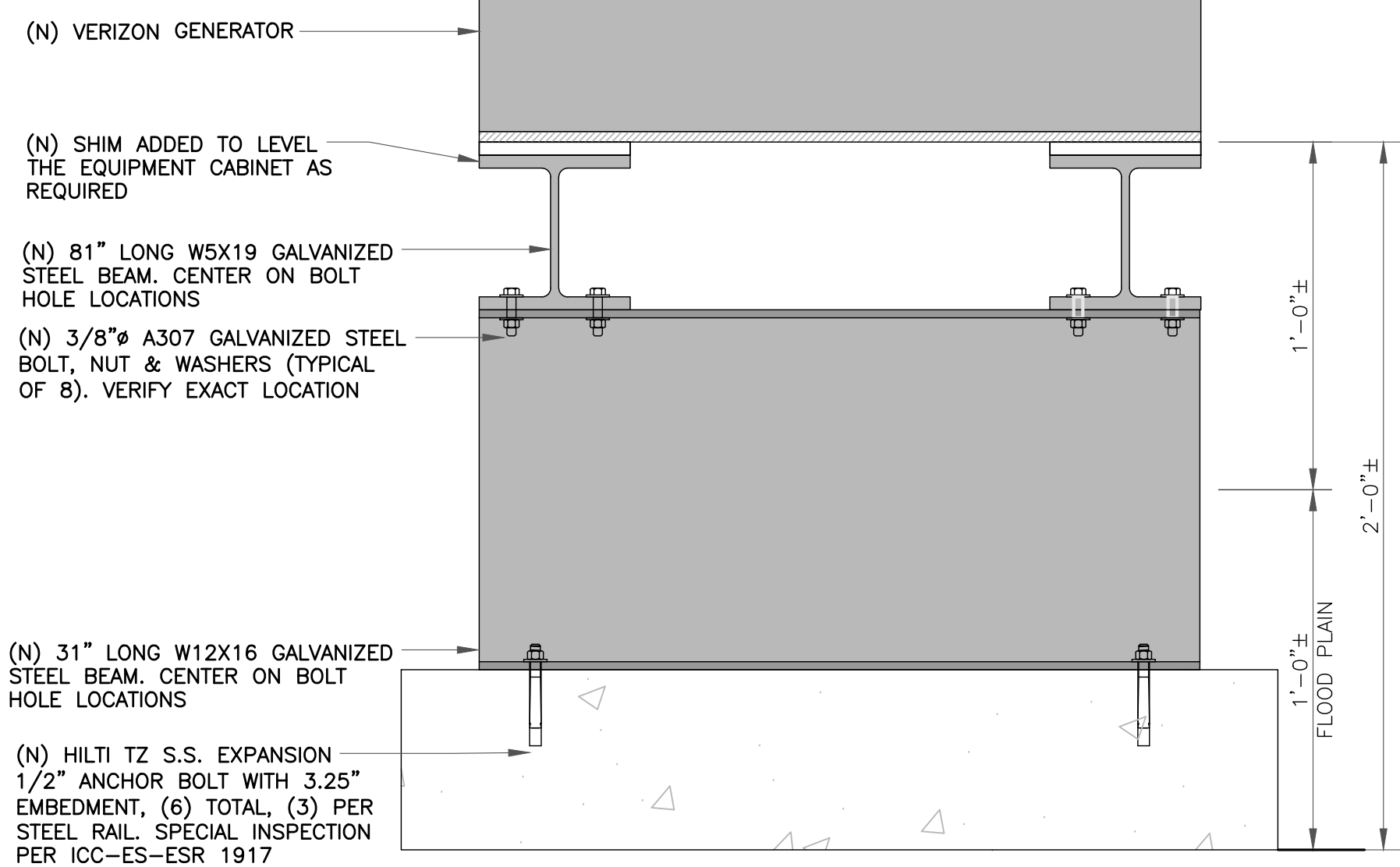
1 RF CABINET MOUNTING
SCALE: NOT TO SCALE



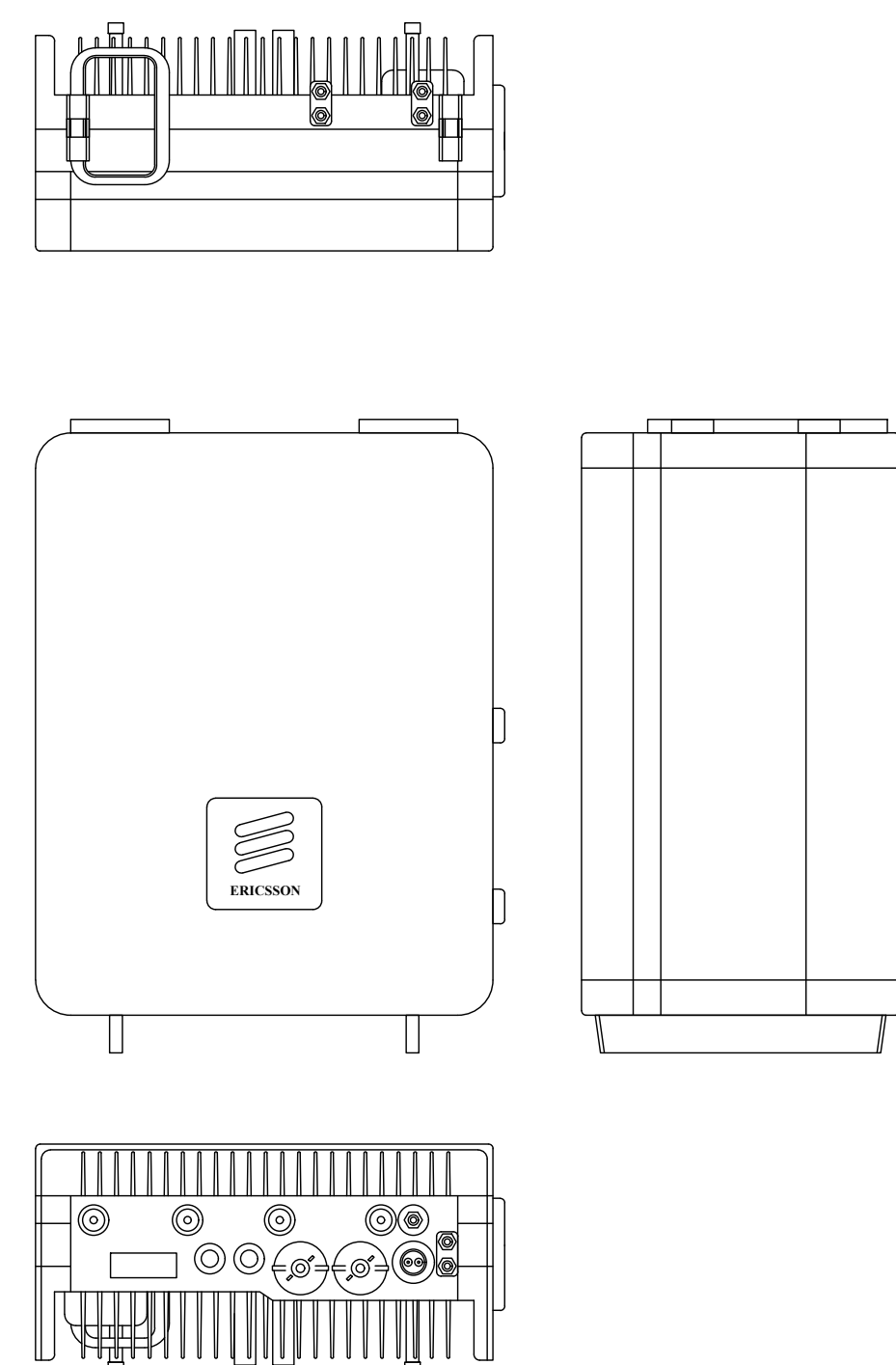
2 COMMSCOPE - BSAMNT-SBS-1-2
SCALE: NOT TO SCALE



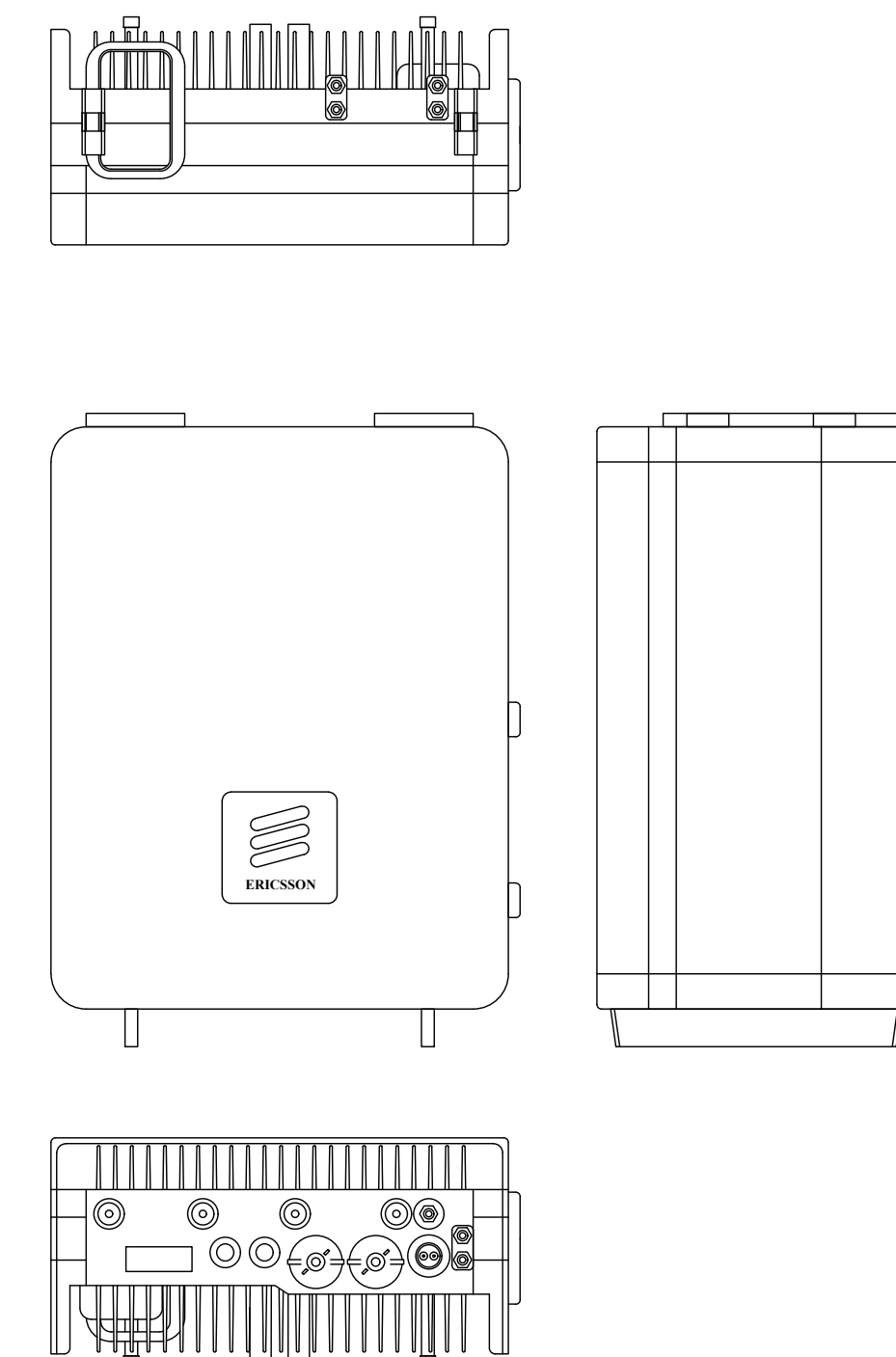
3 BATTERY CABINET MOUNTING
SCALE: NOT TO SCALE



4 GENERATOR MOUNTING
SCALE: NOT TO SCALE



5 RADIO 4449
SCALE: NOT TO SCALE



6 RADIO 8843
SCALE: NOT TO SCALE

verizon

3245 158TH AVENUE MS 231
BELLEVUE, WA 98008

CROWN CASTLE

4301 HACIENDA DRIVE, SUITE 410
PLEASANTON, CA 94588

TOWER ENGINEERING PROFESSIONALS
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PHOENIX, AZ 85040
OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
300189

BU #: 877196
101 AUTO REPAIR

13145 MURPHY AVE
SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
TO 50'-0" MONOPOLE

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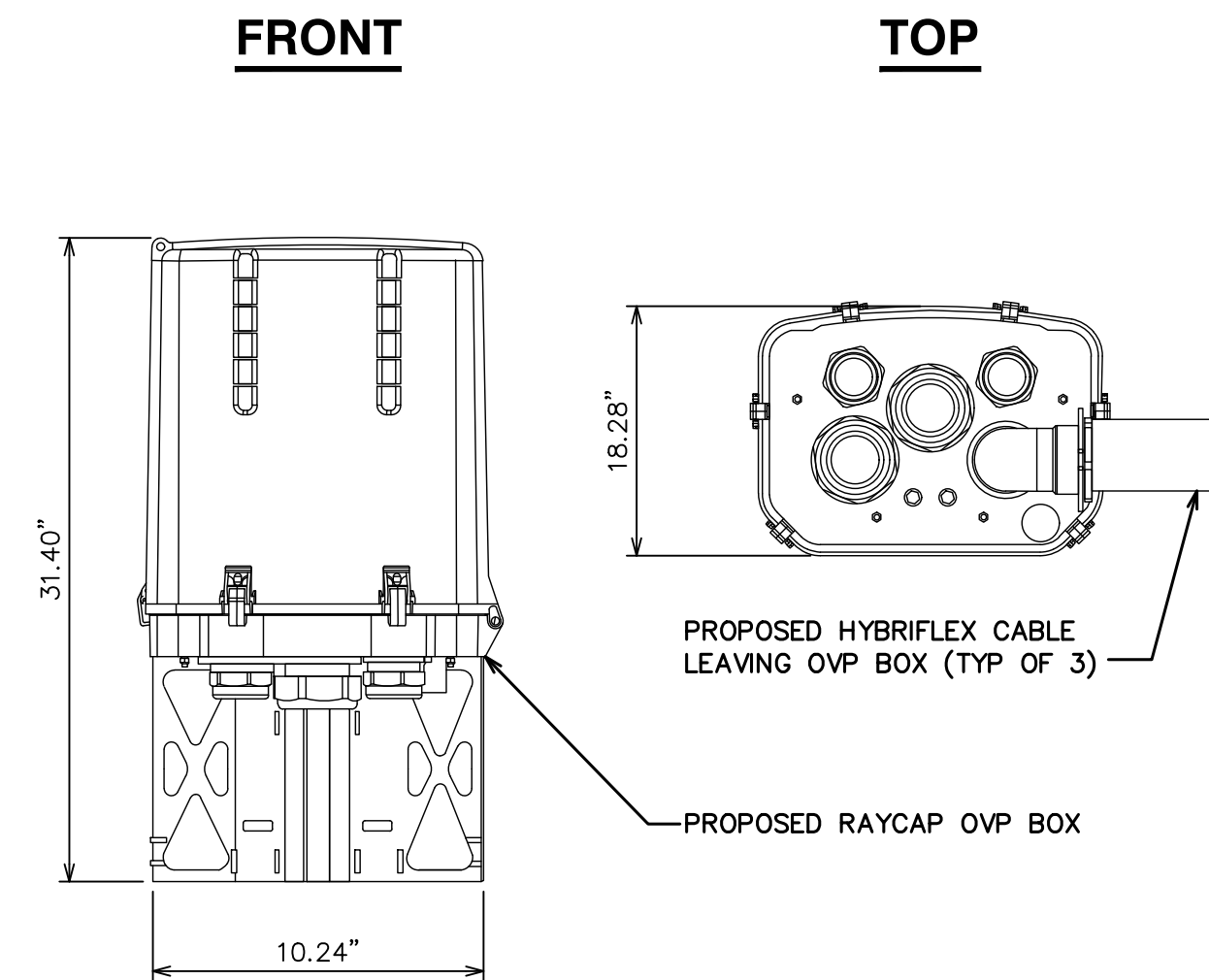
REGISTERED PROFESSIONAL ENGINEER
STEPHEN BUNTING
91898
Stephen E. Bunting
STATE OF CALIFORNIA

01/02/24

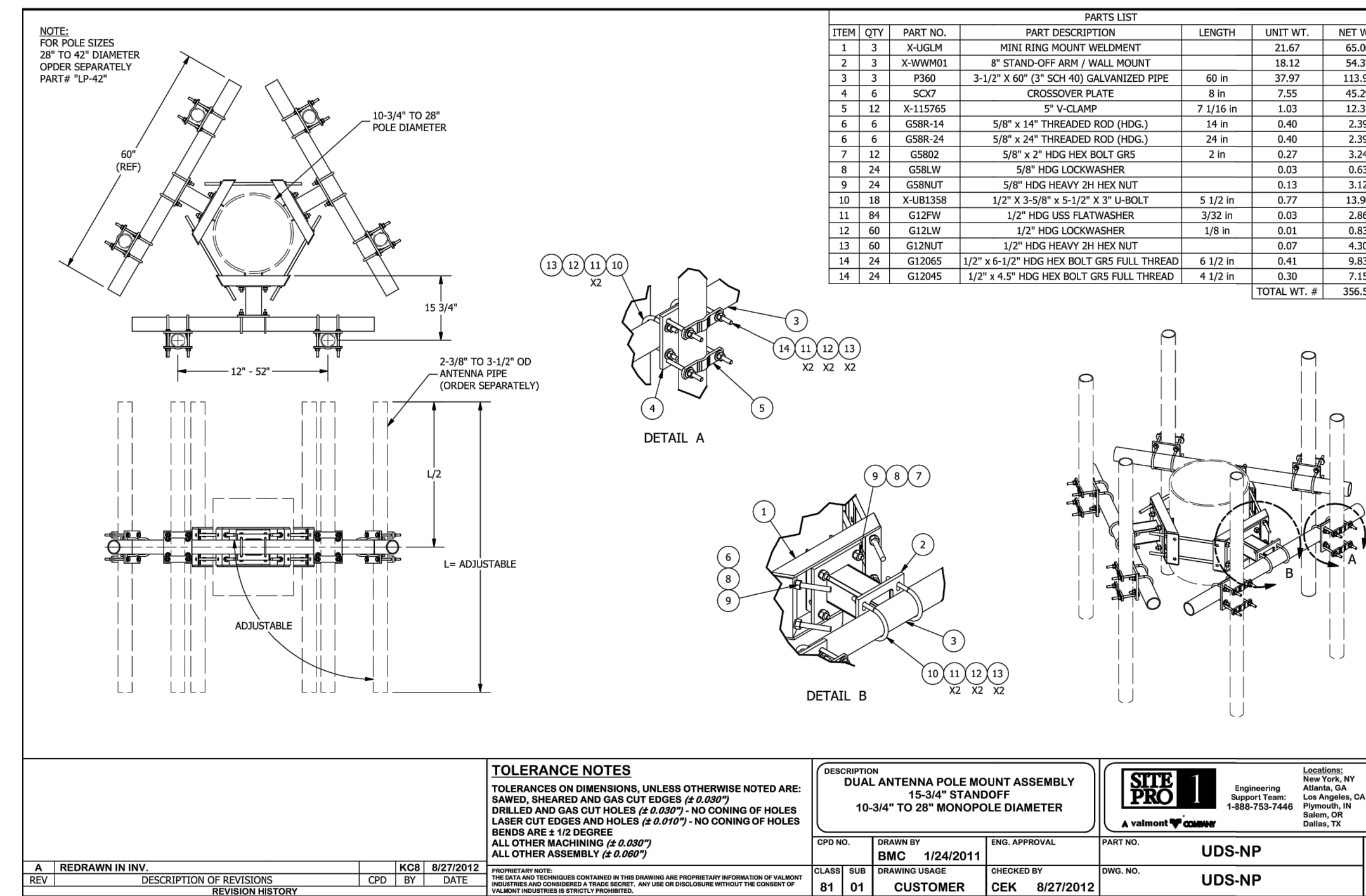
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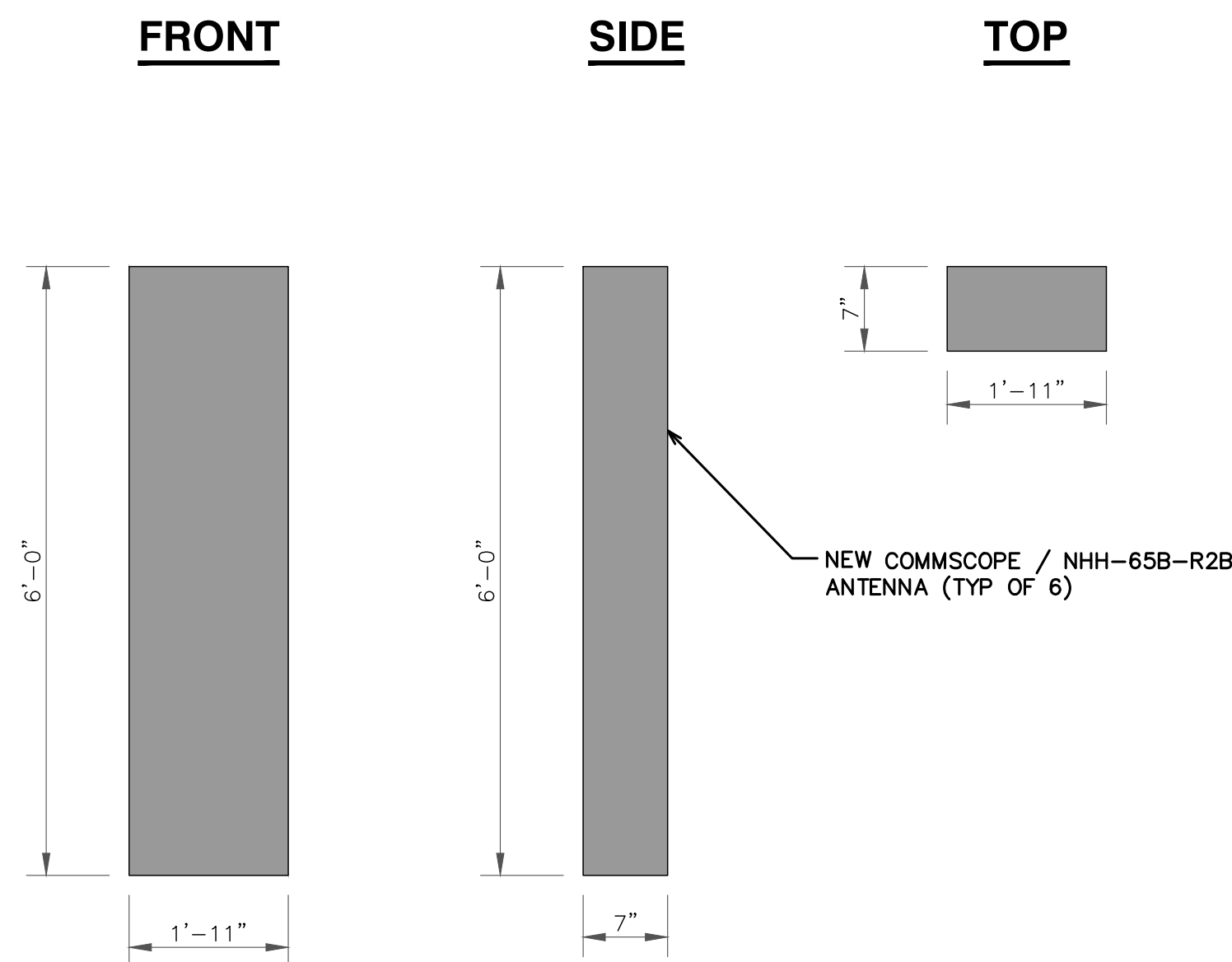
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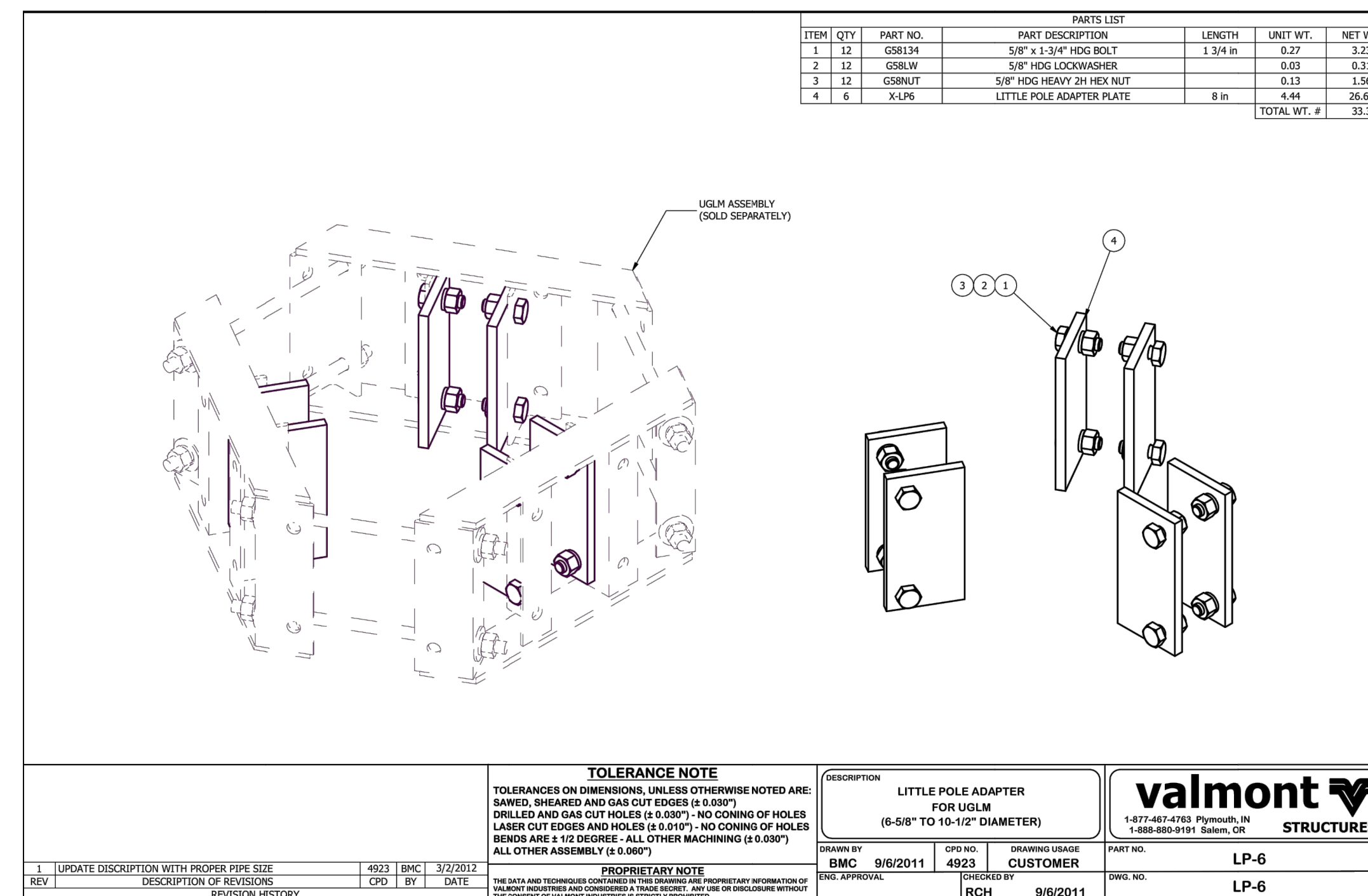
1 RAYCAP - DC6-48-60-0-8C-EV
SCALE: NOT TO SCALE



2 COMPACT MOUNT DETAIL
SCALE: NOT TO SCALE



3 COMMSCOPE - NHH-65B-R2B
SCALE: NOT TO SCALE



4 COMPACT MOUNT ADAPTER DETAIL
SCALE: NOT TO SCALE

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BELLEVUE, WA 98008

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REGISTERED PROFESSIONAL ENGINEER
STEPHEN BUNTING
91898
Stephen E. Bunting
STATE OF CALIFORNIA

01/02/24

Stephen Bunting P.E.
Professional Engineer License: #91898

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NOTE:
GENERATOR ENCLOSURE WILL BE PROVIDED BY THE GENERATOR MANUFACTURER FOR WEATHER PROTECTION (SEE SHEET C-5.6). ENCLOSURE WILL ENCLOSE THE GENERATOR ONLY PER THE MANUFACTURER STANDARDS. NO OTHER EQUIPMENT WILL BE ENCLOSED BY THE GENERATOR ENCLOSURE.

SD030 | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

GENERAC INDUSTRIAL POWER

Standby Power Rating
30 kW, 38 kVA, 60 Hz

Prime Power Rating*
27 kW, 34 kVA, 60 Hz



*EPA Certified Prime ratings are not available in the US or its Territories

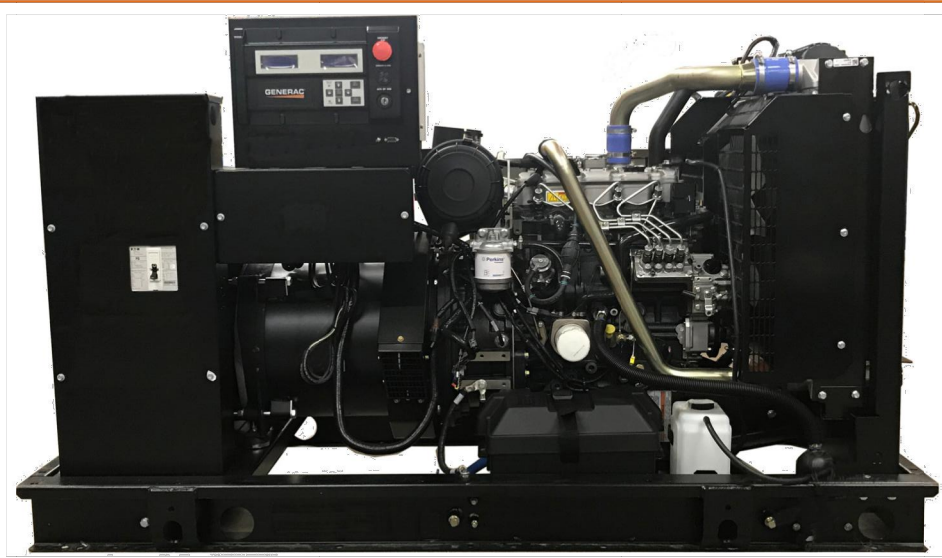


Image used for illustration purposes only

Codes and Standards

Not all codes and standards apply to all configurations. Contact factory for details.

- UL2200, UL508, UL489, UL142
- CSA C22.2
- BS5514 and DIN 6271
- SAE J1349
- NFPA 37, 70, 99, 110
- NEC700, 701, 702, 708
- ISO 3046, 7637, 8528, 9001
- NEMA ICS10, MG1, 250, ICS6, AB1
- ANSI C62.41

Powering Ahead

For over 50 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SD030 | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

GENERAC INDUSTRIAL POWER

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General		Cooling System	
Make	Perkins	Cooling System Type	Closed Recovery
EPA Emissions Compliance	Stationary Emergency	Water Pump Type	Pre-Lubed, Self Sealing
EPA Emissions Reference	See Emission Data Sheet	Fan Type	Pusher
Cylinder #	4	Fan Speed - RPM	1,980
Type	In-Line	Fan Diameter - in (mm)	18 (457)
Displacement - in ³ (L)	135 (2.22)	Fuel System	
Bore - in (mm)	3.3 (84)	Fuel Type	Ultra Low Sulfur Diesel Fuel #2
Stroke - in (mm)	3.9 (100)	Fuel Specifications	ASTM
Compression Ratio	23.3:1	Fuel Filtering (Microns)	5
Intake Air Method	Turbocharged	Fuel Inject Pump	Distribution Injection Pump
Cylinder Head	Cast Iron	Fuel Pump Type	Engine Driven Gear
Piston Type	Aluminum	Injector Type	Mechanical
Crankshaft Type	Forged Steel	Fuel Supply Line - in (mm)	0.31 (7.9) ID
Fuel Return Line - in (mm)	0.2 (4.8) ID	Engine Electrical System	
Engine Governing		System Voltage	12 VDC
Governor	Electronic Isochronous	Battery Charger Alternator	Standard
Frequency Regulation (Steady State)	±0.5%	Battery Size	See Battery Index 01619708SBY
Lubrication System		Battery Voltage	12 VDC
Oil Pump Type	Gear	Ground Polarity	Negative
Oil Filter Type	Full-Flow		
Crankcase Capacity - qt (L)	11.2 (10.6)		

ALTERNATOR SPECIFICATIONS

Standard Model		Standard Excitation	
Standard Model	K0035124Y21	Standard Excitation	Brushless
Poles	4	Bearings	Single Sealed
Field Type	Revolving	Coupling	Direct via Flexible Disc
Insulation Class - Rotor	H	Load Capacity - Standby	100%
Insulation Class - Stator	H	Prototype Short Circuit Test	Yes
Total Harmonic Distortion	<5% (3-Phase)	Voltage Regulator Type	Digital
Telephone Interference Factor (TIF)	<50	Number of Sensed Phases	All
		Regulation Accuracy (Steady State)	±0.25%

SD030 | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

GENERAC INDUSTRIAL POWER

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer (Enclosed Unit Only)
- Engine Coolant Heater

Fuel System

- Fuel Lockoff Solenoid
- Primary Fuel Filter

Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze

Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- Rotor Dynamically Spin Balanced
- Amortisseur Winding (3-Phase Only)
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Unit Only)

ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuation Enclosures)
- Gasketed Doors
- Stamped Air-Intake Louvers
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

FUEL TANKS (If Selected)

- UL 142/ULC S601
- Double Wall
- Normal and Emergency Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

CONTROL SYSTEM



Digital H Control Panel - Dual 4x20 Display

Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors

- Audible Alarms and Shutdowns
- Not In Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus™ Protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total, and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents

ALTERNATOR SYSTEM

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

SD030 | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

GENERAC INDUSTRIAL POWER

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Oil Heater
- Critical Silencer (Open Set Only)
- Radiator Stone Guard
- Level 1 Fan and Belt Guards (Open Set Only)

FUEL SYSTEM

- NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- 10A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

GENERATOR SET

- Extended Factory Testing
- 8 Position Load Center
- Pad Vibration Isolation

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

ENCLOSURE

- Weather Protected Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- ACOG Enclosure Lighting Kit
- Door Alarm Switch
- Enclosure Heater
- Damper Alarm Contacts

WARRANTY (Standby Gensets Only)

- 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indication and Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 100 dB Alarm Horn
- Ground Fault Annunciation
- 120V GFCI and 240V Outlets
- Remote Communication - Modem
- 10A Engine Run Relay

FUEL TANKS (Size On Last Page)

- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- 19 in (482.6 mm) Fill Extension
- Overfill Protection Valve
- 5 Gallon Spill Box Return Hose
- 5 Gallon Spill Box
- Tank Risers
- Fuel Level Switch and Alarm
- 12 Vent System
- Fire Rated Stainless Steel Fuel Hose

ENGINEERED OPTIONS

ENGINE SYSTEM

- Coolant Heater Isolation Ball Valves
- Fluid Containment Pan

CONTROL SYSTEM

- Spare Inputs (x4) / Outputs (x4)
- Battery Disconnect Switch

ALTERNATOR SYSTEM

- 3rd Breaker System

GENERATOR SET

- Special Testing

FUEL TANKS

- UL2085 Tank
- Stainless Steel Tanks
- Special Fuel Tanks
- Vent Extensions

SD030 | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

GENERAC INDUSTRIAL POWER

OPERATING DATA

POWER RATINGS

Standby		
Single-Phase 120/240 VAC @ 0.1 Dpf	30 kW	Amps: 125
Three-Phase 120/208 VAC @ 0.8 Dpf	30 kW	Amps: 104
Three-Phase 120/240 VAC @ 0.8 Dpf	30 kW	Amps: 90
Three-Phase 277/480 VAC @ 0.8 Dpf	30 kW	Amps: 45
Three-Phase 346/600 VAC @ 0.8 Dpf	30 kW	Amps: 36

MOTOR STARTING CAPABILITIES (skVA)

skVA vs. Voltage Dip			
277/480 VAC	30%	208/240 VAC	30%
K0035124Y21	61	K0035124Y21	46
K0040124Y21	76	K0040124Y21	58
K0050124Y21	96	K0050124Y21	75

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)	Diesel - gph (Lph)	
	Percent Load	Standby
3 (1)	25%	1.0 (3.7)
	50%	1.4 (5.2)
	75%	2.0 (7.5)
	100%	2.8 (10.5)

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

Standby	
Coolant Flow	gpm (Lpm) 14.9 (56.2)
Coolant System Capacity	gal (L) 2.5 (9.5)
Heat Rejection to Coolant	BTU/hr (kW) 128,638 (136)
Inlet Air	scfm (m ³ /hr) 2,800 (4,757)
Maximum Operating Ambient Temperature	°F (°C) 122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0198290SSD
Maximum Radiator Backpressure	in H ₂ O (kPa) 0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

Standby	
Flow at Rated Power	scfm (m ³ /min) 88 (2.5)

ENGINE

Standby		EXHAUST		Standby	
Rated Engine Speed	RPM 1,800	Exhaust Flow (Rated Output)	scfm (m ³ /min)	296.6 (8.4)	
Horsepower at Rated kW**	hp 49	Max. Allowable Backpressure (Post Turbocharger)	inHg (kPa)	1.5 (5.1)	
Piston Speed	f/min (m/min) 1,181 (360)	Exhaust Temp (Rated Output)	°F (°C)	892 (478)	
BMEP	psi (kPa) 159 (1,066)				

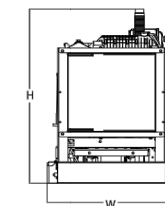
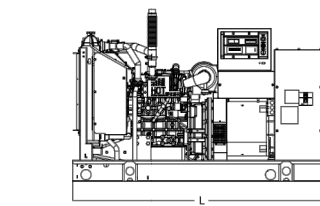
** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Operation - Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards. Standby - See Bulletin 0167500SSB Prime - See Bulletin 01875100SSB

SD030 | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

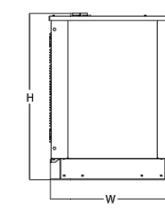
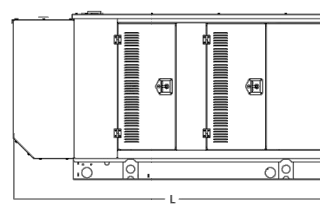
GENERAC INDUSTRIAL POWER

DIMENSIONS AND WEIGHTS*



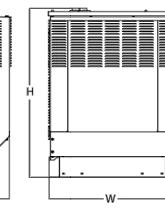
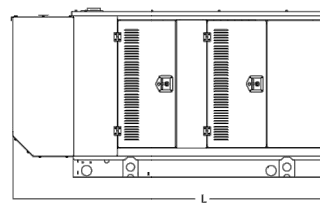
OPEN SET (Includes Exhaust Flex)

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	76.0 (1,930) x 37.4 (950) x 44.8 (1,138)	1,641 (745)
19	54 (204)	76.0 (1,930) x 37.4 (950) x 57.8 (1,468)	2,121 (963)
47	132 (501)	76.0 (1,930) x 37.4 (950) x 69.8 (1,773)	2,351 (1,067)
75	211 (799)	76.0 (1,930) x 37.4 (950) x 81.8 (2,078)	2,560 (1,162)
107	300 (1,136)	92.9 (2,360) x 37.4 (950) x 81.8 (2,078)	2,823 (1,190)



WEATHER PROTECTED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)	
			Steel	Aluminum
No Tank	-	94.8 (2,409) x 38.0 (965) x 49.5 (1,258)		
19	54 (204)	94.8 (2,409) x 38.0 (965) x 62.5 (1,588)	372 (170)	241 (110)
47	132 (501)	94.8 (2,409) x 38.0 (965) x 74.5 (1,893)		
75	211 (799)	94.8 (2,409) x 38.0 (965) x 86.5 (2,198)		
107	300 (1,136)	94.8 (2,409) x 38.0 (965) x 86.5 (2,198)		



LEVEL 1 ACOUSTIC ENCLOSURE

Run Time -



TOTAL # OF BATTERIES INSTALLED: 24
 TOTAL BATTERY KWH CAPACITY: 54.72

1. General Operating Instructions

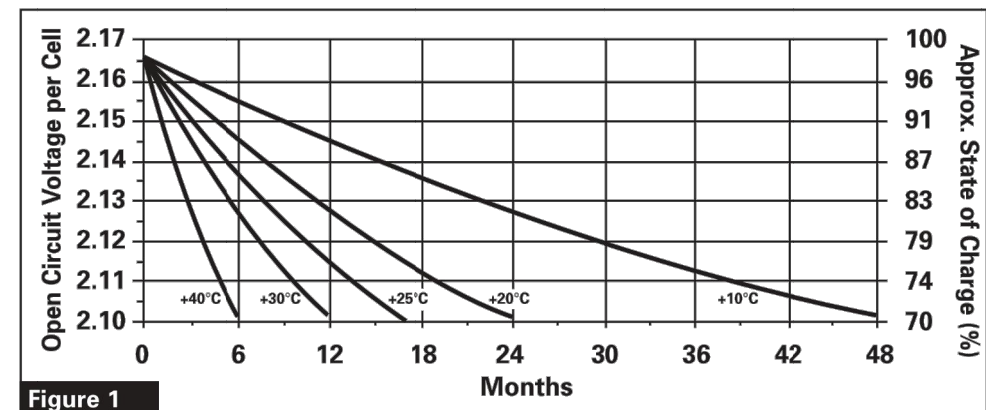
1.1 Operating Temperature Range

The recommended operating temperature range for PowerSafe® SBS EON Technology™ batteries in hybrid applications is -40°C to +50°C. Optimum life and performance are attained at +20°C, however, with the correct controls in place, cyclic performance in hybrid applications is not impacted by elevated temperatures (providing that the maximum battery temperature is not allowed to exceed +50°C).

1.2 Storage

PowerSafe SBS EON Technology battery types have a shelf life of 2 years when stored at 20°C. Higher temperatures increase the rate of self discharge and reduce storage life.

Figure 1 gives the relationship between storage time, open circuit voltage (OCV) and state of charge as a function of temperature.



1.3 Freshening Charge

PowerSafe SBS EON Technology battery types must be given a freshening charge when the OCV approaches 2.10 Volts/cell or when maximum storage time is reached (whichever occurs first).

The freshening charge should be conducted using constant voltage in the range of 2.29 to 2.40 volts per cell for a period of 24 hours. The charge current should be limited to a value expressed numerically in Amps as 10% of the 10 hour capacity rating of the battery (ie. 19 Amps for SBS 190F).

The maximum storage times between refresh charge and recommended OCV audit frequency is given in the table below.

Temperature (°C / °F)	Storage Time (Months)	OCV Audit Interval (Months)
+10 / +50	48	6
+15 / +59	34	6
+20 / +68	24	4
+25 / +77	17	4
+30 / +86	12	3
+35 / +95	8.5	2
+40 / +104	6	2

1.4 Commissioning

Prior to commencement of cyclic duty, the battery must be given a commissioning charge. This shall consist of 24 hours charge at a voltage equivalent to 2.40 Volts/cell with no load connected.

1.5 Fast Charging

Fast charge techniques must be used for frequent discharge cyclic applications. In such applications the rectifier output voltage should be set at 2.40 Volts/cell (20°C).

1.6 Current Limit

Inherent low internal resistance allows PowerSafe SBS EON Technology battery types to accept in-rush currents up to 600% C10 amps (e.g. PowerSafe SBS 190F in-rush current up to 1140 Amps). For reliable cyclic performance and to achieve maximum cycle life potential, the acceptable recharge current limit range is 0.1 to 1C10 Amps (e.g. for PowerSafe SBS 190F the recharge current range is 19 Amps to 190 Amps per series string).

1.7 Disposal

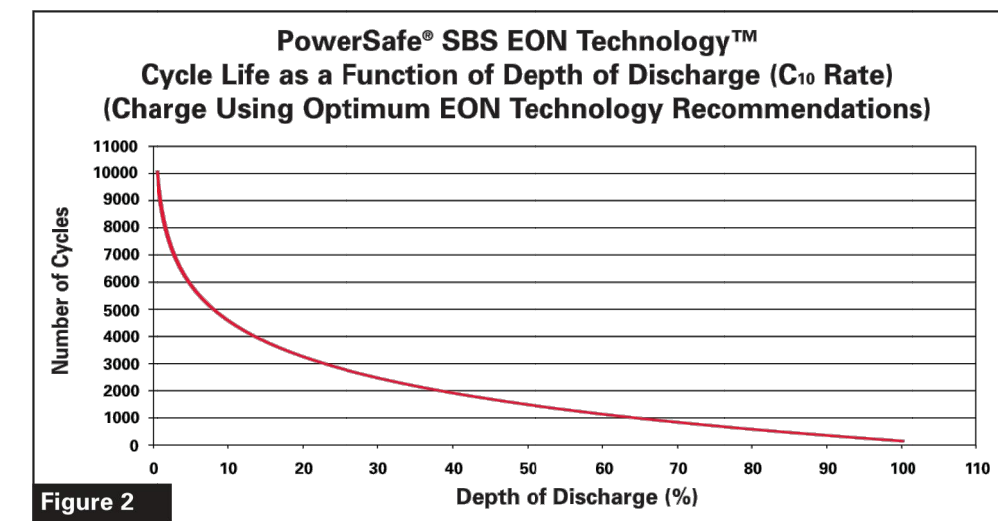
PowerSafe SBS EON Technology batteries are recyclable. End of life batteries must be packaged and transported according to prevailing transportation rules and regulations. End of life batteries must be disposed of in compliance with local and national laws by a licensed battery recycler.

2. Cyclic Operation Guidelines

2.1 Cyclic Performance

PowerSafe SBS EON Technology has been developed from proven SBS Thin Plate Pure Lead (TPPL) technology, to provide the added capability of delivering higher levels of cyclic performance as illustrated in figure 2.

In order to achieve the cycle life shown in figure 2 PowerSafe SBS EON Technology batteries must be returned to full state of charge using the charge regime options recommended by EnerSys® prior to commencement of the next discharge cycle. Operating at partial state of charge will significantly reduce cycle life.



2.2 Discharge

Depth of discharge must be measured using an Ah counting device, with an accuracy ±1% of full range of expected discharge cycle currents. The classification of the shunt should be minimum of 0.2. A low voltage disconnect should be used to protect the battery from abusive deep discharge (typically 1.75 Volts/cell).

2.3 Recharge

Optimum cycle life (figure 2) is achieved by controlling the amount of recharge back into the battery to a level where 103% of discharged Ah is returned. Controlled recharge can be achieved by Ah counting using a device capable of measuring float current equivalent to 100mA/100Ah of installed battery capacity.

Alternatively, where Ah counting during recharge is not available, it is possible to calculate the required recharge time based upon the following formula.

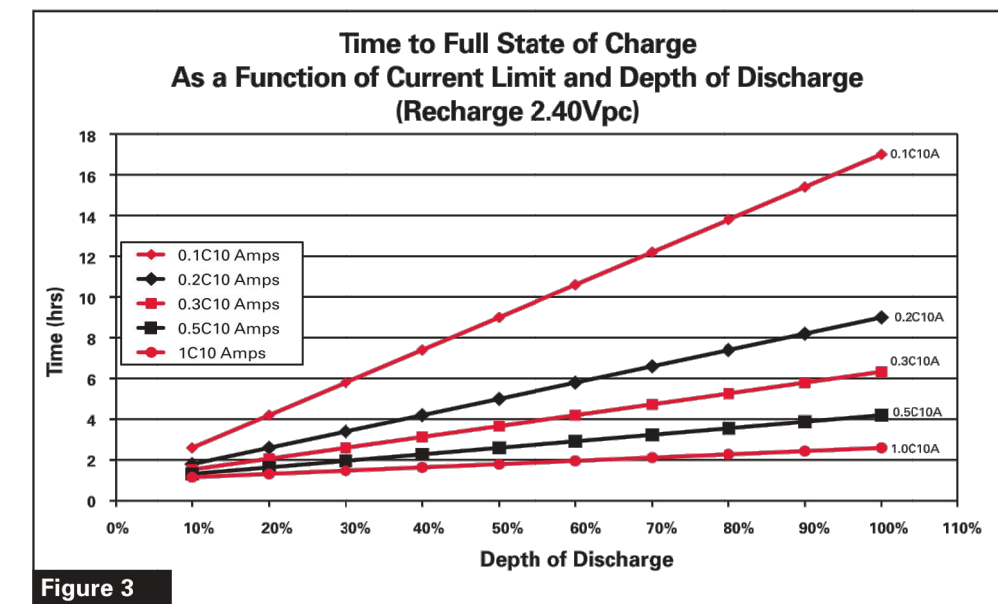
$$\text{Recharge time (hrs)} = \frac{(\text{discharged Ah} * 0.8) / \text{recharge current limit}}{2} + 1$$

Example

PowerSafe SBS 190F discharge to 80% depth of discharge removes 152Ah. With a current limit of 0.5C10 A (95 Amps), the time to recharge the battery is:

$$\begin{aligned} \text{Time (hrs)} &= \frac{(152 * 0.8) / 95}{2} + 1 \\ &= \frac{121.6 / 95}{2} + 1 \\ &= 1.28 * 2 + 1 \\ &= 2.56 + 1 \\ &= 3.56 \text{hrs} \end{aligned}$$

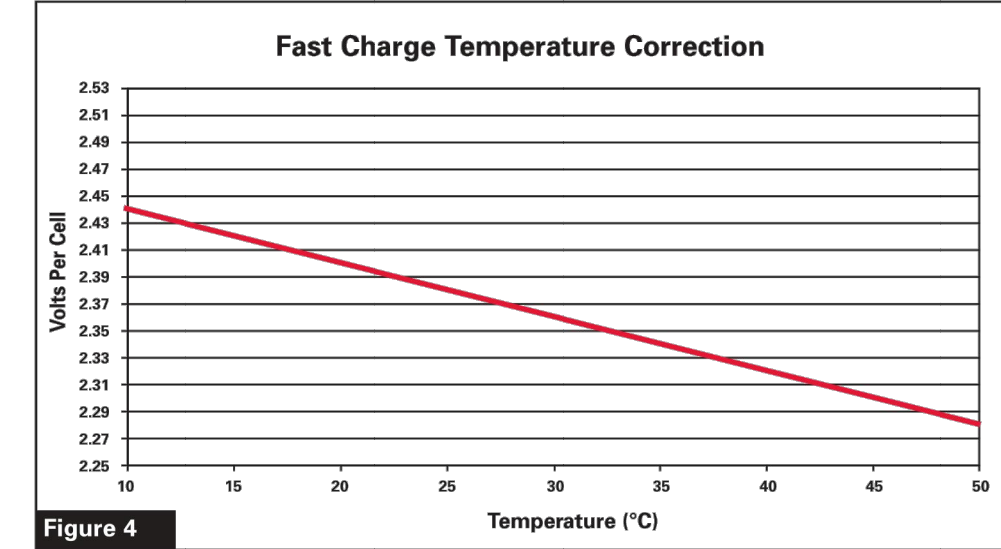
Indication of time to full state of charge using the above formula for various depths of discharge and current limits is shown in figure 3.



The time to reach full state of charge is influenced by battery temperature and charge voltage during the recharge.

1) Where Ah counting is used to control the recharge (i.e. 103% of discharged Ah is returned) the battery voltage can be maintained at a constant 2.40 Volts/cell provided that the battery temperature is controlled at or below +50°C discharged Ah returned.

2) Where time formula recharge is used, temperature compensation for charge voltage should be applied at the rates shown in figure 4.



Where rectifier voltage cannot be adjusted to values >2.40 Volts/cell to compensate for temperatures below 20°C, the time to full state of charge will be increased. For additional information and guidance on this, please contact your EnerSys® representative.

At the end of controlled recharge the battery can revert to either discharge mode, or where the battery is used to provide mains back up the voltage should be reduced to float voltage level of 2.29 Volts/cell.

2.4 Data Recording

In order for the warranty to be valid, the user must provide, by means of routine regular data logging, the following data:

- 1) The number of cycles performed and the depth of discharge ("dod") of each cycle.
- 2) The duration of each discharge and charge cycle, and the Ah in and out.
- 3) Full details of the recharge voltage/current profile for the last 50 cycles.
- 4) A full history of the ambient and battery surface temperatures, recorded at regular intervals throughout battery operation and life.
- 5) The time and date of each "event" (an "event" is defined as the start /stop of the battery discharge, the start/stop of the battery recharge, the start stop of any generator input power or other input power source, etc).

Warning

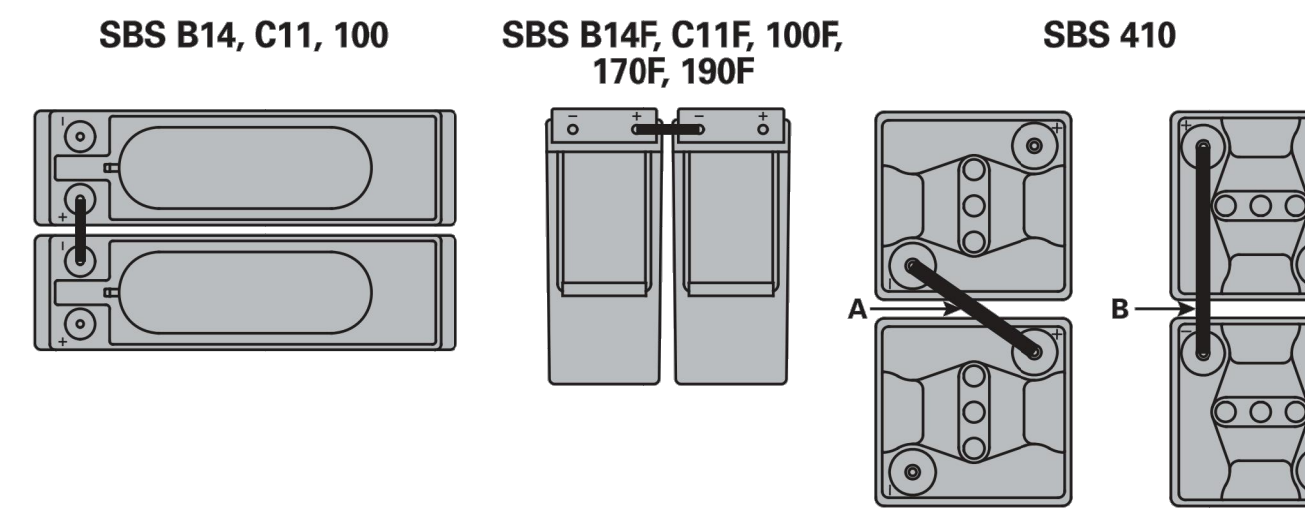
In hybrid applications it is important that the maximum temperature of the battery in operation does not exceed +50°C. Continuous charge at 2.40volts/cell will significantly reduce the battery life.

3. General Specifications

PowerSafe® SBS Battery Type	Nominal Capacity (Ah)			Nominal Dimensions				Weight kg	Weight lbs	Typical Short Circuit Current (A)	Resistance (mΩ)	Internal Terminals		
	Nominal Voltage (V)	to 1.80Vpc @ 20°C	to 1.75Vpc @ 77°F	8 hr rate Length mm	in	Width mm	in						Height mm	in
SBS B14	12	62	62	280	11.0	97	3.8	264	10.4	19.1	42.0	1800	7.0	M8 F
SBS B14F	12	62	62	303	11.9	97	3.8	264	10.4	19.1	42.0	1800	7.0	M6 M
SBS C11	12	92	91	395	15.6	105	4.1	264	10.4	28.0	61.6	2300	5.5	M8 F
SBS C11F	12	92	91	417	16.4	105	4.1	256	10.1	28.0	61.6	2300	5.5	M6 M
SBS 100	12	100	100	395	15.6	108	4.3	287	11.3	32.6	71.9	2210	5.6	M8 F
SBS 100F	12	100	100	395	15.6	108	4.3	287	11.3	32.6	71.9	2210	5.6	M6 M
SBS 170F	12	170	170	561	22.1	125	4.9	283	11.1	52.5	115.7	3400	4.0	M6 M
SBS 190F	12	190	190	561	22.1	125	4.9	316	12.4	60.0	132.3	3800	3.3	M6 M
SBS 410	2	410	410	200	7.9	208	8.2	239	9.4	23.2	51.1	4725	1.3	M8 M

4. Connectors

PowerSafe® SBS Battery Type	Connector Part No.
SBS B14, C11	2205-8919
SBS B14F, C11F	2205-8891
SBS 100	2205-8750
SBS 100F	2205-8749
SBS 170F & 190F	2205-8769
SBS 410	2205-9887 (A)
SBS 410	2205-8865 (B)



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 PLEASANTON, CA 94588

TOWER ENGINEERING PROFESSIONALS
 4710 E ELWOOD ST, STE 9
 PHOENIX, AZ 85040
 OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
 300189

BU #: 877196
 101 AUTO REPAIR

13145 MURPHY AVE
 SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
 TO 50'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
3	11/17/22	KRS	CONSTRUCTION	JFJ
4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ
7	01/02/24	TWH	CONSTRUCTION	JTC

REGISTERED PROFESSIONAL ENGINEER
 STEPHEN BUNTING
 91898
 Stephen E. Bunting
 STATE OF CALIFORNIA

01/02/24

Stephen Bunting P.E.
 Professional Engineer License: #91898

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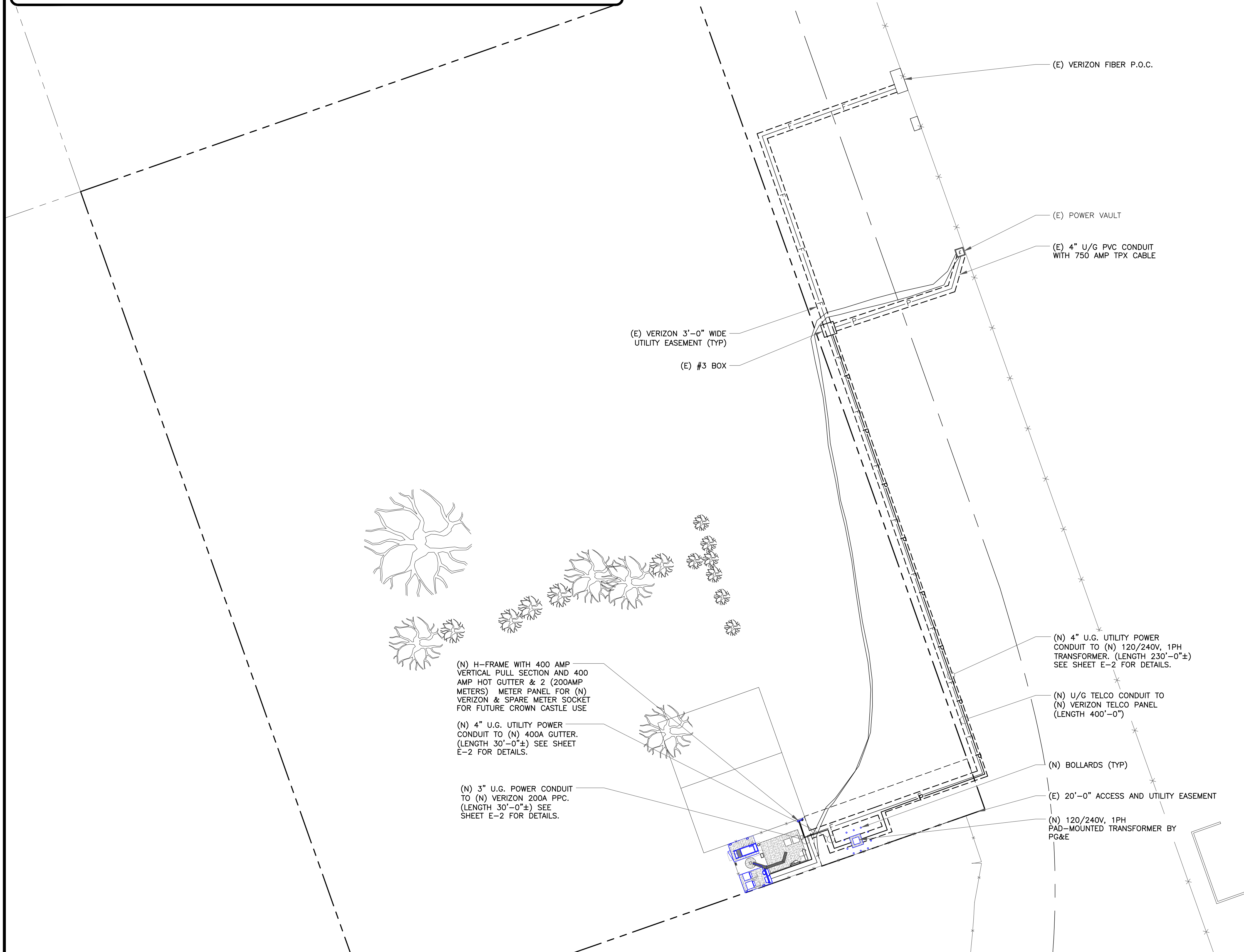
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REVISION:

7

ELECTRICAL DETAILS NOTES:

- EXISTING EQUIPMENT LAYOUT WAS MADE USING INFORMATION PROVIDED BY CROWN CASTLE. CONTRACTOR TO VERIFY ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR IS TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.
- CONTRACTOR TO ENSURE THAT ALL T-MOBILE EQUIPMENT IS INSTALLED INSIDE T-MOBILE'S LEASE AREA, INCLUDING BUT NOT LIMITED TO, EQUIPMENT CABINETS, UTILITY CABINETS, H-FRAMES, ETC.
- CONTRACTOR TO VERIFY THAT ALL T-MOBILE EQUIPMENT IS INSTALLED TO MEET THE WORKING CLEARANCE REQUIREMENTS OF NEC 110.26



1 OVERALL ROUTING PLAN
 SCALE: 1"=20'-0" (FULL SIZE)
 1"=40'-0" (11x17)

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 PLEASANTON, CA 94588

TOWER ENGINEERING PROFESSIONALS
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 PHOENIX, AZ 85040
 OFFICE: (480) 285-0036

VERIZON SITE NUMBER:
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101 AUTO REPAIR

13145 MURPHY AVE
 SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
 TO 50'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
2	08/31/22	ORG	CONSTRUCTION	JFJ
3	11/17/22	KRS	CONSTRUCTION	JFJ
4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ



06/30/23

Mark Quakenbush, P.E.
 Professional Engineer License: #23287

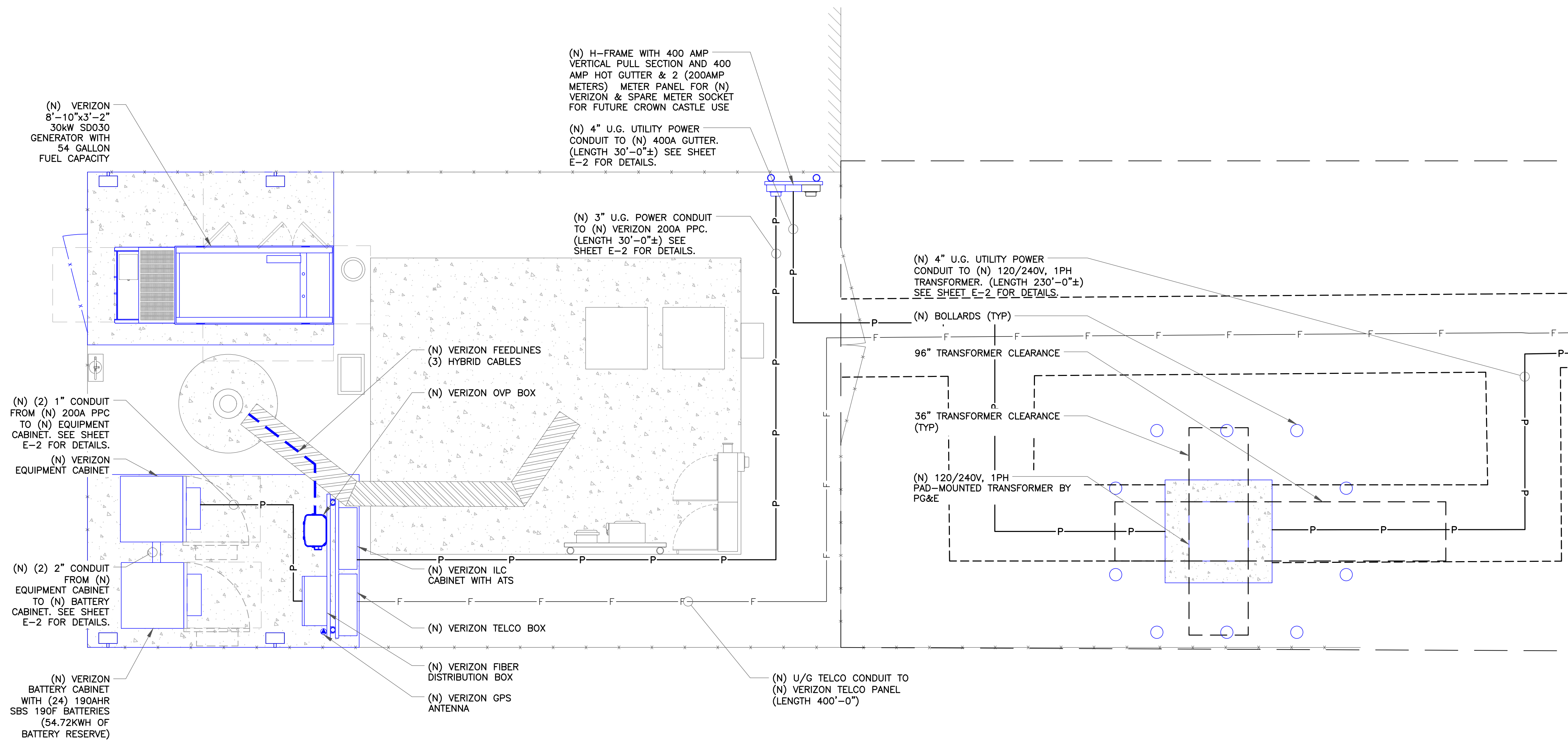
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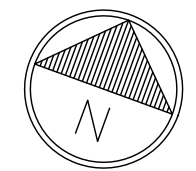
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- CONTRACTOR TO VERIFY THAT ALL T-MOBILE EQUIPMENT IS INSTALLED TO MEET THE WORKING CLEARANCE REQUIREMENTS OF NEC 110.26

NOTE:
GENERATOR ENCLOSURE WILL BE PROVIDED BY THE GENERATOR MANUFACTURER FOR WEATHER PROTECTION (SEE SHEET C-5.6). ENCLOSURE WILL ENCLOSE THE GENERATOR ONLY PER THE MANUFACTURER STANDARDS. NO OTHER EQUIPMENT WILL BE ENCLOSED BY THE GENERATOR ENCLOSURE.



1 PROPOSED ROUTING PLAN
SCALE: 3/4"=1'-0" (FULL SIZE)
3/8"=1'-0" (11x17)



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7	01/02/24	TWH	CONSTRUCTION	JTC

01/02/24

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SHEET NUMBER: **E-1.2** REVISION: **7**

ELECTRICAL DETAILS NOTES:

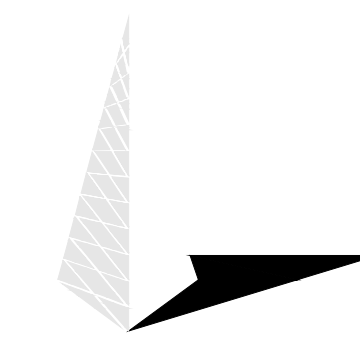
1. EXISTING EQUIPMENT LAYOUT WAS MADE USING INFORMATION PROVIDED BY CROWN CASTLE. CONTRACTOR TO VERIFY ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR IS TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.
2. CONTRACTOR TO ENSURE THAT ALL T-MOBILE EQUIPMENT IS INSTALLED INSIDE T-MOBILE'S LEASE AREA, INCLUDING BUT NOT LIMITED TO, EQUIPMENT CABINETS, UTILITY CABINETS, H-FRAMES, ETC.
3. CONTRACTOR TO VERIFY THAT ALL T-MOBILE EQUIPMENT IS INSTALLED TO MEET THE WORKING CLEARANCE REQUIREMENTS OF NEC 110.26
4. CONTRACTOR TO VERIFY CONDITION AND LOCATION OF ALL EXISTING GROUNDING EQUIPMENT PRIOR TO CONSTRUCTION. TEP DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, GROUND RINGS, GROUND RODS, AND GROUND BARS.
5. PROPOSED UTILITY TRANSFORMER GROUNDING TO BE SIZED AND INSTALLED PER PACIFIC GAS & ELECTRIC STANDARDS.

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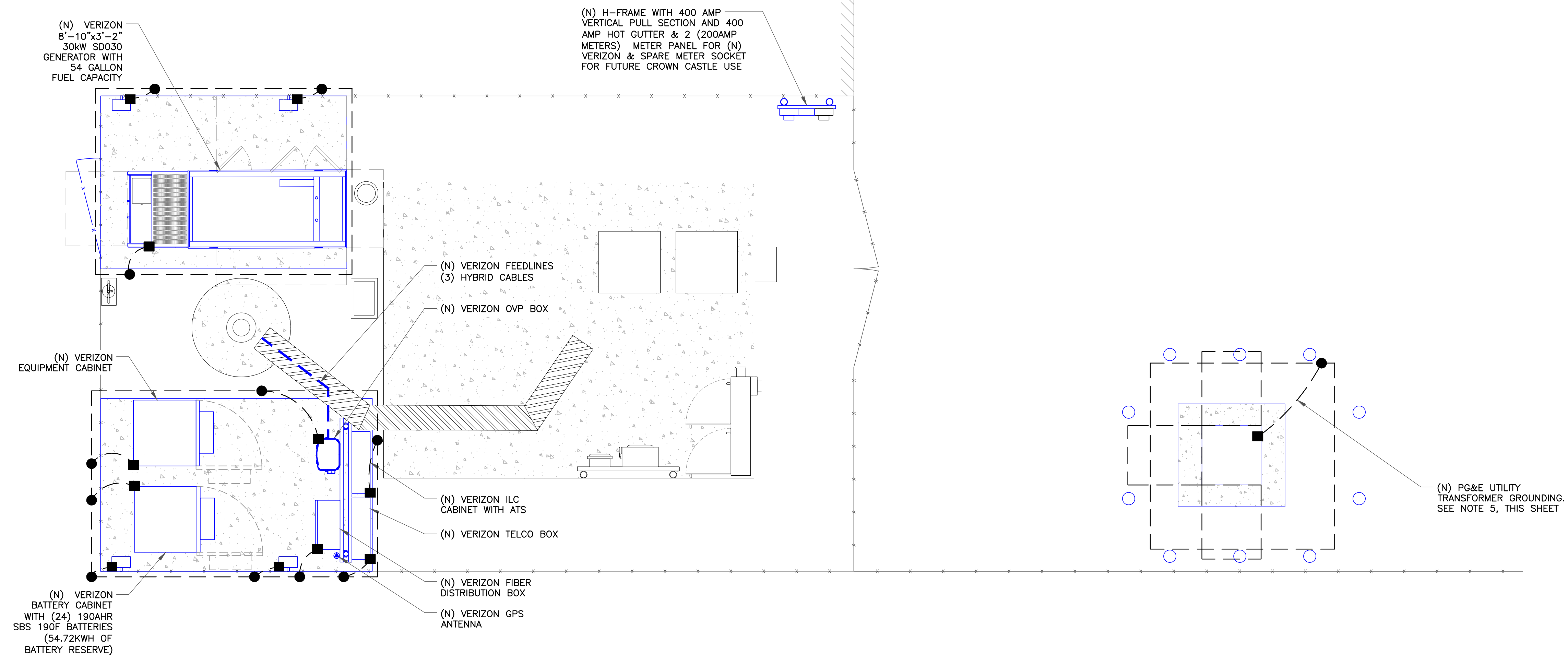
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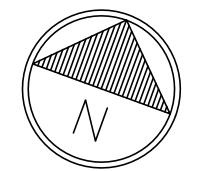
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4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ



LEGEND

■	MECHANICAL CONNECTION
●	EXOTHERMIC CONNECTION
□	ANTENNA GROUND BAR
▭	MASTER GROUND BAR

1 PROPOSED GROUNDING PLAN
SCALE: 3/4"=1'-0" (FULL SIZE)
3/8"=1'-0" (11x17)



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Professional Engineer License: #23287

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SHEET NUMBER: **E-1.3** REVISION: **6**

AC POWER PANEL (PROPOSED)											
120/240 VOLTS 1 PHASE			3 WIRE SURFACE MOUNTED				200A, 2 POLE MAIN BREAKER				
NO.	LOAD SERVED	ØA VA	ØB VA	AMP/ POLE	L1	L2	AMP/ POLE	ØA VA	ØB VA	LOAD SERVED	NO.
1	RECEPTACLE	180	-	20/1	830	-	20/1	650	-	BATTERY CHARGER	2
3	LIGHT	-	300	20/1	-	1300	20/1	-	1000	HEATER	4
5	RECTIFIER	1000	-	30/2	1000	-	30/2	0	-	SURGE SUPPRESSOR	6
7		-	1000		-	1000		-	0		-
9	RECTIFIER	1000	-	30/2	2000	-	30/2	1000	-	RECTIFIER	10
11		-	1000		-	2000		-	1000		-
13	RECTIFIER	1000	-	30/2	2000	-	30/2	1000	-	RECTIFIER	14
15		-	1000		-	2000		-	1000		-
17	RECTIFIER	1000	-	30/2	2000	-	30/2	1000	-	RECTIFIER	18
19		-	1000		-	2000		-	1000		-
21	BLANK	-	-	-	1000	-	30/2	1000	-	RECTIFIER	22
23	BLANK	-	-	-	-	1000	-	-	-	RECTIFIER	24
25	BLANK	-	-	-	-	-	-	-	-	BLANK	26
27	BLANK	-	-	-	-	-	-	-	-	BLANK	28
29	BLANK	-	-	-	-	-	-	-	-	BLANK	30
31	BLANK	-	-	-	-	-	-	-	-	BLANK	32
33	BLANK	-	-	-	-	-	-	-	-	BLANK	34
35	BLANK	-	-	-	-	-	-	-	-	BLANK	36
37	BLANK	-	-	-	-	-	-	-	-	BLANK	38
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41	BLANK	-	-	-	-	-	-	-	-	BLANK	42
PHASE TOTALS (VA):					8830	9300					
CURRENT PER PHASE (A):					73.6	77.5					
PANEL TOTAL (VA):					18130						
PANEL TOTAL x 125% (VA):					22130						
TOTAL LOAD FOR GEN OPERATION (kVA)					18.1						

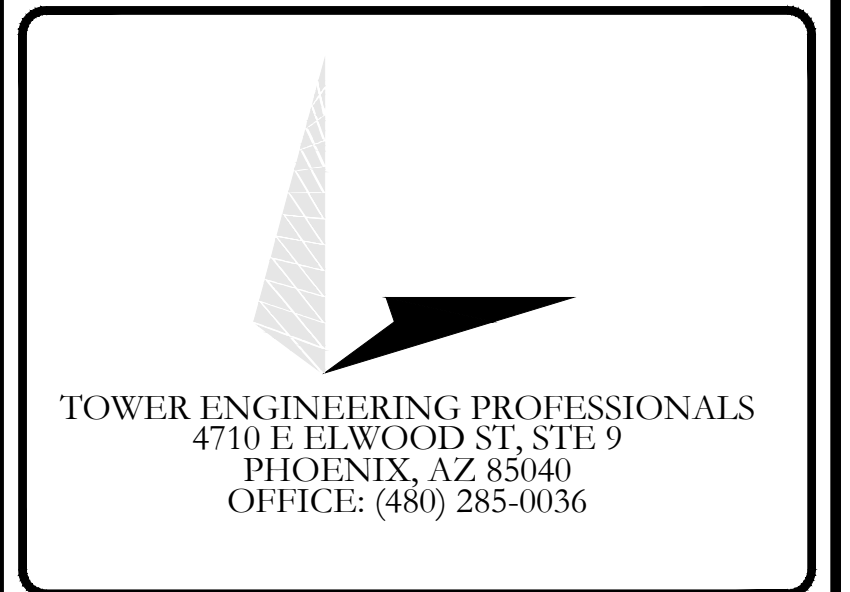
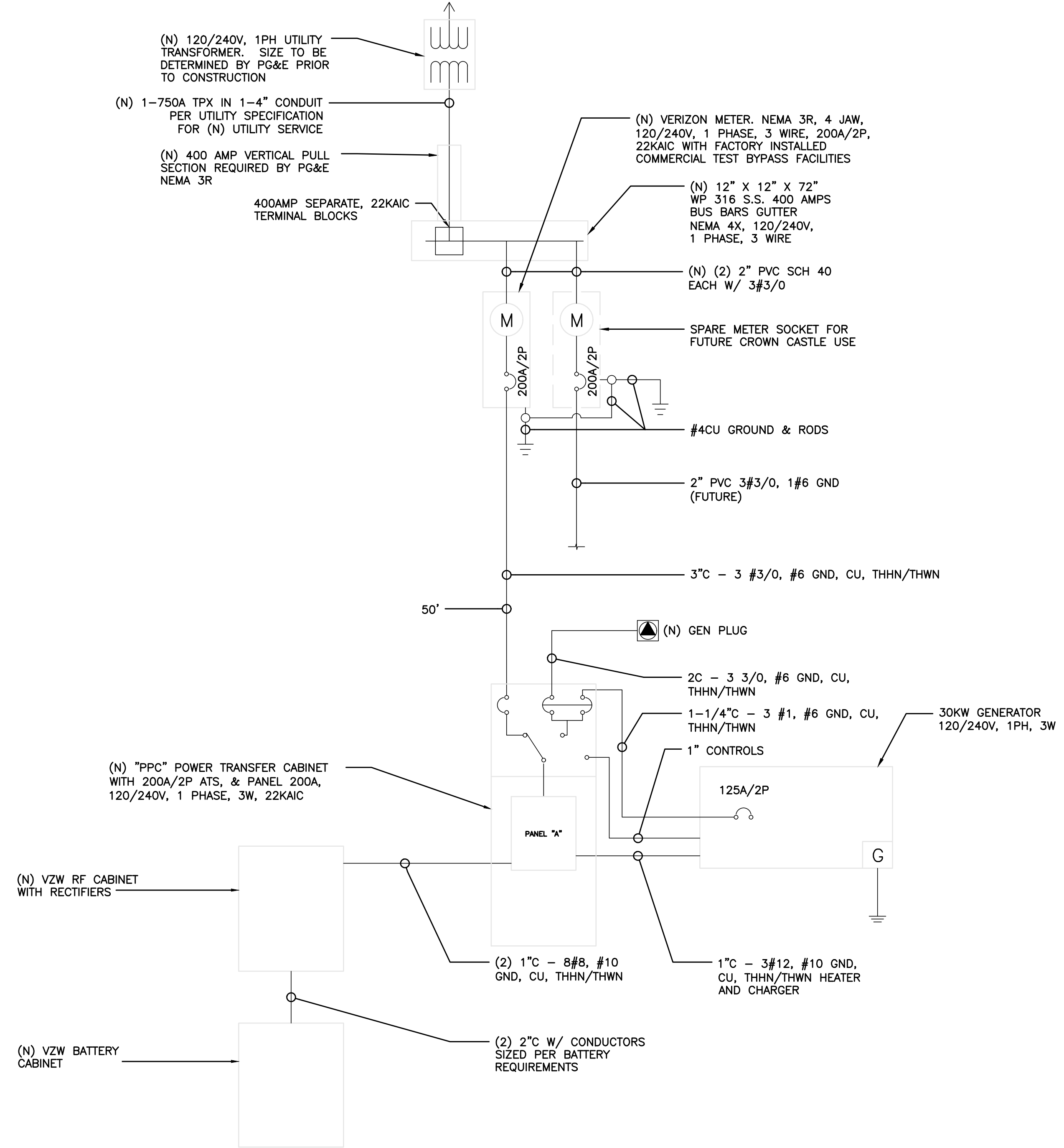
DC -48V FEEDER CABLING CHART			
CALCULATIONS ARE BASE ON WORST CASE FULL LOAD AMPS AT 104A -48VDC, NOT EXCEEDING 3% VOLTAGE DROP. IF FIELD CONDITIONS ARE DIFFERENT THAN INDICATED, CONTACT ENGINEER FOR REVISED CALCULATIONS.			
DISTANCE FROM FUEL CELL TO EQUIP. CABINET.	-48V, DC SINGLE CABLE	-48V, DC PARALLEL CABLE	CONDUIT SIZE
1'-70'	1-#1/0 CU. AWG		1-1/4"
71'-90'	1-#2/0 CU. AWG		1-1/2"
91'-110'	1-#3/0 CU. AWG		1-1/2"
111'-140'	1-#4/0 CU. AWG		2"
141'-175'		2-#2/0 CU. AWG	2"

NOTE:
#6 COPPER WIRE AND GREATER SHALL BE (COPPER) THWN WIRE OR (COPPER) XHHW.

NOTE:
PRIOR TO RUNNING CONDUIT ROUTE - CONTRACTOR SHALL CONTACT THE VERIZON PROJECT MANAGER AND VERIFY THE EQUIPMENT CABINET LAYOUT CONFIGURATION AND ROUTE CONDUITS ACCORDINGLY.

NOTE:
PRE-CONSTRUCTION MEETING AND ELECTRICAL EASEMENT REQUIRED.

NOTE:
CONTRACTOR SHALL TAG EACH CIRCUIT CONDUCTOR AT EACH J-BOX, OUTLET, SWITCH, ETC. WITH THE CIRCUITS IDENTIFICATION.



VERIZON SITE NUMBER:
300189

BU #: 877196
101 AUTO REPAIR

13145 MURPHY AVE
SAN MARTIN, CA 95046

EXISTING 35'-0" MODIFIED
TO 50'-0" MONOPOLE

ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
2	08/31/22	ORG	CONSTRUCTION	JFJ
3	11/17/22	KRS	CONSTRUCTION	JFJ
4	05/19/23	KBA	CONSTRUCTION	JFJ
5	06/16/23	GBP	CONSTRUCTION	JFJ
6	06/30/23	GBP	CONSTRUCTION	JFJ

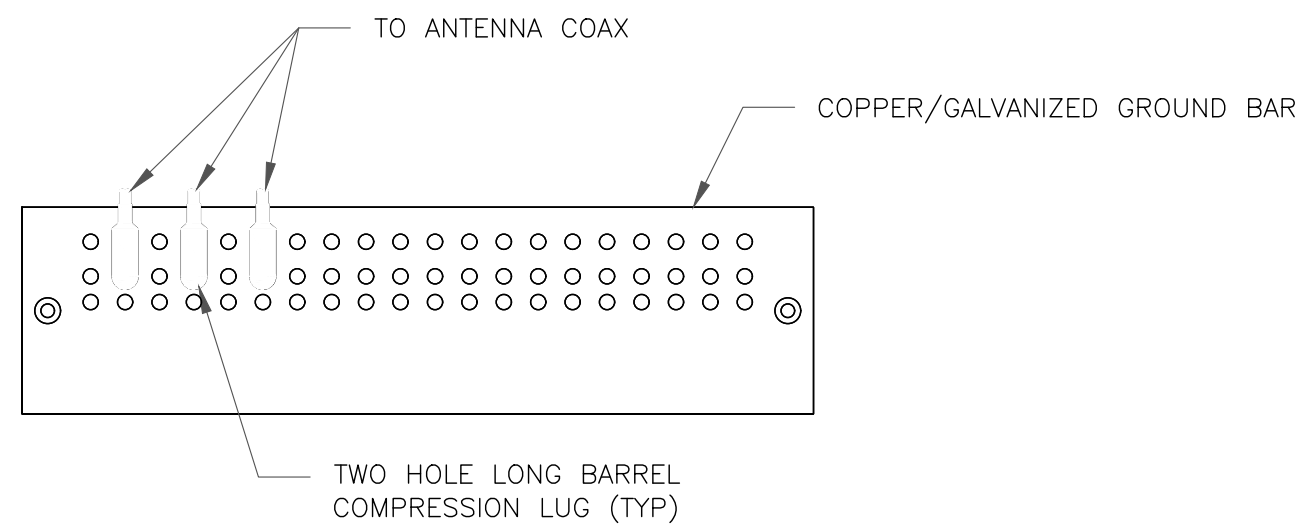


06/30/23

Mark Quakenbush, P.E.
Professional Engineer License: #23287

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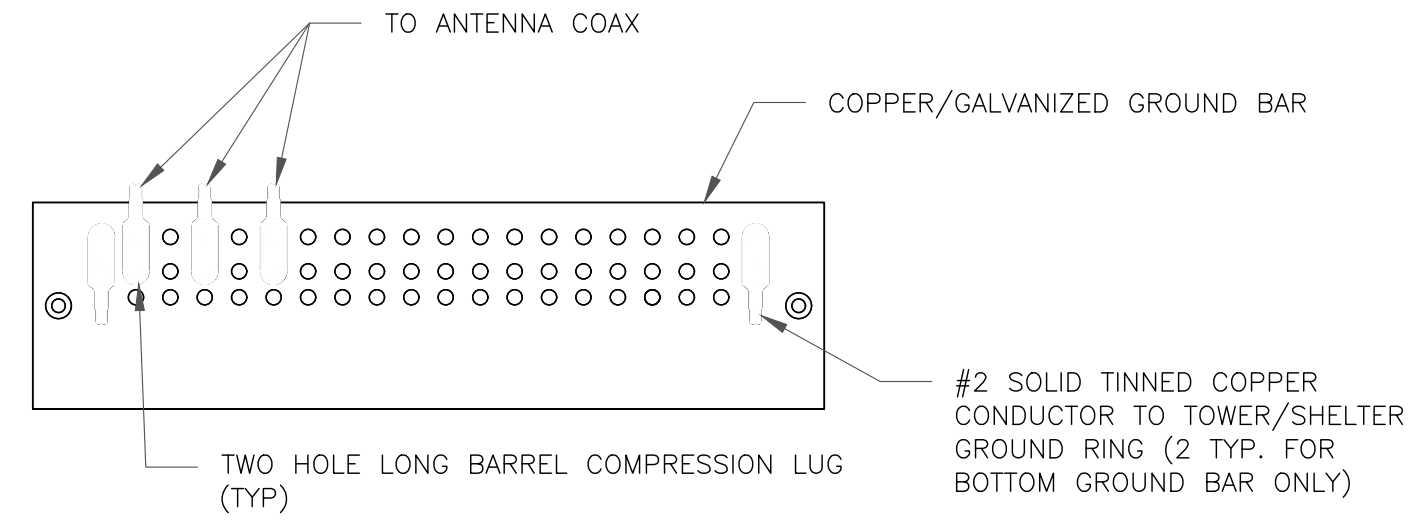
SHEET NUMBER: **E-2** REVISION: **6**



NOTES:

- DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
- EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
- GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

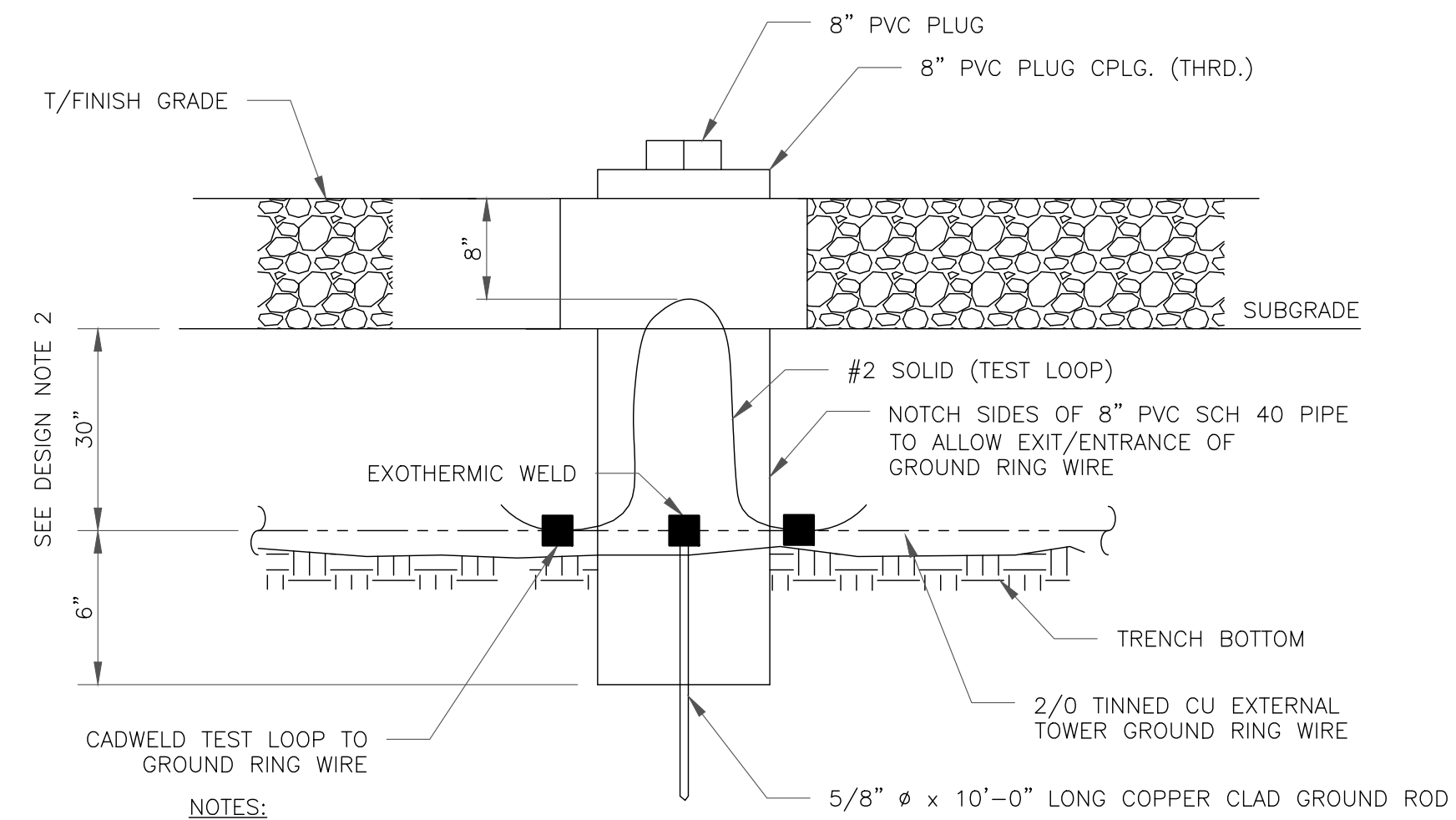
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

- EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
- GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
- GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

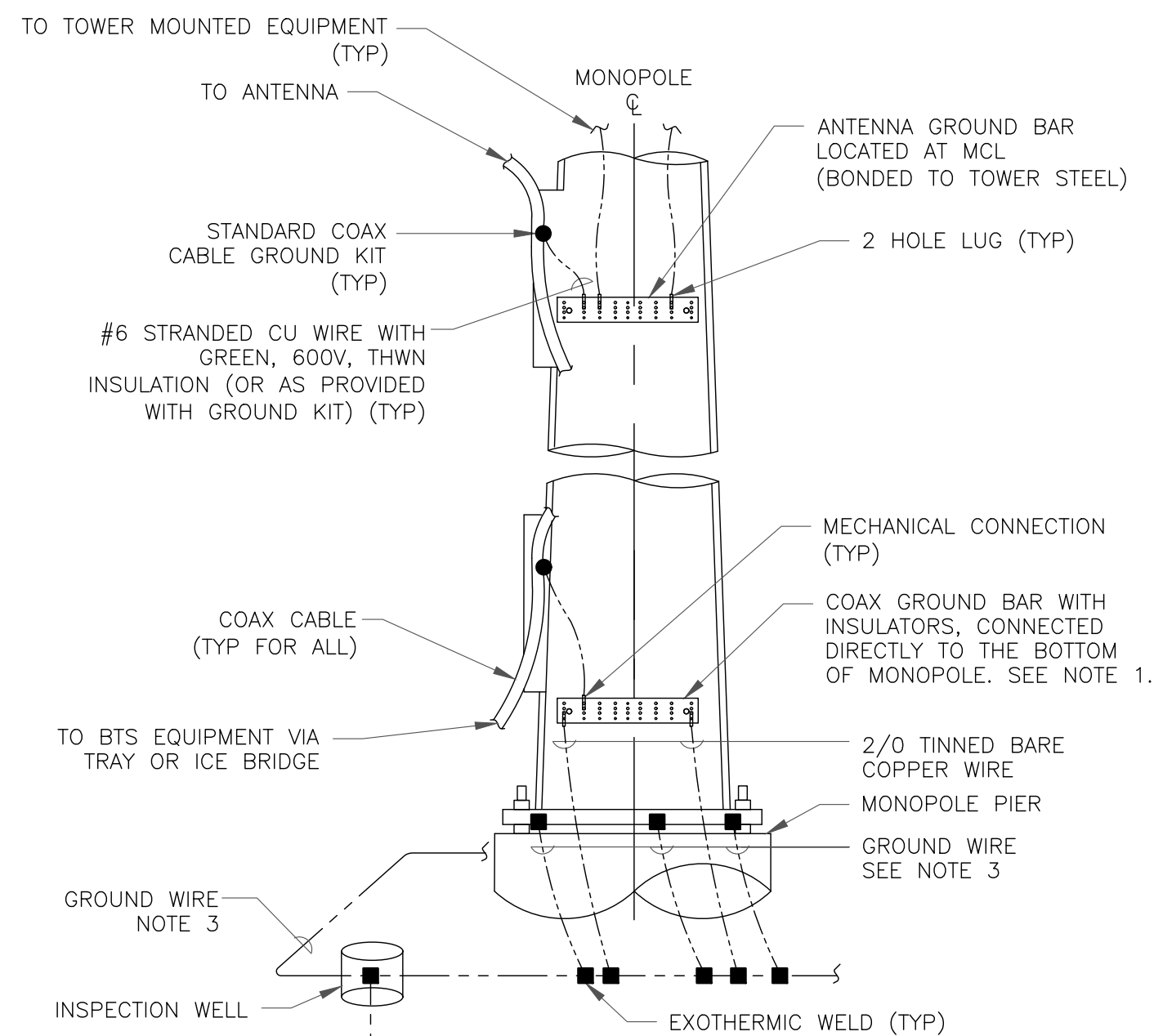
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

- GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
- GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

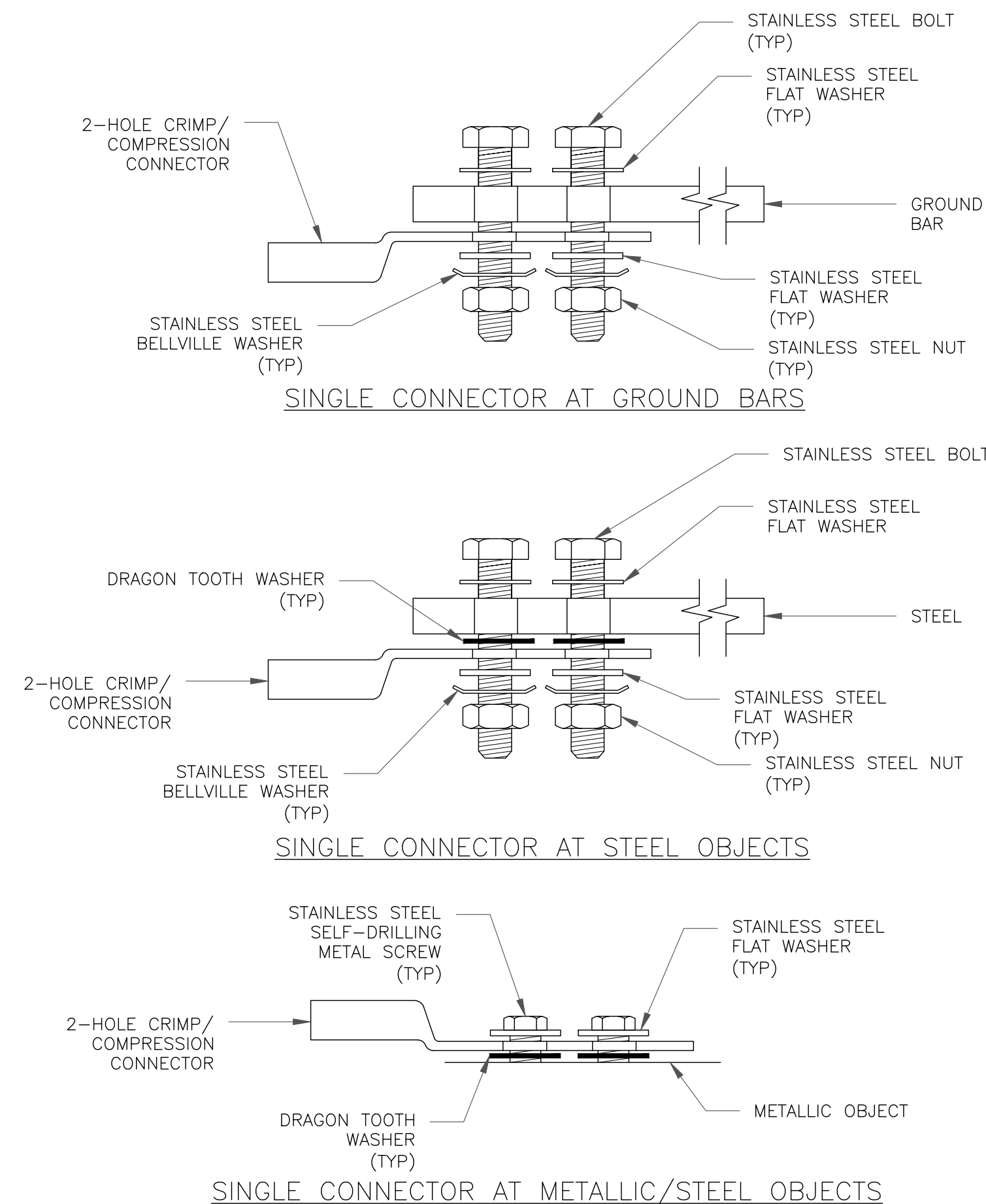
3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE



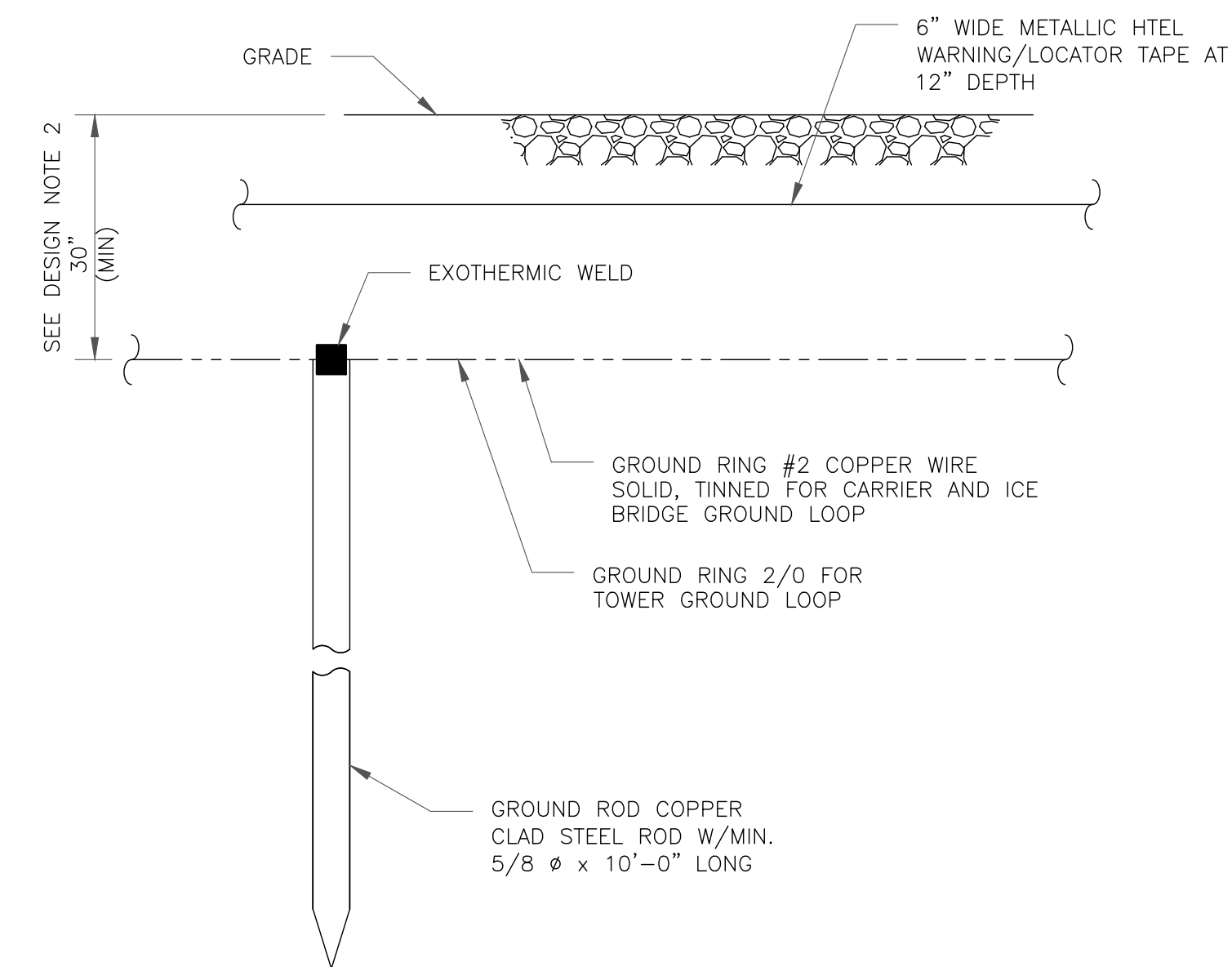
NOTES:

- NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
- ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE USA INC. TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
- ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE



5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

- GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
- GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

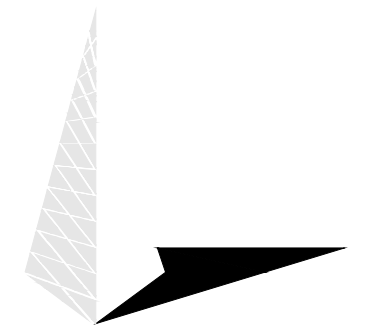
6 GROUND ROD DETAIL
SCALE: NOT TO SCALE



3245 158TH AVENUE MS 231
BELLEVUE, WA 98008



4301 HACIENDA DRIVE, SUITE 410
PLEASANTON, CA 94588



TOWER ENGINEERING PROFESSIONALS
4710 E ELWOOD ST, STE 9
PHOENIX, AZ 85040
OFFICE: (480) 285-0036

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EXISTING 35'-0" MODIFIED
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B	10/21/21	GVM	PRELIMINARY	JFJ
0	03/09/22	DRS	CONSTRUCTION	JFJ



03/09/22

Mark Quakenbush, P.E.
Professional Engineer License: #23287

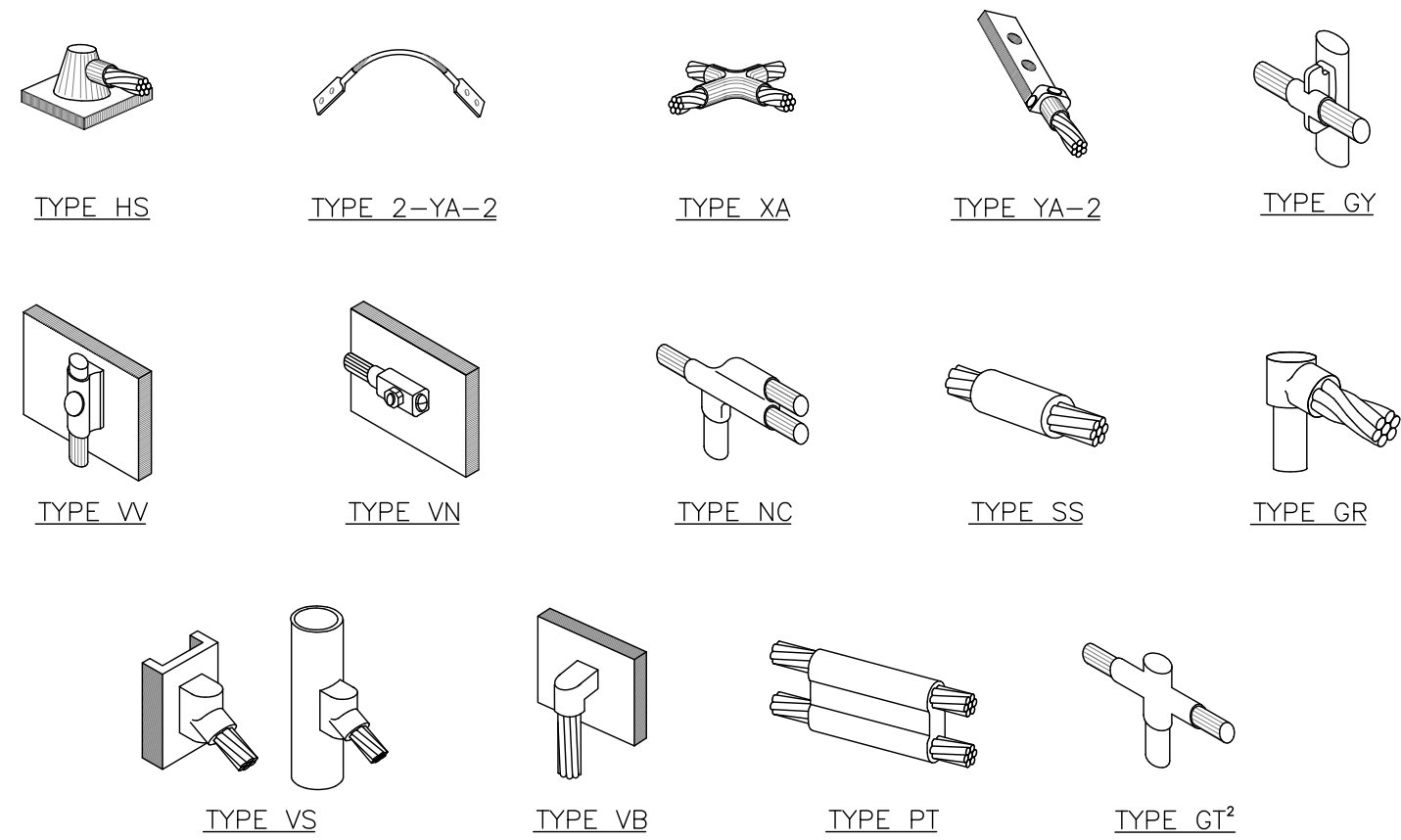
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G-1

REVISION:

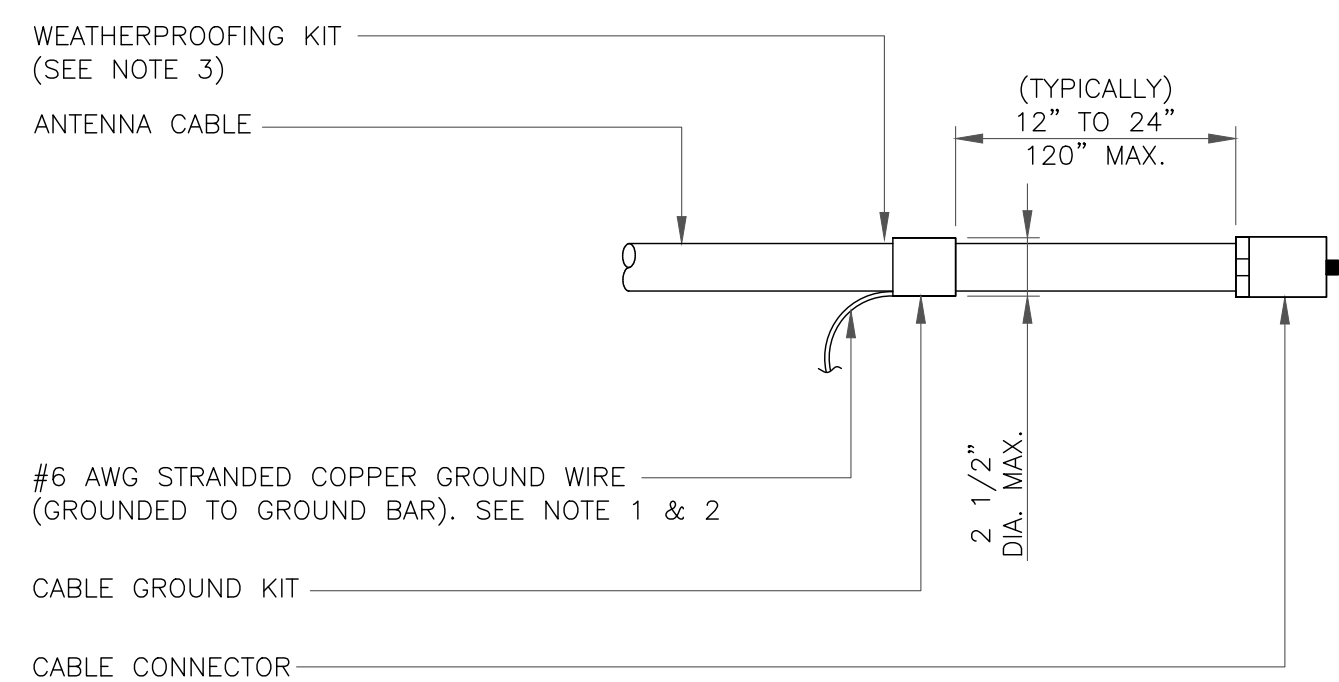
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NOTE:

1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

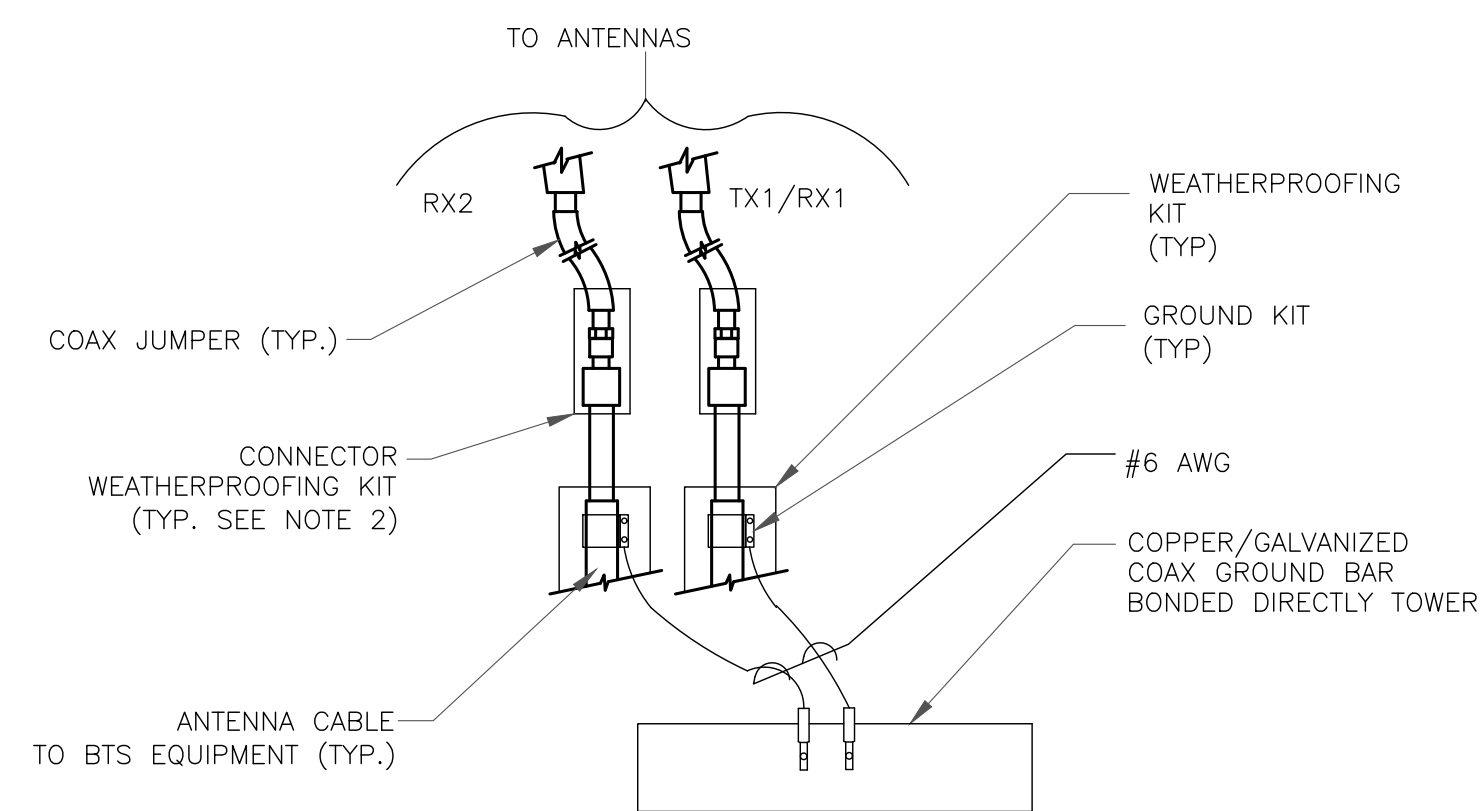
1 CADWELD GROUNDING CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

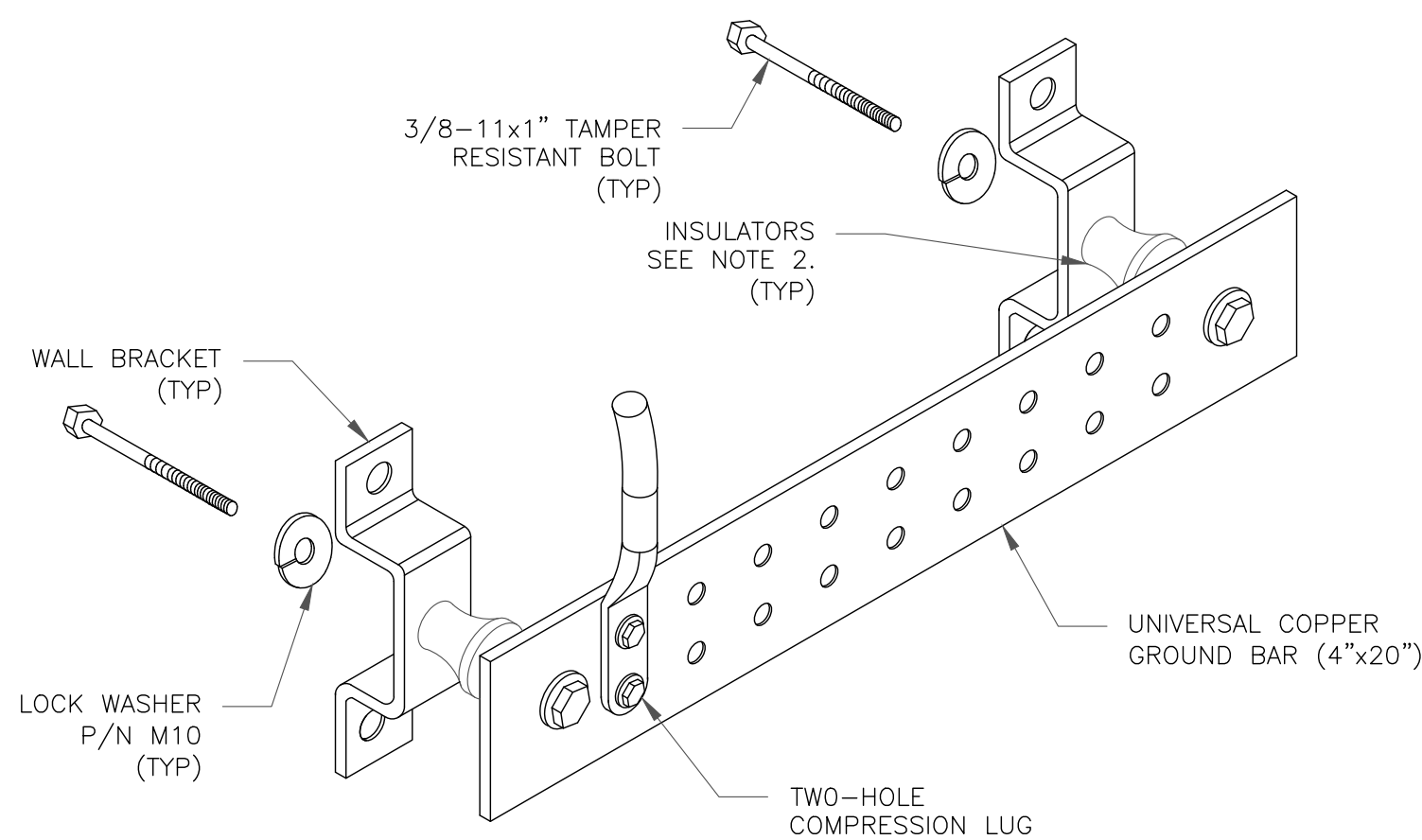
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

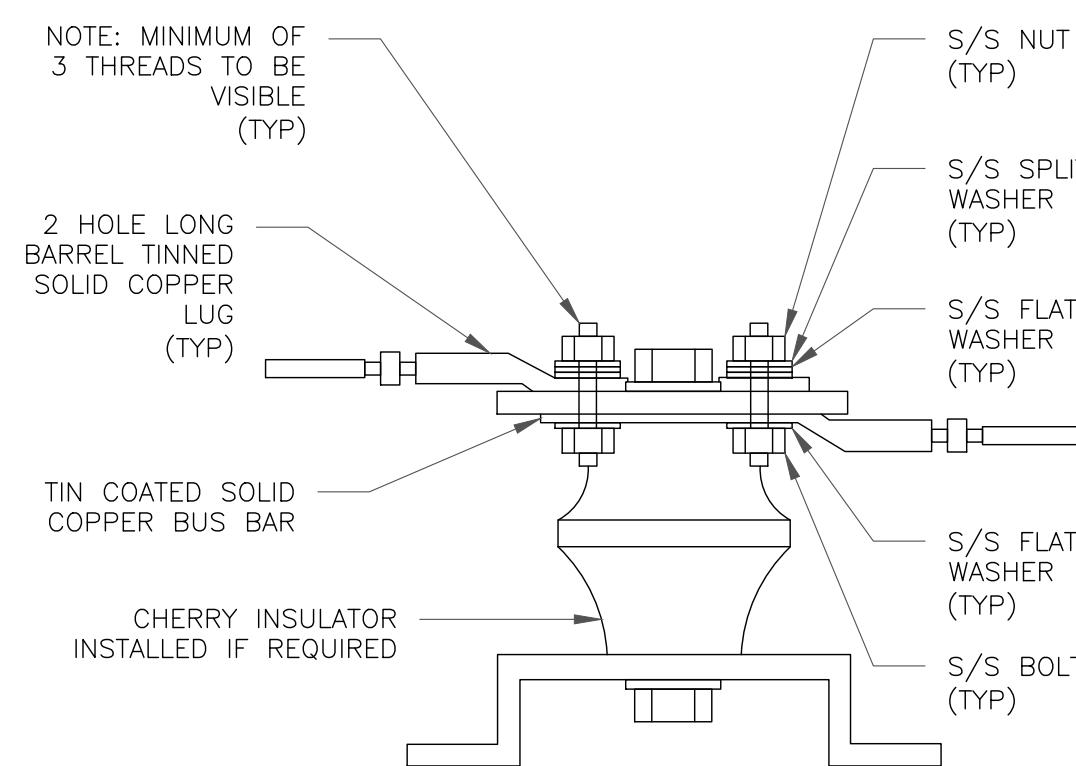
4 GROUND CABLE CONNECTION
SCALE: NOT TO SCALE



NOTES:

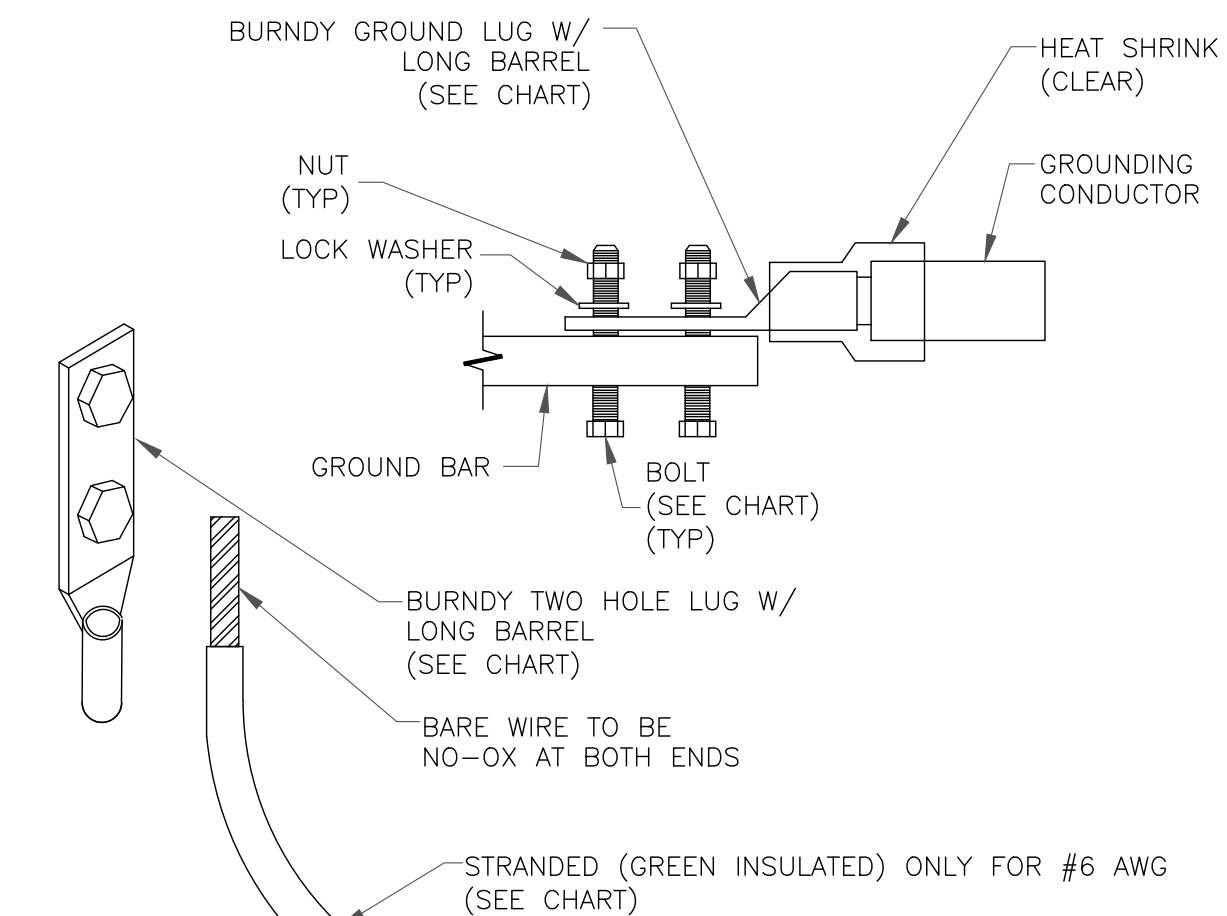
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION. CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL. USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

6 GROUND BAR DETAIL
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

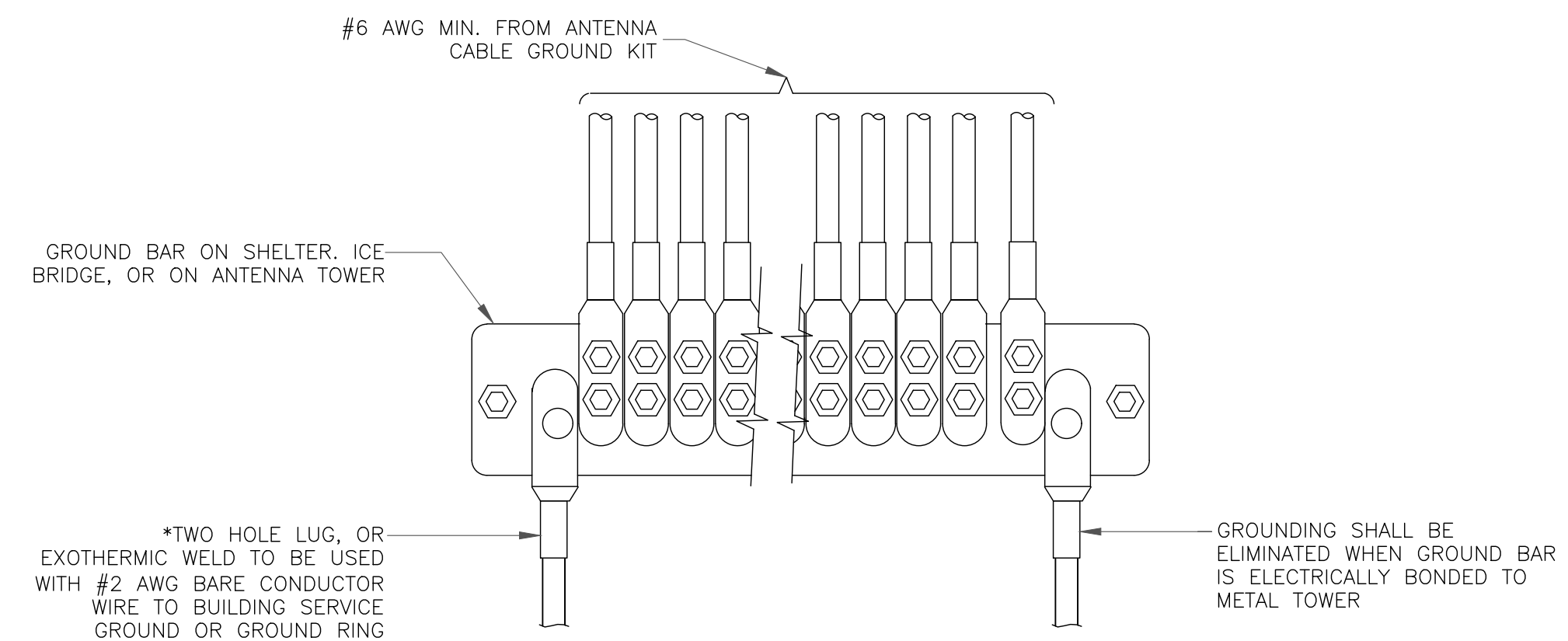
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



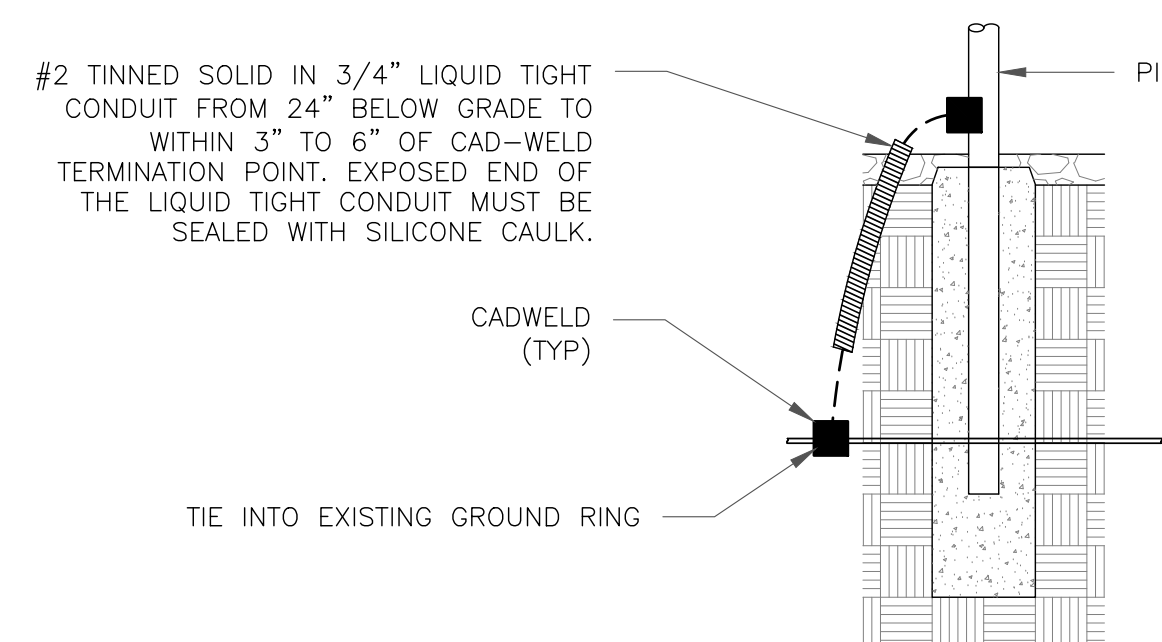
NOTES:

1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

2 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



5 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL
SCALE: NOT TO SCALE

verizon
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Professional Engineer Seal
MARK QUAKENBUSH, P.E.
ELECTRICAL ENGINEER
STATE OF CALIFORNIA
25287

03/09/22

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Professional Engineer License: #23287

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0