

Plot Date: 4/25/2024 9:50 AM  
 Filename: O:\2023\MMNY-23001\46.00 PDI UNDERGROUND STORAGE TANK IPA SDA DRAWINGS\ELECTRICAL\E001 ELECTRICAL GENERAL NOTES, SYMBOLS & ABBREVIATION.DWG  
 Plotted By: AUSTIN WHALEN

### ELECTRICAL GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE 2017 NATIONAL ELECTRICAL CODE (NEC), STATE OF NEW YORK UNIFORM CONSTRUCTION CODES, THE 2020 INTERNATIONAL BUILDING CODE, AND ALL GOVERNING LOCAL CODES, LAWS, AND REGULATIONS.
- PROVIDE A COMPLETE OPERABLE SYSTEM IN A NEAT AND SKILLFUL MANNER. OUTLINE DESCRIPTION AND EQUIPMENT; DO NOT LIMIT CONTRACTOR'S LIABILITY FOR THE INSTALLATION OF A COMPLETE OPERABLE SYSTEM.
- VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK. NO ADDITIONAL COMPENSATION WILL BE DUE FOR FAILURE TO DO SO.
- CONTRACTOR TO BE RESPONSIBLE FOR REVIEWING THE FULL SET OF BID DOCUMENTS TO BE AWARE OF THE TOTAL SCOPE PRIOR TO SUBMITTING BID. ALL WORK SHOWN ON THE DRAWINGS NOT SPECIFICALLY CALLED OUT AS EXISTING SHALL BE CONSIDERED WORK TO BE PERFORMED UNDER THIS CONTRACT.
- BIDDERS, BEFORE SUBMITTING A PROPOSAL, SHALL VISIT AND CAREFULLY EXAMINE THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED. NO ALLOWANCE WILL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF ANY ERROR DUE TO THE CONTRACTOR'S NEGLIGENCE TO COMPLY WITH THIS REQUIREMENT. REPORT ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS TO THE ENGINEER.
- BEFORE COMMENCING WORK, THE CONTRACTOR SHALL FILE ALL REQUIRED CERTIFICATES OF INSURANCE WITH THE BUILDING DEPARTMENT. OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES REQUIRED.
- UPON COMPLETION OF ALL ELECTRICAL WORK, ELECTRICAL CONTRACTOR SHALL ADJUST AND TEST ALL CIRCUITS, DEVICES AND ANY OTHER ELECTRICAL ITEMS INSTALLED. ANY DEFECTIVE ITEMS SHALL BE IMMEDIATELY REPAIRED OR REPLACED WITH NEW EQUIPMENT OR MATERIALS AND THAT PORTION OF THE SYSTEM SHALL BE RETESTED. ALL SUCH REMEDIAL WORK SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- ALL NOTATIONS OF "SCALE" ARE INTENDED AS APPROXIMATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ASCERTAIN THE EXACT DIMENSIONS IN FIELD.
- ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. SIZES AND LOCATION OF EQUIPMENT AND WIRING ARE SHOWN TO SCALE WHERE POSSIBLE, BUT MAY BE DISTORTED FOR CLARITY ON THE DRAWINGS.
- UNLESS OTHERWISE NOTED, ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO PULL BOXES, JUNCTION BOXES, LOW VOLTAGE SYSTEMS DEVICES, ETC. WHERE INDICATED ON DRAWINGS, SHALL BE CONSIDERED SHOWN AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL LOCATE THESE ITEMS AS FIELD CONDITIONS DICTATE AND AS APPROVED BY THE ARCHITECT OR OWNER.
- ALL CONDUIT RUNS, WHEN SHOWN ON THE DRAWINGS, ARE SHOWN DIAGRAMMATICALLY TO OUTLINE THE GENERAL ROUTING OF MAJOR FEEDERS AND BRANCH WIRING. IT IS NOT WITHIN THE SCOPE OF THESE DRAWINGS TO SHOW ALL NECESSARY BENDS, OFFSETS, PULL BOXES AND OBSTRUCTIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THEIR WORK TO CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
- ADDITIONAL PULL AND JUNCTION BOXES NOT SHOWN ON DRAWINGS SHALL BE PROVIDED WHERE REQUIRED BY APPLICABLE CODE REQUIREMENTS OR WHERE CALLED FOR BY FIELD CONDITIONS. PULL AND JUNCTION BOXES SHALL BE SURFACE MOUNTED THROUGHOUT.
- CONDUIT RUNS SHALL CLEAR ALL ARCHITECTURAL FEATURES (I.E. DOORS, ETC.) AND STRUCTURAL MEMBERS. CONDUIT INSTALLATION SHALL ALSO BE MADE TO AVOID OBSTRUCTION AND CLEAR ACCESS WITH PIPES, DUCTS, OR OTHER EQUIPMENT CORRESPONDING TO OTHER TRADES, INCLUDING BUT NOT LIMITED TO MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION. SHALL ANY OF THESE ELEMENTS PREVENT THE INSTALLATION OF RACEWAY AS DELINEATED ON THE CONTRACT DOCUMENTS, DEVIATION MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ANY VARIATION DUE TO FIELD CONDITIONS SHALL NOT REPRESENT AN ADDITIONAL COST TO OWNER.
- CONDUIT AND BOXES WHEN EXPOSED SHALL MATCH SURROUNDING SURFACES. FACTORY PAINTING WILL BE ACCEPTED AS A PRIME COAT. CONDUIT SHALL BE RUN ABOVE HUNG CEILING WHERE AVAILABLE.
- MINIMUM SIZE OF CONDUITS SHALL BE 3/4". UNLESS OTHERWISE NOTED, PROVIDE 2#12, 1#12G IN 3/4" CONDUIT TO 20A CIRCUIT BREAKERS IN PANELS INDICATED, UNLESS OTHERWISE NOTED.
- PROVIDE OUTLET BOXES AND ENCLOSURES APPROPRIATE FOR THE PURPOSE AT ALL LOCATIONS WHERE THE DRAWINGS REQUIRE THE INSTALLATION OF ELECTRICAL DEVICES OR ELECTRICAL EQUIPMENT.
- ALL OPENINGS BETWEEN FLOORS, THROUGH RATED FIRE AND SMOKE WALLS, CREATED BY THE CONTRACTOR FOR CABLE OR CONDUIT PASS THROUGH SHALL BE SEALED WITH A FIRE STOPPING MATERIAL. FIRE STOPPING MATERIAL AND ITS APPLICATION SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT IS ACCEPTABLE TO THE LOCAL FIRE AND BUILDING AUTHORITIES HAVING JURISDICTION OVER THIS WORK. ANY OPENINGS CREATED BY OR FOR THE CONTRACTOR AND LEFT UNUSED SHALL ALSO BE SEALED AS PART OF THIS WORK.
- ALL EXPOSED NONCURRENT-CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT AND RACEWAYS SHALL BE GROUNDED. A SEPARATE GROUND CONDUCTOR SHALL BE RUN IN ALL CONDUITS IN ALL CASES. ENSURE CONTINUITY OF THE GROUNDING CIRCUIT FROM THE SUPPLYING PANELBOARD GROUNDING BUS TO THE LOAD GROUND TERMINAL. THE RESISTANCE FROM THE SERVICE EQUIPMENT GROUND BUS TO ANY LOAD GROUND TERMINAL SHALL NOT EXCEED 1 OHM.
- NO LOW VOLTAGE WIRING SHALL BE PERMITTED IN THE SAME RACEWAY AS POWER WIRING.
- ALL ELECTRICAL EQUIPMENT AND ACCESSORIES INSTALLED OUTSIDE OR EXPOSED TO WEATHER SHALL HAVE NEMA 3R ENCLOSURES AND SHALL BE TIGHTLY GASKETED FOR A COMPLETE RAIN TIGHT INSTALLATION. PROVIDE WITH EXPLOSION PROOF RATING IN EXPLOSION PROOF HAZARDOUS AREAS (I.E. ALCOHOL ROOM).
- ALL EQUIPMENT SHALL HAVE COPPER CURRENT CARRYING PARTS INCLUDING GROUND BUS AND TERMINALS.
- REMOVE ALL DEBRIS RESULTING FROM REMOVAL AND/OR INSTALLATION OF ELECTRICAL WORK FROM THE PREMISES.
- UNLESS OTHERWISE NOTED, "INSTALL" MEANS TO BE PROVIDED AND INSTALLED BY THIS CONTRACTOR.
- CONTRACTOR TO BE RESPONSIBLE FOR ALL RESTORATION, SEALING, WATERPROOFING, PENETRATIONS, CORE DRILLING, CUTTING, PATCHING, AND/OR PAINTING FOR THE COMPLETE CONTRACT WORK INDICATED. ALL RESTORATION WORK PERFORMED BY CONTRACTOR SHALL RESTORE DISTURBED SURFACES TO MATCH ALL SURROUNDING CONSTRUCTION.
- IF DURING THE COURSE OF THE PROJECT, ASBESTOS OR OTHER HAZARDOUS MATERIAL CONTAMINATION IS ENCOUNTERED OR SUSPECTED, THE CONTRACTOR SHALL NOTIFY THE OWNER, THE PROJECT MANAGER, AND THE DESIGN PROFESSIONAL IMMEDIATELY (WITHIN 24 HRS.) IN WRITING. CONTRACTOR WILL SUSPEND WORK IN THE AFFECTED AREA UNTIL SUCH TIME THAT THE SAID AREA IS CERTIFIED AS CONTAMINATION FREE.

### ELECTRICAL DEMOLITION NOTES

- THE DEMOLITION WORK SHALL BE CARRIED ON IN EVERY RESPECT IN A THOROUGH AND NEAT AND SKILLFUL MANNER.
- ALL DEMOLITION, REMOVAL, AND DISPOSAL WORK SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE BUILDING CODE AND WITH ALL STATE AND FEDERAL REGULATIONS.
- REMOVE ALL DEBRIS NOT EXPLICITLY DESIGNATED TO BE SALVAGED (TO REMAIN) FROM THE PREMISES AND LEGALLY DISPOSE OF AWAY FROM PREMISES.
- ITEMS INDICATED TO BE SALVAGED SHALL BE REMOVED/ABANDONED IN PLACE AS INDICATED ON PLAN. DURING THE PROCESS OF THE WORK, STORE AND/OR PROTECT ON THE SITE IN A LOCATION DESIGNATED BY THE OWNER'S REPRESENTATIVE. THESE ITEMS WILL BE IDENTIFIED AND RETAINED BY THE OWNER.
- CAREFULLY REMOVE AND PROTECT ALL ITEMS TO BE SAVED AND REUSED AS INDICATED ON DRAWINGS. REPLACE ANY ITEMS THAT ARE DAMAGED BY REMOVAL AT YOUR OWN COST. NOTIFY THE OWNER IN WRITING OF ANY ITEM THAT IS DAMAGED PRIOR TO REMOVAL SO THAT THEY MAY ASCERTAIN THE ITEM'S CONDITION.
- PROTECT MATERIALS, SURFACES AND STRUCTURE, WHICH ARE TO REMAIN, FROM DAMAGE; IF DAMAGE OCCURS, REPAIR OR REPLACEMENT SHALL BE MADE BY THE CONTRACTOR, TO THE SATISFACTION OF THE OWNER, AND AT THE EXPENSE OF THE CONTRACTOR.
- DISCONNECT, REMOVE AND RELOCATE ANY ELECTRICAL EQUIPMENT NOT SHOWN ON THESE DRAWINGS AS PART OF THIS CONTRACT, BUT INTERFERES WITH THE WORK UNDER THIS CONTRACT. THIS WORK SHALL NOT BE CONSIDERED EXTRA AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- VISIT AND EXAMINE CAREFULLY THE AREAS AFFECTED BY THIS WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT ATTEND THE EXECUTION OF THIS WORK. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT, OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED.
- RELOCATE AND/OR ALTER THE EXISTING BUILDING COMPONENTS AS DIRECTED BY OWNER'S REPRESENTATIVE. ALL RELOCATION OR ALTERATIONS TO BUILDING SHALL BE RESTORED TO THEIR ORIGINAL WORKING CONDITIONS AFTER SUCH RELOCATION OR ALTERATION WORK.
- AT THE COMPLETION OF DEMOLITION WORK, ALL RUBBISH, DEBRIS AND WASTE MATERIALS SHALL BE REMOVED BY THE CONTRACTOR AND THE PREMISES SHALL BE LEFT IN CLEAN CONDITION.
- THE CONTRACTOR SHALL DISCONNECT THE CIRCUIT WIRING NOT IN USE AND SHALL REMOVE ALL NECESSARY WIRING MATERIALS, INCLUDING EXPOSED CONDUITS AND JUNCTION BOXES WHICH IMPEDE THE NEW WORK.
- MAINTAIN CONTINUITY FOR ALL EQUIPMENT TO REMAIN. PROVIDE ALL REQUIRED ACCESSORIES, WIRING AND CONDUIT AS REQUIRED.
- SUBSTANTIAL JOB COMPLETION INCORPORATES DEMOLITION OF EXISTING SYSTEMS IN CONTRACT.
- THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN OPERATIONAL AT ALL TIMES DURING CONSTRUCTION.

### ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CKT(S)	CIRCUIT(S)
CLG	CEILING
DISC	DISCONNECT
DWG	DRAWING
EC	EMPTY CONDUIT
ELEC	ELECTRIC
EM	EMERGENCY
ER	EXISTING TO BE RELOCATED
EQ.	EQUAL
EXIST, EX, E	EXISTING
F#	FUSE #
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTER
HP	HORSE POWER
IG	ISOLATED GROUND
IPA-#	ISOPROPYL ALCOHOL TANK #
J, JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT AMPERE
L-#	LINE - IDENTIFICATION #
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
MTD	MOUNTED
MTR	METER
N	NEUTRAL
N-#	NEUTRAL - IDENTIFICATION #
N.C	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O	NORMALLY OPEN
NTS	NOT TO SCALE
PB	PULL BOX
PNL	PANEL
φ, PH	PHASE
PWR	POWER
R	EXISTING TO BE REMOVED
RC	RELAY CONTACT
RE	EXISTING TO BE REMOVED OR RETURNED TO OWNER
SP	SPARE
SV-#	SOLENOID VALVE- IDENTIFICATION#
SW	SWITCH
SWBD	SWITCHBOARD
TB#	RELAY PANEL TERMINAL BLOCK #
TM	TIMED CONTACT
TYP	TYPICAL
U.O.N	UNLESS OTHERWISE NOTED
V	VOLT, VOLTAGE
VIF	VERIFY IN FIELD
WH-#	WITCH HAZEL TANK #
WP	WEATHER PROOF
XPLP	EXPLOSION PROOF
1P, 2P, 3P	SINGLE POLE, TWO POLE, THREE POLE

### POWER SYMBOLS

	HOMERUN-NUMERAL WHERE USED INDICATES CIRCUIT NUMBER FOR REFERENCE ONLY. 2#12+1#12G-3/4" FOR ONE CKT. HOMERUN, U.O.N. 3#12+1#12G-3/4" FOR TWO CKT. HOMERUN, U.O.N. 4#12+1#12G-3/4" FOR THREE CKT. HOMERUN, U.O.N.
	CEILING MOUNTED JUNCTION BOX
	FLUSH WALL MOUNTED JUNCTION BOX
	WALL MOUNTED GROUND BUS BAR
	CONTROL RELAY
	SWITCH RATING DISCONNECT SWITCH, RATING AND FUSING NOTED. HORSEPOWER RATING AS REQUIRED BY MOTOR LOAD. "WP" INDICATES WEATHERPROOF NEMA 4X ENCLOSURE, OTHERWISE NEMA-1. SUBSCRIPT "L" INDICATES LOCKABLE TYPE.
	EXISTING CONDUIT/EQUIPMENT TO REMAIN
	NEW CONDUIT/EQUIPMENT
	PENDANT MOUNTED 1'x4' LED LIGHTING FIXTURE. INSCRIPTION DENOTES FIXTURE TYPE. SUBSCRIPTION DENOTES SWITCH CONTROL. TRIANGLE SHADE INDICATES EMERGENCY LIGHTING.
	EXISTING FIRE ALARM CONTROL PANEL
	MOTOR STARTER WITHOUT DISCONNECT SWITCH, WITH PUSH BUTTON STATIONS & H-O-A. STARTER RATING AS PER HORSEPOWER OF THE MOTOR INDICATED.
	SINGLE POLE, LINE-VOLTAGE TOGGLE SWITCH MOUNTED AT 48" A.F.F. SUBSCRIPT DENOTES LIGHTING FIXTURES CONTROLLED. "WP" INDICATES WEATHER PROOF SWITCH. REFER TO LIGHTING DWGS FOR LOCATION OF SWITCHES.
	LIGHTING AND POWER PANEL BOARD, FLUSH MOUNTED IN WALL WITH COVER.



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 TWO NICE-PAK PARK  
 ORANGEBURG, NY 10962

LPD STORAGE CAPACITY UPGRADE

TWO NICE-PAK PARK,  
 ORANGEBURG, NY 10962

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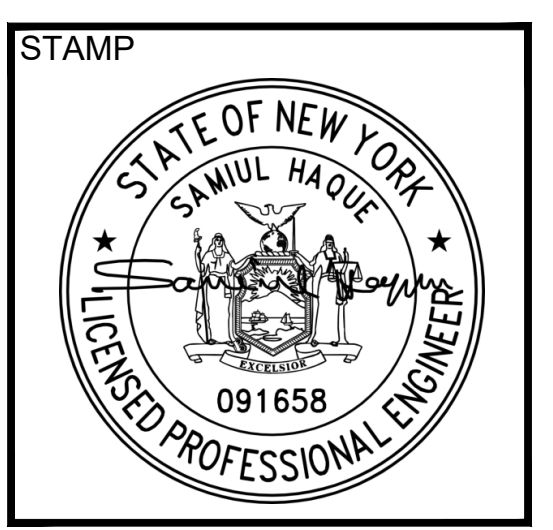
ELECTRICAL GENERAL NOTES, SYMBOLS & ABBREVIATION

GPI PROJECT/CONTRACT NO.:

E001

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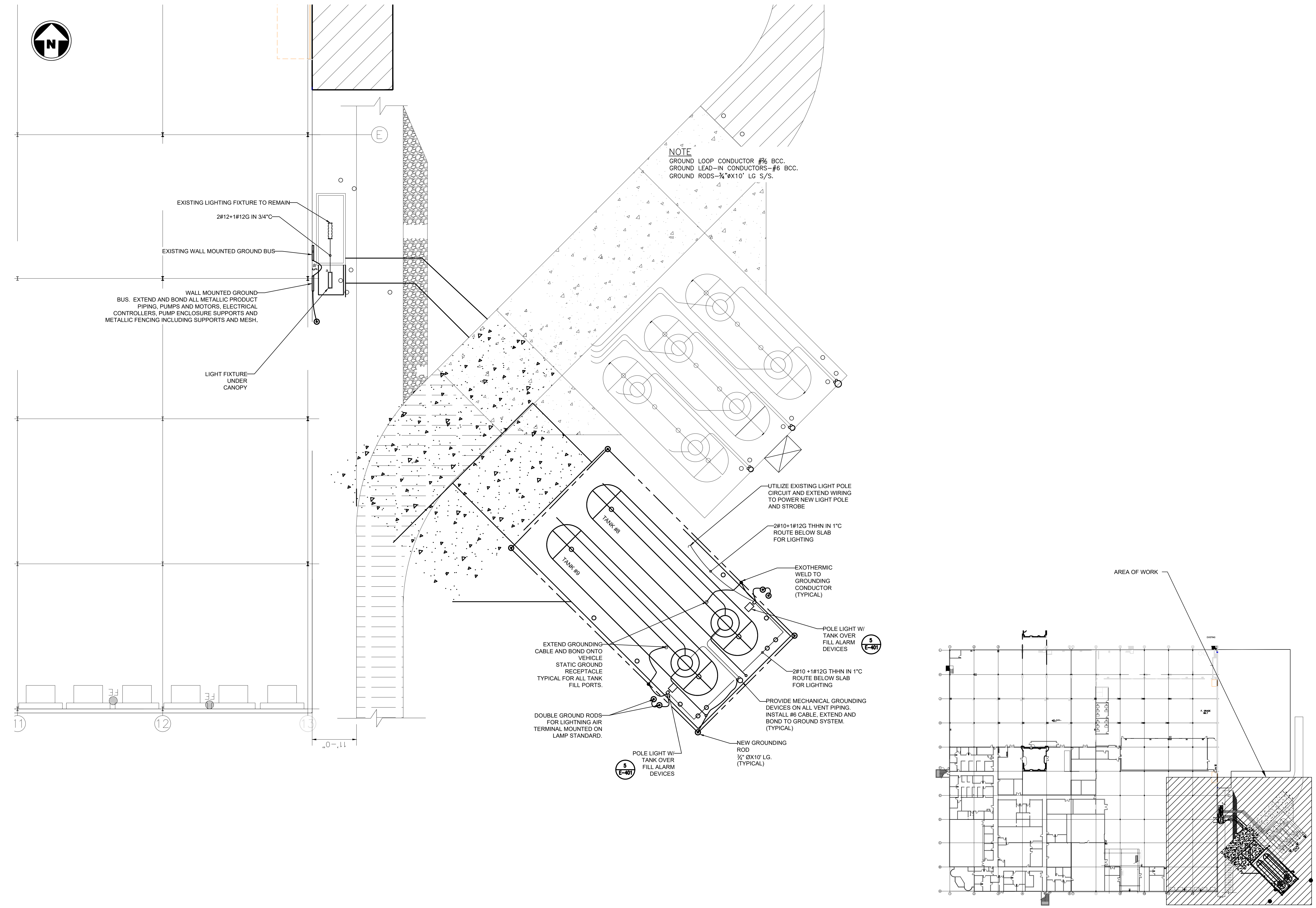
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 Plotted By: AUSTIN WHALEN



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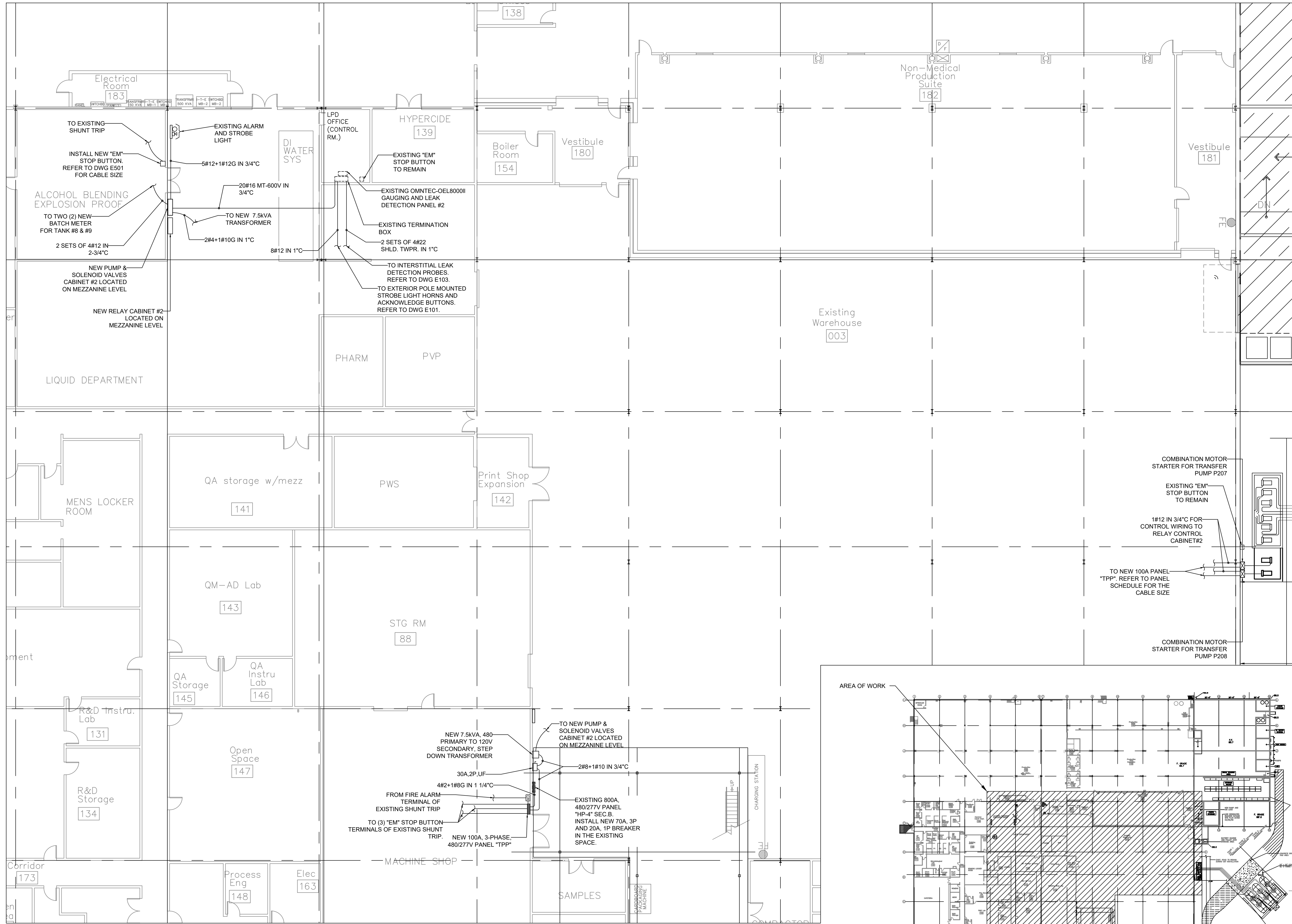
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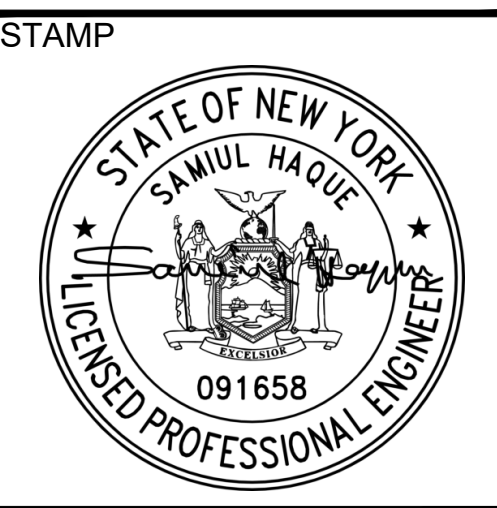
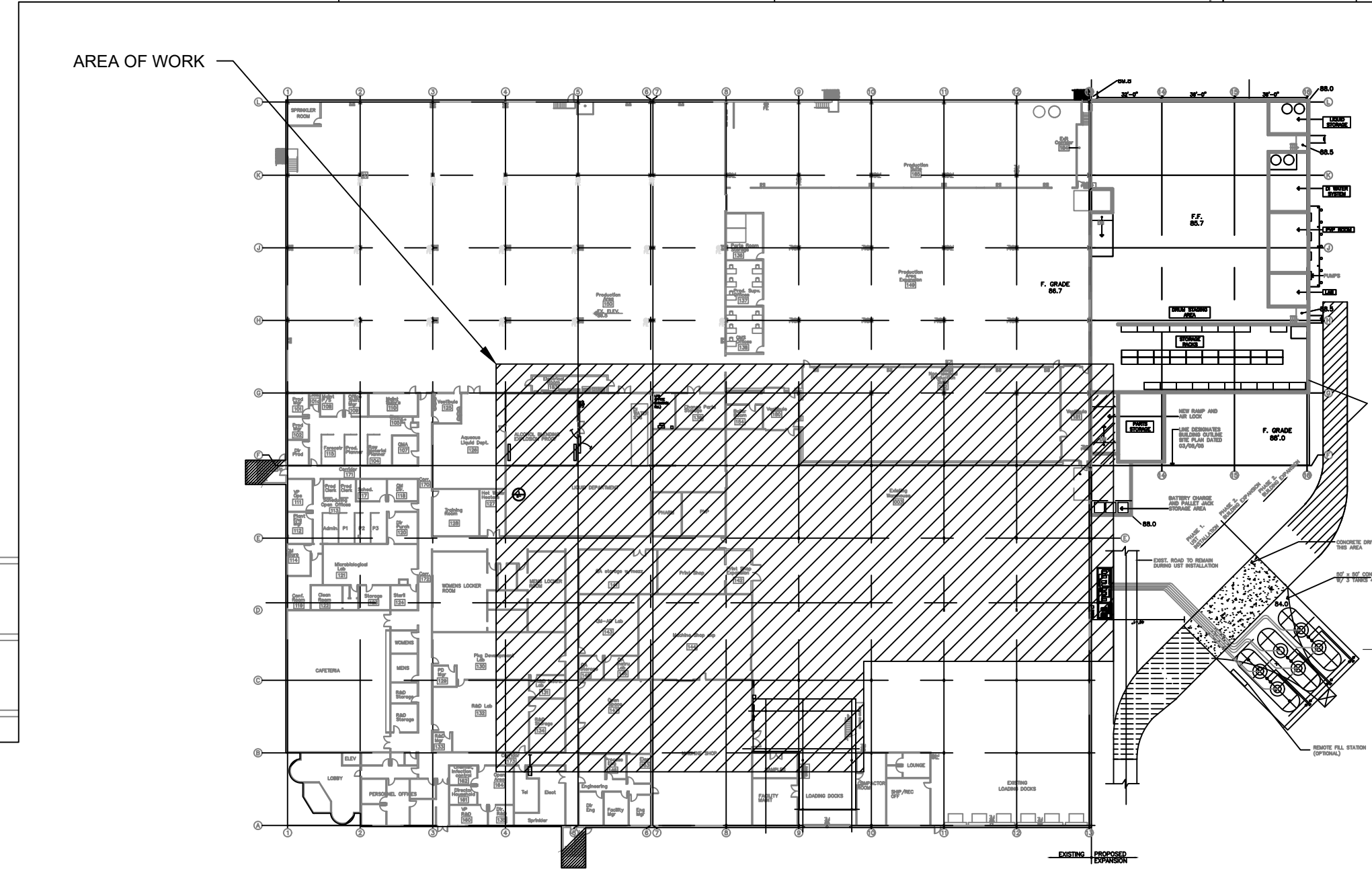


**1** GROUNDING AND LIGHTING SITE PLAN  
 E101 SCALE: 3/32"=1'-0"

Plot Date: 4/25/2024 9:50 AM  
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**1** ELECTRICAL POWER AND CONTROL PLAN  
 E102 SCALE: 3/32"=1'-0"



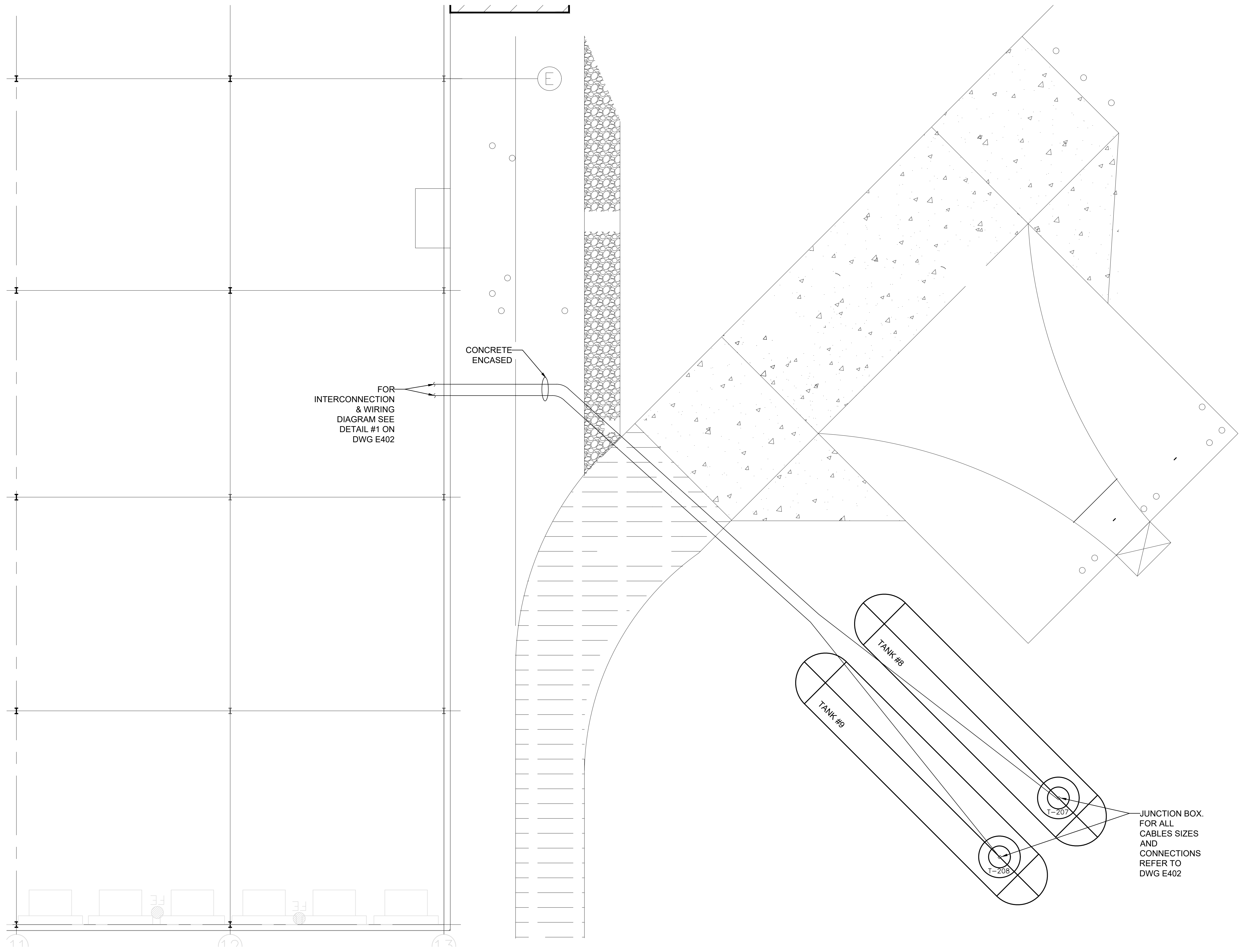
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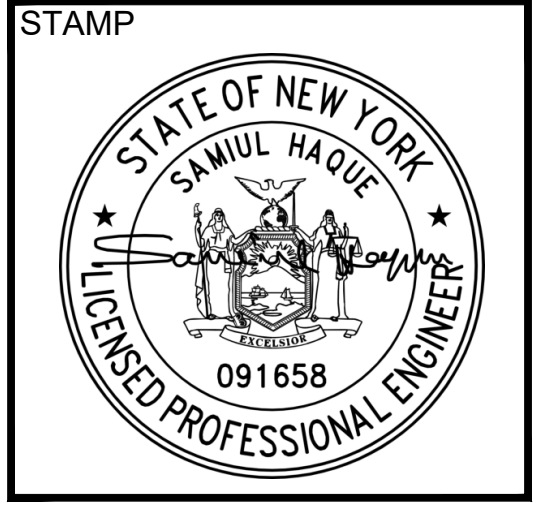
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 Filename: O:\2023\MMNY-23001\46.00 PDI UNDERGROUND STORAGE TANK IPA SDA\DRAWINGS\ELECTRICAL\E108 ELECTRICAL INSTRUMENT ROUTING PLAN.DWG  
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1 ELECTRICAL LEVEL AND LEAK DETECTION INSTRUMENT PLAN  
 E-103 SCALE: 1/8"



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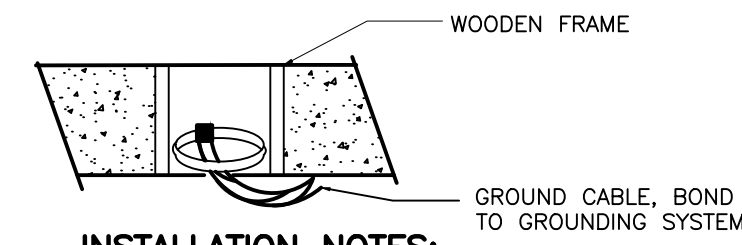
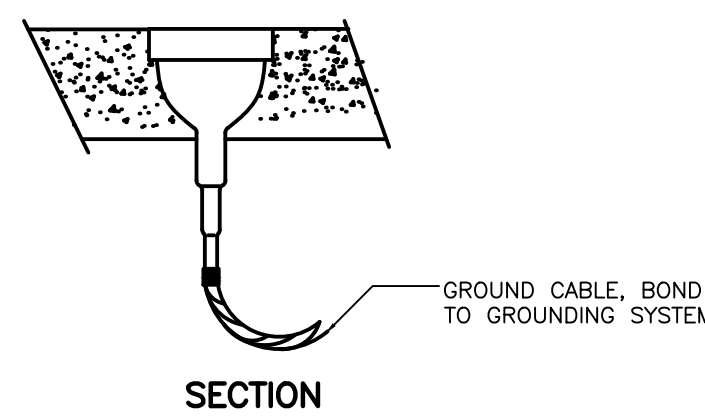
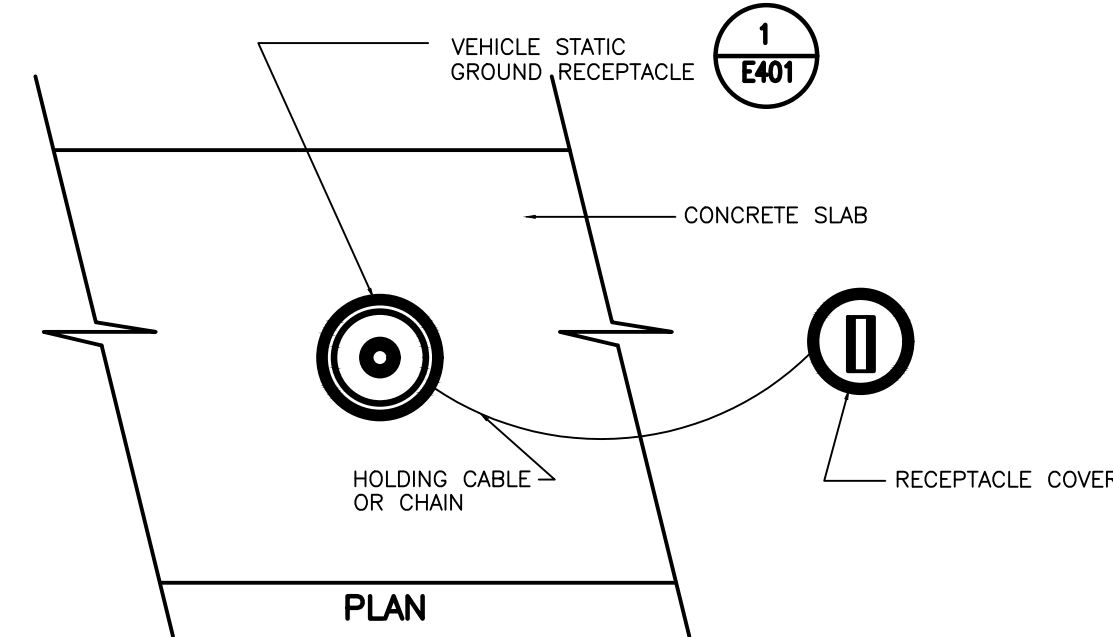
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ELECTRICAL  
SECTIONS &  
DETAILS

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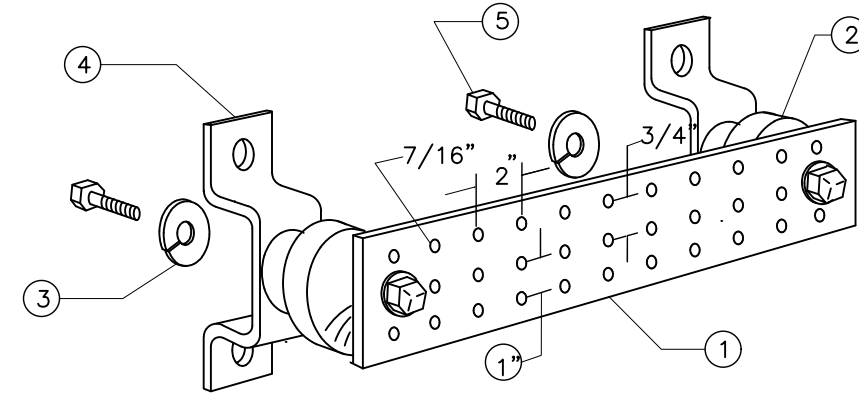
E401

SHEET OF 3

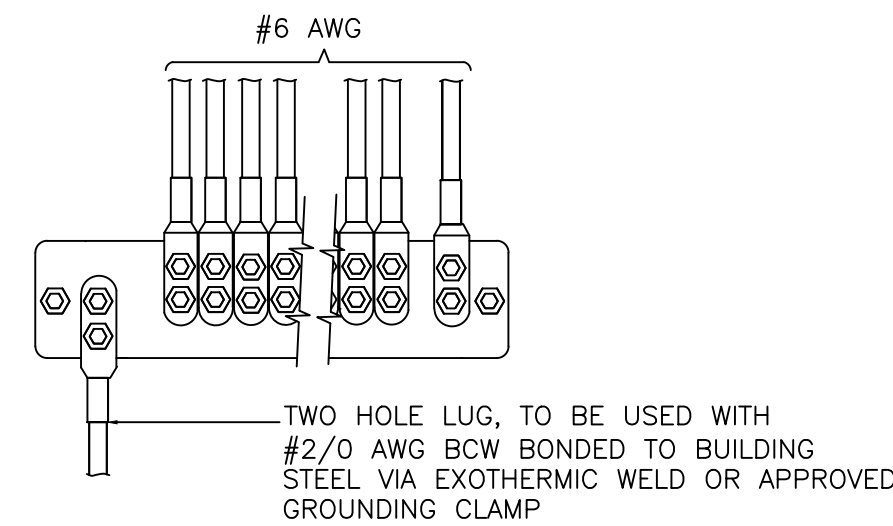


**INSTALLATION NOTES:**  
1. ELECTRICAL CONTRACTOR SHALL INSTALL AND COIL FREE ENDS OF GROUNDING CABLES AT THE STATIC RECEPTACLE LOCATIONS BY USING SEE DWG E401  
2. GENERAL CONTRACTOR SHALL INSTALL SIX (6) 10"x10" WOODEN FRAMES AT THE RECEPTACLE LOCATIONS ON THE TOP OF COILED CABLES. THESE FRAMES SHALL NOT BE FILLED WITH CONCRETE DURING SLAB INSTALLATION.  
3. AFTER CONCRETE SETTLING, ELECTRICAL CONTRACTOR SHALL REMOVE WOODEN FRAME, WELD STATIC RECEPTABLES TO THE END ON THE COILED CABLES, FILL WOODEN FRAME WITH CONCRETE AND SET RECEPTABLES IN PLACE.  
4. AFTER CONCRETE CURING, GROUT CONCRETE SURFACE TO MATCH SURROUNDING SLAB.

**1 VEHICLE STATIC GROUND**  
E401 SCALE: NONE



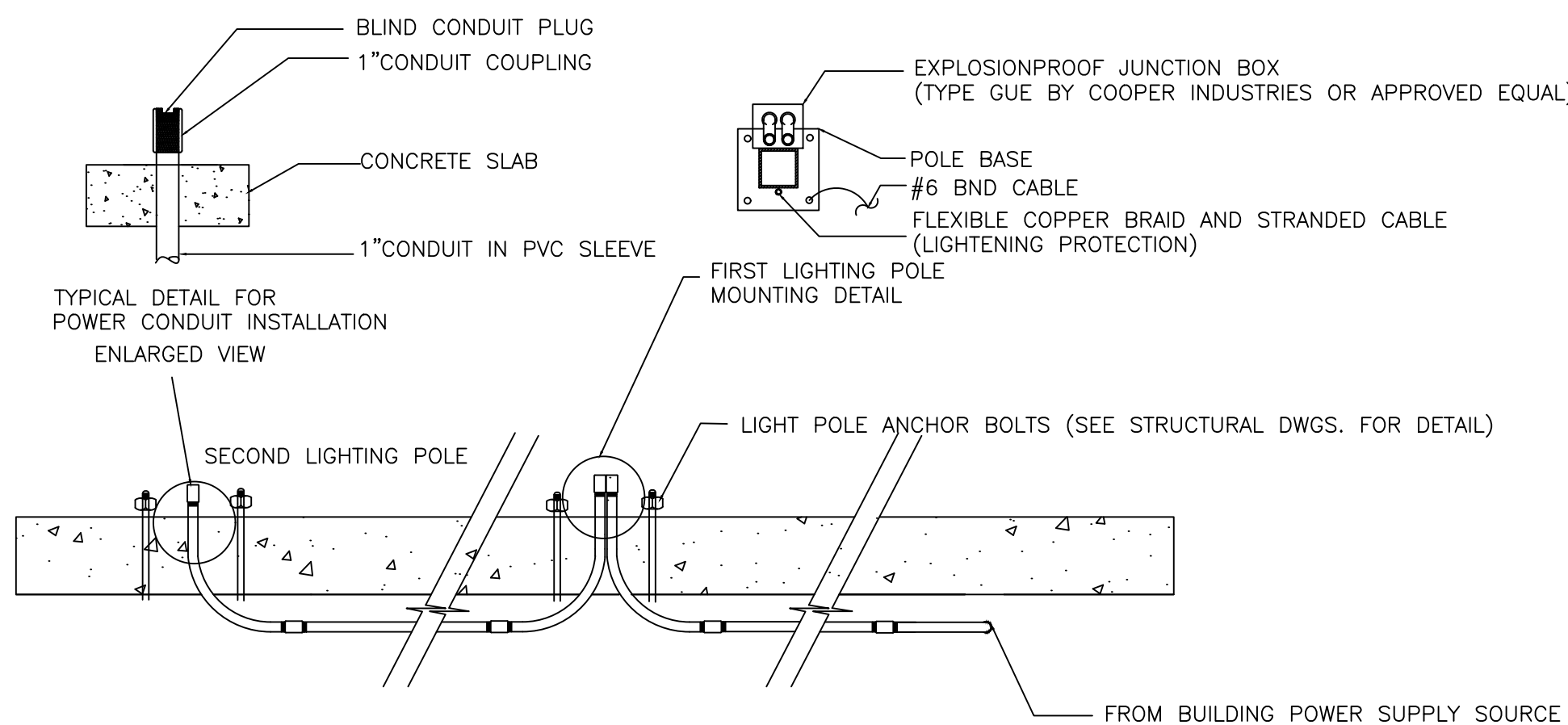
1-COPPER GROUND BAR, 1/4"X 4"X 36", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTION)  
2-INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL  
3-5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUAL  
4-WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL  
5-5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR EQUAL.



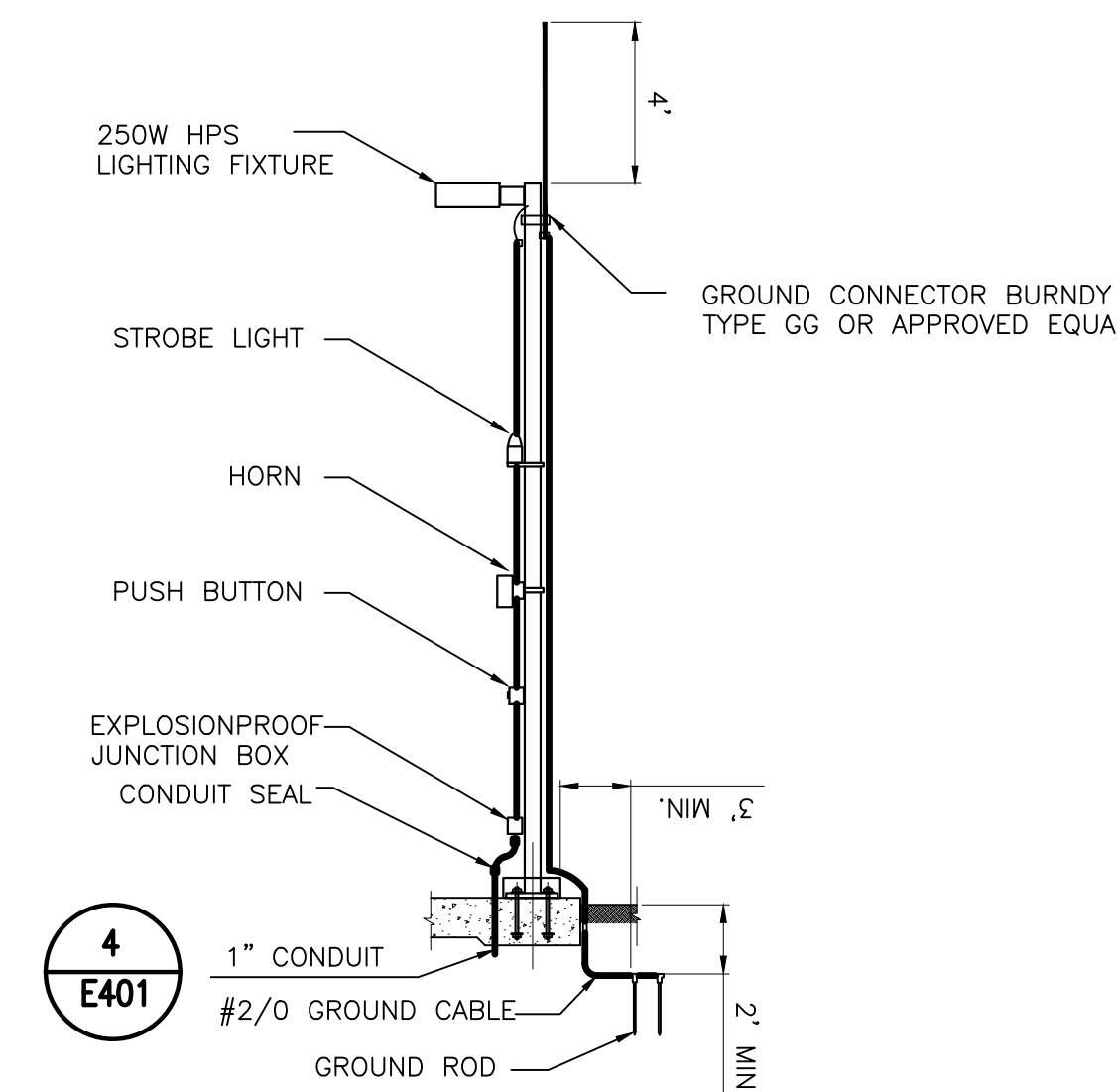
\* ALL LUG TO HAVE 2 BOLT HOLES \*  
GROUNDING - STANDARD 2. 10 1. \*  
GROUND BAR ON WALL SEE DETAIL

**3 GROUND TERMINATION DETAIL**  
E401 SCALE: NONE

**2 GROUND BUS**  
E401 SCALE: NONE



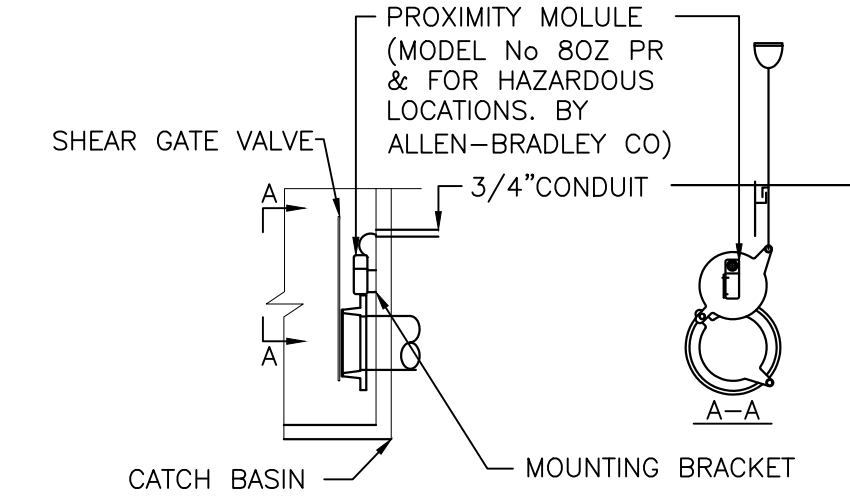
**4 POWER SUPPLY TO LIGHTING POLES DETAIL**  
E401 SCALE: NONE



**4 E401**

**5 LIGHT POLE INSTALLATION DETAIL**  
E401 SCALE: NONE

**6 DRAIN VALVE MONITORING DETAIL**  
E401 SCALE: NONE



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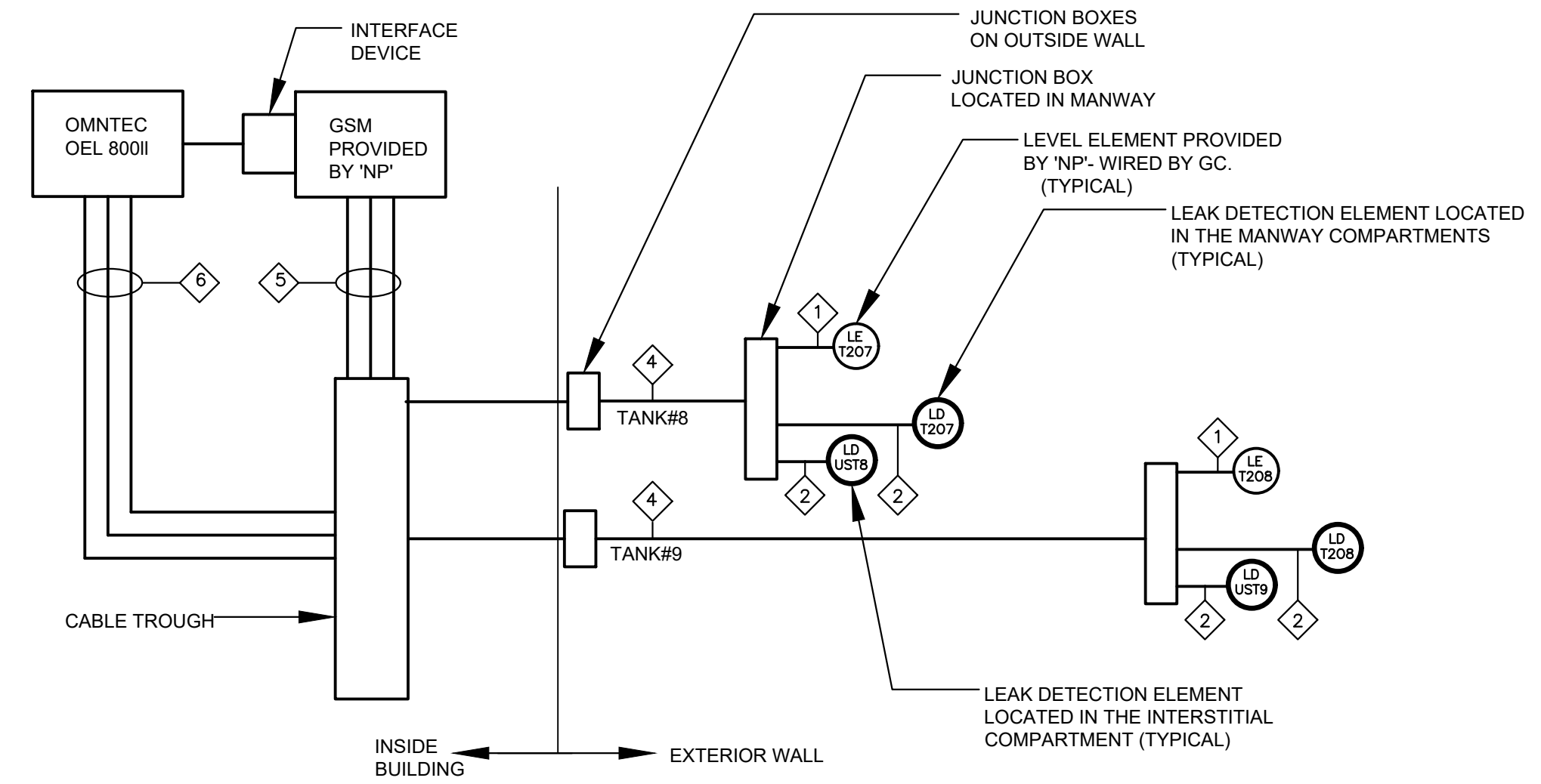
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ELECTRICAL LEVEL  
AND LEAK  
DETECTION  
INSTRUMENT  
DETAILS

GPI PROJECT/CONTRACT NO.:

E402

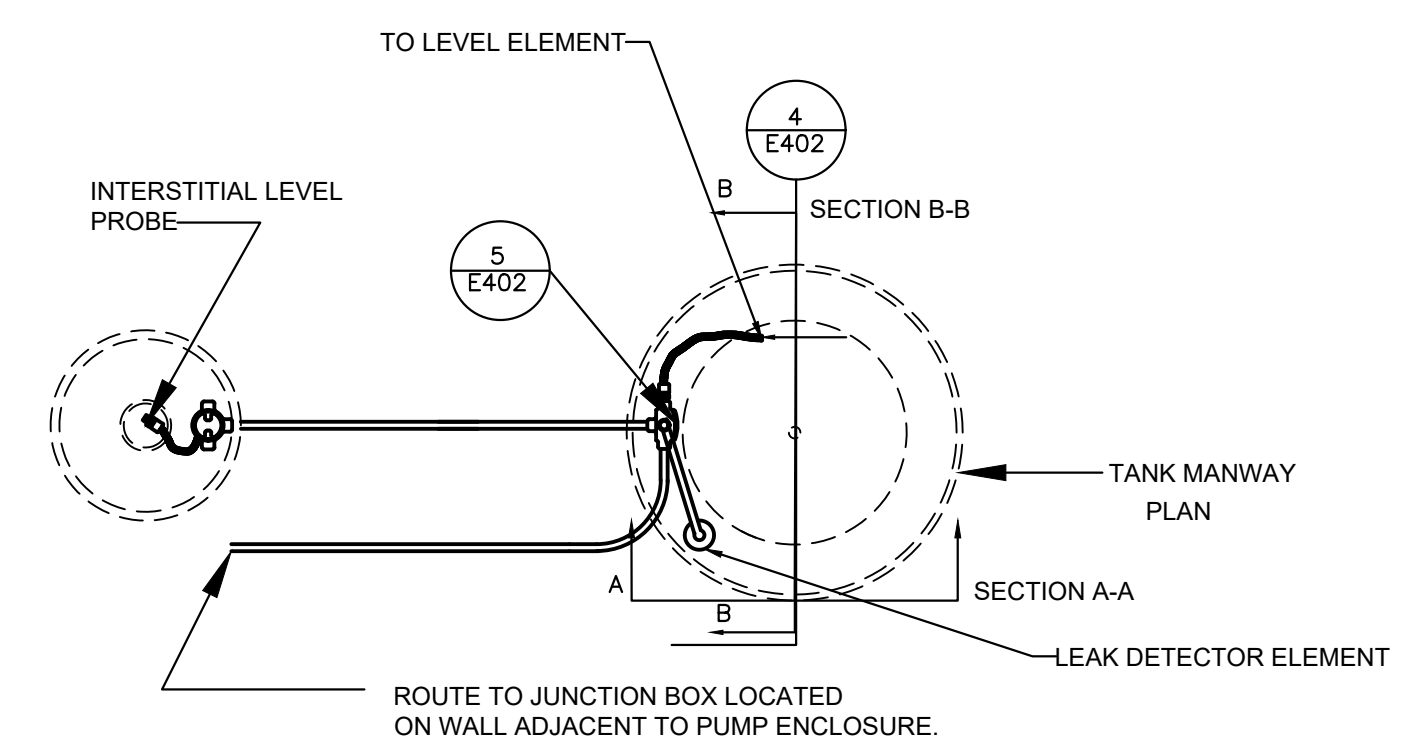
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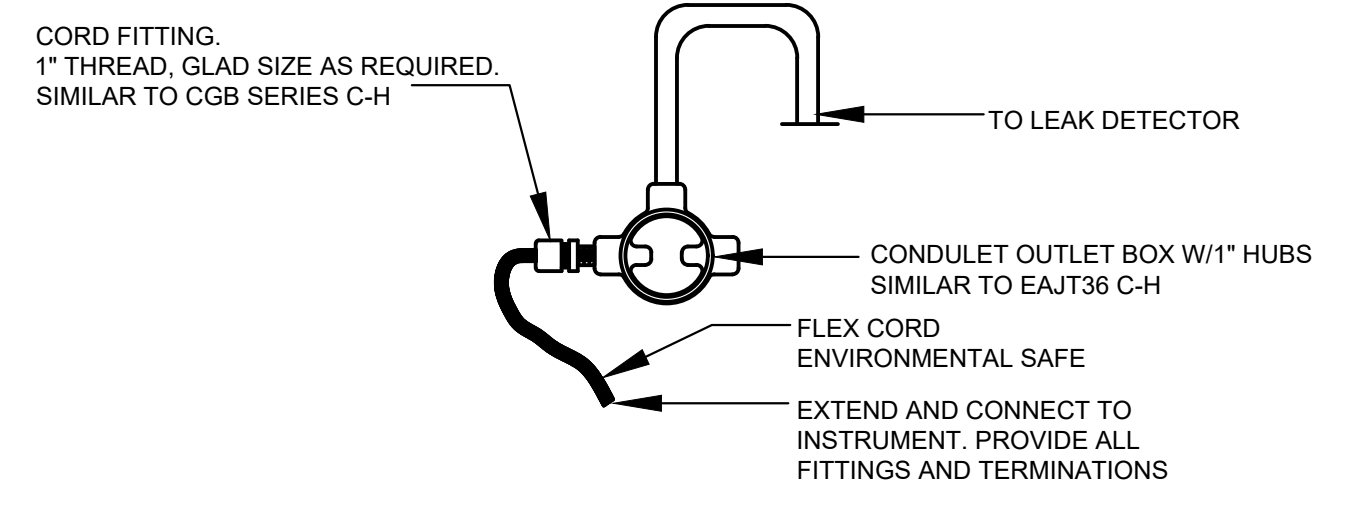
**1 INTERCONNECTON DIAGRAM**  
E402 SCALE: NONE

WIRE AND CONDUIT SCHEDULE		
SYMB	QUANTITY, WIRE/CABLE SIZE, CONDUIT SIZE.	COMMENTS
①	1-2/C, #22, SHLD, TWPR, 300V.-1"C.	BELDEN # 8761
②	1-4/C, #22 SHLD. TWPR, 300V.-1"C.	BELDEN # 9940
③	2 CABLES 1#1 AND 1#2	BELDEN # 8761+ BELDEN# 9940
④	3-CABLES, 2#1 AND 1#2-1"C.	BELDEN # 8761 & #9940
⑤	6-CABLES @ 3SETS (2#1)-1"C.	6x BELDEN # 8761
⑥	3-CABLES 4/C #22, SHLD, TWPR, 300V.-1"C.	3X BELDEN # 9940

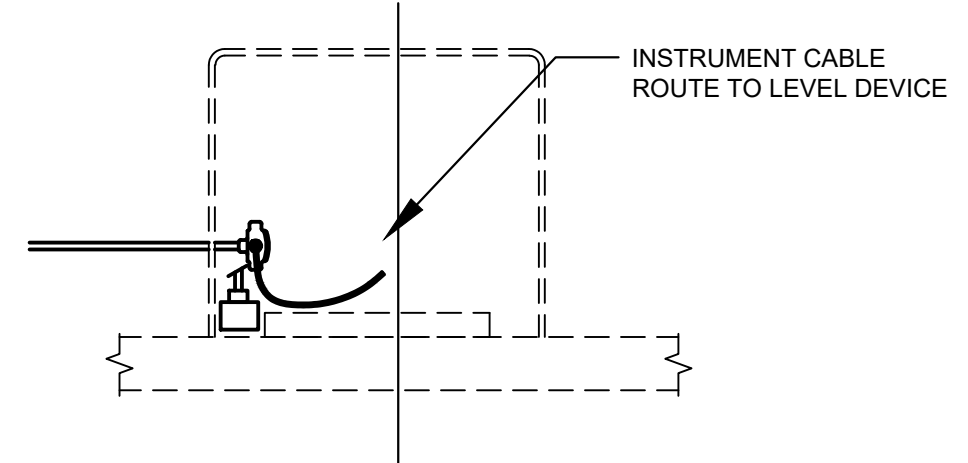
**2 WIRE AND CABLE SCHEDULE**  
E402 SCALE: NONE



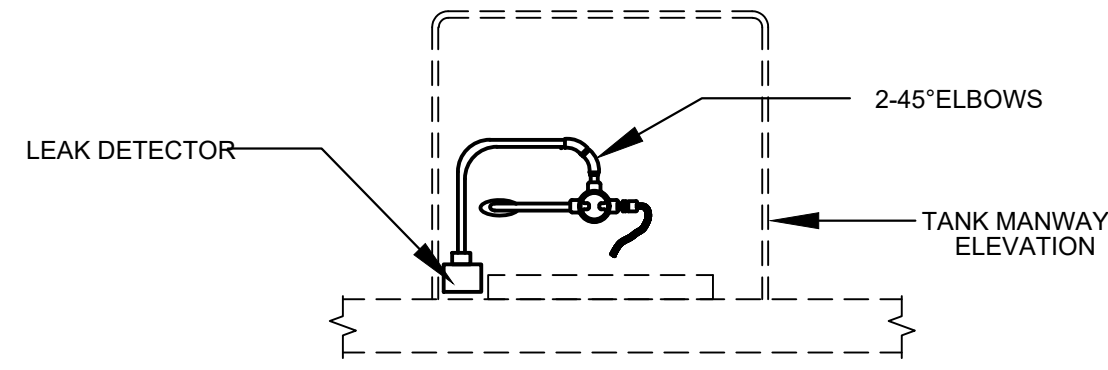
**3 TANK MANWAY**  
E402 SCALE: NONE



**5 JUNCTION BOX DETAIL**  
E402 SCALE: NONE



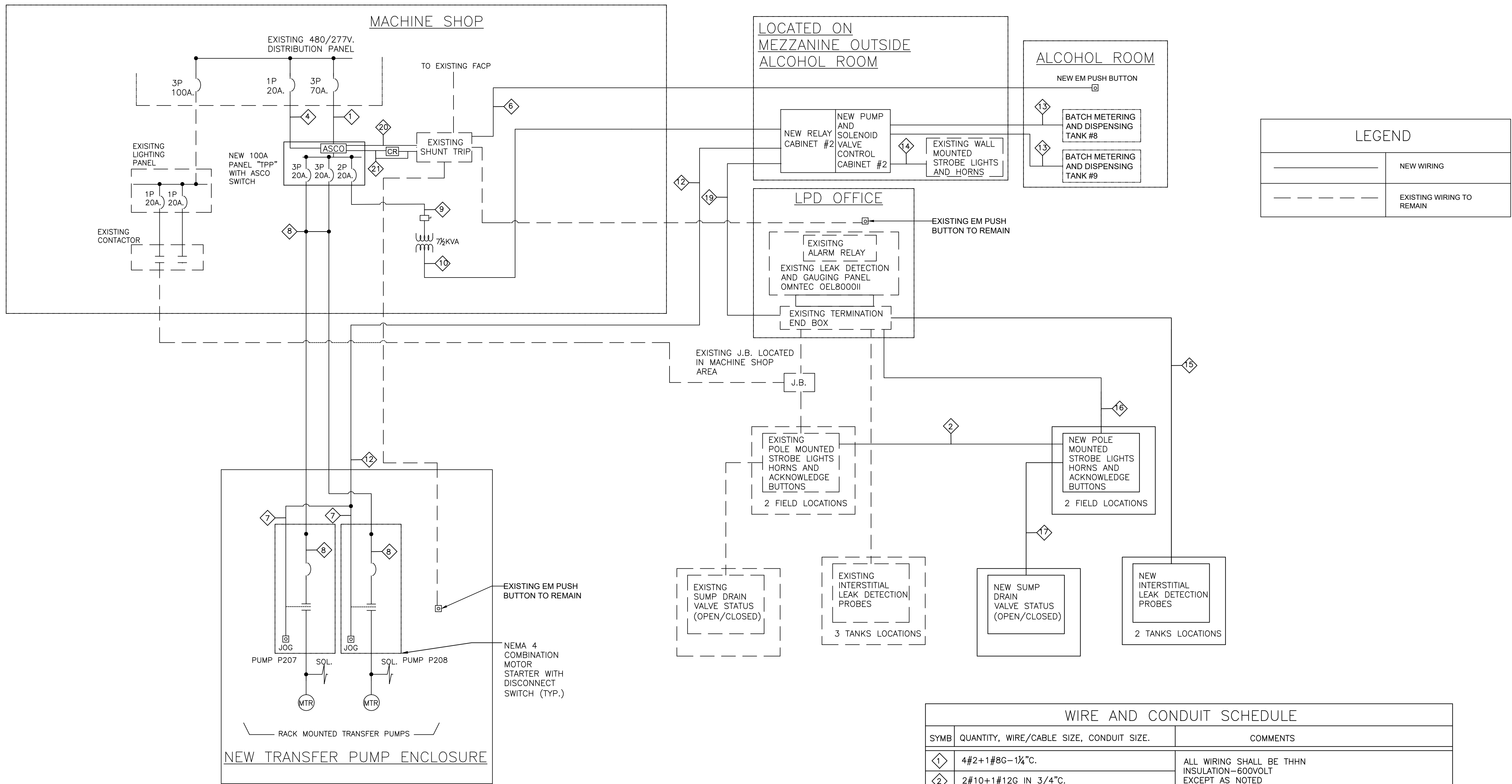
**4 MANWAY ELEVATION SECTION A-A**  
E402 SCALE: NONE



**6 MANWAY ELEVATION SECTION B-B**  
E402 SCALE: NONE

Plot Date: 4/25/2024 9:50 AM  
Filename: O:\2023\MMNY-23001\46.00 PDI UNDERGROUND STORAGE TANK IPA SDA\DRAWINGS\ELECTRICAL\E402 ELECTRICAL LEVEL AND LEAK DETECTION INSTRUMENT DETAILS.DWG  
Plotted By: AUSTIN WHALEN

Plot Date: 4/25/2024 9:50 AM  
 Filename: C:\2023\MMNY-23001\46.00 UNDERGROUND STORAGE TANK IPA SDA\DRAWINGS\ELECTRICAL\E502 ELECTRICAL SINGLE LINE DIAGRAM CABLE AND CONDUIT SCHEDULE.DWG  
 Plotted By: AUSTIN WHALEN



**LEGEND**

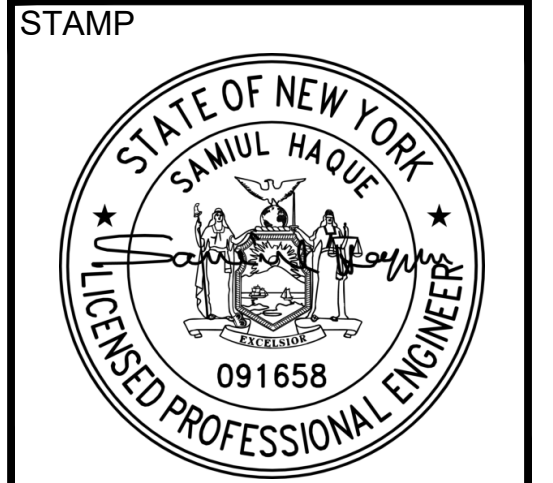
	NEW WIRING
	EXISTING WIRING TO REMAIN

**1 SINGLE LINE DIAGRAM**  
E-501 SCALE: NONE

**WIRE AND CONDUIT SCHEDULE**

SYMB	QUANTITY, WIRE/CABLE SIZE, CONDUIT SIZE.	COMMENTS
①	4#2+1#8G-1/4"C.	ALL WIRING SHALL BE THHN INSULATION-600VOLT EXCEPT AS NOTED
②	2#10+1#12G IN 3/4"C.	
③	2#10+1#12G IN 3/4"C.	CONDUIT SHALL BE RIGID GALVANIZED STEEL, MINIMUM TRADE SIZE 3/4"
④	2#12 IN 3/4"C.	
⑤	2#10+1#12G IN 3/4"C.	
⑥	2#12+1#12GND-3/4"C	
⑦	3#12	3#12 FOR CONTROL ROUTE WITH ITEM #8
⑧	3#10, 1#12 GND-1"C.	
⑨	2#8+1#10 GND-1"C.	PWR TO TRANSFORMER
⑩	2#4+1#10 GND-1"C.	PWR TO TRANSFORMER
⑪	6#12-1"C.	
⑫	4#12-3/4"C.	
⑬	5#12,1#12, GND-3/4"C.	
⑭	2 SETS OF 4#22 SHLD. TWPR. IN 1"C	
⑮	8#12 IN 1"C.	SUMP VALVE STATUS WIRING
⑯	4-#12-1"C.	ROUTE FROM LIGHT POLE J.B. TO VALVE DEVICE
⑰	10#12-3/4"C	
⑱	20#16 MT-600V-3/4"C.	
⑲	3 SETS OF 2#12+1#12G IN 3-3/4"C	3 SETS FOR 3"EM" PUSH BUTTONS
⑲	2#12+1#12G IN 3/4"C	FOR FIRE ALARM

**2 CABLE AND CONDUIT SCHEDULE**  
E-501 SCALE: NONE



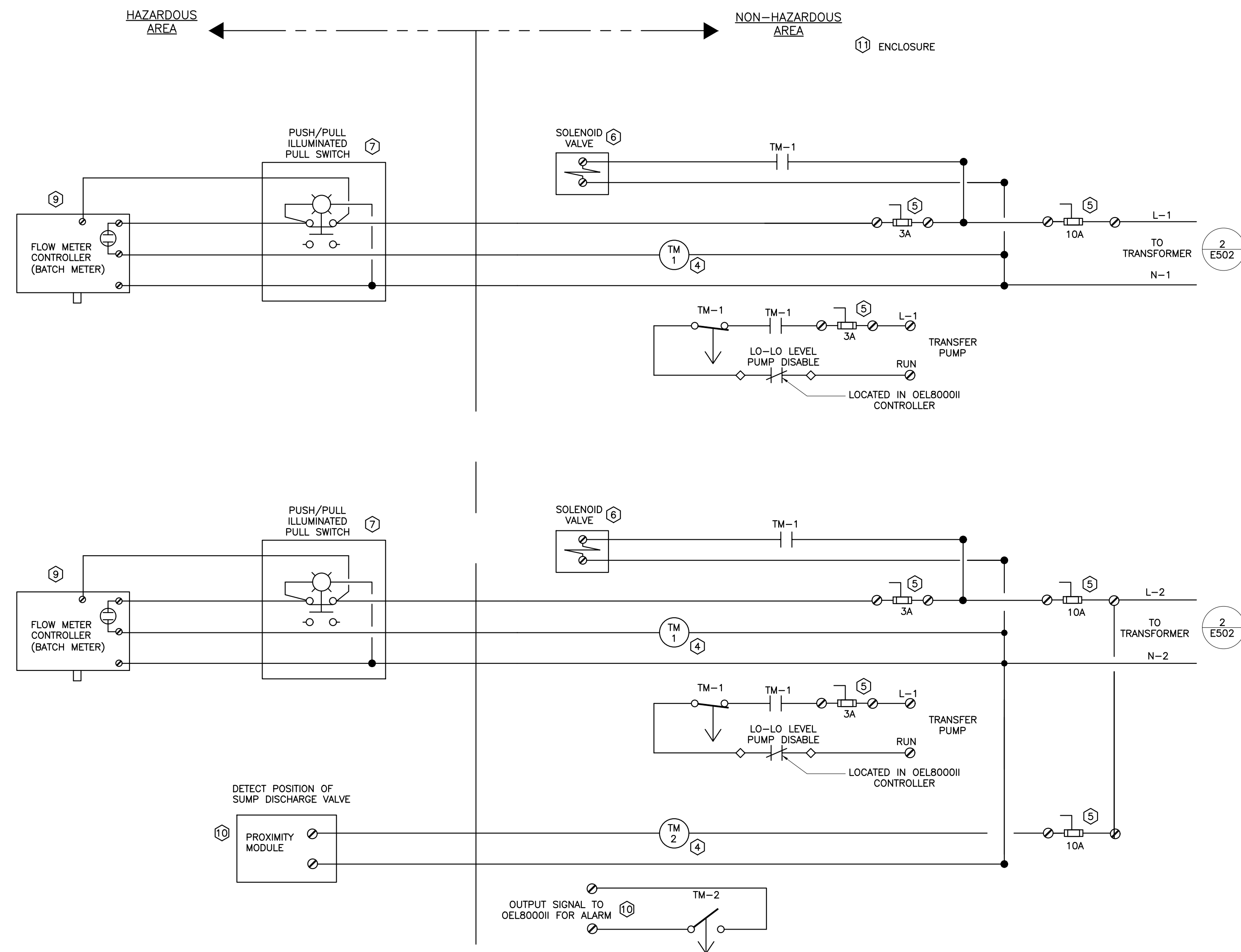
**REVISIONS**

NO.	REVISION	DATE
1	100% FOR PERMIT	4-24-24

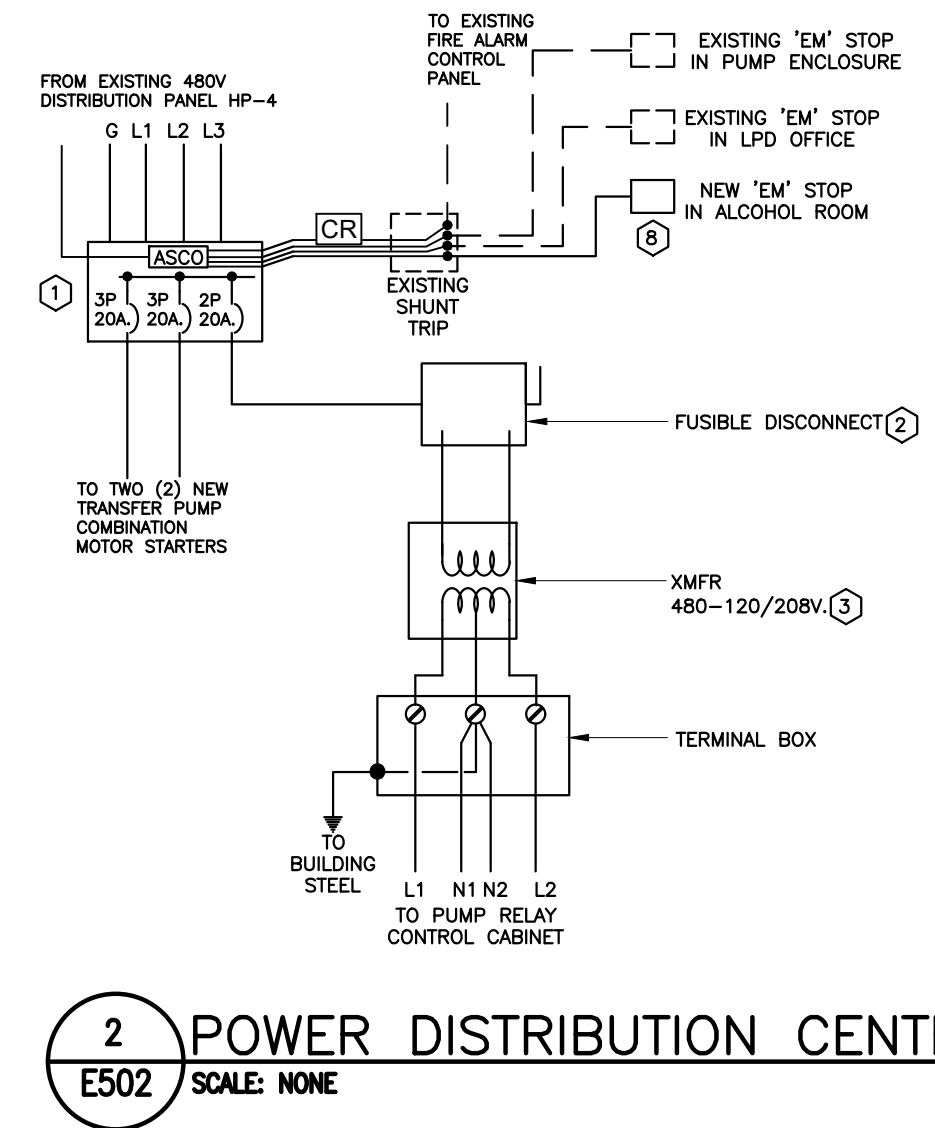
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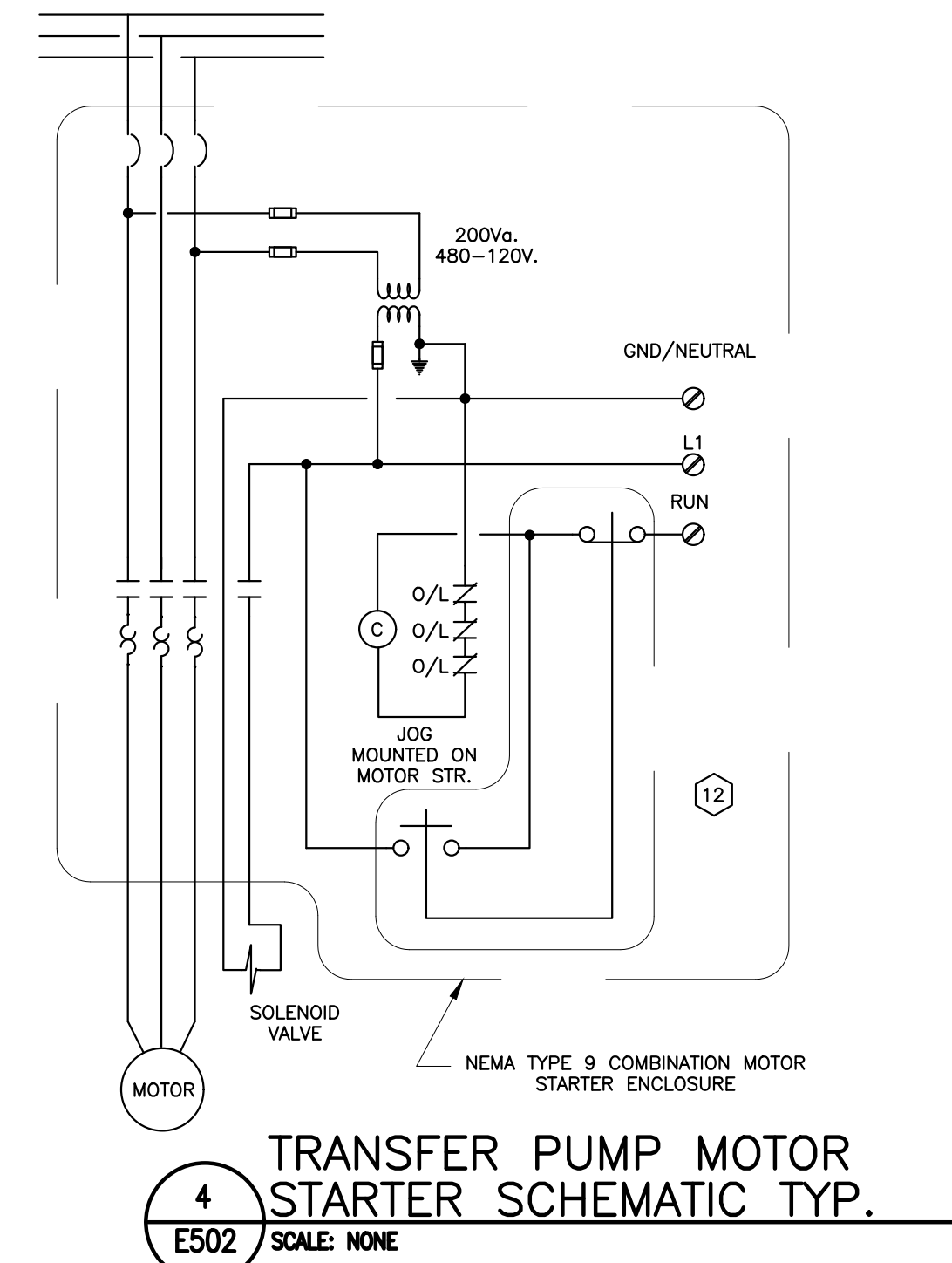
Plot Date: 4/25/2024 9:50 AM  
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 Plotted By: AUSTIN WHALEN



**1 RELAY CONTROL CABINET**  
 E502 SCALE: NONE



**2 POWER DISTRIBUTION CENTER**  
 E502 SCALE: NONE



**4 TRANSFER PUMP MOTOR STARTER SCHEMATIC TYP.**  
 E502 SCALE: NONE

ITEM	PRODUCT	NOMENCLATURE
1	POWER PANEL W/ASCO CONTACTS	NEW 100AMP, 3Ø, 277/480V POWER PANEL WITH ASCO CONTACTS
2	DISCONNECT SWITCH	2P, 30AMP, UNFUSED DISCONNECT SWITCH, HEAVY DUTY, 600VOLT, NEMA TYPE 1 ENCLOSURE
3	TRANSFORMER	TRANSFORMER, 1Ø, 7KVA, 480-120V, GENERAL PURPOSE ENCLOSURE W/GROUND BUS
4	TIMING RELAY	RELAY W/3-N.O. INSTANTANEOUS CONTACTS, ADJUSTABLE TIME DELAY AFTER ENERGIZATION, (TIME-LATER)
5	FUSED T.B.	RAIL MOUNTED, SCREW TYPE TERMINAL BLOCK W/FUSED BLOCK, FUSED AS INDICATED, SIMILAR TO A-B#1492-CE6
6	SOLENOID VALVE	3-WAY 110 OPERATING COIL, 125# AIR PRESSURE, ADJUSTABLE DISCHARGE PORT.
7	ILLUMINATED P.B.	2-POSITION, ILLUMINATED PUSH BUTTON, 110V, LED, MAINTAINED OPERATOR, FOR INSTALLATION IN HAZARDOUS AREA -NEMA TYPE 9, CLASS 1, DIVISION 1D, MOUNTED IN METALLIC ENCLOSURE.
8	EM PUSH BUTTON	OIL TIGHT OPERATOR, N.O. MOMENTARY, NEMA TYPE 12 ENCLOSURE, W/EXTENDED GUARD, NAMEPLATE 'E-STOP'.
9	BATCH METER	BATCH METER W/FLOW ELEMENT, METER PROVIDED IN EXPLOSION-PROOF ENCLOSURE MFG. 'CONTREC'
10	PROX. MODULE	INDUCTIVE PROXIMITY CONTROL, SOLID STATE, APPROVED FOR HAZARDOUS LOCATION, NEMA TYPE 4 ENCLOSURE WITH TERMINALS AND THREADED CONDUIT OPENING. SIMILAR TO A-B 802PR.
11	ENCLOSURE	RELAY CABINET: THE FOLLOWING SHALL INCLUDE BUT NOT LIMITED TO-NEMA TYPE 12, WITH BACK MOUNTING PANEL, ENCLOSED WIREWAY (SIMILAR TO WIREMOLD) RAIL MOUNTED SCREW TERMINAL STRIP WITH FUSED MODULES, RATED AS INDICATED SIMILAR TO A-B#1492, ADJUSTABLE TIMING RELAYS AND WIRED AND CONFIGURED TO FUNCTION AS INDICATED ON SEQUENCE OF OPERATION. ALL DEVICES SHALL BE TERMINATED ON THE TERMINAL STRIP
12	COMB. MTR STARTER	COMBINATION CIRCUIT BREAKER TYPE MOTOR STARTER IN NEMA TYPE 9,3R ENCLOSURE WITH EXTENDED OVER LOAD RESET BUTTON AND NEMA 4 MOMENTARY CONTACT COVER MOUNTED JOG PUSH BUTTON. INCLUDE 200VA, 480/120VOLT CONTROL TRANSFORMER W/2 FUSED PRIMARY AND SINGLE FUSED SECONDARY. SIMILAR TO ALLEN-BRADLEY # 513BUB38 600VOLT.

**3 EQUIPMENT IDENTIFICATION SCHEDULE**  
 E502 SCALE: NONE

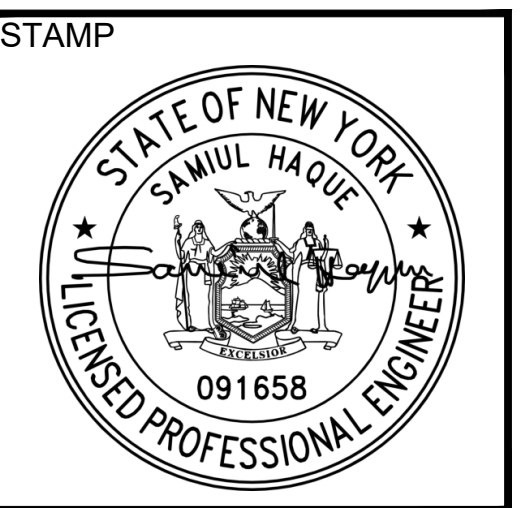
PRODUCT TRANSFER OPERATION PROCEDURE

OPERATOR SHALL SELECT TYPE OF PRODUCT AND REQUIRED QUANTITY. AFTER COMPLETION OF THE FIRST STEP, OPERATOR SHALL PERFORM THE FOLLOWING:

- \* VERIFY THAT THE INDICATOR LIGHT ON THE PULL SWITCH IS ILLUMINATED, IF NOT, PULL THE BUTTON UNTIL THE LAMP IS LIGHTED.
- \* ENTER THE QUANTITY OF MATERIAL TO BE DISPENSED ON THE BATCHMETER.
- \* IF THE DISPLAYED QUANTITY IS CORRECT AND THE CONTAINER TO RECEIVE THE PRODUCT IS IN PLACE, HE SHALL PRESS THE START BUTTON ON THE METER.

THE FOLLOWING SEQUENCE WILL OCCUR:

- CLOSING CONTACTS ON THE BATCHMETER WILL ENERGIZE THE TIMING RELAY IN THE REMOTE RELAY CABINET.
- TIMING RELAY WILL SIGNAL THE DISCHARGE SOLENOID VALVES IN THE ALCOHOL ROOM TO OPEN AND SIMULTANEOUSLY START THE OUTDOOR TRANSFER PUMP AND OPEN THE SUCTION SIDE SOLENOID VALVE.
- SHOULD THE OPERATOR WISH TO STOP PRODUCT DELIVERY AND FREEZE THE DISCHARGE QUANTITY, HE CAN PRESS THE ILLUMINATED SWITCH PUSH-BUTTON WHICH WILL TRIGGER STOPPING THE PUMP, CLOSING THE SUCTION SOLENOID VALVE AND CLOSING THE PRODUCT DELIVERY VALVES IN THE ALCOHOL ROOM.
- PULLING THE ILLUMINATED SWITCH WILL RESTART THE DELIVERY PROCESS WITHOUT RESETTING THE METER.
- SHOULD THE TIMING RELAY DETECT AN OVEREXTENDED PUMP TIME, THE TIMING RELAY WILL DISENGAGE THE TRANSFER PUMP, SHUTTING-DOWN THE LIQUID TRANSFER.
- TO RESTART THE TRANSFER, OPERATOR SHOULD PUSH IN AND PULL OUT THE ILLUMINATED PUSH-BUTTON. THIS WILL RESET THE TIMER, AND INITIATE PRODUCT DELIVERY UNTIL THE QUANTITY INDICATED ON THE BATCHMETER HAS BEEN DISPENSED. THEN THE METER WILL STOP THE PUMP AND ALL VALVES WILL CLOSE.



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PREPARED FOR



LPD STORAGE  
CAPACITY  
UPGRADE  
TWO NICE-PAK PARK  
ORANBURG, NY 10962

LPD STORAGE CAPACITY UPGRADE

TWO NICE-PAK PARK,  
ORANBURG, NY 10962

PANEL SCHEDULE										
PANEL NAME:	TPP	LOCATION:	MACHINE SHOP	MOUNTING:	SURFACE					
VOLTAGE/PHASE:	277/480V, 3 Phase, 4W & G	PANEL (AMP)	100A	FREQUENCY:	60 Hz					
PANEL SHORT CIRCUIT RATING(KA):	22 KA	FEEDER SIZE	4#2+1#8G IN 1 1/4" C	FEEDING SOURCE:	PANEL HP-4 (SEC. B)					
MAIN BREAKER TYPE	MCB	MAIN BREAKER RATING (A):	100A	BRANCH C.B TYPE	MCCB					
Load Designation	Wiring	Phase Load in VA						Wiring	Load Designation	
		C/B (A)	CT NO	A Ø	B Ø	C Ø	CT NO			C/B (A)
ASCO SWITCH										
TRANSFER PUMP P207	3#10 + 1#12G IN 1" C	25	1	3880				2	TRANSFER PUMP P208	
			3	3880				4		
			5		3880					6
			7			3880				
			9				3880			
SPARE	25	7					8	7.5kVA STEP DOWN TRANSFORMER TO PUMP & SOLENOID VALVES CONTROL RELAY CABINET #2		
		9		3744					10	
SPARE	20	13					12	SPARE		
SPARE	20	15					14	SPARE		
SPARE	20	17					16	SPARE		
SPACE		19					18	SPACE		
SPACE		21					20	SPACE		
SPACE		23					22	SPACE		
							24	SPACE		
CONNECTED LOAD PER PHASE IN VA		11504	11504	7760	PANEL TYPE: NEMA 3		MOUNTING: SURFACE			
TOTAL CONNECTED LOAD IN KVA					COPPER BUS, EQUIP. GROUND BAR					
TOTAL CONNECTED LOAD IN AMPS		37.01								

**1** ELECTRICAL PANEL SCHEDULE  
E503 SCALE: NONE

STAMP



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**ELECTRICAL PANEL SCHEDULE**

GPI PROJECT/CONTRACT NO.:

**E503**

SHEET OF 3