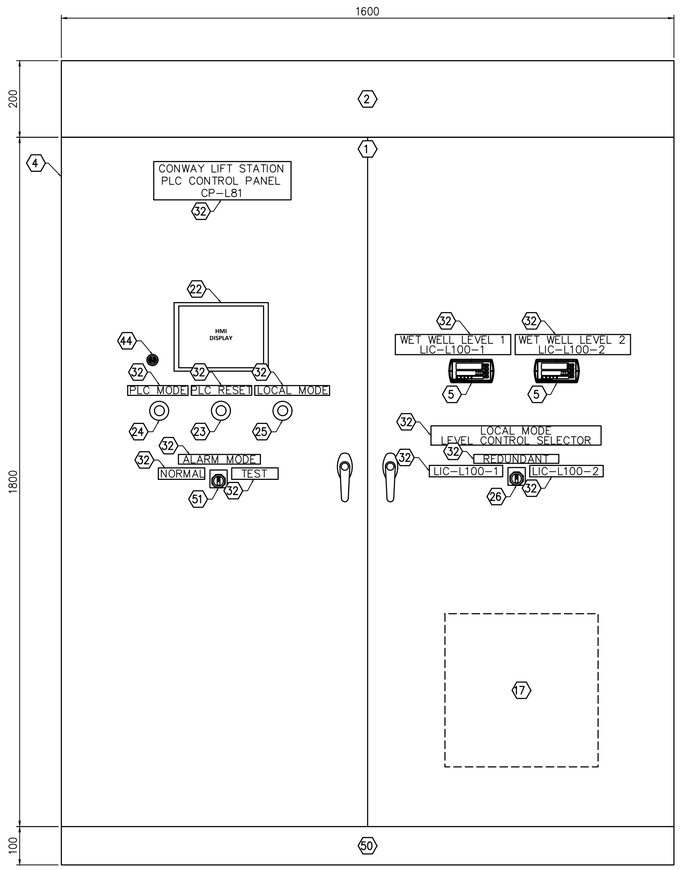
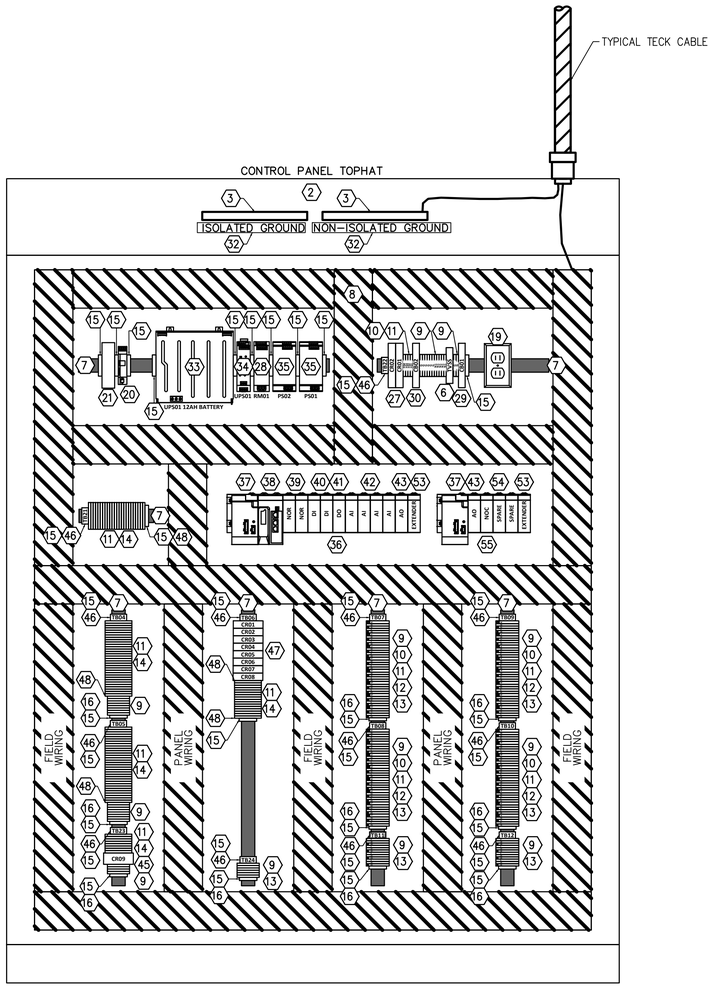
NOTES:

1. CABLING AND PLUG-IN BRIDGES NOT SHOWN ON PANEL LAYOUT.
2. ALL FUSES TO BE PROVIDED. TWO SPARE FUSES OF EACH SIZE ARE TO BE PROVIDED.
3. 120VAC POWER WIRING TO BE MINIMUM 12AWG STRANDED COPPER UNLESS OTHERWISE STATED.
4. ANALOG AND CONTROL WIRING TO BE 16AWG STRANDED COPPER UNLESS OTHERWISE STATED.
5. FUNCTIONALITY OF ALL COMPONENTS AND WIRING TO BE TESTED AND DOCUMENTED. CONNECTION DETAILS TO BE VERIFIED AND DOCUMENTED.
6. ALL MAJOR EQUIPMENT TO BE IDENTIFIED WITH LAMACOIDS TO CITY STANDARDS.
7. TERMINAL BLOCK AND WIRE NUMBERING TO BE MARKED AS INDICATED ON DRAWINGS.
8. 24VDC AND 120VAC WIRING TO BE RUN IN SEPARATE PANDUIT.



FRONT PANEL
SCALE: 1:8



NTERIOR
SCALE: 1:8

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	MANUFACTURER	CATALOG NUMBER
1	1	TWO DOOR FLOOR MOUNTED TYPE 12 ENCLOSURE W/ MOUNTING PLATE	HOFFMAN	P2KOD18164E
2	1	TOP HAT ASSEMBLY	HOFFMAN	P2TMM2166
3	2	GROUND BAR	ILSCO	D167-14
4	2	EXTERIOR SIDE PANEL	HOFFMAN	P2CS184
5	2	PROCESS METER, 4-20MA OUT, 4 RELAY, 24VDC	PRECISION DIGITAL	PD6000-7H7
6	1	TYPE 3 SURGE PROTECTION DEVICE, MODULE AND BASE	PHOENIX CONTACT	2907918
7	AS REQ'D	35MM DIN RAIL	PHOENIX CONTACT	801733
8	AS REQ'D	100MM X 100MM NARROW SLOT WIRING DUCT AND COVER, GRAY	PANDUIT	MC100X100IG2
9	AS REQ'D	FEED THROUGH TERMINAL	PHOENIX CONTACT	3046184
10	AS REQ'D	FUSED TERMINAL	PHOENIX CONTACT	3046142
11	AS REQ'D	FUSE CONNECTOR	PHOENIX CONTACT	3036806
12	AS REQ'D	DISCONNECT TERMINAL	PHOENIX CONTACT	3046139
13	AS REQ'D	GROUND TERMINAL	PHOENIX CONTACT	3046207
14	AS REQ'D	DOUBLE LEVEL FUSED TERMINAL	PHOENIX CONTACT	3044720
15	AS REQ'D	TERMINAL END CLAMP	PHOENIX CONTACT	1201442
16	AS REQ'D	TERMINAL END PLATE	PHOENIX CONTACT	3047141
17	1	DRAWING HOLDER, INSIDE PANEL DOOR	HOFFMAN	ADP2
18	AS REQ'D	PLUG-IN BRIDGE	PHOENIX CONTACT	3030365
19	1	DIN RAIL MOUNTED RECEPTACLE, 120VAC, 15A	PHOENIX CONTACT	5600462
20	1	PSTN MODEM - SALVAGE EXISTING	PHOENIX CONTACT	2313067
21	1	WIRELESS MODEM - SUPPLIED BY OWNER	SIERRA WIRELESS	RV50X
22	1	12" HMI TOUCHSCREEN	SCHNEIDER ELECTRIC	HMI GTO 6310
23	1	PUSHBUTTON, 22MM, NO, RED	SCHNEIDER ELECTRIC	ZB4BA4
24	1	PUSHBUTTON, 22MM, NO, BLUE	SCHNEIDER ELECTRIC	ZB4BA6
25	1	PUSHBUTTON, 22MM, NC, YELLOW	SCHNEIDER ELECTRIC	ZB4BA5
26	1	SELECTOR SWITCH, 3 POSITION, MAINTAINED	SCHNEIDER ELECTRIC	ZB4BD3
27	2	RELAY AND BASE. 120VAC. SPDT W/ LED AND TEST BUTTON	OMRON	G2R-1-SNI AC120 (S), P2RF-05
28	1	REDUNDANCY MODULE	PHOENIX CONTACT	2320173
29	1	CIRCUIT BREAKER, DIN RAIL MOUNTED, 10A	PHOENIX CONTACT	TMC 81B 10A
30	1	CIRCUIT BREAKER, DIN RAIL MOUNTED, 5A	PHOENIX CONTACT	TMC 81B 05A
31	1	RS-232 SERIAL COMMUNICATION CABLE, RJ45 TO DB9 CONNECTOR	--	--
32	AS REQ'D	LAMACOID	--	--
33	1	QUINT SERIES BATTERY, 24VDC, 12AH	PHOENIX CONTACT	1274119
34	1	QUINT SERIES UNINTERRUPTIBLE POWER SUPPLY, 24VDC	PHOENIX CONTACT	2320225
35	2	QUINT SERIES POWER SUPPLY, 24VDC, 10A	PHOENIX CONTACT	2866763
36	1	PLC RACK BACK PLANE, 12 SLOT	SCHNEIDER ELECTRIC	BME XBP 1200
37	2	PLC POWER SUPPLY	SCHNEIDER ELECTRIC	BMX CPS 3020
38	1	M580 LOGIC UNIT	SCHNEIDER ELECTRIC	BME P58 3020
39	2	NOR COMMUNICATION CARD	SCHNEIDER ELECTRIC	BMX NOR 0200H
40	2	PLC DISCRETE INPUT CARD C/W 40-WAY CONNECTOR WITH FLYING LEADS	SCHNEIDER ELECTRIC	BMX DDI 3202K / BMX FCW 303
41	1	PLC DISCRETE OUTPUT CARD C/W SCREW CLAMP TERMINAL BLOCK	SCHNEIDER ELECTRIC	BMX DDO 1602 / BMX FTB 2010
42	4	PLC ANALOG INPUT CARD C/W 28-WAY REMOVABLE TERMINAL BLOCK WITH FLYING LEADS	SCHNEIDER ELECTRIC	BMX AMI 0810 / BMX FTW 308S
43	1	PLC ANALOG OUTPUT CARD C/W 28-WAY REMOVABLE TERMINAL BLOCK WITH FLYING LEADS	SCHNEIDER ELECTRIC	BMX AMO 0410 / BMX FTW 308S
44	1	PANEL MOUNTED RJ45 PORT FOR ETHERNET INTERFACE	SCHNEIDER ELECTRIC	XB5PRJ45
45	2	RELAY AND BASE. 24VDC, 4PDT W/ LED AND DIODE	OMRON	MY4(Z)IN-D2 (S), PYF14A-N
46	AS REQ'D	TERMINAL BLOCK IDENTIFIER	PHOENIX CONTACT	1004348
47	18	RELAY AND BASE. 24VDC, SPDT W/ LED AND DIODE	OMRON	G2R-1-SND DC24 (S), P2RF-05
48	AS REQ'D	DOUBLE LEVEL TERMINAL END PLATE	PHOENIX CONTACT	3047293
49	AS REQ'D	ETHERNET PATCH CABLE, CAT6	--	--
50	1	SEALED PLINTH PANEL BASE	HOFFMAN	P2B1164
51	1	SELECTOR SWITCH, 2 POSITION, MAINTAINED	SCHNEIDER ELECTRIC	ZB4BD2
52	1	PLC RACK BACK PLANE, 4 SLOT	SCHNEIDER ELECTRIC	BME XBP 0400
53	2	PLC RACK EXTENDER W/ CABLE AND LINE TERMINATORS	SCHNEIDER ELECTRIC	BMX XBE 2005
54	3	SPARE SLOT COVER	SCHNEIDER ELECTRIC	BMX XEM 010
55	1	NOC ETHERNET NETWORK CARD	SCHNEIDER ELECTRIC	BME NOC 0311

NO.	DRAWING NUMBER	REFERENCE DRAWING TITLE
10		
9		
8		
7		
6		
5		
4	1-0131L-A0002	AUTOMATION PLAN
3	1-0131L-A0004	NETWORK BLOCK DIAGRAM
2	1-0131L-A0005	POWER DISTRIBUTION WIRING SCHEMATIC - PLC CONTROL PANEL CP-L81
1	1-0131L-A0014	AUTOMATIC PUMP CONTROL WIRING SCHEMATIC - PLC CONTROL PANEL CP-L81

REFERENCE DRAWINGS

0 160 320 480 640 800
SCALE: 1:8

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES
UNLESS OTHERWISE NOTED

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
MPE, a division of Englobe Corp.
No. 4968 Date: MAR 19, 2024

B.M.
ELEV.

NO.	REVISIONS	DATE	BY
0	ISSUED FOR CONSTRUCTION	2024-03-19	

MPE a division of Englobe

DESIGNED BY	J. SWAIN	CHECKED BY	R. OFSTIE
DRAWN BY	J. SWAIN	APPROVED BY	R. OFSTIE
SCALE: HORIZONTAL VERTICAL	1:8	RELEASED FOR CONSTRUCTION	
DATE	2024-03-19	DATE	

PLOT DATE: 2024 03 19

PROVINCE OF MANITOBA R.G. OFSTIE Member 44405 REGISTERED PROFESSIONAL ENGINEER
MARCH 21, 2024
CONSULTANT DRAWING NUMBER

BID OPPORTUNITY: --

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

CONWAY LIFT PUMPING STATION
2024 UPGRADES
PANEL LAYOUT AND BILL OF MATERIALS
PLC CONTROL PANEL CP-L81

CITY DRAWING NUMBER 1-0131L-A0003-001-00 SHEET 59 OF 102

FILE PATH: M:\N-Data\84\00 City of Winnipeg\005 - Conway Lift Station\Autodesk\ACAD\
FILE NAME: A1.1 AUTOMATION PANEL LAYOUT AND BILL OF MATERIALS.dwg