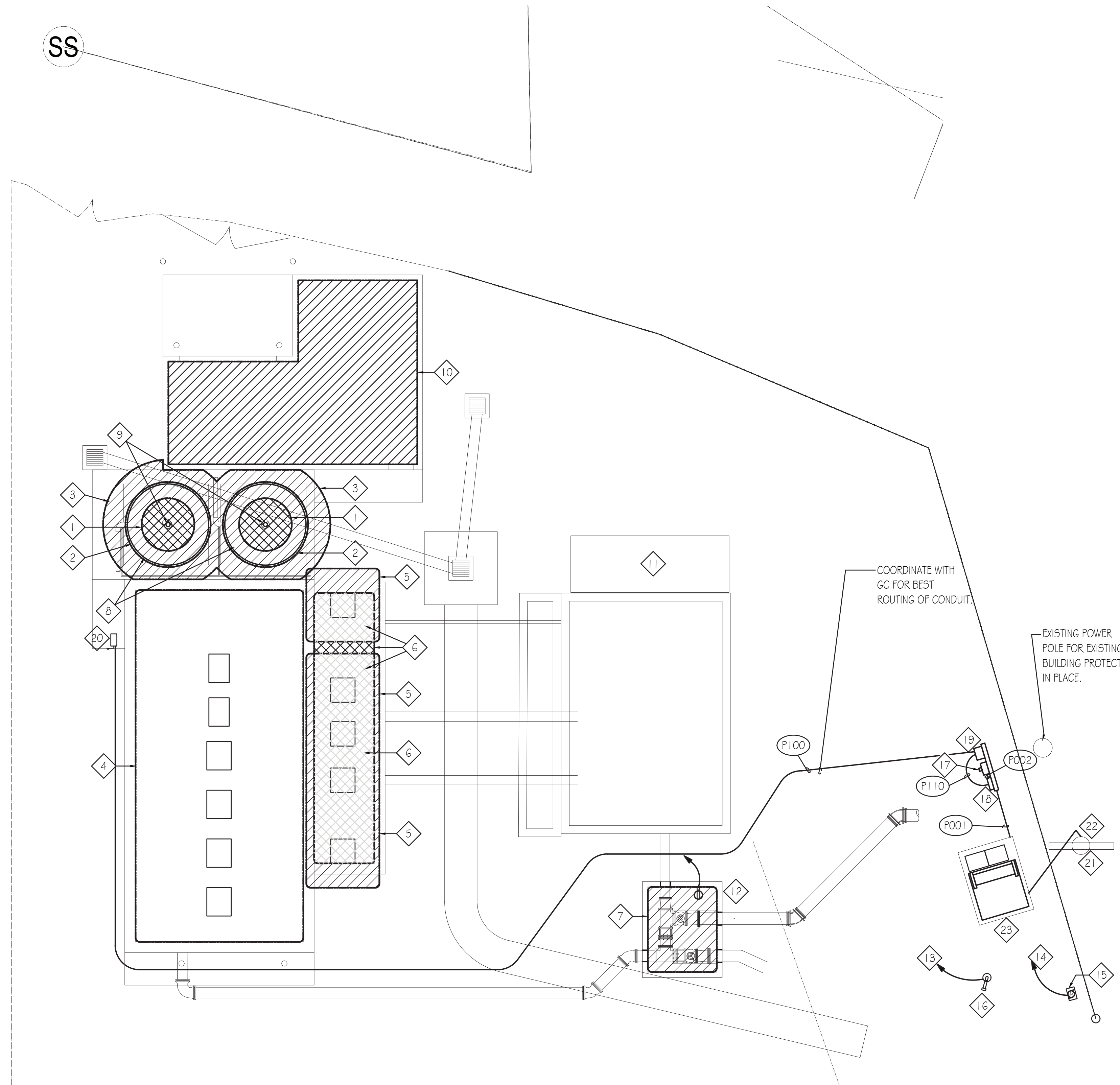
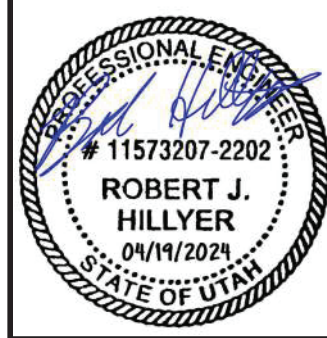


DRAWING NOTES

- 1 CLASS 1, DIV 1 TO 3'-0" RADIUS FROM OUTLET.
- 2 CLASS 1, DIV 2 TO 5'-0" RADIUS FROM OUTLET.
- 3 CLASS 1, DIV 2 TO 3'-0" RADIUS AROUND EQUIPMENT.
- 4 UNCLASSIFIED UPSTAIRS. UNCLASSIFIED DOWNSTAIRS WITH 6 AIR CHANGES PER HOUR, 3 AIR CHANGES PER HOUR UNDER 50°F.
- 5 CLASS 1, DIV 2 TO 1'-6" HEIGHT ABOVE GRADE WITHIN 3'-0" OF ANY HATCH OR OPENING.
- 6 CLASS 1, DIV 1 WITHIN WET WELL BELOW GRADE
- 7 VALVE VAULT CLASS 1, DIV 2 CONFINED SPACE.
- 8 ODOR CONTROL UNIT.
- 9 ODOR CONTROL OUTLET.
- 10 CLASS 1, DIV 2 WITHIN ALL INDOOR AREA OF HEADWORKS BUILDING. WITH 12 AIR CHANGES IN LOWER LEVEL.
- 11 PREPARE SPACE FOR NEW GENERATOR. COORDINATE WITH OWNER AND GENERAL CONTRACTOR REMOVAL OF PORTABLE GENERATOR AND PREPARATION OF SPACE FOR THE INSTALLATION OF A NEW GENERATOR. REPLACE GENERATOR PLUG WITH NEW NEMA 3R GENERATOR BREAKER ENCLOSURE 200A/3P. SEE ONE-LINE DIAGRAM REGARDING CONNECTIONS. FIELD-COORDINATE ALL REQUIREMENTS.
- 12 PROVIDE WP GFCI RECEPTACLE FOR SUMP PUMP. SEE CIVIL DETAILS. POWER FROM EXISTING BUILDING 120V PANEL SPARE 20A BREAKER.
- 13 DEMOLISH EXISTING GATE CONTROLLER AND GATE OPERATOR. FIELD-COORDINATE. RE-USE POWER CONDUIT AS PRACTICABLE FOR NEW GATE OPERATOR.
- 14 PROVIDE POWER TO GATE OPERATOR FROM THE SAME CIRCUIT AS CURRENTLY FEEDS EXISTING GATE OPERATOR. EXTEND TO HERE PER MANUFACTURER'S RECOMMENDATIONS. SEE ALSO CIVIL DRAWINGS.
- 15 GATE OPERATOR. SEE ALSO CIVIL DRAWINGS
- 16 POLE MOUNTED KEYPAD. WIRE CONTROLS AS RECOMMENDED BY GATE CONTROLLER MANUFACTURER'S RECOMMENDATIONS. SEE ALSO CIVIL DRAWINGS.
- 17 POWER METER
- 18 CT CABINET
- 19 PRIMARY DISCONNECT FOR NEW BUILDING.
- 20 BUILDING MAIN DISCONNECT.
- 21 NEW POWER POLE BY RMP.
- 22 PROVIDE 4" PVC CONDUIT WITH LONG SWEEP FIBERGLASS ELBOWS AND PULL STRING. STUB UP AT LOCATION OF BASE OF NEW POLE. PROVIDE 4" RISER CONDUIT FOR RMP. CONFIRM CONDUIT COUNT AND SIZE AND INSTALLATION TIMING WITH RMP.
- 23 UTILITY TRANSFORMER. VAULT AND CONDUIT WITH PULL STRING BY CONTRACTOR. COORDINATE ALL UTILITY REQUIREMENTS WITH ROCKY MOUNTAIN POWER.



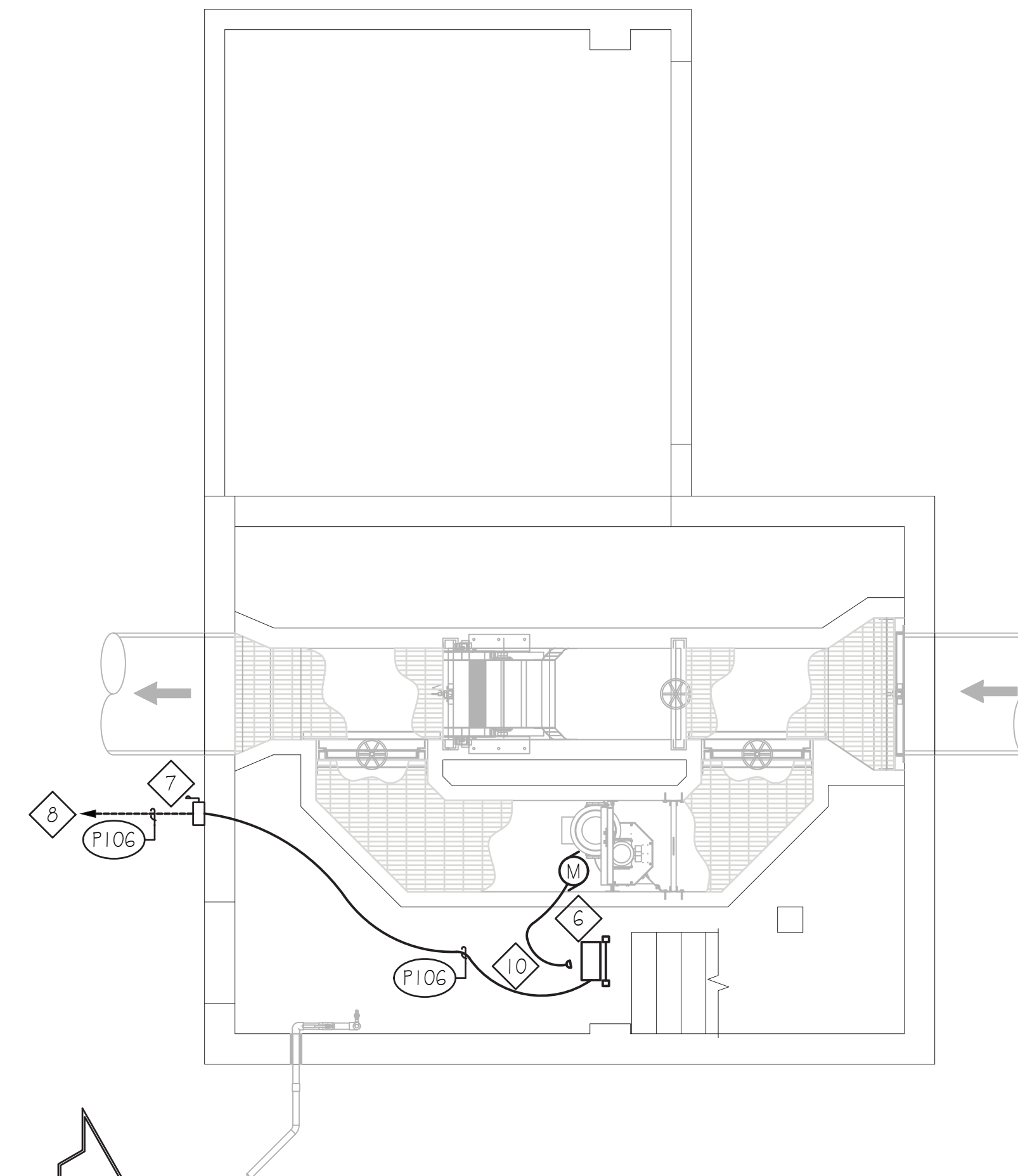
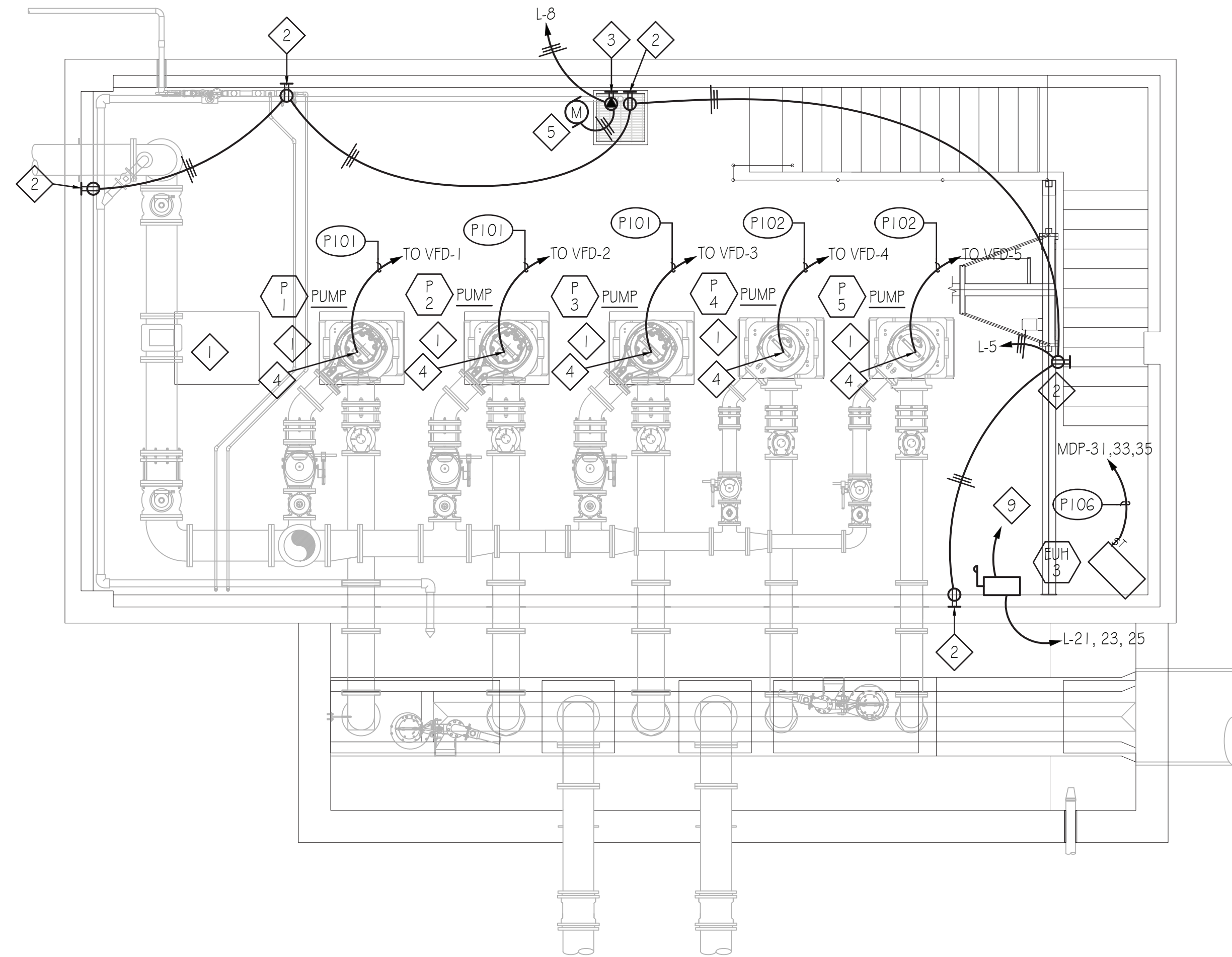
ELECTRICAL SITE PLAN
 SCALE: 1/8" = 1'-0"
 10 5 0 10 20



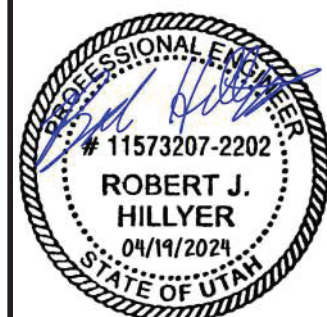
HANSEN ALLEN & LUCE ENGINEERS	HEATH Engineering Company	DESIGNED RJH	3						SCALE SOUTH SALT LAKE	DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION ELECTRICAL SITE PLANS	SHEET
		DRAFTED KGM	2								ES100
		CHECKED RJH	1								126.42.300
		DATE MAY 26, 2022	NO.	DATE	REVISIONS	BY	APVD.				

DRAWING NOTES

- 1 ACCESS HATCH ABOVE, TYPICAL.
- 2 GFCI WP +48" AFF
- 3 20A LOCK GFCI WP +48" AFF
- 4 SEE MOTOR CONNECTION DETAIL. ALL WIRING AND CONDUIT ROUTING SHALL NOT INTERFERE WITH CRANE MOTION AND OPERATION.
- 5 SUMP PUMP WITH INTEGRAL FLOAT SWITCH
- 6 GRINDER
- 7 GRINDER DISCONNECT. SEE ONE-LINE DIAGRAM. SEE CLASSIFIED TRANSITION DETAIL TO BE INSTALLED ON CLASSIFIED SIDE OF UNCLASSIFIED DISCONNECT. LABEL ON DISCONNECT "THIS BUILDING HAS MULTIPLE DISCONNECTS AND HAS CIRCUITS FED FROM THE BUILDING TO THE SOUTH."
- 8 TO MOTOR CONTROL PANEL IN PUMP BUILDING
- 9 TO HOIST CONTROLLER WIRE PER MANUFACTURER'S INSTRUCTIONS. ENSURE ALL WIRING WITHIN THIS LEVEL DOES NOT INTERFERE WITH CRANE MOVEMENT AND OPERATION.
- 10 INSTALL CLASS 1 DIV 2 480V/3PH LOCKING PLUG ON GRINDER TO BE STORED ON UPPER LEVEL AND PLACED IN SERVICE AS NEEDED. INSTALL A MATCHING CLASSIFIED RECEPTACLE ON FIBERGLASS STRUT 2 FT ABOVE FLOOR.



1 LOWER LEVEL POWER PLAN
 EP100 SCALE: 1/4" = 1'-0" 5 0 10 N



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SCALE



DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
 ELECTRICAL
 DRY PIT POWER PLAN

SHEET
 EP100
 126.42.300

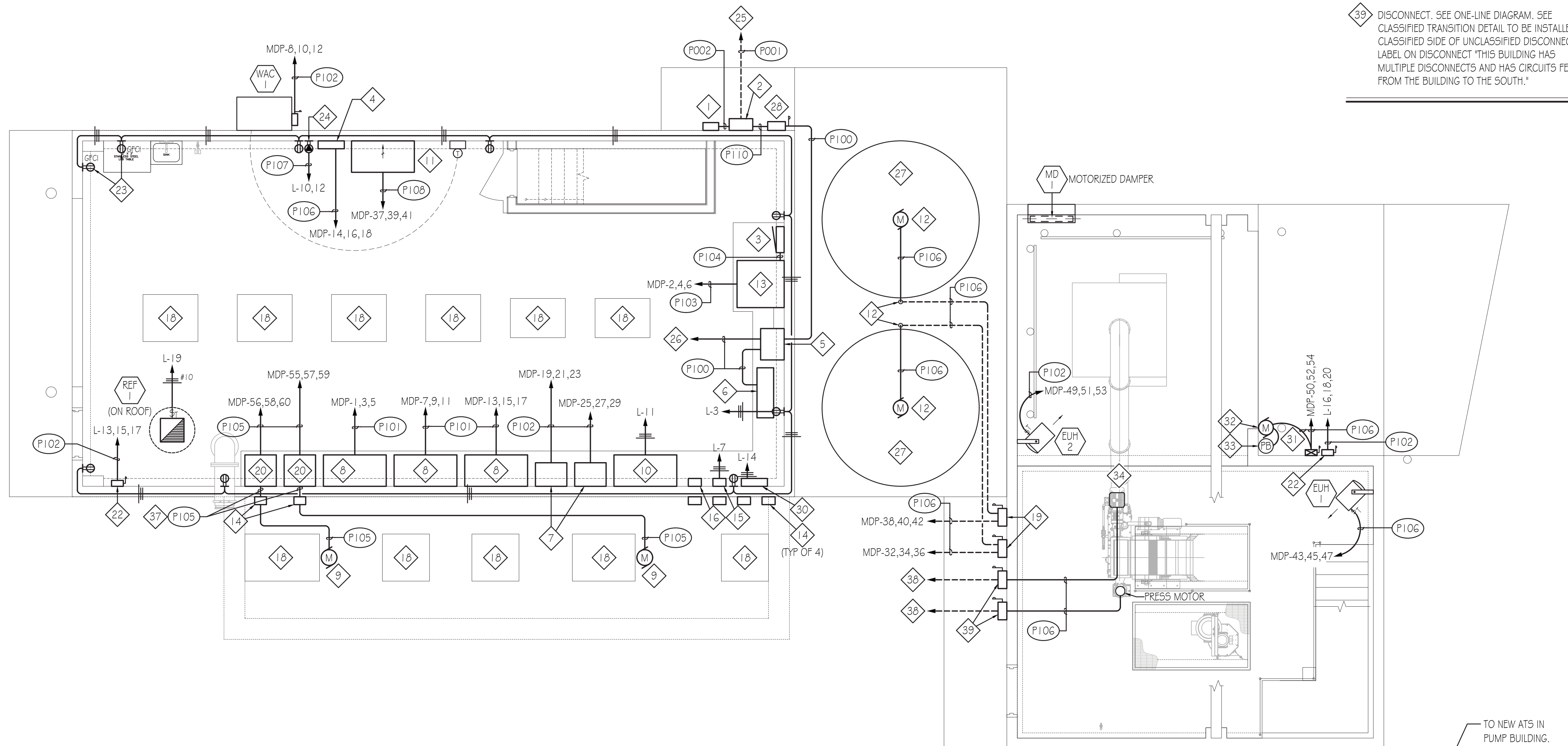
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GENERAL NOTES

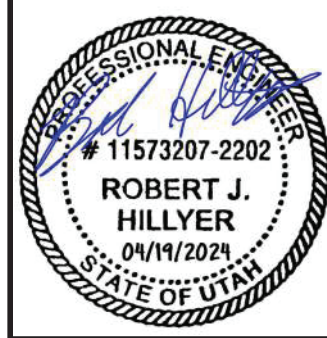
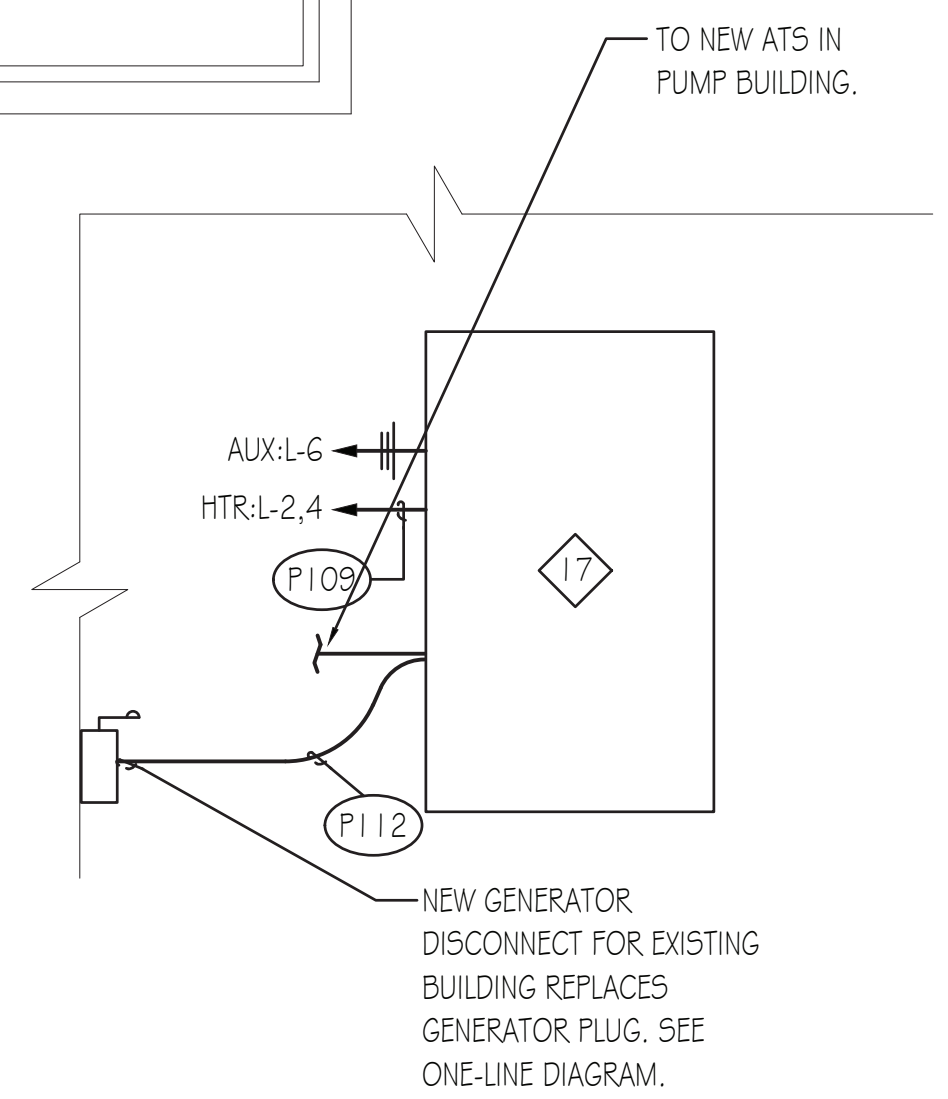
A. PROVIDE SPARE 2" CONDUIT FOR EACH TRENCH, PROVIDE (2) SPARE 2" CONDUITS BETWEEN PUMP BUILDING AND SCREEN BUILDING, BETWEEN PUMP BUILDING, EXISTING BUILDING AND BETWEEN PUMP BUILDING AND GENERATOR. PROVIDE (1) SPARE 1" CONDUIT BETWEEN EVERY ELECTRICAL DEVICE THAT HAS A CONTROL CONDUIT TO THE PLC.

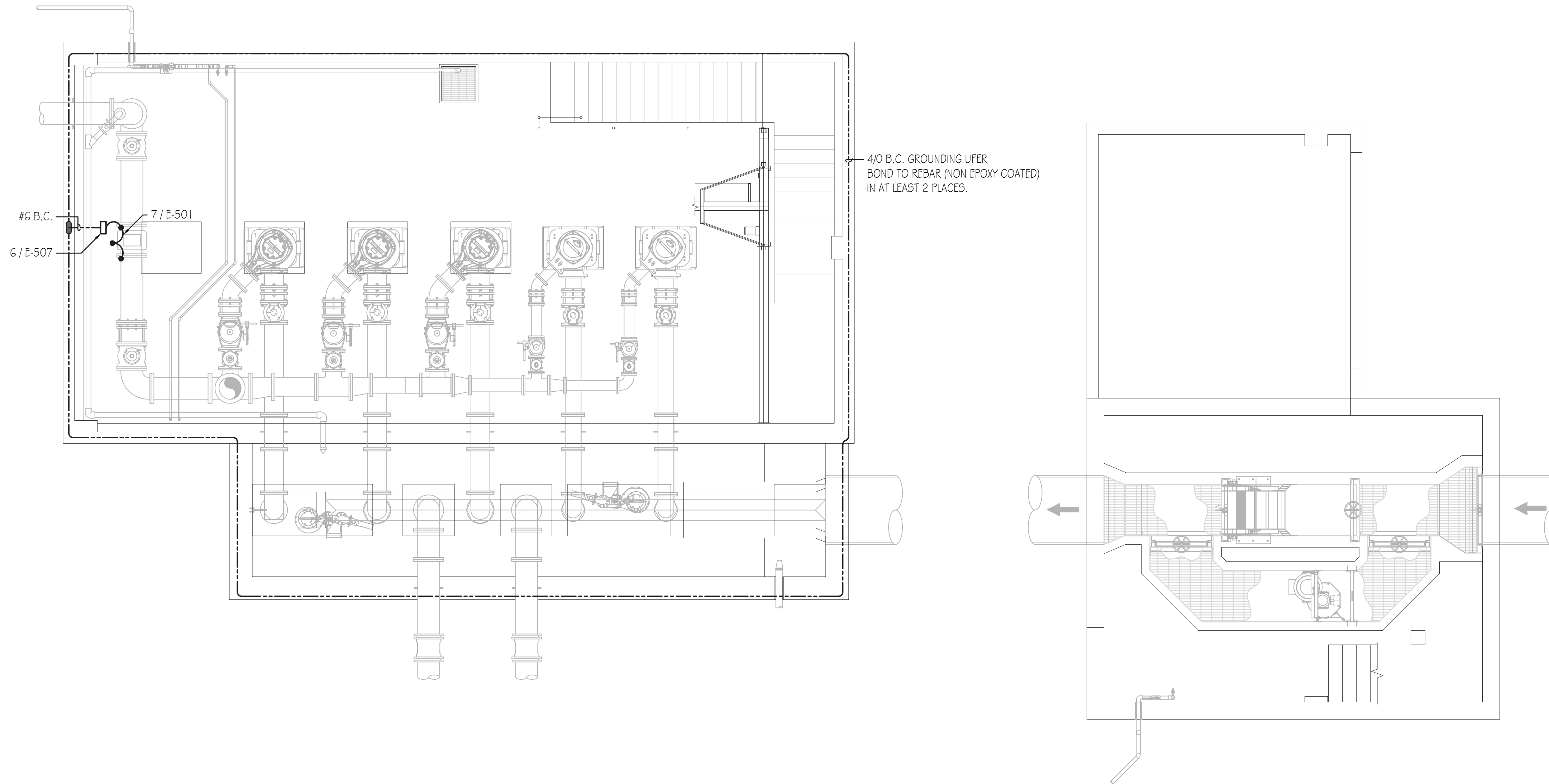
DRAWING NOTES

- 37 SEPARATE OUT THE POWER AND TEMPERATURE SIGNAL WITHIN THE CLASSIFIED TRANSITION. RUN POWER AND TEMPERATURE SIGNAL IN SAME CONDUIT TO CONTROLLER
- 38 TO HEADWORKS MOTOR CONTROL PANEL IN PUMP BUILDING.
- 39 DISCONNECT. SEE ONE-LINE DIAGRAM. SEE CLASSIFIED TRANSITION DETAIL TO BE INSTALLED ON CLASSIFIED SIDE OF UNCLASSIFIED DISCONNECT. LABEL ON DISCONNECT "THIS BUILDING HAS MULTIPLE DISCONNECTS AND HAS CIRCUITS FED FROM THE BUILDING TO THE SOUTH."
- 1 UTILITY METER.
- 2 CT ENCLOSURE.
- 3 PANEL 'L'.
- 4 GRINDER CONTROL PANEL
- 5 AUTOMATIC TRANSFER SWITCH.
- 6 MAIN DISTRIBUTION PANEL 'MDP'.
- 7 VFD - 15 HP.
- 8 VFD - 110 HP.
- 9 AERIGATOR. PROVIDE WITH MANUFACTURER'S CABLE INCLUDING POWER AND TEMPERATURE SHUTDOWN WIRING.
- 10 PLC.
- 11 HEADWORKS MOTOR CONTROL PANEL
- 12 SEE ODOR CONTROL UNIT DETAIL 5 / E-505
- 13 TRANSFORMER.
- 14 CLASSIFIED TRANSITION. SEE DETAIL 9 / E-502.
- 15 FLOW METER.
- 16 LEVEL METER. HYDRORANGER LT500 LEVEL TRANSMITTER
- 17 GENERATOR.
- 18 EQUIPMENT ACCESS HATCH.
- 19 ODOR CONTROL UNIT DISCONNECT. SEE ONE-LINE DIAGRAM.
- 20 AERIGATOR SOFT START
- 21 SEE MOTOR CONNECTION DETAIL.
- 22 CRANE HOIST DISCONNECT. SEE ONE-LINE DIAGRAM.
- 23 MOUNT AT 6" ABOVE SINK AND TABLE TOP.
- 24 50 / 2 WELDER RECEPTACLE.
- 25 TO UTILITY POLE-MOUNT TRANSFORMER.
- 26 TO GENERATOR.
- 27 ODOR CONTROL UNIT.
- 28 SERVICE DISCONNECT, SEE ONE-LINE DIAGRAM.
- 29 NOT USED
- 30 HEADWORKS COMBUSTIBLE GAS ALARM PANEL.
- 31 MOUNT THE DOOR MOTOR AND CONTROLS ON THE OUTSIDE OF THE BUILDING
- 32 ROLL UP DOOR MOTOR, UNCLASSIFIED WHEN INSTALLED OUTDOORS
- 33 ROLL UP DOOR CONTROL, UNCLASSIFIED WHEN INSTALLED OUTDOORS
- 34 SCREEN MOTOR

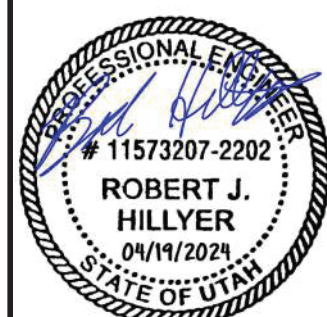


1 MAIN LEVEL POWER PLAN
 SCALE: 1/4"=1'-0"
 5 0 10





1 LOWER LEVEL GROUNDING PLAN
 EP 102 SCALE: 1/4" = 1'-0" 



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SCALE



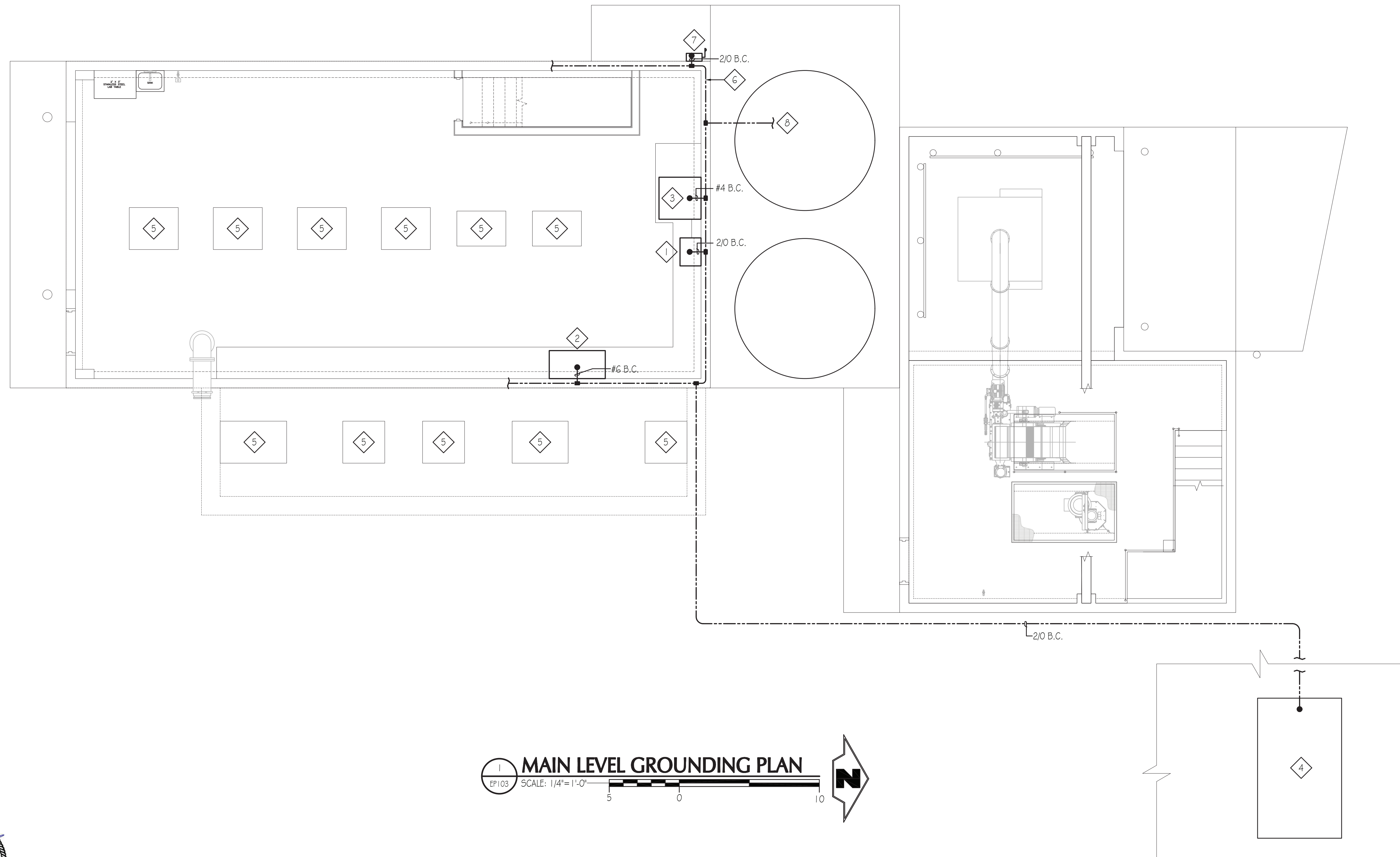
DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
 ELECTRICAL
 DRY PIT GROUNDING PLAN

SHEET
 EP102
 126.42.300

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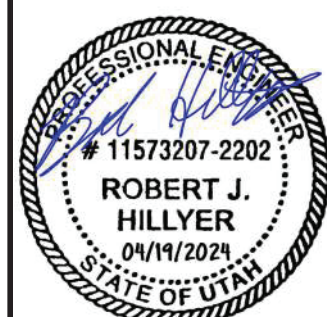
DRAWING NOTES

- 1 AUTOMATIC TRANSFER SWITCH
- 2 PLC
- 3 TRANSFORMER
- 4 GENERATOR
- 5 EQUIPMENT ACCESS HATCH
- 6 THIS UFER GROUND IS ESTABLISHED IN THE LOWER FOOTING, SHOWN HERE FOR REFERENCE. SEE LOWER LEVEL GROUNDING PLAN.
- 7 SERVICE DISCONNECT
- 8 TO LIGHTNING PROTECTION OF BOTH BUILDINGS.



1 MAIN LEVEL GROUNDING PLAN

EP103 SCALE: 1/4" = 1'-0"



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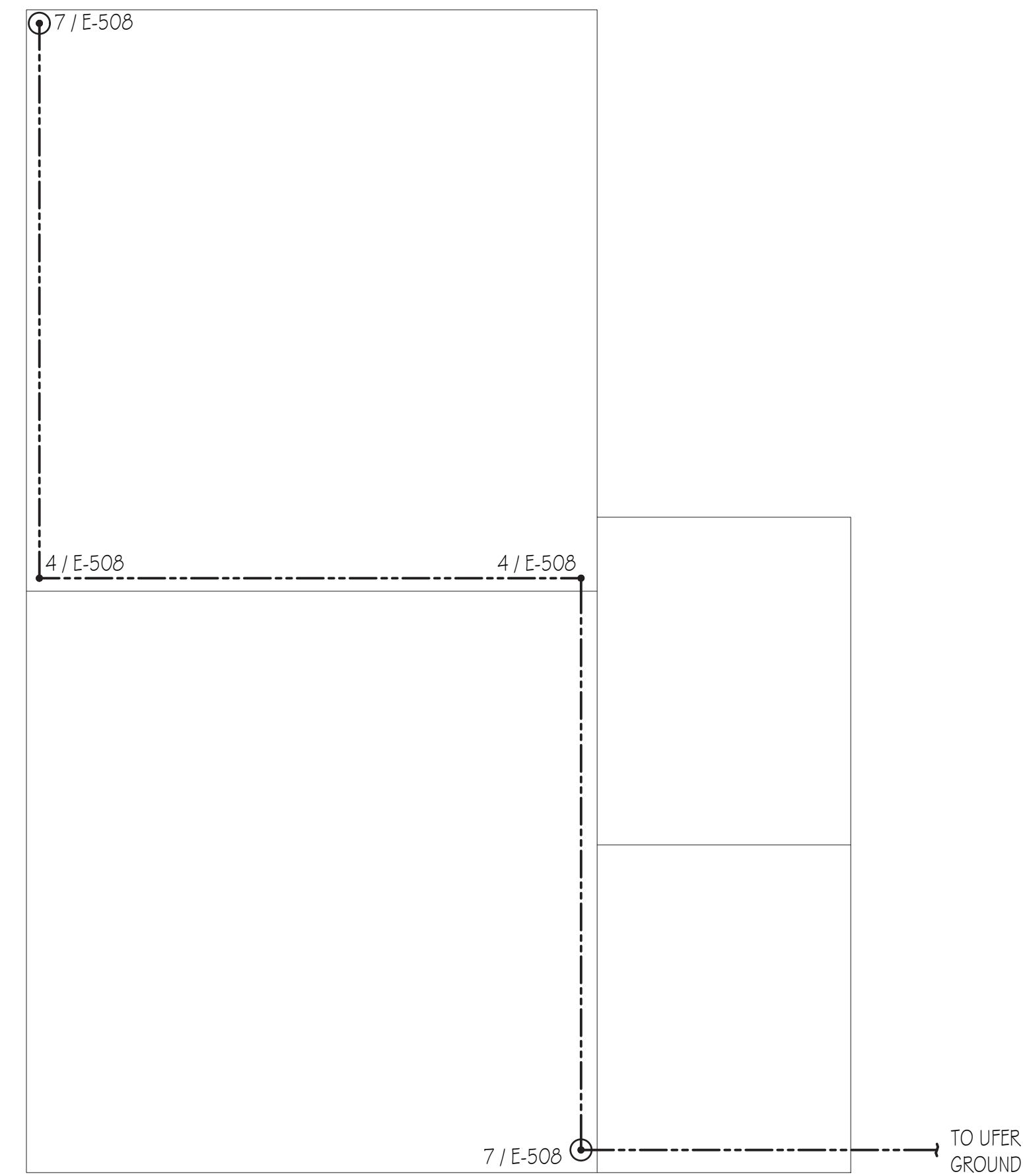
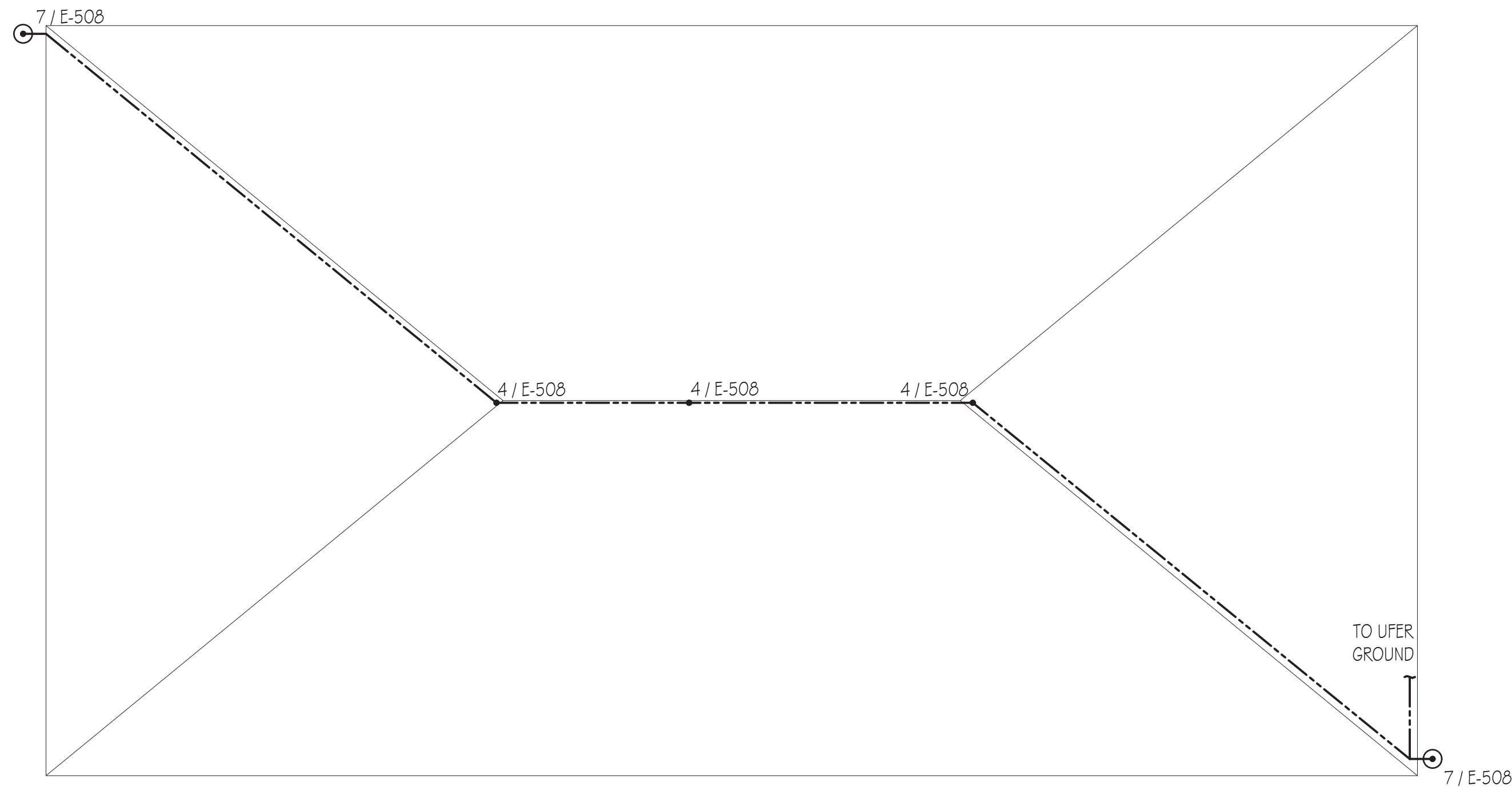
BY APVD.

SCALE



DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
ELECTRICAL
TOP FLOOR GROUNDING PLAN

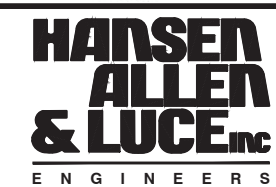
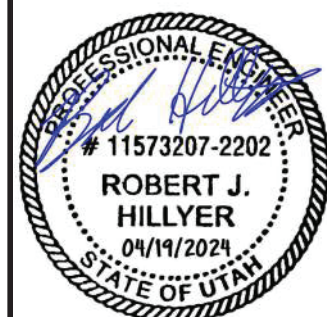
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EP103
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EP104

ROOF LIGHTNING PROTECTION PLAN

SCALE: 1/4" = 1'-0"



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SCALE



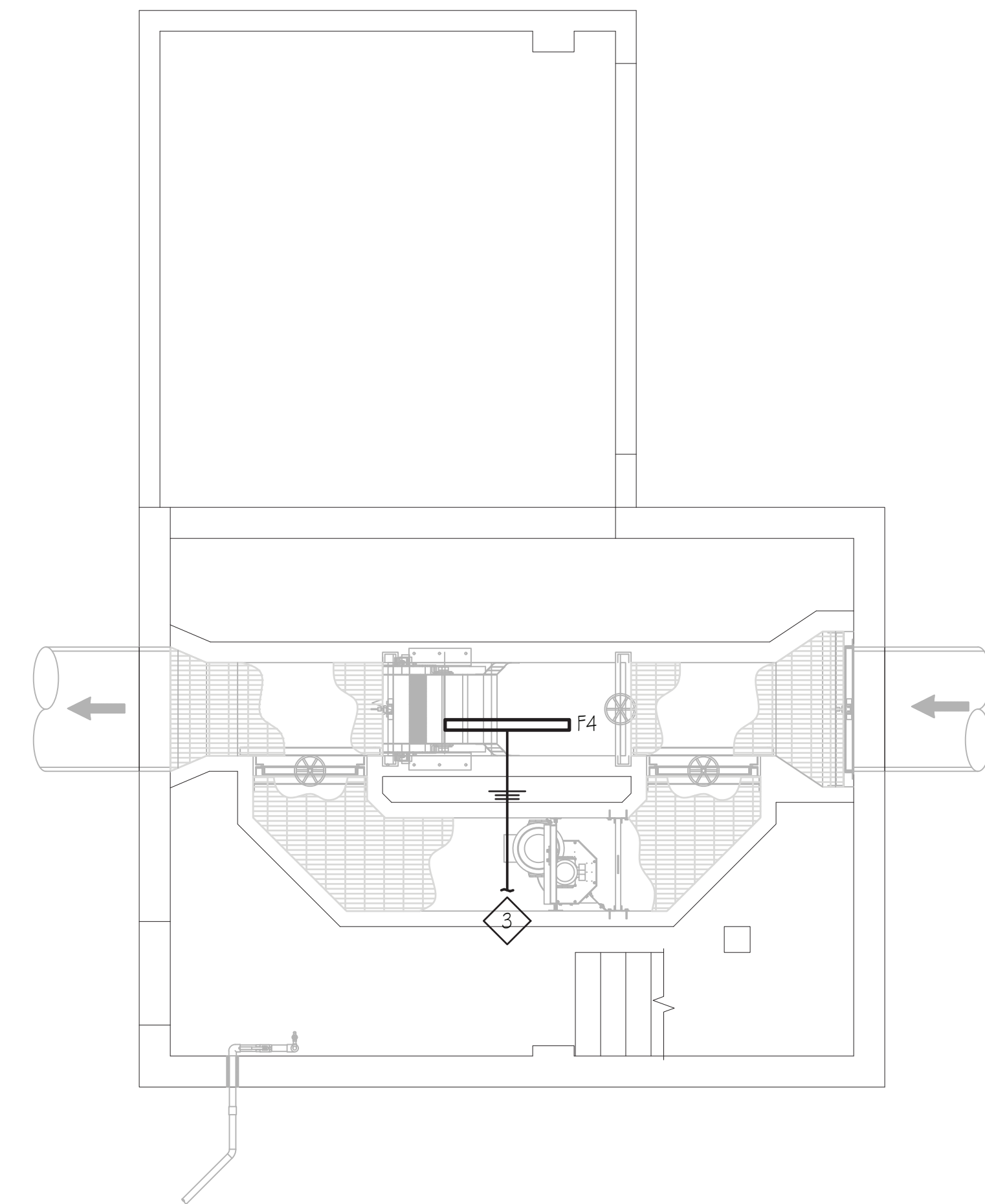
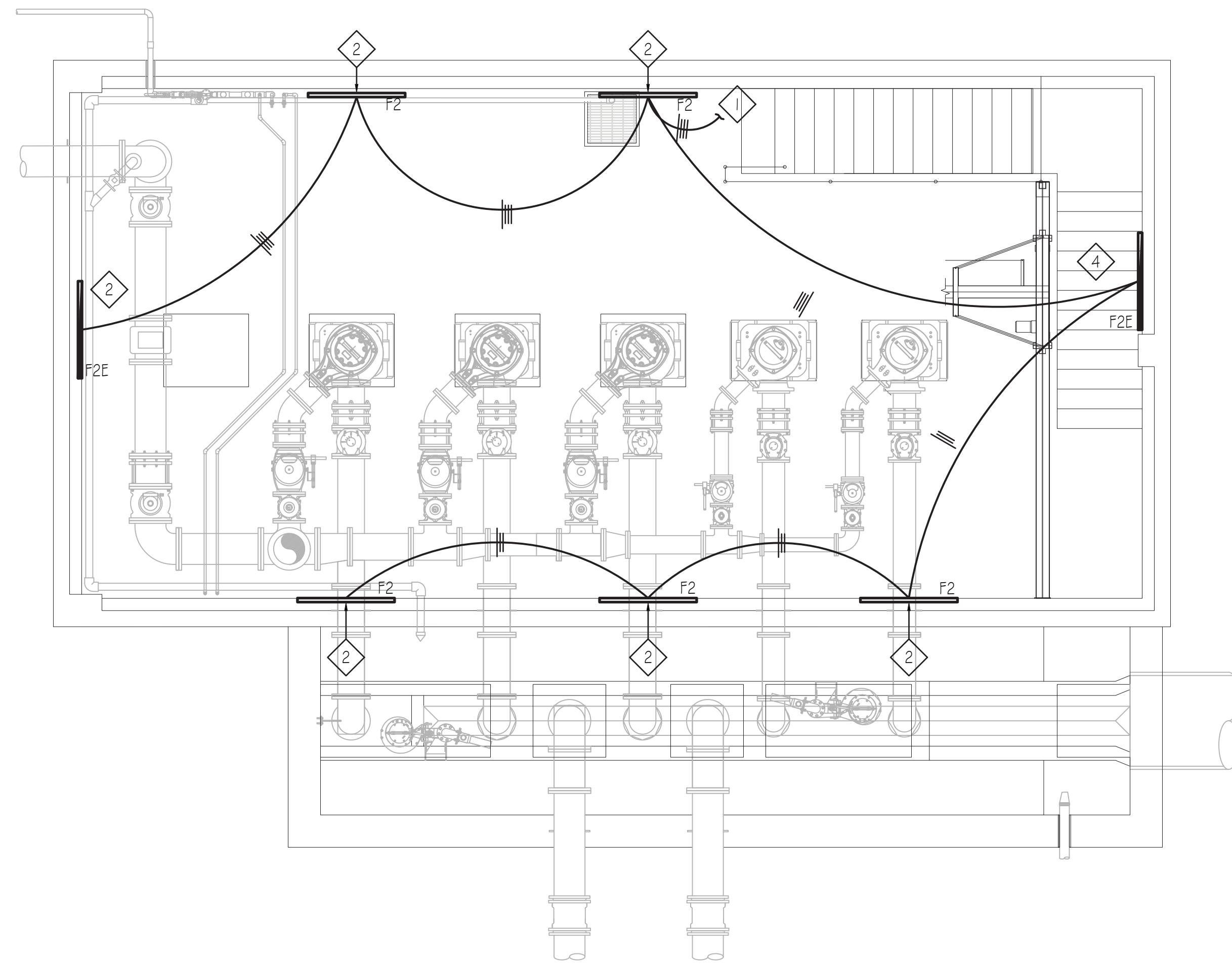
DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
ELECTRICAL
LIGHTNING PROTECTION PLANS

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DRAWING NOTES

- 1 FROM SWITCH AT UPPER LEVEL TOP OF STAIRS.
- 2 MOUNT AT 8'-0" A.F.F. TYPICAL OF ALL PIT LIGHTS.
- 3 FROM LIGHTING CIRCUIT ABOVE.
- 4 MOUNT AT 8'-0" MINIMUM ABOVE STAIR HEIGHT.



1 LOWER LEVEL LIGHTING PLAN

EL 100 SCALE: 1/4" = 1'-0"



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SCALE



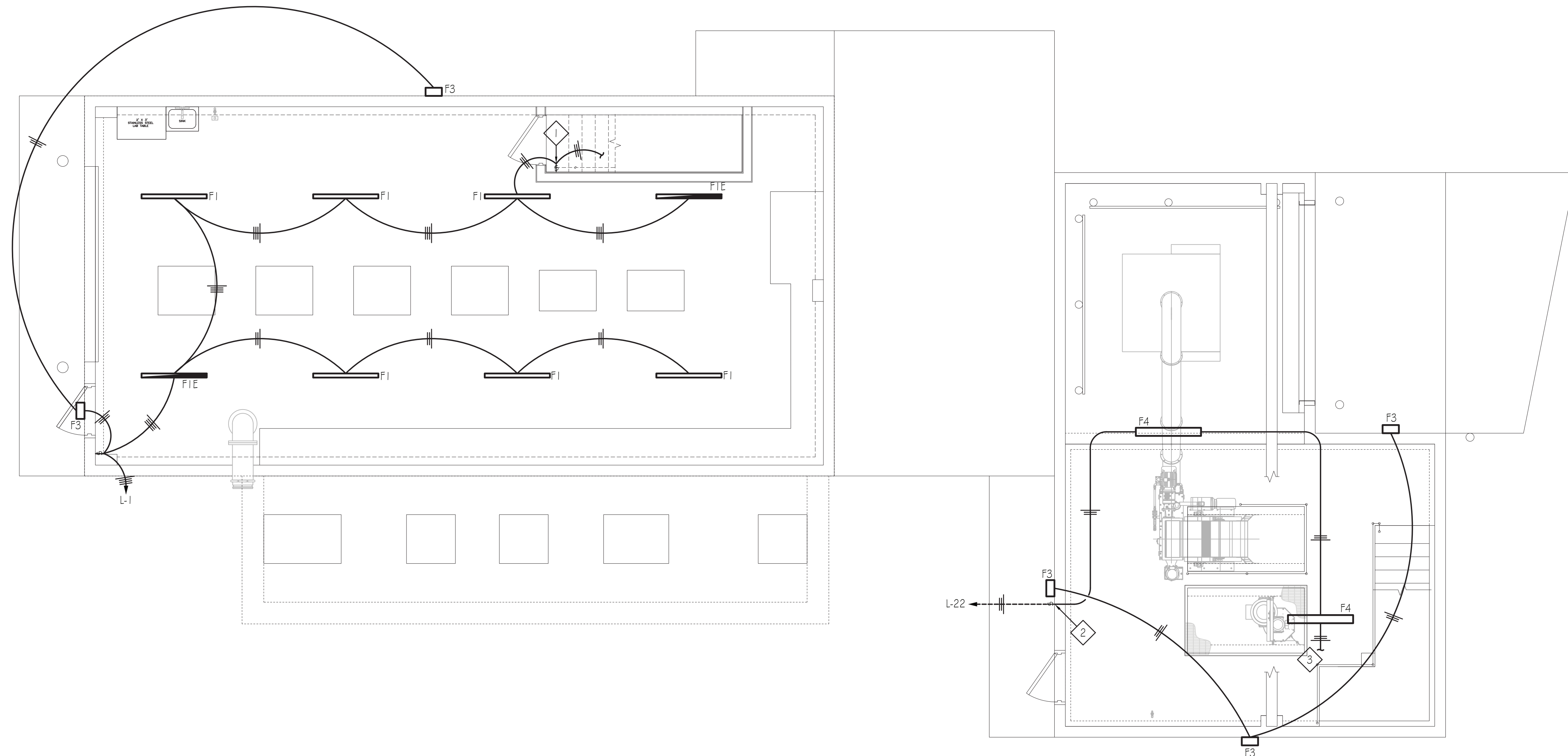
DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
ELECTRICAL
LOWER LEVEL LIGHTING PLANS

SHEET
EL100
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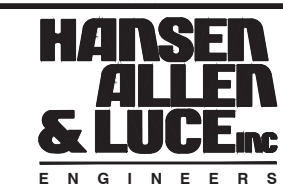
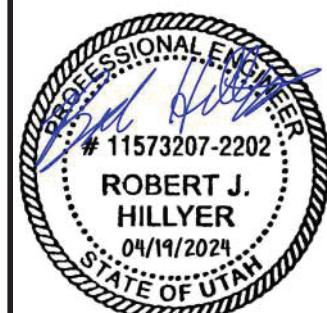
DRAWING NOTES

- 1 POWER AND SWITCH FOR LOWER LEVEL.
- 2 CLASSIFIED TRANSITION REQUIRED AT WALL PENETRATION.
- 3 TO LIGHT FIXTURE BELOW.



1
MAIN LEVEL LIGHTING PLAN
 EL101 SCALE: 1/4"=1'-0"

N



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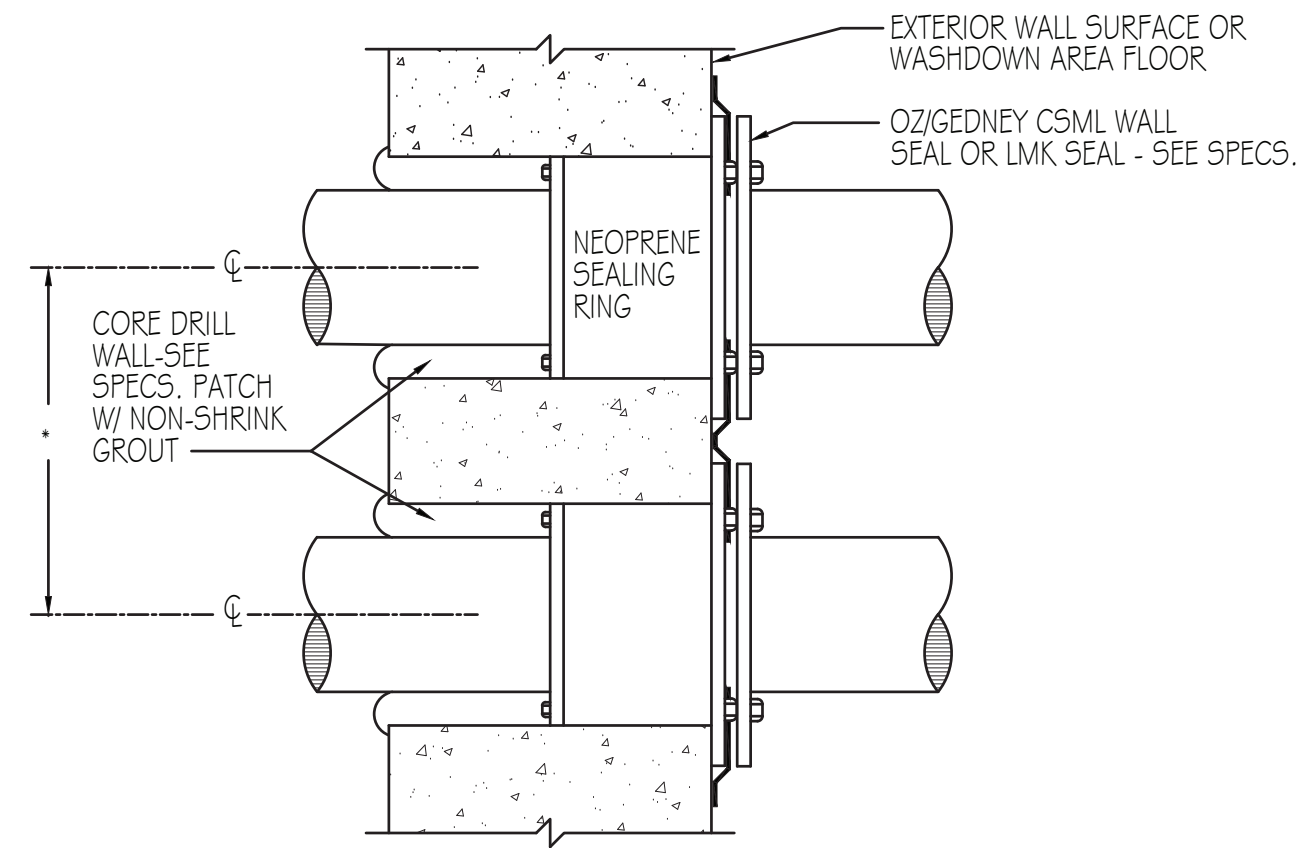
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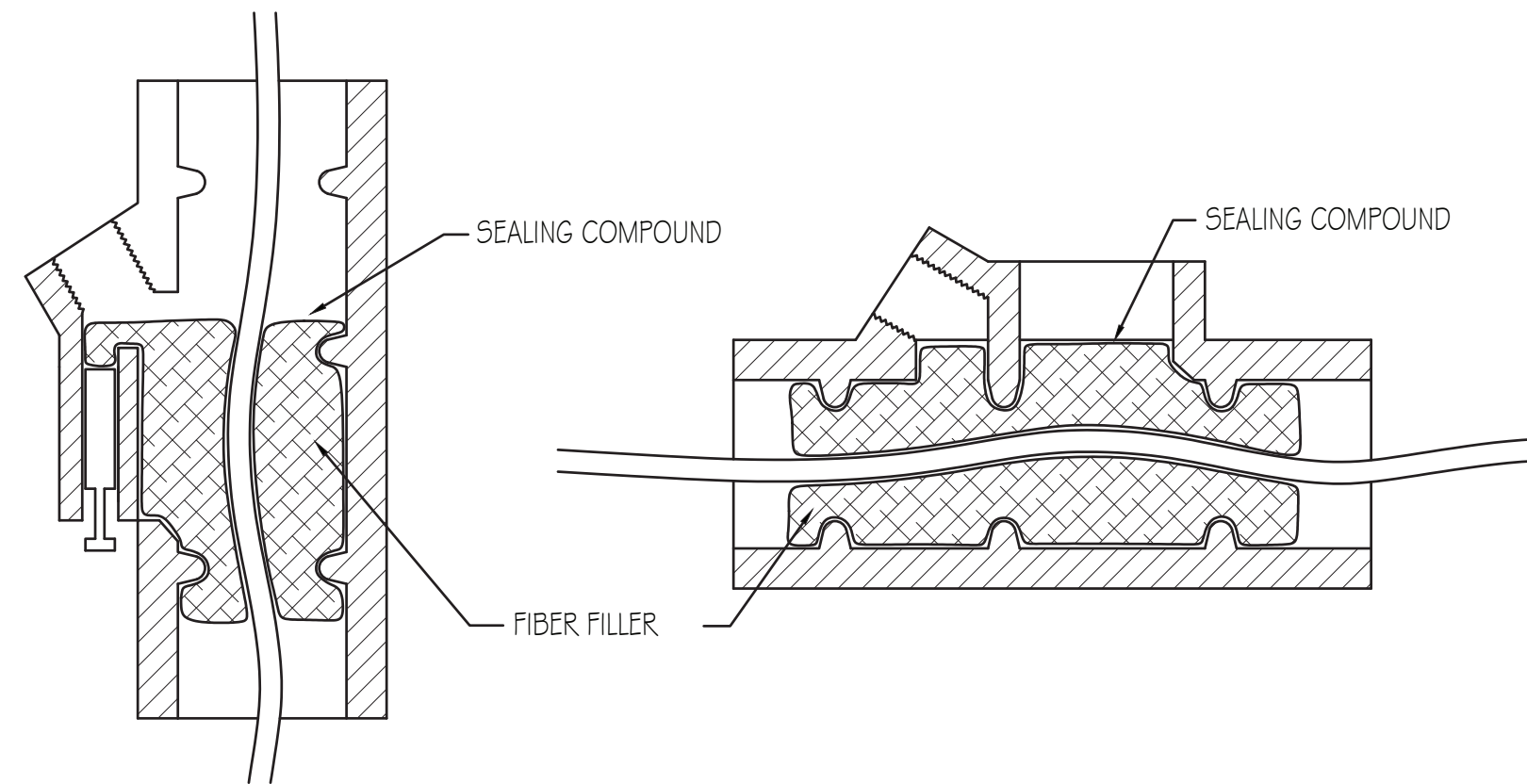
DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
 ELECTRICAL
 UPPER FLOOR LIGHTING PLANS

SHEET
 EL101
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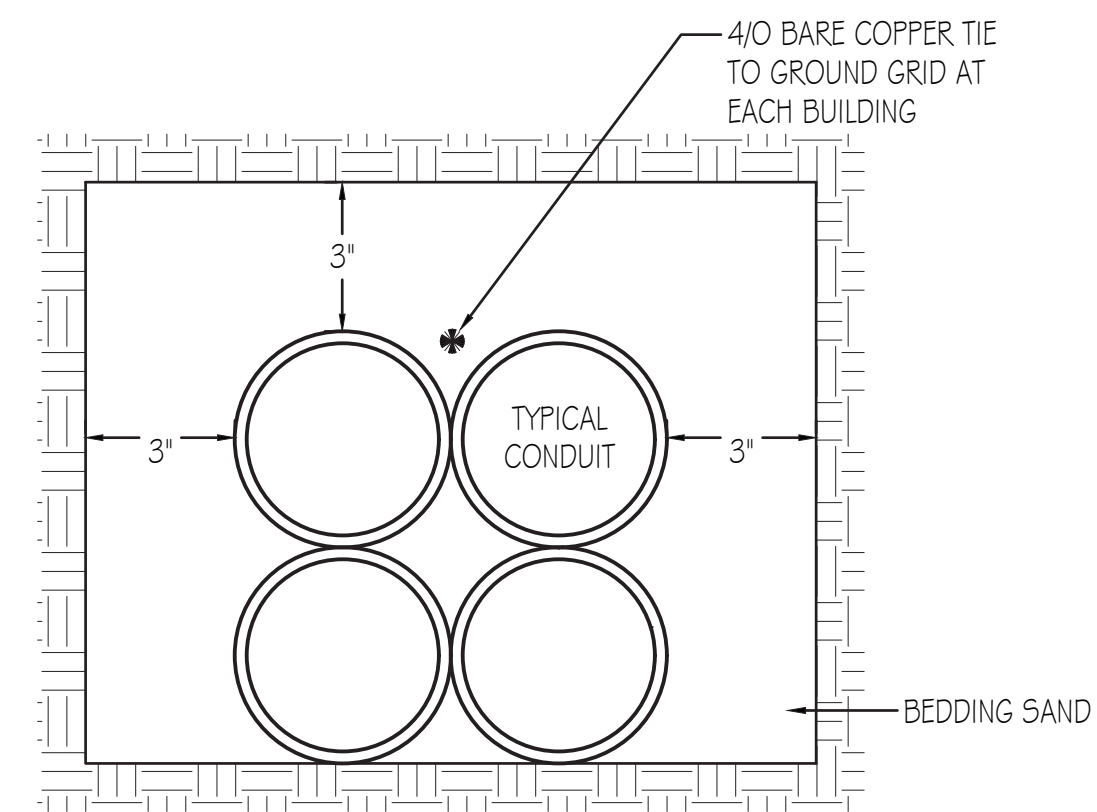


UNDERGROUND CONDUIT WALL SEAL OR WASHDOWN FLOOR
SCALE: NONE 6 E-501

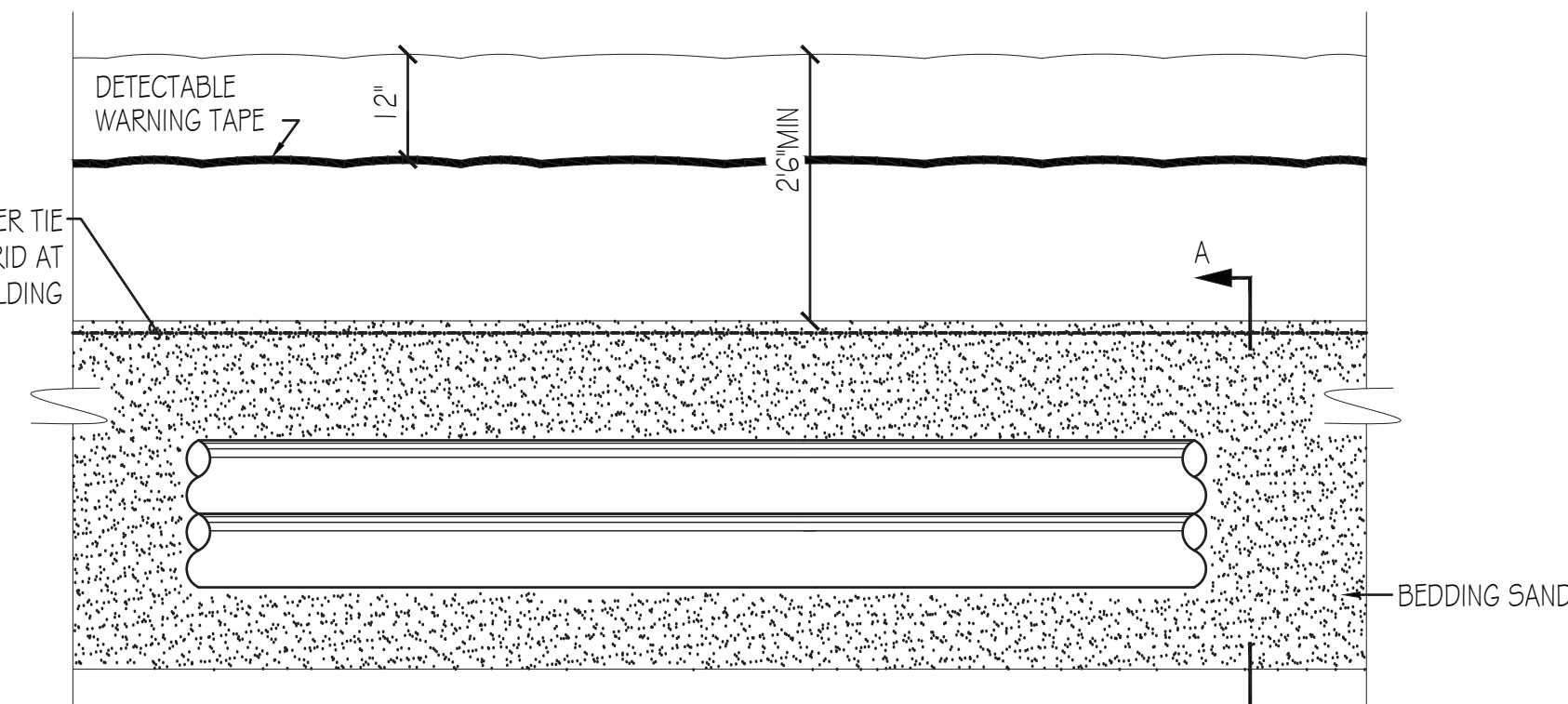


VERTICAL CONDUIT **HORIZONTAL CONDUIT**

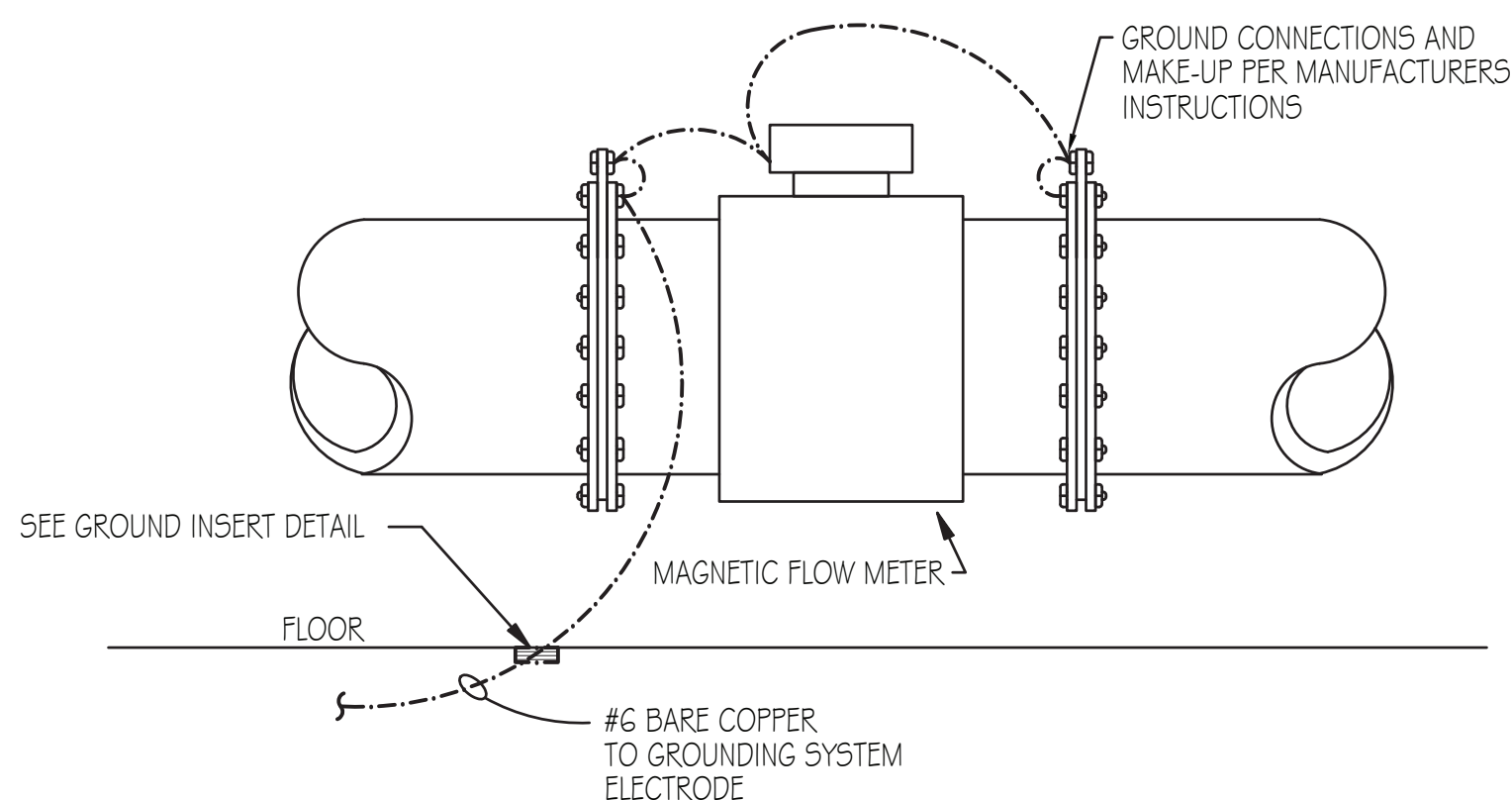
TYPICAL CONDUIT SEAL DAMMING AND POURING
SCALE: NONE 3 E-501



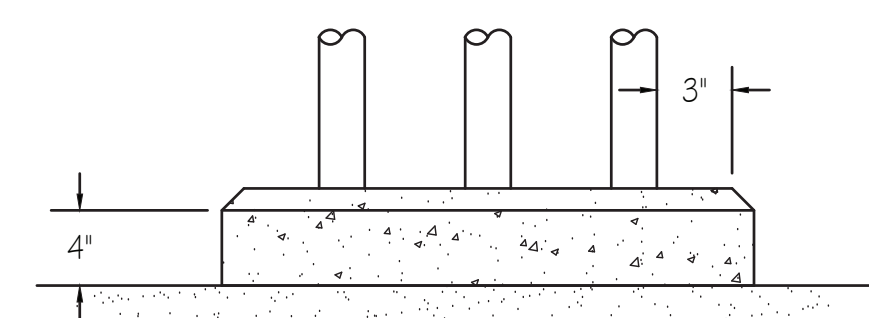
SECTION A-A



DUCT BANK DETAIL
SCALE: NONE 1 E-501

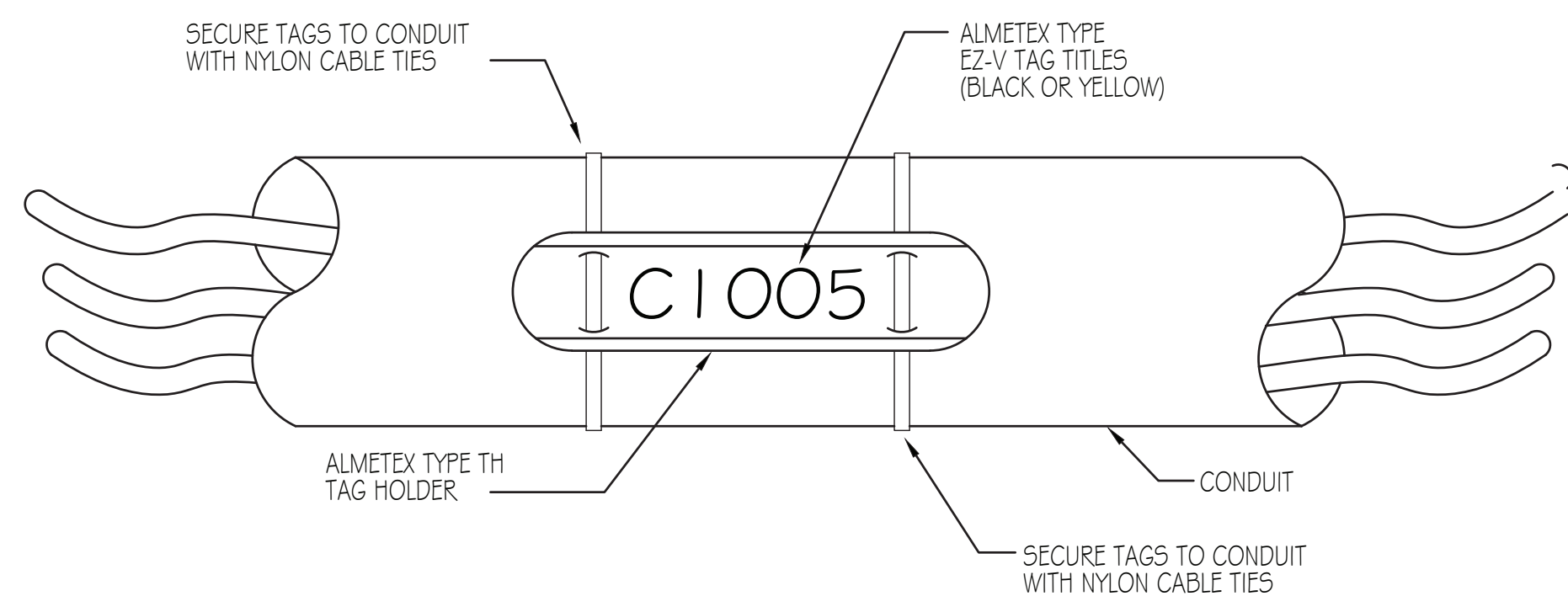


FLOW METER GROUND RING CONNECTION DETAIL
SCALE: NONE 7 E-501

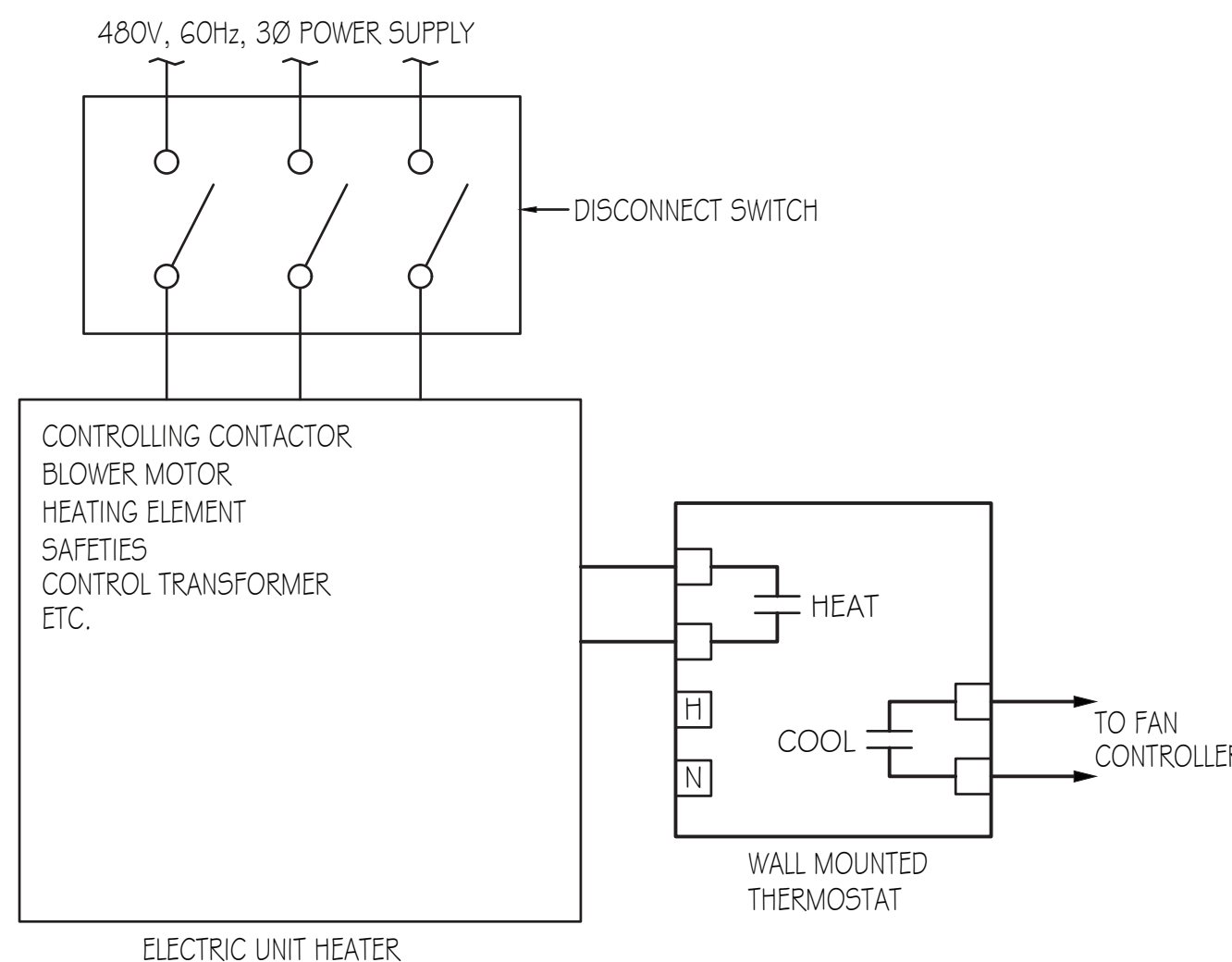


HOUSEKEEPING CURB REQUIRED AT ALL INTERIOR WALL LOCATIONS FOR SINGLE AND MULTIPLE CONDUIT RISERS. CONDUIT RISERS SHALL BE COUPLED SO THAT SINGLE CONDUITS ARE SIX FEET APART MINIMUM.

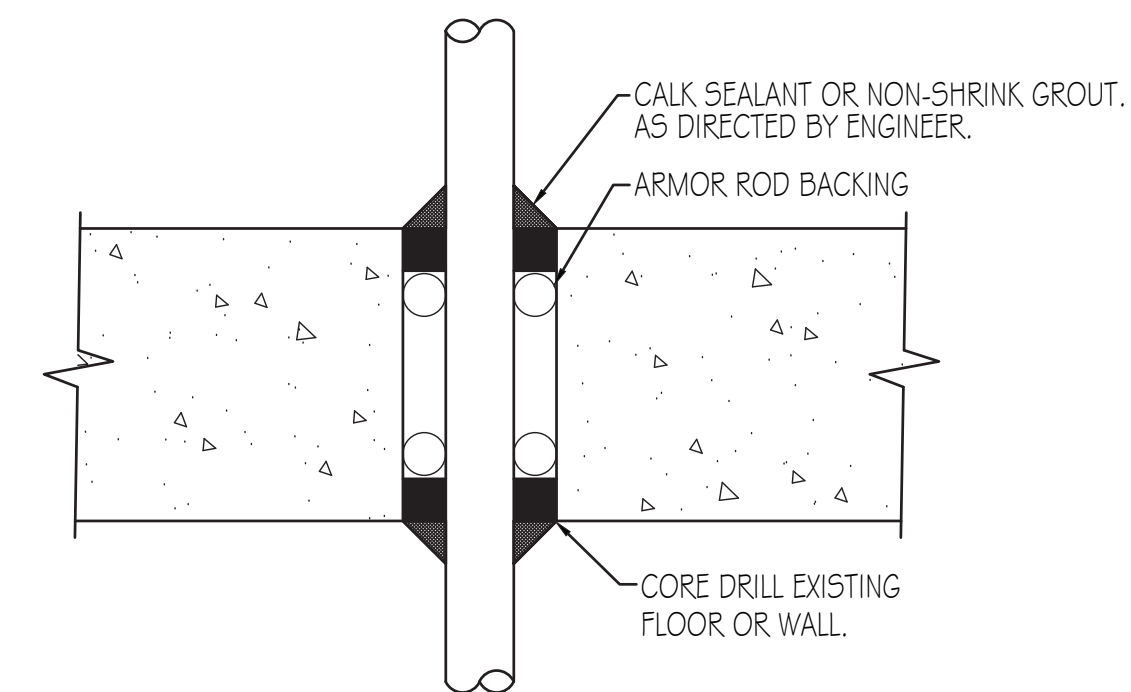
CONCRETE HOUSEKEEPING CURB DETAIL
SCALE: NONE 4 E-501



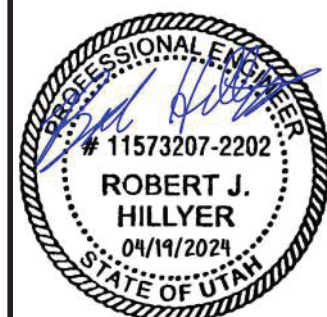
CONDUIT MARKING SYSTEM
SCALE: NONE TYPICAL OF ALL CONDUITS 8 E-501



ELECTRIC UNIT HEATER CONTROL DIAGRAM
SCALE: NONE 5 E-501



EXISTING WALL/DRY FLOOR PENETRATIONS
SCALE: NONE 2 E-501



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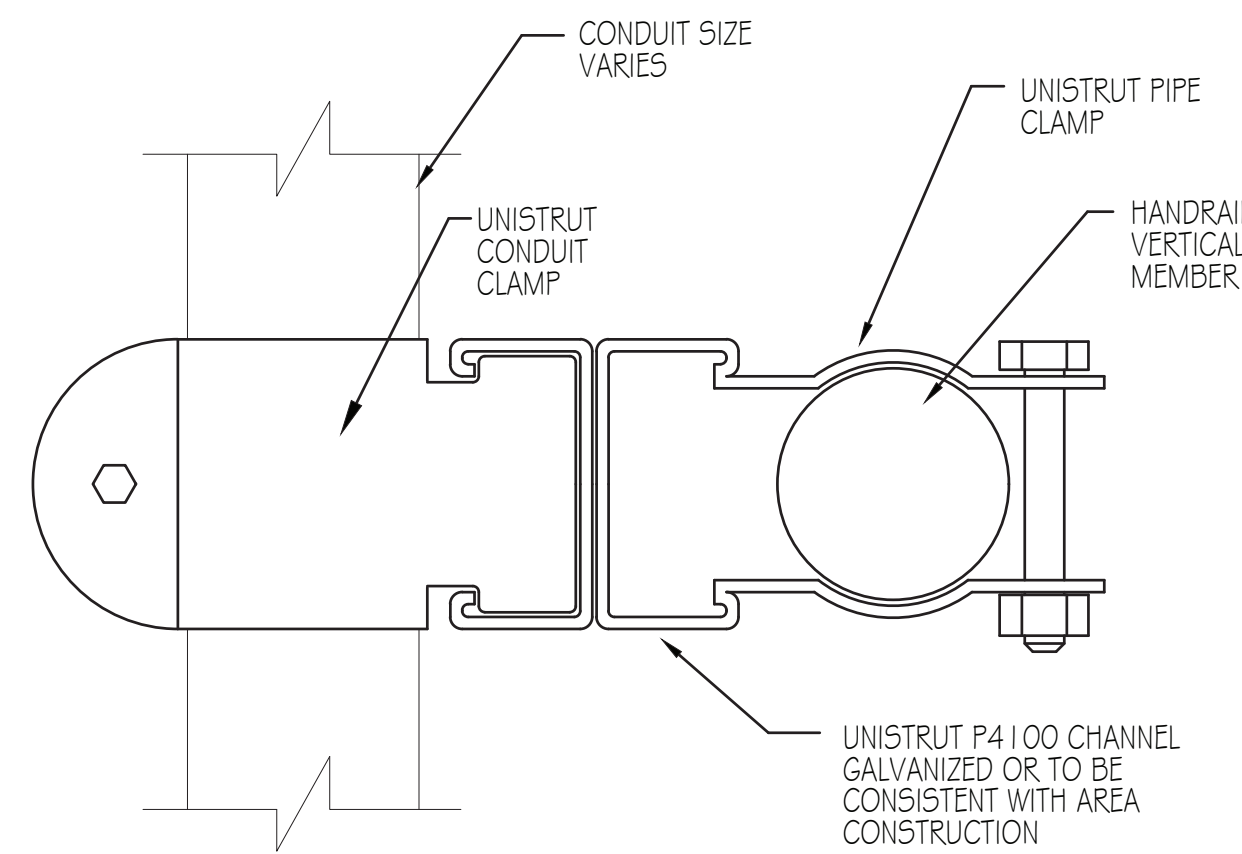
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SCALE

SOUTH SALT LAKE

DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
ELECTRICAL
DETAILS

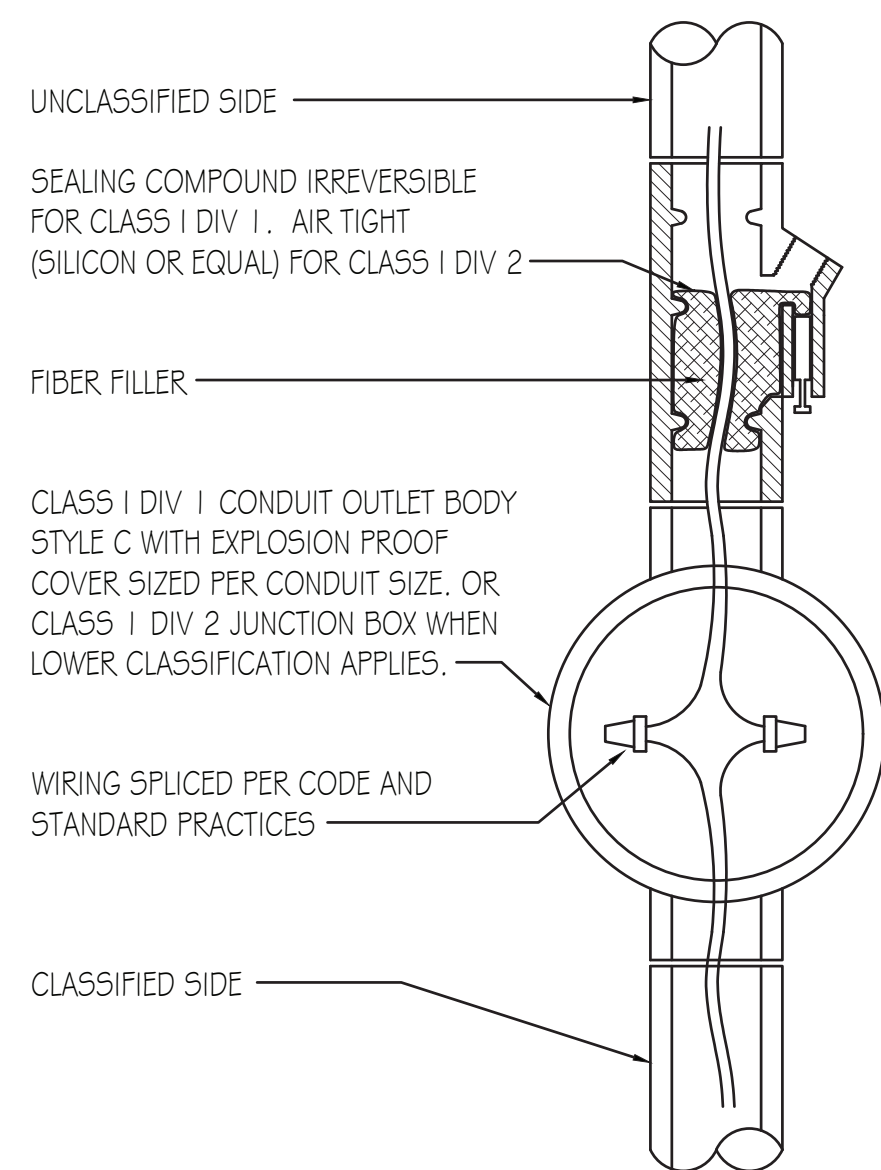
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E-501
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TOP VIEW

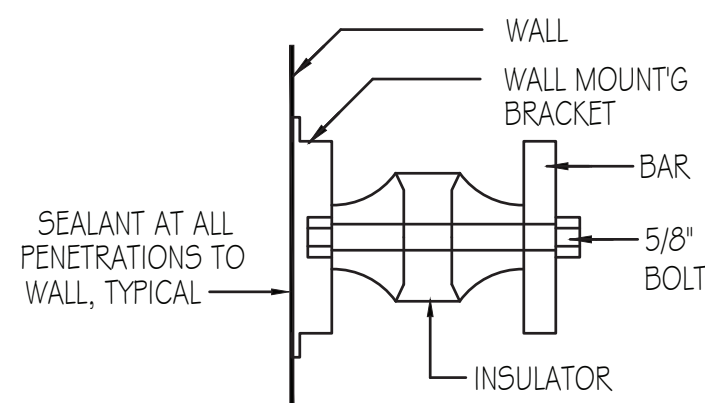
CONDUIT ATTACHMENT TO HANDRAIL

SCALE: NONE TYPICAL 8 E-502

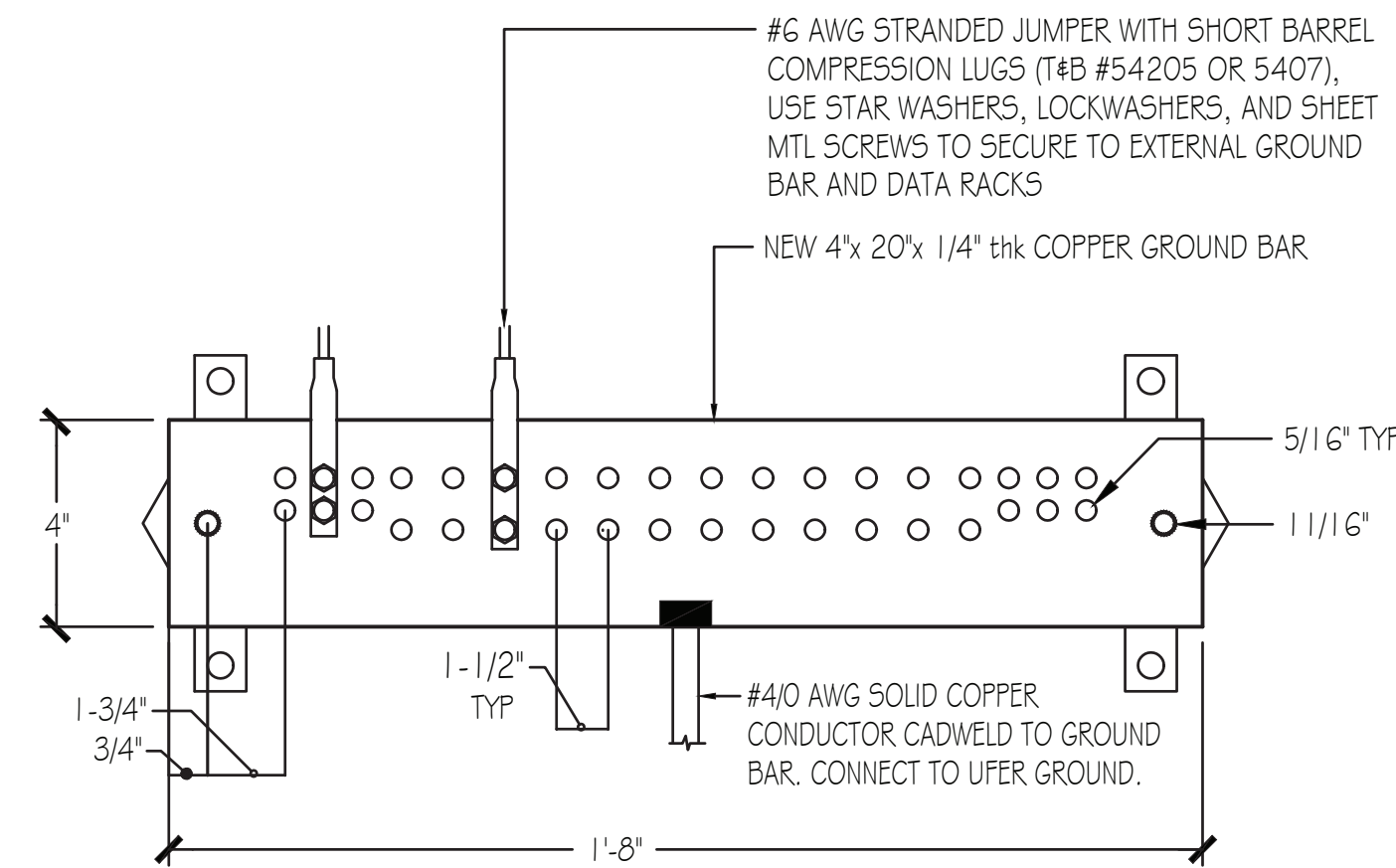


CLASSIFIED TRANSITION DETAIL

SCALE: NONE TYPICAL 9 E-502



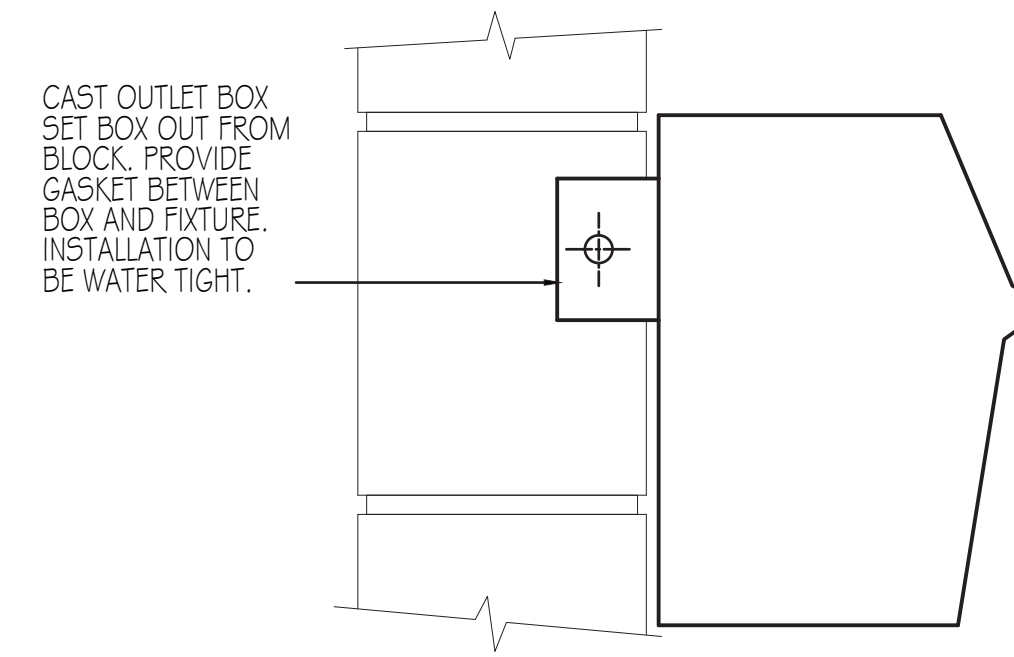
MOUNTING DETAIL



- NOTES:
1. ALL HARDWARE STAINLESS STEEL INCLUDING BELLVILLES COAT ALL SURFACE WITH KOPR-SHIELD BEFORE MATING.
 2. FOR GROUND BOND TO STEEL ONLY: INSERT A TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH KOPR-SHIELD.
 3. ALL HOLES ARE COUNTERSUNK 1/16\".

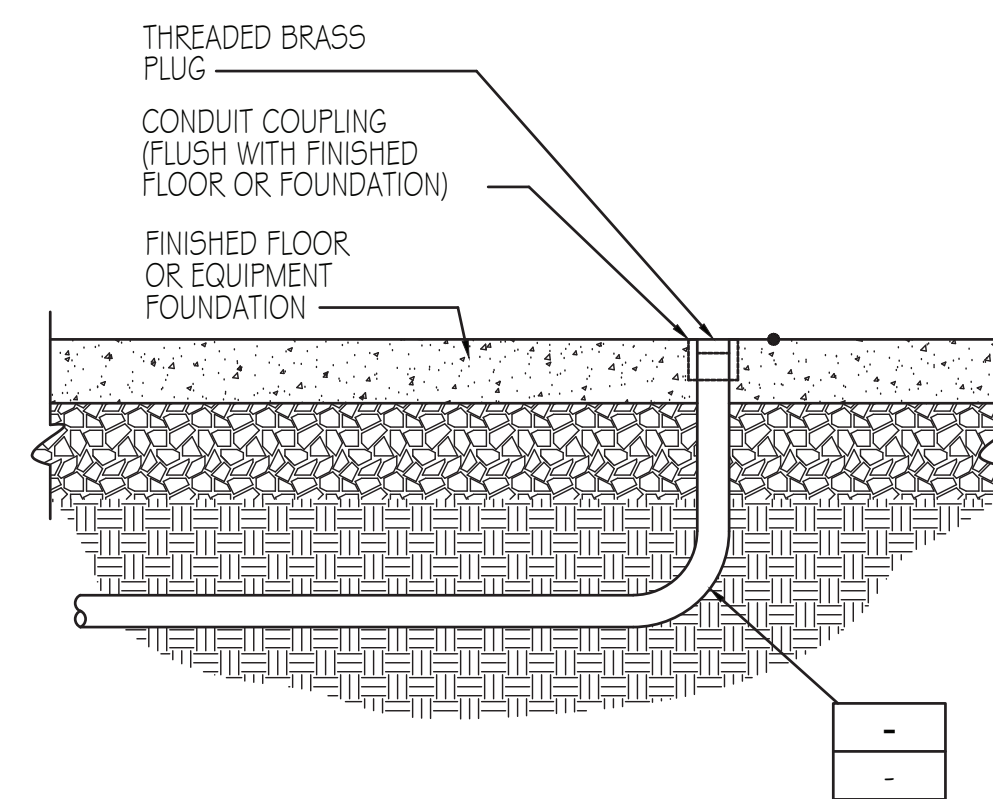
GROUND BAR

SCALE: NONE TYPICAL 6 E-502



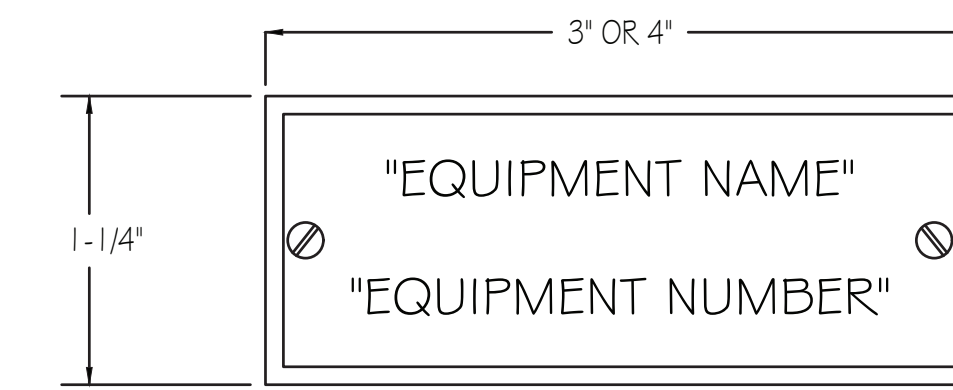
WALL HUNG FIXTURE MOUNTING DETAIL

SCALE: NONE TYPICAL OF ALL WALL HUNG FIXTURES 3 E-502



FLUSH CONDUIT TERMINATION

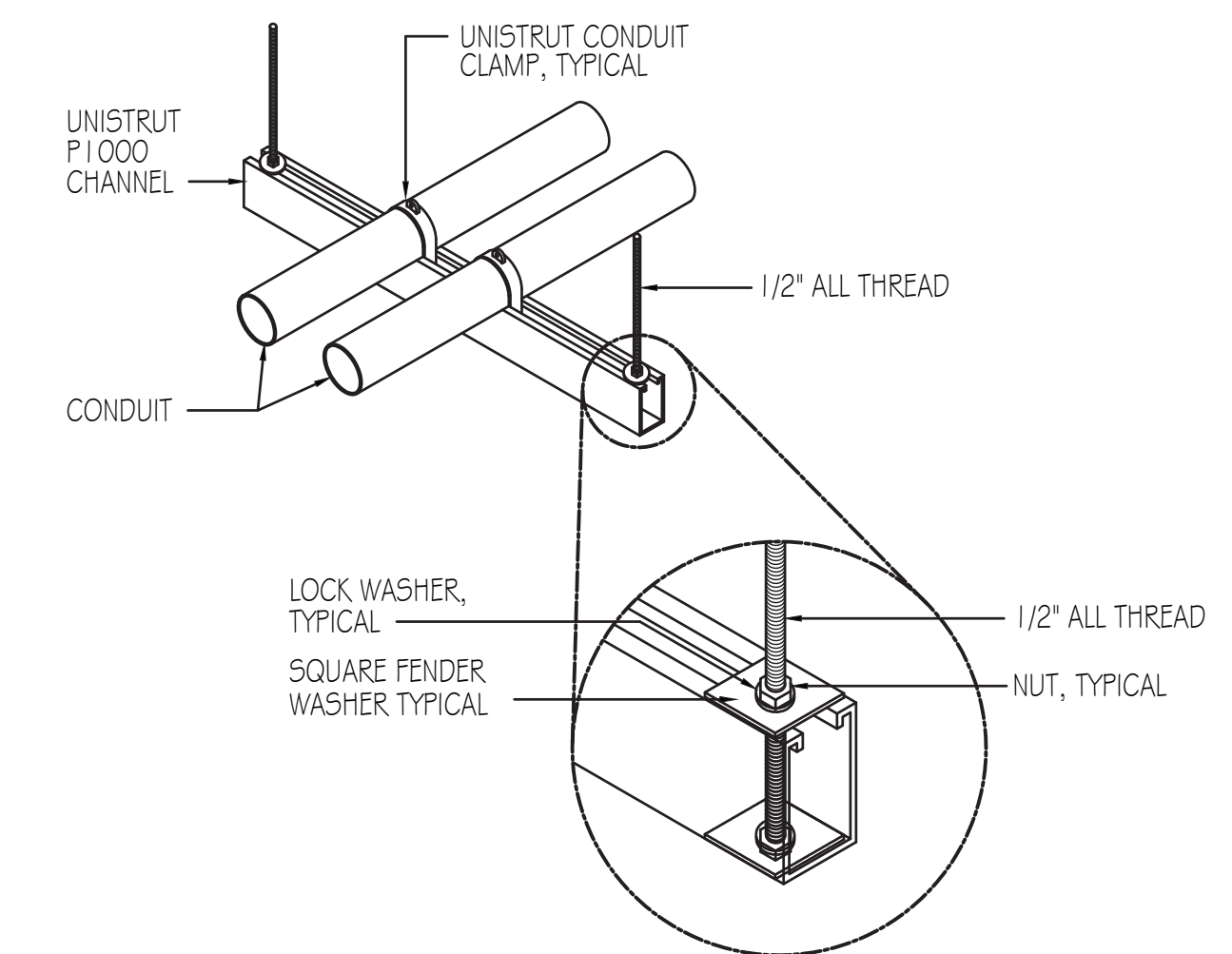
SCALE: NONE TYPICAL 4 E-502



- NOTES:
1. ALL LETTERS TO BE 1/4\" UNLESS NOTED OTHERWISE.
 2. ALL NAMEPLATES TO BE MOUNTED ON THE VERTICAL CENTERLINE OF THE CUBICAL OR DEVICE.
 3. ATTACH ALL NAMEPLATES WITH STAINLESS STEEL SCREWS.
 4. PROVIDE BLANK NAMEPLATES FOR ALL SPARE AND FUTURE DEVICES.

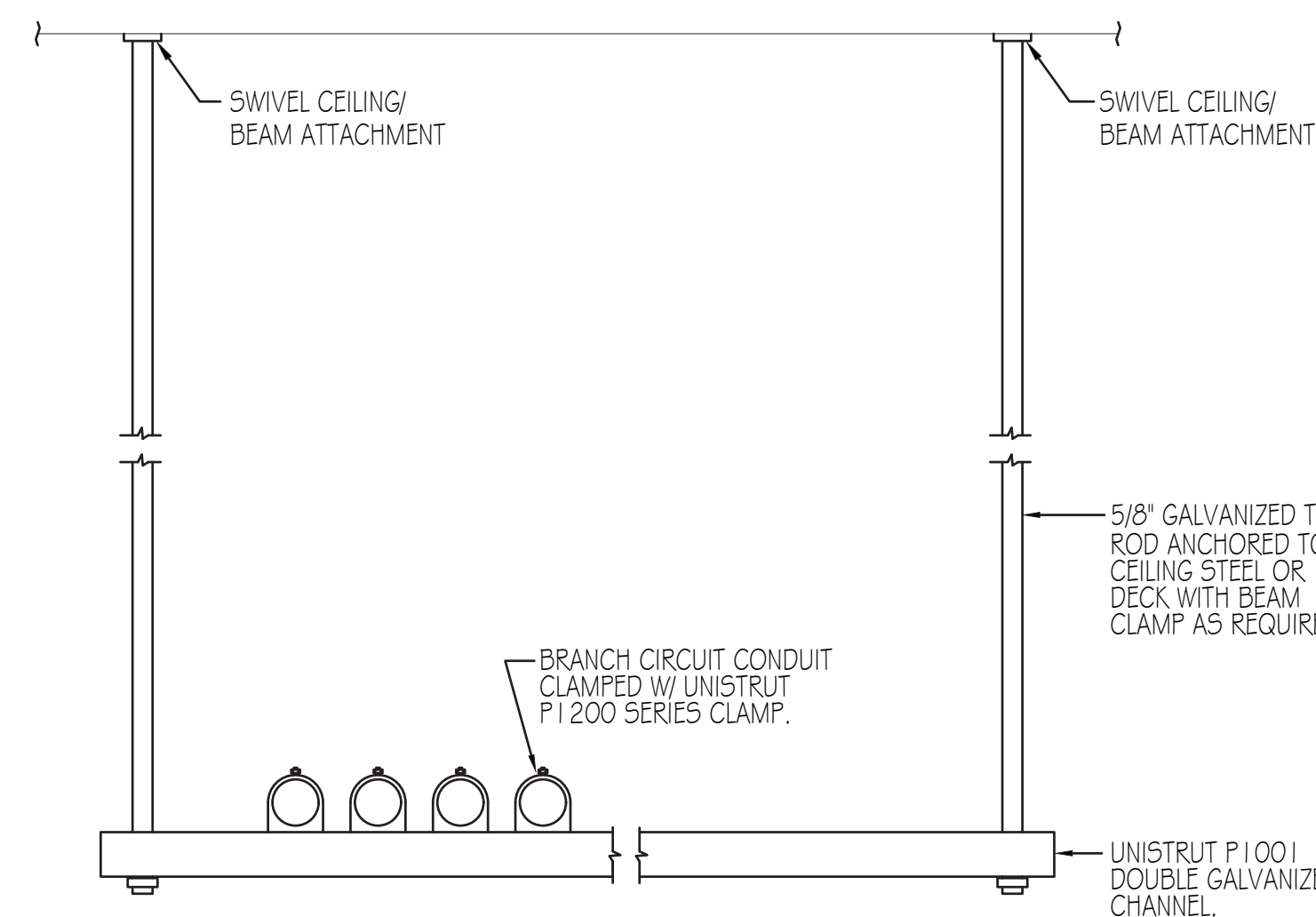
NAMEPLATE DETAIL

SCALE: NONE TYPICAL OF ALL EQUIPMENT 1 E-502



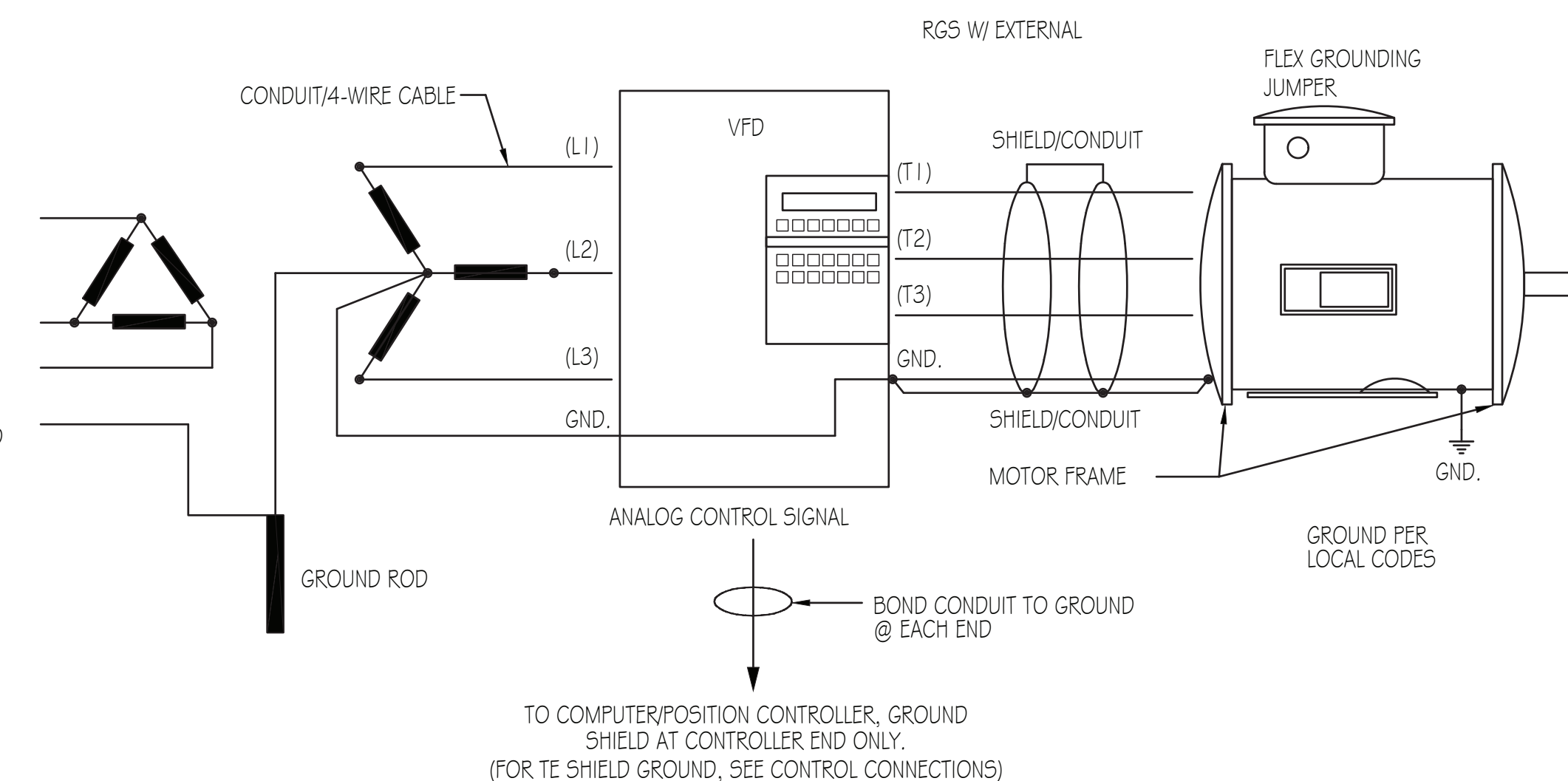
CONDUIT SUPPORT DETAIL

SCALE: NONE TYPICAL 2 E-502



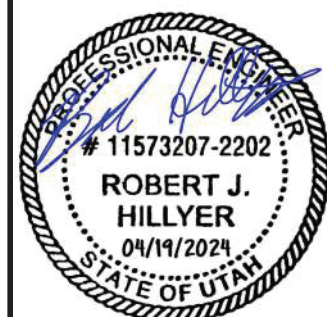
CONDUIT SUPPORT DETAIL

SCALE: NONE TYPICAL 7 E-502



VFD GROUNDING DIAGRAM

SCALE: NONE TYPICAL 5 E-502



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DATE	MAY 26, 2022	NO.	DATE

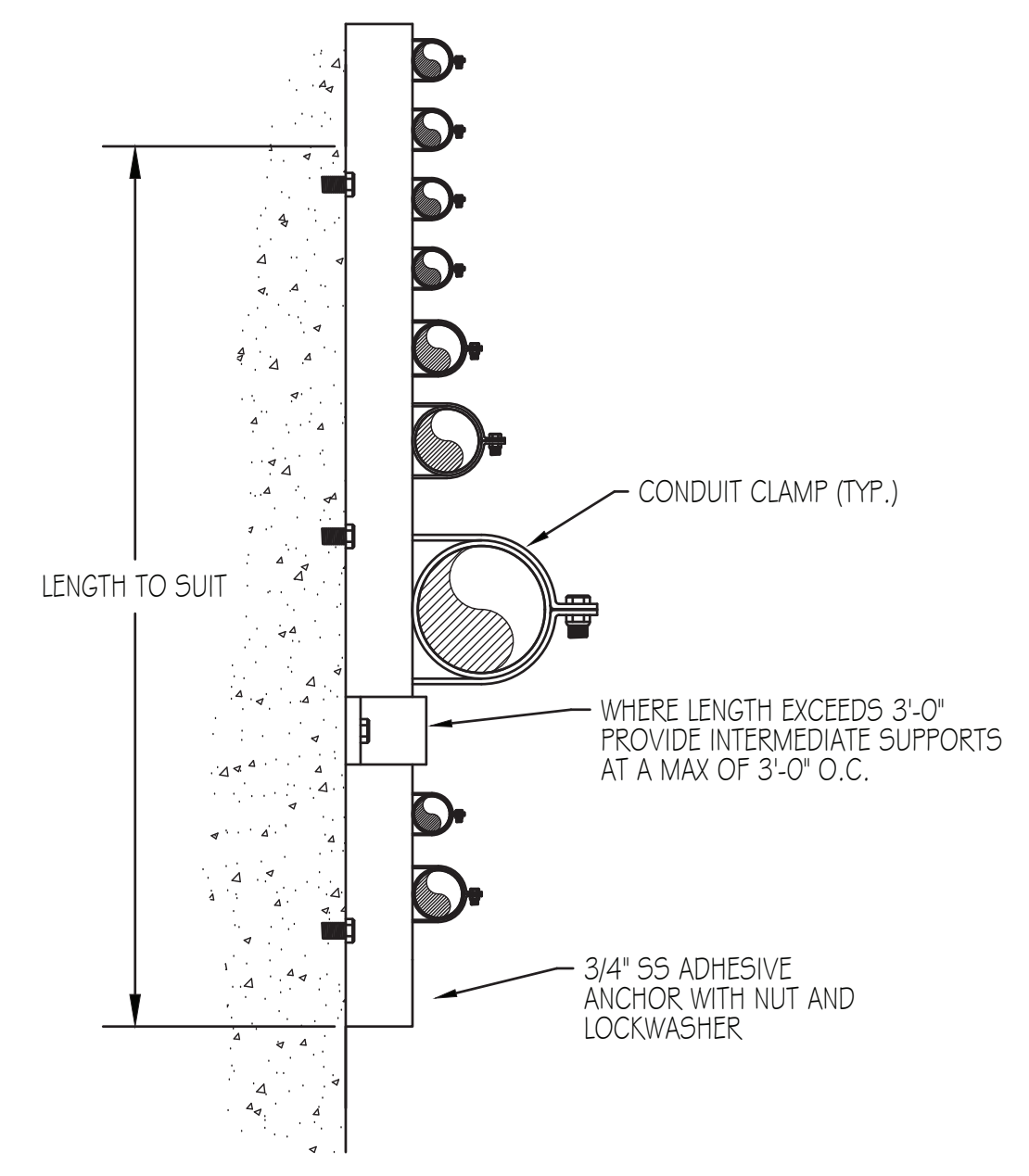
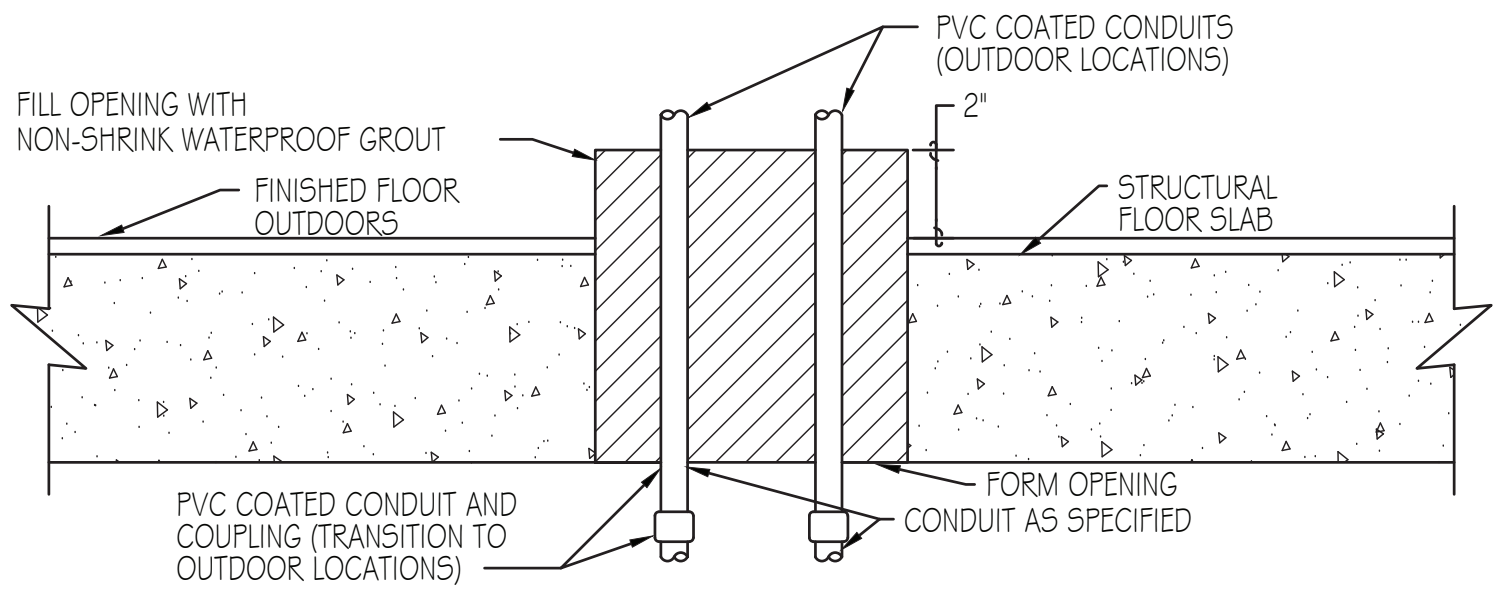
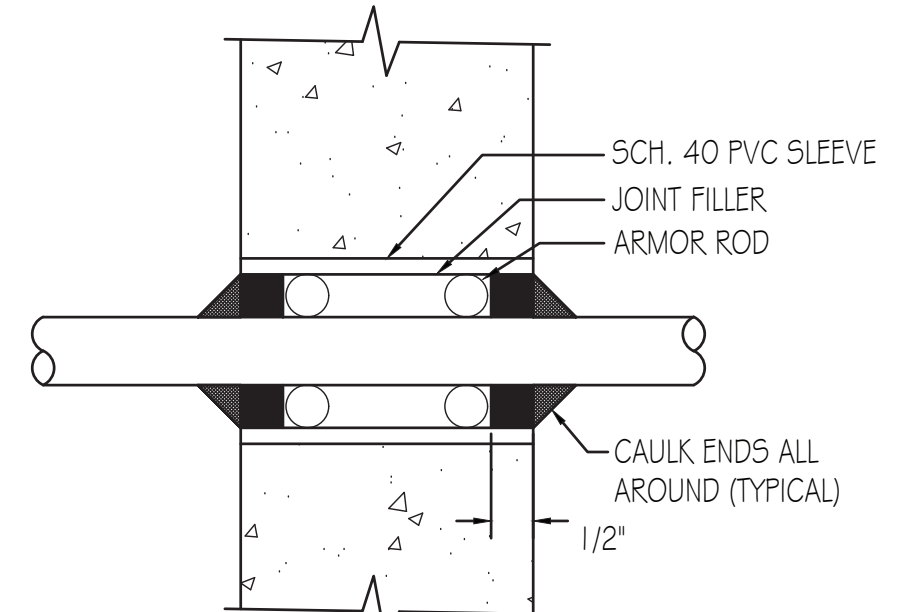
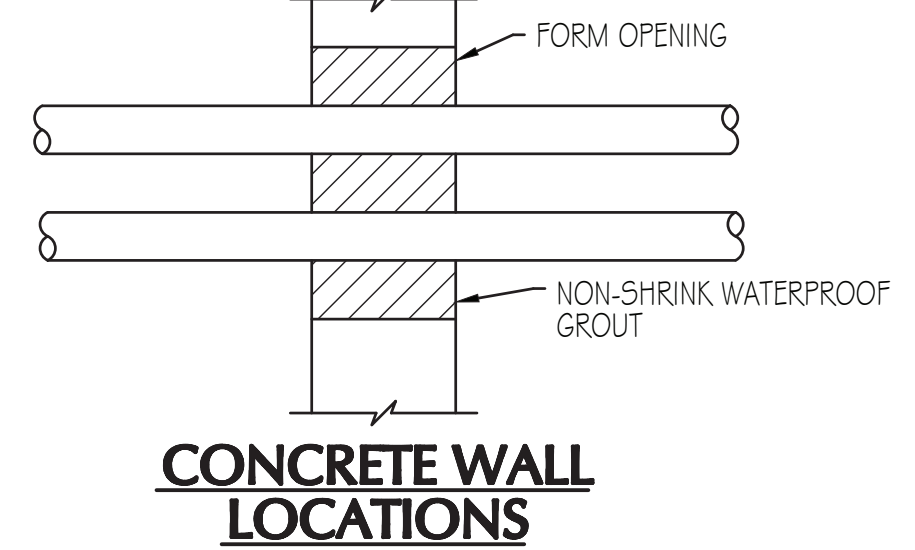
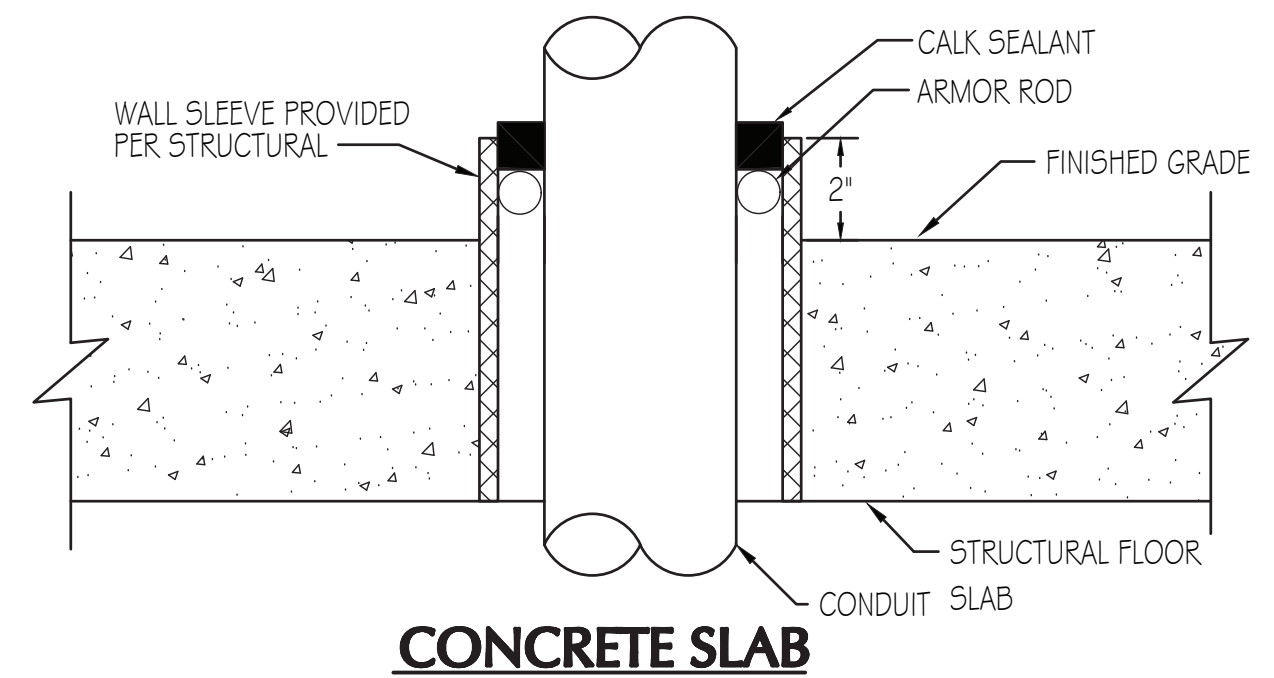
NO.	REVISIONS	BY	APVD.

SCALE



DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION ELECTRICAL DETAILS

SHEET E-502 126.42.300



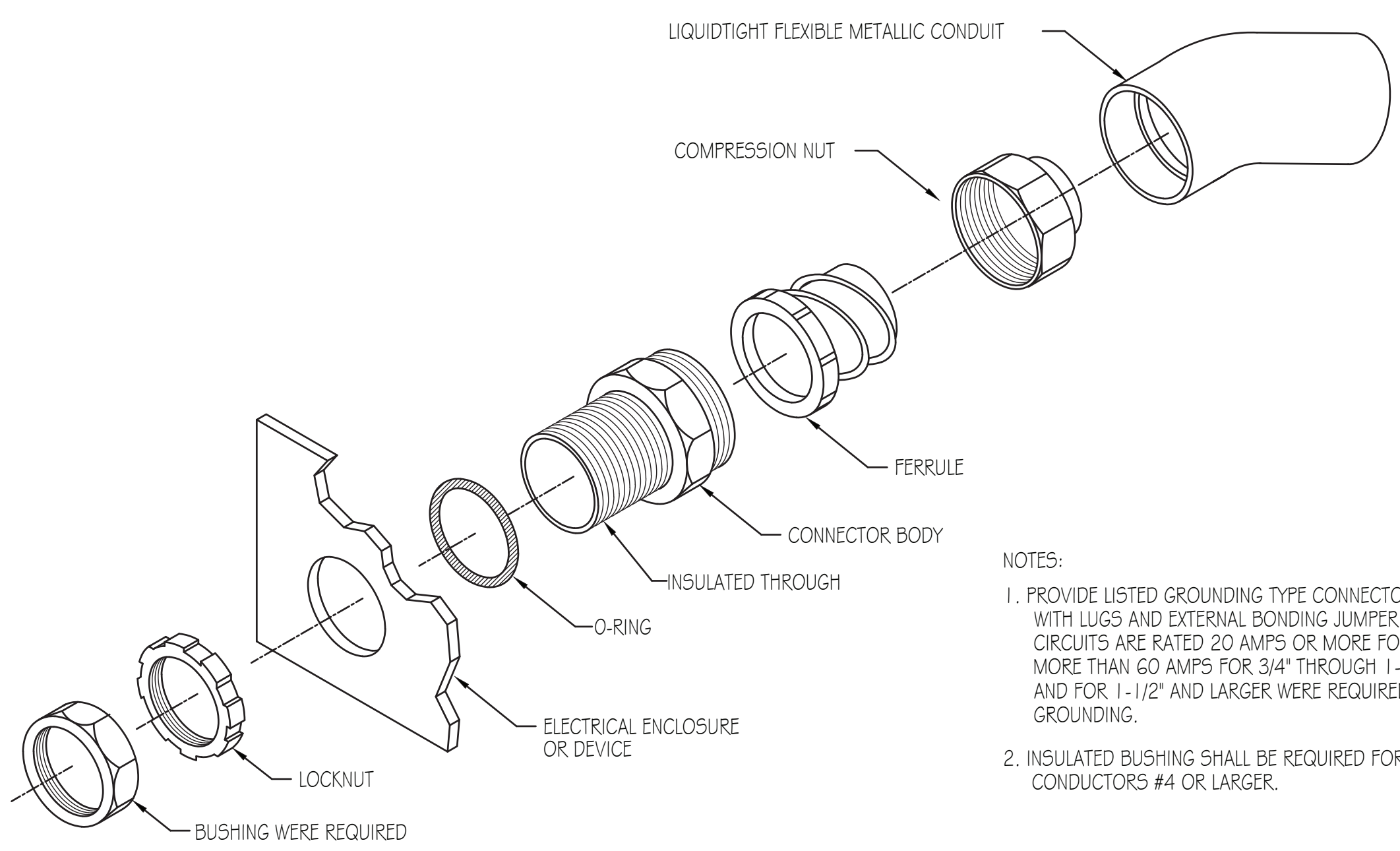
SINGLE CONDUIT PENETRATION FOR ABOVE GRADE PENETRATIONS ONLY

CONCRETE SLAB WET LOCATIONS

CONDUIT SUPPORT
SCALE: NONE TYPICAL

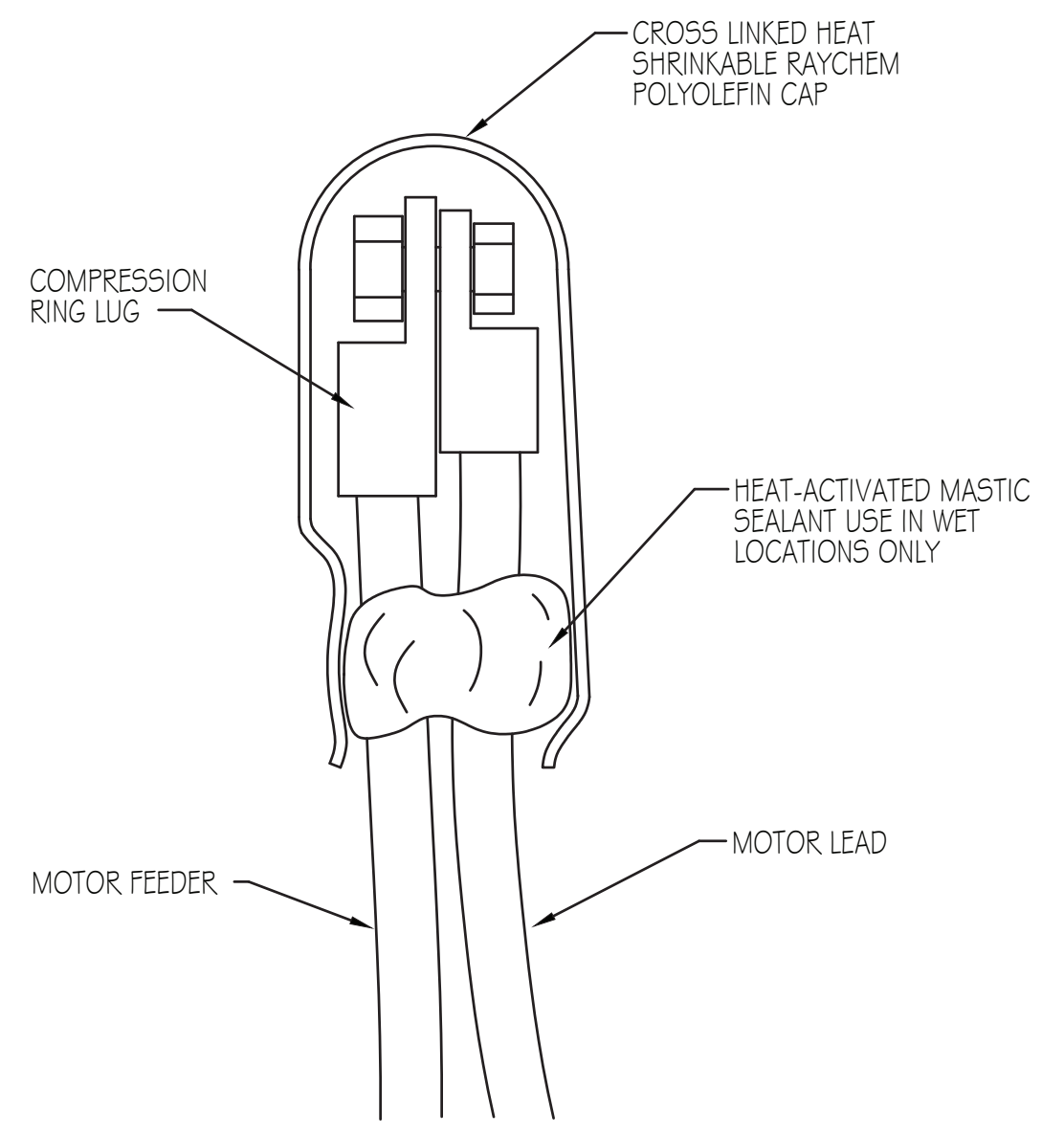
TYPICAL ABOVE GROUND CONDUIT PENETRATIONS FOR NEW WALLS/FLOORS

SCALE: NONE

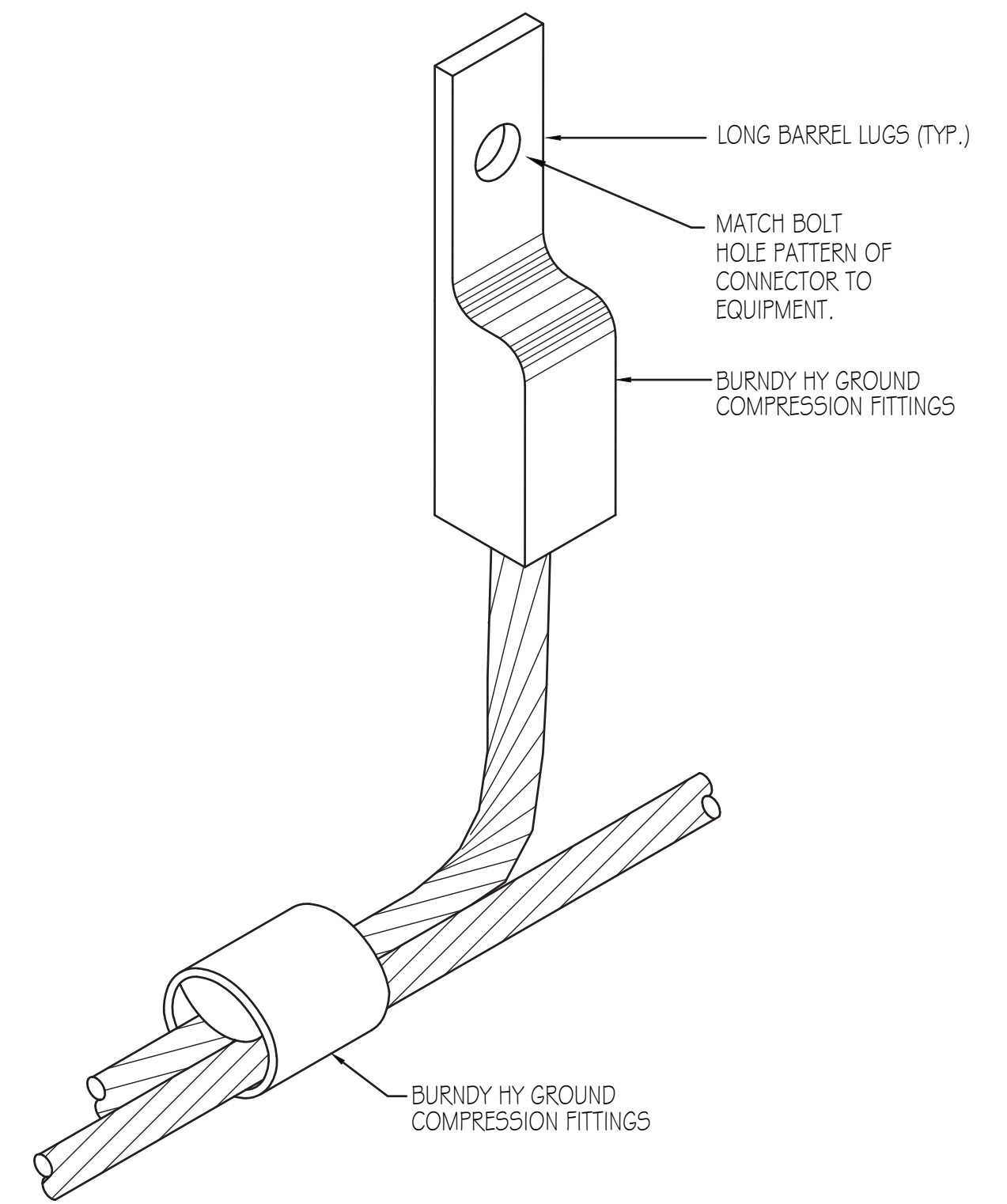


- NOTES:
1. PROVIDE LISTED GROUNDING TYPE CONNECTORS WITH LUGS AND EXTERNAL BONDING JUMPER WHEN CIRCUITS ARE RATED 20 AMPS OR MORE FOR 1/2", MORE THAN 60 AMPS FOR 3/4" THROUGH 1-1/4", AND FOR 1-1/2" AND LARGER WERE REQUIRED FOR GROUNDING.
 2. INSULATED BUSHING SHALL BE REQUIRED FOR CONDUCTORS #4 OR LARGER.

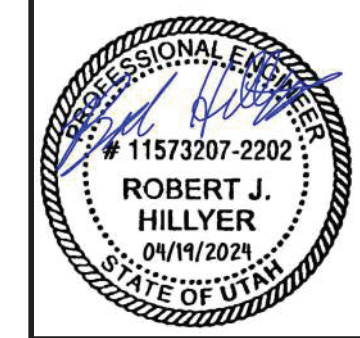
TYPICAL FLEXIBLE CONDUIT CONNECTION DETAIL
SCALE: NONE

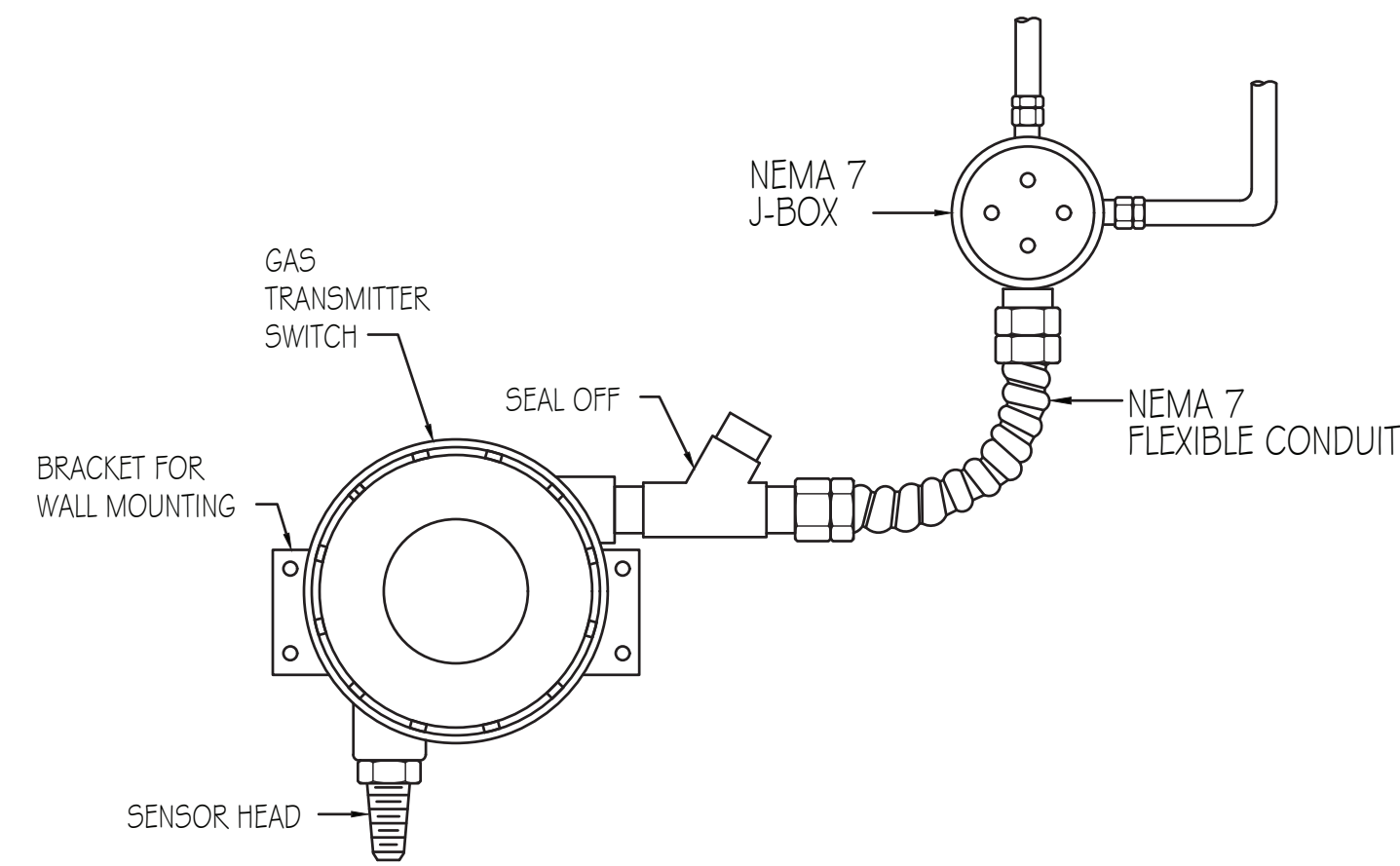


TYPICAL MOTOR LEAD TERMINATION
SCALE: NONE TYPICAL

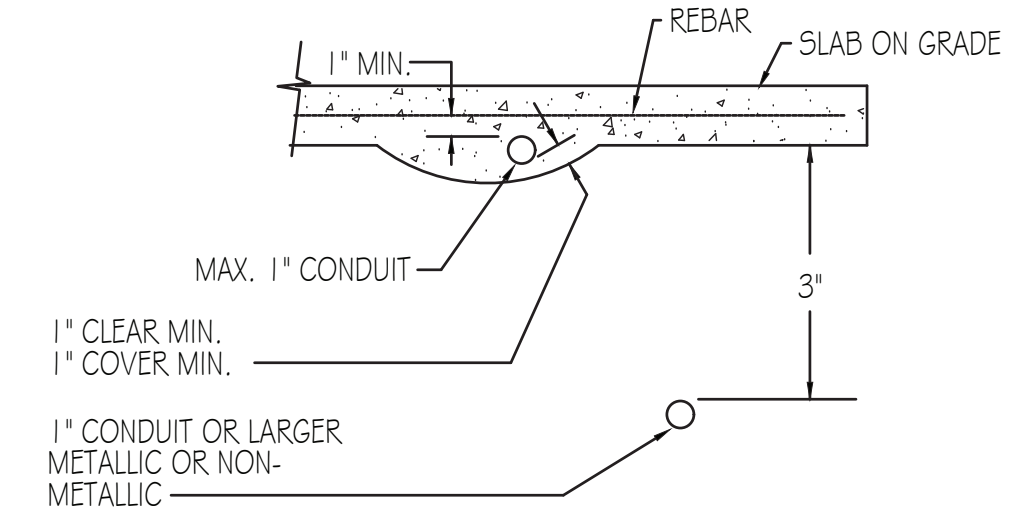


EQUIPMENT GROUNDING CONNECTION
SCALE: NONE TYPICAL

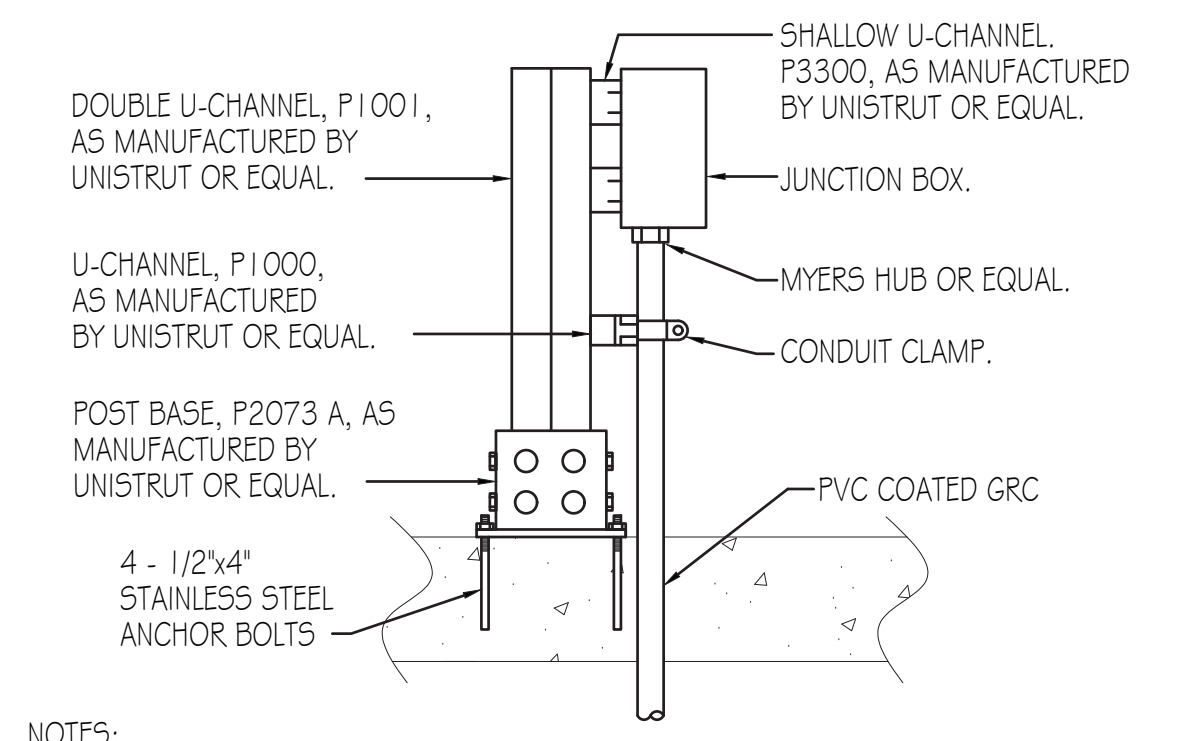




GAS SENSOR AND TRANSMITTER DETAIL 6
NO SCALE E-504

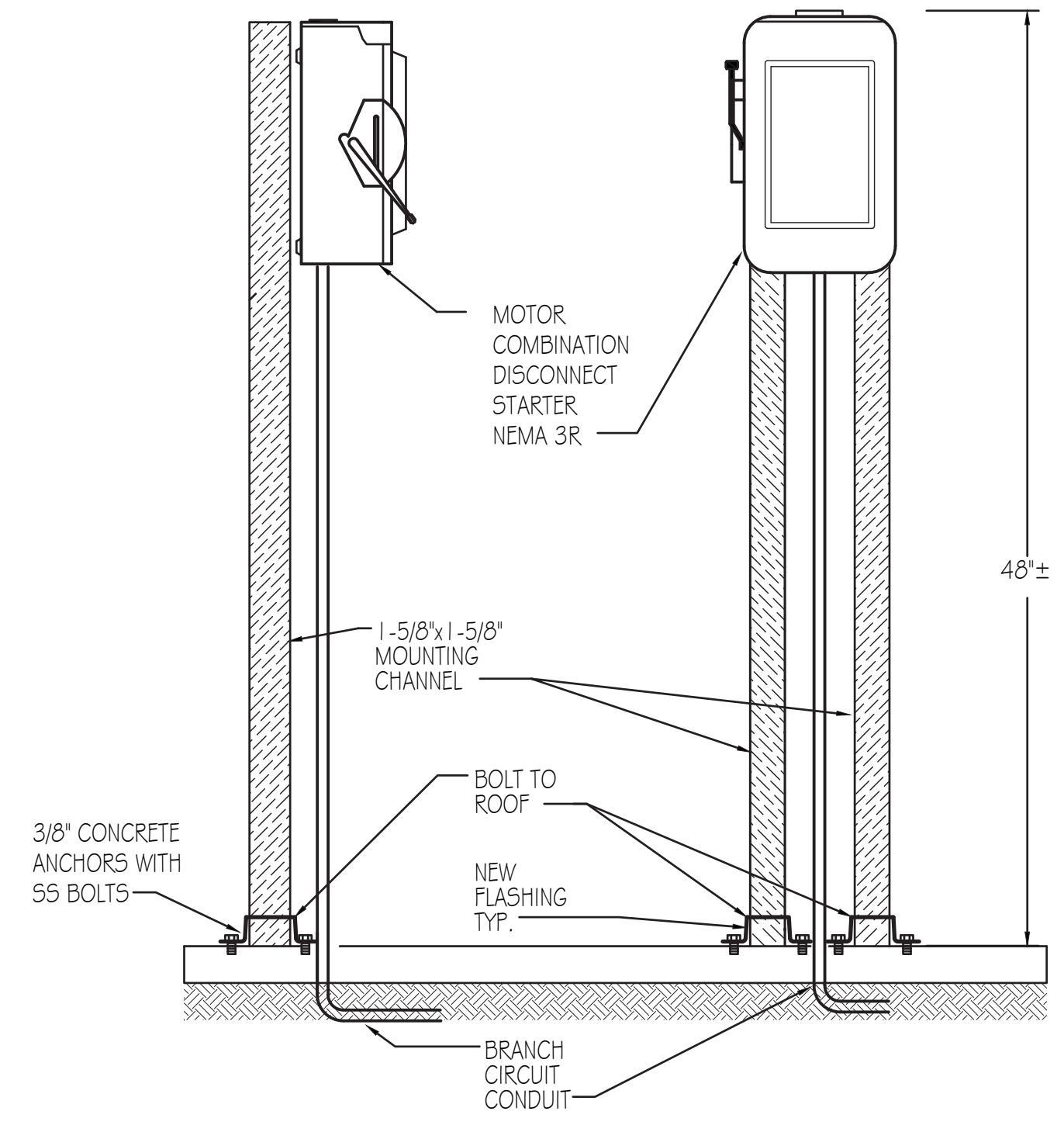


CONDUIT PLACEMENT 4
SCALE: NONE TYPICAL E-504

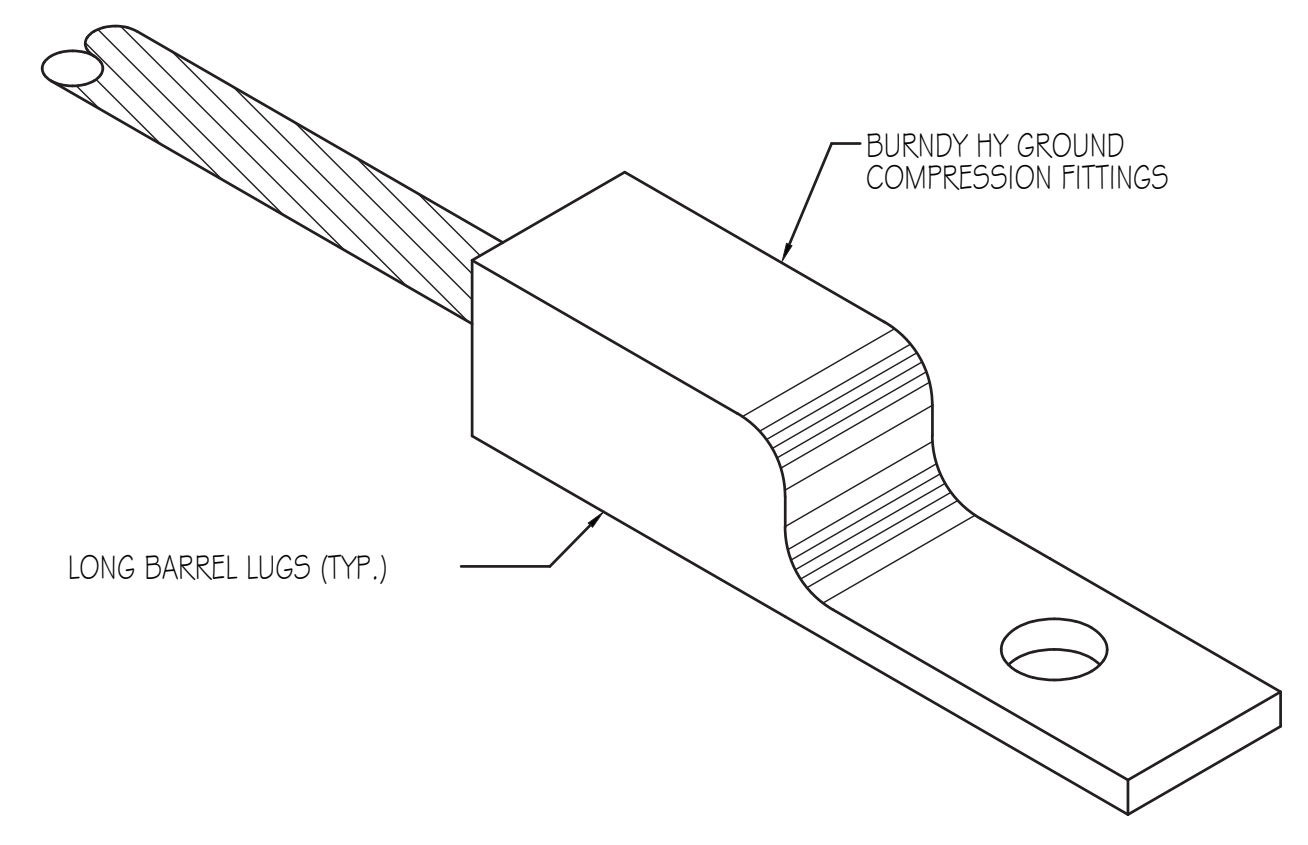


- NOTES:
 1. IN CORROSIVE AREAS PROVIDE STAINLESS STEEL U-CCHANNEL.
 2. OMIT POST BASE WHEN MOUNTING TO SIDE OF ABOVE GRADE STRUCTURE.
 3. PROVIDE HARDWARE OF SAME MATERIAL AS U-CCHANNEL.

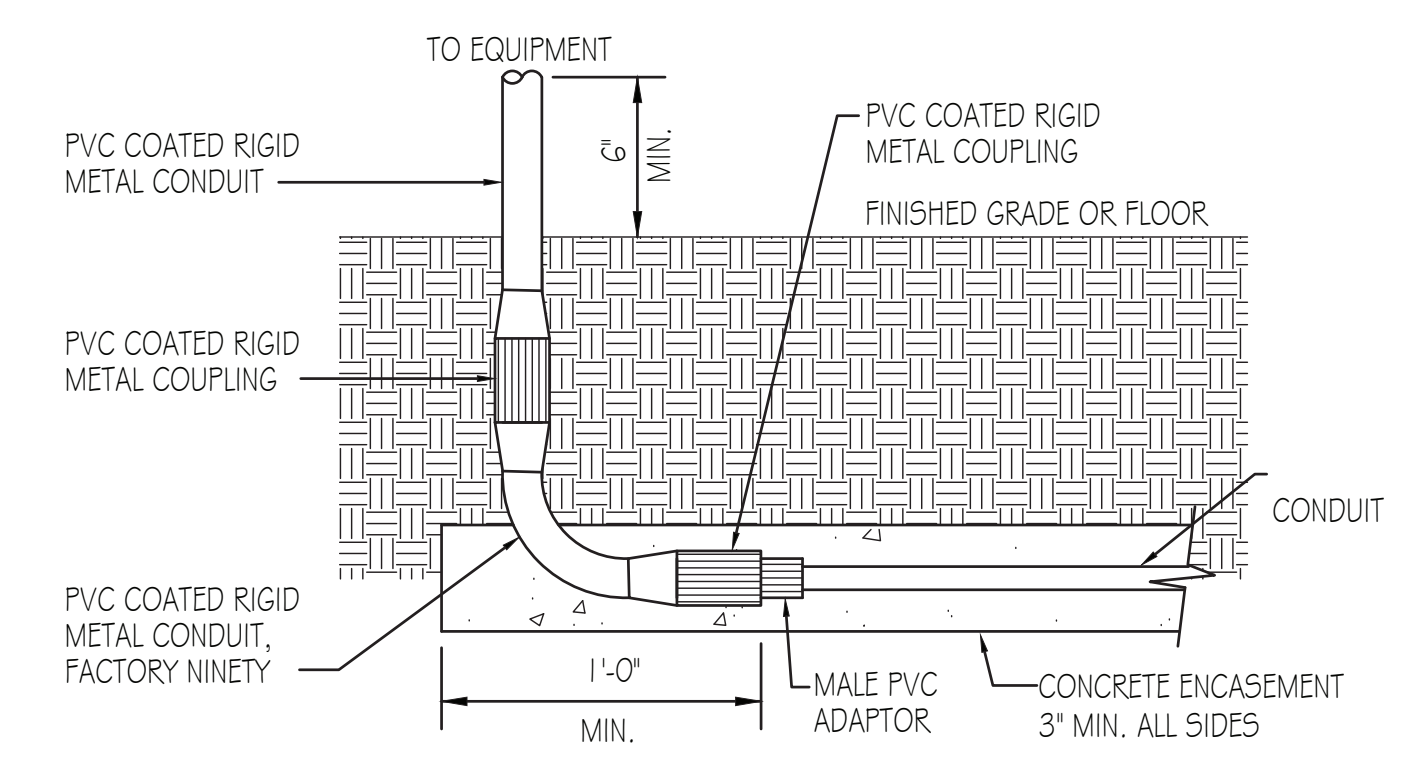
JUNCTION BOX MOUNTING DETAIL 1
SCALE: NONE E-504



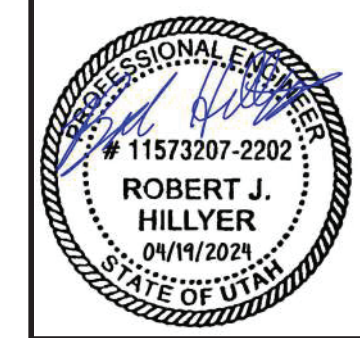
MOTOR COMBINATION DISCONNECT STARTER DETAIL 5
SCALE: NONE E-504



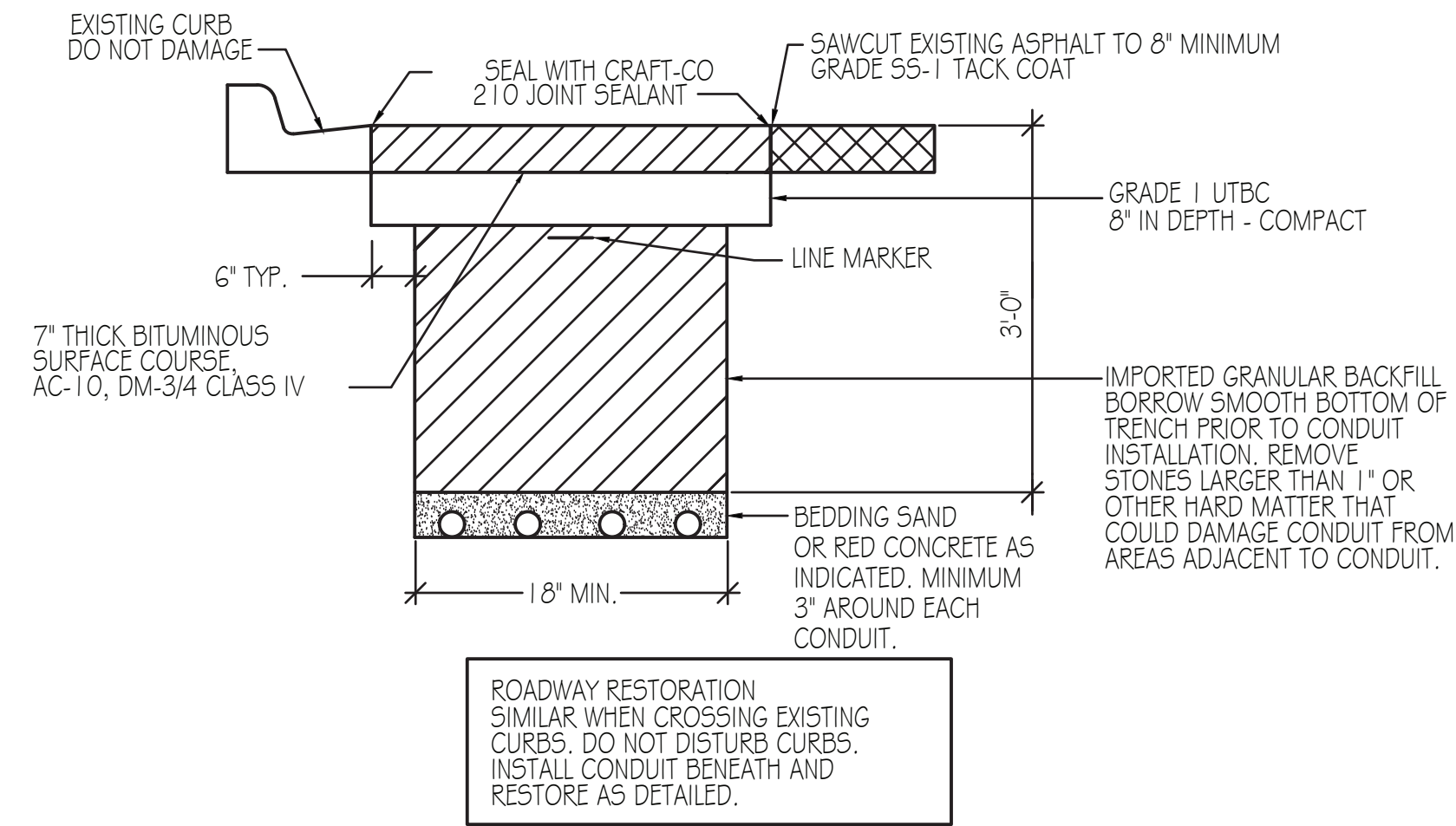
BONDING LUG 2
SCALE: NONE E-504



CONDUIT RISER 3
SCALE: NONE TYPICAL E-504



DESIGNED	RJH	3					
DRAFTED	KGM	2					
CHECKED	RJH	1					
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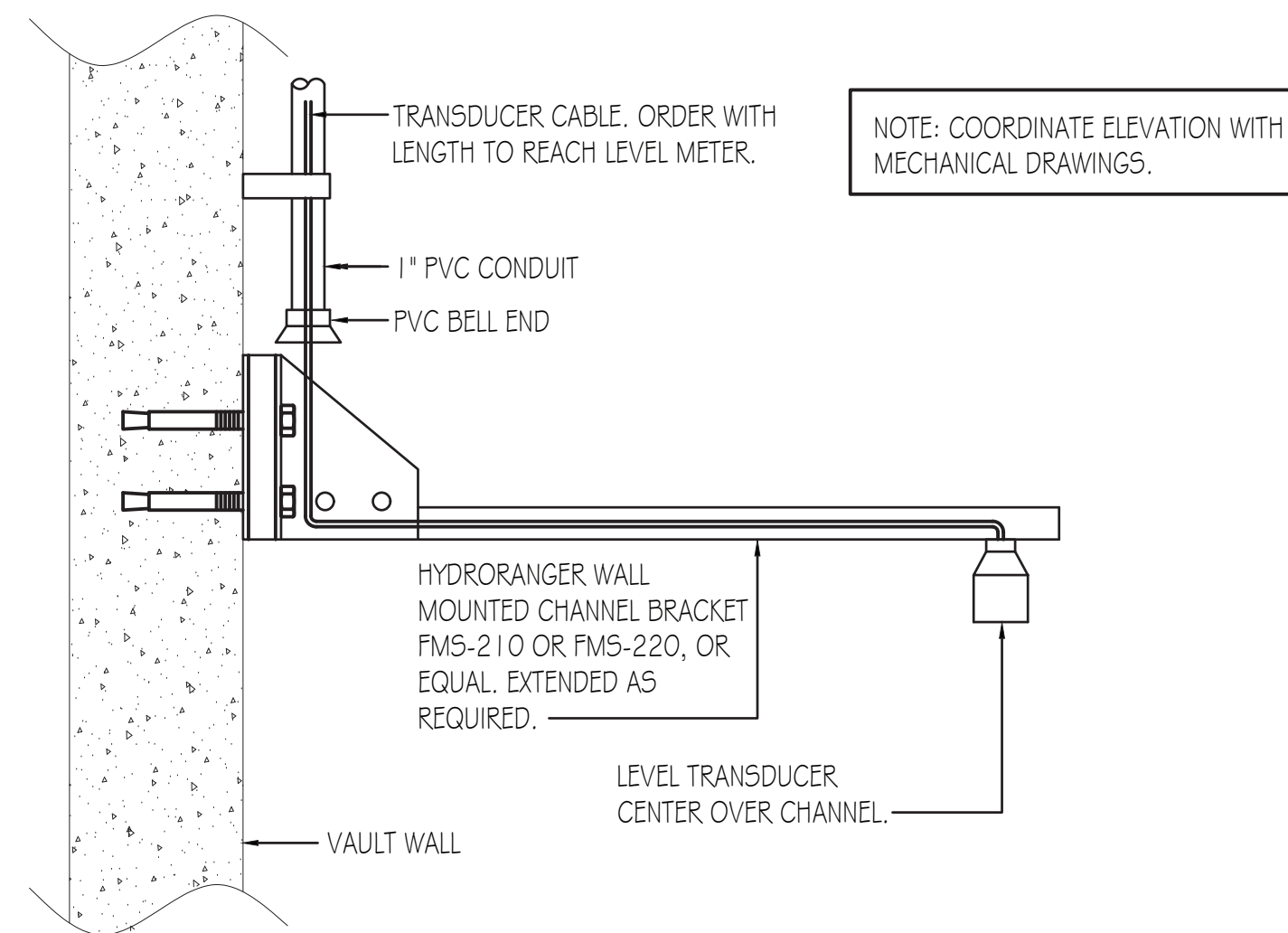


TRENCH DETAIL-ROADWAY RESTORATION

SCALE: NONE

6

E-505

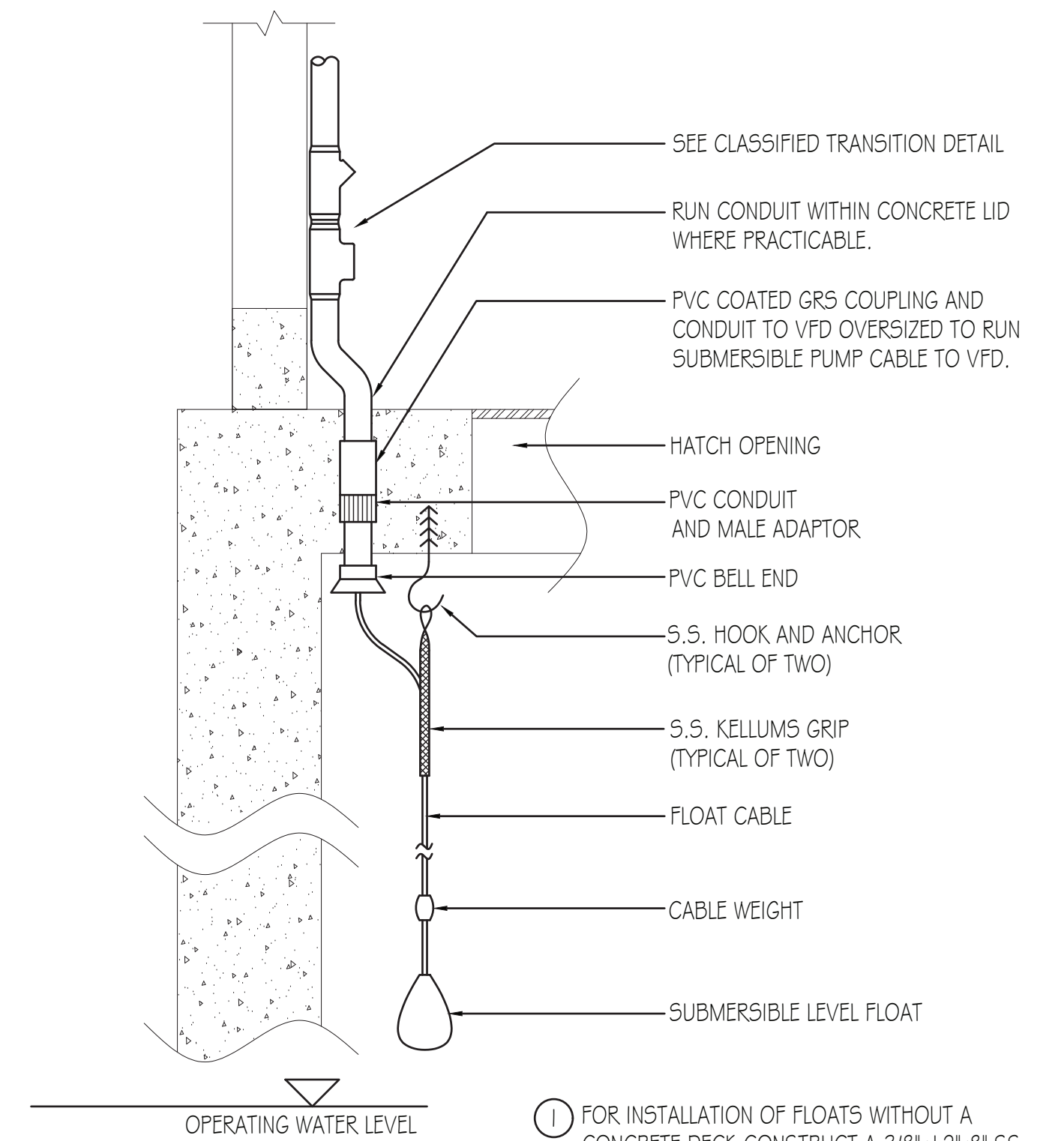


HEADWORKS TRANSUDER MOUNTING DETAIL

SCALE: NONE

3

E-505



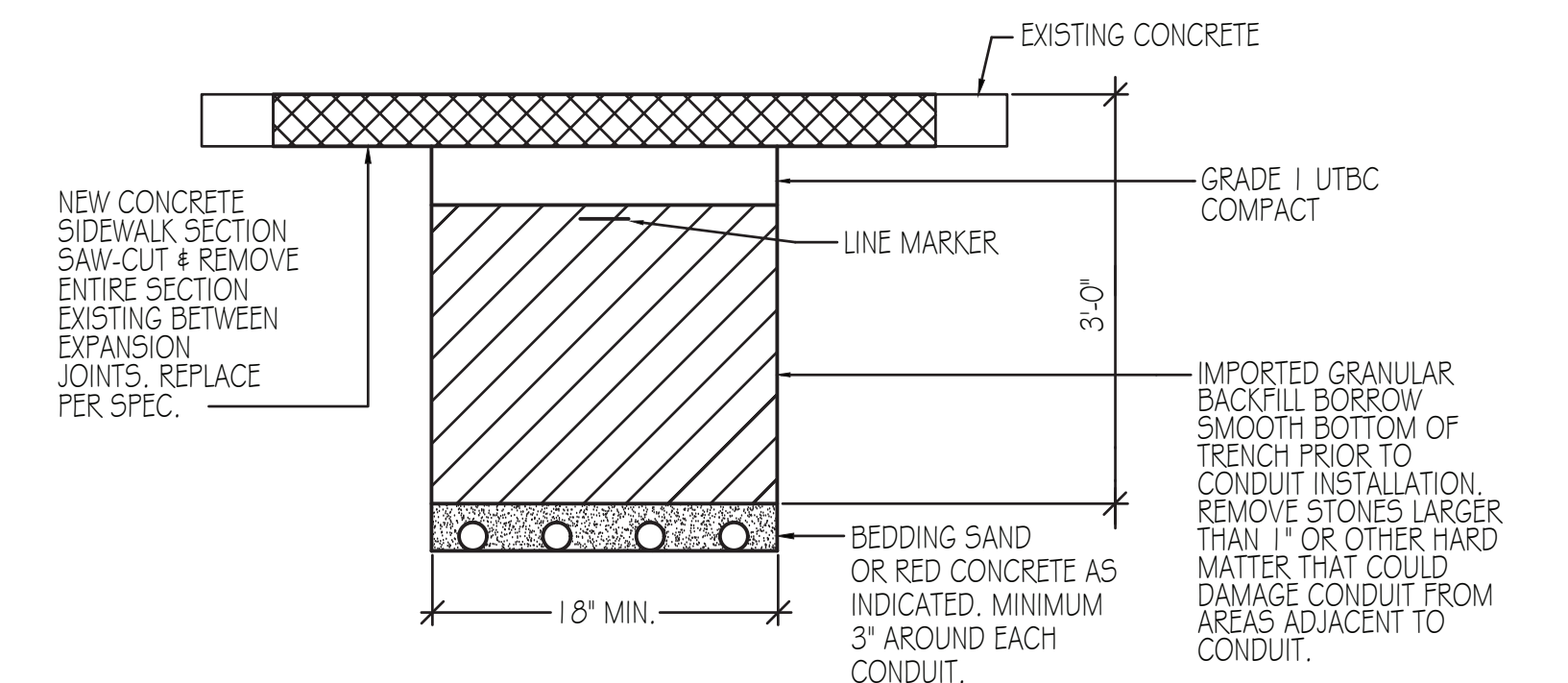
1 FOR INSTALLATION OF FLOATS WITHOUT A CONCRETE DECK CONSTRUCT A 3/8"x12"x8" SS PLATE SUPPORT ANCHORED TO WALL AT MINIMUM 4 PLACES. WELD A 3/8"x6"x12" SS GUSSET TO THE BOTTOM OF PLATE SUPPORT.

LEVEL FLOAT MOUNTING DETAIL

SCALE: NONE

1

E-505

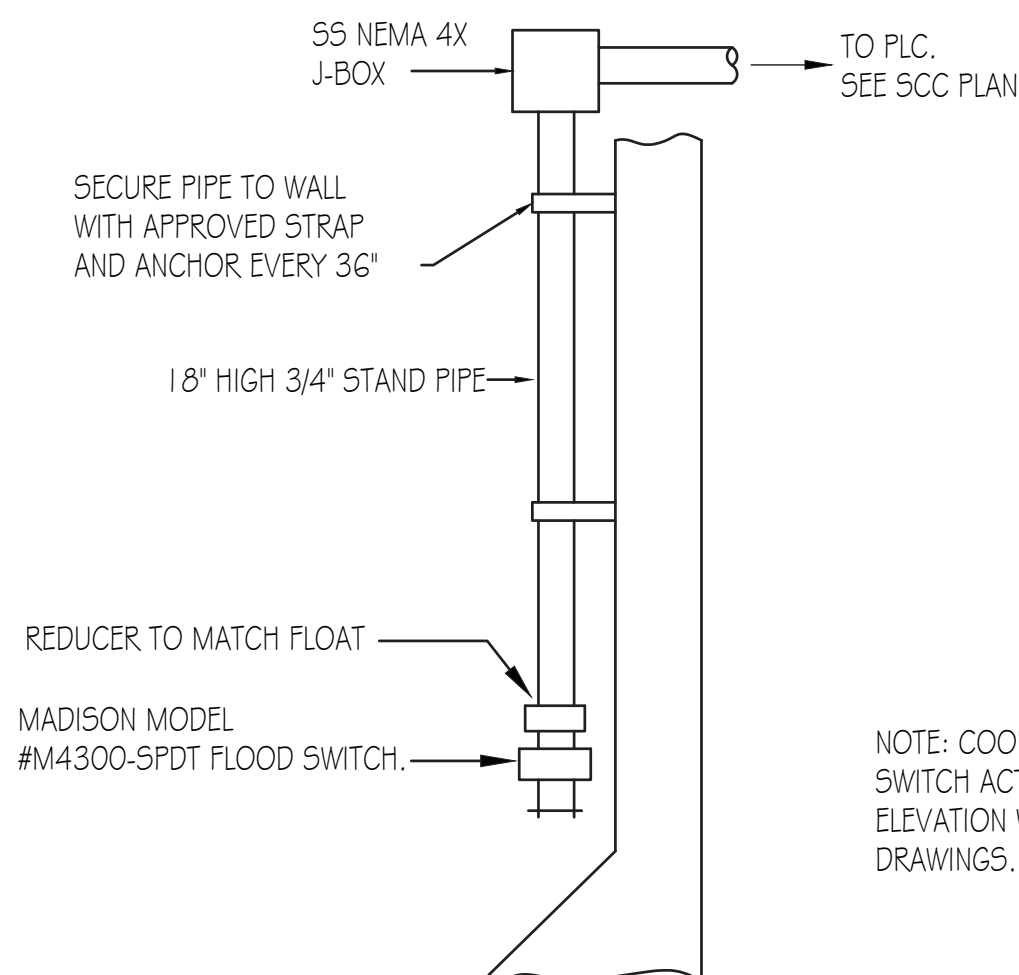


TRENCH DETAIL-SIDEWALK RESTORATION

SCALE: NONE

7

E-505

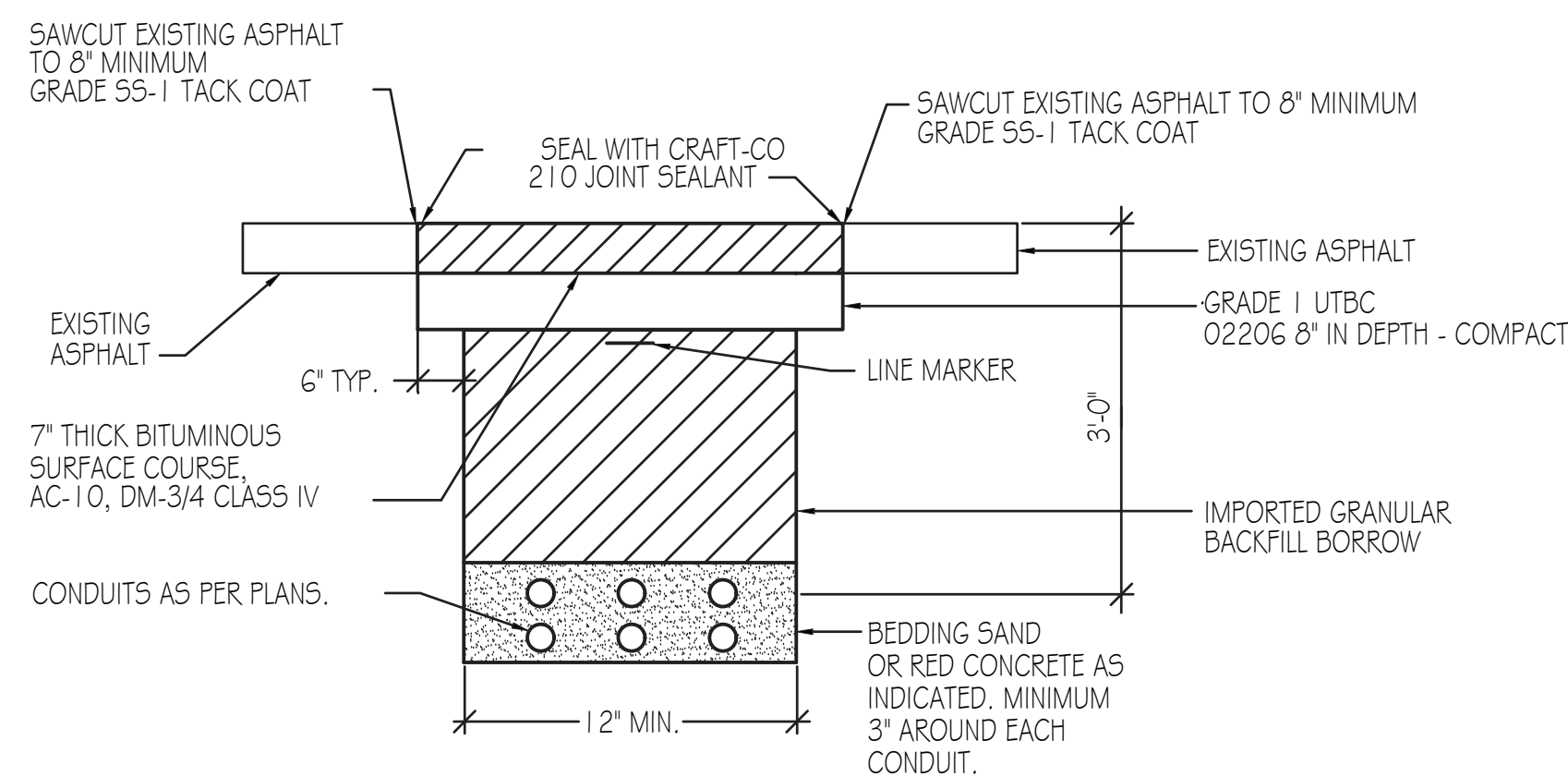


FLOOD FLOAT SWITCH INSTALLATION

NO SCALE

4

E-505

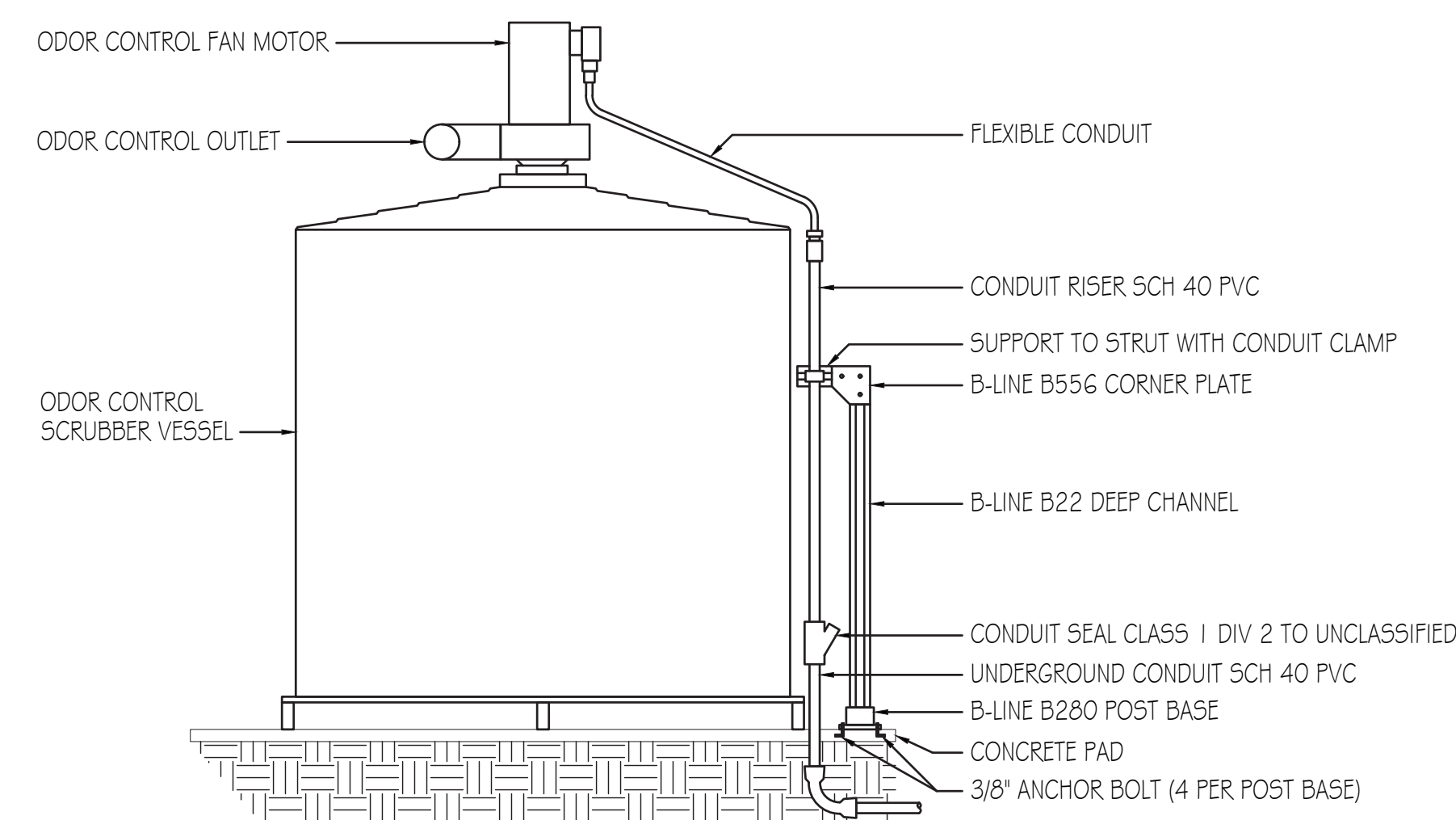


TRENCH DETAIL-ROADWAY RESTORATION

SCALE: NONE

8

E-505

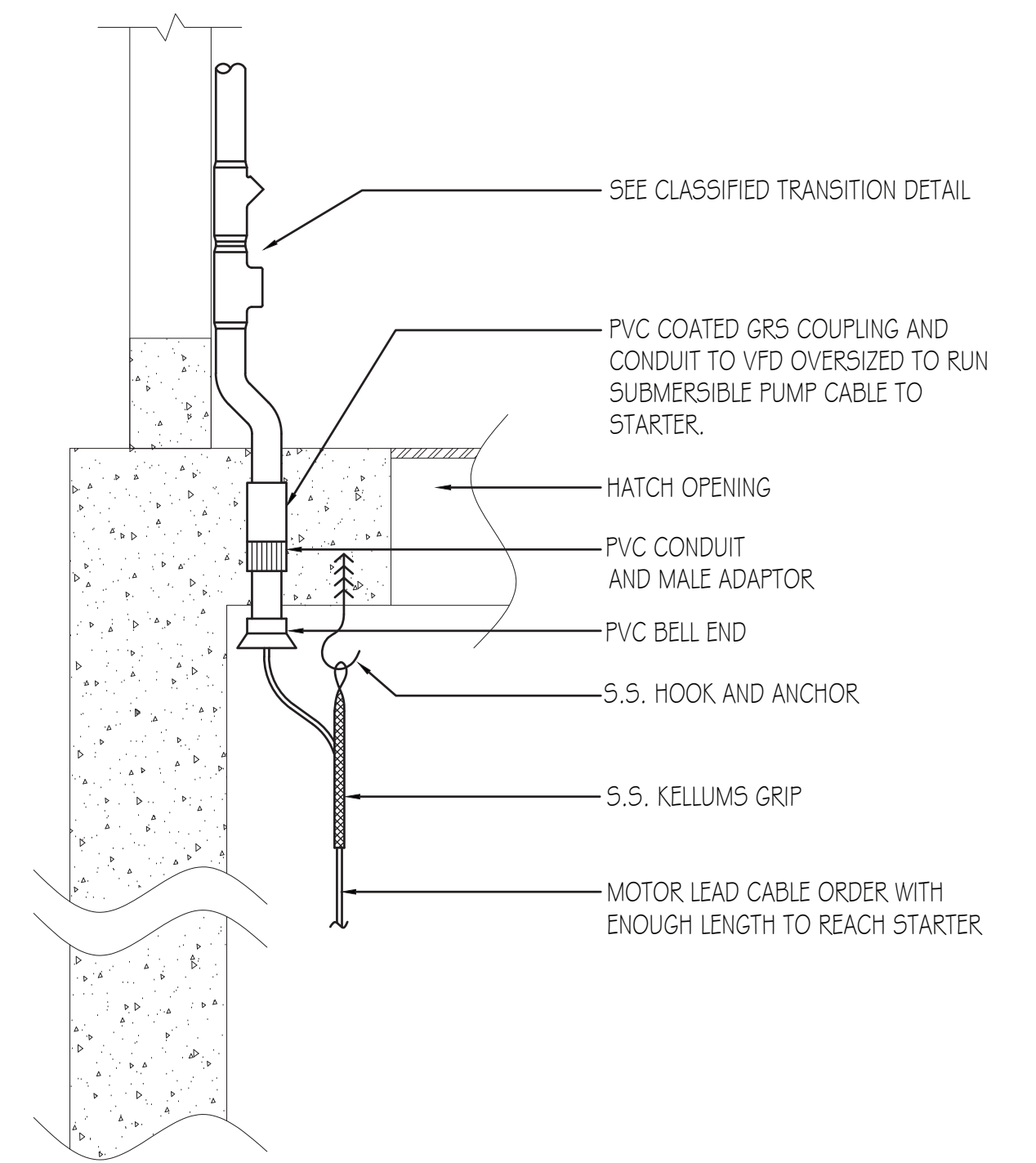


ODOR CONTROL UNIT DETAIL

NO SCALE

5

E-505



AERIGATOR LEAD MOUNTING DETAIL

SCALE: NONE

2

E-505



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DESIGNED	RJH	3	
DRAFTED	KGM	2	
CHECKED	RJH	1	
DATE	MAY 26, 2022	NO.	DATE

REVISIONS

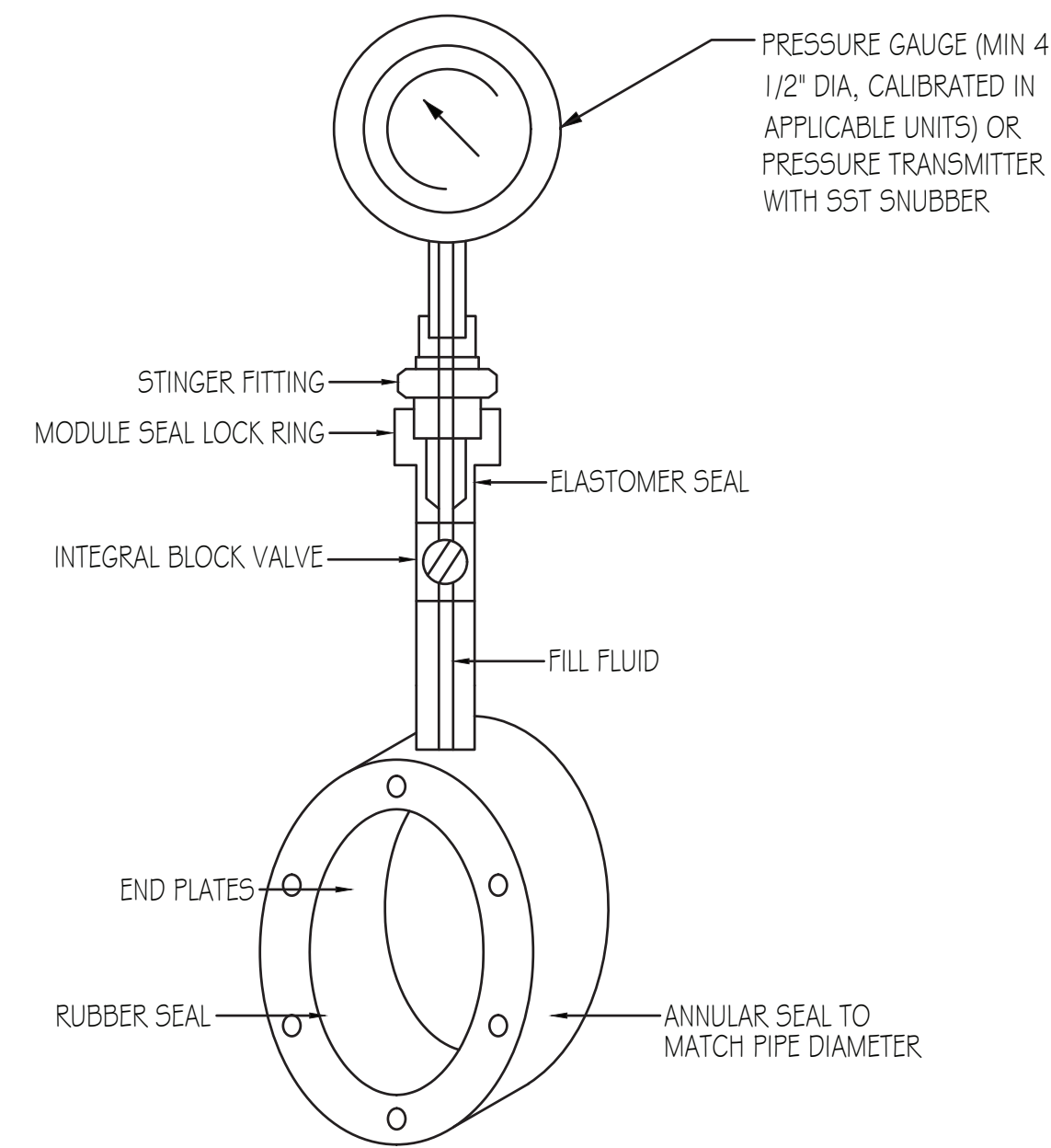
BY	APVD.
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SCALE

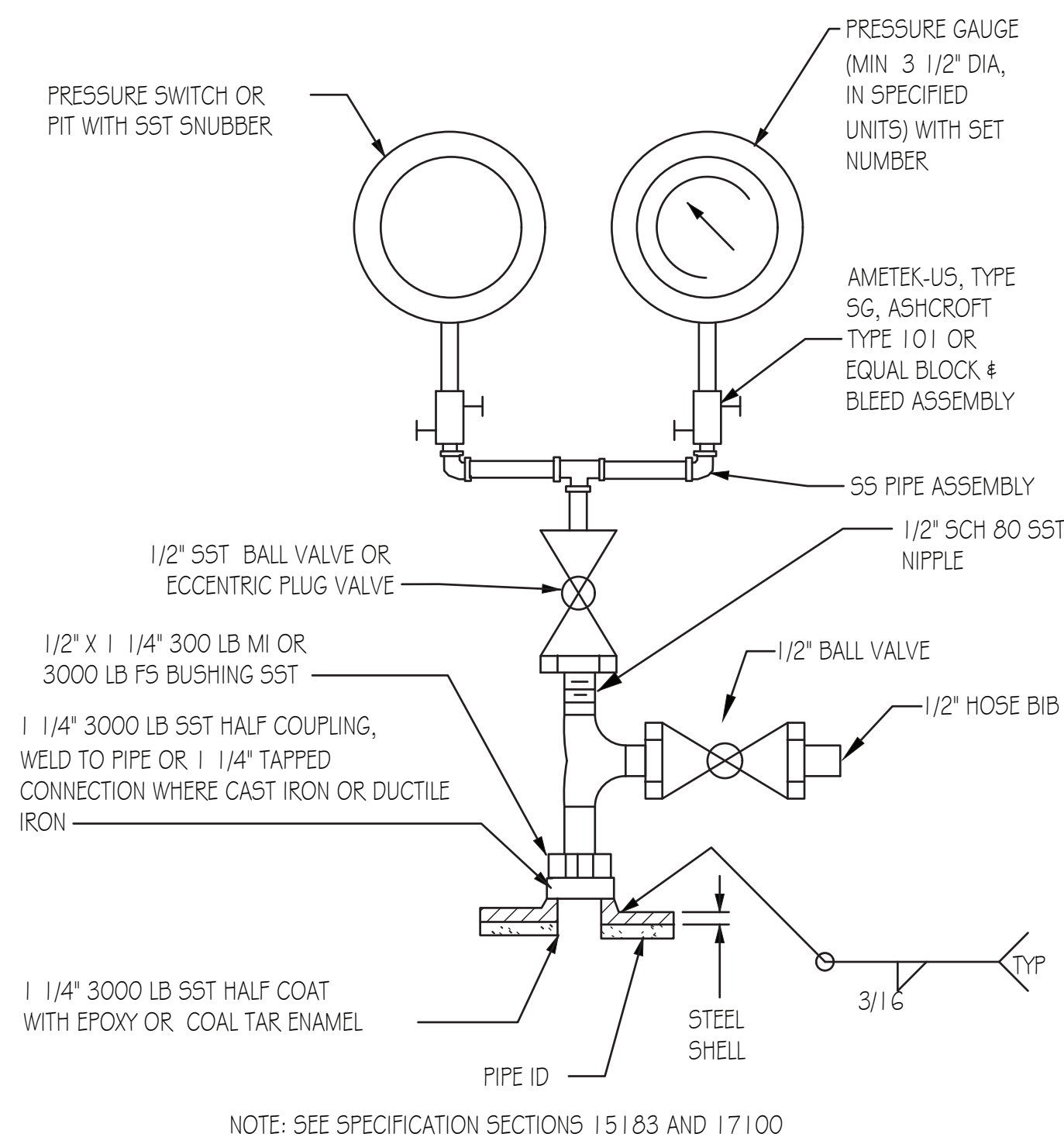
**SOUTH
SALT LAKE**

DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
ELECTRICAL
DETAILS

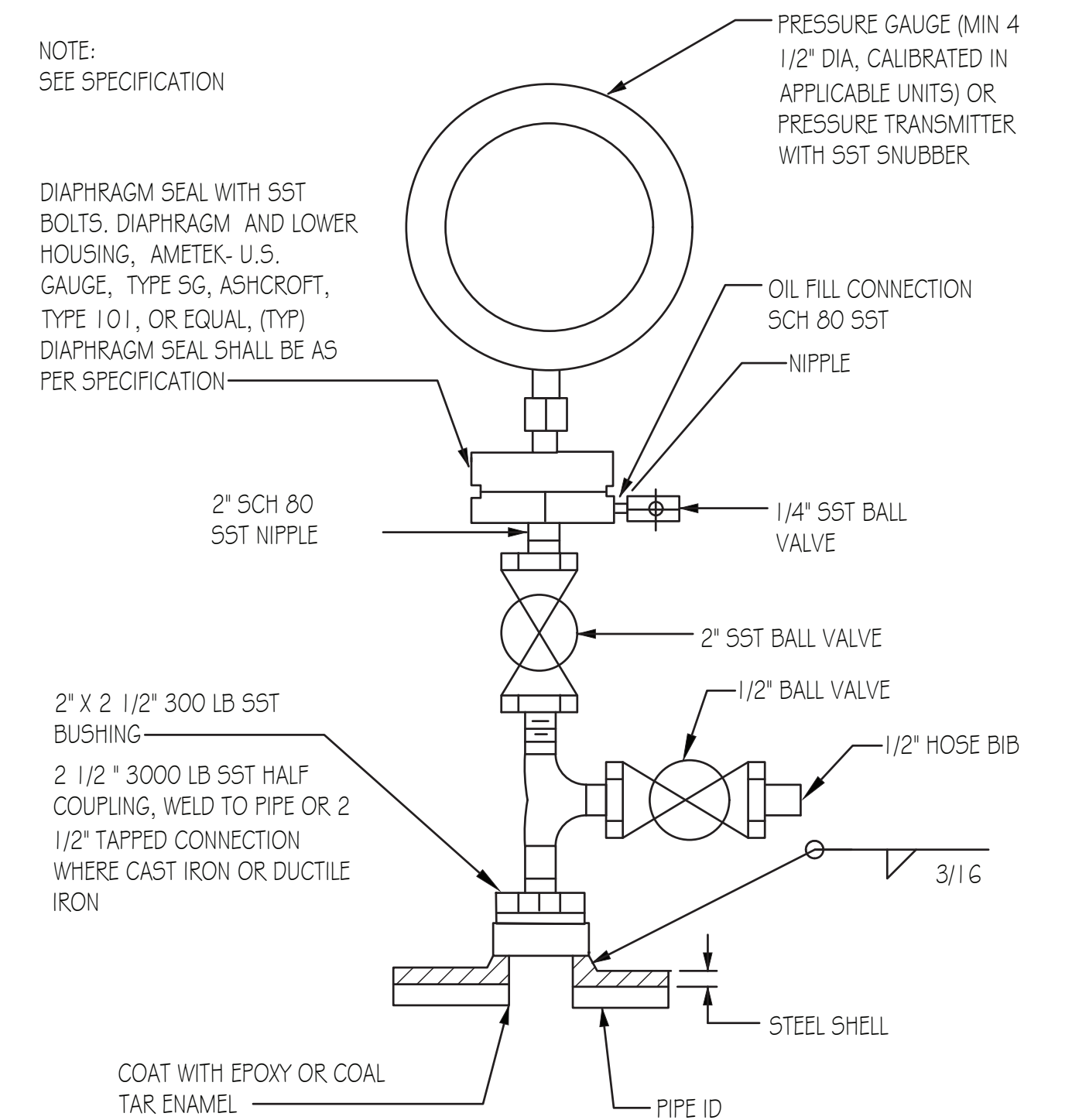
SHEET
E-505
126.42.300



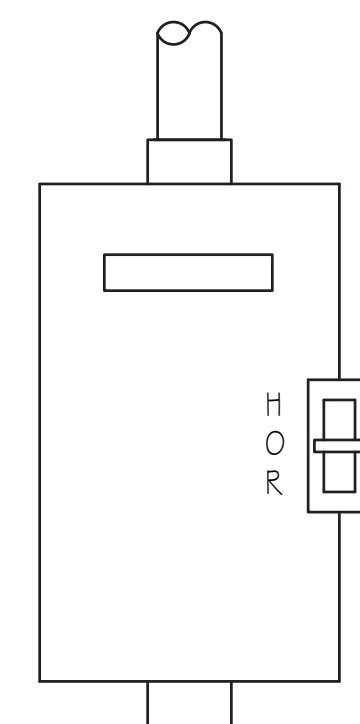
PRESSURE GAUGE OR PRESSURE SWITCH WITH ANNULAR SEAL 5
 NO SCALE E-506



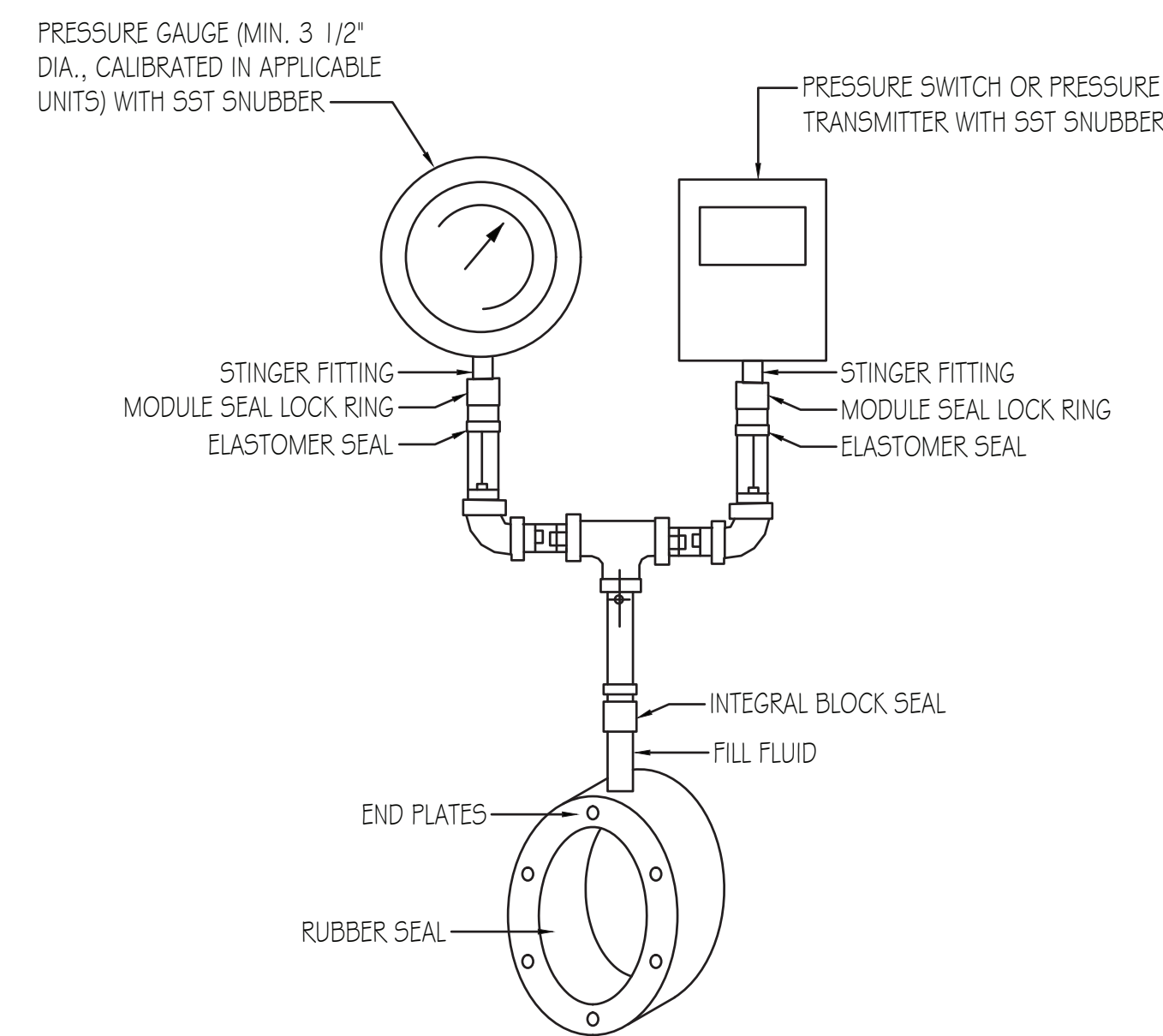
PRESSURE GAUGE AND PRESSURE SWITCH/PIT 3
 NO SCALE (CLEAN WATER ONLY) E-506



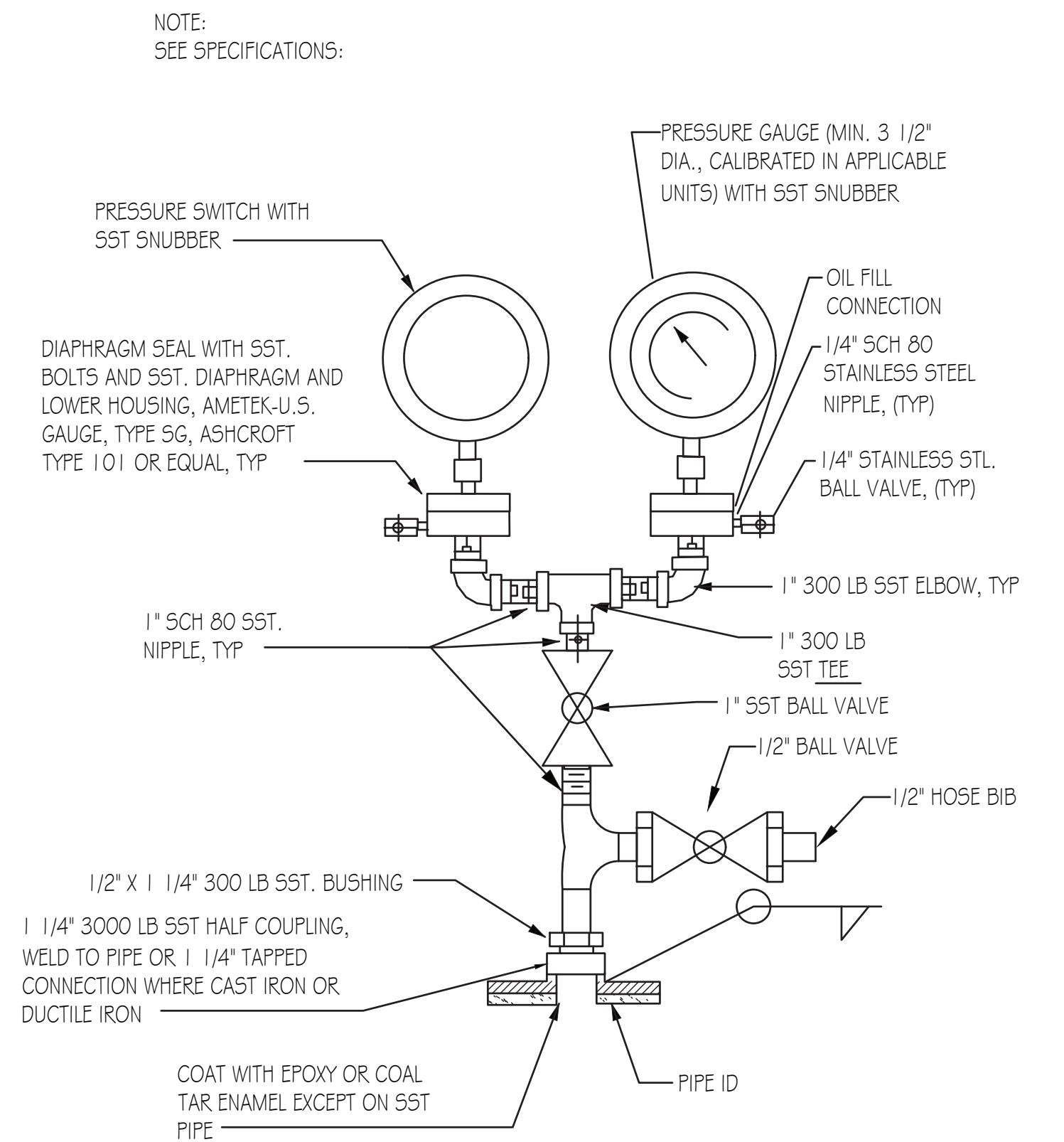
PRESSURE GAUGE OR PRESSURE SWITCH WITH DIAPHRAGM SEAL 1
 NO SCALE E-506



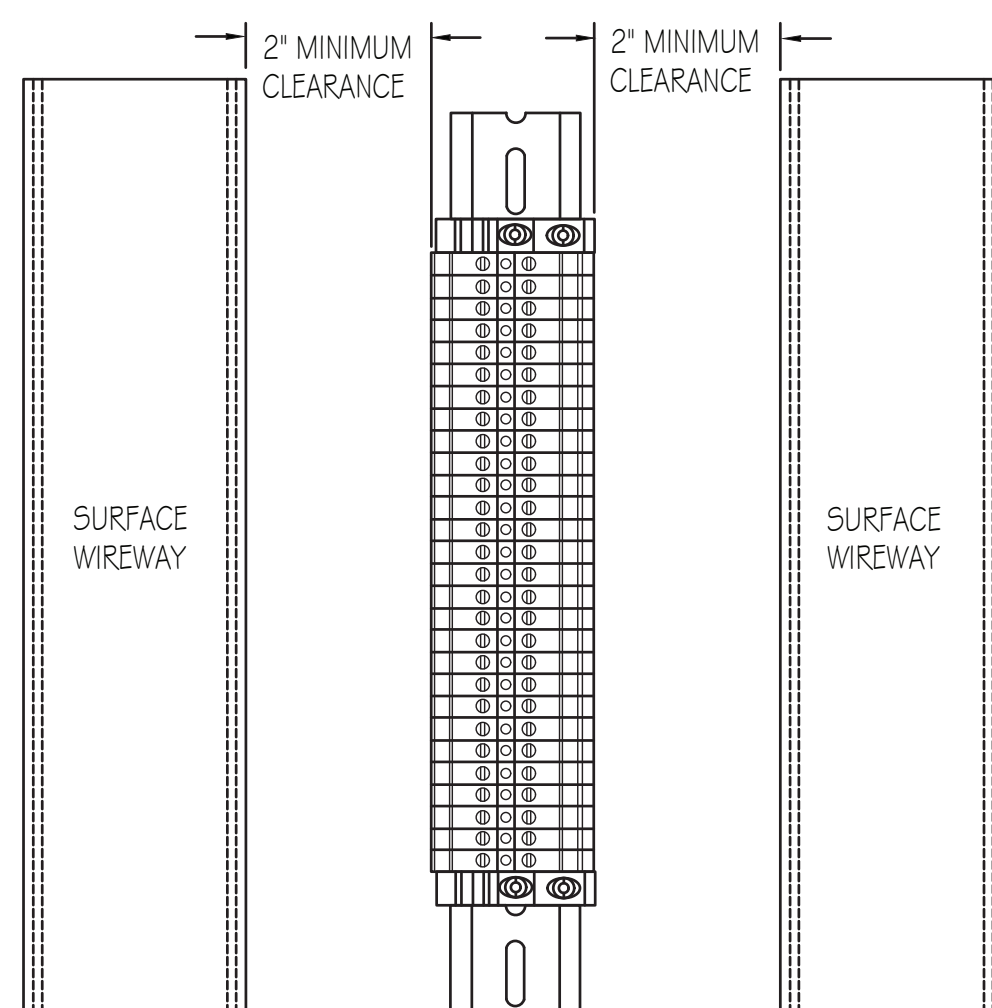
EQUIPMENT HAND OFF REMOTE SWITCH 6
 NO SCALE OPEN / CLOSE AND POSITION POT SWITCHES SIMILAR E-506



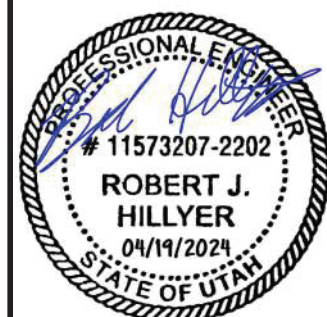
PRESSURE GAUGE AND PRESSURE SWITCH WITH ANNULAR SEAL 4
 NO SCALE E-506



PRESSURE GAUGE AND PRESSURE SWITCH WITH DIAPHRAGM SEAL 2
 NO SCALE E-506



TERMINAL BLOCK CLEARANCE DETAIL 7
 NO SCALE E-506



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DESIGNED	RJH	3
DRAFTED	KGM	2
CHECKED	RJH	1
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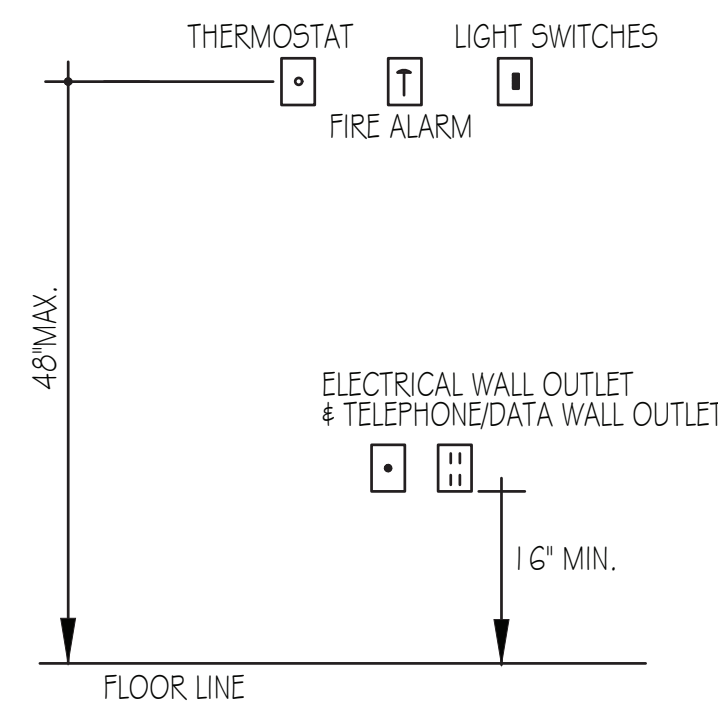
NO.	DATE	REVISIONS	BY	APVD.

SCALE

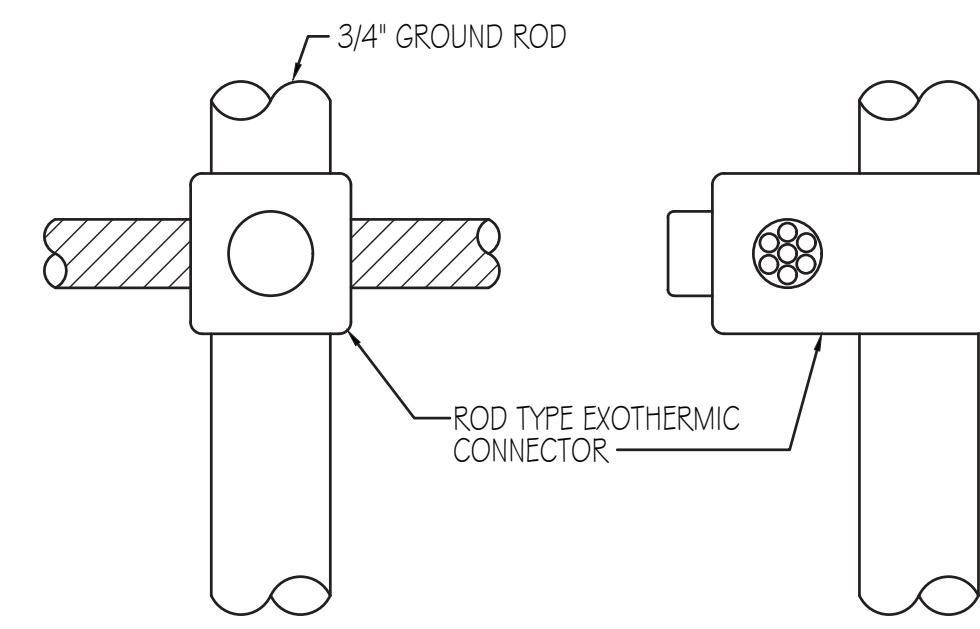


DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
 ELECTRICAL
 DETAILS

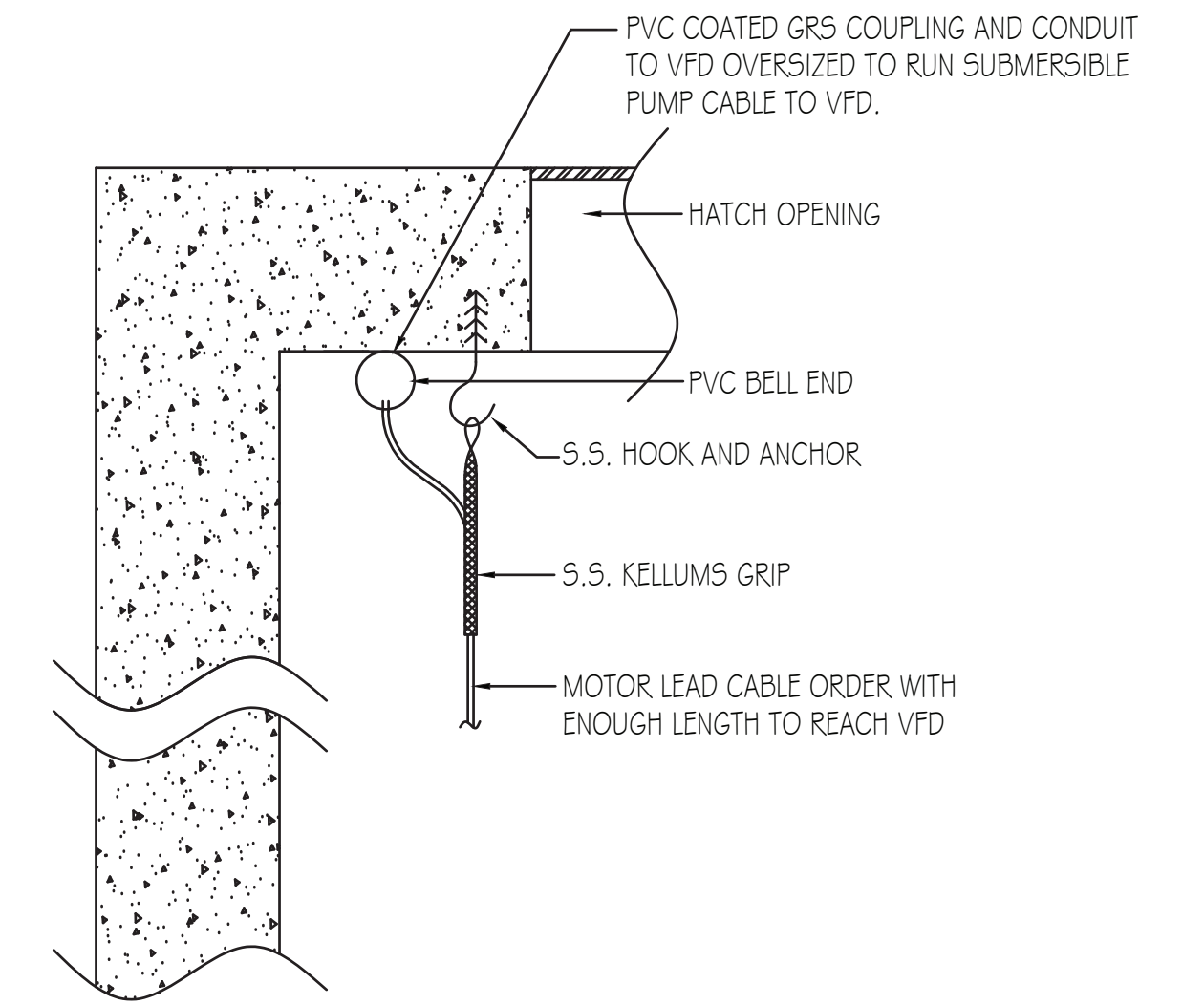
SHEET
 E-506
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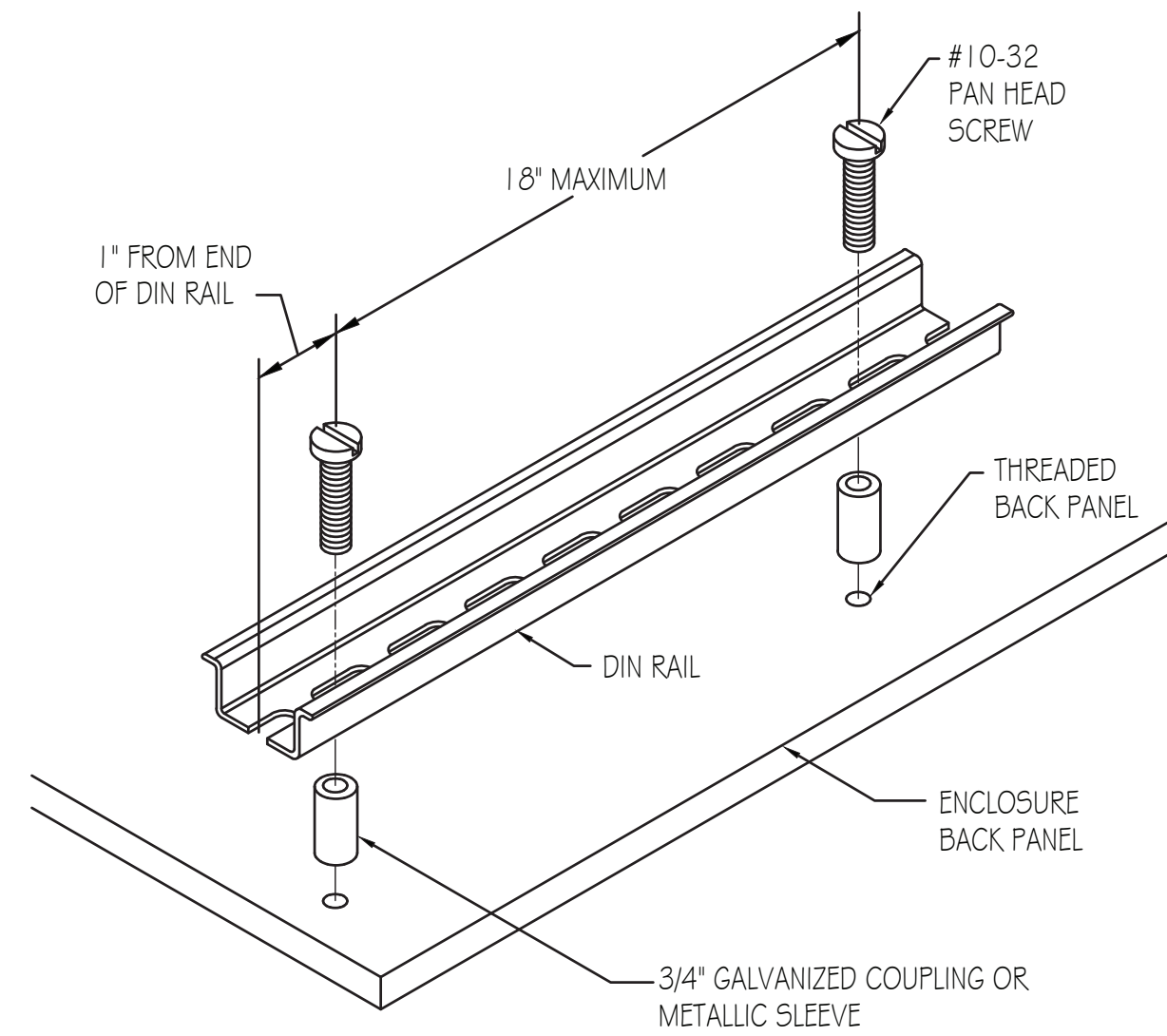
MOUNTING HEIGHTS FOR ELECTRICAL DEVICES
 SCALE: NONE
 6 E-507



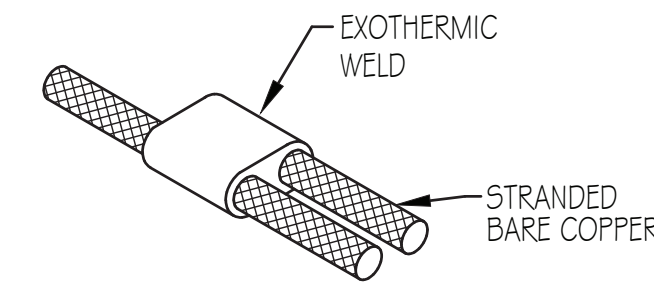
CABLE TO ROD CONNECTION DETAIL
 SCALE: NONE TYPICAL
 3 E-507



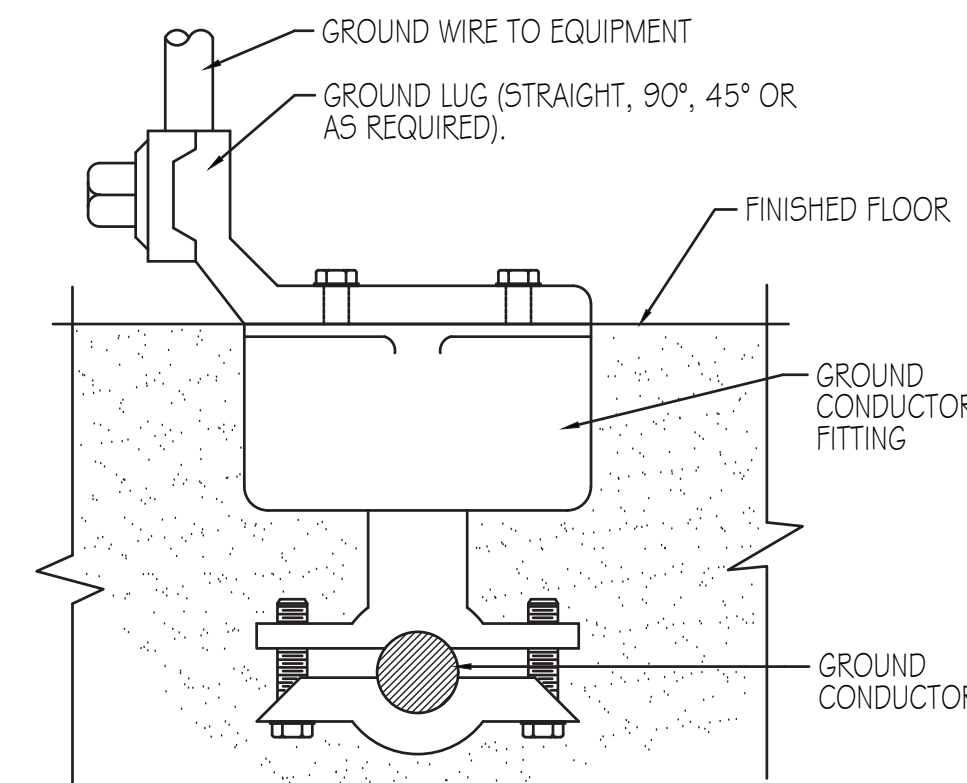
PUMP MOTOR LEAD MOUNTING DETAIL
 SCALE: NONE
 (MOTOR MONITORING CABLE SIMILAR)
 1 E-507



DIN RAIL MOUNTING DETAIL
 NO SCALE
 7 E-507

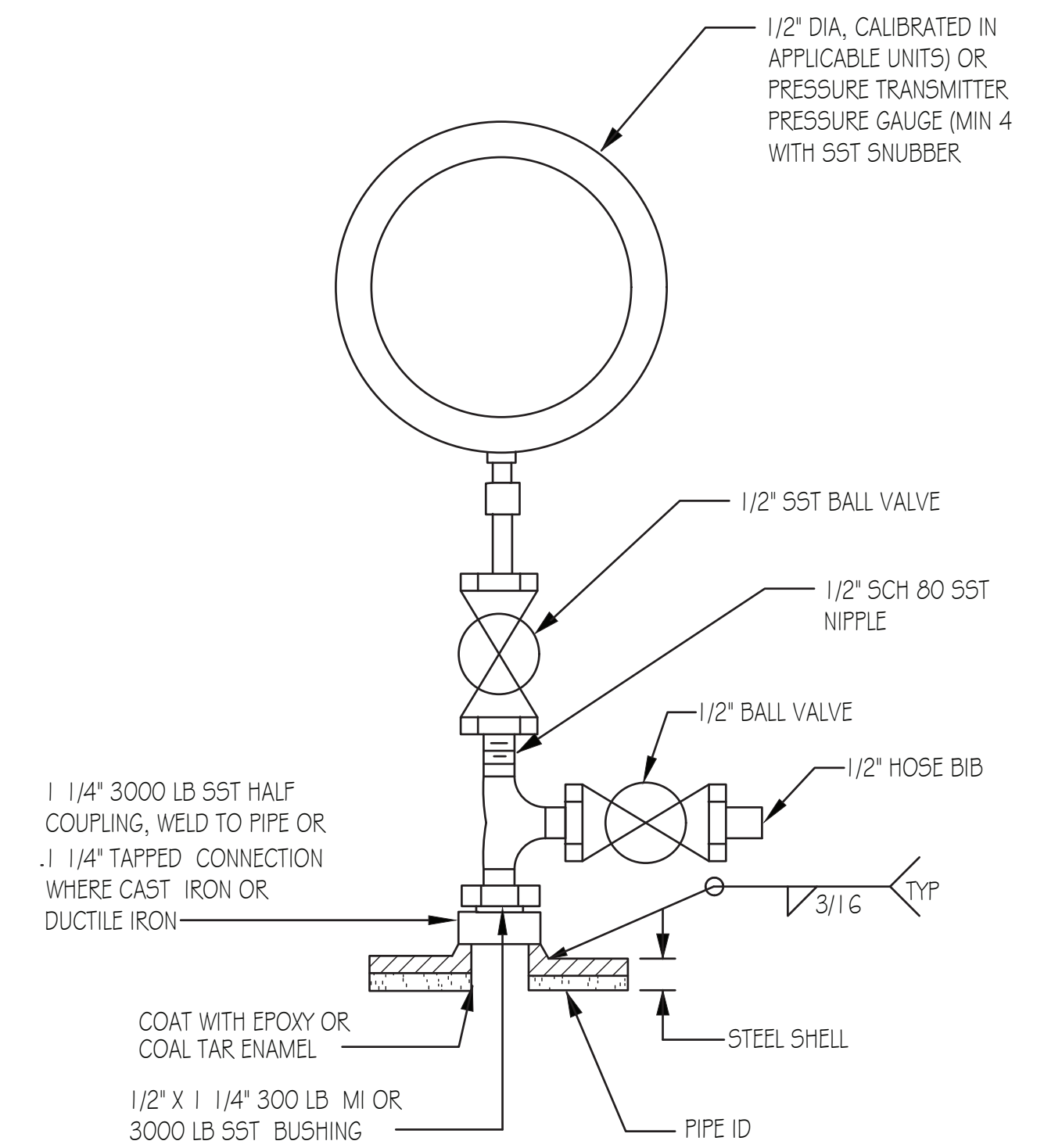


GROUNDING GRID TIE-IN
 SCALE: NONE TYPICAL
 4 E-507



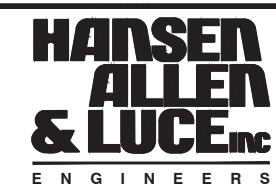
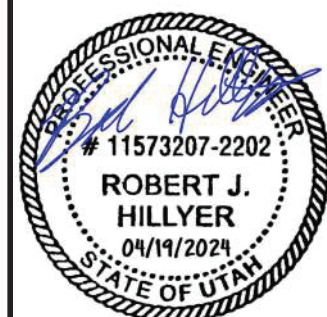
NOTE:
 BOLTS SHALL BE INSERTED IN BOLT HOLES BEFORE CONNECTOR IS EMBEDDED.

GROUND INSERT DETAIL
 SCALE: NONE TYPICAL OF ALL INTERIOR EQUIPMENT GROUNDING
 5 E-507



NOTE:
 SEE SPECIFICATION SECTIONS 15183 AND 17100

PRESSURE GAUGE OR PRESSURE SWITCH
 SCALE: NONE
 (CLEAN WATER ONLY)
 2 E-507



DESIGNED	RJH	3	
DRAFTED	KGM	2	
CHECKED	RJH	1	
DATE	MAY 26, 2022	NO.	DATE

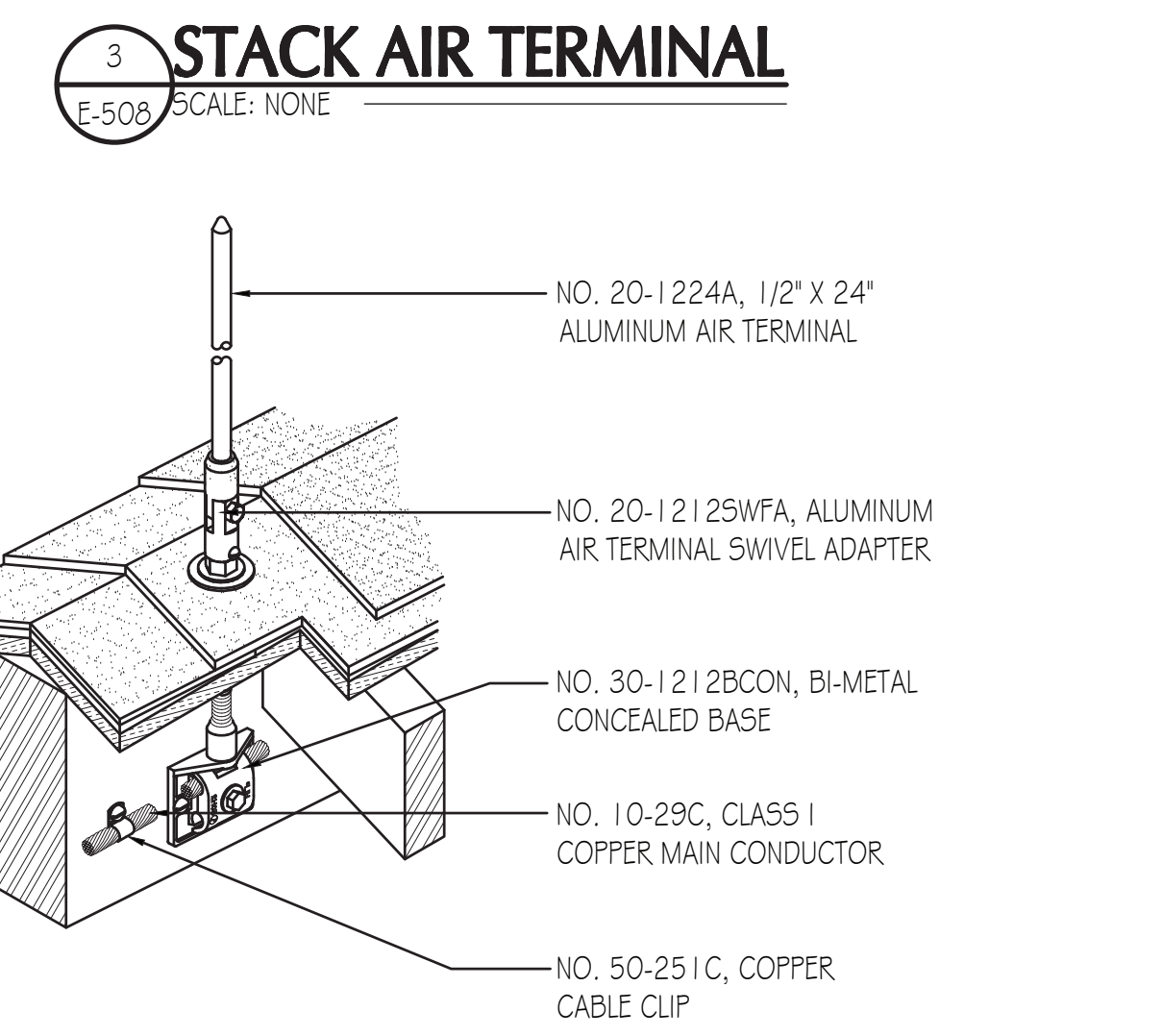
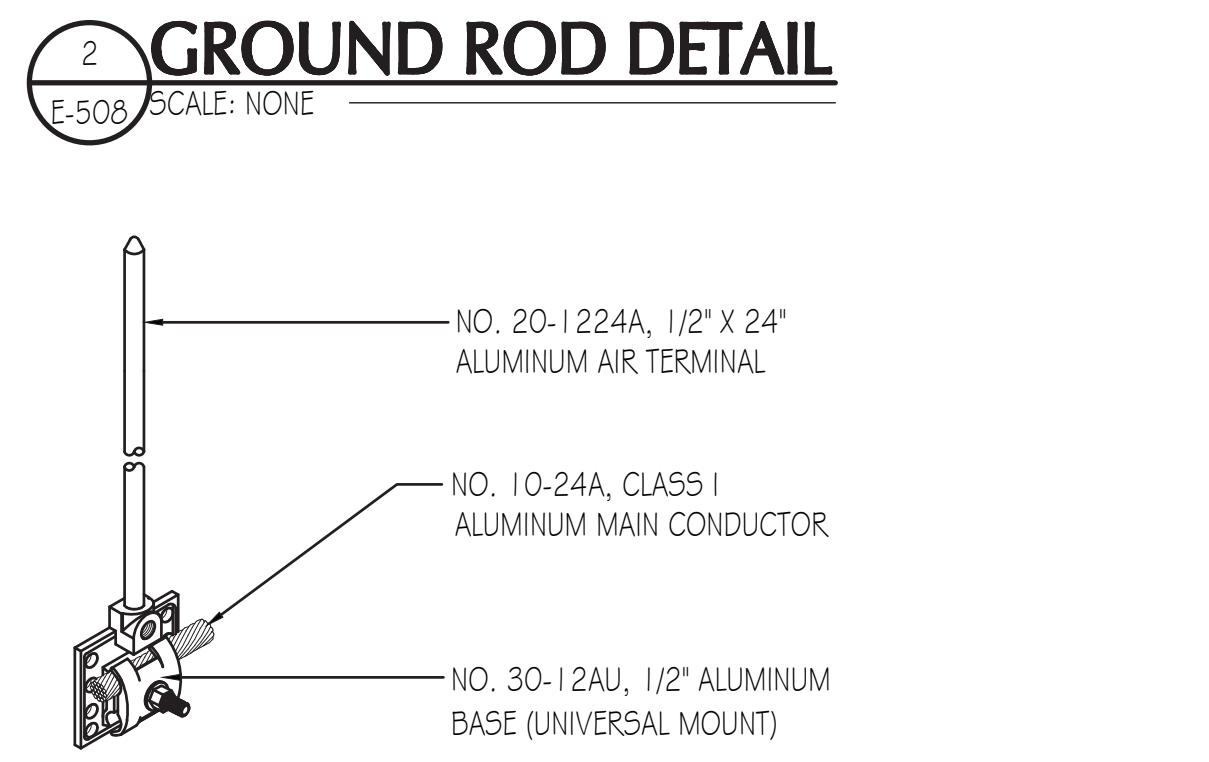
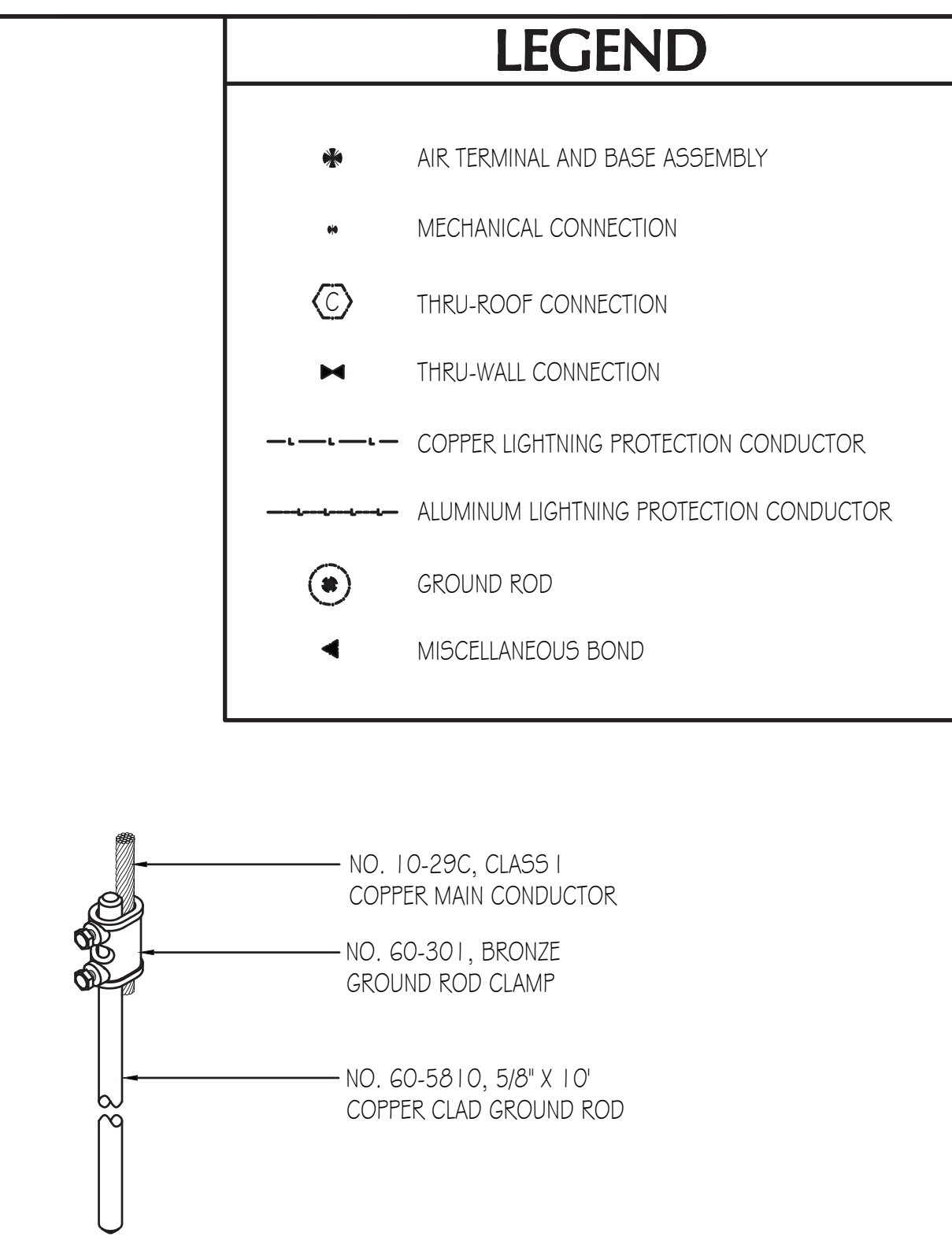
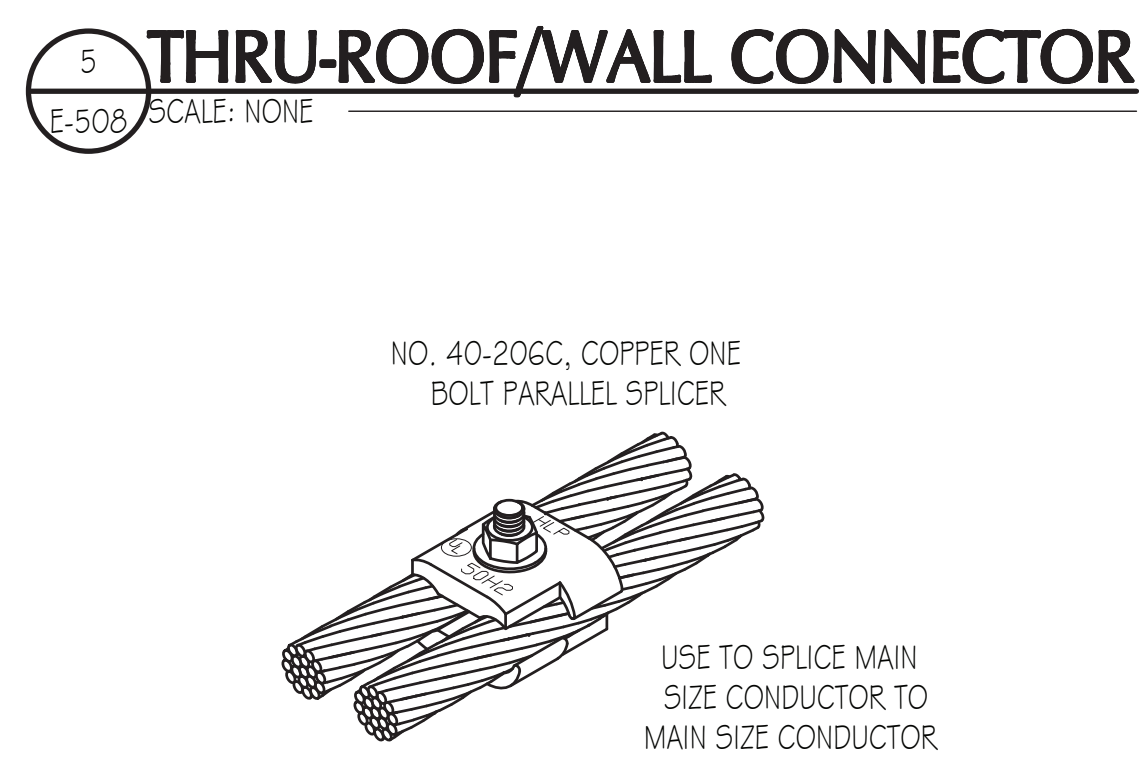
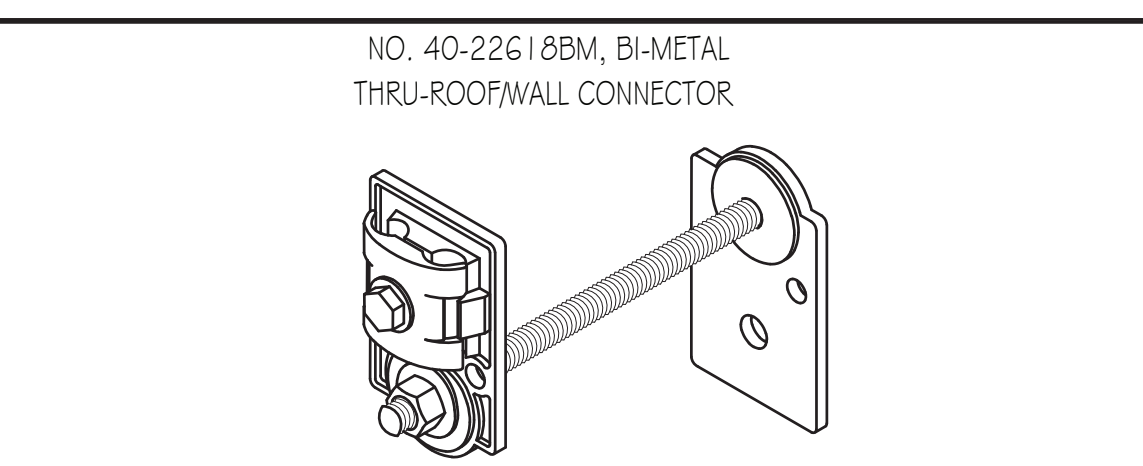
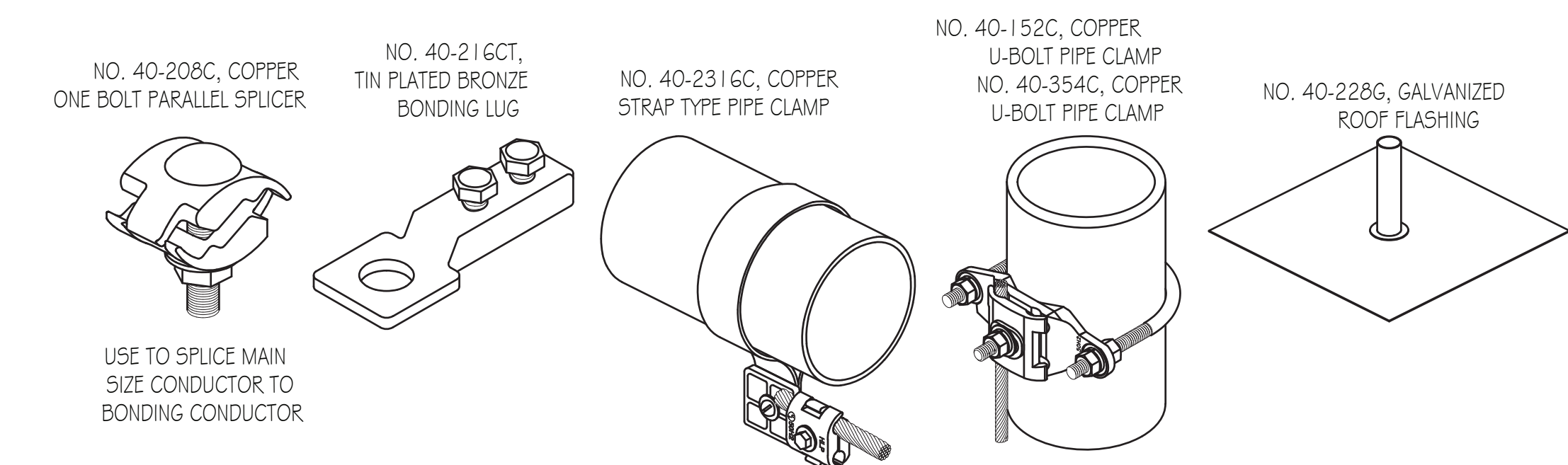
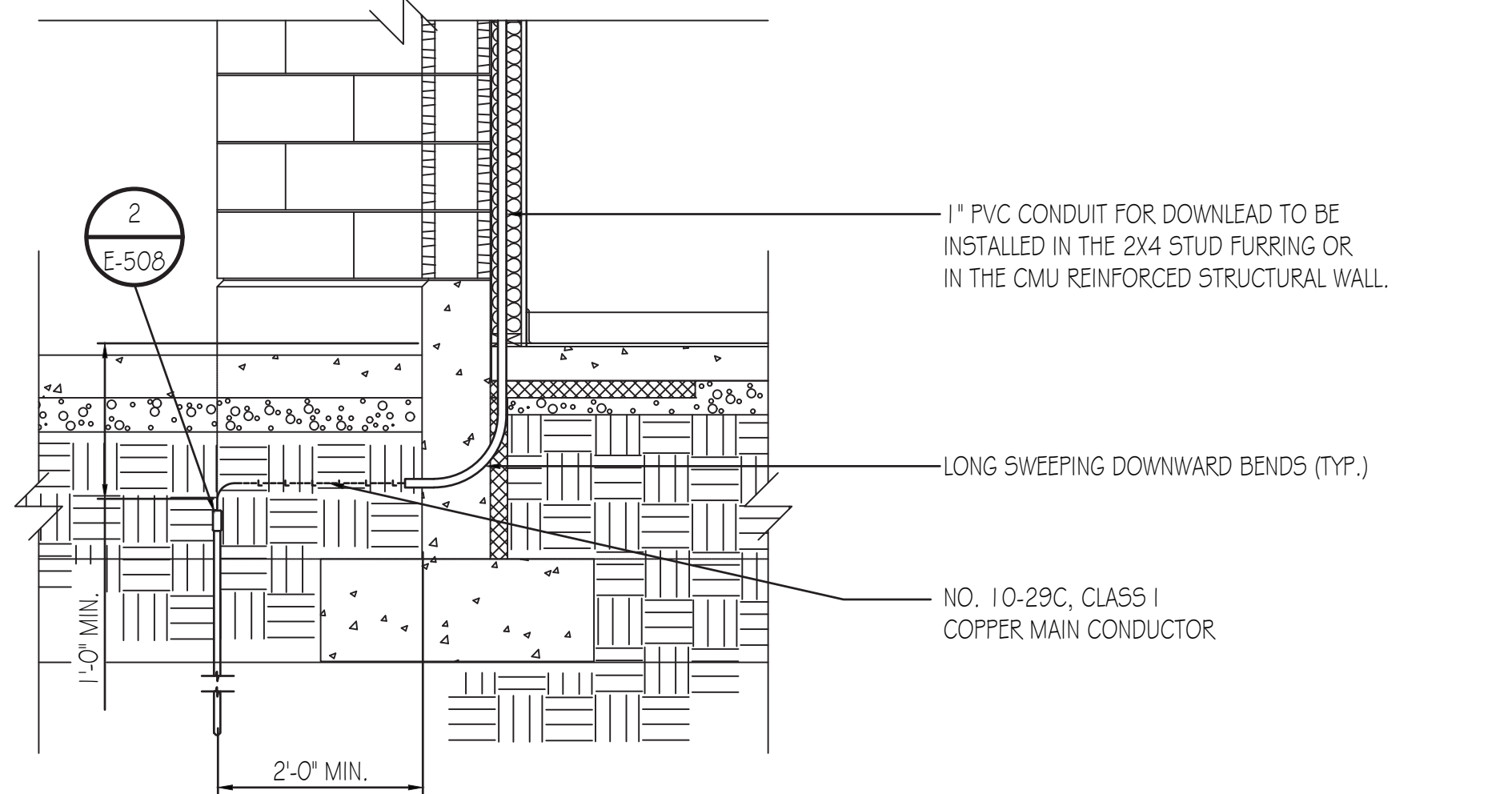
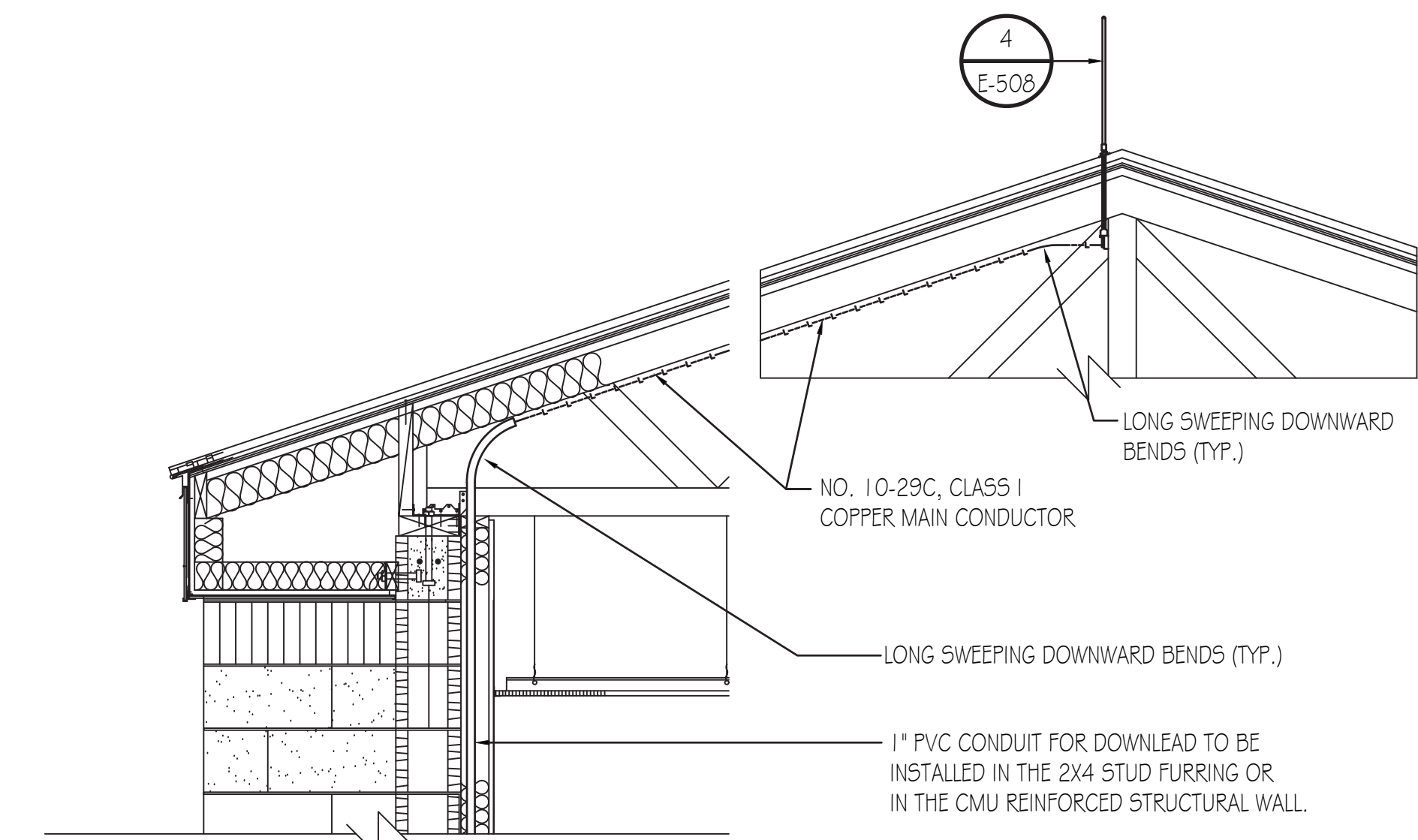
REVISIONS		BY	APVD.

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DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
 ELECTRICAL
 DETAILS

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LEGEND

- ✦ AIR TERMINAL AND BASE ASSEMBLY
- MECHANICAL CONNECTION
- ⬢ THRU-ROOF CONNECTION
- ◀ THRU-WALL CONNECTION
- COPPER LIGHTNING PROTECTION CONDUCTOR
- ALUMINUM LIGHTNING PROTECTION CONDUCTOR
- ⊕ GROUND ROD
- ◀ MISCELLANEOUS BOND

GENERAL CONSTRUCTION NOTES

1 THIS DRAWING IS INTENDED FOR USE AS A CONSTRUCTION DOCUMENT. FIELD VERIFY ACTUAL CONDITIONS PRIOR TO CONSTRUCTION. CONTACT ENGINEER TO CLARIFY ANY DISCREPANCIES.

GENERAL BONDING NOTES

1 TYPICAL BODIES OF CONDUCTANCE AS NOTED BELOW. USE FULL SIZE CONDUCTOR AND APPROPRIATE FITTING SHOWN FOR CONNECTION.

2 BONDING CONNECTIONS AND FITTINGS SHOWN ARE TYPICAL EXAMPLES. MAKE ALL CONNECTIONS REQUIRED TO MEET CODES AS NOTED BELOW. ADJUST FITTING TYPE AS REQUIRED TO SUIT FIELD CONDITIONS.

3 TYPICAL BODIES OF INDUCTANCE AS NOTED BELOW. USE SECONDARY SIZE (SMALLER) CONDUCTOR AND APPROPRIATE FITTING SHOWN FOR CONNECTION.

4 (PLUMBING STACK) REQUIRES BONDING WITH MAIN SIZE CABLE ONLY IF WITHIN 6'-0" (1,828mm) OF LIGHTNING PROTECTION SYSTEM.

GENERAL INSTALLATION NOTES

1 LOCATE AIR TERMINALS AS SHOWN. TAKE CARE TO INSURE THAT ALL POINTS ARE WITHIN 2'-0" (609mm) OF OUTSIDE BUILDING EDGE, OUTSIDE CORNERS, RIDGE ENDS, AND THAT MAX SPACING DOES NOT EXCEED 20'-0" (6,096mm), AND THAT MIN PROJECTION ABOVE OBJECT PROTECTED IS 1'-0" (254mm); POINTS PROJECTING 24" (609mm) MAY BE SPACED @ 25'-0" (7,520mm) MAX.

2 MAINTAIN HORIZONTAL OR DOWNWARD COURSING OF MAIN CONDUCTOR. INSURE THAT ALL BENDS HAVE AT LEAST AN 8' (203mm) RADIUS AND DO NOT EXCEED 90 DEGREES.

3 ATTACH ALL EXPOSED ROOF, DOWN LEAD AND BONDING CABLES AT 3'-0" (914mm) ON CENTER MAX. VERIFY COMPATIBILITY OF ADHESIVE ON MEMBRANE ROOF APPLICATIONS PRIOR TO INSTALLATION.

4 GROUND ELECTRODES SHALL BE INSTALLED AS SHOWN, BUT IN NO INSTANCE SHALL THEY BE LESS THAN 1'-0" (304mm) BELOW GRADE AND 2'-0" (609mm) FROM FOUNDATION WALL. DRIVEN RODS SHALL PENETRATE THE EARTH AT LEAST 10'-0" (3,048mm).

5 BOND TO WATER SERVICE AND OTHER PIPING SYSTEMS AS SHOWN AND AS REQUIRED BY CODE.

6 INTERCONNECT LIGHTNING PROTECTION GROUND TO ELECTRIC, TELEPHONE, AND OTHER BUILDING GROUND SYSTEMS AS SHOWN OR AS REQUIRED BY CODE.

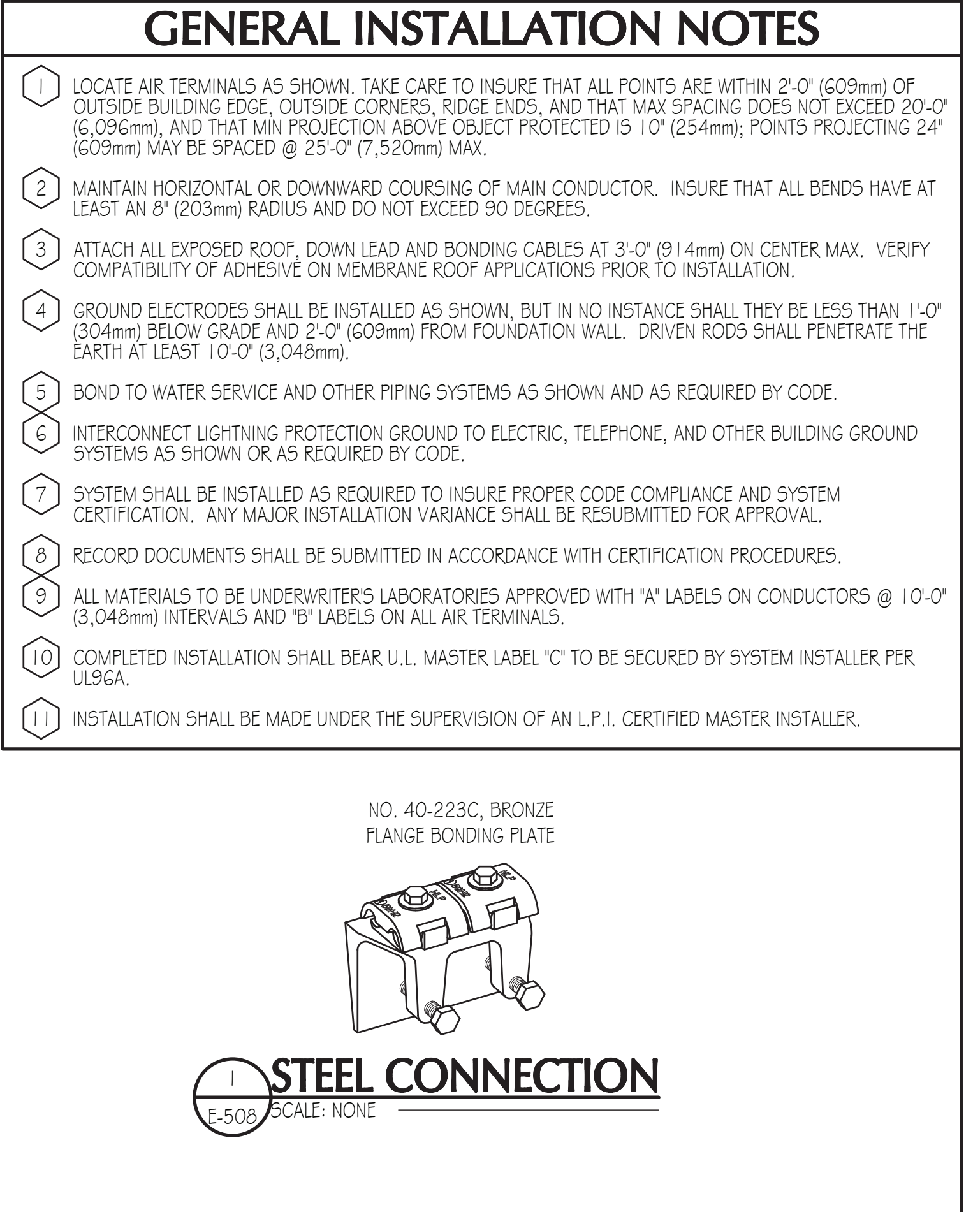
7 SYSTEM SHALL BE INSTALLED AS REQUIRED TO INSURE PROPER CODE COMPLIANCE AND SYSTEM CERTIFICATION. ANY MAJOR INSTALLATION VARIANCE SHALL BE RESUBMITTED FOR APPROVAL.

8 RECORD DOCUMENTS SHALL BE SUBMITTED IN ACCORDANCE WITH CERTIFICATION PROCEDURES.

9 ALL MATERIALS TO BE UNDERWRITERS LABORATORIES APPROVED WITH "A" LABELS ON CONDUCTORS @ 10'-0" (3,048mm) INTERVALS AND "B" LABELS ON ALL AIR TERMINALS.

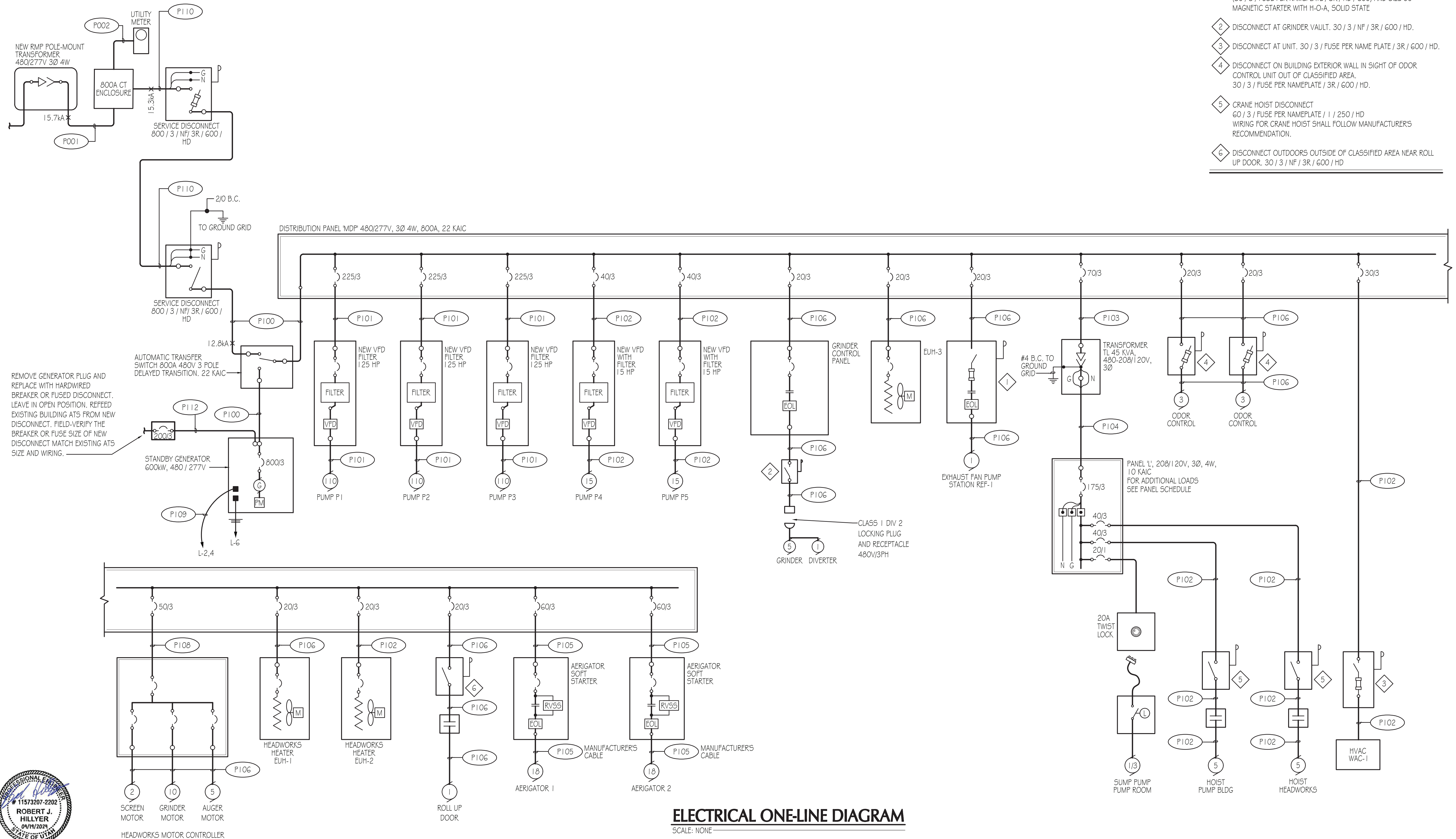
10 COMPLETED INSTALLATION SHALL BEAR U.L. MASTER LABEL "C" TO BE SECURED BY SYSTEM INSTALLER PER UL96A.

11 INSTALLATION SHALL BE MADE UNDER THE SUPERVISION OF AN L.P.I. CERTIFIED MASTER INSTALLER.



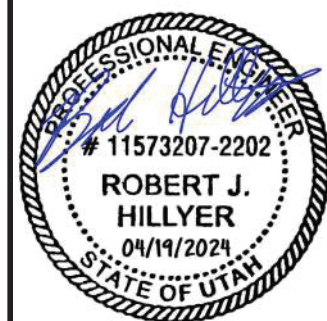
DRAWING NOTES

- 1 COMBINATION FUSED SWITCH (30 / 3 / FUSE PER NAMEPLATE / 3R / HD / 600) AND SIZE 00 MAGNETIC STARTER WITH H-O-A, SOLID STATE
- 2 DISCONNECT AT GRINDER VAULT. 30 / 3 / NF / 3R / 600 / HD.
- 3 DISCONNECT AT UNIT. 30 / 3 / FUSE PER NAME PLATE / 3R / 600 / HD.
- 4 DISCONNECT ON BUILDING EXTERIOR WALL IN SIGHT OF ODOR CONTROL UNIT OUT OF CLASSIFIED AREA. 30 / 3 / FUSE PER NAMEPLATE / 3R / 600 / HD.
- 5 CRANE HOIST DISCONNECT 60 / 3 / FUSE PER NAMEPLATE / 1 / 250 / HD WIRING FOR CRANE HOIST SHALL FOLLOW MANUFACTURER'S RECOMMENDATION.
- 6 DISCONNECT OUTDOORS OUTSIDE OF CLASSIFIED AREA NEAR ROLL UP DOOR. 30 / 3 / NF / 3R / 600 / HD



ELECTRICAL ONE-LINE DIAGRAM

SCALE: NONE



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DESIGNED	RJH	3
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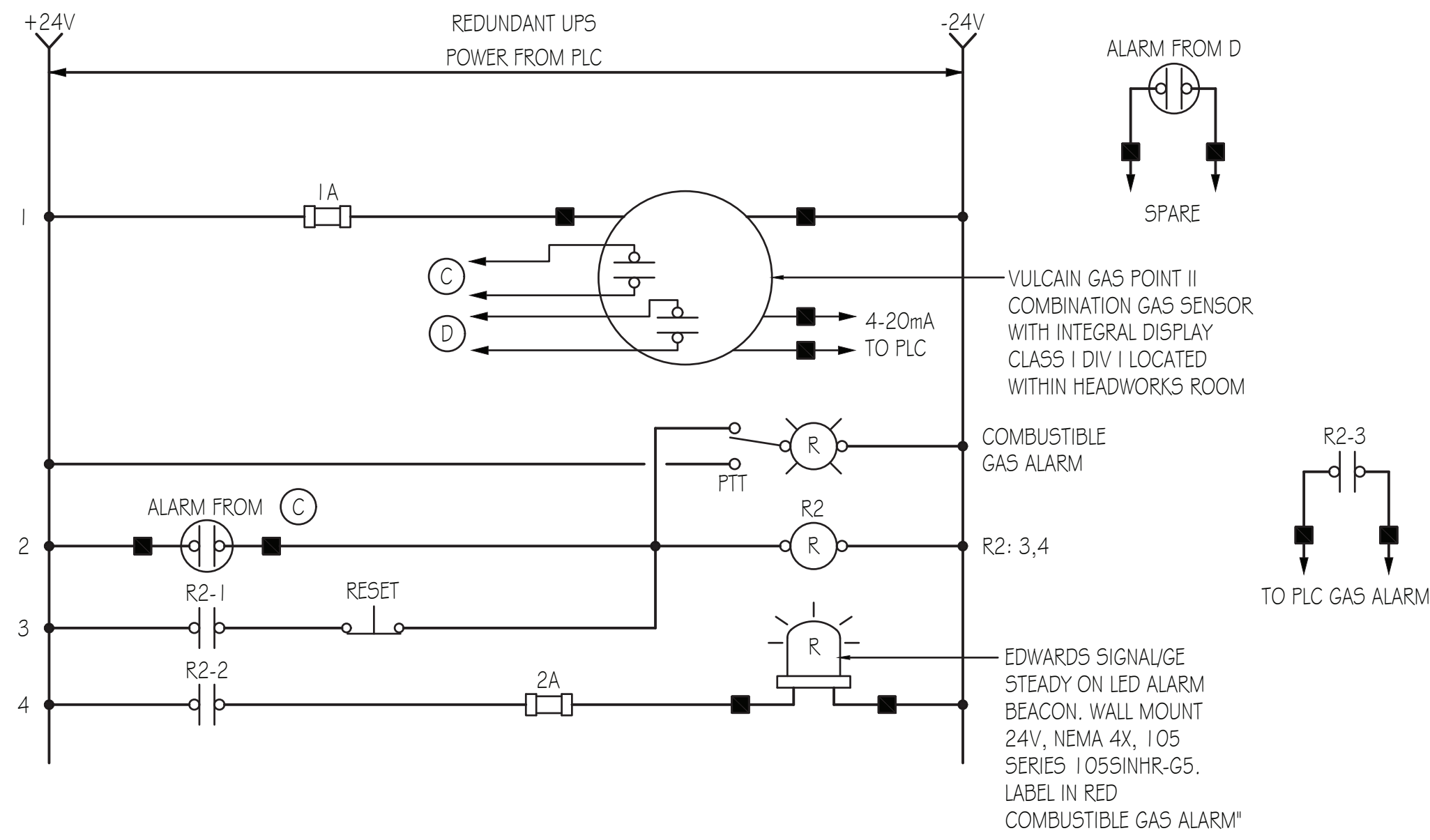
NO.	DATE	REVISIONS	BY	APVD.

SCALE



DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
ELECTRICAL
ONE-LINE DIAGRAM

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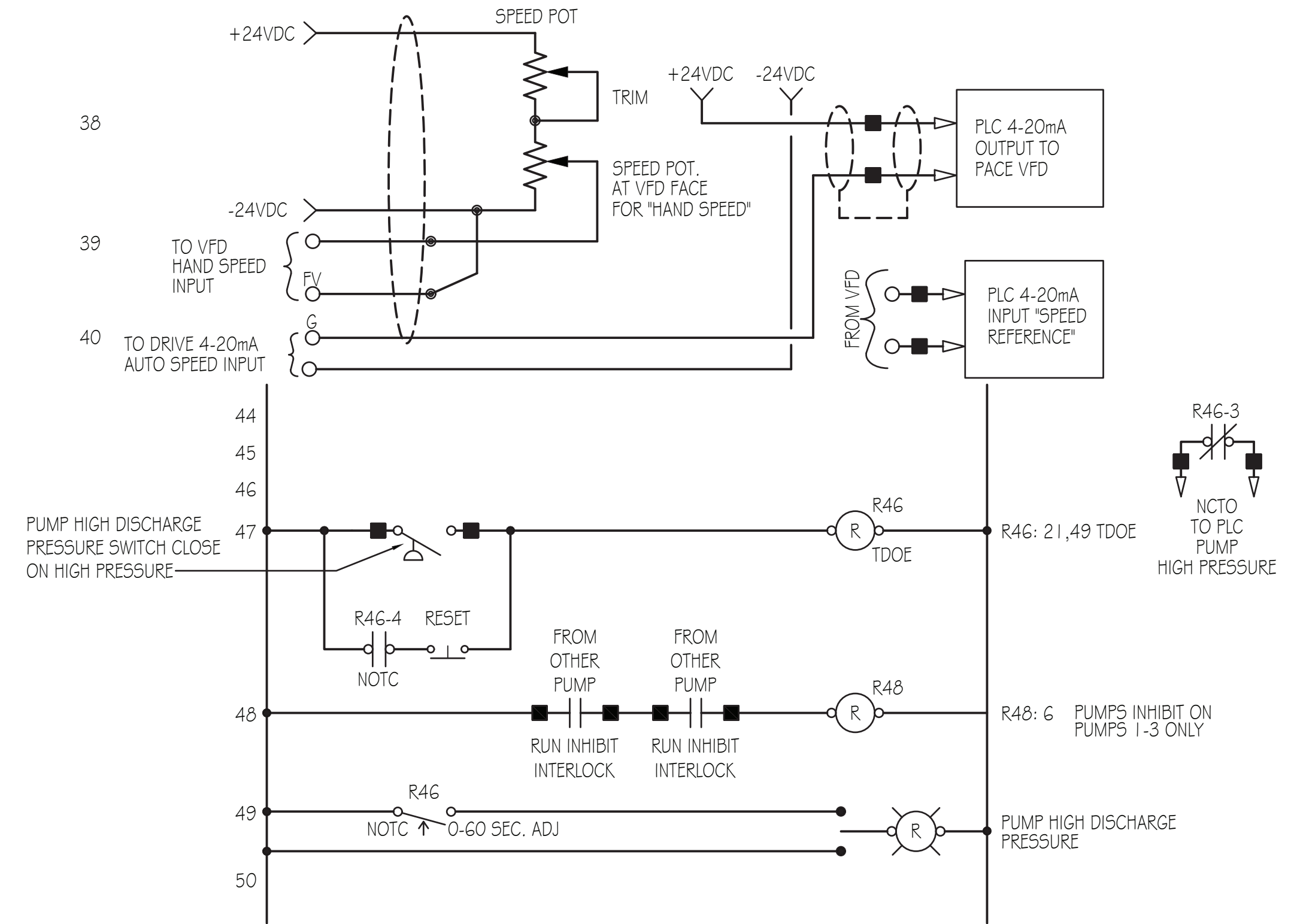
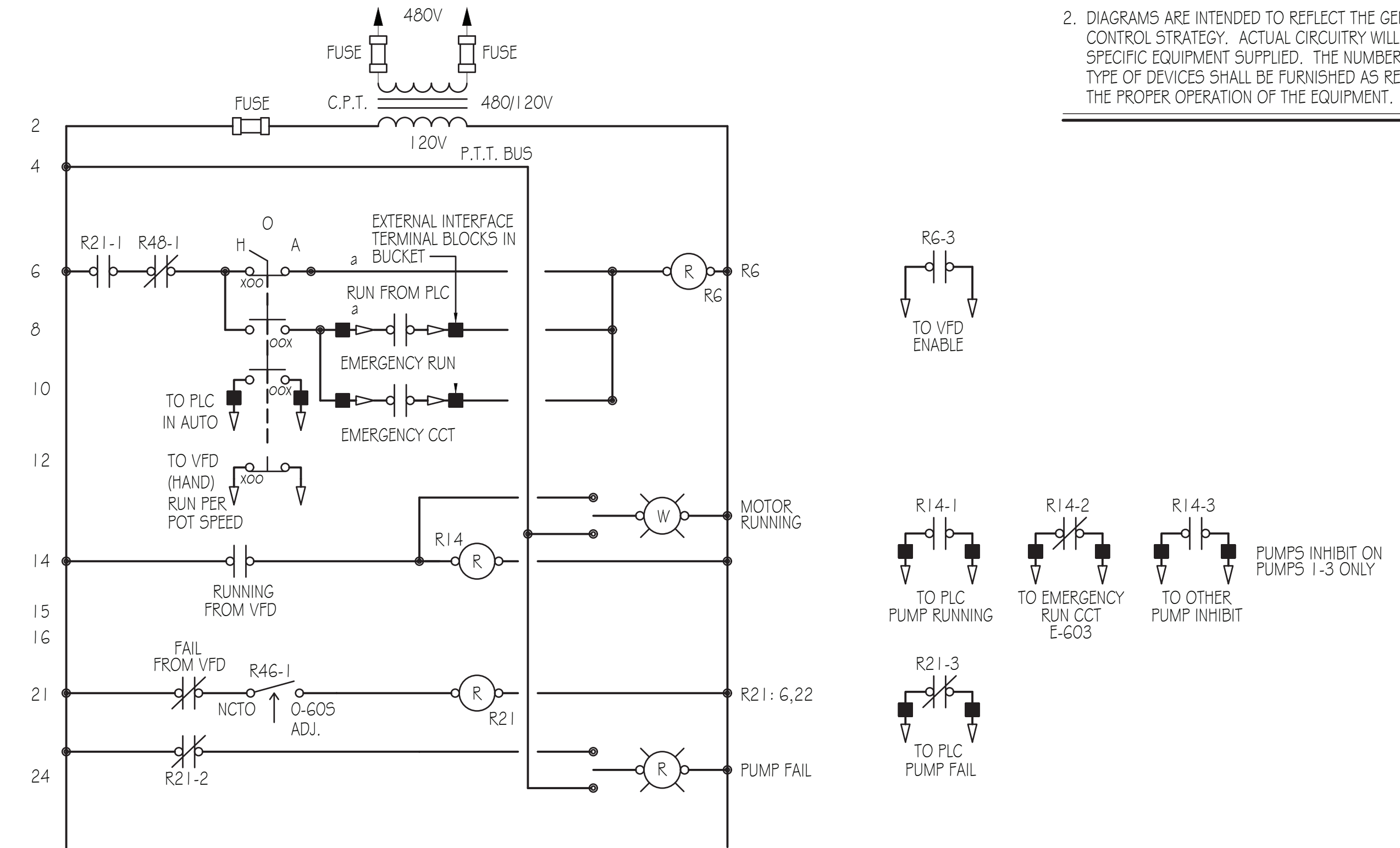


HEADWORKS GAS ALARM PANEL CONTROL DIAGRAM

SCALE: NONE

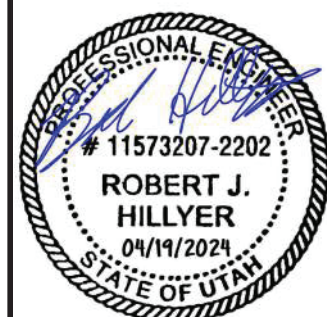
GENERAL NOTES

1. PROVIDE AND SIZE OVER CURRENT DEVICES PER THE UTILIZATION EQUIPMENT MANUFACTURERS RECOMMENDATIONS.
2. DIAGRAMS ARE INTENDED TO REFLECT THE GENERAL CONTROL STRATEGY. ACTUAL CIRCUITRY WILL VARY FOR THE SPECIFIC EQUIPMENT SUPPLIED. THE NUMBER AND THE TYPE OF DEVICES SHALL BE FURNISHED AS REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT.



PRIMARY SEWAGE PUMPS VFD WIRING DIAGRAM

SCALE: NONE TYPICAL OF: 5 LIFT PUMPS



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Engineering Company

DESIGNED	RJH	3
DRAFTED	KGM	2
CHECKED	RJH	1
DATE	MAY 26, 2022	NO. DATE

REVISIONS

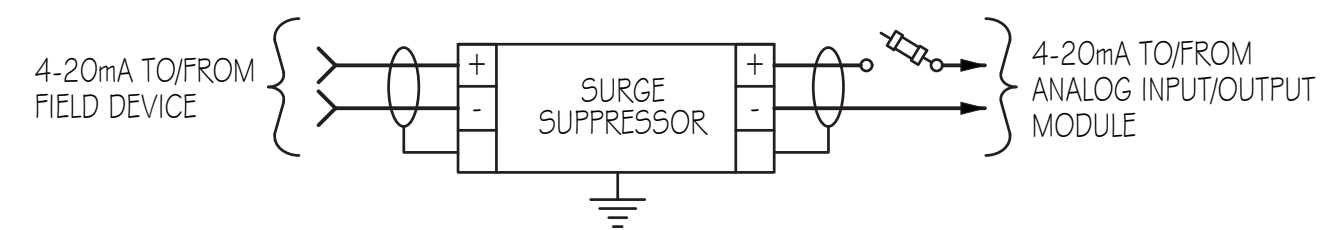
BY APVD.

SCALE



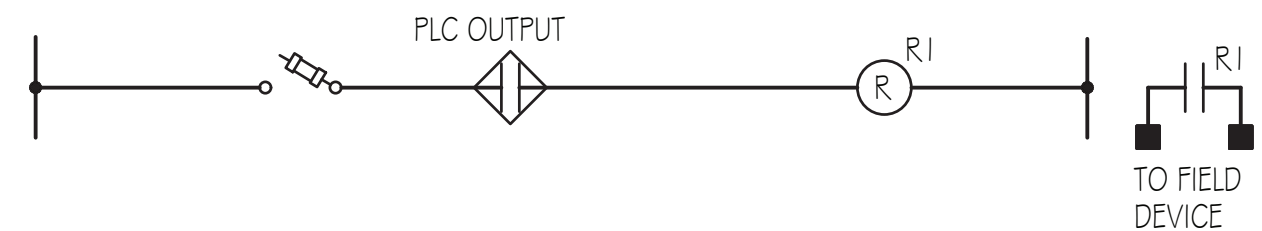
DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
ELECTRICAL CONTROL DIAGRAMS

SHEET
E-602
126.42.300



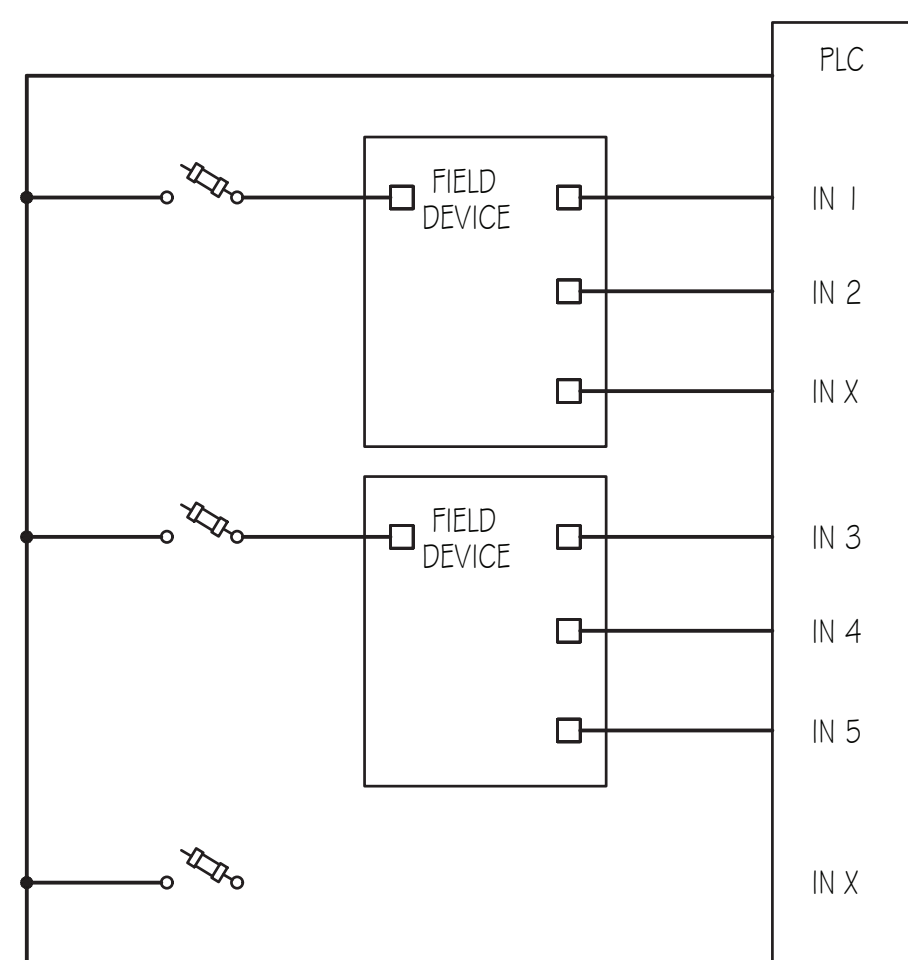
TYPICAL ANALOG INPUT/OUTPUT DIAGRAM

SCALE: NONE



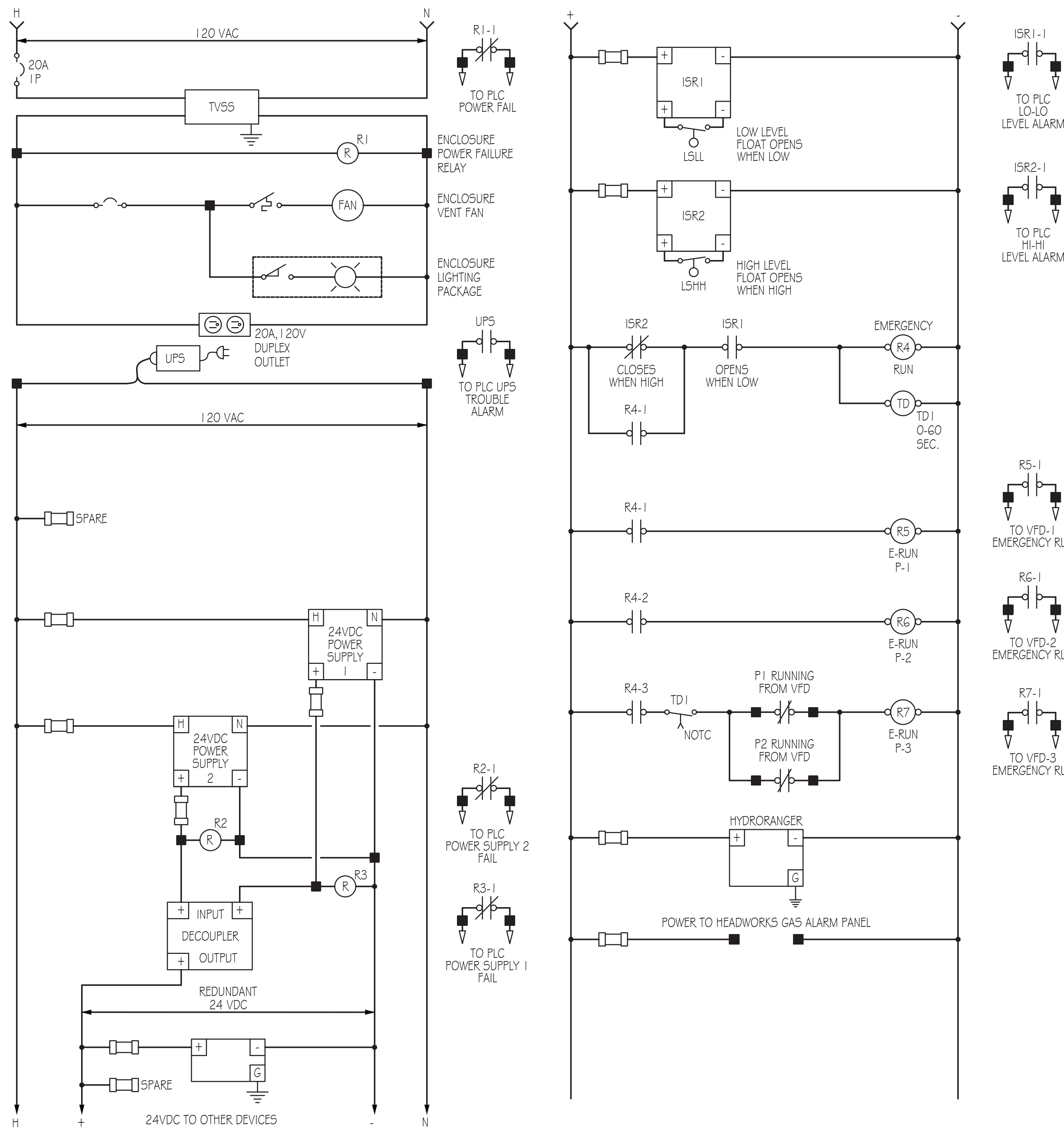
TYPICAL DISCRETE OUTPUT DIAGRAM

SCALE: NONE



TYPICAL DISCRETE INPUT DIAGRAM

SCALE: NONE



PLC/RTU ENCLOSURE POWER WIRING DIAGRAM

SCALE: NONE

GENERAL NOTES

1. PROVIDE AND SIZE OVER CURRENT DEVICES PER THE UTILIZATION EQUIPMENT MANUFACTURERS RECOMMENDATIONS.
2. DIAGRAMS ARE INTENDED TO REFLECT THE GENERAL WIRING STRATEGY. ACTUAL CIRCUITRY MAY VARY FOR THE SPECIFIC EQUIPMENT SUPPLIED. THE NUMBER AND THE TYPE OF DEVICES SHALL BE FURNISHED AS REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT.
3. EACH DC POWER SUPPLY SHALL BE SIZED TO OPERATE AT 60% OF CAPACITY MAXIMUM WHILE CARRYING THE ENTIRE PLC/RTU ENCLOSURE DC LOAD.
4. ADJUST THE DC POWER SUPPLY VOLTAGES FOR REDUNDANT APPLICATION AS RECOMMENDED BY THE MANUFACTURER.
5. SEE SPECIFICATIONS FOR CONTROL NARRATIVE



**HANSEN
ALLAN
& LUCE**
ENGINEERS



DESIGNED RJH 3
DRAFTED KGM 2
CHECKED RJH 1
DATE MAY 26, 2022 NO. DATE

REVISIONS

BY APVD.

SCALE



DOWNTOWN SEWER IMPROVEMENTS AND PUMP STATION
ELECTRICAL
CONTROL DIAGRAMS

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E-603

126.42.300