



SAUSALITO-MARIN CITY SANITARY DISTRICT

MARIN COUNTY, CALIFORNIA

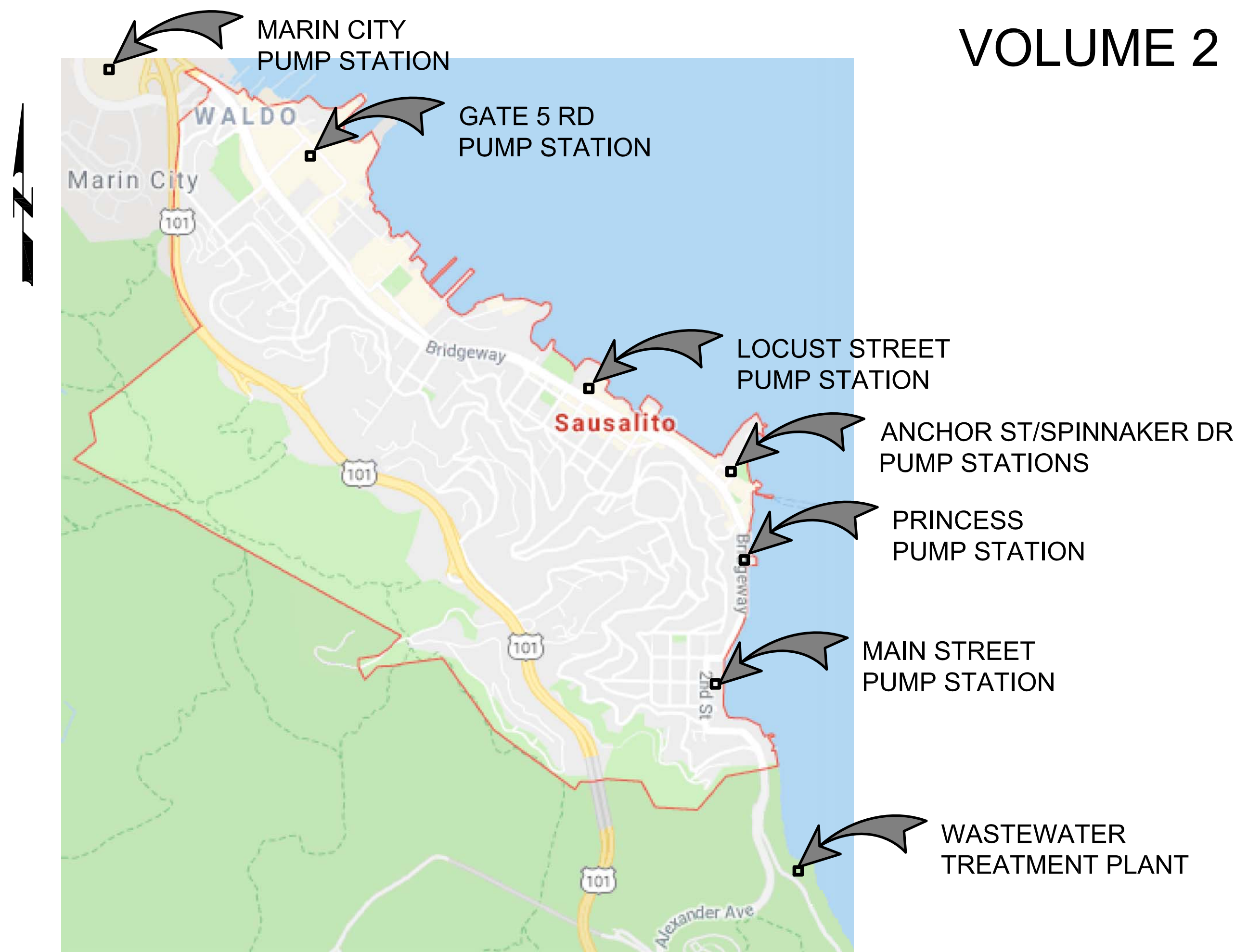
GENERATOR RELIABILITY IMPROVEMENTS PROJECT

OCTOBER 2020

VOLUME 2 OF 2 - DRAWINGS

DRAWING INDEX

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LOCATION MAP

P:\429_Main Plant Gen, Main st, Gen and Princess PS Replacement\DRAWINGS\429_G-01.dwg 10-14-20 04:25:01 PM tp

REV	DATE	BY	DESCRIPTION

DESIGNED TP
DRAWN LD
CHECKED DTN
DATE 10-13-2020



DLN ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA



SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
**COVER SHEET, LOCATION MAP
AND DRAWING INDEX**

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
DTN NO. 429
DRAWING NO.
G-1
SHEET NO.
1 OF 32

1	2	3	4	5	6	7	8	9	10	11	12	13													
CONTROL DIAGRAM SYMBOLS CONTROL TRANSFORMER, PRIMARY AND SECONDARY VOLTAGES SHOWN, SIZE AS SHOWN OR SPECIFIED CIRCUIT BREAKER, THERMAL-MAGNETIC, 3 POLE, UON, RATING IN AMPS DESIGNATES PLC INPUT TERMINATION OR CONTROL PANEL TERMINATION FUSE <p>MODIFIERS: CLF = CURRENT LIMITING FUSE DE = DUAL ELEMENT F = CLASS F</p> PUSHBUTTON, MOMENTARY CONTACT, NORMALLY OPEN PUSHBUTTON, MOMENTARY CONTACT, NORMALLY CLOSED STOP PUSHBUTTON WITH LOCKOUT CONTROL RELAY OPERATING COIL FUNCTION: CR = CONTROL RELAY U = UNLATCH L = LATCH THERMAL OVERLOAD RELAY OUTPUT CONTACTS TIMING RELAY OPERATING COIL ON/OFF/DELAY RANGE: SEC/MIN SET: SEC/MIN SELECTOR SWITCH 3 POSITION MAINTAINED CONTACT (X = CONTACTS CLOSED) INDICATING LIGHT L = LENS COLOR A = AMBER B = BLUE G = GREEN R = RED W = WHITE 2-WAY SOLENOID VALVE		CIRCUITS AND RACEWAYS RACEWAY EXPOSED RACEWAY UNDERGROUND RACEWAY CONCEALED IN CONCRETE ENCASEMENT RACEWAY TURNED TOWARD THE VIEWER RACEWAY TURNED DOWN HH23 HH: HANDHOLE, MH: MANHOLE JUNCTION BOX TERMINAL BOX RACEWAY SIZE WITH CONDUCTOR CONTENTS AND SIZES CIRCUIT HOMERUN WITH DESTINATION NOTED ICXXX INSTRUMENTATION CONDUIT CCXXX CONTROL CONDUIT P-4XX POWER CONDUIT WITH 480V CIRCUITS LP-2XX POWER CIRCUIT 240V WITH POWER SOURCE IDENTIFICATION LP-1XX POWER CIRCUIT 120V WITH POWER SOURCE IDENTIFICATION		LIGHTING FIXTURE IDENTIFICATION: NUMBER OF FIXTURES (SHOWN ONLY WHEN REQUIRED FOR CLARITY) FIXTURE TYPE REFER TO FIXTURE SCHEDULE TYPE APPLIES TO ALL FIXTURES OF THE SAME SHAPE WITHIN A ROOM OR AREA. MOUNTING: CEILING (C), RECESSED (R) POLE (PP), STANCHION (S), PENDANT (P), WALL (W). MOUNTING HEIGHT, FLOOR TO BOTTOM OF FIXTURE UON. AS HIGH AS POSSIBLE (AHAP) NUMBER OF LAMPS/LAMP WATTAGE LIGHTING FIXTURE SHAPES AND SCALE ARE REPRESENTED WHERE POSSIBLE. THE EXAMPLES SHOWN BELOW ARE TYPICAL APPLICATIONS. FLUORESCENT FIXTURE WALL MOUNTED FIXTURE EMERGENCY LIGHTING UNIT SELF CONTAINED		WIRING DEVICES SWITCHES: UNLESS OTHERWISE SPECIFIED, ALL SWITCHES ARE WALL MOUNTED TOGGLE SWITCH, SINGLE POLE, 20 AMP GANGED SWITCHES IN COMMON BOX WITH COMMON WALL PLATE SUPERSCRIT INDICATES CIRCUIT CONTROLLED: a, b, c, ETC. MAY BE COMBINED WITH CIRCUIT NUMBER: 1a, 4b, ETC. SUBSCRIPT MODIFIER INDICATES: 2 = DOUBLE POLE 3 = THREE WAY 4 = FOUR WAY K = KEY OPERATED MC = MOMENTARY CONTACT, THREE POSITION MS = MANUAL (MOTOR) STARTER OR SWITCH R = RHEOSTAT (DIMMER, SPEED CONTROL) WP = WEATHER PROOF RECEPTACLES: UNLESS OTHERWISE SPECIFIED, ALL RECEPTACLES ARE 125 VOLT, SINGLE PHASE, STRAIGHT BLADE, NON LOCKING, GROUNDING STYLE. DUPLEX RECEPTACLE, 20 AMP, 3 WIRE. MODIFIERS: WP = WEATHER PROOF GFI = GROUND FAULT CIRCUIT INTERRUPTER H = HAZARDOUS AREA-EXPLOSION PROOF SPECIAL RECEPTACLE TWIST LOCK RECEPTACLE		ONE-LINE DIAGRAM SYMBOLS SIZE 2 COMBINATION FULL VOLTAGE NON-REVERSING MAGNETIC STARTER MCP SIZED BY MANUFACTURER (OVERLOAD RELAY NOT SHOWN). RV = REDUCED VOLTAGE 2S2W = TWO-SPEED TWO-WINDING 2 = SIZE 2 DISCONNECT 200A 200 AMP SHOWN FUSE WITH BLOWN INDICATOR MULTI-FUNCTION ELECTRONIC METER POWER TRANSFORMER 480/277V 5.75% Z IMPEDANCE SHOWN GENERATOR. POWER RATING, FREQUENCY, VOLTAGE. 600KW 60HZ 480V 3ø, 4W																	
GENERAL NOTES																									
1. THIS DRAWING IS GENERAL IN NATURE. SOME SYMBOLS SHOWN HERE ON MAY NOT BE USED ON THE CONTRACT DRAWINGS. 2. IDENTIFICATIONS (ID), SIZES, RATINGS, LOCATIONS AND SIMILAR INFORMATION SHOWN ASSOCIATED WITH SYMBOLS ARE OPTIONAL; EXAMPLES OF SUCH INFORMATION ARE SHOWN WITH SOME SYMBOLS FOR CLARITY. 3. THE ELECTRICAL DRAWINGS USE THE ONE-LINE DIAGRAMS AND PANEL SCHEDULES IN CONJUNCTION WITH SHOWING THE LOCATION OF THE ELECTRICAL/INSTRUMENTATION SOURCES AND LOADS/DEVICES SHOWN ON THE PLAN DRAWINGS TO DEPICT THE WORK. THE CONTRACTOR SHALL USE THESE DOCUMENTS TO DETERMINE AND PROVIDE THE NECESSARY RACEWAY AND WIRING SYSTEM FOR EACH CIRCUIT. ALL INDOOR RACEWAY SHALL BE RUN EXPOSED, AND ROUTED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED. THE TYPE OF RACEWAY AND WIRE USED SHALL BE AS SPECIFIED IN THE SPECIFICATIONS UNLESS OTHERWISE NOTED. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY PULL BOXES TO SUPPORT CONDUIT ROUTINGS AT NO ADDITIONAL COST TO THE OWNER. ALL STAINLESS STEEL CALLS OUT SHALL BE 316 SS UNLESS SPECIFY IDENTIFIED OTHERWISE. ALL PVC SCHEDULE SHALL BE SCH 80 UNLESS SPECIFIED IDENTIFIED OTHERWISE (TYP.) ALL TRENCH-PLATES SHALL BE RECESSED TO BE FLUSH WITH ASPHALT. ALL TRANSITIONS BETWEEN ROAD AND TRENCH-PLATES SHALL BE SUITABLE FOR BYCICLE TRAFFIC. 4. THE LOCATION OF THE CONTROL STATIONS SHOWN ON THE PLAN DRAWINGS ARE DIAGRAMMATIC AND THE ACTUAL LOCATION SHALL BE COORDINATED IN THE FIELD WITH THE CONSTRUCTION MANAGER. 5. THE EXACT LOCATION OF THE MOTORS AND ACCESSORIES ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THE STRUCTURAL AND MECHANICAL DRAWINGS FOR CONDUIT STUBOUT AND TERMINATION LOCATIONS. 6. ALL EQUIPMENT SHALL BE LABELED WITH NAMEPLATES. DESCRIPTION OF EQUIPMENT SHALL BE IN ACCORDANCE WITH THE ONE-LINE DIAGRAM DESCRIPTION. A LIST OF THE NAMEPLATES SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER PRIOR TO ENGRAVING. 7. UNLESS OTHERWISE NOTED, ALL CONVENIENCE OUTLETS SHALL BE MOUNTED AT 48-INCHES ABOVE FINISHED FLOOR. ALL LIGHT SWITCHES SHALL BE MOUNTED AT 54-INCHES ABOVE FINISHED FLOOR. 8. EACH CONVENIENCE OUTLET AND LIGHTING CIRCUIT SHALL BE PROVIDED WITH A #12AWG GREEN GROUNDING CONDUCTOR. 9. THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST TO DISCONNECT AND REMOVE EXISTING ELECTRICAL EQUIPMENT AS SHOWN ON THE DEMOLITION DRAWINGS. 10. ALL TYPICAL DETAILS SHALL APPLY REGARDLESS THEY ARE REFERENCED ON ANY DRAWING OR NOT. 11. FOR PACKAGED EQUIPMENT, CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S RECOMMENDED INSTALLATION AND SHALL INSTALL THEM PER APPROVED SHOP DRAWINGS. 12. FOR CLARITY, CONTROL SCHEMATIC DIAGRAMS DO NOT SHOW REQUIRED EQUIPMENT GROUNDING CONDUCTOR WHICH SHALL BE PROVIDED FOR EACH POWER CIRCUIT. 13. ALL EXPOSED CONDUITS SHALL BE PVC-COATED RIGID GALVANIZED STEEL CONDUITS, ALL ASSOCIATED CONDUIT ACCESSORIES SUCH AS FITTINGS, BOXES, CONDUITS ETC. SHALL ALSO BE PVC-COATED. 14. ALL EQUIPMENT AND ASSOCIATED INSTALLATION IN NEMA 4X AREAS SHALL BE SUITABLE FOR CLASS 1 DIV 1 OF THE CLASSIFIED HAZARDOUS LOCATIONS PER NEC. 15. ALL EQUIPMENT AND ASSOCIATED INSTALLATION IN NEMA 4X AREAS SHALL BE CORROSIVE RESISTANT WITH STAINLESS STEEL MATERIALS AND ENCLOSURES. 16. IN ADDITION TO SPECIFIC ARC FLASH LABELS GENERATED FROM THE ARC FLASH / SHORT CIRCUIT STUDY, GENERIC ARC FLASH WARNING LABELS SHALL BE PROVIDED FOR EACH OF THE ELECTRICAL EQUIPMENT, PANEL, ENCLOSURE. 17. ALL TEMPORARY, PORTABLE CABLES SHALL BE PROTECTED BY CABLE PROTECTORS AND SHALL BE ARRANGED NEATLY TO AVOID TRIPPING HAZARDS.																									
STANDARD ABBREVIATIONS																									
A AMMETER AFF ABOVE FINISHED FLOOR ATCS AUTOMATIC TRANSFER SWITCH BCW BARE COPPER WIRE C CONDUIT C.O. CONDUIT ONLY (EMPTY CONDUIT) CP CONTROL PANEL CPT CONTROL POWER TRANSFORMER CR CONTROL RELAY CT CONTACTOR (HEAVY DUTY) CU COPPER DPDT DOUBLE POLE DOUBLE THROW (E) OR EXIST. EXISTING FLA FULL LOAD AMPERE FM FIBER OPTIC MODEM FS FLOAT SWITCH FVNV FULL VOLTAGE NON-REVERSING STARTER G GROUND HP HORSE POWER HZ HERTZ KVAR REACTIVE POWER KW KILOWATT KWHR KILOWATT HOUR I/O INPUT/OUTPUT ISR INTRINSICALLY SAFE RELAY LC LOAD CENTER LOS LOCKOUT STOP MCC MOTOR CONTROL CENTER MCP MOTOR CIRCUIT PROTECTOR MF MULTI-FUNCTION METER MIN MINIMUM NC NORMALLY CLOSED NIC NOT IN CONTRACT NO NORMALLY OPEN OIT OPERATOR INTERFACE TERMINAL PAIR OR PR TWISTED, SHIELDED PAIRS PB PULL BOX PLC PROGRAMMABLE LOGIC CONTROLLER PP POWER POLE PS PUMP STATION (UON) RTD RESISTANCE THERMAL DETECTOR RTU REMOTE TERMINAL UNIT SCADA SUPERVISORY CONTROL & DATA ACQUISITION SPD SURGE PROTECTION DEVICE SSRs SOLID STATE REDUCED VOLTAGE STARTER SPDT SINGLE POLE DOUBLE THROW SWGR SWITCHGEAR TDR TIME DELAY RELAY TS TEMPERATURE SWITCH TYP TYPICAL UON UNINTERRUPTIBLE POWER SUPPLY V VOLTMETER VFD VARIABLE FREQUENCY DRIVE WP WEATHER PROOF (NEMA 4X) XFMR TRANSFORMER																									
<table border="1"> <thead> <tr> <th>NORMALLY OPEN</th> <th>NORMALLY CLOSE</th> <th>DEFINITION</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>DELAY ON COIL ENERGIZATION (ON DELAY)</td> </tr> <tr> <td></td> <td></td> <td>POSITION (LIMIT) SWITCH</td> </tr> <tr> <td></td> <td></td> <td>TEMPERATURE SWITCH</td> </tr> <tr> <td></td> <td></td> <td>PRESSURE SWITCH</td> </tr> <tr> <td></td> <td></td> <td>LEVEL SWITCH</td> </tr> </tbody> </table>		NORMALLY OPEN	NORMALLY CLOSE	DEFINITION			DELAY ON COIL ENERGIZATION (ON DELAY)			POSITION (LIMIT) SWITCH			TEMPERATURE SWITCH			PRESSURE SWITCH			LEVEL SWITCH	GROUNDING GROUND ROD WITH GROUND WELL GROUND CONNECTION, BOLTED TYPE GROUND CONNECTION, COMPRESSION TYPE GROUNDING CONDUCTOR, MINIMUM #4/0 BARE COPPER INSTRUMENT CABLE SHIELD GROUND		MISCELLANEOUS GROUND CONNECTION PROGRAMMABLE LOGIC CONTROLLER I/O TYPICAL DETAIL DESIGNATION THERMOSTAT NOTE DESIGNATION DESIGNATES EQUIPMENT OR DEVICE LOCATED AT LOAD IN THE FIELD DESIGNATES EQUIPMENT OR DEVICES LOCATED IN MCC DESIGNATES PLC WIRING TERMINAL PHOTO ELECTRIC FIRE DETECTOR IONIZATION SMOKE DETECTOR REMOVABLE POST END-OF-LINE DEVICE FIRE ALARM PULL STATION COMBINATION STROBE LIGHT/HORN REFERENCE DESIGNATION WITH DRAWING NUMBER WHERE DETAIL IS SHOWN SURGE SUPPRESSOR KIRK-KEY INTERLOCK CORROSIVE AREA CLASSIFIED HAZARDOUS AREA GENERAL PURPOSE AREA DENOTES DEMOLITION		MOTORS AND EQUIPMENT DISCONNECT SWITCH, NON-FUSED, HEAVY DUTY PADLOCKABLE, INDUSTRIAL TYPE M = MOTOR SV = SOLENOID VALVE 125 = 125HP FIELD INSTRUMENT CONTROL STATION (SEE CONTROL DIAGRAMS FOR DEVICES REQUIRED) TELEPHONE AND COMMUNICATION SYSTEMS: UNLESS OTHERWISE SPECIFIED, TELEPHONE OUTLETS SHALL BE MOUNTED AT SAME HEIGHT AS THE RECEPTACLES, VERIFY. EXTERNAL LINE OR PLANT PHONE SYSTEM OUTLET COM. ETHERNET COMMUNICATION PORT	
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REV	DATE	BY	DESCRIPTION																						

P:\429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-01.dwg 10-14-20 04:10:24 PM tp

SHEET NOTES:

① AT MAIN WWTP:

- a. ACCESS IS LIMITED DUE TO SITE CONFIGURATION. WORK SHALL BE PERFORMED IN AN OPERATING TREATMENT PLANT. CONTRACTOR SHALL PLAN AND COORDINATE WITH THE DISTRICT IN ADVANCE TO ENSURE PLANT OPERATIONS ARE NOT IMPACTED DURING CONSTRUCTION.
- b. CONTRACTOR SHALL COORDINATE WITH THE DISTRICT ON STAGING OF THE DISTRICT'S FRONT LOADER AND SLUDGE HAULING OPERATIONS DURING CONSTRUCTION.
- c. A BACKUP GENERATOR IS REQUIRED AT ALL TIMES. CONTRACTOR MUST PROVIDE 2 WEEKS ADVANCE NOTICE FOR ALL PLANT SHUTDOWNS REQUIRED TO CONNECT/DISCONNECT A BACKUP GENERATOR. PLANT SHUTDOWNS MAY BE LIMITED TO 2 HOURS AND MUST BE PERFORMED DURING DRY WEATHER. PERFORMING WORK DURING WET WEATHER MAY RESULT IN CONSTRUCTION DELAYS DUE TO HIGH WET WEATHER FLOW RATES. WET WEATHER DELAYS SHALL BE ACCOMMODATED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- d. COORDINATION WITH THE DISTRICT AND SUBMITTAL OF WORK PLANS ARE REQUIRED FOR ALL SHUTDOWN AND TIE-INS.

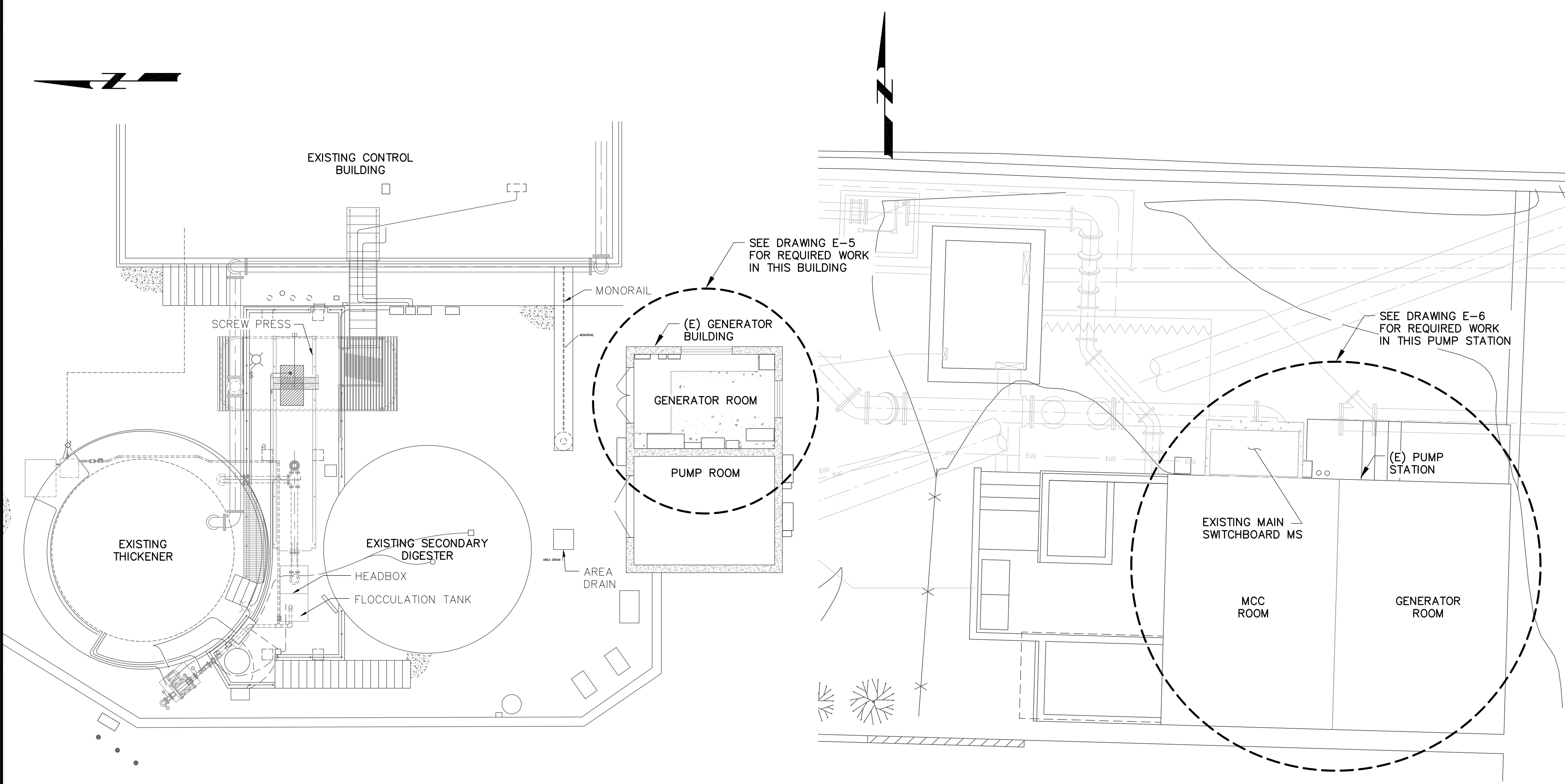
② AT MAIN STREET PS:

- a. WORKSITE IS LOCATED ON CITY STREET NEAR RESIDENTIAL APARTMENTS. CONTRACTOR MUST MAINTAIN ACCESS TO CITY BOARDWALK AND PROTECT PEDESTRIAN TRAFFIC FROM CONSTRUCTION HAZARDS.
- b. CONTRACTOR MUST COMPLY WITH ALL TERMS OF THE CITY OF SAUSALITO'S ENCROACHMENT PERMIT INCLUDING SWPPP, TRAFFIC CONTROL, CONSTRUCTION HOURS AND NOISE LIMITATIONS.
- c. A BACKUP GENERATOR SHALL BE PROVIDED TO SUPPORT POWER REDUNDANCY AND/OR PRIMARY BYPASS PUMPING.
- d. PRIMARY BYPASS PUMPS SHALL BE ELECTRIC AND POWERED BY PG&E OR A BACKUP GENERATOR. DIESEL PUMPS ARE NOT ALLOWED FOR PRIMARY BACKUP DUE TO NOISE AND EMISSION BUT MAY BE PROVIDED FOR EMERGENCY REDUNDANCY. PUMPING REDUNDANCY MUST BE PROVIDED AT ALL TIMES.

③ AT PRINCESS PS:

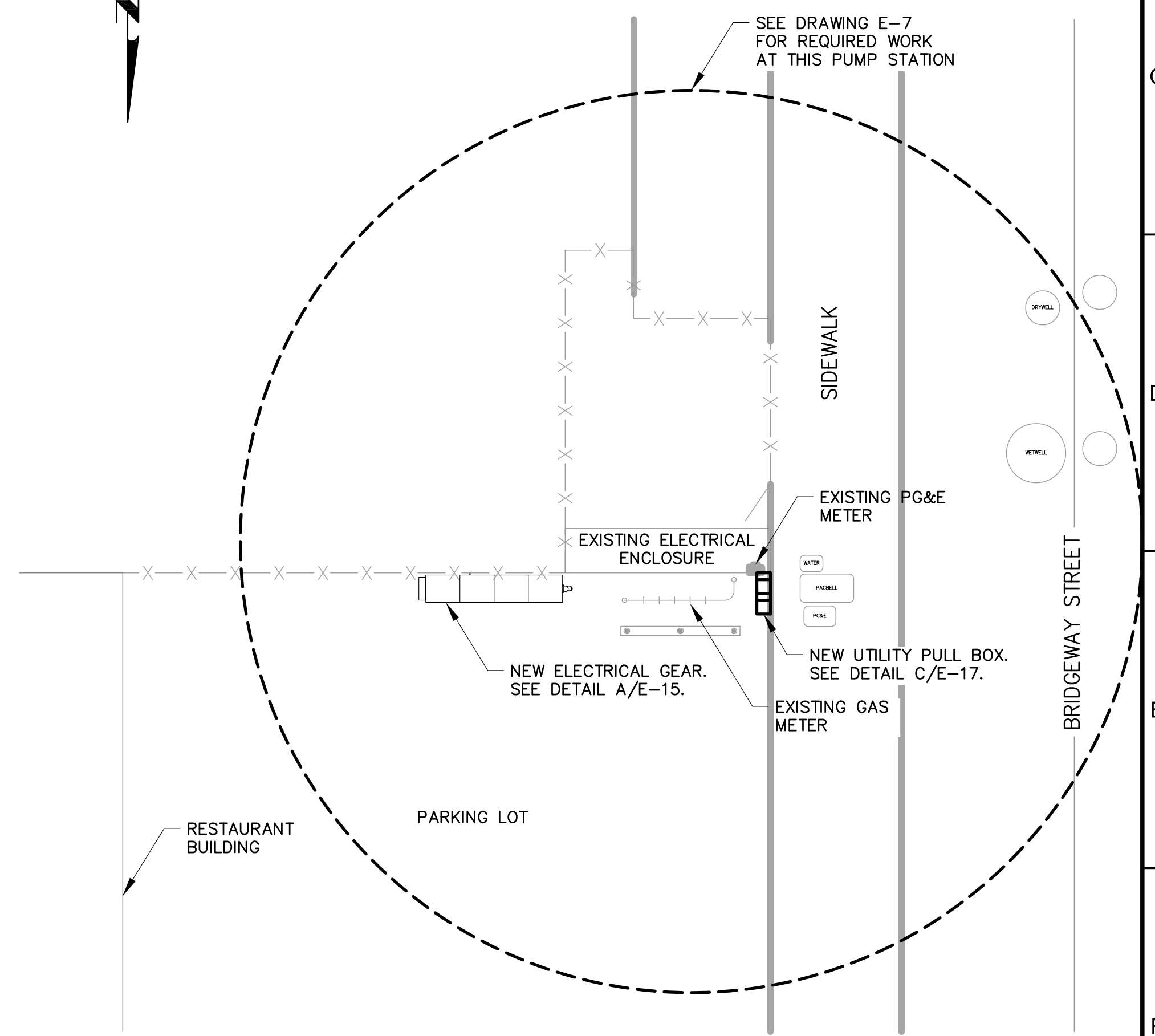
- a. WORKSITE IS LOCATED IN HEAVY FOOT AND BIKE TRAFFIC LOCATION. TRAFFIC CONTROL WILL BE REQUIRED. THE SIDEWALK ADJACENT TO THE PROJECT SITE MUST REMAIN OPEN DURING CONSTRUCTION AND COMPLY WITH ALL ADA REQUIREMENTS.
- b. ALL TRENCH PLATES SHALL BE RECESSED EVEN WITH PAVEMENT FOR BIKE TRAFFIC SAFETY.
- c. WORKSITE IS OVER THE SAN FRANCISCO BAY AND MUST COMPLY WITH ALL SWPPP REQUIREMENTS.
- d. CONTRACTOR SHALL COORDINATE STAGING AND CONSTRUCTION WITH THE RESTAURANTS' VALET AND MANAGERS TO MINIMIZE IMPACT. STAGING MAY NOT BE AVAILABLE AT THE PROJECT SITE.
- e. CONTRACTOR SHALL PROVIDE BYPASS PUMPING WITH REDUNDANCY AT ALL TIMES.

P: \429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-02.dwg 10-14-20 04:10:34 PM to



A MAIN WWTP - PARTIAL SITE PLAN ①
SCALE: 1/8" = 1'-0"

B MAIN STREET PS - PARTIAL SITE PLAN ②
SCALE: 3/16" = 1'-0"

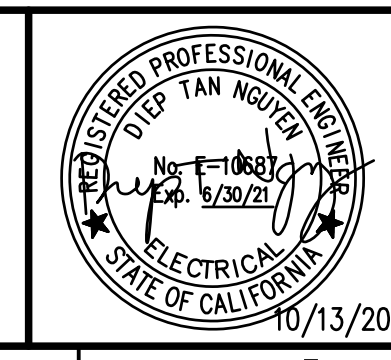


C PRINCESS PS - PARTIAL SITE PLAN ③
SCALE: 1/8" = 1'-0"

Underground Service Alert
Call: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

REV	DATE	BY	DESCRIPTION

DESIGNED TP
DRAWN LD
CHECKED DTN
DATE 10-13-2020



DLN ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA



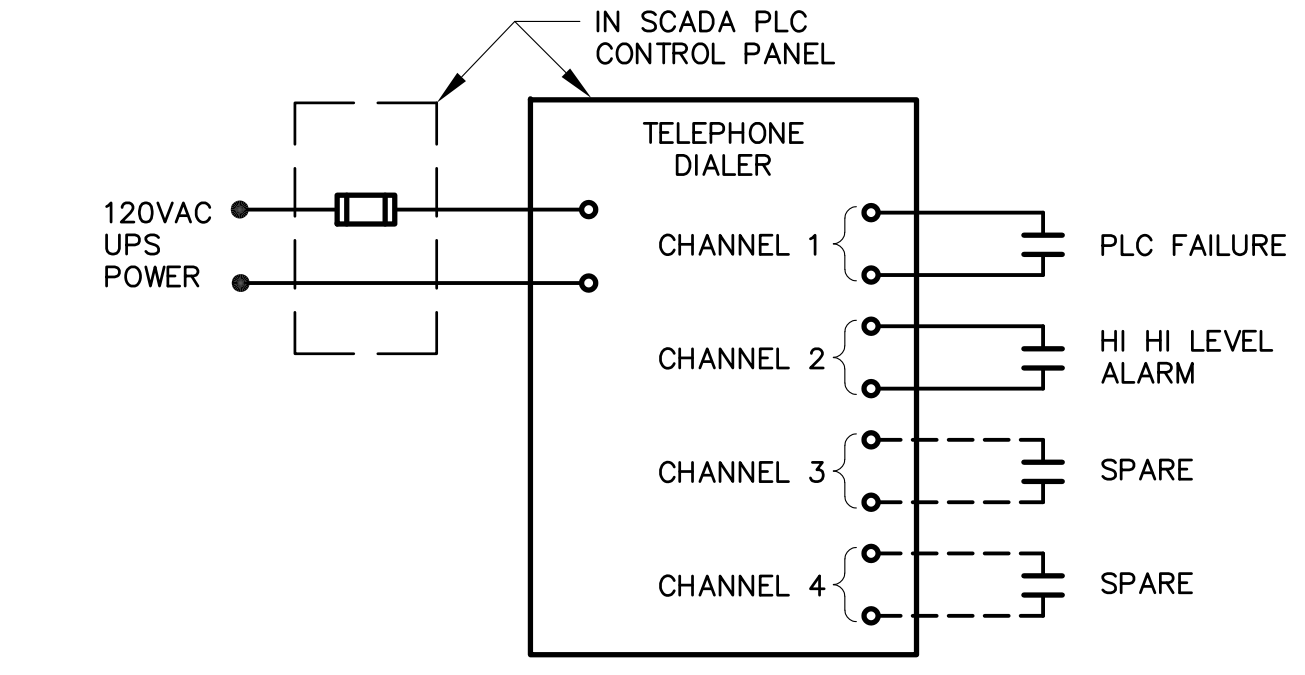
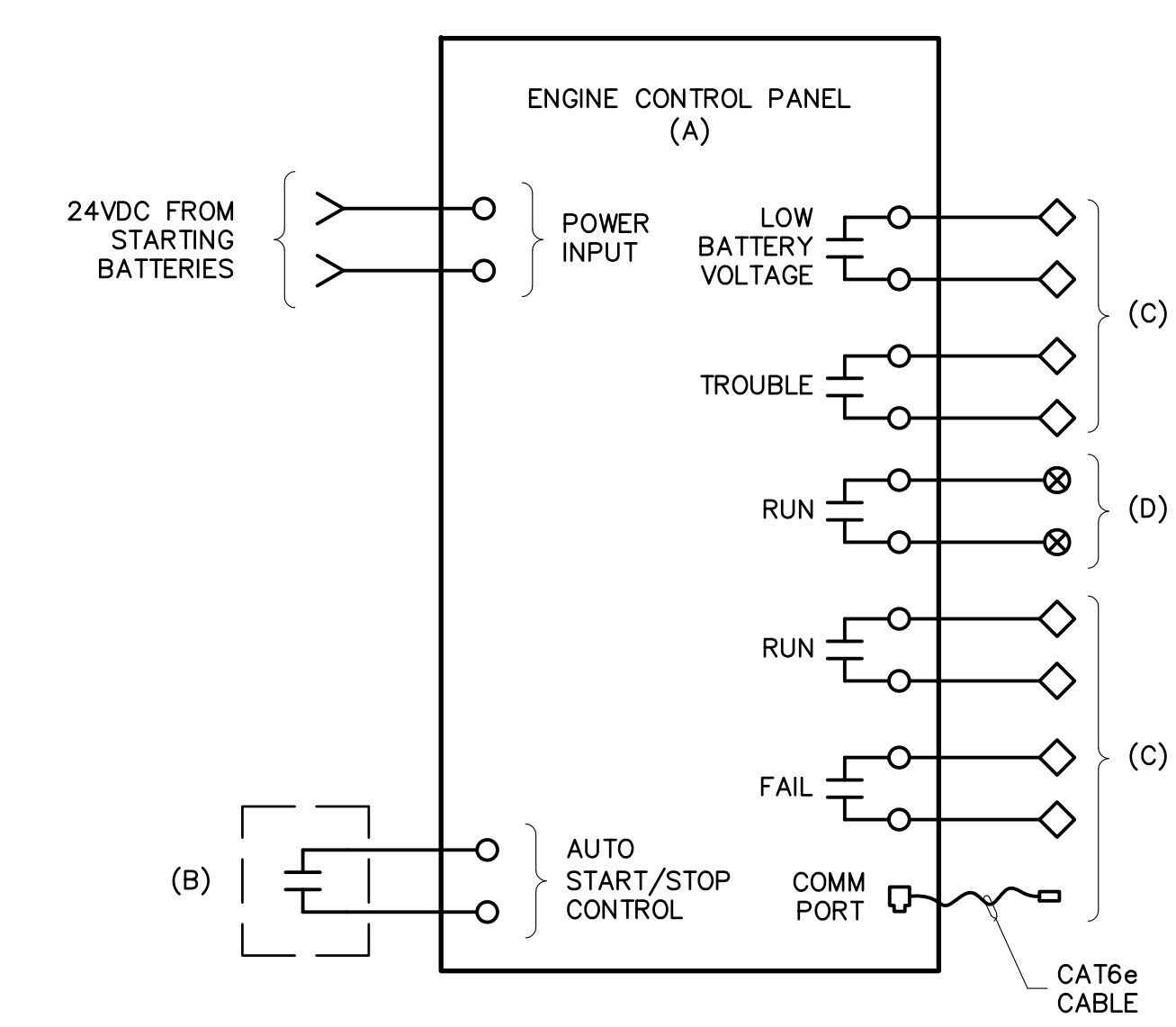
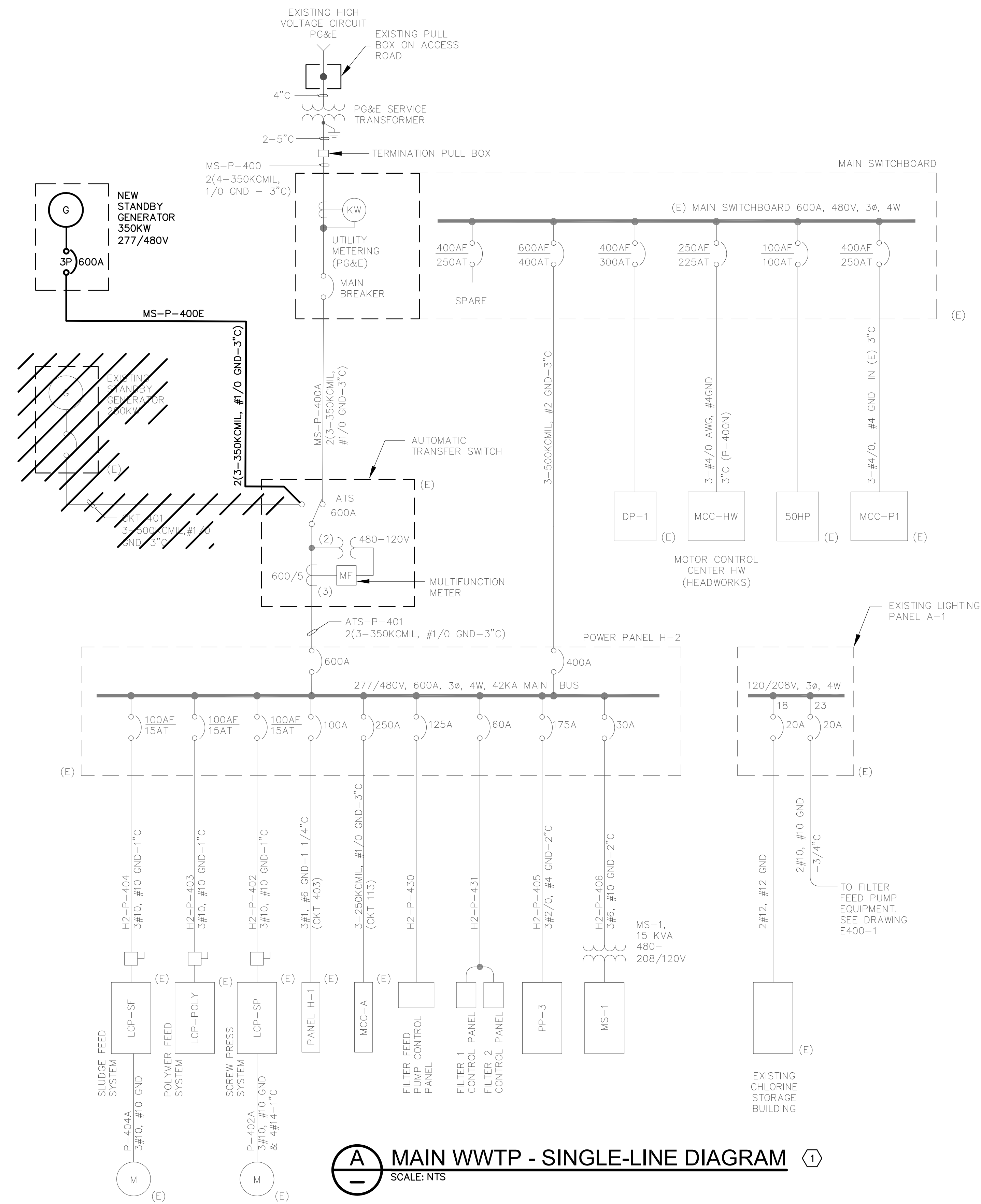
SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
GENERAL SITE PLANS AND NOTES

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DTN NO. 429
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. E-2
	SHEET NO. 3 OF 32

P: 429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-03.dwg 10-14-20 04:10:42 PM to

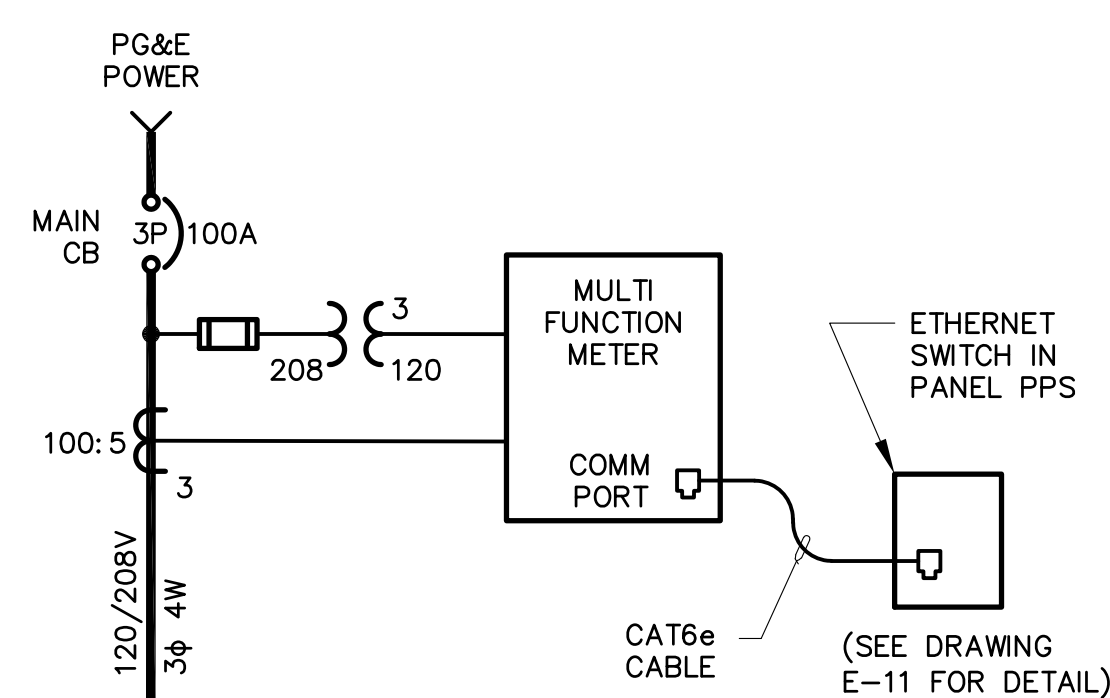
SHEET NOTES:

① SEE DETAIL A/E-19 FOR TEMPORARY POWER REQUIREMENTS.



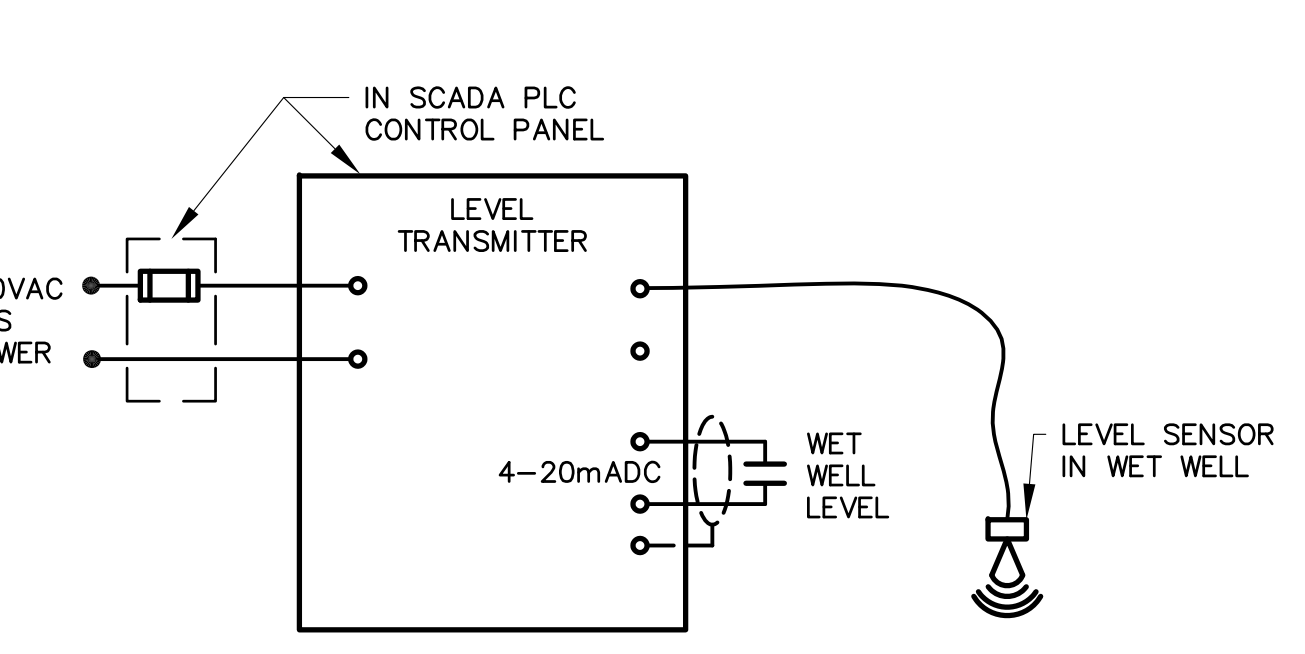
(A)	(B)	(C)	(D)	NOTES
MAIN WWTP STANDBY GENERATOR CONTROL PANEL	SIGNAL FROM EXISTING ATS	EXISTING PLC-GEN	SPARE	
MAIN STREET PUMP STATION GENERATOR CONTROL PANEL	SIGNAL FROM NEW ATS	EXISTING SCADA PLC	REMOTE RADIATOR FAN CONTROL	

B STAND-BY GENERATOR CONTROL DIAGRAM
SCALE: NTS



NOTE:
ALL DEVICES SHOWN ARE LOCATED IN SWITCHBOARD PPS.

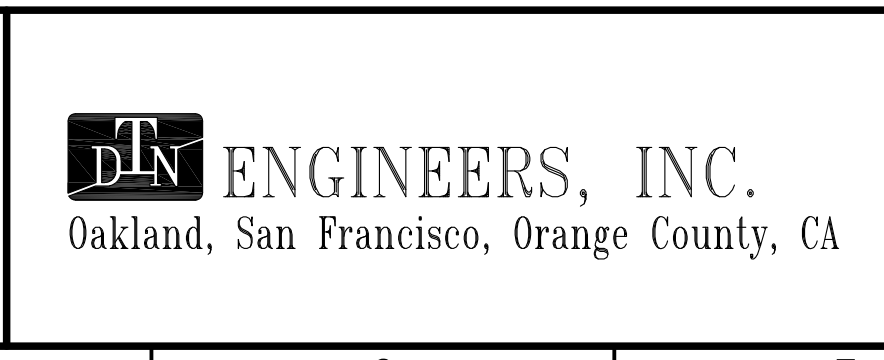
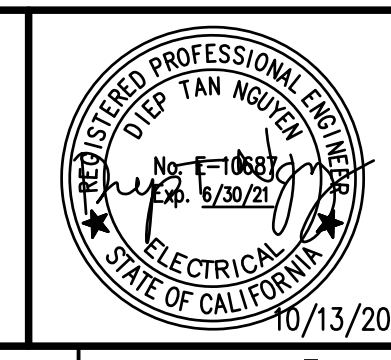
D MULTIFUNCTION METER
SCALE: NTS
PRINCESS PUMP STATION



E LEVEL TRANSMITTER
SCALE: NTS

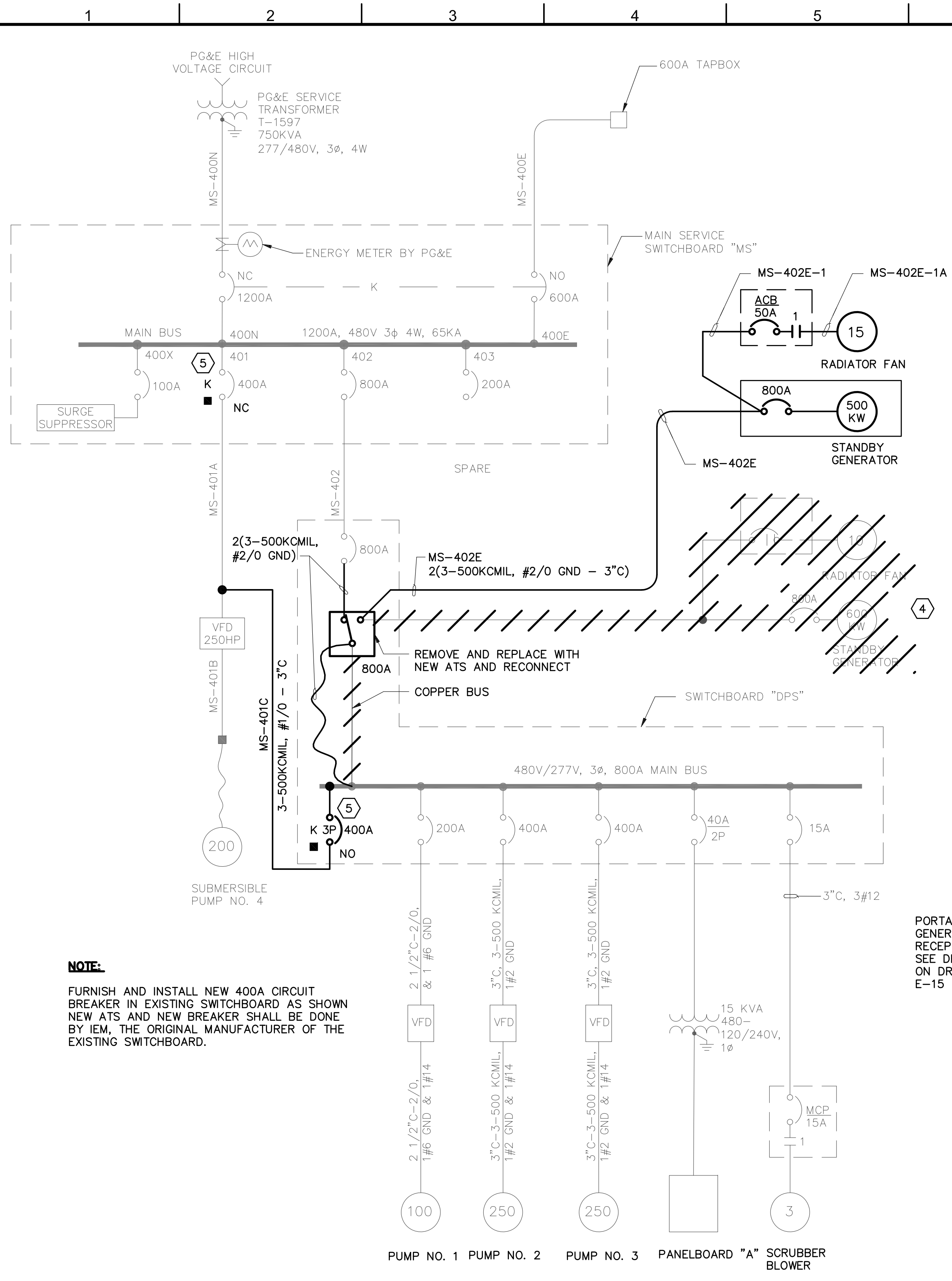
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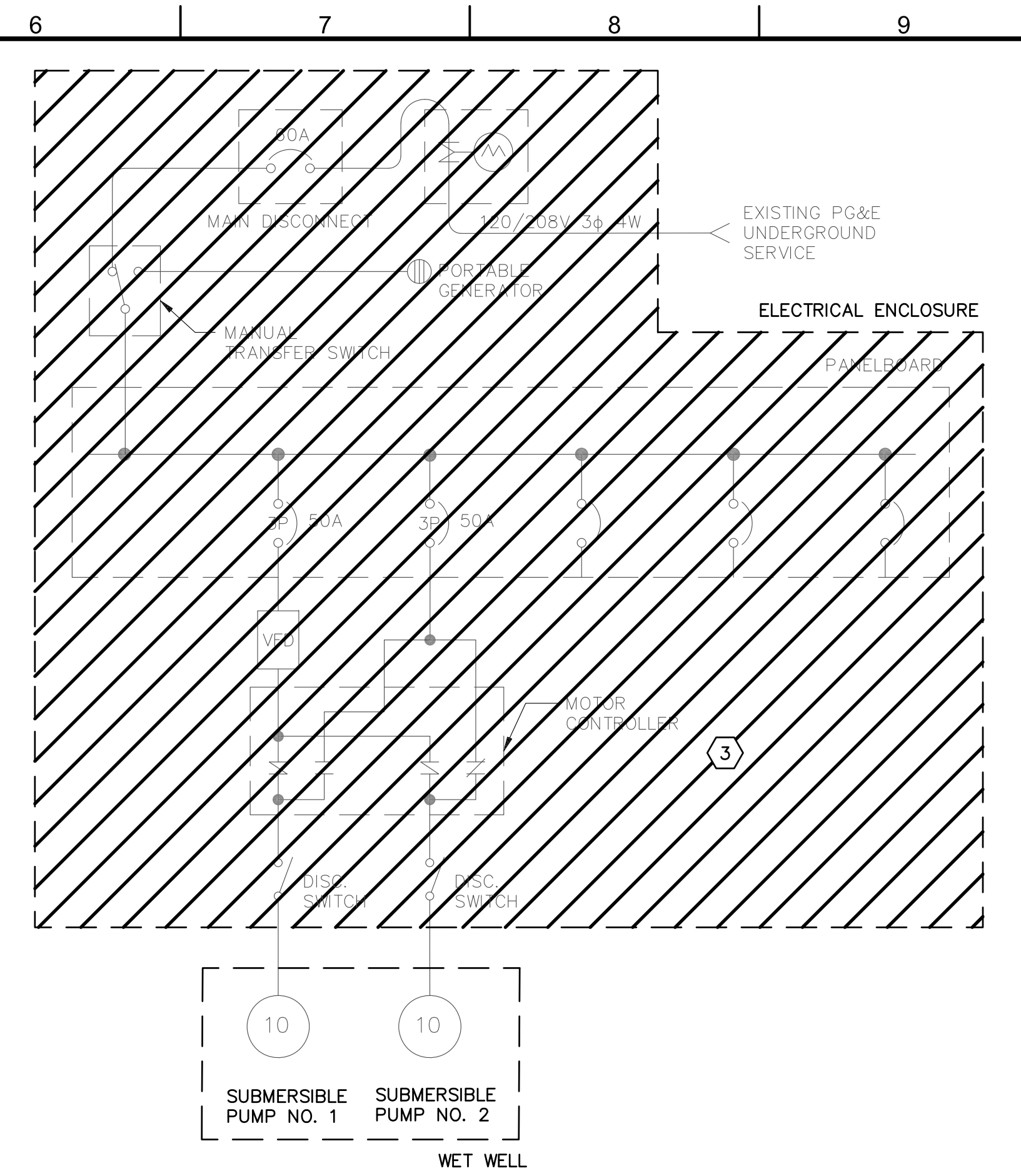


SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
MAIN WWTP SINGLE-LINE DIAGRAM

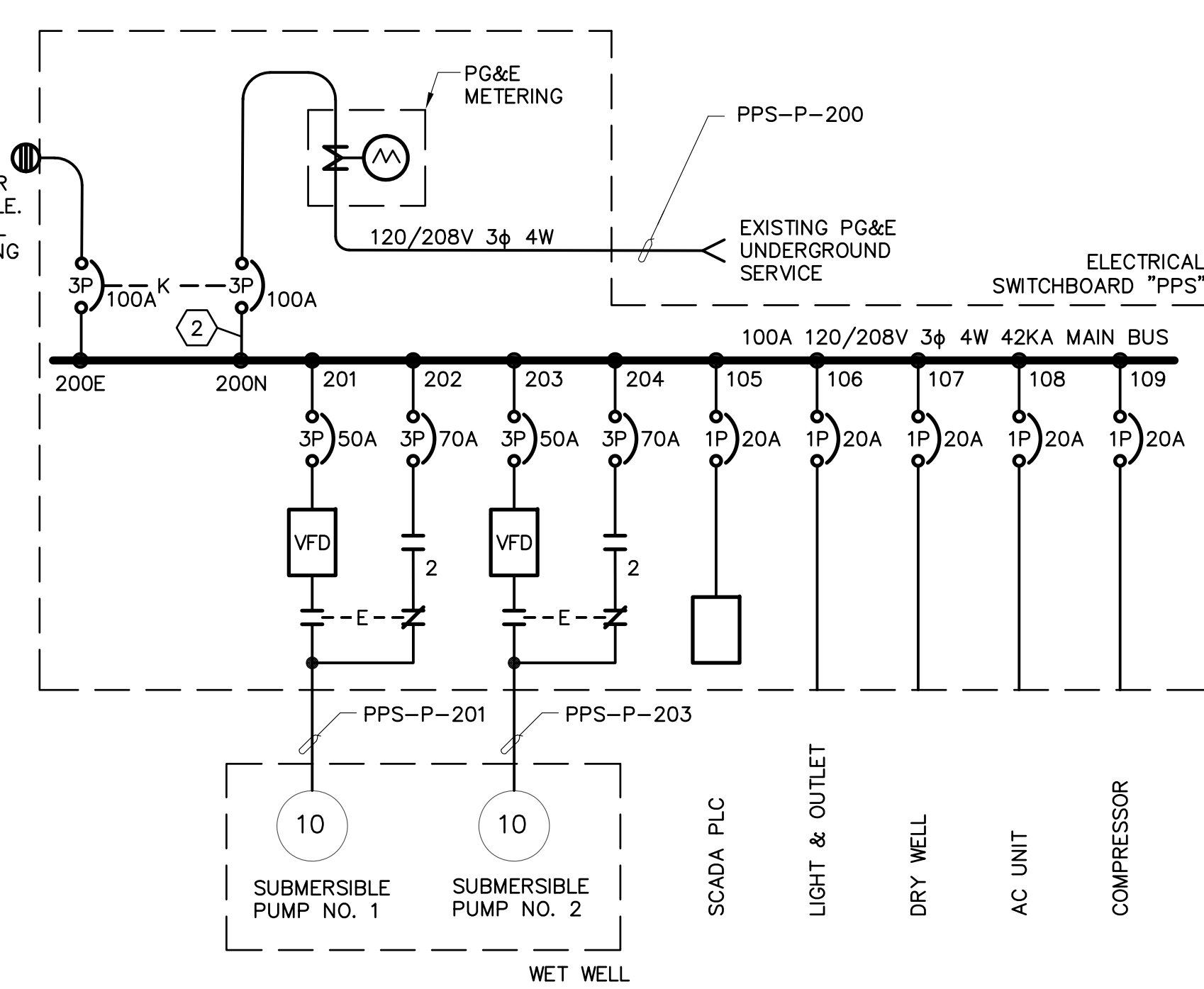
VERIFY SCALES	JOB NO.
BAR IS ONE INCH ON ORIGINAL DRAWING	DTN NO. 429
0 1"	DRAWING NO.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	E-3
	SHEET NO.
	4 OF 32



(A) MAIN STREET PS - MODIFIED SINGLE-LINE DIAGRAM
SCALE: NTS



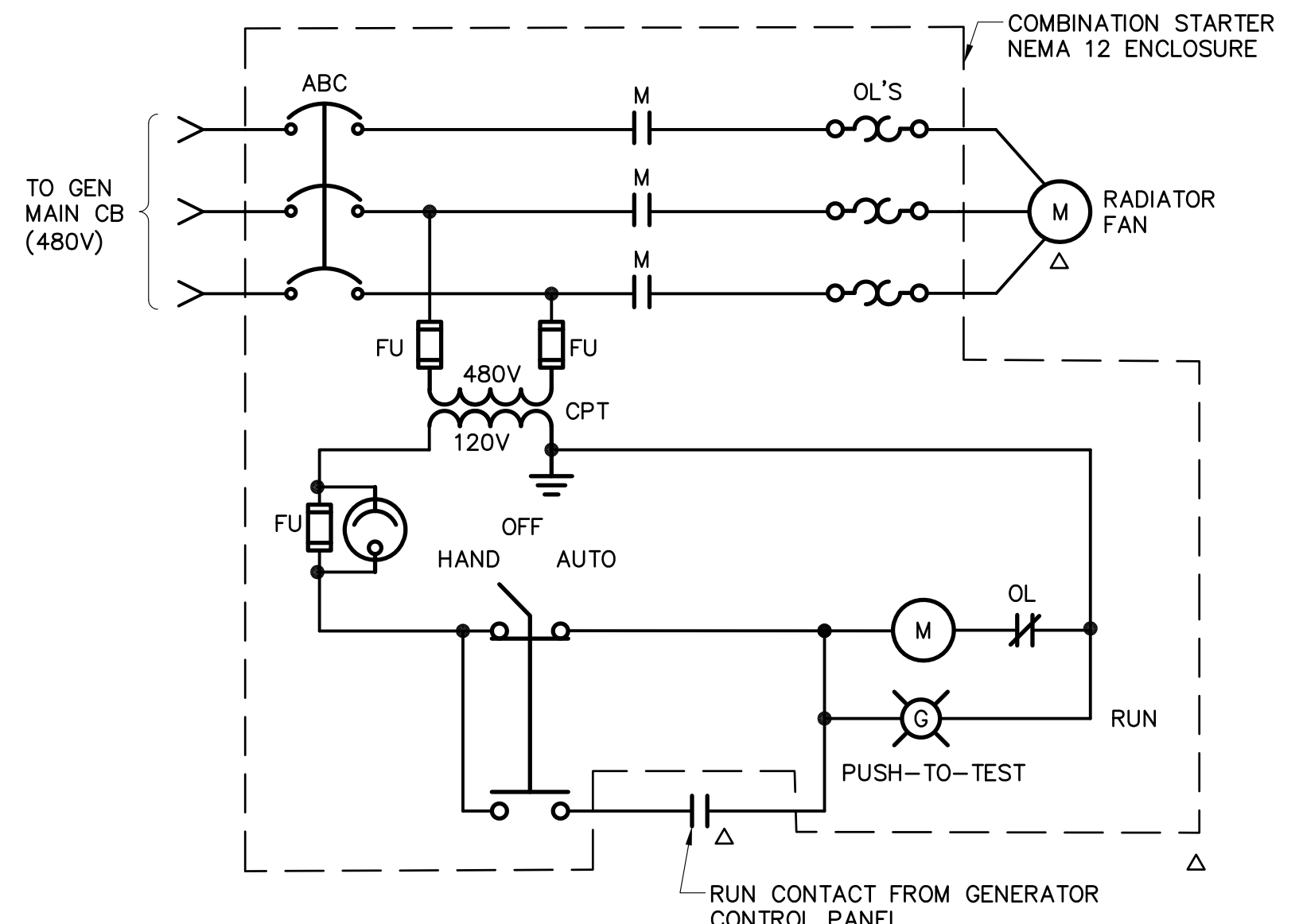
(B) EXISTING PRINCESS PS SINGLE-LINE DIAGRAM
SCALE: NTS



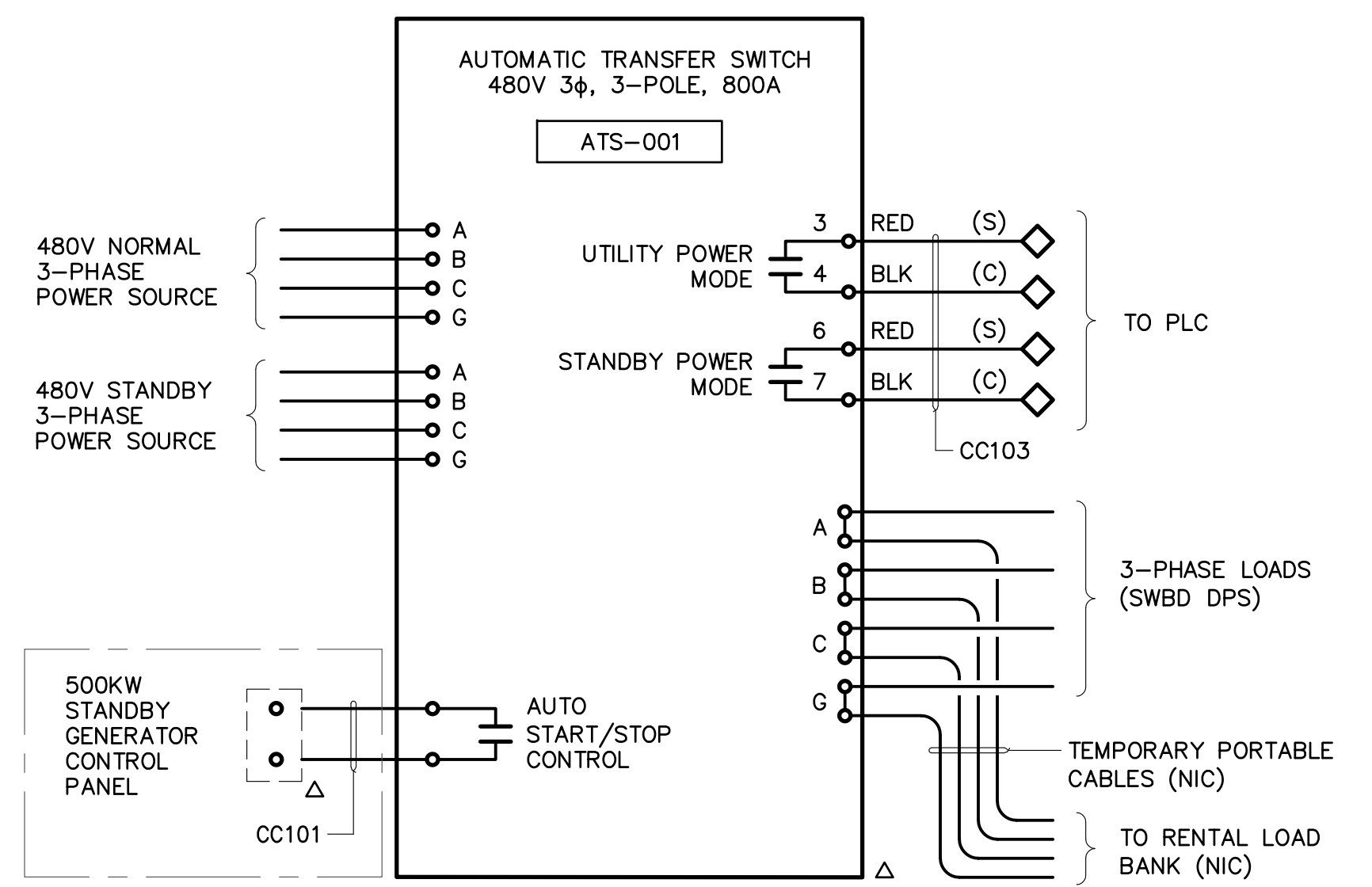
(C) NEW PRINCESS PS SINGLE-LINE DIAGRAM
SCALE: NTS

SHEET NOTES:

- 1 UNLESS OTHERWISE NOTED, ALL BREAKERS SHOWN ARE THREE-POLE.
- 2 SEE DETAIL D/E-3 FOR REQUIRED MULTI-FUNCTION METER.
- 3 FOR DEMOLITION, SEE APPLICABLE DETAILS SHOWN ON DRAWING E-14.
- 4 FOR DEMOLITION, SEE APPLICABLE DETAILS SHOWN ON DRAWINGS E-12 AND E-13.
- 5 FURNISH AND INSTALL KIRK-KEY TO INTERLOCK THESE TWO BREAKERS SUCH THAT ONLY ONE BREAKER MAY BE CLOSED AT ANY ONE TIME.



(D) REMOTE RADIATOR CONTROL SCHEMATIC
SCALE: NTS



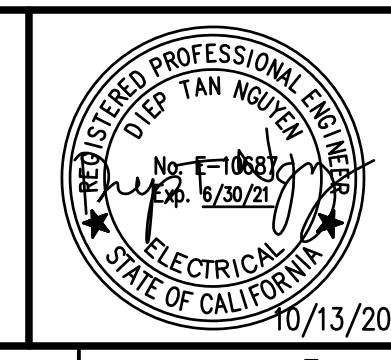
(E) ATS CONTROL DIAGRAM
SCALE: NTS

NOTE:
FURNISH AND INSTALL NEW 400A CIRCUIT BREAKER IN EXISTING SWITCHBOARD AS SHOWN. NEW ATS AND NEW BREAKER SHALL BE DONE BY IEM, THE ORIGINAL MANUFACTURER OF THE EXISTING SWITCHBOARD.

P:\429_Main Plant Gen, Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-04.dwg 10-14-20 04:10:53 PM to

REV	DATE	BY	DESCRIPTION
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DATE	10-13-2020



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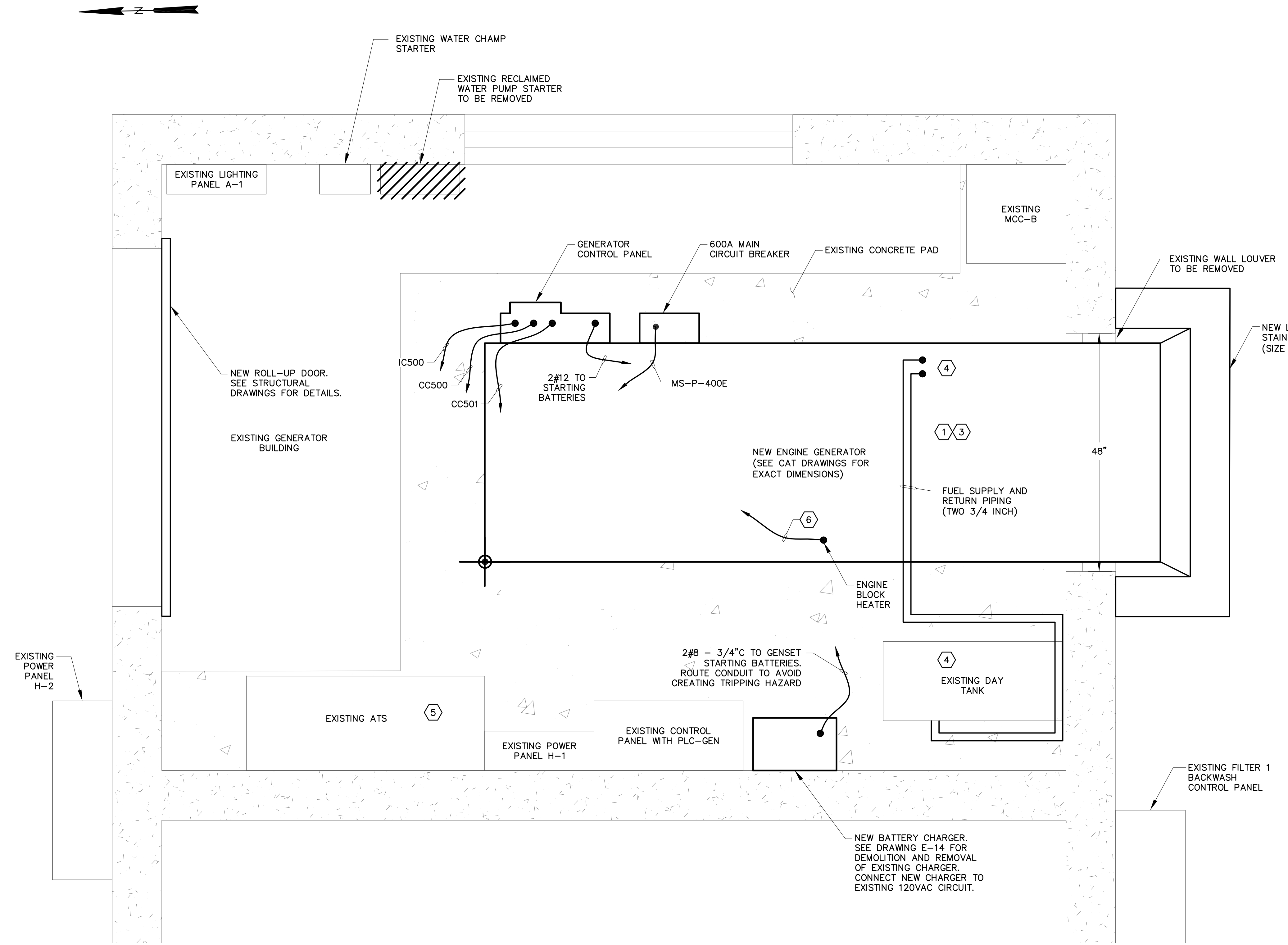


SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
MAIN STREET PS AND PRINCESS PS
SINGLE-LINE DIAGRAMS

VERIFY SCALES	JOB NO.
BAR IS ONE INCH ON ORIGINAL DRAWING	DTN NO. 429
0 1"	DRAWING NO.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	E-4
	SHEET NO.
	5 OF 32

SHEET NOTES:

- ① CONTRACTOR SHALL USE APPROVED SHOP DRAWINGS DURING CONSTRUCTION TO CONFIRM THE EXACT LOCATIONS OF TERMINATIONS OF ALL CABLES, AND CONDUITS APPROPRIATELY.
- ② SEE DRAWINGS E-12 AND E-14 FOR REQUIRED DEMOLITION OF EXISTING ENGINE AND GENERATOR, EXISTING MUFFLER (MTD. ON ROOF) AND ASSOCIATED CABLES AND CONDUITS.
- ③ ALL WORK IN THIS BUILDING SHALL BE FULLY COORDINATED WITH REQUIRED STRUCTURAL WORK RESPECTIVELY.
- ④ FIELD VERIFY EXACT LOCATIONS OF FUEL LINE PRIOR TO INSTALLATION.
- ⑤ CABLE AND CONDUIT ENTRIES TO THE EXISTING ATS SHALL BE AT THE TOP. FIELD VERIFICATION IS REQUIRED.
- ⑥ 2/12, #12 GND - 3/4" C TO EXISTING LIGHTING PANEL A-1. USE EXISTING CIRCUITS A1-8, 10 WITH EXISTING 15A 2P CIRCUIT BREAKER.
- ⑦ CONTRACTOR SHALL ADJUST ROOF DRAINS AS REQUIRED AT NO ADDITIONAL COSTS TO THE DISTRICT.

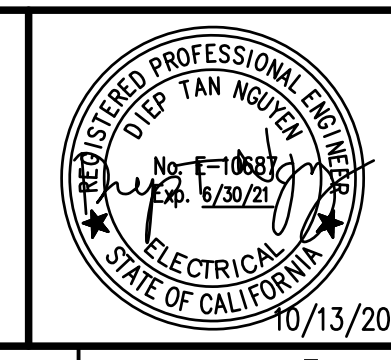


A MAIN WWTP - GENERATOR BLDG ②⑦
SCALE: 1" = 1' - 0"

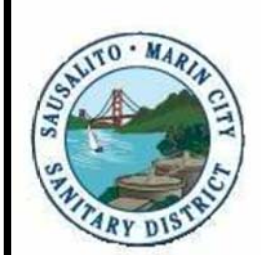
P:\429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-05.dwg 10-14-20 04:11:08 PM tp

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SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
**MAIN WWTP
GENERATOR BUILDING PLAN - ELECTRICAL**

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
DTN NO. 429
DRAWING NO.
E-5
SHEET NO.
6 OF 32

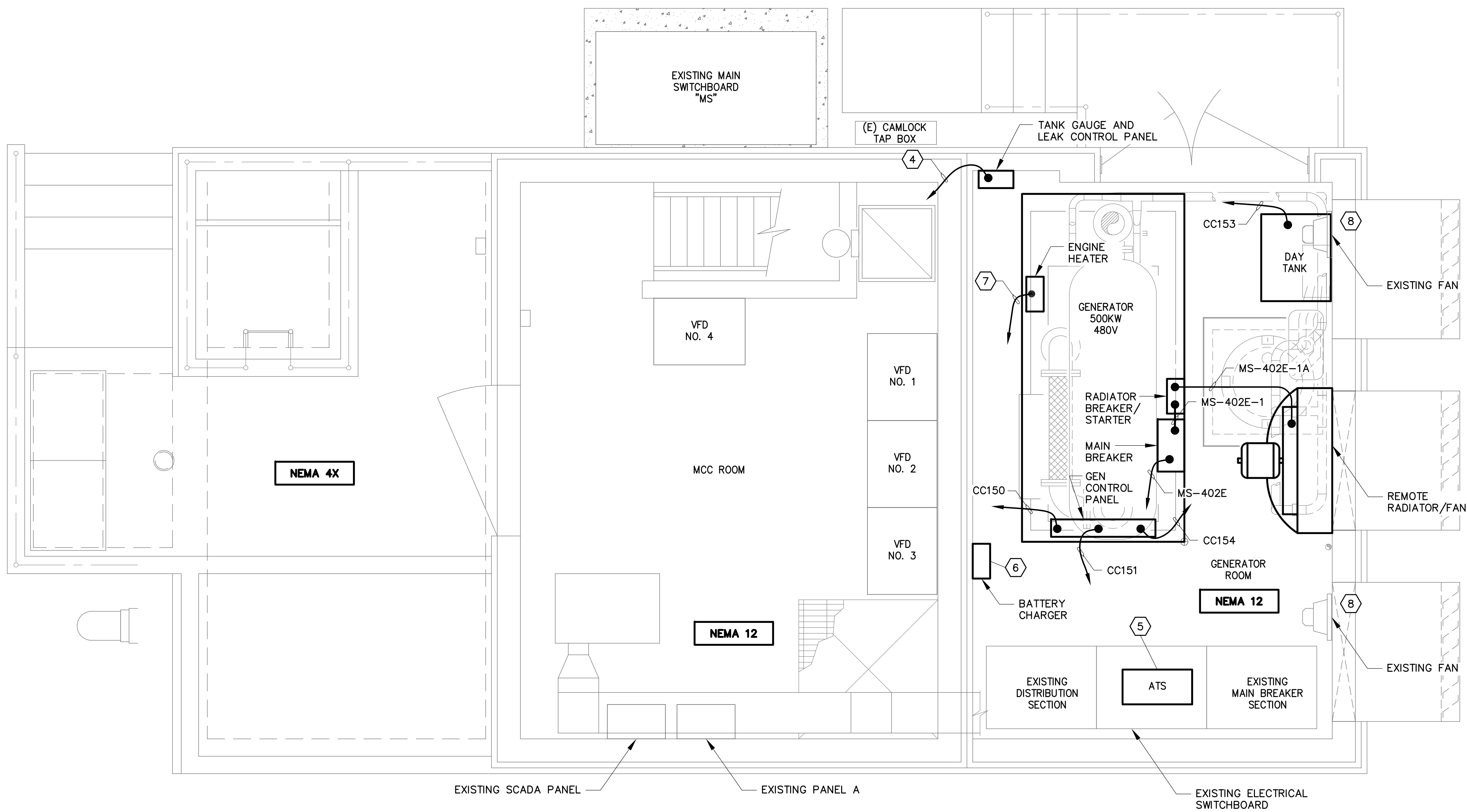
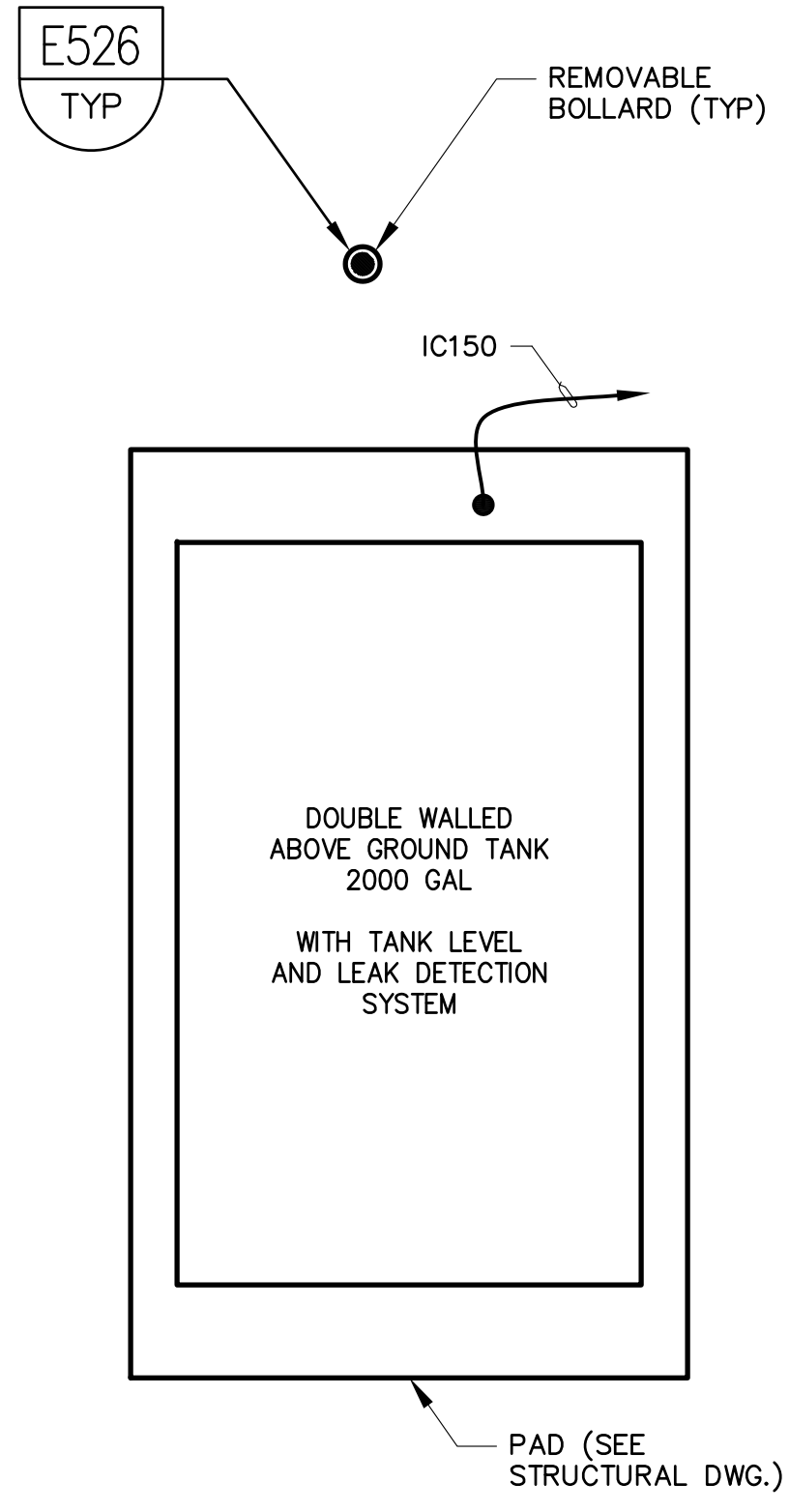
1 2 3 4 5 6 7 8 9 10 11 12 13

A
B
C
D
E
F

A
B
C
D
E
F

SHEET NOTES:

- ① FOR DEMOLITION OF ELECTRICAL EQUIPMENT INCLUDING EXISTING GENERATOR AND EXISTING ATS, SEE APPLICABLE DEMOLITION DETAILS SHOWN ON DRAWINGS E-12 AND E-13.
- ② SEE MECHANICAL DRAWINGS AND STRUCTURAL DRAWINGS FOR REQUIRED COORDINATED WORK.
- ③ CONNECT EXISTING 120VAC CIRCUIT TO NEW CONTROLLER.
- ④ CORE DRILL WALL AS REQUIRED FOR INSTALLATION OF 1" (1 PAIR AND 4#14) AND ROUTE TO EXISTING SCADA PLC PANEL.
- ⑤ SEE DETAIL A/E-16 FOR REQUIRED WORK.
- ⑥ CONNECT NEW BATTERY CHARGER TO EXISTING 120VAC CIRCUIT.
- ⑦ CONNECT HEATER TO PANEL A, CIRCUIT 2 AND 4 WITH 2#10, #10 GND - 3/4"C.
- ⑧ PROVIDE CONTROL INTERLOCKS WITH CONTACTORS SUCH THAT WHEN THE GENERATOR RUNS, THE EXISTING FANS SHALL ALSO RUN. CONTROLS AND CONTACTORS SHALL BE LOCATED IN NEMA 12 ENCLOSURE. EXACT LOCATION SHALL BE AS DIRECTED BY THE ENGINEER.

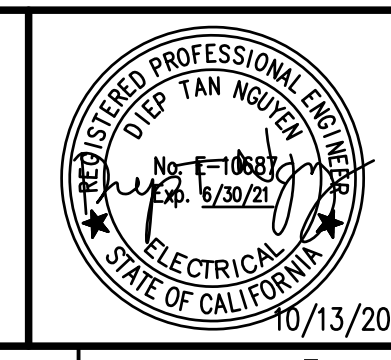


A MAIN STREET PS - BUILDING PLAN ①②
SCALE: 1/2" = 1'-0"

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SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
MAIN STREET PUMP STATION BUILDING PLAN - ELECTRICAL

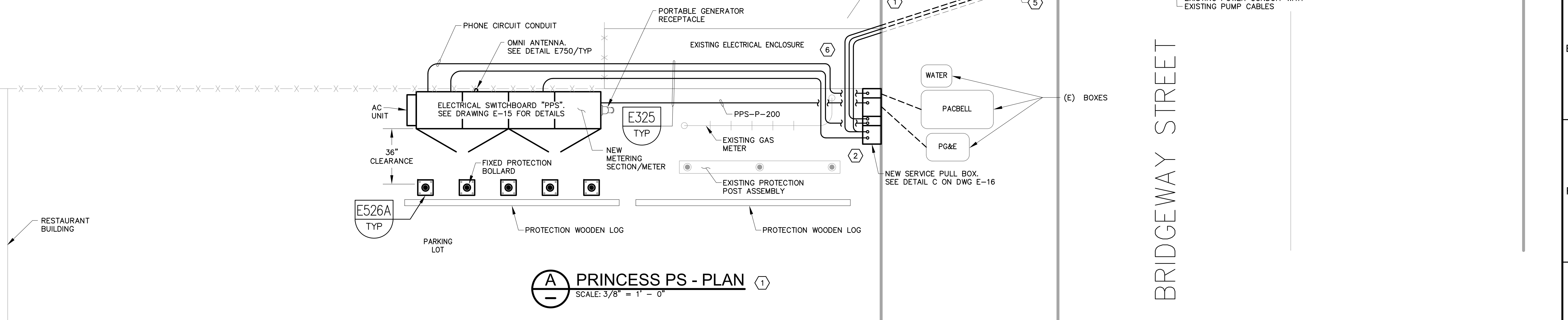
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
DTN NO. 429
DRAWING NO.
E-6
SHEET NO.
7 OF 32

1 2 3 4 5 6 7 8 9 10 11 12 13

CABLE AND CONDUIT SCHEDULE						
CONDUIT #	CONDUIT SIZE	TYPE	FROM	TO	CABLES	NOTES
MAIN WWTP						
MS-P-400E	2-3"	RGS	STANDBY GENERATOR	EXISTING ATS	2(3-350KCMIL, #1/0 GND)	
X	X	X	X	X	X	
CC500	3/4"	RGS	ENGINE CONTROL PANEL	PLC GEN	4#14	
CC501	3/4"	RGS	ENGINE CONTROL PANEL	EXISTING ATS	2#14	
IC500	1"	RGS	ENGINE CONTROL PANEL	PLC GEN	CAT6e	
X	X	X	X	X	X	
MAIN STREET PUMP STATION						
MS-402E	2-3"	RGS	NEW ATS	ENGINE GEN MAIN BREAKER	2(3-500KCMIL, #2/0 GND)	
MS-402E-1	1"	RGS	RADIATOR FAN	ENGINE GEN MAIN BREAKER	3#10, #10 GND	
MS-402E-1A	1"	RGS	RADIATOR FAN	FAN STARTER	3#10, #10 GND	
X	X	X	X	X	X	
MS-CC150	3/4"	RGS	ENGINE CONTROL PANEL	SCADA PLC	4#14	
MS-CC151	3/4"	RGS	ENGINE CONTROL PANEL	NEW ATS (CONTROL)	2#14	
MS-CC152	1"	RGS	ENGINE CONTROL PANEL	SCADA PLC	CAT6e	
MS-CC153	3/4"	RGS	DAY TANK	SCADA PLC	4#14	
MS-CC154	3/4"	RGS	ENGINE CONTROL PANEL	REMOTE RADIATOR STARTER	2#14	
MS-IC150	2-1"C	RGS	ABOVE GROUND FUEL TANK	TANG GAUGE & LEAK CONTROLLER	AS REQUIRED PER MFR	
PRINCESS PUMP STATION						
PPS-P-200	2"	RGS	EXISTING SERVICE	SWITCHBOARD "PPS"	BY PG&E	
PPS-P-201	1"	PVC/RGS	SWITCHBOARD "PPS"	SUBMERSIBLE PUMP NO. 1	3#12, #12 GND	
PPS-P-203	1"	PVC/RGS	SWITCHBOARD "PPS"	SUBMERSIBLE PUMP NO. 2	3#12, #12 GND	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
PPS-CC100	3"	PVC/RGS	WETWELL FLOAT SWITCHES	PRINCESS SCADA PLC	4-2/#14 CABLES	VIA NEW PULL BOX
PPS-CC101	-	-	PUMP 1 VFD & BYPASS STARTER	PRINCESS SCADA PLC	2 PAIRS & 30#14	PPS INTERNAL WIRINGS
PPS-CC102	-	-	PUMP 2 VFD & BYPASS STARTER	PRINCESS SCADA PLC	2 PAIRS & 30#14	PPS INTERNAL WIRINGS
PPS-CC103	-	-	CONTROL RELAYS IN PPS	AUTO DIALER	4#14	PPS INTERNAL WIRINGS
PPS-CC104	X	X	X	X	X	
PPS-CC105	X	X	X	X	X	
X	X	X	X	X	X	
X	X	X	X	X	X	
PPS-IC100	1"	PVC/RGS	ULTRASONIC SENSOR	TRANSMITTER (IN SWBD "PPS")	MFR CABLE	VIA NEW J-BOX
PPS-IC101	1"	PVC/RGS	PHONE SERVICE BOX	PHONE DIALER (IN SWBD "PPS")	ONE PAIR	

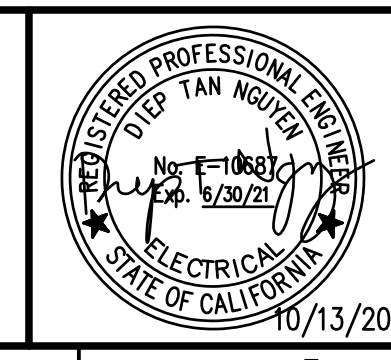
- SHEET NOTES:**
- THE CONTRACTOR SHALL NOTE THAT AT THIS SITE, THERE ARE EXISTING UNDERGROUND UTILITIES SUCH AS WATER PIPING, SEWAGE PIPING, GAS PIPING, TELEPHONE/DATA COMMUNICATION AND ELECTRICAL CONDUITS. ALL OF THESE UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED PRIOR TO ANY TRENCHING WORK TO AVOID DAMAGES TO ANY OF THESE UTILITIES.
 - ALL PULL BOXES AND JUNCTION BOXES SHALL BE 316 STAINLESS STEEL.
 - THE CONTRACTOR SHALL COORDINATE WITH THE DISTRICT CONCERNING TRAFFIC CONTROL PLAN WHICH WILL BE INCLUDED IN THE ENCROACHMENT PERMIT.
 - THE EXISTING DRY WELL AS WELL AS WET WELL ARE CLASSIFIED HAZARDOUS LOCATIONS, AND ALSO ARE CONFINED SPACE PER OSHA. ALL WORK AT THESE LOCATIONS SHALL FOLLOW APPLICABLE SAFETY PROCEDURES AND REGULATIONS.
 - SUBMIT EXACT TRENCH LOCATION AND DETAILS OF EXISTING UNDERGROUND UTILITIES AFTER FIELD VERIFICATION FOR REVIEW AND APPROVAL. THIS TRENCH LOCATION AS SHOWN IS DIAGRAMMATIC ONLY AND IS SUBJECT TO FIELD VERIFICATION AND CHANGES BY THE CONTRACTOR.
 - THE PULL BOXES ARE LOCATED ON A PIER THAT IS TO BE DEMOLISHED, THEY SHALL BE RELOCATED TO THE SIDE OF THE ADJACENT DOCK.



PRINCESS PS - PLAN
SCALE: 3/8" = 1' - 0"

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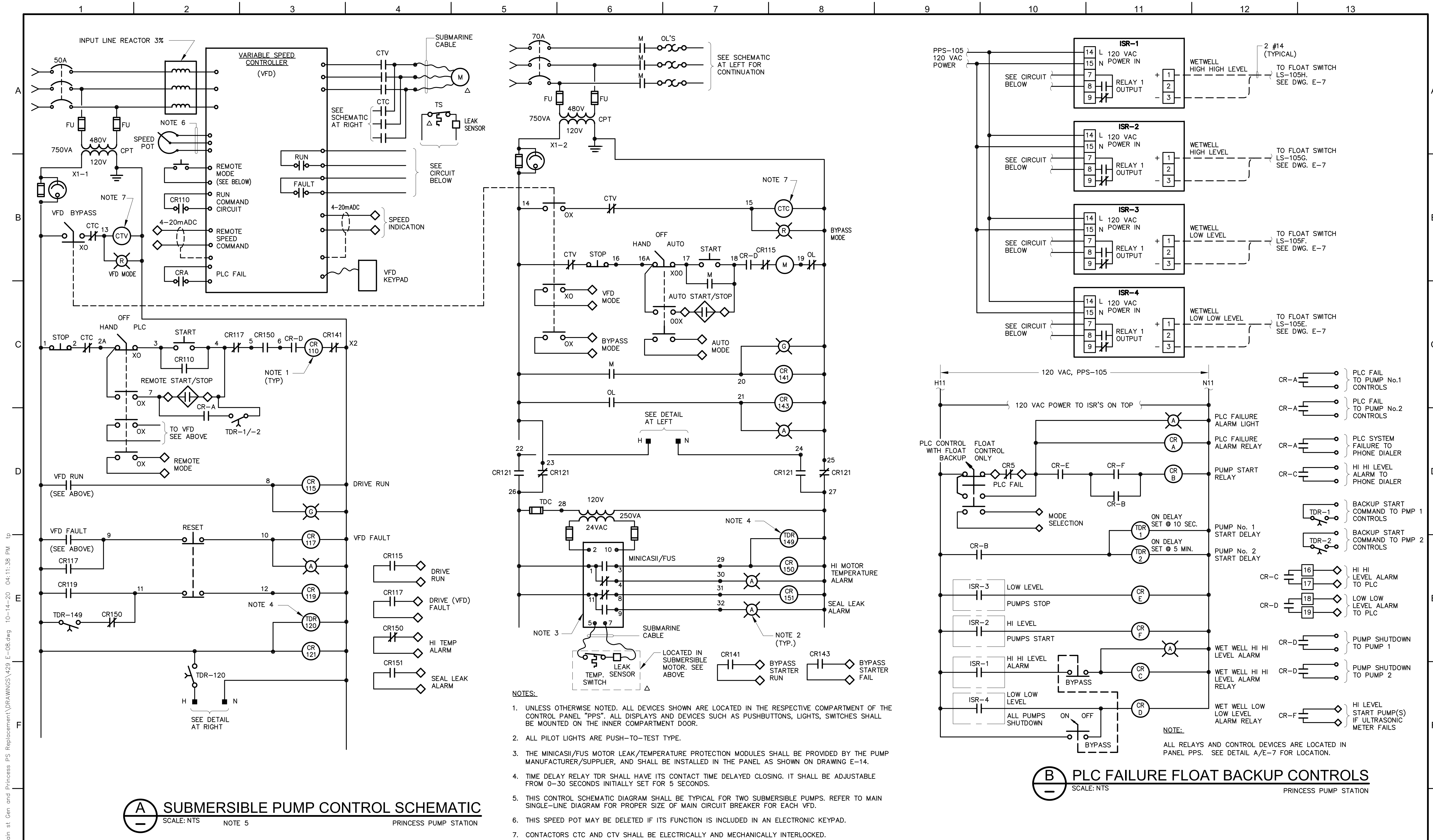
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Oakland, San Francisco, Orange County, CA



SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
**PRINCESS PUMP STATION
PLAN - ELECTRICAL**

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DTN NO. 429
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. E-7
	SHEET NO. 8 OF 32

P:\429_Main Plant Gen, Main st, Princess PS Replacement\DRAWINGS\429 E-07.dwg 10-14-20 04:11:28 PM tp



- NOTES:**
- UNLESS OTHERWISE NOTED, ALL DEVICES SHOWN ARE LOCATED IN THE RESPECTIVE COMPARTMENT OF THE CONTROL PANEL "PPS". ALL DISPLAYS AND DEVICES SUCH AS PUSHBUTTONS, LIGHTS, SWITCHES SHALL BE MOUNTED ON THE INNER COMPARTMENT DOOR.
 - ALL PILOT LIGHTS ARE PUSH-TO-TEST TYPE.
 - THE MINICASII/FUS MOTOR LEAK/TEMPERATURE PROTECTION MODULES SHALL BE PROVIDED BY THE PUMP MANUFACTURER/SUPPLIER, AND SHALL BE INSTALLED IN THE PANEL AS SHOWN ON DRAWING E-14.
 - TIME DELAY RELAY TDR SHALL HAVE ITS CONTACT TIME DELAYED CLOSING. IT SHALL BE ADJUSTABLE FROM 0-30 SECONDS INITIALLY SET FOR 5 SECONDS.
 - THIS CONTROL SCHEMATIC DIAGRAM SHALL BE TYPICAL FOR TWO SUBMERSIBLE PUMPS. REFER TO MAIN SINGLE-LINE DIAGRAM FOR PROPER SIZE OF MAIN CIRCUIT BREAKER FOR EACH VFD.
 - THIS SPEED POT MAY BE DELETED IF ITS FUNCTION IS INCLUDED IN AN ELECTRONIC KEYPAD.
 - CONTACTORS CTC AND CTV SHALL BE ELECTRICALLY AND MECHANICALLY INTERLOCKED.

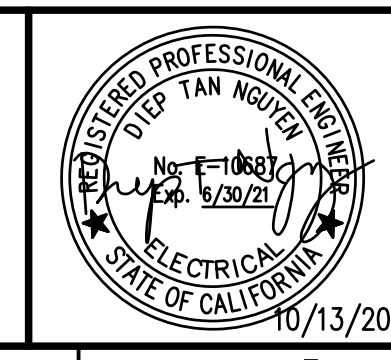
A SUBMERSIBLE PUMP CONTROL SCHEMATIC
SCALE: NTS NOTE 5 PRINCESS PUMP STATION

B PLC FAILURE FLOAT BACKUP CONTROLS
SCALE: NTS PRINCESS PUMP STATION

P: 429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-08.dwg 10-14-20 04:11:38 PM tp

REV	DATE	BY	DESCRIPTION

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DATE 10-13-2020



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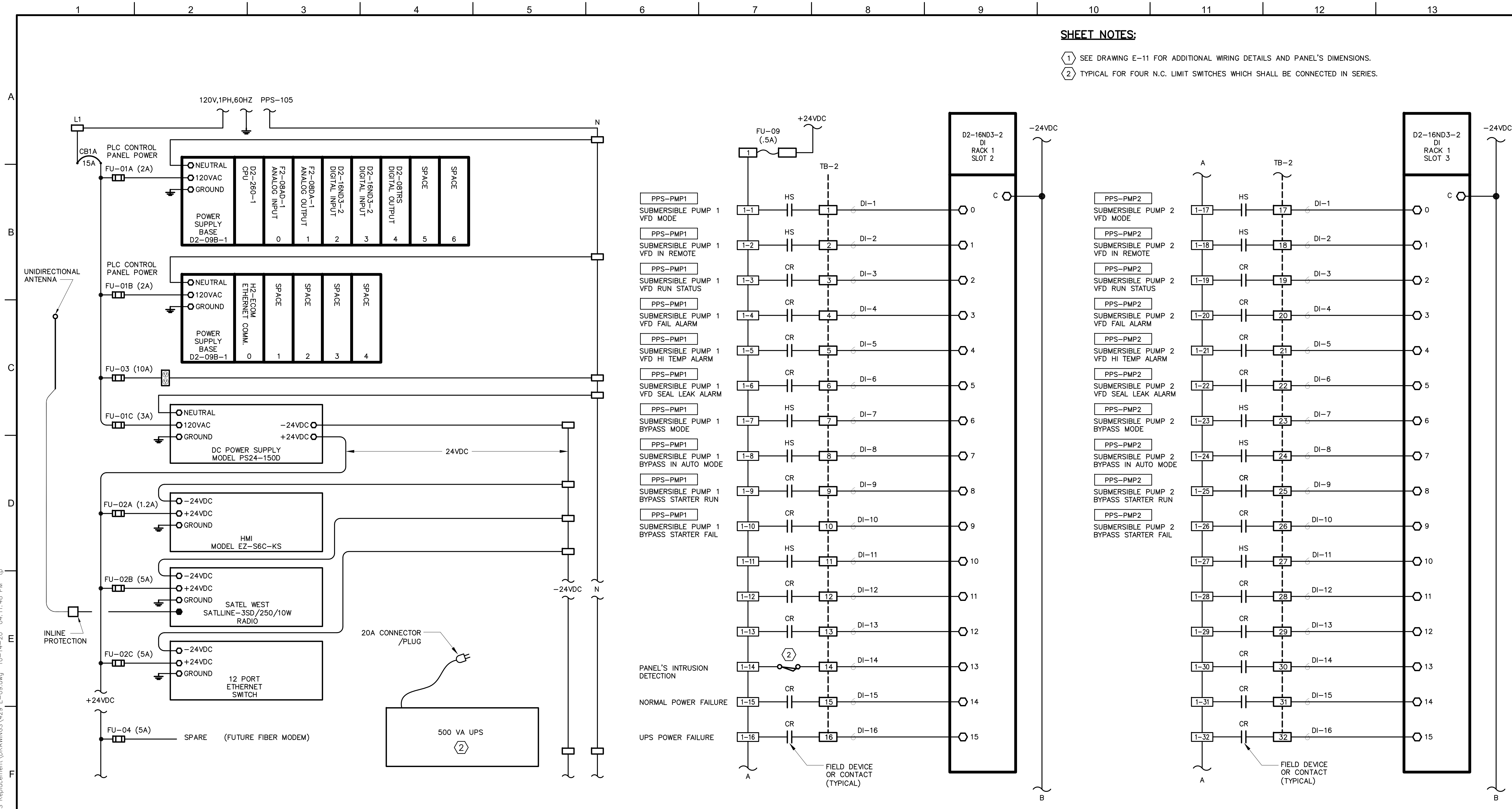


SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
PRINCESS PUMP STATION
ELECTRICAL CONTROL SCHEMATIC DIAGRAM

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DTN NO. 429
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. E-8
	SHEET NO. 9 OF 32

SHEET NOTES:

- ① SEE DRAWING E-11 FOR ADDITIONAL WIRING DETAILS AND PANEL'S DIMENSIONS.
- ② TYPICAL FOR FOUR N.C. LIMIT SWITCHES WHICH SHALL BE CONNECTED IN SERIES.



A SCADA PLC-PRINCESS PUMP STATION INTERNAL POWER CONFIGURATION
SCALE: NTS

B SCADA PLC-PRINCESS PUMP STATION WIRING DIAGRAMS
SCALE: NTS

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DATE 10-13-2020	

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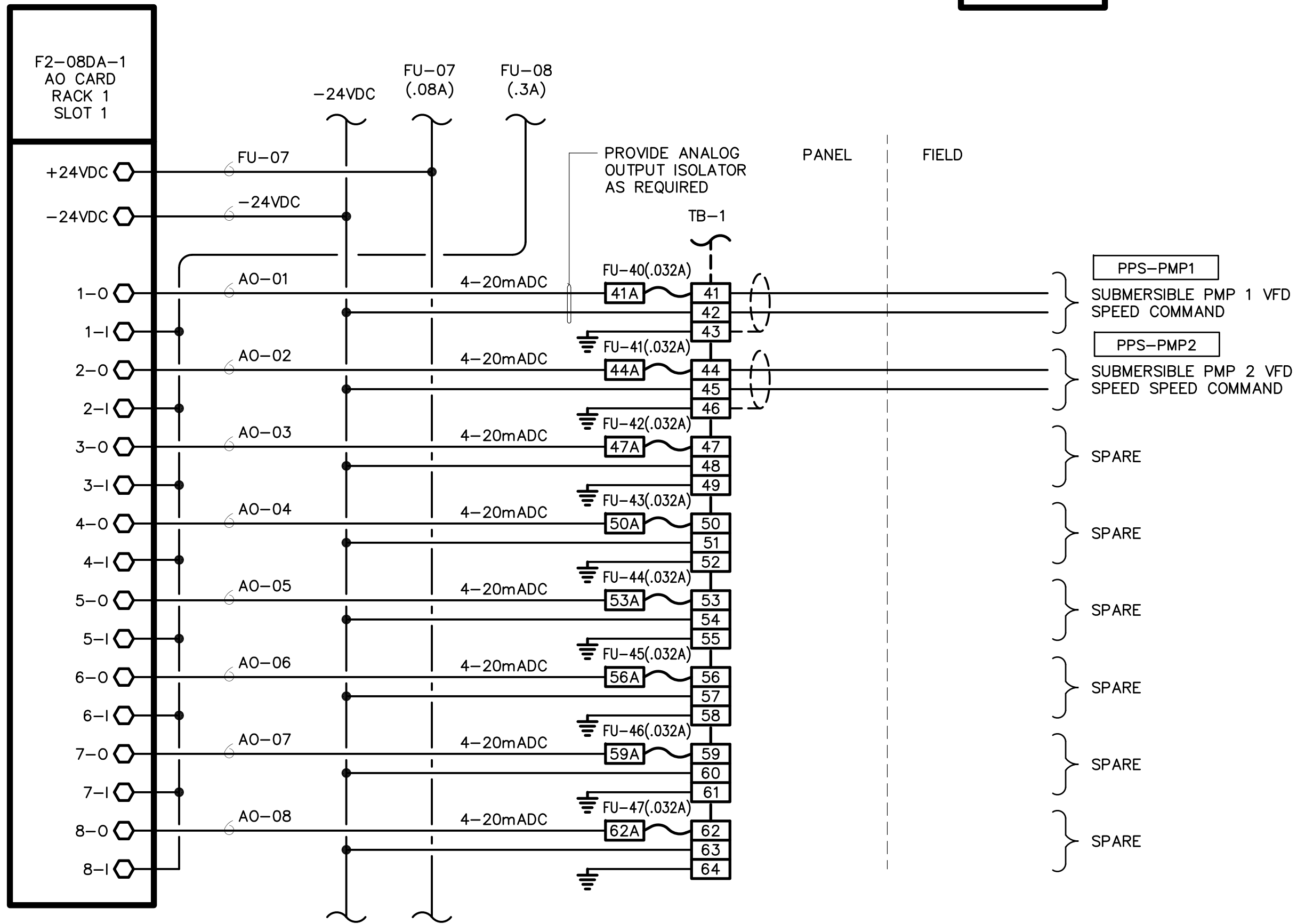
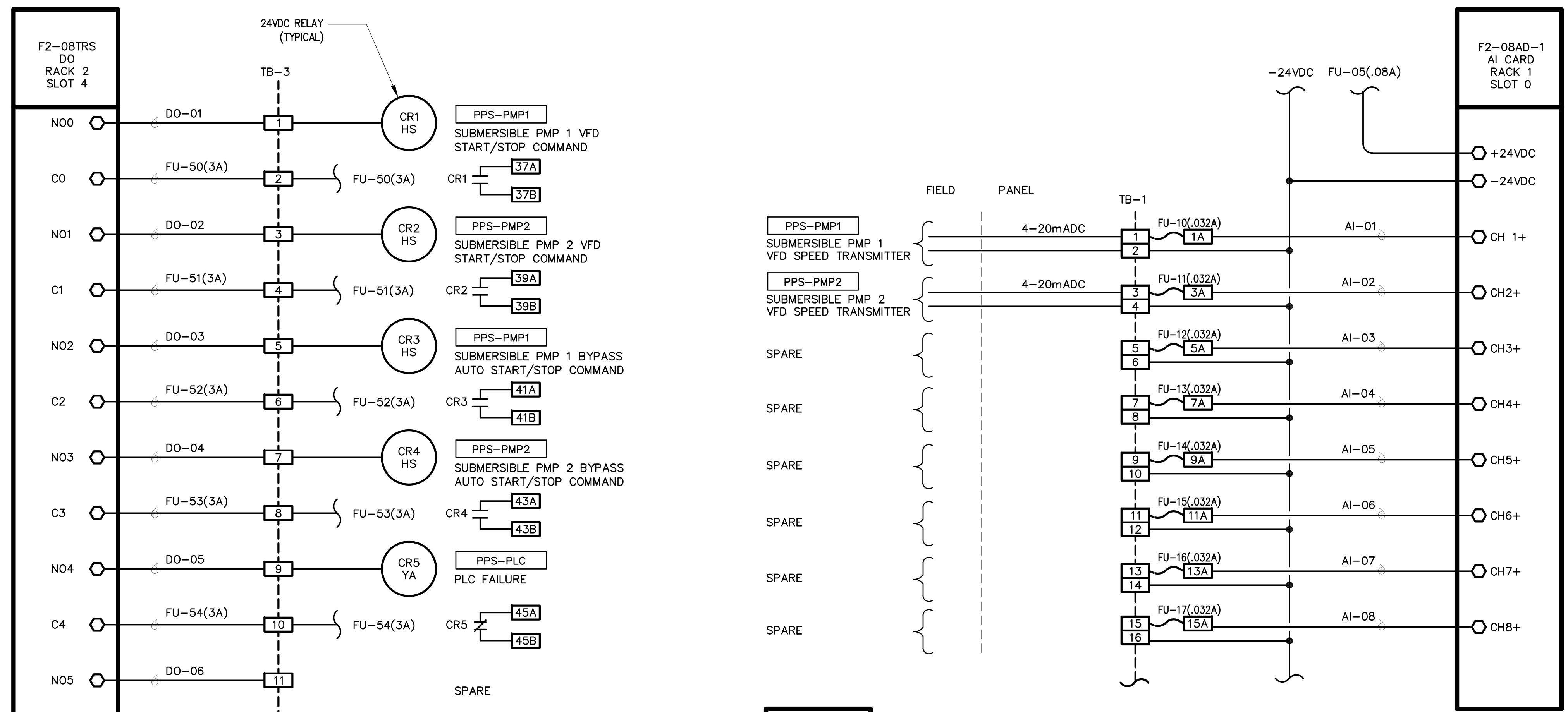
Sausalito-Marín City Sanitary District

SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
PRINCESS PUMP STATION
SCADA WIRING DIAGRAMS - SHEET 1

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DTN NO. 429
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. E-9
	SHEET NO. 10 OF 32

P: 429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-09.dwg 10-14-20 04:11:48 PM tp

SHEET NOTES:
 ① SEE DRAWING E-9 FOR I/O CARD RACK SEQUENCE IN THE PLC.

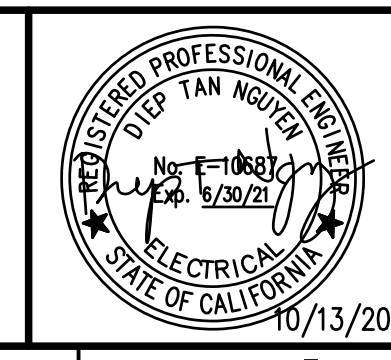


SCADA PLC-PRINCESS PUMP STATION WIRING DIAGRAMS
 SCALE: NTS

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DATE 10-13-2020

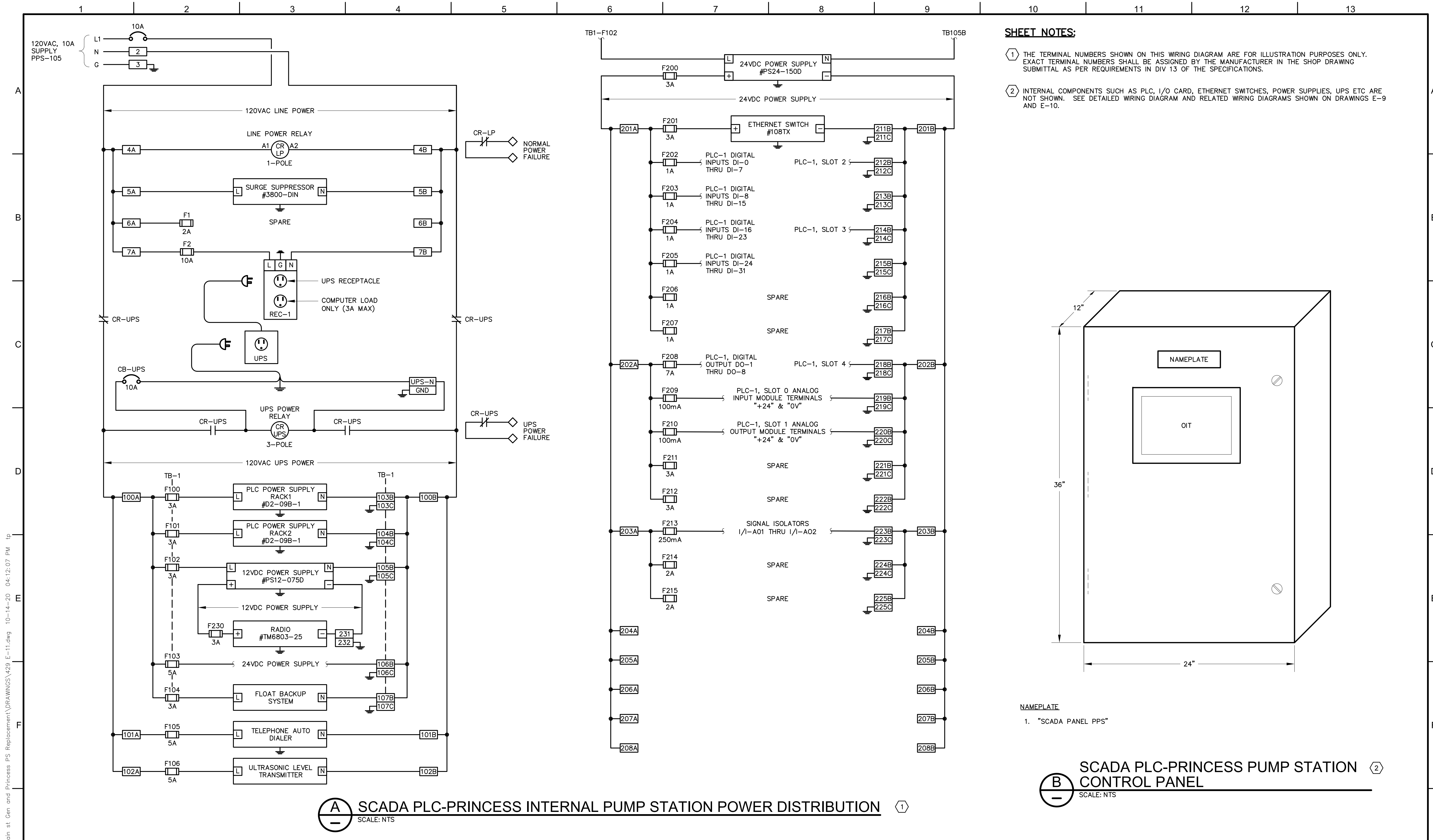


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SAUSALITO-MARIN CITY SANITARY DISTRICT
 GENERATORS RELIABILITY IMPROVEMENT PROJECT
 ELECTRICAL
PRINCESS PUMP STATION SCADA WIRING DIAGRAMS - SHEET 2

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DTN NO. 429
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. E-10
	SHEET NO. 11 OF 32



SHEET NOTES:

- ① THE TERMINAL NUMBERS SHOWN ON THIS WIRING DIAGRAM ARE FOR ILLUSTRATION PURPOSES ONLY. EXACT TERMINAL NUMBERS SHALL BE ASSIGNED BY THE MANUFACTURER IN THE SHOP DRAWING SUBMITTAL AS PER REQUIREMENTS IN DIV 13 OF THE SPECIFICATIONS.
- ② INTERNAL COMPONENTS SUCH AS PLC, I/O CARD, ETHERNET SWITCHES, POWER SUPPLIES, UPS ETC ARE NOT SHOWN. SEE DETAILED WIRING DIAGRAM AND RELATED WIRING DIAGRAMS SHOWN ON DRAWINGS E-9 AND E-10.

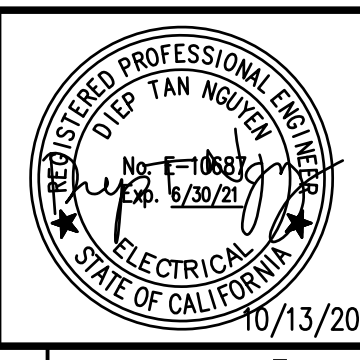
A SCADA PLC-PRINCESS INTERNAL PUMP STATION POWER DISTRIBUTION ①
SCALE: NTS

B SCADA PLC-PRINCESS CONTROL PANEL ②
SCALE: NTS

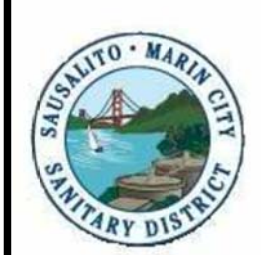
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GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
**PRINCESS PUMP STATION
SCADA CONTROL PANEL**

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

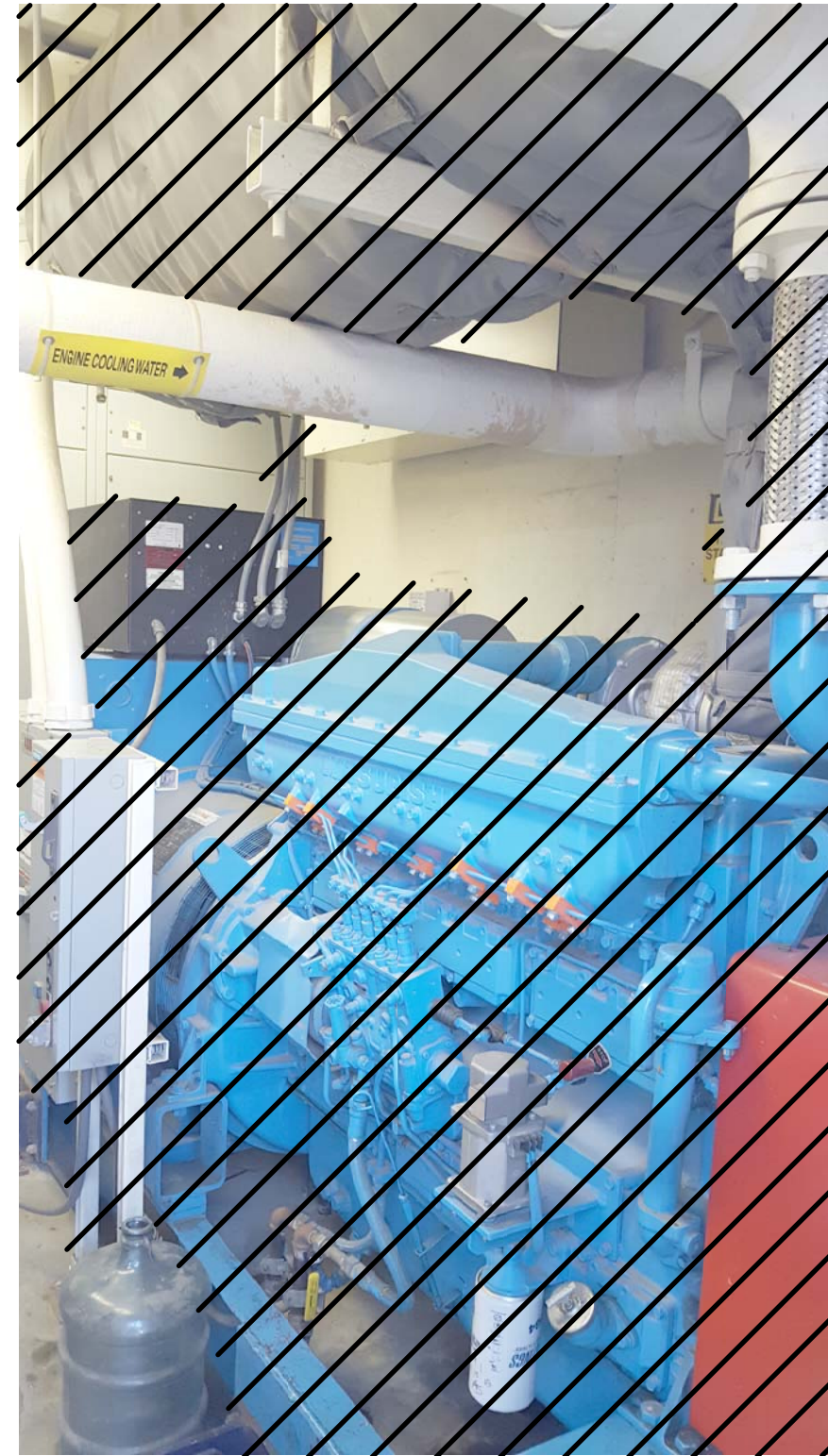
JOB NO.
DTN NO. 429
DRAWING NO.
E-11
SHEET NO.
12 OF 32



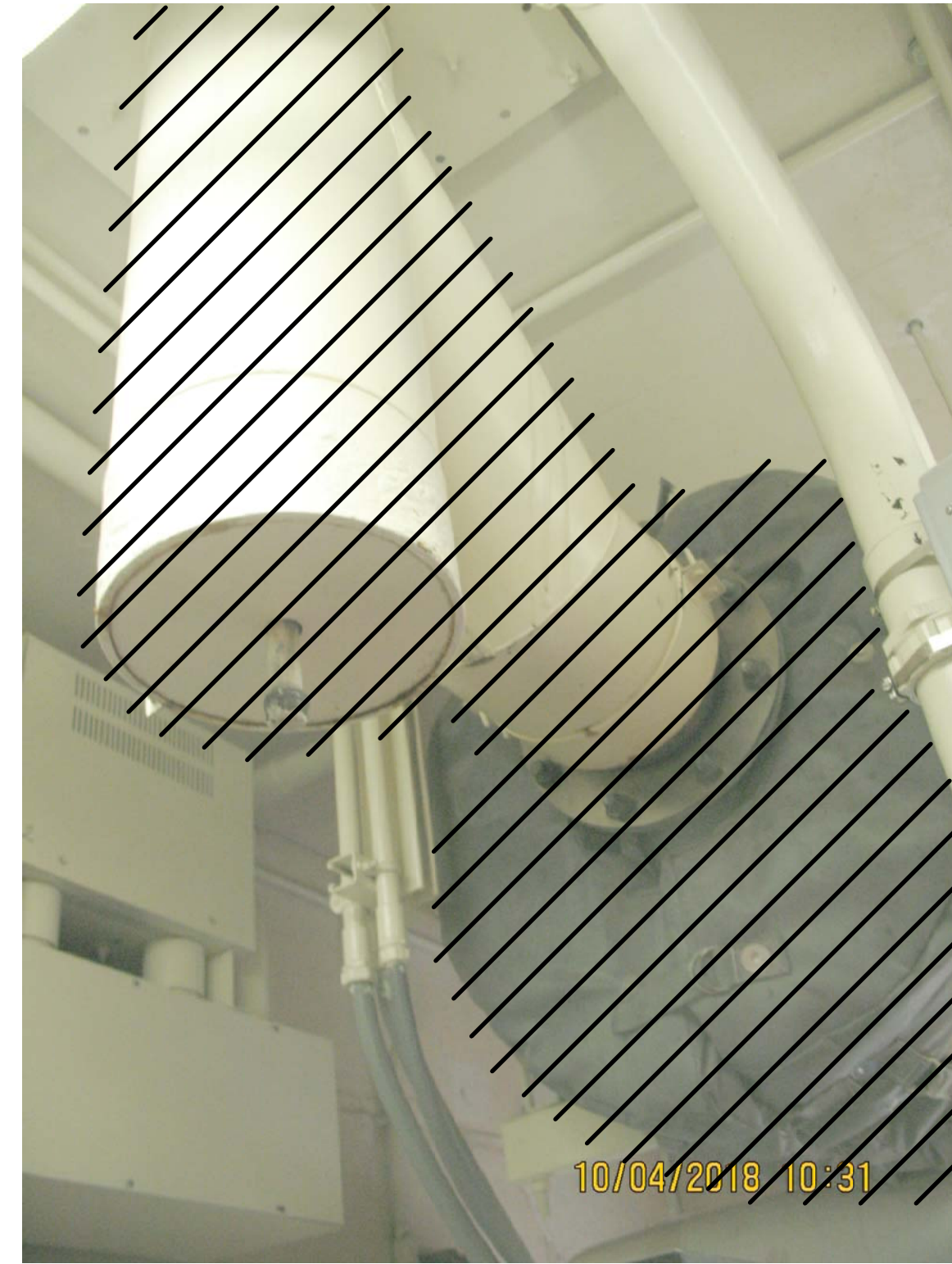
(A) DEMOLITION DETAIL 1
SCALE: NTS
MAIN PLANT EXIST. GEN SET



(B) DEMOLITION DETAIL 2
SCALE: NTS
MAIN PLANT GEN SET'S MUFFLER



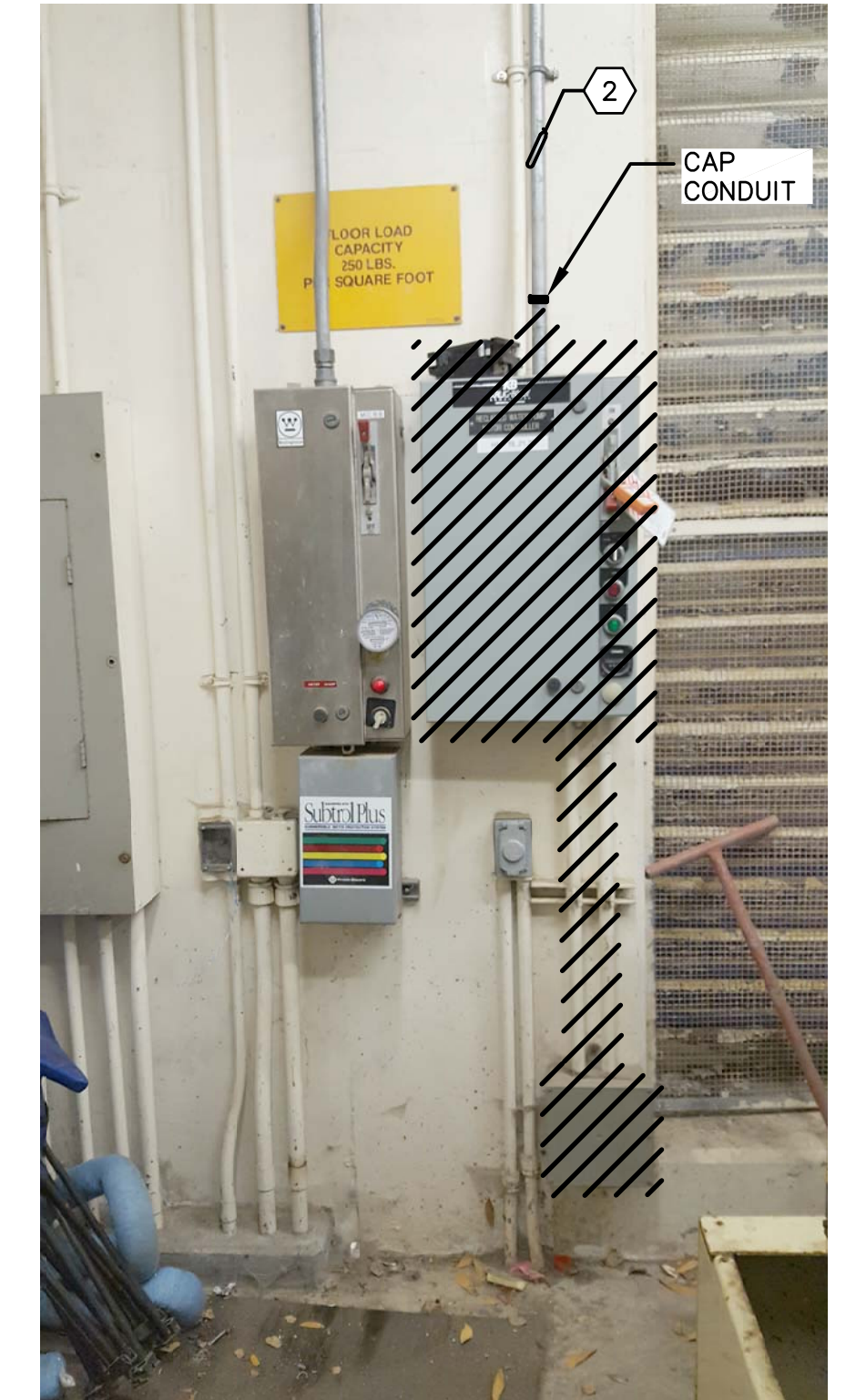
(C) DEMOLITION DETAIL 3
SCALE: NTS
(E) MAIN ST GEN & MUFFLER



(D) DEMOLITION DETAIL 4
SCALE: NTS
(E) MAIN ST PS MUFFLER

SHEET NOTES:

- ① SEE DRAWING E-16 FOR DETAILS OF REQUIRED WORK.
- ② ALL CABLES SHALL BE REMOVED TO THE EXISTING 480V SOURCE.



(I) DEMOLITION DETAIL 9
SCALE: NTS
MAIN PLANT - GEN ROOM



(E) DEMOLITION DETAIL 5
SCALE: NTS
(E) MAIN ST REMOTE RADIATOR FAN



(F) DEMOLITION DETAIL 6
SCALE: NTS
(E) MAIN ST DAY TANK



(G) DEMOLITION DETAIL 7
SCALE: NTS
(E) MAIN ST ATS

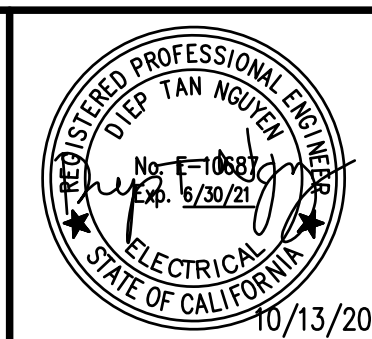


(H) DEMOLITION DETAIL 8
SCALE: NTS
(E) MAIN ST PS UNDERGROUND FUEL TANK

P: 429_Main Plant Gen, Main st, Gen and Princess PS Replacement\DRAWINGS\429 E-12.dwg 10-14-20 04:15:38 PM tp

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GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
**DEMOLITION DETAILS
SHEET 1**

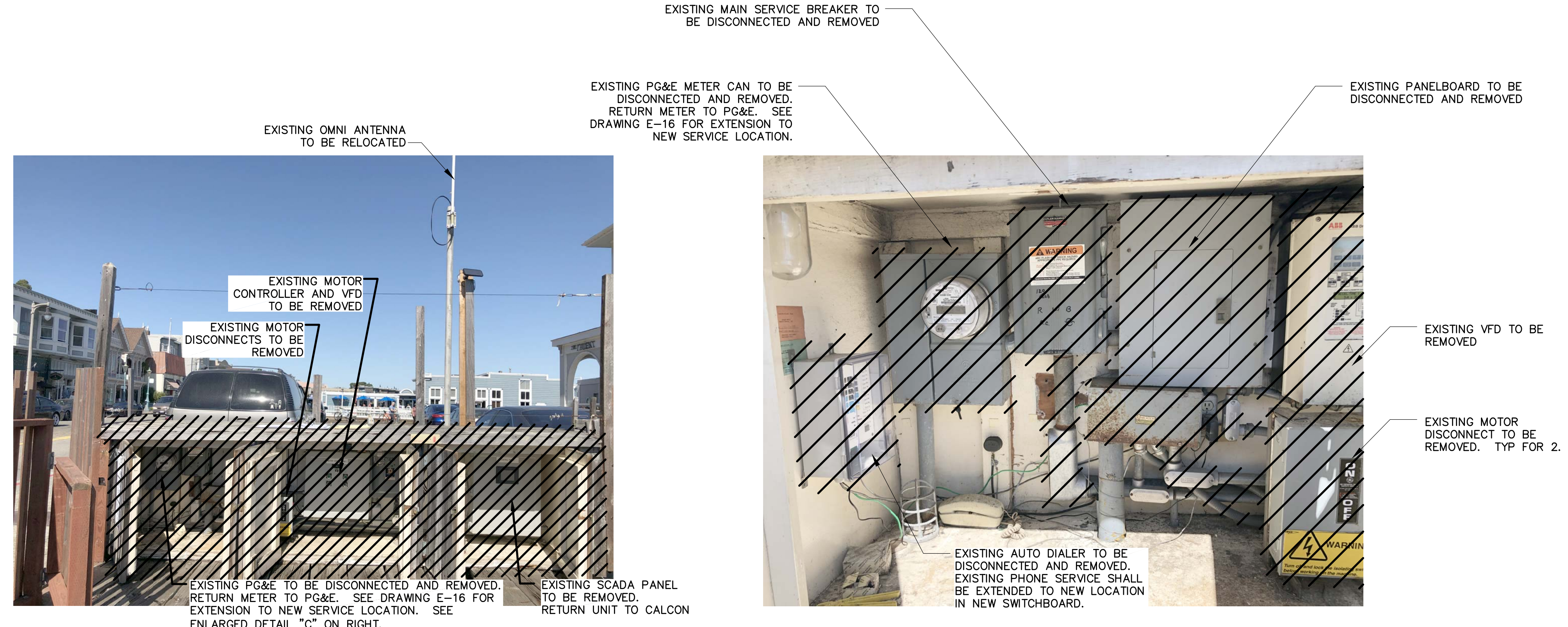
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DTN NO. 429
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. E-12
	SHEET NO. 13 OF 32

SHEET NOTES:

① DISCONNECT AND REPLACE EXISTING BATTERY CHARGER WITH NEW CHARGER. SEE DIV 16 FOR REQUIRED CHARACTERISTICS OF NEW CHARGER.



(A) EXISTING BATTERY CHARGER
SCALE: NTS MAIN PLANT - GEN. BLDG



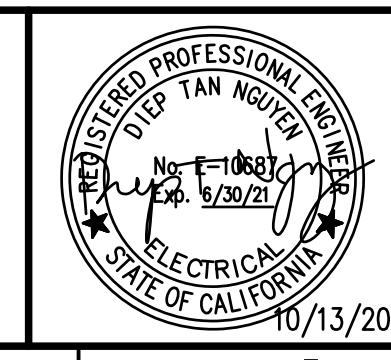
(B) PRINCESS PS PANEL DEMOLITION
SCALE: NTS PRINCESS PS

(C) PRINCESS PS DEMOLITION DETAIL
SCALE: NTS PRINCESS PS

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SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
DEMOLITION DETAILS
SHEET 3

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

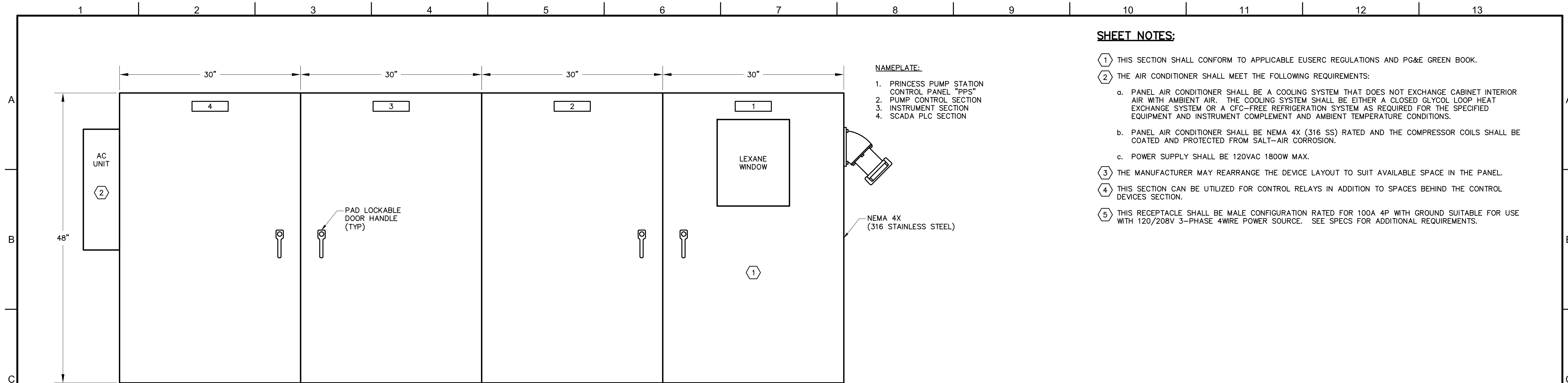
JOB NO.
DTN NO. 429
DRAWING NO.
E-14
SHEET NO.
15 OF 32

P:\429_Main Plant Gen. and Princess PS Replacement\DRAWINGS\429 E-15.dwg 10-14-20 04:18:40 PM tp

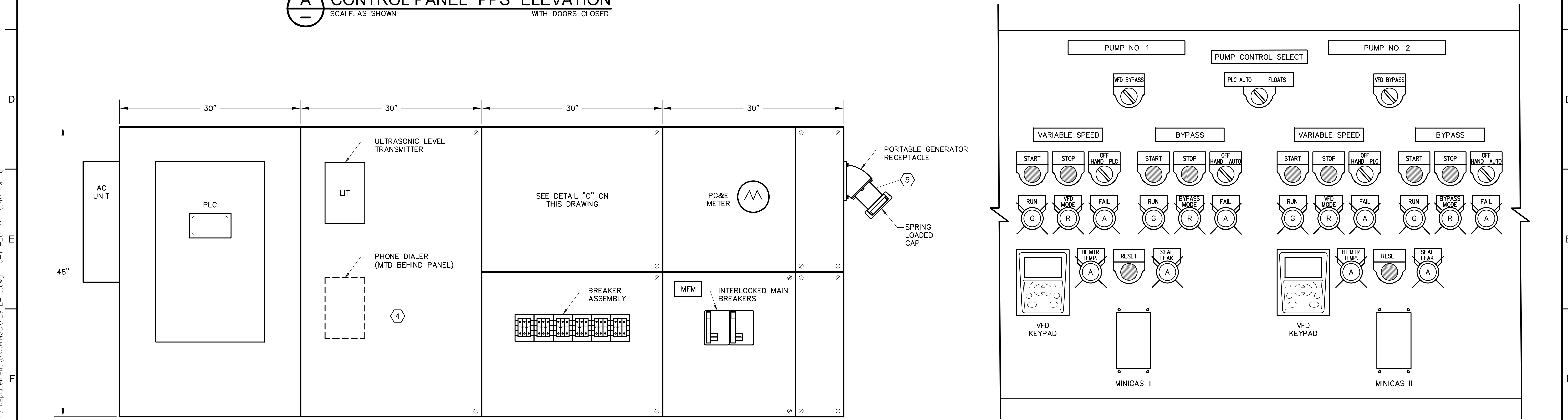
SHEET NOTES:

- ① THIS SECTION SHALL CONFORM TO APPLICABLE EUSERC REGULATIONS AND PG&E GREEN BOOK.
- ② THE AIR CONDITIONER SHALL MEET THE FOLLOWING REQUIREMENTS:
 - a. PANEL AIR CONDITIONER SHALL BE A COOLING SYSTEM THAT DOES NOT EXCHANGE CABINET INTERIOR AIR WITH AMBIENT AIR. THE COOLING SYSTEM SHALL BE EITHER A CLOSED GLYCOL LOOP HEAT EXCHANGE SYSTEM OR A CFC-FREE REFRIGERATION SYSTEM AS REQUIRED FOR THE SPECIFIED EQUIPMENT AND INSTRUMENT COMPLEMENT AND AMBIENT TEMPERATURE CONDITIONS.
 - b. PANEL AIR CONDITIONER SHALL BE NEMA 4X (316 SS) RATED AND THE COMPRESSOR COILS SHALL BE COATED AND PROTECTED FROM SALT-AIR CORROSION.
 - c. POWER SUPPLY SHALL BE 120VAC 1800W MAX.
- ③ THE MANUFACTURER MAY REARRANGE THE DEVICE LAYOUT TO SUIT AVAILABLE SPACE IN THE PANEL.
- ④ THIS SECTION CAN BE UTILIZED FOR CONTROL RELAYS IN ADDITION TO SPACES BEHIND THE CONTROL DEVICES SECTION.
- ⑤ THIS RECEPTACLE SHALL BE MALE CONFIGURATION RATED FOR 100A 4P WITH GROUND SUITABLE FOR USE WITH 120/208V 3-PHASE 4WIRE POWER SOURCE. SEE SPECS FOR ADDITIONAL REQUIREMENTS.

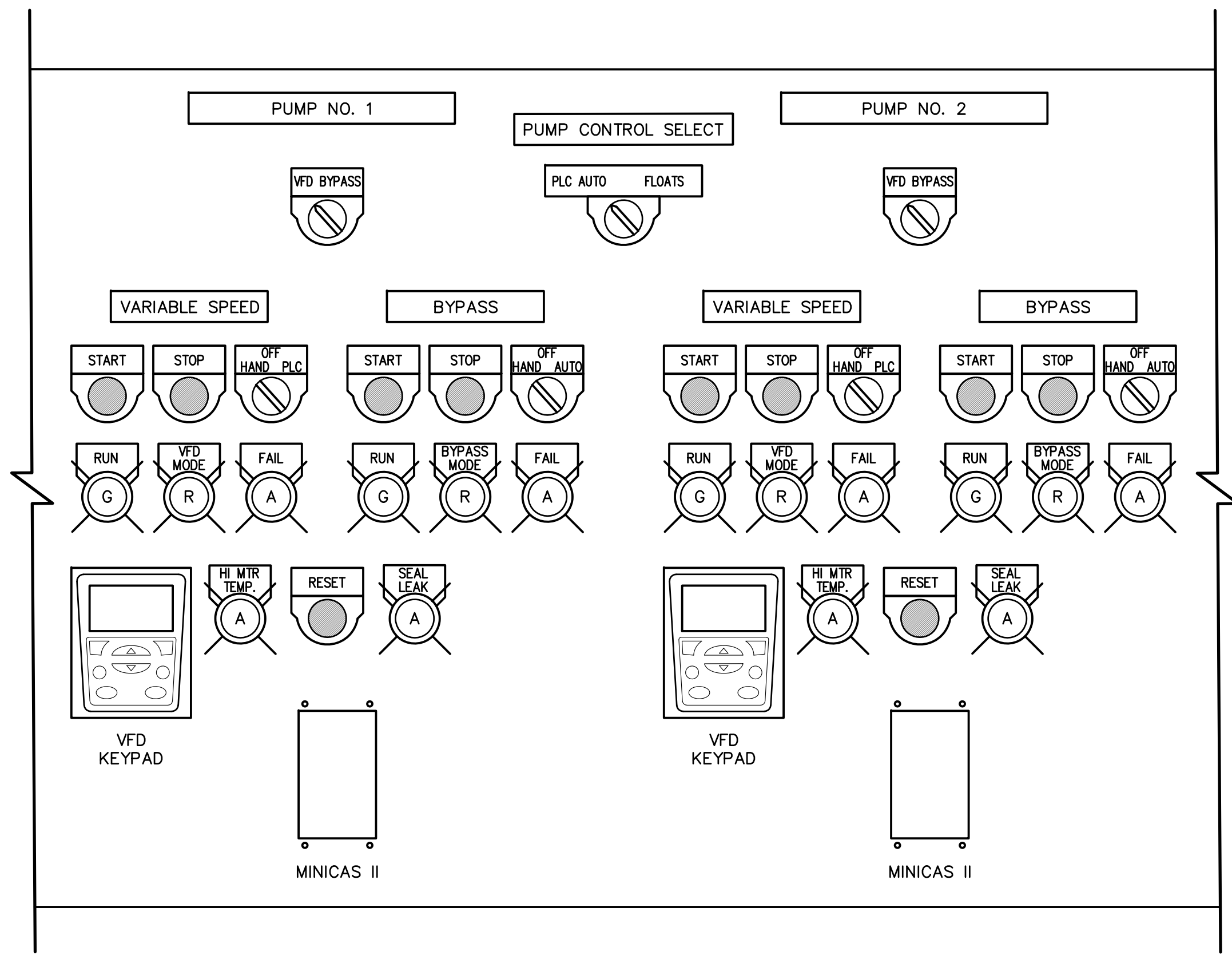
- NAMEPLATE:**
1. PRINCESS PUMP STATION CONTROL PANEL "PPS"
 2. PUMP CONTROL SECTION
 3. INSTRUMENT SECTION
 4. SCADA PLC SECTION



A CONTROL PANEL "PPS" ELEVATION
SCALE: AS SHOWN WITH DOORS CLOSED



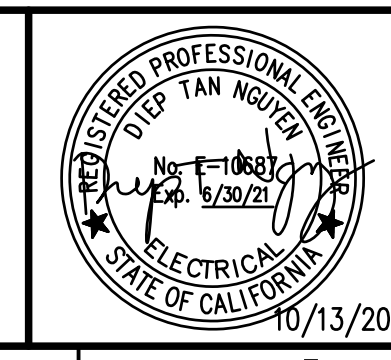
B CONTROL PANEL "PPS" ELEVATION
SCALE: AS SHOWN WITH DOORS OPEN



C CONTROL DEVICES
SCALE: NTS

REV	DATE	BY	DESCRIPTION
1			
2			
3			
4			

DESIGNED TP
DRAWN LD
CHECKED DTN
DATE 10-13-2020

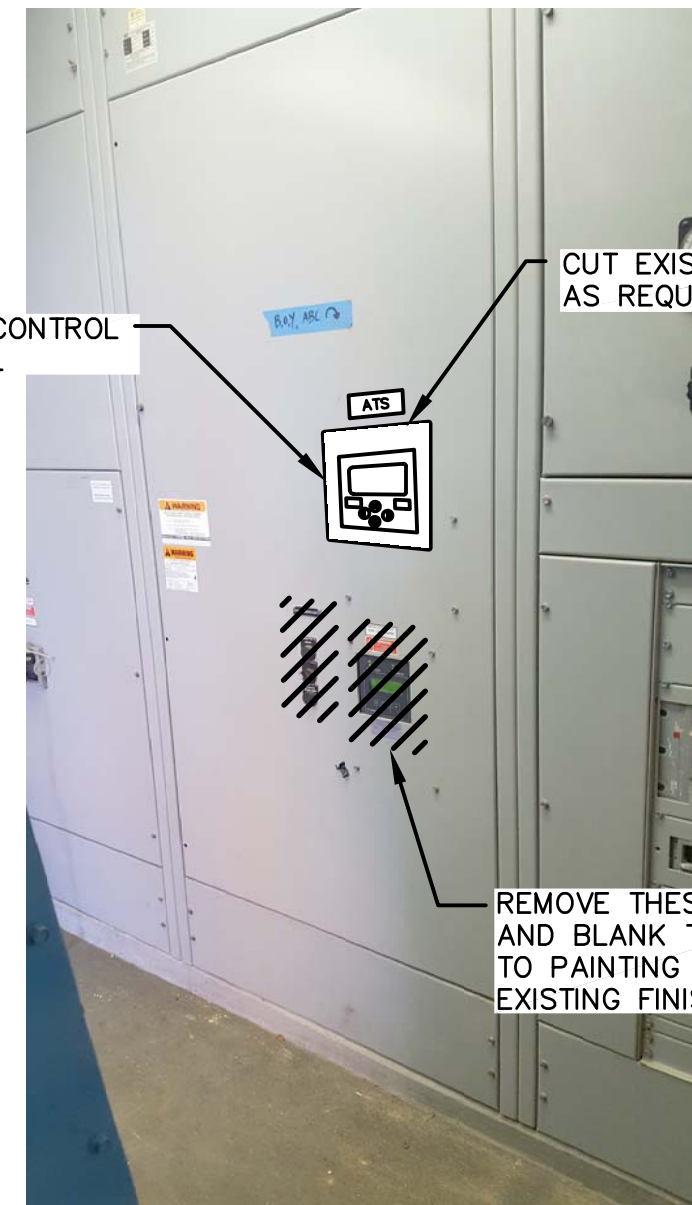


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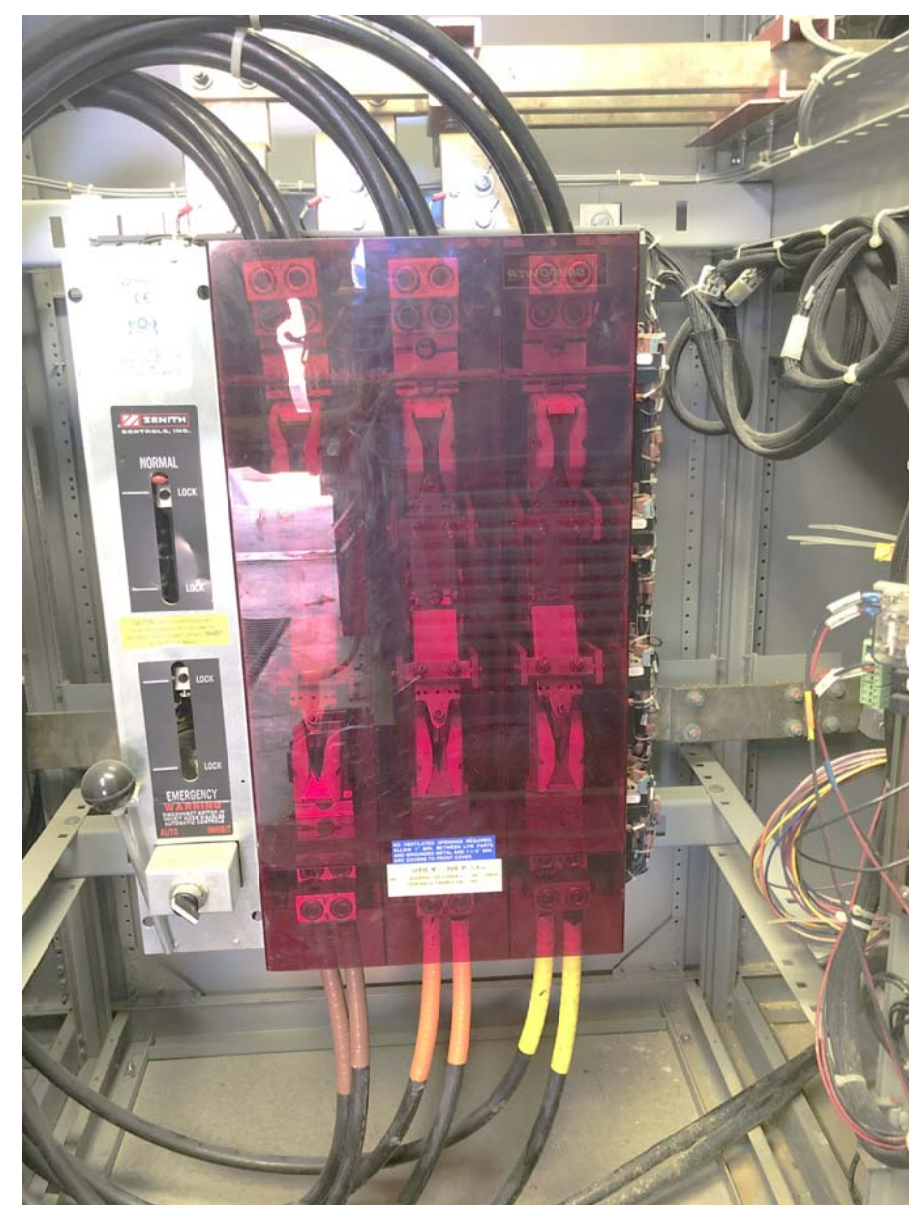


SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
CONSTRUCTION DETAILS
SHEET 1

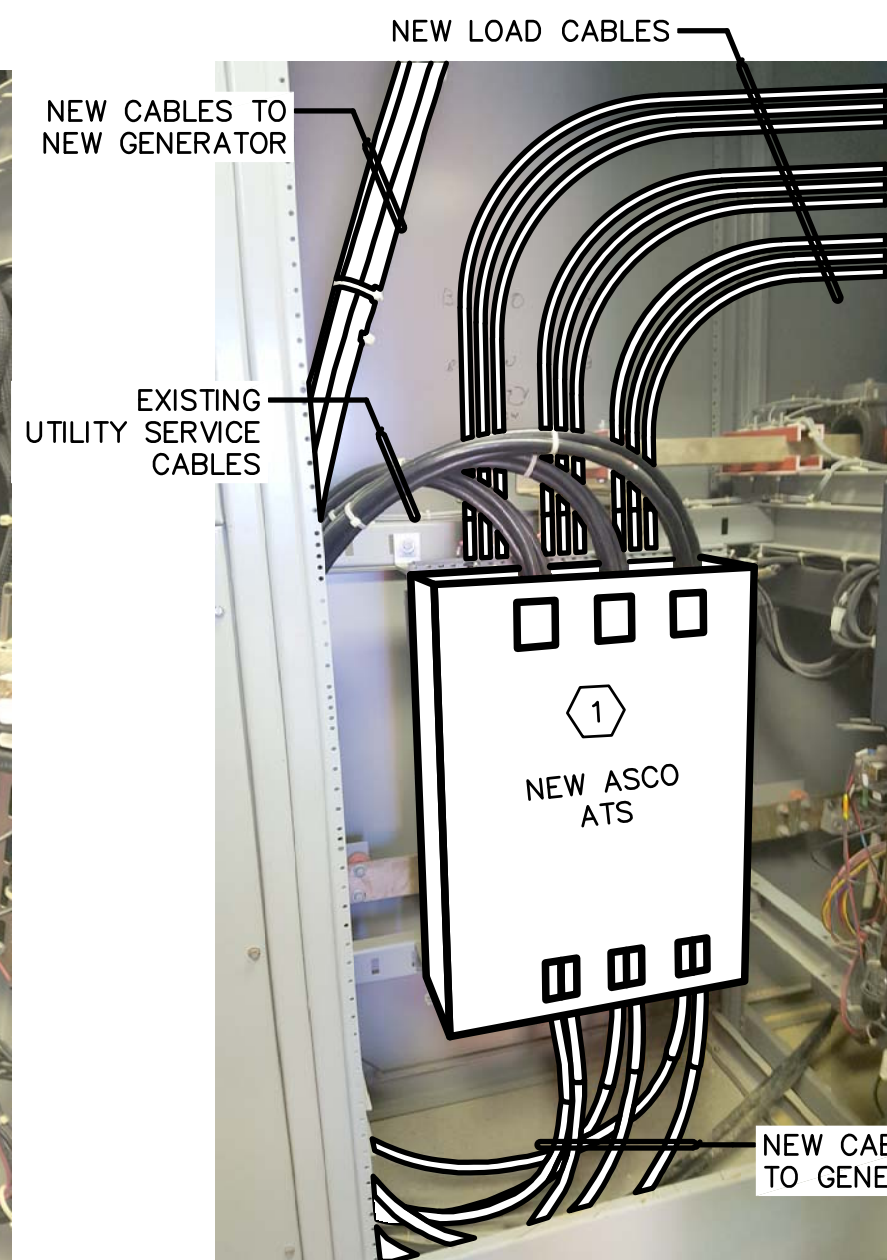
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DTN NO. 429
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. E-15
	SHEET NO. 16 OF 32



ATS EXTERIOR DOOR MODIFICATIONS



EXISTING ATS TO BE REPLACED



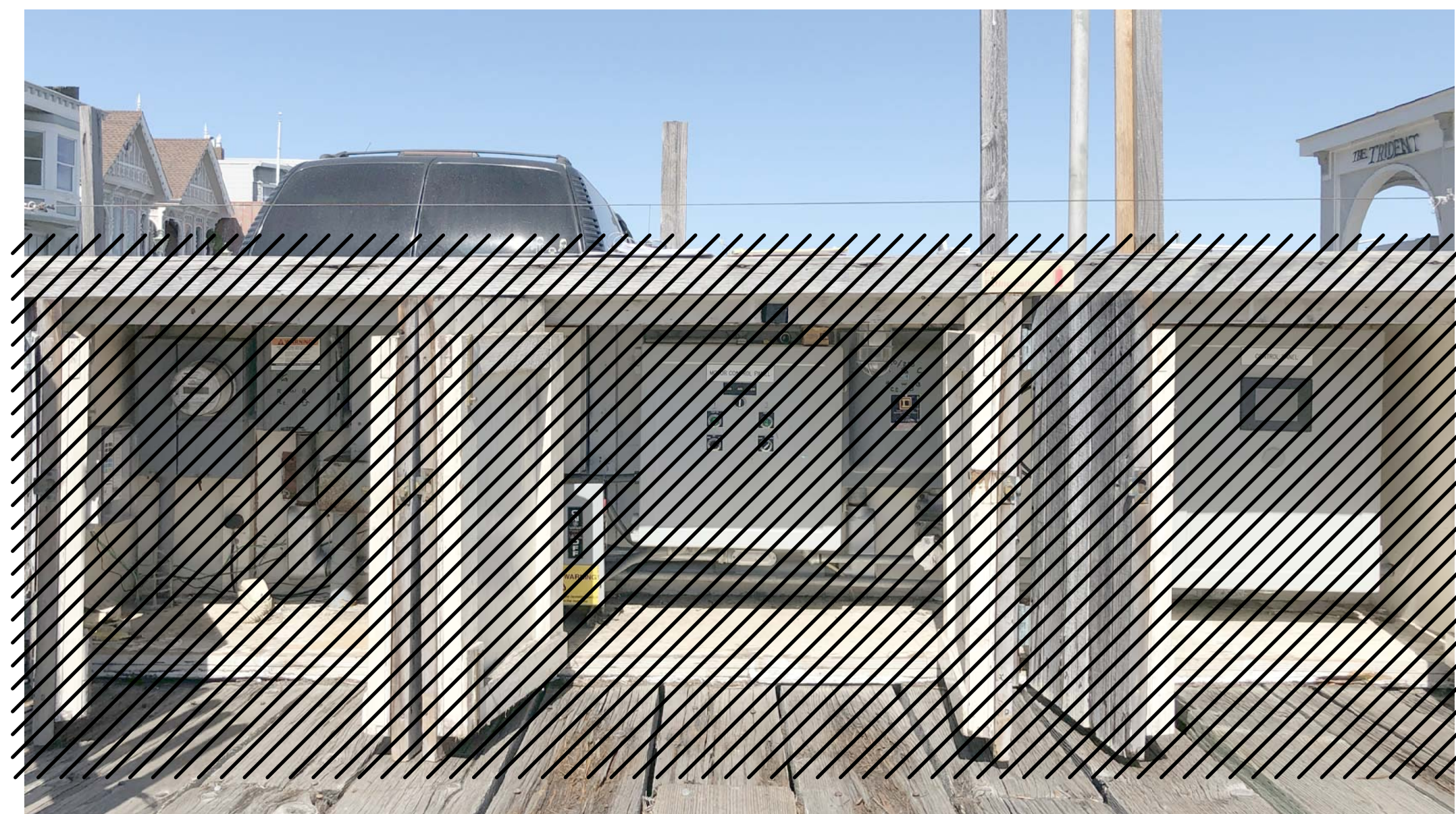
ATS REPLACEMENT

SHEET NOTES:

- ① THE CONTRACTOR SHALL OBTAIN SERVICES FROM IEM TO PERFORM THE FOLLOWING WORK:
1. REMOVE EXISTING ATS AND AUXILIARY CONTROL DEVICES.
 2. FURNISH AND INSTALL NEW ASCO 7000 SERIES ATS, 800A 3P, OPEN-TYPE AND AUXILIARY CONTROLS IN THE EXISTING SWITCHBOARD AS SPECIFIED IN THIS SECTION AND AS SHOWN ON THE DRAWINGS.
 3. PROGRAM AND TEST THE NEW UNIT AS PER DESIGN SPECIFICATION SECTION 16955.
 4. ALL WORK TO BE DONE SHALL FOLLOW SAFETY PROCEDURES FROM NEC AND OSHA WITH THE EXISTING SWITCHBOARD COMPLETELY DE-ENERGIZED. (SEE REQUIRED BYPASS EQUIPMENT IN A SEPARATE SPECS SECTION.
 5. PROTECT ATS UNTIL ACCEPTANCE BY THE DISTRICT.
- ALL OTHER RELATED WORK SUCH AS MODIFICATION AND REMOVAL OF EXISTING COPPER BUSES, CABLE TERMINATIONS AND CONTROL WIRINGS ETC. SHALL BE DONE BY IEM UNDER SUPERVISION FROM THE CONTRACTOR.
- ② THE EXISTING WOODEN ENCLOSURE AND ALL EXISTING ELECTRICAL AND INSTRUMENTATION PANELS SHALL BE DISCONNECTED AND REMOVED COMPLETELY.

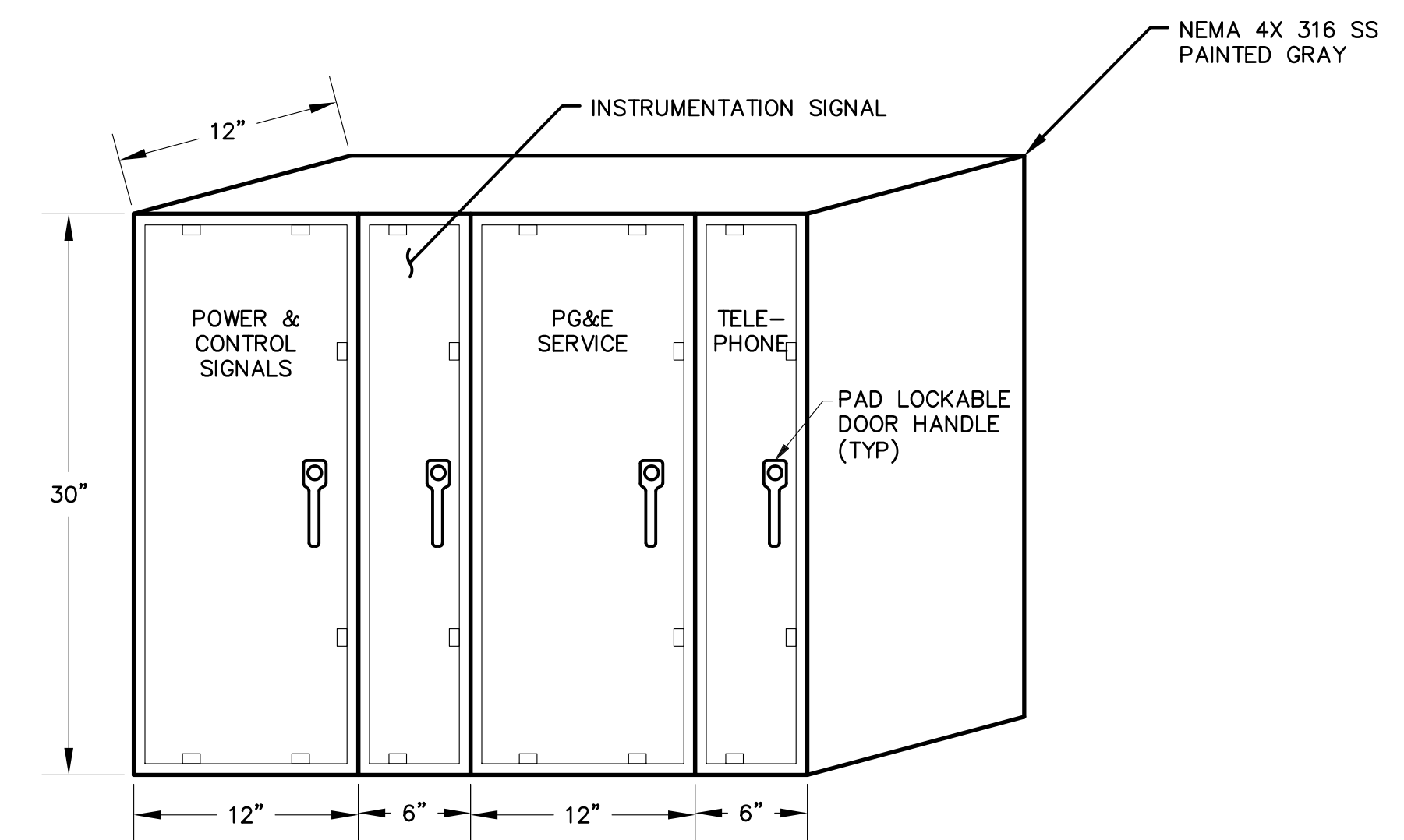
(E) ATS REPLACEMENT DETAILS
SCALE: NTS

MAIN STREET PUMP STATION



(B) PULL BOX DETAILS
SCALE: NTS

PRINCESS PUMP STATION

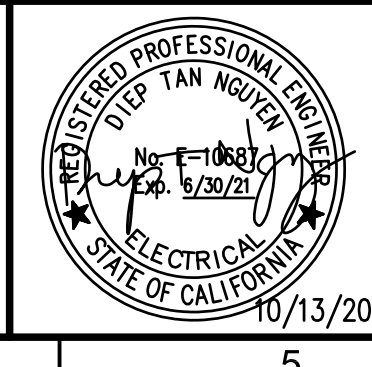


(C) UTILITY PULL BOX
SCALE: NTS

PRINCESS PUMP STATION

REV	DATE	BY	DESCRIPTION
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CHECKED	DTN
DATE	10-13-2020



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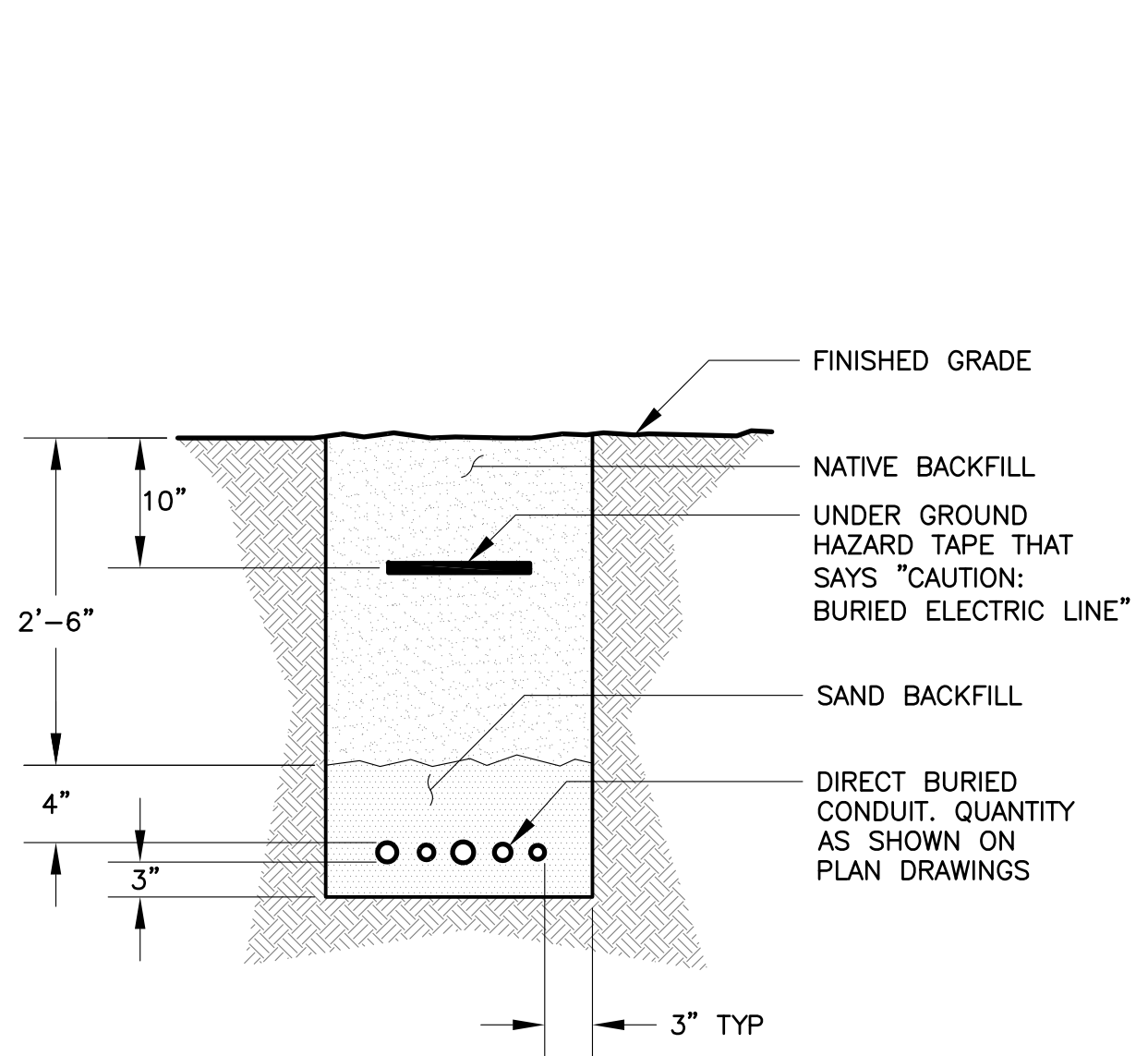


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SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
CONSTRUCTION DETAILS
SHEET 2

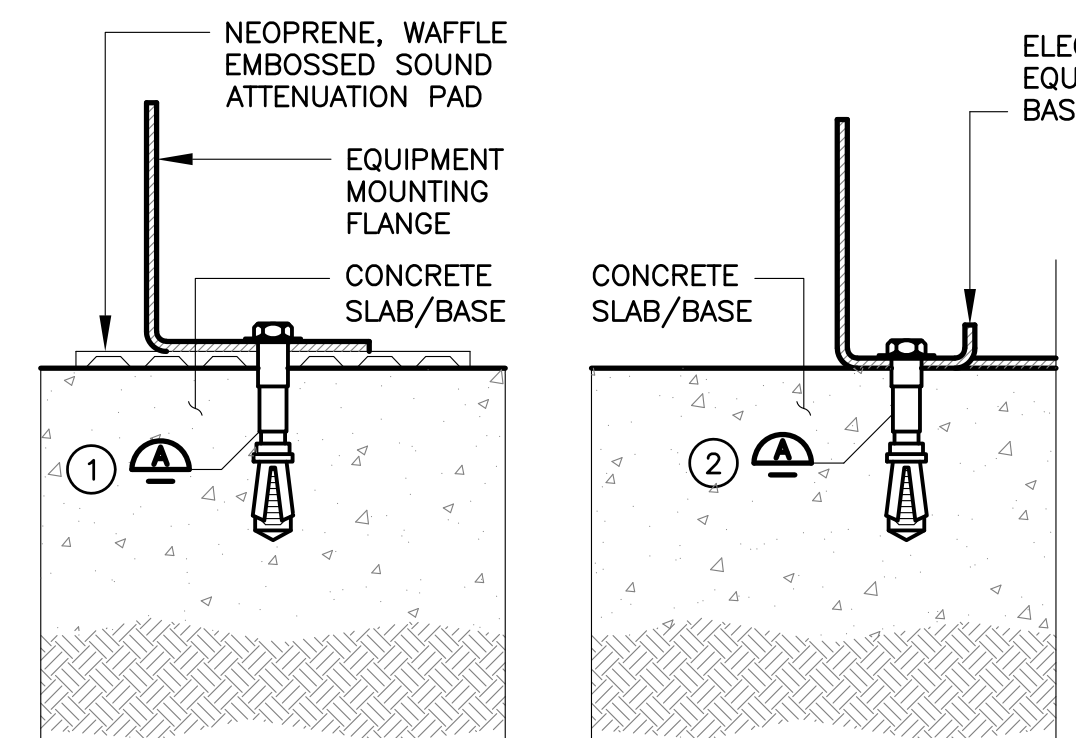
VERIFY SCALES	JOB NO. DTN NO. 429
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. E-16
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 17 OF 32

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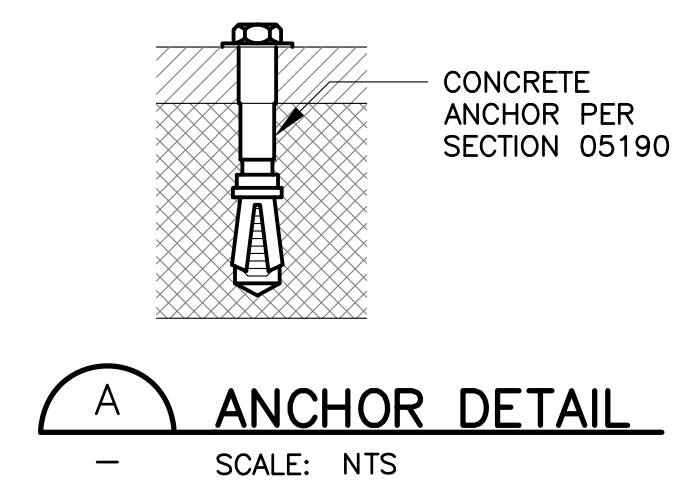


- NOTES:**
1. ALL DIMENSIONS ARE MINIMUM UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 2. REFER TO SPECIFICATIONS FOR TRENCH BACKFILL REQUIREMENTS.

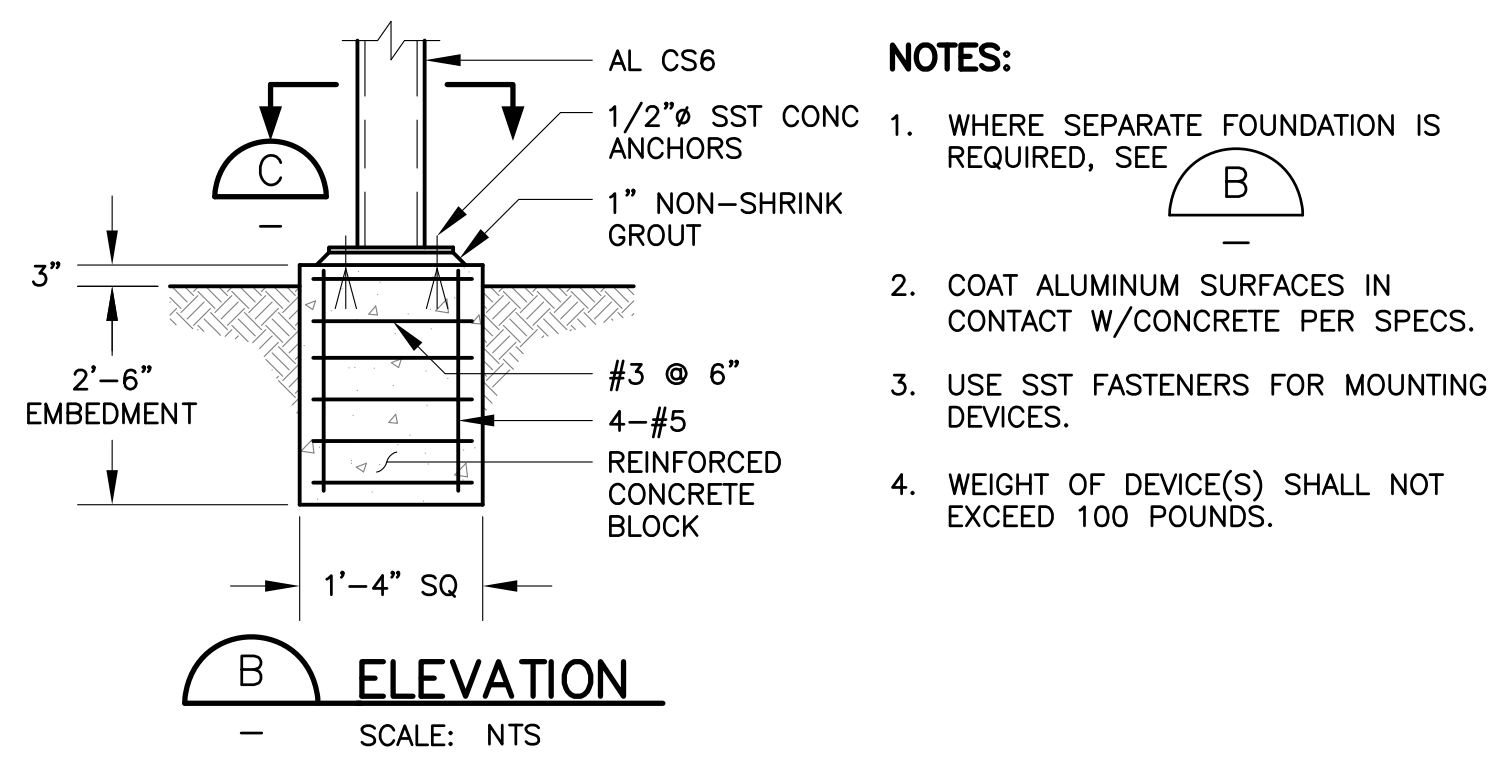
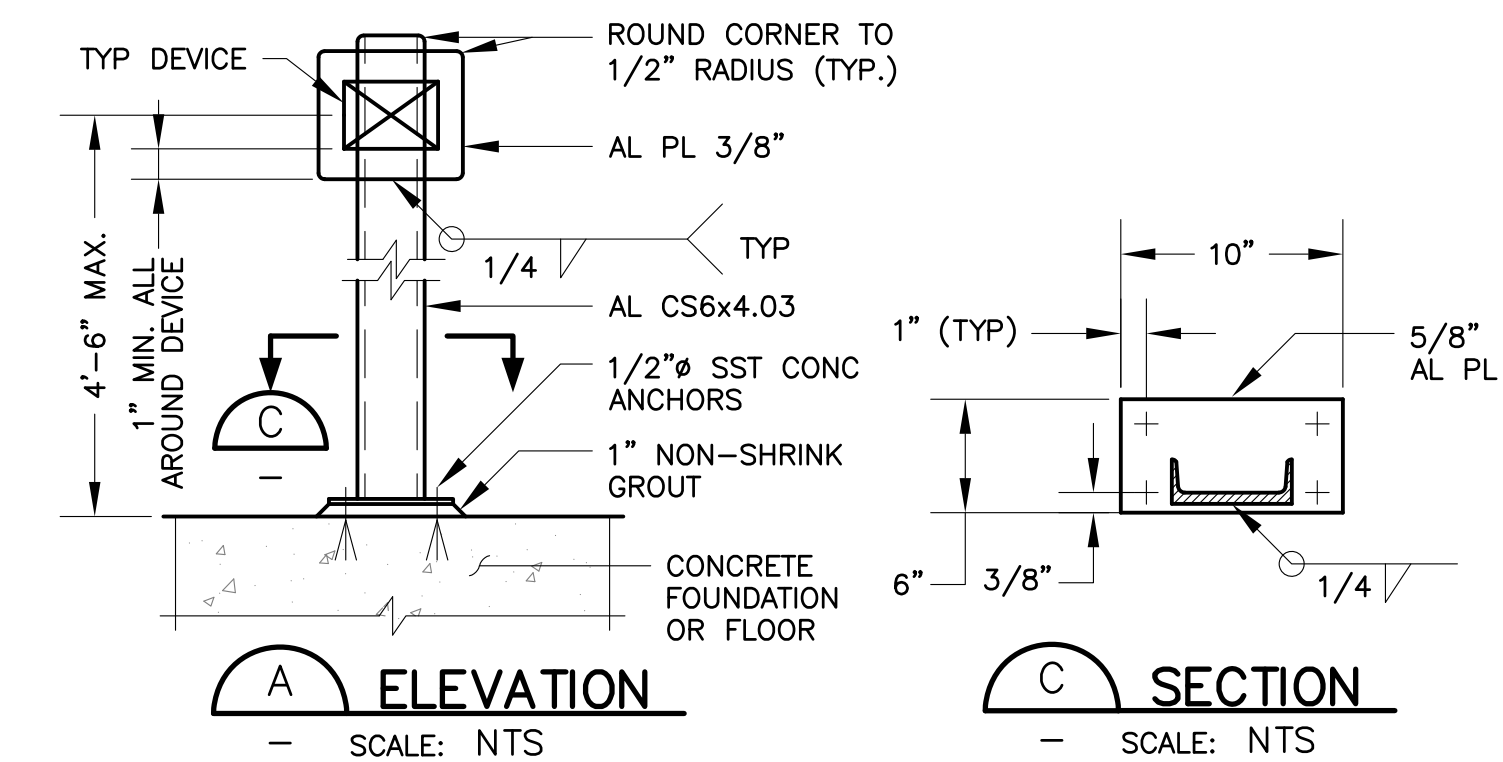
E131 DIRECT BURIED CONDUIT
TYP SCALE: NTS



- 1 SHALL BE USED FOR TRANSFORMER ATTACHMENT.
- 2 SHALL BE USED FOR MAIN SWITCHBOARD (MSB), MOTOR CONTROL CENTERS (MCC), AND DISTRIBUTION BOARDS.
- 3 ANCHOR AND MOUNTING FLANGE SHALL BE 316SS

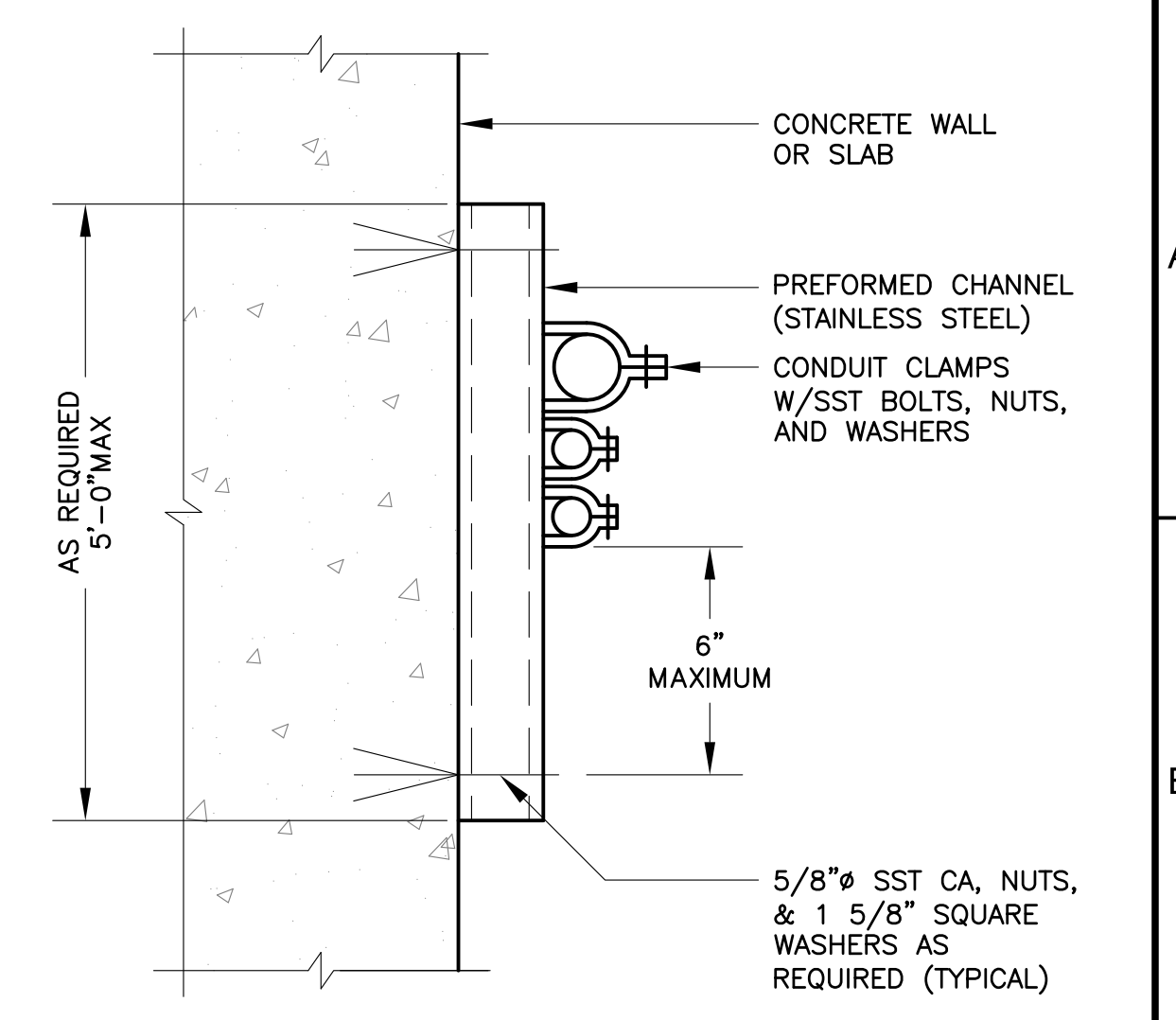


E326 ELECTRICAL EQUIPMENT MOUNTING DETAIL
TYP SCALE: NTS



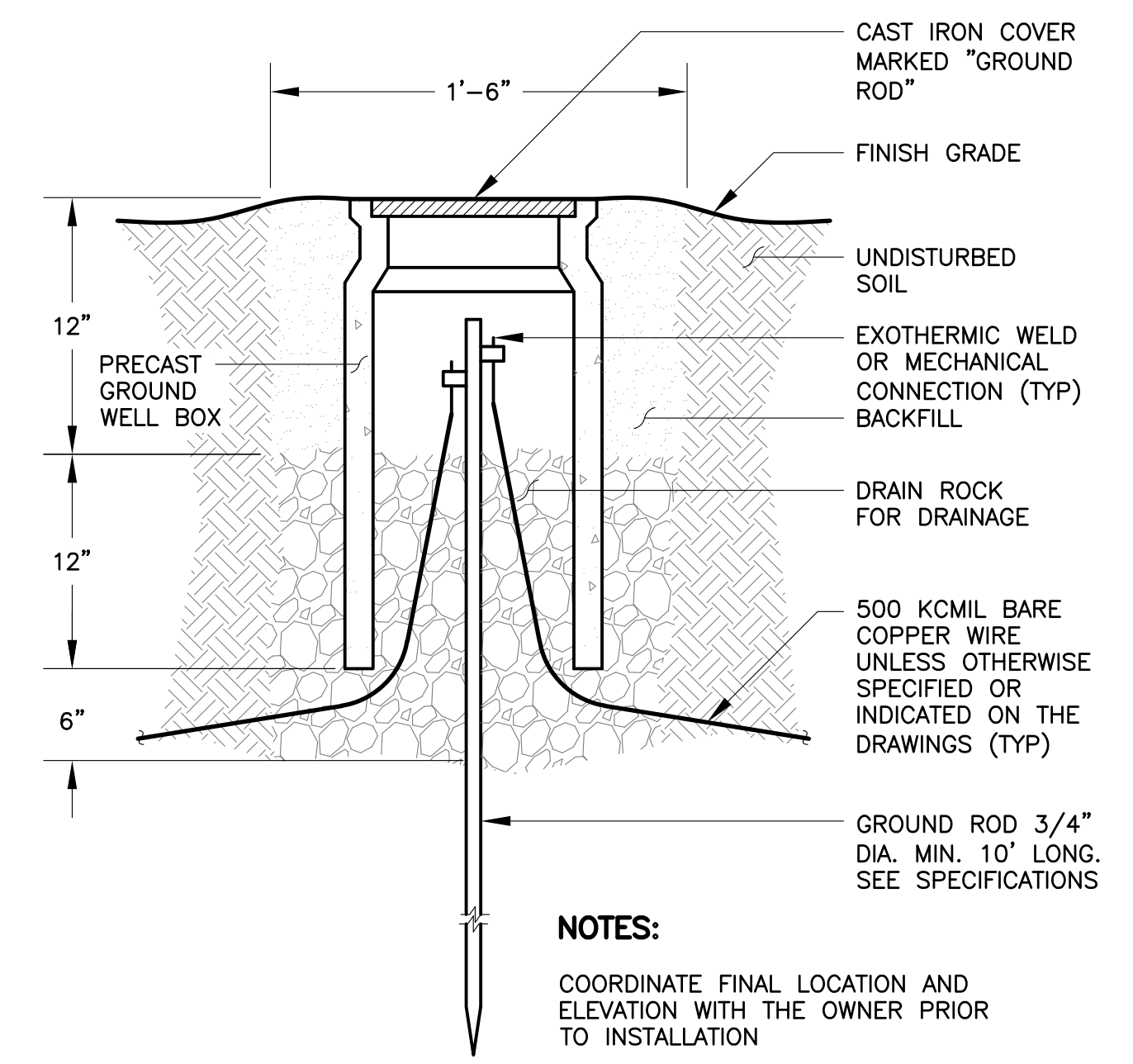
- NOTES:**
1. WHERE SEPARATE FOUNDATION IS REQUIRED, SEE B
 2. COAT ALUMINUM SURFACES IN CONTACT W/CONCRETE PER SPECS.
 3. USE SST FASTENERS FOR MOUNTING DEVICES.
 4. WEIGHT OF DEVICE(S) SHALL NOT EXCEED 100 POUNDS.

E330 DEVICE SUPPORT AND MOUNTING
TYP SCALE: NTS



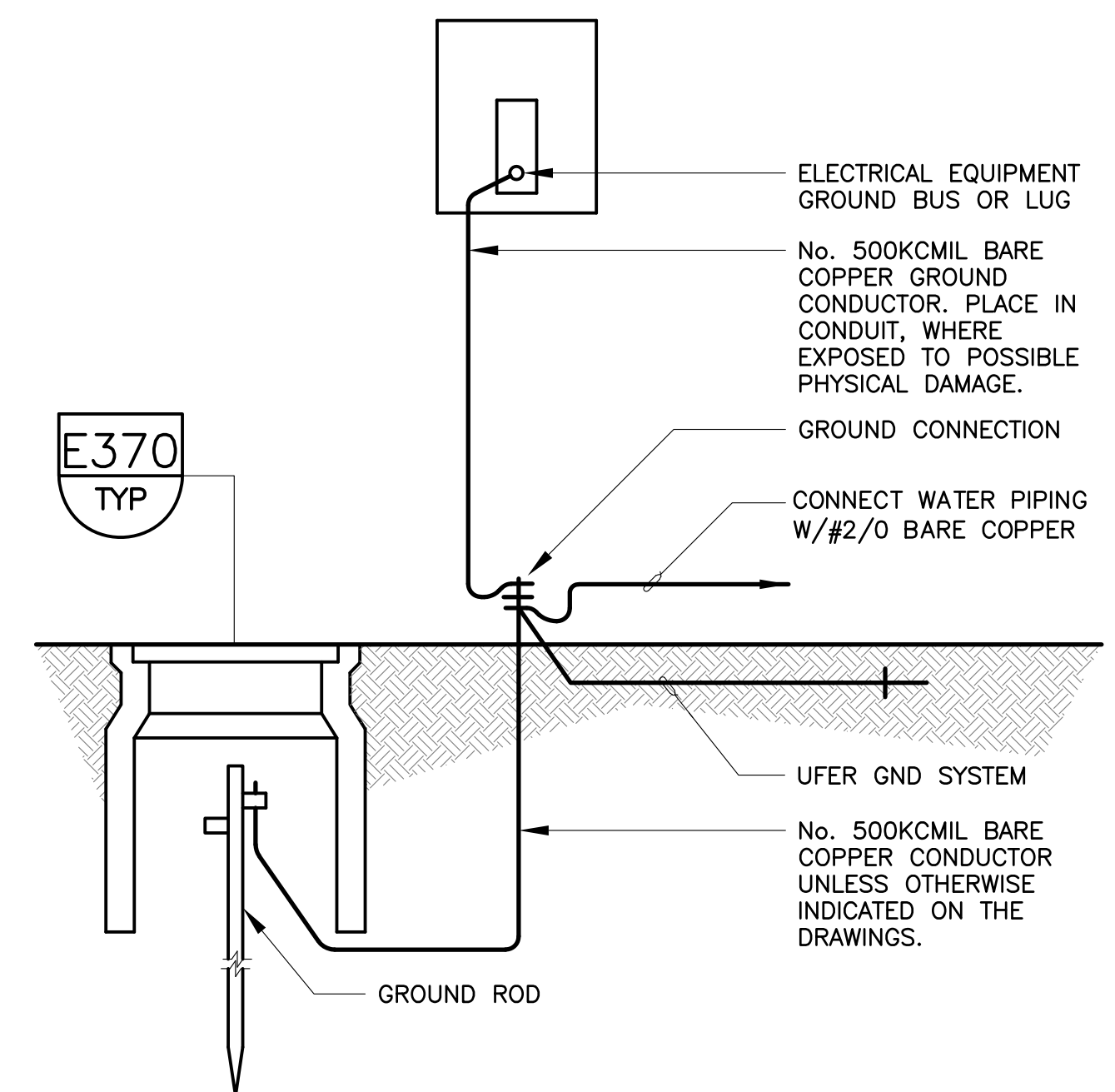
- NOTES:**
1. THIS DETAIL TYPICAL FOR BOTH VERTICAL AND HORIZONTAL MOUNTING.
 2. PREFORMED CHANNEL, FITTINGS, AND CLAMPS SHALL BE STAINLESS STEEL FOR NEMA 12 AREAS AND STAINLESS STEEL FOR ALL AREAS. FIELD COAT ALL CUTS PER SPECIFICATIONS.
 3. CHANNELS TO BE SPACED AT 5'-0" OC MAXIMUM.

E340 CONDUIT SUPPORT
TYP SCALE: NTS

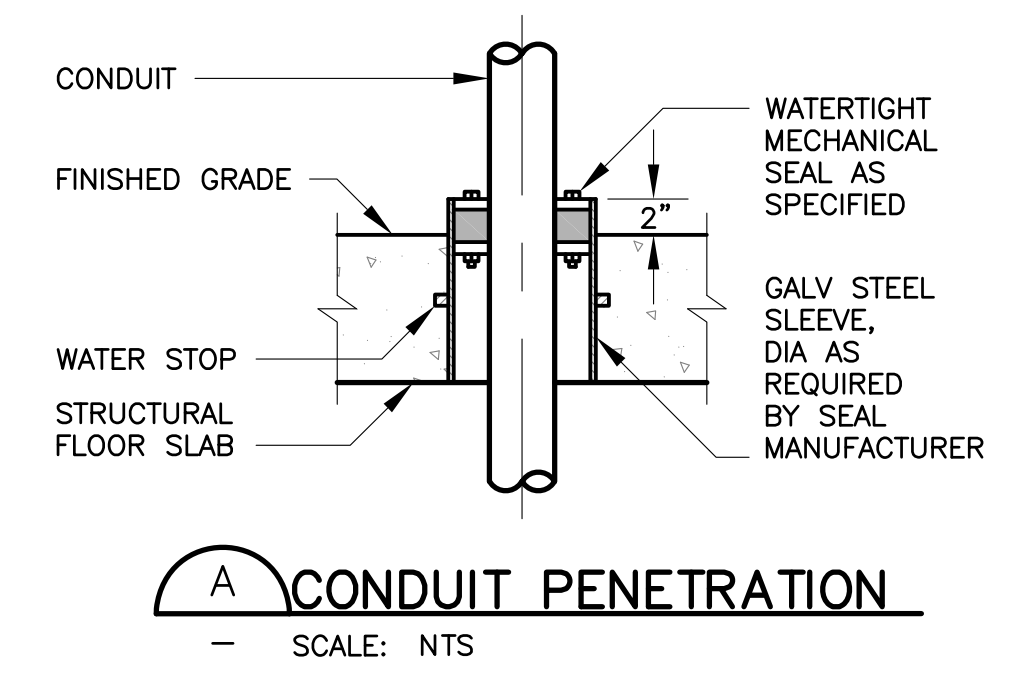


- NOTES:**
1. COORDINATE FINAL LOCATION AND ELEVATION WITH THE OWNER PRIOR TO INSTALLATION

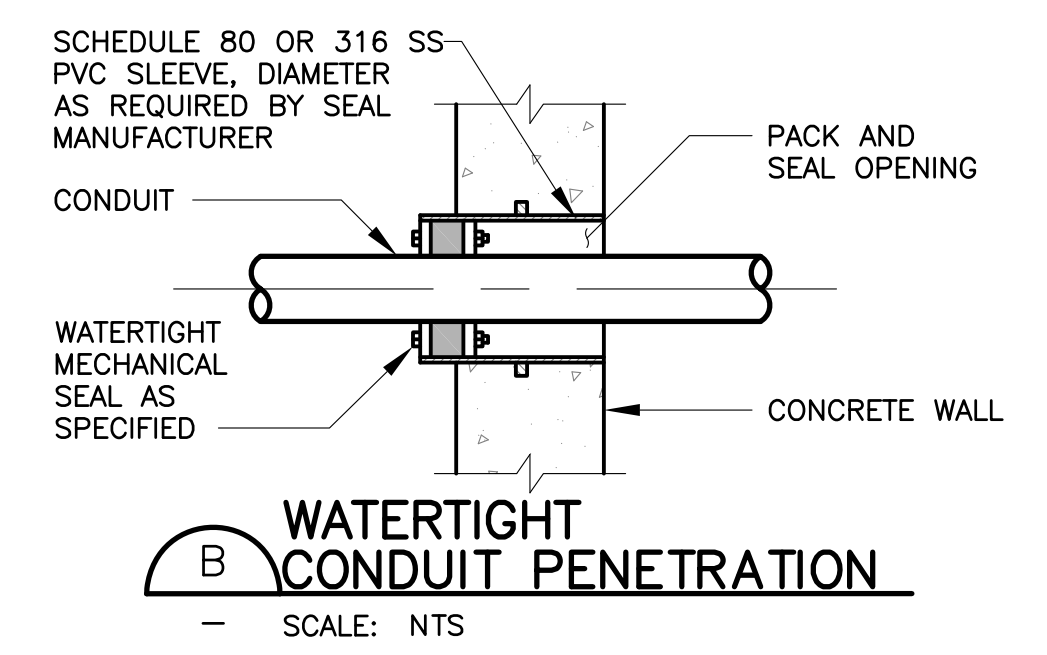
E370 GROUND WELL
TYP SCALE: NTS



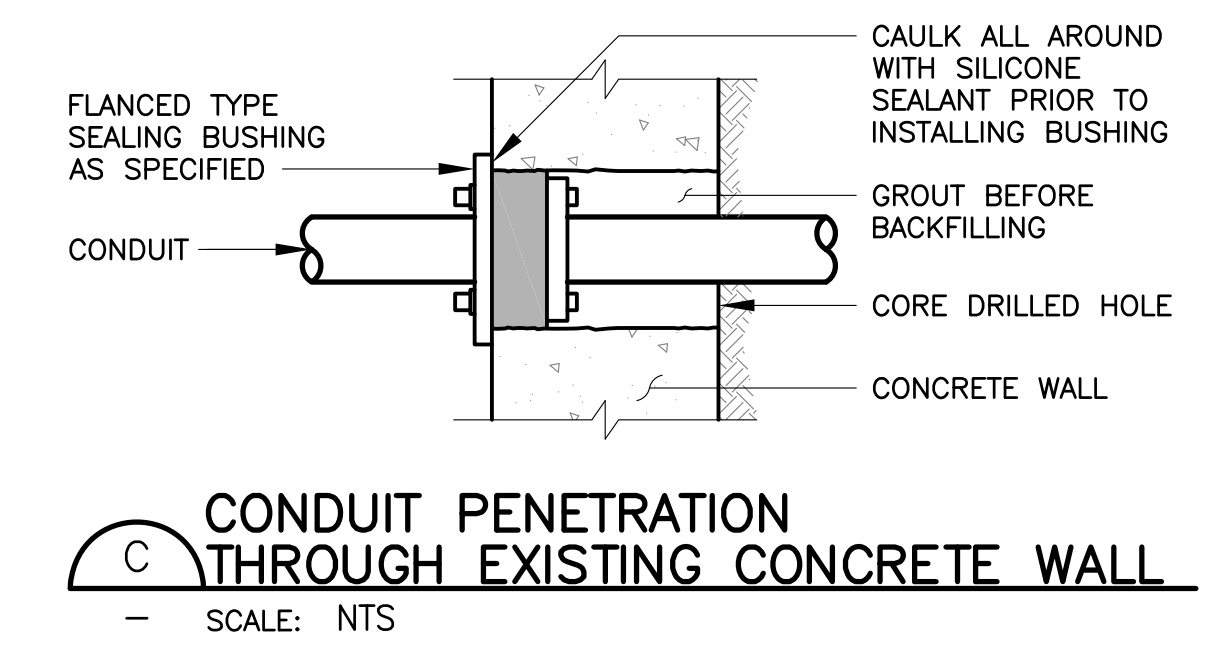
E372 SERVICE GROUNDING DETAIL
TYP SCALE: NTS



A CONDUIT PENETRATION
SCALE: NTS



B WATERTIGHT CONDUIT PENETRATION
SCALE: NTS



C CONDUIT PENETRATION THROUGH EXISTING CONCRETE WALL
SCALE: NTS

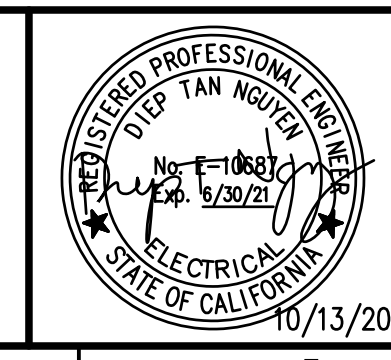
E418 DETAILED CONDUIT PENETRATION
TYP SCALE: NTS

- NOTES:**
1. NO GALVANIZED STEEL OR CARBON STEEL SLEEVES ARE ALLOWED ANYWHERE IN THE PROJECT.

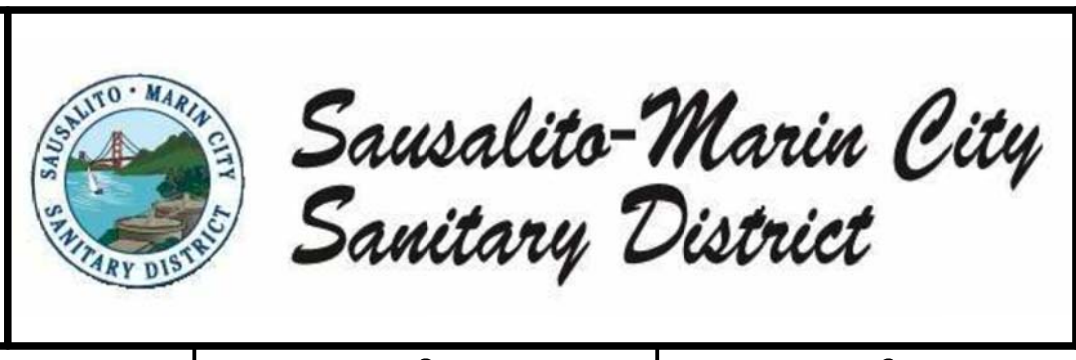
P:\429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-17.dwg 10-14-20 04:20:27 PM to

REV	DATE	BY	DESCRIPTION
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DESIGNED	TP
DRAWN	LD
CHECKED	DTN
DATE	10-13-2020

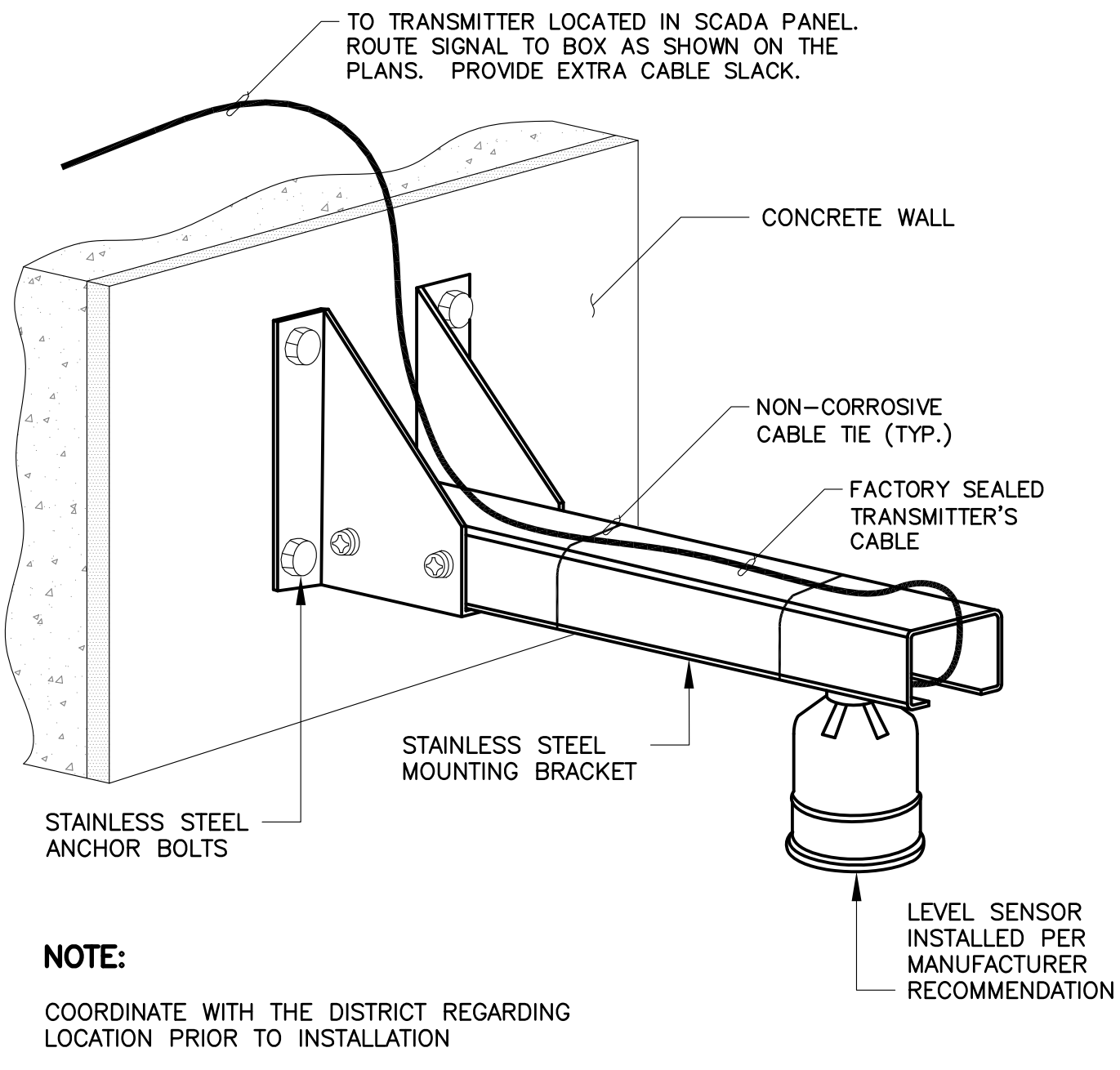


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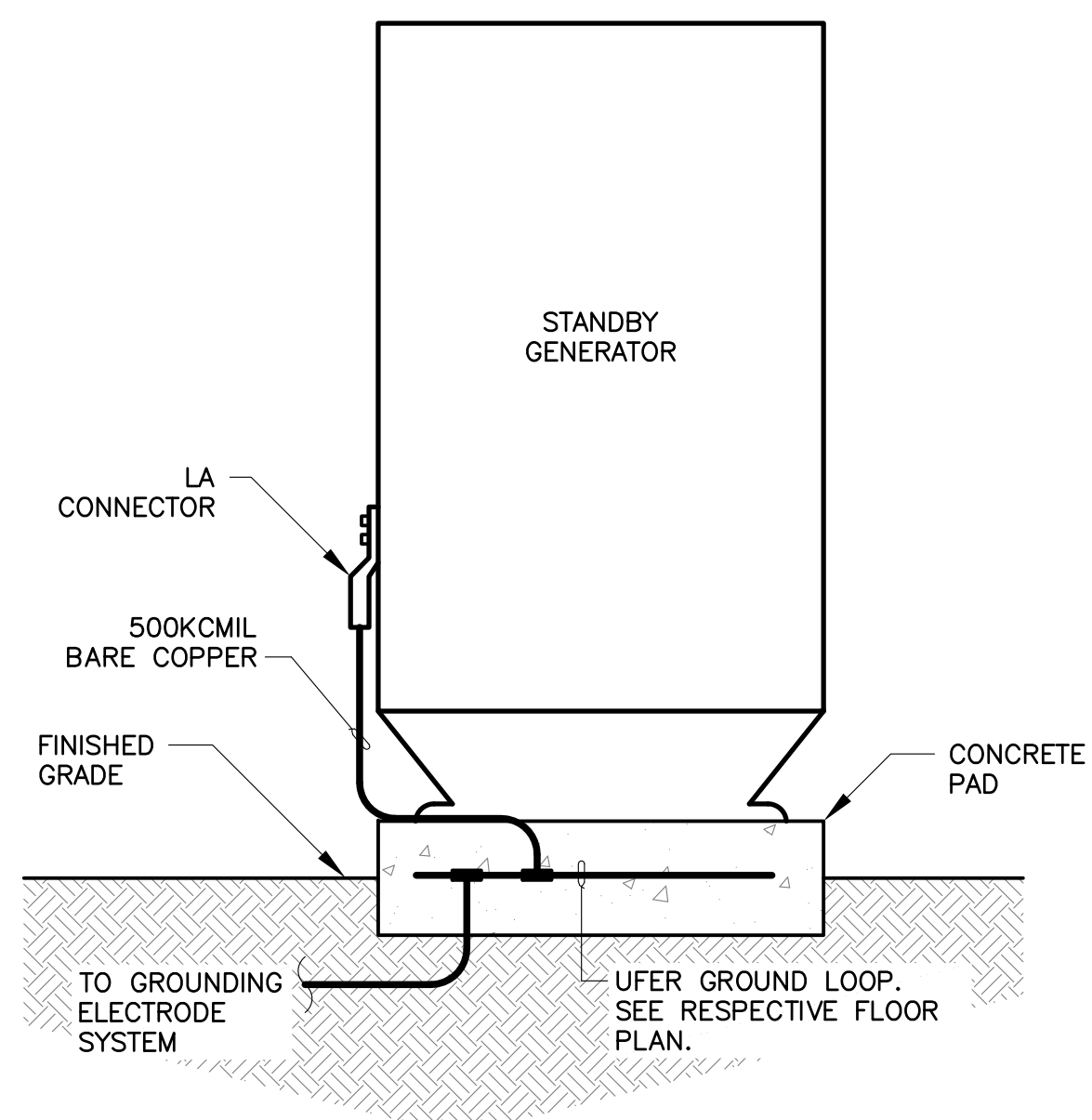


SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
TYPICAL CONSTRUCTION DETAILS
SHEET 1

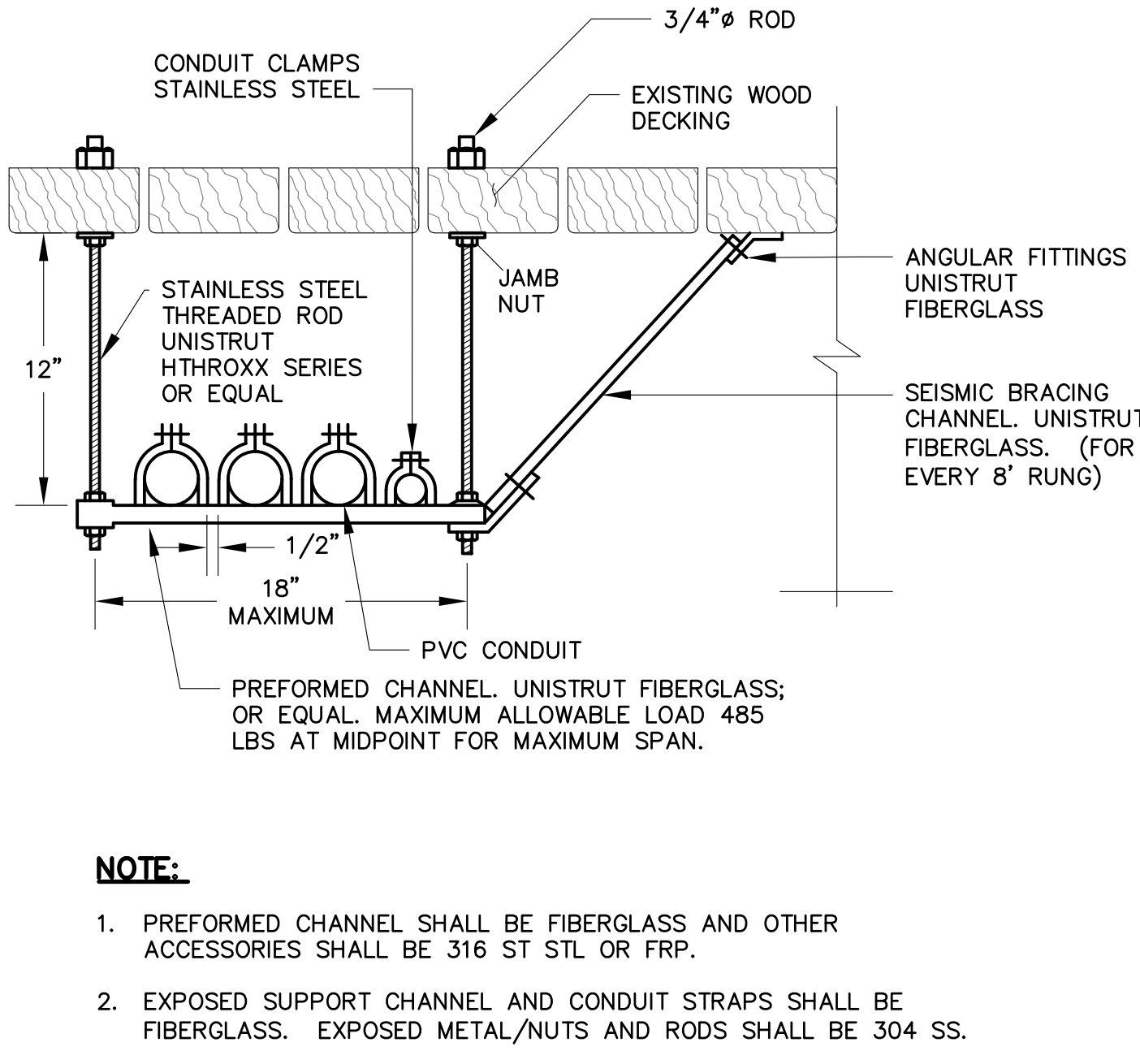
VERIFY SCALES	JOB NO. DTN NO. 429
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. E-17
0 1"	SHEET NO. 18 OF 32
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	



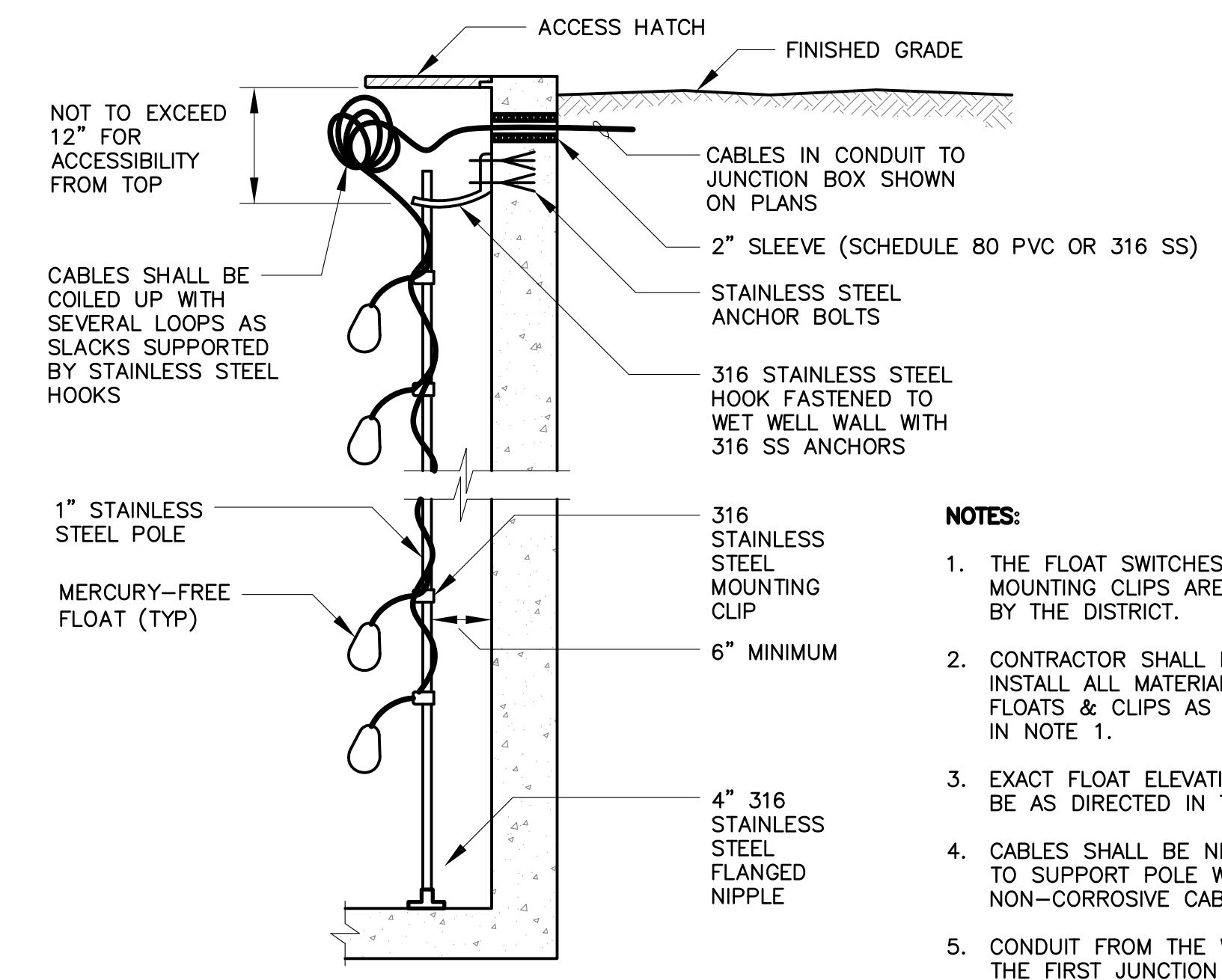
E105A ULTRASONIC SENSOR FOR PUMP STATION'S WETWELL
TYP SCALE: NTS



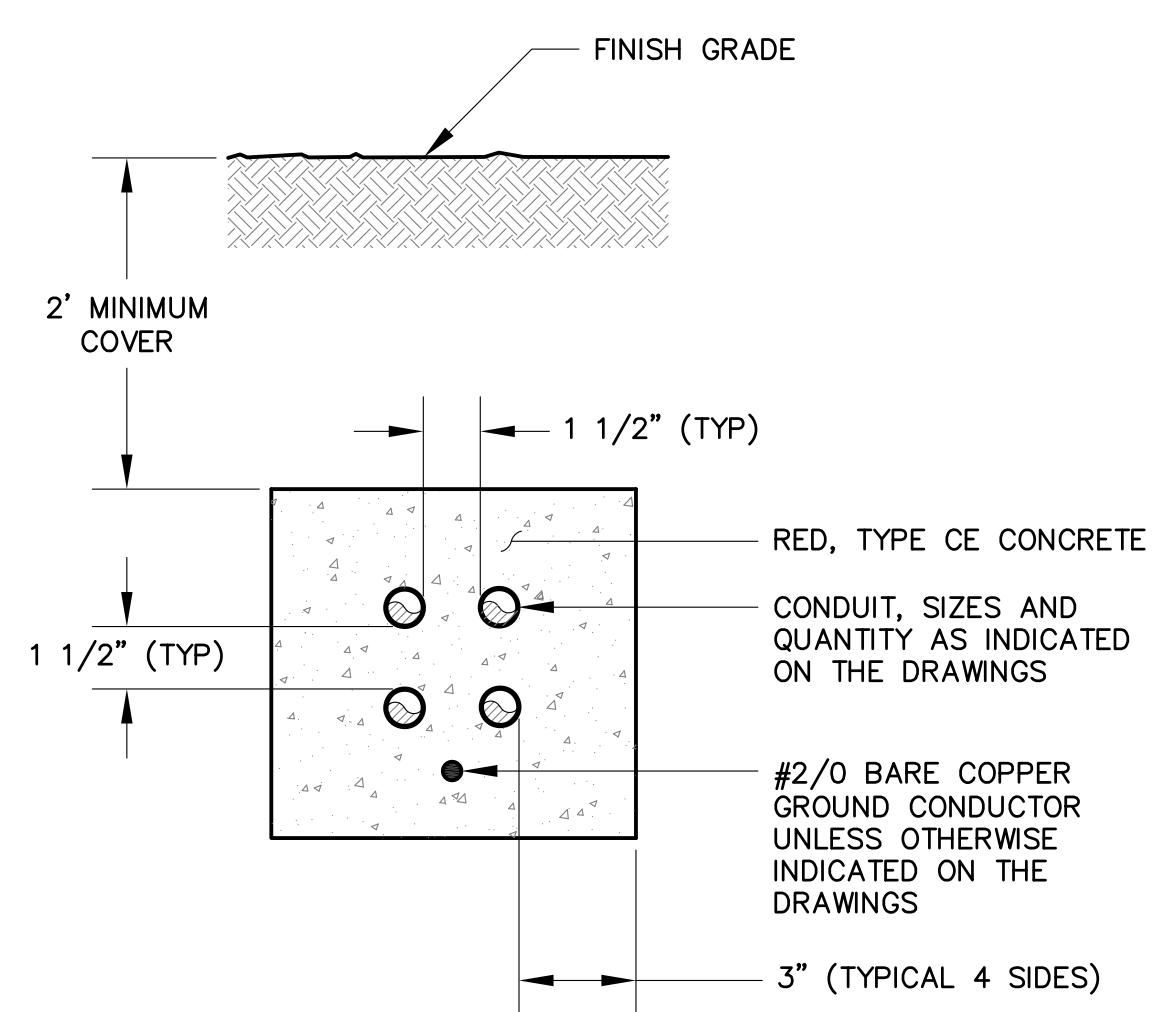
E122 STATIONARY EQUIPMENT GROUNDING CONNECTION
TYP SCALE: NTS



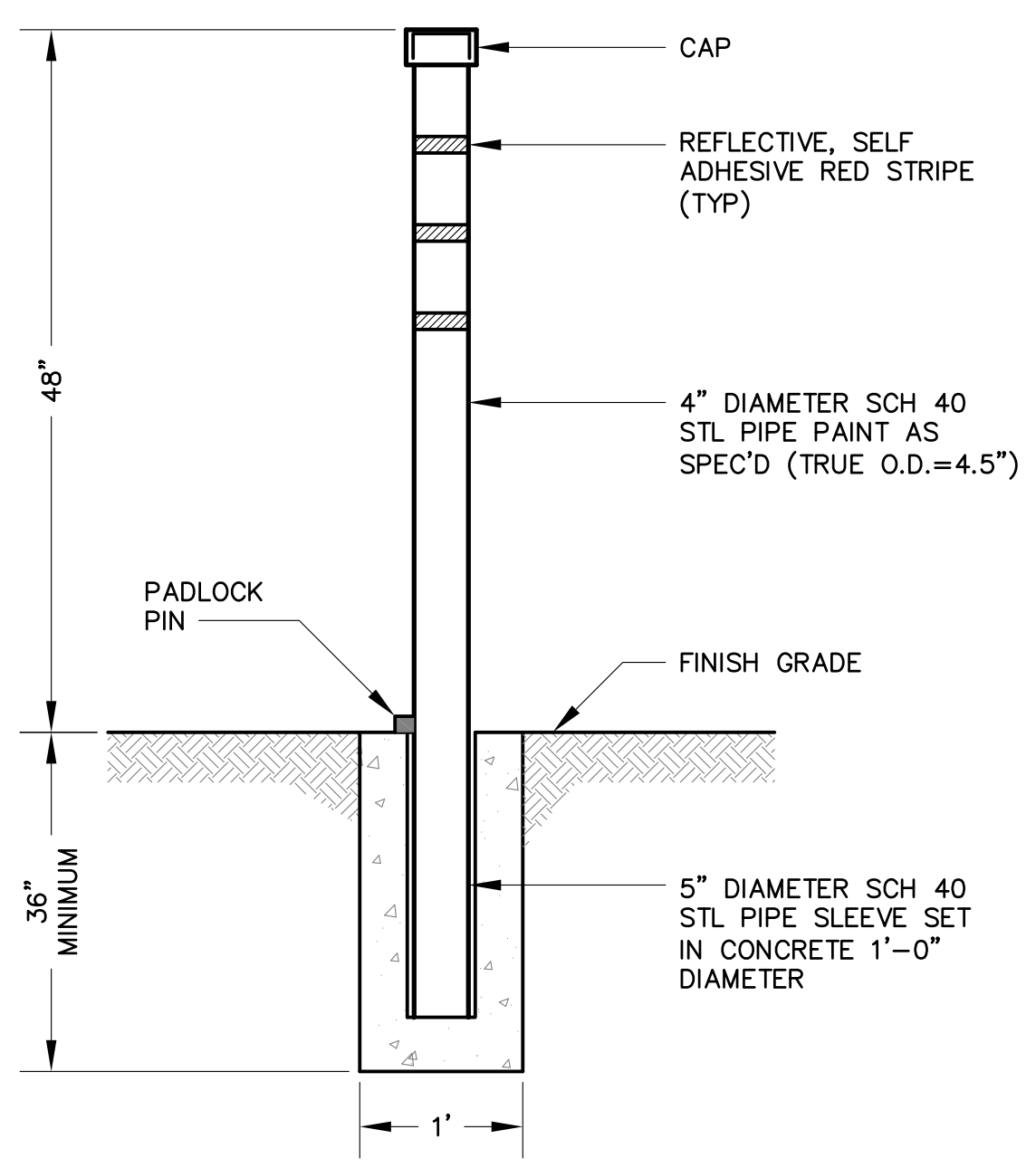
E325 CONDUIT SUPPORT BELOW WOOD DECK
TYP SCALE: NTS



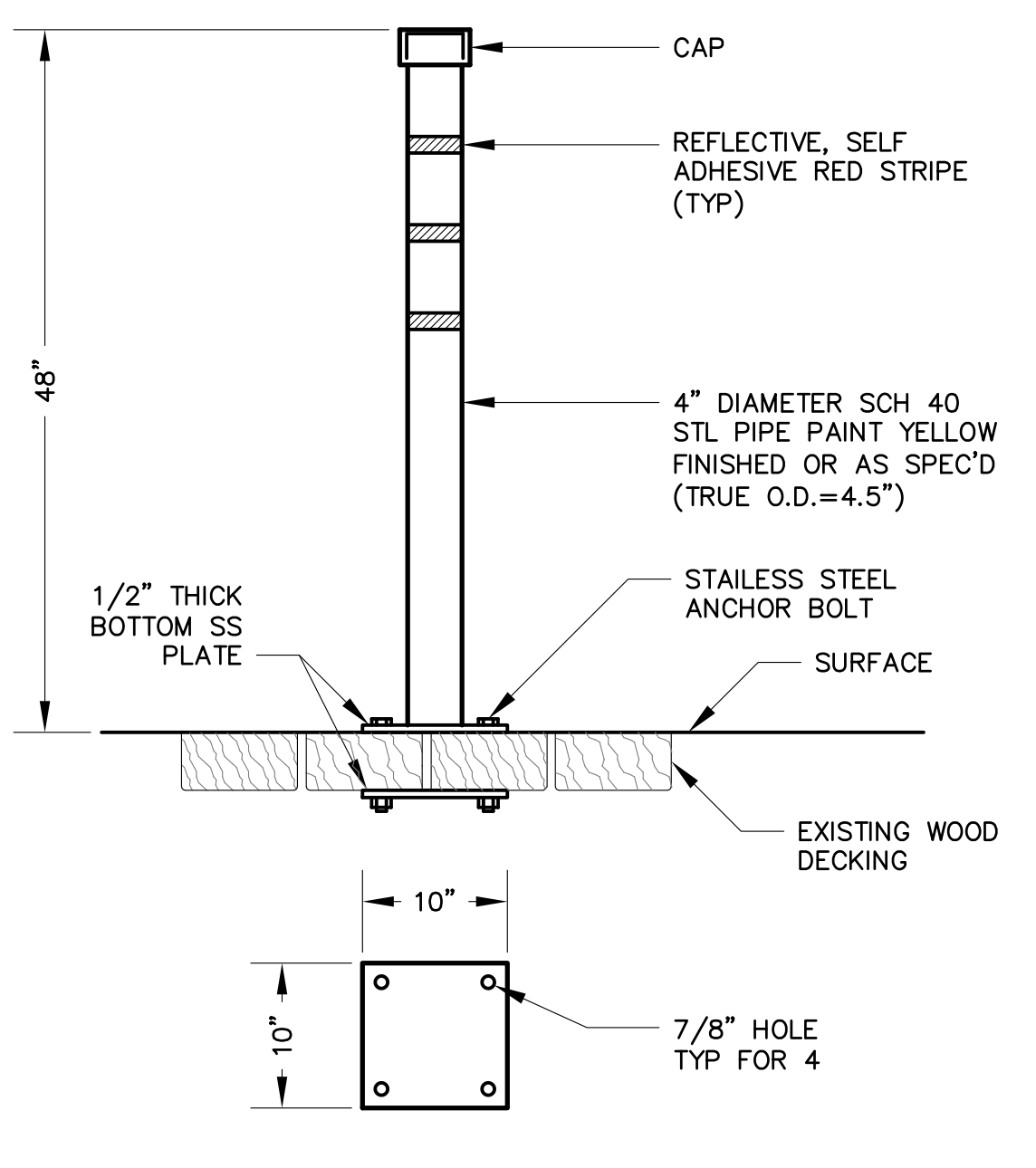
E334 REMOVABLE FLOAT SWITCH ASSEMBLY MOUNTING
TYP SCALE: NTS



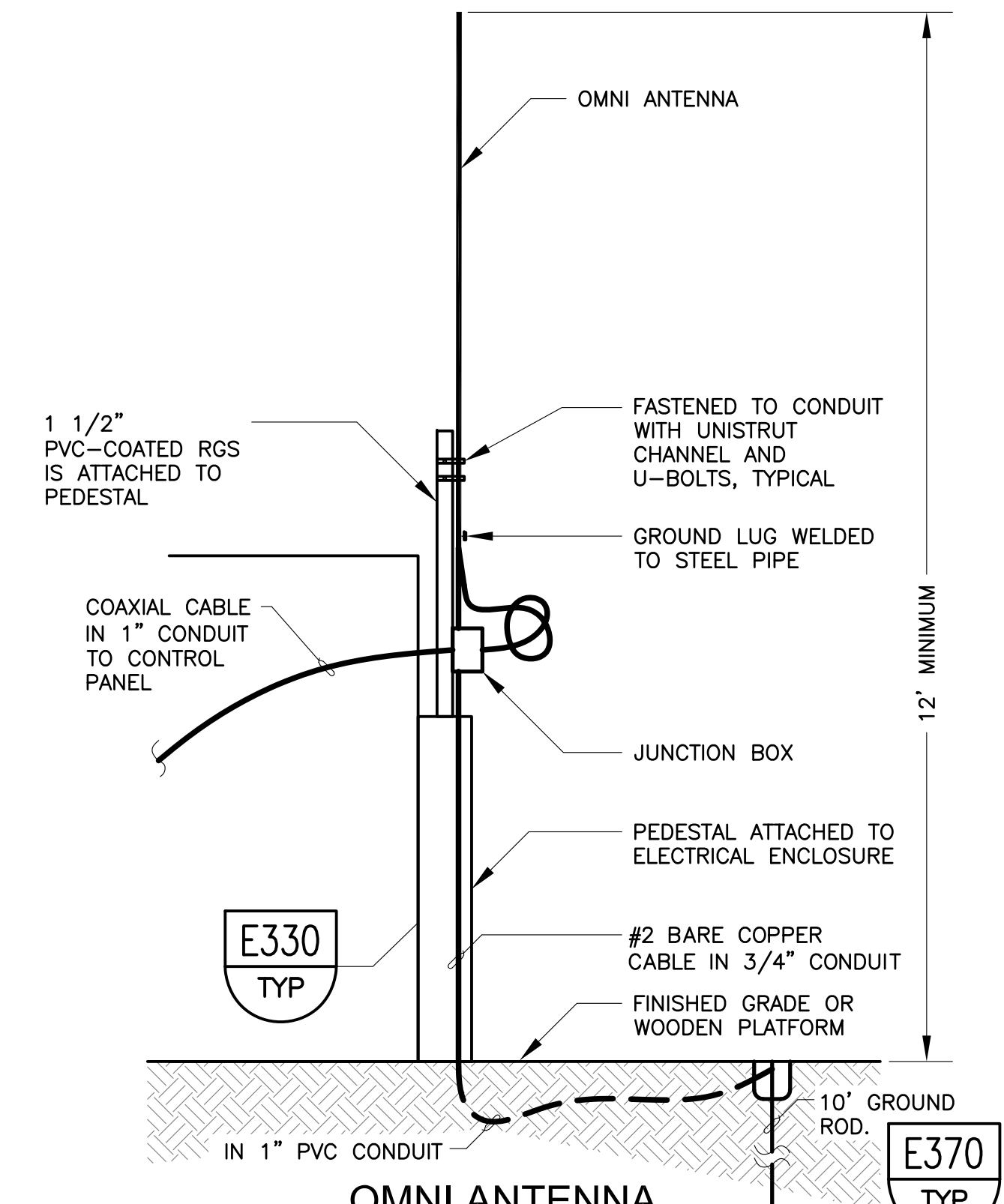
E404 UNREINFORCED CONCRETE DUCTBANK
TYP SCALE: NTS



E526 REMOVEABLE PROTECTION BOLLARD
TYP SCALE: NTS



E526A FIXED PROTECTION BOLLARD
TYP SCALE: NTS

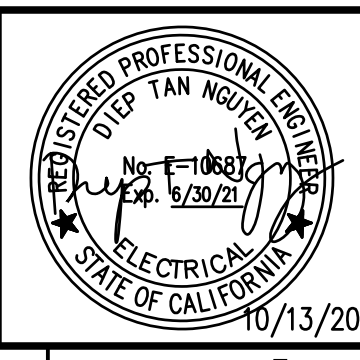


E750 OMNI ANTENNA MOUNTING DETAIL
TYP SCALE: NTS

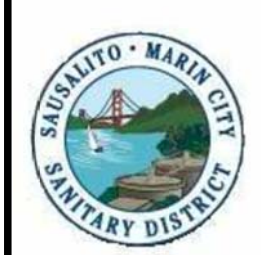
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DATE	10-13-2020



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GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
TYPICAL CONSTRUCTION DETAILS
SHEET 2

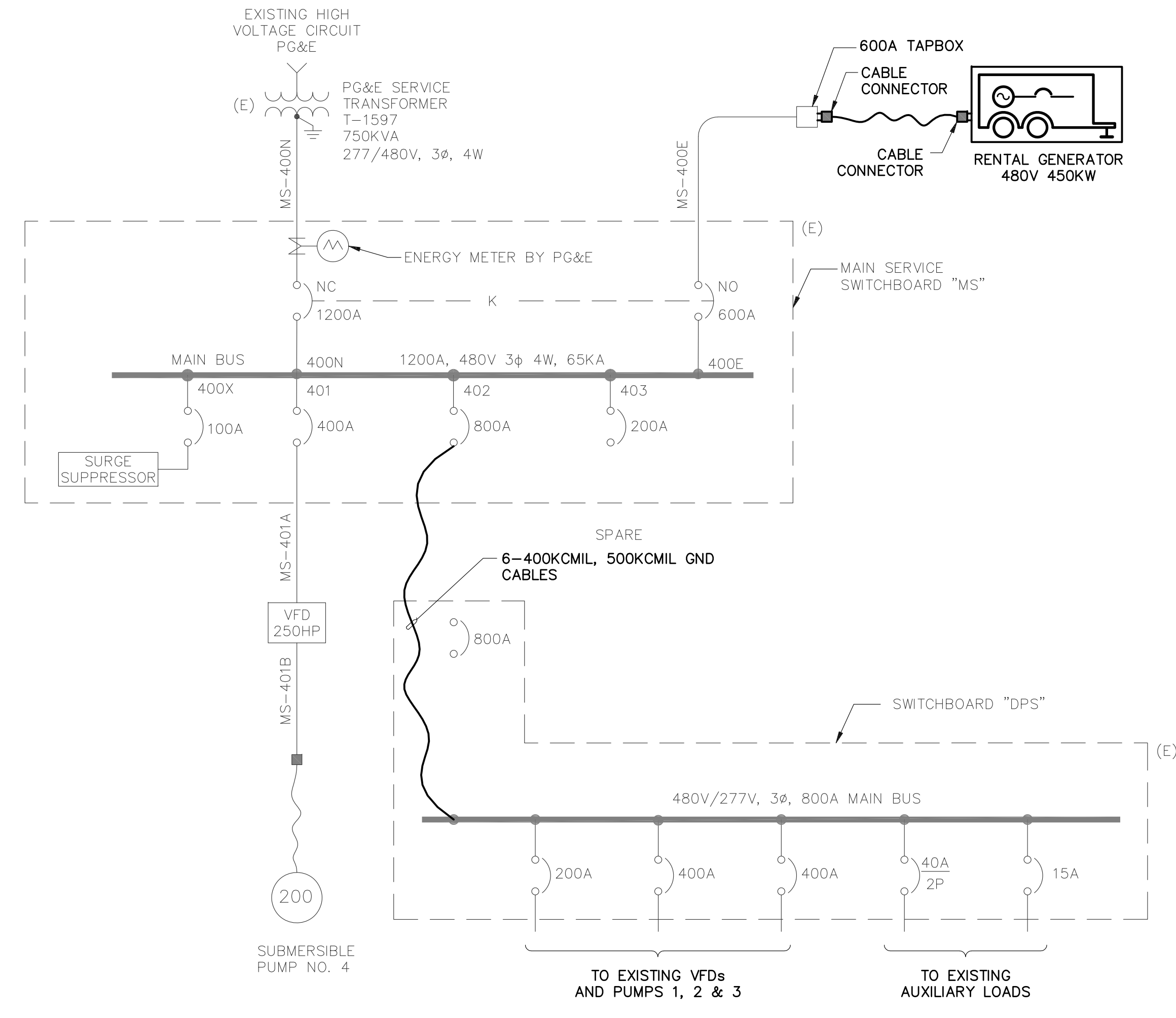
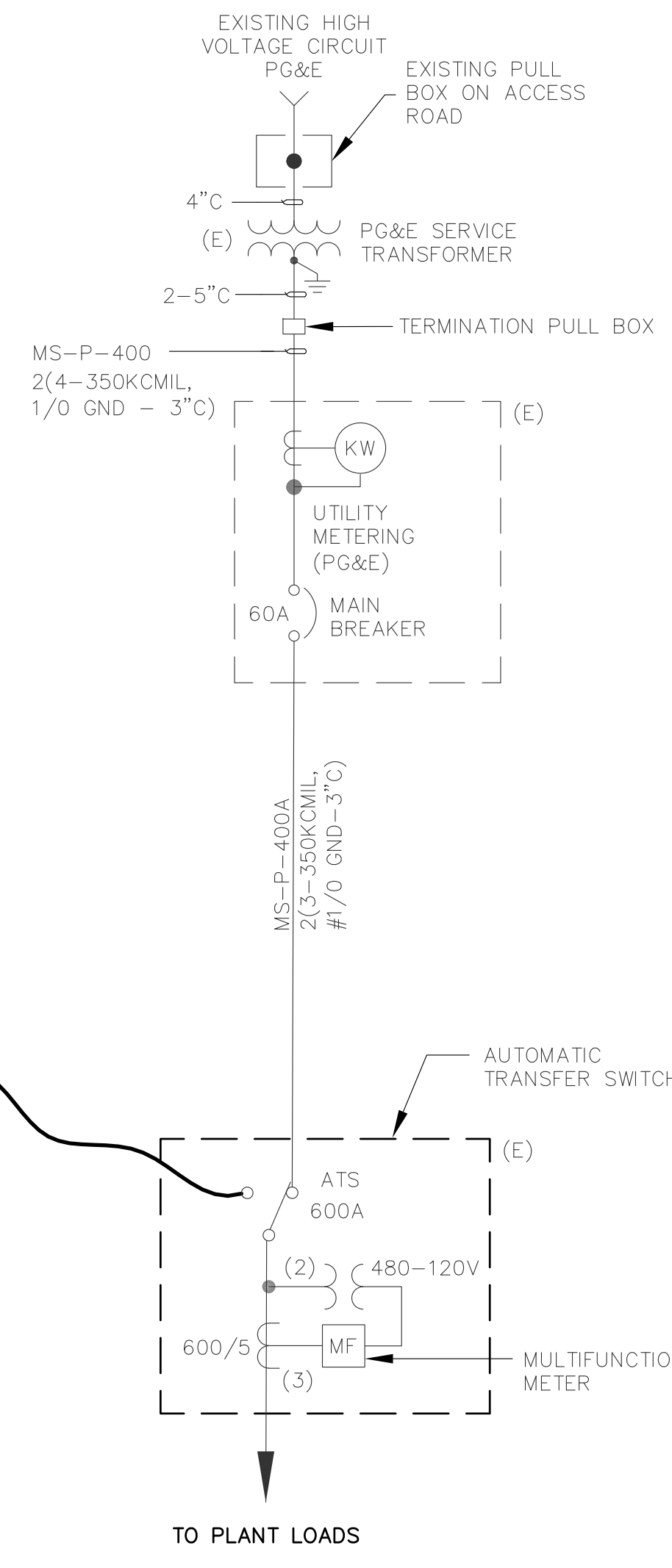
VERIFY SCALES	JOB NO. DTN NO. 429
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. E-18
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 19 OF 32

P:\429_Main Plant Gen, Main st Gen and Princess PS Replacement\DRAWINGS\429 E-19.dwg 10-14-20 04:20:48 PM to

1 2 3 4 5 6 7 8 9 10 11 12 13

A
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C
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G



SHEET NOTES:

- 1 THESE ARE SIMPLIFIED SEQUENCES TO DESCRIBE STEPS TO BE TAKEN IN ORDER TO ACCOMPLISHED INSTALLATION OF THE NEW GENERATOR AND RELATED EQUIPMENT AS EFFICIENTLY AS POSSIBLE. IT IS VERY IMPORTANT THAT ALL SAFETY PROCEDURES AND SAFETY REGULATIONS SHALL BE FOLLOWED AND OBSERVED AT ALL TIMES.
DURING CONSTRUCTION, A FORMAL STEP BY STEP SEQUENCE OF WORK AND STANDBY POWER PLAN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO EXECUTION OF THE WORK.
- 2 NO ELECTRICAL EQUIPMENT SHALL BE WORKED ON WHILE BEING ENERGIZED.
- 3 REFER TO SPECIFICATIONS (DIV 1) FOR SPECIFIC REQUIREMENTS AND CONSTRAINTS REGARDING STANDBY POWER DURING CONSTRUCTION.
- 4 THIS RENTAL GENSET SHALL BE LOCATED AT THE DISTRICT'S SHOP LEVEL. ROUTE TEMPORARY POWER CABLES DOWN THE HILLSIDE TO THE GENERATOR BUILDING. FIELD VERIFICATION OF CABLE LENGTHS, REQUIRED SUPPORTS AND PROTECTION REQUIRED.

GENERAL ELECTRICAL SEQUENCE OF WORK 1 2 3

1. DISCONNECT AND REMOVE EXISTING STATIONARY GENSET.
2. INSTALL AND HOOK UP TEMPORARY RENTAL GENSET.
3. MODIFY EXISTING GENERATOR ROOM WALL.
4. INSTALL AND TEST NEW STATIONARY GENSET.
5. DISCONNECT RENTAL GENSET AND HOOK UP STATIONARY GENSET TO EXISTING ATS.
6. TEST NEW GENSET'S AUTOMATIC FUNCTIONS SUCCESSFULLY.
7. REMOVE TEMPORARY RENTAL GENSET.

GENERAL ELECTRICAL SEQUENCE OF WORK 1 2 3

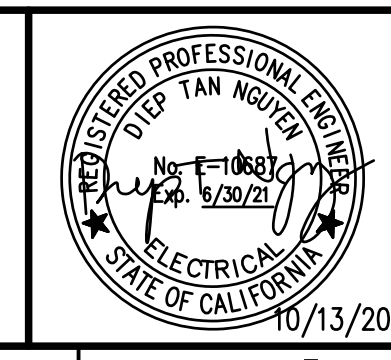
1. DISCONNECT AND REMOVE EXISTING STATIONARY GENSET.
2. MODIFY EXISTING SWITCHBOARD'S BUS WORK.
3. INSTALL AND HOOK UP TEMPORARY RENTAL GENSET.
4. INSTALL DIESEL-DRIVEN BYPASS PUMPING SYSTEM
5. DISCONNECT AND REMOVE EXISTING ATS.
6. INSTALL NEW ATS.
7. INSTALL NEW STATIONARY GENSET.
8. HOOK UP ATS AND STATIONARY GENSET.
9. TEST ENTIRE STANDBY POWER SYSTEM SUCCESSFULLY.
10. REMOVE TEMPORARY RENTAL GENSET AND BYPASS PUMP.

A MAIN PLANT - TEMPORARY POWER ONE-LINE
SCALE: NTS

B MAIN STREET PS - TEMPORARY POWER ONE-LINE
SCALE: NTS

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DATE	10-13-2020

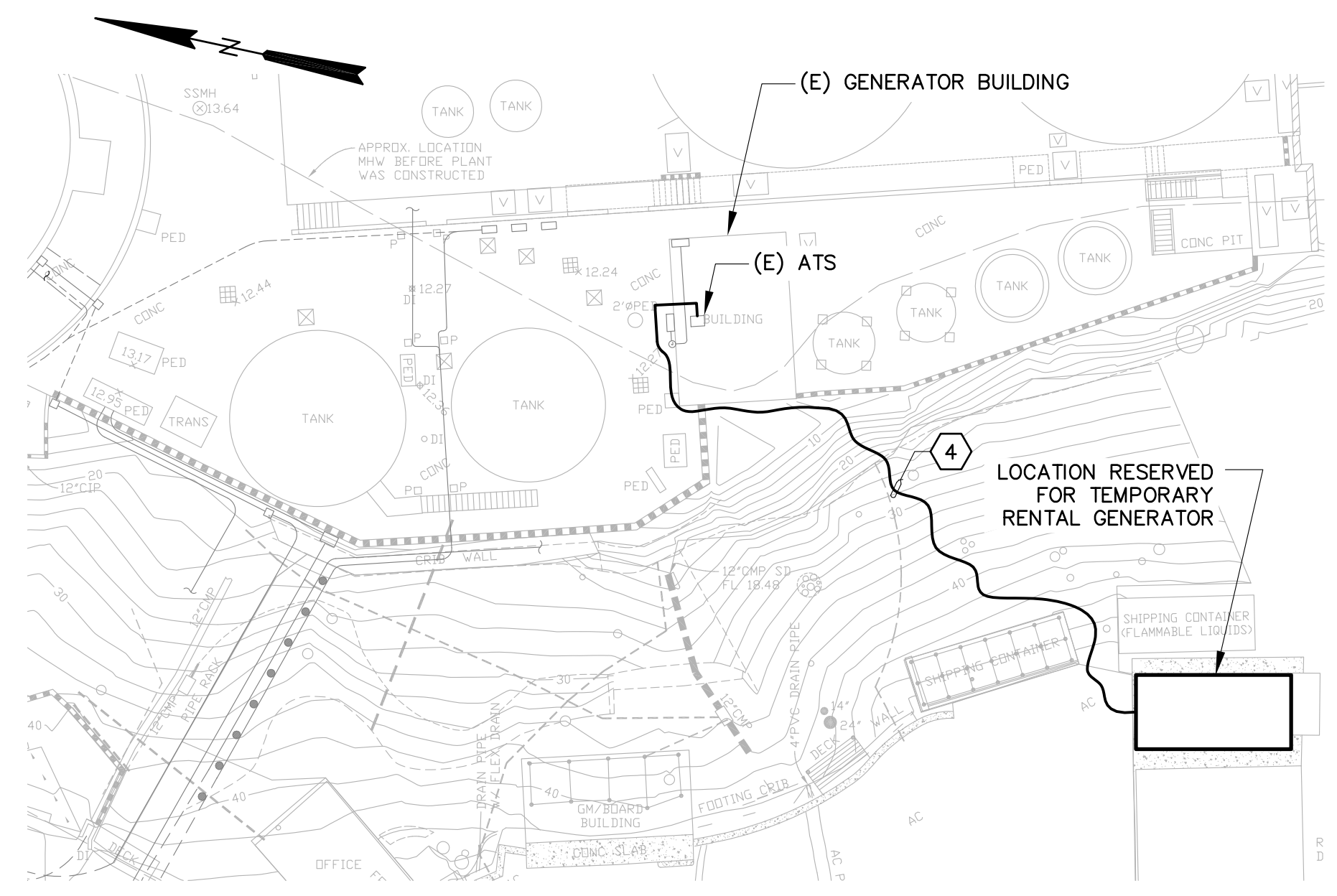
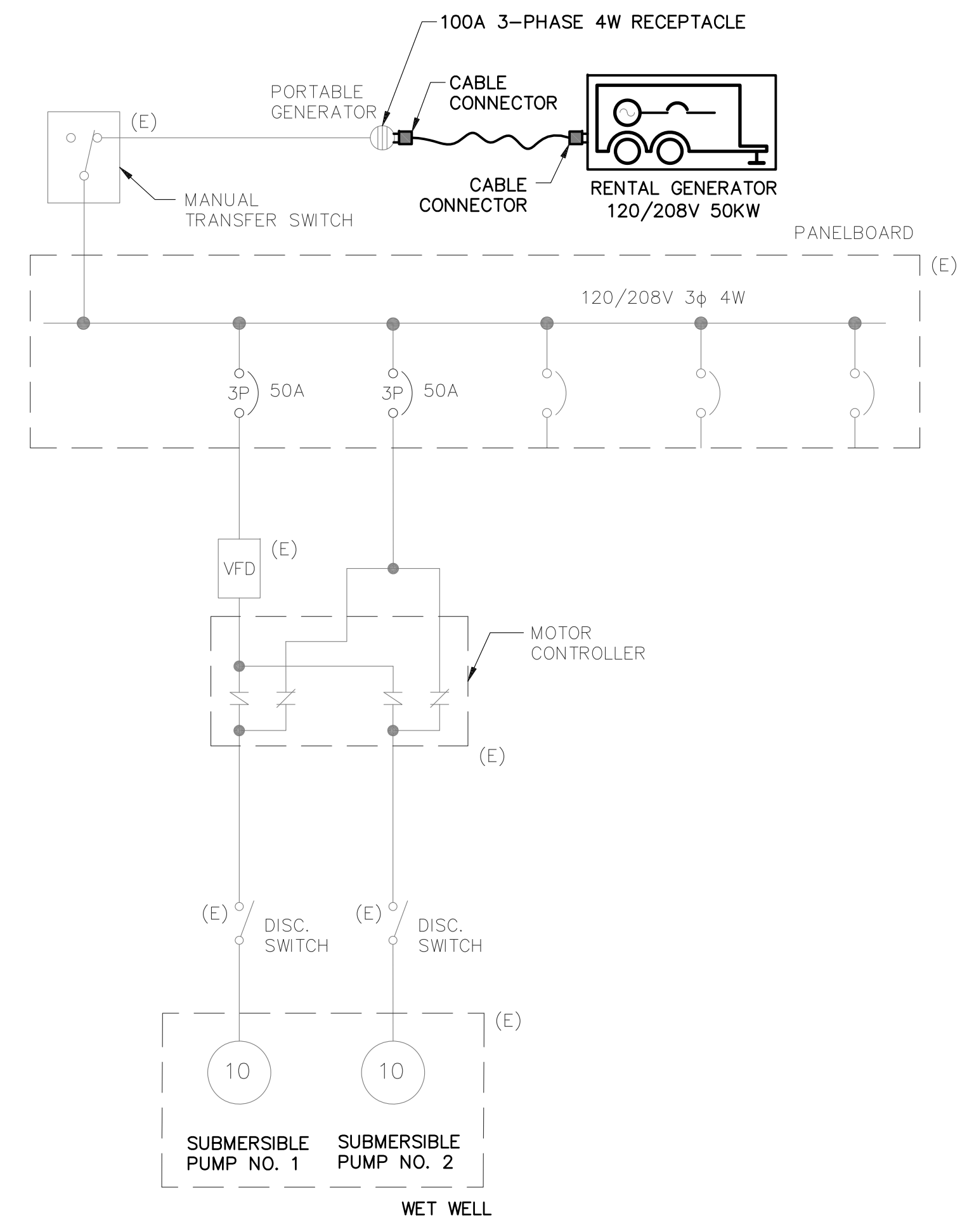


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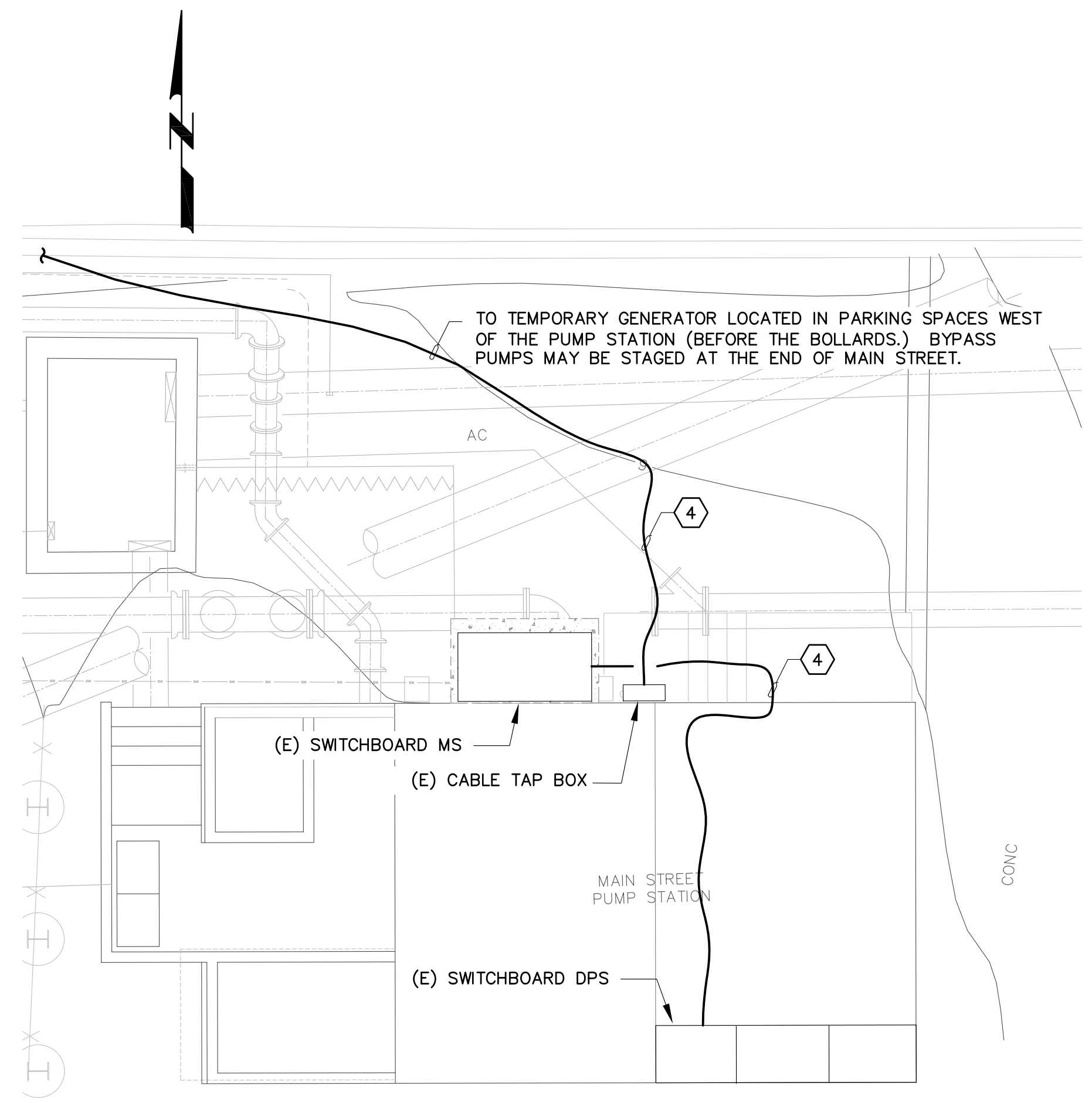


SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
TEMPORARY POWER - SHEET 1

VERIFY SCALES	JOB NO. DTN NO. 429
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. E-19
0 1"	SHEET NO. 20 OF 32
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	



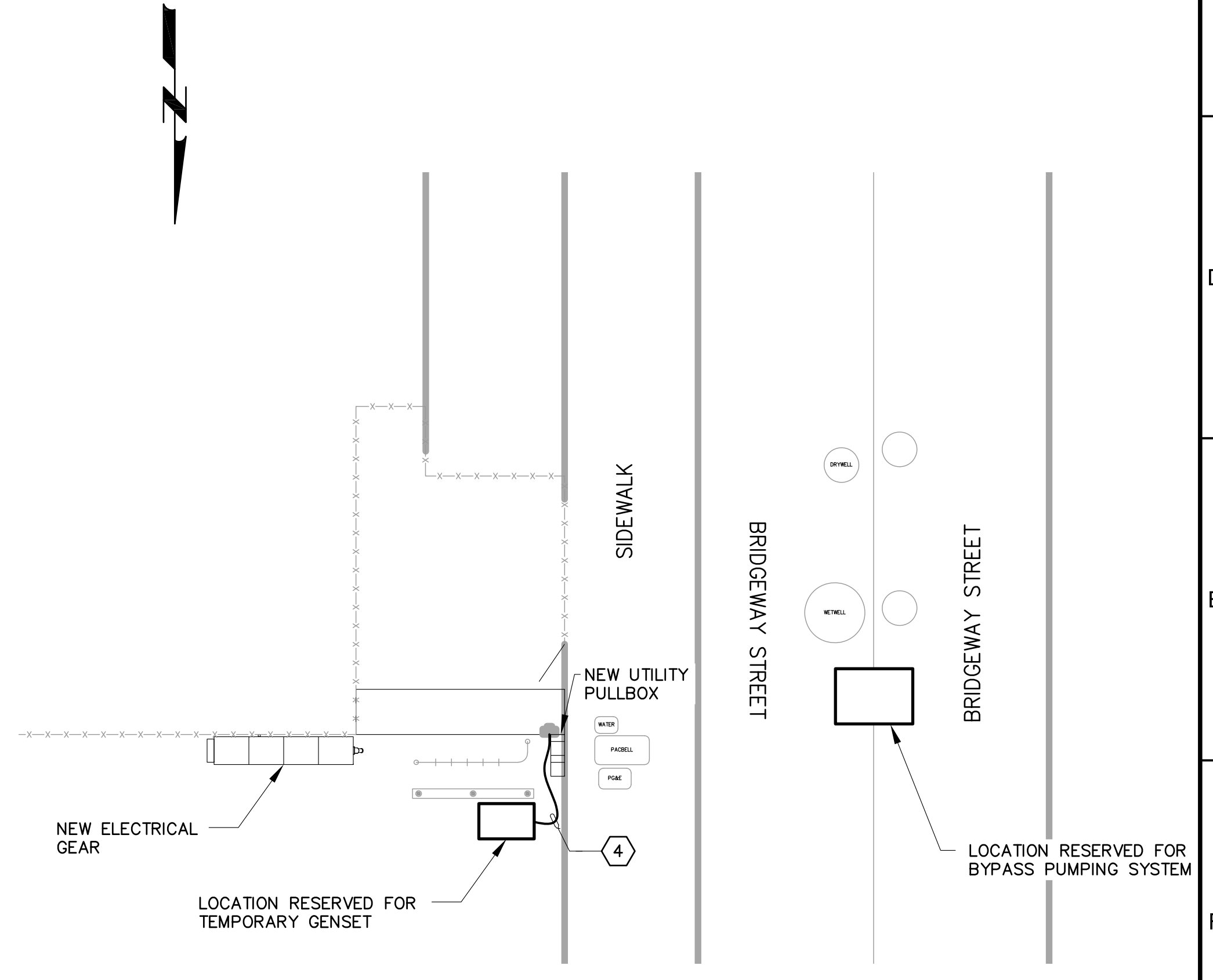
(B) MAIN WWTP - TEMPORARY POWER STAGING PLAN
SCALE: 1" = 20'



(C) MAIN STREET PS - TEMPORARY POWER STAGING PLAN
SCALE: 3/16" = 1'-0"

SHEET NOTES:

- 1 THESE ARE SIMPLIFIED SEQUENCES TO DESCRIBE STEPS TO BE TAKEN IN ORDER TO ACCOMPLISHED INSTALLATION OF THE NEW ELECTRICAL GEAR AND RELATED EQUIPMENT AS EFFICIENTLY AS POSSIBLE. IT IS VERY IMPORTANT THAT ALL SAFETY PROCEDURES AND SAFETY REGULATIONS SHALL BE FOLLOWED AND OBSERVED AT ALL TIMES.
DURING CONSTRUCTION, A FORMAL STEP BY STEP SEQUENCE OF WORK AND PLAN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO EXECUTION OF THE WORK.
- 2 NO ELECTRICAL EQUIPMENT SHALL BE WORKED ON WHILE BEING ENERGIZED.
- 3 REFER TO SPECIFICATIONS (DIV 1) FOR SPECIFIC REQUIREMENTS AND CONSTRAINTS REGARDING STANDBY POWER DURING CONSTRUCTION.
- 4 TEMPORARY POWER CABLES. PROVIDE CABLE SUPPORTS, CABLE PROTECTORS ETC.
- 5 FOR THE MAIN STREET PUMP STATION:
 - a. GENERATOR CABLES SHALL REQUIRE ADA RAMP TO MAINTAIN PUBLIC ACCESS TO THE CITY'S BOARDWALK.
 - b. CONTRACTOR SHALL OBTAIN NO PARKING SIGNS FROM THE CITY OF SAUSALITO'S POLICE DEPARTMENT IN ORDER TO SUPPORT GENERATOR STAGING.
 - c. ALL REQUIRED BYPASS PUMPS SHALL HAVE SPILL MATS TO ENSURE NO SEWER ENTERS THE BAY.
 - d. PRIMARY BYPASS PUMPS SHALL BE ELECTRIC AND POWERED BY PG&E OR A PORTABLE GENERATOR. DIESEL PUMPS ARE NOT ALLOWED AS PRIMARY BACKUP DUE TO NOISE AND EMISSIONS. PORTABLE GENERATOR SHALL HAVE 65dBA ENCLOSURE AS PER THE CITY NOISE ORDINANCE.



(D) PRINCESS PS - TEMPORARY POWER STAGING PLAN
SCALE: 1/8" = 1'-0"

GENERAL ELECTRICAL SEQUENCE OF WORK 1 2 3

1. PUT EXISTING TRANSFER SWITCH IN STANDBY MODE.
2. INSTALL AND HOOK UP TEMPORARY RENTAL GENSET.
3. INSTALL NEW ELECTRICAL GEAR AND CONDUIT WORK.
4. PERFORM NEW TRENCHING AND INSTALL RELATED CABLES AND CONDUITS.
5. INSTALL DIESEL-DRIVEN BYPASS PUMP.
6. SWITCH OVER TO NEW SYSTEM.
7. TEST NEW ELECTRICAL GEAR AND CONTROLS SUCCESSFULLY.
8. REMOVE TEMPORARY GENSET AND BYPASS PUMP.

(A) PRINCESS PS - TEMPORARY POWER ONE-LINE
SCALE: NTS

REV	DATE	BY	DESCRIPTION
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CHECKED DTN	
DATE 10-13-2020	

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SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
TEMPORARY POWER - SHEET 2

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DTN NO. 429
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. E-20
	SHEET NO. 21 OF 32

P:\429_Main Plant Gen, Main st Gen and Princess PS Replacement\DRAWINGS\429 E-21.dwg 10-14-20 04:21:20 PM tp

	DESIGN (*)	REMOVE EXIST. EQUIPT.	MODIFY EXIST. ELECT SYSTEM	FURNISH NEW EQUIPT.	INSTALL NEW EQUIPT.	INTER-EQUIPT. CONNECT	PERFORM SYSTEM FUNCTIONAL TESTS
SCOPE OF WORK	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GENERATOR REQUIREMENTS	TYPE: DIESEL RATING: 200KW 480VAC 3φ FUEL TANK: SUB-BASED 8 HRS FULL LOAD ENCLOSURE: SOUND ATTENUATED OUTDOOR WEATHER PROOF EPA: TIER						
ATS REQUIREMENTS (NOT REQUIRED. ATS IS EXISTING)	TYPE: AUTOMATIC RATING: 250A 3-POLE 65KA ENCLOSURE: NEMA 12 IN EXISTING MCC AUTO START: YES EXERCISE CLOCK: YES POSITION SWITCHES: TWO						
SCADA SIGNAL INTERFACE REQUIREMENTS	a) GENERATOR RUN b) GENERATOR FAIL c) ATS IN NORMAL MODE (E) d) ATS IN EMERGENCY MODE (E) e) FUEL TANK LEAK ALARM f) FUEL TANK LOW						
POWER REQUIREMENTS FOR SYSTEM'S AUXILIARY	a) 120VAC POWER FOR BATTERY CHARGER b) 240VAC FOR ENGINE HEATER (USE EXISTING POWER PANEL)						
MISCELLANEOUS REQUIREMENTS	a) MODIFY EXISTING FENCE AND GATE TO ACCOMMODATE NEW GENERATOR'S DIMENSIONS. b) NEW, LARGER SIZE POWER CONDUCTORS FROM NEW GENERATOR TO EXISTING ATS ARE REQUIRED. REMOVE EXISTING POWER CONDUCTORS PRIOR TO INSTALLATION OF NEW CONDUCTORS. c) FIELD INVESTIGATION OF EXISTING CONDITIONS AND A PRE-DESIGN REPORT SHALL BE REQUIRED FOR APPROVAL PRIOR TO DESIGN-BUILD.						

(*) DESIGN DOCUMENTS SHALL BE PREPARED BY CALIFORNIA REGISTERED PROFESSIONAL ENGINEER.



A LOCUST STREET - GENERATOR REPLACEMENT
SCALE: NTS

	DESIGN (*)	REMOVE EXIST. EQUIPT.	MODIFY EXIST. ELECT SYSTEM	FURNISH NEW EQUIPT.	INSTALL NEW EQUIPT.	INTER-EQUIPT. CONNECT	PERFORM SYSTEM FUNCTIONAL TESTS
SCOPE OF WORK	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GENERATOR REQUIREMENTS	TYPE: DIESEL RATING: 60KW 480VAC 3φ FUEL TANK: SUB-BASED 8 HRS FULL LOAD ENCLOSURE: SOUND ATTENUATED OUTDOOR WEATHER PROOF EPA: TIER						
ATS REQUIREMENTS	TYPE: AUTOMATIC RATING: 100A 3-POLE 42KA ENCLOSURE: NEMA 12 LOCATED INSIDE STATION BUILDING. AUTO START: YES EXERCISE CLOCK: YES POSITION SWITCHES: TWO						
SCADA SIGNAL INTERFACE REQUIREMENTS	a) GENERATOR RUN b) GENERATOR FAIL c) ATS IN NORMAL MODE d) ATS IN EMERGENCY MODE e) FUEL TANK LEAK ALARM f) FUEL TANK LOW						
POWER REQUIREMENTS FOR SYSTEM'S AUXILIARY	a) 120VAC POWER FOR BATTERY CHARGER b) 240VAC FOR ENGINE HEATER (USE EXISTING POWER PANEL)						
MISCELLANEOUS REQUIREMENTS	a) FURNISH AND INSTALL SPLICE BOX AS REQUIRED TO EXTEND POWER CONDUCTORS TO REACH NEW GENERATOR. b) FIELD INVESTIGATION OF EXISTING CONDITIONS AND A PRE-DESIGN REPORT SHALL BE REQUIRED FOR APPROVAL PRIOR TO DESIGN-BUILD.						

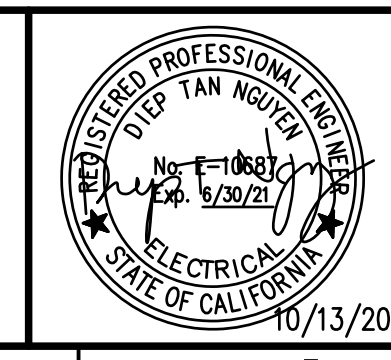
(*) DESIGN DOCUMENTS SHALL BE PREPARED BY CALIFORNIA REGISTERED PROFESSIONAL ENGINEER.



B MARIN CITY - GENERATOR REPLACEMENT
SCALE: NTS

REV	DATE	BY	DESCRIPTION

DESIGNED TP
DRAWN LD
CHECKED DTN
DATE 10-13-2020



DN ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA



SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
LOCUST STREET AND MARIN CITY
GENERATOR REPLACEMENT

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
DTN NO. 429
DRAWING NO.
E-21
SHEET NO.
22 OF 32

P:\429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-22.dwg 10-14-20 04:22:03 PM tp

	DESIGN (*)	REMOVE EXIST. EQUIPT.	MODIFY EXIST. ELECT SYSTEM	FURNISH NEW EQUIPT.	INSTALL NEW EQUIPT.	INTER-EQUIPT. CONNECT	PERFORM SYSTEM FUNCTIONAL TESTS
SCOPE OF WORK	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GENERATOR REQUIREMENTS	TYPE: DIESEL RATING: 40KW 340VAC 3φ FUEL TANK: SUB-BASED 8 HRS FULL LOAD ENCLOSURE: SOUND ATTENUATED OUTDOOR WEATHER PROOF EPA: TIER						
ATS REQUIREMENTS (NOT REQUIRED. ATS IS EXISTING)	TYPE: AUTOMATIC RATING: 100A 3-POLE 42KA ENCLOSURE: NEMA 12 IN EXISTING ELECTRICAL GEAR AUTO START: YES EXERCISE CLOCK: YES POSITION SWITCHES: TWO						
SCADA SIGNAL INTERFACE REQUIREMENTS	a) GENERATOR RUN b) GENERATOR FAIL c) ATS IN NORMAL MODE (E) d) ATS IN EMERGENCY MODE (E) e) FUEL TANK LEAK ALARM f) FUEL TANK LOW						
POWER REQUIREMENTS FOR SYSTEM'S AUXILIARY	a) 120VAC POWER FOR BATTERY CHARGER b) 240VAC FOR ENGINE HEATER (USE EXISTING POWER PANEL)						
MISCELLANEOUS REQUIREMENTS	a) FURNISH AND INSTALL SPLICE BOX AS REQUIRED TO EXTEND POWER CONDUCTORS TO REACH NEW GENERATOR. b) FIELD INVESTIGATION OF EXISTING CONDITIONS AND A PRE-DESIGN REPORT SHALL BE REQUIRED FOR APPROVAL PRIOR TO DESIGN-BUILD.						

(*) DESIGN DOCUMENTS SHALL BE PREPARED BY CALIFORNIA REGISTERED PROFESSIONAL ENGINEER.



A GATE 5 - GENERATOR REPLACEMENT
SCALE: NTS



DN ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA



Sausalito-Marín City Sanitary District

SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
**GATE 5
GENERATOR REPLACEMENT**

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. DTN NO. 429
DRAWING NO. **E-22**
SHEET NO. 23 OF 32

REV	DATE	BY	DESCRIPTION

DESIGNED TP
DRAWN LD
CHECKED DTN
DATE 10-13-2020

P:\429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-23.dwg 10-14-20 04:22:30 PM tp

SCOPE OF WORK	DESIGN (*)	REMOVE EXIST. EQUIPT.	MODIFY EXIST. ELECT SYSTEM	FURNISH NEW EQUIPT.	INSTALL NEW EQUIPT.	INTER-EQUIPT. CONNECT	PERFORM SYSTEM FUNCTIONAL TESTS
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GENERATOR REQUIREMENTS	TYPE: DIESEL RATING: 30KW 240VAC 3φ FUEL TANK: SUB-BASED 8 HRS FULL LOAD ENCLOSURE: SOUND ATTENUATED OUTDOOR WEATHER PROOF EPA: TIER						
ATS REQUIREMENTS	TYPE: AUTOMATIC RATING: 100A 3-POLE 42KA ENCLOSURE: NEMA 4X SS, PADLOCKABLE OR IN SAME ENCLOSURE FOR GENSET AUTO START: YES EXERCISE CLOCK: YES POSITION SWITCHES: TWO						
SCADA SIGNAL INTERFACE REQUIREMENTS	a) GENERATOR RUN b) GENERATOR FAIL c) ATS IN NORMAL MODE d) ATS IN EMERGENCY MODE e) FUEL TANK LEAK ALARM f) FUEL TANK LOW						
POWER REQUIREMENTS FOR SYSTEM'S AUXILIARY	a) 120VAC POWER FOR BATTERY CHARGER b) 240VAC FOR ENGINE HEATER (USE EXISTING POWER PANEL)						
MISCELLANEOUS REQUIREMENTS	a) LOCATE GENERATOR AND ATS AS CLOSE TO EXISTING ELECTRICAL GEAR AS POSSIBLE. b) FURNISH AND INSTALL NEW CONCRETE PADS FOR NEW EQUIPMENT. c) ALL EXPOSED CONDUITS SHALL BE PVC-COATED RGS. d) FIELD INVESTIGATION OF EXISTING CONDITIONS AND A PRE-DESIGN REPORT SHALL BE REQUIRED FOR APPROVAL PRIOR TO DESIGN-BUILD.						

(*) DESIGN DOCUMENTS SHALL BE PREPARED BY CALIFORNIA REGISTERED PROFESSIONAL ENGINEER.



A ANCHOR ST - GENERATOR & ATS INSTALLATION
SCALE: NTS

SCOPE OF WORK	DESIGN (*)	REMOVE EXIST. EQUIPT.	MODIFY EXIST. ELECT SYSTEM	FURNISH NEW EQUIPT.	INSTALL NEW EQUIPT.	INTER-EQUIPT. CONNECT	PERFORM SYSTEM FUNCTIONAL TESTS
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GENERATOR REQUIREMENTS	TYPE: DIESEL RATING: 30KW 240VAC 3φ FUEL TANK: SUB-BASED 8 HRS FULL LOAD ENCLOSURE: SOUND ATTENUATED OUTDOOR WEATHER PROOF EPA: TIER						
ATS REQUIREMENTS	TYPE: AUTOMATIC RATING: 100A 3-POLE 42KA ENCLOSURE: NEMA 4X SS, PADLOCKABLE OR IN SAME ENCLOSURE FOR GENSET AUTO START: YES EXERCISE CLOCK: YES POSITION SWITCHES: TWO						
SCADA SIGNAL INTERFACE REQUIREMENTS	a) GENERATOR RUN b) GENERATOR FAIL c) ATS IN NORMAL MODE d) ATS IN EMERGENCY MODE e) FUEL TANK LEAK ALARM f) FUEL TANK LOW						
POWER REQUIREMENTS FOR SYSTEM'S AUXILIARY	a) 120VAC POWER FOR BATTERY CHARGER b) 240VAC FOR ENGINE HEATER (USE EXISTING POWER PANEL)						
MISCELLANEOUS REQUIREMENTS	a) LOCATE GENERATOR AND ATS AS CLOSE TO EXISTING ELECTRICAL GEAR AS POSSIBLE. b) FURNISH AND INSTALL NEW CONCRETE PADS FOR NEW EQUIPMENT. c) ALL EXPOSED CONDUITS SHALL BE PVC-COATED RGS. d) FIELD INVESTIGATION OF EXISTING CONDITIONS AND A PRE-DESIGN REPORT SHALL BE REQUIRED FOR APPROVAL PRIOR TO DESIGN-BUILD.						

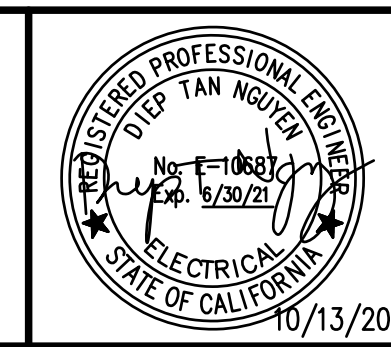
(*) DESIGN DOCUMENTS SHALL BE PREPARED BY CALIFORNIA REGISTERED PROFESSIONAL ENGINEER.



B SPINNAKER DR - GENERATOR & ATS INSTALLATION
SCALE: NTS

REV	DATE	BY	DESCRIPTION

DESIGNED TP
DRAWN LD
CHECKED DTN
DATE 10-13-2020



DN ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA

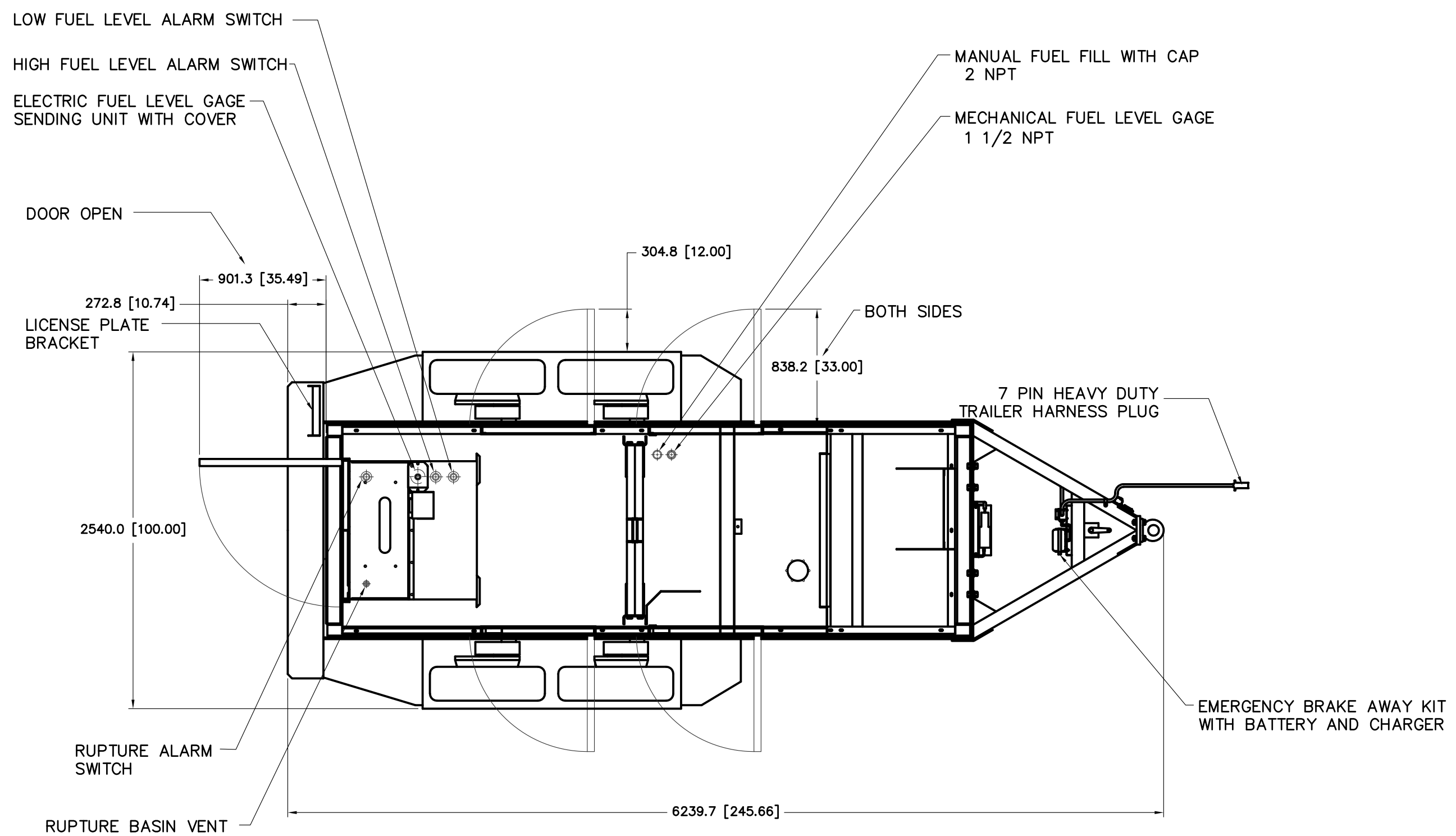


Sausalito-Marín City Sanitary District

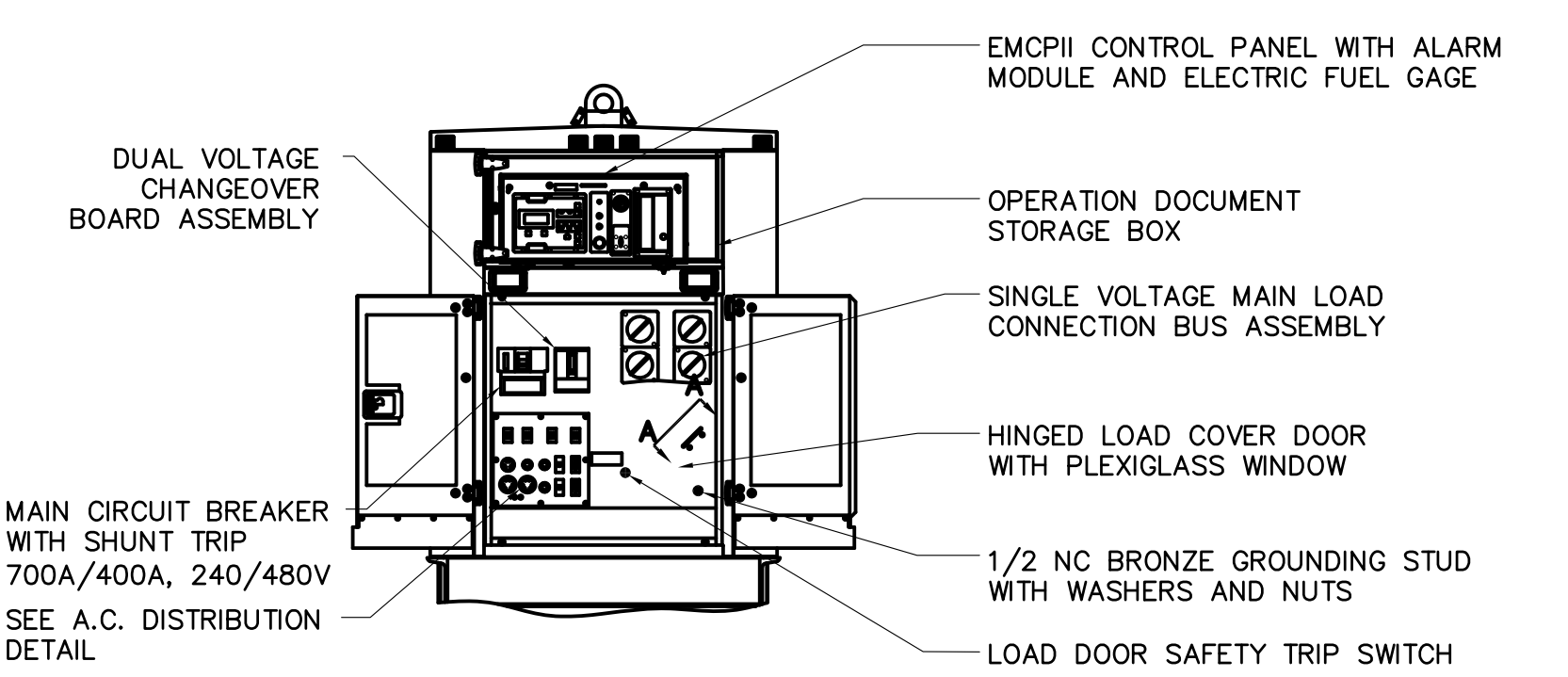
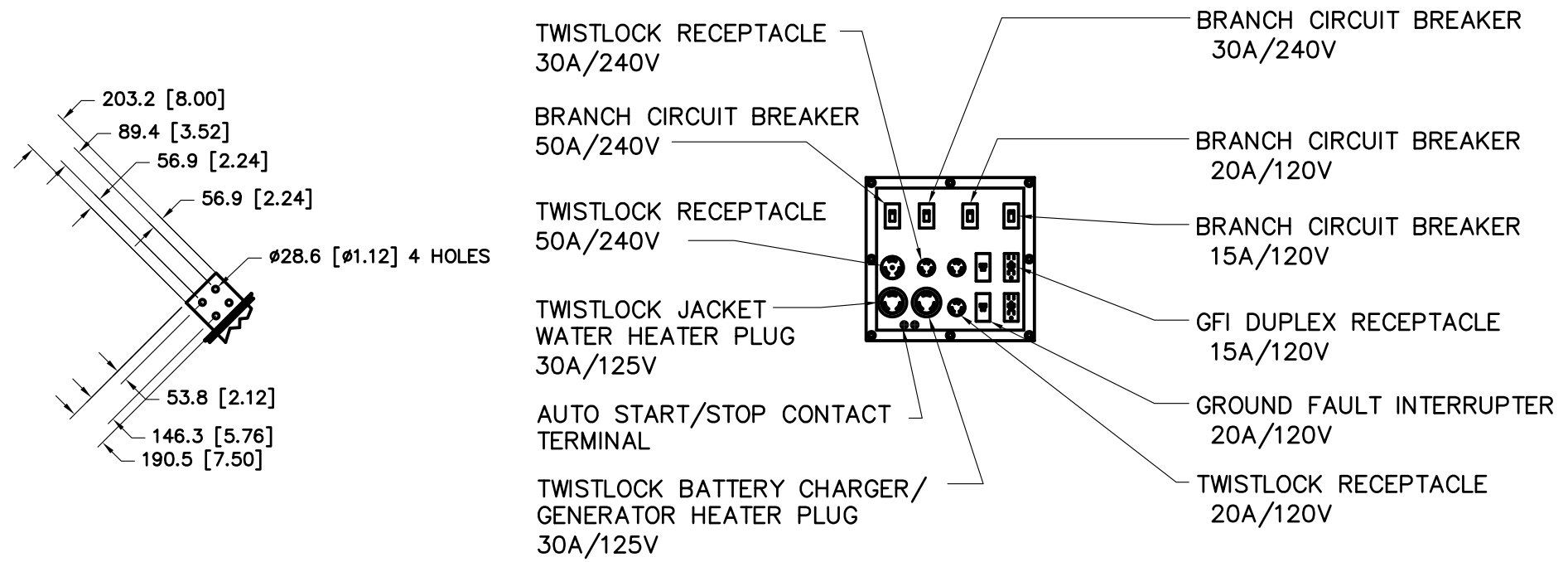
SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
ANCHOR ST / SPINNAKER DR
GENERATOR INSTALLATION

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

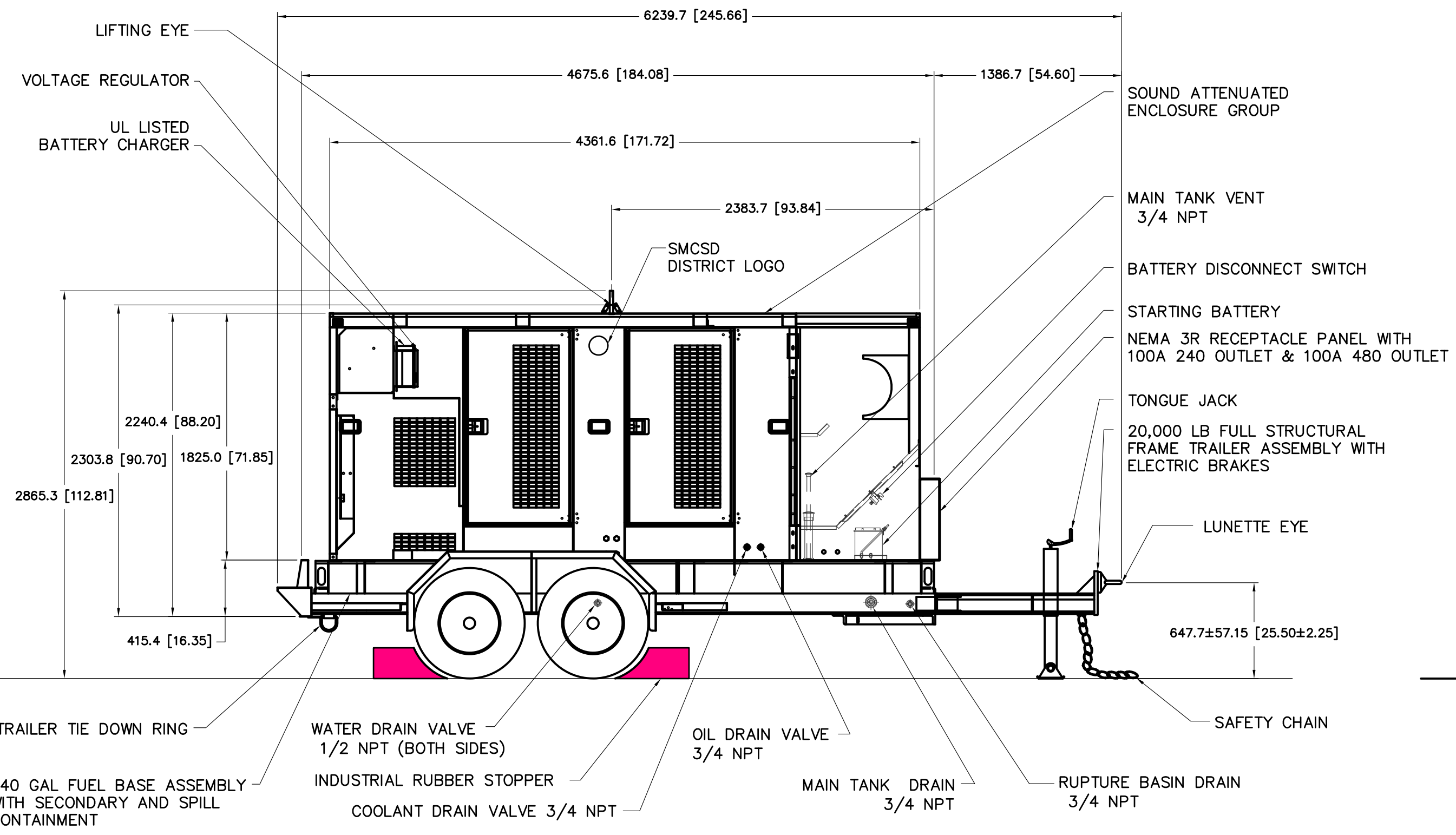
JOB NO.
DTN NO. 429
DRAWING NO.
E-23
SHEET NO.
24 OF 32



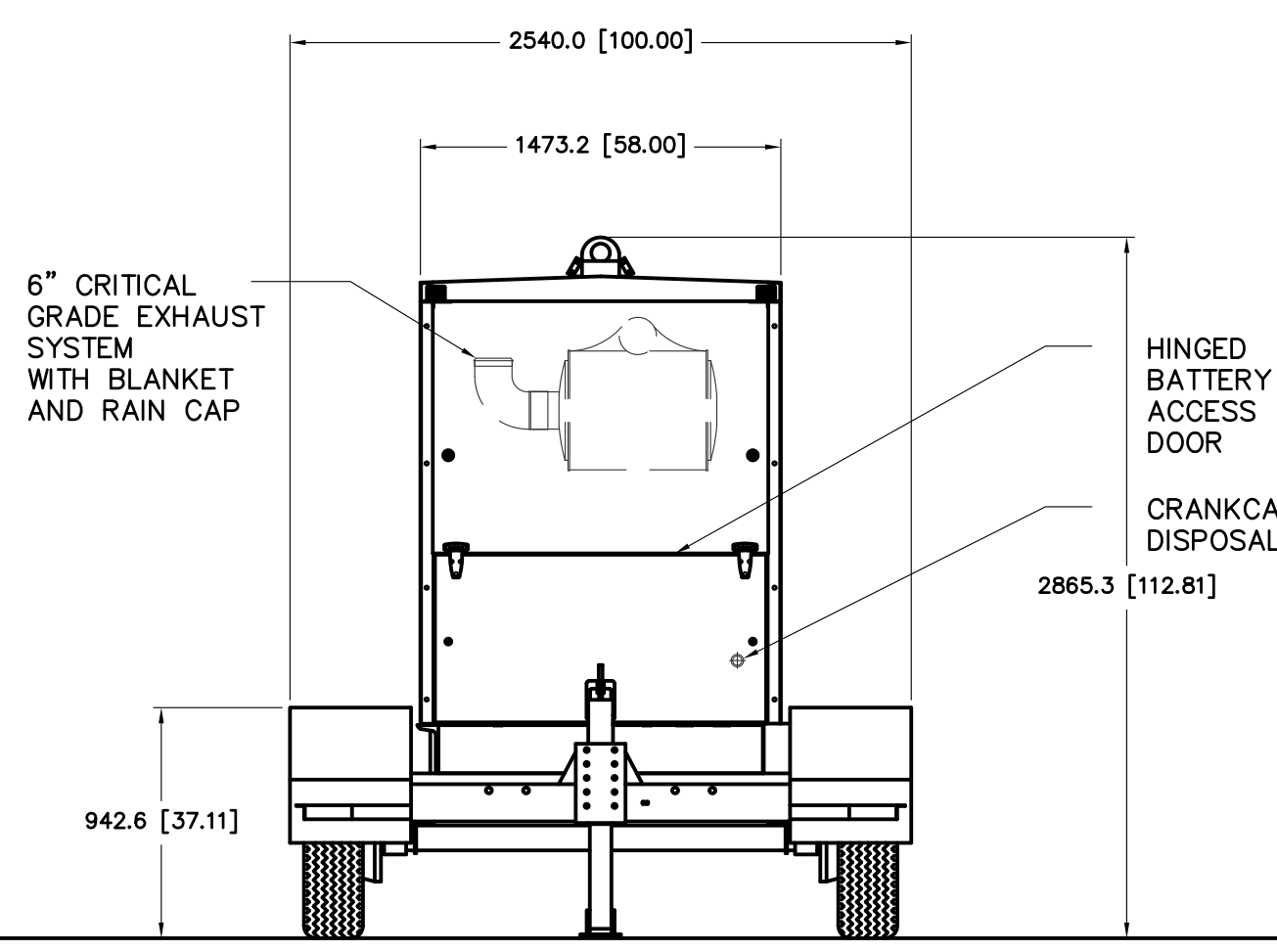
A TOP VIEW
SCALE: AS SHOWN



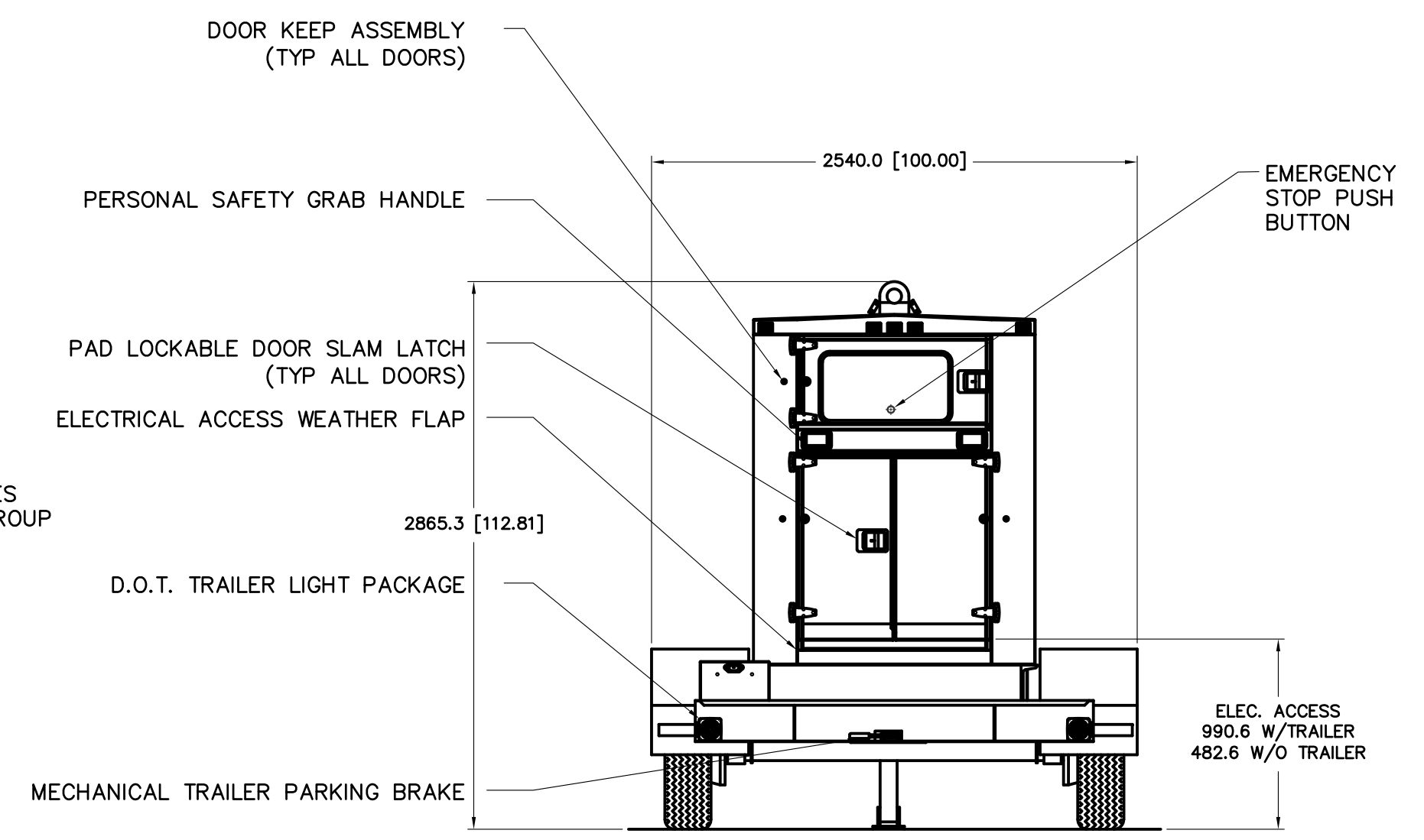
E REAR VIEW WITH REAR DOOR OPEN
SCALE: AS SHOWN



B RIGHT SIDE VIEW
SCALE: AS SHOWN



C FRONT VIEW
SCALE: AS SHOWN



D REAR VIEW
SCALE: AS SHOWN

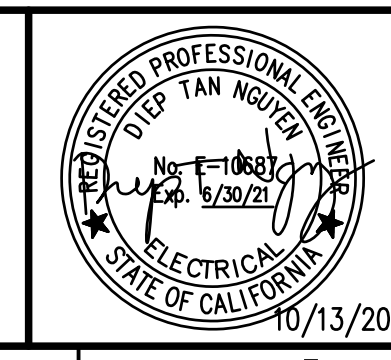
SHEET NOTES:

- 1 THE SPECIFIC DIMENSIONS SHOWN ON THIS DRAWING ARE FROM ONE SPECIFIC MANUFACTURER. NO PREFERENCES ARE IMPLIED OR EXPRESSED BY THE ENGINEER. EXACT DIMENSIONS SHALL BE AS REQUIRED BY THE MANUFACTURER.
- 2 THIS DRAWING ILLUSTRATES REQUIREMENTS AND FUNCTIONS OF THE GENSET AND ITS ASSOCIATED FEATURES OF THE UNIT. EXACT LOCATIONS OF THE INDIVIDUAL COMPONENTS MAY BE AS REQUIRED BY THE MANUFACTURER.

P:\429_Main Plant Gen. Main st. Gen and Princess PS Replacement\DRAWINGS\429 E-24.dwg 10-14-20 04:22:37 PM tp

REV	DATE	BY	DESCRIPTION
1			
2			

DESIGNED TP
DRAWN LD
CHECKED DTN
DATE 10-13-2020

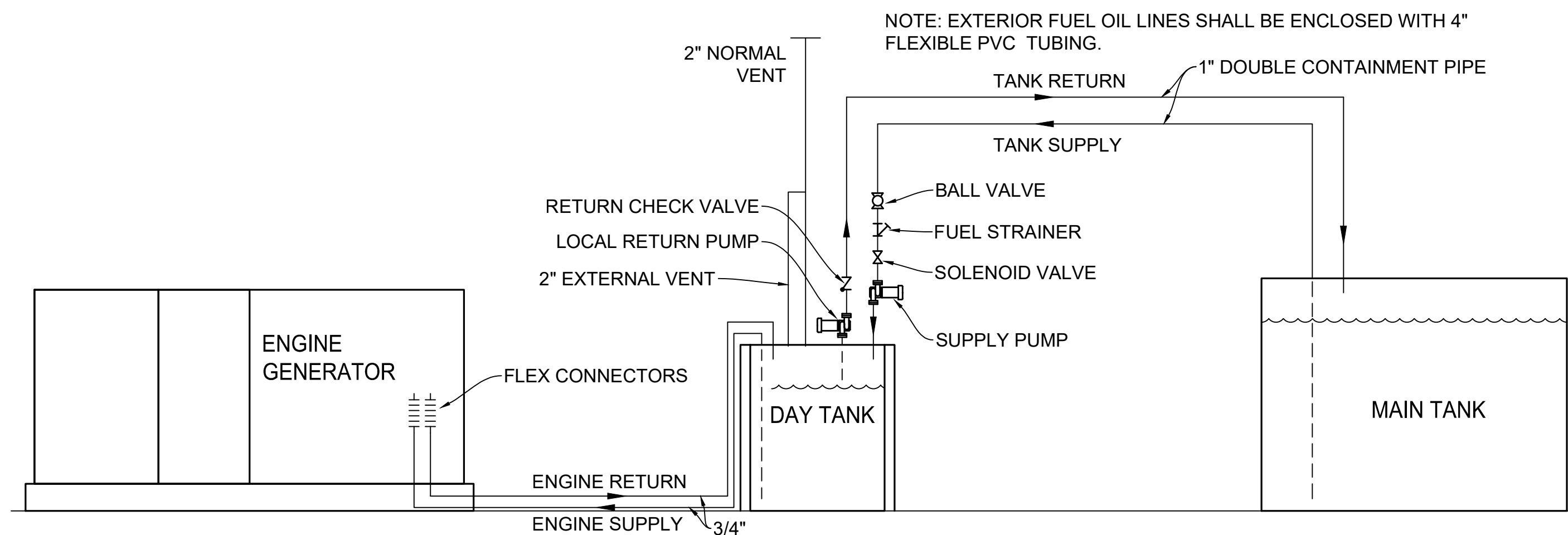


ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA



SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATORS RELIABILITY IMPROVEMENT PROJECT
ELECTRICAL
PORTABLE GENERATOR

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. DTN NO. 429 DRAWING NO. E-24 SHEET NO. 25 OF 32
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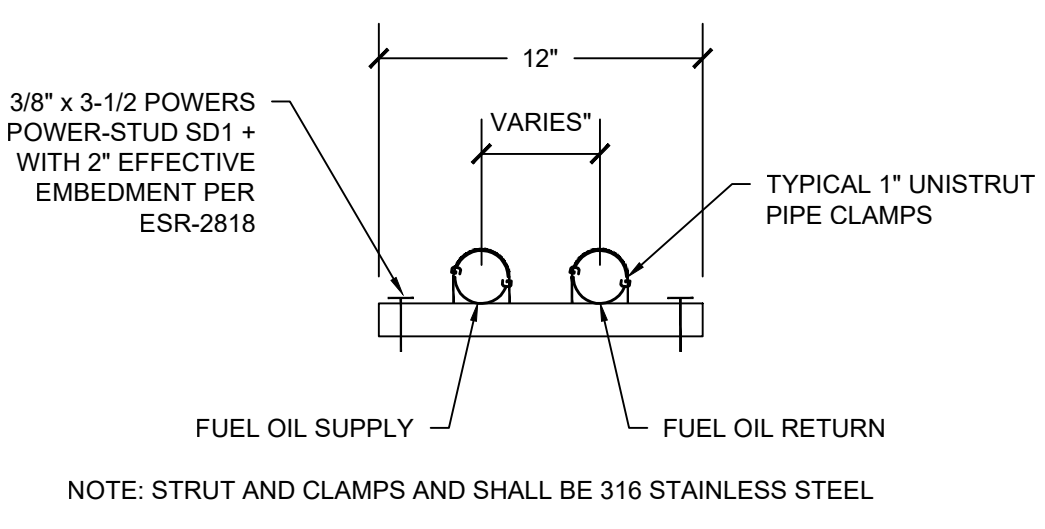


FUEL PIPING DIAGRAM SCHEDULE		
NAME	PRYCO MODEL NUMBER OR EQUAL	DESCRIPTION
DAY TANK	PY50ULDW	DAY TANK - STANDARD - 50 GAL., U/L LISTED, DOUBLE WALL, CONTROL VOLTAGE - 120vac, DRY CONTACTS, THIS TANK IS FOR INDOOR USE ONLY
ALARM, COMBINATION	210	ALARM, COMBINATION - High / Low Fuel Level
ALARM RELAY	211	ALARM RELAY - For Remote Signal Of Opt. #210
LEAK DETECTOR	295	LEAK DETECTOR - DOUBLE WALL - Alarm & P/M Shut Down
FUEL STRAINER	314-YB	FUEL STRAINER - "Y" TYPE - 1" NPT, 20 MESH
SUPPLY CHECK VALVE	355A	CHECK VALVE - PUMP INTAKE, 1/2" NPT
RETURN CHECK VALVE	355A	CHECK VALVE - PUMP INTAKE, 1/2" NPT
SOLENOID VALVE	360A-120	SOLENOID VALVE - N/C - 1/2" NPT, 120vac
REMOTE PUMP UNIT NEMA 3R	397-12A	REMOTE PUMP UNIT NEMA 3R - 24W X 12D - Single Pump/Motor System
REMOTE SUPPLY PUMP	401	PUMP - BRONZE ROTARY - 4 GPM - SUPPLY - 1/3 HP 115V TEFC
LOCAL RETURN PUMP	401	PUMP - BRONZE ROTARY - 4 GPM - SUPPLY - 1/3 HP 115V TEFC
ENCLOSURE	544	ENCLOSURE - Control Panel, NEMA-1

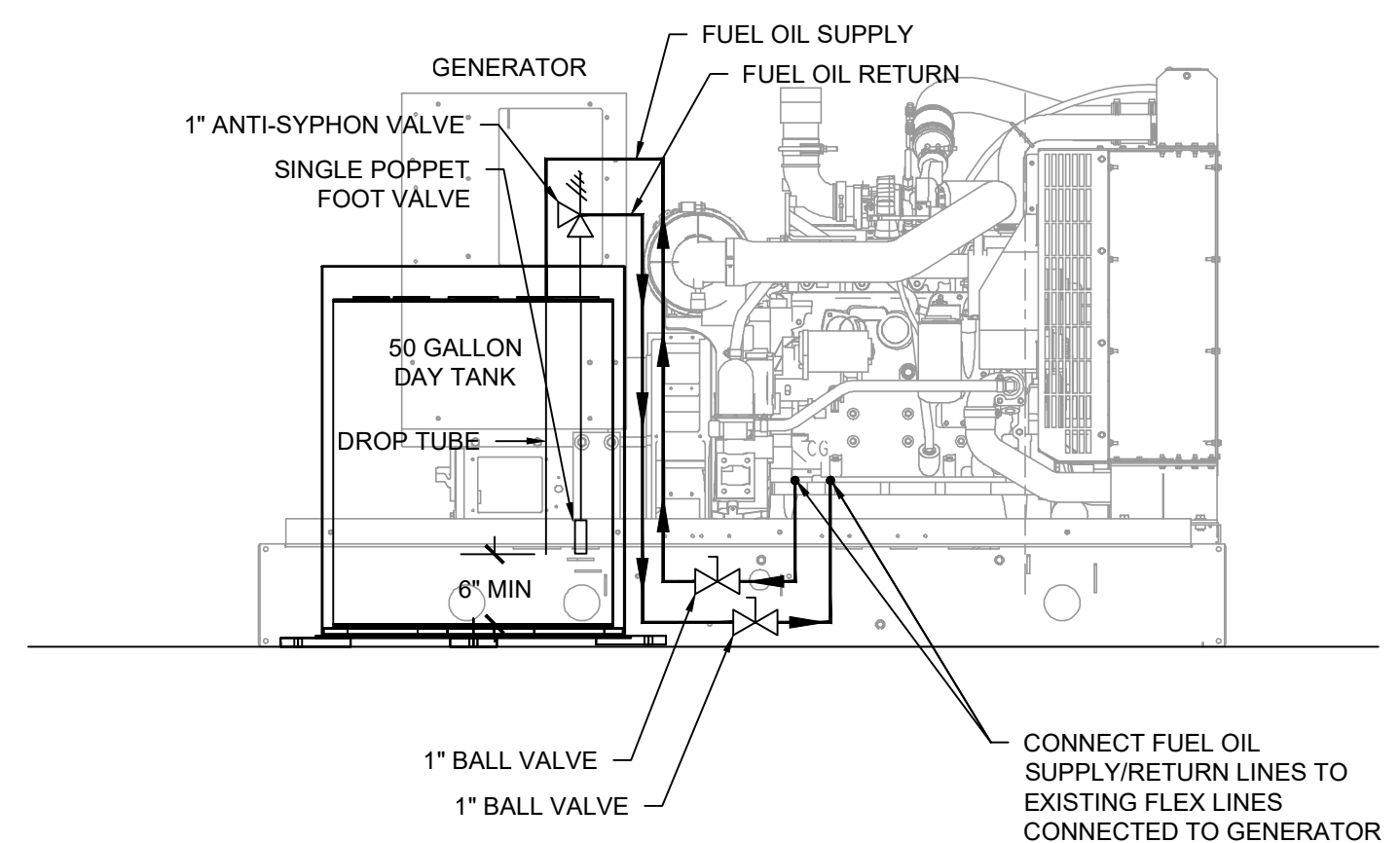
B FUEL PIPING DIAGRAM
SCALE: NONE

PIPE TESTING PROCEDURES
PRIMARY PIPE IS TO BE TESTED AT 110% OF ANTICIPATED WORKING PRESSURE OR 50 PSI WHICHEVER IS GREATER

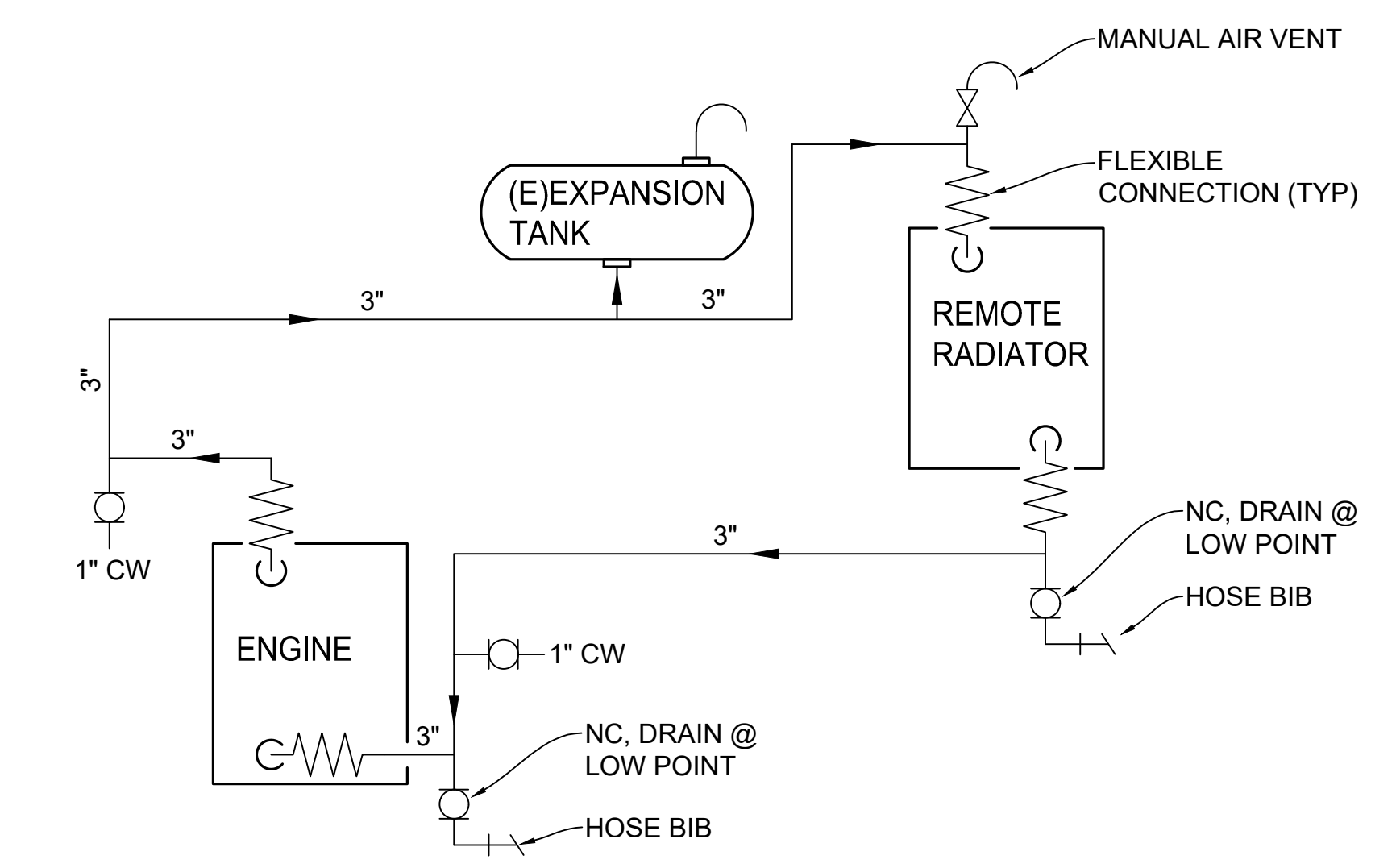
NOTE: LINES ARE SHOWN FOR CLARITY ONLY. WHEN LINES ARE INSTALLED THEY WILL BE PARALLEL TO EACH OTHER
NOTE: FOR ACTUAL ROUTING OF FUEL LINES SEE M-2



TYPICAL PIPE SUPPORT DETAIL



TYPICAL PIPING CROSS SECTION



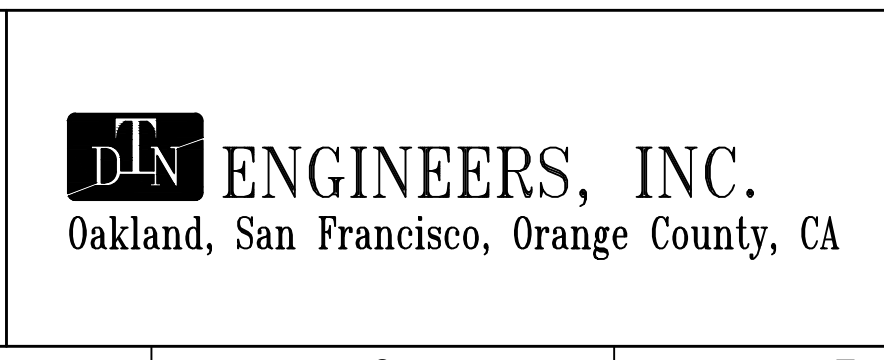
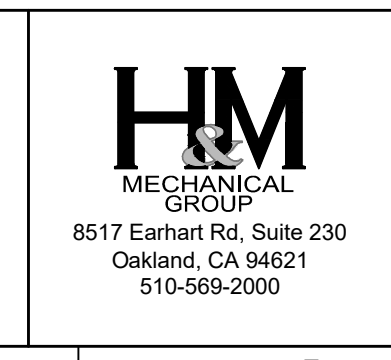
C RADIATOR COOLING SYSTEM
SCALE: NONE

A FUEL OIL PIPING DETAIL
SCALE: NONE

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REV	DATE	BY	DESCRIPTION
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2			
3			

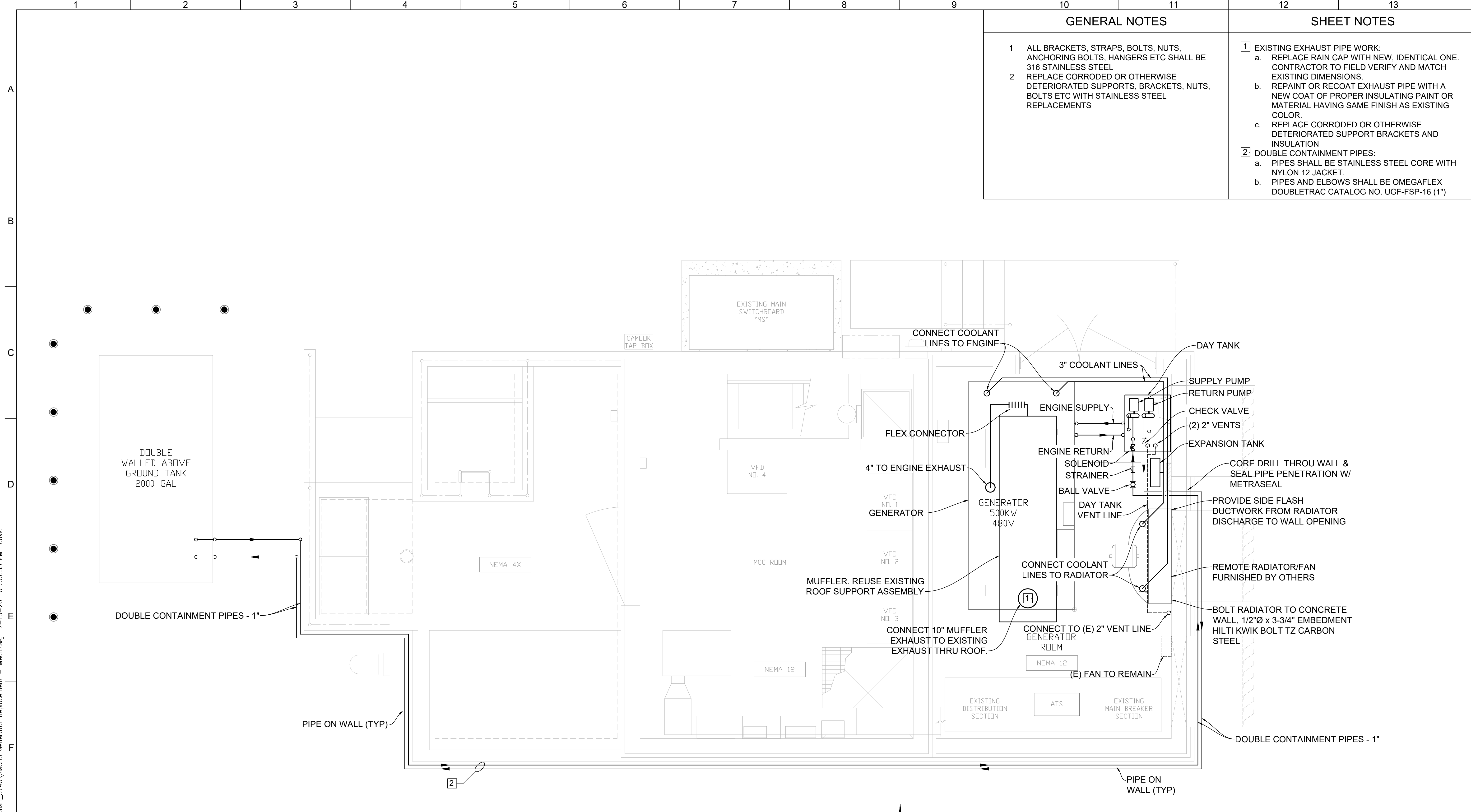
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DRAWN DS
CHECKED GH
DATE JULY 14, 2020



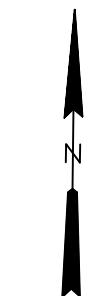
SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATOR RELIABILITY IMPROVEMENTS PROJECT
MECHANICAL
MAIN STREET PUMP STATION
BUILDING PLAN - MECHANICAL

VERIFY SCALES
JOB NO. 8231D.10
DRAWING NO. M-1
SHEET NO. 1 OF 2

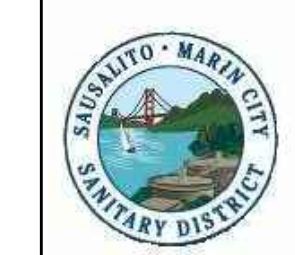
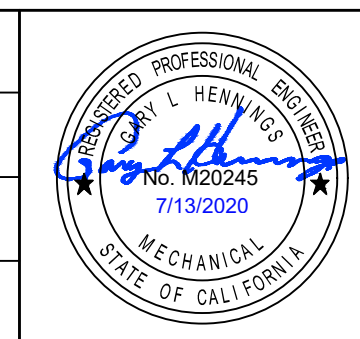
GENERAL NOTES		SHEET NOTES	
1	ALL BRACKETS, STRAPS, BOLTS, NUTS, ANCHORING BOLTS, HANGERS ETC SHALL BE 316 STAINLESS STEEL	1	EXISTING EXHAUST PIPE WORK: a. REPLACE RAIN CAP WITH NEW, IDENTICAL ONE. CONTRACTOR TO FIELD VERIFY AND MATCH EXISTING DIMENSIONS. b. REPAINT OR RECOAT EXHAUST PIPE WITH A NEW COAT OF PROPER INSULATING PAINT OR MATERIAL HAVING SAME FINISH AS EXISTING COLOR. c. REPLACE CORRODED OR OTHERWISE DETERIORATED SUPPORT BRACKETS AND INSULATION
2	REPLACE CORRODED OR OTHERWISE DETERIORATED SUPPORTS, BRACKETS, NUTS, BOLTS ETC WITH STAINLESS STEEL REPLACEMENTS	2	DOUBLE CONTAINMENT PIPES: a. PIPES SHALL BE STAINLESS STEEL CORE WITH NYLON 12 JACKET. b. PIPES AND ELBOWS SHALL BE OMEGAFLEX DOUBLETRAC CATALOG NO. UGF-FSP-16 (1")



A MAIN STREET PS - BUILDING PLAN
SCALE: 1/2" = 1'-0"



REV	DATE	BY	DESCRIPTION
1			
2			
3			



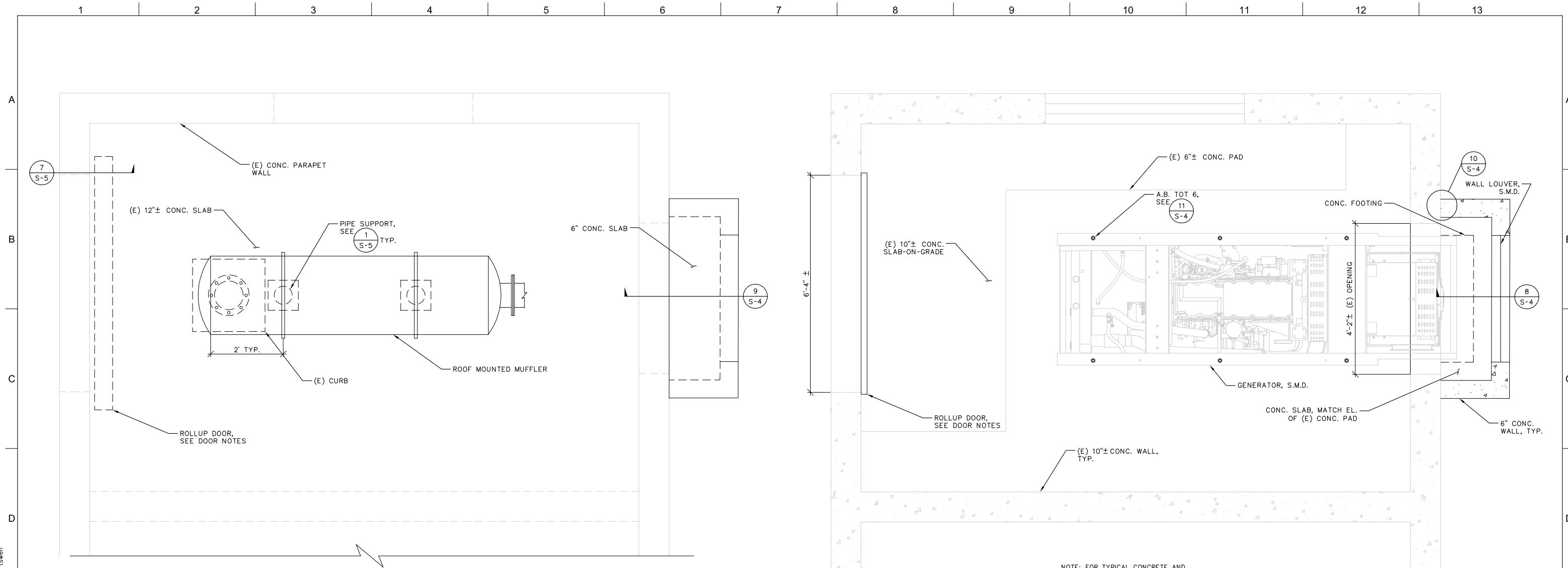
Sausalito-Marin City Sanitary District

SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATOR RELIABILITY IMPROVEMENTS PROJECT
MECHANICAL
MAIN STREET PUMP STATION
BUILDING PLAN - MECHANICAL

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 8231D.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. M-2
	SHEET NO. 2 OF 2

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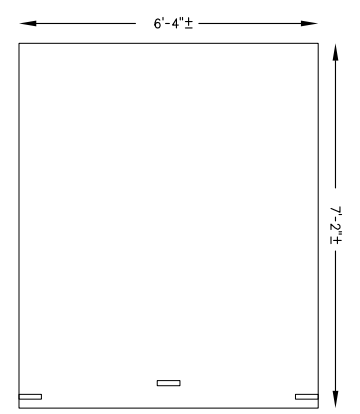


2 MAIN WWT - ROOF PLAN
1/2"=1'-0"

1 MAIN WWT - FLOOR PLAN
1/2"=1'-0"

- DOOR NOTES:**
1. FIELD VERIFY ROUGH OPENING PRIOR TO ORDERING OR FABRICATING DOORS.
 2. DOOR: MANUALLY OPERATED, ANODIZED ALUMINUM ROLL UP DOOR WITH STAINLESS STEEL HARDWARE. SEE SPECIFICATIONS. DOOR CONFIGURATION AS SHOWN.

ALL HANGARS, CLAMPS AND HARDWARE SHALL BE TYPE 316 STAINLESS STEEL. UNISTRUT SHALL BE TYPE 316 STAINLESS STEEL OR FIBERGLASS, TYP.



NOTE: FOR TYPICAL CONCRETE AND REINFORCING DETAILS, SEE SHEET S-4

REV	DATE	BY	DESCRIPTION

DESIGNED	
DRAWN	
CHECKED	
DATE	APRIL 17, 2020



DLN ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA

Bluestone ENGINEERING

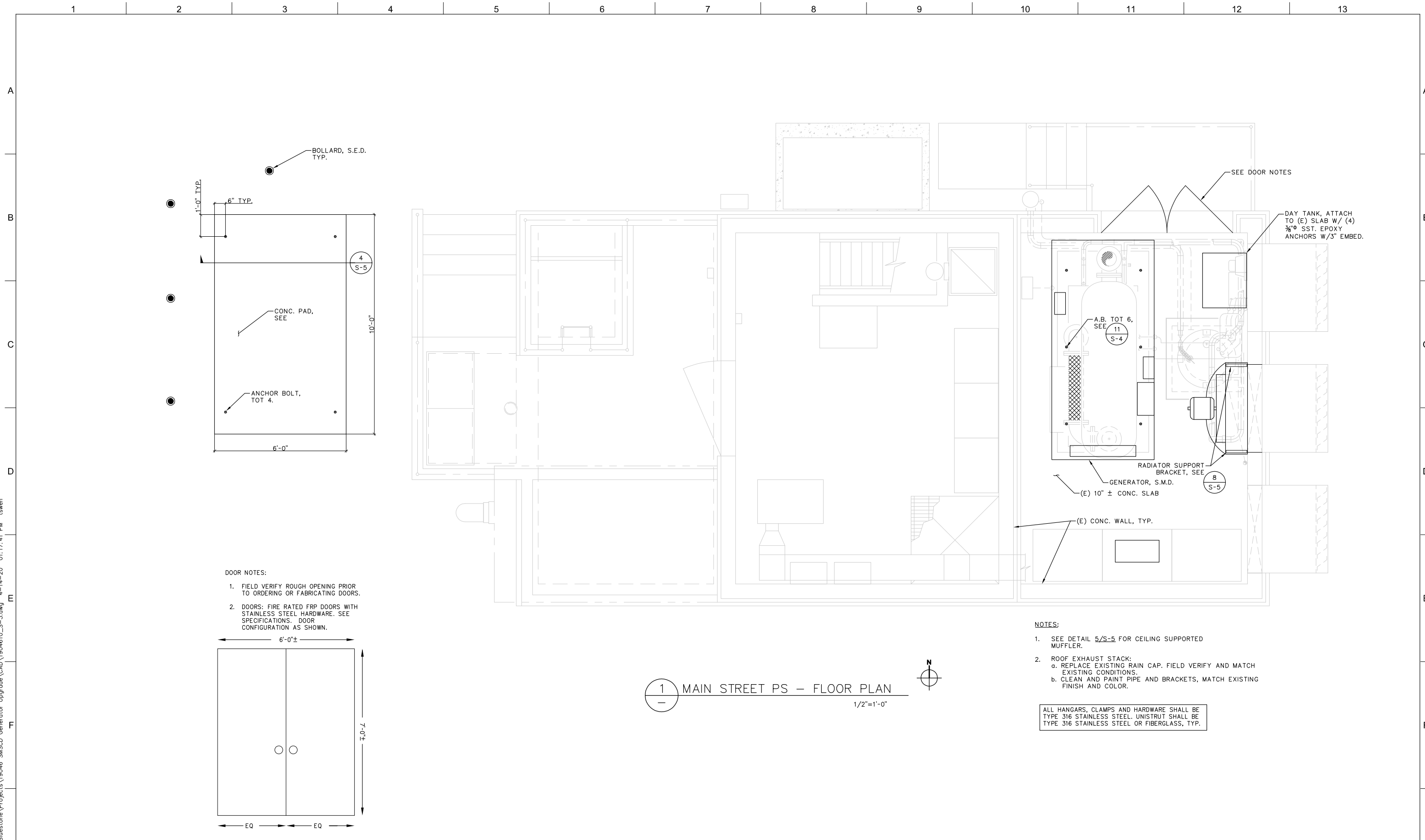
Sausalito-Marin City Sanitary District

SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATOR RELIABILITY IMPROVEMENTS PROJECT
STRUCTURAL
MAIN WWT - FLOOR AND ROOF PLANS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 8231D.10
DRAWING NO. S-2
SHEET NO. X OF XX

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1 MAIN STREET PS - FLOOR PLAN
1/2"=1'-0"



REV	DATE	BY	DESCRIPTION

DESIGNED	
DRAWN	
CHECKED	
DATE	APRIL 17, 2020



DLN ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA

Bluestone ENGINEERING

Sausalito-Marin City Sanitary District

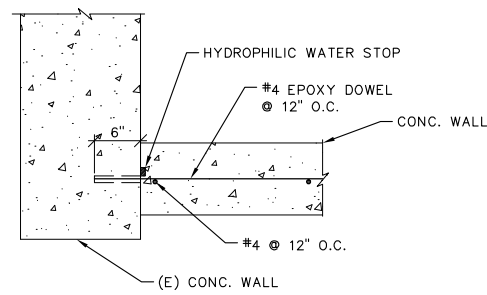
SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATOR RELIABILITY IMPROVEMENTS PROJECT
STRUCTURAL
MAIN STREET PS - FLOOR PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

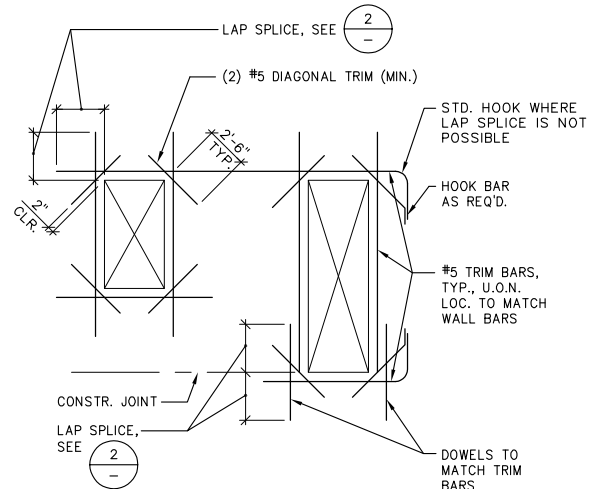
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DRAWING NO. S-3
SHEET NO. X OF XX

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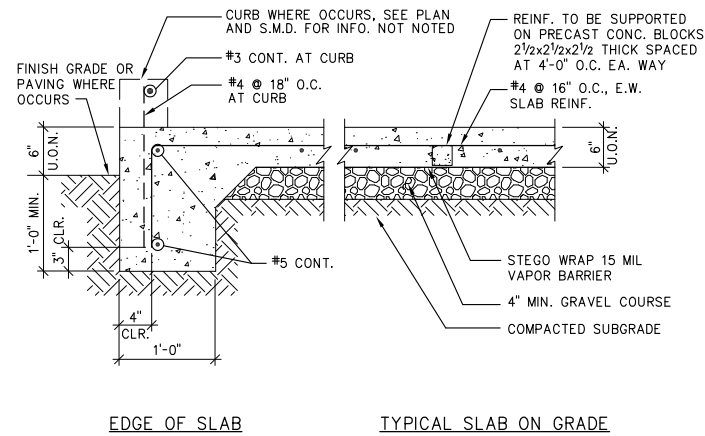
10 CONNECTION AT CONC. WALL
1 1/2" = 1'-0"



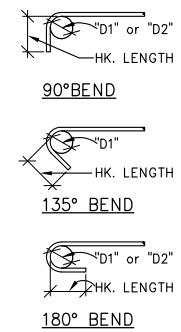
7 CONCRETE WALL OPENING TRIM REINFORCEMENT
N.T.S.



4 SLAB-ON-GRADE DETAILS
N.T.S.



1 STANDARD HOOKS
NO SCALE

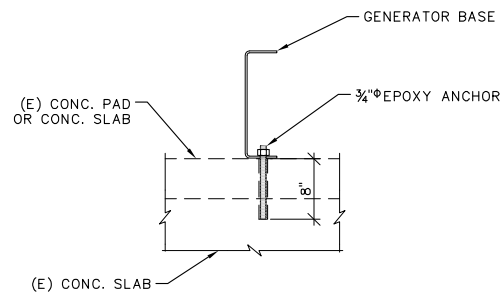


STANDARD HOOK LENGTHS				
BAR SIZE	MAIN REINF.		STIRRUP & TIE HOOKS	
	90°	180°	90°	135°
#3	6"	4"	3"	4 1/2"
#4	8"	4"	4"	6"
#5	9 1/2"	4 1/2"	5"	7 1/2"
#6	11 1/2"	5 1/2"	11 1/2"	10"
#7	13 1/2"	6 1/2"	13 1/2"	11 1/2"
#8	15"	7"	15"	13"
#9	18"	9"	—	—
#10	20"	10"	—	—
#11	22"	11"	—	—

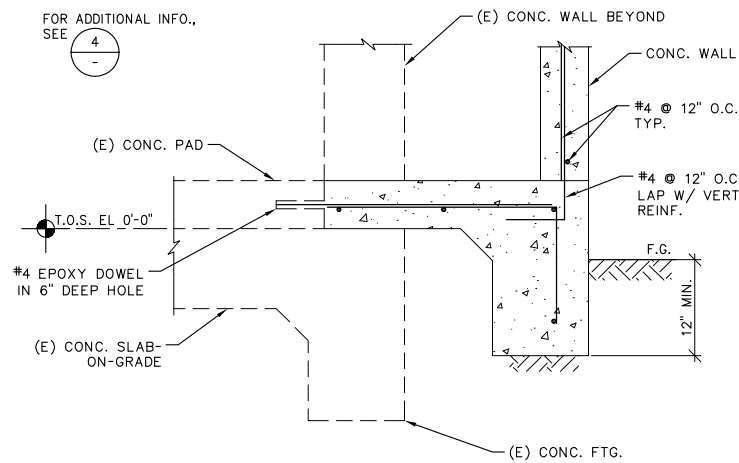
DIAMETER OF BENDS	
D1	1 1/2" FOR #3 BARS 2" FOR #4 BARS 2 1/2" FOR #5 BARS
D2	6d FOR #3 THRU #8 BARS 8d FOR #9, #10 & #11 BARS

"D1" - FOR STIRRUPS, TIES AND WALL REINF. AT OP'GS.
"D2" - FOR ALL OTHERS

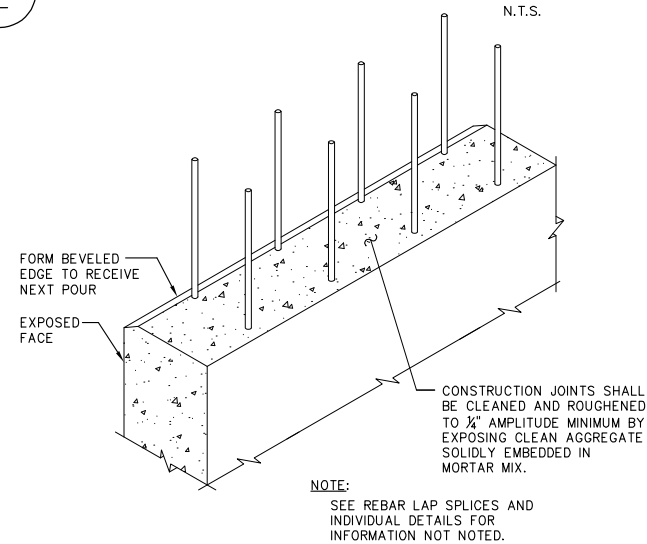
11 GENERATOR ANCHORAGE DETAIL
1" = 1'-0"



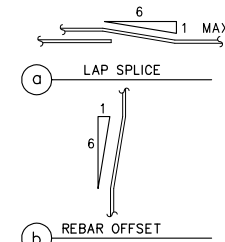
8 FOOTING SECTION
1" = 1'-0"



5 HORIZONTAL CONSTRUCTION JOINT IN CONCRETE WALL
N.T.S.



2 REBAR OFFSET AND LAP SPLICE
NO SCALE

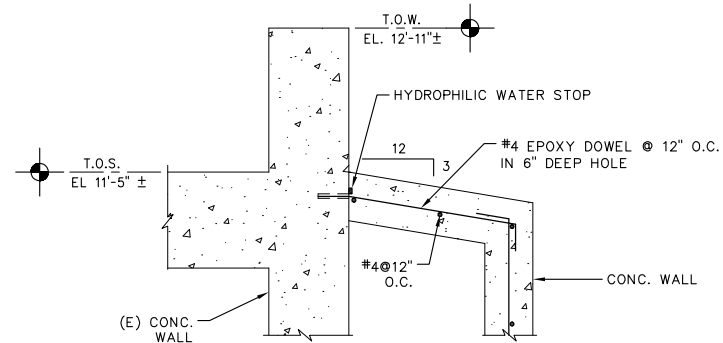


CONCRETE STRENGTH	BAR CASE	F'c = 2500 PSI		F'c = 3000 PSI		F'c = 4000 PSI	
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	3'-0"	2'-11"	3'-6"	2'-8"	3'-0"	2'-4"	2'-4"
#4	5'-1"	3'-11"	4'-8"	3'-7"	4'-0"	3'-1"	3'-1"
#5	6'-4"	4'-11"	5'-9"	4'-5"	5'-0"	3'-10"	3'-10"
#6	7'-7"	5'-10"	6'-11"	5'-4"	6'-0"	4'-7"	4'-7"
#7	11'-1"	8'-6"	10'-1"	7'-9"	8'-9"	6'-9"	6'-9"
#8	12'-8"	9'-9"	11'-7"	8'-11"	10'-0"	7'-8"	7'-8"
#9	14'-3"	11'-0"	13'-1"	10'-0"	11'-4"	8'-8"	8'-8"
#10	16'-1"	12'-5"	14'-8"	11'-4"	12'-9"	9'-9"	9'-9"

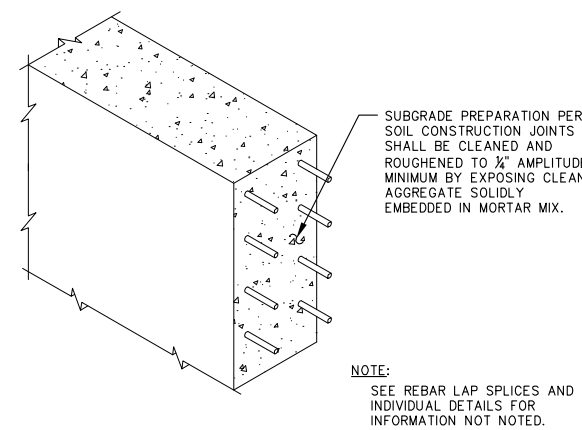
- NOTES:
1. THE LAP SPLICE LENGTHS ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW.
 2. WHERE CLEAR SPACE BETWEEN BARS LAP SPICED AT ANY SECTION IS GREATER THAN 2 BAR DIAMETERS AND WHERE THE BAR COVER IS GREATER THAN ONE BAR DIAMETER, THE LAP SPLICE MAY BE MULTIPLIED BY 67%.
 3. WHERE LIGHTWEIGHT AGGREGATE CONCRETE IS USED, INCREASE LAP SPLICE LENGTH BY 30%.
 4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
 5. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.

ALL HANGARS, CLAMPS AND HARDWARE SHALL BE TYPE 316 STAINLESS STEEL. UNISTRUT SHALL BE TYPE 316 STAINLESS STEEL OR FIBERGLASS, TYP.

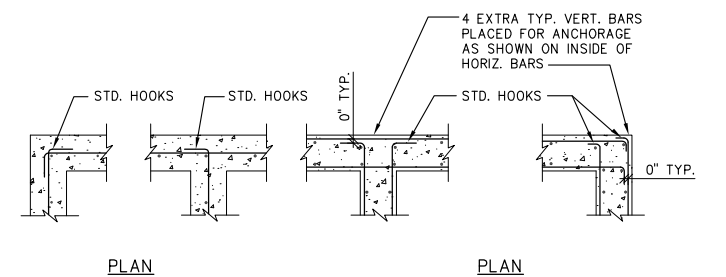
9 ROOF TO WALL CONN.
1" = 1'-0"



6 VERTICAL CONSTRUCTION JOINT IN CONCRETE WALL
N.T.S.



3 CONCRETE WALL AND FOOTING INTERSECTIONS
N.T.S.



REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED	
DRAWN	
CHECKED	
DATE	APRIL 17, 2020



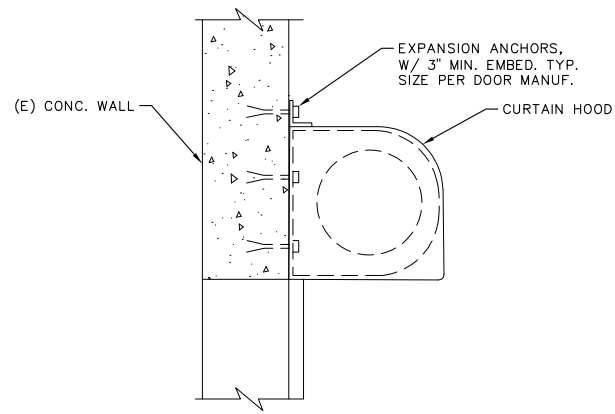
DLN ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA

Bluestone ENGINEERING

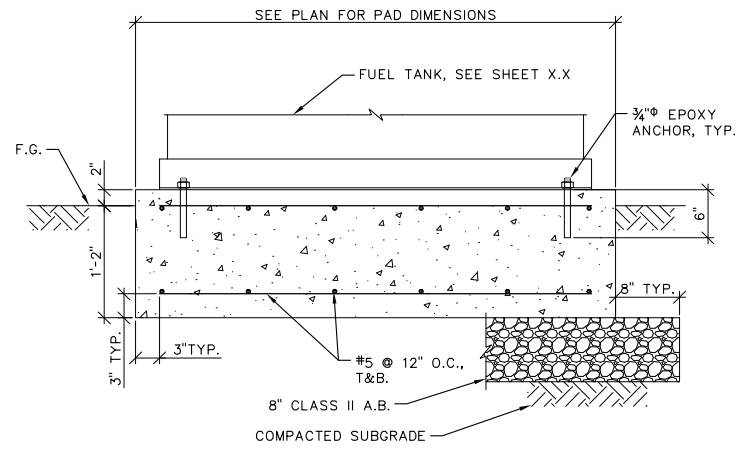
Sausalito-Marino City Sanitary District

SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATOR RELIABILITY IMPROVEMENTS PROJECT
STRUCTURAL
SECTIONS AND DETAILS NO.1

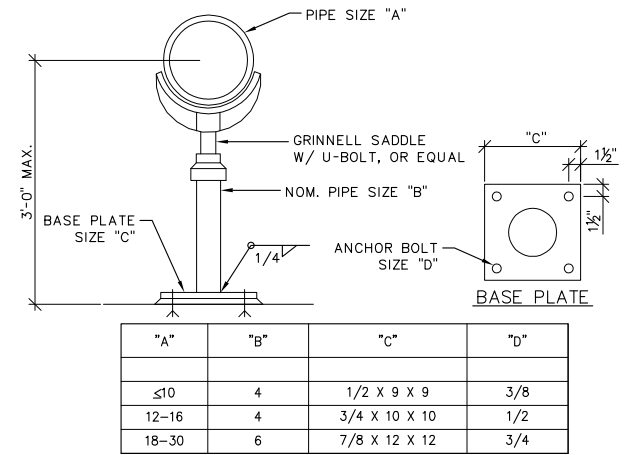
VERIFY SCALES	JOB NO. 8231D.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. S-4
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. X OF XX



7 ROLL UP DOOR
NO SCALE

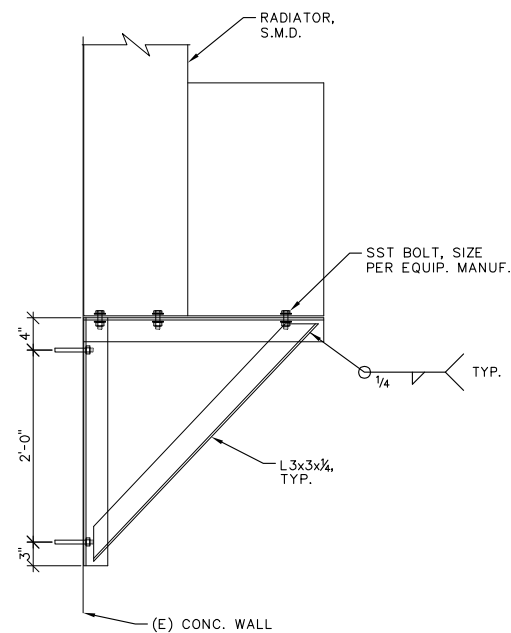


4 EQUIPMENT PAD DETAIL
1" = 1'-0"

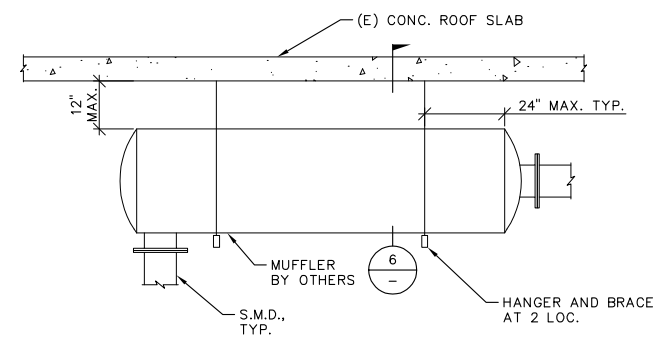


1 PIPE SUPPORT
NO SCALE

NOTES:
(1) ALL DIMENSIONS IN INCHES.
(2) CONCRETE FLOOR SLAB TO HAVE MIN. 3500 PSI.
(3) SUPPORT PIPE TO BE TYPE 316 SCHEDULE 40S, STAINLESS STEEL
(4) SEE DETAIL 2/- FOR ANCHOR BOLTS



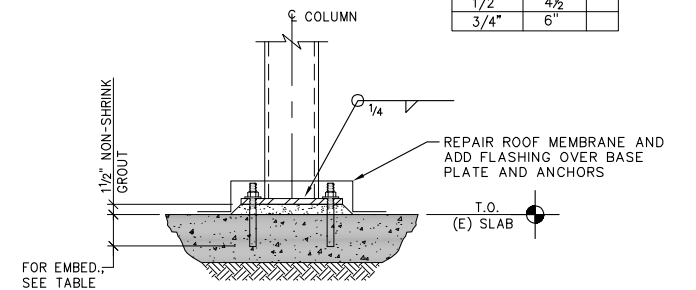
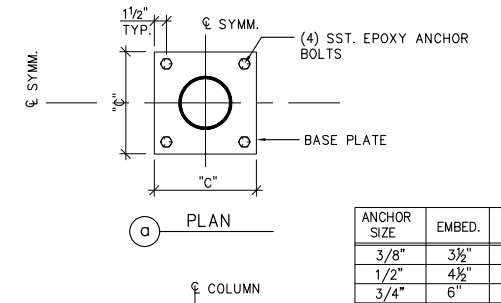
8 RADIATOR SUPPORT BRACKETS
1" = 1'-0"



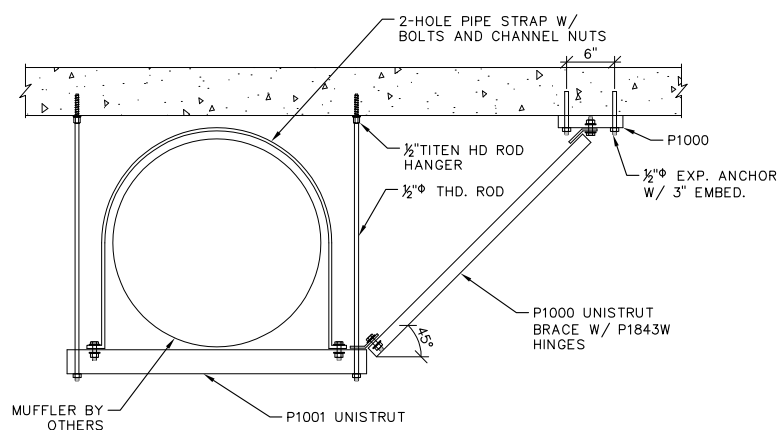
5 SUSPENDED EQUIPMENT DETAIL
1/2" = 1'-0"

1 PIPE SUPPORT
NO SCALE

NOTE: SEE DETAIL 1/- FOR ADDITIONAL INFO.



3 BASE PLATE DETAIL WITH EPOXY ANCHORS
N.T.S.



6 SECTION
1" = 1'-0"

ALL HANGARS, CLAMPS AND HARDWARE SHALL BE TYPE 316 STAINLESS STEEL. UNISTRUT SHALL BE TYPE 316 STAINLESS STEEL OR FIBERGLASS, TYP.

NOTE: SUPPORT BRACKET SHALL BE TYPE 304 OR 316 STAINLESS STEEL

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REV	DATE	BY	DESCRIPTION

DESIGNED
DRAWN
CHECKED
DATE
APRIL 17, 2020



DLN ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA

Bluestone ENGINEERING



SAUSALITO-MARIN CITY SANITARY DISTRICT
GENERATOR RELIABILITY IMPROVEMENTS PROJECT
STRUCTURAL
SECTIONS AND DETAILS NO. 2

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 8231D.10
DRAWING NO. S-5
SHEET NO. X OF XX