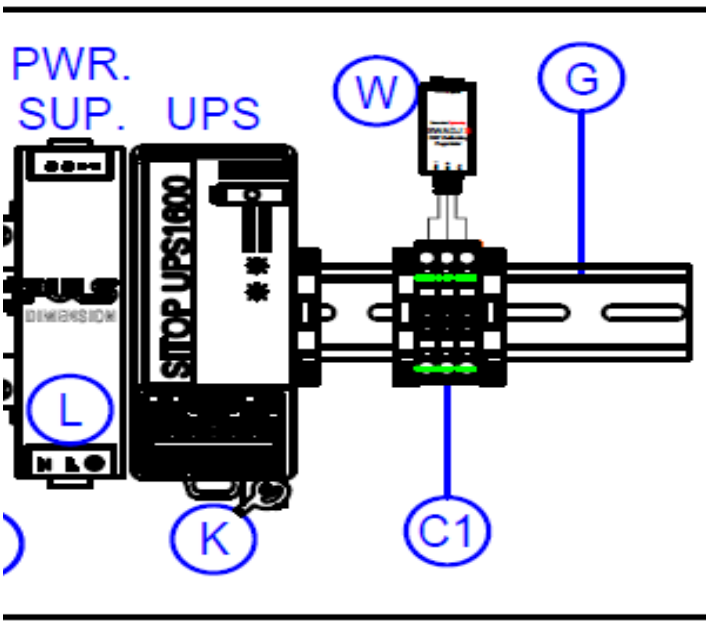
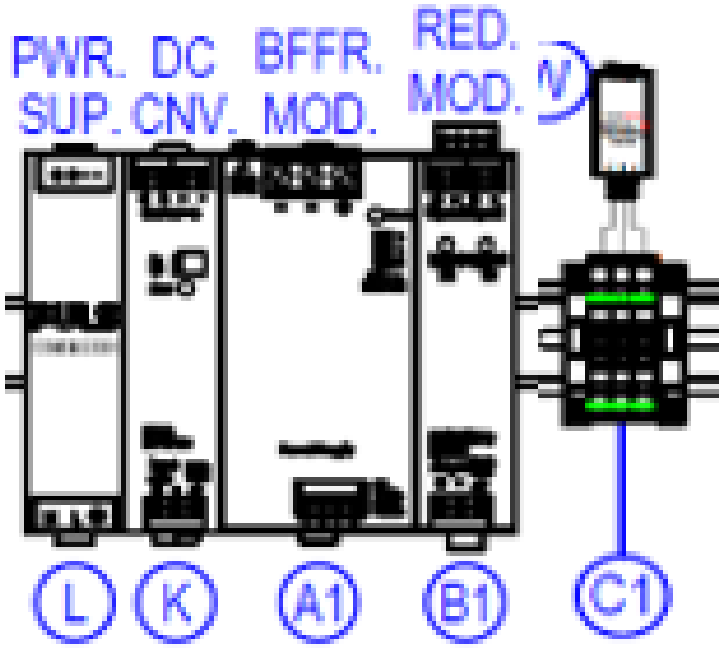
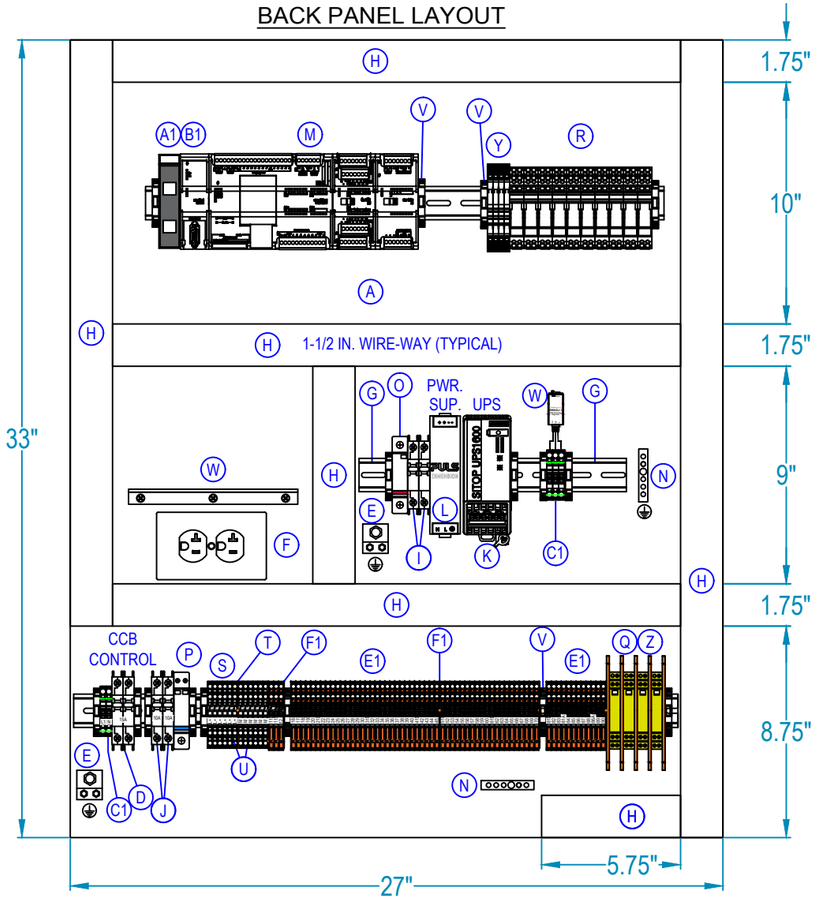
Replace this layout on pg 1 of **270710_JEA_50 RTU BACKPLATES - R00 - AS BUILT**



With this pony pump style layout and wire using **JEA-ShopDrawings-LiftStationRTUStandard_1200RetroBP-PP** (Pg 2 of 11)



BACK PANEL LAYOUT



BACK PANEL:
SPP-3630 (33"H x 27"W) FABRICATED FROM 12ga. CARBON STEEL
WITH WHITE INDUSTRIAL GRADE ENAMEL FINISH.

DRAWING LAYER COLOR LEGEND:

GREY	-	NOTES
BLACK	-	ELECTRICAL SCHEMATIC WIRING DIAGRAMS AND DEVICES
BLUE	-	PART IDENTIFICATION
PURPLE	-	WIRE NUMBERS
GREEN	-	FIELD DEVICES AND WIRING OUTSIDE ENCLOSURE (DASHED)
RED	-	FUTURE DEVICES AND WIRING
TEAL	-	DIMENSIONS

CONTROL WIRE UL508A COLOR:

RED	-	120 VAC
WHITE	-	NEUTRAL
BLUE	-	+24 VDC
WHITE / BLUE STRIPE	-	0 VDC

BILL of MATERIAL

	QTY	MANUFACTURER	PART NUMBER	DESCRIPTION
A	1	SCHAEFER	SPP-3630	BACK PANEL, CARBON STEEL, WHITE
3 B	X	SCHAEFER	SPN1AL-888-JEA	BATTERY ENCLOSURE, .125 ALUMINUM
3 C	X	POWER SONIC	PS-12180 F2	BATTERY, LEAD-ACID, 12VDC, 18Ah
D	1	WEIDMULLER	9926 25 2015	CCB, UL489, 2 POLE, 15A
7 E	2	T & B	ADR21-21	DOUBLE GND LUG, #1/0-14AWG
F	1	-	-	GFCI DUPLEX RECEPTACLE, 15A, 120VAC
G	1	WAGO	210-112	2M DIN RAIL, GALVANIZED, SLOTTED
H	2	PANDUIT	1.5"W x 3"H x 72"L	WIREWAY, HINGE COVER, WIDE FINGER
I	2	WEIDMULLER / PHOENIX	9926 25 1007 / 2907632	CB1 and CB2, UL489, 1 POLE, 7A
J	2	WEIDMULLER	9926 25 1010	CB3 and CB4, UL489, 1 POLE, 10A
K	1	SIEMENS	6AG1 134-3AB00-7AY2	SITOP DC UPS, 10A WITH CHARGER
L	1	PULS	QS5.241-A1	24VDC POWER SUPPLY, 5A
M	1	SIEMENS	6AG1 215-1AG40-4XB0	CPU 1215C DC/DC/DC, 14 DI - 10 DO PLC
	1	SIEMENS	6ES7 954-8LC02-0AA0	SIMATIC MEMORY CARD, 4MB
	1	SIEMENS	6AG1 221-1BH32-4XB0	16 DIGITAL INPUT MODULE
	1	SIEMENS	6AG1 231-4HD32-4XB0	4 CHANNEL ANALOG INPUT MODULE
	1	SIEMENS	6AG1 241-1AH32-4XB0	COMMUNICATION MODULE, RS232
7 N	2	SQUARE D	PK5GTA	EQUIPMENT GROUND BAR, 5-POINT
O	1	CITEL	DS70R-120	120VAC SURGE SUPPRESSOR, BASE
P	1	CITEL	DS220S-24DC	24VDC SURGE SUPPRESSOR
Q	4	CITEL	DLAW-24D3	ANALOG SURGE SUPPRESSOR, 24VDC
R	10	FINDER	4CP190245050	RELAY, STATUS, SPRING, SPDT, 24VDC
	9	FINDER	09752	2-WAY JUMPER LINK
S	12	WAGO	2002-1401	TERMINAL, 2002, SPRING, GRAY
T	2	WAGO	2002-1492	TERMINAL END / PART. PLATE, ORANGE
U	11	WAGO	2002-400	ADJACENT JUMPER, 2-WAY CONTINUOUS
V	16	WAGO	249-116	TERMINAL END STOP, GRAY
8 W	X	MDS	TRANSNET 900	RADIO, SPREAD-SPECTRUM, UNLICENSED
8	X	MDS	03-4124S01	DIN RAIL MOUNT KIT
8	1	TFS, INC.	-	RADIO CABLE, RS232, 3' 9-PIN
8	1	TFS, INC.	-	RADIO CABLE, RS232, 3', 9F/25M
8	1	TFS, INC	12V3A	VOLTAGE REGULATOR
	1	OEM	-	RADIO MOUNT / SHELF, MDS 9710
8 X	1	-	-	6' NM /TNC MRA 195 JUMPER
	1	-	-	NM/TNCF ADAPTER
Y	4	WAGO	857-411	ANALOG SIGNAL ISOLATOR
Z	5	WAGO	209-191	SEPARATOR, ORANGE
A1	1	PHOENIX CONTACT	2313931	NETWORK ISOLATOR
B1	1	SIEMENS	6XV1840-2AH10	PROFINET CABLE, FAST CONNECT
	2	SIEMENS	6AG1901-1BB10-7AA0	PROFINET CONNECTOR, SIPLUS
C1	5	WAGO	2004-1201	TERMINAL, 2004, SPRING, GRAY
D1	1	WAGO	2004-1492	TERMINAL END / PART. PLATE, 2004, ORANGE
E1	65	WAGO	2102-5301	TERMINAL, 2101, SPRING/LEVER, GRAY
F1	4	WAGO	2102-1391	TERMINAL END / PART. PLATE, 2102, GRAY

GENERAL NOTES:

1. REFER TO "433 LIFT STATION SCADA CONTROLS SPECIFICATION" FOR FURTHER DETAILS THAT MUST BE ADHERED TO.
2. REFER TO NOTES AND DETAILS ON ALL DRAWING SHEETS FOR MORE MANUFACTURING DETAILS.
3. BATTERY ENCLOSURE IS TO BE INSTALLED IN THE FIELD. TWO 12VDC BATTERIES ARE WIRED IN SERIES AND MOUNTED INSIDE BATTERY ENCLOSURE (EXTERNAL TO CONTROL PANEL).
4. ALL PLC I/O WIRING INTERNAL TO THE CONTROL PANEL SHALL BE #18 AWG.
5. ALL WIRES IN CONTROL PANEL SHALL BE TERMINATED WITH FERRULES.
6. ALL MOUNTING SCREWS SHALL BE STAINLESS STEEL, DRILLED AND TAPPED (NO SELF-TAPPING SCREWS ARE ALLOWED).
7. ENSURE GOOD ELECTRICAL CONTACT BETWEEN BACK PANEL AND ALL MECHANICAL GROUND CONNECTIONS.
8. TECHNICAL FIELD SERVICES, INC., JACKSONVILLE, FLORIDA (904) 278-5250

NO.	BY	DATE	REVISIONS
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1.	EM	11/01/21	AS-BUILT

ELECTRICAL SCHEMATIC
EG CONTROLS
11790 PHILIPS HIGHWAY
JACKSONVILLE, FLORIDA 32256

904-292-0110

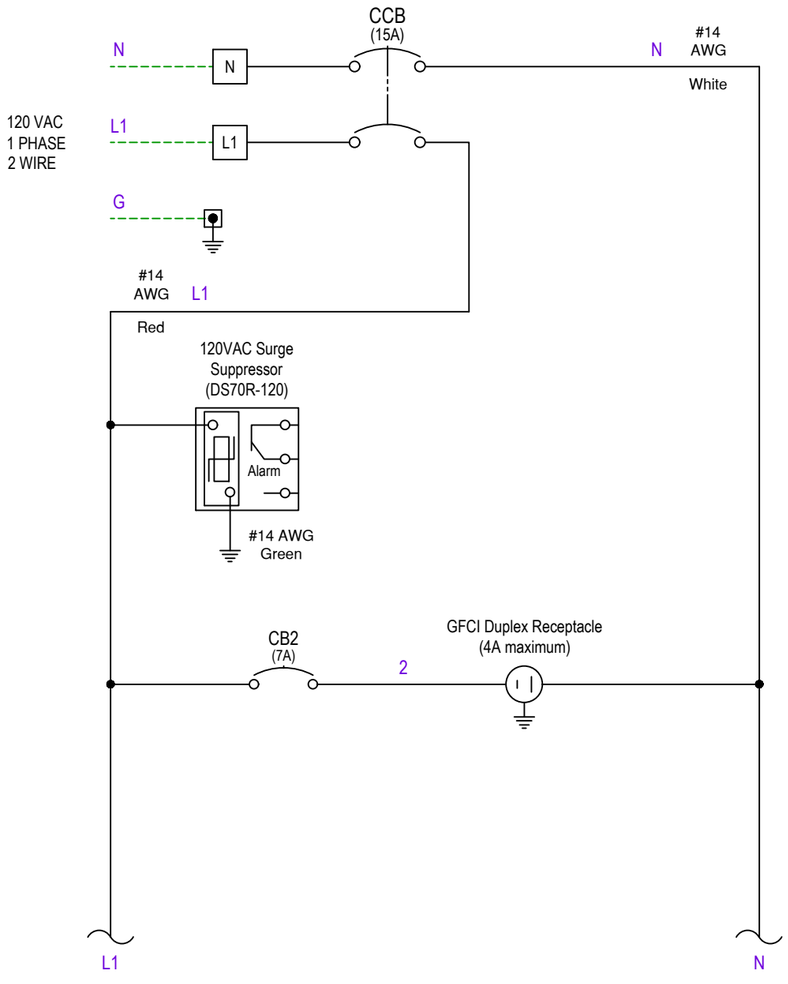
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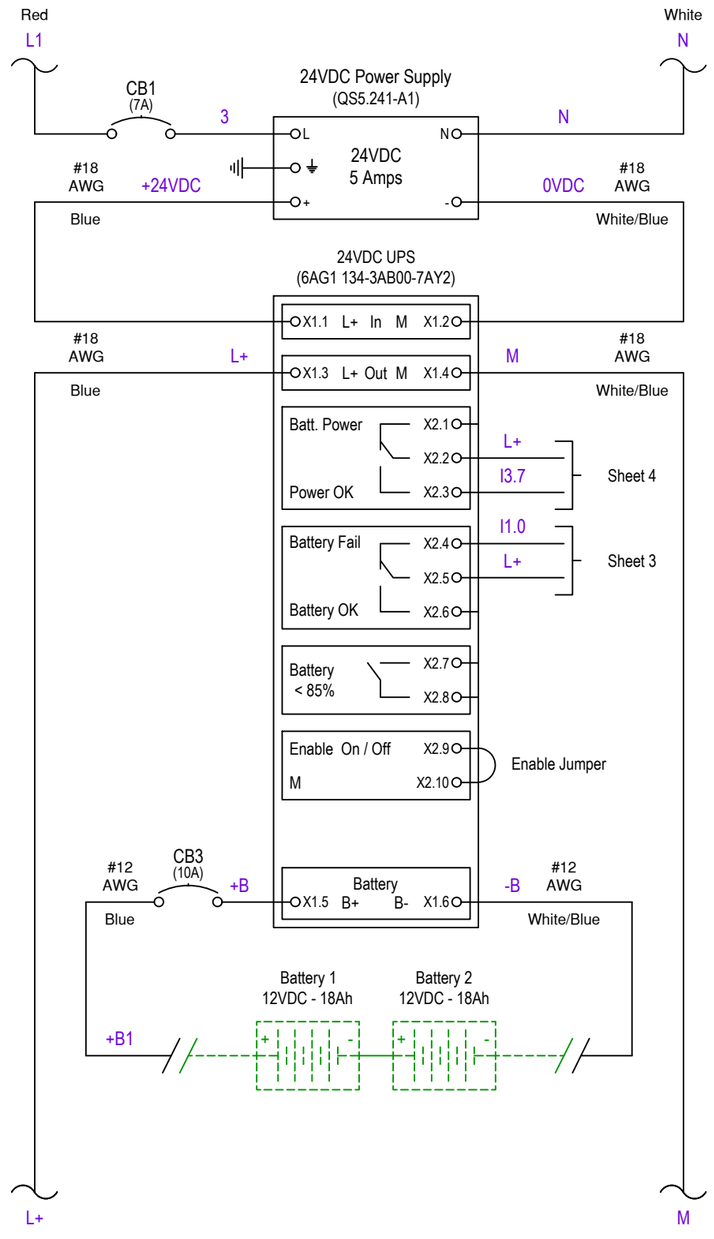
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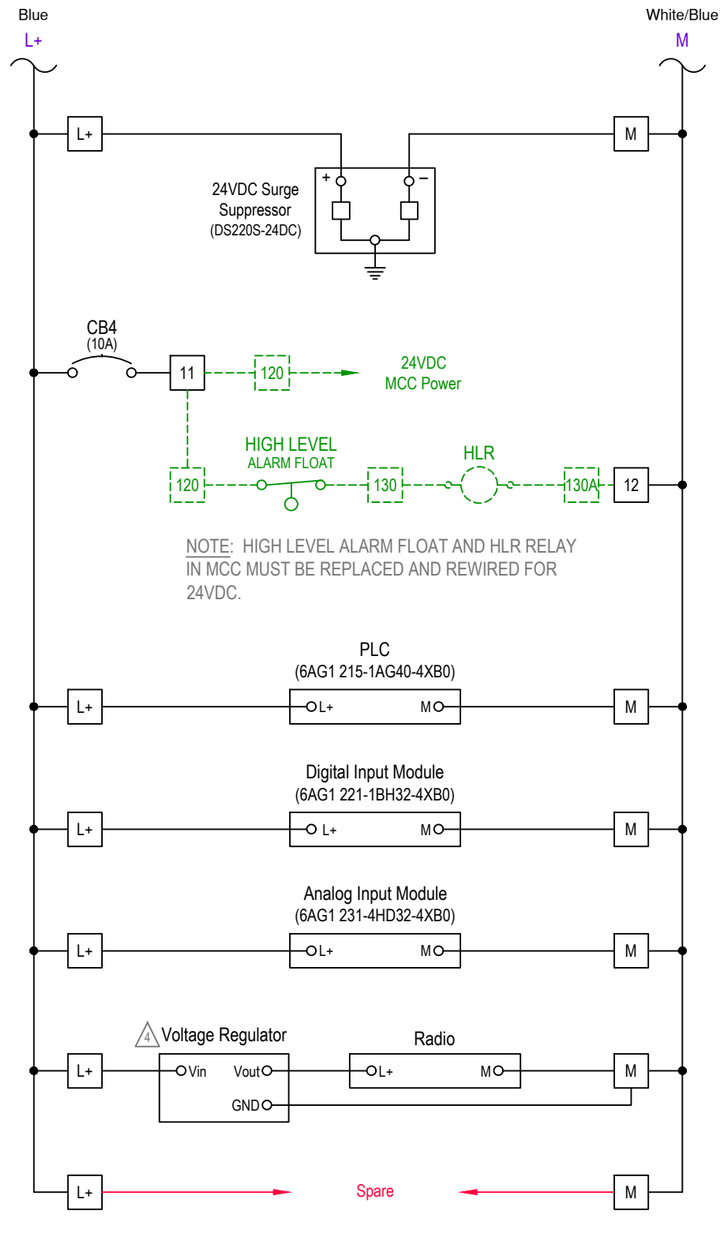
SHEET TITLE: BACK PANEL LAYOUT
PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL
JOB No: 270710
SHEET 1 OF 11

GENERAL NOTES:

1. ALL CONTROL WIRING AND 12-18 AWG SHALL BE STRANDED TIN-PLATED COPPER WIRE. APPLY DIELECTRIC GREASE TO ENDS TO PREVENT CORROSION.
2. ALL WIRES IN CONTROL PANEL SHALL BE TERMINATED WITH FERRULES.
3. USE 6MM FERRULES FOR WIRES TERMINATING AT PLC.
4. VOLTAGE REGULATOR REQUIRED FOR MDS 9710 RADIO ONLY.







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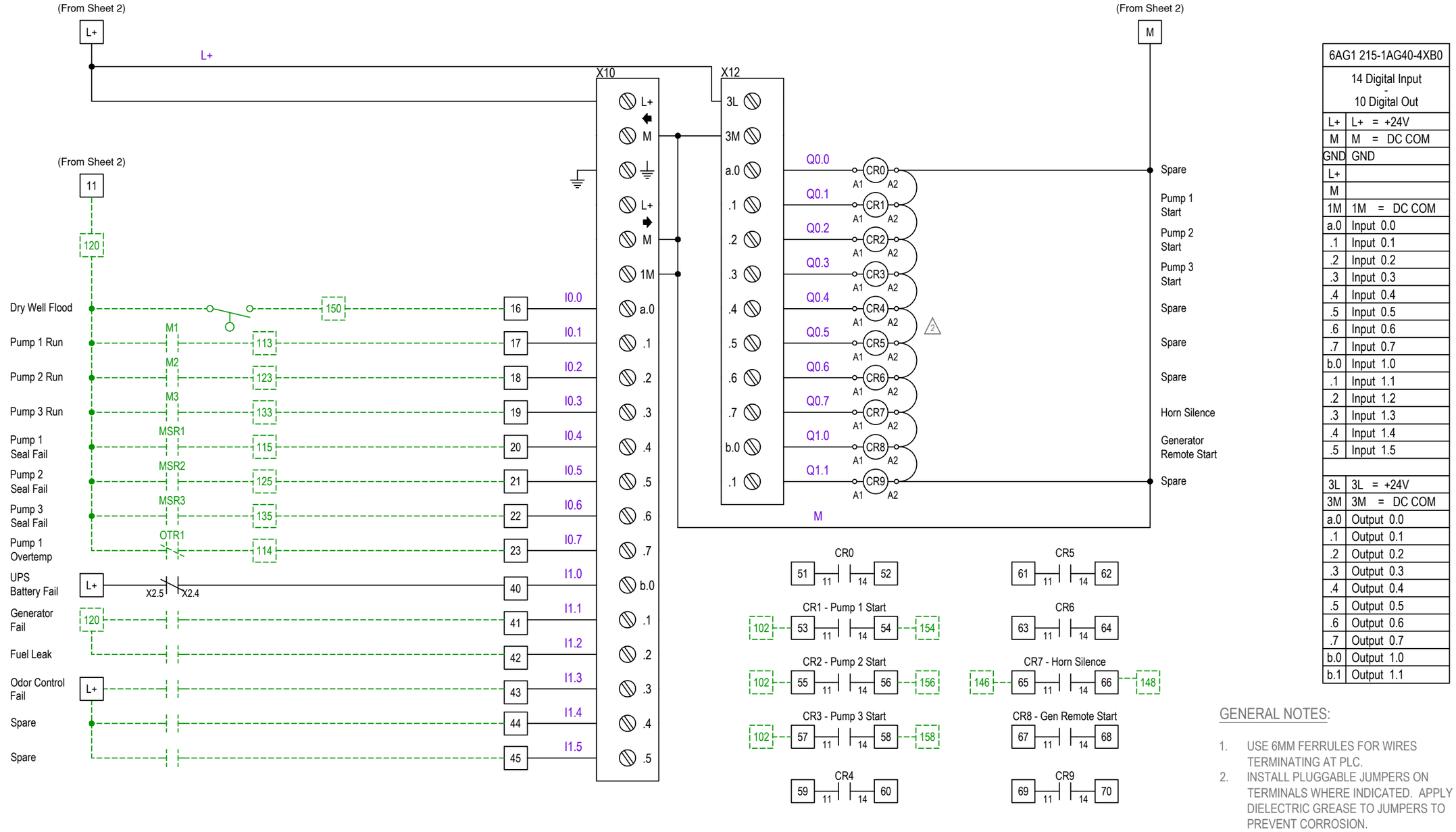
ELECTRICAL SCHEMATIC
EG CONTROLS
11790 PHILIPS HIGHWAY
JACKSONVILLE, FLORIDA 32256
904-292-0110

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DESIGNER:	SY
DRAWN BY:	EM
DATE:	07/12/21
CHECKED BY:	SY
DATE:	07/13/21

SHEET TITLE: WIRING DIAGRAM
PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL
JOB No: 270710
SHEET 2 OF 11

RACK: 0 SLOT: 1



6AG1 215-1AG40-4XB0	
14 Digital Input - 10 Digital Out	
L+	L+ = +24V
M	M = DC COM
GND	GND
L+	
M	
1M	1M = DC COM
a.0	Input 0.0
.1	Input 0.1
.2	Input 0.2
.3	Input 0.3
.4	Input 0.4
.5	Input 0.5
.6	Input 0.6
.7	Input 0.7
b.0	Input 1.0
.1	Input 1.1
.2	Input 1.2
.3	Input 1.3
.4	Input 1.4
.5	Input 1.5
3L	3L = +24V
3M	3M = DC COM
a.0	Output 0.0
.1	Output 0.1
.2	Output 0.2
.3	Output 0.3
.4	Output 0.4
.5	Output 0.5
.6	Output 0.6
.7	Output 0.7
b.0	Output 1.0
b.1	Output 1.1

GENERAL NOTES:

1. USE 6MM FERRULES FOR WIRES TERMINATING AT PLC.
2. INSTALL PLUGGABLE JUMPERS ON TERMINALS WHERE INDICATED. APPLY DIELECTRIC GREASE TO JUMPERS TO PREVENT CORROSION.

NO.	BY	DATE	REVISIONS
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1.	EM	11/01/21	AS-BUILT

ELECTRICAL SCHEMATIC
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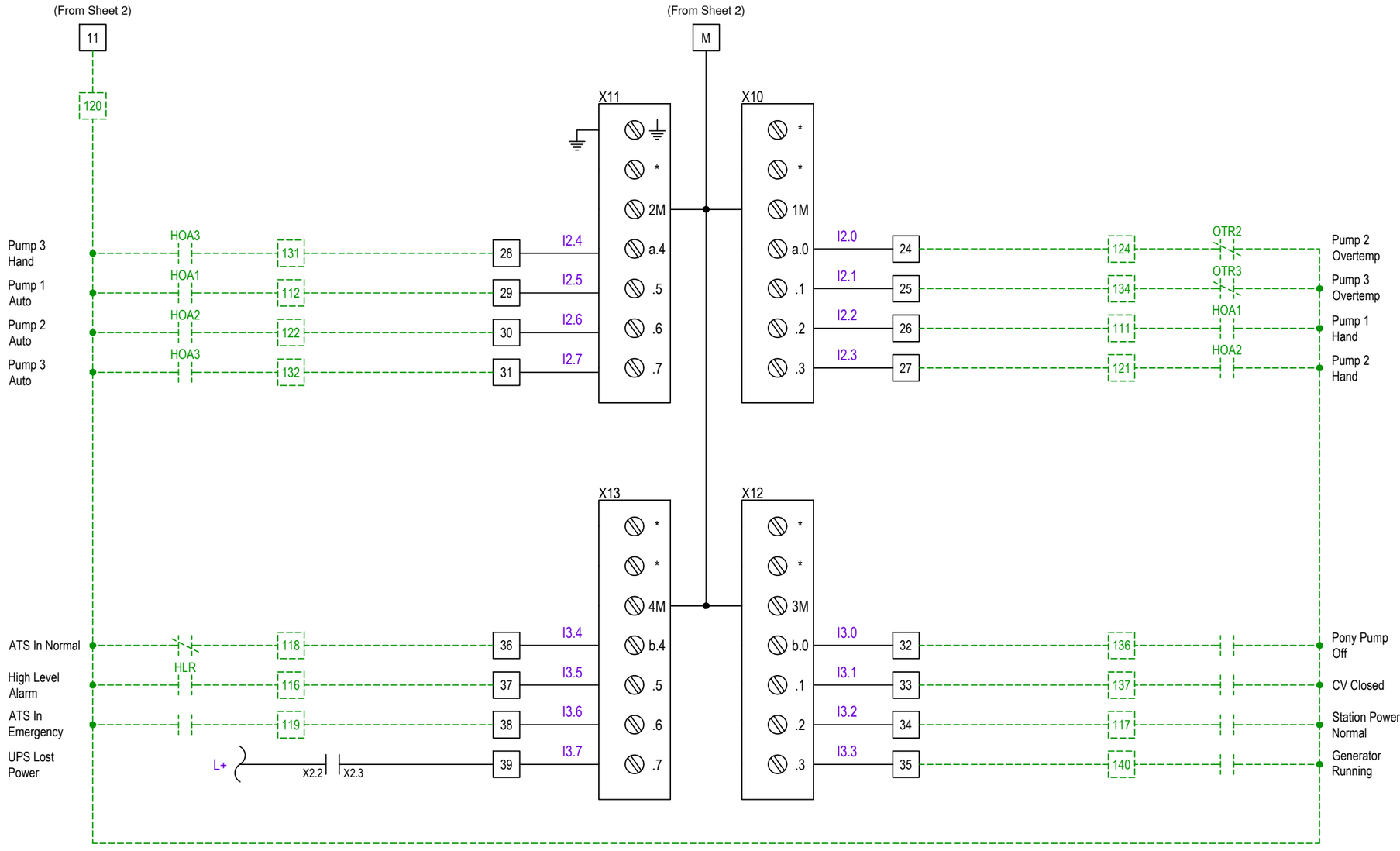
SHEET TITLE: PLC DIGITAL I/O

PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL

JOB No: 270710

SHEET 3 OF 11

RACK: 0 SLOT: 2



6AG1 221-1BH32-4XB0	
16 Digital Input	
*	
*	
1M	M = DC COM
a.0	Input 2.0
.1	Input 2.1
.2	Input 2.2
.3	Input 2.3
GND	GND
*	
2M	2M = DC COM
.4	Input 2.4
.5	Input 2.5
.6	Input 2.6
.7	Input 2.7
*	
*	
3M	3M = DC COM
b.0	Input 3.0
.1	Input 3.1
.2	Input 3.2
.3	Input 3.3
*	
*	
4M	4M = DC COM
.4	Input 3.4
.5	Input 3.5
.6	Input 3.6
.7	Input 3.7

GENERAL NOTES:

1. USE 6MM FERRULES FOR WIRES TERMINATING AT PLC.

NO.	BY	DATE	REVISIONS
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1.	EM	11/01/21	AS-BUILT

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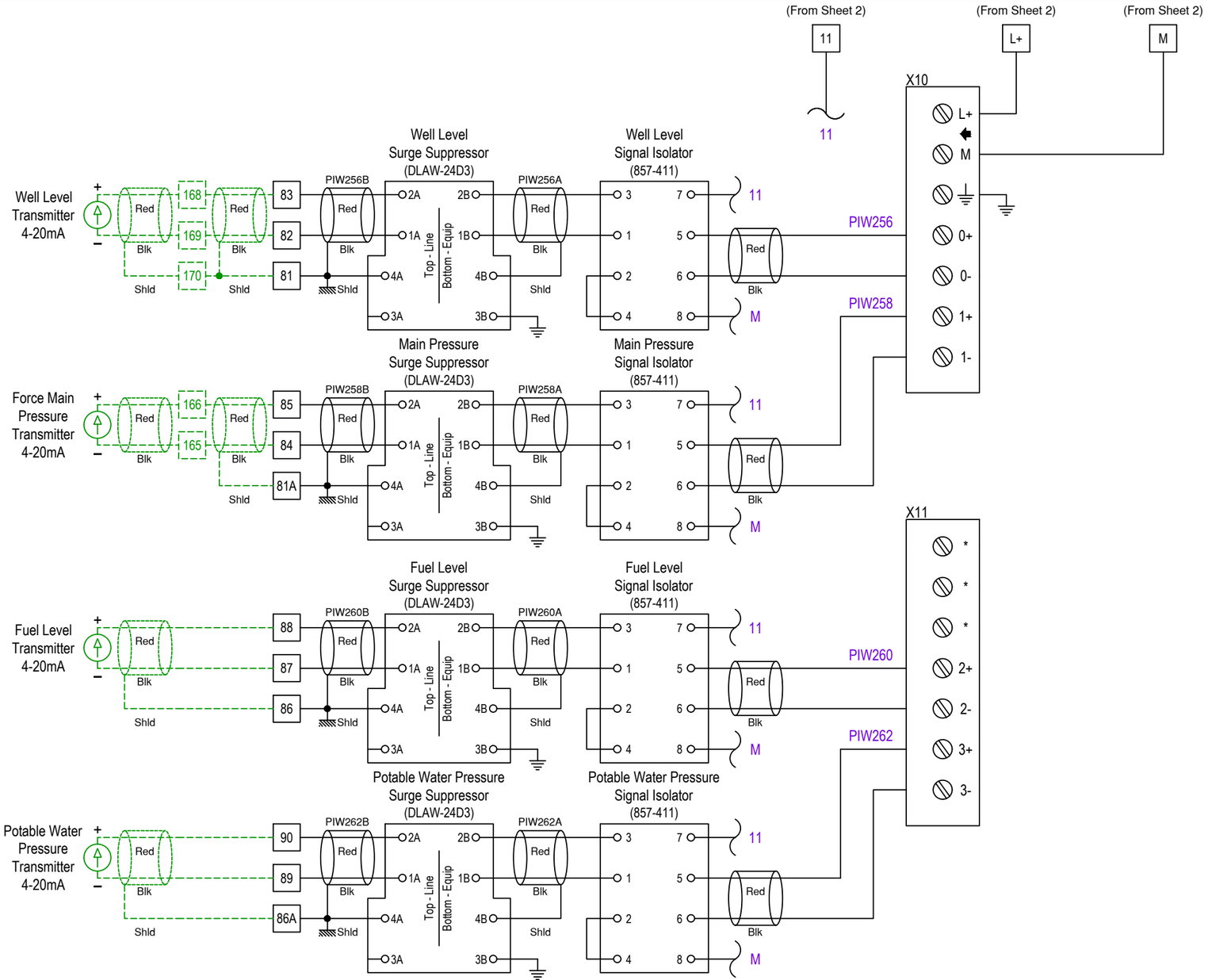
SHEET TITLE: PLC DIGITAL I/O

PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL

JOB No: 270710

SHEET 4 OF 11

RACK: 0 SLOT: 3



6AG1 231-4HD32-4XB0	
4 Analog Input	
L+	L+ = +24V
M	M = DC COM
GND	GND
0+	CH0 + => PIW256
0-	CH0 -
1+	CH1 + => PIW258
1-	CH1 -
*	
*	
*	
2+	CH2 + => PIW260
2-	CH2 -
3+	CH3 + => PIW262
3-	CH3 -

GENERAL NOTES:

1. USE 6MM FERRULES FOR WIRES TERMINATING AT PLC.
2. ALL ANALOG SIGNAL WIRING SHALL BE SHIELDED CABLE WITH THE SHIELD GROUNDED ONLY AT ONE POINT.

NO.	BY	DATE	REVISIONS
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1.	EM	11/01/21	AS-BUILT

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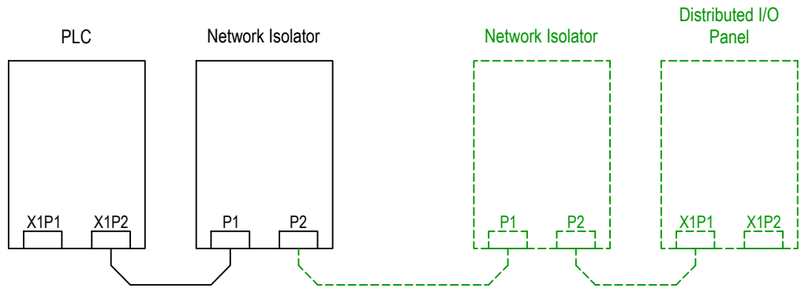
SHEET TITLE: PLC ANALOG I/O

PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL

JOB No: 270710

SHEET 5 OF 11

PROFINET NETWORK DIAGRAM



NO.	BY	DATE	REVISIONS
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1.	EM	11/01/21	AS-BUILT

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DRAWN BY:	EM
DATE:	07/12/21
CHECKED BY:	SY
DATE:	07/13/21

SHEET TITLE: NETWORK CONNECTION DIAGRAM

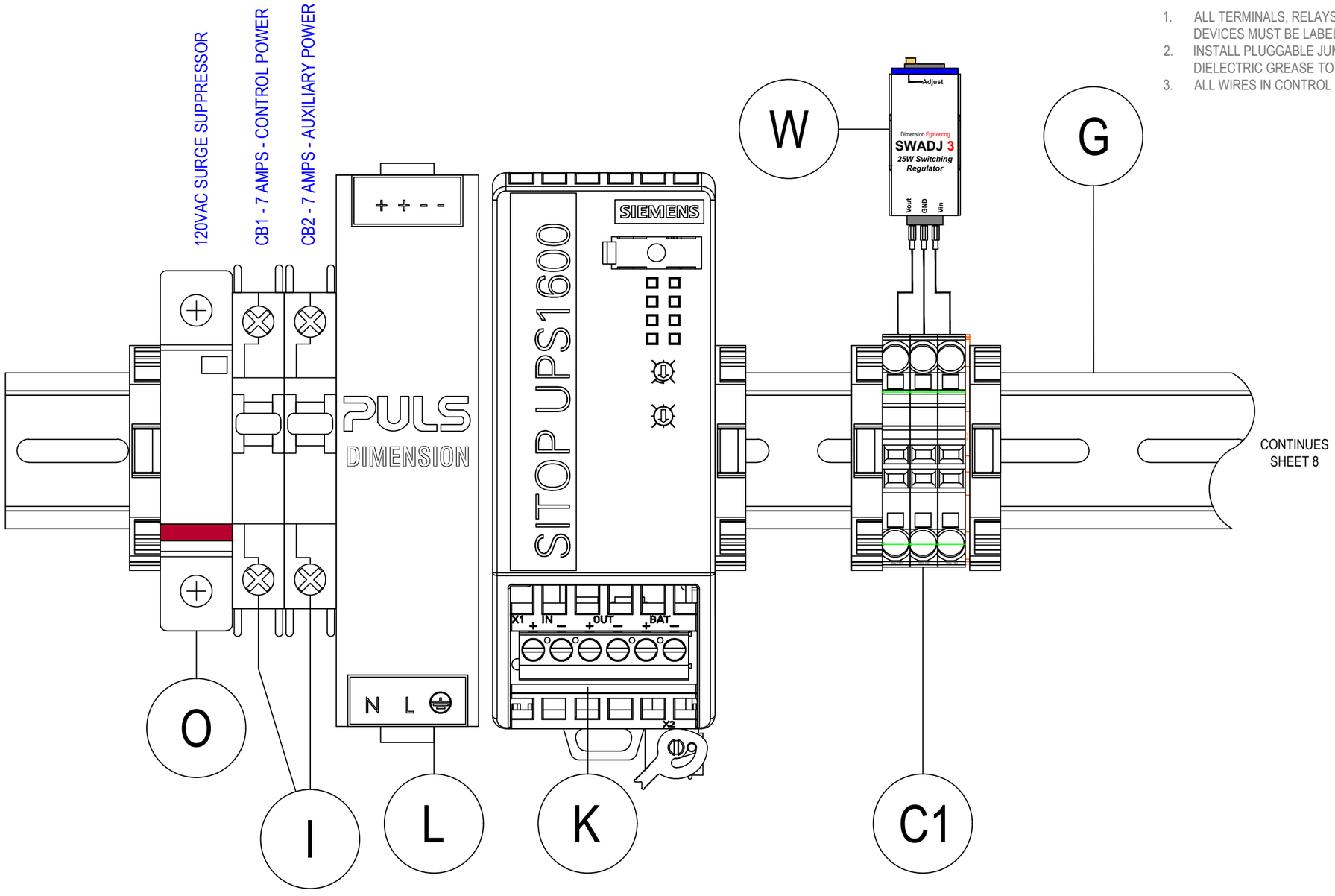
PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL

JOB No: 270710

SHEET 6 OF 11

GENERAL NOTES:

1. ALL TERMINALS, RELAYS, SURGE SUPPRESSORS, BREAKERS, AND OTHER DEVICES MUST BE LABELED.
2. INSTALL PLUGGABLE JUMPERS (U) ON TERMINALS WHERE INDICATED. APPLY DIELECTRIC GREASE TO JUMPERS TO PREVENT CORROSION.
3. ALL WIRES IN CONTROL PANEL SHALL BE TERMINATED WITH FERRULES.



NO.	BY	DATE	REVISIONS
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1.	EM	11/01/21	AS-BUILT

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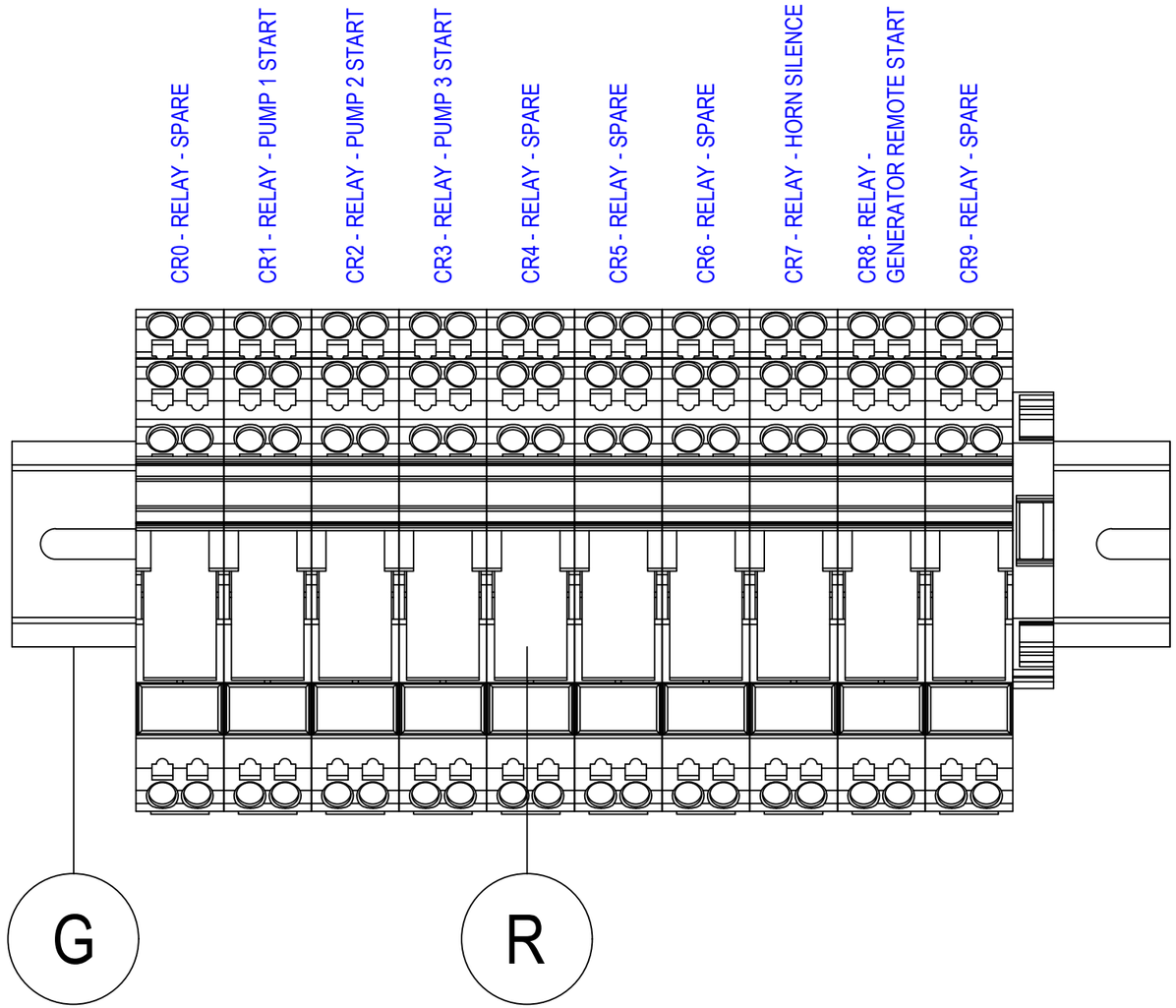
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DATE:	07/13/21

SHEET TITLE: CONTROL POWER LAYOUT

PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL

JOB No: 270710

SHEET 7 OF 11



GENERAL NOTES:

1. ALL TERMINALS, RELAYS, SURGE SUPPRESSORS, BREAKERS, AND OTHER DEVICES MUST BE LABELED.
2. INSTALL PLUGGABLE JUMPERS (U) ON TERMINALS WHERE INDICATED. APPLY DIELECTRIC GREASE TO JUMPERS TO PREVENT CORROSION.
3. ALL WIRES IN CONTROL PANEL SHALL BE TERMINATED WITH FERRULES.

NO.	BY	DATE	REVISIONS
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1.	EM	11/01/21	AS-BUILT

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904-292-0110

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DESIGNER:	SY
DRAWN BY:	EM
DATE:	07/12/21
CHECKED BY:	SY
DATE:	07/13/21

SHEET TITLE: RELAY LAYOUT

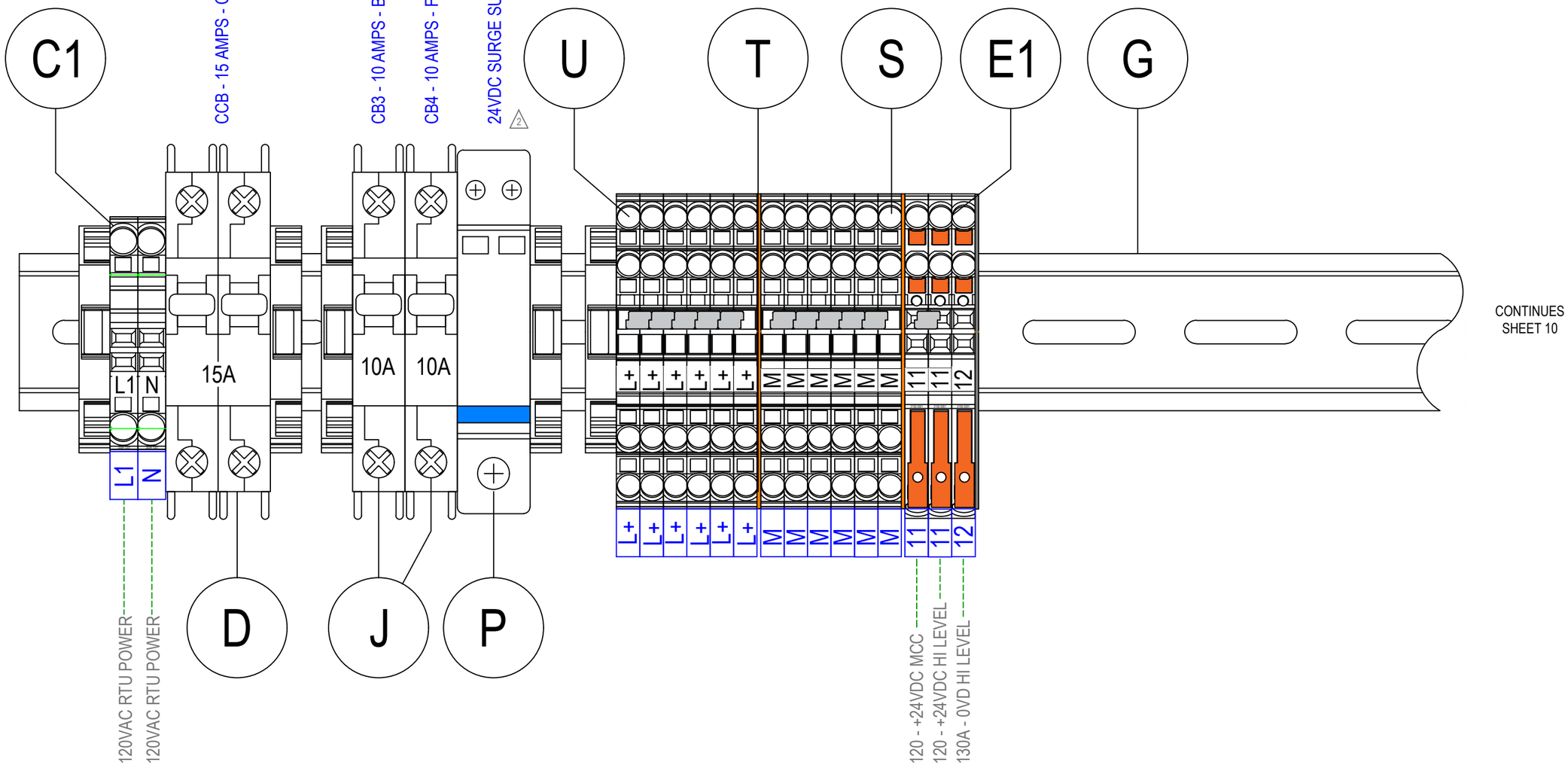
PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL

JOB No: 270710

SHEET 8 OF 11

GENERAL NOTES:

1. ALL TERMINALS, RELAYS, SURGE SUPPRESSORS, BREAKERS, AND OTHER DEVICES MUST BE LABELED.
2. INSTALL PLUGGABLE JUMPERS (U) ON TERMINALS WHERE INDICATED. APPLY DIELECTRIC GREASE TO JUMPERS TO PREVENT CORROSION.
3. ALL WIRES IN CONTROL PANEL SHALL BE TERMINATED WITH FERRULES.



NO.	BY	DATE	REVISIONS
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1.	EM	11/01/21	AS-BUILT

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DRAWN BY:	EM
DATE:	07/12/21
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DATE:	07/13/21

SHEET TITLE: POWER TERMINAL BLOCK LAYOUT

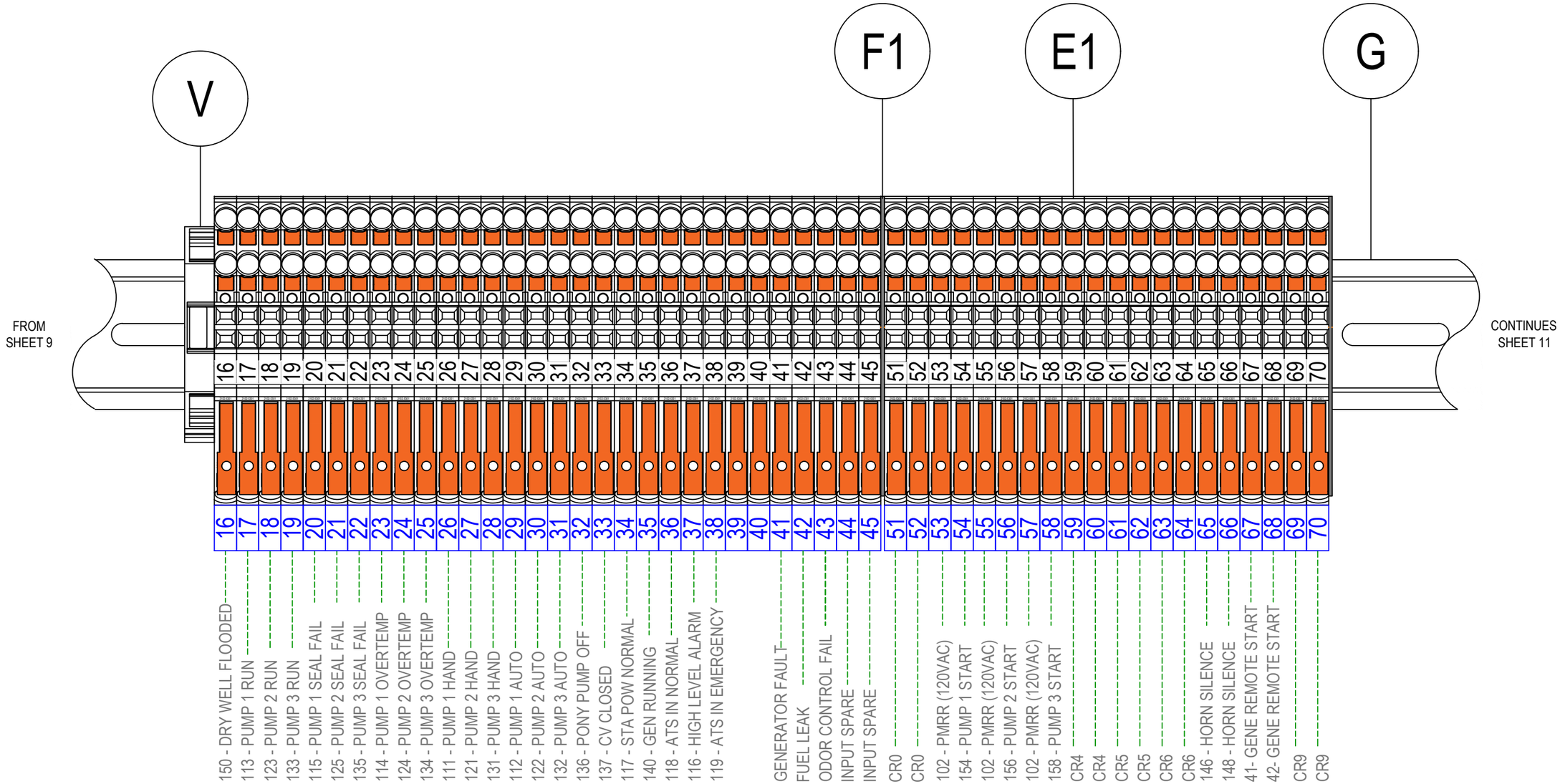
PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL

JOB No: 270710

SHEET 9 OF 11

GENERAL NOTES:

1. ALL TERMINALS, RELAYS, SURGE SUPPRESSORS, BREAKERS, AND OTHER DEVICES MUST BE LABELED.
2. INSTALL PLUGGABLE JUMPERS (U) ON TERMINALS WHERE INDICATED. APPLY DIELECTRIC GREASE TO JUMPERS TO PREVENT CORROSION.
3. ALL WIRES IN CONTROL PANEL SHALL BE TERMINATED WITH FERRULES.



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1.	EM	11/01/21	AS-BUILT

ELECTRICAL SCHEMATIC

EG CONTROLS
11790 PHILIPS HIGHWAY
JACKSONVILLE, FLORIDA 32256

904-292-0110

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DESIGNER:	SY
DRAWN BY:	EM
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DATE:	07/13/21

SHEET TITLE: REMOTE TERMINAL BLOCK LAYOUT

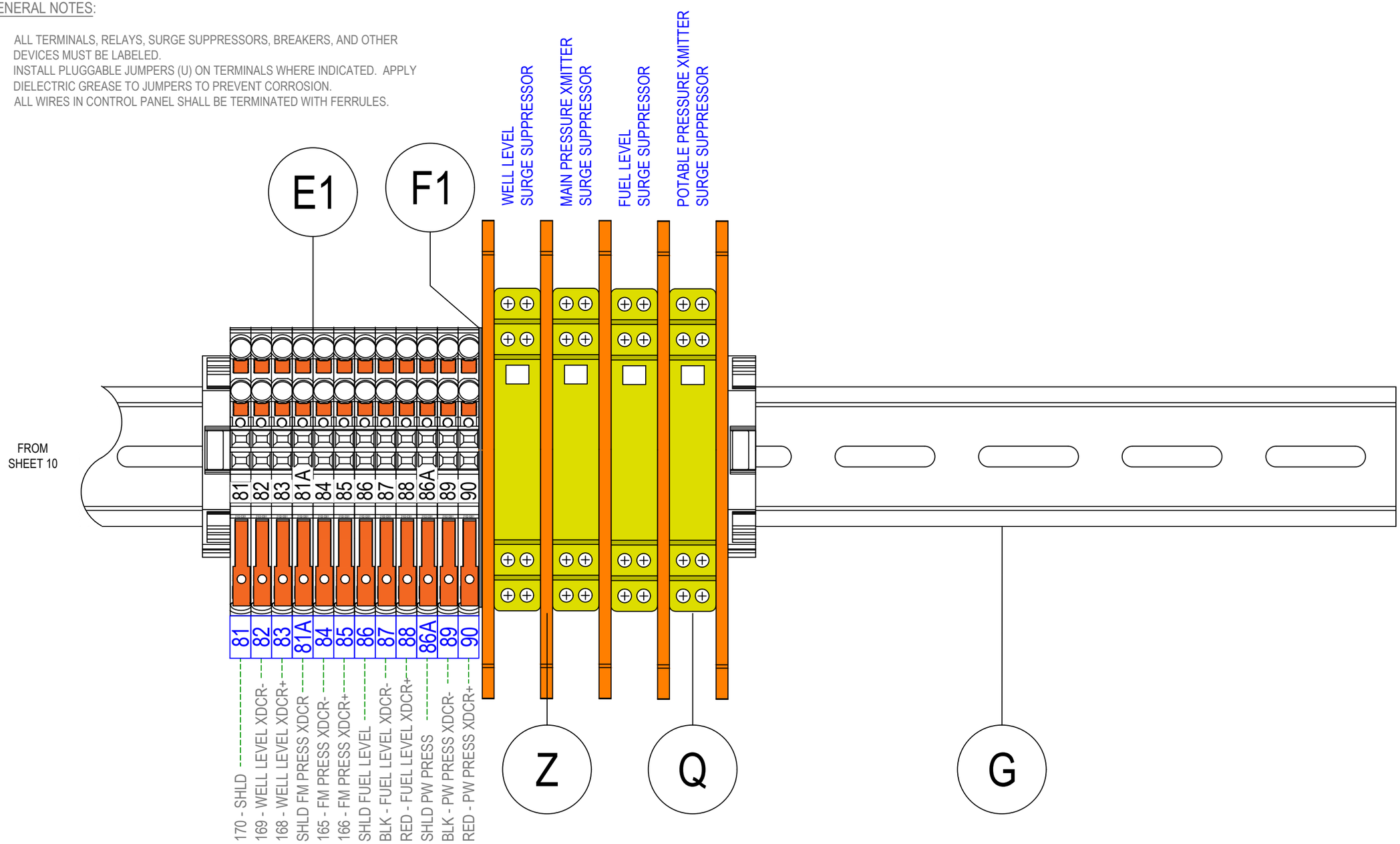
PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL

JOB No: 270710

SHEET 10 OF 11

GENERAL NOTES:

1. ALL TERMINALS, RELAYS, SURGE SUPPRESSORS, BREAKERS, AND OTHER DEVICES MUST BE LABELED.
2. INSTALL PLUGGABLE JUMPERS (U) ON TERMINALS WHERE INDICATED. APPLY DIELECTRIC GREASE TO JUMPERS TO PREVENT CORROSION.
3. ALL WIRES IN CONTROL PANEL SHALL BE TERMINATED WITH FERRULES.



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1.	EM	11/01/21	AS-BUILT

ELECTRICAL SCHEMATIC

EG CONTROLS
11790 PHILIPS HIGHWAY
JACKSONVILLE, FLORIDA 32256

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DESIGNER:	SY
DRAWN BY:	EM
DATE:	07/12/21
CHECKED BY:	SY
DATE:	07/13/21

SHEET TITLE: ANALOG TERMINAL BLOCK LAYOUT

PROJECT: RTU BACK PLATES
RETROFIT RTU LIFT STATION PANEL

JOB No: 270710

SHEET 11 OF 11