

Plot Date: 17-SEP-2020 3:09:16 PM

User: svcPW

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LAST SAVED BY: Alalco

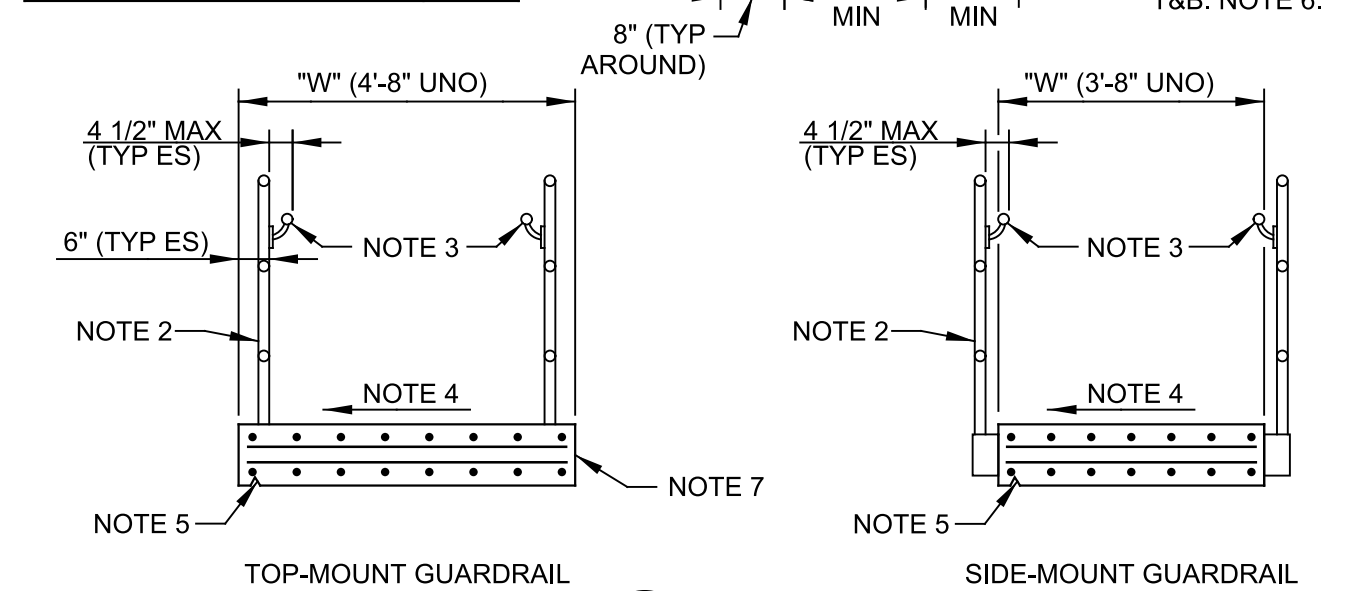
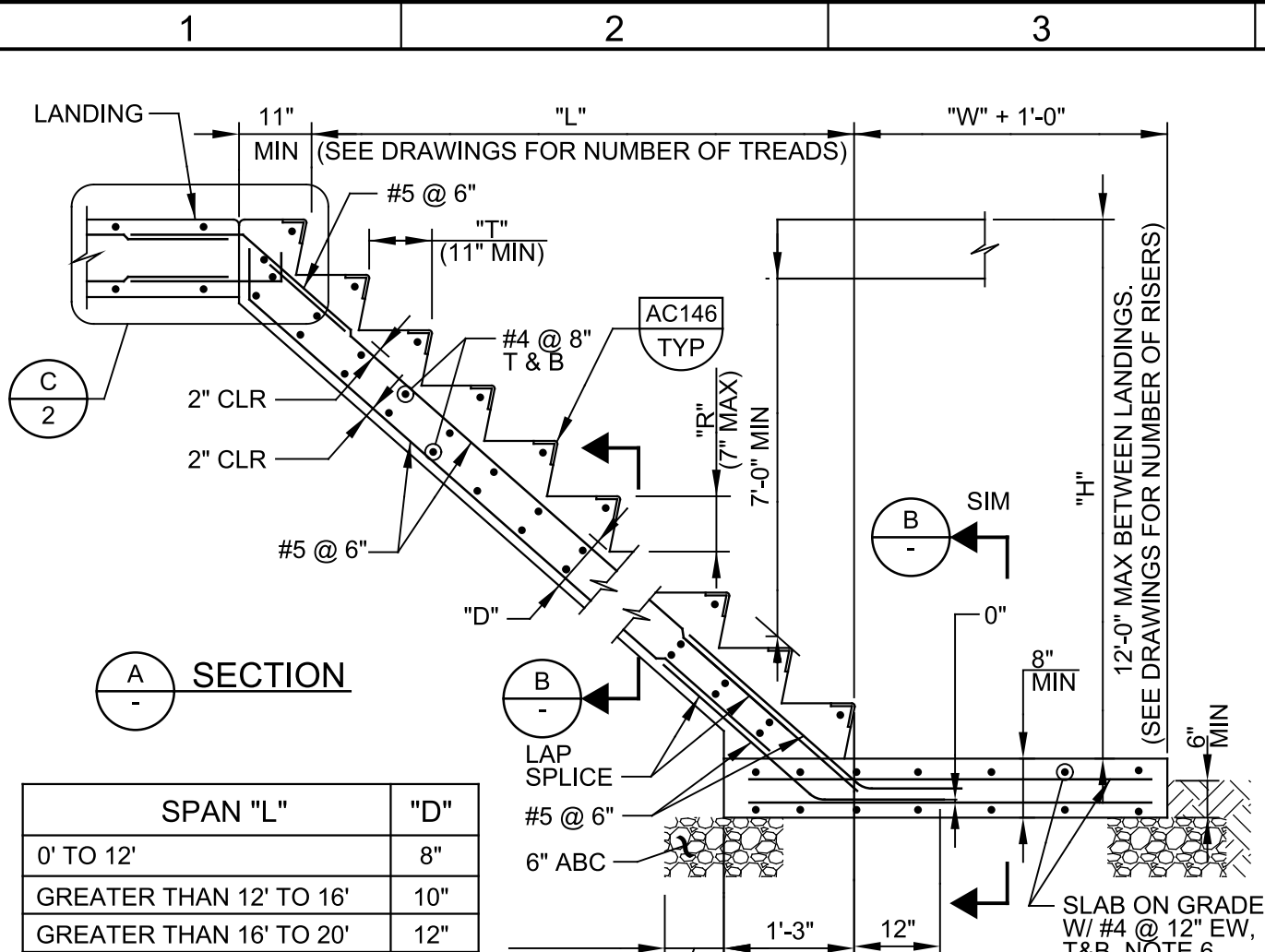
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PROJECT NO. 8231D10 FILE NAME: 8231D10G04.dgn

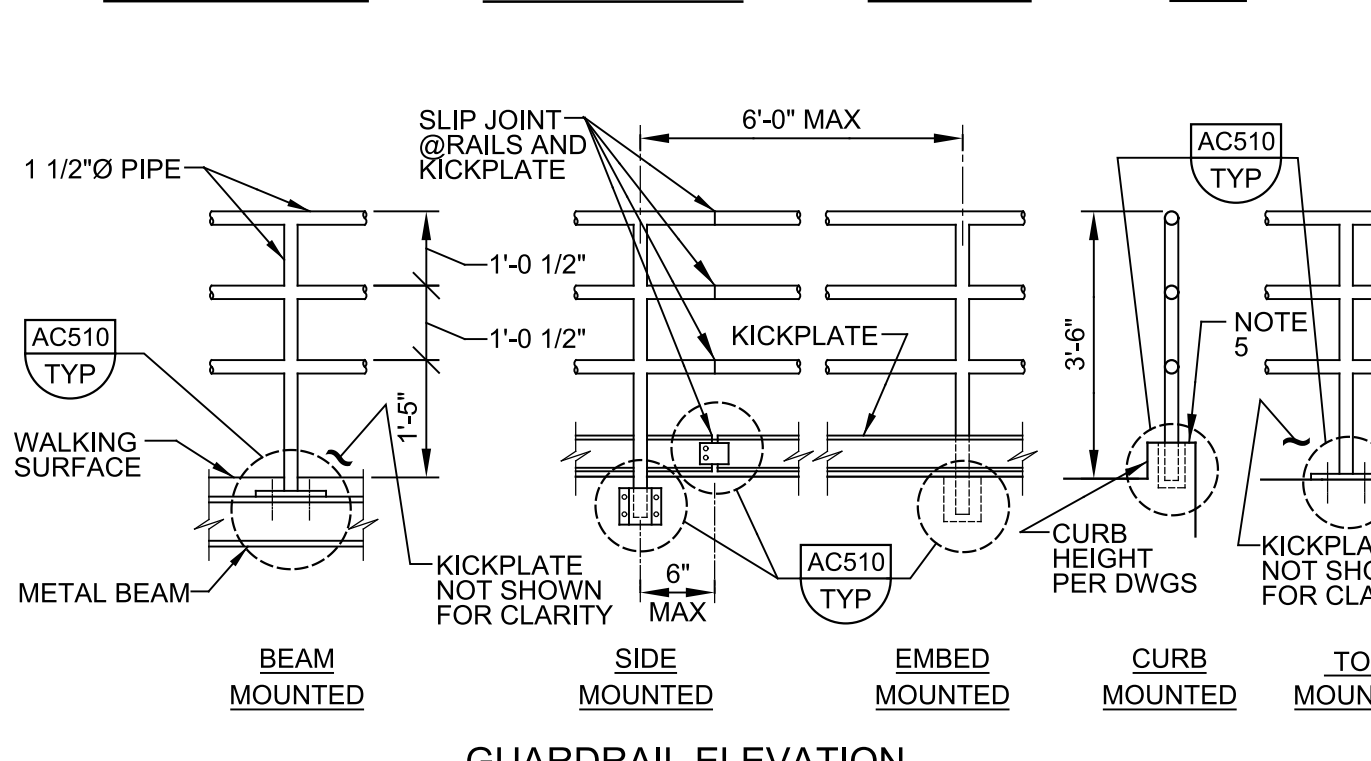
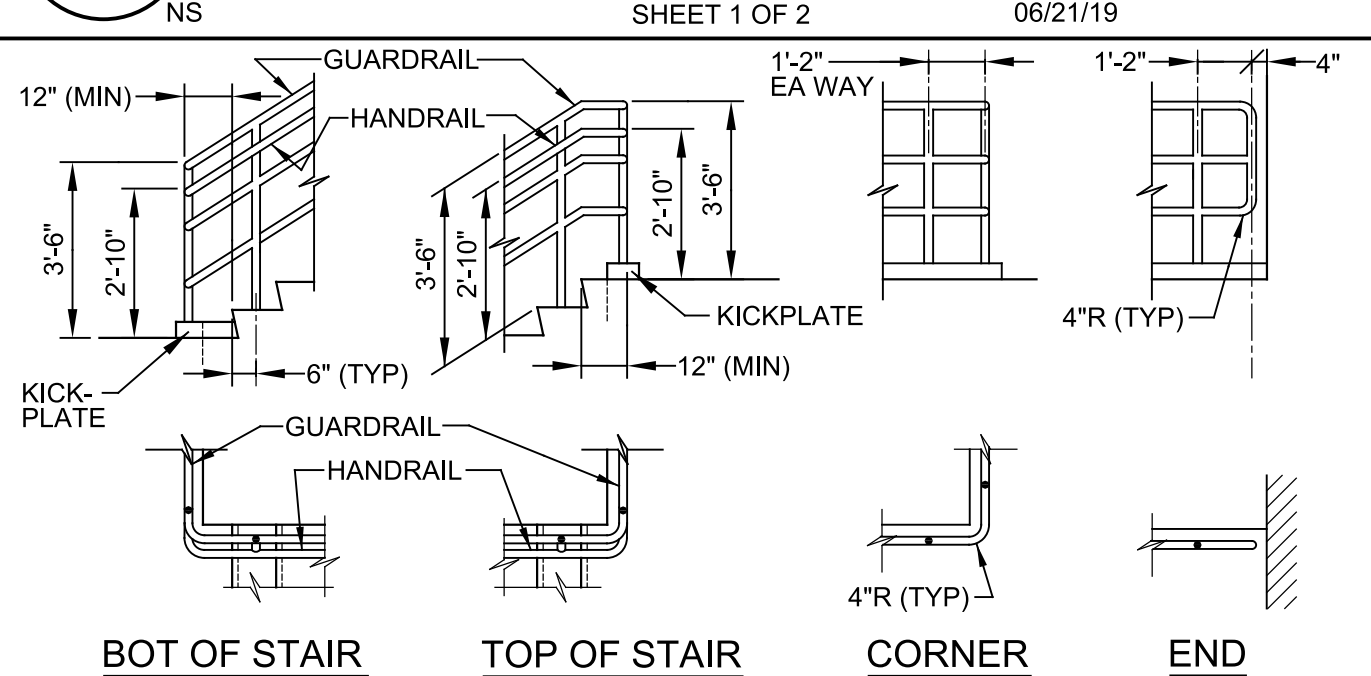
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CORIOLOS</td></tr><tr><td></td><td>BASKET STRAINER</td><td></td><td>X = M - MAGNETIC</td></tr><tr><td></td><td>BLOWER</td><td></td><td>X = P - PROPELLER</td></tr><tr><td></td><td>CALIBRATION COLUMN</td><td></td><td>X = PT - PITOT TUBE</td></tr><tr><td></td><td>COMPRESSOR/TURBINE</td><td></td><td>X = R - ROTAMETER</td></tr><tr><td></td><td>COMPRESSOR: RECIPROCATING</td><td></td><td>X = T - TURBINE</td></tr><tr><td></td><td>DIAPHRAGM SEAL</td><td></td><td>X = TH - THERMAL</td></tr><tr><td></td><td>DRAIN</td><td></td><td>X = U - ULTRASONIC</td></tr><tr><td></td><td>EJECTOR OR EDUCTOR</td><td></td><td>X = D - DENSITY</td></tr><tr><td></td><td>ELECTRIC MOTOR</td><td></td><td>PRIMARY FLOW ELEMENT: ORIFICE PLATE</td></tr><tr><td></td><td>EQUIPMENT DRAIN</td><td></td><td>PRIMARY FLOW ELEMENT: VENTURI TUBE</td></tr><tr><td></td><td>EXPANSION JOINT, FLEXIBLE VIBRATION JOINT</td><td></td><td>PRIMARY FLOW ELEMENT: WEIR</td></tr><tr><td></td><td>FAN: EXHAUST/SUPPLY</td><td></td><td>PULSATION DAMPENER</td></tr><tr><td></td><td>FILTER</td><td></td><td>PUMP: CENTRIFUGAL</td></tr><tr><td></td><td>FIRE HYDRANT</td><td></td><td>PUMP: DIAPHRAGM</td></tr><tr><td></td><td>FLAME ARRESTER</td><td></td><td>PUMP: METERING</td></tr><tr><td></td><td>FLAME ARRESTER WITH THERMALLY OPERATED VALVE</td><td></td><td>PUMP: PLUNGER</td></tr><tr><td></td><td>FLOOR DRAIN</td><td></td><td>PUMP: PERISTALTIC TUBE METERING</td></tr><tr><td></td><td>FLOW SWITCH</td><td></td><td>PUMP: PROGRESSIVE CAVITY</td></tr><tr><td></td><td>GAUGE: PRESSURE</td><td></td><td>PUMP: RECIPROCATING</td></tr><tr><td></td><td>GAUGE: DIFFERENTIAL PRESSURE</td><td></td><td>PUMP: ROTARY</td></tr><tr><td></td><td>WEIR</td><td></td><td>PUMP: SCREW</td></tr><tr><td></td><td>MIXER</td><td></td><td>PUMP: SUBMERSIBLE</td></tr><tr><td></td><td>OIL OR MOISTURE TRAP</td><td></td><td>PUMP: VERTICAL LIFT</td></tr><tr><td></td><td>PRIMARY LEVEL ELEMENT: BUBBLER</td><td></td><td>ROTARY CHEMICAL FEEDER</td></tr><tr><td></td><td>PRIMARY LEVEL ELEMENT: ELECTRODE</td><td></td><td>RUPTURE DISK</td></tr><tr><td></td><td>PRIMARY LEVEL ELEMENT: FLOAT SWITCH</td><td></td><td>SAMPLE PORT</td></tr><tr><td></td><td>FLUID LEVEL</td><td></td><td>SIGHT GLASS</td></tr><tr><td></td><td>PRIMARY LEVEL ELEMENT: INVERTED COLUMN</td><td></td><td>SLIDE GATE</td></tr><tr><td></td><td></td><td></td><td>SLUICE GATE</td></tr><tr><td></td><td></td><td></td><td>STRAINER: WYE TYPE</td></tr><tr><td></td><td></td><td></td><td>STRAINER: WYE TYPE WITH BLOWOFF</td></tr><tr><td></td><td></td><td></td><td>THERMOMETER</td></tr></table>													SINGLE LINE	DESCRIPTION	SINGLE LINE	DESCRIPTION		AIR OR CHEMICAL DIFFUSER		PRIMARY LEVEL ELEMENT: RADAR		QUICK DISCONNECT HIGH PRESSURE AIR OR FLUSHING		PRIMARY LEVEL ELEMENT: ULTRASONIC		BATCHMETER		PRIMARY FLOW ELEMENT: FLUME		AIR VENT		PRIMARY FLOW ELEMENT: X = C - 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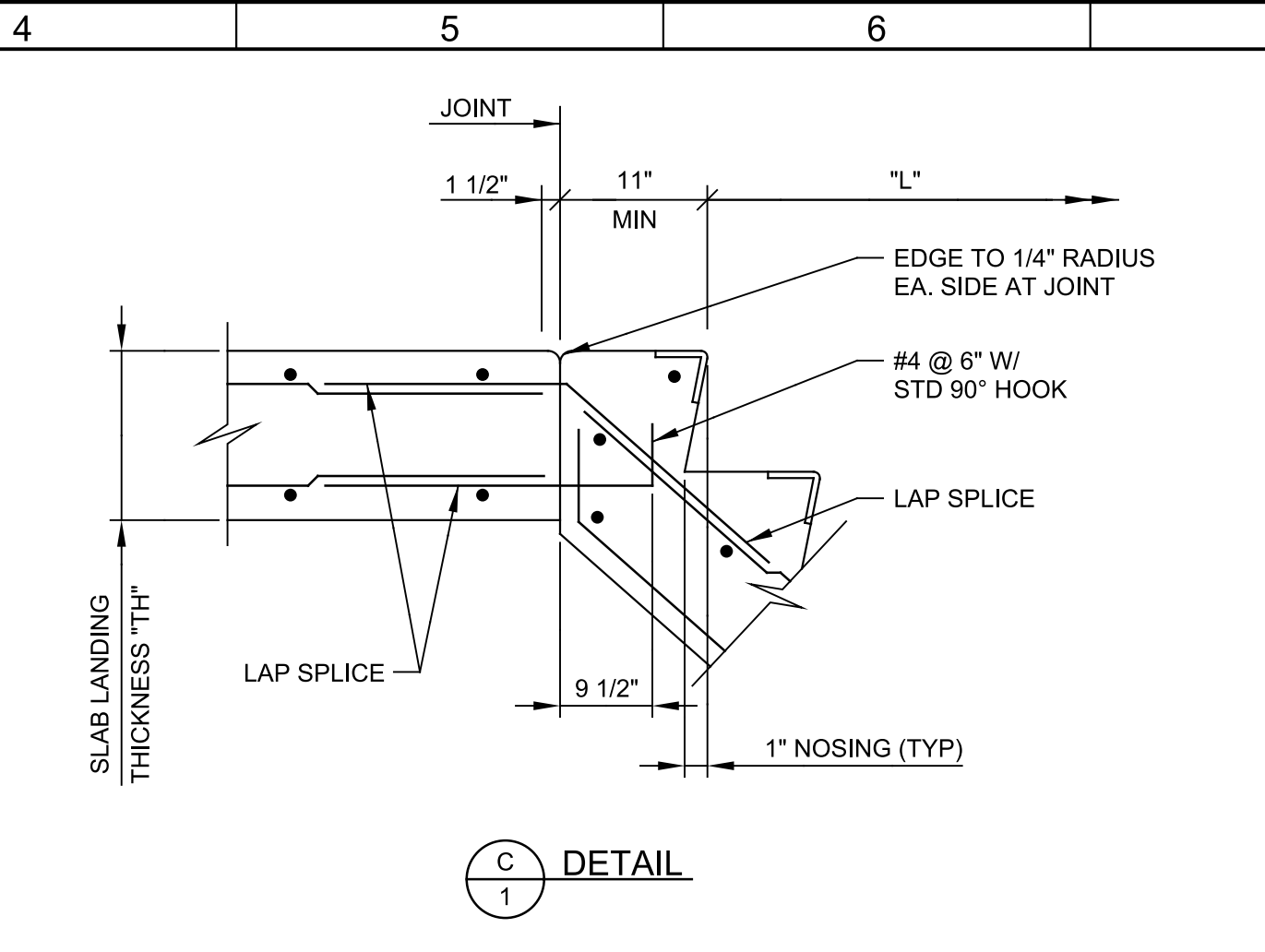
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NOTES				DUCTWORK SYMBOLS			EQUIPMENT SYMBOLS			REGISTERS, GRILLES & LOUVERS SYMBOLS					
<div>1. SIZES OF EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ADJUSTMENT TO EQUIPMENT PAD SIZES SHALL BE AT NO ADDITIONAL COST TO THE OWNER WHERE THE SIZE INCREASED IS LESS THAN 25 PERCENT AS COMPARED TO THE PROJECT PLANS. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE TYPICAL STRUCTURAL DRAWINGS.</div> <div>2. DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF COPPER PIPE TO OTHER TYPES OF METALLIC PIPING.</div> <div>3. HVAC PIPING AND DUCTWORK DRAWINGS DO NOT SHOW ALL DRAINS, VENTS, OFFSETS AND FITTINGS ETC. REQUIRED FOR THE COMPLETE SYSTEM. SMALL PIPING IS SHOWN APPROXIMATELY TO SCALE BUT NOT EVERY FITTING AND OFFSET IS SHOWN. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL HVAC SYSTEMS TO PROVIDE THE COMPLETE SYSTEM.</div> <div>4. UNLESS OTHERWISE SHOWN ON THE DRAWINGS ALL FLOOR SLAB AND WALL PENETRATIONS SHALL BE AS SHOWN ON THE TYPICAL DETAILS.</div> <div>5. NOT ALL AND ONLY CERTAIN TYPES OF SUPPORTS ARE SHOWN ON THE HVAC DRAWINGS. UNLESS OTHERWISE DETAILED ON THE DRAWINGS ALL PIPE AND DUCT SUPPORTS SHALL BE DESIGNED, FURNISHED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED.</div> <div>6. THIS IS A GENERAL LIST OF SYMBOLS. NOT ALL ITEMS SHOWN HERE APPEAR ON CONTRACT DRAWINGS.</div> <div>7. TYPICAL DETAILS SHALL BE USED FOR ALL PERMANENT WORK EVEN THOUGH THEY ARE NOT CALLED OUT AT ALL LOCATIONS WHERE THEY APPLY.</div> <div>8. COORDINATE FINAL LOUVER SIZE AND LOCATION WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.</div> <div>9. PROVIDE TURNING VANES IN ALL ELBOWS. (SHOWN OR NOT)</div>				FEATURE			SYMBOL			FEATURE			SYMBOL		
				DIRECTION OF FLOW						A/C OR HEAT PUMP COMPRESSOR					
				DUCT SIZE- FIRST NUMBER IS SIDE SHOWN						CENTRIFUGAL FAN					
				ROUND DUCT						CONTROL PANEL					
				DUCT SECTION, POSITIVE PRESS FIRST NUMBER IS TOP						COOLING COIL					
				DUCT SECTION, NEGATIVE PRESS FIRST NUMBER IS TOP						DIRECT EXPANSION COIL					
				SIDE MOUNT DEVICE						DUCT SMOKE DETECTOR					
				ELEVATION CHANGE (R) RISE, (D) DROP						ELECTRIC HEATER					
				ACCESS DOOR						FILTER					
				BOTTOM MOUNT DEVICE REGISTER, GRILLE, DIFFUSER OR DUCT TAKEOFF						AIR FLOW SWITCH					
FLEXIBLE CONNECTION						GAS HEATER									
FLEXIBLE DUCT						HUMIDISTAT									
DUCT INSULATION						INLINE/AXIAL FAN									
TURNING VANES						MOTOR OPERATED VALVE									
RECTANGULAR TO RECTANGULAR TRANSITION						ROOF/SIDEWALL FAN									
RECTANGULAR TO ROUND TRANSITION						ROOF VENT OR ROOF FAN									
POSITIVE PRESSURE DUCT - ELBOW TURNED UP (USE ONE DIAGONAL FOR NEGATIVE PRESSURE)						SOLENOID VALVE									
POSITIVE PRESSURE DUCT - ELBOW TURNED DOWN (USE ONE DIAGONAL FOR NEGATIVE PRESSURE)						THERMOSTAT 60" ABOVE FINISH FLOOR									
SMOKE DETECTOR CONFIRM ORIENTATION OF INSTALLATION						UNIT HEATER (HORIZONTAL TYPE)									
DAMPERS						UNIT HEATER (VERTICAL TYPE)									
BACKDRAFT						PRESSURE DIFFERENTIAL SWITCH									
BALANCING						<div>NOTE: THIS IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DRAWINGS.</div>									
FIRE W/ ACCESS DOOR															
MOTORIZED															
SMOKE CONFIRM ORIENTATION OF INSTALLATION															
COMBINATION SMOKE AND FIRE CONFIRM ORIENTATION OF INSTALLATION															
ABBREVIATIONS															
<div><div>A</div><div>@</div><div>AFF</div><div>AFS</div><div>AT</div><div>ABOVE FINISHED FLOOR</div><div>AIR FLOW SWITCH</div></div> <div><div>B</div><div>BD</div><div>BDD</div><div>BOD</div><div>BALANCING DAMPER</div><div>BACKDRAFT DAMPER</div><div>BOTTOM OF DUCT</div></div> <div><div>C</div><div>CO</div><div>CARBON MONOXIDE DETECTOR</div></div> <div><div>D</div><div>DG</div><div>DOOR GRILLE</div></div> <div><div>E</div><div>EA</div><div>EXHAUST AIR</div></div> <div><div>F</div><div>FA</div><div>FD</div><div>FOUL AIR</div><div>FIRE DAMPER</div></div> <div><div>N</div><div>NC</div><div>NO</div><div>NORMALLY CLOSED</div><div>NORMALLY OPEN</div></div> <div><div>O</div><div>OA</div><div>OUTSIDE AIR</div></div> <div><div>R</div><div>RA</div><div>RR</div><div>RETURN AIR</div><div>RETURN REGISTER OR GRILLE</div></div> <div><div>S</div><div>SA</div><div>SD</div><div>SFD</div><div>SR</div><div>SUPPLY AIR</div><div>SMOKE DAMPER OR SMOKE DETECTOR</div><div>SMOKE & FIRE DAMPER COMBINATION</div><div>SUPPLY REGISTER, GRILLE OR DIFFUSER</div></div>															
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AC143 STAIRS - CONCRETE
TYP NS
SHEET 1 OF 2
06/21/19

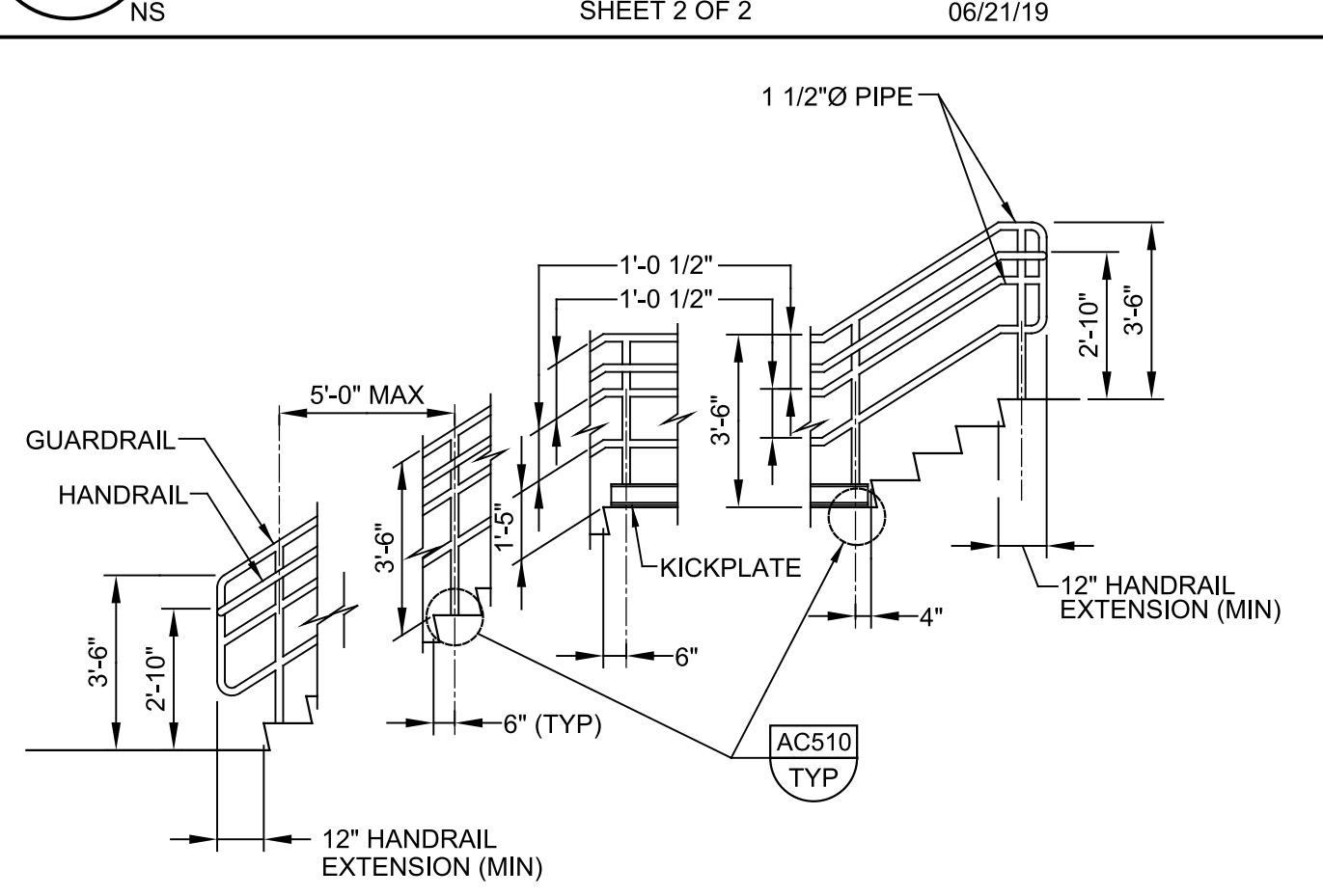


AC504 GUARDRAIL - THREE RAIL
TYP NS
SHEET 1 OF 3
06/21/19



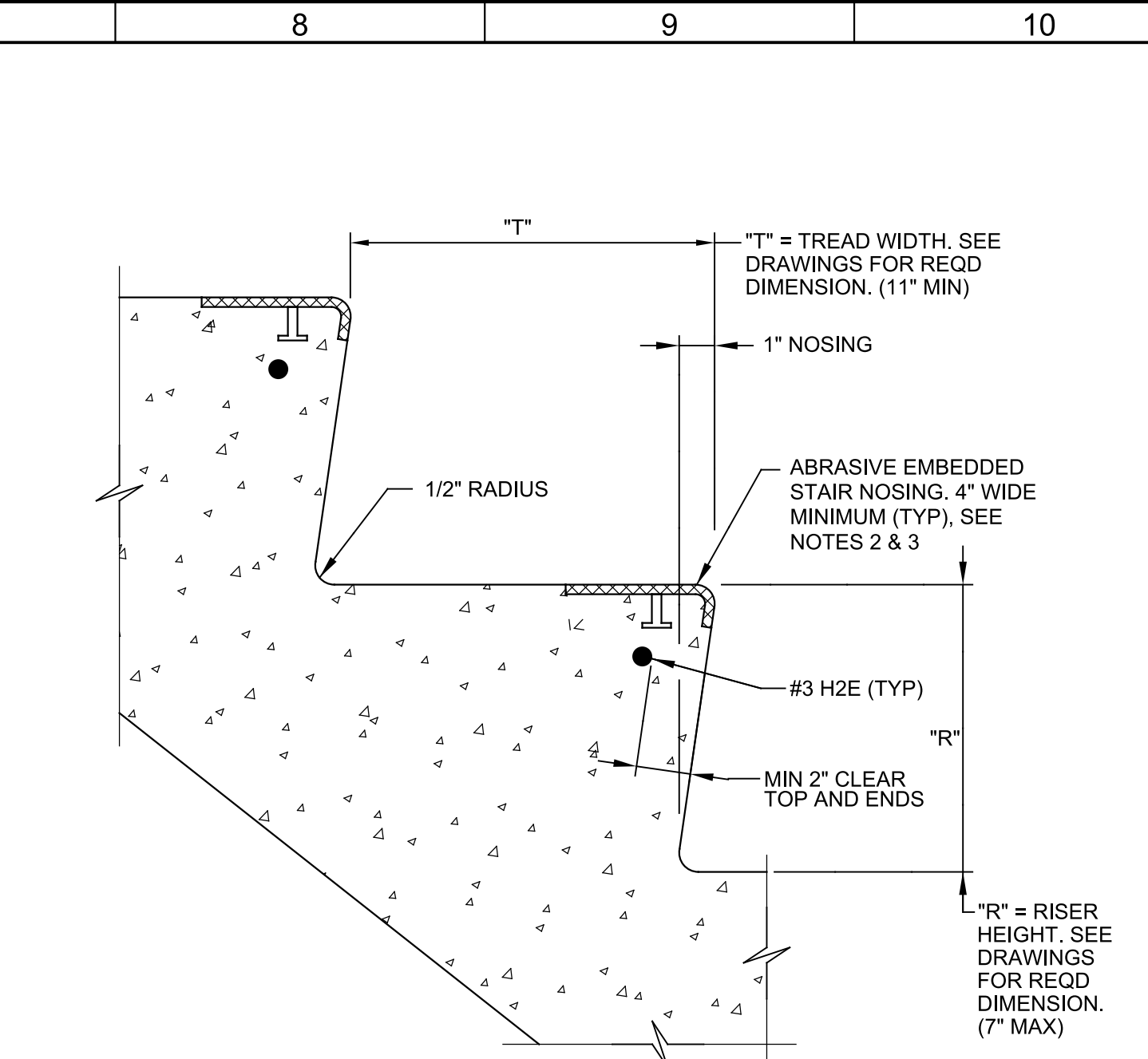
- NOTES:
- SEE DRAWINGS FOR DIMENSIONS "H", "L", "R", "T", "W" AND "TH".
 - SEE DETAIL AC500/TYP FOR GUARDRAIL/HANDRAIL NOTES. SEE DRAWINGS FOR GUARDRAIL/HANDRAIL TYPE AND MATERIAL.
 - PROVIDE HANDRAIL AT EACH SIDE OF STAIR.
 - AT EXTERIOR STAIRS AND BOTTOM LANDING, PROVIDE CROSS SLOPE OF 1/8" PER FOOT TO DRAIN PERPENDICULAR TO TRAFFIC AND AWAY FROM STRUCTURE.
 - AT EXTERIOR STAIR, PROVIDE DRIP GROOVE. SEE DETAIL S160/TYP-SIMILAR.
 - AT EXTERIOR STAIR, PROVIDE LANDING SLAB ON GRADE UNLESS OTHERWISE NOTED. EDGE TOP CORNERS OF SLAB TO 1/4" RADIUS.
 - WHERE STAIR IS CAST ADJACENT TO WALL, PROVIDE 1" CLEAR SEPARATION.

AC143 STAIRS - CONCRETE
TYP NS
SHEET 2 OF 2
06/21/19



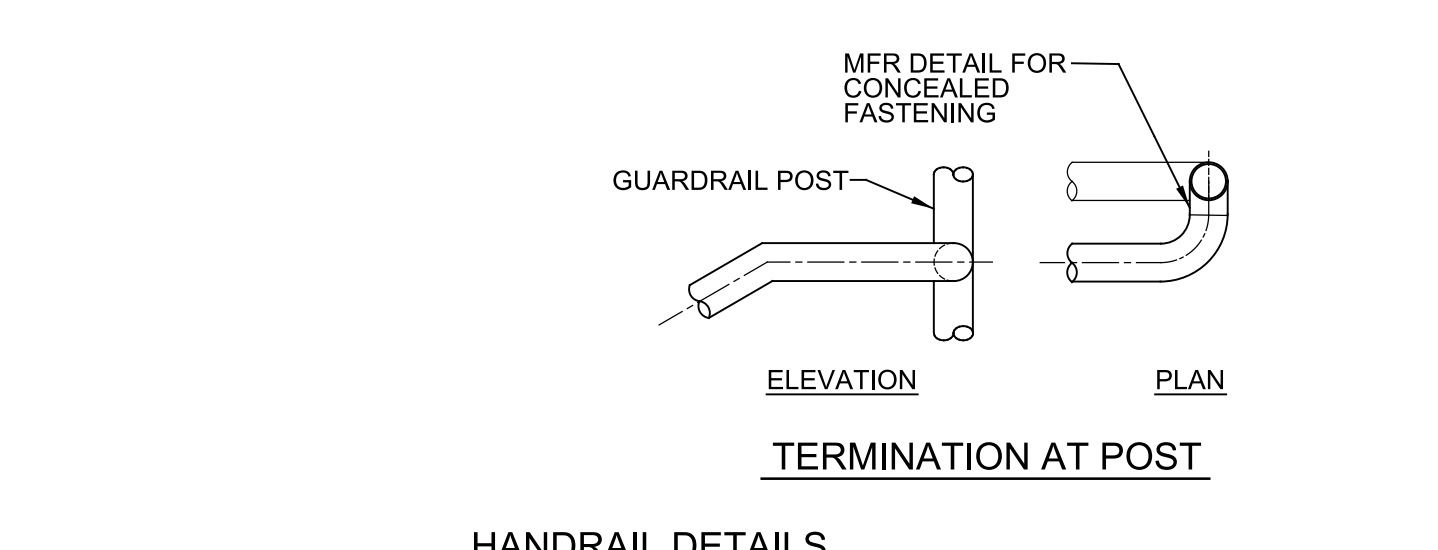
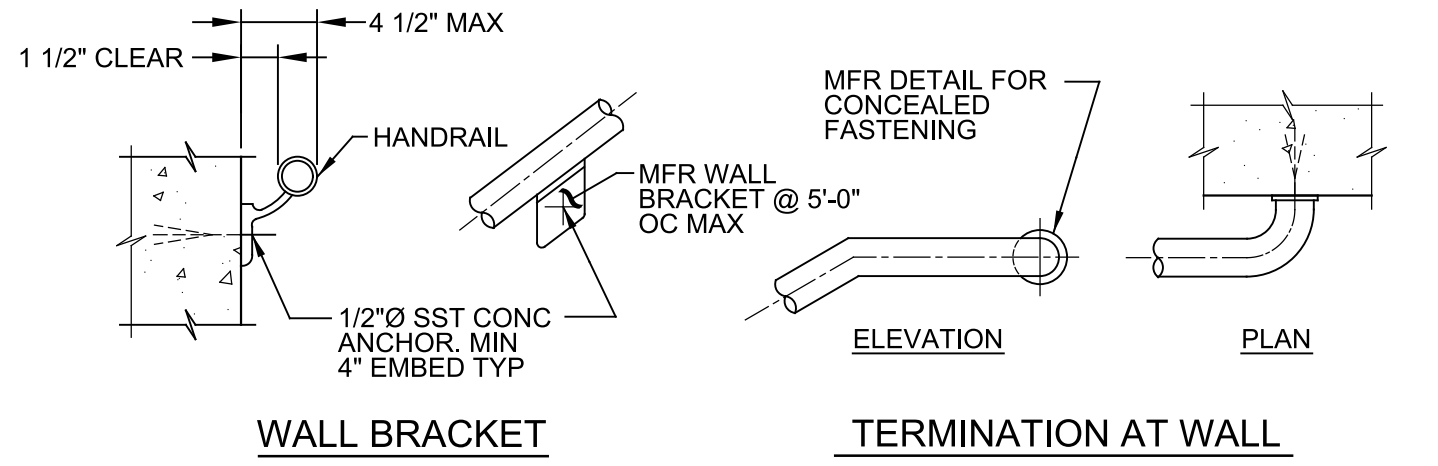
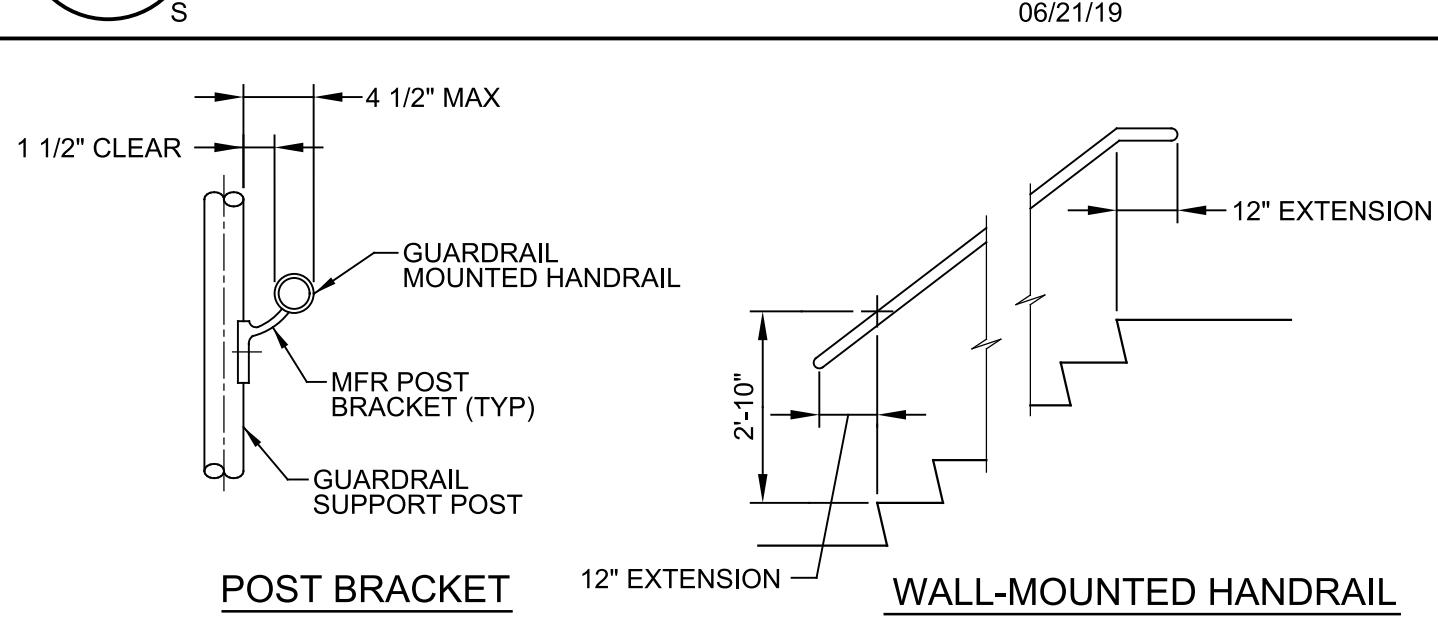
- NOTES:
- THIS DETAIL IS APPLICABLE AT PRIVATE STAIRS IN F, H, AND S OCCUPANCIES WHERE OPERATOR ONLY ACCESS IS REQUIRED. DETAILS AND INSTALLATION SHALL COMPLY WITH THE BUILDING CODE.
 - SEE SPECIFICATIONS AND DETAIL AC500/TYP FOR ADDITIONAL REQUIREMENTS.
 - VARIOUS POST MOUNTING DETAILS ARE ILLUSTRATED. SEE DRAWINGS AND DETAIL AC510/TYP FOR SPECIFIC MOUNTING REQUIREMENTS.
 - HANDRAIL EXTENSIONS ARE REQUIRED ON BOTH SIDES OF STAIR, EXCEPT WHERE INSIDE HANDRAIL IS CONTINUOUS AT SWITCHBACK STAIR.
 - AT CURB, USE EMBEDDED OR TOP MOUNTED POST AS INDICATED ON THE DRAWINGS.

AC504 GUARDRAIL - THREE RAIL
TYP NS
SHEET 2 OF 3
06/21/19



- NOTES:
- ANY FASTENERS FOR THE STAIR NOSING SHALL BE TYPE 304 OR 316 SST.
 - PROVIDE 4" BETWEEN END OF STAIR NOSING AND EDGE OF CONCRETE STEP. EMBEDDED STUD FOR STAIR NOSING SHOULD BE NO CLOSER THAN 6" FROM END OF THE STEP.
 - TOOL A GROOVE, 1/8" WIDE BY FULL WIDTH AND THICKNESS OF EMBEDDED NOSING, AT EACH END OF NOSING INCLUDING VERTICAL FACE AT RISER. FILL GROOVE WITH SYNTHETIC RUBBER SEALING COMPOUND.

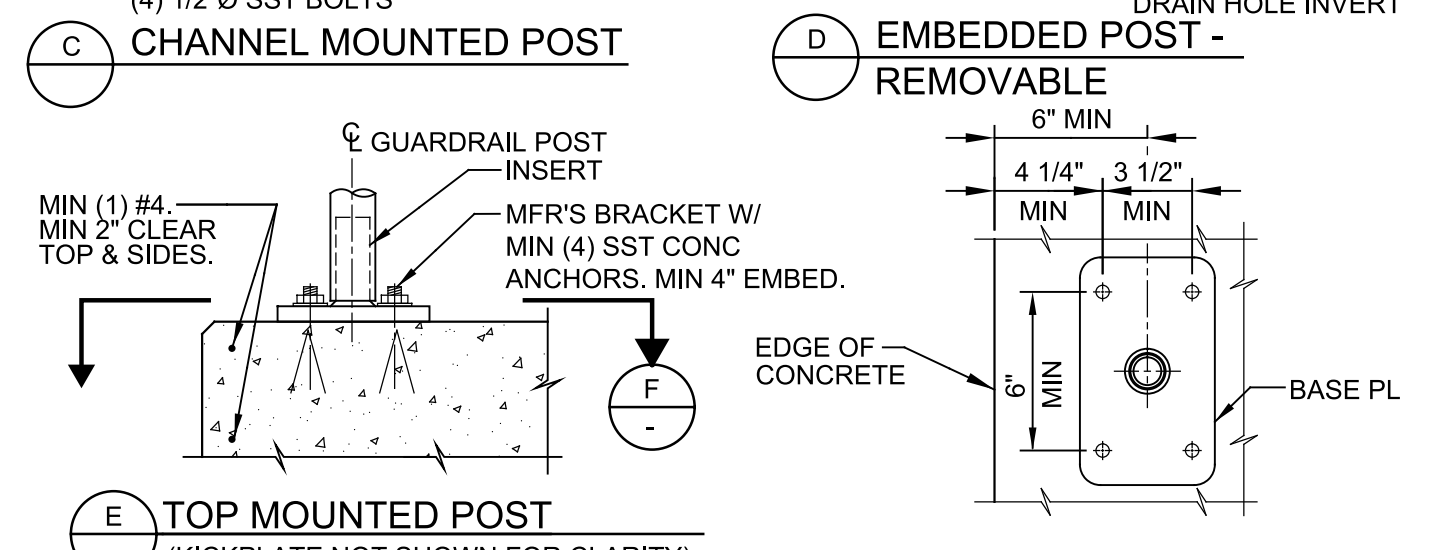
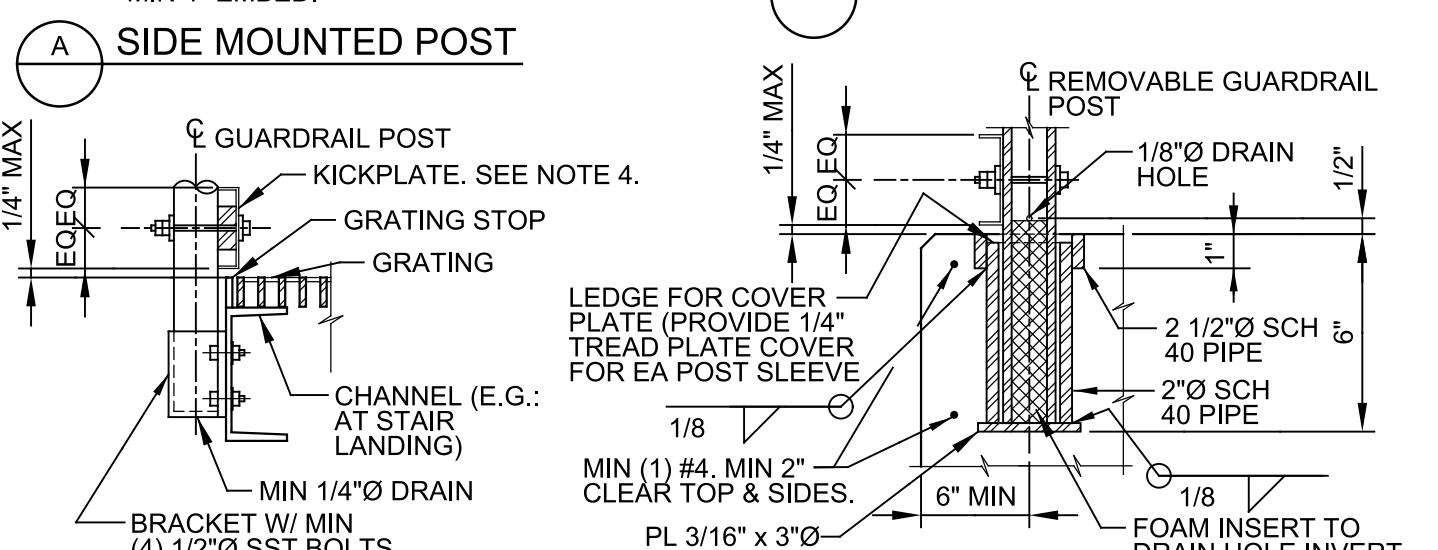
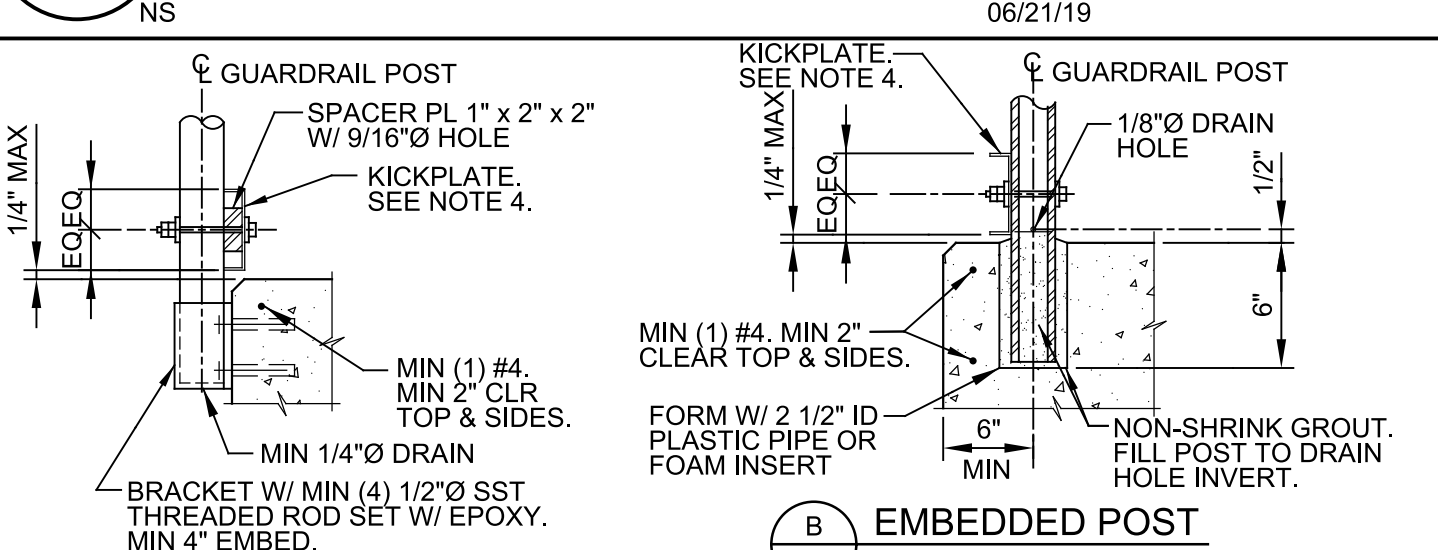
AC146 STAIRS - CONCRETE - STEP
TYP S
06/21/19



AC504 GUARDRAIL - THREE RAIL
TYP NS
SHEET 3 OF 3
06/21/19

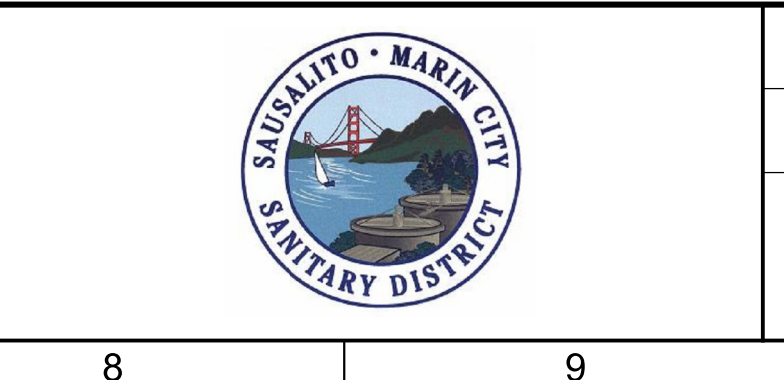
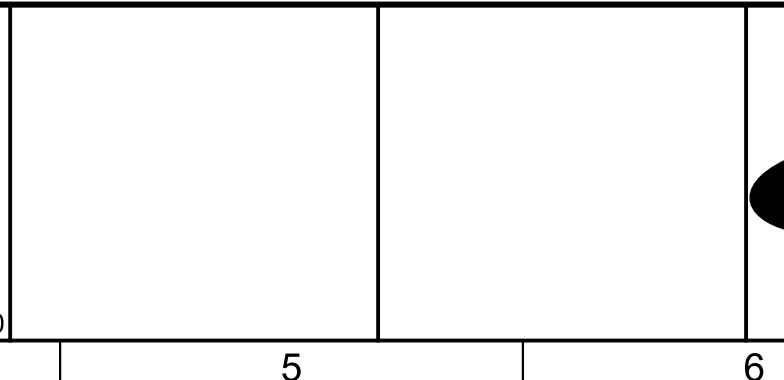
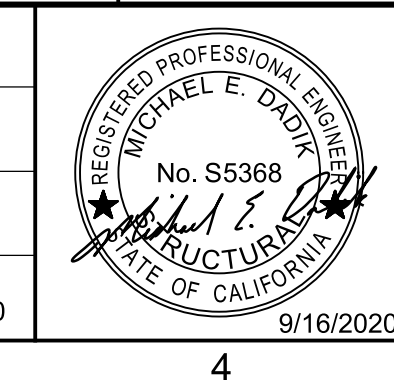
- NOTES:
- PROVIDE GUARDRAILS AT STAIRS AND AT OPEN SIDED WALKING SURFACES THAT ARE ELEVATED MORE THAN 30" ABOVE GRADE OR ADJACENT CONSTRUCTION.
 - WHERE EQUIPMENT IS LOCATED LESS THAN 10' FROM EDGE OF ROOF AND ELEVATED MORE THAN 30" ABOVE GRADE OR ADJACENT CONSTRUCTION, PROVIDE 42" HIGH GUARDRAIL FORMING A PROTECTIVE BARRIER. PARAPET WALL 42" OR MORE IN HEIGHT MAY BE THE GUARDRAIL AT ROOF LOCATIONS.
 - SEE DRAWINGS AND SPECIFICATIONS FOR GUARDRAIL MATERIAL TYPE(S).
 - PROVIDE HANDRAIL AT BOTH SIDES OF EVERY STAIR HAVING 2 OR MORE RISERS.
 - PROVIDE CONTINUOUS HANDRAIL GRIPPING SURFACES FOR THE FULL LENGTH OF THE STAIR.
 - PROVIDE HANDRAIL EXTENSIONS AT BOTH SIDES OF STAIRS AT TOP AND BOTTOM. HANDRAIL EXTENSION ON STAIR MOUNTED GUARDRAIL MAY BE OMITTED WHERE IT IS PERPENDICULAR TO AND IMPEDES EXIT FLOW.
 - MAKE INSIDE HANDRAIL ON SWITCHBACK STAIRS CONTINUOUS.
 - FOR WALL MOUNTED HANDRAILS, PROVIDE SINGLE RAIL WITH TOP OF RAIL AT 2'-10" HEIGHT ABOVE LANDINGS OR TREAD NOSINGS. PROVIDE MATCHING HANDRAIL ON OPPOSITE SIDE.
 - GUARDRAIL SHALL BE FIXED UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 - PLACE CENTER OF EMBEDDED POSTS 6" FROM EDGE OF CONCRETE AND 6" FROM FRONT EDGE OF CONCRETE TREAD NOSINGS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 - PLACE GUARDRAIL POSTS OPPOSITE EACH OTHER WHERE RAILINGS ARE PARALLEL.
 - FOR GUARDRAIL POSTS MOUNTED TO BEAM OR STAIR CHANNEL, PROVIDE MANUFACTURERS REINFORCED CONNECTION FROM POST TO PLATE. PLATE AND REINFORCED INSERTS SHALL BE ALUMINUM OR STAINLESS STEEL.
 - PROVIDE SLIDING JOINTS AT 24" MAX SPACING FOR EXPANSION OF RAIL AND KICKPLATE. LOCATE SLIDING JOINTS NEAR FACE OF POST. GAP AT TIME OF INSTALLATION SHALL BE BASED ON TEMPERATURE OF GUARDRAIL. PROVIDE 1/4" GAP AT 100°F AND 5/8" GAP AT 0°F. INTERPOLATE GAP FOR OTHER INSTALLATION TEMPERATURES. AT CONCRETE EXPANSION JOINTS, PROVIDE MINIMUM 1" GAP IN SLIDING JOINTS BUT NOT LESS THAN WIDTH OF CONCRETE EXPANSION JOINT. MAKE INSERT SLEEVES IN RAILS LONG ENOUGH TO ALLOW FOR THE FULL RANGE OF MOVEMENT.
 - MATERIAL FOR KICKPLATE CHANNEL SLIDING JOINT PLATES, SHALL BE OF THE SAME MATERIAL AS THE GUARDRAIL.
 - JOINTS FOR STAINLESS STEEL GUARDRAIL AND HANDRAIL SHALL BE COPED, WELDED, AND GROUND SMOOTH.
 - PROVIDE KICKPLATE AT ALL LOCATIONS EXCEPT AT SLOPING GUARDRAIL ON STAIRS AND WHERE GUARDRAIL IS MOUNTED ON A 4" MIN CURB. KICKPLATE MAY BE EXTENDED OR BENT PLATE AND SHALL BE ATTACHED WITH SST BOLTS IN 5/16" x 3/4" SLOTTED HOLES. BOLT KICKPLATE TO 1/2" ABOVE BOTTOM FLOOR. FOR SIDE MOUNTED GUARDRAIL, PROVIDE STANDARD SPACER BLOCK BETWEEN POST AND KICKPLATE TO MAINTAIN 1/4" MAX CLEAR SPACING. HAND TIGHTEN AND CENTER PUNCH BOLT THREADS TO LOCK.
 - COAT SURFACES OF ALUMINUM IN CONTACT WITH CONCRETE AS SPECIFIED. PROVIDE NEOPRENE GASKET BETWEEN ALUMINUM AND STEEL.

AC500 GUARDRAIL - HANDRAIL - NOTES
TYP NS
06/21/19



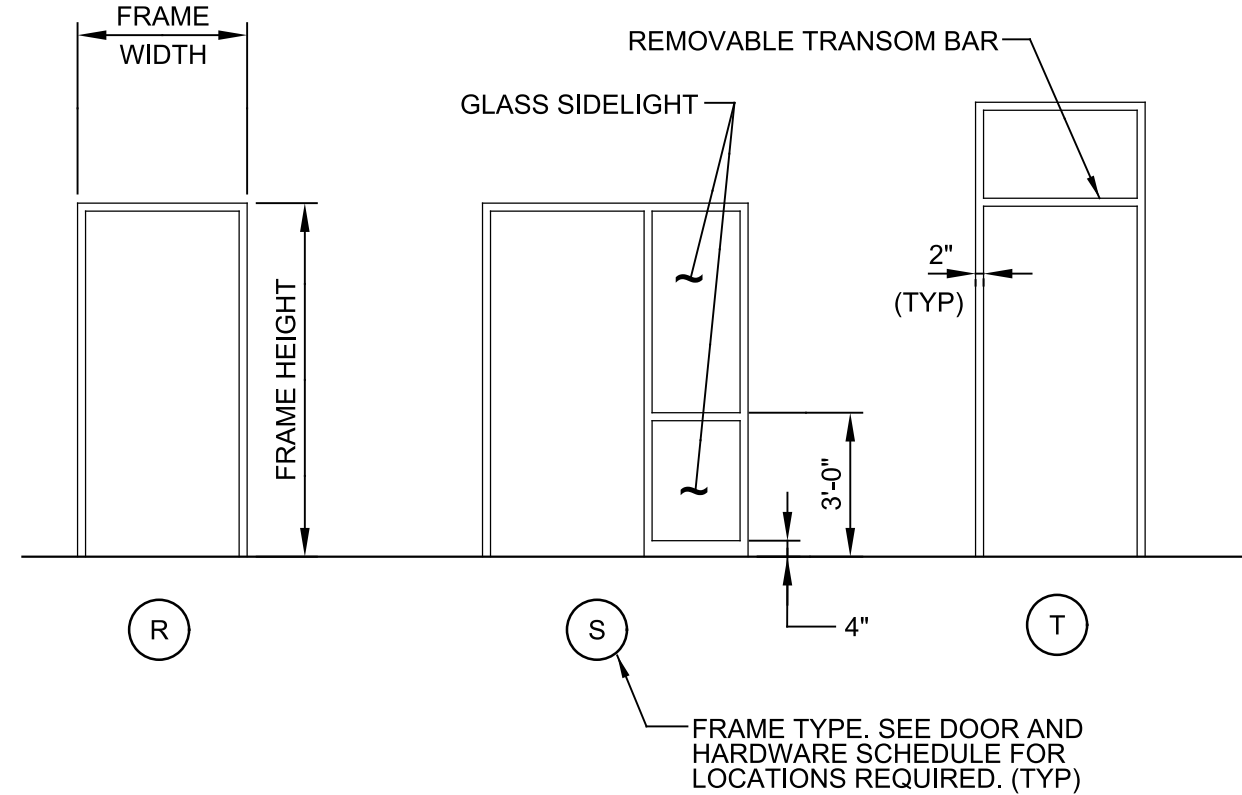
AC510 GUARDRAIL - MOUNTING
TYP NS
SHEET 1 OF 2
06/21/19

REV	DATE	BY	DESCRIPTION
1			
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SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
TYPICALS
TYPICAL DETAILS
ARCHITECTURAL

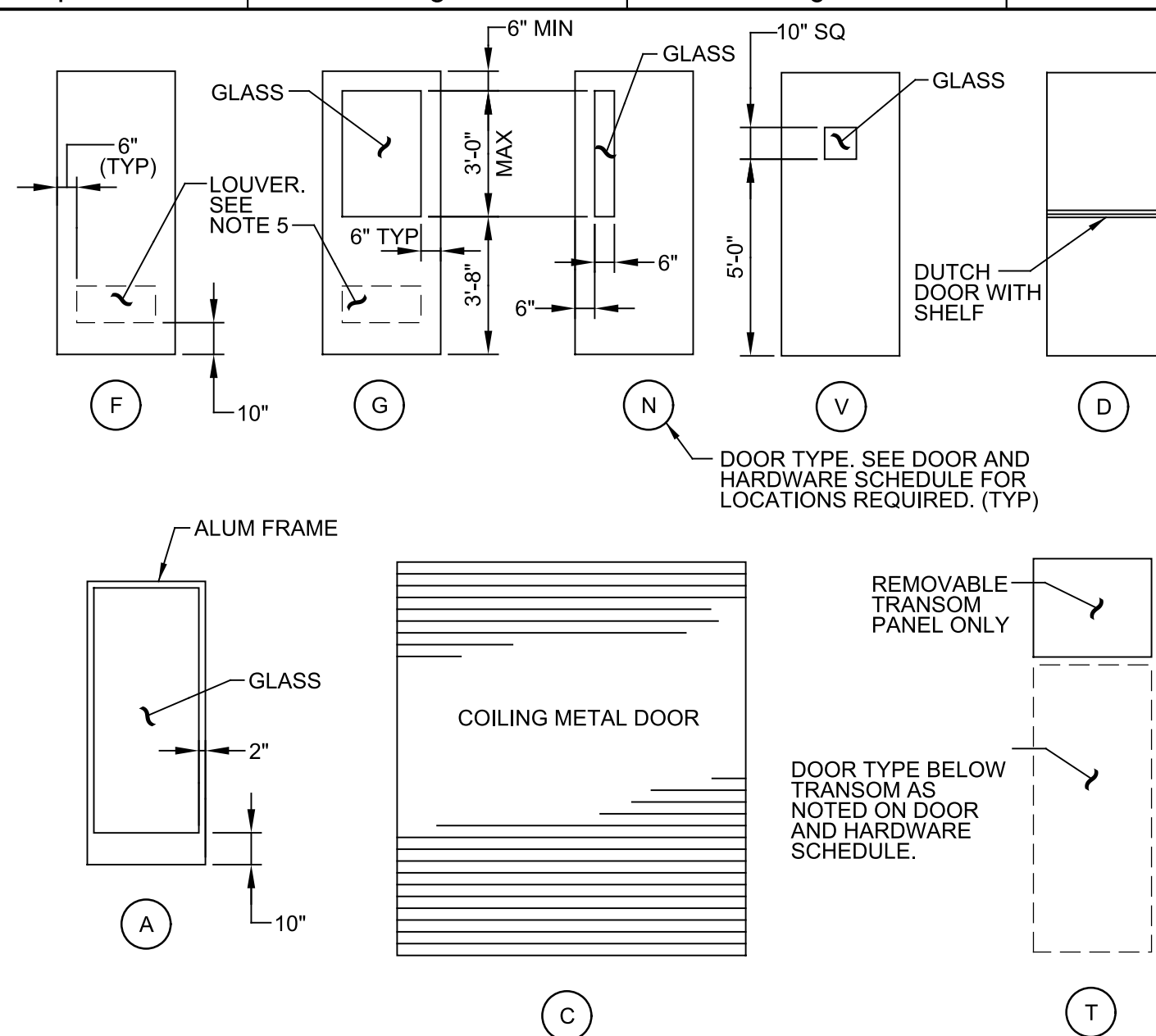
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 8231D.10 DRAWING NO. TA01 SHEET NO. 8 OF 60
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- NOTES:**
1. SEE DOOR AND HARDWARE SCHEDULE FOR FRAME SIZE, MATERIAL, AND DETAILS.
 2. SIDELIGHT MAY BE ON EITHER SIDE OF DOOR. SEE DRAWINGS FOR REQUIRED SIDELIGHT LOCATION.
 3. GLASS AT SIDELIGHTS SHALL BE TEMPERED.
 4. GLASS AT INTERIOR SIDELIGHTS SHALL BE CLEAR. GLASS AT EXTERIOR SIDELIGHTS SHALL BE TINTED INSULATING GLASS.

AJ100 DOOR - FRAME - STICK
TYP

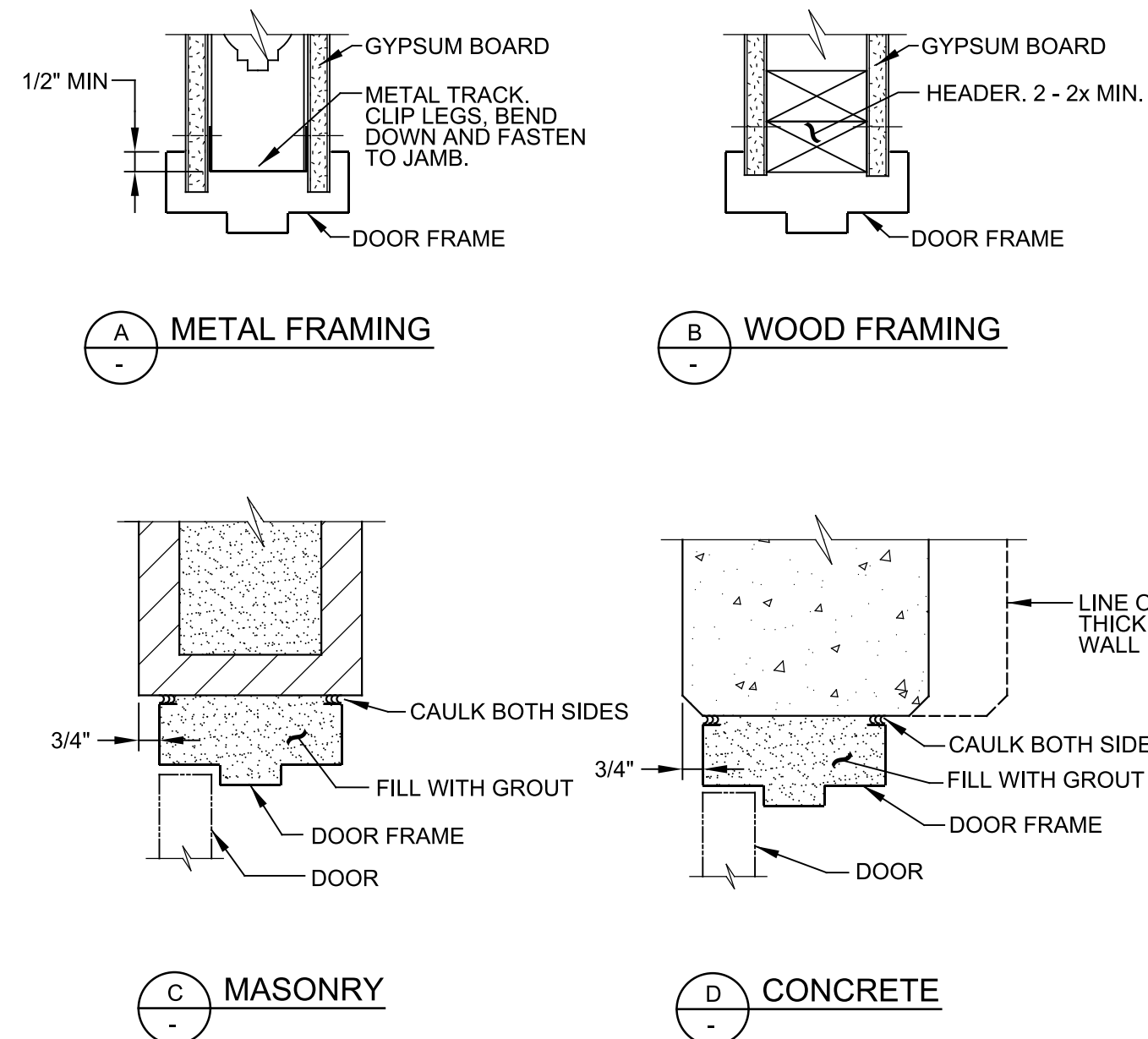
06/21/19



- NOTES:**
1. DOOR SIZE AND TYPE SHALL BE IN ACCORDANCE WITH DOOR AND HARDWARE SCHEDULE.
 2. GLASS AT DOORS SHALL BE TEMPERED UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 3. GLASS AT INTERIOR DOORS SHALL BE CLEAR. GLASS AT EXTERIOR DOORS SHALL BE TINTED.
 4. PROVIDE WIRE GLASS AT LABELED DOORS.
 5. LOUVER MAY BE REQD AT ANY DOOR TYPE. IF A LOUVER IS REQUIRED, SIZES AND LOCATIONS WILL BE NOTED ON DOOR AND HARDWARE SCHEDULE.
 6. PROVIDE LABELED DOORS IN ACCORDANCE WITH DOOR AND HARDWARE SCHEDULE.

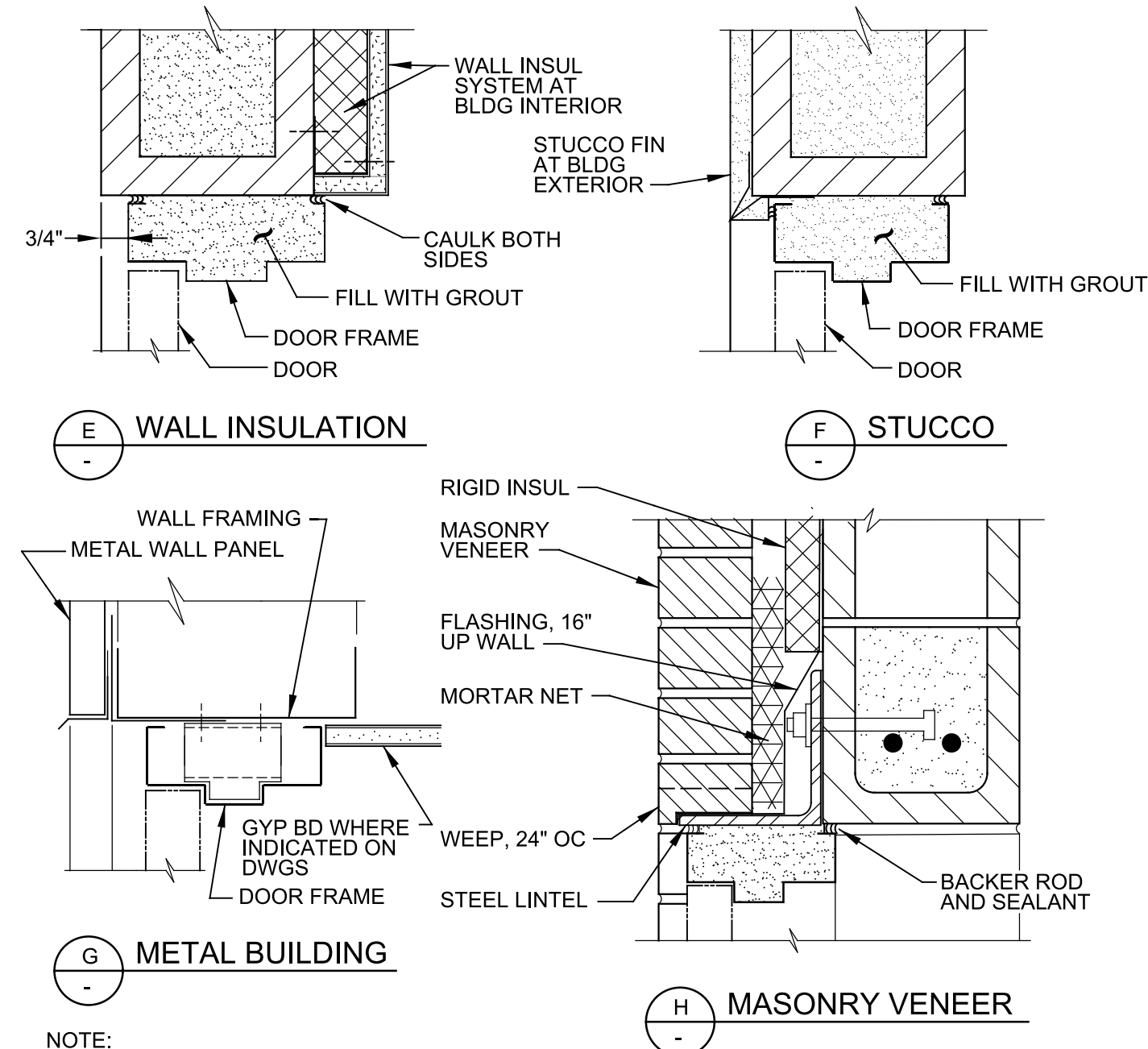
AJ103 DOOR - ELEVATIONS - TYPES

06/21/19



AJ105 DOOR - HEAD - DETAILS

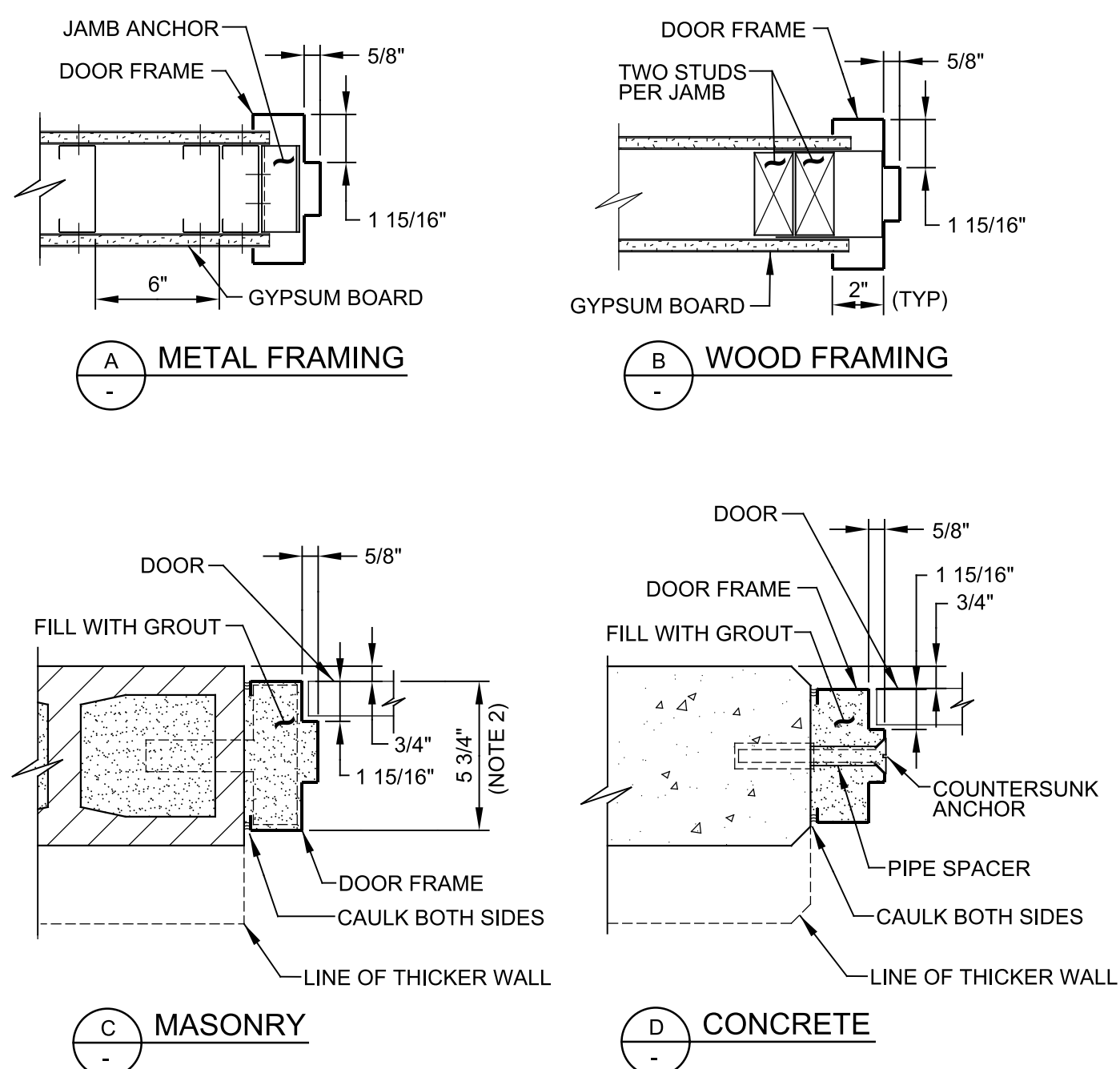
SHEET 1 OF 2



- NOTE:**
1. DOOR AND FRAME SIZE AND MATERIAL SHALL BE IN ACCORDANCE WITH DOOR AND HARDWARE SCHEDULE.
 2. FRAME DIMENSIONS SHALL MATCH THOSE OF JAMB DETAILS ON AJ107/TYP.
 3. SEE SPEC FOR WALL INSULATION SYSTEM DETAILS.
 4. SEE STRUCT DRAWINGS FOR LINTEL DETAILS.

AJ105 DOOR - HEAD - DETAILS

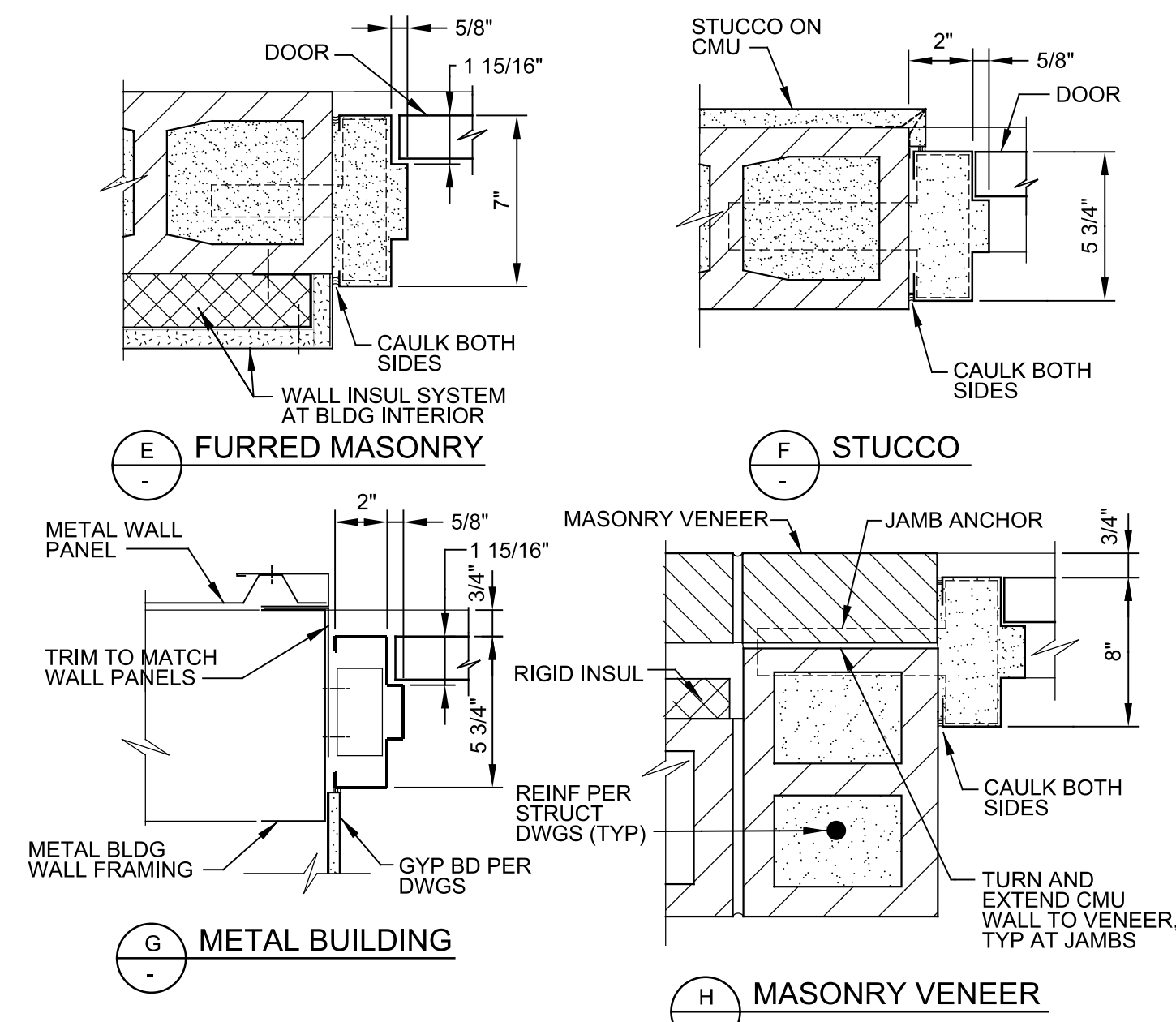
SHEET 2 OF 2



AJ107 DOOR - JAMB - DETAILS

SHEET 1 OF 2

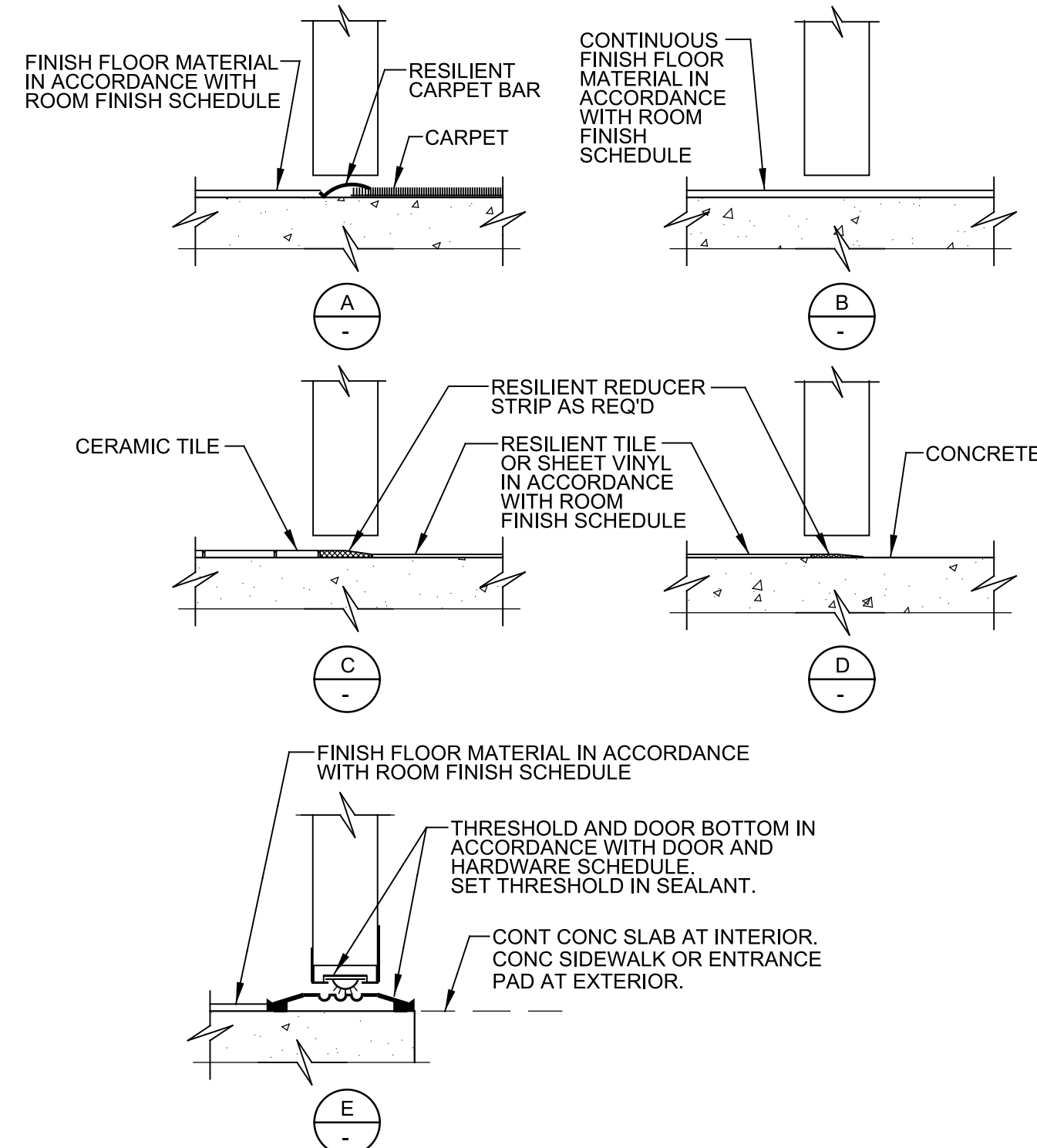
06/21/19



- NOTES:
1. DOOR AND FRAME SIZE AND MATERIAL SHALL BE IN ACCORDANCE WITH DOOR AND HARDWARE SCHEDULE.
 2. PROVIDE 2" FRAME WIDTH, 5 3/4" FRAME DEPTH AND 1/2" BACKBEND TYPICAL UNLESS OTHERWISE SHOWN OR SCHEDULED.
 3. PROVIDE MINIMUM 3 ANCHORS PER JAMB AT MASONRY AND 4 ANCHORS PER JAMB AT STUD OR CONCRETE CONSTRUCTION. FILL FRAMES IN MASONRY WITH GROUT.

AJ107 DOOR - JAMB - DETAILS

SHEET 2 OF 2



- NOTE:
1. DOOR CLEARANCE AT BOTTOM OF DOOR SHALL BE 1/4" MIN AND 3/8" MAX.

AJ109 DOOR - SILL - DETAILS

06/21/19

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REV	DATE	BY	DESCRIPTION	DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT

TYPICALS

TYPICAL DETAILS

ARCHITECTURAL

VERIFY SCALES

BAR IS ONE INCH ON
ORIGINAL DRAWING

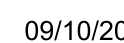
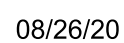
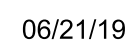
IF NOT ONE INCH ON

JOB NO.
8231D.10

DRAWING NO.

TA02

SHEET NO.



- 07/25/13

JOB NO.
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TC01

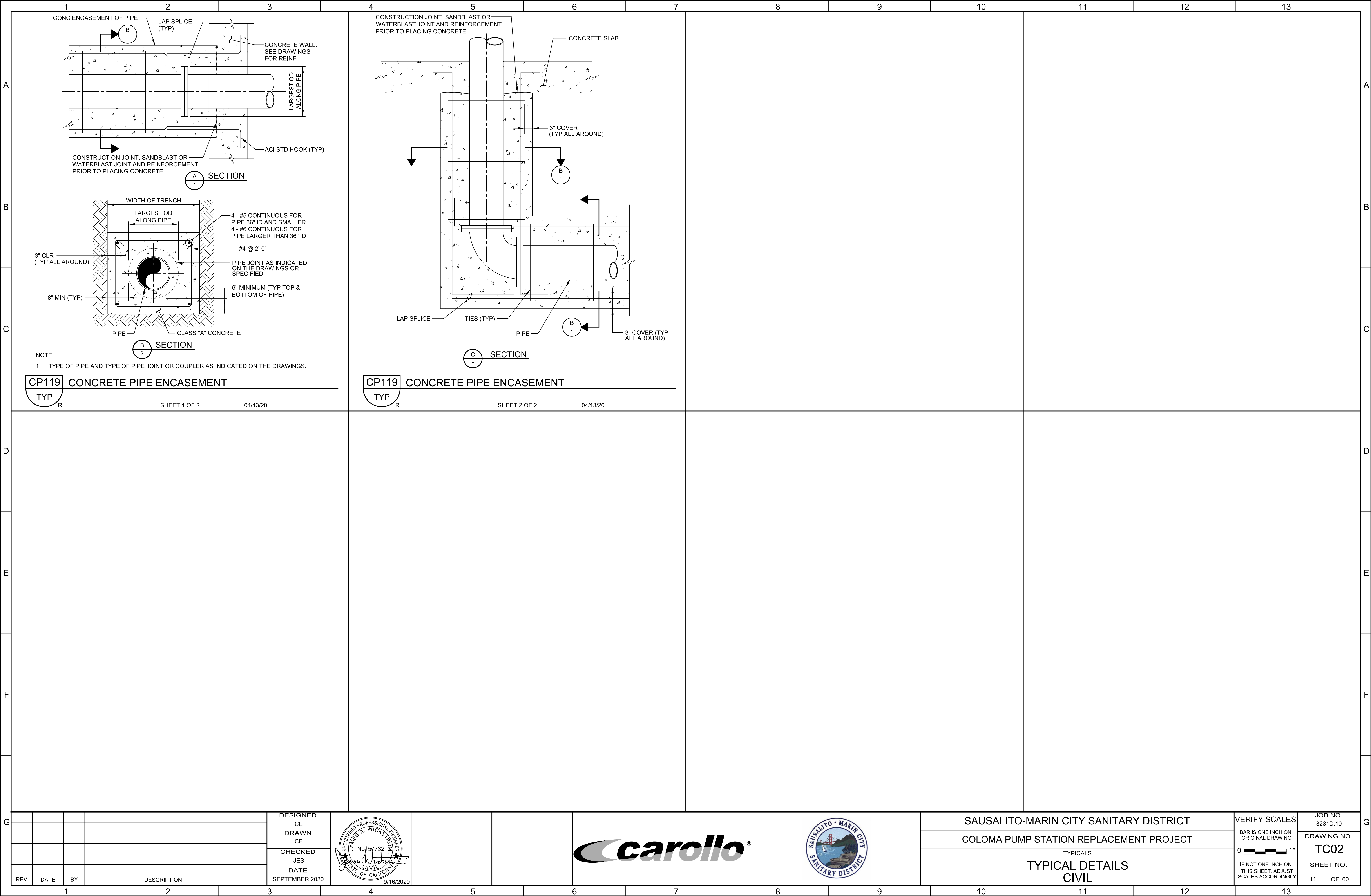
SHEET NO.
10 OF 60

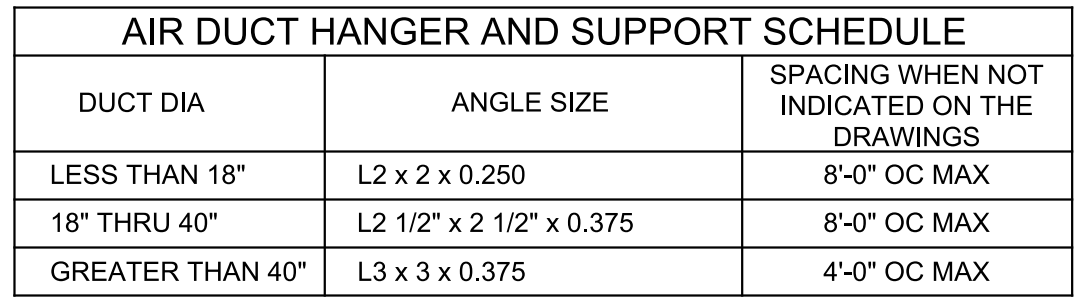
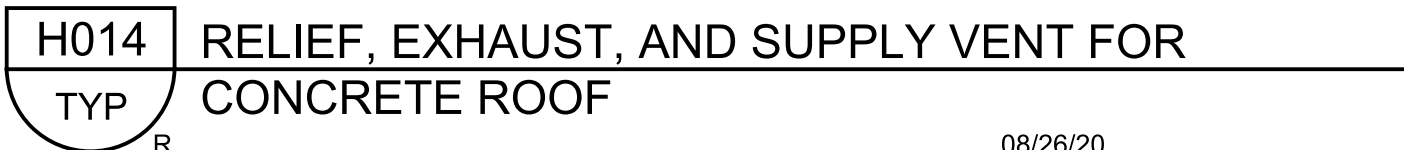
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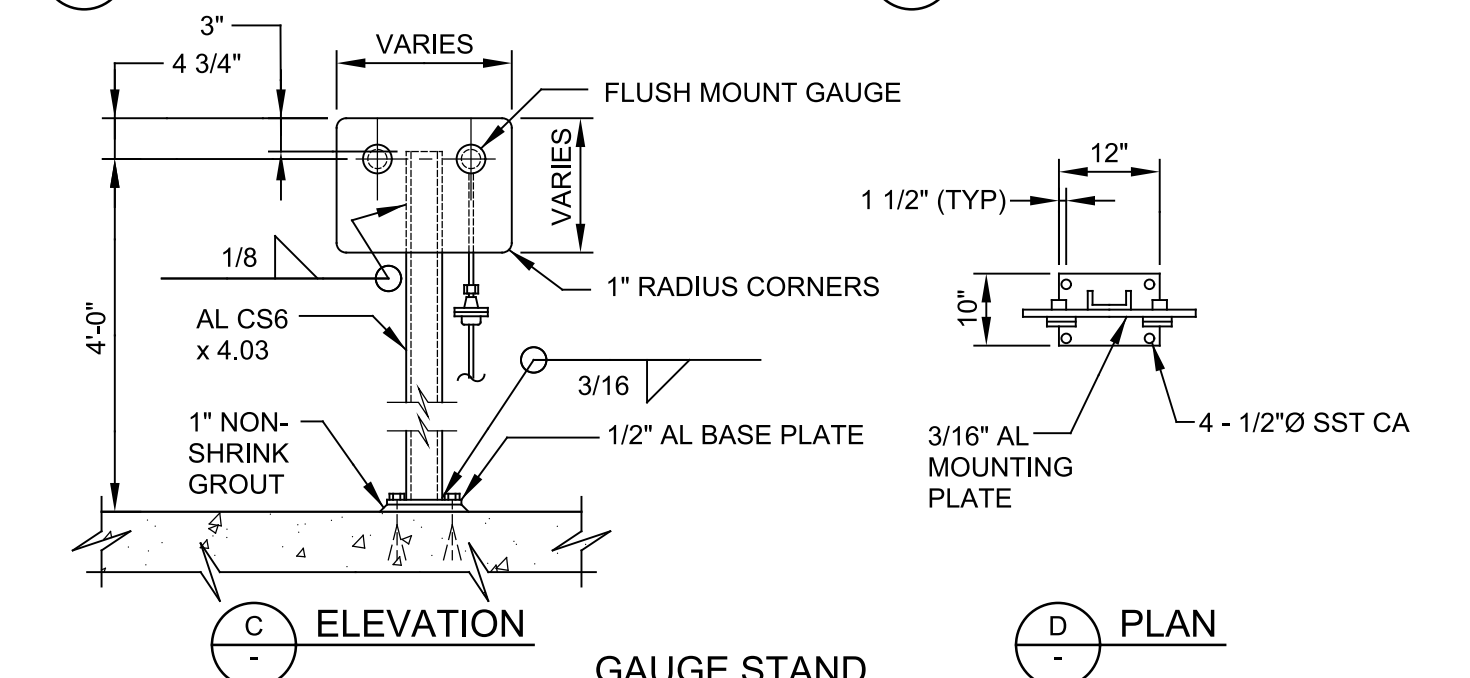
LAST SAVED BY: Alalco





HS326	DUCT SUPPORT FOR VERTICAL ROUND DUCT -
TYP	WALL LATERAL BRACE

9/14/18



- NOTES:**
1. ALL GAUGES SHALL BE DUAL SCALE. SCALES ON THE GAUGE FACE SHALL BE MARKED IN PSIG AND FEET OF WATER (FOR POSITIVE READINGS) OR INCHES OF MERCURY (FOR VACUUM READINGS).
 2. MOUNTING PLATE DIMENSIONS VARY ACCORDING TO SIZE AND NUMBER OF GAUGES REQUIRED.
 3. AT GAUGE STAND, DIAPHRAGM SHALL BE LOCATED BELOW THE MOUNTING PLATE. ONE INCH PIPE SHALL BE ROUTED BETWEEN DIAPHRAGM AND SERVICE PIPE PLUG VALVE. CROSSES WITH THREADED PLUGS SHALL BE USED IN LIEU OF 90° ELBOWS, WITH AT LEAST ONE UNION PER CROSS.
 4. COAT ALUMINUM IN CONTACT WITH CONCRETE AS SPECIFIED.

M294	PRESSURE GAUGE DETAILS
TYP	

REV	DATE	BY	DESCRIPTION


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CHECKED
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DATE
SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
TYPICALS
TYPICAL DETAILS
HVAC AND MECHANICAL

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

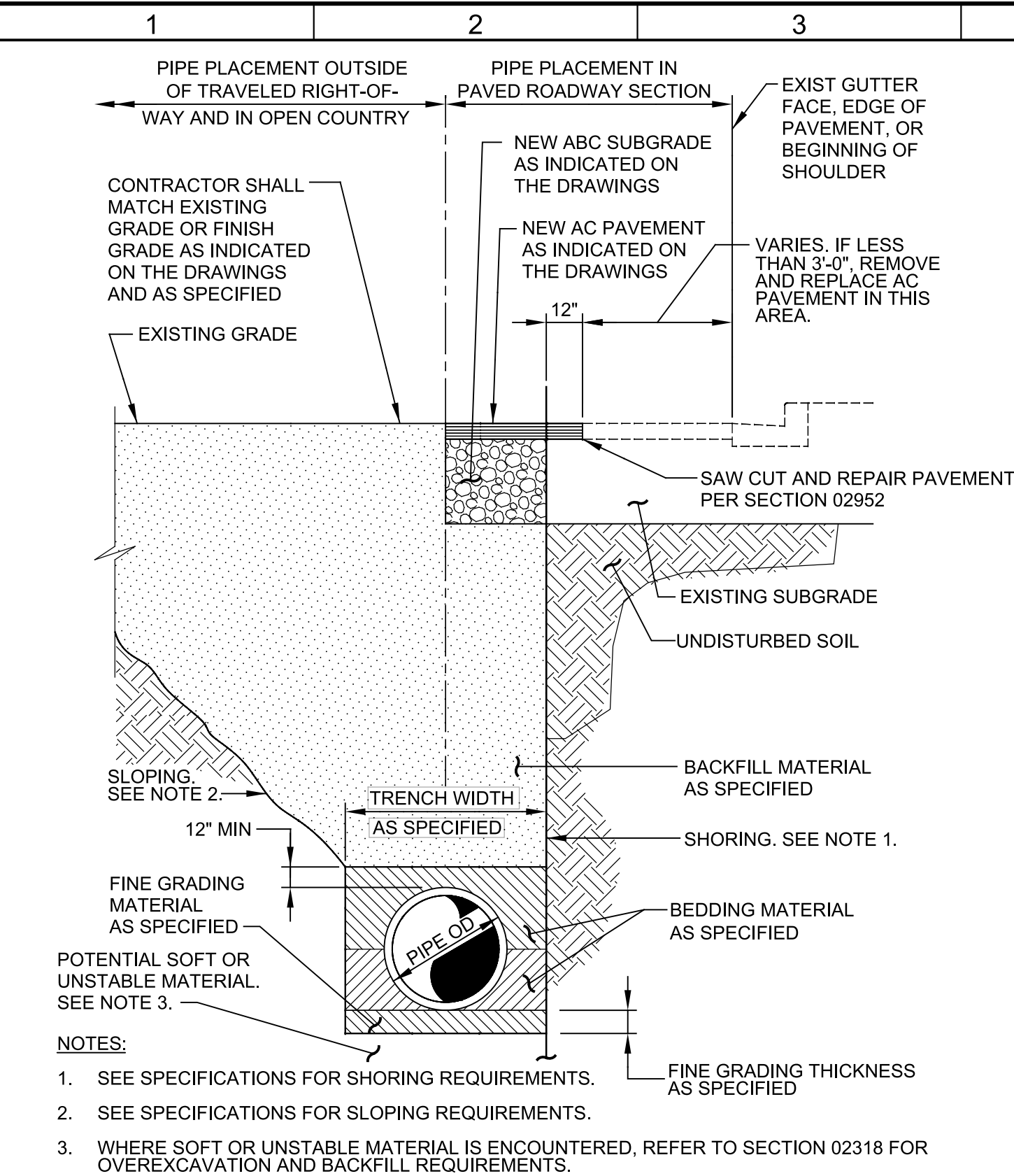
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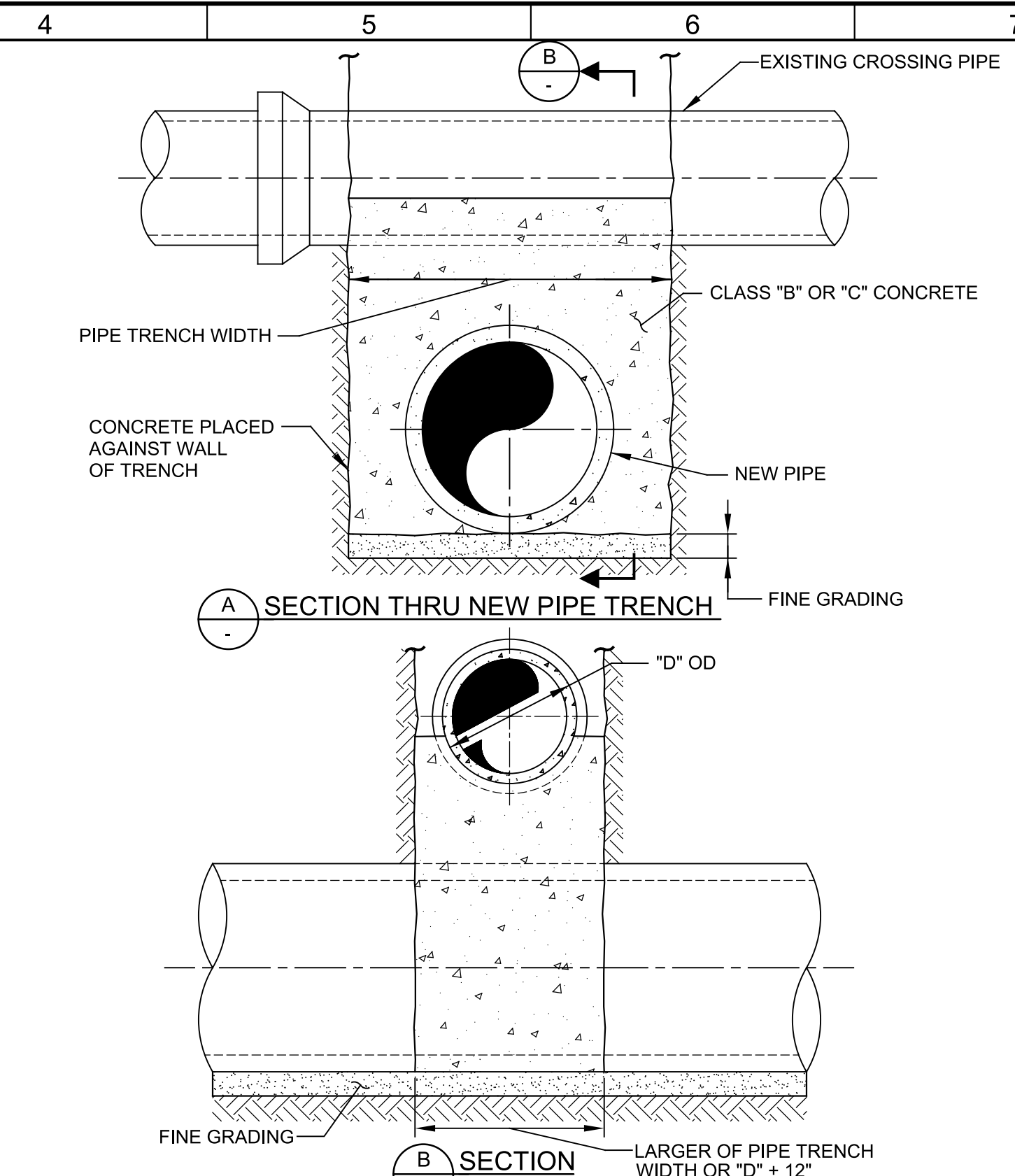
JOB NO.
8231D.10

DRAWING NO.
TM01

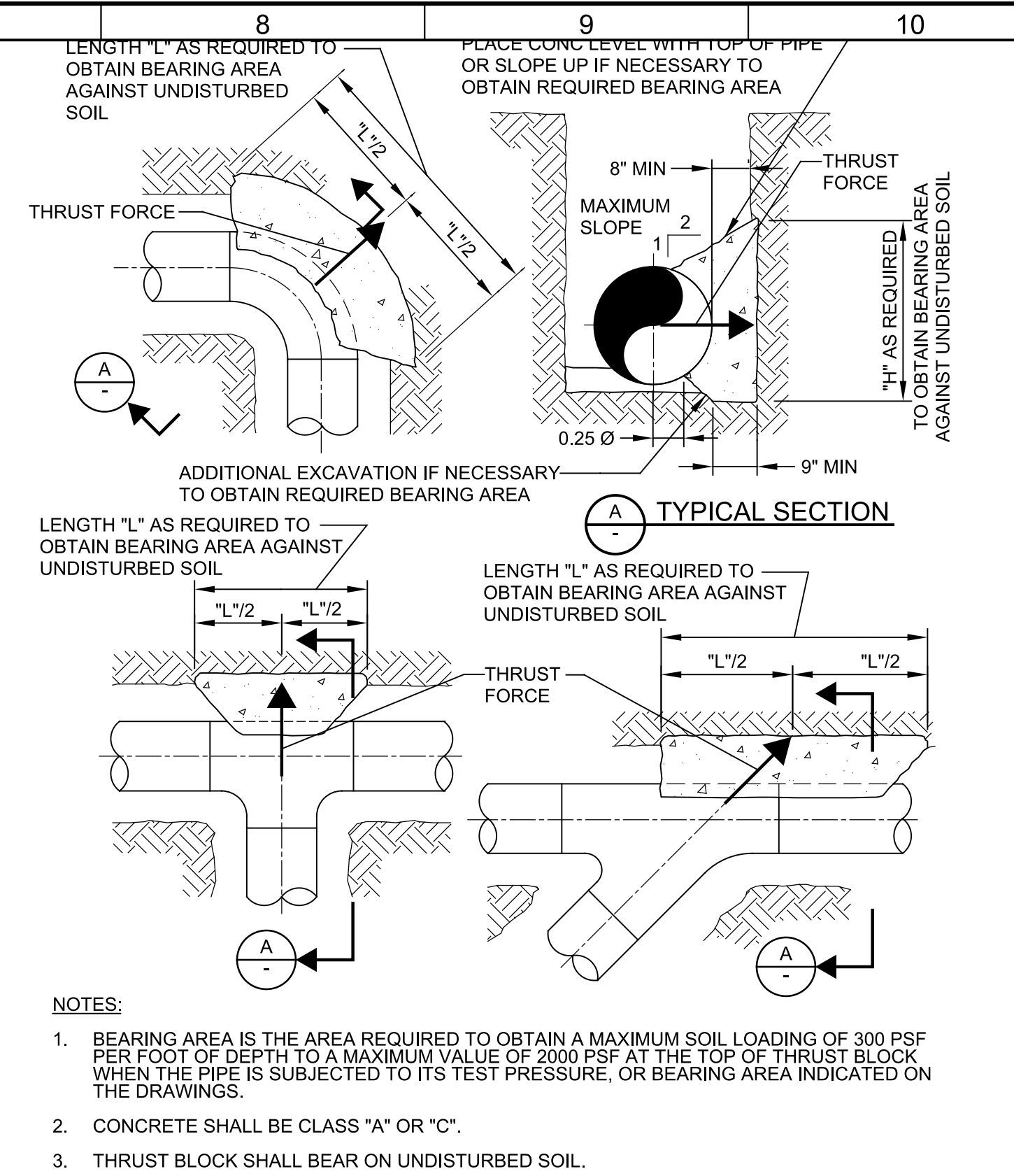
SHEET NO.
12 OF 60



P002 TYP PIPE INSTALLATION AND PAVEMENT REPLACEMENT



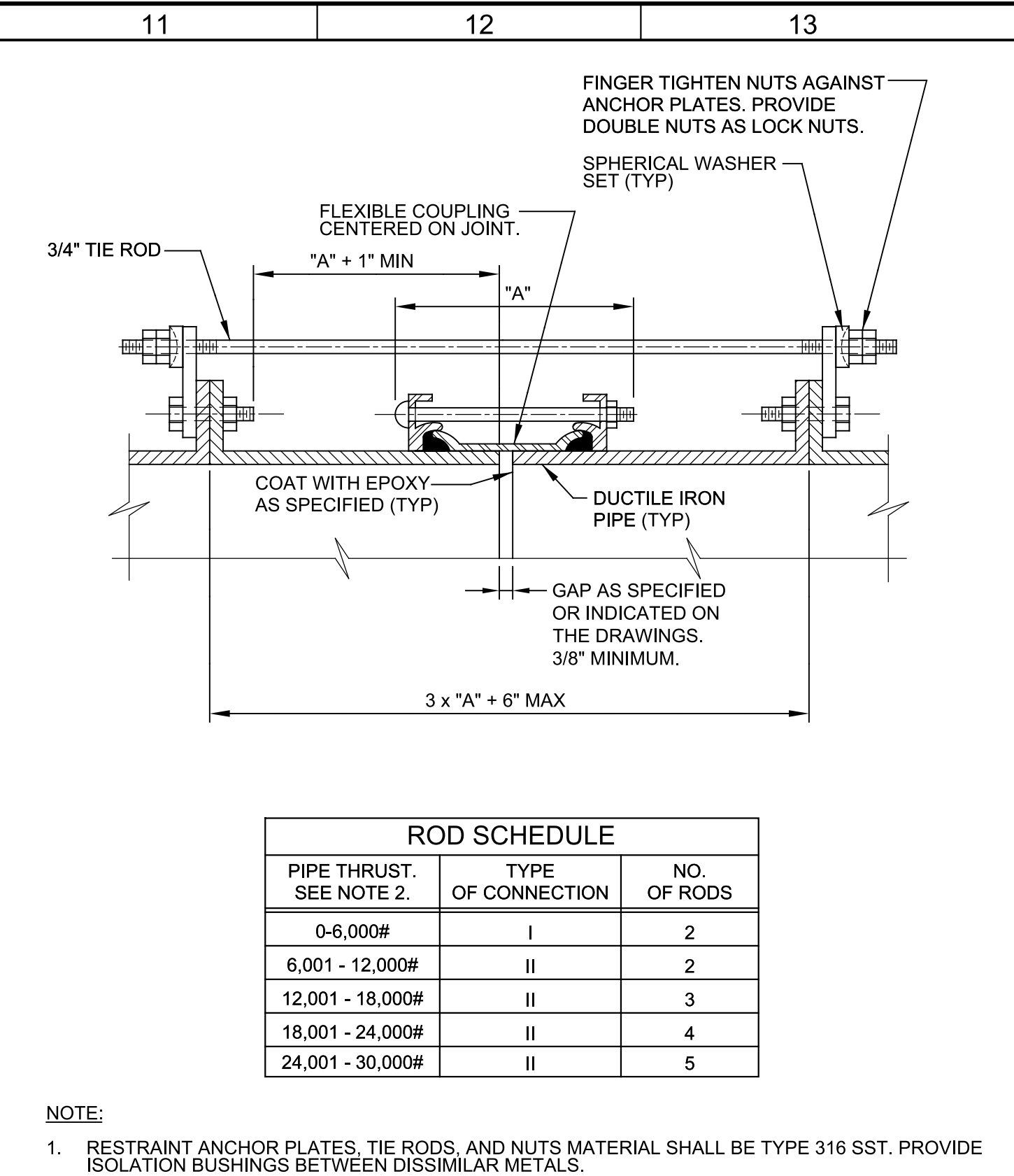
P048 PIPE SUPPORT ACROSS TRENCH
TYP
03/02/15



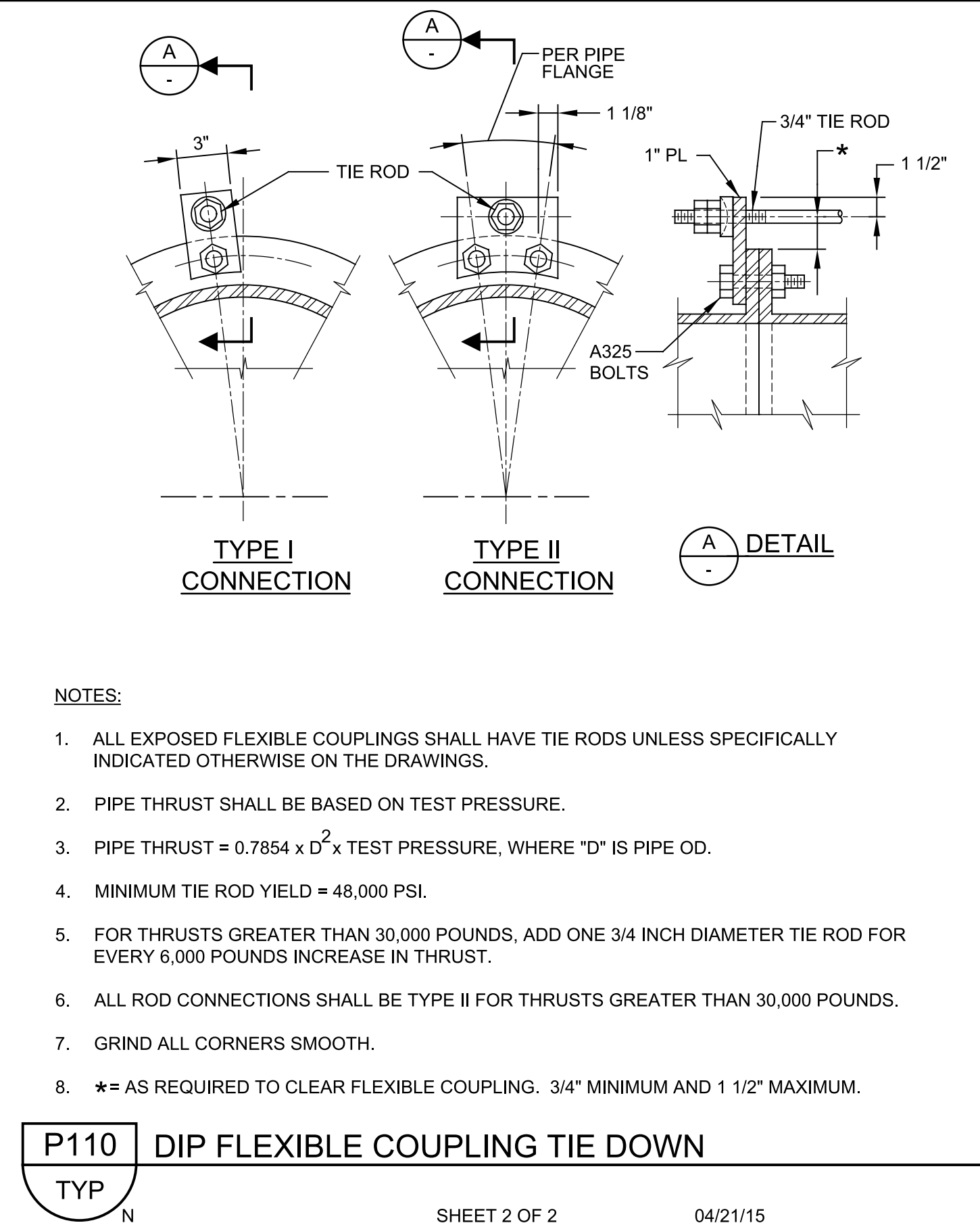
P102 PIPE THRUST BLOCK

TYP

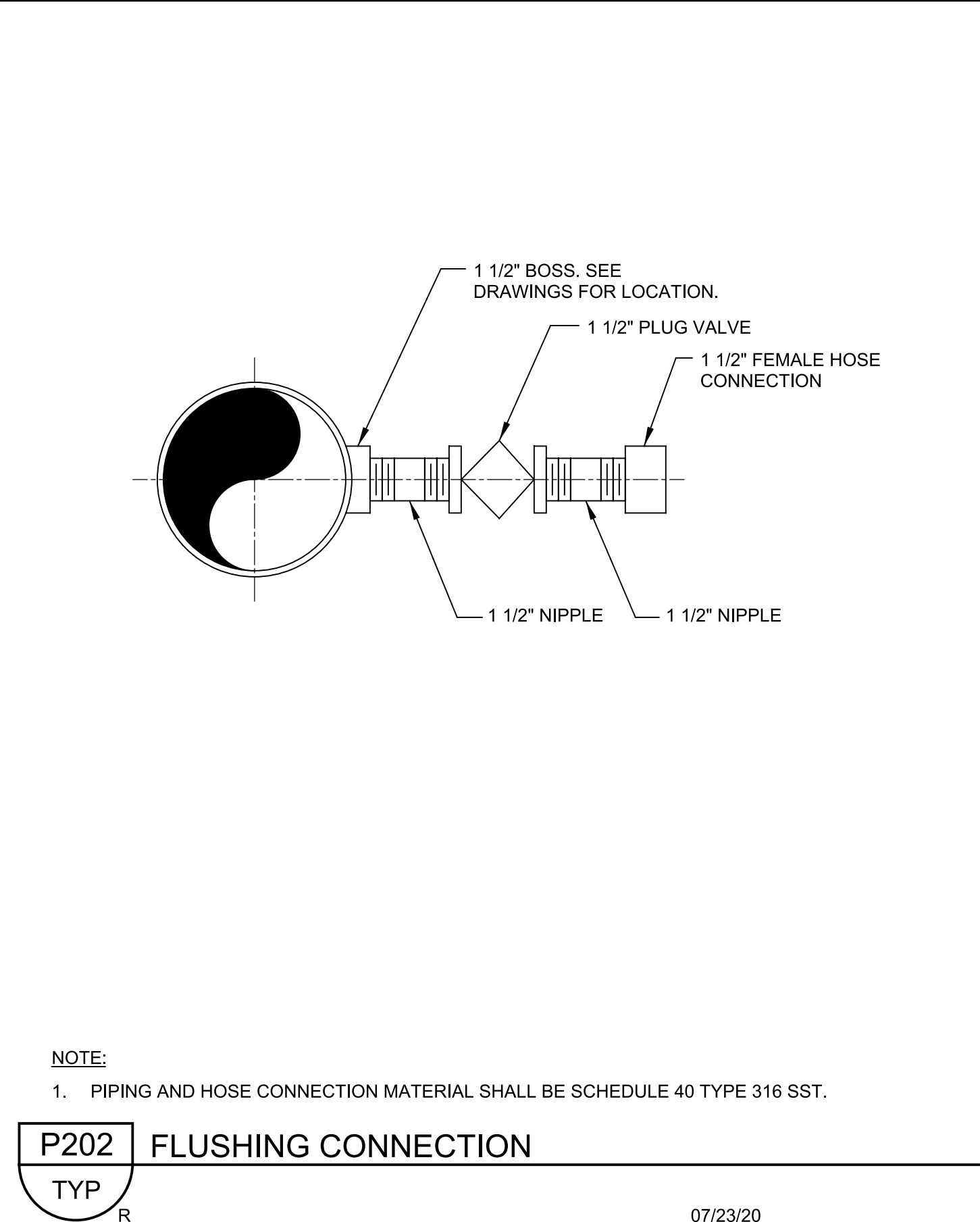
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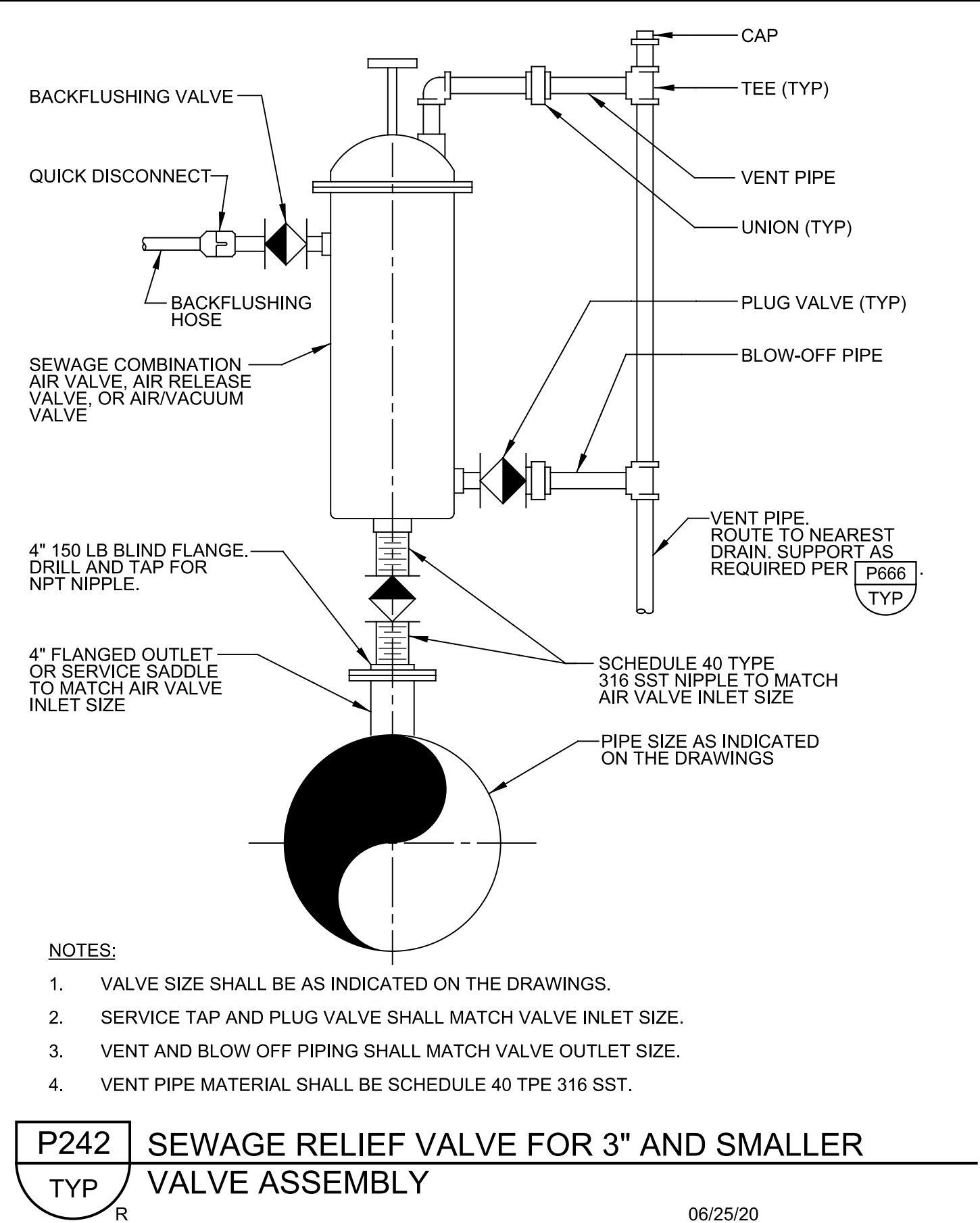
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REV	DATE	BY	DESCRIPTION	DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT

TYPICALS
TYPICAL DETAILS
PIPING

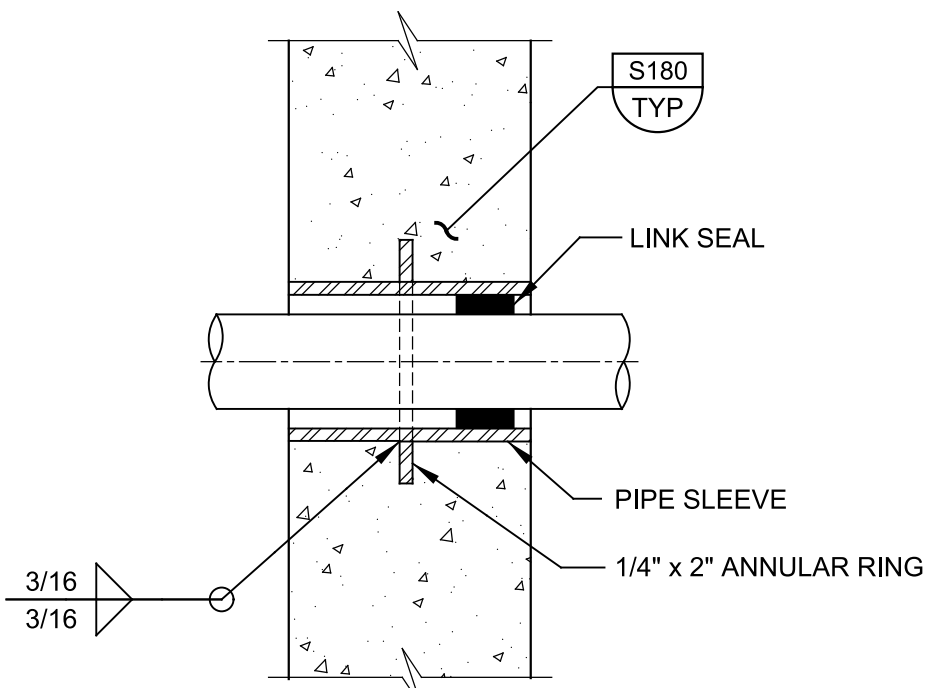
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	SHEET NO. 13 OF 60

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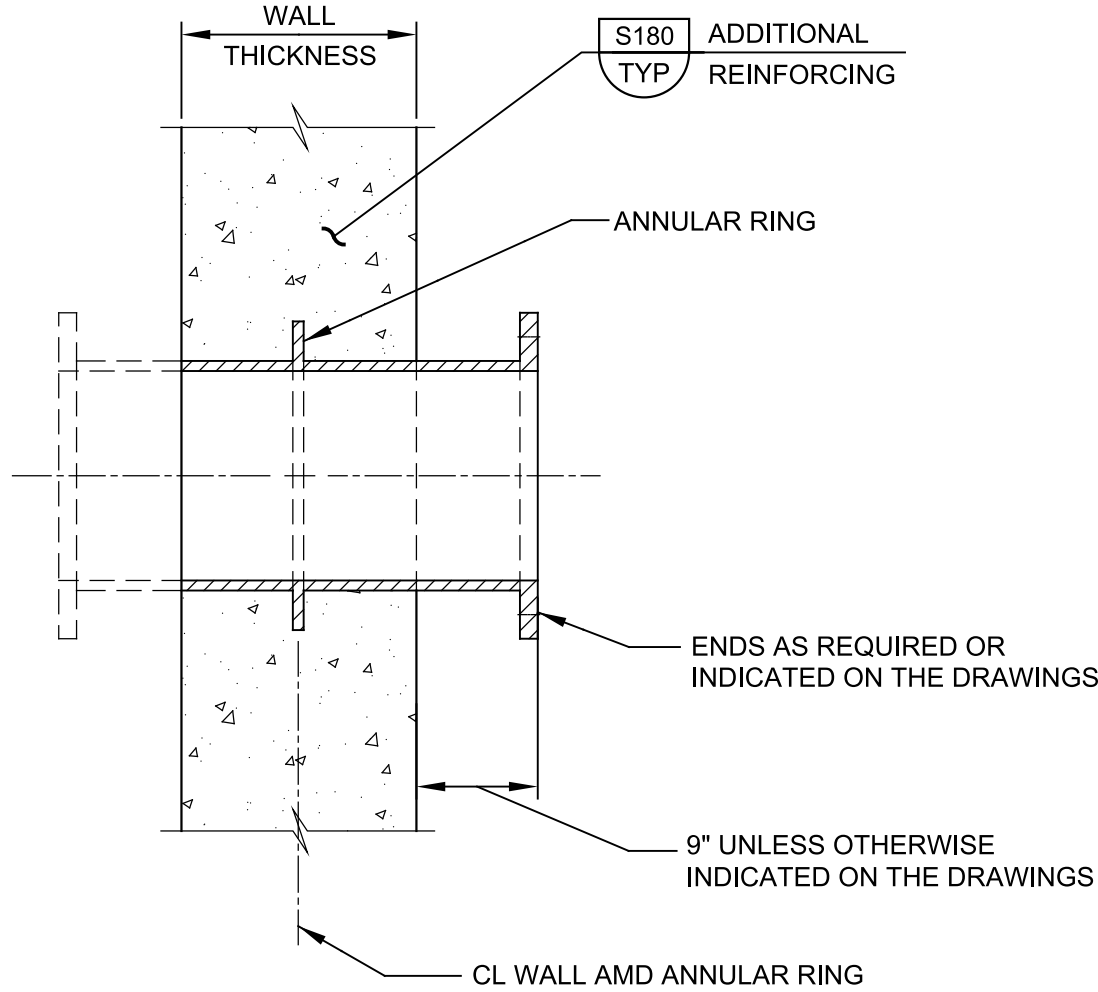
LAST SAVED BY: Alalco



- NOTES:
- 6"Ø SLEEVES AND SMALLER SHALL BE SCH 40 TYPE 316 STAINLESS STEEL PIPE.
 - SLEEVES LARGER THAN 6"Ø SHALL BE 1/4" THICK TYPE 316 STAINLESS STEEL PIPE.
 - IN WALLS THICKER THAN 12", LINK SEAL SHALL BE INSTALLED AT BOTH ENDS OF WALL SLEEVE. SLEEVE DIAMETER SHALL BE PER LINK SEAL MANUFACTURER'S RECOMMENDATION.
 - CONFIRM LINKSEAL NUT ORIENTATION WITH OWNER'S FIELD REPRESENTATIVE PRIOR TO INSTALLATION.
 - GROUT OVER LINKSEAL TO FORM SMOOTH WALL SURFACE AFTER PRESSURE TESTING.

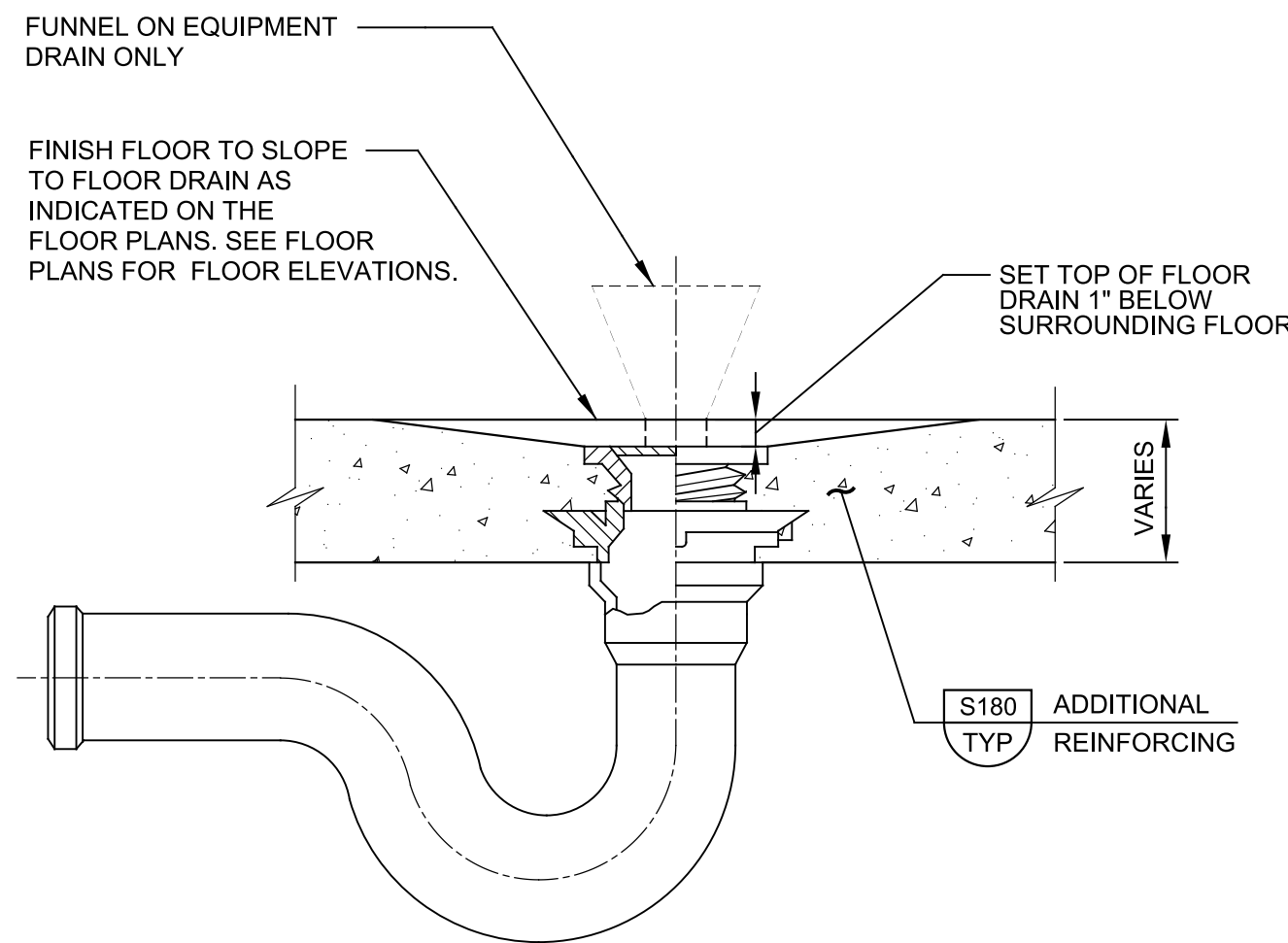
P304 SLEEVE INSTALLATION THROUGH WALLS AND FLOOR SLABS
TYP

09/10/20



P312 WALL THIMBLE FOR DIP
TYP

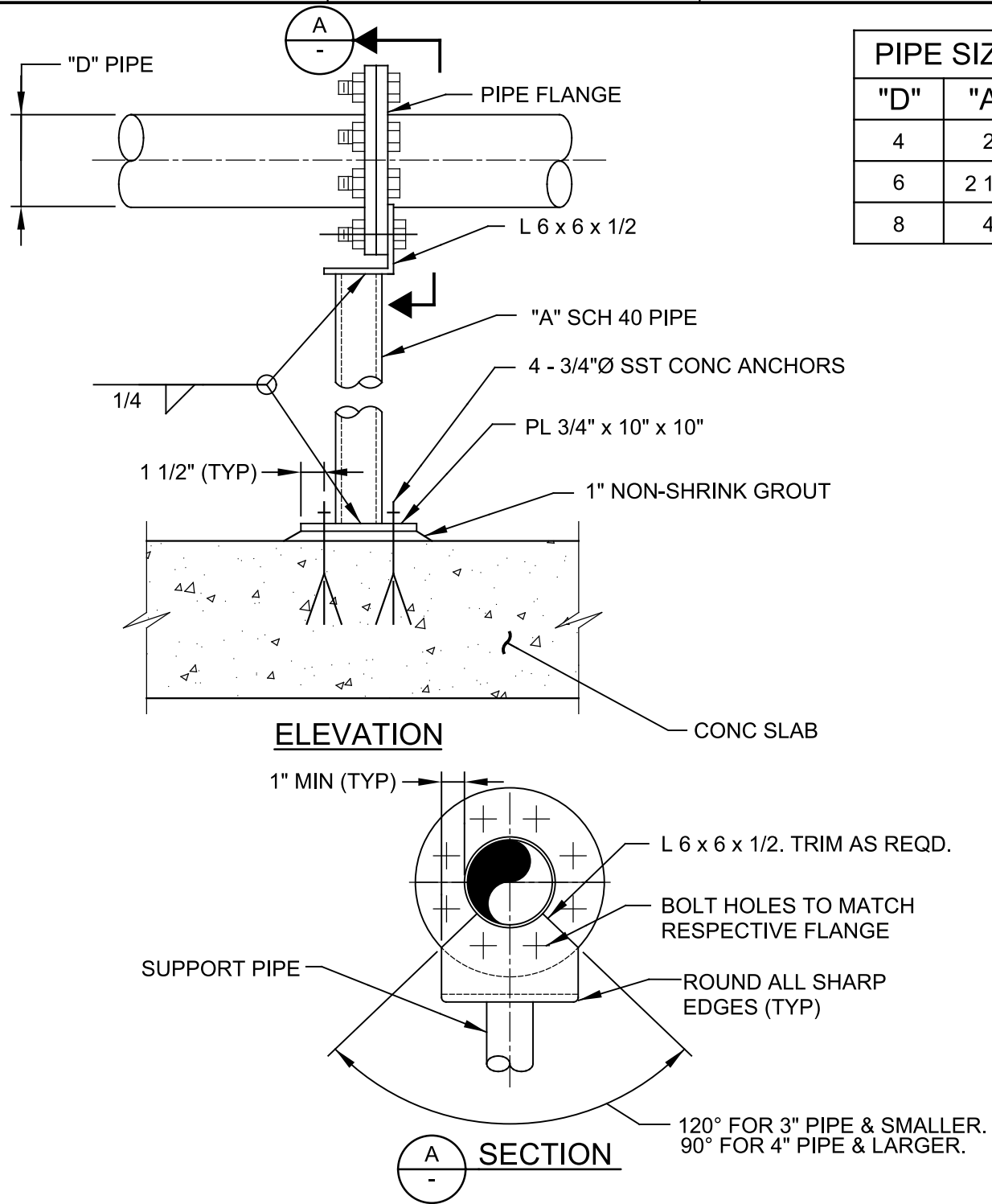
01/30/2015



- NOTES:
- PROVIDE 12" RADIUS SLOPE TO EQUIPMENT DRAINS WHERE FLOOR DOES NOT SLOPE TO DRAIN.
 - PROVIDE MINIMUM 6" TRAP.

P410 FLOOR DRAIN OR EQUIPMENT DRAIN WITH TRAP
TYP

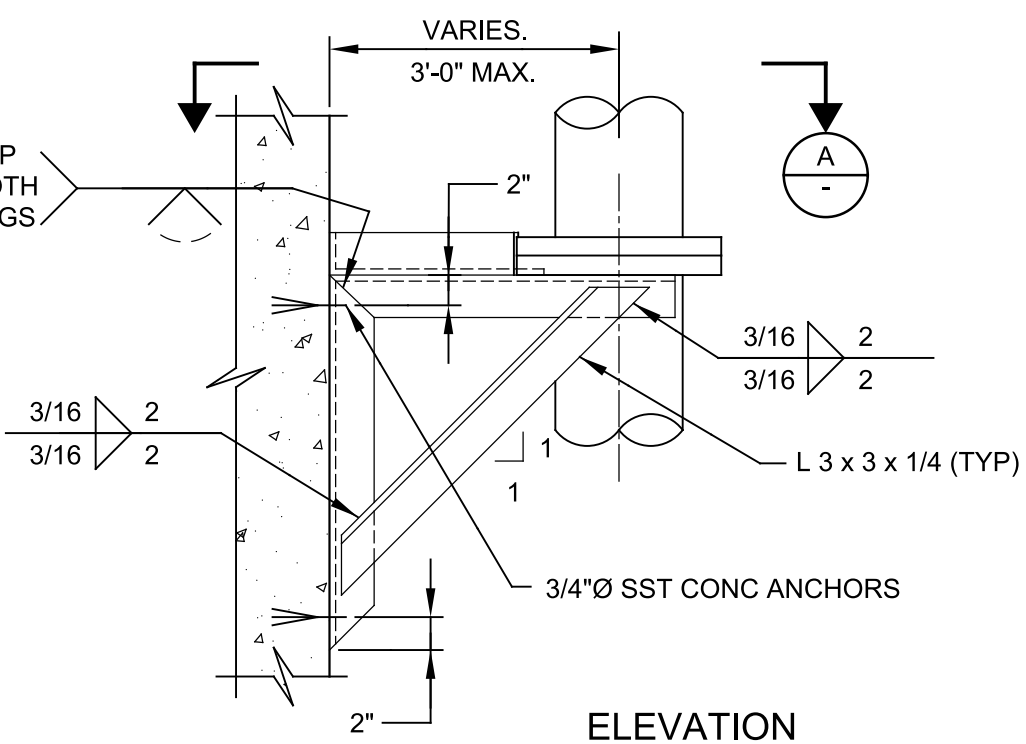
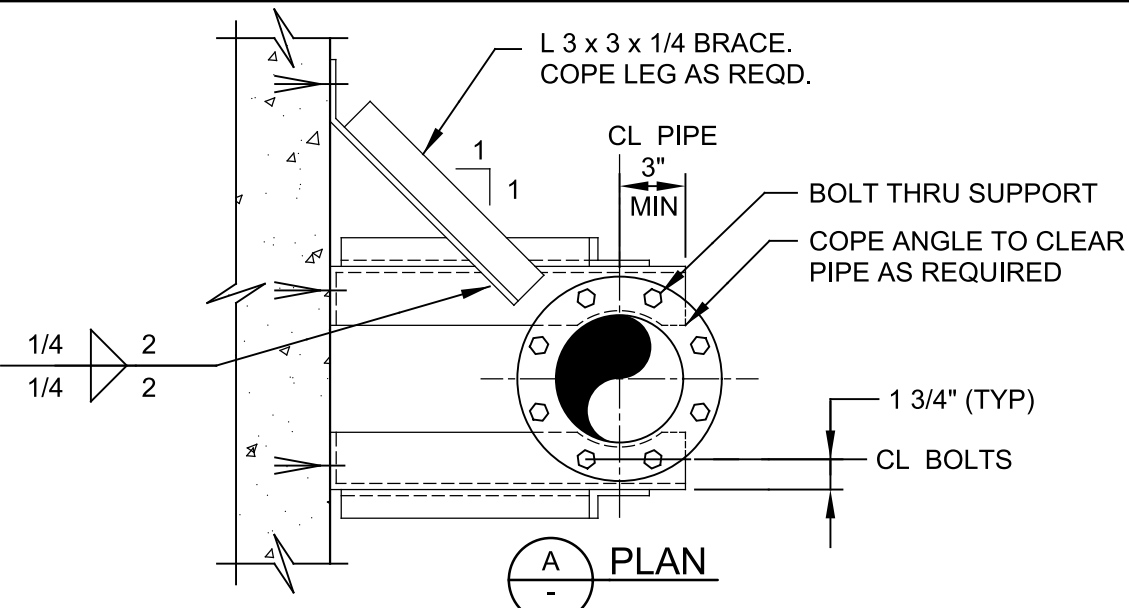
09/10/20



- NOTE:
- ALL MATERIAL FOR SUPPORT SHALL BE TYPE 316 STAINLESS STEEL.

P626 PIPE SUPPORT WITH PIPE FLANGE CONNECTION
TYP

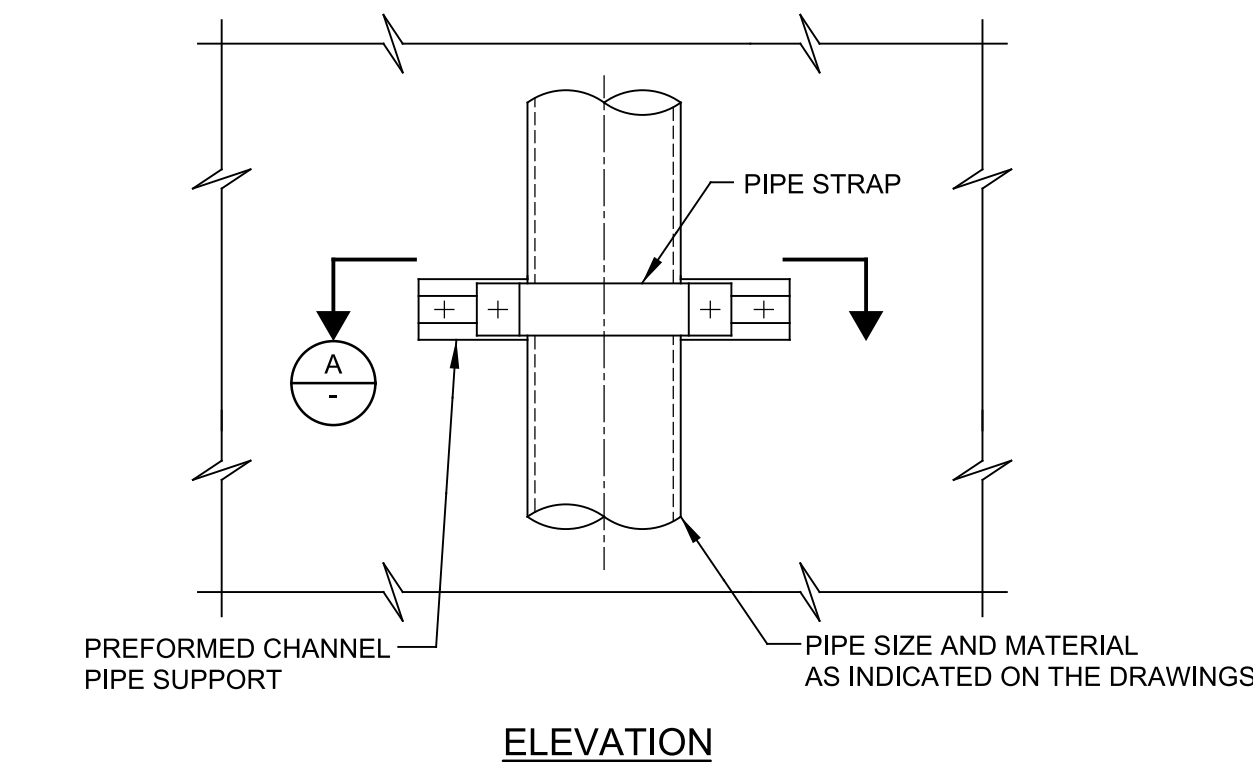
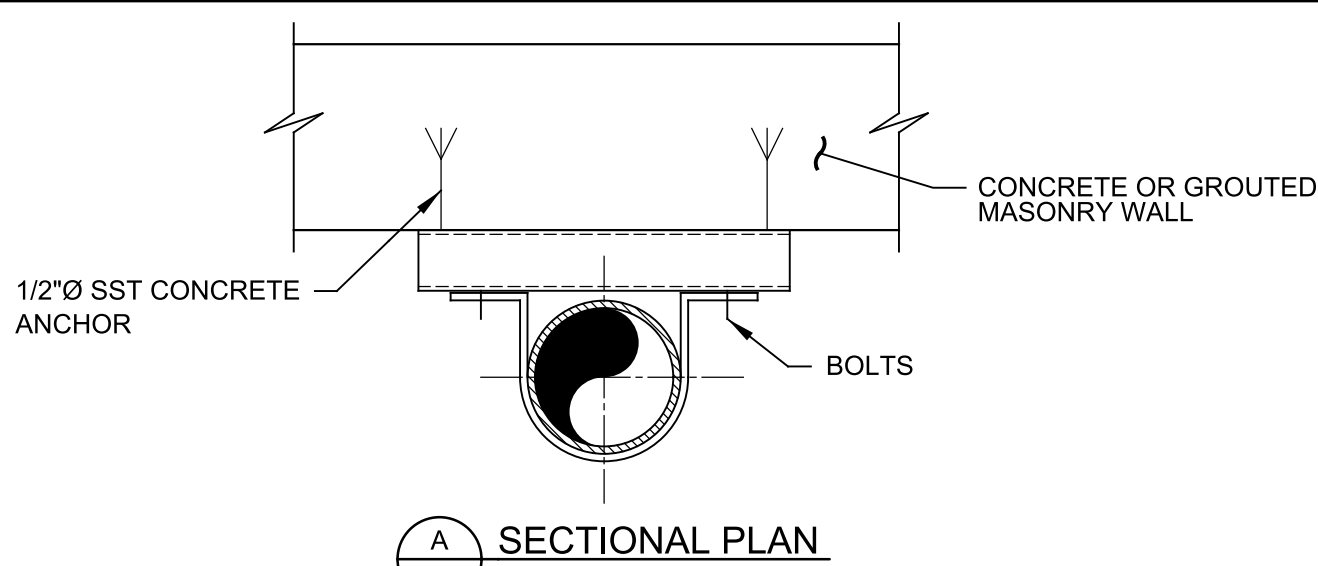
06/25/20



- NOTES:
- ALL MATERIAL FOR SUPPORT SHALL BE TYPE 316 STAINLESS STEEL.
 - ADJUST DIMENSION FROM WALL TO CENTERLINE OF PIPE TO ACCOMMODATE CURVED WALLS.

P656 VERTICAL PIPE SUPPORT - WALL BRACKET INSIDE
TYP

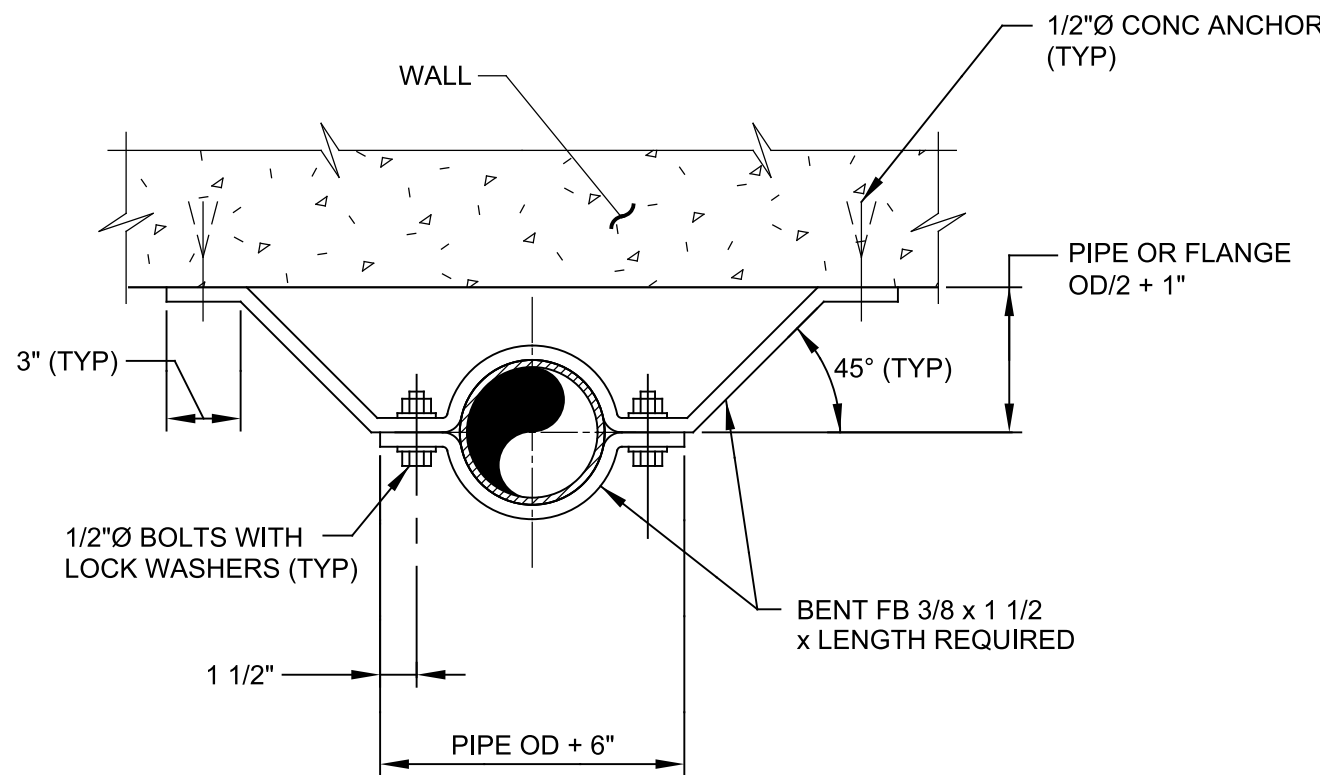
06/25/20



- NOTE:
- ALL MATERIAL FOR SUPPORT SHALL BE TYPE 316 STAINLESS STEEL.

P662 PIPE SUPPORT FOR ONE VERTICAL RISER
TYP

06/25/20



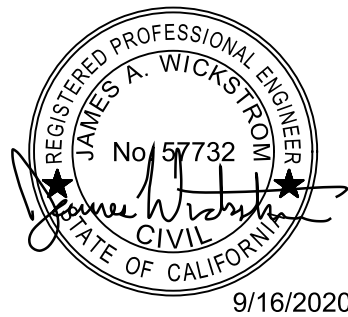
- NOTE:
- ALL MATERIAL SHALL BE TYPE 316 STAINLESS STEEL.

P666 VERTICAL PIPE SWAY BRACE
TYP

07/23/20

REV	DATE	BY	DESCRIPTION

DESIGNED CE
DRAWN CE
CHECKED JES
DATE SEPTEMBER 2020



carollo



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT

TYPICALS
TYPICAL DETAILS
PIPING

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.
TP02
SHEET NO.
14 OF 60

1. SEE DIVISION 03 SPECIFICATIONS FOR REQUIREMENTS FOR CONCRETE CONSTRUCTION.
2. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, MINIMUM REINFORCEMENT OF CONCRETE WALLS OR SLABS SHALL BE:
10" THICK OR LESS:#5 @ 12" EACH WAY.
MORE THAN 10" THICK:#5 @ 12" EACH WAY, EACH FACE.
3. WALL REINFORCEMENT AT CORNERS OR JUNCTIONS OF WALLS SHALL BE CONTINUOUS, LAP SPICED, OR TERMINATED IN AN ACI STANDARD 90 DEGREE HOOK. SEE DETAIL **S144/TYP.**
4. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, BARS SHALL BE DOWELED. DOWELS SHALL BE THE SAME SIZE AND SPACING AS THE REINFORCEMENT WHICH IS SPICED TO THE DOWELS.
5. SLAB, BEAM AND COLUMN REINFORCING BARS SHALL HAVE A MINIMUM EXTENSION OR ANCHORAGE INTO SUPPORTS IN ACCORDANCE WITH ACI 318 AND ACI 350.
6. STIRRUP SUPPORT BARS SHALL BE PROVIDED TO SECURE TOP BARS AGAINST DISPLACEMENT AS REQUIRED.
7. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, CONCRETE COVER OVER #11 AND SMALLER REINFORCING BARS SHALL BE AS FOLLOWS:
A. SLABS AND JOISTS:
FORMED CONCRETE SURFACES AND UNFORMED TOP SURFACES FOR DRY CONDITIONS
#7 BARS AND SMALLER.....1"
#8 BARS AND LARGER.....1 1/2"
FORMED CONCRETE SURFACES AND UNFORMED TOP SURFACES EXPOSED TO WEATHER, IN CONTACT WITH SOIL OR FLUIDS, OR LOCATED OVER FLUIDS.....2"
B. BEAMS AND COLUMNS:
FORMED CONCRETE SURFACES FOR DRY CONDITIONS:
STIRRUPS, SPIRALS, AND TIES.....1 1/2"
PRINCIPAL REINFORCEMENT.....2"
FORMED CONCRETE SURFACES EXPOSED TO WEATHER, IN CONTACT WITH SOIL OR FLUIDS, OR IN BEAMS LOCATED OVER FLUIDS:
STIRRUPS AND TIES.....2"
PRINCIPAL REINFORCEMENT.....2 1/2"
C. WALLS:
FORMED CONCRETE SURFACES FOR DRY CONDITIONS:
#7 BARS AND SMALLER.....1"
#8 BARS AND LARGER.....1 1/2"
FORMED CONCRETE SURFACES EXPOSED TO WEATHER, OR IN CONTACT WITH SOIL OR FLUIDS.....2"

S101

TYP

S

REINFORCED CONCRETE NOTES

SHEET 1 OF 3

07/08/16

- D. FOOTINGS AND SLABS ON GRADE:
FORMED VERTICAL CONCRETE SURFACES.....2"
AT UNFORMED CONCRETE SURFACES CAST AGAINST SOIL, ROCK, OR CONCRETE WORK MATS.....3"
TOP SURFACE OF FOOTINGS AND SLABS.....SAME AS SLABS
8. WATERSTOPS:
A. PROVIDE WATERSTOPS AT JOINTS IN SLABS AND WALLS OF LIQUID-CONTAINING STRUCTURES, AND PORTIONS OF STRUCTURES BELOW THE DESIGN GROUNDWATER LEVEL. MAKE WATERSTOPS CONTINUOUS THROUGH STRUCTURE, SPlicing WATERSTOPS IN SLABS WITH WATERSTOPS IN WALLS.
B. END WATERSTOPS 3" BELOW TOP OF WALLS, WHERE TOP OF WALL IS COVERED BY A SLAB WITHOUT WATERSTOPS, CONTINUE WATERSTOP TO WALL/SLAB JOINT. WHERE TOP OF WALL IS COVERED BY A SLAB WITH WATERSTOPS, MAKE WATERSTOPS CONTINUOUS, SPlicing WATERSTOPS IN WALLS WITH WATERSTOPS IN SLAB.
9. CURE CONCRETE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WHERE WATER CURING IS SPECIFIED, MEMBRANE CURING IS NOT ALLOWED.
A. THE CONTRACTOR IS WARNED THAT WATER CURING IS DIFFICULT AT TIMES DUE TO WIND AND DRY CONDITIONS. STUDY SPECIFICATION REQUIREMENTS AND FURNISH ADEQUATE SYSTEMS TO PROVIDE WATER CURING WHERE REQUIRED.
B. KEEP WATER CURED SURFACES VISIBLY MOIST AT ALL TIMES. FLOOD TOPS OF WALLS NOT LESS THEN 3 TIMES DAILY.
10. DO NOT PLACE BACKFILL AGAINST WALLS UNTIL:
A. WALLS HAVE BEEN CAST TO FULL HEIGHT OF STRUCTURE AND CONCRETE HAS REACHED THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH (f_c).
B. CONNECTING SLABS AND BEAMS HAVE BEEN CAST AND CONCRETE IN THOSE ELEMENTS HAS REACHED THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH (f_c).
11. LAP SPLICES:
A. SEE TABLE 1 OF THIS DETAIL FOR LAP SPlice LENGTHS.
B. WHEN MULTIPLE BARS ARE SPICED AT THE SAME SECTION, THE "CLEAR BAR SPACING" IS DEFINED AS THE MINIMUM CLEAR DISTANCE BETWEEN THE BARS OUTSIDE THE SPlice LENGTH MINUS ONE BAR DIAMETER.
C. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, BARS AT A LAP SPlice SHALL BE IN CONTACT WITH EACH OTHER.
D. "TOP BARS" ARE HORIZONTAL REINFORCEMENT AT LOCATIONS WHERE MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
12. FORM EXPOSED CONCRETE CORNERS AND EDGES WITH 3/4" CHAMFER UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

S101

TYP

S

REINFORCED CONCRETE NOTES

SHEET 2 OF 3

07/08/16

TABLE 1: REINFORCING BAR LAP SPLICES: $f_c = 4000$ PSI, $F_y = 60,000$ PSI				
BAR SIZE	MINIMUM COVER (BAR DIA)	MINIMUM CLEAR BAR SPACING (BAR DIA)	LAP SPlice LENGTH (INCHES)	
			TOP BARS	OTHER BARS
#4	MORE THAN 1	MORE THAN 2	32 *	25 *
	MORE THAN 2	MORE THAN 4	20	16
#5	MORE THAN 1	MORE THAN 2	40 *	31 *
	MORE THAN 2	MORE THAN 4	26	20
#6	MORE THAN 1	MORE THAN 2	48 *	37 *
	MORE THAN 2	MORE THAN 4	30	24
#7	MORE THAN 1	MORE THAN 2	70 *	54 *
	MORE THAN 2	MORE THAN 4	43	33
#8	MORE THAN 1	MORE THAN 2	81 *	62 *
	MORE THAN 2	MORE THAN 4	50	38
#9	MORE THAN 1	MORE THAN 2	90 *	70 *
	MORE THAN 2	MORE THAN 4	56	42
#10	MORE THAN 1	MORE THAN 2	104 *	81 *
	MORE THAN 2	MORE THAN 4	62	48
#11	MORE THAN 1	MORE THAN 2	114 *	88 *
	MORE THAN 2	MORE THAN 4	69	54

REINFORCING BAR LAP SPlice TABLE NOTES:

1. TABULATED SPlice LENGTHS ARE APPLICABLE ONLY WHEN BOTH REQUIREMENTS FOR MINIMUM COVER AND FOR MINIMUM CLEAR BAR SPACING ARE SATISFIED.
2. * = IF THE CLEAR BAR SPACING IS LESS THAN OR EQUAL TO TWO BAR DIAMETERS, OR THE COVER IS LESS THAN OR EQUAL TO ONE BAR DIAMETER, THE LAP SPlice LENGTH SHALL BE INCREASED BY 50 PERCENT.

S101

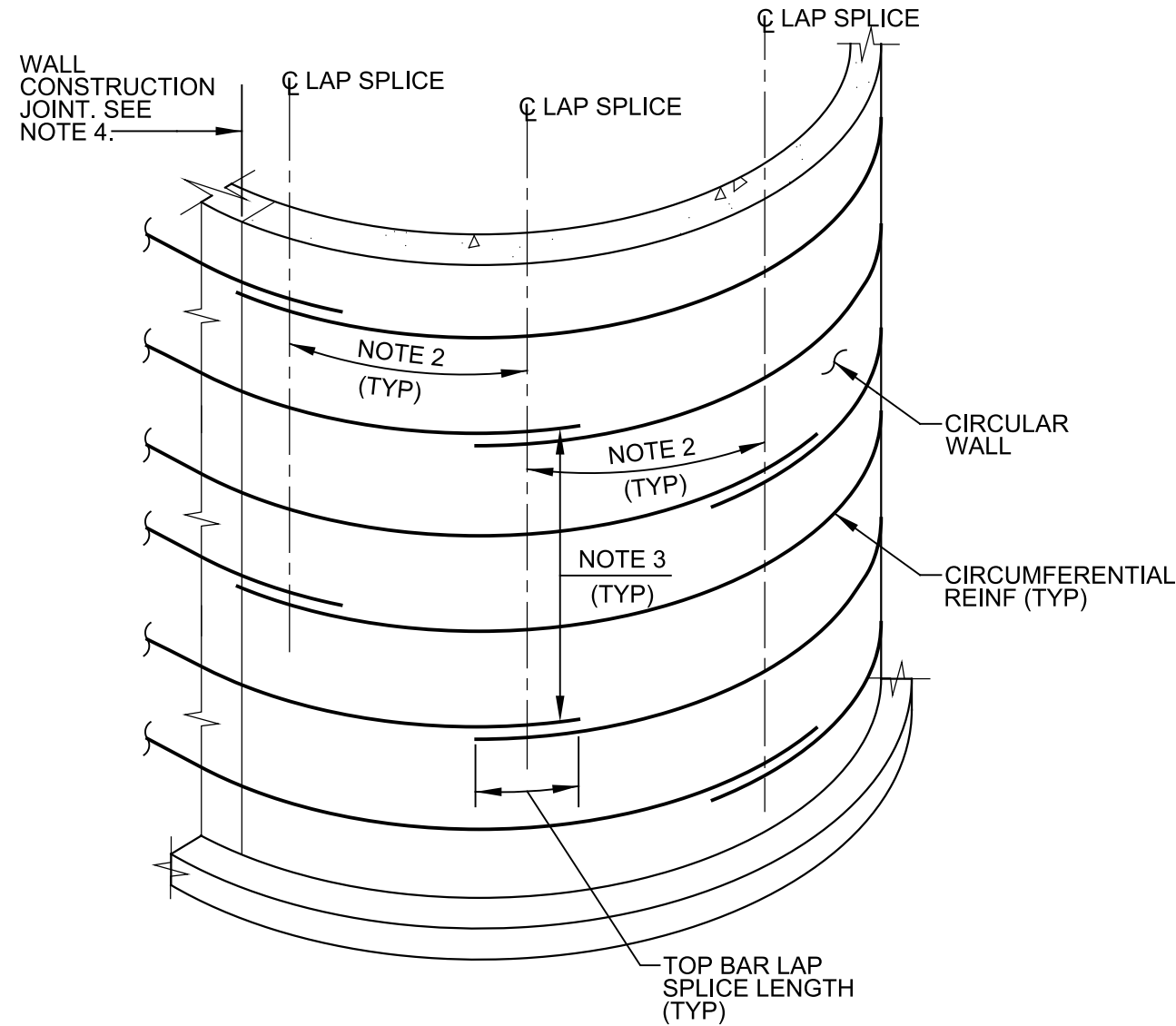
TYP

S

REINFORCED CONCRETE NOTES

SHEET 3 OF 3

07/08/16



NOTES:

1. LAP SPlice HORIZONTAL REINFORCEMENT IN CIRCULAR WALLS OF LIQUID-CONTAINING STRUCTURES USING TOP BAR LAP SPLICES.
2. AT EACH FACE, STAGGER ADJACENT LAP SPLICES BY AT LEAST ONE TOP BAR LAP SPlice LENGTH, BUT NOT LESS THAN 3 FEET.
3. AT EACH FACE OF WALL, LAP SPLICES SHALL NOT COINCIDE IN VERTICAL ARRAYS MORE THAN EVERY THIRD BAR.
4. STAGGER BAR PROJECTIONS PAST VERTICAL CONSTRUCTION JOINT TO MAINTAIN LAYOUT RESULTING FROM NOTES 2 AND 3.
5. SHOP-BEND HORIZONTAL BARS TO RADIUS OF WALL.

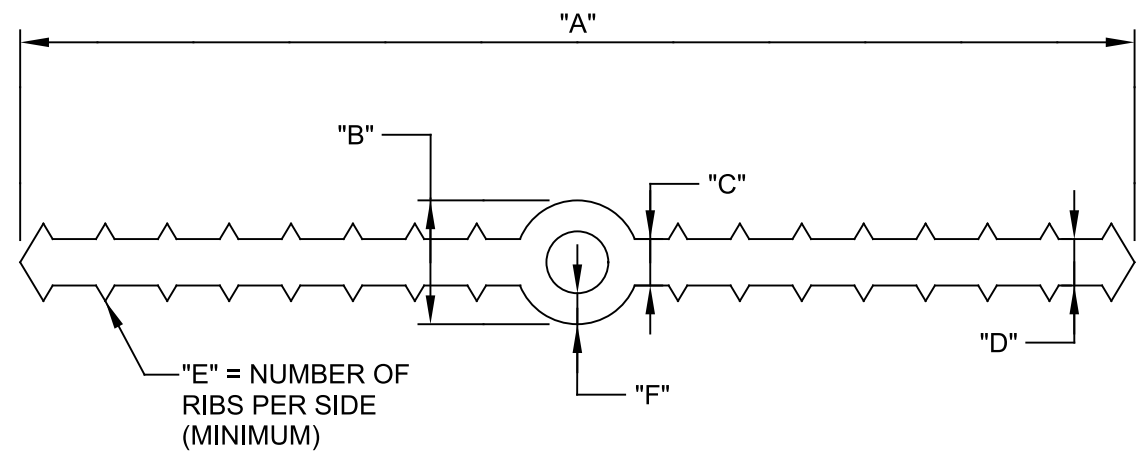
S102

TYP

S

CIRCULAR WALLS - HORIZONTAL REINFORCEMENT LAP SPLICES

03/19/19



TYPE	"A"	"B"	"C"	"D"	"E"	"F"	APPLICATION
W/O CENTERBULB	6"	-	3/8"	3/8"	7	-	CONSTRUCTION AND CONTROL JOINTS
CENTERBULB	6"	7/8"	3/8"	3/8"	7	9/32"	FOR USE WITH DETAIL EM071/TYP ONLY
CENTERBULB	9"	1"	3/8"	3/8"	7	1/4"	EXPANSION JOINTS 1" AND NARROWER
CENTERBULB	9"	2"	3/8"	3/8"	7	1/4"	EXPANSION JOINTS WIDER THAN 1" AND TENSION/COMPRESSION RING BEAM AT DIGESTERS

NOTES:

1. SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
2. DIMENSIONS ARE MINIMUM, UNLESS OTHERWISE NOTED.

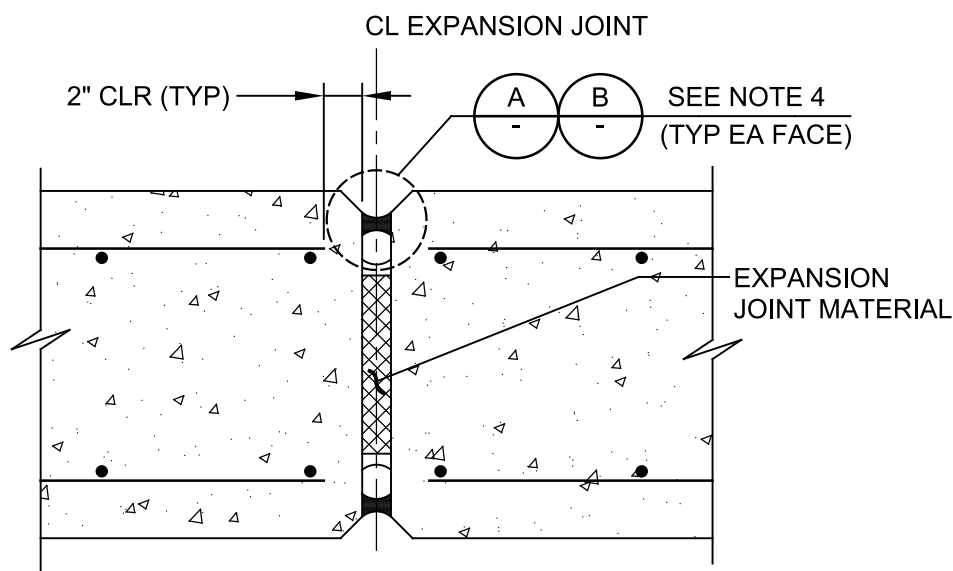
S106

TYP

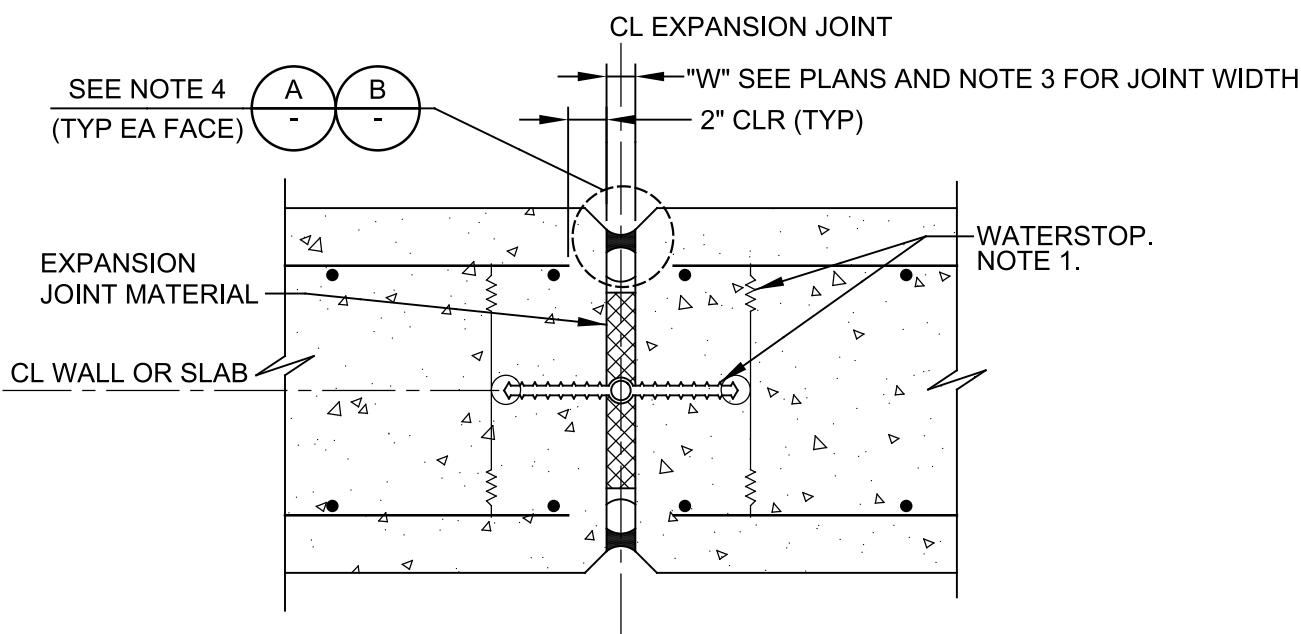
S

PVC WATERSTOP SCHEDULE

07/08/16



NON-WATER BEARING SLAB OR WALL



WATER BEARING SLAB OR WALL

S130

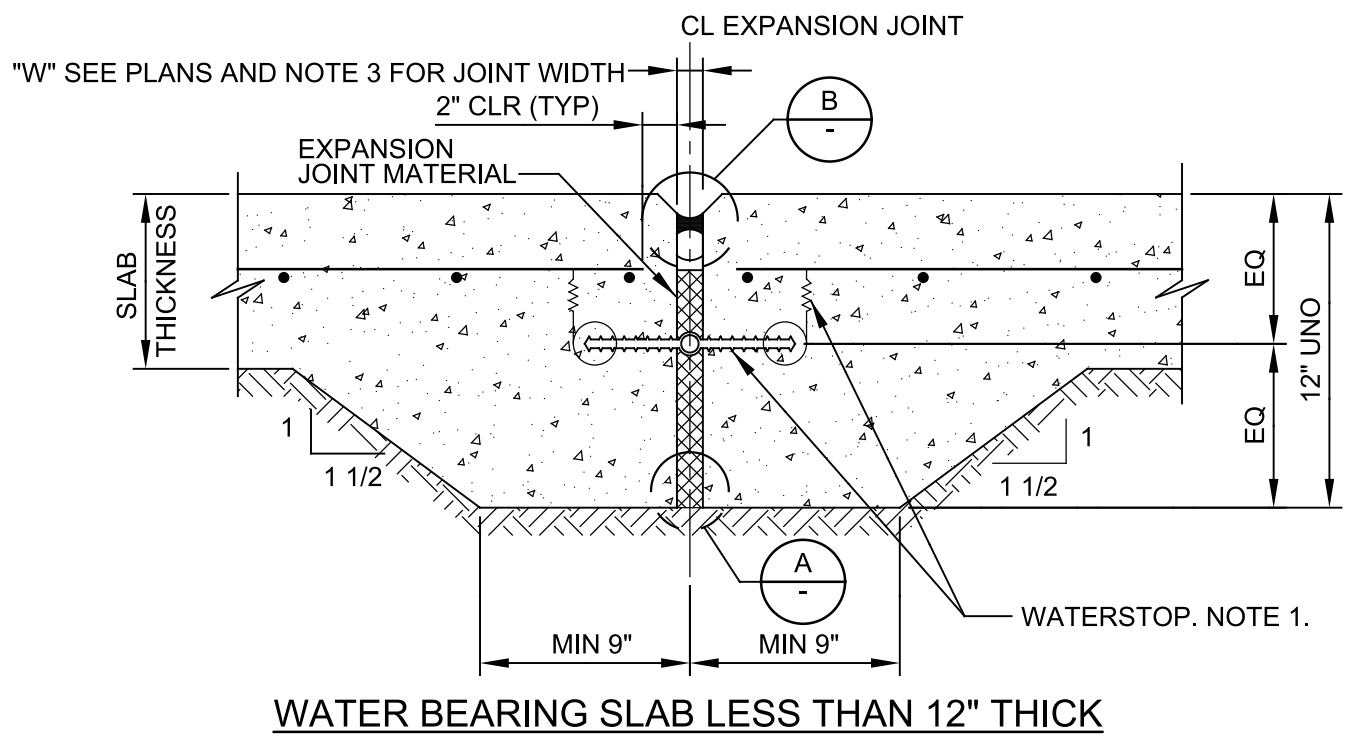
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S

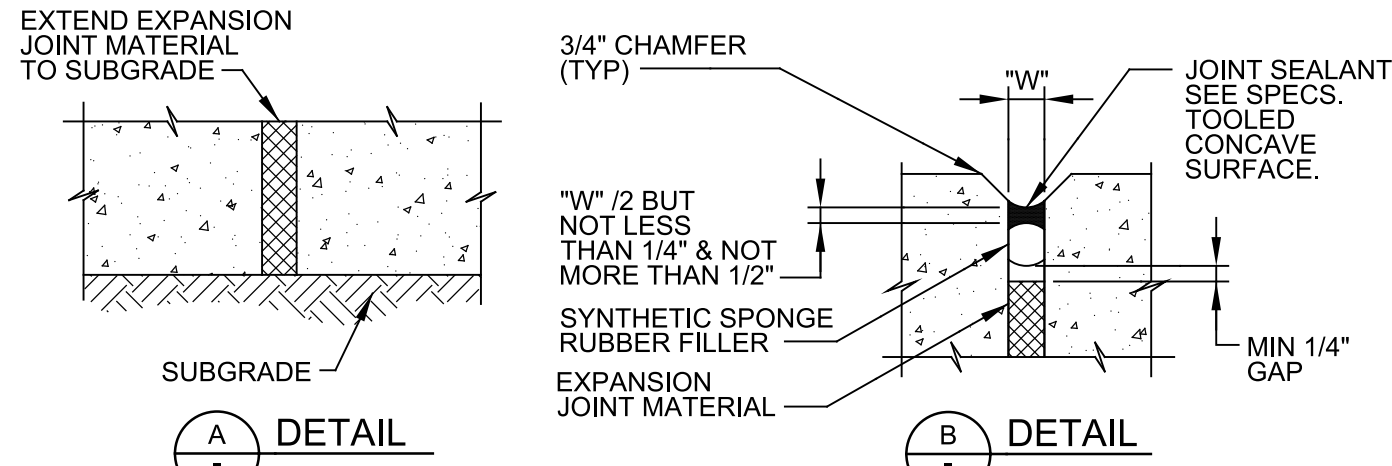
EXPANSION JOINT

SHEET 1 OF 2

07/22/16



WATER BEARING SLAB LESS THAN 12" THICK



NOTES:

1. 9" WATERSTOP WITH CENTER BULB CENTERED ON JOINT - SEE DETAIL **S106/TYP**. PROVIDE WIRE TIES MAX 2'-0" OC. HOG RINGS MAY BE USED IN LIEU OF WIRE LOOPS. THOROUGHLY CLEAN WATERSTOP BEFORE PLACING CONCRETE IN SECOND POUR.
2. JOINT EDGES:
A. FOR WALLS AND BOTTOM OF EXPOSED SLABS: FORM EDGES WITH 3/4" CHAMFER.
B. FOR SLABS: EDGE TOP AND ENDS WITH 1/4" RADIUS.
3. "W"=1" UNLESS OTHERWISE INDICATED ON PLANS. (MIN JOINT WIDTH = 3/8". MAX JOINT WIDTH = 2")
4. USE DETAIL A ONLY AT SOIL SIDE OF SLABS ON GRADE. USE DETAIL B AT ALL OTHER LOCATIONS.

S130

TYP

S

EXPANSION JOINT

SHEET 2 OF 2

07/22/16



SAUSALITO-MARIN CITY SANITARY DISTRICT

COLOMA PUMP STATION REPLACEMENT PROJECT

TYPICALS
TYPICAL DETAILS
STRUCTURAL

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

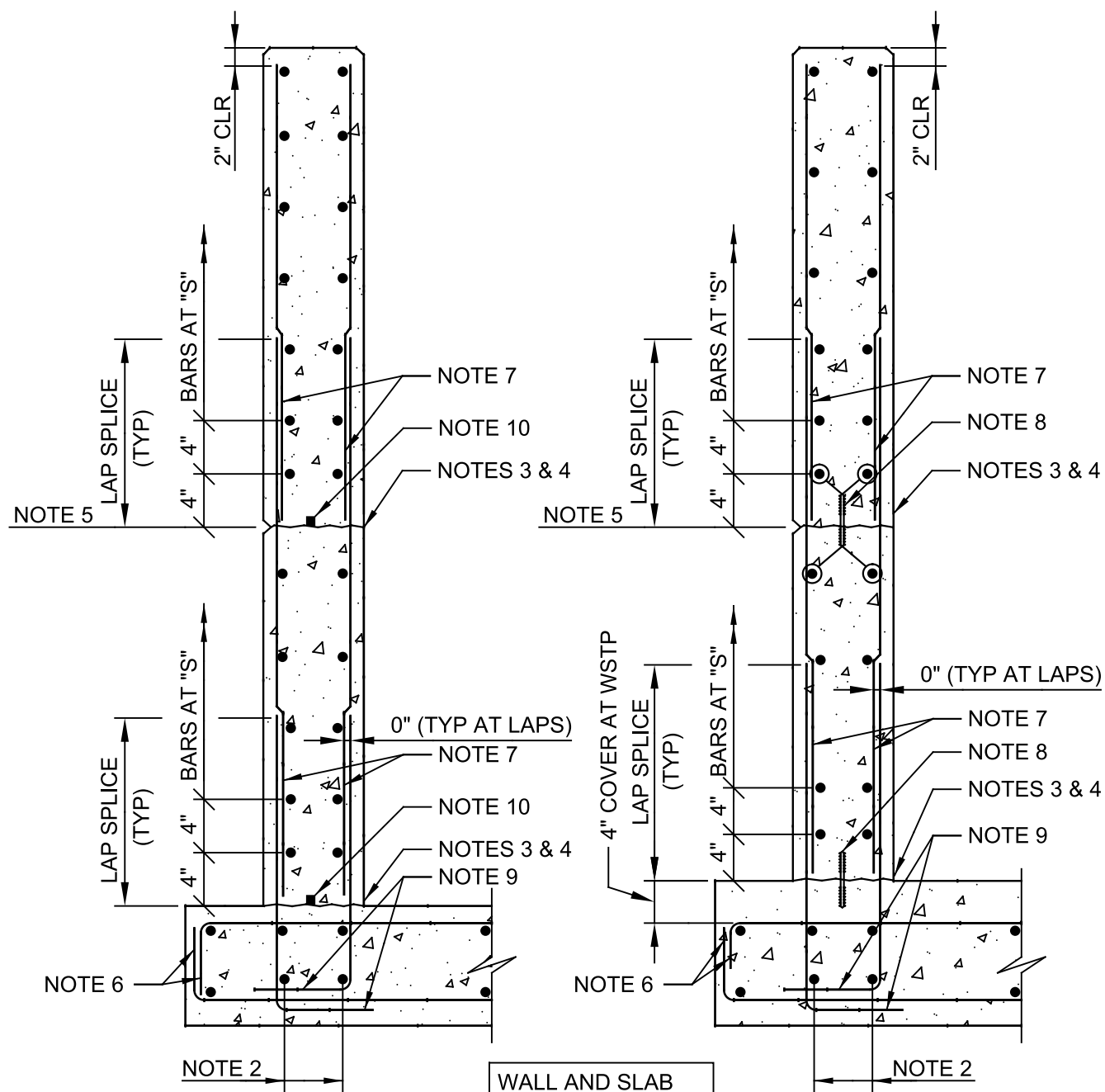
0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
8231D.10

DRAWING NO.
TS01

SHEET NO.
15 OF 60



A SECTION

B SECTION - "W/ WSTP"

S141 CONSTRUCTION JOINT - WALLS

TYP

S, N

SHEET 1 OF 2

03/12/19

NOTES:

1. "S" EQUALS TYPICAL BAR SPACING INDICATED ON THE DRAWINGS.
2. PLACE AND ALIGN BARS BEFORE PLACING DOWELS. BAR SIZE TO MATCH SLAB BARS.
3. WATER-BLAST JOINT FACE AND PROJECTING REINFORCEMENT BEFORE PLACING CONCRETE.
4. PLACE CEMENT GROUT OVER JOINT FACE IMMEDIATELY BEFORE PLACING CONCRETE. (SEE SPECIFICATIONS.)
5. CONSTRUCTION JOINT WHERE INDICATED ON THE DRAWINGS. WHERE WALL SURFACE IS EXPOSED TO VIEW IN THE FINISHED WORK, PROVIDE V-GROOVE PER DETAIL S162/TYP.
6. STANDARD 90° HOOK WHERE INDICATED ON THE DRAWINGS. (ALTERNATE: PROVIDE 180° HOOK WHERE REQUIRED BY SLAB THICKNESS.)
7. DOWELS: SAME SIZE AND SPACING AS VERTICAL WALL BARS, UNLESS OTHERWISE NOTED.
8. 6" PVC WATERSTOP CENTERED VERTICALLY ON JOINT. PROVIDE WIRE TIES MAX 2'-0" OC. HOG RINGS MAY BE USED IN LIEU OF WIRE LOOPS. THOROUGHLY CLEAN WATERSTOP BEFORE PLACING CONCRETE.
9. STANDARD 90° HOOK UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
10. WHERE DRAWINGS INDICATE "W/ STRIP WSTP" PROVIDE LOW EXPANSION HYDROPHILIC WATERSTOP AT TOP SURFACE OF JOINT AND CENTERED BETWEEN VERTICAL BARS.

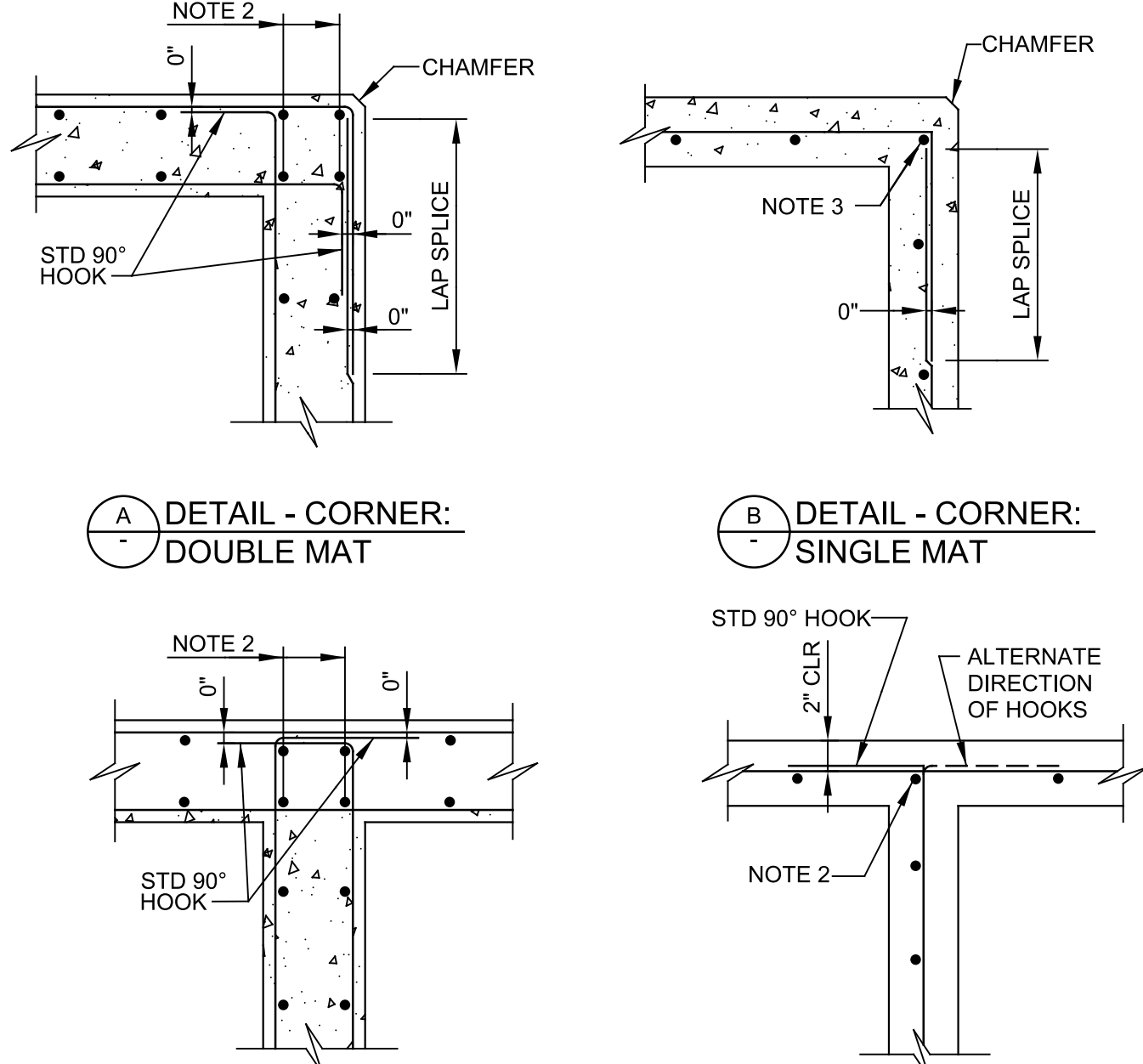
S141 CONSTRUCTION JOINT - WALLS

TYP

S

SHEET 2 OF 2

03/12/19



NOTES:

1. BAR SIZE, SPACING, AND ORIENTATION OF BAR LAYERS SHALL BE AS INDICATED ON THE DRAWINGS.
2. AT INTERSECTION, MAKE BAR SIZE THE LARGER OF BAR SIZES IN CONNECTING WALLS. PLACE BARS IN SAME LAYERS AS AT CONNECTING WALLS (TYP).
3. BAR TAILS: 12 BAR DIAMETERS PLUS 12".

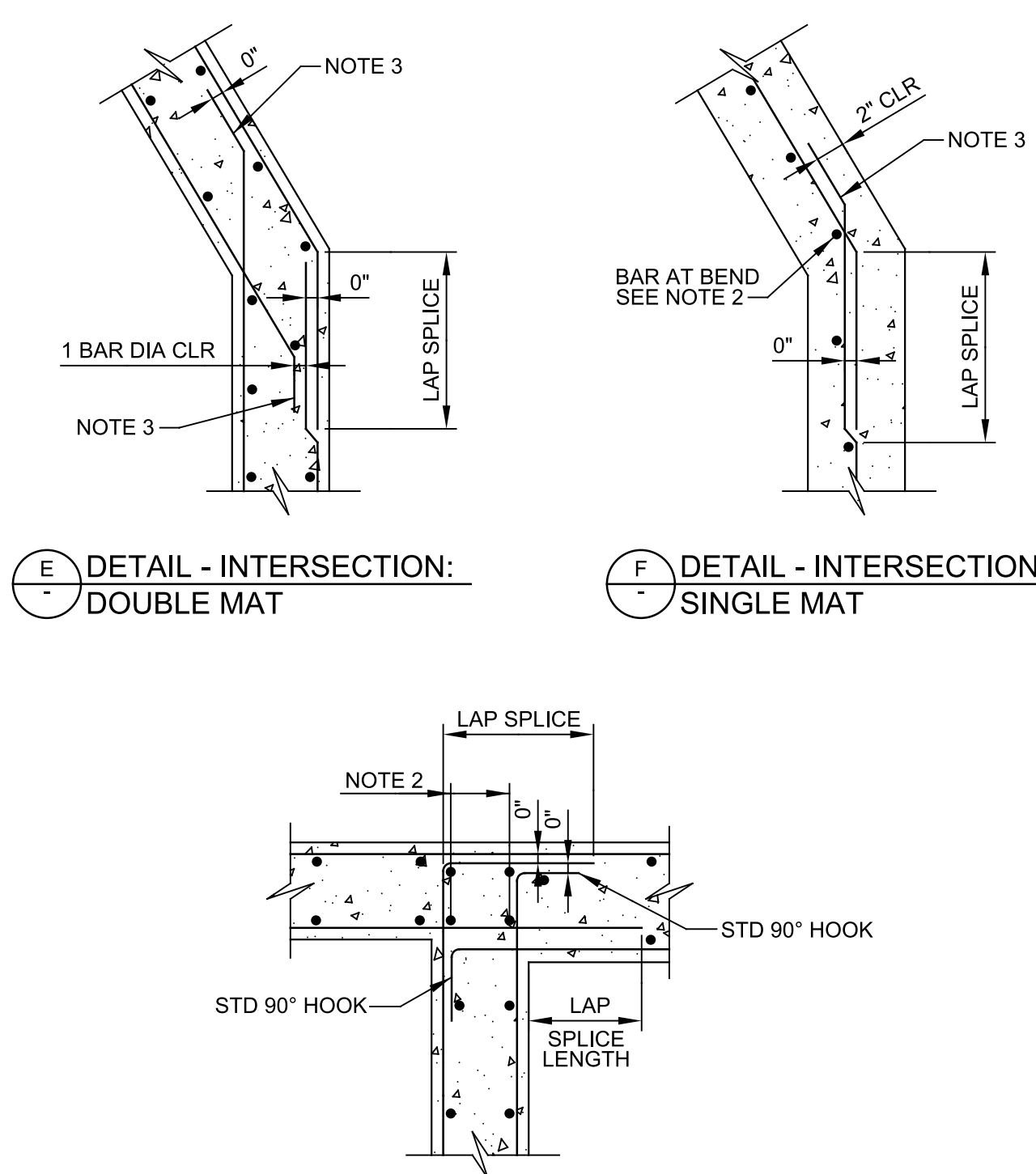
S144 WALL REINFORCEMENT AT CORNERS & INTERSECTIONS

TYP

S

SHEET 1 OF 2

05/31/16



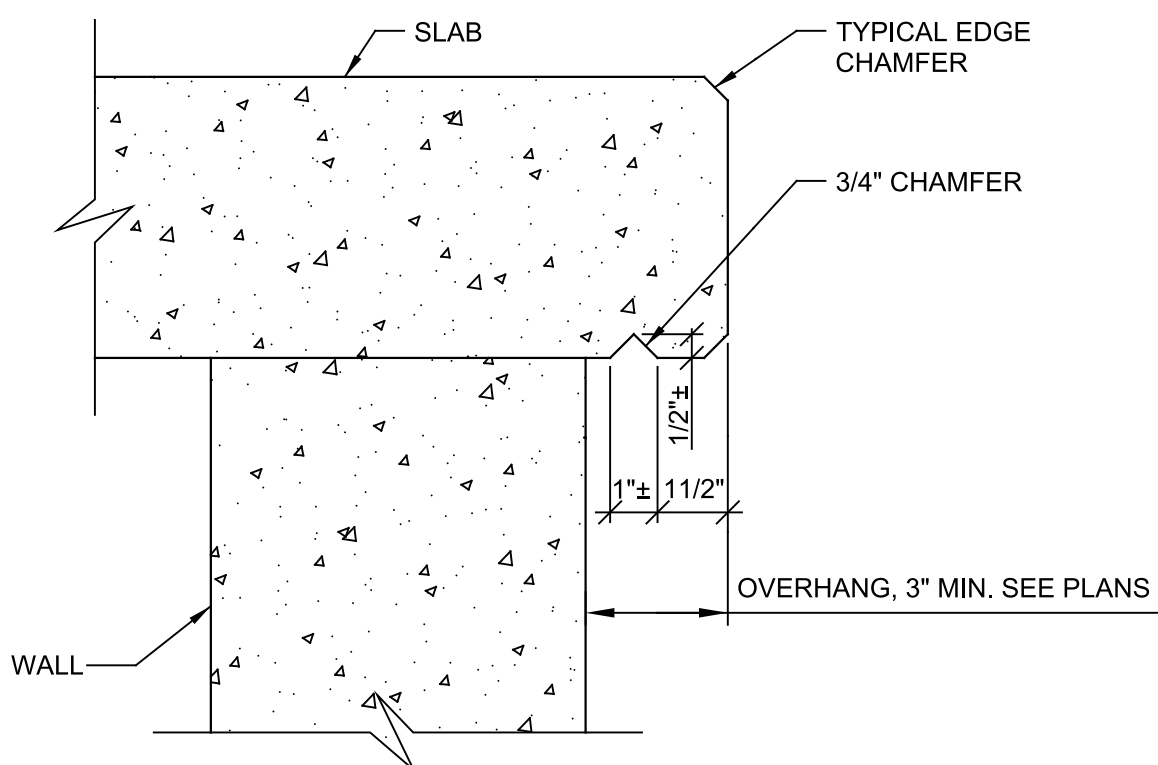
S144 WALL REINFORCEMENT AT CORNERS & INTERSECTIONS

TYP

S

SHEET 2 OF 2

05/31/16

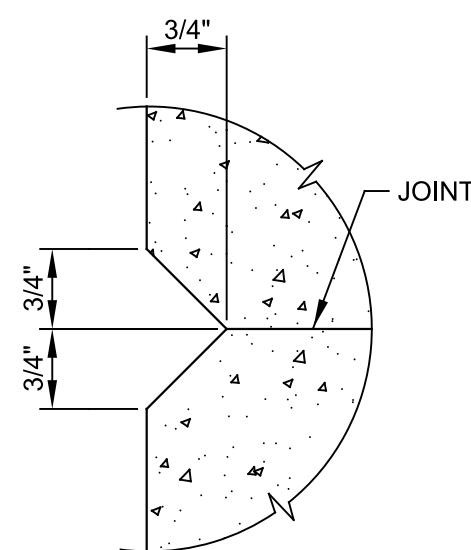


S160 DRIP GROOVE

TYP

N

07/21/16

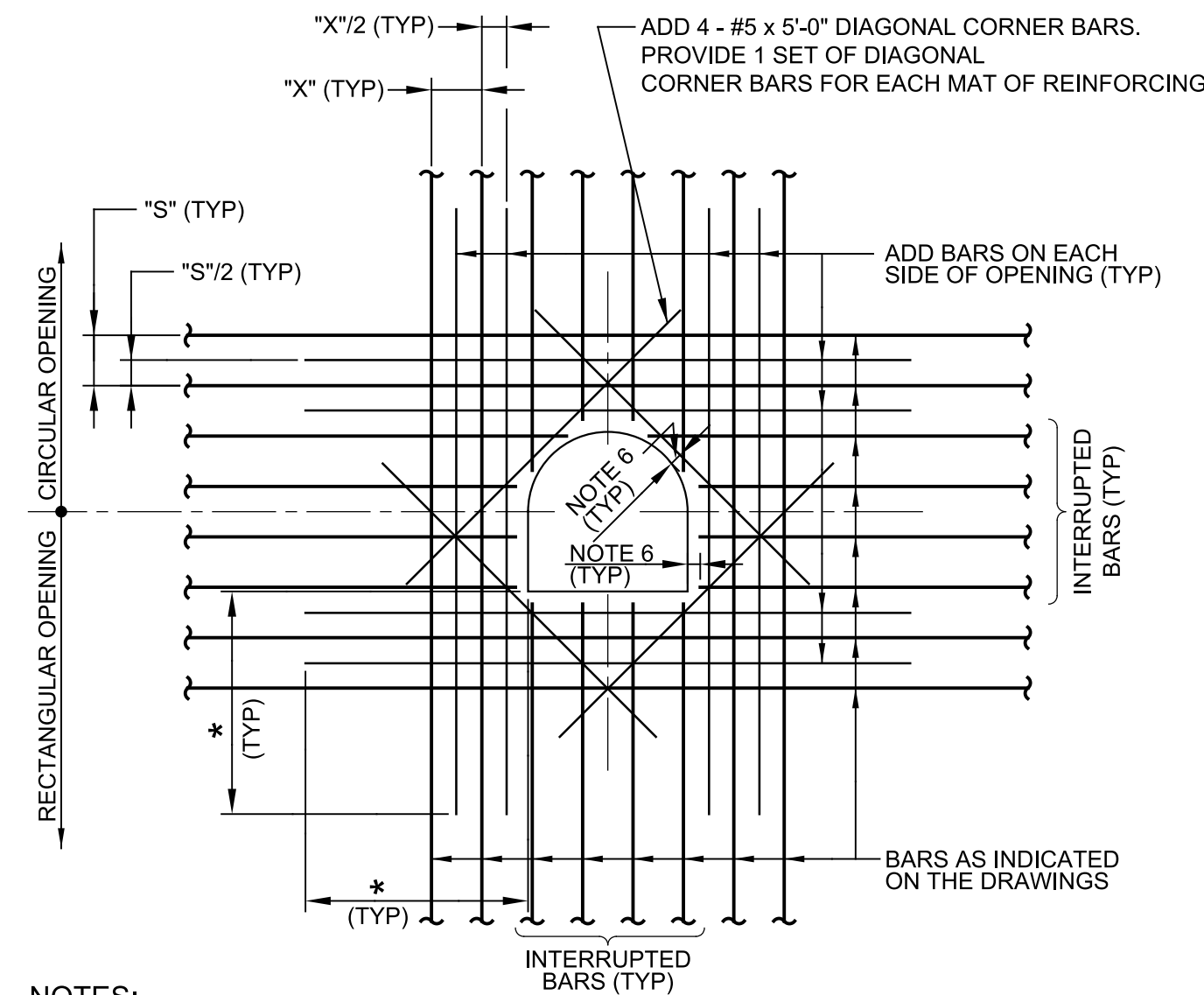


S162 V-GROOVE JOINT

TYP

N

07/21/16



NOTES:

1. AREA OF ADD BARS AT EACH EDGE OF OPENING IN EACH DIRECTION SHALL BE EQUAL TO OR GREATER THAN 1/2 THE CROSS SECTIONAL AREA OF THE INTERRUPTED BARS.
2. PROVIDE STANDARD ACI HOOKS ON BARS IF STRAIGHT EXTENSION PAST THE OPENING, CANNOT BE ACHIEVED.
3. PLACE ADD BARS IN SAME PLANES AS INTERRUPTED REINFORCING.
4. PLACE #5 DIAGONAL BARS ON INSIDE OF INTERRUPTED REINFORCING.
5. * DIMENSION EQUALS OPENING DIMENSION MEASURED PERPENDICULAR TO ADD BARS PLUS LAP SPLICE LENGTH.
6. 2" CLEAR TO CONCRETE OPENINGS OR OUTSIDE FACE OF PIPES AND PIPE SLEEVES. DO NOT OVERCUT REINFORCEMENT FOR EASIER PLACEMENT OF WEEP RINGS AND FLANGES.
7. ADD BARS ARE NOT REQUIRED AT SIDES OF OPENINGS PARALLEL TO AND WITHIN 6" OF A WALL OR BEAM.

S180 ADDITIONAL REINFORCING AT OPENINGS IN CONCRETE SLABS OR WALLS

TYP

S

06/01/17



SAUSALITO-MARIN CITY SANITARY DISTRICT

COLOMA PUMP STATION REPLACEMENT PROJECT

TYPICALS
TYPICAL DETAILS
STRUCTURAL

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

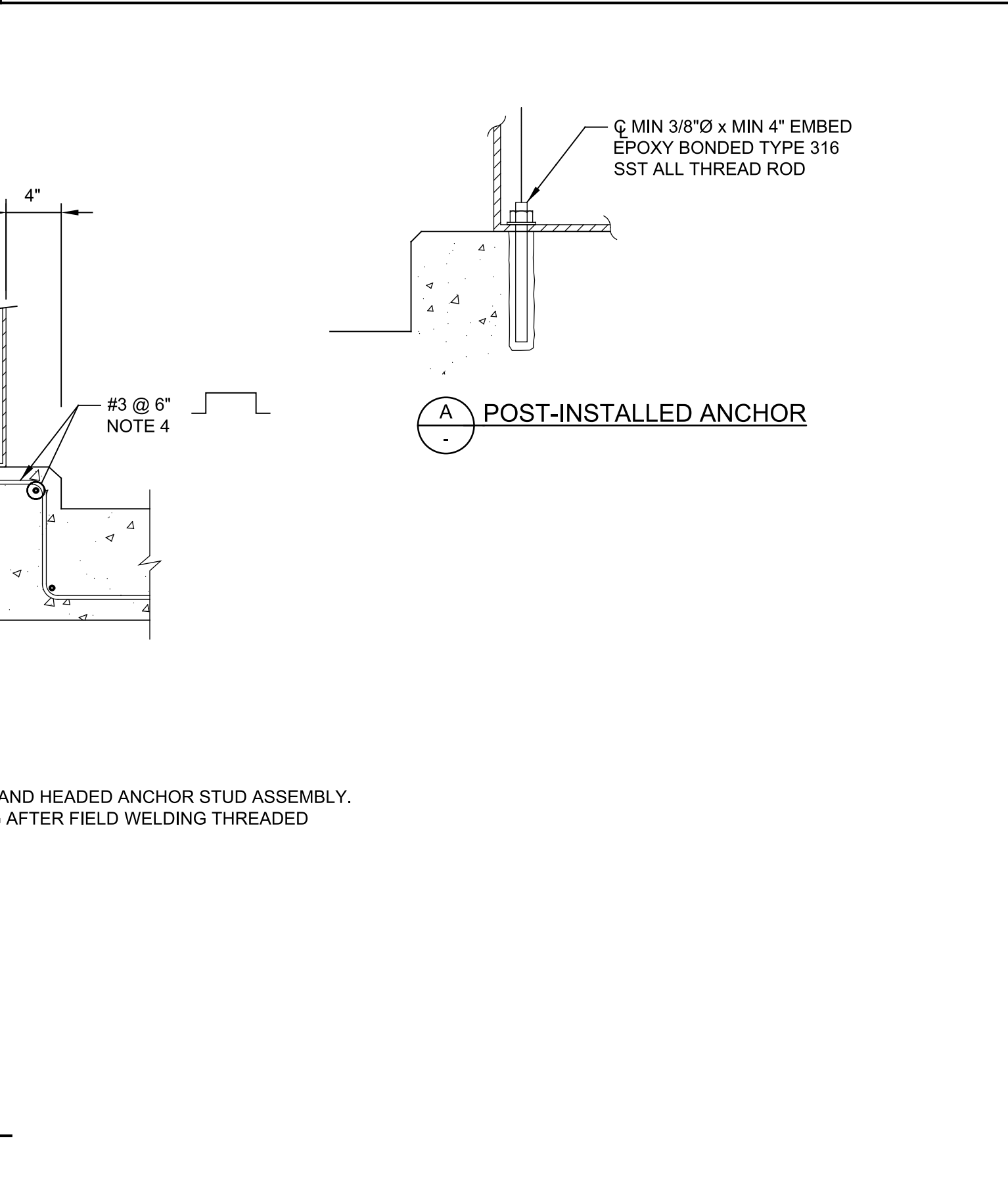
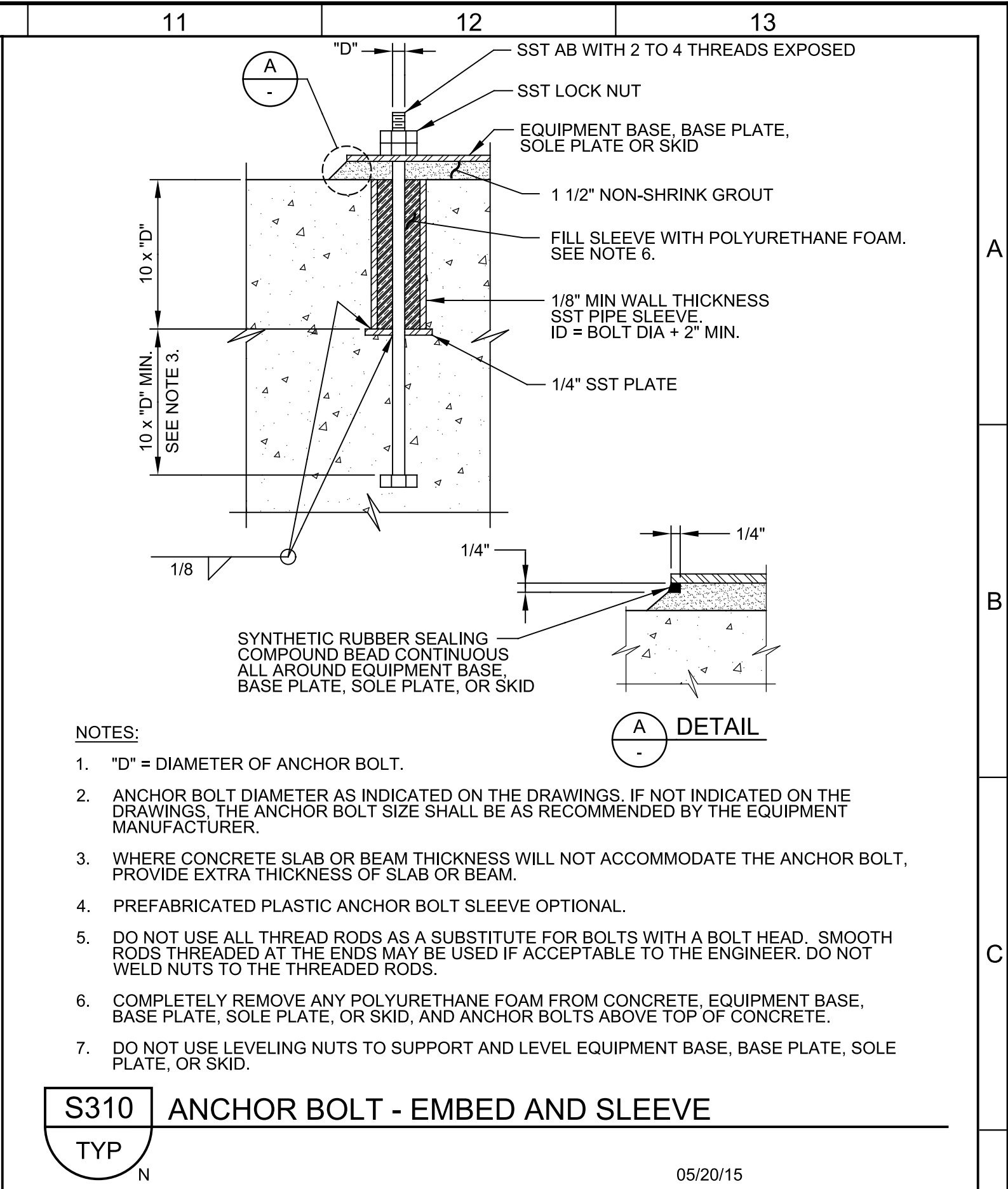
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
8231D.10

DRAWING NO.
TS02

SHEET NO.

16 OF 60



PROJECT NO. 8231D10 FILE NAME: 8231D10TS03.dgn

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1

2

3

A

B

C

GRATING - REBATE AND SEAT
ALUMINUM

NOTES:

- SEE SPECIFICATIONS FOR ALUMINUM GRATING.
- MAKE REBATE AND/OR SEAT CONTINUOUS AROUND OPENING.
- EMBEDDED REBATE ANGLE AND PLATE SHALL BE 1/4" MINIMUM THICKNESS.
- REBATE MAY BE EXTRUDED, SUBJECT TO ENGINEER'S ACCEPTANCE.
- COAT ALUMINUM SURFACES IN CONTACT WITH CONCRETE AS SPECIFIED.
- * = DIMENSION AS REQUIRED BY GRATING MANUFACTURER. SEE SPECIFICATIONS.

S542

TYP

NS

GRATING - REBATE AND SEAT

ALUMINUM

SHEET 1 OF 2

06/21/19

4

5

6

A

B

C

GRATING - REBATE AND SEAT
ALUMINUM

NOTES:

- SEE SPECIFICATIONS FOR ALUMINUM GRATING.
- MAKE REBATE AND/OR SEAT CONTINUOUS AROUND OPENING.
- EMBEDDED REBATE ANGLE AND PLATE SHALL BE 1/4" MINIMUM THICKNESS.
- REBATE MAY BE EXTRUDED, SUBJECT TO ENGINEER'S ACCEPTANCE.
- COAT ALUMINUM SURFACES IN CONTACT WITH CONCRETE AS SPECIFIED.
- * = DIMENSION AS REQUIRED BY GRATING MANUFACTURER. SEE SPECIFICATIONS.

S542

TYP

NS

GRATING - REBATE AND SEAT

ALUMINUM

SHEET 2 OF 2

06/21/19

7

8

9

A

B

C

H-20 HEAVY DUTY GRATING - REBATE AND SEAT
HOT-DIP GALVANIZED STEEL

NOTES:

- SEE SPECIFICATIONS FOR H-20 HEAVY DUTY HOT-DIP GALVANIZED STEEL GRATING.
- MAKE REBATE AND/OR SEAT CONTINUOUS AROUND OPENING.
- EMBEDDED REBATE ANGLE AND PLATE SHALL BE 1/4" MINIMUM THICKNESS.
- HOT-DIP GALVANIZED AFTER FABRICATION.
- * = DIMENSION AS REQUIRED BY GRATING MANUFACTURER. SEE SPECIFICATIONS.

S544

TYP

R

H-20 HEAVY DUTY GRATING - REBATE AND SEAT

HOT-DIP GALVANIZED STEEL

SHEET 1 OF 2

07/08/20

10

11

12

A

B

C

H-20 HEAVY DUTY GRATING - REBATE AND SEAT
HOT-DIP GALVANIZED STEEL

NOTES:

- SEE SPECIFICATIONS FOR H-20 HEAVY DUTY HOT-DIP GALVANIZED STEEL GRATING.
- MAKE REBATE AND/OR SEAT CONTINUOUS AROUND OPENING.
- EMBEDDED REBATE ANGLE AND PLATE SHALL BE 1/4" MINIMUM THICKNESS.
- HOT-DIP GALVANIZED AFTER FABRICATION.
- * = DIMENSION AS REQUIRED BY GRATING MANUFACTURER. SEE SPECIFICATIONS.

S544

TYP

R

H-20 HEAVY DUTY GRATING - REBATE AND SEAT

HOT-DIP GALVANIZED STEEL

SHEET 2 OF 2

07/08/20

REV	DATE	BY	DESCRIPTION

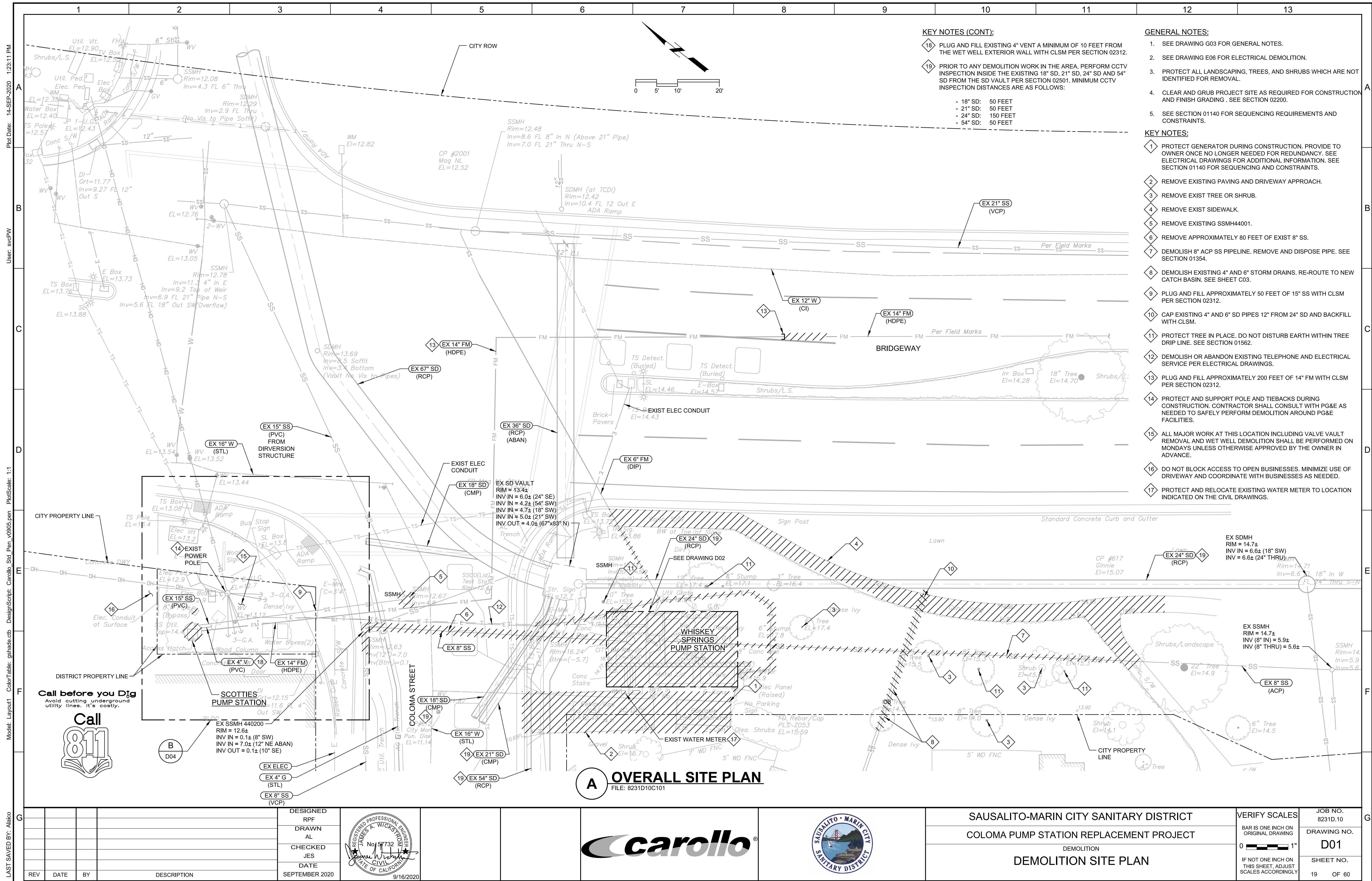
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DRAWN	CE
CHECKED	MED
DATE	SEPTEMBER 2020

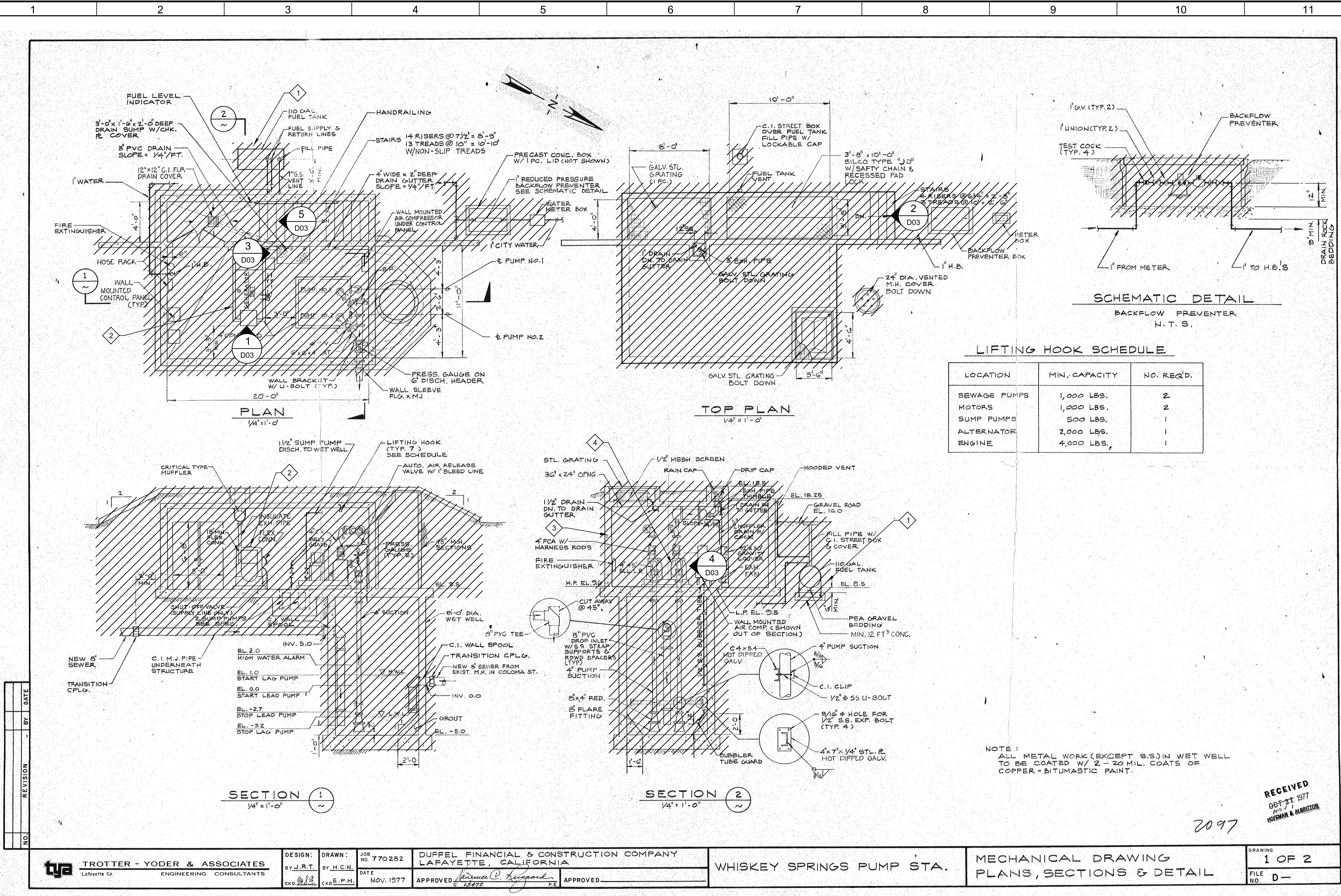


SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
TYPICALS
**TYPICAL DETAILS
STRUCTURAL**

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.
TS04
SHEET NO.
18 OF 60





GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING G03.
2. THIS DRAWING HAS BEEN REDUCED BY APPROXIMATELY 85% OF ORIGINAL SIZE.
3. SEE SECTION 01140 FOR SEQUENCING REQUIREMENTS AND CONSTRAINTS.
4. DEMOLISH ENTIRE WHISKEY SPRINGS PUMP STATION. SEE SPECIFICATION SECTION 01738.

KEY NOTES:

- 1 REMOVE AND DISPOSE OF BURIED 110 GAL FUEL TANK PER SECTION 01364.
- 2 HANDLE GENERATOR REMOVAL WITH CARE TO PREVENT HAZARDOUS SPILLS.
- 3 EXISTING PAINT WITHIN THE DRY PIT WAS TESTED AND FOUND TO CONTAIN LEAD. HANDLE PER SECTION 01354.
- 4 SALVAGE PUMPS, GENERATOR CAMLOCK BOX, VALVES, AND FLOATS. DELIVER TO OWNER.

TROTTER - YODER & ASSOCIATES Lafayette, Ca. ENGINEERING CONSULTANTS		DESIGN: BY J.R.T. CHKD. J.R.T.	DRAWN: BY H.C.N. CHKD. E.P.M.	JOB NO. 770282 DATE NOV. 1977	DUFFEL FINANCIAL & CONSTRUCTION COMPANY LAFAYETTE, CALIFORNIA APPROVED: [Signature] DATE 12/1/77	APPROVED: [Signature]
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WHISKEY SPRINGS PUMP STA.

MECHANICAL DRAWING
PLANS, SECTIONS & DETAIL

DRAWING
1 OF 2
FILE NO. D-

DESIGNED
RPF
DRAWN
AL
CHECKED
JES
DATE
SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
DEMOLITION
WHISKEY SPRINGS PUMP STATION
DEMOLITION PLANS AND SECTIONS

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. D02
SHEET NO. 20 OF 60

Plot Date: 14-SEP-2020 12:30:03 PM

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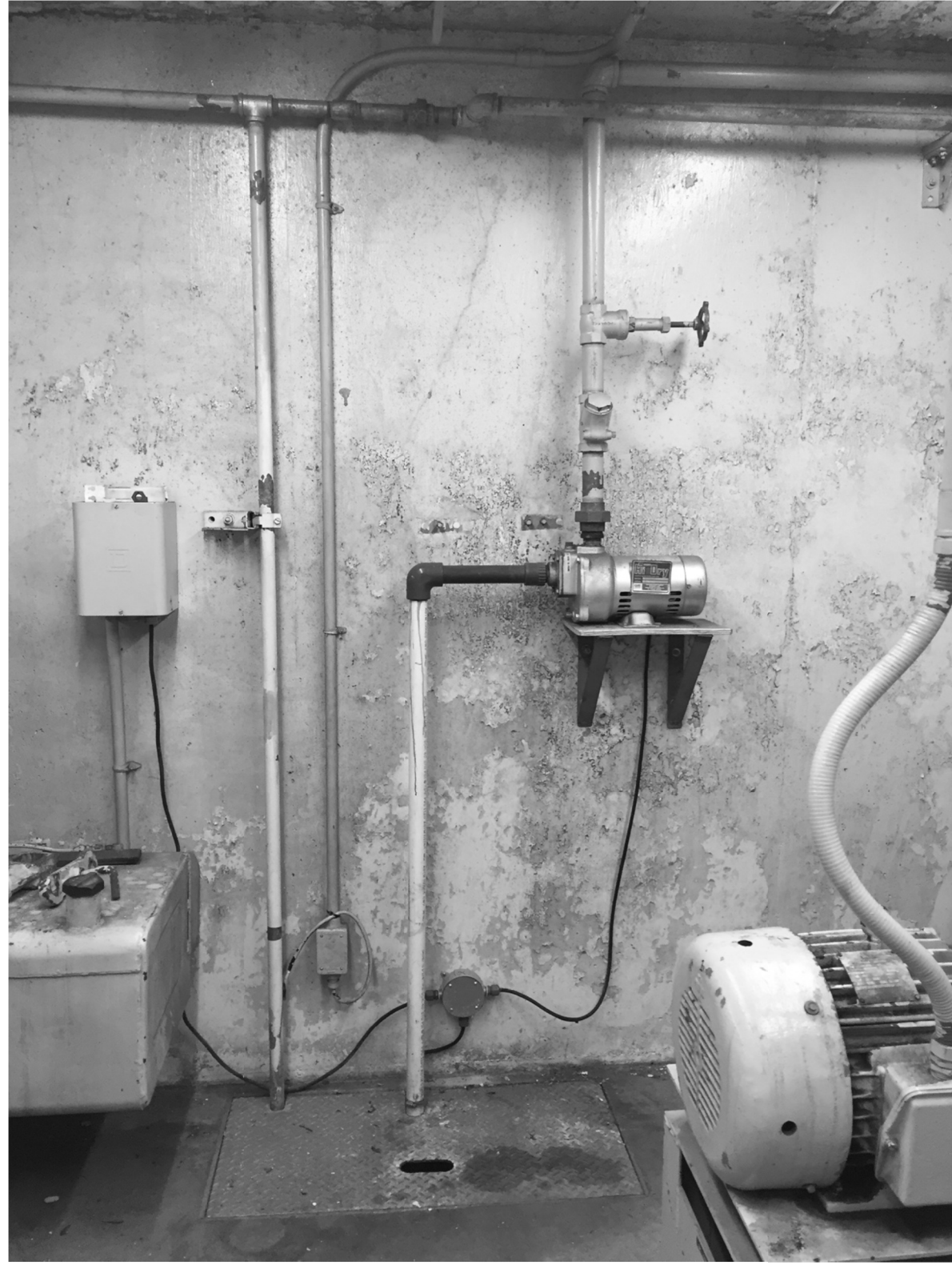


1 **STANDBY GENERATOR**
D02 SCALE: NO SCALE
FILE: 8231D10D03A



2 **EXTERIOR CONCRETE**
D02 SCALE: NO SCALE
FILE: 8231D10D03B

- GENERAL NOTES:**
1. SEE GENERAL NOTES ON DRAWINGS G03.
 2. SEE SECTION 01140 FOR SEQUENCING REQUIREMENTS AND CONSTRAINTS.
 3. SEE DRAWING E06 FOR ELECTRICAL DEMOLITION.
 4. REMOVE AND DISPOSE OF ALL EQUIPMENT AND CONCRETE STRUCTURES SHOWN IN PHOTOS.



3 **SUMP PUMP**
D02 SCALE: NO SCALE
FILE: 8231D10D03C



4 **PUMPS AND PIPING**
D02 SCALE: NO SCALE
FILE: 8231D10D03D



5 **INTERIOR STAIR**
D02 SCALE: NO SCALE
FILE: 8231D10D03E

REV	DATE	BY	DESCRIPTION

DESIGNED RPF
DRAWN ML
CHECKED JES
DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
DEMOLITION
WHISKEY SPRINGS PUMP STATION
DEMOLITON PHOTOS

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

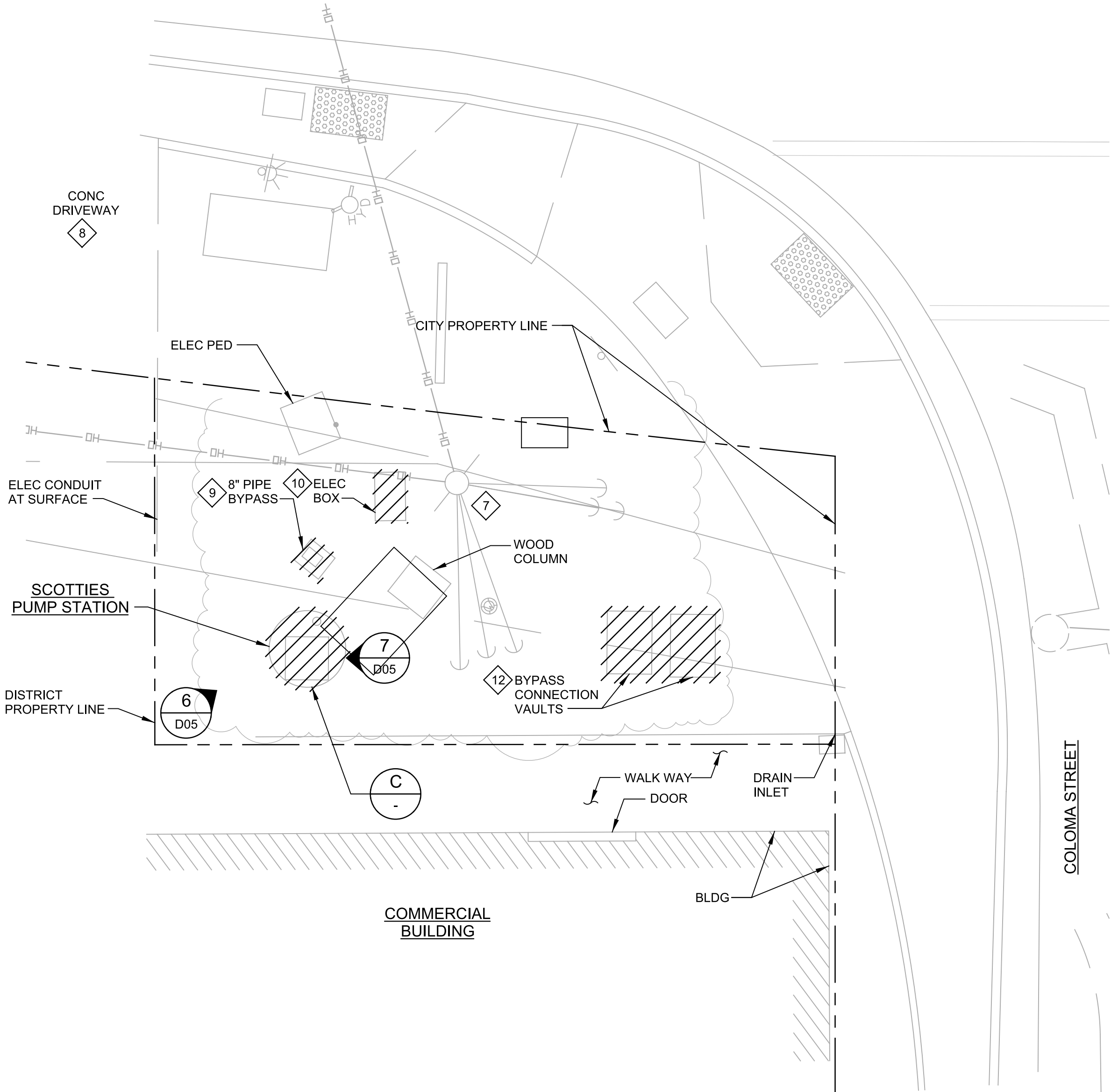
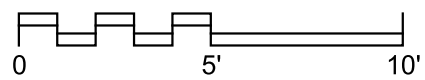
JOB NO. 8231D.10
DRAWING NO. D03
SHEET NO. 21 OF 60

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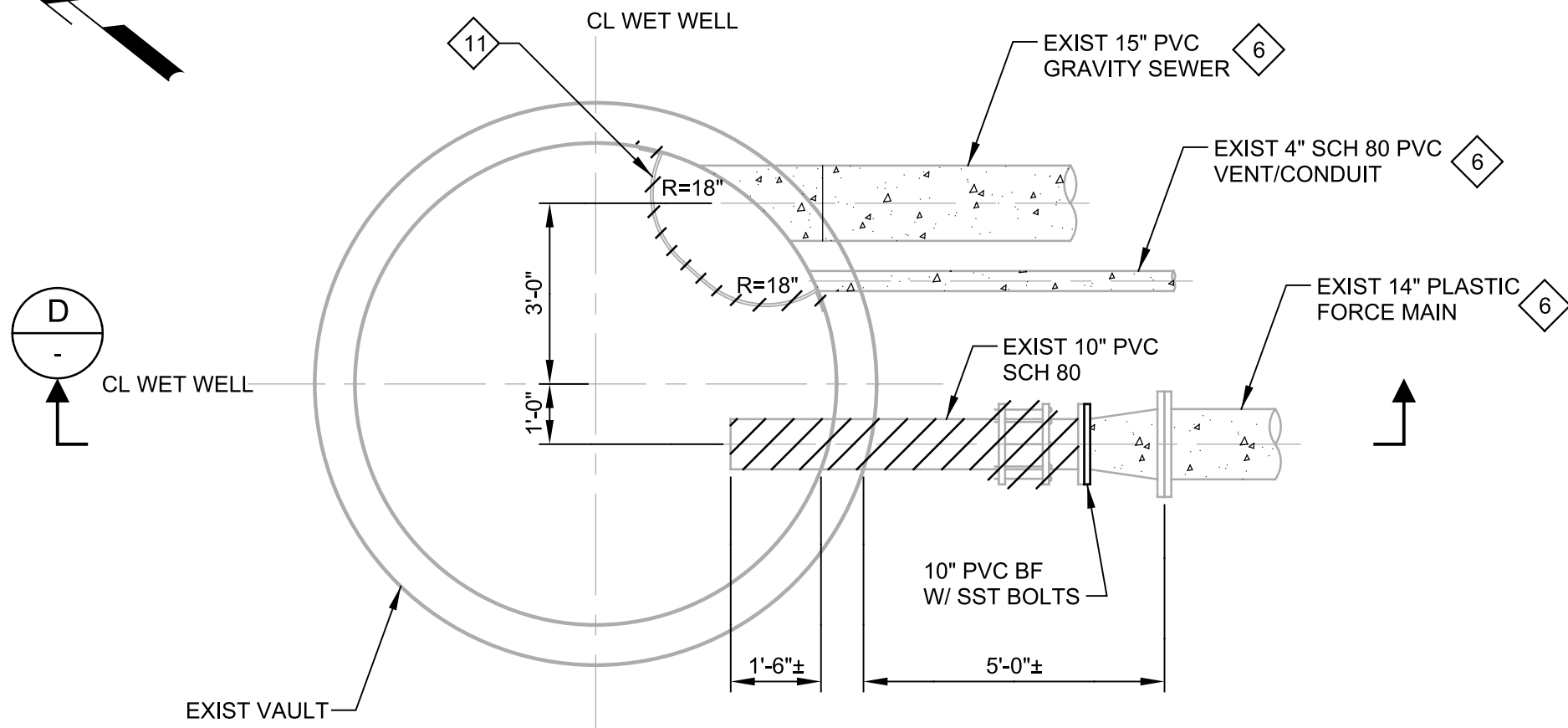
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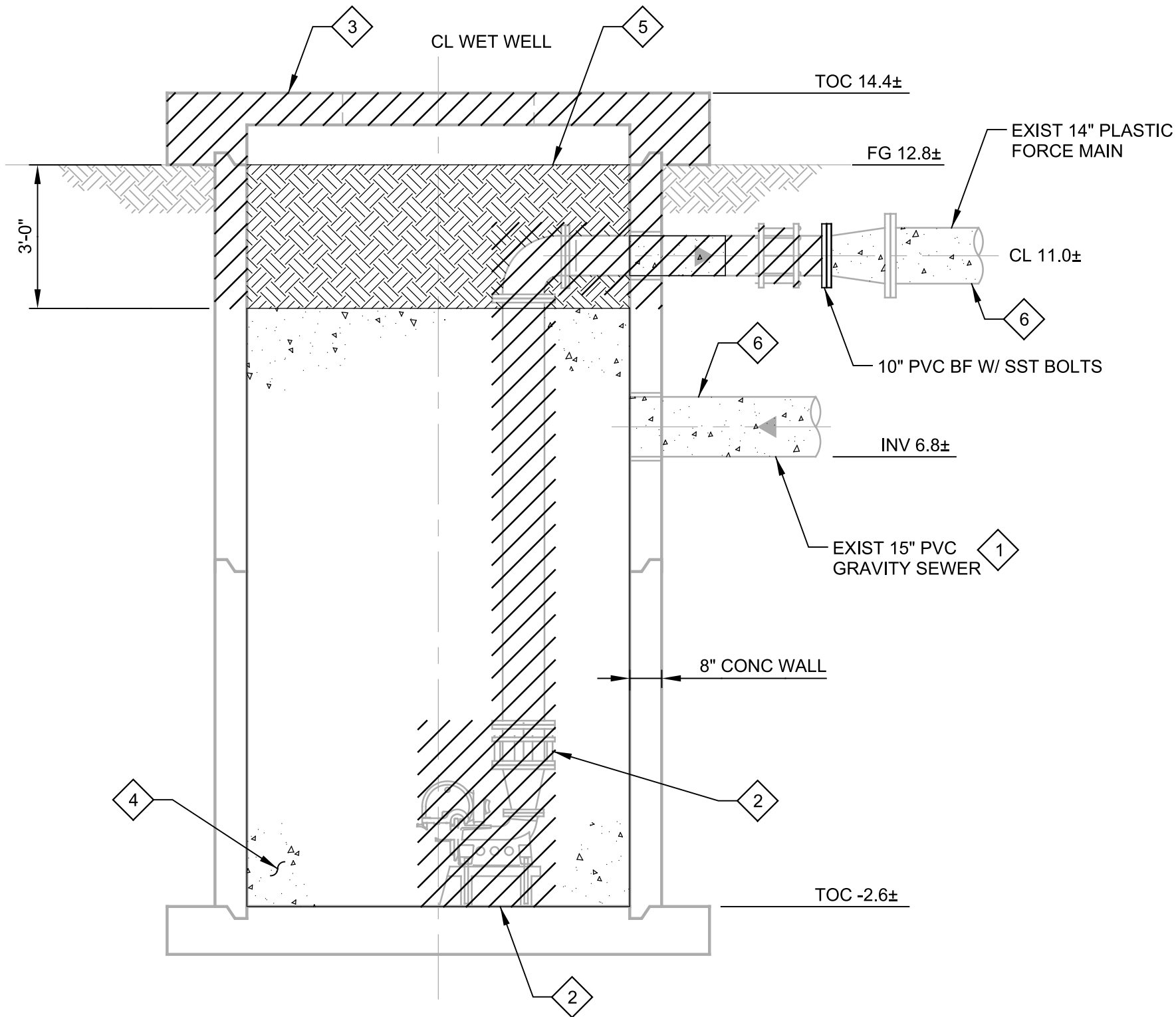
LAST SAVED BY: Alaloo



B ENLARGED PLAN
FILE: 8231D10C101



C PLAN
SCALE: 3/8" = 1'-0"
FILE: 8231D10D9101



D SECTION
SCALE: 3/8" = 1'-0"
FILE: 8231D10D9101

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING G03.
2. SEE SECTION 01140 FOR SEQUENCING REQUIREMENTS AND CONSTRAINTS.

KEY NOTES:

- 1 SHOWN OUT OF SECTION.
- 2 REMOVE PUMP AND ASSOCIATED, PUMP SUPPORTS, SUCTION AND DISCHARGE PIPING. COORDINATE WITH OWNER AND PROVIDE FITTINGS, AND EQUIPMENT TO DISTRICT AS REQUESTED. PROTECT PUMP AND PUMP CABLE DURING REMOVAL. ALL UNSAVED EQUIPMENT AND FITTINGS SHALL BE DISPOSED.
- 3 DEMOLISH EXISTING CONCRETE ROOF, ACCESS HATCH, AND CONCRETE WETWELL WALLS DOWN TO 3 FEET BELOW GRADE.
- 4 FILL WET WELL WITH CLSM PER SECTION 02312.
- 5 BACKFILL HOLE WITH TOPSOIL APPROVED BY OWNER'S REPRESENTATIVE.
- 6 PLUG PIPES AND FILL WITH CLSM PER SECTION 02312. SEE DRAWING D01 FOR LIMITS OF CLSM.
- 7 COORDINATE WITH PG&E TO SUPPORT POWER POLE AS REQUIRED FOR CONSTRUCTION.
- 8 ACCESS TO SCOTTIES PS IS THROUGH BUSINESS DRIVEWAY. CONTRACTOR SHALL NOTIFY OWNER PRIOR TO USE OF DRIVEWAY. BUSINESS HOURS ARE 9 AM TO 6 PM TUESDAY TO SATURDAY. TO THE EXTENT POSSIBLE, LIMIT DRIVEWAY USE TO BUSINESS NON-WORKING HOURS.
- 9 DEMOLISH PUMP STATION 8" PIPE BYPASS PIPING, VALVES, AND VAULT TO 3- FEET BELOW GRADE. FILL REMAINING PIPE WITH CLSM PER SECTION 02312. BACKFILL EXCAVATION WITH 3 FEET OF TOPSOIL.
- 10 SEE SHEET E06 FOR ELECTRICAL DEMO DETAILS.
- 11 DEMOLISH STAINLESS STEEL BAFFLE.
- 12 DEMOLISH EXISTING BYPASS VAULTS INCLUDING CHECK VALVE, PLUG VALVE, AND FLANGED CONNECTION DOWN TO 3 FEET BELOW GRADE.

REV	DATE	BY	DESCRIPTION

DESIGNED RPF
DRAWN AL
CHECKED JES
DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
DEMOLITION
SCOTTIES PUMP STATION ABANDONMENT
PLANS AND SECTION

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. D04
SHEET NO. 22 OF 60

Plot Date: 14-SEP-2020 1:23:45 PM

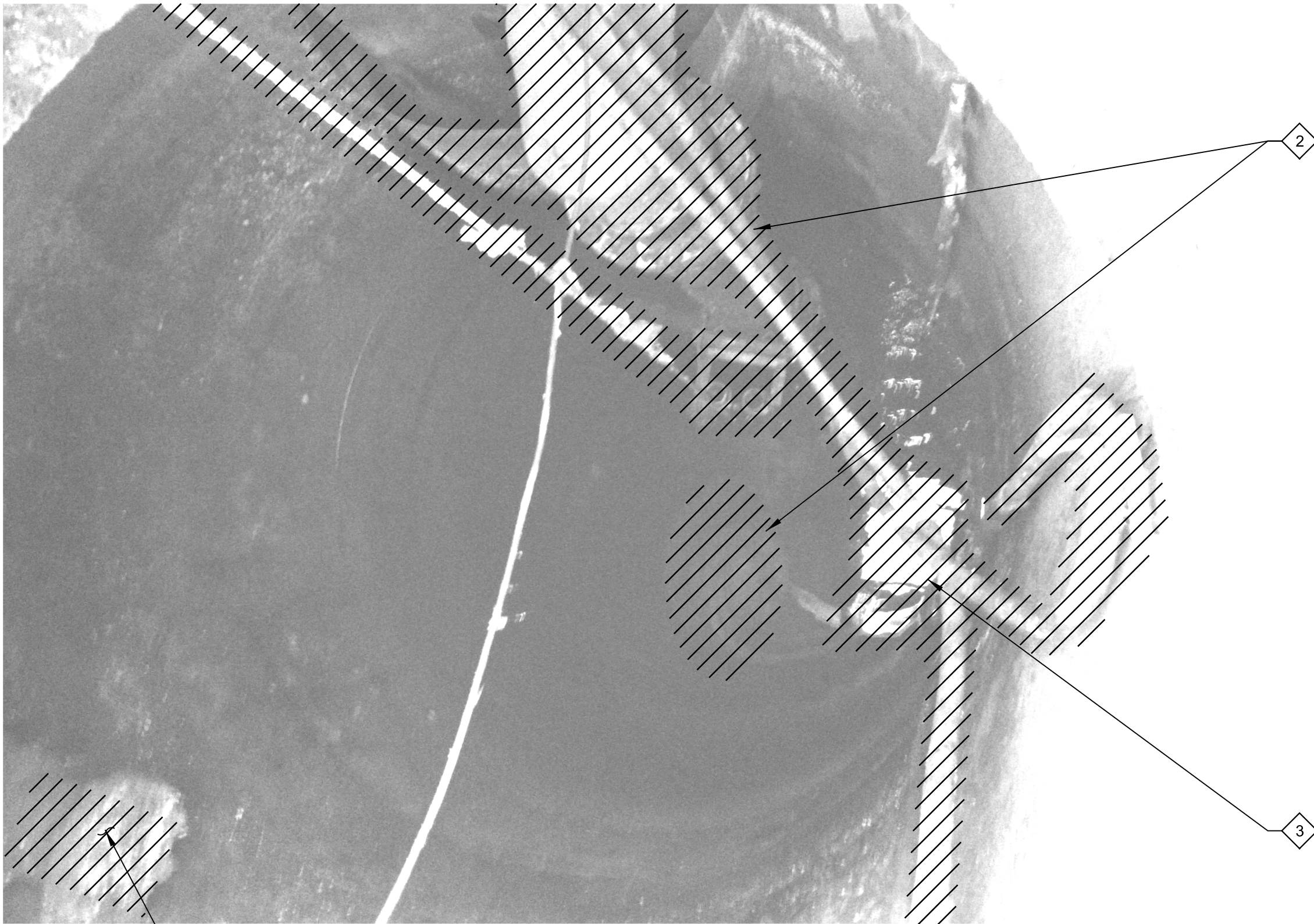
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Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: Alaloo



6 EXTERIOR OF SCOTTIES PS
D04 SCALE: NO SCALE
FILE: 8231D10D05A



7 INTERIOR OF SCOTTIES PS
D04 SCALE: NO SCALE
FILE: 8231D10D05B

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWINGS G03.
2. SEE SECTION 01140 FOR SEQUENCING REQUIREMENTS AND CONSTRAINTS.
3. SEE DRAWING E06 FOR ELECTRICAL DEMOLITION.

KEY NOTES:

1. DEMOLISH EXIST CONCRETE ROOF, ACCESS HATCH, AND CONCRETE WET WELL WALLS DOWN TO 3 FEET BELOW GRADE.
2. REMOVE PUMP AND ASSOCIATED PUMP SUPPORTS, SUCTION PIPING, AND BAFFLE.
3. REMOVE ULTRASONIC LEVEL TRANSMITTER AND PROVIDE TO OWNER.
4. PROTECT SHAPED PLANT AT ALL TIMES DURING CONSTRUCTION.

REV	DATE	BY	DESCRIPTION

DESIGNED RPF
DRAWN ML
CHECKED JES
DATE SEPTEMBER 2020

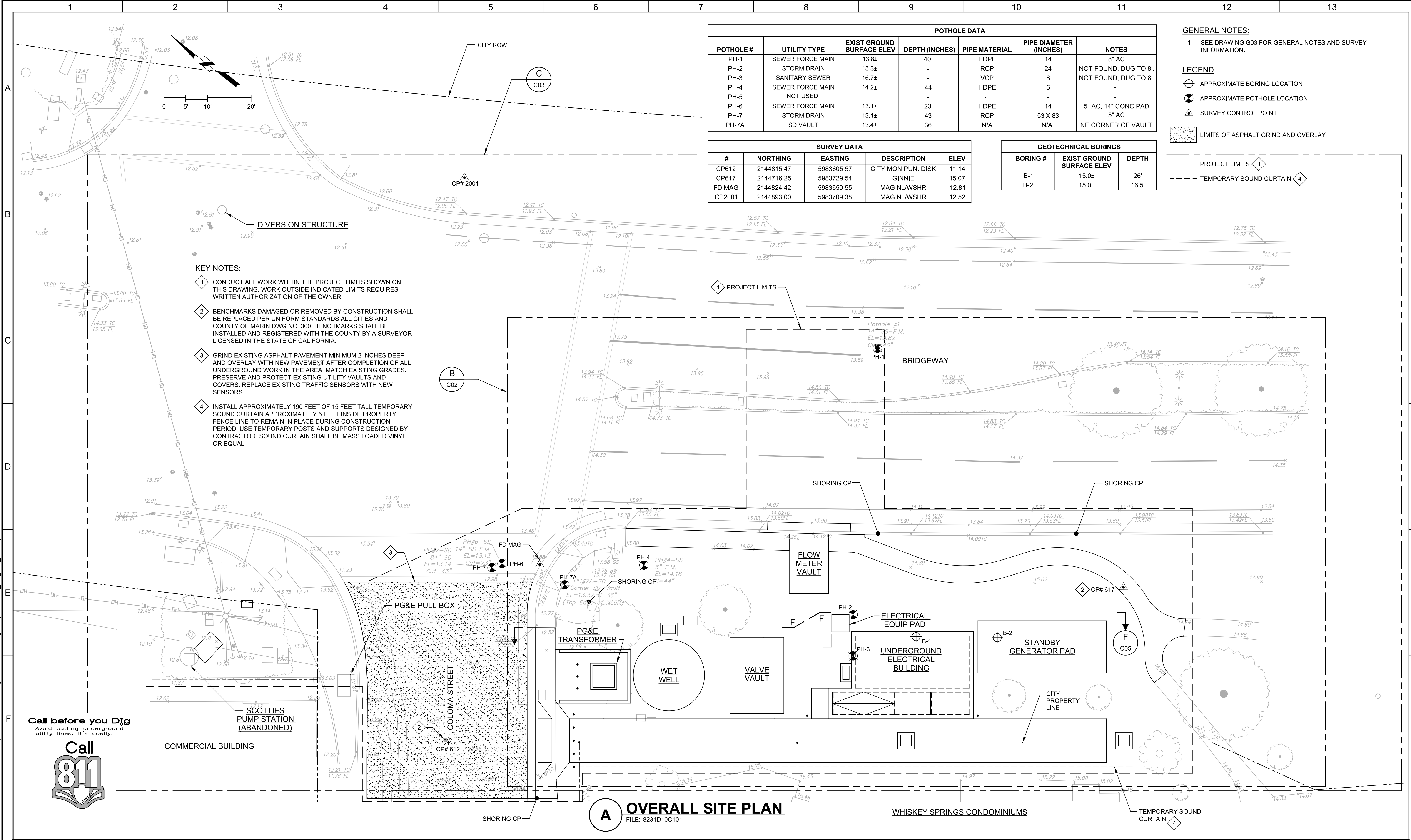


SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
DEMOLITION
SCOTTIES PUMP STATION ABANDONMENT DEMOLITION PHOTOS

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

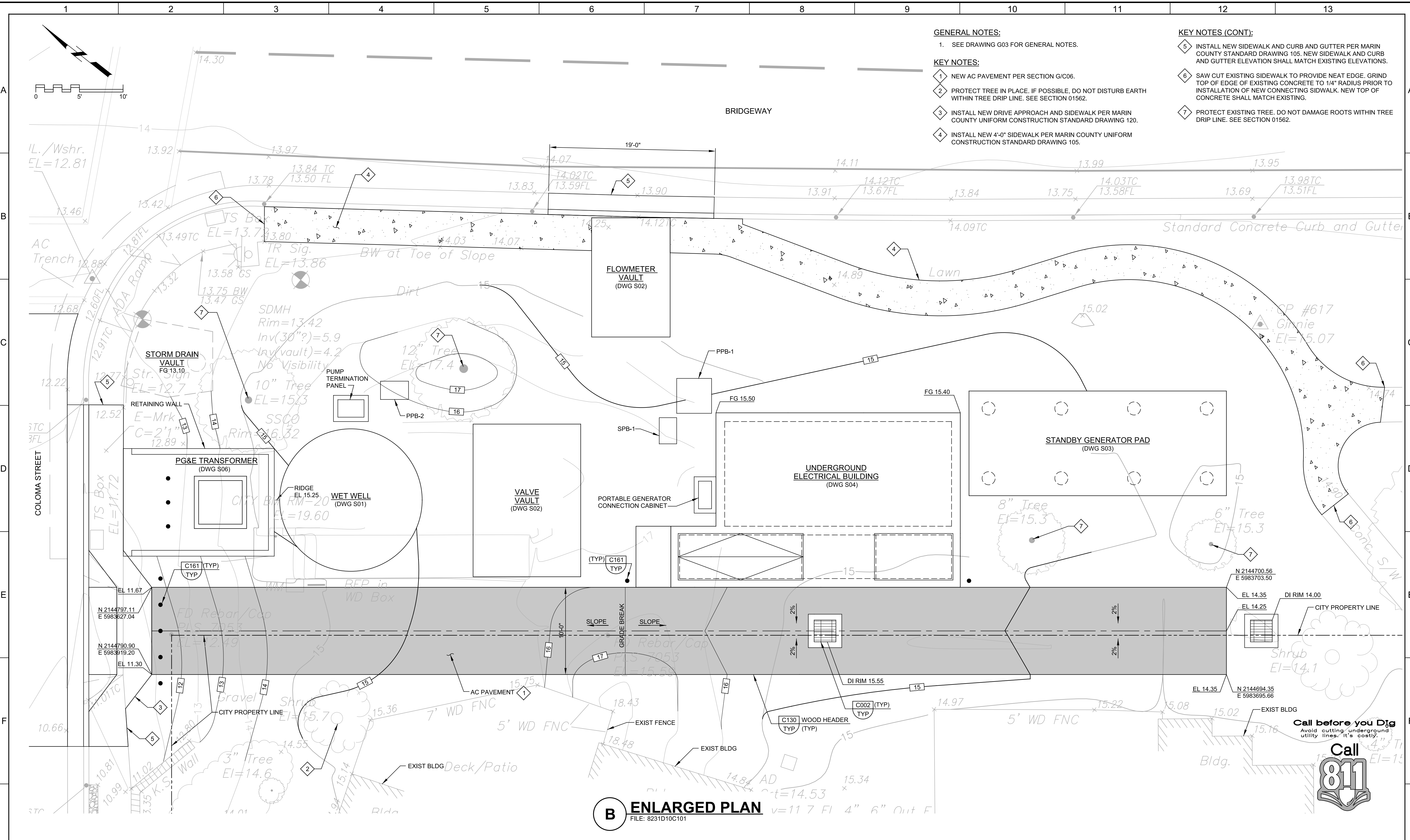
JOB NO. 8231D.10
DRAWING NO. D05
SHEET NO. 23 OF 60

Plot Date: 21-SEP-2020 2:35:43 PM User: svcPW Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1 LAST SAVED BY: Alairo



G					DESIGNED RPF								SAUSALITO-MARIN CITY SANITARY DISTRICT			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								
					DRAWN AL						COLOMA PUMP STATION REPLACEMENT PROJECT			DRAWING NO. C01											
					CHECKED JES						CIVIL														
					DATE SEPTEMBER 2020						OVERALL SITE PLAN			SHEET NO. 24 OF 60											
	REV	DATE	BY	DESCRIPTION																					
	1		2		3		4		5		6		7		8		9		10		11		12		13

Plot Date: 21-SEP-2020 2:35:45 PM
User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1
LAST SAVED BY: Alalco



GENERAL NOTES:

1. SEE DRAWING G03 FOR GENERAL NOTES.

KEY NOTES:

1. NEW AC PAVEMENT PER SECTION G/C06.
2. PROTECT TREE IN PLACE. IF POSSIBLE, DO NOT DISTURB EARTH WITHIN TREE DRIP LINE. SEE SECTION 01562.
3. INSTALL NEW DRIVE APPROACH AND SIDEWALK PER MARIN COUNTY UNIFORM CONSTRUCTION STANDARD DRAWING 120.
4. INSTALL NEW 4'-0" SIDEWALK PER MARIN COUNTY UNIFORM CONSTRUCTION STANDARD DRAWING 105.

KEY NOTES (CONT):

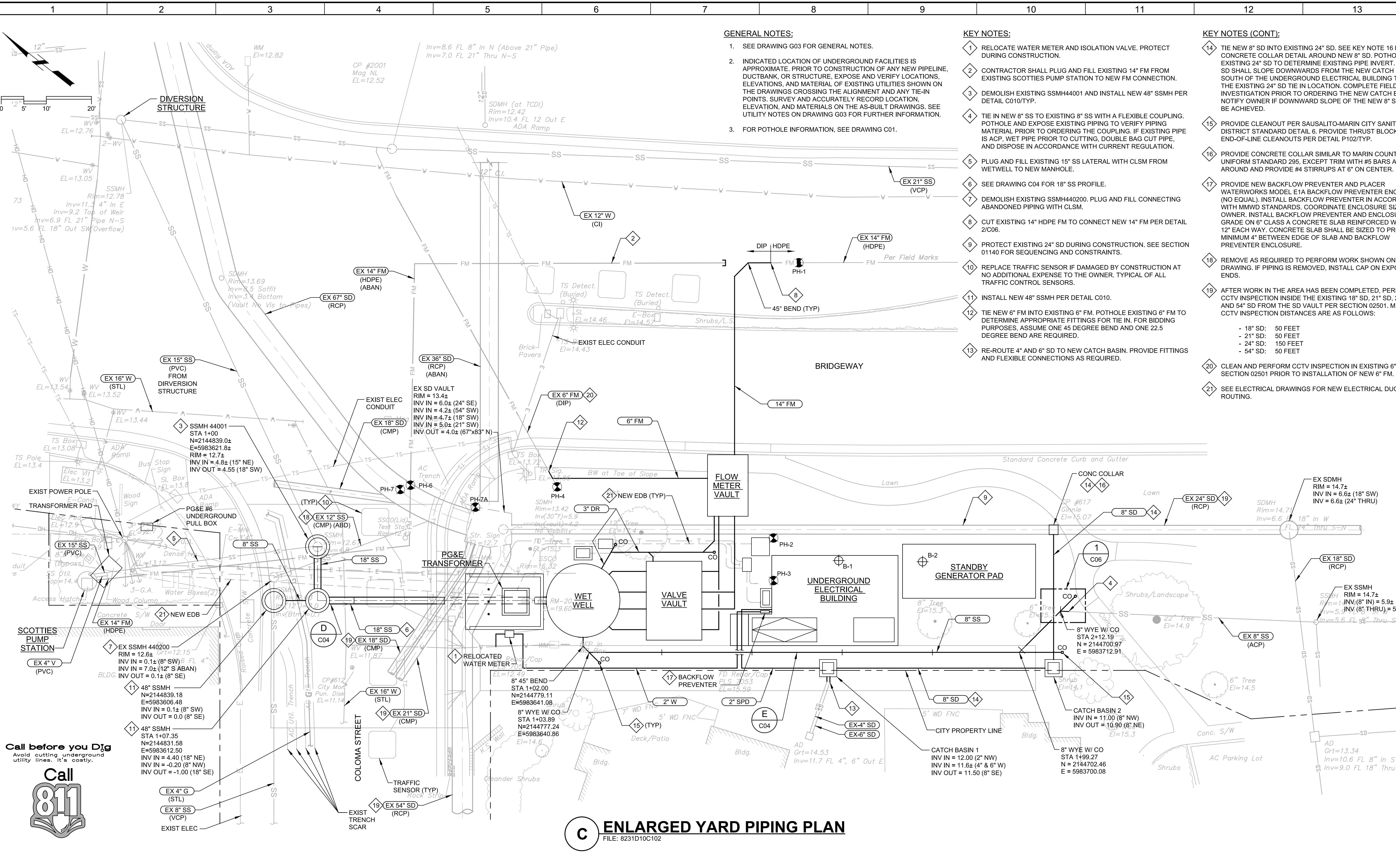
5. INSTALL NEW SIDEWALK AND CURB AND GUTTER PER MARIN COUNTY STANDARD DRAWING 105. NEW SIDEWALK AND CURB AND GUTTER ELEVATION SHALL MATCH EXISTING ELEVATIONS.
6. SAW CUT EXISTING SIDEWALK TO PROVIDE NEAT EDGE. GRIND TOP OF EDGE OF EXISTING CONCRETE TO 1/4" RADIUS PRIOR TO INSTALLATION OF NEW CONNECTING SIDEWALK. NEW TOP OF CONCRETE SHALL MATCH EXISTING.
7. PROTECT EXISTING TREE. DO NOT DAMAGE ROOTS WITHIN TREE DRIP LINE. SEE SECTION 01562.

B ENLARGED PLAN
FILE: 8231D10C101



G																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Plot Date: 21-SEP-2020 2:35:44 PM User: svcPW Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1 LAST SAVED BY: Alaioco



ENLARGED YARD PIPING PLAN
FILE: 8231D10C102



				DESIGNED RPF										SAUSALITO-MARIN CITY SANITARY DISTRICT				VERIFY SCALES								
				DRAWN AL										COLOMA PUMP STATION REPLACEMENT PROJECT				BAR IS ONE INCH ON ORIGINAL DRAWING								
				CHECKED JES										CIVIL				IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY								
				DATE SEPTEMBER 2020										YARD PIPING PLAN												
REV	DATE	BY	DESCRIPTION																							
1			2		3		4		5		6		7		8		9		10		11		12		13	

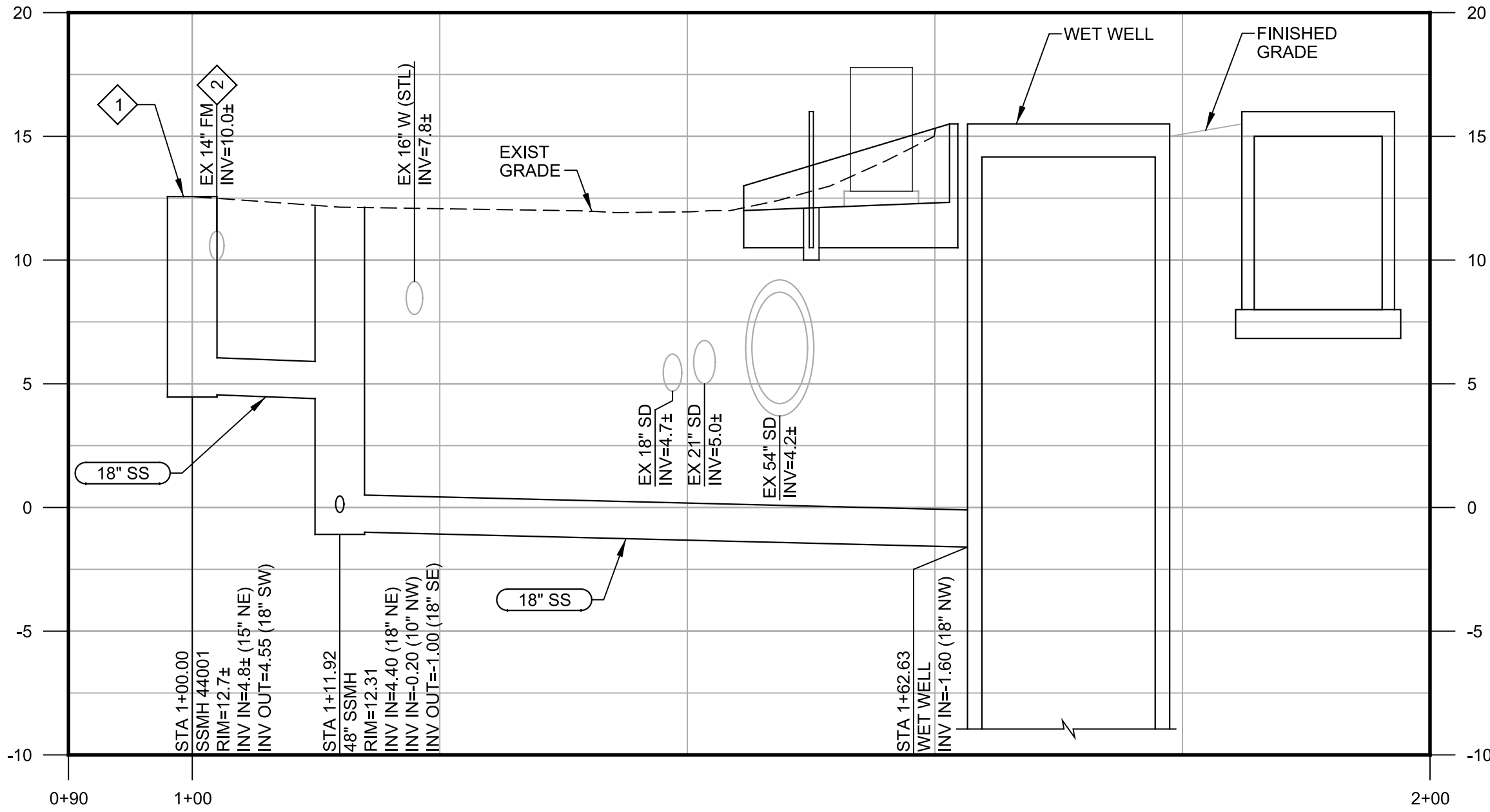
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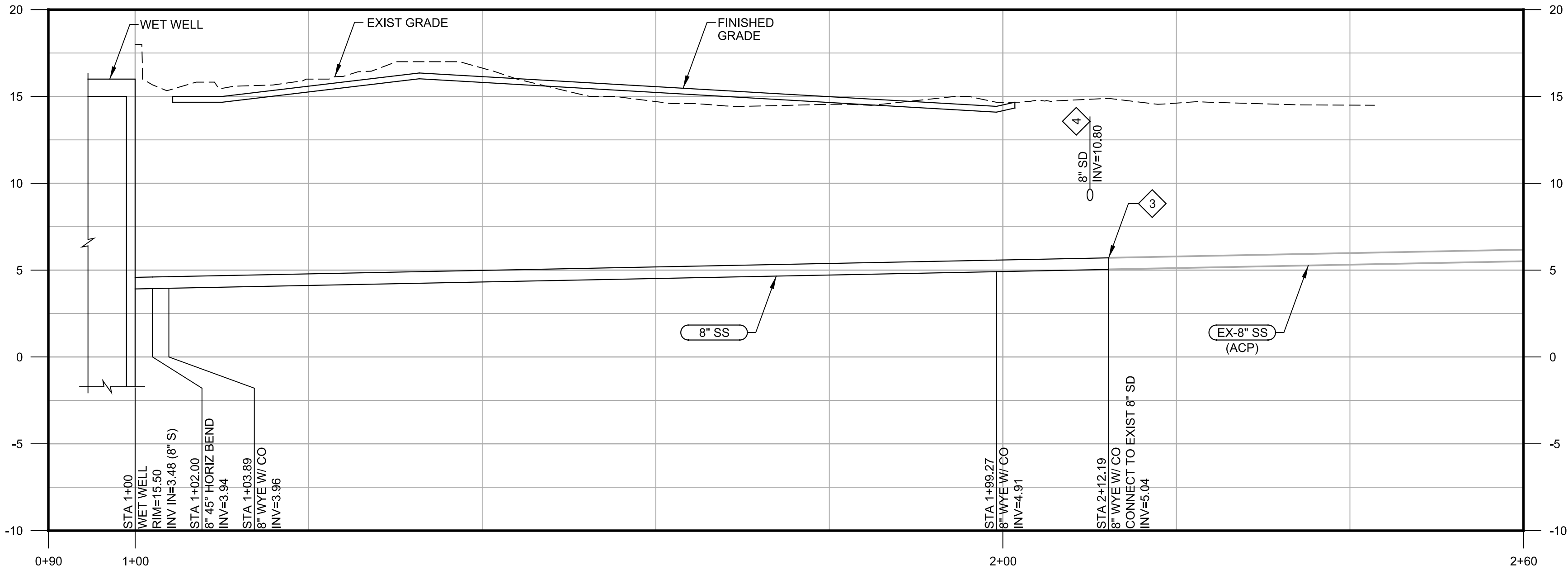
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LAST SAVED BY: Alaioc

D 18" SS PROFILE - COLOMA PUMP STATION
C03
HORIZ SCALE: 1" = 10'
VERT SCALE: 1" = 5'
FILE: 8231D10C102



E 8" SS PROFILE - COLOMA PUMP STATION
C03
HORIZ SCALE: 1" = 10'
VERT SCALE: 1" = 5'
FILE: 8231D10C102



GENERAL NOTES:

- SEE DRAWING G03 FOR GENERAL NOTES.

KEY NOTES:

- REMOVE AND REPLACE EXISTING SSMH 44001 WITH A NEW 48" MH. INSTALL NEW MANHOLE SSMH 44001 PER TYPICAL DETAIL C010.
- ABANDON EXISTING 14" FM. SEE DRAWING C03.
- CONNECT NEW 8" WYE TO 1/C06. ABANDON EXISTING 8" DOWNSTREAM PER D01.
- COORDINATE LOCATION OF NEW 8" SD WITH KEY NOTE 14 ON DRAWING C03.

REV	DATE	BY	DESCRIPTION

DESIGNED RPF
DRAWN AL
CHECKED JES
DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
CIVIL
PIPING PROFILES

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

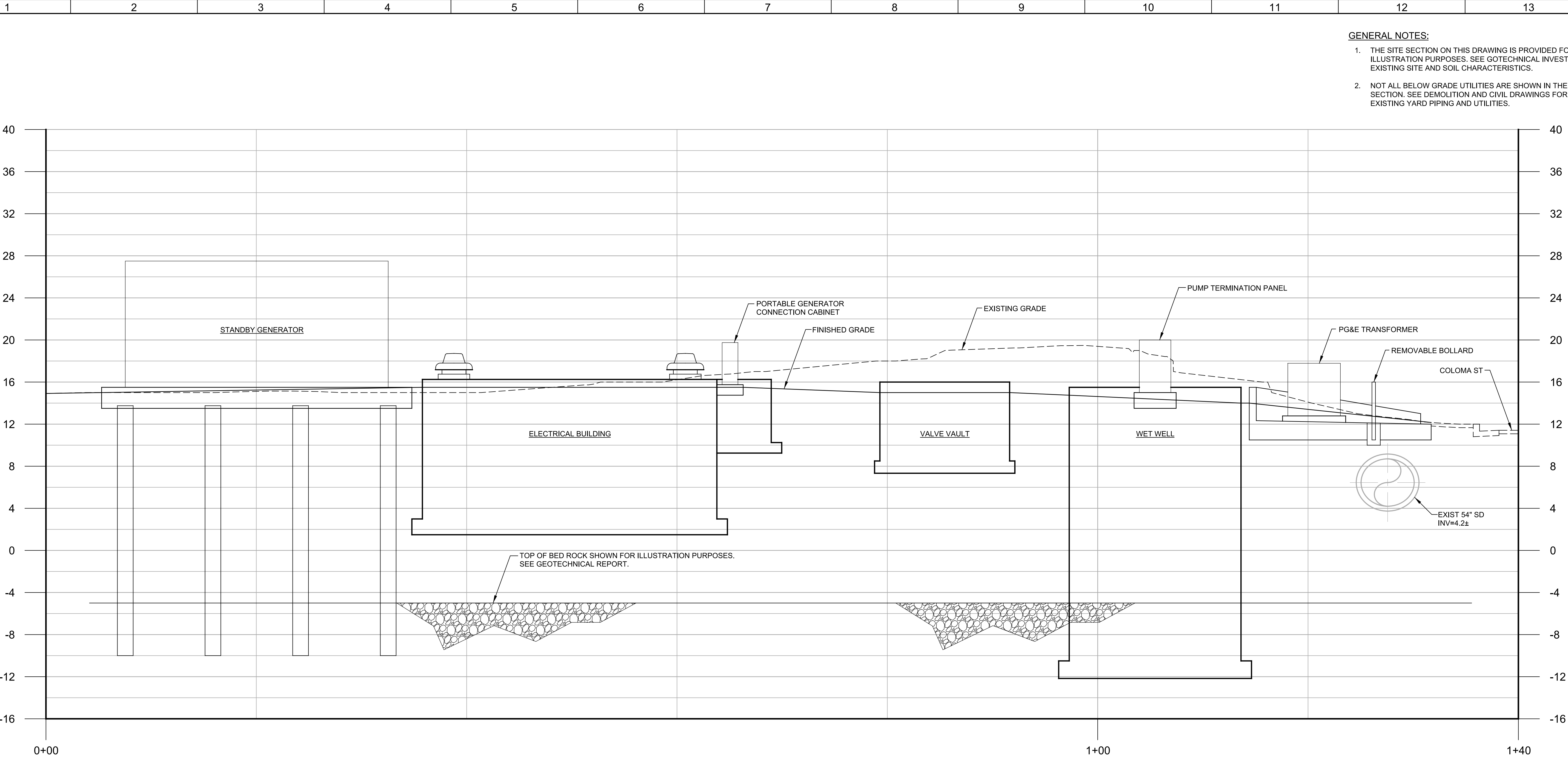
JOB NO. 8231D.10
DRAWING NO. C04
SHEET NO. 27 OF 60

Plot Date: 21-SEP-2020 2:25:53 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: Alaloo



- GENERAL NOTES:**
1. THE SITE SECTION ON THIS DRAWING IS PROVIDED FOR ILLUSTRATION PURPOSES. SEE GEOTECHNICAL INVESTIGATION FOR EXISTING SITE AND SOIL CHARACTERISTICS.
 2. NOT ALL BELOW GRADE UTILITIES ARE SHOWN IN THE SITE SECTION. SEE DEMOLITION AND CIVIL DRAWINGS FOR NEW AND EXISTING YARD PIPING AND UTILITIES.

F SITE SECTION
C01 SCALE: 1" = 5'
FILE: 8231D10C301

REV	DATE	BY	DESCRIPTION

DESIGNED
JAW
DRAWN
AL
CHECKED
JES
DATE
SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
CIVIL
SITE SECTION

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

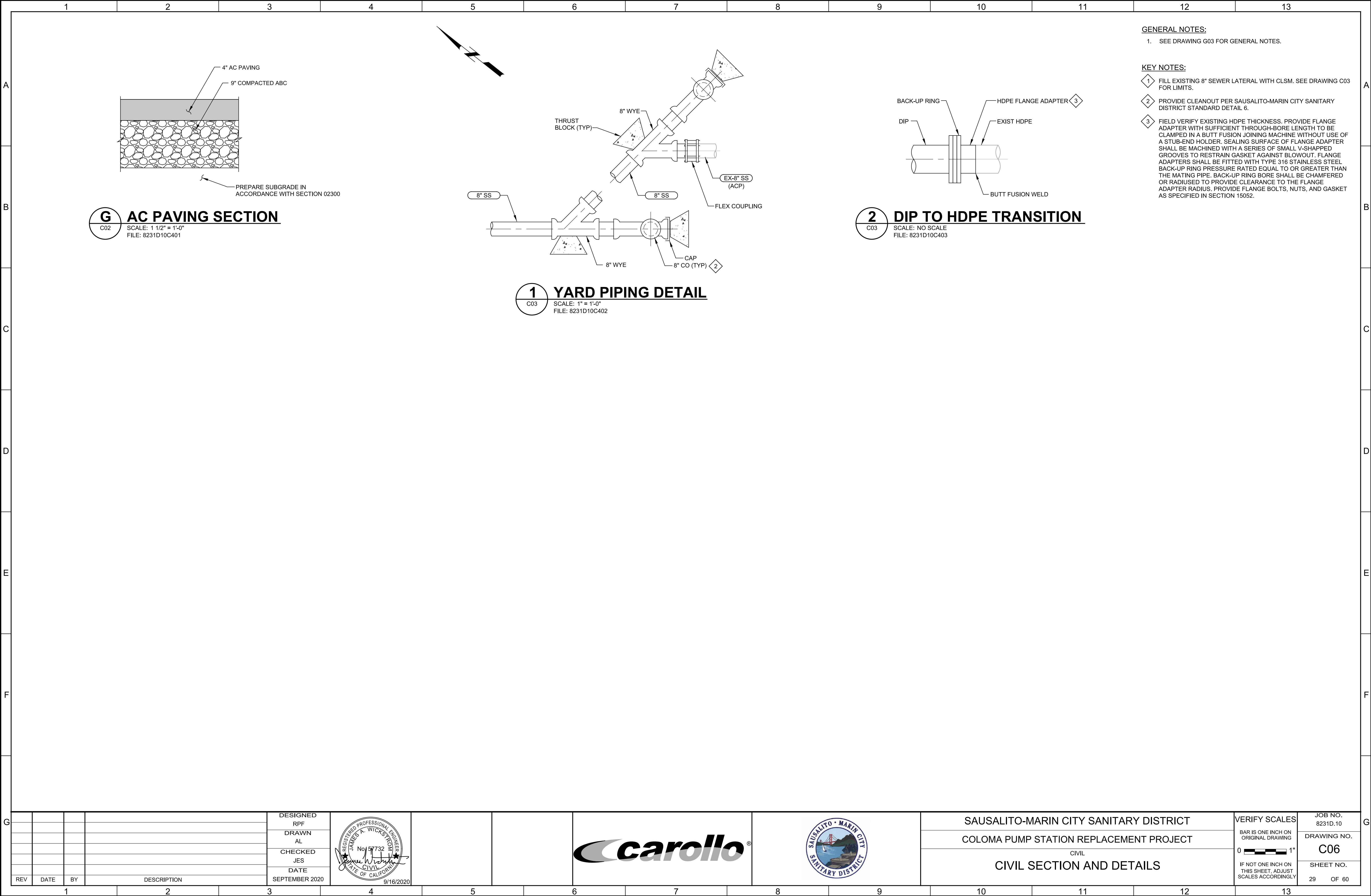
JOB NO.
8231D.10
DRAWING NO.
C05
SHEET NO.
28 OF 60

Plot Date: 14-SEP-2020 1:23:31 PM

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LAST SAVED BY: Alaloo

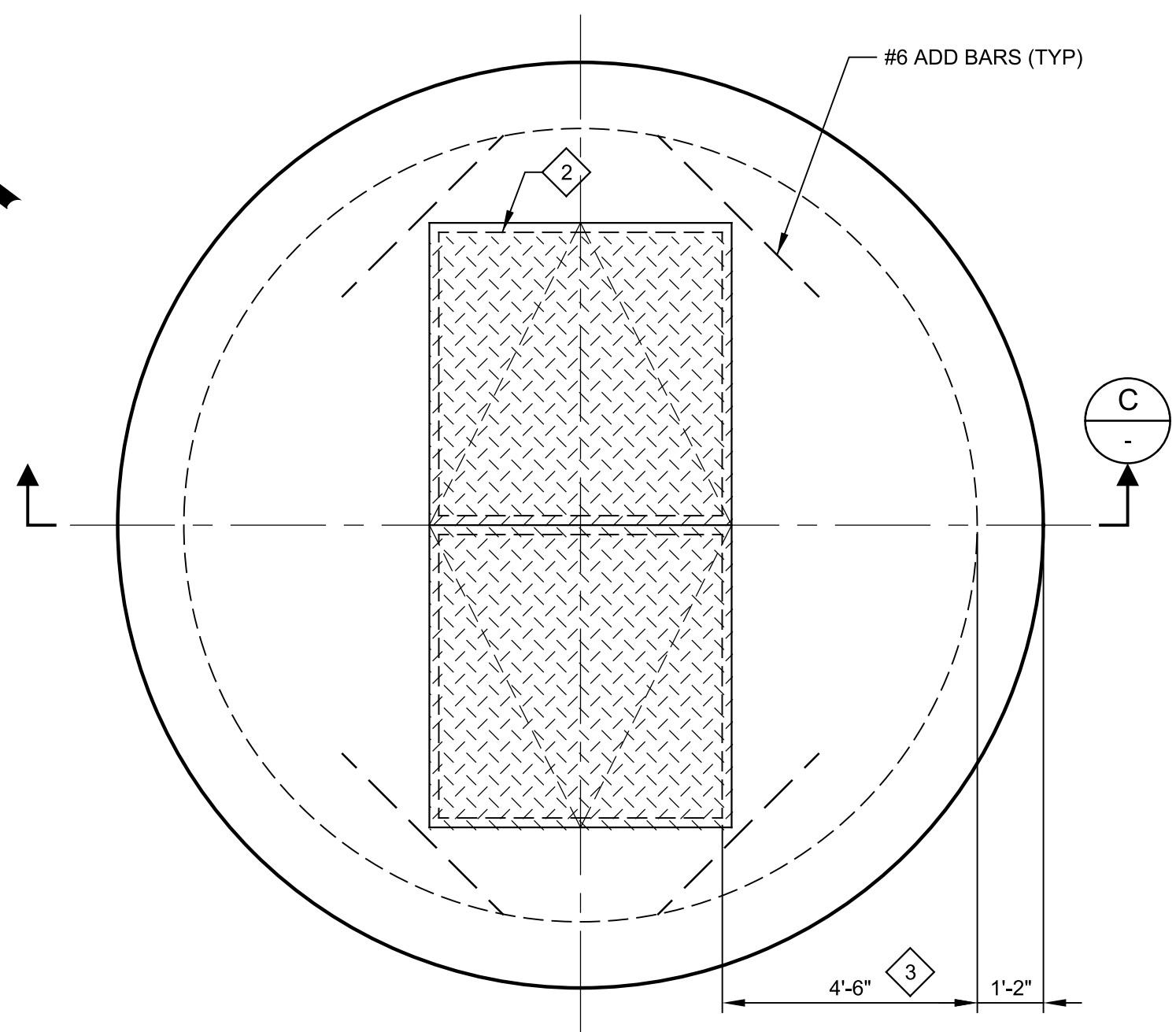


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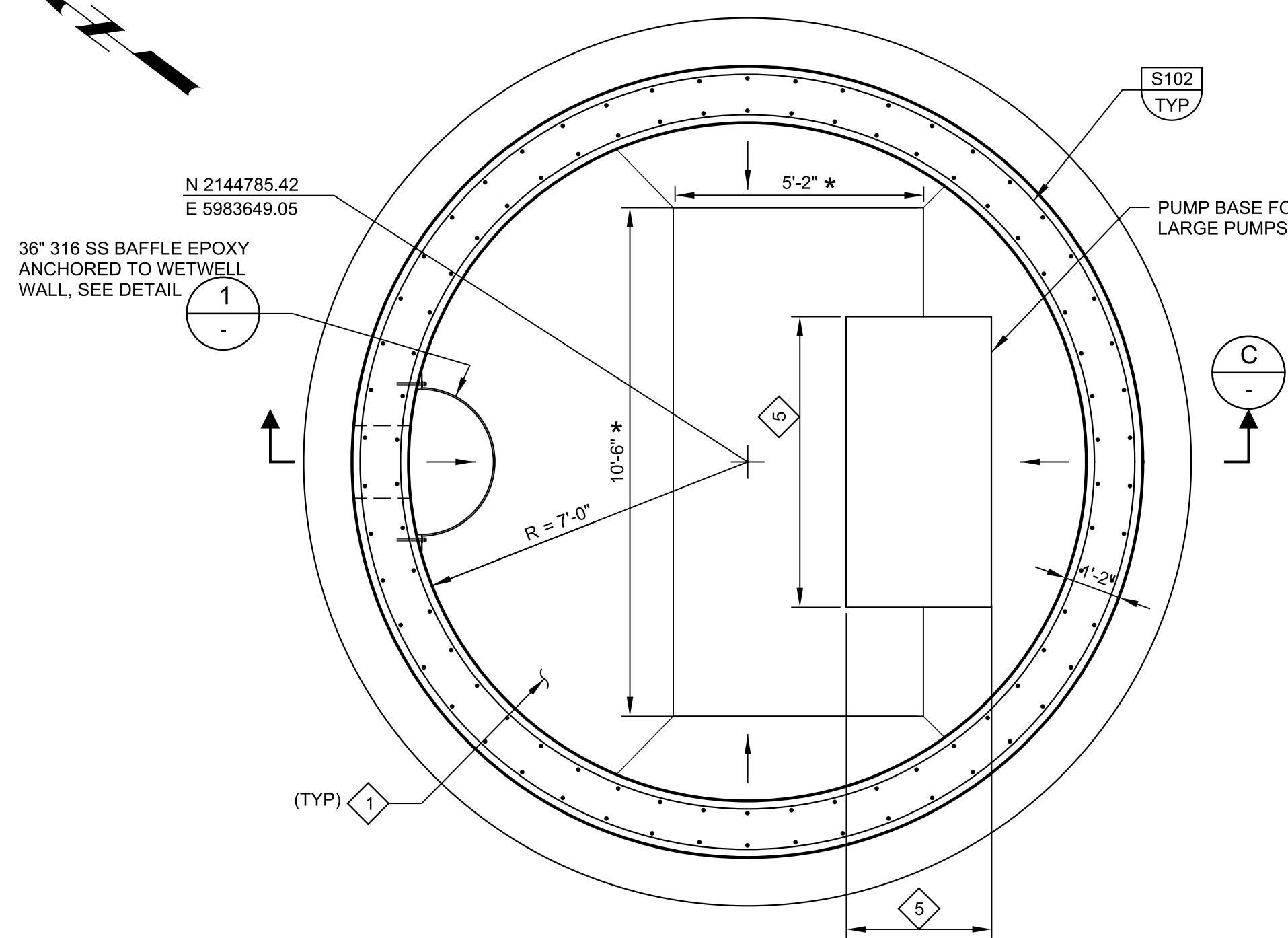
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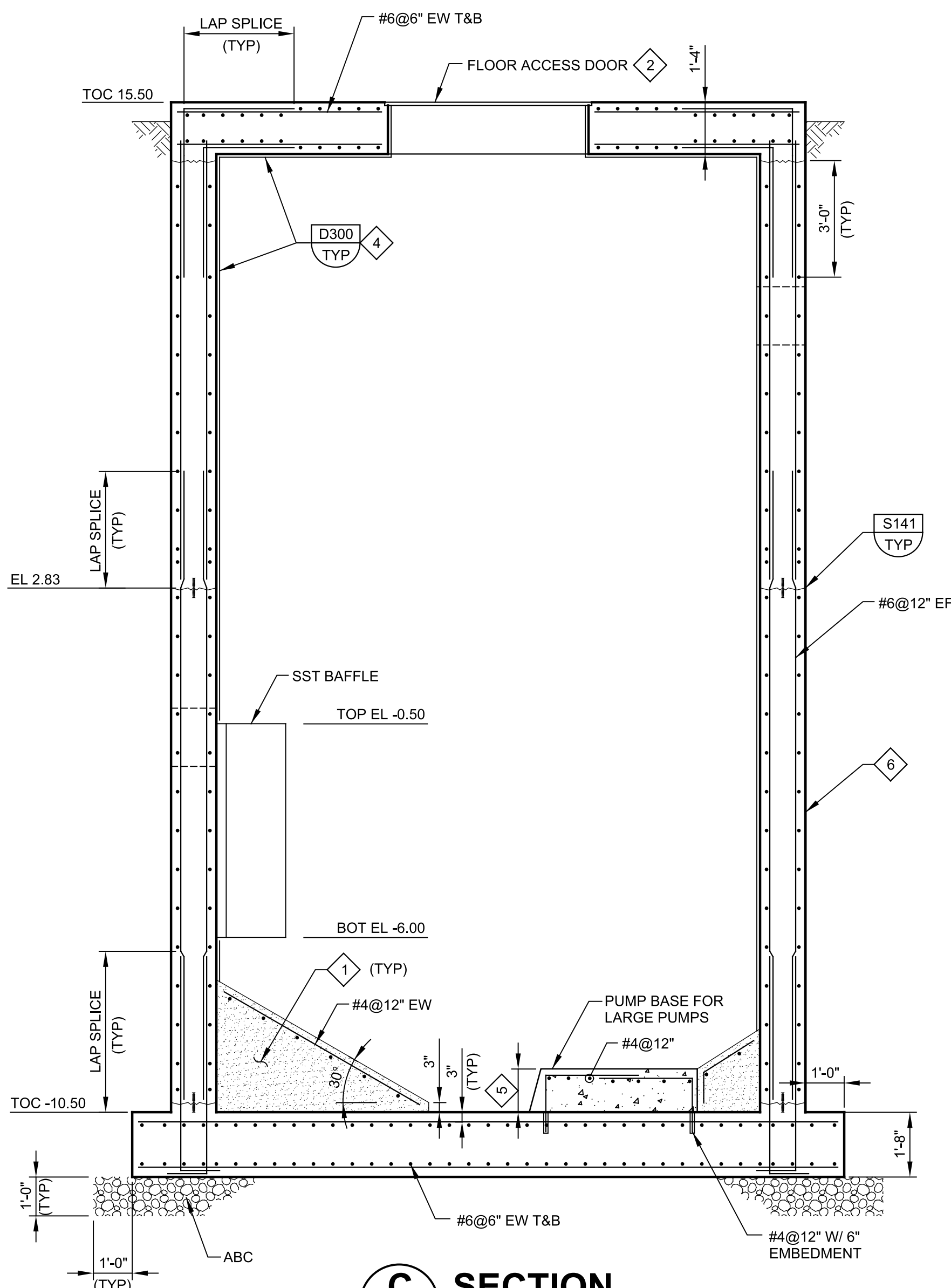
LAST SAVED BY: Alaloo



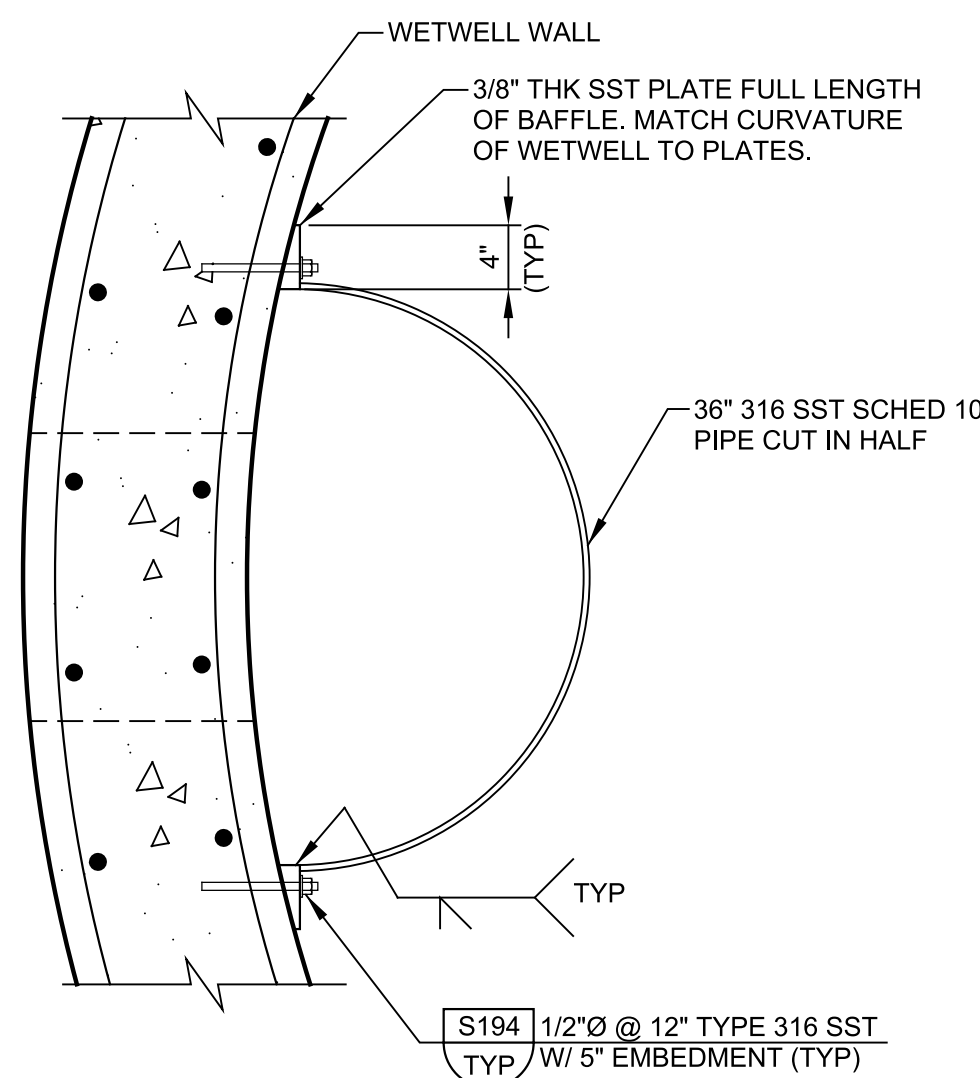
A TOP PLAN
SCALE: 3/8" = 1'-0"
FILE: 8231D10S102



B BOTTOM PLAN
SCALE: 3/8" = 1'-0"
FILE: 8231D10S101



C SECTION
SCALE: 3/8" = 1'-0"
FILE: 8231D10S301



1 BAFFLE DETAIL
SCALE: 1" = 1'-0"
FILE: 8231D10S101

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING G03.
2. PROVIDE GROUT PADS FOR INSTALLATION OF PIPE SUPPORTS ON CURVED SURFACES.
3. * COORDINATE DIMENSIONS WITH SUBMERSIBLE PUMP SUPPLIER AND CONFIRM WITH ENGINEER.

KEY NOTES:

- 1 CLASS "C" CONCRETE FILL PER SECTION 03300.
- 2 5'-0"x10'-4" MEDIUM DUTY ALUMINUM DOUBLE LEAF FLOOR ACCESS DOOR WITH FALL PROTECTION GRATING SYSTEM PER SECTION 08320. CONFIRM DIMENSIONS AND LOCATION WITH SUBMERSIBLE PUMP MANUFACTURER. VERIFY DOOR OPENING ORIENTATION WITH OWNER DURING SHOP DRAWING SUBMITTAL REVIEW. COVERS SHALL INCLUDE A LIFT ASSIST SYSTEM.
- 3 COORDINATE POSITION OF PUMP HATCH WITH SUBMERSIBLE PUMPS AND GUIDE RAILS.
- 4 COAT ALL INTERIOR SURFACES OF PUMP STATION PER SPECIFICATION 09960, APPENDIX B, CODE POL-C-1-BCS.
- 5 COORDINATE PUMP BASE HEIGHT, WIDTH, AND LENGTH WITH SUBMERSIBLE PUMP MANUFACTURER.
- 6 DAMP PROOF EXTERIOR OF PUMP STATION WALLS PER SECTION 07110.

REV	DATE	BY	DESCRIPTION

DESIGNED MJH
DRAWN MJG
CHECKED MED
DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
STRUCTURAL
COLOMA PUMP STATION WET WELL
PLANS, SECTION AND DETAIL

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

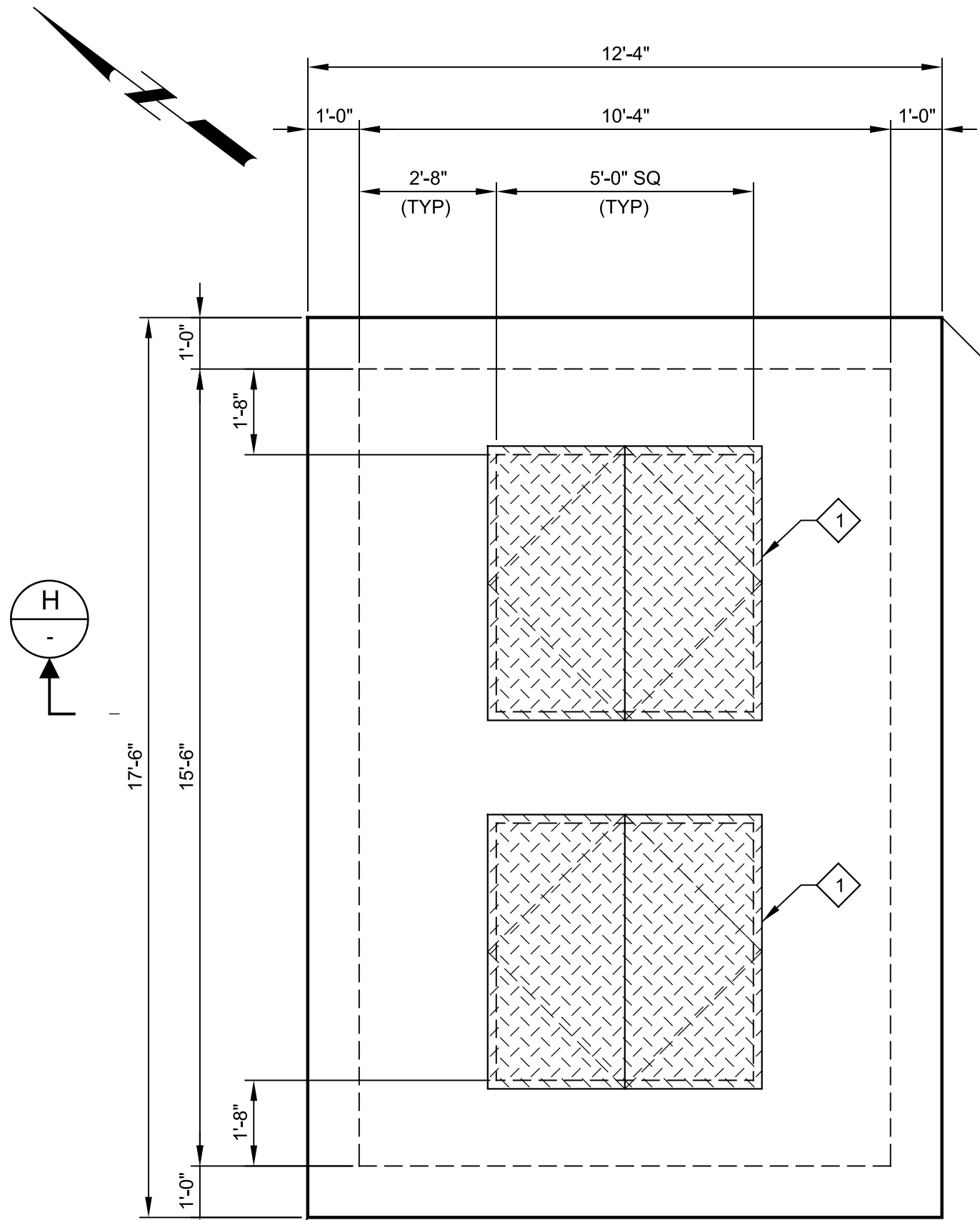
JOB NO.
8231D.10
DRAWING NO.
S01
SHEET NO.
30 OF 60

Plot Date: 14-SEP-2020 1:22:07 PM

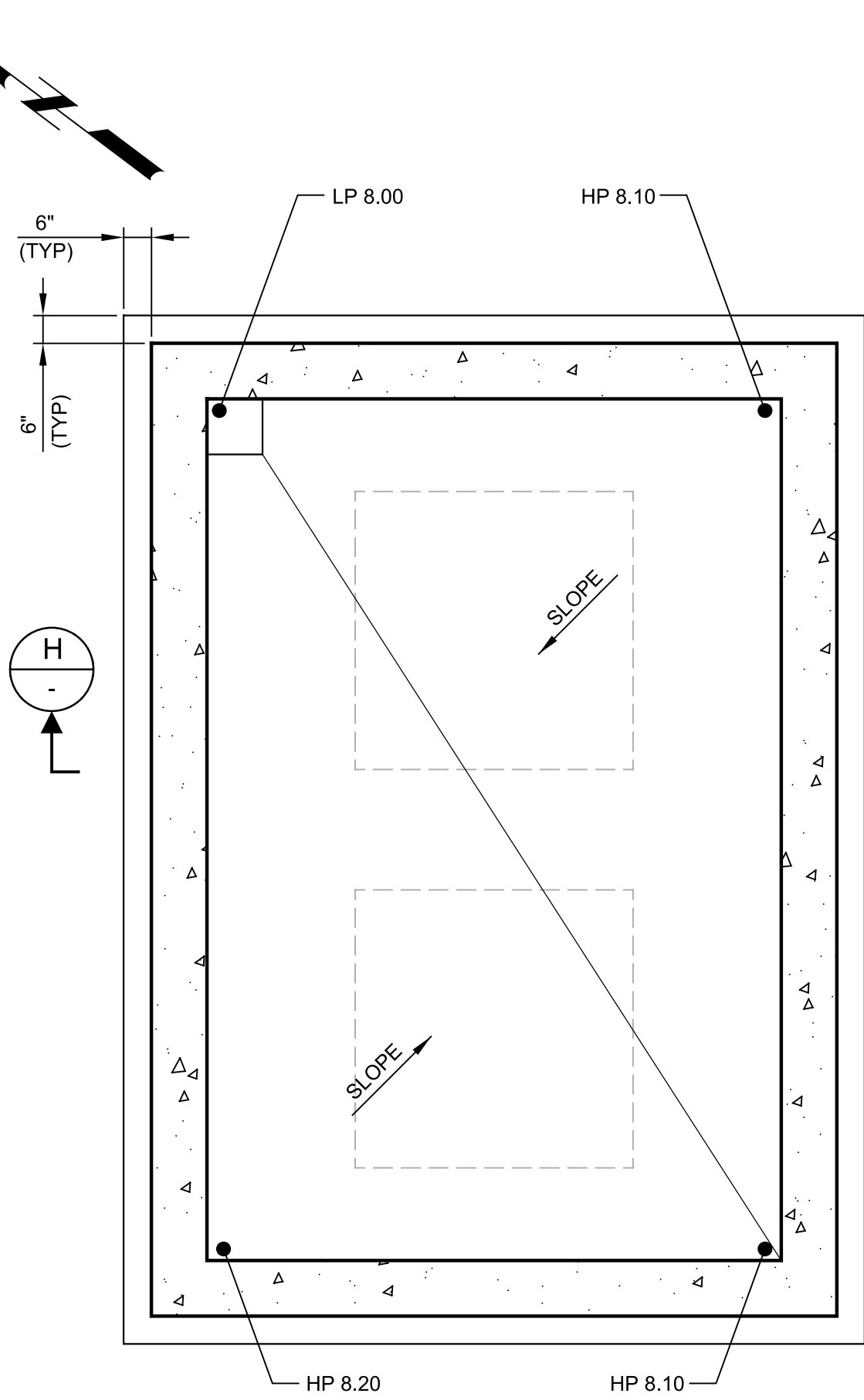
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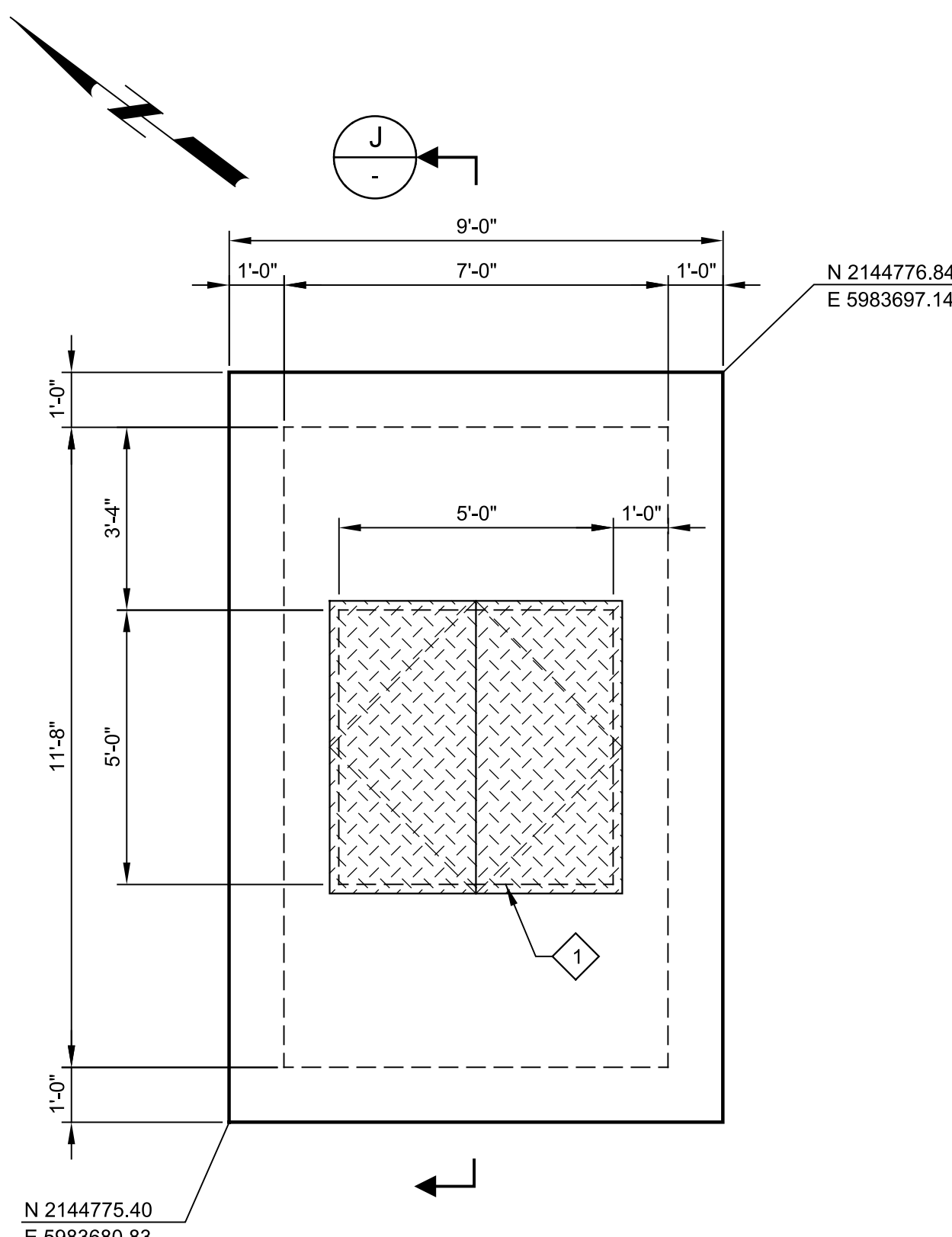
LAST SAVED BY: Alalco



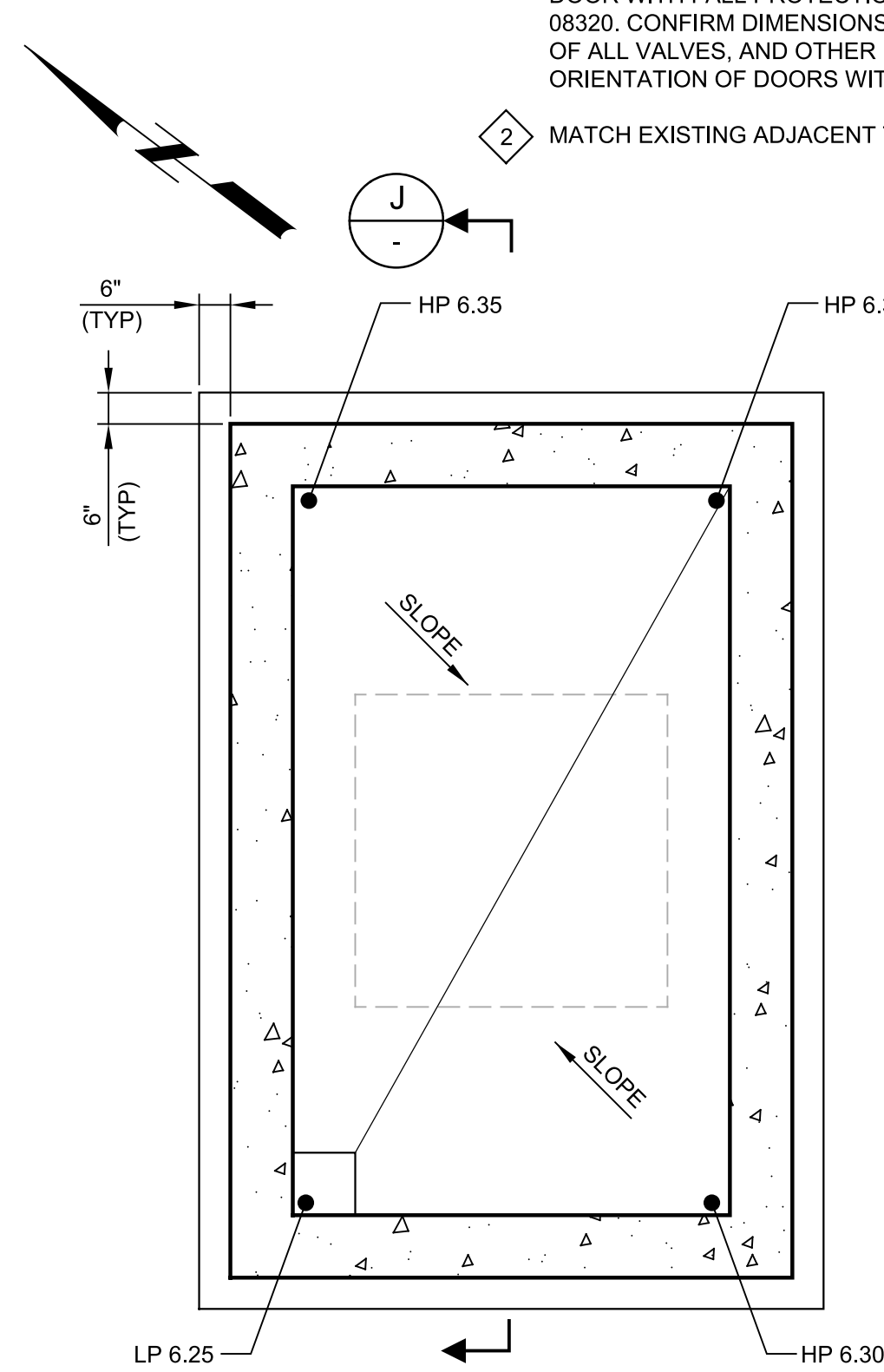
D VALVE VAULT TOP PLAN
SCALE: 3/8" = 1'-0"
FILE: 8231D10S102



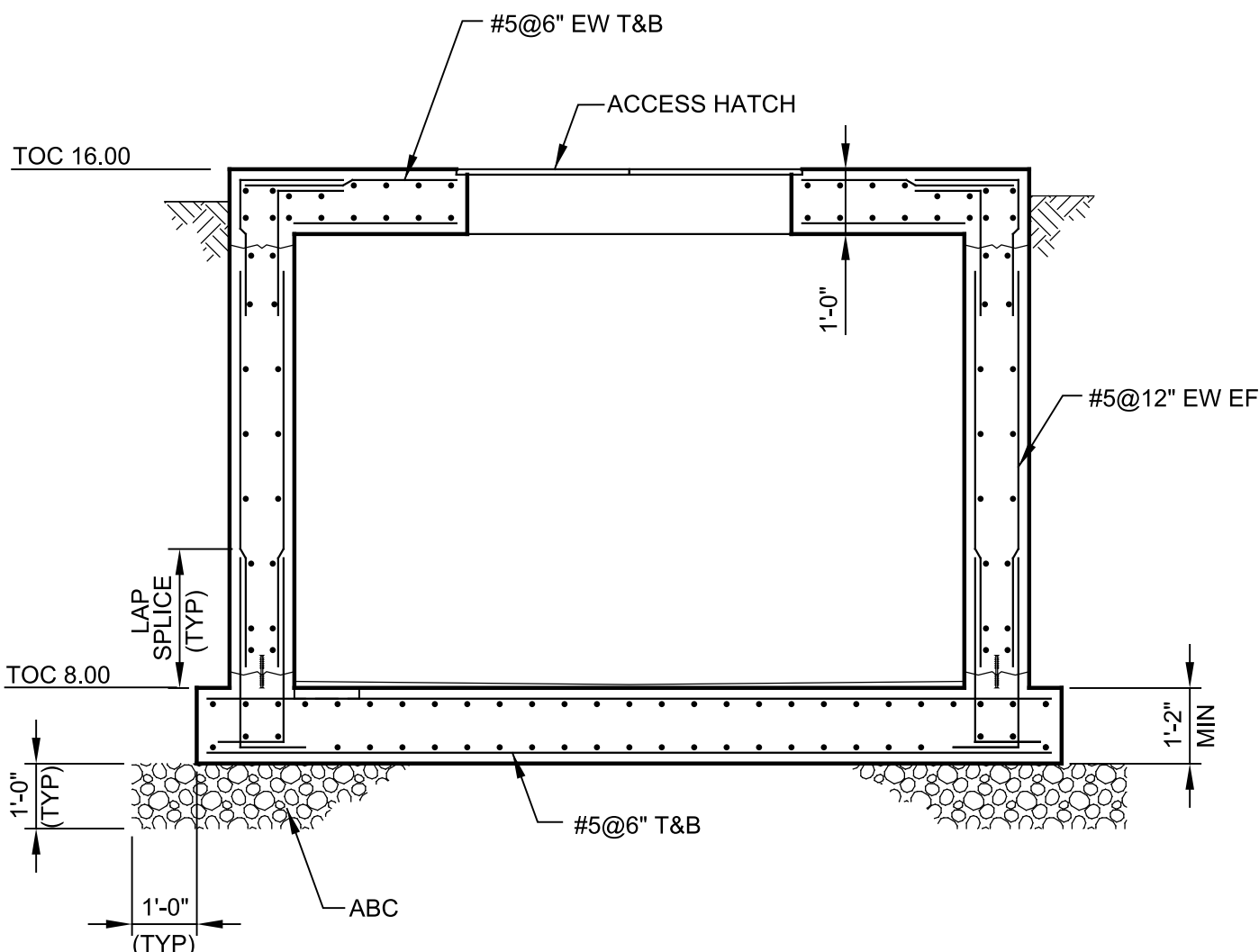
E VALVE VAULT BOTTOM PLAN
SCALE: 3/8" = 1'-0"
FILE: 8231D10S101



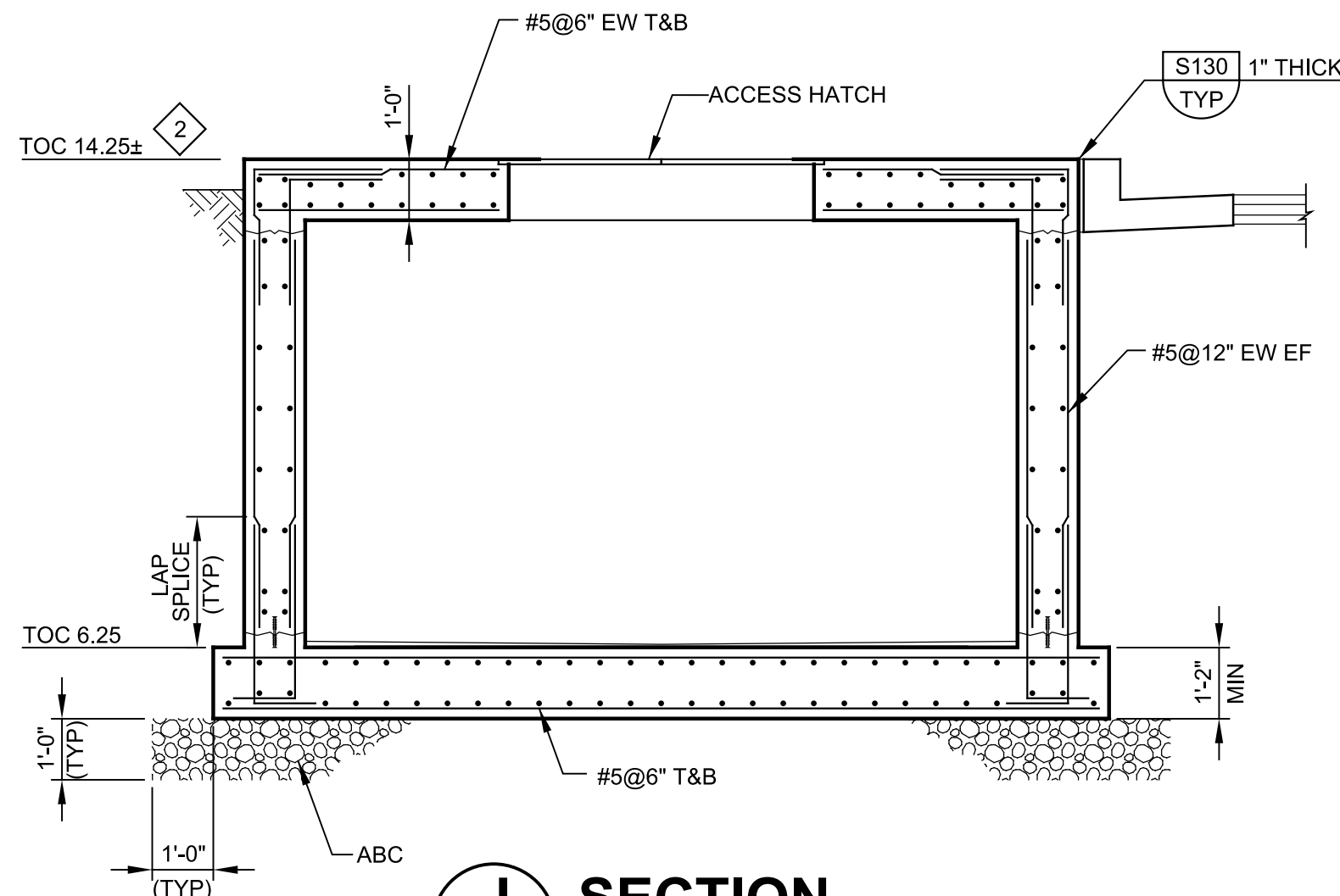
F FLOWMETER VAULT TOP PLAN
SCALE: 3/8" = 1'-0"
FILE: 8231D10S102



G FLOWMETER VAULT BOTTOM PLAN
SCALE: 3/8" = 1'-0"
FILE: 8231D10S101



H SECTION
SCALE: 3/8" = 1'-0"
FILE: 8231D10S301



J SECTION
SCALE: 3/8" = 1'-0"
FILE: 8231D10S301

GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING G03.

KEY NOTES:

1. 5'-0"x5'-0" MEDIUM DUTY ALUMINUM DOUBLE LEAF FLOOR ACCESS DOOR WITH FALL PROTECTION GRATING SYSTEM PER SECTION 08320. CONFIRM DIMENSIONS ARE ADEQUATE FOR INSTALLATION OF ALL VALVES, AND OTHER EQUIPMENT. FIELD VERIFY OPENING ORIENTATION OF DOORS WITH OWNER PRIOR TO INSTALLATION.
2. MATCH EXISTING ADJACENT TOP OF CURB ELEVATION.

REV	DATE	BY	DESCRIPTION

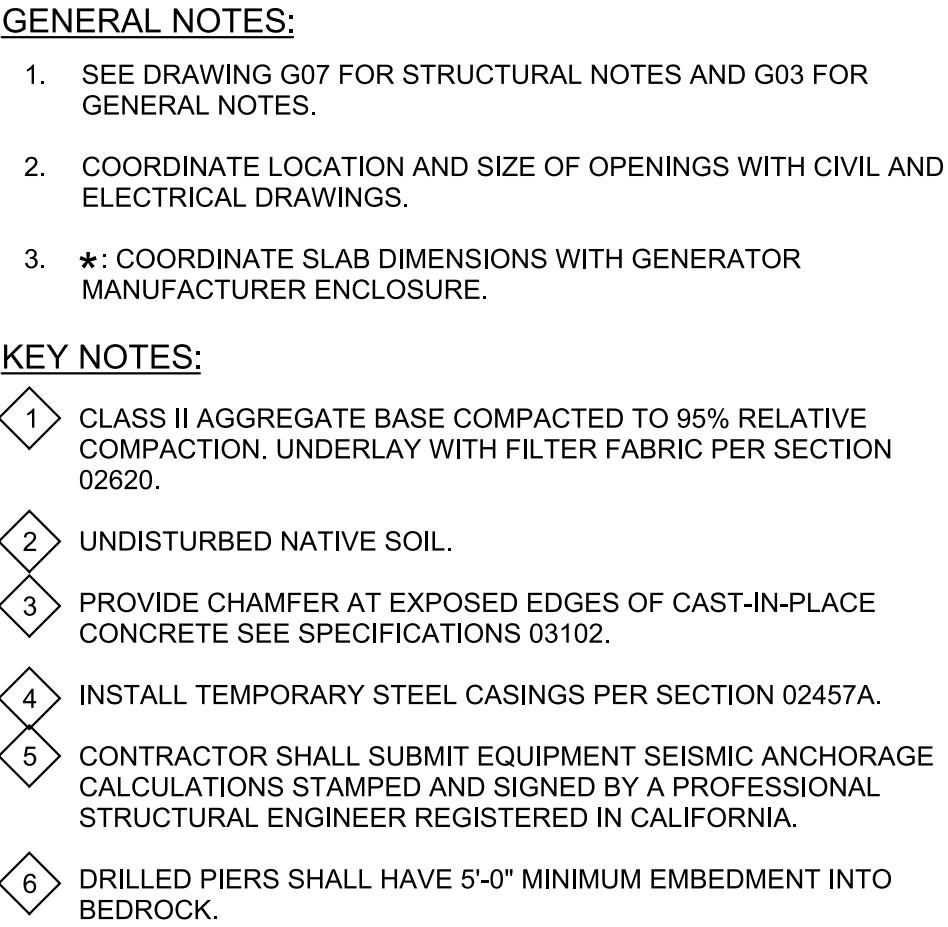
DESIGNED	MJH
DRAWN	MJG
CHECKED	MED
DATE	SEPTEMBER 2020






SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
STRUCTURAL
VALVE AND METER VAULTS
PLANS AND SECTIONS

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.
S02
SHEET NO.
31 OF 60



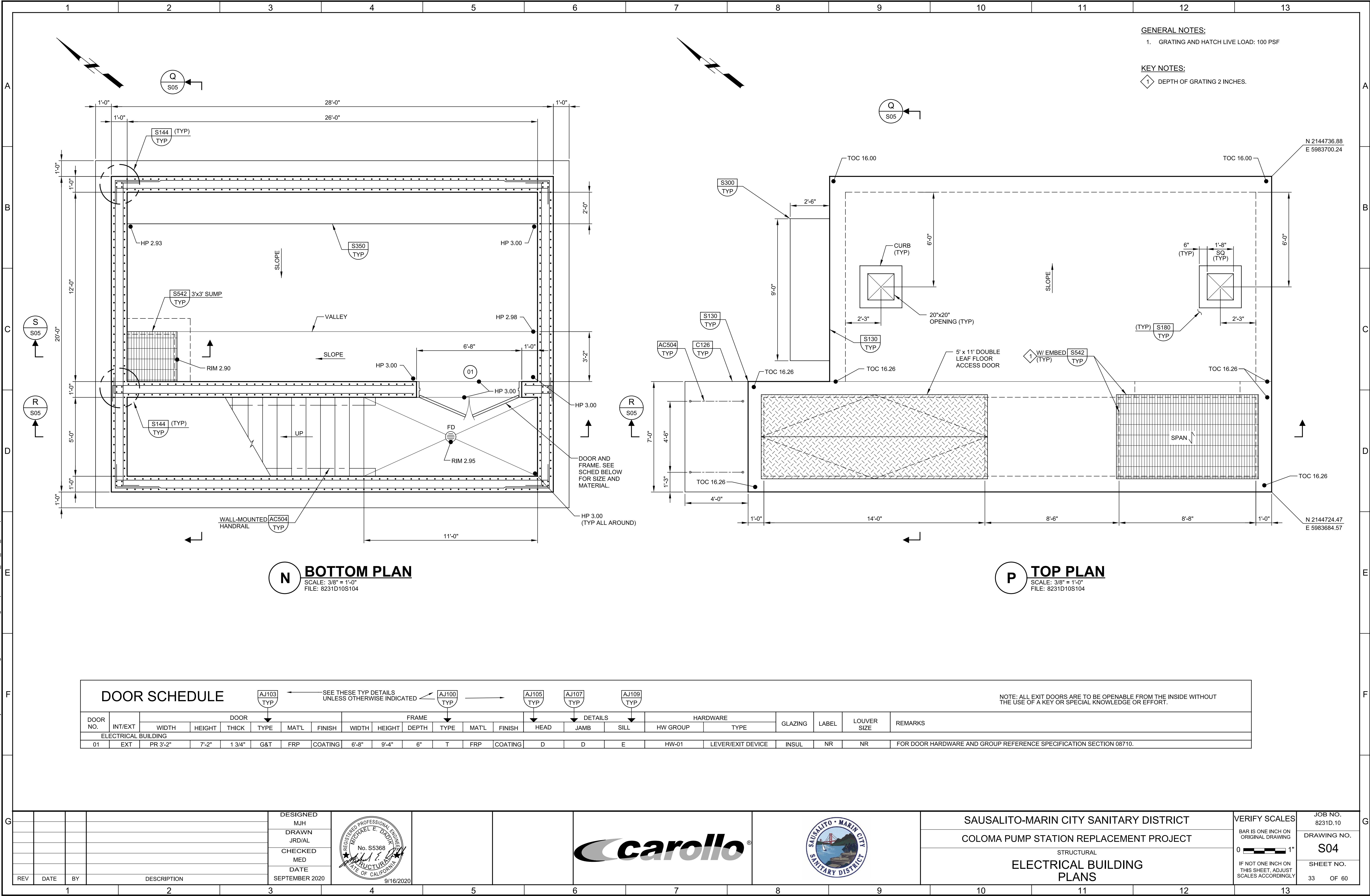
G					DESIGNED MJH							SAUSALITO-MARIN CITY SANITARY DISTRICT			VERIFY SCALES	JOB NO. 8231D.10	G									
					DRAWN AL					COLOMA PUMP STATION REPLACEMENT PROJECT			BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO.												
					CHECKED MED					STRUCTURAL GENERATOR PAD PLAN, SECTIONS AND DETAIL			0 1"	S03												
					DATE SEPTEMBER 2020								IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY			SHEET NO. 32 OF 60										
	REV	DATE	BY	DESCRIPTION																						
	1		2		3		4		5		6		7		8		9		10		11		12		13	

Plot Date: 14-SEP-2020 1:22:08 PM

User: svcPW

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LAST SAVED BY: Alalco



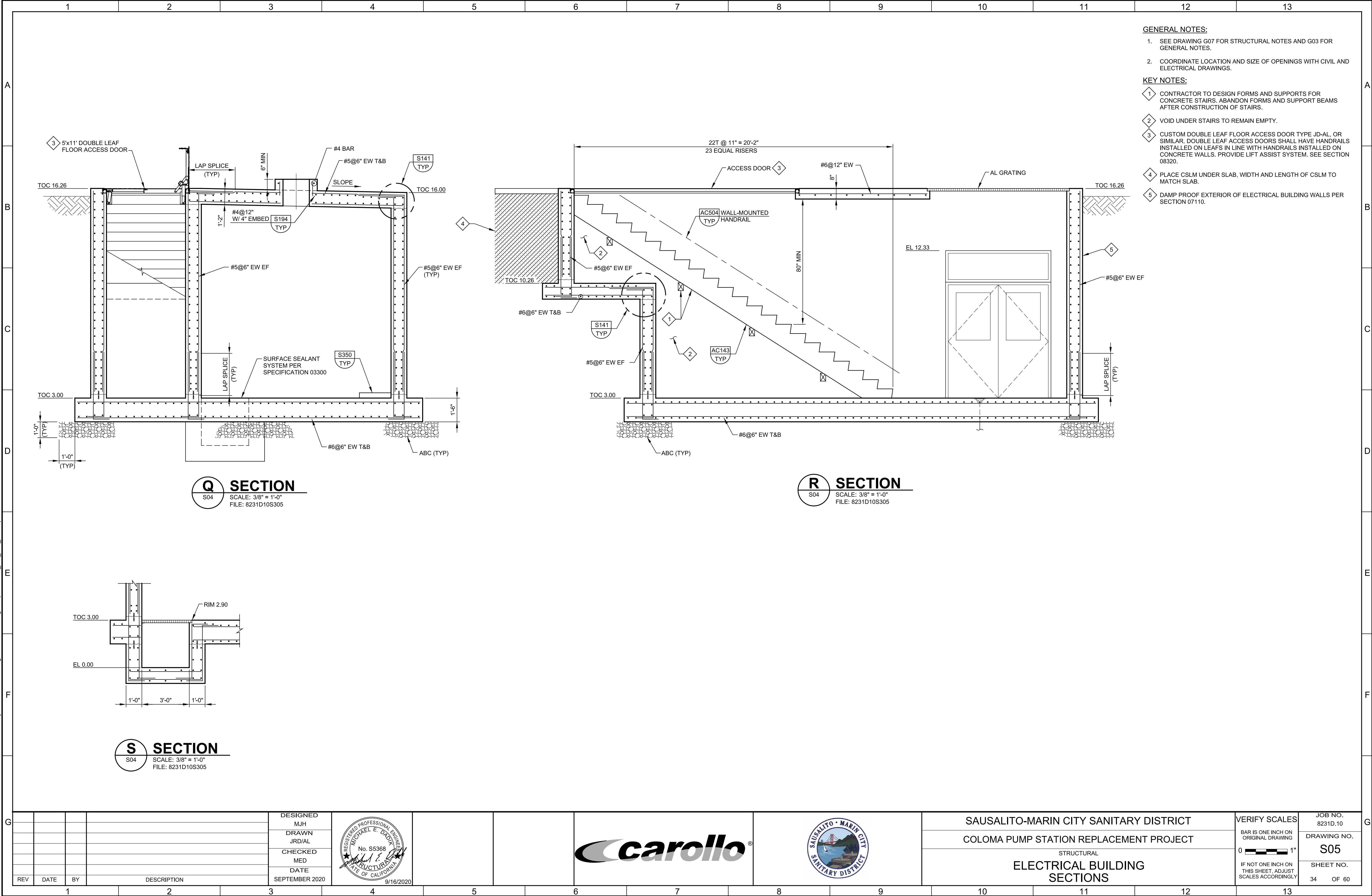
Plot Date: 14-SEP-2020 12:22:10 PM

User: svcPW

PlotScale: 1:1

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen

LAST SAVED BY: Alaloo



REV	DATE	BY	DESCRIPTION

DESIGNED	MJH
DRAWN	JRD/AL
CHECKED	MED
DATE	SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
STRUCTURAL
ELECTRICAL BUILDING
SECTIONS

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

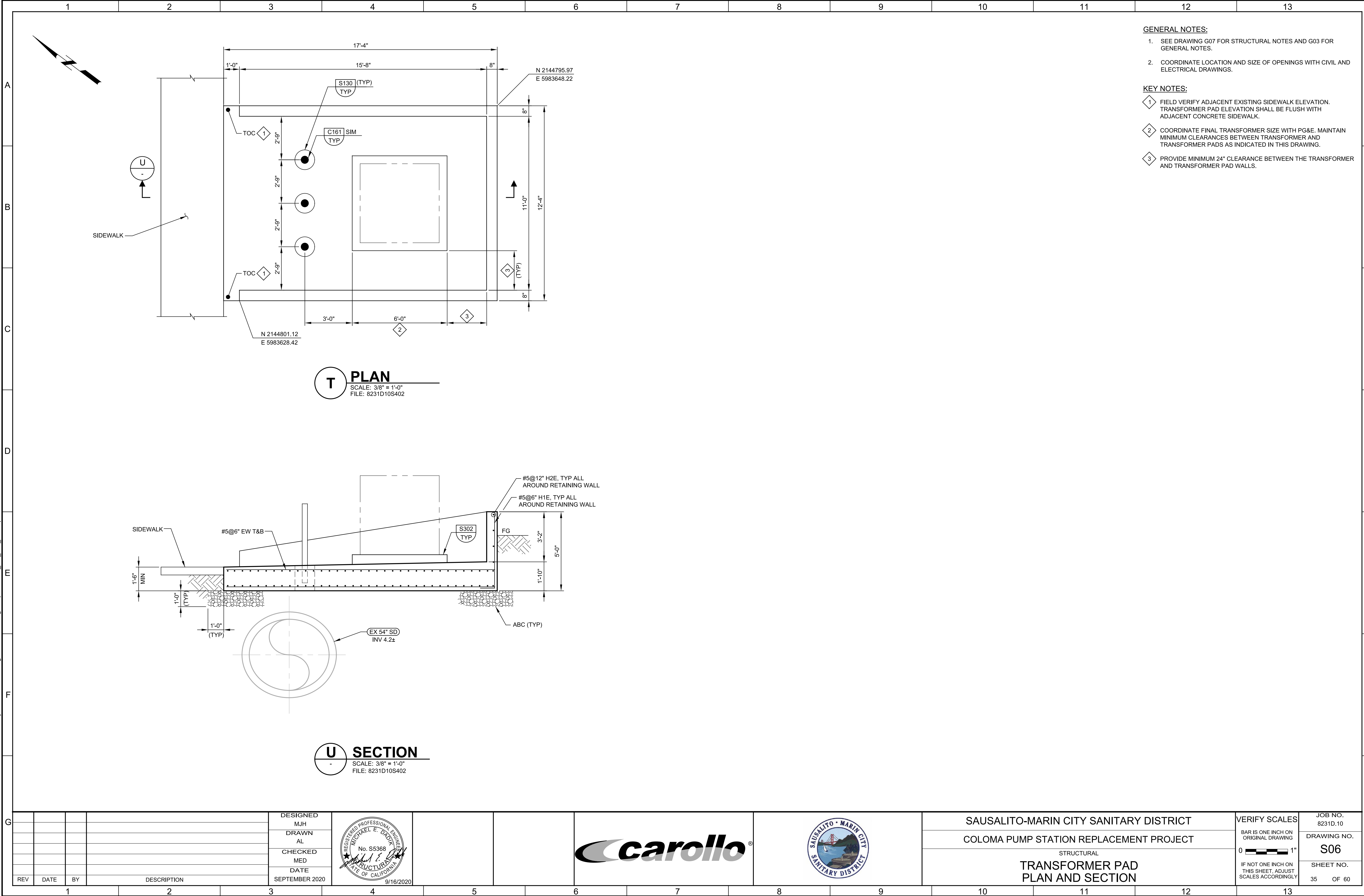
JOB NO.	8231D.10
DRAWING NO.	S05
SHEET NO.	34 OF 60

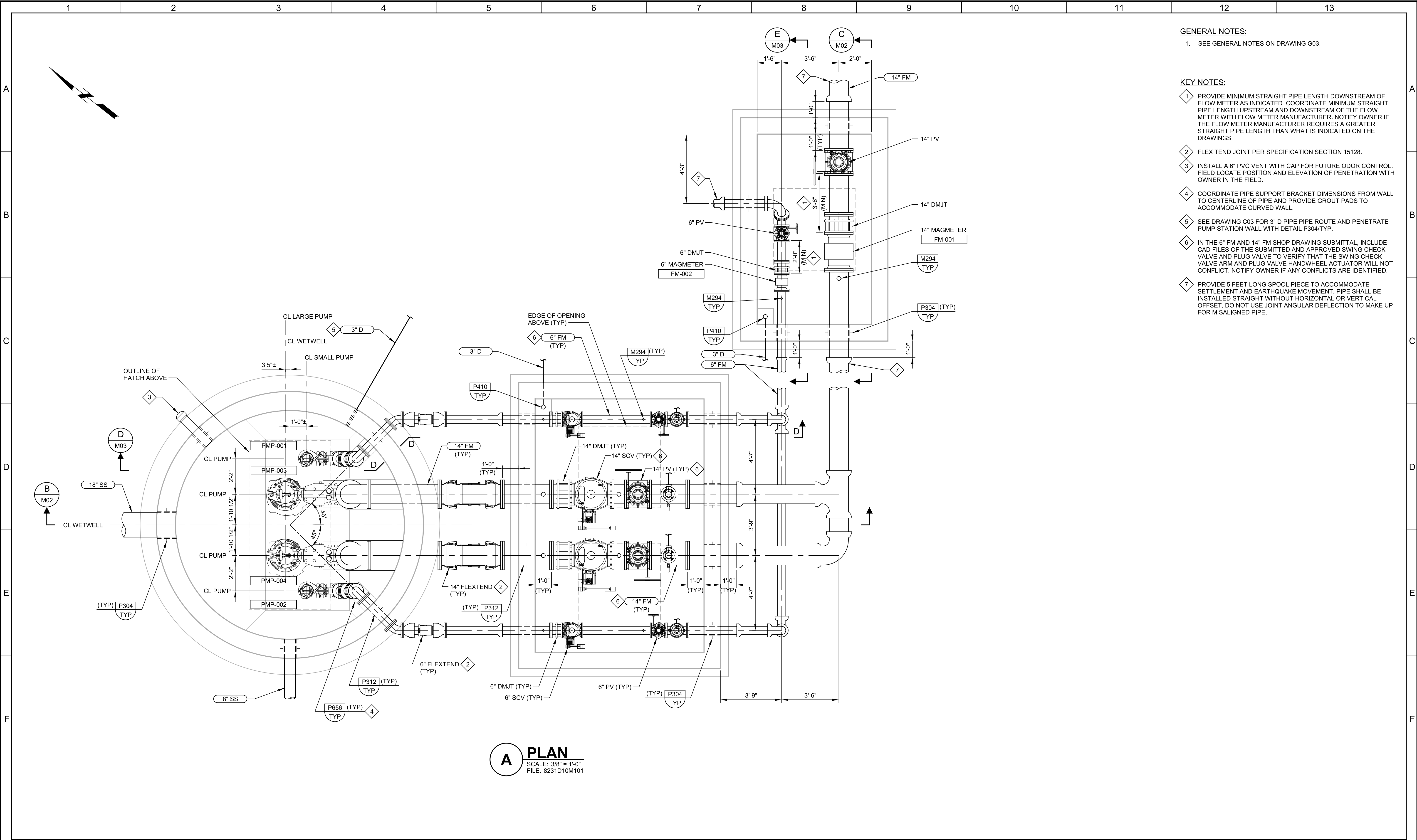
Plot Date: 14-SEP-2020 1:22:09 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: Alaloo





- GENERAL NOTES:**
- SEE GENERAL NOTES ON DRAWING G03.
- KEY NOTES:**
- PROVIDE MINIMUM STRAIGHT PIPE LENGTH DOWNSTREAM OF FLOW METER AS INDICATED. COORDINATE MINIMUM STRAIGHT PIPE LENGTH UPSTREAM AND DOWNSTREAM OF THE FLOW METER WITH FLOW METER MANUFACTURER. NOTIFY OWNER IF THE FLOW METER MANUFACTURER REQUIRES A GREATER STRAIGHT PIPE LENGTH THAN WHAT IS INDICATED ON THE DRAWINGS.
 - FLEX TEND JOINT PER SPECIFICATION SECTION 15128.
 - INSTALL A 6" PVC VENT WITH CAP FOR FUTURE ODOR CONTROL. FIELD LOCATE POSITION AND ELEVATION OF PENETRATION WITH OWNER IN THE FIELD.
 - COORDINATE PIPE SUPPORT BRACKET DIMENSIONS FROM WALL TO CENTERLINE OF PIPE AND PROVIDE GROUT PADS TO ACCOMMODATE CURVED WALL.
 - SEE DRAWING C03 FOR 3" D PIPE PIPE ROUTE AND PENETRATE PUMP STATION WALL WITH DETAIL P304/TYP.
 - IN THE 6" FM AND 14" FM SHOP DRAWING SUBMITTAL, INCLUDE CAD FILES OF THE SUBMITTED AND APPROVED SWING CHECK VALVE AND PLUG VALVE TO VERIFY THAT THE SWING CHECK VALVE ARM AND PLUG VALVE HANDWHEEL ACTUATOR WILL NOT CONFLICT. NOTIFY OWNER IF ANY CONFLICTS ARE IDENTIFIED.
 - PROVIDE 5 FEET LONG SPOOL PIECE TO ACCOMMODATE SETTLEMENT AND EARTHQUAKE MOVEMENT. PIPE SHALL BE INSTALLED STRAIGHT WITHOUT HORIZONTAL OR VERTICAL OFFSET. DO NOT USE JOINT ANGULAR DEFLECTION TO MAKE UP FOR MISALIGNED PIPE.

A PLAN
SCALE: 3/8" = 1'-0"
FILE: 8231D10M101

REV	DATE	BY	DESCRIPTION

DESIGNED RPF
DRAWN AL
CHECKED JES
DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
MECHANICAL
**COLOMA PUMP STATION
PLAN**

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

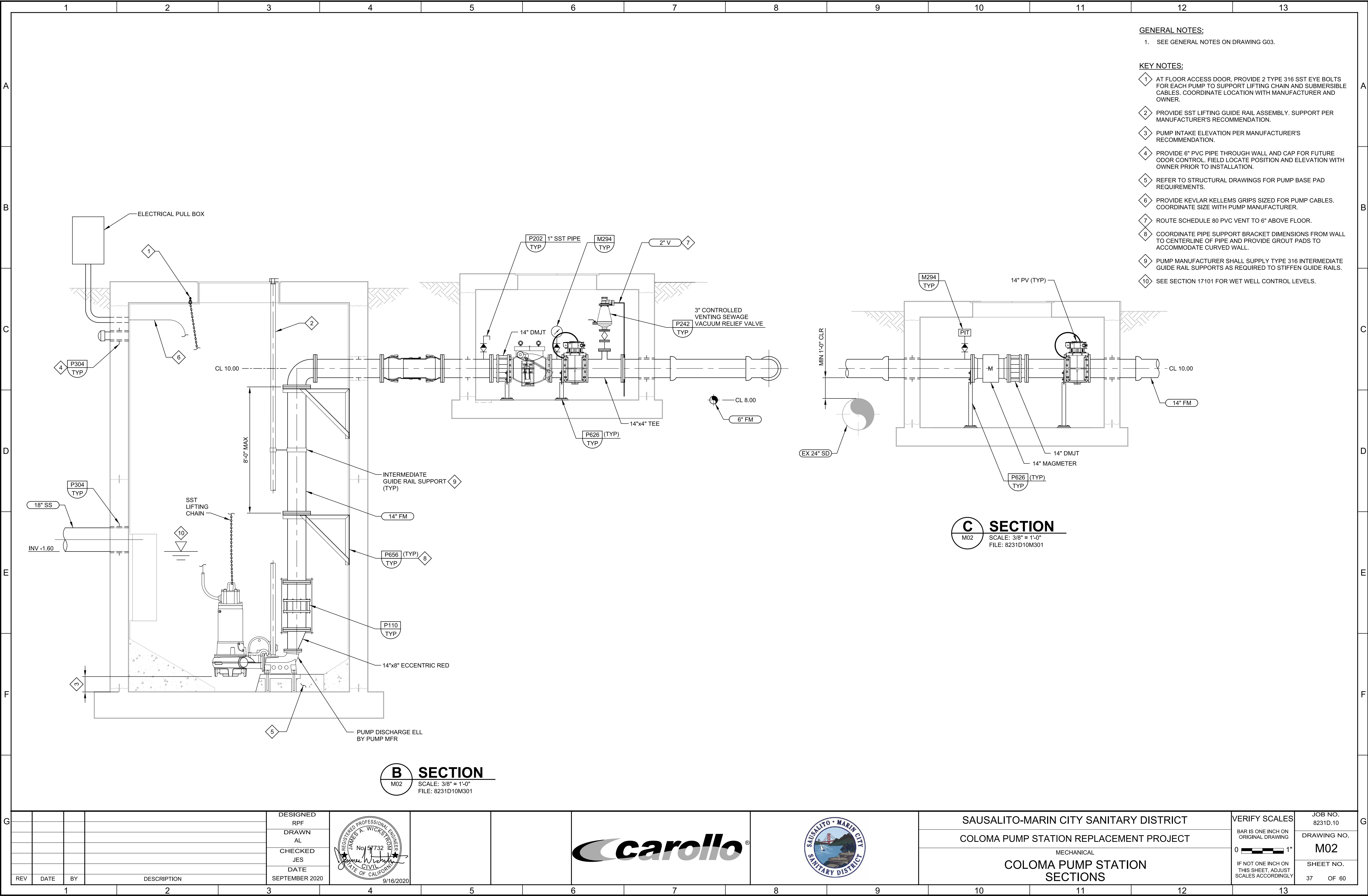
JOB NO.
8231D.10
DRAWING NO.
M01
SHEET NO.
36 OF 60

Plot Date: 14-SEP-2020 1:22:18 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: Alaioco



REV	DATE	BY	DESCRIPTION

DESIGNED RPF
DRAWN AL
CHECKED JES
DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
MECHANICAL
COLOMA PUMP STATION
SECTIONS

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

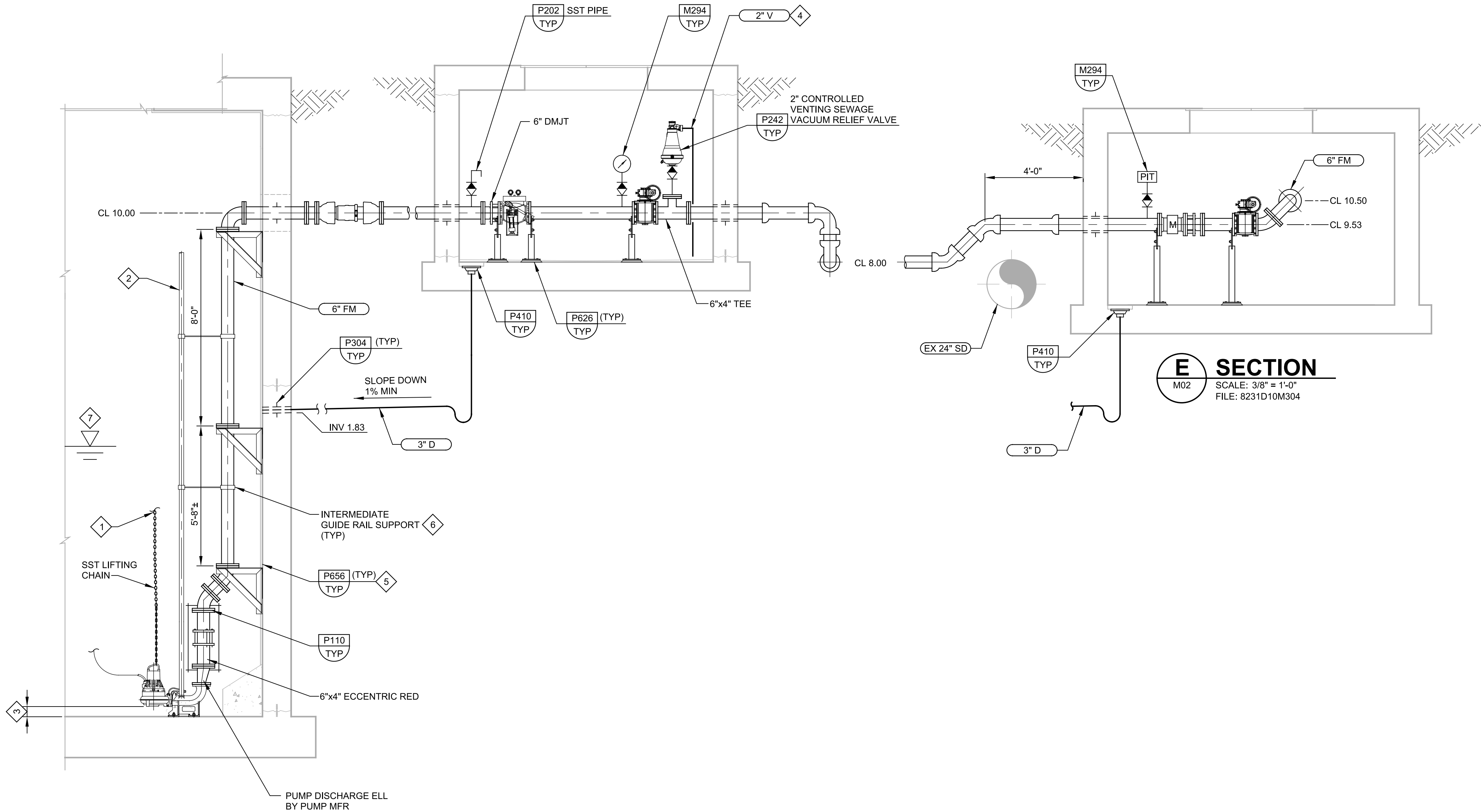
JOB NO. 8231D.10
DRAWING NO. M02
SHEET NO. 37 OF 60

Plot Date: 14-SEP-2020 1:22:20 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: Alaloo



GENERAL NOTES:

1. SEE GENERAL NOTES ON DRAWING G03.

KEY NOTES:

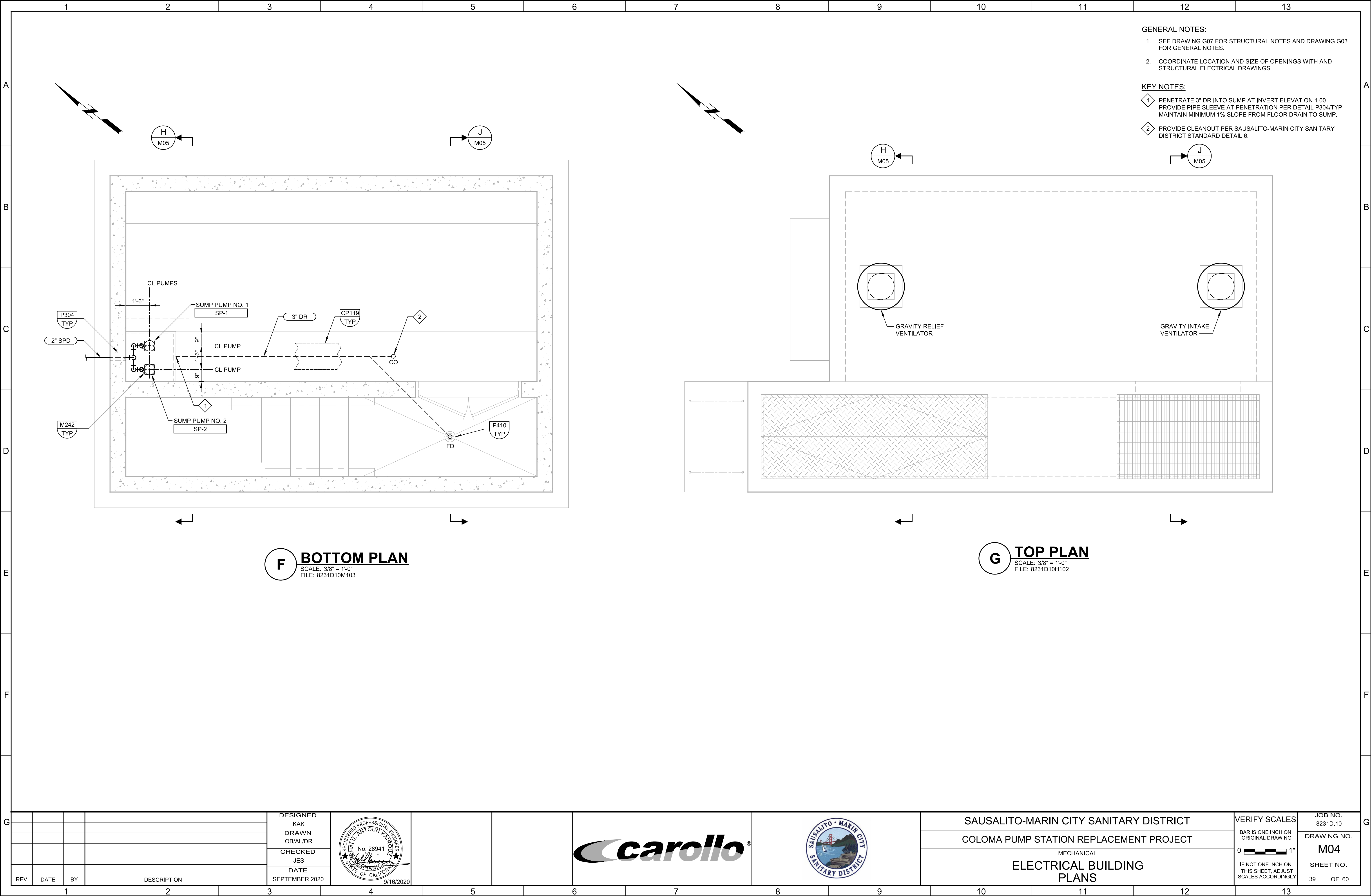
- 1 AT FLOOR ACCESS DOOR, PROVIDE 2 TYPE 316 SST EYE BOLTS TO SUPPORT LIFTING CHAIN AND SUBMERSIBLE CABLES. COORDINATE LOCATION WITH MANUFACTURER AND OWNER.
- 2 PROVIDE SST LIFTING GUIDE RAIL ASSEMBLY. SUPPORT PER MANUFACTURER'S RECOMMENDATION.
- 3 PUMP INTAKE ELEVATION PER MANUFACTURER'S RECOMMENDATION.
- 4 ROUTE SCHEDULE 80 PVC VENT TO 6" ABOVE FLOOR.
- 5 COORDINATE PIPE SUPPORT BRACKET DIMENSIONS FROM WALL TO CENTERLINE OF PIPE AND PROVIDE GROUT PADS TO ACCOMMODATE CURVED WALL.
- 6 PUMP MANUFACTURER SHALL SUPPLY TYPE 316 INTERMEDIATE GUIDE RAIL SUPPORTS AS REQUIRED TO STIFFEN GUIDE RAILS.
- 7 SEE SECTION 17101 FOR WET WELL CONTROL LEVELS.

Plot Date: 21-SEP-2020 2:41:18 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: Alaloo



REV	DATE	BY	DESCRIPTION

DESIGNED KAK
DRAWN OB/AL/DR
CHECKED JES
DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
MECHANICAL
ELECTRICAL BUILDING PLANS

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

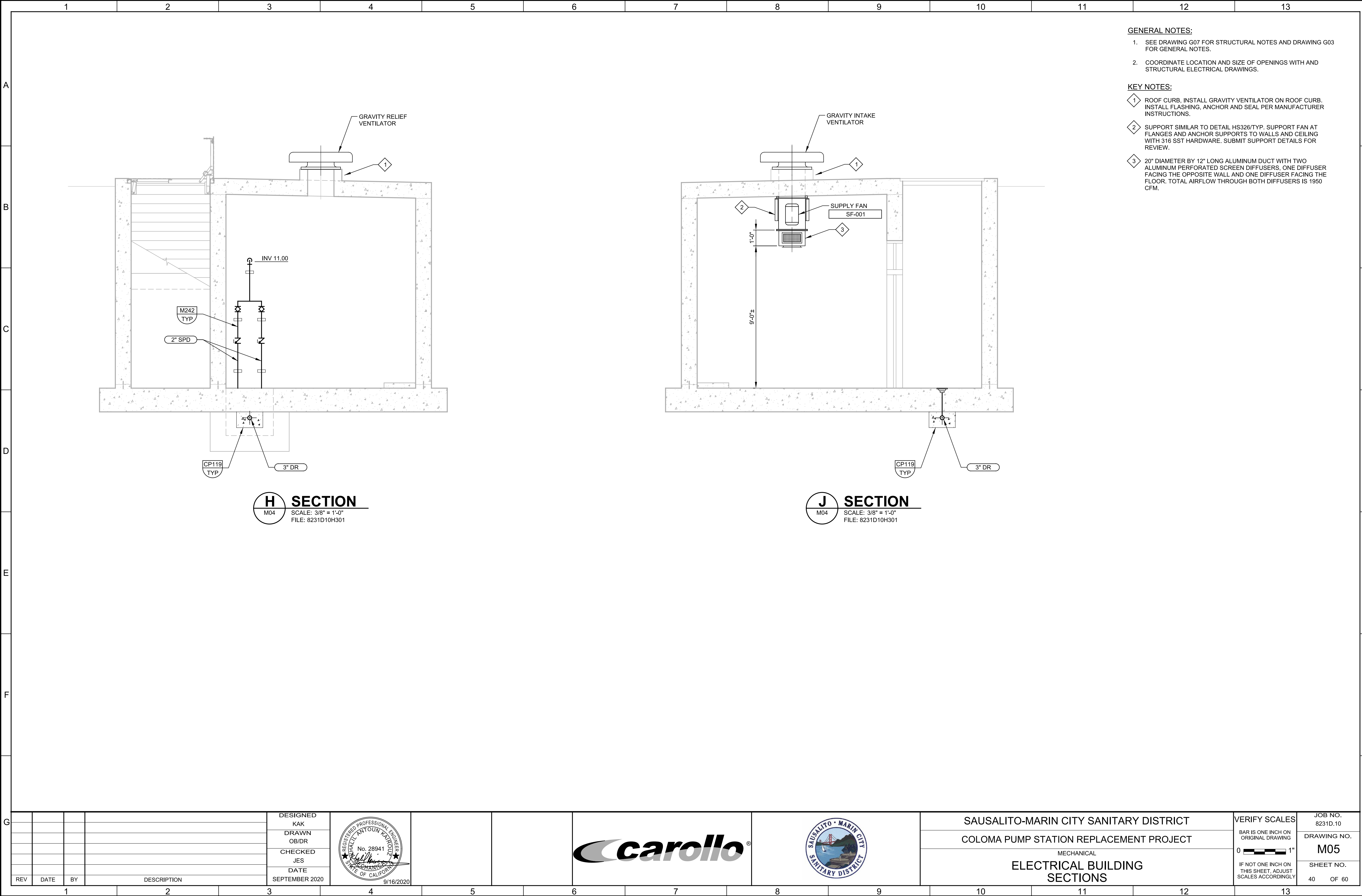
JOB NO. 8231D.10
DRAWING NO. M04
SHEET NO. 39 OF 60

Plot Date: 14-SEP-2020 1:22:20 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: Alaioc



- GENERAL NOTES:**
- SEE DRAWING G07 FOR STRUCTURAL NOTES AND DRAWING G03 FOR GENERAL NOTES.
 - COORDINATE LOCATION AND SIZE OF OPENINGS WITH AND STRUCTURAL ELECTRICAL DRAWINGS.
- KEY NOTES:**
- ROOF CURB, INSTALL GRAVITY VENTILATOR ON ROOF CURB. INSTALL FLASHING, ANCHOR AND SEAL PER MANUFACTURER INSTRUCTIONS.
 - SUPPORT SIMILAR TO DETAIL HS326/TYP. SUPPORT FAN AT FLANGES AND ANCHOR SUPPORTS TO WALLS AND CEILING WITH 316 SST HARDWARE. SUBMIT SUPPORT DETAILS FOR REVIEW.
 - 20" DIAMETER BY 12" LONG ALUMINUM DUCT WITH TWO ALUMINUM PERFORATED SCREEN DIFFUSERS, ONE DIFFUSER FACING THE OPPOSITE WALL AND ONE DIFFUSER FACING THE FLOOR. TOTAL AIRFLOW THROUGH BOTH DIFFUSERS IS 1950 CFM.

H SECTION
M04 SCALE: 3/8" = 1'-0"
FILE: 8231D10H301

J SECTION
M04 SCALE: 3/8" = 1'-0"
FILE: 8231D10H301

REV	DATE	BY	DESCRIPTION

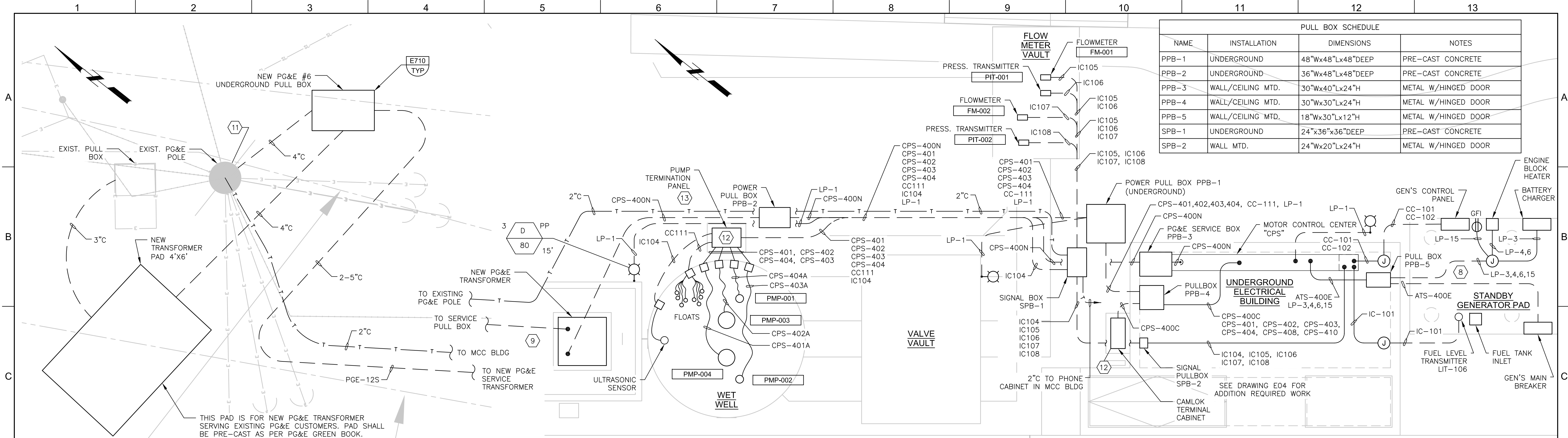
DESIGNED KAK
DRAWN OB/DR
CHECKED JES
DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
MECHANICAL
ELECTRICAL BUILDING SECTIONS

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

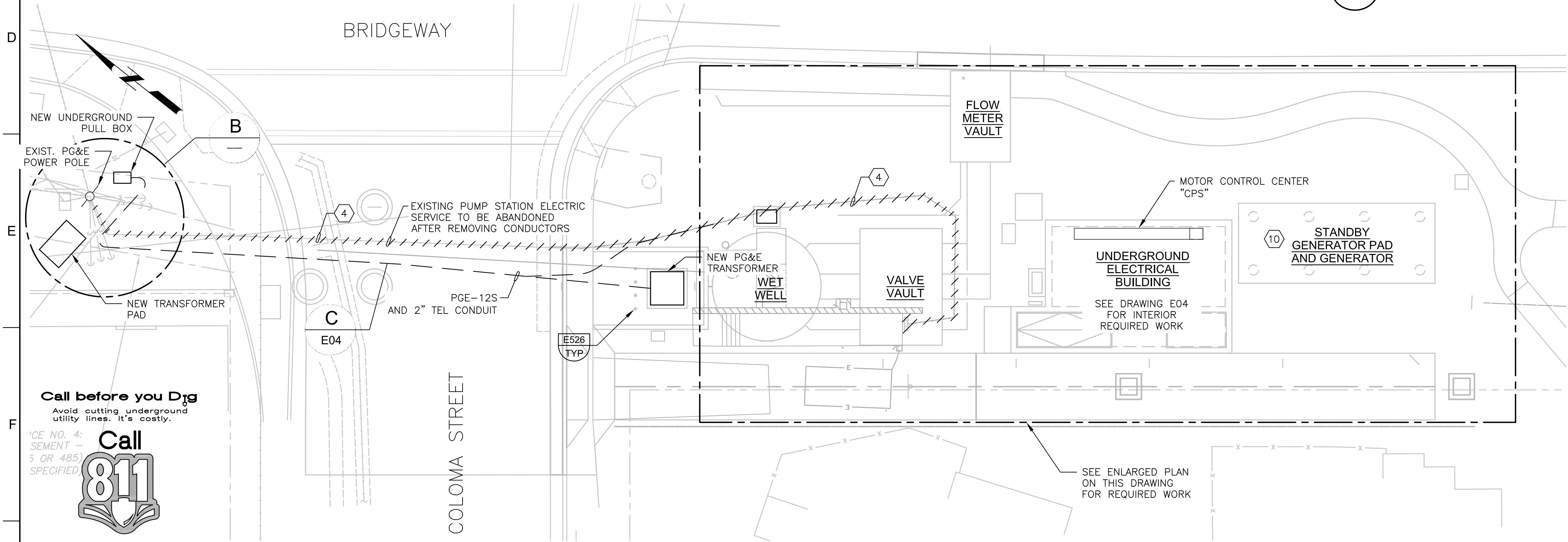
JOB NO. 8231D.10
DRAWING NO. M05
SHEET NO. 40 OF 60



PULL BOX SCHEDULE			
NAME	INSTALLATION	DIMENSIONS	NOTES
PPB-1	UNDERGROUND	48"Wx48"Lx48"DEEP	PRE-CAST CONCRETE
PPB-2	UNDERGROUND	36"Wx48"Lx48"DEEP	PRE-CAST CONCRETE
PPB-3	WALL/CEILING MTD.	30"Wx40"Lx24"H	METAL W/HINGED DOOR
PPB-4	WALL/CEILING MTD.	30"Wx30"Lx24"H	METAL W/HINGED DOOR
PPB-5	WALL/CEILING MTD.	18"Wx30"Lx12"H	METAL W/HINGED DOOR
SPB-1	UNDERGROUND	24"x36"x36"DEEP	PRE-CAST CONCRETE
SPB-2	WALL MTD.	24"Wx20"Lx24"H	METAL W/HINGED DOOR

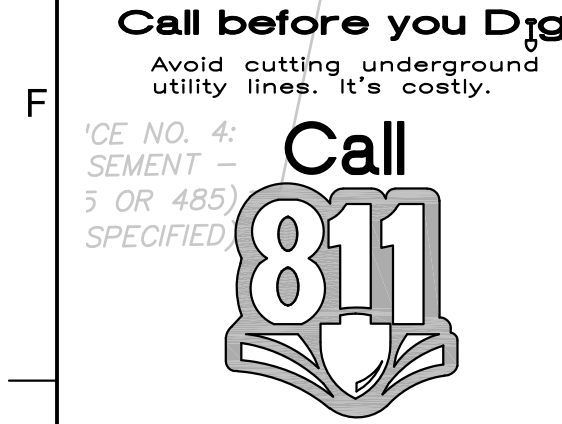
B ENLARGED ELECTRIC SERVICE PLAN 1 3 6 7
SCALE: NO SCALE

C ENLARGED PARTIAL SITE PLAN
SCALE: 1" = 5'

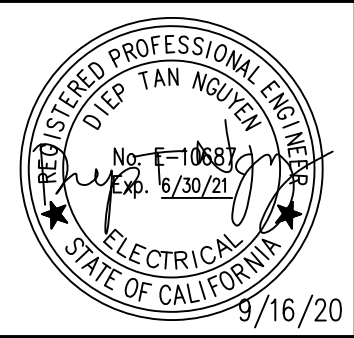


A SITE PLAN 1 2 3 5
SCALE: 1" = 10'

- SHEET NOTES:**
- THIS PROJECT IS LOCATED AT AN AREA WHERE THERE ARE EXISTING VARIOUS UNDERGROUND UTILITIES SUCH AS WATER, GAS, PIPING, SEWER, UNDERGROUND VAULTS, VALVES, ETC... ALL OF THESE UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED PRIOR TO ANY TRENCHING OPERATION TO AVOID DAMAGE TO THESE UTILITIES.
 - REFER TO SEQUENCE OF WORK IN SPECIFICATIONS DIVISION 1 FOR DETAILED REQUIREMENTS REGARDING TEMPORARY POWER, BYPASS PUMPING AND OTHER CONSTRAINTS IMPOSED BY THE CITY OF SAUSALITO AND THE DISTRICT.
 - IN ADDITION TO DEMOLITION WORK SHOWN ON THIS SITE PLAN REFER TO DRAWING E06 AND "D" SERIES DRAWINGS FOR ADDITIONAL, REQUIRED DEMOLITION WORK.
 - REMOVE EXISTING ELECTRICAL POWER CONDUCTORS. ABANDON AND PLUG EXISTING CONDUITS.
 - SEE DRAWING E06 (DETAILS B, C, D, E, F & G) FOR REQUIRED DEMOLITION IN THIS EXISTING PUMP STATION.
 - AT THIS LOCATION CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWINGS TO ACCOMMODATE PG&E ELECTRICAL SERVICE FOR THE PUMP STATION:
 - NEW PG&E #6 UNDERGROUND PULL BOX
 - NEW TRANSFORMER PAD
 - EMPTY CONDUITS WITH PULL WIRES AS SHOWN
 - EXACT LOCATIONS OF THE PULL BOX AND THE PAD SHALL BE FIELD VERIFIED AND COORDINATED WITH PG&E DURING CONSTRUCTION. ALL REQUIRED SERVICE WORK SHALL BE IN COMPLIANCE WITH REQUIREMENTS SET FORTH IN LATEST PG&E GREEN BOOK.
 - EXACT LOCATION OF CONDUIT TERMINATIONS FOR GENERATOR AND AUXILIARY EQUIPMENT SHALL BE AS REQUIRED PER APPROVED SHOP DRAWINGS DURING CONSTRUCTION PHASE.
 - SEE DRAWING S06 FOR PAD AND PROTECTION POST DETAILS.
 - CONTRACTOR SHALL DIRECT EXHAUST PIPE OF THE GENSET TOWARD BRIDGEWAY STREET. COLOR OF THE AUXILIARY ENCLOSURE SHALL BE AS DIRECTED BY THE DISTRICT.
 - PROVIDE 2" TELEPHONE SERVICE RISER AS REQUIRED.
 - THIS ENCLOSURE IS NEMA 3RX (316 SS) PAINTED COLOR OF PAINT FINISH SHALL BE AS DIRECTED BY THE DISTRICT.
 - PUMP TERMINATION PANEL SHALL BE LOCATED AT LEAST 3FT AWAY FROM THE EDGE OF THE WET WELL.



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Oakland, San Francisco, Orange County, CA

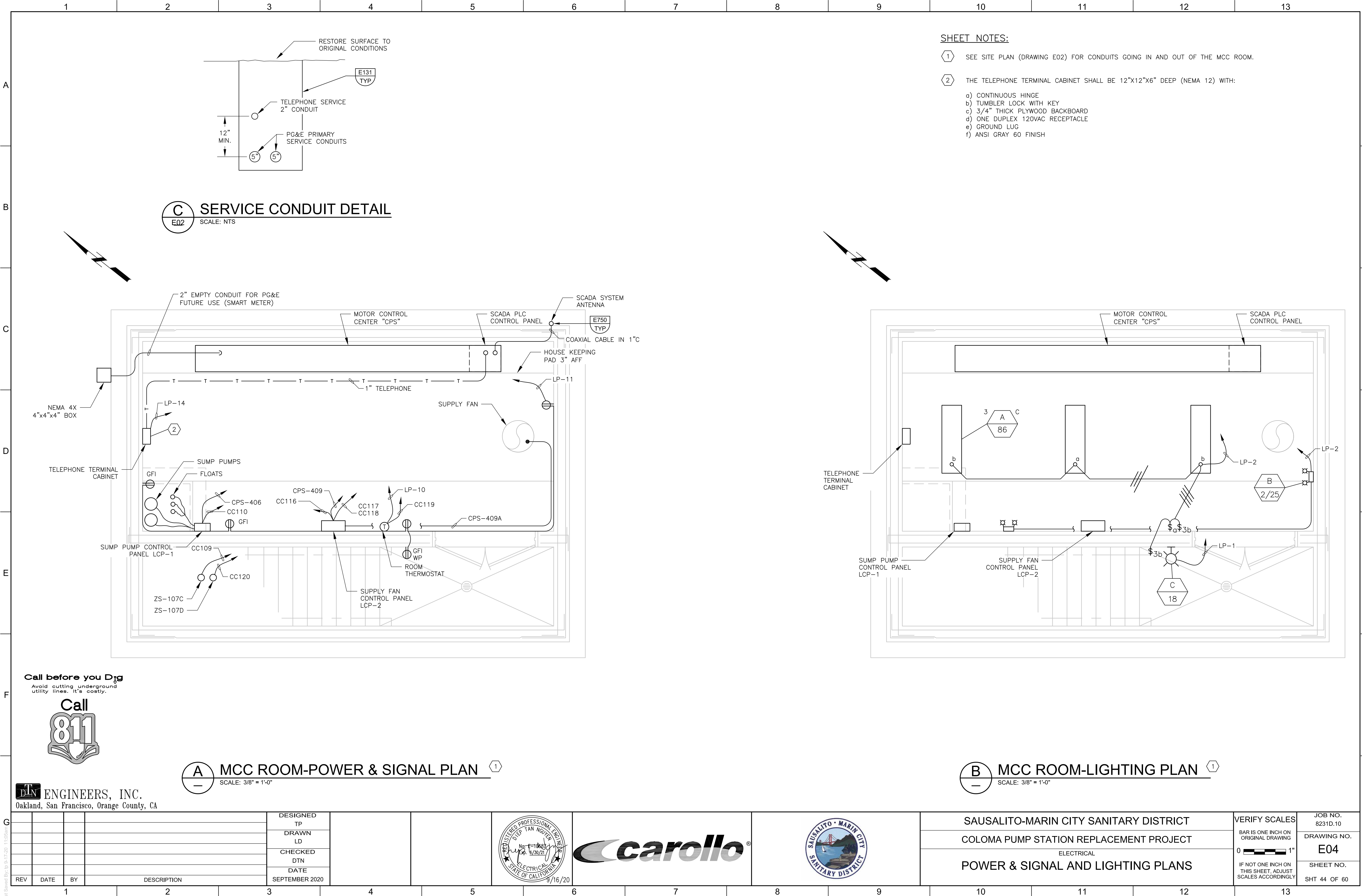


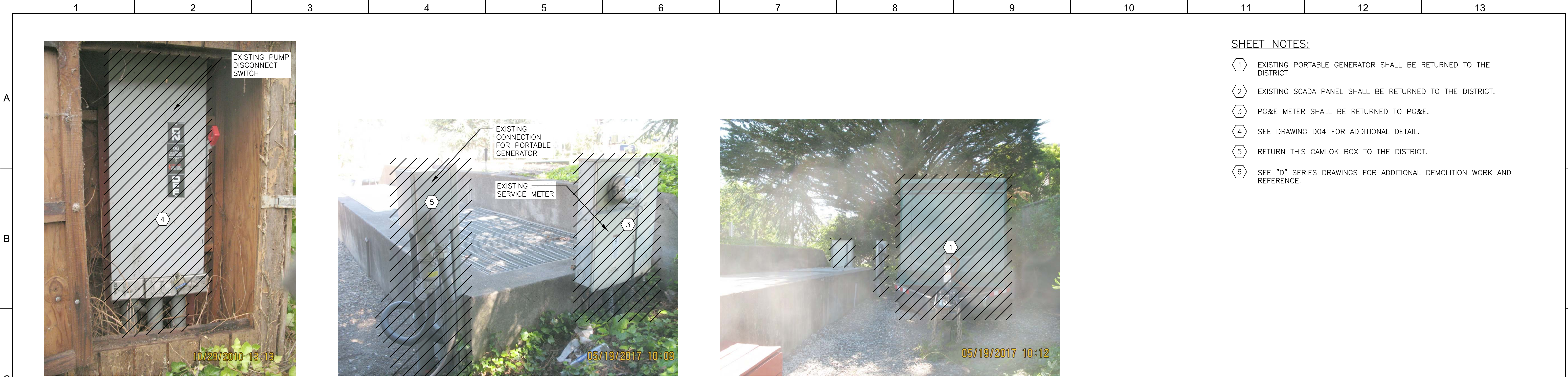
SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
ELECTRICAL
SITE PLANS

VERIFY SCALES	JOB NO. 8231D.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. E02
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. SHT 42 OF 60

Last Saved By: tp 9-17-20 08:23am

REV	DATE	BY	DESCRIPTION
1			
2			
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10			
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12			
13			





- SHEET NOTES:
- 1 EXISTING PORTABLE GENERATOR SHALL BE RETURNED TO THE DISTRICT.
 - 2 EXISTING SCADA PANEL SHALL BE RETURNED TO THE DISTRICT.
 - 3 PG&E METER SHALL BE RETURNED TO PG&E.
 - 4 SEE DRAWING D04 FOR ADDITIONAL DETAIL.
 - 5 RETURN THIS CAMLOK BOX TO THE DISTRICT.
 - 6 SEE "D" SERIES DRAWINGS FOR ADDITIONAL DEMOLITION WORK AND REFERENCE.

A DEMOLITION DETAIL 1
SCALE: NTS OLD WHISKEY SPRING PS

B DEMOLITION DETAIL 2
SCALE: NTS OLD COLOMA PS

C DEMOLITION DETAIL 3
SCALE: NTS OLD COLOMA PS



D DEMOLITION DETAIL 4
SCALE: NTS OLD COLOMA PS

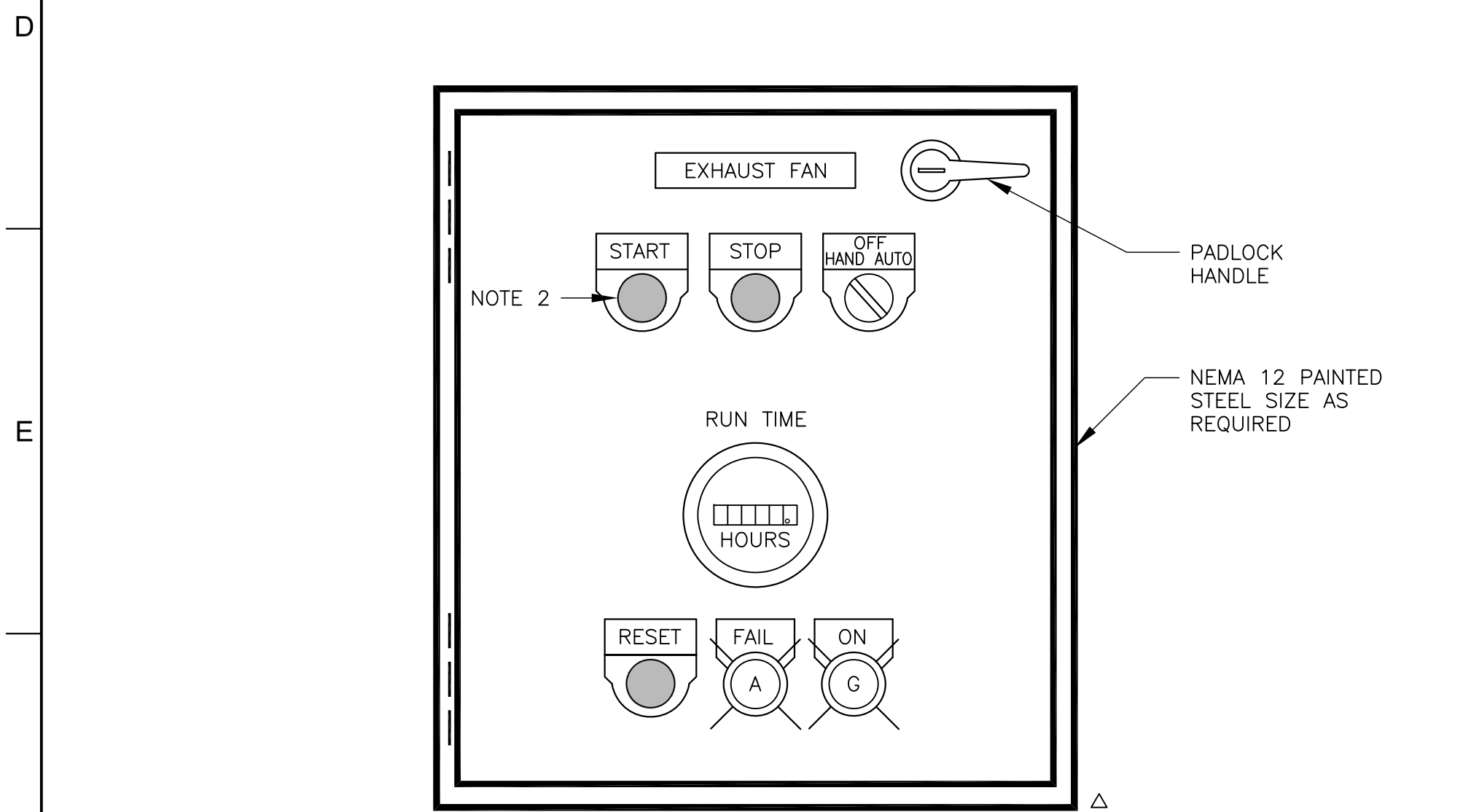
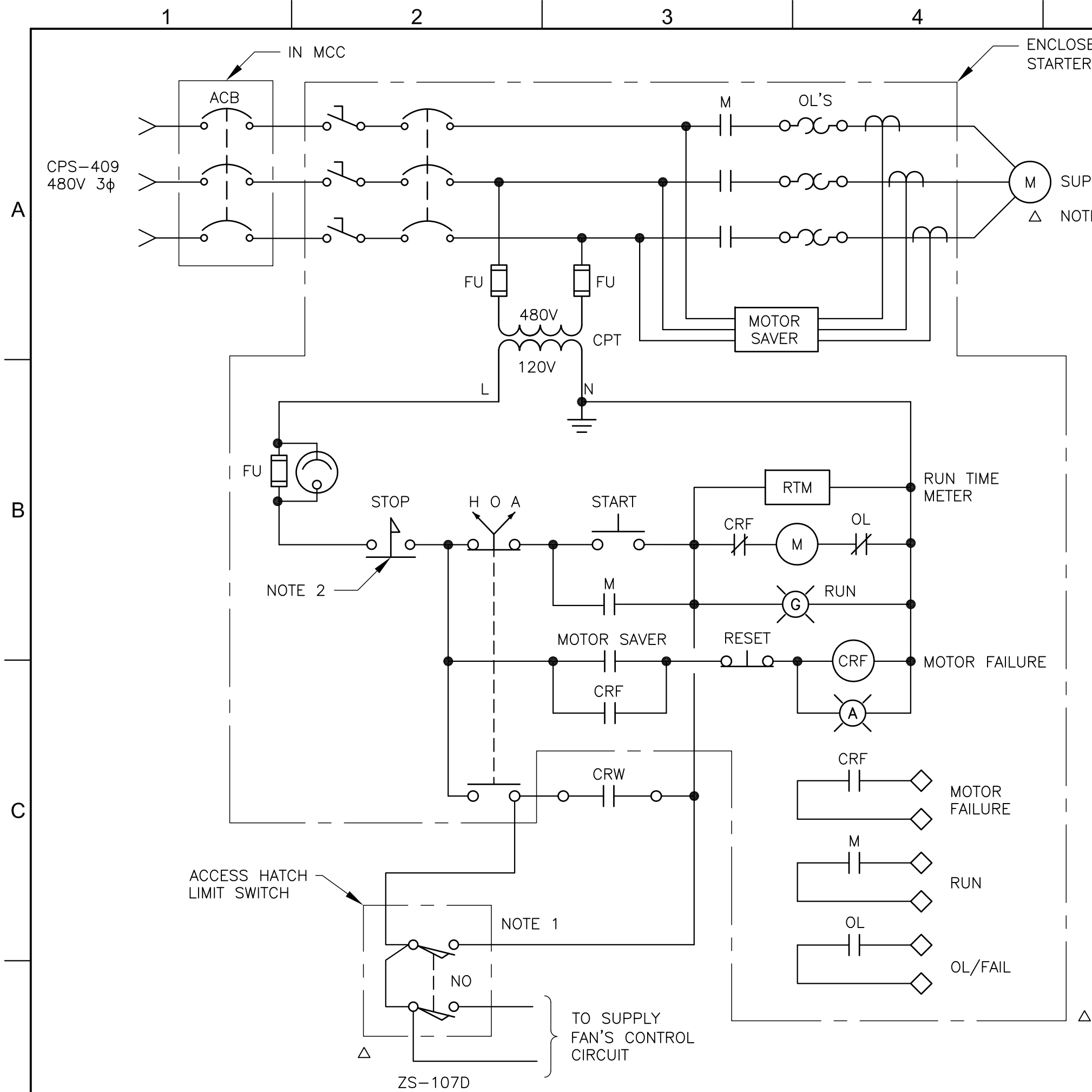
E DEMOLITION DETAIL 5
SCALE: NTS OLD COLOMA PS

F DEMOLITION DETAIL 6
SCALE: NTS OLD COLOMA PS

G DEMOLITION DETAIL 7
SCALE: NTS OLD COLOMA PS

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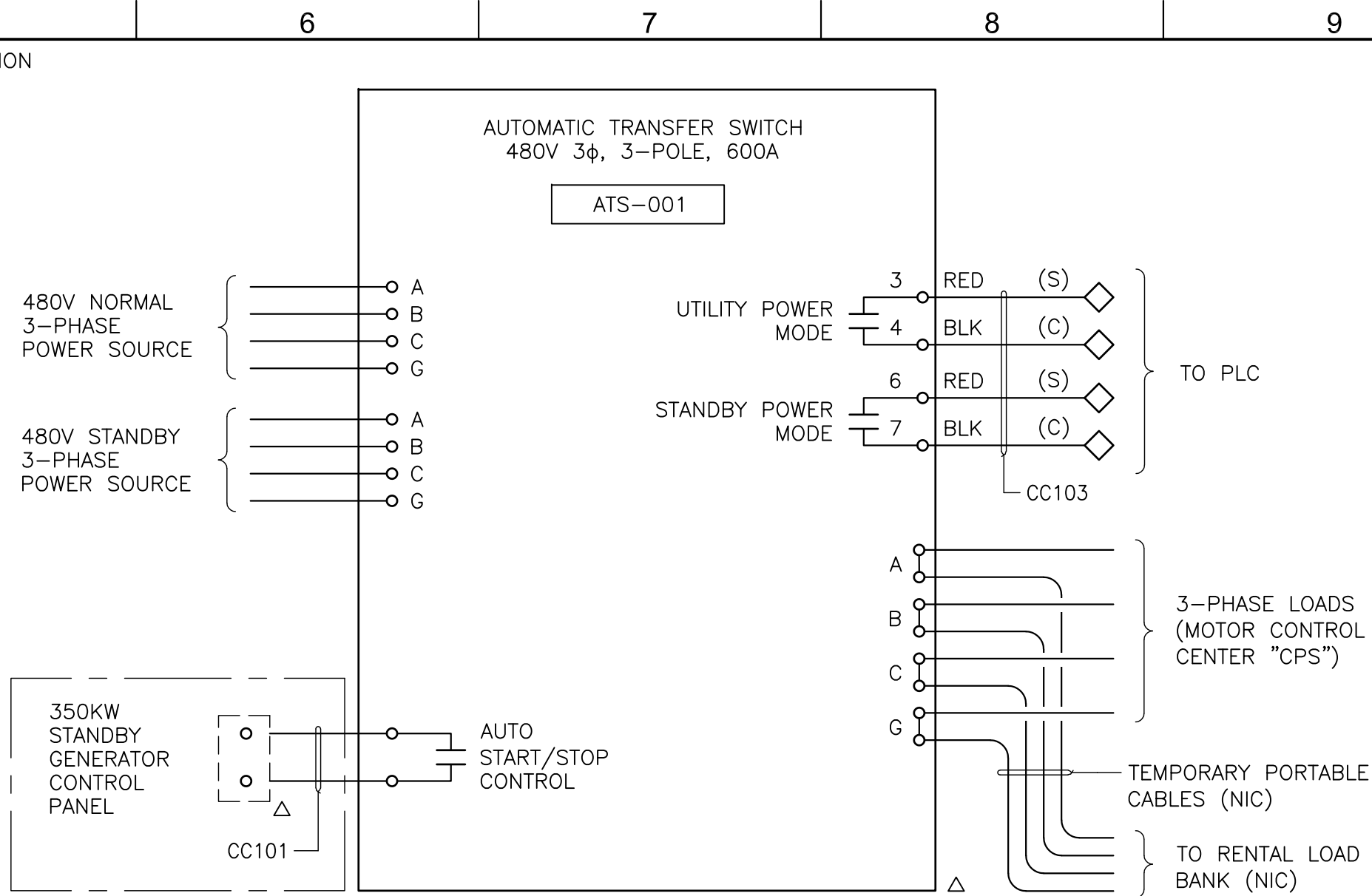
G				DESIGNED TP				SAUSALITO-MARIN CITY SANITARY DISTRICT		VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0  1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. 8231D.10
				DRAWN LD				COLOMA PUMP STATION REPLACEMENT PROJECT			DRAWING NO. E06
				CHECKED DTN				ELECTRICAL			SHEET NO. SHT 46 OF 60
				DATE SEPTEMBER 2020				ELECTRICAL DEMOLITION DETAILS 6			
	REV	DATE	BY	DESCRIPTION							



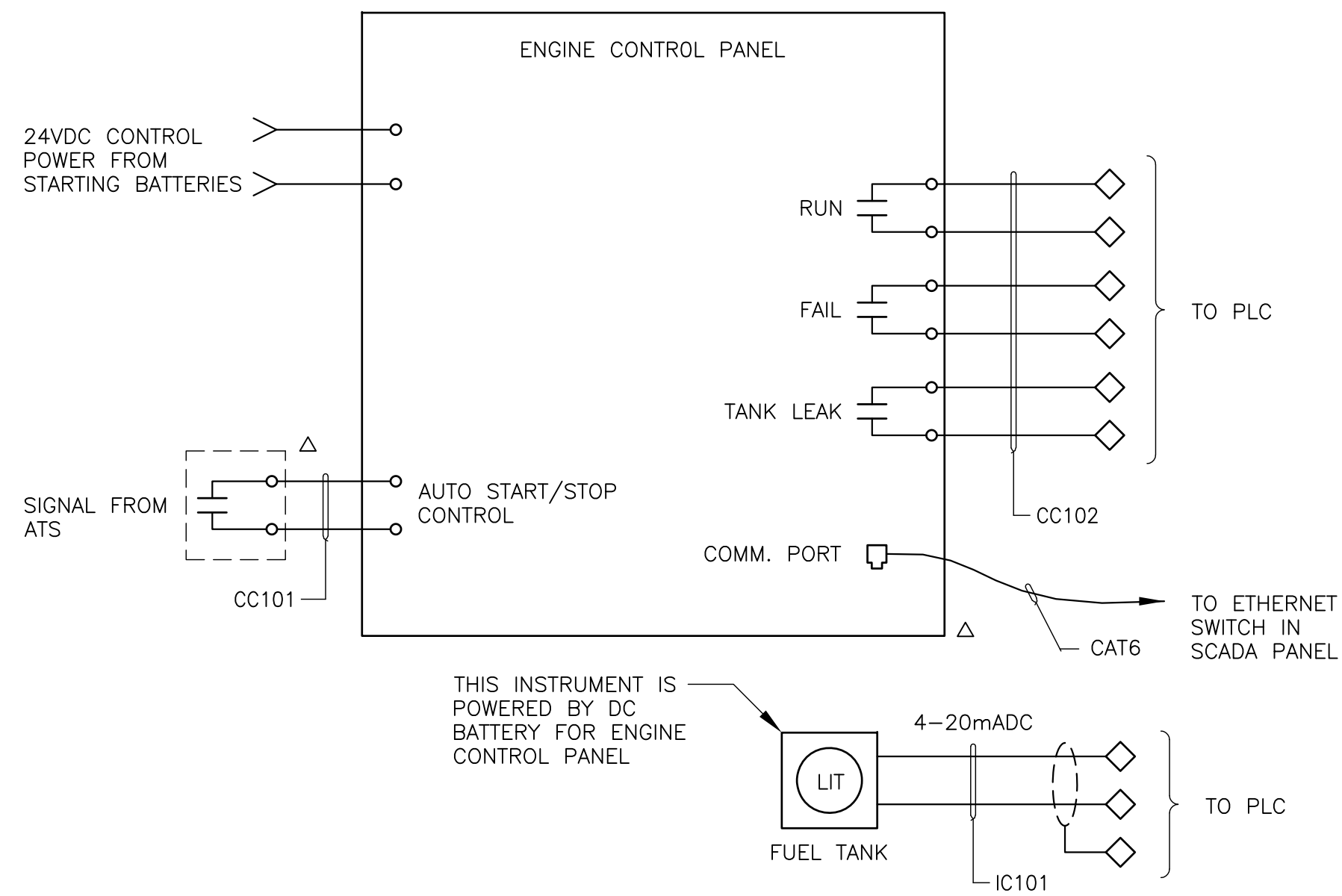
NOTES:

- CONTACT IS FROM ACCESS HATCH LIMIT SWITCH.
- PILOT DEVICE SHALL BE 30MM HEAVY DUTY INDUSTRIAL TYPE. SEE DIV. 16 SPECS FOR REQUIREMENTS.
- GROUNDING CONDUCTOR IN POWER CIRCUIT IS REQUIRED.
- ZSH-107D IS A DPDT SWITCH

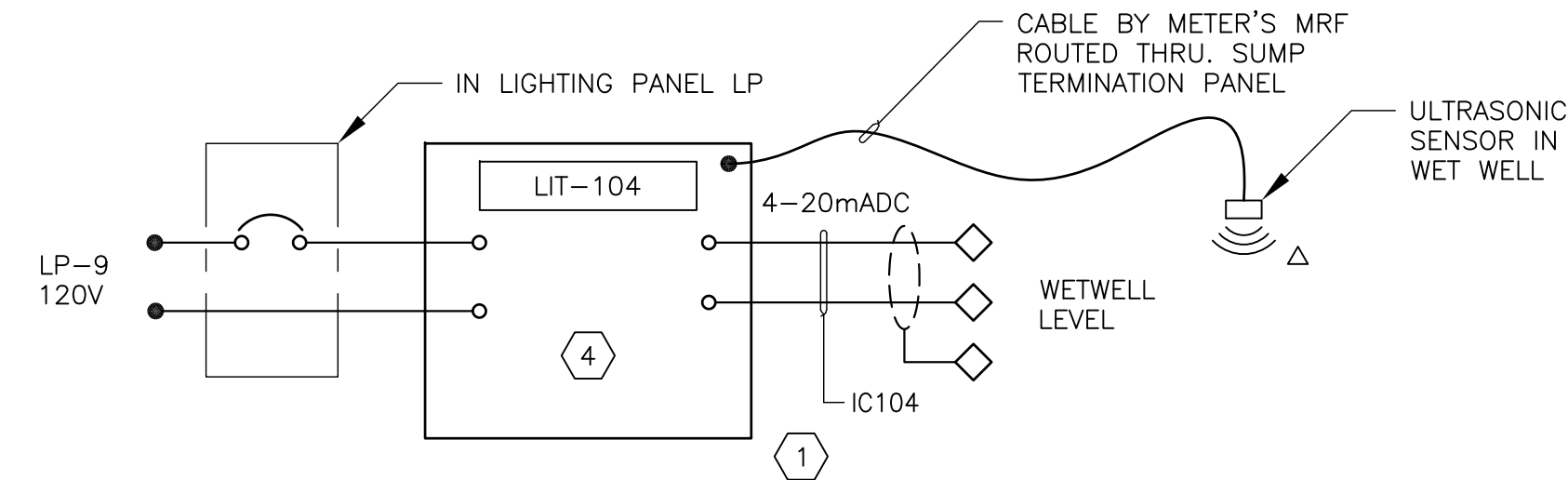
A SUPPLY FAN CONTROL SCHEMATIC
SCALE: NTS



B ATS CONTROL DIAGRAM
SCALE: NTS



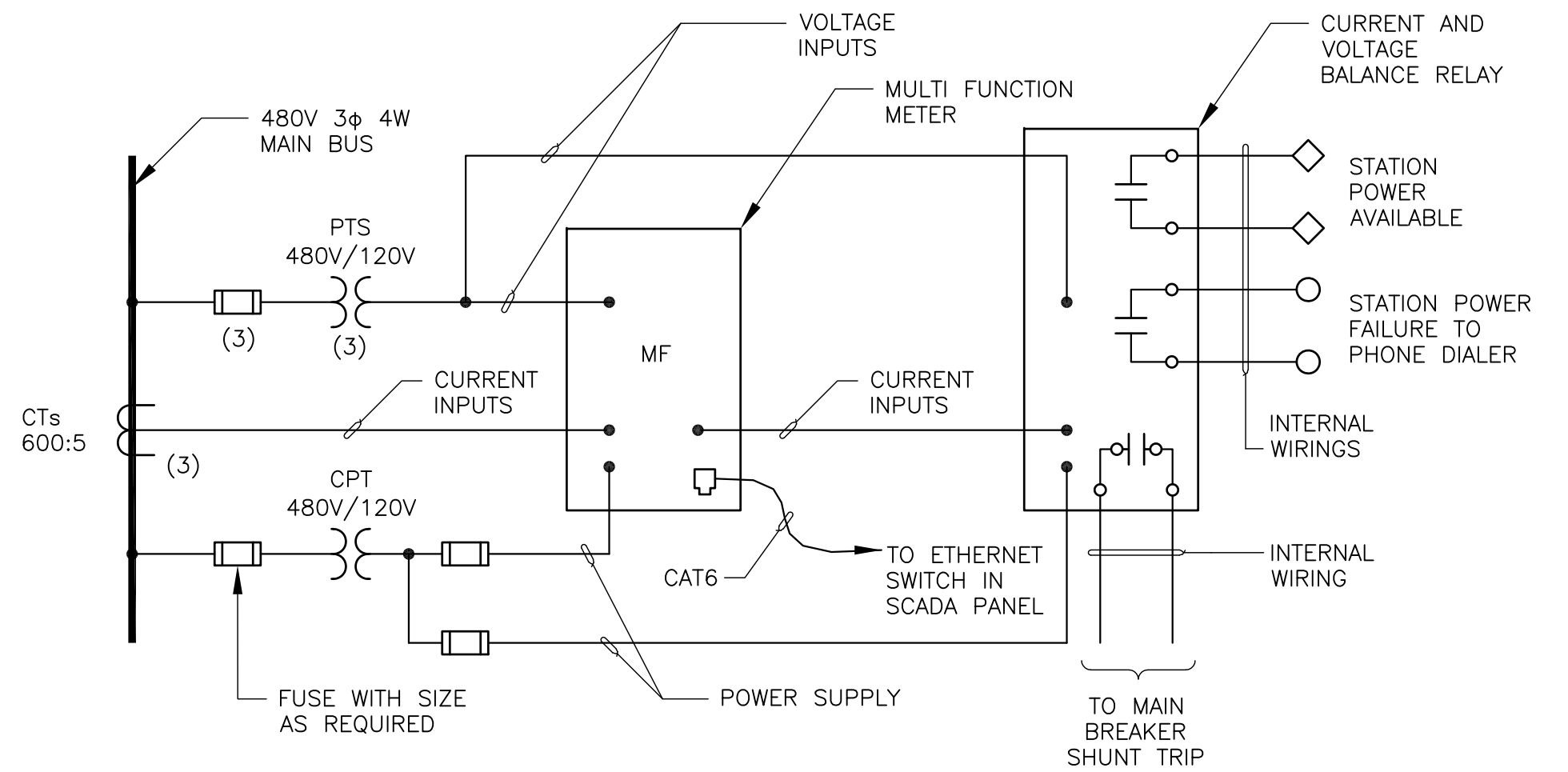
C STANDBY GENERATOR CONTROL DIAGRAM
SCALE: NTS



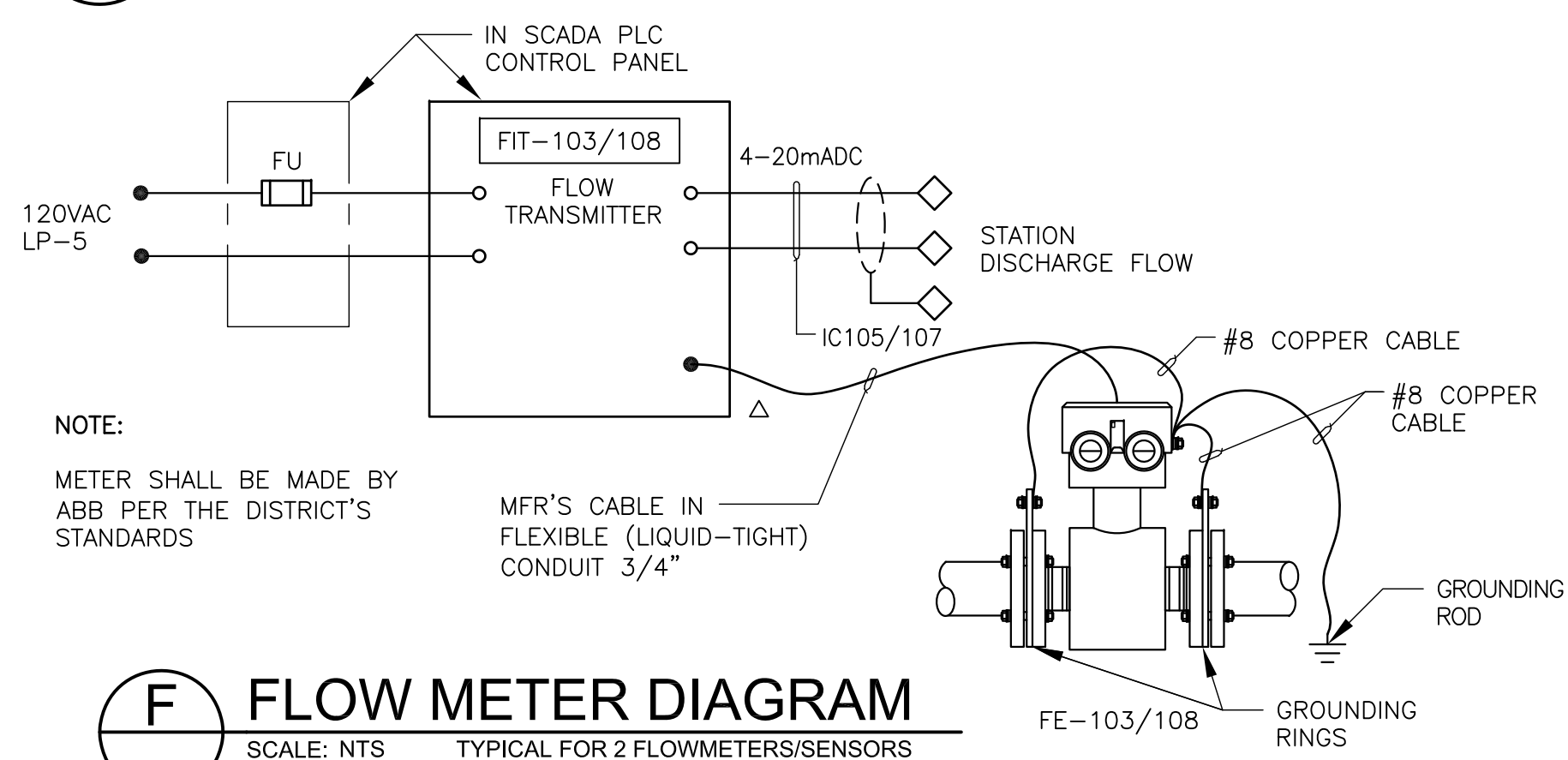
D WET WELL LEVEL TRANSMITTER
SCALE: NTS

SHEET NOTES:

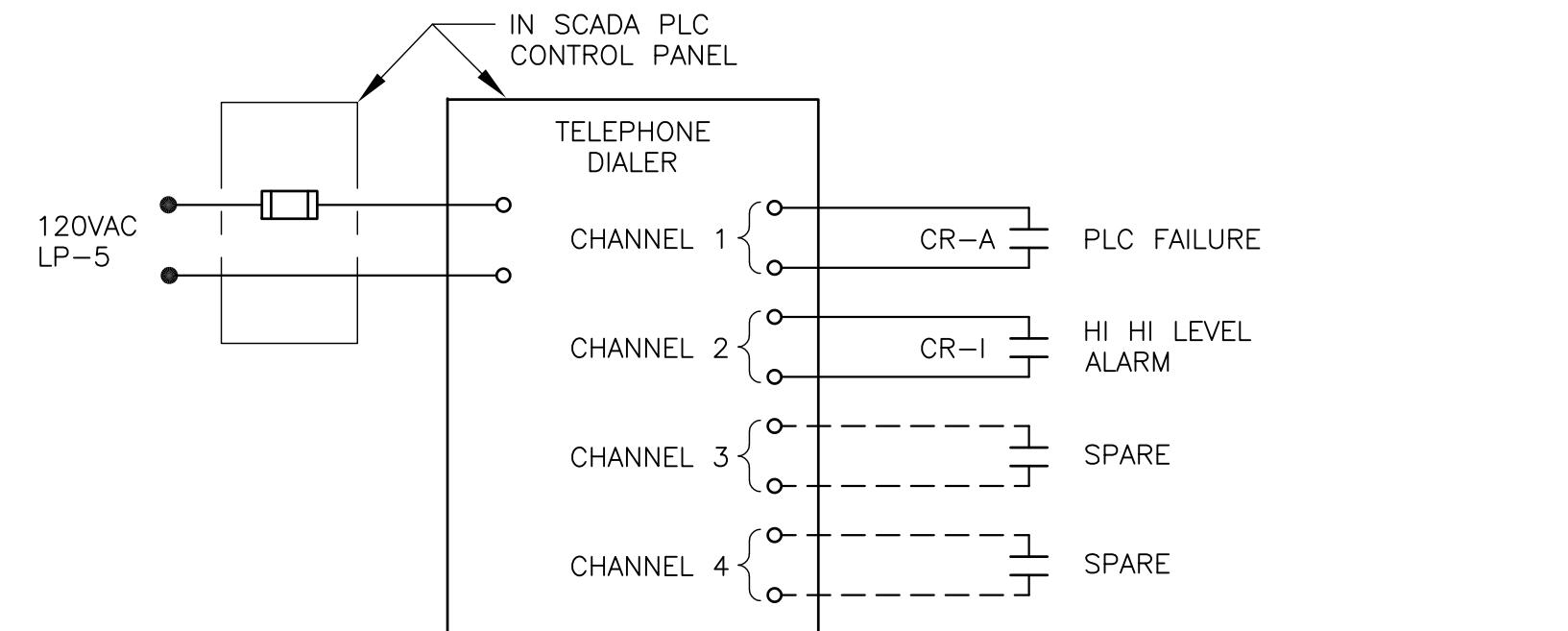
- THIS DEVICE IS LOCATED IN THE ELECTRICAL BUILDING.
- UNLESS OTHERWISE NOTED, ALL DEVICES SHOWN ARE LOCATED IN THE ATS.
- CONTROL PANEL SHALL HAVE A MAIN 3-POLE DISCONNECT SWITCH. IF NOT PROVIDED, EXTERNAL DISCONNECT NEMA 4X SHALL BE REQUIRED.
- LEVEL TRANSMITTER IS LOCATED IN SCADA PANEL.
- PHONE DIALER IS LOCATED IN SCADA PANEL.



E MULTI FUNCTION METER AND PROTECTIVE RELAY CONNECTIONS
SCALE: NTS

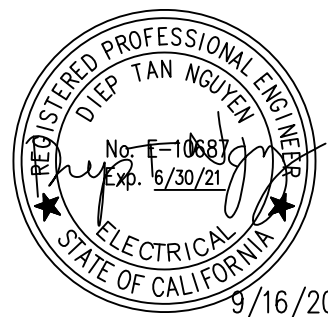


F FLOW METER DIAGRAM
SCALE: NTS
TYPICAL FOR 2 FLOWMETERS/SENSORS



G TELEPHONE DIALER
SCALE: NTS

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Oakland, San Francisco, Orange County, CA

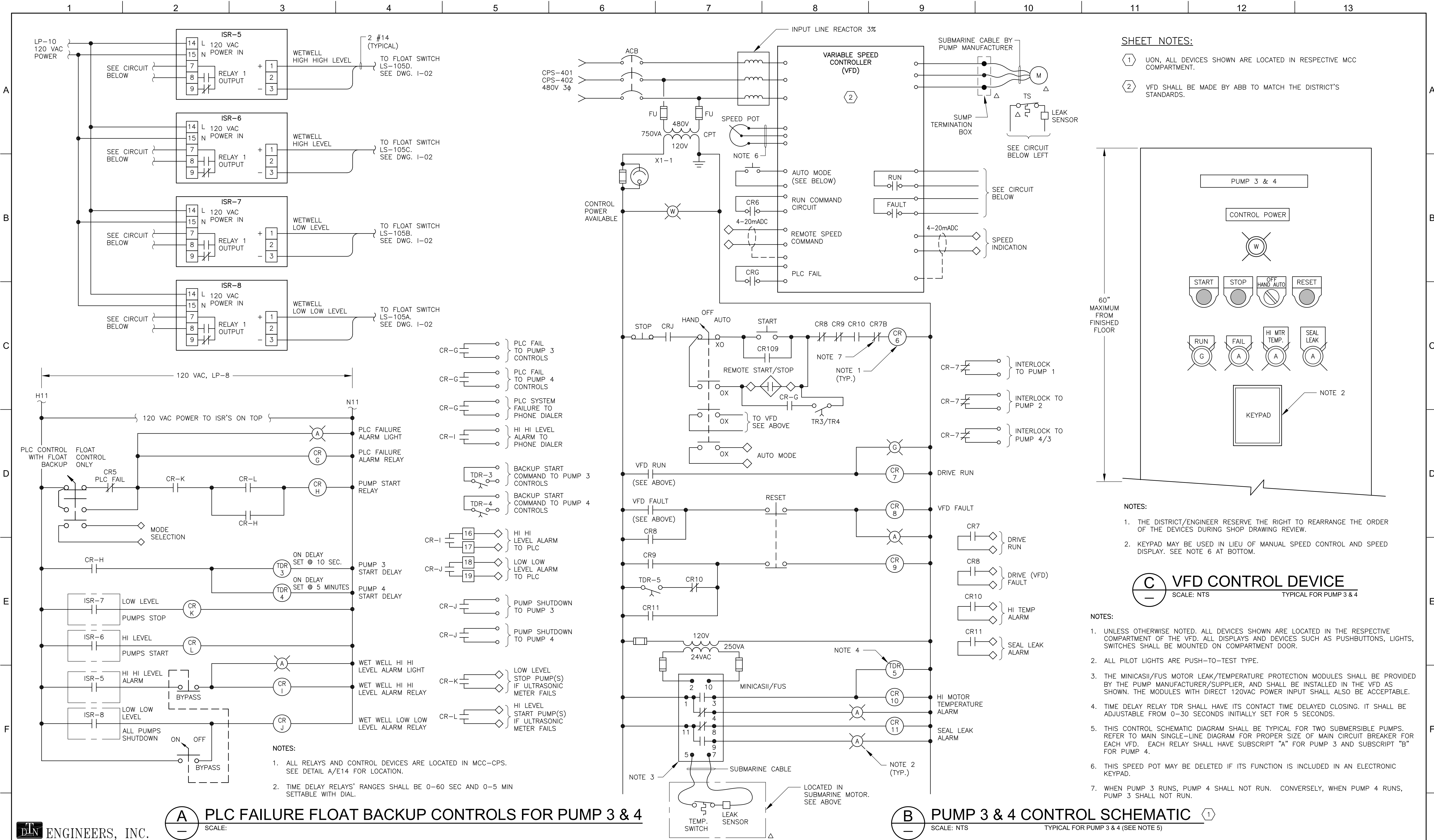


SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
ELECTRICAL
CONTROL DIAGRAMS - 1

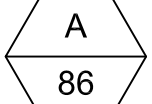
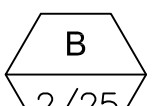
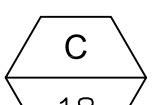
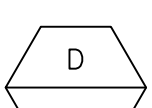
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
JOB NO. 8231D.10
DRAWING NO. E07
SHEET NO. SHT 47 OF 60

REV	DATE	BY	DESCRIPTION

DESIGNED TP
DRAWN LD
CHECKED DTN
DATE SEPTEMBER 2020



ENGINEERS, INC. Oakland, San Francisco, Orange County, CA				DESIGNED TP	SEP 16 2020	ELECTRICAL STATE OF CALIFORNIA 9/16/20	carollo®	SAUSALITO • MARIN CITY SANITARY DISTRICT	SAUSALITO-MARIN CITY SANITARY DISTRICT COLOMA PUMP STATION REPLACEMENT PROJECT ELECTRICAL CONTROL DIAGRAMS - 3		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. E09 SHEET NO. SHT 49 OF 60
REV	DATE	BY	DESCRIPTION	CHECKED DTN								
1	2	3	4	5								

LIGHTING FIXTURE SCHEDULE								
FIXTURE DESIGNATION	TYPE	QTY	VOLT	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	MOUNTING
	LED 86W	AS SHOWN	120V	PENDANT MOUNTED, WRAP AROUND, LED TYPE LIGHT FIXTURE 52" LONG, 15" WIDE WITH ACRYLIC.	LITHONIA MCGRAW EDISON	FHE-LED-7L-PCL-MVOLT EQUIVALENT	LED	CEILING MOUNTED
	EMERGENCY BATTERY PACK	AS SHOWN	120V	BATTERY PACK WITH NICAD BATTERY, CHARGER, TWO 25W SEALED BEAM HEADS ADJUSTABLE 12VDC WITH INDICATOR AND TEST PUSH BUTTON.	HOLOPHANE SIMKAR	DM6-N-50-7-NS-2-NA SHDEM-2-25W-12	SEALED BEAM TUNGSTEN	WALL/ SURFACE
	LED 18W	AS SHOWN	120V	WALL MOUNTED, WATER PROOF, LED TYPE IN CAST ALUMINUM HOUSING, DARK BRONZE FINISH, BUILT-IN PHOTO CELL CONTROL, 2100 LUMENS	LITHONIA HOLOPHANE	TWS-LED-P1-50K-MVOLT-PE- DDB-M4 EQUIVALENT	LED	WALL MOUNTED
	LED 80W	AS SHOWN	120V	POLE MOUNTED, LED, ROADWAY TYPE LED, 10 YR. WARRANTY, 15' ALUMINUM STRAIGHT POLE WITH PROVISION FOR AN OUTDOOR CONVENIENCE OUTLET, POLE TO WITHSTAND 100 MPH WIND. FIXTURE IS DARK SKY FRIENDLY.	CREE APPROVED EQUAL	RSWM-A-HT-3ME-9L-30K8-UL -BZ APPROVED EQUAL	LED	15' STRAIGHT ALUMINUM POLE

SHEET NOTES:

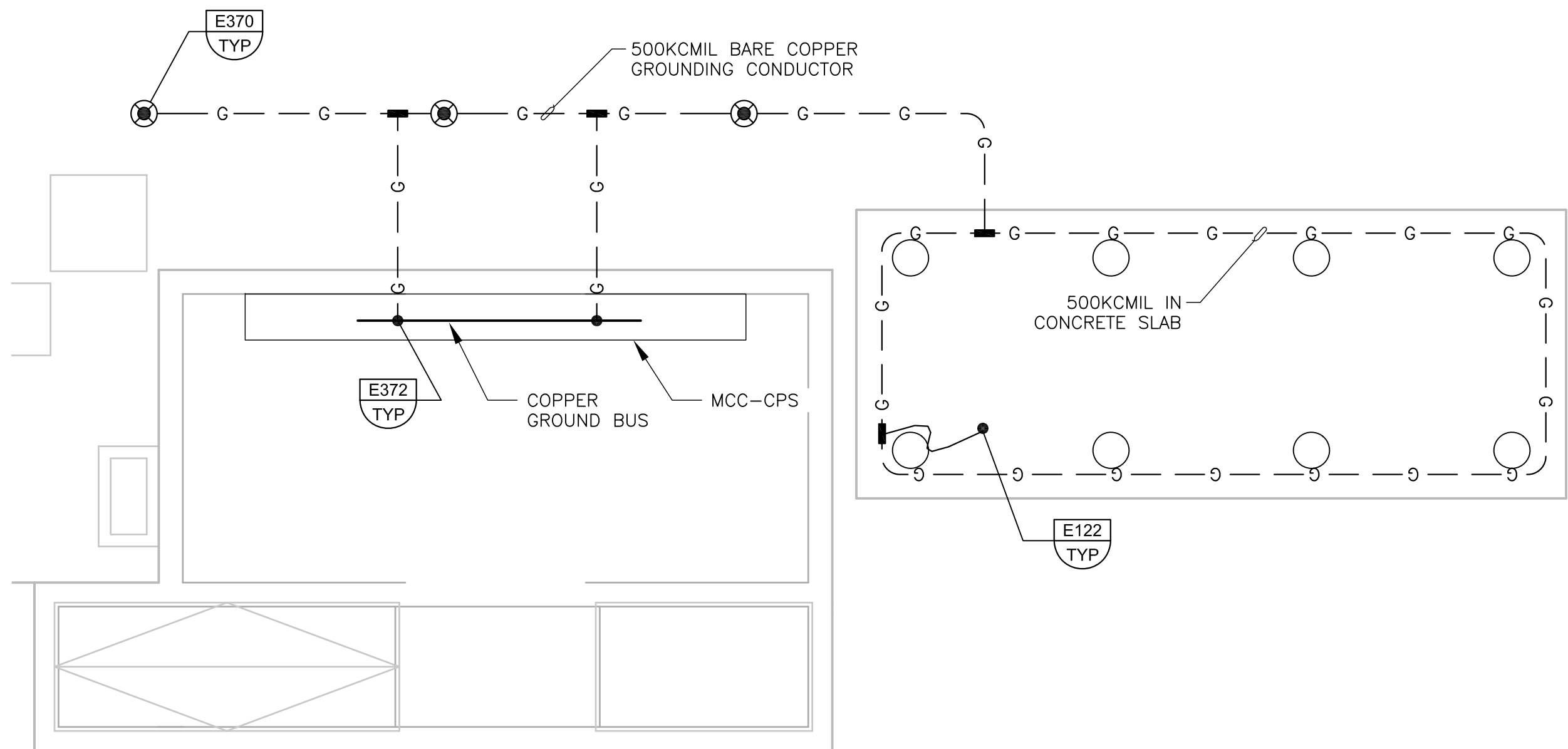
- 1 EACH CIRCUIT SHOWN SHALL BE PROVIDED WITH A GREEN, GROUNDING CONDUCTOR IN EACH 3/4" OR 1" CONDUIT.

PROVIDE PANELBOARD WITH INSIDE POCKET TO HOLD TYPED CIRCUIT DIRECTORY.
- 2 FOR PVC CONDUITS, MINIMUM CONDUIT SIZE SHALL BE 1".

A LIGHTING FIXTURE SCHEDULE

PANEL		LP		VOLTAGE/PHASE		120/208V — 3ϕ — 4W		POLES		3		MTG.		SURFACE											
LOCATION		IN MCC "CPS"		MAIN LUGS		50A		BUS		100A		PANEL BREAKER		BOLT-ON											
LOAD DESCRIPTION		VOLTAGE/AMPERE			WIRE (*) CONDUIT		TRIP		CKT.		S/N A B C		CKT.		TRIP		WIRE (*) CONDUIT		VOLTAGE/AMPERE			LOAD DESCRIPTION			
		ϕA	ϕB	ϕC															ϕA	ϕB	ϕC				
SITE LIGHTING		180			#10	20	1	●					2	20	#12	180			BUILDING LIGHTING						
BATTERY CHARGER						20	3		●				4	30	#10		1000		GENERATOR						
SCADA CONTROL PANEL, PHONE DIALER				1000	#12	20	5		●				6	2P	#10			1000	JACKET HEATER						
SPARE						20	7	●					8	20	#12	200			COLOMA FLOAT BACKUP CONTROLS						
SPARE						20	9		●				10	20	#12		180		MCC ROOM THERMOSTAT						
BLDG INDOOR OUTLETS				200	#12	20	11		●				12	20	#12			180	BLDG OUTDOOR OUTLETS (GFI)						
SPARE		180			#12	20	13	●					14	20	#12				TELEPHONE CABINET OUTLET						
OUTDOOR OUTLET (GFI)			180		#12	20	15		●				16	20					SPARE						
SPARE						20	17		●				18	20					SPARE						
SPARE						20	19	●					20	20					SPARE						
SPACE							21		●				22						SPACE						
SPACE							23		●				24						SPACE						
SUBTOTAL		360	180	1200													380	1180	1180						
TOTAL VA = 4480																						AMPERES = 12.43		© 208 V 3ϕ	

(*) EACH CIRCUIT SHALL BE 2#12, #12G GND IN 3/4" CONCRETE



B SCALE: NTS

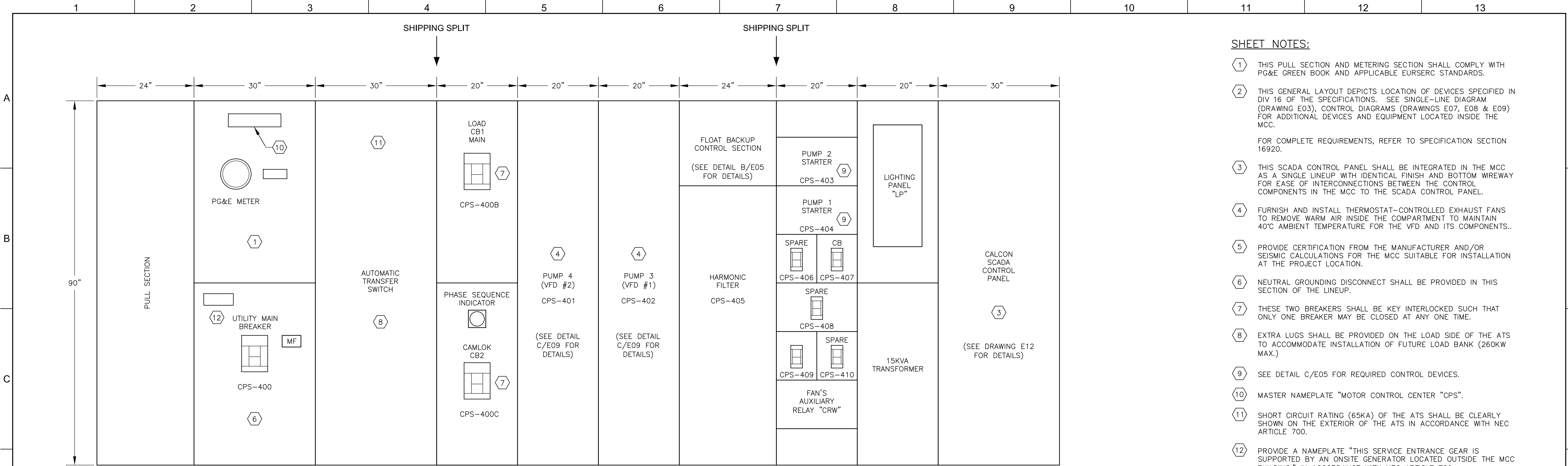


C ELECTRICAL BUILDING GROUNDING PLAN SCALE: 1" = 5'



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

G					DESIGNED						SAUSALITO-MARIN CITY SANITARY DISTRICT	VERIFY SCALES	JOB NO. 8231D.10
					TP							BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO.
					DRAWN							0  1"	E13
					LD							IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO.
	REV	DATE	BY	DESCRIPTION	CHECKED								
				DTN									
				DATE				9/16/20					
				SEPTEMBER 2020									



A MOTOR CONTROL CENTER "CPS"

SCALE: NTS

NOTES:

- REFER TO SECTION 01140 - WORK RESTRICTIONS FOR SEQUENCE OF WORK AND SECTION 02552 TEMPORARY BYPASS PUMPING REQUIREMENTS, FOR ADDITIONAL DETAILS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE FURNISHING AND INSTALLATION OF THE TEMPORARY POWER AND REQUIRED EQUIPMENT TO IMPLEMENT THE BYPASS PUMPING SET FORTH IN SECTION 01140, AND SECTION 02552. TEMPORARY EQUIPMENT INSTALLATION SHALL BE IN COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS.
- ALL TEMPORARY POWER EQUIPMENT SHALL BE WEATHER-PROOF AND RAIN-PROOF. ALL TEMPORARY CABLES SHALL BE HEAVY DUTY, PORTABLE, FULLY AND NEATLY PROTECTED TO AVOID BEING DAMAGED.
- TEMPORARY POWER CONNECTION FOR BYPASS PUMPING ACROSS COLOMA STREET SHALL BE UNDERGROUND. ALL OTHER TEMPORARY CONNECTIONS SHALL BE ABOVE GROUND.
- SUBMIT DETAILED SEQUENCE OF WORK AND TEMPORARY BYPASS PUMPING PLAN FOR REVIEW AND APPROVAL.
- CONTRACTOR MAY USE TEMPORARY POWER WITH APPROPRIATE STEP-DOWN TRANSFORMERS TO POWER ELECTRICAL HAND TOOLS UTILIZED ON THE JOBSITE DURING CONSTRUCTION.

B TEMPORARY POWER REQUIREMENTS - ONE-LINE DIAGRAM

SCALE: NTS

DTN ENGINEERS, INC.
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SAUSALITO-MARIN CITY SANITARY DISTRICT

COLOMA PUMP STATION REPLACEMENT PROJECT

ELECTRICAL

MCC ELEVATION DETAIL AND TEMPORARY POWER REQUIREMENTS - ONE-LINE DIAGRAM

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

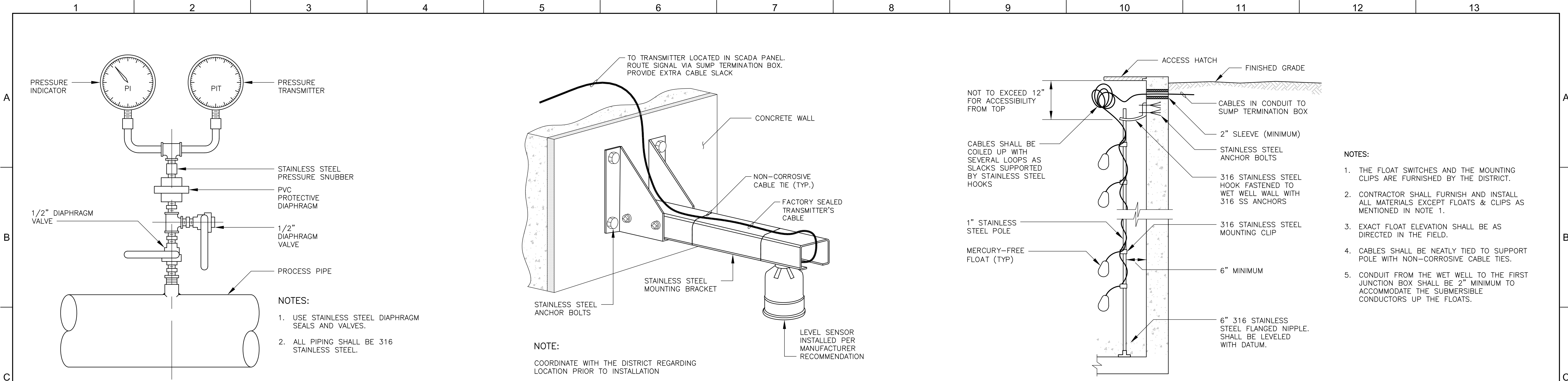
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
8231D.10

DRAWING NO.
E14

SHEET NO.

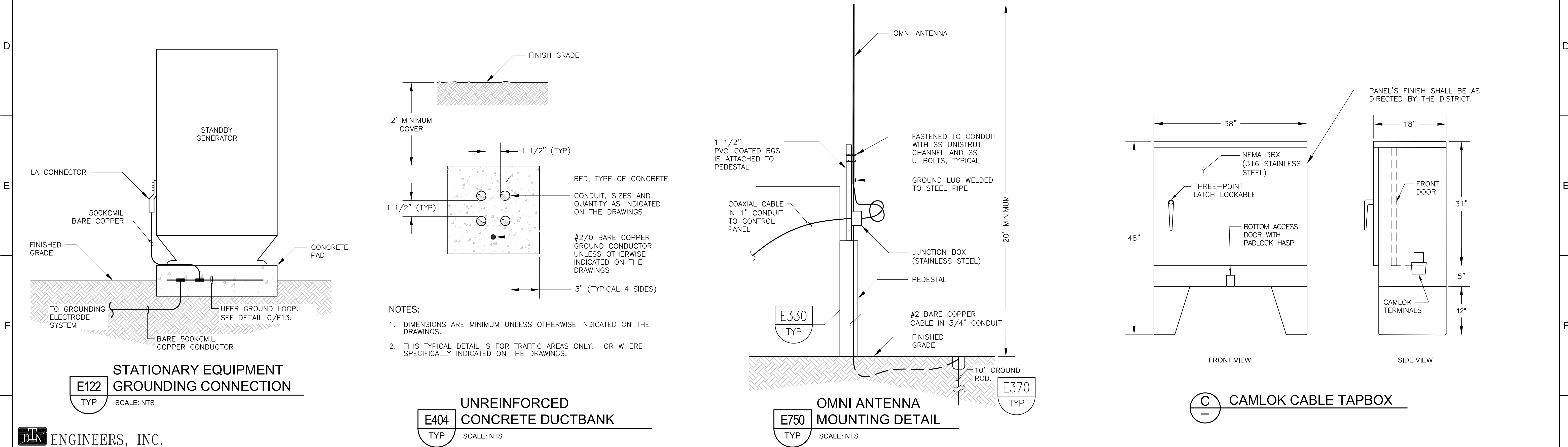
SHT 54 OF 60



Pressure Gauge Detail for Sewage Service
E101C TYP SCALE: NTS

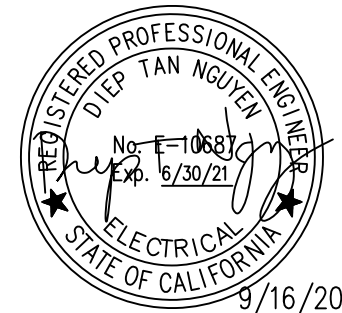
Ultrasonic Sensor for Pump Station's Wetwell
E105A TYP SCALE: NTS

Removable Float Switch Assembly Mounting
E334 TYP SCALE: NTS (TYPICAL FOR TWO SETS)



DESIGNED TP				DRAWN LD				CHECKED DTN				DATE SEPTEMBER 2020			
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1				2				3				4			

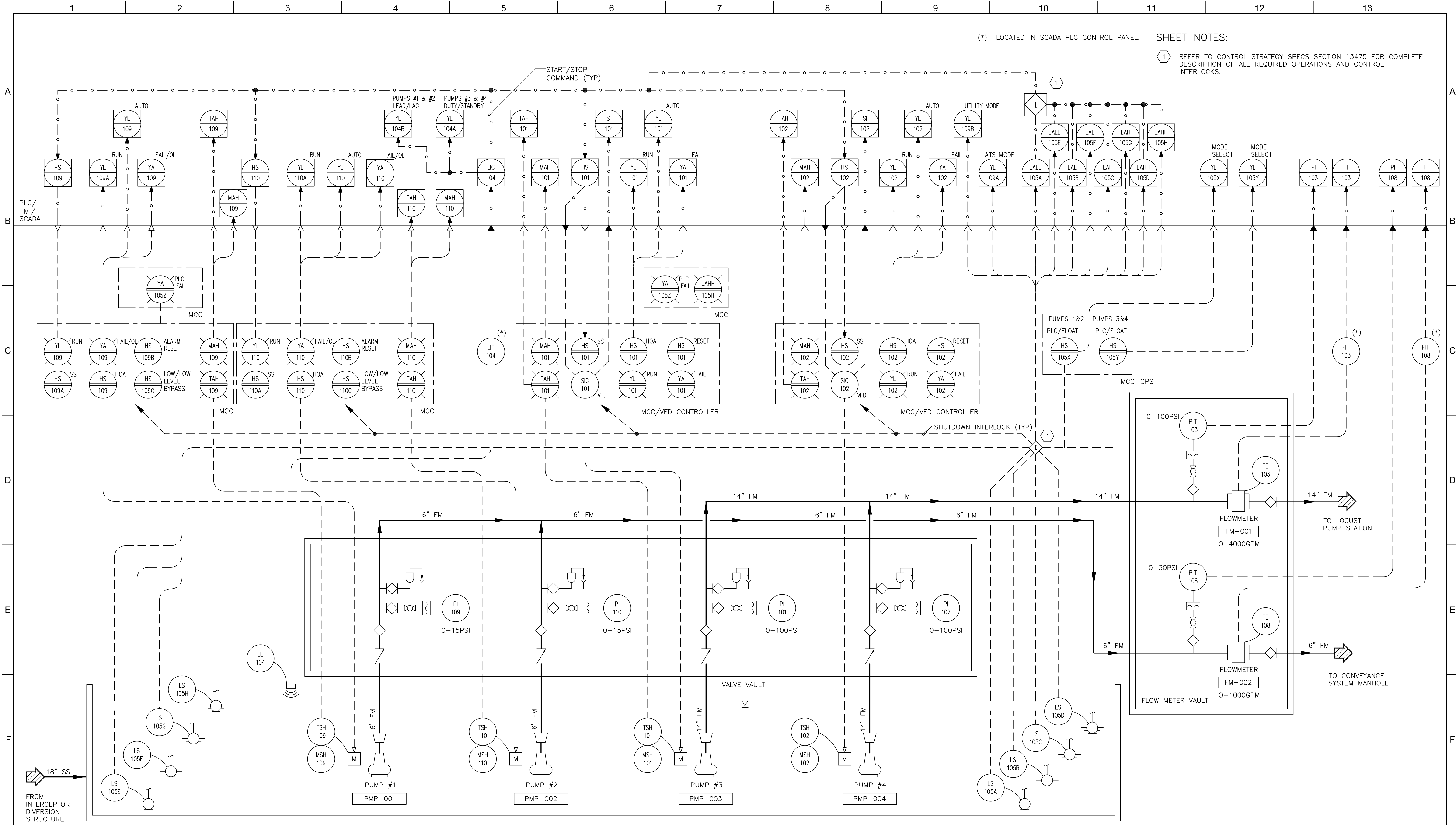
ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
ELECTRICAL
GENERAL ELECTRICAL DETAILS - 2

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. E16
SHEET NO. SHT 56 OF 60

1			2			3			4			5			6			7			8			9			10			11			12			13																																																					
INSTRUMENT IDENTIFICATION																		INTERNATIONAL SOCIETY OF AUTOMATION (ISA) TABLE																		LINE LEGEND																		ABBREVIATIONS & LETTER SYMBOLS																																			
<div>EXAMPLE SYMBOLS</div> <div><div><div><div><div></div><div>T</div><div>RC</div></div><div><div>W-X-V-Z</div><div>(A) (B)</div></div><div><div></div><div></div><div></div></div></div><div>FIRST LETTER(S)</div><div>SUCCEEDING LETTERS</div><div>SET NUMBER (USED WHEN THERE ARE MULTIPLE SETS OF UNITS WITH THE SAME W-X-Y DESIGNATIONS)</div><div>THE TOTAL NUMBER OF SETS OF UNITS (Z VARIES FROM 1 TO B)</div><div>THE TOTAL NUMBER OF SETS OF UNITS (Y VARIES FROM 1 TO A)</div><div>UNIT NUMBER (USED WHEN THERE ARE MULTIPLE UNITS WITH THE SAME W-X DESIGNATIONS)</div><div>LOOP NUMBER</div><div>UNIT PROCESS NUMBER (NOT USED IN THIS PROJECT)</div></div><div><div><div>TT</div><div>W-X-V-Z</div></div>FIELD MOUNTED INSTRUMENT</div><div><div><div>FY</div><div>I/P</div><div>W-X-V-Z</div></div>REAR-OF-PANEL MOUNTED INSTRUMENT</div><div><div><div>FIC</div><div>W-X-V-Z</div></div>PANEL MOUNTED INSTRUMENT</div><div><div><div>PI</div></div>SHARED DISPLAY, SHARED CONTROL (DCS) PRIMARY LOCATION, NORMALLY ACCESSIBLE TO OPERATOR</div></div> <div>SPECIAL CASES</div> <div><div><div></div></div>FACE MOUNTED INSTRUMENT ON FIELD PANEL, OPERATOR ACCESSIBLE</div> <div><div><div>QL</div><div>00</div></div>ON AND OFF EVENT LIGHTS</div> <div><div><div>ZL</div><div>0C</div></div>OPENED AND CLOSED POSITION LIGHTS</div> <div><div><div>ZS</div><div>0C</div></div>OPENED AND CLOSED POSITION SWITCHES</div> <div><div><div>HS</div><div>00</div></div>ON-OFF HAND SWITCH. MAINTAINED CONTACT SWITCH (CONTROLLED DEVICE WILL RESTART ON RETURN OF POWER AFTER POWER FAILURE).</div> <div><div><div>HS</div><div>SS</div></div>STOP-START HAND SWITCH MOMENTARY CONTACT SWITCHES (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE).</div> <div><div><div>HS</div><div>OSC</div><div>E</div></div>ELECTRIC ACTUATOR WITH INTEGRAL OPEN-STOP-CLOSE MOMENTARY CONTACT CONTROL SWITCH.</div> <div><div><div>FIHK</div><div>CM</div></div>FLOW INDICATING, COMPUTER/MANUAL CONTROL STATION</div> <div><div><div>FIC</div><div>CAM</div></div>FLOW INDICATING, COMPUTER/AUTO/MANUAL CONTROL STATION</div> <div>DESIGNED TP DRAWN LD CHECKED DTN DATE SEPTEMBER 2020</div>																		<div>NOTE: (+) : WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.</div> <div>TRANSUCERS</div> <div>A : ANALOG</div> <div>D : DIGITAL</div> <div>E : VOLTAGE</div> <div>F : FREQUENCY</div> <div>H : HYDRAULIC</div> <div>I : CURRENT</div> <div>P : PNEUMATIC</div> <div>PD : PULSE DURATION</div> <div>PF : PULSE FREQUENCY</div> <div>R : RESISTANCE</div> <div>SELF CONTAINED VALVE & EQUIPMENT TAG NUMBERS</div> <div>AHU : AIR HANDLING UNIT</div> <div>ARV : AIR RELEASE VALVE</div> <div>AVRV : AIR AND VACUUM RELEASE VALVE</div> <div>CARV : COMBINATION AIR RELEASE VALVE</div> <div>E : EJECTOR</div> <div>FCV : FLOW CONTROL VALVE</div> <div>G : GATE</div> <div>LCV : LEVEL CONTROL VALVE</div> <div>M : MECHANICAL EQUIPMENT</div> <div>P : PUMP</div> <div>PA : PLANT ABBREVIATION</div> <div>PCV : PRESSURE CONTROL VALVE</div> <div>PRS : PRESSURE RELIEF VALVE</div> <div>T : TANK</div> <div>TCV : TEMPERATURE CONTROL VALVE</div> <div>VRV : VACUUM RELIEF VALVE</div> <div>W : UNIT PROCESS NUMBER</div> <div>X : LOOP NUMBER</div> <div>Y : UNIT NUMBER</div> <div>EXAMPLE</div> <div><div><div><div>FY</div><div>I/P</div></div><div><div>P</div><div>C</div><div>B</div><div>S</div><div>BL</div></div><div><div>:</div><div>:</div><div>:</div><div>:</div><div>:</div></div><div><div>PLUG</div><div>CHECK</div><div>BUTTERFLY</div><div>SOLENOID</div><div>BALL</div></div></div><div><div>PVLVOX-XX</div></div></div>																		<div>PLC/RTU TERMINATIONS</div> <div><div>△</div>DISCRETE INPUT</div> <div><div>▽</div>DISCRETE OUTPUT</div> <div><div>▲</div>ANALOG INPUT</div> <div><div>▼</div>ANALOG OUTPUT</div>																		<div>INTERFACE SYMBOLS</div> <div><div><div><div>S</div><div>WA</div></div><div>PROCESS INTERFACE</div></div><div><div><div>WA</div><div>D</div></div><div>SIGNAL INTERFACE</div></div><div><div><div>N</div></div><div>PROCESS OR SIGNAL LINE CONTINUATION N = 1, 2, 3...</div></div><div><div><div></div><div></div></div><div>INTERFACE TO OR FROM PROCESS EXTERNAL TO PROJECT</div></div></div>																		<div>GENERAL NOTES</div> <div>1. P & ID'S ARE FOR INFORMATION ON CONTROL CONCEPTS AND INSTRUMENTATION ONLY. REFER TO PLANS AND SPECIFICATIONS FOR DETAILS.</div> <div>2. THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THE SYMBOLS ARE USED IN THIS PROJECT.</div> <div>3. REFER TO SPECIFICATION FOR LOCAL AND SCADA CONTROL LOGIC.</div> <div>4. IN THIS PROJECT, THE TERMS "PLC" AND "RTU" ARE INTERCHANGEABLE.</div>																	
																																				<div>MISCELLANEOUS SYMBOLS</div> <div><div><div></div></div>VALVE</div> <div><div><div>M</div></div>PUMP AND MOTOR</div> <div><div><div></div></div>ULTRASONIC SENSOR</div> <div><div><div></div></div>WATER SURFACE</div> <div><div><div></div></div>MAGNETIC TYPE FLOWMETER</div> <div><div><div>M</div></div>SUBMERSIBLE PUMP AND MOTOR</div> <div><div><div></div></div>CARV</div>																																																					
																																				SAUSALITO-MARIN CITY SANITARY DISTRICT																		VERIFY SCALES																		JOB NO. 8231D.10																	
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ENGINEERS, INC.
Oakland, San Francisco, Orange County, CA

COLOMA PUMP STATION



carollo



SAUSALITO-MARIN CITY SANITARY DISTRICT

COLOMA PUMP STATION REPLACEMENT PROJECT

INSTRUMENTATION

P&ID
COLOMA PUMP STATION

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.

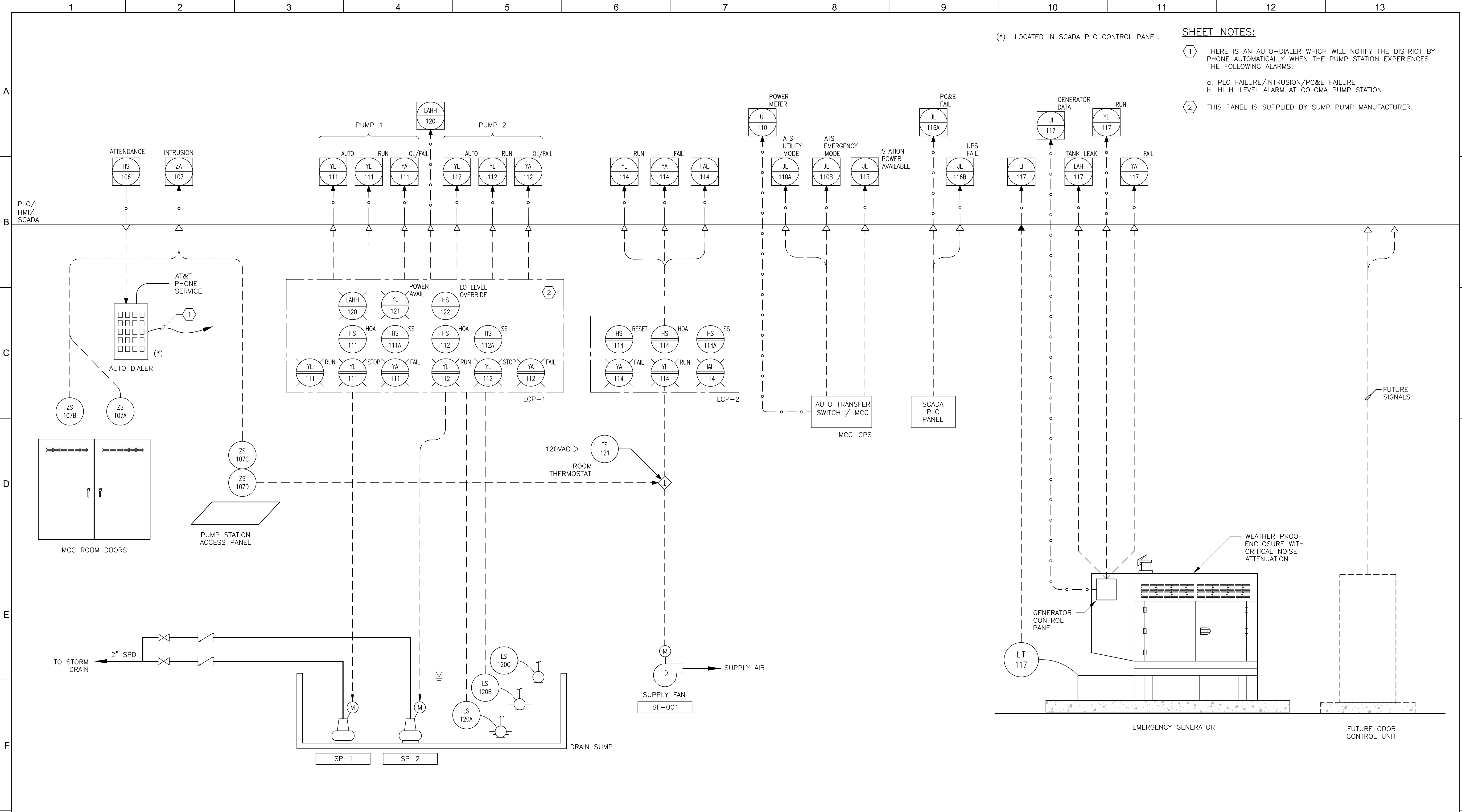
8231D.10

DRAWING NO.

102

SHEET NO.

SHT 59 OF 60



(*) LOCATED IN SCADA PLC CONTROL PANEL.

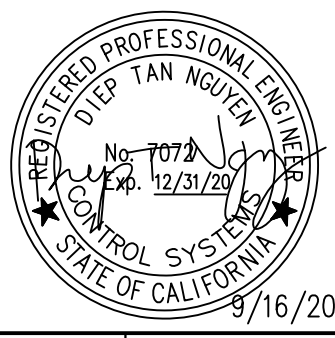
SHEET NOTES:

- 1 THERE IS AN AUTO-DIALER WHICH WILL NOTIFY THE DISTRICT BY PHONE AUTOMATICALLY WHEN THE PUMP STATION EXPERIENCES THE FOLLOWING ALARMS:
- a. PLC FAILURE/INTRUSION/PG&E FAILURE
 - b. HI HI LEVEL ALARM AT COLOMA PUMP STATION.
- 2 THIS PANEL IS SUPPLIED BY SUMP PUMP MANUFACTURER.

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

REV	DATE	BY	DESCRIPTION

DESIGNED TP
DRAWN LD
CHECKED
DATE SEPTEMBER 2020



SAUSALITO-MARIN CITY SANITARY DISTRICT
COLOMA PUMP STATION REPLACEMENT PROJECT
INSTRUMENTATION
P&ID
PUMP STATION AUXILIARY EQUIPMENT

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.
103
SHEET NO.
SHT 60 OF 60