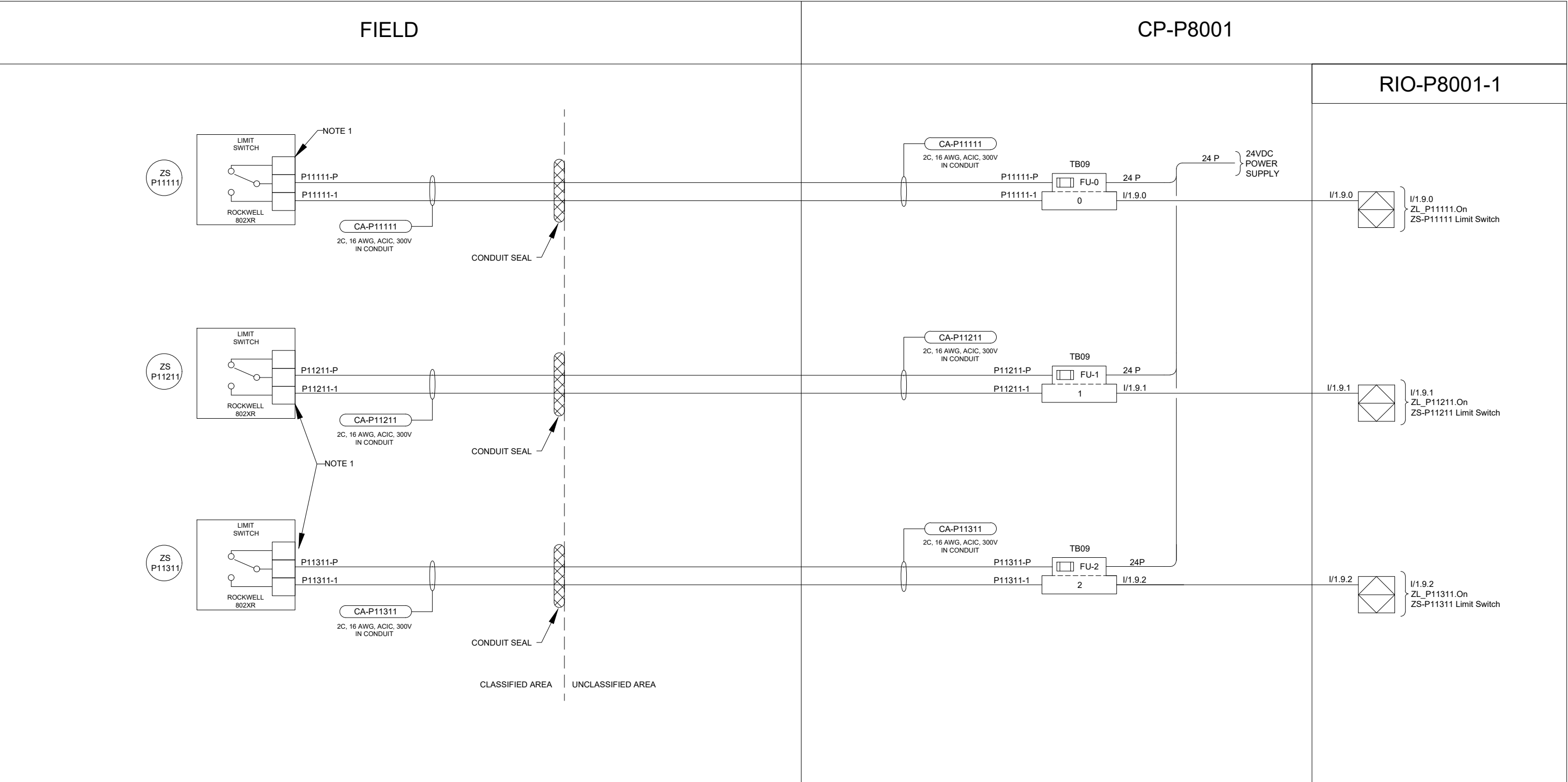


B SIZE - 279mm x 432mm



NOTES:
1. CONTRACTOR TO IDENTIFY TERMINAL CONFIGURATIONS FOR FAIL SAFE SIGNAL FOR ALL FIELD WIRING. HIGH SIGNAL IS NORMAL CONDITION.



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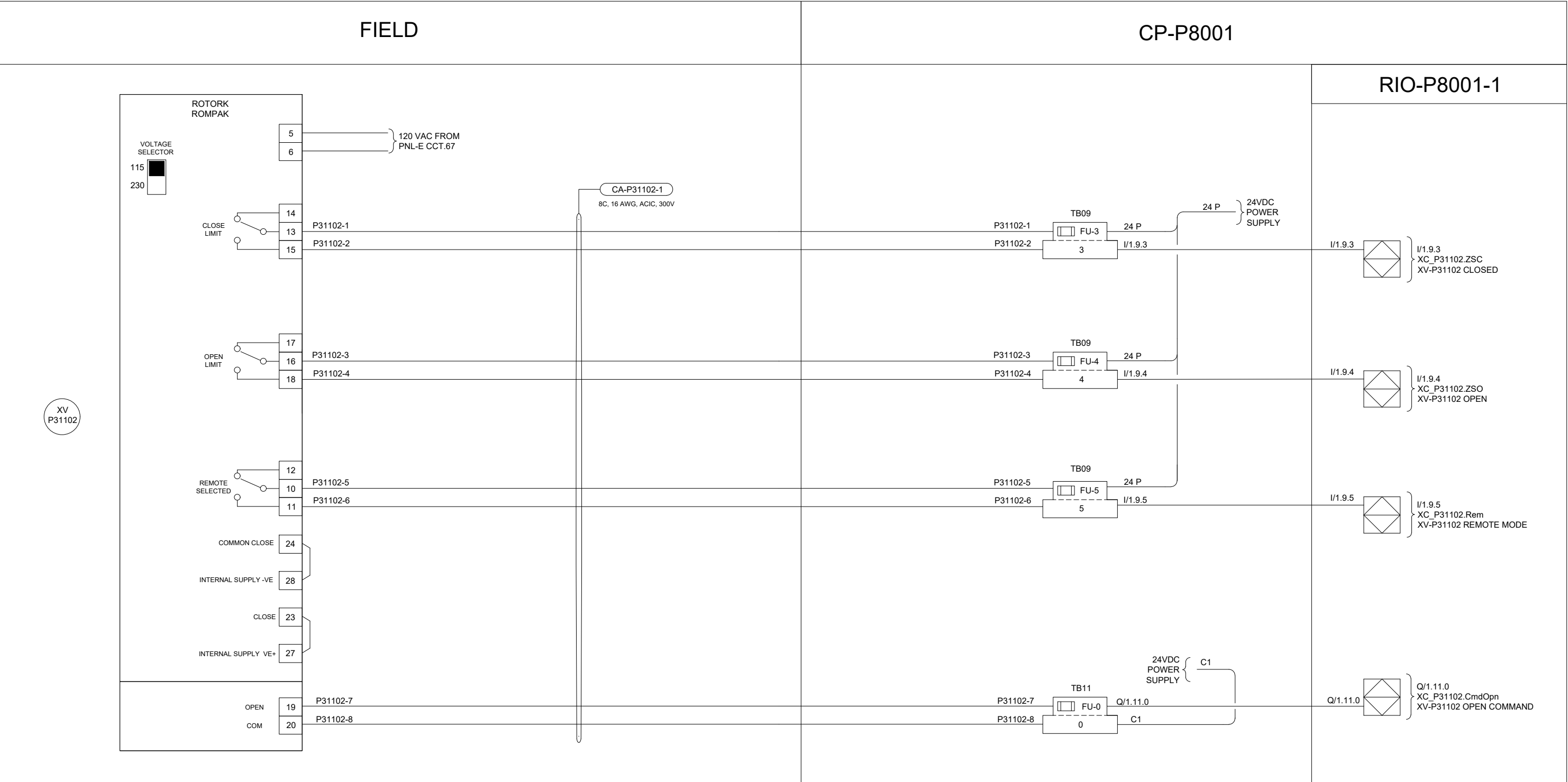


THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
LIMIT SWITCH ZS-P11111, ZS-P11211, ZS-P11311

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P300	001	00	B

B SIZE - 279mm x 432mm



XV

P31102

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P1-I602	

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2025-01-30

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THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

PRIMARY CLARIFIERS - LOOP DIAGRAM

FSW VALVE XV-P31102

CITY DRAWING NUMBER

1-0101-AILD-P301

SHEET

001

REV.

00

SIZE

B

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No. 4671 Date: 2025-01-31

[illegible]

The diagram illustrates the wiring for the CP-P8001 control unit, divided into three main sections: FIELD, CP-P8001, and RIO-P8001-1.

FIELD Section:

- ROTORK ROMPAK:** Includes a VOLTAGE SELECTOR (115/230V), CLOSE LIMIT (terminals 14, 13, 15), OPEN LIMIT (terminals 17, 16, 18), REMOTE SELECTED (terminals 12, 10, 11), COMMON CLOSE (terminal 24), INTERNAL SUPPLY -VE (terminal 28), CLOSE (terminal 23), INTERNAL SUPPLY VE+ (terminal 27), OPEN (terminal 19), and COM (terminal 20).
- Wiring:**
 - Terminals 5 and 6 are connected to 120 VAC FROM PNL-D CCT.49.
 - Terminals 14, 13, and 15 are connected to P32122-1, P32122-2, and P32122-3 respectively.
 - Terminals 17, 16, and 18 are connected to P32122-3, P32122-4, and P32122-5 respectively.
 - Terminals 12, 10, and 11 are connected to P32122-5, P32122-6, and P32122-7 respectively.
 - Terminal 24 is connected to P32122-7.
 - Terminal 28 is connected to P32122-8.
 - Terminal 23 is connected to P32122-8.
 - Terminal 27 is connected to P32122-8.
 - Terminal 19 is connected to P32122-7.
 - Terminal 20 is connected to P32122-8.

CP-P8001 Section:

- CA-P32122-1:** 8C, 16 AWG, ACIC, 300V.
- Terminal Blocks (TB09, TB11):**
 - TB09:** Contains fuses FU-9, FU-10, and FU-11. Terminals 9, 10, and 11 are labeled.
 - TB11:** Contains fuse FU-2. Terminal 2 is labeled.
- Wiring:**
 - P32122-1 and P32122-2 are connected to TB09 terminals 9 and 10 respectively.
 - P32122-3 and P32122-4 are connected to TB09 terminals 10 and 11 respectively.
 - P32122-5 and P32122-6 are connected to TB09 terminals 11 and 12 respectively.
 - P32122-7 and P32122-8 are connected to TB11 terminals 2 and 3 respectively.

RIO-P8001-1 Section:

- 24VDC POWER SUPPLY:** Connected to terminals 9, 10, and 11 of TB09.
- Inputs:**
 - I/1.9.9: XC_P32122.ZSC, XV-P32122 CLOSED.
 - I/1.9.10: XC_P32122.ZSO, XV-P32122 OPEN.
 - I/1.9.11: XC_P32122.Rem, XV-P32122 REMOTE MODE.
- Output:**
 - Q/1.11.2: XC_P32122.CmdOpn, XV-P32122 OPEN COMMAND.

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FIELD

ROTORK ROMPAK

VOLTAGE SELECTOR
115 ☒
230 ☐

CLOSE LIMIT
14
13
15

OPEN LIMIT
17
16
18

REMOTE SELECTED
12
10
11

COMMON CLOSE 24

INTERNAL SUPPLY -VE 28

CLOSE 23

INTERNAL SUPPLY VE+ 27

OPEN 19
COM 20

120 VAC FROM PNL-E CCT.63

CA-P32112-1
8C, 16 AWG, ACIC, 300V

CP-P8001

P32112-1
P32112-2

TB09
FU-12
12

24 P

24 P
24VDC POWER SUPPLY

I/1.9.12

P32112-3
P32112-4

TB09
FU-13
13

24 P

I/1.9.13

P32112-5
P32112-6

TB09
FU-14
14

24 P

I/1.9.14

P32112-7
P32112-8

TB11
FU-3
3

24VDC POWER SUPPLY
C1

Q/1.11.3

RIO-P8001-1

I/1.9.12
XC_P32112.ZSC
XV-P32112 CLOSED

I/1.9.13
XC_P32112.ZSO
XV-P32112 OPEN

I/1.9.14
XC_P32112.Rem
XV-P32112 REMOTE MODE

Q/1.11.3
XC_P32112.CmdOpn
XV-P32112 OPEN COMMAND

XV P32112

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						DESIGNED BY:	CHECKED BY:					NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION PRIMARY CLARIFIERS - LOOP DIAGRAM P-P3211 INTAKE FSW VALVE XV-P32112			
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												SHEET			
												REV.			
												SIZE			
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												B			

FIELD		CP-P8001		RIO-P8001-1	
ROTORK ROMPAK VOLTAGE SELECTOR 115 ☐ 230 ☒ 120 VAC FROM PNL-D CCT.51 5 6 CLOSE LIMIT 14 13 15 P32121-1 P32121-2 OPEN LIMIT 17 16 18 P32121-3 P32121-4 REMOTE SELECTED 12 10 11 P32121-5 P32121-6 COMMON CLOSE 24 INTERNAL SUPPLY -VE 28 CLOSE 23 INTERNAL SUPPLY VE+ 27 OPEN 19 COM 20 P32121-7 P32121-8		CA-P32121-1 8C, 16 AWG, ACIC, 300V TB09 FU-15 15 P32121-1 P32121-2 24 P I/1.9.15 24 P 24VDC POWER SUPPLY TB09 FU-16 16 P32121-3 P32121-4 24 P I/1.9.16 TB09 FU-17 17 P32121-5 P32121-6 24 P I/1.9.17 TB11 FU-4 4 P32121-7 P32121-8 24VDC POWER SUPPLY C1 Q/1.11.4 C1		I/1.9.15 I/1.9.15 XC_P32121.ZSC XV-P32121 CLOSED I/1.9.16 I/1.9.16 XC_P32121.ZSO XV-P32121 OPEN I/1.9.17 I/1.9.17 XC_P32121.Rem XV-P32121 REMOTE MODE Q/1.11.4 Q/1.11.4 XC_P32121.CmdOpn XV-P32121 OPEN COMMAND	

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Winnipeg

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

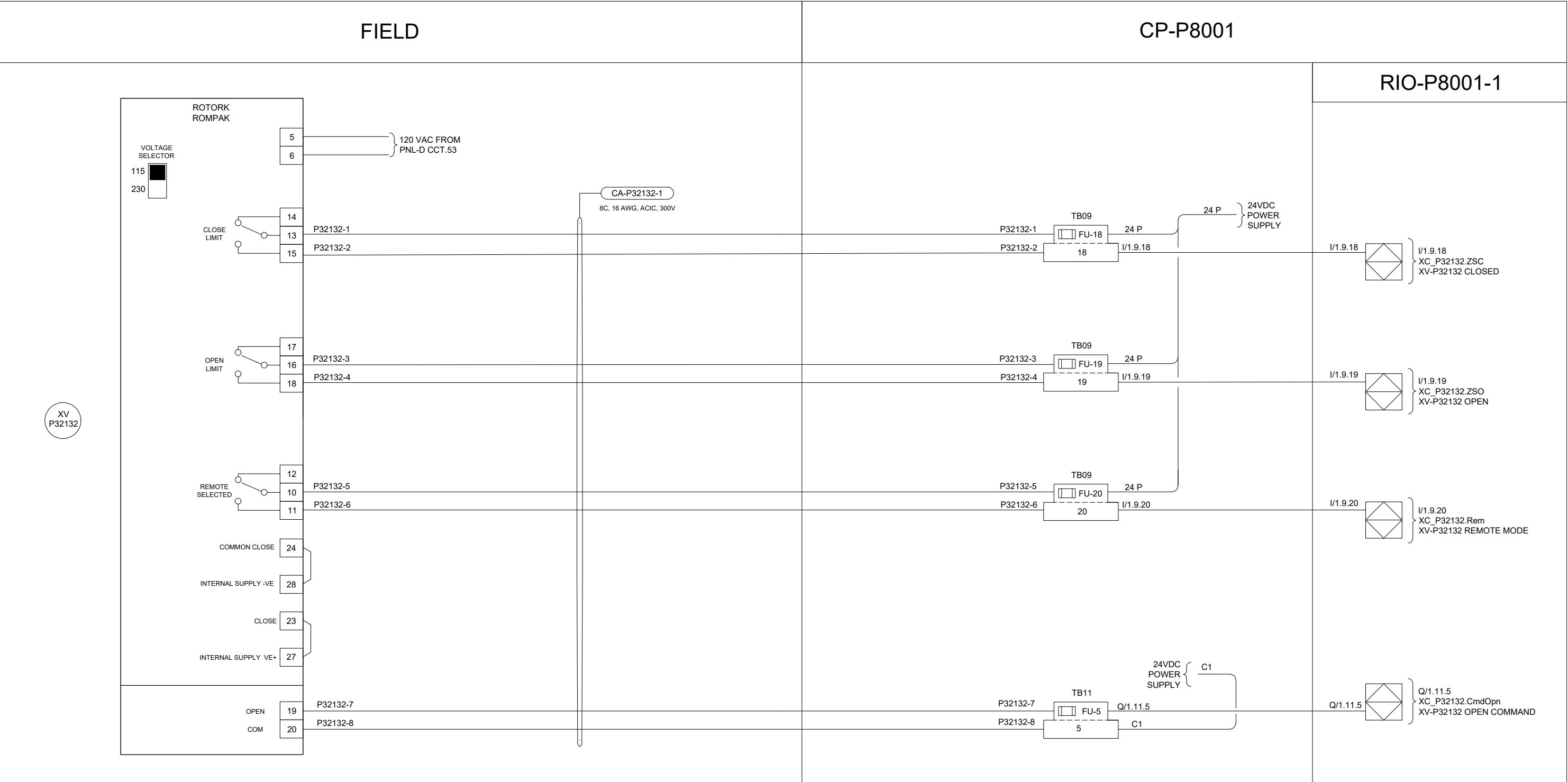
AUTOMATION

PRIMARY CLARIFIERS - LOOP DIAGRAM

P-P3212 INTAKE FSW VALVE XV-P32121

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P305	001	00	B

B SIZE - 279mm x 432mm



XV
P32132

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	P1-I607

ENGINEER'S SEAL

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BOGHOSSIAN

Member

33454

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2025-01-30

Winnipeg

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

PRIMARY CLARIFIERS - LOOP DIAGRAM

P-P3213 INTAKE FSW VALVE XV-P32132

CITY DRAWING NUMBER

1-0101-AILD-P306

SHEET

001

REV.

00

SIZE

B

The diagram illustrates the electrical wiring for a Rotork Rompak valve actuator, divided into three main sections: FIELD, CP-P8001, and RIO-P8001-1.

FIELD Section:

- ROTORK ROMPAK:** The actuator unit with terminals 5 through 20.
- VOLTAGE SELECTOR:** A switch with positions for 115V (black) and 230V (white).
- Limit Switches:**
 - CLOSE LIMIT:** Terminals 14 and 15.
 - OPEN LIMIT:** Terminals 17 and 18.
 - REMOTE SELECTED:** Terminals 12 and 11.
- Internal Connections:**
 - COMMON CLOSE:** Terminal 24.
 - INTERNAL SUPPLY -VE:** Terminal 28.
 - CLOSE:** Terminal 23.
 - INTERNAL SUPPLY VE+:** Terminal 27.
 - OPEN:** Terminal 19.
 - COM:** Terminal 20.

CP-P8001 Section:

- CA-P32211-1:** A cable labeled "8C, 16 AWG, ACIC, 300V" connecting the Field and CP-P8001 sections.
- Terminal Blocks (TB09, TB11):** Housing fuses (FU-21, FU-22, FU-23, FU-8) and providing 24VDC power supply connections.
- Wiring:**
 - P32211-1 to P32211-2:** Connects to I/O module 21.
 - P32211-3 to P32211-4:** Connects to I/O module 22.
 - P32211-5 to P32211-6:** Connects to I/O module 23.
 - P32211-7 to P32211-8:** Connects to I/O module 8.

RIO-P8001-1 Section:

- I/O Modules:**
 - I/O 1.9.21:** XC_P32211.ZSC, XV-P32211 CLOSED.
 - I/O 1.9.22:** XC_P32211.ZSO, XV-P32211 OPEN.
 - I/O 1.9.23:** XC_P32211.Rem, XV-P32211 REMOTE MODE.
 - Q/I 1.11.8:** XC_P32211.CmdOpn, XV-P32211 OPEN COMMAND.
- Power Supply:** 24VDC POWER SUPPLY connected to the I/O modules.

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	REVISIONS	DATE	DESIGN	CHECK			CITY DRAWING NUMBER 1-0101-AILD-P307		SHEET 001	REV. 00	SIZE B

FIELD

ROTORK ROMPAK

VOLTAGE SELECTOR
115 ☒
230 ☐

CLOSE LIMIT
14
13
15

OPEN LIMIT
17
16
18

REMOTE SELECTED
12
10
11

COMMON CLOSE 24

INTERNAL SUPPLY -VE 28

CLOSE 23

INTERNAL SUPPLY VE+ 27

OPEN 19
COM 20

120 VAC FROM PNL-D CCT.55

CA-P32212-1
8C, 16 AWG, ACIC, 300V

CP-P8001

P32212-1
P32212-2
P32212-3
P32212-4
P32212-5
P32212-6
P32212-7
P32212-8

TB09
FU-27
27
24 P
I/1.9.24

TB09
FU-25
25
24 P
I/1.9.25

TB09
FU-26
26
24 P
I/1.9.26

TB11
FU-9
9
Q/1.11.9
C1

24VDC POWER SUPPLY

RIO-P8001-1

I/1.9.24
XC_P32212.ZSC
XV-P32212 CLOSED

I/1.9.25
XC_P32212.ZSO
XV-P32212 OPEN

I/1.9.26
XC_P32212.Rem
XV-P32212 REMOTE MODE

Q/1.11.9
XC_P32212.CmdOpn
XV-P32212 OPEN COMMAND

XV P32212

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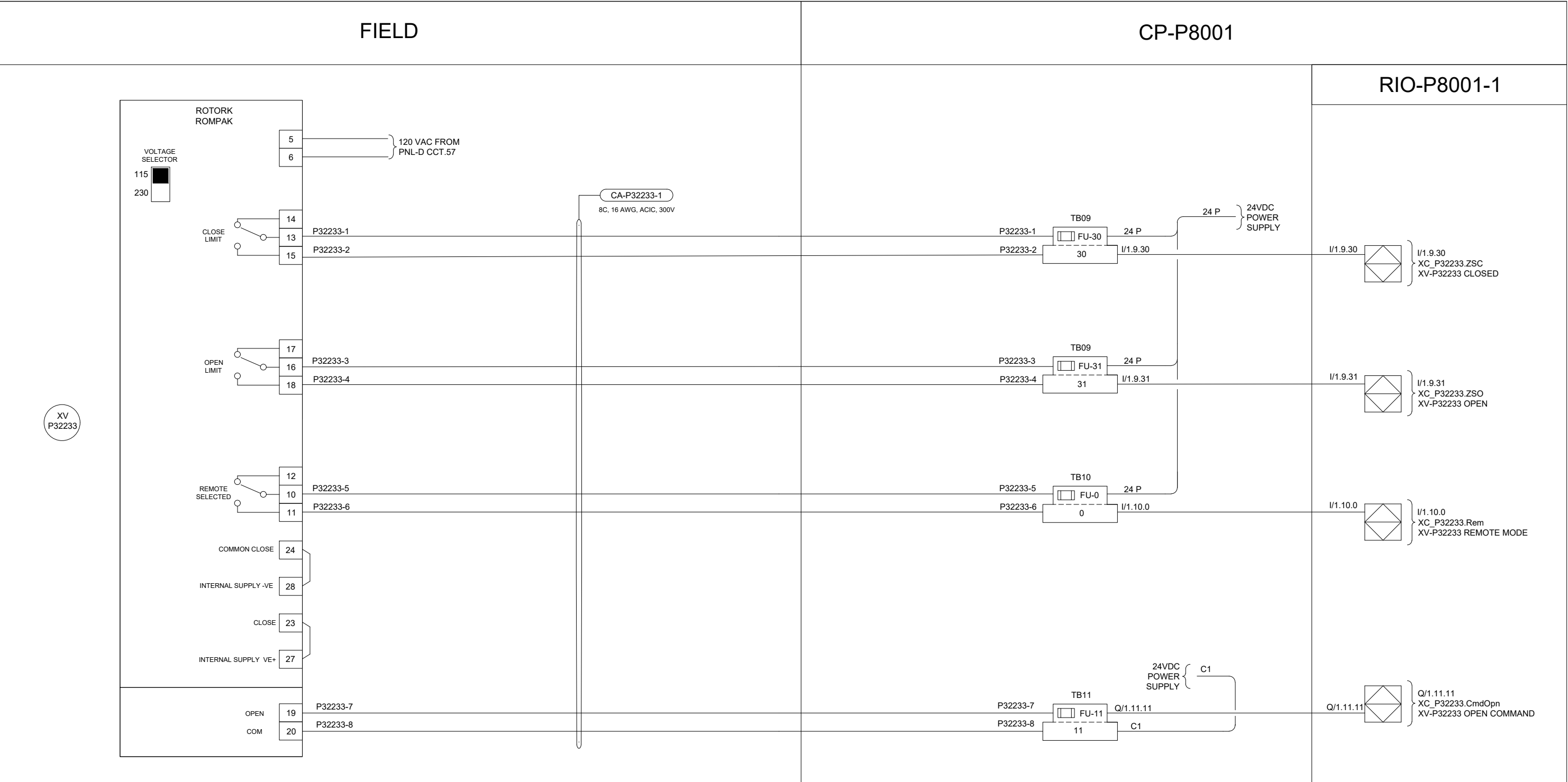
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 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION PRIMARY CLARIFIERS - LOOP DIAGRAM SCUM TANK 2 FSW VALVE XV-P32212			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P308	001	00	B

FIELD		CP-P8001		RIO-P8001-1
ROTORK ROMPAK VOLTAGE SELECTOR 115 ☒ 230 CLOSE LIMIT 14 13 15 OPEN LIMIT 17 16 18 REMOTE SELECTED 12 10 11 COMMON CLOSE 24 INTERNAL SUPPLY -VE 28 CLOSE 23 INTERNAL SUPPLY VE+ 27 OPEN 19 COM 20		CA-P32223-1 8C, 16 AWG, ACIC, 300V TB09 FU-27 27 TB09 FU-28 28 TB09 FU-29 29 TB11 FU-10 10 24VDC POWER SUPPLY C1		I/1.9.27 XC_P32223.ZSC XV-P32223 CLOSED I/1.9.28 XC_P32223.ZSO XV-P32223 OPEN I/1.9.29 XC_P32223.Rem XV-P32223 REMOTE MODE Q/1.11.10 XC_P32223.CmdOpn XV-P32223 OPEN COMMAND

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B SIZE - 279mm x 432mm



XV
P32233

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THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
PRIMARY CLARIFIERS - LOOP DIAGRAM
P-P3223 FSW VALVE XV-P32233

CITY DRAWING NUMBER

1-0101-AILD-P310

SHEET

001

REV.

00

SIZE

B

The diagram illustrates the electrical connections for the P35011 system, organized into three main sections: FIELD, JBA-35011, and CP-P8001, with a final output section RIO-P8001-1.

FIELD Section:

- ROTORK RCEL:** A rotary switch with terminals 5, 6, 7, 8, 19, and 20.
- Limit Switches:** CLOSE LIMIT (terminals 5, 6) and OPEN LIMIT (terminals 7, 8).
- Output Terminals:** OPEN (terminal 19) and COM (terminal 20).
- Conduit Seal:** A vertical line with a cross-hatch pattern separating the CLASSIFIED AREA (left) from the UNCLASSIFIED AREA (right).

JBA-35011 Section:

- Terminal Blocks:** TB02 (top and bottom) and TB01 (R-1, R-2, R-3).
- Wiring:** Connections for 120 VAC FROM PANEL-E CCT.74 (L, N) and 24VDC POWER SUPPLY (24 P, C1).
- Fuses:** FU-1, FU-2, and FU-6.

CP-P8001 Section:

- Terminal Blocks:** TB10 (top and bottom) and TB11.
- Wiring:** Connections for 24VDC POWER SUPPLY (24 P, C1) and digital signals I/1.10.1, I/1.10.2, and Q/1.11.6.
- Fuses:** FU-1, FU-2, and FU-6.

RIO-P8001-1 Section:

- Digital Input Modules:** I/1.10.1 (XC_P35011.ZSC, XV-P35011 CLOSED), I/1.10.2 (XC_P35011.ZSO, XV-P35011 OPEN), and Q/1.11.6 (XC_P35011.CmdOpn, XV-P35011 OPEN COMMAND).

No. 4671 Date: 2025-01-31

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THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
PRIMARY CLARIFIERS - LOOP DIAGRAM
CONTROL CHAMBER OUTER RING XV-P35011

CITY DRAWING NUMBER

1-0101-AILD-P311

SHEET

001

REV.

00

SIZE

B

The diagram illustrates the electrical wiring for the P35012 valve assembly, organized into four main sections: FIELD, JBA-35012, CP-P8001, and RIO-P8001-1.

FIELD Section:

- ROTORK RCEL:** The valve actuator with terminals 5, 6, 7, 8, 19, and 20.
- Limit Switches:** CLOSE LIMIT (terminals 5, 6) and OPEN LIMIT (terminals 7, 8).
- Power Supply:** 24VDC POWER SUPPLY (terminals 19, 20).
- Wiring:** P35012-1, P35012-2, P35012-3, P35012-4, and P35012-5.
- Conduit Seal:** A vertical line indicating the boundary between the CLASSIFIED AREA and UNCLASSIFIED AREA.

JBA-35012 Section:

- Terminal Blocks:** TB02 (top and bottom) and TB01 (R-4, R-5, R-2).
- Power Supply:** 120 VAC FROM PNL-E CCT.76.
- Wiring:** P35012-1, P35012-2, P35012-3, P35012-4, and P35012-5.

CP-P8001 Section:

- Terminal Blocks:** TB10 (top and bottom) and TB11.
- Power Supply:** 24VDC POWER SUPPLY (terminals 19, 20).
- Wiring:** P35012-1, P35012-2, P35012-3, P35012-4, and P35012-5.

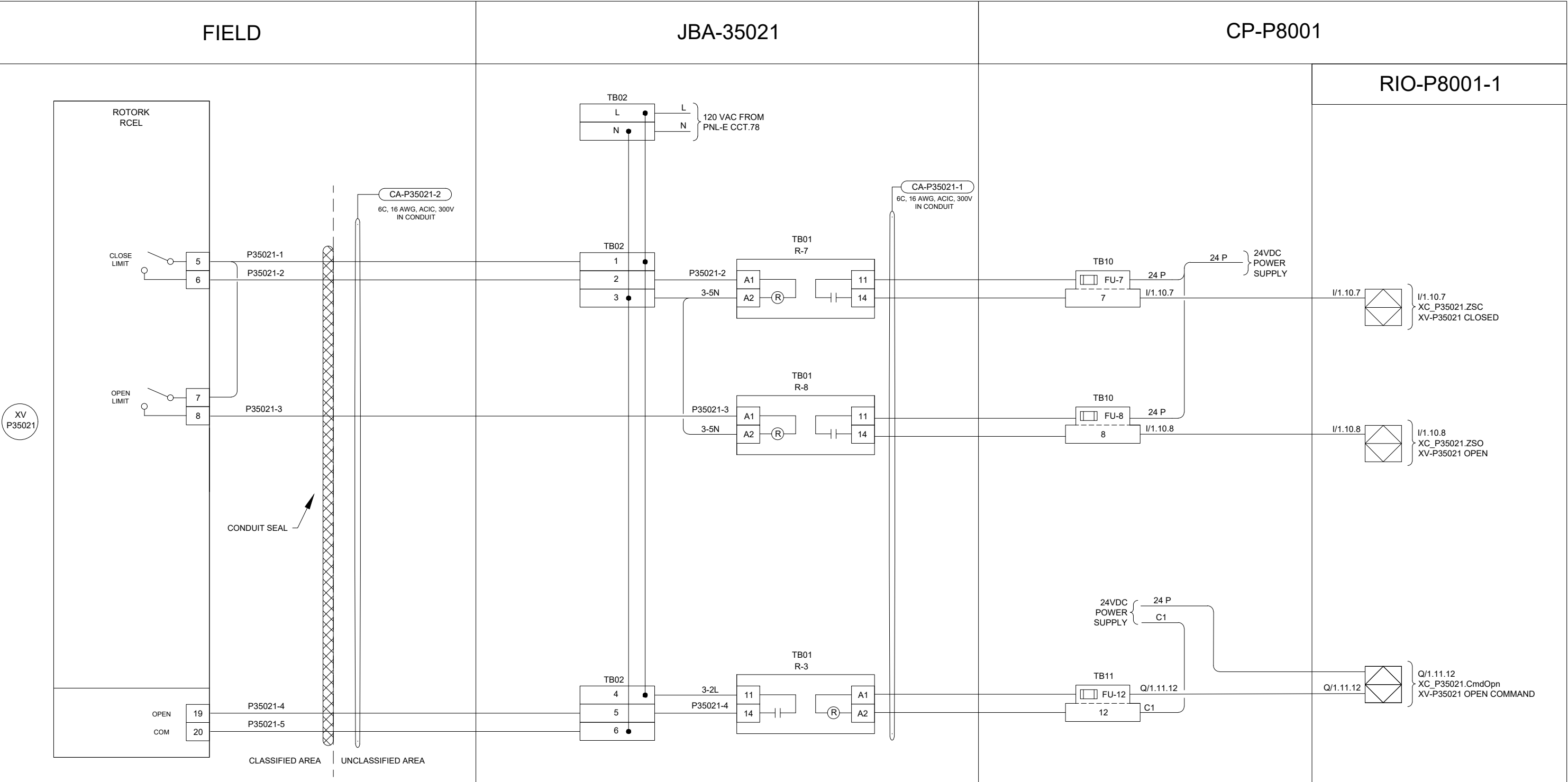
RIO-P8001-1 Section:

- Input/Output Modules:** I/1.10.4, I/1.10.5, and Q/1.11.7.
- Wiring:** P35012-1, P35012-2, P35012-3, P35012-4, and P35012-5.

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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION PRIMARY CLARIFIERS - LOOP DIAGRAM CONTROL CHAMBER INNER RING XV-P35012			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P312	001	00	B

B SIZE - 279mm x 432mm



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CONSULTANTNO.: P1-I614	

ENGINEER'S SEAL



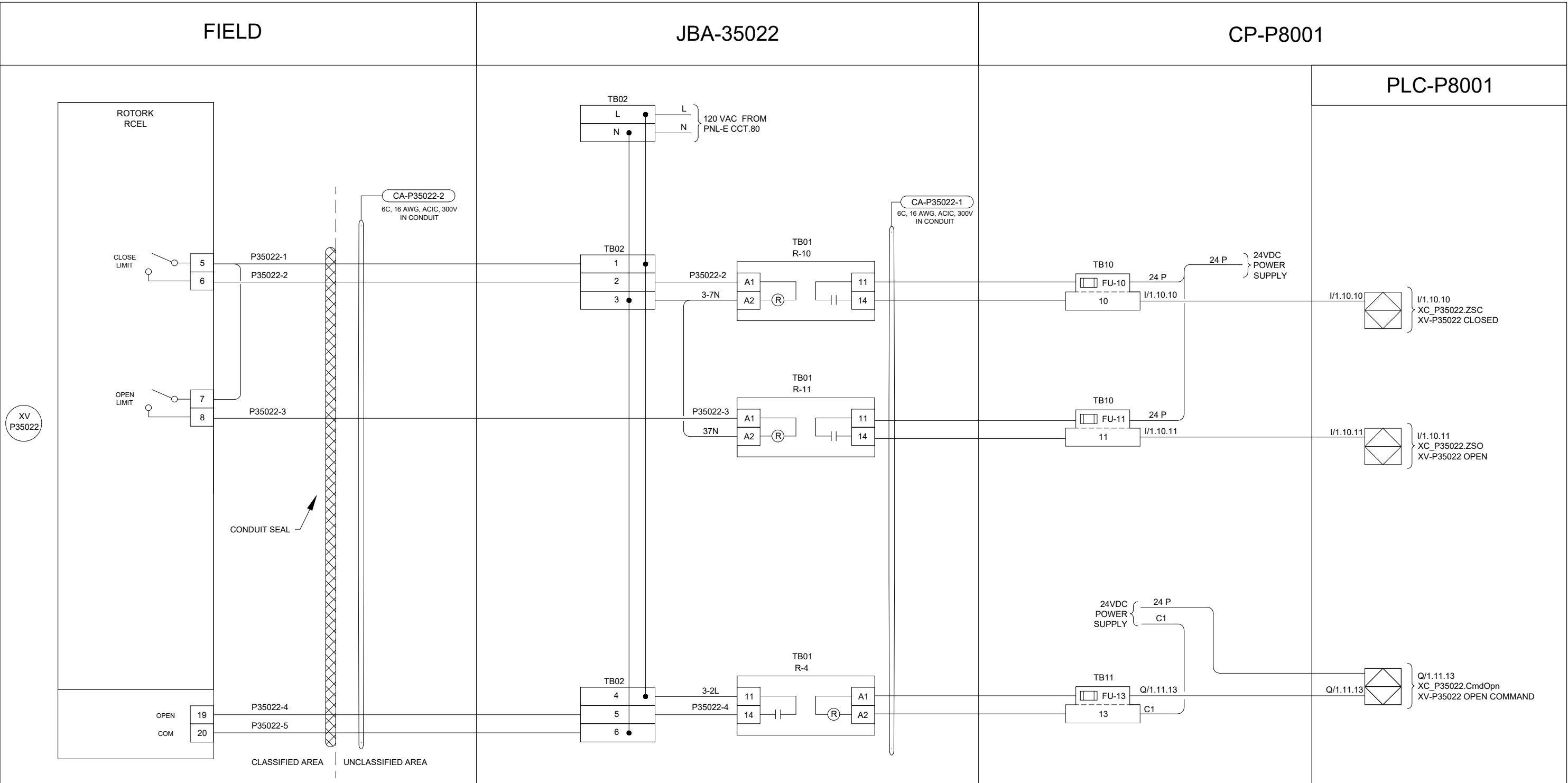
2025-01-30

**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
PRIMARY CLARIFIERS - LOOP DIAGRAM
CONTROL CHAMBER OUTER RING XV-P35021

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P313	001	00	B

B SIZE - 279mm x 432mm



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GEOSCIENTISTS
MANITOBA**

Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: 2025-01-31

AECOM				
			DESIGNED BY:	CHECKED BY:
			DR	SB
			DRAWN BY:	APPROVED BY:
			DR	NW
			SCALE:	DATE:
			NTS	2024-01-08
			ISSUED FOR CONSTRUCTION	
			BY: DATE:	
			CONSULTANTNO.: P1-I615	
00	ISSUED FOR TENDER	2025-01-31	DR	SB
	REVISIONS	DATE	DESIGN	CHECK

ENGINEER'S SEAL

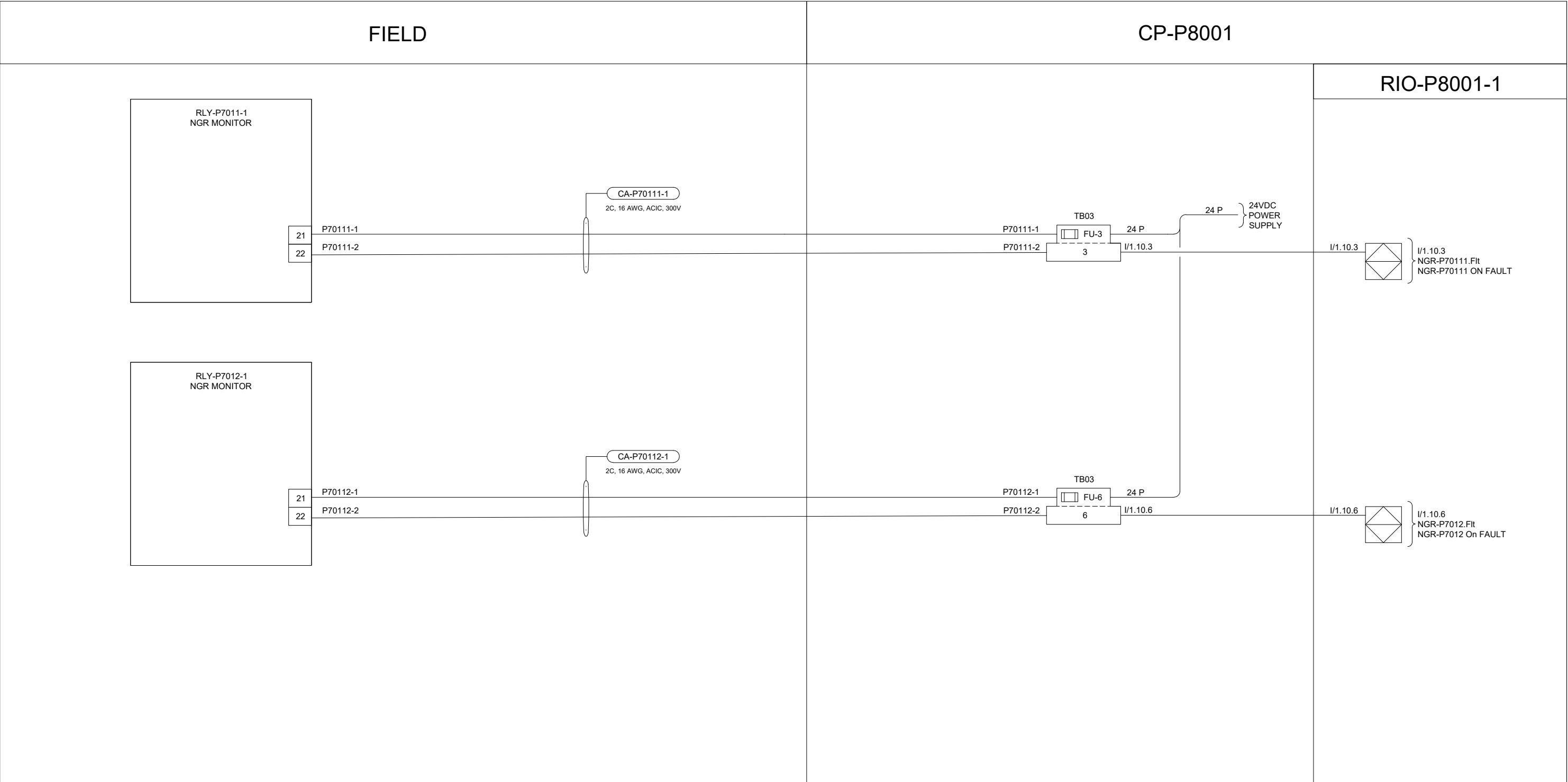


**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
PRIMARY CLARIFIERS - LOOP DIAGRAM
CONTROL CHAMBER INNER RING XV-P35022

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P314	001	00	B

B SIZE - 279mm x 432mm



**ENGINEERS
GEOSCIENTISTS
MANITOBA**

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AECOM Canada Ltd.

No. 4671 Date: 2025-01-31

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	REVISIONS	DATE	DESIGN	CHECK

AECOM

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DR	NW
SCALE:	DATE:
NTS	2024-01-08
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BY: DATE:	
CONSULTANTNO.: P1-I616	

ENGINEER'S SEAL



2025-01-30

**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
PRIMARY CLARIFIERS - LOOP DIAGRAM
NGR FAULT MONITORS

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P711	001	00	B

B SIZE - 279mm x 432mm

FIELD
PRIMARY CLARIFIERS

NETWORK PANEL
NP-P9900

PRIMARY CLARIFIER 1
VALVE

XV-P11110
ADD:
PNL-E CCT.64

DP

CA-P11110

PB-DP, XXX m, NON ARMOURED

SCUM TANK 1A & 1B
INPUT VALVE

XV-P31101
ADD:
PNL-E CCT.66

DP

CA-P31101

PB-DP, XXX m, NON ARMOURED

SCUM TANK 1A
LEVEL

LIT-P31111
ADD:
PNL-E CCT.68

DP

CA-P31111

PB-DP, XXX m, NON ARMOURED

SCUM TANK 1A
OUTPUT VALVE

XV-P31113
ADD:
PNL-E CCT.70

DP

CA-P31113

PB-DP, XXX m, NON ARMOURED

SCUM TO TANK 1A
VALVE

XV-P32222
ADD:
PNL-E CCT.72

DP

CA-P32222

PB-DP, XXX m, NON ARMOURED

CTRL CHAMBER
OUTPUT VALVE

XV-P33111
ADD:
PNL-E CCT.73

DP

CA-P33111

PB-DP, XXX m, NON ARMOURED

FLOW TO CTRL
CHAMBER

FIT-P35012
ADD:
PNL-E CCT.75

DP

CA-P35012

PB-PA, XXX m, NON ARMOURED

TRANSF PUMP 1
PRESSURE

PIT-P32121
ADD:

PA

CA-P32121

PB-PA, XXX m, NON ARMOURED

PB-PA, XXX m, NON ARMOURED

CA-P9162

NSP-P9162

PA SPLITTER

SEGMENT PROTECTOR

TRANSF PUMP 3
PRESSURE

PIT-P32221
ADD:

PA

CA-P32221

PB-PA, XXX m, NON ARMOURED

NSP-P9163

PA SPLITTER

SEGMENT PROTECTOR

CA-P9163

ND-P9161

PROFIBUS
MODULAR SYSTEM

SLOT 2

ON

CH1 DP

ON

CH2 DP

SLOT 3

ON

CH1 DP

ON

CH2 DP

SLOT 4

ON

CH1 DP

ON

CH2 DP

SLOT 5

ON

CH1 DP

ON

CH2 DP

SLOT 6

ON

CH1 DP

ON

CH2 DP

SLOT 7

ON

CH1 PA

SLOT 8

ON

CH1 PA

SPARE

SPARE

NGW-P9160

PROFIBUS REMOTE MASTER

DP

CA-P9160-2

PB-DP, XXX m, NON ARMOURED

CA-P9160-1

CAT 6, ETHERNET CABLE

FROM 1-0101-ANET-A004
NSW-P9110

NOTES:

- CONTRACTOR WILL PROVIDE THE LENGTH BASED ON LOCATION OF FIELD INSTALLATION
- ALL PROFIBUS CABLES TO BE INSTALLED ON TRAYS



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No. 4671 Date: 2025-01-31

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SCALE:	DATE:
NTS	2024-01-08
ISSUED FOR CONSTRUCTION	DATE:
BY:	
CONSULTANTNO.:	P1-I617

ENGINEER'S SEAL



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
PRIMARY CLARIFIERS - PROFIBUS SEGMENT
NP-P9900

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AIFS-P003	001	00	B

B SIZE - 279mm x 432mm

FIELD
PRIMARY CLARIFIERS

NETWORK PANEL
NP-P9900

PRIMARY CLARIFIER 2
VALVE

XV-P11210
ADD:
PNL-E CCT.73

DP

SCUM TANK 1B
LEVEL

LIT-P31121
ADD:
PNL-E CCT.75

DP

SCUM TANK 1B
OUTPUT VALVE

XV-P31123
ADD:
PNL-E CCT.77

DP

CTRL CHAMBER
OUTPUT VALVE

FIT-P33121
ADD:
PNL-E CCT.79

DP

SCUM TO DEWATERING
VALVE

XV-P32232
ADD:
PNL-E CCT.81

DP

FLOW TO CTRL
CHAMBER

FIT-P35022
ADD:
PNL-E CCT.83

DP

CA-P11210
PB-DP, XXX m, NON ARMoured

CA-P31121
PB-DP, XXX m, NON ARMoured

CA-P31123
PB-DP, XXX m, NON ARMoured

CA-P33121
PB-DP, XXX m, NON ARMoured

CA-P32232
PB-DP, XXX m, NON ARMoured

CA-P35022
PB-DP, XXX m, NON ARMoured

RECIRC. PUMP 1
PRESSURE

PIT-P32111
ADD:

PA

TRANSF PUMP 2
PRESSURE

PIT-P32131
ADD:

PA

TRANSF PUMP 4
PRESSURE

PIT-P32231
ADD:

PA

CA-P32111
PB-PA, XXX m, NON ARMoured

CA-P32131
PB-PA, XXX m, NON ARMoured

CA-P32231
PB-PA, XXX m, NON ARMoured

CA-P9172
PB-PA, XXX m, NON ARMoured

NSP-P9172
PA SPLITTER

NSP-P9173
PA SPLITTER

SEGMENT PROTECTOR

SEGMENT PROTECTOR

CA-P9173
PB-PA, XXX m, NON ARMoured

ND-P9171

PROFIBUS
MODULAR SYSTEM

SLOT 2

ON

CH1 DP

ON

CH2 DP

SLOT 3

ON

CH1 DP

ON

CH2 DP

SLOT 4

ON

CH1 DP

ON

CH2 DP

SLOT 5

ON

CH1 DP

SPARE

OFF

CH2 DP

SLOT 6

SPARE

OFF

CH1 DP

SPARE

CH2 DP

SLOT 7

ON

CH1 PA

SLOT 8

ON

CH1 PA

NGW-P9170
PROFIBUS REMOTE MASTER

DP

CA-P9170-2
PB-DP, XXX m, NON ARMoured

CA-P9170-1
CAT 6, ETHERNET CABLE

FROM 1-0101-ANET-A004
NSW-P9210

NOTES:

1. CONTRACTOR WILL PROVIDE THE LENGTH BASED ON LOCATION OF FIELD INSTALLATION
2. ALL PROFIBUS CABLES TO BE INSTALLED ON TRAYS



**ENGINEERS
GEOSCIENTISTS
MANITOBA**

Certificate of Authorization

AECOM Canada Ltd.

No. 4671

Date: 2025-01-31

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SB

DRAWN BY:

DR

APPROVED BY:

NW

SCALE:

NTS

DATE:

2024-01-08

BY:

ISSUED FOR CONSTRUCTION

DATE:

CONSULTANTNO.:

P1-I618

ENGINEER'S SEAL



THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

PRIMARY CLARIFIERS - PROFIBUS SEGMENT

NP-P9900

CITY DRAWING NUMBER

1-0101-AIFS-P004

SHEET

001

REV.

00

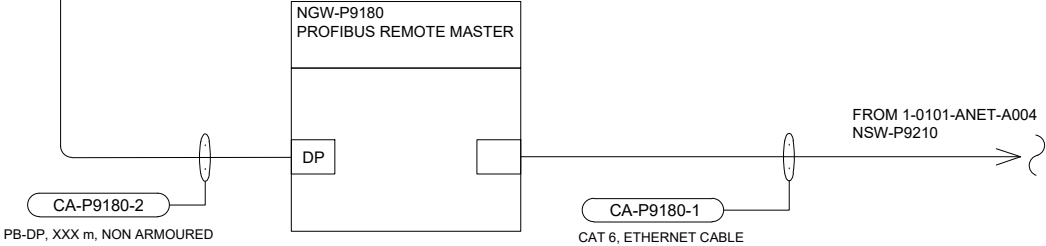
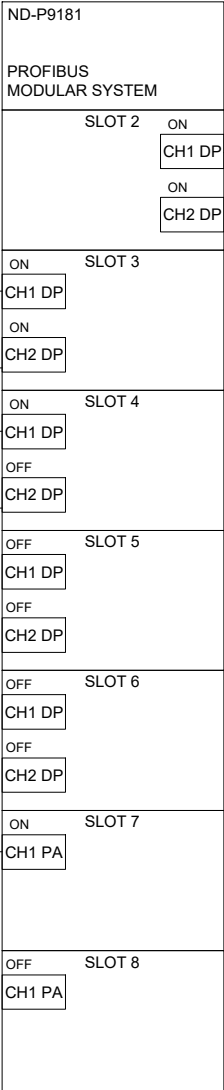
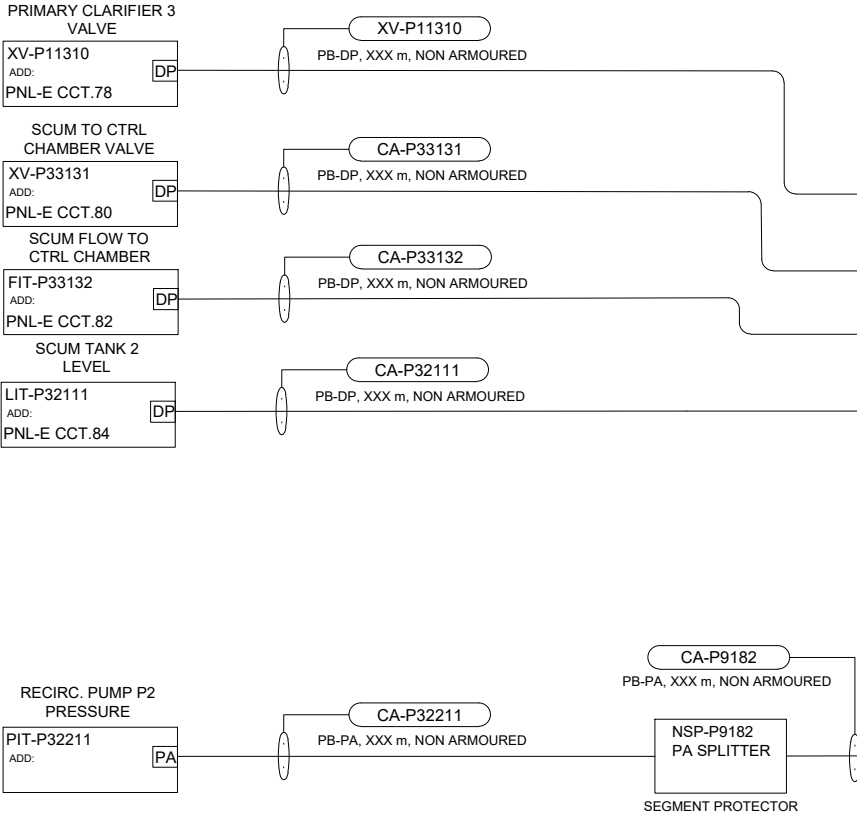
SIZE

B

B SIZE - 279mm x 432mm

FIELD
PRIMARY CLARIFIERS

NETWORK PANEL
NP-P9900



- NOTES:
- CONTRACTOR WILL PROVIDE THE LENGTH BASED ON LOCATION OF FIELD INSTALLATION
 - ALL PROFIBUS CABLES TO BE INSTALLED ON TRAYS

**ENGINEERS
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MANITOBA**

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No. 4671 Date: 2025-01-31

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					SCALE:	NTS	DATE:	2024-01-08	
					ISSUED FOR CONSTRUCTION		DATE:		
					BY:		DATE:		
					CONSULTANTNO.:	P1-I619			
00	ISSUED FOR TENDER	2025-01-31	DR	SB					
	REVISIONS	DATE	DESIGN	CHECK					



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

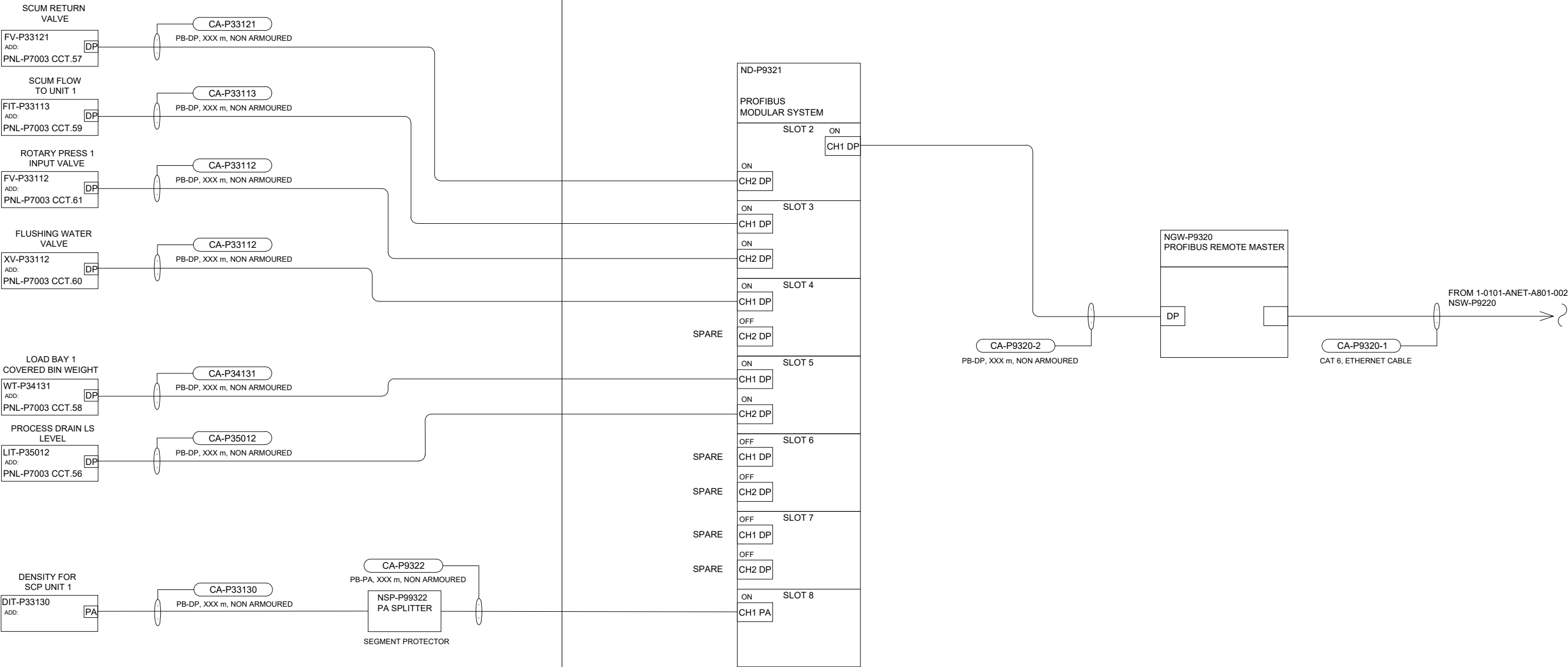
NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
PRIMARY CLARIFIERS - PROFIBUS SEGMENT
NP-P9900

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AIFS-P005	001	00	B

B SIZE - 279mm x 432mm

FIELD
SCUM DEWATERING BUILDING

NETWORK PANEL
NP-P9901



NOTES:

- 1. CONTRACTOR WILL PROVIDE THE LENGTH BASED ON LOCATION OF FIELD INSTALLATION
- 2. ALL PROFIBUS CABLES TO BE INSTALLED ON TRAYS



**ENGINEERS
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MANITOBA**

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AECOM Canada Ltd.

No. 4671 Date: 2025-01-31

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DR	SB
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DR	NW
SCALE:	DATE:
NTS	2024-01-08
ISSUED FOR CONSTRUCTION	
BY:	DATE:
CONSULTANTNO.: P3-I608	

ENGINEER'S SEAL



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

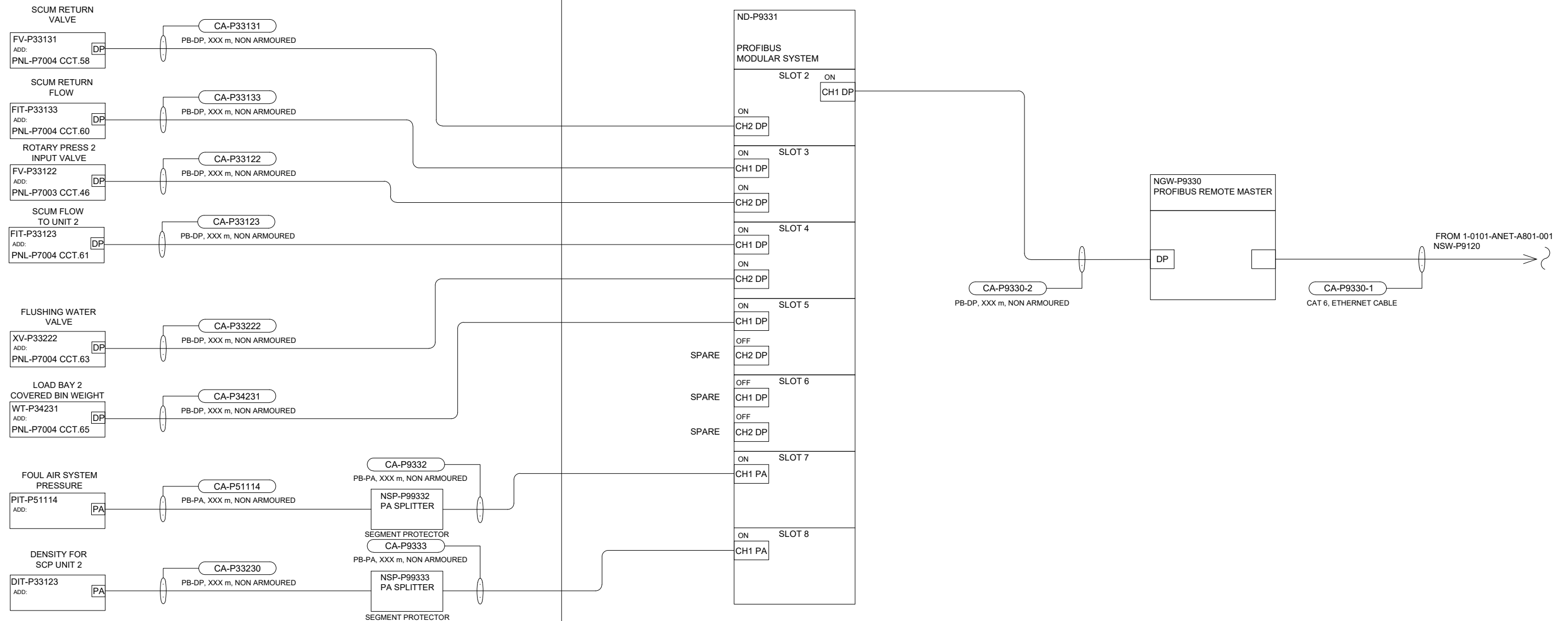
NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - PROFIBUS SEGMENT
NP-P9901

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AIFS-P001	001	00	B

B SIZE - 279mm x 432mm

FIELD
SCUM DEWATERING BUILDING

NETWORK PANEL
NP-P9901



NOTES:

1. CONTRACTOR WILL PROVIDE THE LENGTH BASED ON LOCATION OF FIELD INSTALLATION
2. ALL PROFIBUS CABLES TO BE INSTALLED ON TRAYS



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No. 4671 Date: 2025-01-31



00	ISSUED FOR TENDER	2025-01-31	DR	SB
	REVISIONS	DATE	DESIGN	CHECK

DESIGNED BY:	
--------------	--

DR

DRAWN BY:

DR

SCALE:

NTS

--	--

CONSULTANT NO.

P3-1609

ENGINEER'S SEAL



2025-01-30



THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

SCUM DEWATERING BUILDING - PROFIBUS SEGMENT

NP-P9901

CITY DRAWING NUMBER

1-0101-AIFS-P001

SHEET

002

REV.

00

SIZE

B

FIELD

CP-P8030

RIO-P8030-1

ROTORK ROMPAK

VOLTAGE SELECTOR
115
230

120 VAC FROM PNL-P7003 CCT.41

CA-P34112-1
8C, 16 AWG, ACIC, 300V

CLOSE LIMIT

OPEN LIMIT

REMOTE SELECTED

COMMON CLOSE

INTERNAL SUPPLY -VE

CLOSE

INTERNAL SUPPLY VE+

OPEN

COM

P34112-1

P34112-2

P34112-3

P34112-4

P34112-5

P34112-6

P34112-7

P34112-8

TB01

FU-2

2

24 P

I/1.1.2

TB01

FU-3

3

24 P

I/1.1.3

TB01

FU-4

4

24 P

I/1.1.4

TB03

FU-0

0

24VDC POWER SUPPLY

24 P

Q/1.3.0

C1

I/1.1.2

I/1.1.3

I/1.1.4

Q/1.3.0

I/1.1.2
XC_P34112.ZSC
XV-P34112 CLOSED

I/1.1.3
XC_P34112.ZSO
XV-P34112 OPEN

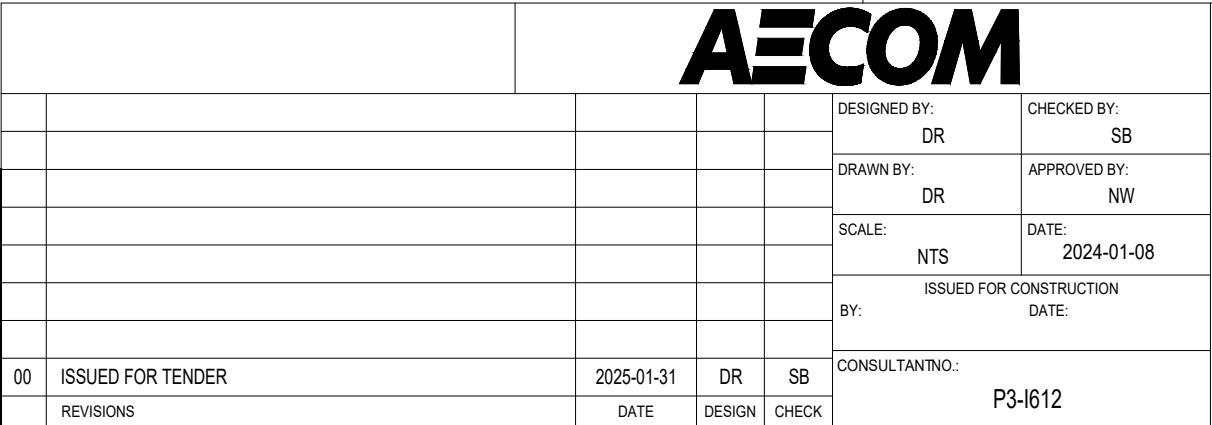
I/1.1.4
XC_P34112.Rem
XV-P34112 REMOTE MODE

Q/1.3.0
XC_P34112.CmdOpn
XV-P34112 OPEN COMMAND

XV
P34112

					ENGINEER'S SEAL		 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT		
					DESIGNED BY:	CHECKED BY:		NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM POLYMER FOR ROTARY PRESS 1 XV-P34112	
		DR	SB						
		DRAWN BY:	APPROVED BY:						
		DR	NW						
		SCALE:	DATE:						
		NTS	2024-01-08						
		ISSUED FOR CONSTRUCTION							
		BY:	DATE:						
00	ISSUED FOR TENDER	2025-01-31	DR	SB	CITY DRAWING NUMBER		SHEET	REV.	SIZE
	REVISIONS	DATE	DESIGN	CHECK	1-0101-AILD-P315		001	00	B
					P3-I611				

FIELD		CP-P8030		RIO-P8030-1
ROTORK ROMPAK VOLTAGE SELECTOR 115 ☐ 230 ☐ CLOSE LIMIT OPEN LIMIT REMOTE SELECTED COMMON CLOSE INTERNAL SUPPLY -VE CLOSE INTERNAL SUPPLY VE+ OPEN COM	5 6 14 13 15 17 16 18 12 10 11 24 28 23 27 19 20	120 VAC FROM PNL-P7004 CCT.21 CA-P34122-1 8C, 16 AWG, ACIC, 300V P34122-1 P34122-2 P34122-3 P34122-4 P34122-5 P34122-6 P34122-7 P34122-8	TB01 FU-5 5 TB01 FU-6 6 TB01 FU-7 7 TB03 FU-1 1 24 P I/1.1.5 I/1.1.6 I/1.1.7 Q/1.3.1 24VDC POWER SUPPLY 24 P C1	I/1.1.5 I/1.1.6 I/1.1.7 Q/1.3.1 I/1.1.5 XC_P34122.ZSC XV-P34122 CLOSED I/1.1.6 XC_P34122.ZSO XV-P34122 OPEN I/1.1.7 XC_P34122.Rem XV-P34122 REMOTE MODE Q/1.3.1 XC_P34122.CmdOpn XV-P34122 OPEN COMMAND



 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM POLYMER FOR ROTARY PRESS 2 XV-P34122			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P316	001	00	B

**ENGINEERS
GEOSCIENTISTS
MANITOBA**

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AECOM Canada Ltd.

No. 4671 Date: 2025-01-31

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							DRAWN BY: DR	APPROVED BY: NW
							SCALE: NTS	DATE: 2024-01-08
							ISSUED FOR CONSTRUCTION DATE:	
							BY:	
00	ISSUED FOR TENDER			2025-01-31	DR	SB	CONSULTANTNO.:	
	REVISIONS			DATE	DESIGN	CHECK	P3-I614	

2025-01-30

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
LIFT STATION HIGH HIGH LEVEL SWITCH LSHH-P35003

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P317	001	00	B

				AECOM			
						DESIGNED BY: DR	CHECKED BY: SB
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						SCALE: NTS	DATE: 2024-01-08
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						BY:	DATE:
00	ISSUED FOR TENDER		2025-01-31	DR	SB	CONSULTANTNO.:	
	REVISIONS		DATE	DESIGN	CHECK	P3-I615	

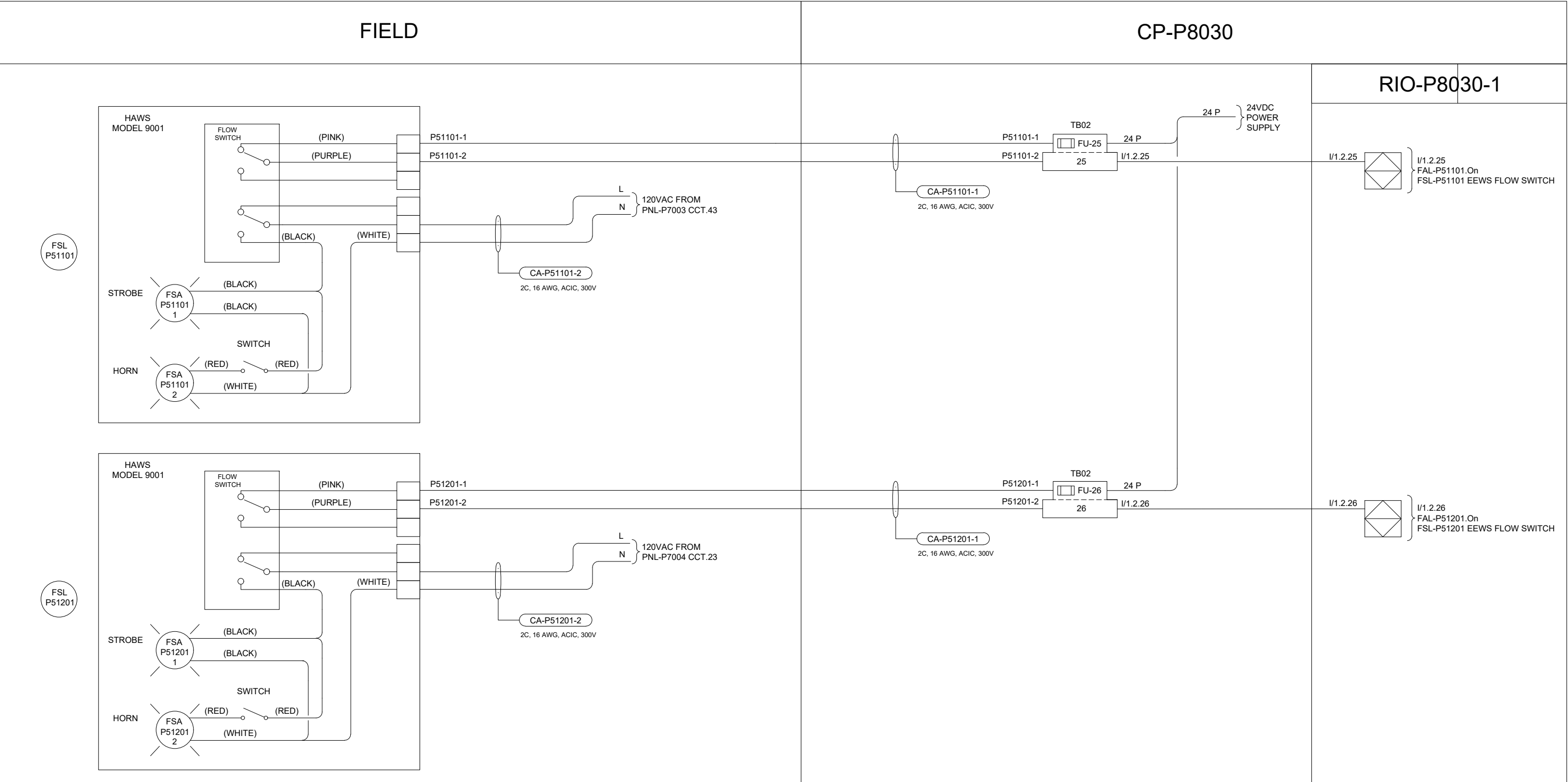
 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM PRESSURE SWITCH ALARMS PAL-P01103, PAL-P01203			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P318	001	00	B

[illegible]

				AECOM			
						DESIGNED BY: DR	CHECKED BY: SB
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						SCALE: NTS	DATE: 2024-01-08
						ISSUED FOR CONSTRUCTION DATE:	
00	ISSUED FOR TENDER		2025-01-31	DR	SB	CONSULTANT NO.: P3-I618	
	REVISIONS		DATE	DESIGN	CHECK		

 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM FLUSH WATER FROM DISTRIBUTION XV-P34144			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P319	001	00	B

B SIZE - 279mm x 432mm



ENGINEERS
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NTS	2024-01-08
BY:	ISSUED FOR CONSTRUCTION DATE:
CONSULTANT NO.:	
P3-I619	

ENGINEER'S SEAL

PROVINCE OF MANITOBA

BOGHOSSIAN

Member

33454

REGISTERED PROFESSIONAL ENGINEER

2025-01-30

Winnipeg

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
PLUMBING, FSL-51101, FSL-51201

CITY DRAWING NUMBER

1-0101-AILD-P320

SHEET

001

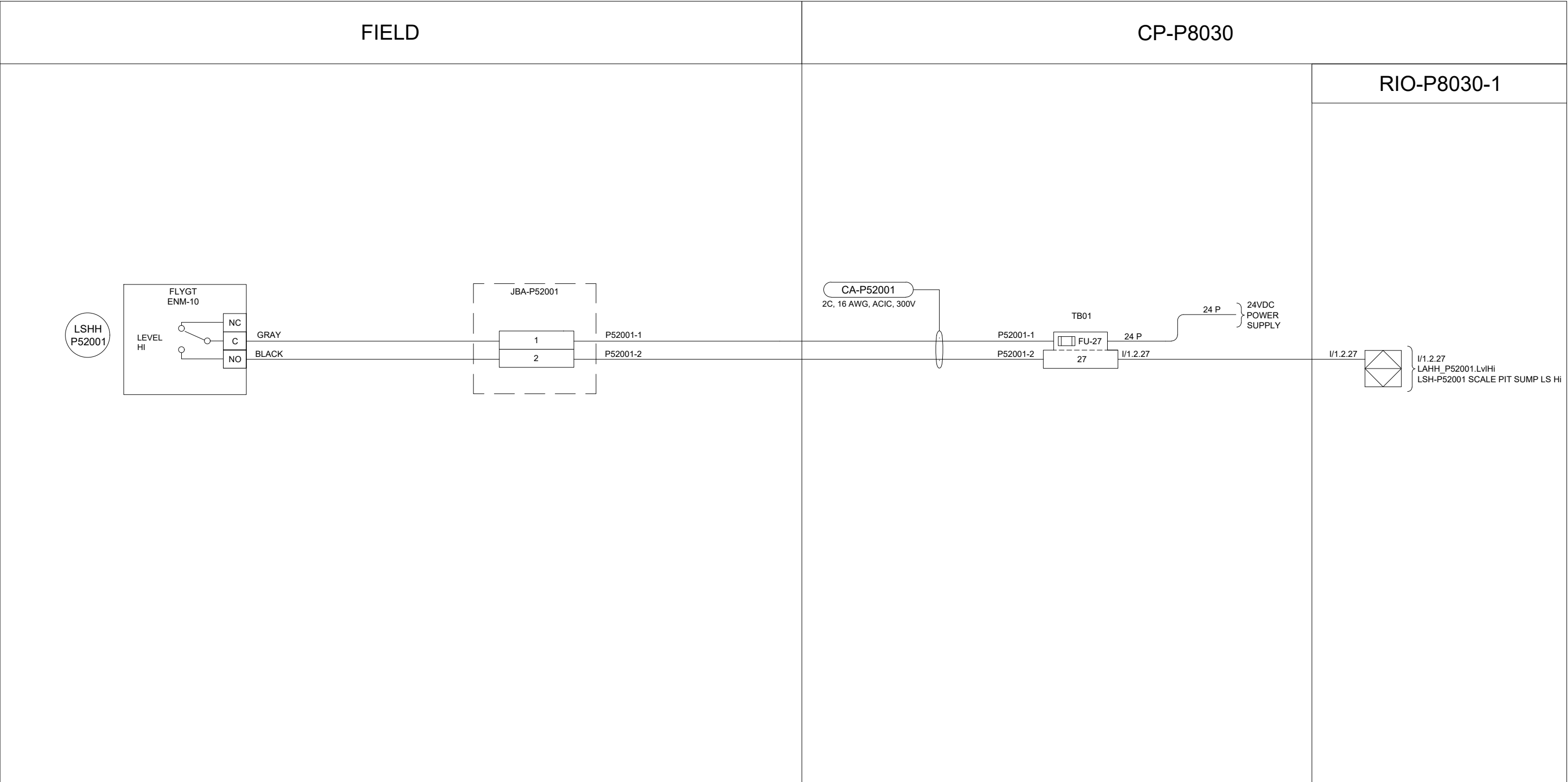
REV.

00

SIZE

B

B SIZE - 279mm x 432mm



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ISSUED FOR CONSTRUCTION	
BY: DATE:	
CONSULTANTNO.: P3-I620	

ENGINEER'S SEAL

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
PLUMBING, LSH-P52001

CITY DRAWING NUMBER

1-0101-AILD-P321

SHEET

001

REV.

00

SIZE

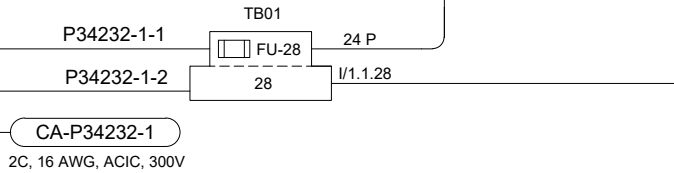
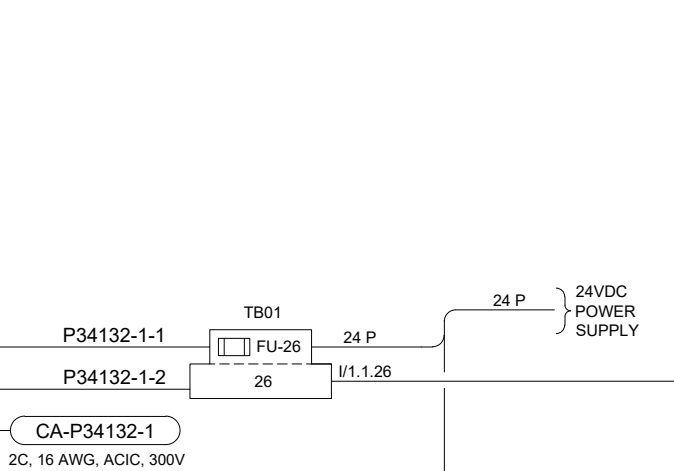
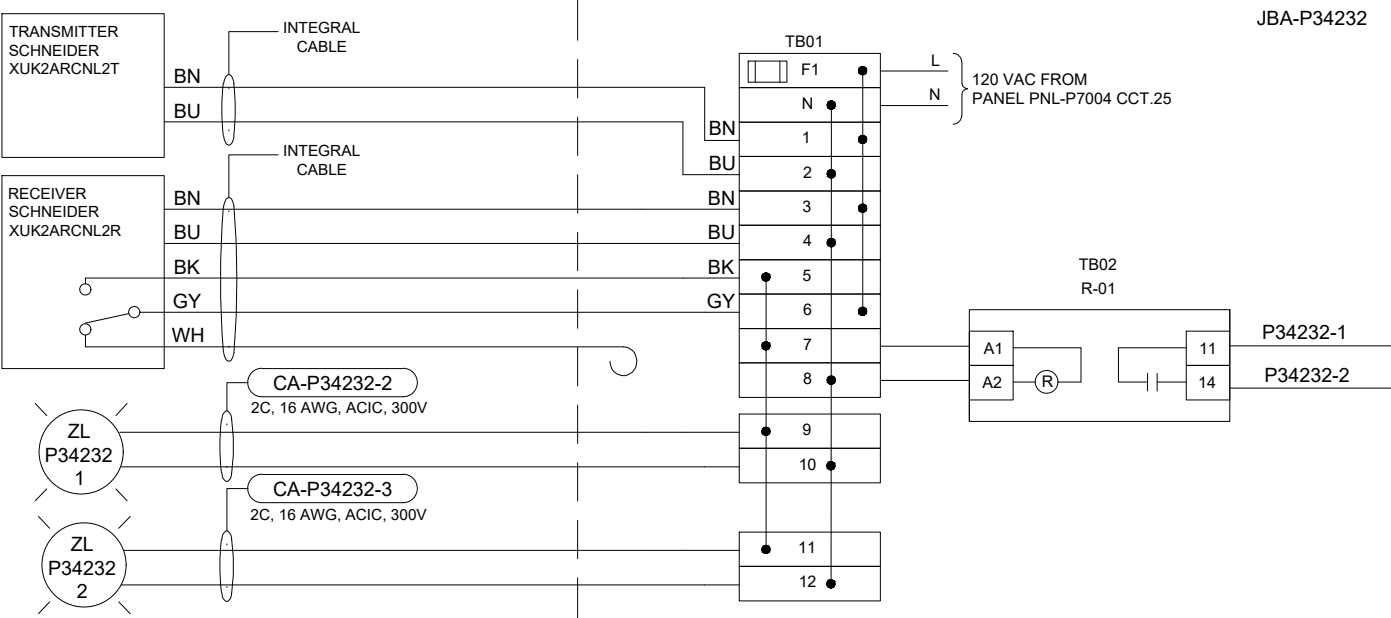
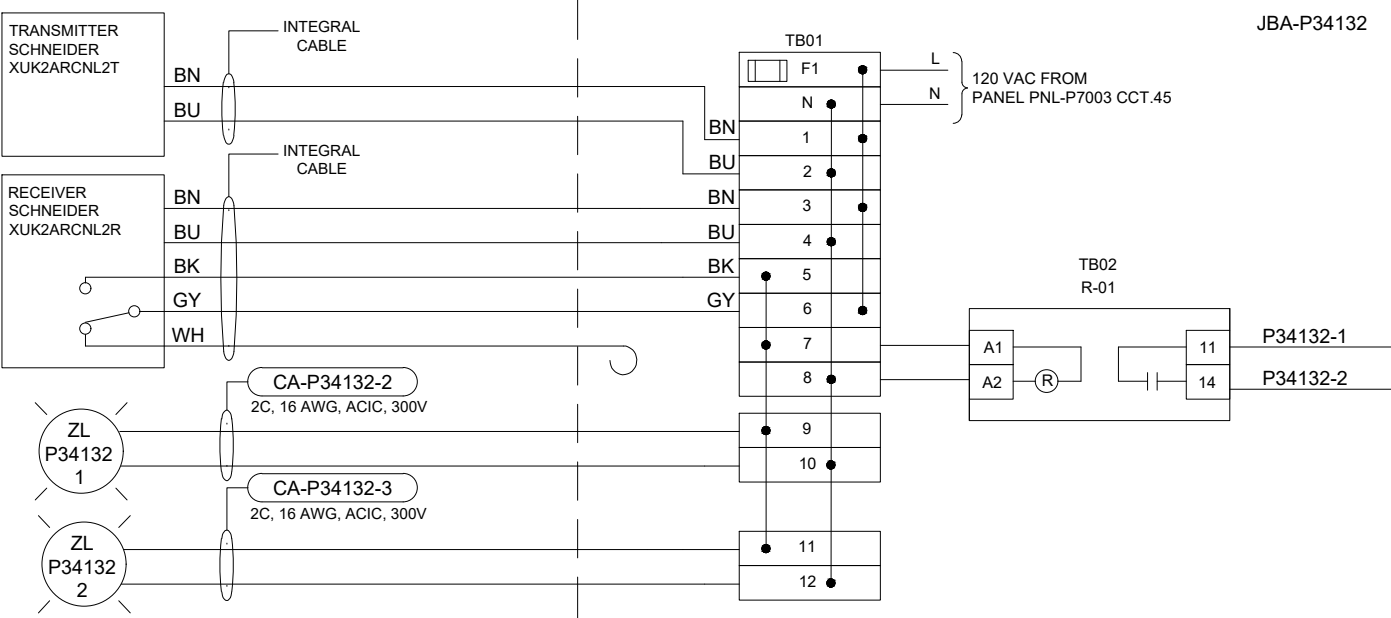
B

B SIZE - 279mm x 432mm

FIELD

CP-P8030

RIO-P8030-1



I/1.1.26
ZL_P34132.InPos
ZS-34132 BIN PRESENT LB1

I/1.1.28
ZL_P34232.InPos
ZS-34232 BIN PRESENT LB2

**ENGINEERS
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AECOM Canada Ltd.
No. 4671 Date: 2025-01-31

REVISIONS				DATE	DESIGN	CHECK
00	ISSUED FOR TENDER	2025-01-31	DR	SB		

AECOM

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DR	SB
DRAWN BY:	APPROVED BY:
DR	NW
SCALE:	DATE:
NTS	2024-01-08
BY:	ISSUED FOR CONSTRUCTION DATE:
CONSULTANTNO.:	P3-I621

ENGINEER'S SEAL



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
ZS-P34132-1, ZS-P34132-2, ZS-P34232-1, ZS-P34232-2,

CITY DRAWING NUMBER	SHEET	REV.	SIZE
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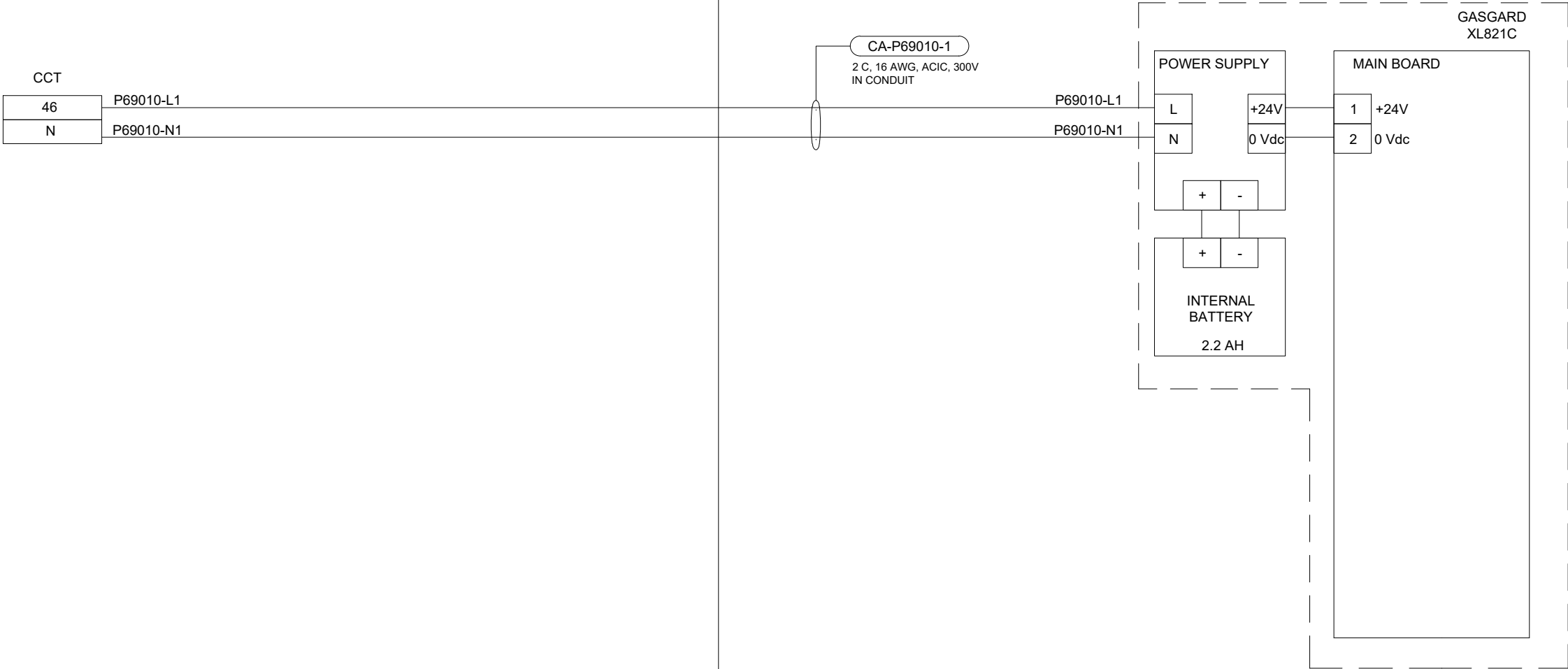
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						ISSUED FOR CONSTRUCTION	
						BY:	DATE:
00	ISSUED FOR TENDER		2025-01-31	DR	SB	CONSULTANTNO.:	
	REVISIONS		DATE	DESIGN	CHECK	P3-I622	

 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM ZL-P34134, ZL-P34234			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P323	001	00	B

B SIZE - 279mm x 432mm

PNL-P7004

GDC-P69010



ENGINEERS
GEOSCIENTISTS
MANITOBA

Certificate of Authorization
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DR	SB
DRAWN BY:	APPROVED BY:
DR	NW
SCALE:	DATE:
NTS	2024-01-08
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BY:	DATE:
CONSULTANTNO.: P3-I623	

ENGINEER'S SEAL



2025-01-30



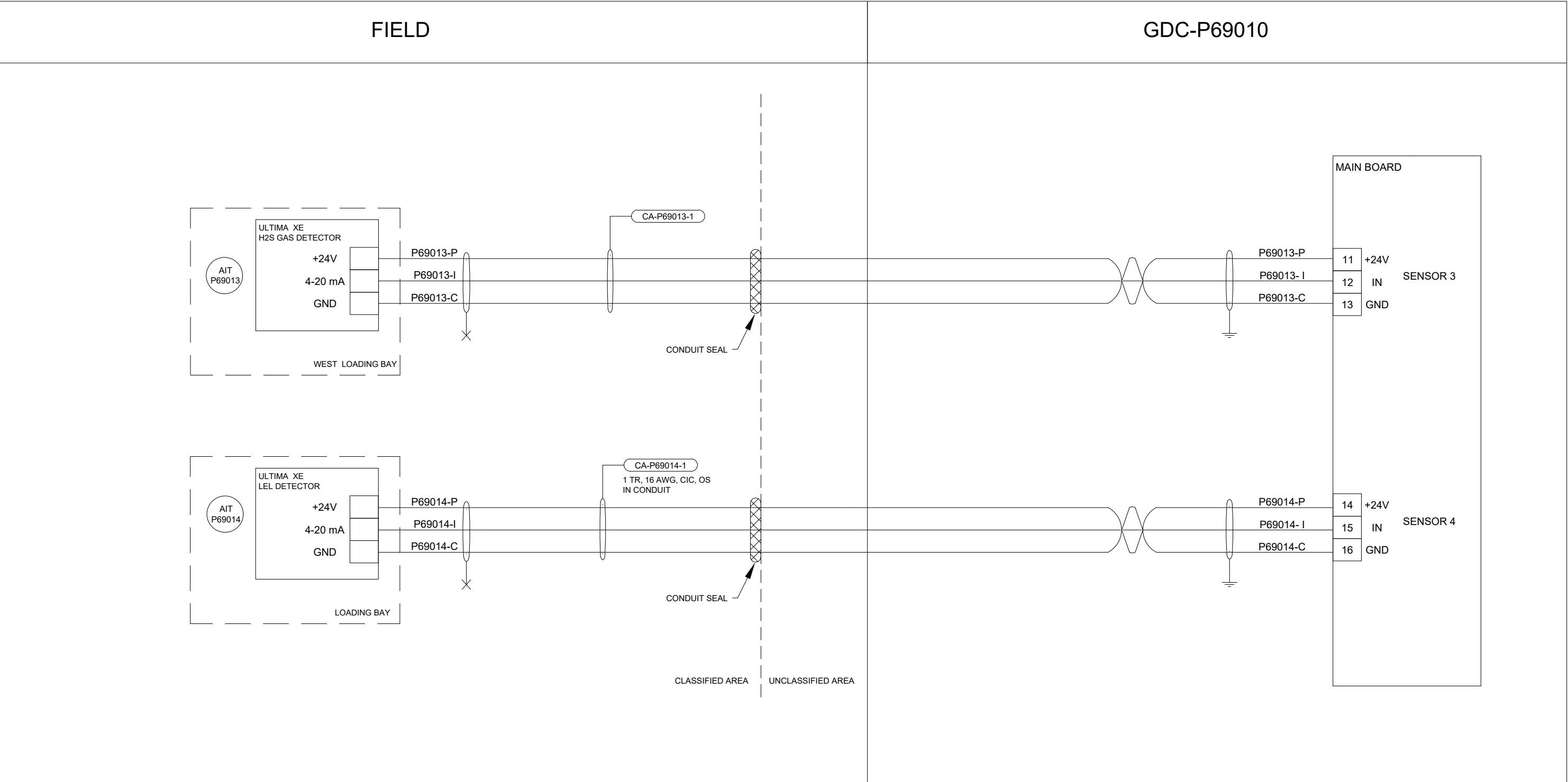
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
GAS DETECTOR CONTROLLER GDC-P6910

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P601	001	00	B

				AECOM				ENGINEER'S SEAL		 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
						DESIGNED BY:	CHECKED BY:		NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM AIT-P69011, AIT-69012				
					DR	SB							
					DRAWN BY:	APPROVED BY:							
					DR	NW							
					SCALE:	DATE:							
					NTS	2024-01-08							
						ISSUED FOR CONSTRUCTION							
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00	ISSUED FOR TENDER	2025-01-31	DR	SB	CONSULTANT NO.:					CITY DRAWING NUMBER	SHEET	REV.	SIZE
	REVISIONS	DATE	DESIGN	CHECK	P3-I624					1-0101-AILD-P602	001	00	B

B SIZE - 279mm x 432mm



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						DESIGNED BY: DR	CHECKED BY: SB
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						BY:	DATE:
00	ISSUED FOR TENDER		2025-01-31	DR	SB	CONSULTANTNO.:	
	REVISIONS		DATE	DESIGN	CHECK	P3-I625	

ENGINEER'S SEAL

PROVINCE OF MANITOBA

BOGHOSSIAN

Member

33454

REGISTERED PROFESSIONAL ENGINEER

2025-01-30

Winnipeg

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

SCUM DEWATERING BUILDING - LOOP DIAGRAM

AIT-69013, AIT-69014

CITY DRAWING NUMBER

1-0101-AILD-P603

SHEET

001

REV.

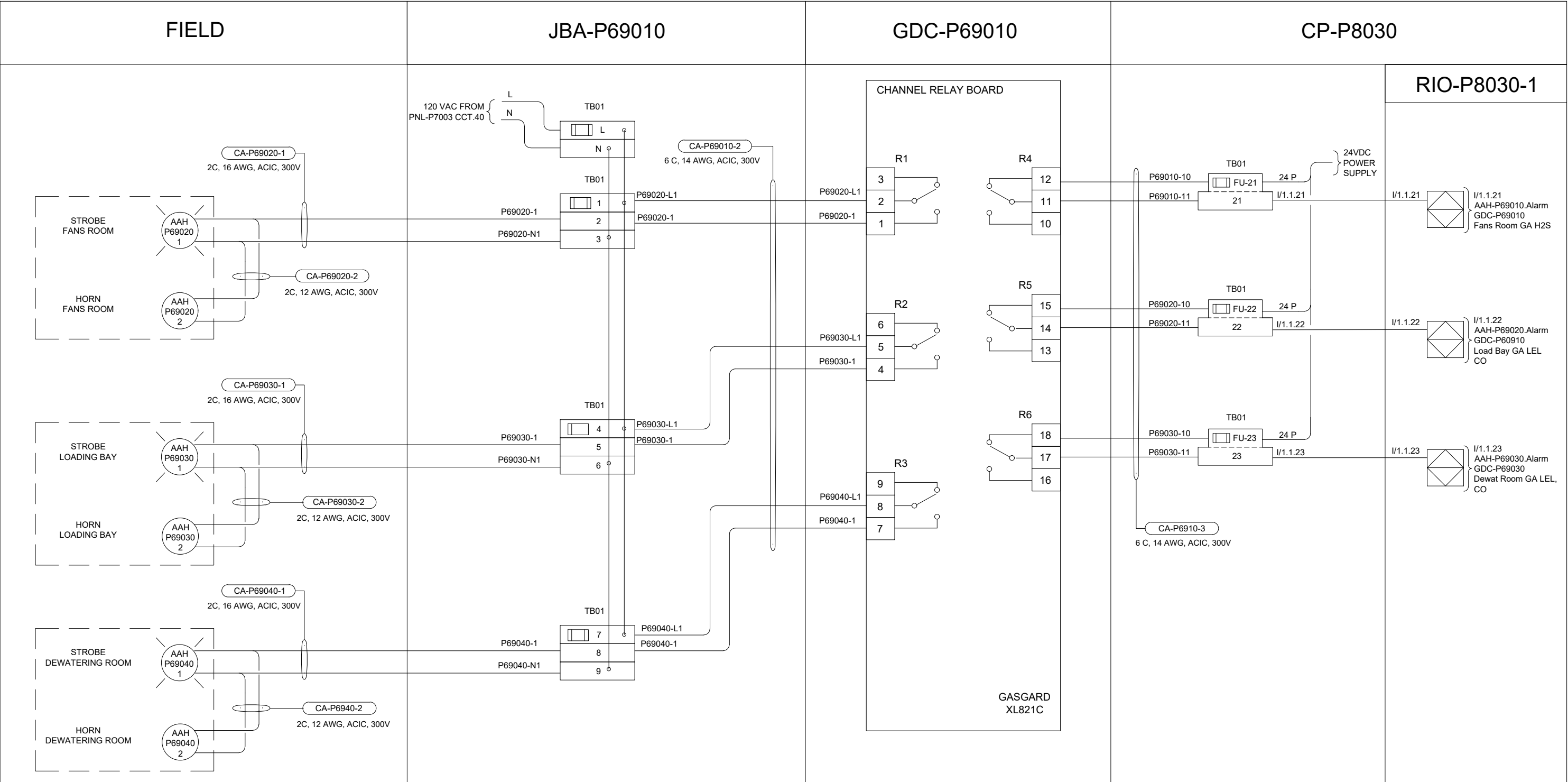
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SIZE

B

 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM AIT-69015, AIT-69016			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P604	001	00	B

B SIZE - 279mm x 432mm



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DR	NW
SCALE:	DATE:
NTS	2024-01-08
BY:	ISSUED FOR CONSTRUCTION DATE:
CONSULTANT NO.:	
P3-I627	

ENGINEER'S SEAL



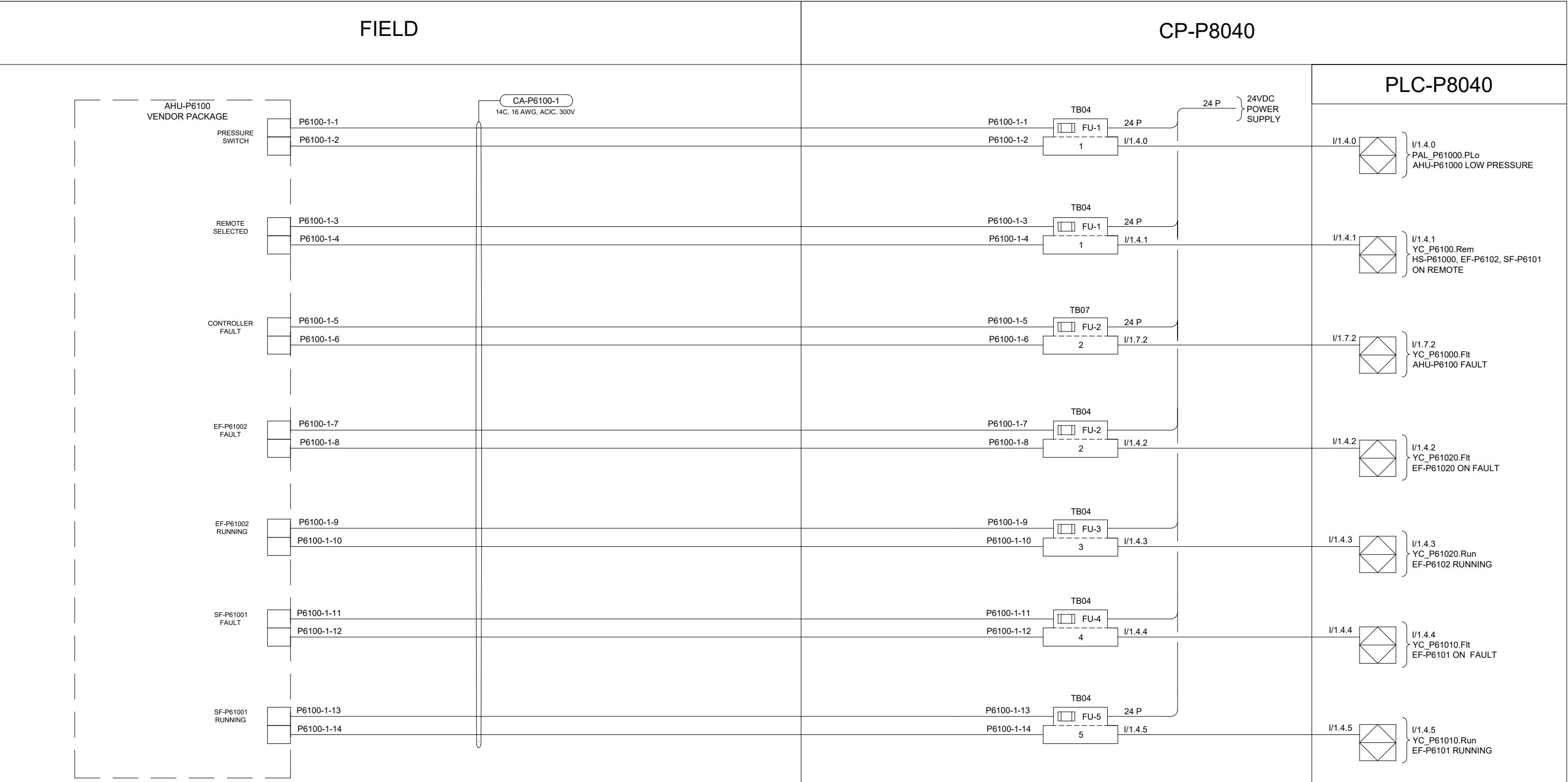
2025-01-30

**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
GAS ALARMS AAH-69020, AAH-69030, AAH-69040

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P605	001	00	B

B SIZE - 279mm x 432mm





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DR	SB
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DR	NW
SCALE:	DATE:
NTS	2024-01-08
BY:	ISSUED FOR CONSTRUCTION DATE:
CONSULTANTNO.:	
	P3-I628

ENGINEER'S SEAL



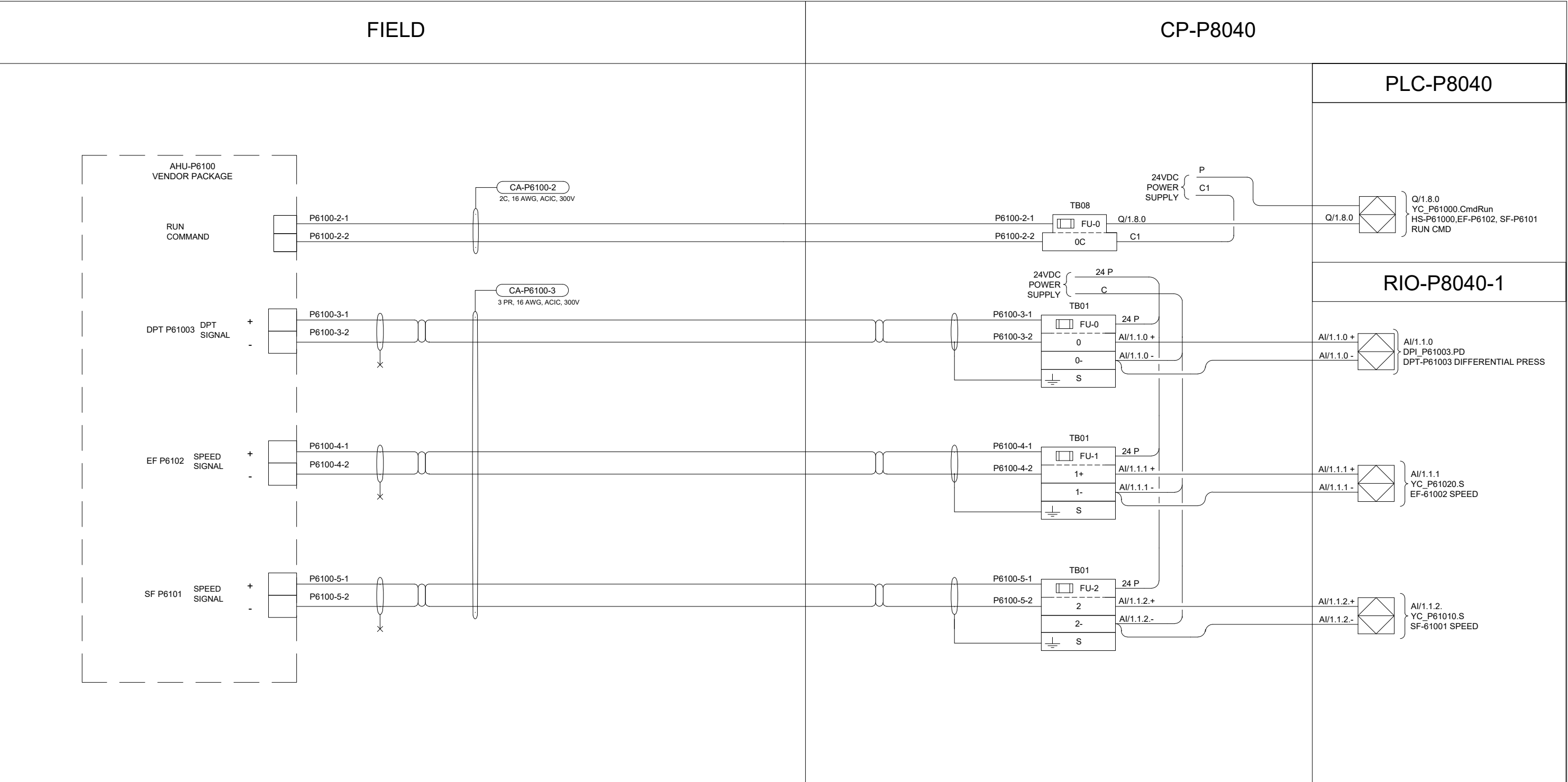


THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-ERV1, AHU-P6100

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P606	001	00	B

B SIZE - 279mm x 432mm



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DR					NW				
SCALE:					DATE:				
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ISSUED FOR CONSTRUCTION					DATE:				
BY:									
CONSULTANTNO.:					P3-I629				
00 ISSUED FOR TENDER					2025-01-31 DR SB				
REVISIONS					DATE DESIGN CHECK				

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THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-ERV1, AHU-P6100

CITY DRAWING NUMBER

1-0101-AILD-P606

SHEET

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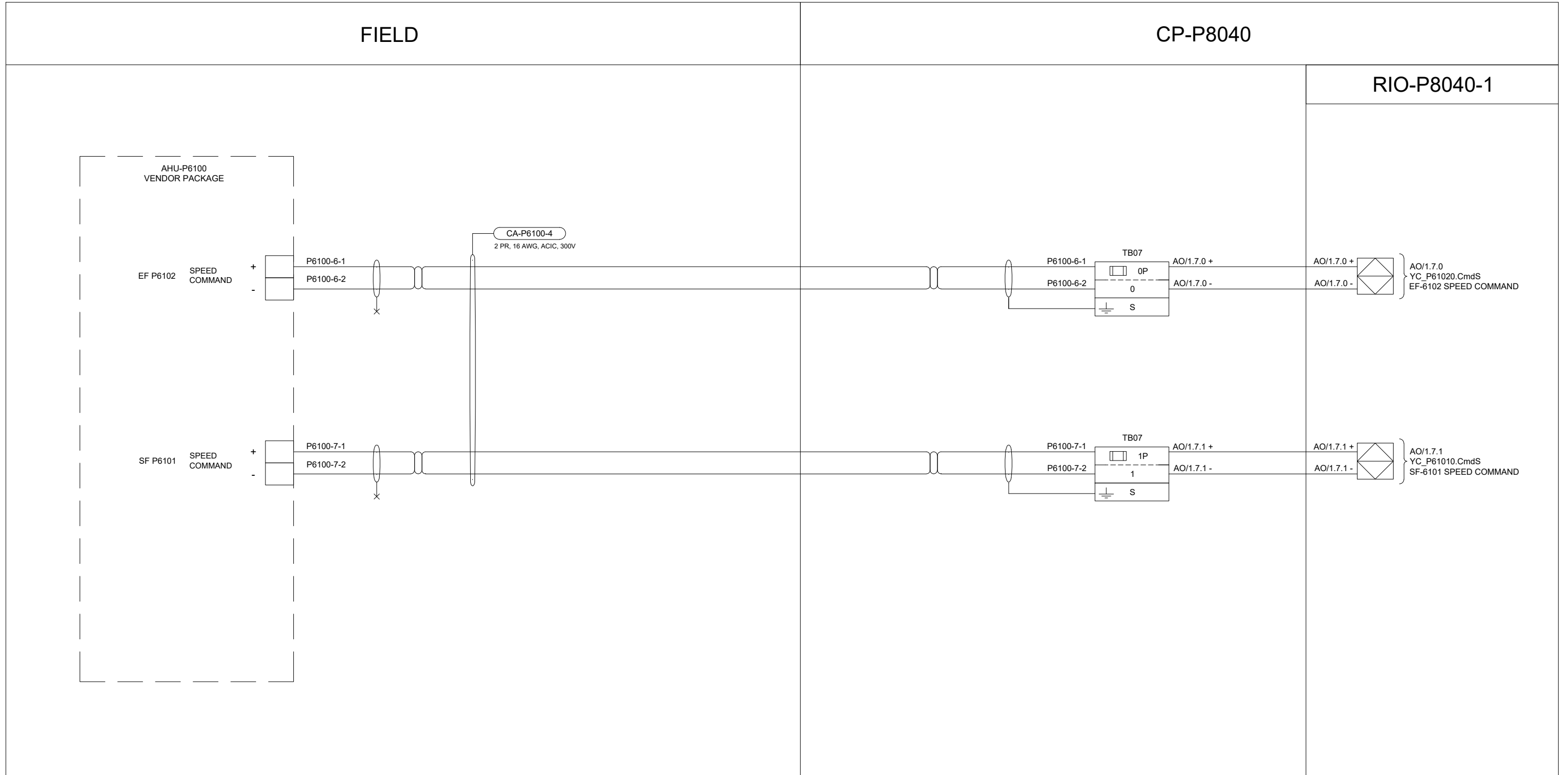
REV.

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SIZE

B

B SIZE - 279mm x 432mm



**ENGINEERS
GEOSCIENTISTS
MANITOBA**

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					DESIGNED BY: DR
					CHECKED BY: SB
					DRAWN BY: DR
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					ISSUED FOR CONSTRUCTION
					DATE:
00	ISSUED FOR TENDER	2025-01-31	DR	SB	CONSULTANTNO.:
	REVISIONS	DATE	DESIGN	CHECK	P3-I630

ENGINEER'S SEAL



THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

SCUM DEWATERING BUILDING - LOOP DIAGRAM

HVAC-ERV1, AHU-P6100

CITY DRAWING NUMBER

1-0101-AILD-P606

SHEET

003

REV.

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SIZE

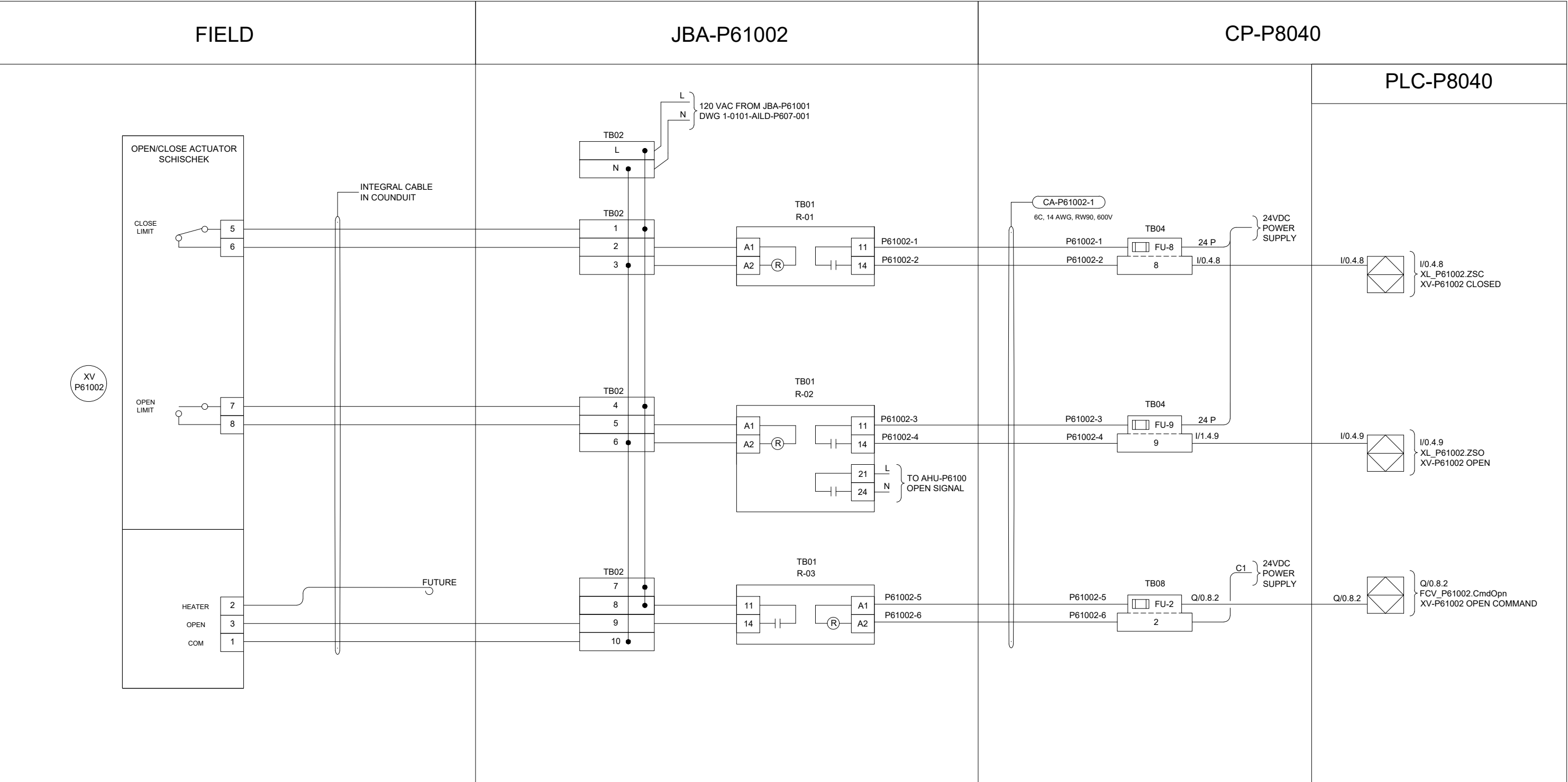
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						BY:	DATE:
00	ISSUED FOR TENDER		2025-01-31	DR	SB	CONSULTANTNO.:	
	REVISIONS		DATE	DESIGN	CHECK	P3-I631	

 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT				
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM XV-P61001				
CITY DRAWING NUMBER	SHEET	REV.	SIZE	
1-0101-AILD-P607	001	00	B	

B SIZE - 279mm x 432mm



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			DRAWN BY:	APPROVED BY:
			DR	NW
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	REVISIONS	DATE	DESIGN	CHECK

ENGINEER'S SEAL

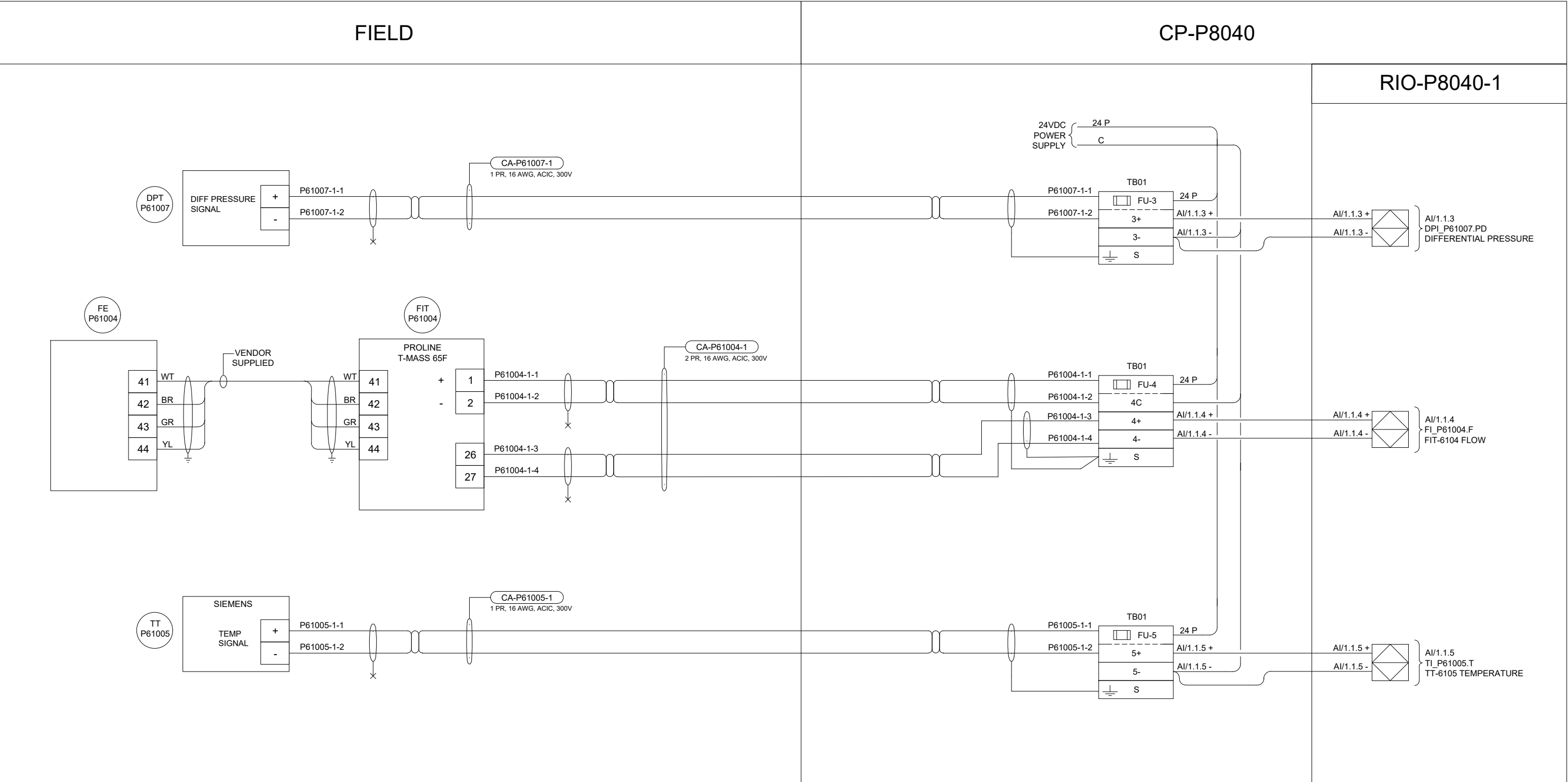


**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
XV-P61002

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P608	001	00	B

B SIZE - 279mm x 432mm



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DR	NW
SCALE:	DATE:
NTS	2024-01-08
BY:	ISSUED FOR CONSTRUCTION DATE:
CONSULTANTNO.:	
	P3-I633

ENGINEER'S SEAL



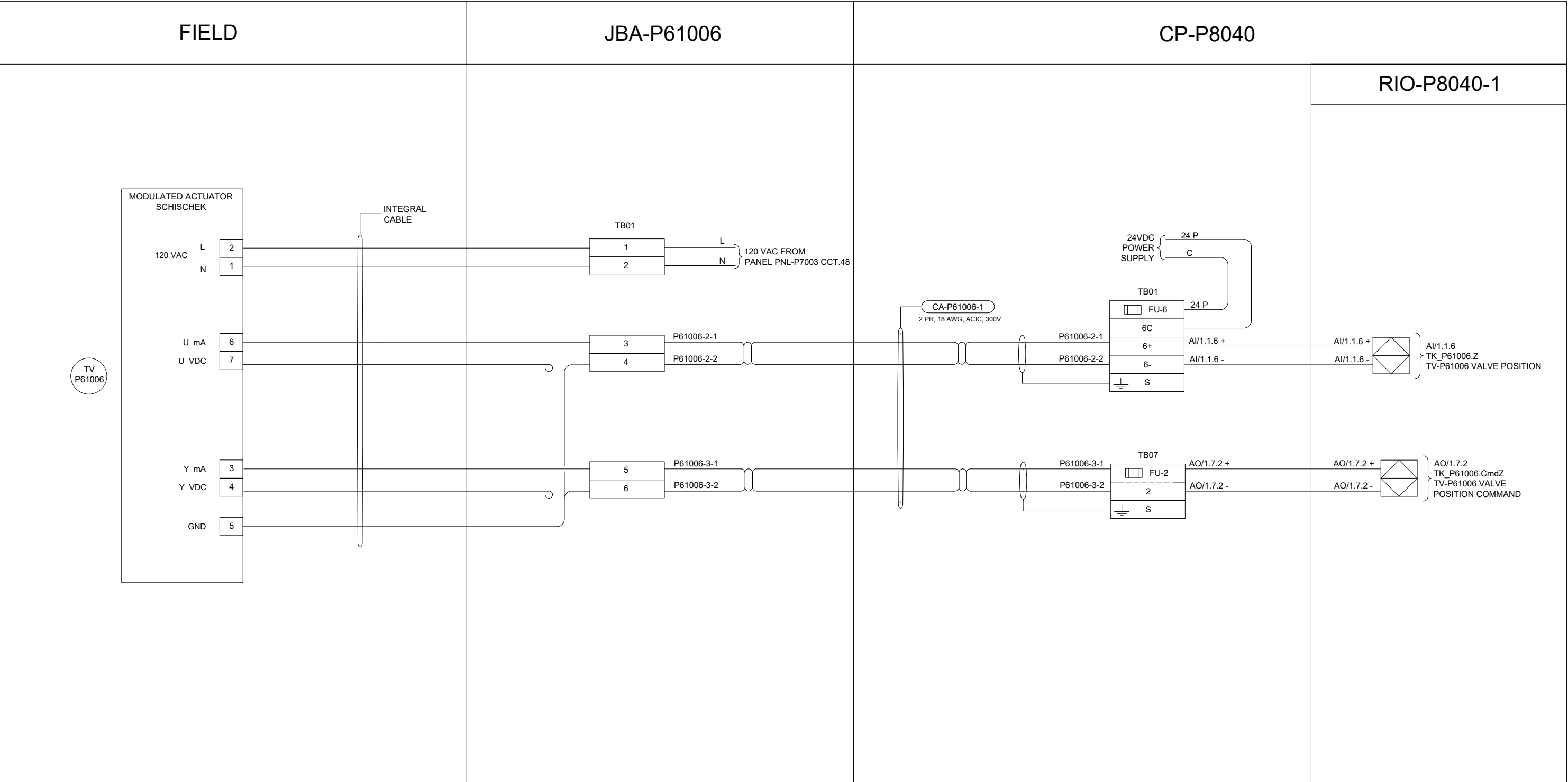
2025-01-30

**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
DPT-P61007, FIT-P61004, TT-P61005

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P609	001	00	B

B SIZE - 279mm x 432mm



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	REVISIONS	DATE	DESIGN	CHECK

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SCALE: NTS	DATE: 2024-01-08
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CONSULTANTNO.: P3-I634	

ENGINEER'S SEAL



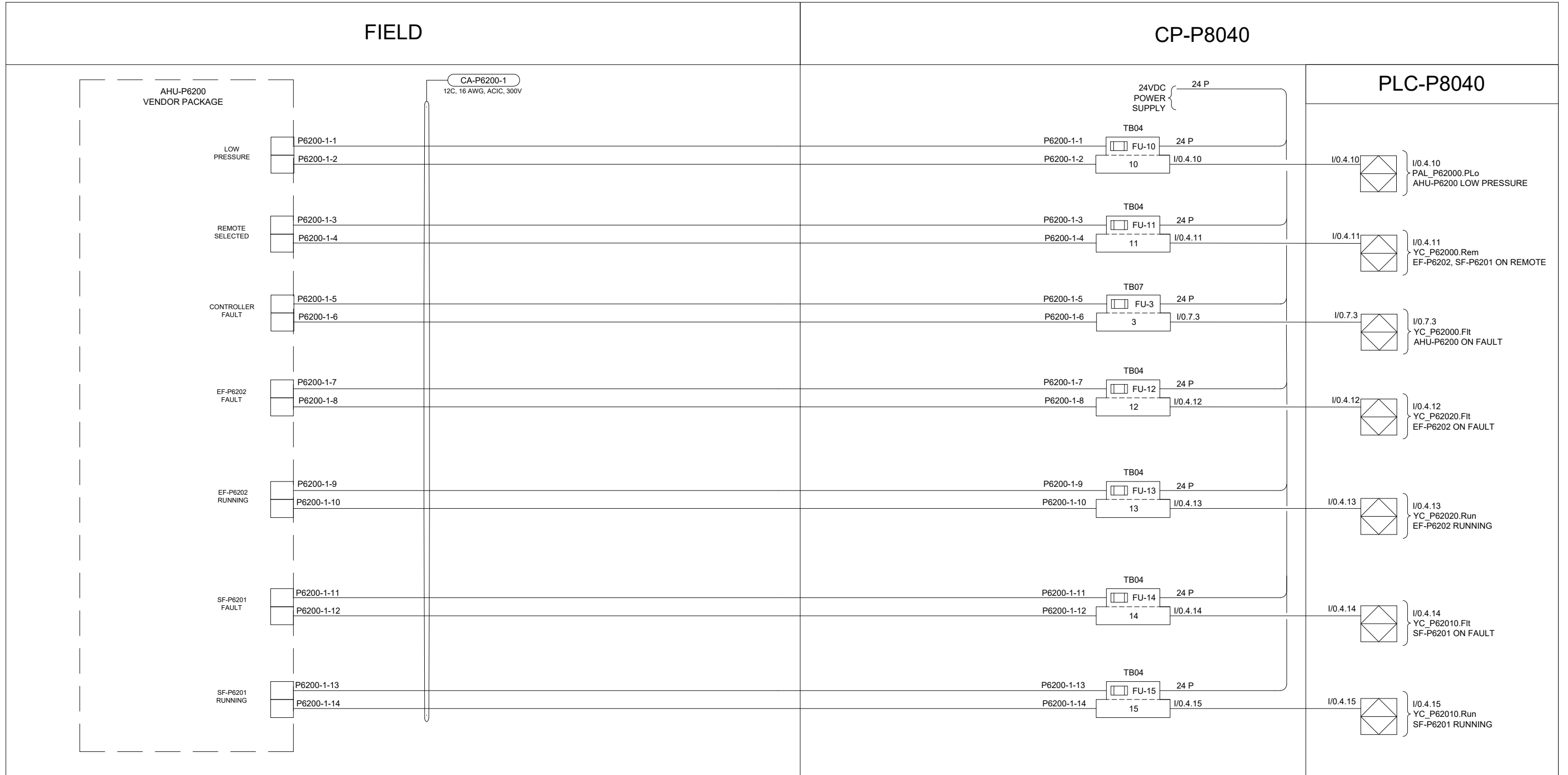
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**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
TV-P61006

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P610	001	00	B

B SIZE - 279mm x 432mm



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							DRAWN BY: DR	APPROVED BY: NW
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ENGINEER'S SEAL

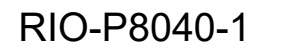


THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-ERV2, AHU-P6200

CITY DRAWING NUMBER	SHEET	REV.	SIZE
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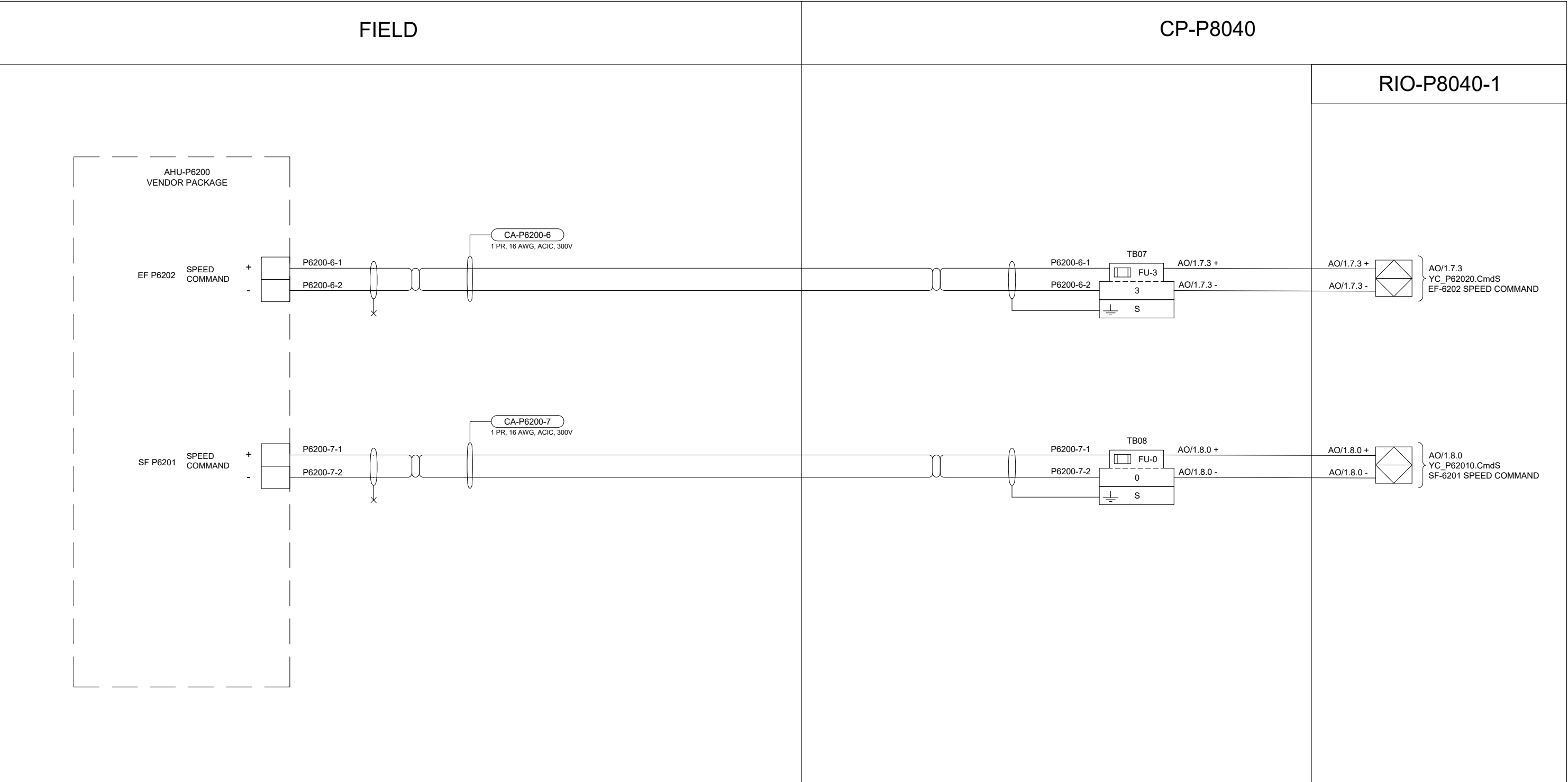
PLC-P8040



P3-1636

P3-1636

B SIZE - 279mm x 432mm



ENGINEERS
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DR	NW
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NTS	2024-01-08
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CONSULTANTNO.:	
	P3-I637

ENGINEER'S SEAL

PROVINCE OF MANITOBA
REGISTERED PROFESSIONAL ENGINEER

BOGHOSIAN
Member
33454

2025-01-30

Winnipeg

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-ERV2, AHU-P6200

CITY DRAWING NUMBER	SHEET	REV.	SIZE
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**ENGINEERS
GEOSCIENTISTS
MANITOBA**

Certificate of Authorization

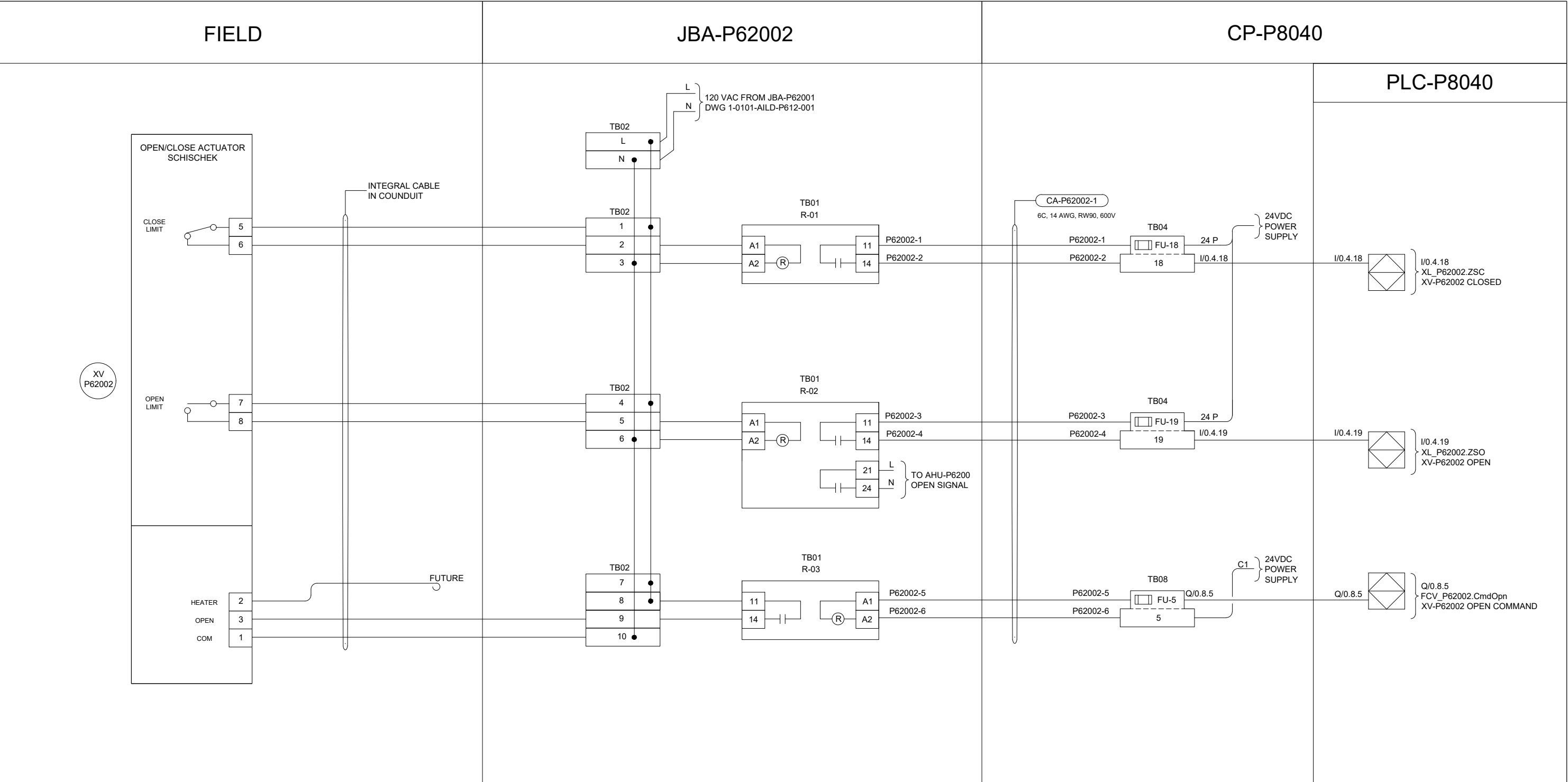
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	REVISIONS			DATE	DESIGN	CHECK		

 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC-ERV2, XV-P62001			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P612	001	00	B

B SIZE - 279mm x 432mm



**ENGINEERS
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DR	NW
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BY:	DATE:
CONSULTANT NO.:	
P3-I639	

ENGINEER'S SEAL



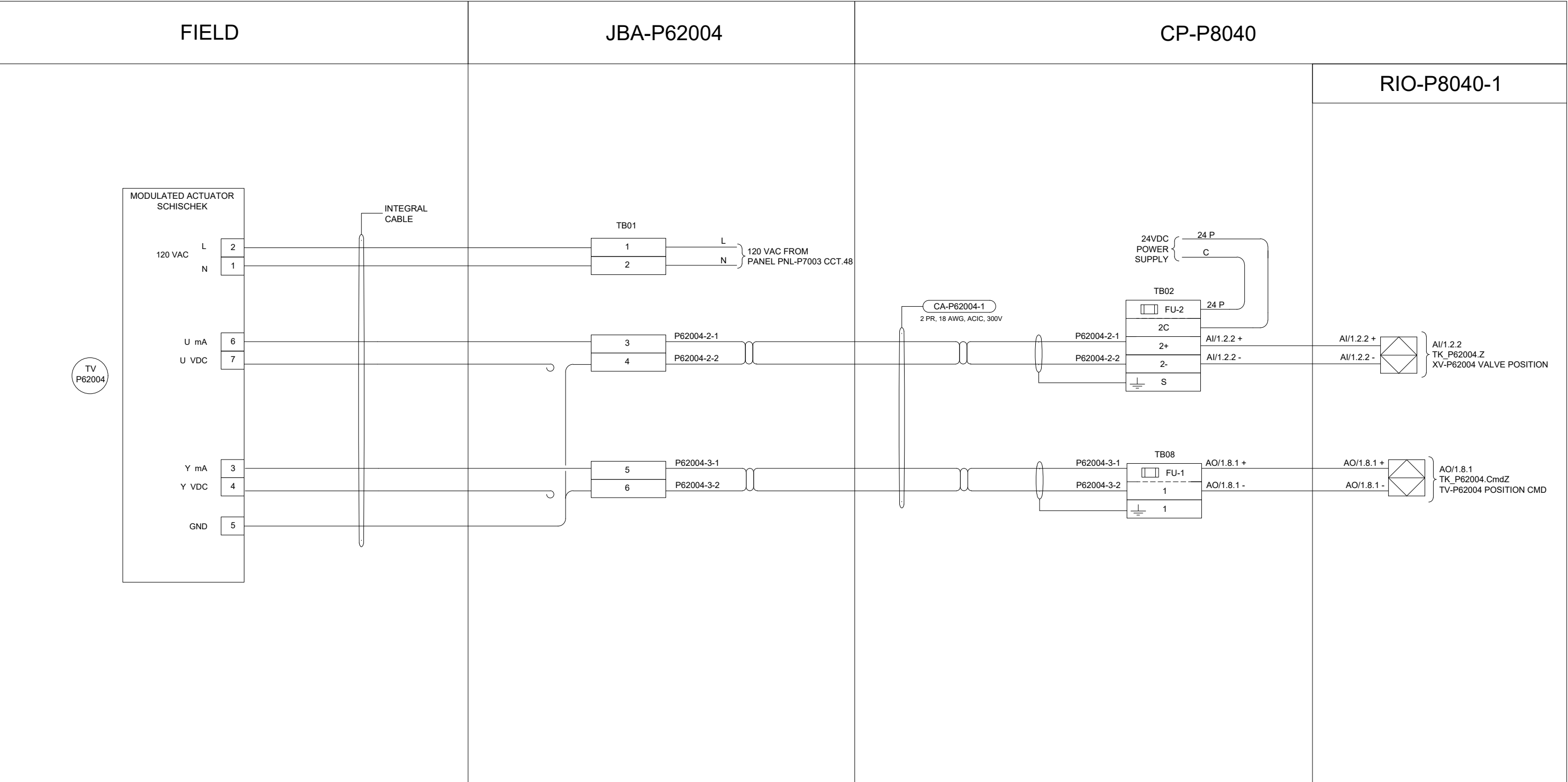
2025-01-30

**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-ERV2, XV-P62002

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P613	001	00	B

B SIZE - 279mm x 432mm



**ENGINEERS
GEOSCIENTISTS
MANITOBA**

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CONSULTANT NO.:				
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2025-01-31 DR SB				
DATE DESIGN CHECK				

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ENGINEER'S SEAL



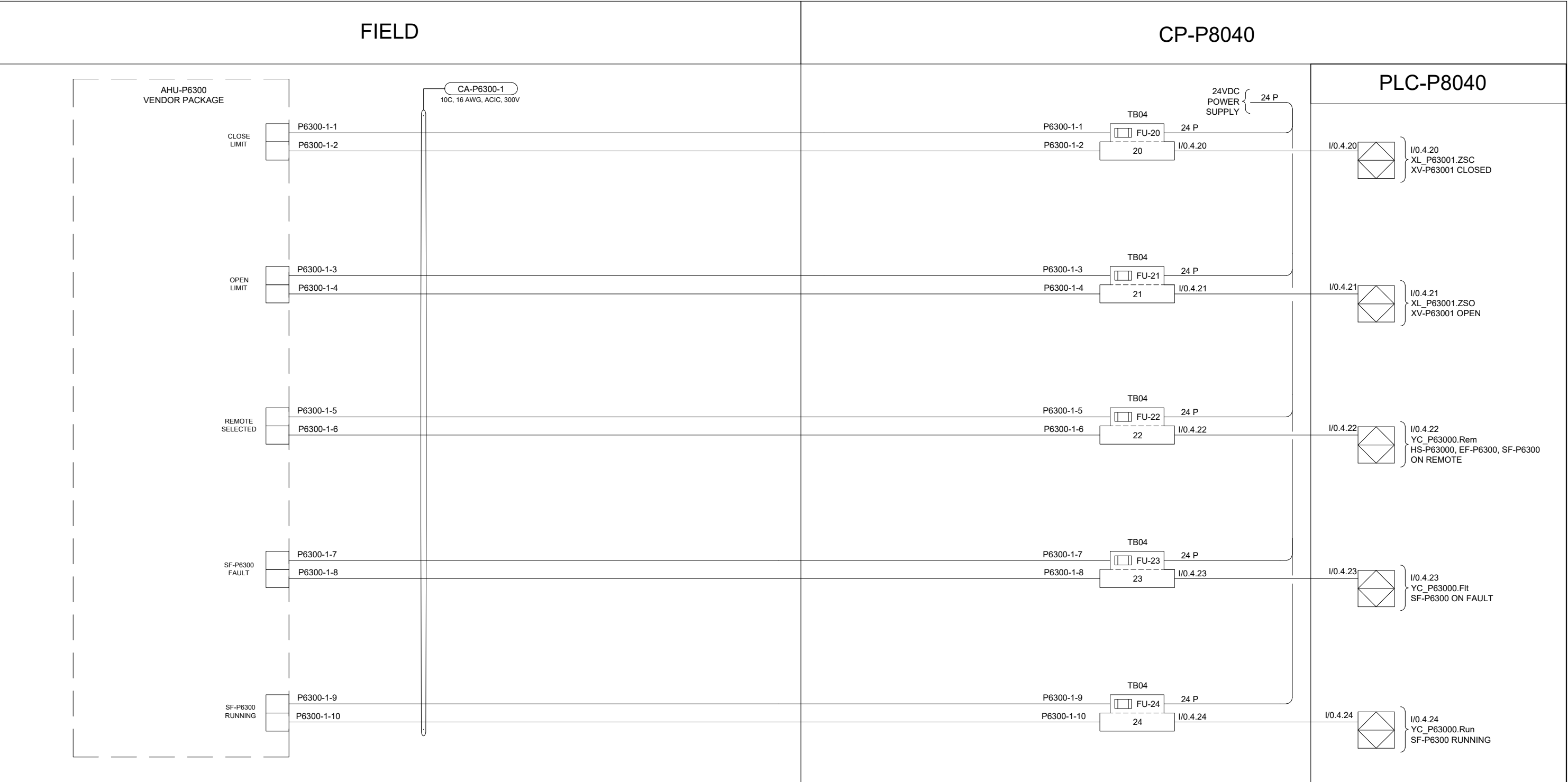
2025-01-30

**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-ERV2, TV-P62004

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P614	001	00	B

B SIZE - 279mm x 432mm





**ENGINEERS
GEOSCIENTISTS
MANITOBA**

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DR	NW
SCALE:	DATE:
NTS	2024-01-08
BY:	ISSUED FOR CONSTRUCTION DATE:
CONSULTANTNO.:	
	P3-I641

ENGINEER'S SEAL



2025-01-30

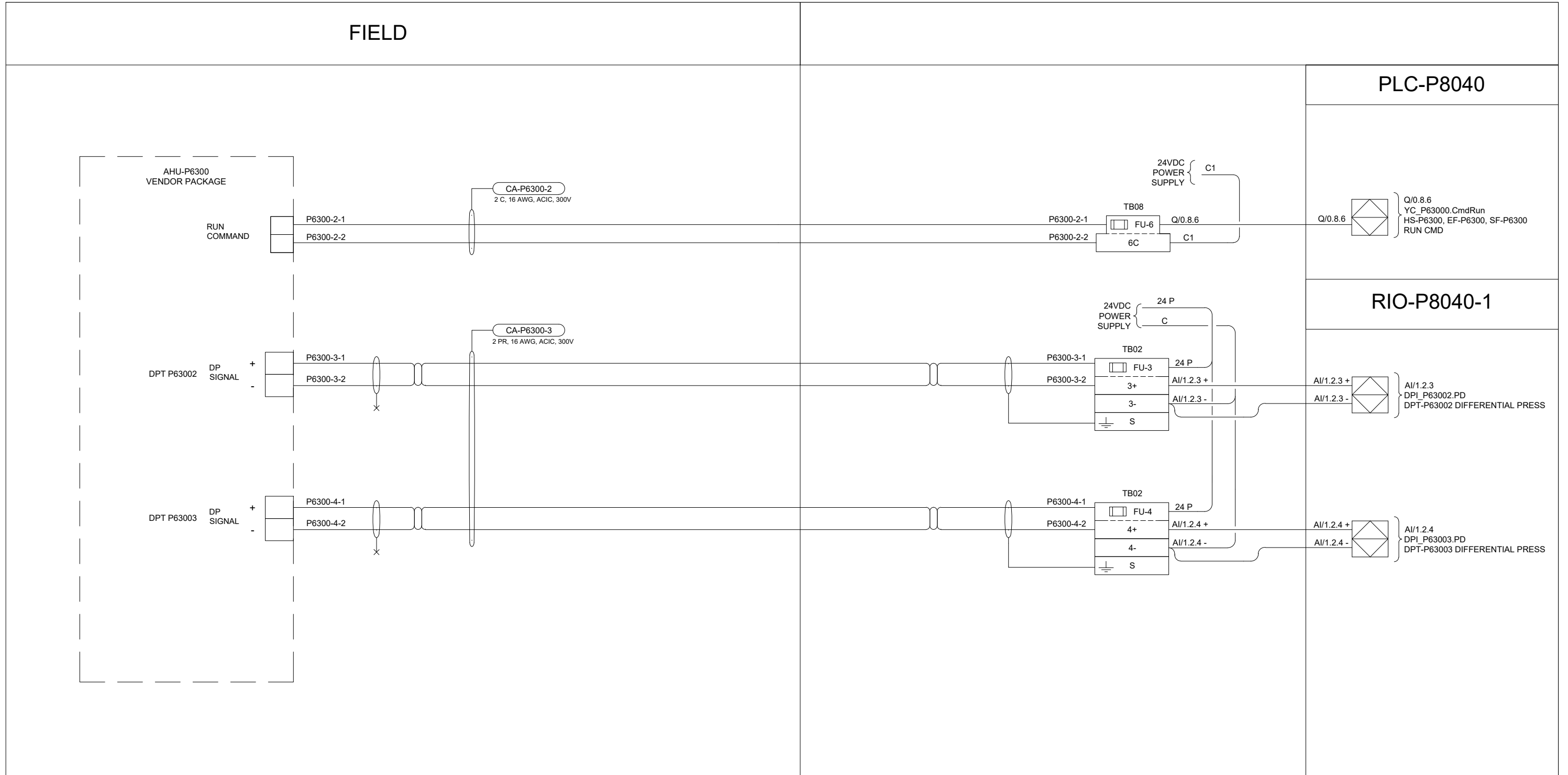


THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-MAU, AHU-P6300

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P615	001	00	B

B SIZE - 279mm x 432mm



**ENGINEERS
GEOSCIENTISTS
MANITOBA**

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						SCALE: NTS	DATE: 2024-01-08
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00	ISSUED FOR TENDER			2025-01-31	DR	SB	CONSULTANT NO.: P3-I642
	REVISIONS			DATE	DESIGN	CHECK	

ENGINEER'S SEAL



THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

SCUM DEWATERING BUILDING - LOOP DIAGRAM

HVAC-MAU, AHU-P6300

CITY DRAWING NUMBER

1-0101-AILD-P615

SHEET

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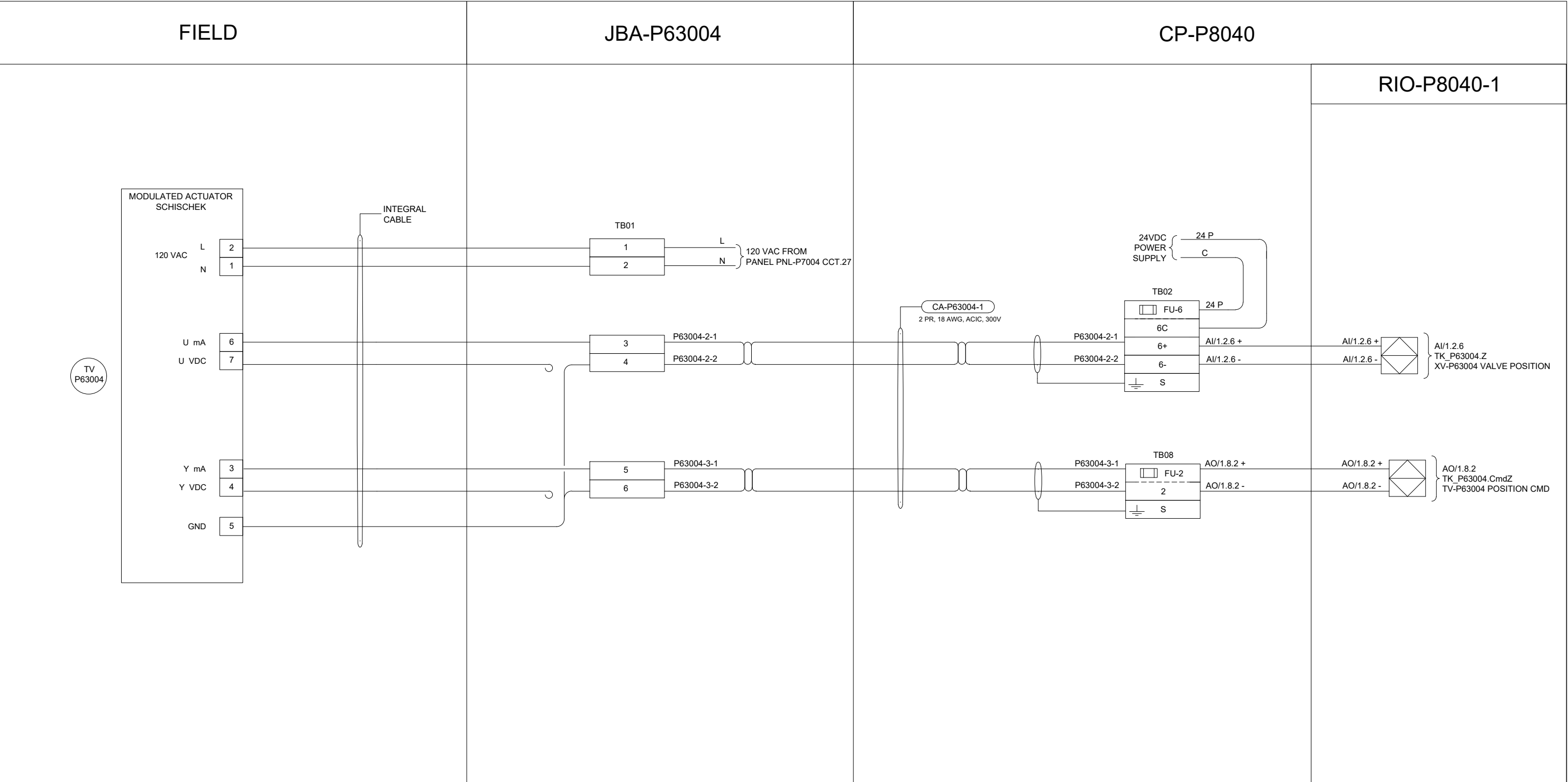
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 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC-MAU, TT-P63005			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P616	001	00	B

B SIZE - 279mm x 432mm



ENGINEERS
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SCALE:				
ISSUED FOR CONSTRUCTION				
BY:				
CONSULTANTNO.:				
REVISIONS				
00	ISSUED FOR TENDER	2025-01-31	DR	SB
		DATE	DESIGN	CHECK

DESIGNED BY:
DR

DRAWN BY:
DR

SCALE:
NTS

ISSUED FOR CONSTRUCTION
BY:

CONSULTANTNO.:
P3-I644

CHECKED BY:
SB

APPROVED BY:
NW

DATE:
2024-01-08

DATE:

ENGINEER'S SEAL

PROVINCE OF MANITOBA
REGISTERED PROFESSIONAL ENGINEER

BOGHOSSIAN
Member
33454

2025-01-30

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-MAU, TV-P63004

CITY DRAWING NUMBER

1-0101-AILD-P617

SHEET

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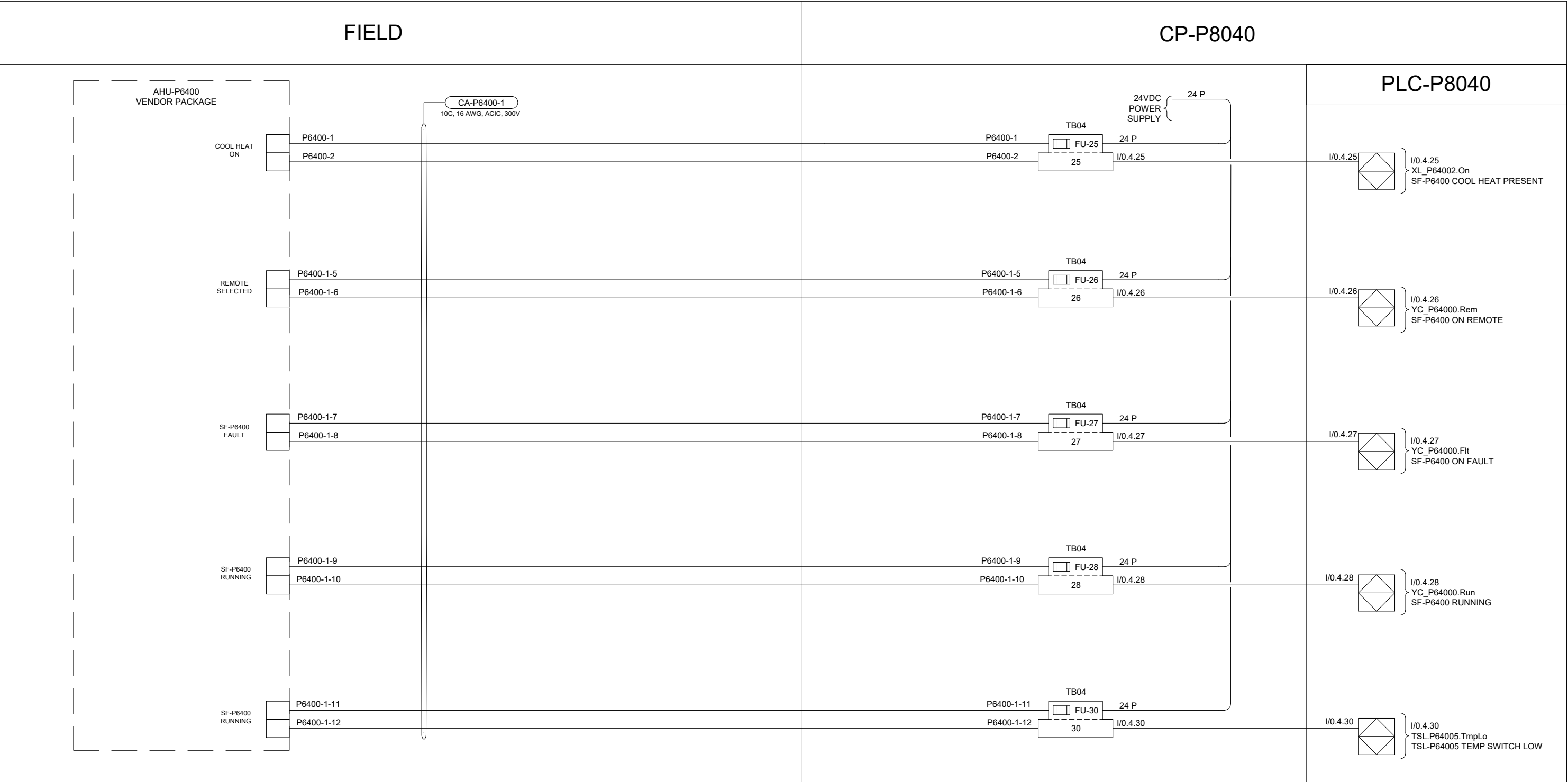
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SIZE

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B SIZE - 279mm x 432mm



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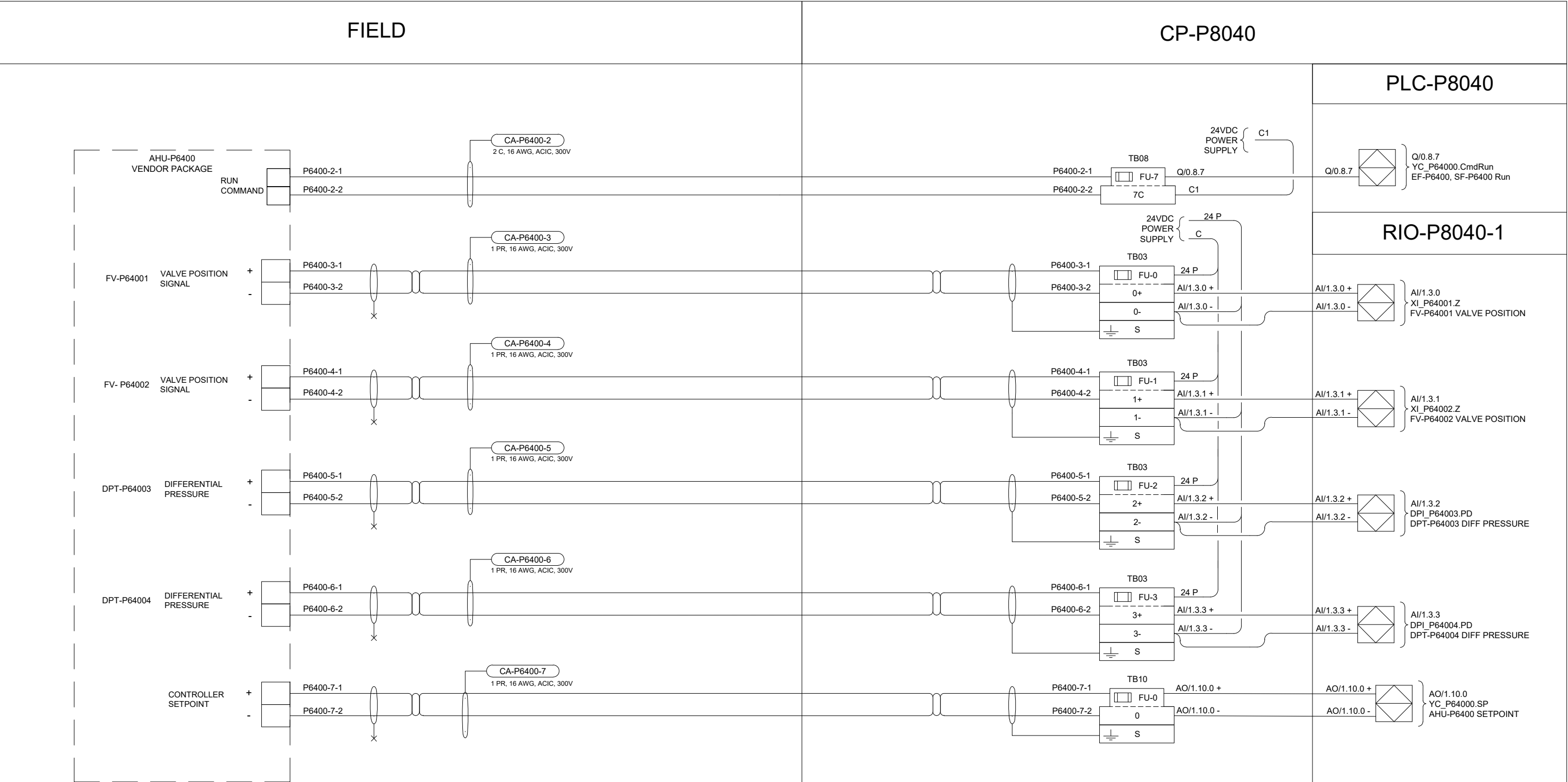
THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-AHU, AHU-P6400

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P618	001	00	B

B SIZE - 279mm x 432mm





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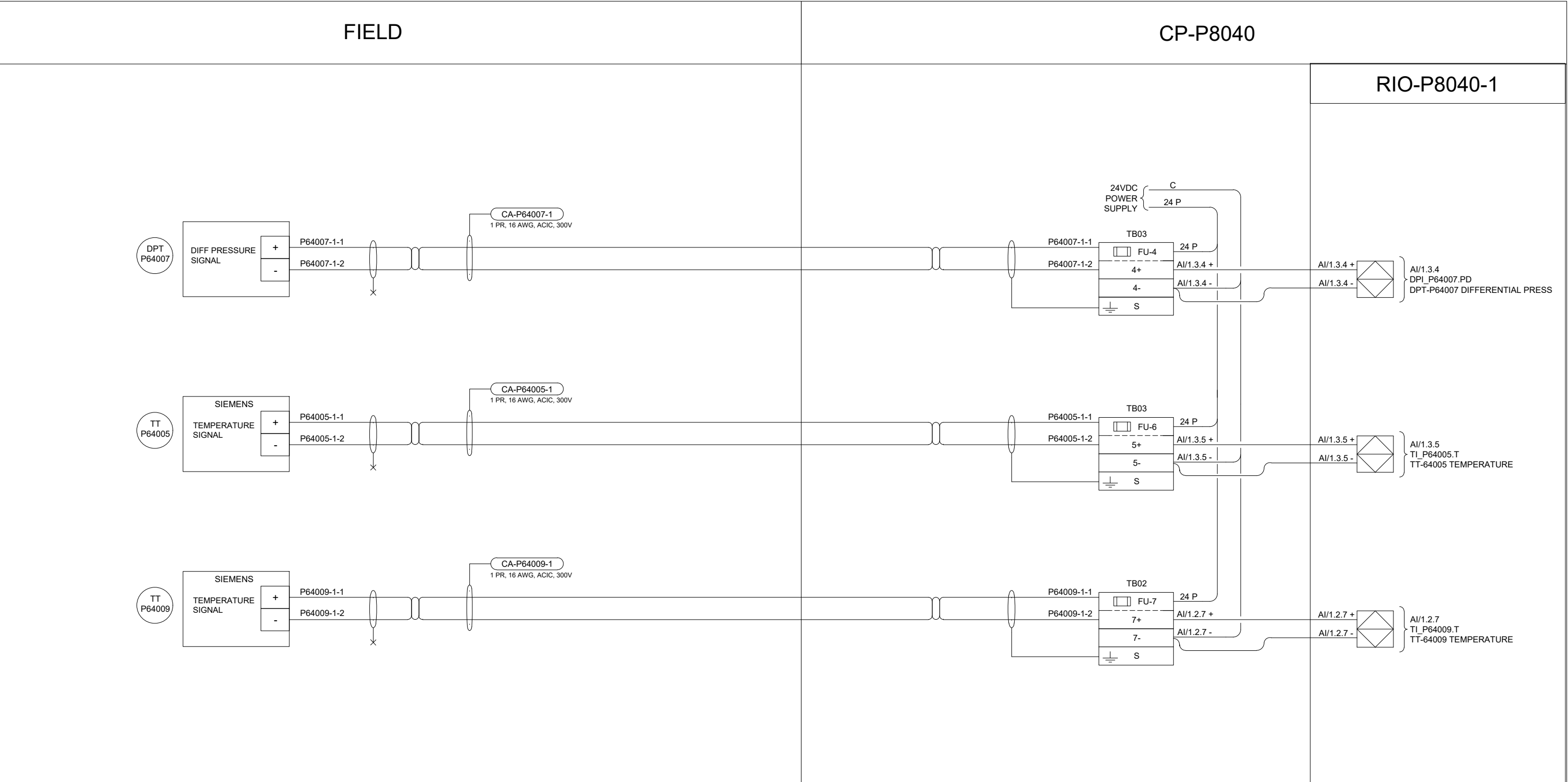


THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-AHU, AHU-P6400

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P618	002	00	B

B SIZE - 279mm x 432mm



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WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-AHU, DPT-P64007, TT-P64005

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P619	001	00	B

The diagram illustrates the electrical connections for the TV P64006 across four functional areas: FIELD, JBA-P64006, CP-P8040, and RIO-P8040-1.

FIELD: The MODULATED ACTUATOR SCHISCHEK provides inputs: 120 VAC (L, N), U mA (6), U VDC (7), Y mA (3), Y VDC (4), and GND (5). A TV P64006 symbol is shown on the left.

JBA-P64006: Features terminal block TB01 with terminals 1-6. It includes a 120 VAC source from PANEL PNL-P7004 CCT.47 and a 120 VAC source to JBA-P64008 DWG 1-0101-AILD-P621-001. It also shows terminal blocks for P64006-2-1, P64006-2-2, P64006-3-1, and P64006-3-2.

CP-P8040: Contains a 24VDC POWER SUPPLY connected to TB03 (FU-6, 6C, 6+, 6-, S). It also includes TB08 (FU-3, 3, S). The diagram shows connections for P64006-2-1, P64006-2-2, P64006-3-1, and P64006-3-2.

RIO-P8040-1: Shows the final output connections for AI/1.3.6 (TK_P64006.Z XV-P64006 VALVE POSITION) and AO/1.8.3 (TK_P64006.CmdZ TV-P64006 POSITION CMD).

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CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P620	001	00	B

FIELD	JBA-P64008	CP-P8040	RIO-P8040-1
MODULATED ACTUATOR SCHISCHEK 120 VAC L 2 N 1 U mA 6 U VDC 7 Y mA 3 Y VDC 4 GND 5 INTEGRAL CABLE TB01 120 VAC FROM JBA-P64006 DWG 1-0101-AILD-P620-001 CA-P64008-1 2 PR, 18 AWG, ACIC, 300V TB03 FU-7 7C 7+ AI/1.3.7 + 7- AI/1.3.7 - S 24VDC POWER SUPPLY 24 P C 24 P AI/1.3.7 + AI/1.3.7 - AI/1.3.7 PK_P64008.Z PV-P64008 VALVE POSITION TB09 FU-0 0 S AO/1.9.0 + AO/1.9.0 - AO/1.9.0 + AO/1.9.0 - AO/1.9.0 PK_P64008.CmdZ PV-P64008 POSITION CMD			

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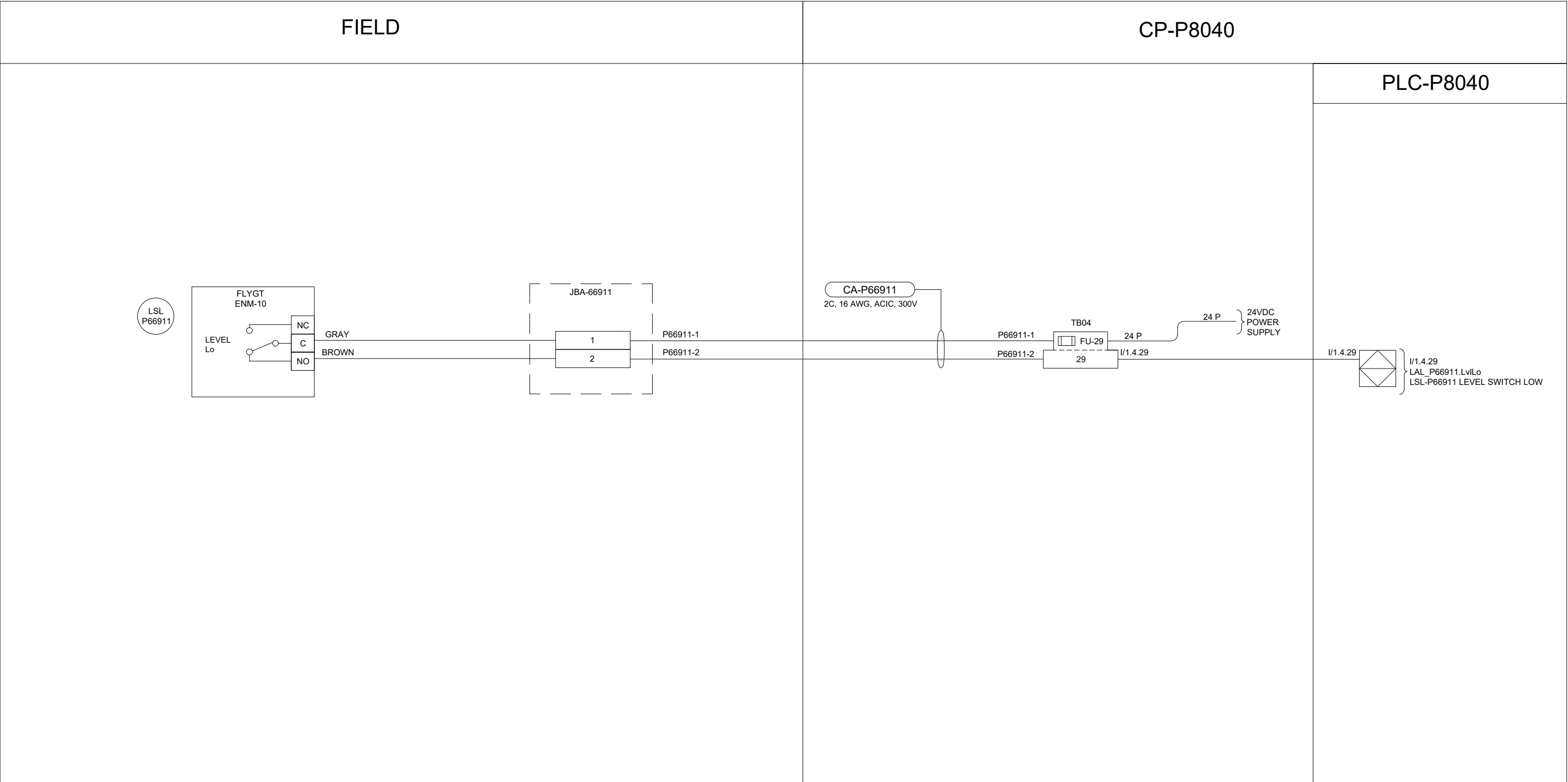
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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC-AHU, TV-64008			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P621	001	00	B

B SIZE - 279mm x 432mm





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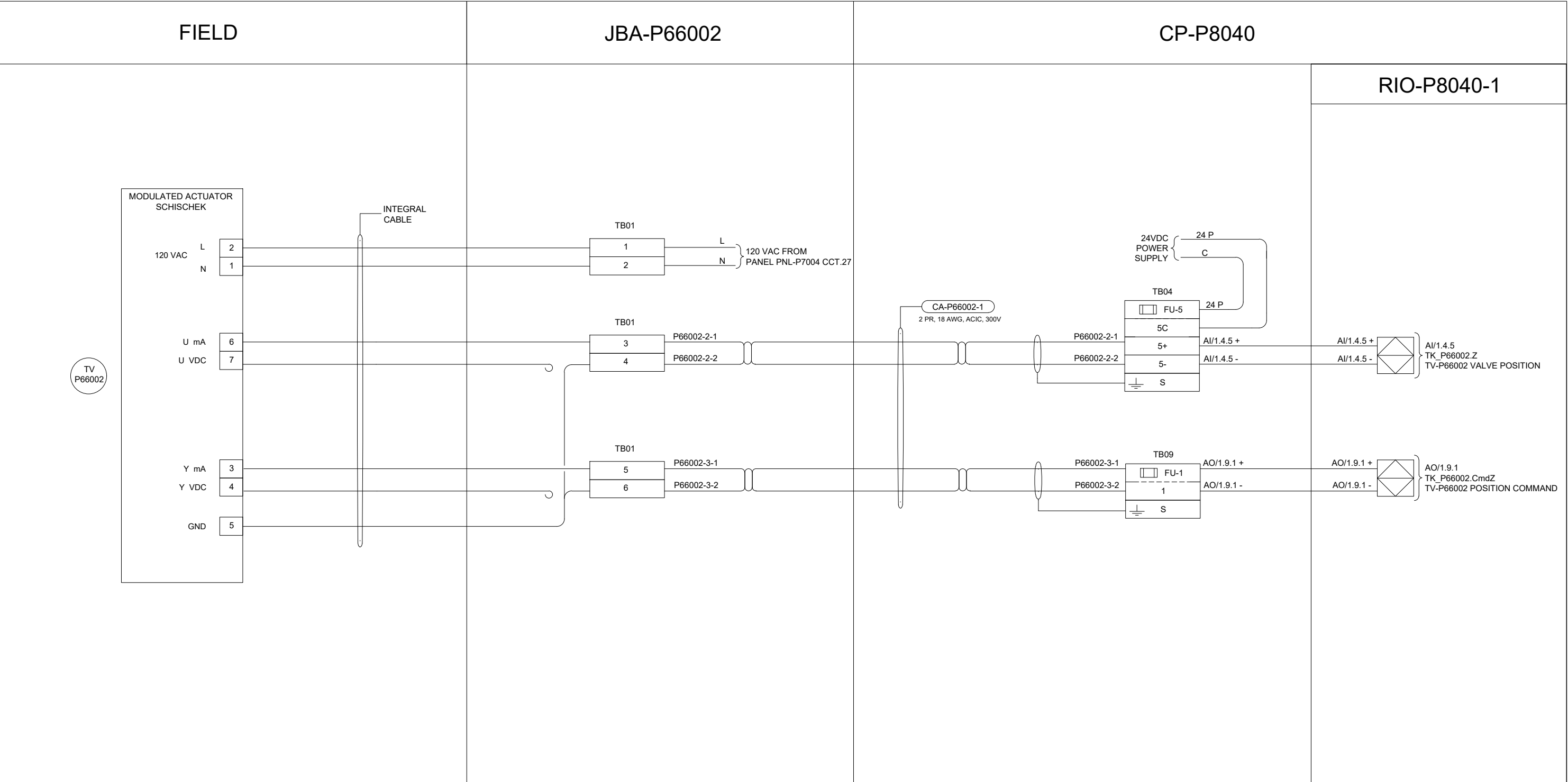
NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC-HYDRONIC, LSL-66911

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P624	001	00	B

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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, TT-P66001, TT-67000, TT-66003, PIT-P66004, TT-P66005			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P625	001	00	B

B SIZE - 279mm x 432mm



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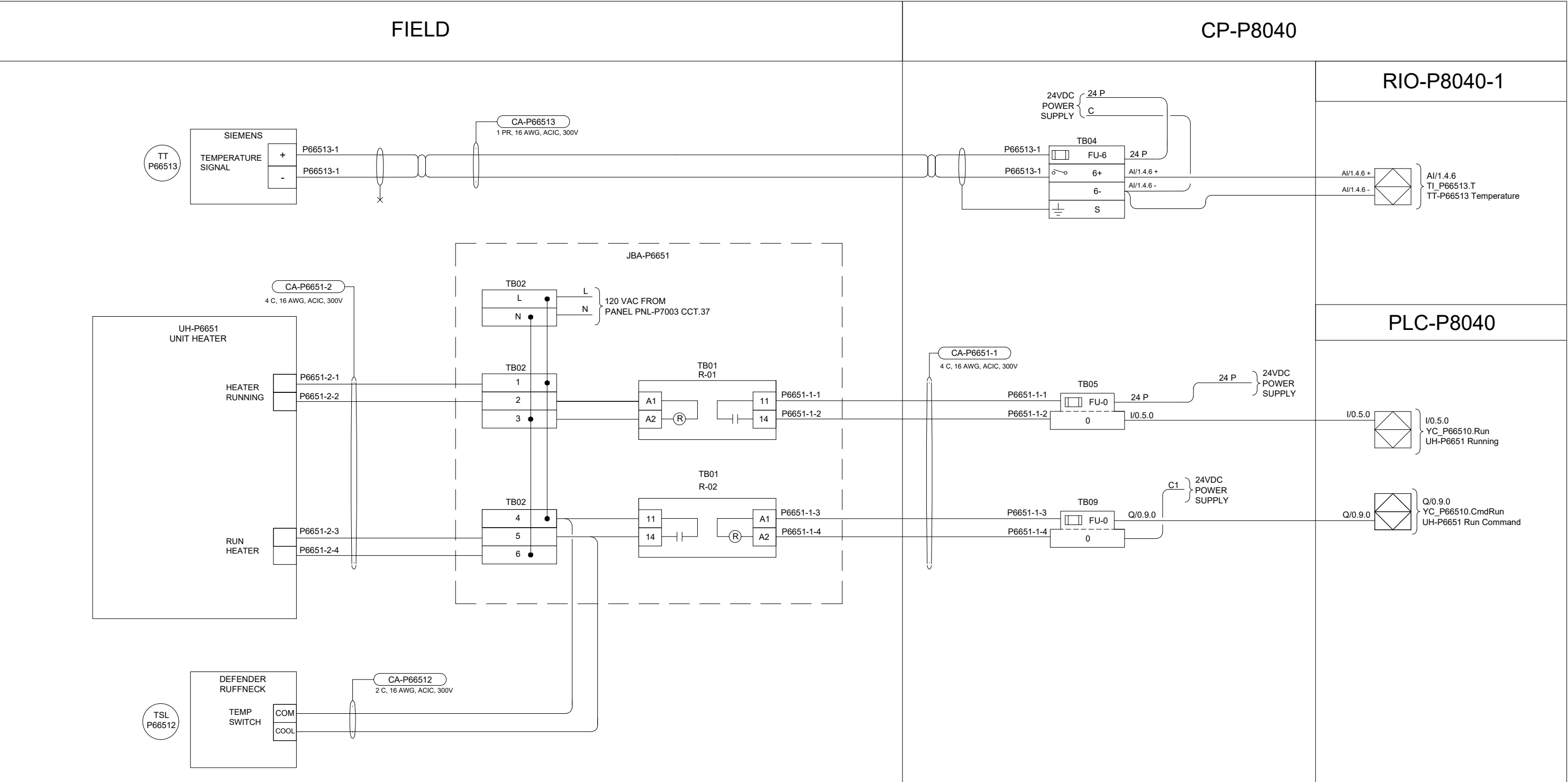
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WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, TV-66002

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P626	001	00	B

B SIZE - 279mm x 432mm



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NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, TT-P66513, TSL-P66512, UH-P6651

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P627	001	00	B

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CITY DRAWING NUMBER	SHEET	REV.	SIZE									
1-0101-AILD-P627	002	00	B									

The diagram illustrates the electrical connections for the UH-P6652 Unit Heater system, divided into three main sections: FIELD, CP-P8040, and PLC-P8040.

FIELD Section:

- UH-P6652 UNIT HEATER:** Features terminals for HEATER RUNNING, RUN HEATER, and a DEFENDER RUFFNECK TEMP SWITCH (COM, COOL).
- CA-P6652-2:** A 4 C, 16 AWG, ACIC, 300V cable connecting the heater to the JBA-P6652 terminal block.
- JBA-P6652:** A central terminal block with terminals TB02 (L, N, 1, 2, 3, 4, 5, 6) and TB01 (R-01, R-02).
- DEFENDER RUFFNECK:** A temperature switch with COM and COOL terminals, connected to the JBA-P6652 terminal block.
- TSL P66522:** A temperature switch with COM and COOL terminals, connected to the JBA-P6652 terminal block.

CP-P8040 Section:

- CA-P6652-1:** A 4 C, 16 AWG, ACIC, 300V cable connecting the JBA-P6652 terminal block to the CP-P8040 terminal block.
- CP-P8040 Terminal Block:** Features terminals TB05 (FU-3, 3) and TB09 (FU-2, 2C).
- 24VDC POWER SUPPLY:** Provides power to the CP-P8040 terminal block.

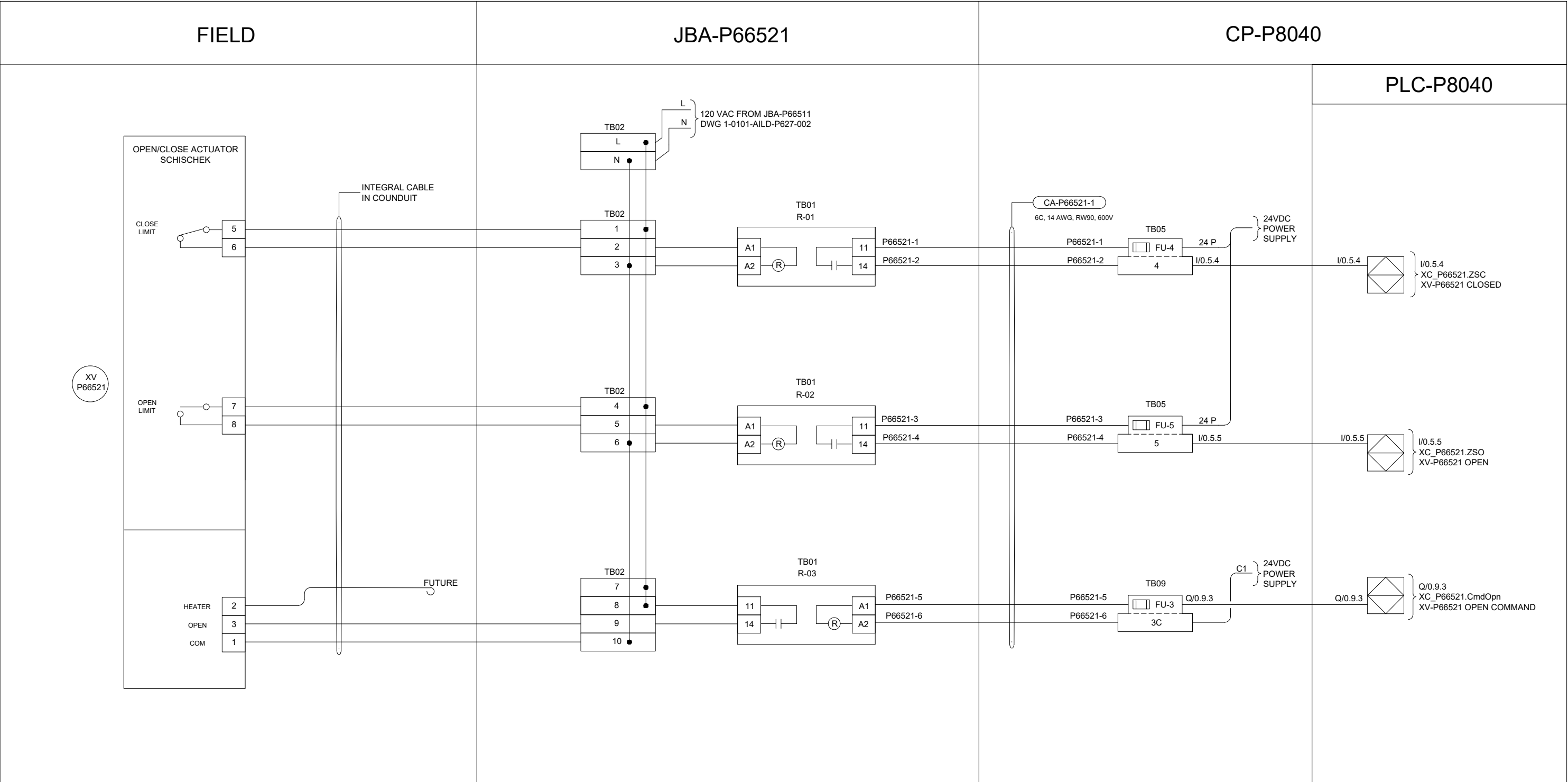
PLC-P8040 Section:

- I/O Connections:**
 - I/O.5.3:** YC_P66520.Run UH-P6652 RUNNING (Input).
 - Q/I.9.2:** YC_P66520.CmdRun UH-P6652 RUN COMMAND (Output).

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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, TSL-P66522, UH-P6652			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P627	003	00	B

B SIZE - 279mm x 432mm



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NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, XV-66521

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P627	004	00	B

The diagram illustrates the wiring for the P6670 unit, divided into three main sections: FIELD, CP-P8040, and PLC-P8040.

FIELD Section:

- HTR-P6670 UNIT HEATER:** Includes terminals for HEATER RUNNING (P6670-2-1, P6670-2-2) and RUN HEATER (P6670-2-3, P6670-2-4).
- DEFENDER RUFFNECK:** Includes a TEMP SWITCH with COM and COOL terminals, and a TSL P66702 sensor.
- JBA-P6670:** A central junction box containing two terminal blocks (TB02) and two relays (TB01 R-01, TB01 R-02).
- CA-P6670-2:** A 4 C, 16 AWG, ACIC, 300V cable connecting the heater running signal to TB02.
- CA-P6670:** A 4 C, 16 AWG, ACIC, 300V cable connecting the heater running signal to TB02.
- CA-P66702:** A 2 C, 16 AWG, ACIC, 300V cable connecting the defender ruffneck signal to TB02.

CP-P8040 Section:

- CA-P6670-1:** A 4 C, 16 AWG, ACIC, 300V cable connecting the heater running signal to TB05.
- TB05:** A terminal block containing a fuse (FU-7) and a 24 P terminal.
- 24VDC POWER SUPPLY:** Provides power to the 24 P terminal.
- TB09:** A terminal block containing a fuse (FU-4) and a 4C terminal.
- C1:** A 24VDC POWER SUPPLY providing power to the 4C terminal.

PLC-P8040 Section:

- I/O.5.7:** A digital input signal from the heater running signal to the PLC.
- Q/0.9.4:** A digital output signal from the PLC to the heater running signal.
- YC_P66700.Run:** A digital output signal from the PLC to the heater running signal.
- UH-P6670 RUNNING:** A digital output signal from the PLC to the heater running signal.
- YC_P66700.CmdRun:** A digital output signal from the PLC to the heater running signal.
- UH-P6670 RUN COMMAND:** A digital output signal from the PLC to the heater running signal.

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The diagram illustrates the electrical connections for the JBA-P66701 actuator across four main sections: FIELD, JBA-P66701, CP-P8040, and PLC-P8040.

FIELD: Includes the OPEN/CLOSE ACTUATOR SCHISCHEK with terminals 5 (CLOSE LIMIT), 6, 7 (OPEN LIMIT), 8, and a HEATER/OPEN/COM block with terminals 2, 3, and 1. A label 'XV P66701' is present.

JBA-P66701: Features three terminal blocks (TB02) and three relay modules (TB01 R-01, R-02, R-03). The top TB02 is connected to 120 VAC. The middle TB02 connects limit switches to the relay modules. The bottom TB02 connects heater and future signals to the third relay module.

CP-P8040: Shows a cable CA-P66701-1 (6C, 14 AWG, RW90, 600V) connecting the JBA modules to PLC modules. It includes terminal blocks TB05 and TB09, fuses FU-8, FU-9, and FU-5, and 24VDC power supplies.

PLC-P8040: Displays the PLC modules: I/O modules for ZSC and ZSO (I/0.5.8, I/0.5.9) and a Q module for the OPEN COMMAND (Q/0.9.5).

Connections:

- Limit Switches:** CLOSE LIMIT (5, 6) and OPEN LIMIT (7, 8) connect to TB02 in JBA-P66701, which then connects via TB01 relays to PLC I/O modules.
- Heater/Future:** HEATER (2, 3) and COM (1) connect to TB02 in JBA-P66701, which connects via TB01 relays to PLC Q module.
- Power:** 120 VAC is supplied to the top TB02. 24VDC power supplies are connected to the PLC I/O and Q modules.

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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, STAIRS B-001, XV-P66701			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
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The diagram illustrates the electrical connections for the JBA-P6650 unit, divided into three main sections: FIELD, CP-P8040, and PLC-P8040.

FIELD Section:

- SIEMENS TEMPERATURE SIGNAL:** Connected to terminals P66503-1 and P66503-1. A temperature sensor (TT P66503) is shown.
- UH-P6650 UNIT HEATER:** Connected to terminals P6650-2-1, P6650-2-2, P6650-2-3, and P6650-2-4. A heater (UH-P6650) is shown.
- DEFENDER RUFFNECK TEMP SWITCH:** Connected to terminals COM and COOL. A temperature switch (TSL P66502) is shown.
- CA-P66503:** 1 PR, 16 AWG, ACIC, 300V.
- CA-P66502:** 2 C, 16 AWG, ACIC, 300V.
- CA-P66501:** 4 C, 16 AWG, ACIC, 300V.

CP-P8040 Section:

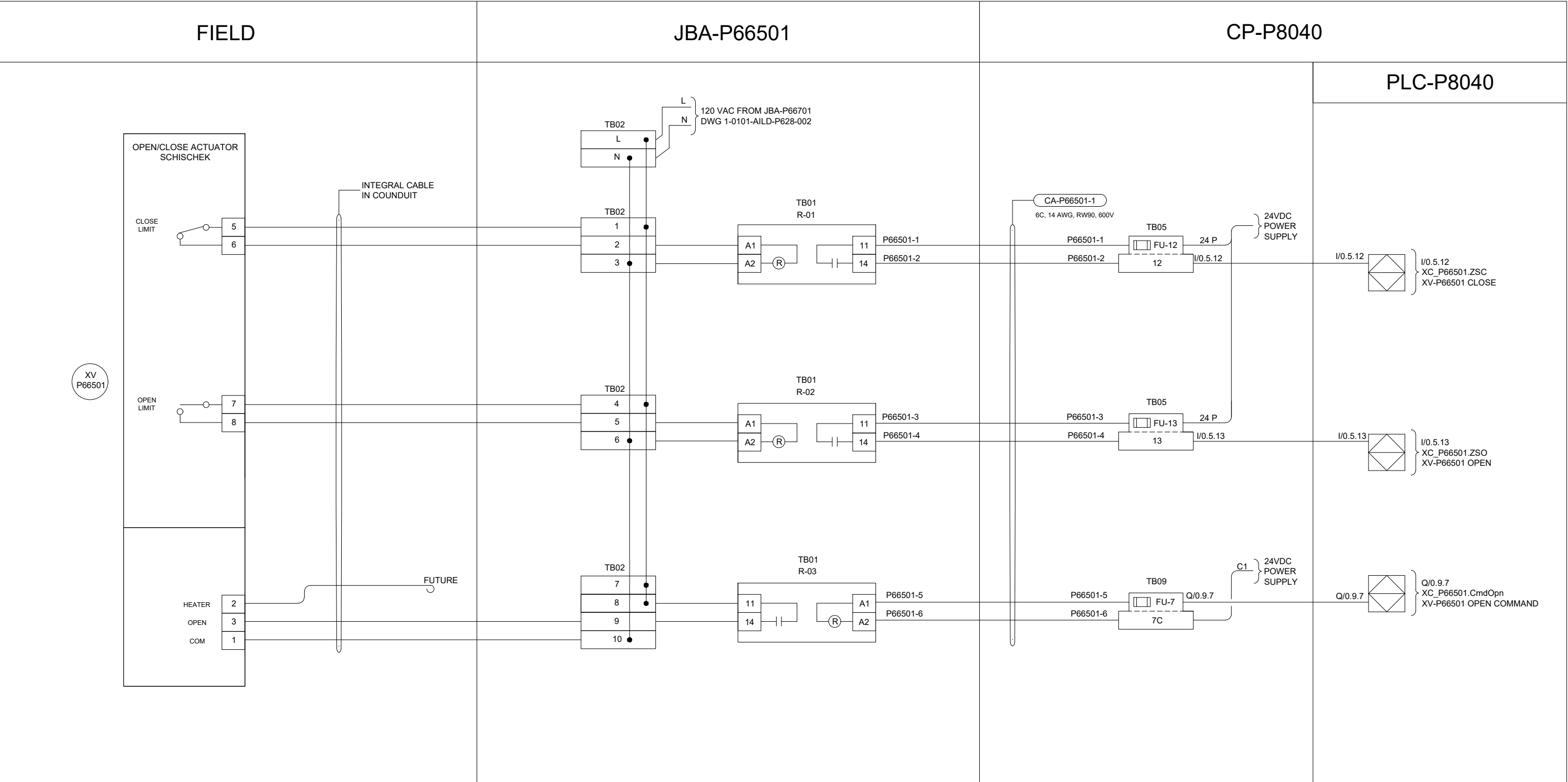
- 24VDC POWER SUPPLY:** Connected to terminals 24 P, C, 7+, 7-, and S.
- 24VDC POWER SUPPLY:** Connected to terminals 24 P, C, 7+, 7-, and S.
- 24VDC POWER SUPPLY:** Connected to terminals 24 P, C, 7+, 7-, and S.
- 24VDC POWER SUPPLY:** Connected to terminals 24 P, C, 7+, 7-, and S.

PLC-P8040 Section:

- AI/1.4.7:** Connected to terminals AI/1.4.7 + and AI/1.4.7 -.
- I/O.5.11:** Connected to terminals I/O.5.11 and I/O.5.11.
- Q/0.9.6:** Connected to terminals Q/0.9.6 and Q/0.9.6.

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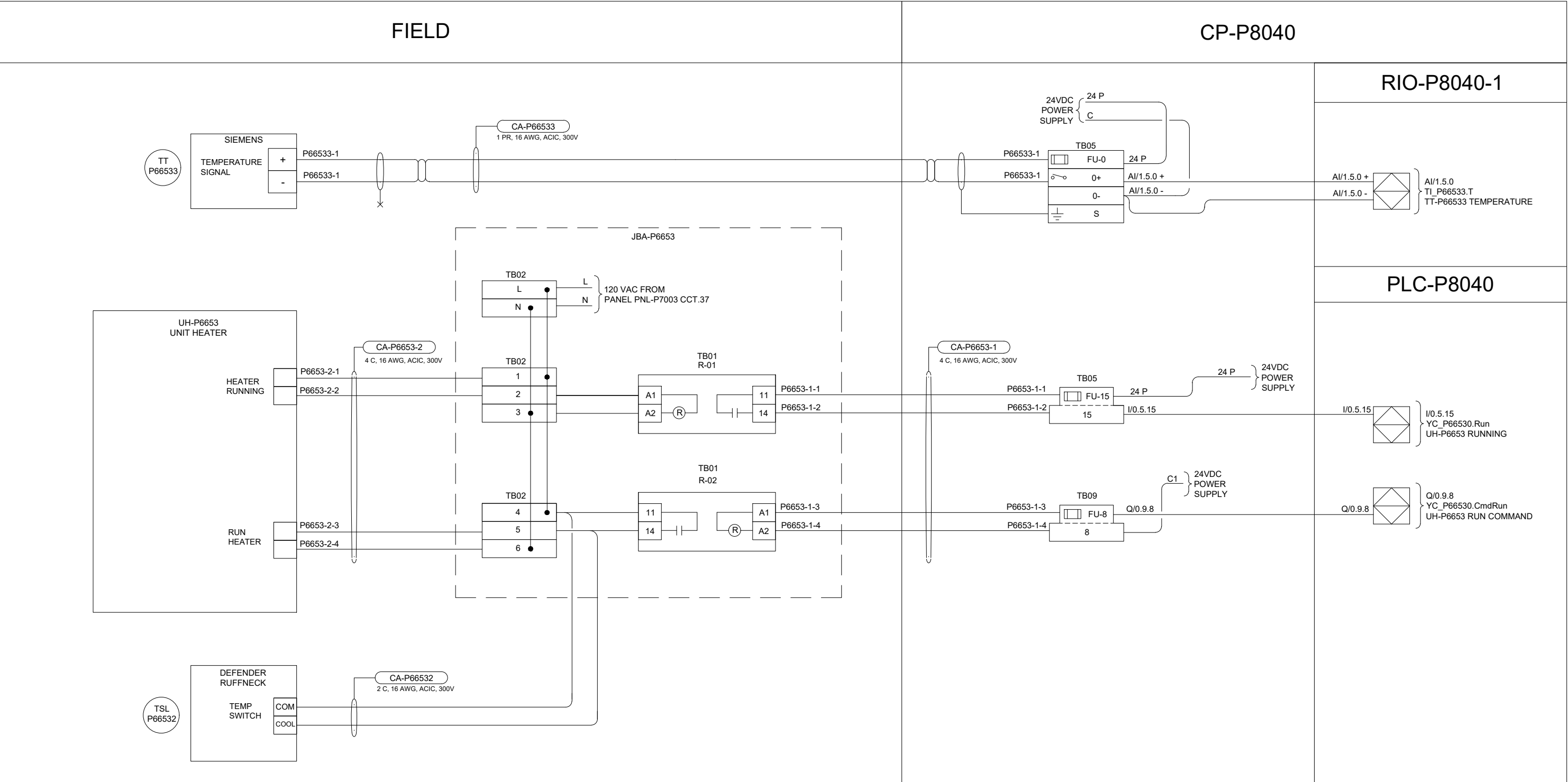
2025-01-30

**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, STAIRS B-002, XV-P66501

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P629	002	00	B

B SIZE - 279mm x 432mm



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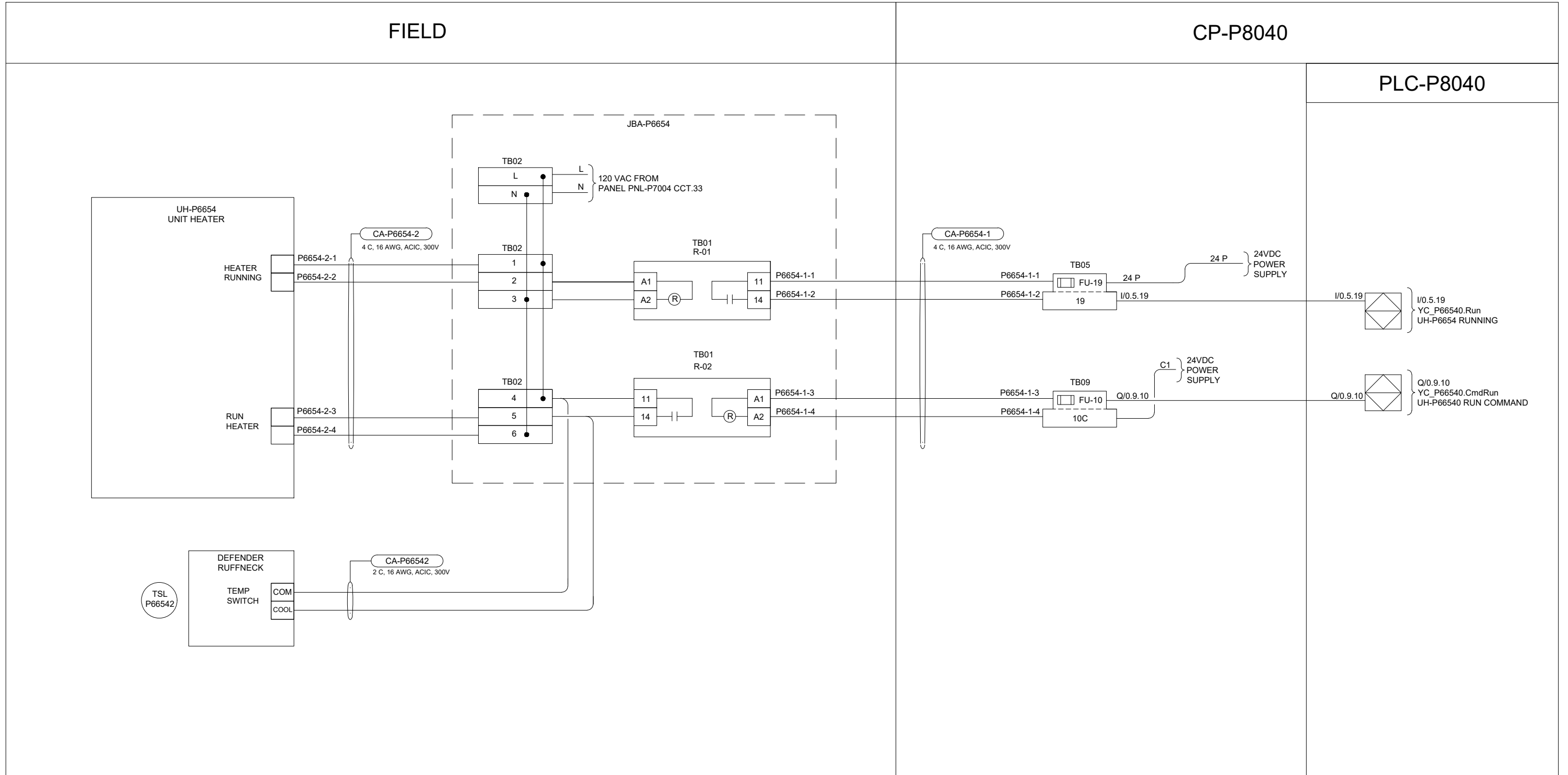
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM POLYMER ROOM M-103, TT-P66533, TSL-P66532, UH-P6653			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
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 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, POLYMER ROOM M-103, XV-P66531			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P630	002	00	B

B SIZE - 279mm x 432mm



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WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

SCUM DEWATERING BUILDING - LOOP DIAGRAM

HVAC HYDRONIC, POLYMER ROOM M-103, TSL-P66542, UH-P6654

CITY DRAWING NUMBER

1-0101-AILD-P630

SHEET

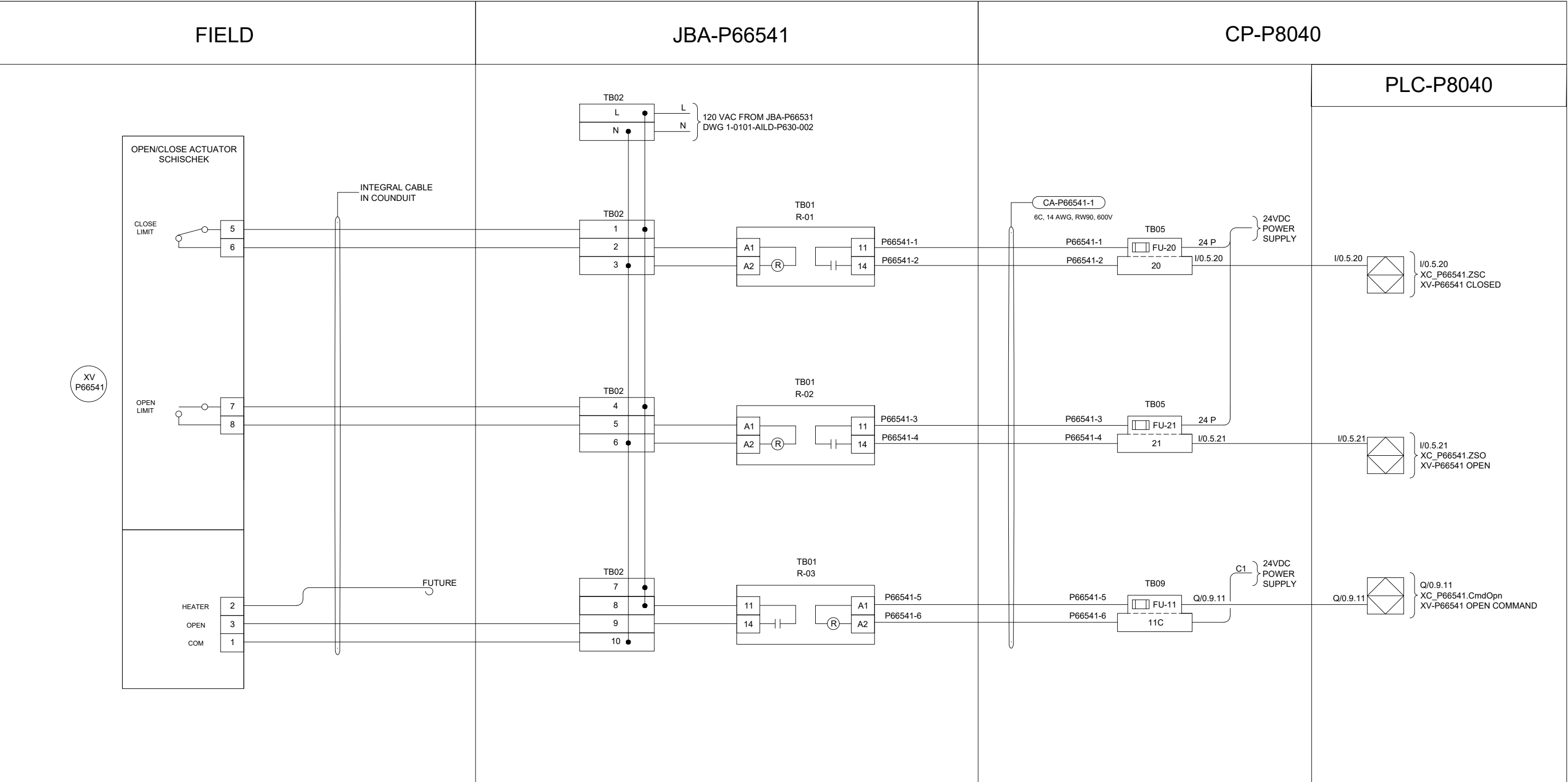
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SIZE

B SIZE - 279mm x 432mm



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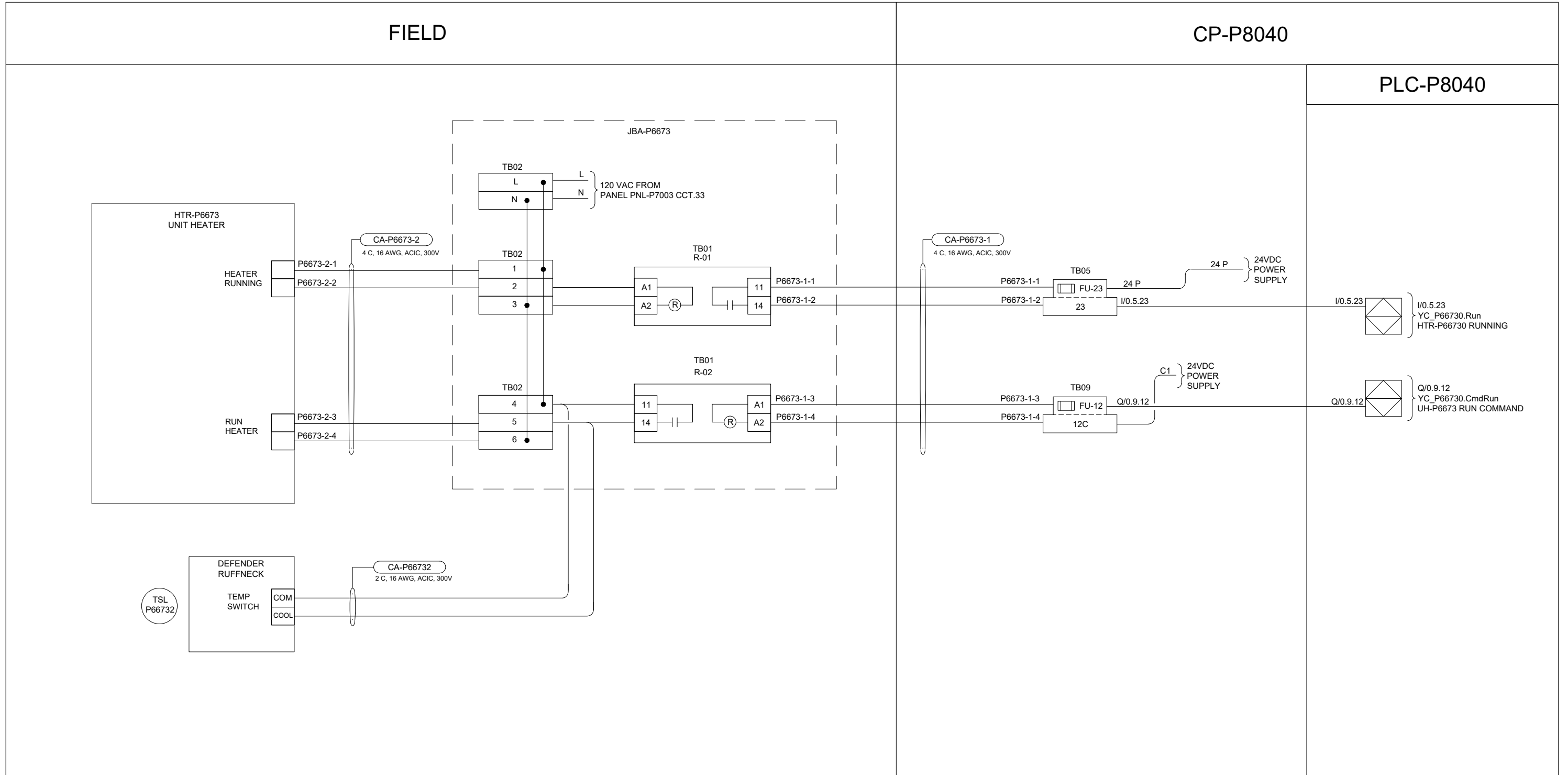
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33454
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THE CITY OF WINNIPEG
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NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, POLYMER ROOM M-103, XV-P66541

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P630	004	00	B

B SIZE - 279mm x 432mm



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PRIMARY CLARIFICATION PROJECT

AUTOMATION

SCUM DEWATERING BUILDING - LOOP DIAGRAM

HVAC HYDRONIC, STAIRS M-104, TSL-P66732,HTR-P6673

CITY DRAWING NUMBER

1-0101-AILD-P631

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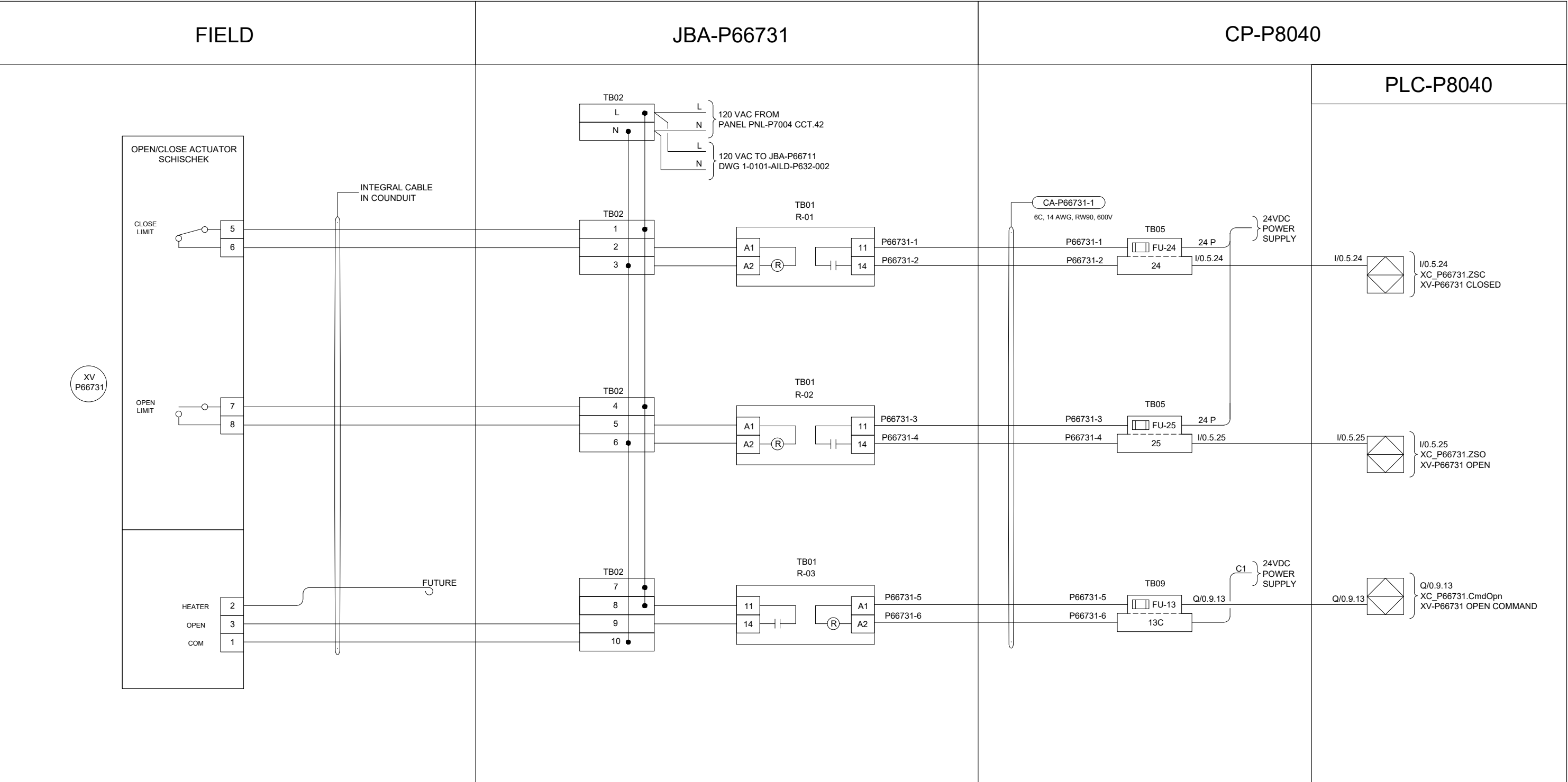
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B SIZE - 279mm x 432mm



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AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, STAIRS M-104, XV-P66731

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P631	002	00	B

 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, STAIRS M-101, TSL-P66712, HTR-P6671			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P632	001	00	B

The diagram illustrates the electrical connections for the JBA-P66711 unit, organized into four main sections: FIELD, JBA-P66711, CP-P8040, and PLC-P8040.

FIELD Section:

- OPEN/CLOSE ACTUATOR SCHISCHEK:** Contains terminals 5, 6, 7, and 8. Terminals 5 and 6 are labeled "CLOSE LIMIT", and terminals 7 and 8 are labeled "OPEN LIMIT".
- HEATER:** Contains terminals 2, 3, and 1. Terminal 2 is labeled "HEATER", 3 is labeled "OPEN", and 1 is labeled "COM".
- Other Labels:** "XV P66711" is shown in a circle. "FUTURE" is indicated near the heater connections.

JBA-P66711 Section:

- Power Input:** TB02 terminals L and N are connected to "120 VAC FROM JBA-P66731 DWG 1-0101-AILD-P631-002".
- Terminal Blocks:** Three TB02 blocks (1-3, 4-6, 7-10) and three TB01 blocks (R-01, R-02, R-03) are shown.
- Internal Components:** Each TB01 block contains a relay (R) and a fuse (FU).

CP-P8040 Section:

- Power Supply:** "CA-P66711-1" (6C, 14 AWG, RW90, 600V) provides power to the system.
- Terminal Blocks:** TB05 and TB09 are shown, each containing a fuse (FU-28, FU-29, FU-15).
- Wiring:** Wires P66711-1 through P66711-6 connect the JBA-P66711 to the CP-P8040.

PLC-P8040 Section:

- I/O Connections:**
 - I/O.5.28: XC_P66711.ZSC, XV-P66711 CLOSED
 - I/O.5.29: XC_P66711.ZSO, XV-P66711 OPEN
 - Q/I.9.15: XC_P66711.CmdOpn, XV-P66711 OPEN COMMAND

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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, STAIRS M-101, XV-P66711			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P632	002	00	B

The diagram illustrates the wiring for the CP-P8040 control panel, divided into three main sections: FIELD, CP-P8040, and RIO-P8040-1/PLC-P8040.

FIELD Section:

- SIEMENS TEMPERATURE SIGNAL:** Connected to terminal P66723-1. The signal is labeled TT P66723.
- HTR-P6672 UNIT HEATER:** Connected to terminals P6672-2-1, P6672-2-2, P6672-2-3, and P6672-2-4. The heater is labeled HTR-P6672 UNIT HEATER.
- DEFENDER RUFFNECK TEMP SWITCH:** Connected to terminals COM and COOL. The switch is labeled TSL P66722.
- Terminal Blocks (TB02):** Two TB02 blocks are shown, each with terminals 1, 2, 3, 8, and 9. They are connected to the heater and switch signals.
- Power Supplies:** Two 24VDC power supplies are shown, labeled CA-P6672-1 and CA-P6672-2, connected to the terminal blocks.

CP-P8040 Section:

- Terminal Blocks (TB05, TB10):** Two TB05 blocks and one TB10 block are shown. TB05 blocks have terminals 1+, 1-, and S. TB10 has terminals 0 and 31. They are connected to the field signals and power supplies.
- Power Supplies:** Two 24VDC power supplies are shown, labeled CA-P6672-1 and CA-P6672-2, connected to the terminal blocks.

RIO-P8040-1 and PLC-P8040 Section:

- AI/1.5.1:** Connected to the AI/1.5.1+ and AI/1.5.1- terminals. The signal is labeled AI/1.5.1 TT_P66723.T.
- I/O.5.31:** Connected to the I/O.5.31 terminal. The signal is labeled I/O.5.31 YC_P66720.Run UH-P6672 RUNNING.
- Q/O.10.0:** Connected to the Q/O.10.0 terminal. The signal is labeled Q/O.10.0 YC_P66720.CmdRun UH-P6672 RUN COMMAND.

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 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, STAIRS 2-201, TT-66723, TSL-P66722, UH-P6672			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P633	001	00	B

The diagram illustrates the electrical wiring for the JBA-P66721 unit, showing its connection to the FIELD, CP-P8040, and PLC-P8041.

FIELD:

- OPEN/CLOSE ACTUATOR SCHISCHEK:** Includes CLOSE LIMIT (terminals 5, 6) and OPEN LIMIT (terminals 7, 8).
- HEATER:** Includes HEATER (terminal 2), OPEN (terminal 3), and COM (terminal 1).
- Future:** A terminal for future expansion.

JBA-P66721:

- Power Input:** 120 VAC FROM PANEL PNL-P7003 CCT.16 (L, N) connected to TB02.
- Terminal Blocks:** TB02 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10), TB01 R-01, TB01 R-02, TB01 R-03.
- Relays:** R-01, R-02, R-03.
- Wiring:** Connections from FIELD to JBA-P66721 terminals, and from JBA-P66721 to CP-P8040.

CP-P8040:

- Power Supply:** 24VDC POWER SUPPLY (C1).
- Terminal Blocks:** TB06, TB10.
- Fuses:** FU-0, FU-1.
- Wiring:** Connections from JBA-P66721 to CP-P8040, and from CP-P8040 to PLC-P8041.

PLC-P8041:

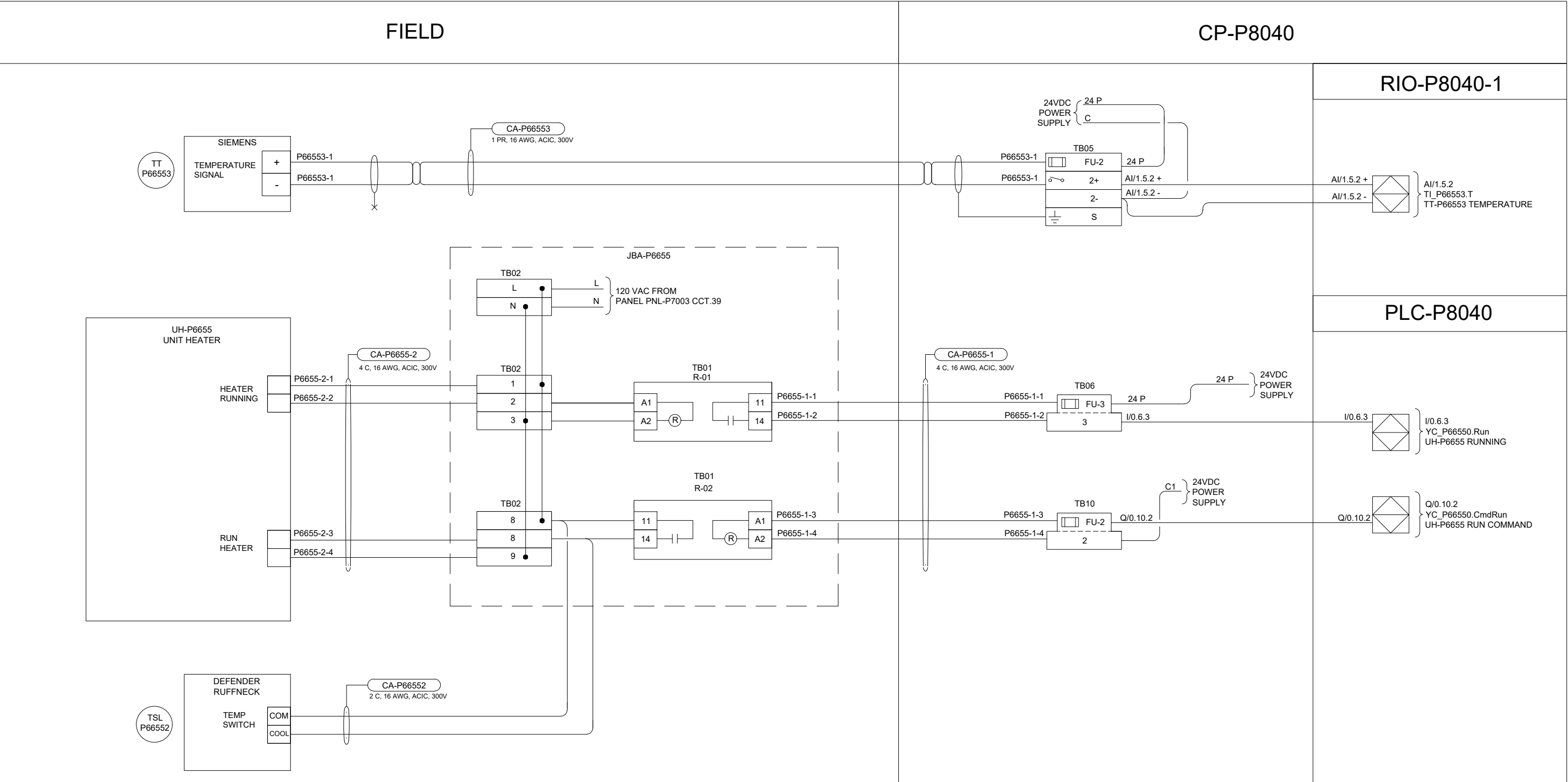
- Inputs:** I/O.6.0 (XC_P66721.ZSC, XV-P66721 CLOSED), I/O.6.1 (XC_P66721.ZSO, XV-P66721 OPEN).
- Outputs:** Q/O.10.1 (XC_P66721.CmdOpn, XV-P66721 OPEN COMMAND).

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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, STAIRS 2-201, XV-P66721			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P633	002	00	B

B SIZE - 279mm x 432mm



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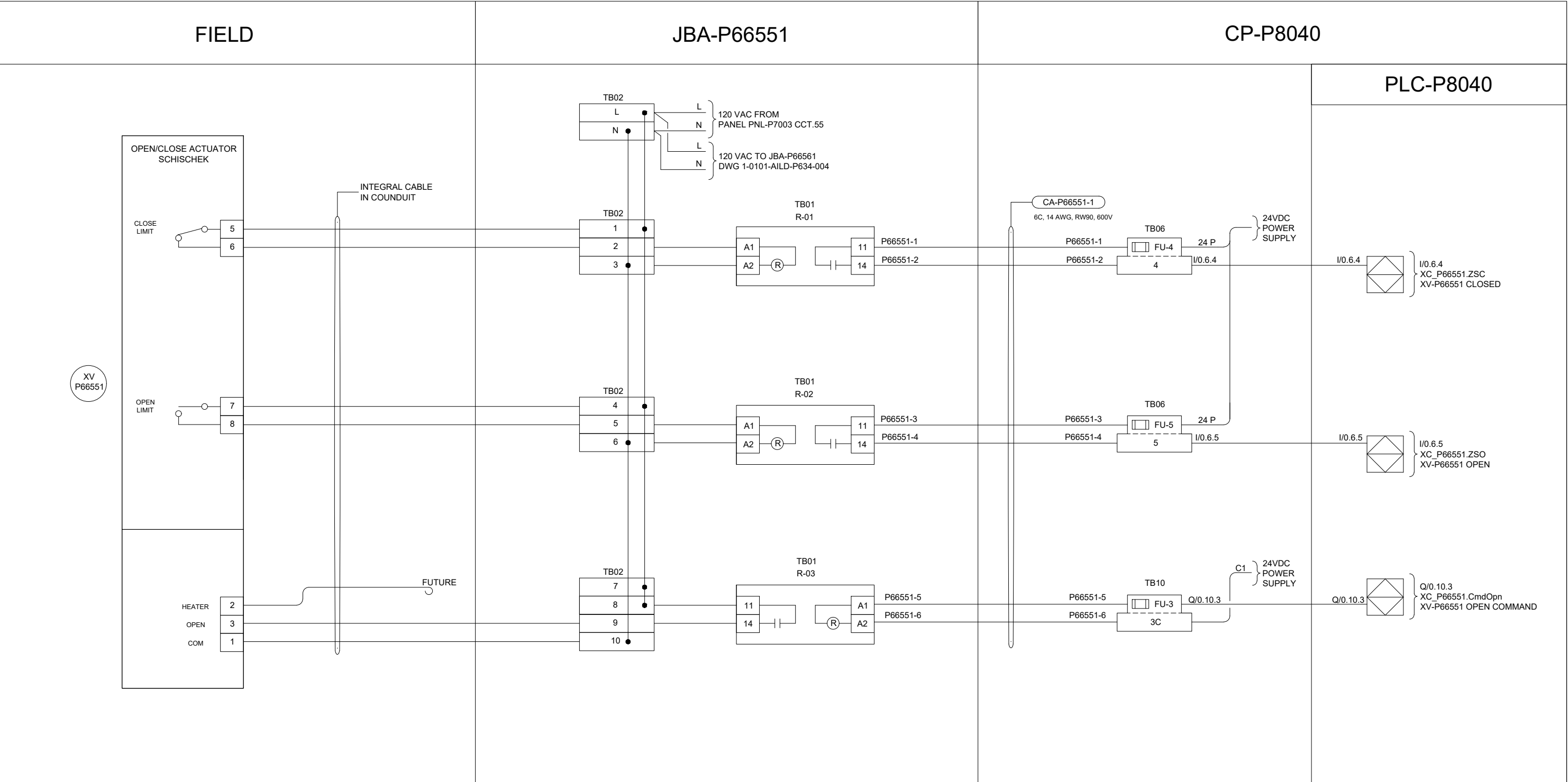
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NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
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SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, LOADING BAY M-100, TT-66553, TSL-P66552, UH-P6655

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P634	001	00	B

B SIZE - 279mm x 432mm



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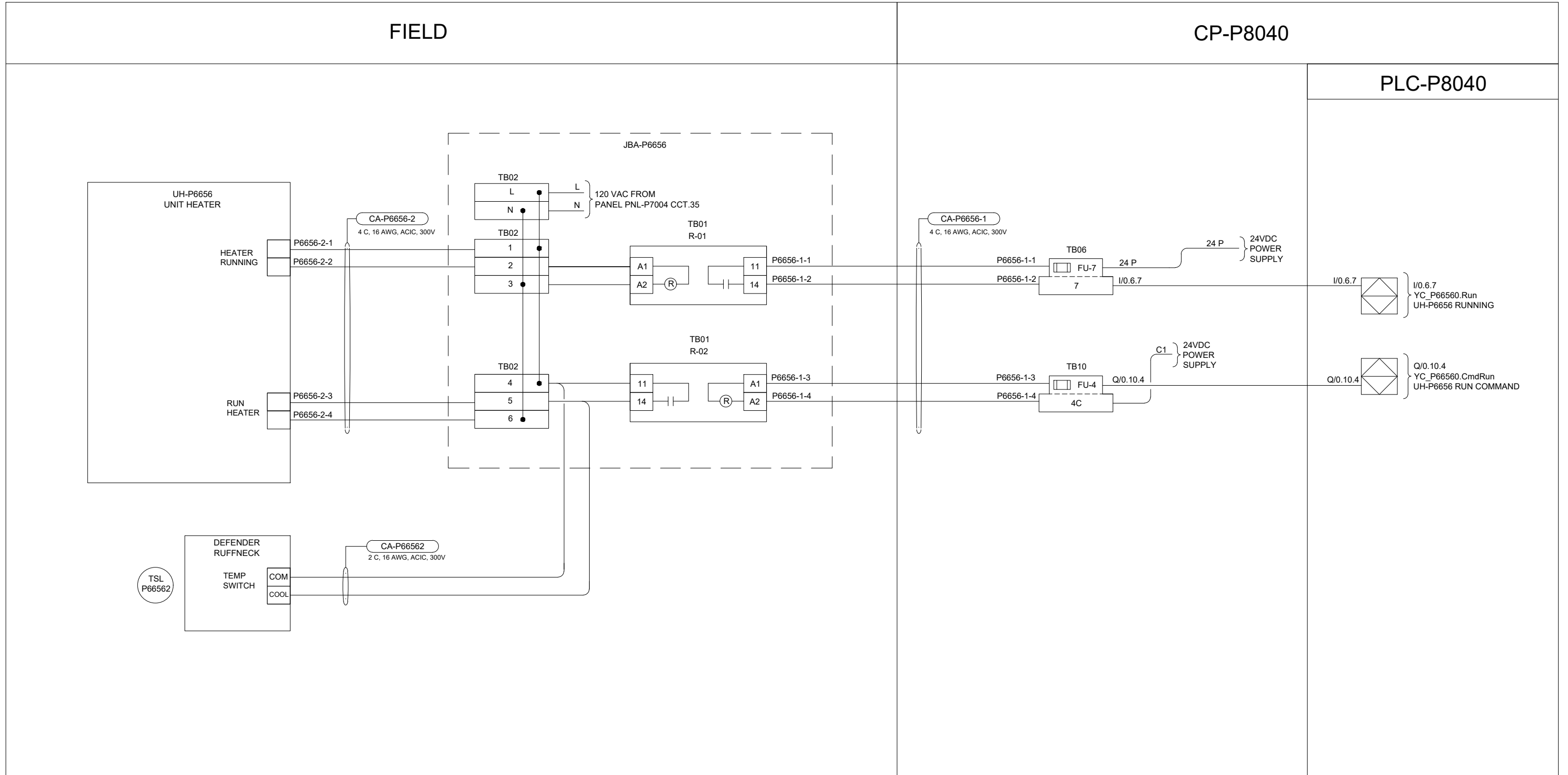
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**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, LOADING BAY M-100, XV-P66551

CITY DRAWING NUMBER	SHEET	REV.	SIZE
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B SIZE - 279mm x 432mm



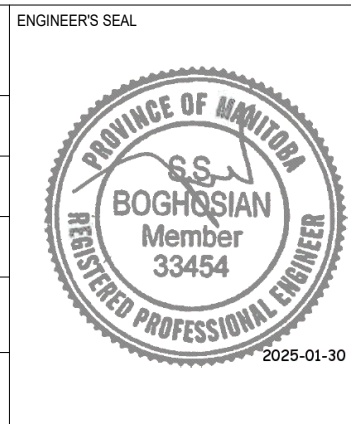
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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, LOADING BAY M-100, TSL-P66562, UH-P6656			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P634	003	00	B

FIELD	JBA-P66561	CP-P8040
		PLC-P8040
XV P66561 OPEN/CLOSE ACTUATOR SCHISCHEK CLOSE LIMIT OPEN LIMIT HEATER OPEN COM FUTURE	TB02 L N 120 VAC FROM JBA-P66551 DWG 1-0101-AILD-P634-002 TB02 1 2 3 TB01 R-01 A1 A2 11 14 P66561-1 P66561-2 TB02 4 5 6 TB01 R-02 A1 A2 11 14 P66561-3 P66561-4 TB02 7 8 9 10 TB01 R-03 11 14 A1 A2 P66561-5 P66561-6	CA-P66561-1 6C, 14 AWG, RW90, 600V TB06 FU-8 8 24 P I/O.6.8 24VDC POWER SUPPLY TB06 FU-9 9 24 P I/O.6.9 24VDC POWER SUPPLY TB10 FU-5 5C Q/0.10.5 C1 24VDC POWER SUPPLY I/O.6.8 XI/P66561.ZSC XV-P66561 CLOSED I/O.6.9 XI/P66561.ZSO XV-P66561 OPEN Q/0.10.5 XI/P66561.CmdOpn XV-P66561 OPEN COMMAND

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 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, LOADING BAY M-100, XV-P66561			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P634	004	00	B

The diagram illustrates the wiring for the P6674 unit, divided into three main sections: FIELD, CP-P8040, and RIO-P8040-1/PLC-P8040.

FIELD Section:

- SIEMENS TEMPERATURE SIGNAL:** Connected to P66743-1 and P66743-1. A cable CA-P66743 (1 PR, 16 AWG, ACIC, 300V) connects this to the CP-P8040 section.
- HTR-P6674 UNIT HEATER:** Connected to P6674-2-1 and P6674-2-2. A cable CA-P6674-2 (4 C, 16 AWG, ACIC, 300V) connects this to the JBA-P6674 section.
- DEFENDER RUFFNECK TEMP SWITCH:** Connected to COM and COOL. A cable CA-P66742 (2 C, 16 AWG, ACIC, 300V) connects this to the JBA-P6674 section.

JBA-P6674 Section:

- 120 VAC FROM PANEL PNL-P7004 CCT.37:** Connected to TB02 L and N.
- TB01 R-01:** A relay with terminals A1, A2, 11, and 14. It is connected to TB02 terminals 1, 2, and 3.
- TB01 R-02:** A relay with terminals 11, 14, A1, and A2. It is connected to TB02 terminals 8, 8, and 9.

CP-P8040 Section:

- 24VDC POWER SUPPLY:** Connected to TB05 FU-3 and TB06 FU-11.
- CA-P6674-1 (4 C, 16 AWG, ACIC, 300V):** Connects the FIELD section to the CP-P8040 section.
- TB05:** A terminal block with terminals 3+, 3-, and S. It is connected to P66743-1 and P66743-1.
- TB06:** A terminal block with terminals 11 and 11. It is connected to P6674-1-1 and P6674-1-2.
- TB10:** A terminal block with terminals 6 and 6. It is connected to P6674-1-3 and P6674-1-4.

RIO-P8040-1 Section:

- AI/1.5.3:** Connected to AI/1.5.3+ and AI/1.5.3-.
- I/O.6.11:** Connected to I/O.6.11.
- Q/O.10.6:** Connected to Q/O.10.6.

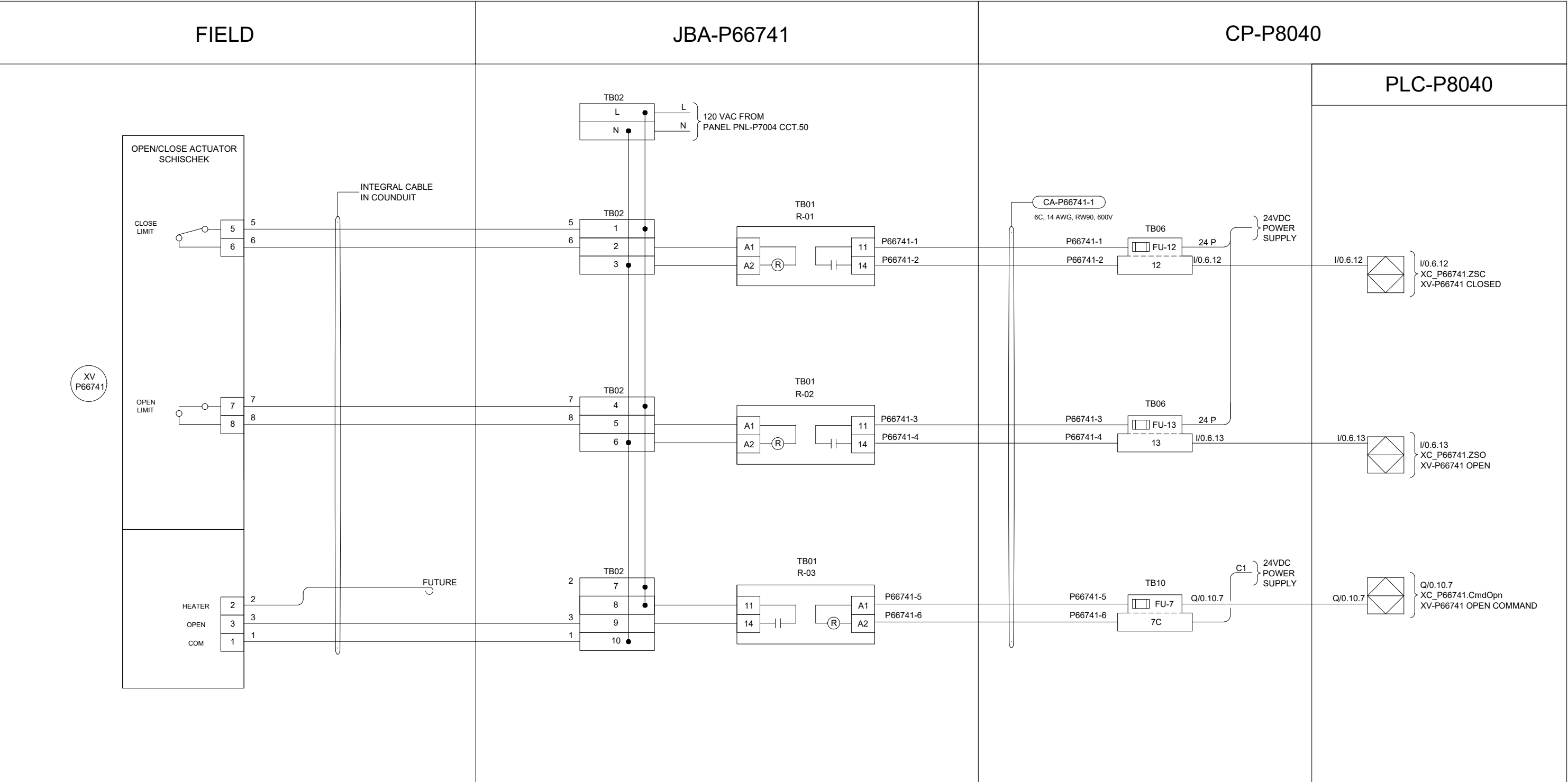
PLC-P8040 Section:

- I/O.6.11:** Connected to YC_P66740.Run and UH-P6674 RUNNING.
- Q/O.10.6:** Connected to YC_P66740.CmdRun and UH-P6674 RUN COMMAND.

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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, STAIRS 2-203, TT-66743, TSL-P66742, HTR-P6674			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P635	001	00	B

B SIZE - 279mm x 432mm



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NORTH END SEWAGE TREATMENT PLANT
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AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, STAIRS 2-203, XV-P66741

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P635	002	00	B

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 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, STAIRS 2-200, TT-P66573, TSL-P66572, UH-P6657			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P636	001	00	B

FIELD	JBA-P66571	CP-P8040	PLC-P8040
The diagram illustrates the electrical control system for a valve (XV P66571). It is divided into four main sections: FIELD, JBA-P66571, CP-P8040, and PLC-P8040. FIELD: Contains the valve actuator (OPEN/CLOSE ACTUATOR SCHISCHEK) with terminals 5 (CLOSE LIMIT), 6 (CLOSE LIMIT), 7 (OPEN LIMIT), 8 (OPEN LIMIT), 2 (HEATER), 3 (OPEN), and 1 (COM). It also includes a FUTURE connection point. JBA-P66571: Contains three terminal blocks (TB02) and three relays (TB01 R-01, R-02, R-03). The first TB02 has terminals L, N, L, N. The second TB02 has terminals 1, 2, 3, 4, 5, 6. The third TB02 has terminals 7, 8, 9, 10. The relays have terminals A1, A2, 11, 14. CP-P8040: Contains three terminal blocks (TB06, TB06, TB10) and three fuses (FU-16, FU-17, FU-9). The first TB06 has terminals 16, 17. The second TB06 has terminals 16, 17. The TB10 has terminals 9C. The fuses are labeled FU-16, FU-17, and FU-9. PLC-P8040: Contains three input/output modules (I/O.6.16, I/O.6.17, Q/0.10.9) and three output modules (XC_P66571.ZSC, XC_P66571.ZSO, XC_P66571.CmdOpn). Connections: Power: 120 VAC FROM PANEL PNL-P7004 CCT.49 and 120 VAC TO JBA-P66581 DWG 1-0101-AILD-P636-004 are connected to the first TB02 in the JBA-P66571. Field to JBA: CLOSE LIMIT (5, 6) and OPEN LIMIT (7, 8) are connected to the second TB02. HEATER (2, 3) and COM (1) are connected to the third TB02. FUTURE is connected to the second TB02. JBA to CP: P66571-1, P66571-2, P66571-3, P66571-4, P66571-5, and P66571-6 are connected to the relays and fuses. CP to PLC: I/O.6.16, I/O.6.17, and Q/0.10.9 are connected to the PLC modules.			

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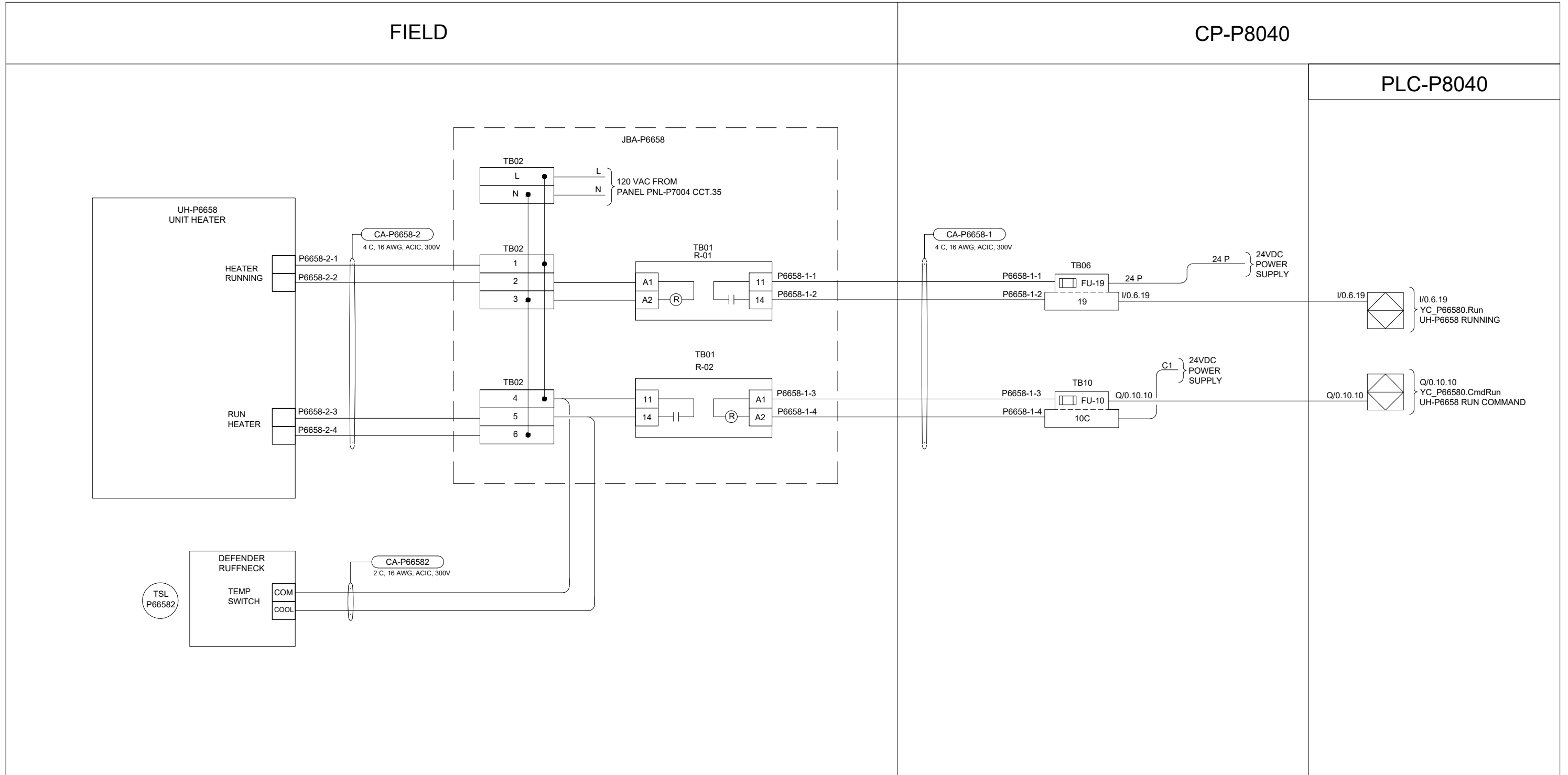
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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, STAIRS 2-200, XV-P66571			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P636	002	00	B

B SIZE - 279mm x 432mm



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NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HVAC HYDRONIC, STAIRS 2-200, TSL-P66582, UH-P6658

CITY DRAWING NUMBER

1-0101-AILD-P636

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NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, STAIRS 2-200, XV-P66581			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P636	004	00	B

The diagram illustrates the electrical connections for the P66590 system, divided into three main sections: FIELD, CP-P8040, and RIO-P8040-1/PLC-P8040.

FIELD Section:

- SIEMENS TEMPERATURE SIGNAL:** Connected to terminals P66593-1 and P66593-1. A cable CA-P66593 (1 PR, 16 AWG, ACIC, 300V) connects this to the CP-P8040 section.
- UH-P6659 UNIT HEATER:** Includes HEATER RUNNING and RUN HEATER signals. Connected to terminals P6659-2-1, P6659-2-2, P6659-2-3, and P6659-2-4. A cable CA-P6659-2 (4 C, 16 AWG, ACIC, 300V) connects this to the JBA-P6659 section.
- DEFENDER RUFFNECK TEMP SWITCH:** Includes COM and COOL signals. Connected to terminals P6659-1-3 and P6659-1-4. A cable CA-P66592 (2 C, 16 AWG, ACIC, 300V) connects this to the CP-P8040 section.
- JBA-P6659:** A central junction box containing two relay modules (TB01 R-01 and TB01 R-02) and two terminal blocks (TB02). It receives 120 VAC from PANEL PNL-P7003 CCT.35. The relay modules control the heater signals (P6659-1-1, P6659-1-2, P6659-1-3, P6659-1-4).

CP-P8040 Section:

- 24VDC POWER SUPPLY:** Connected to terminals P66593-1 and P66593-1. A cable CA-P6659-1 (4 C, 16 AWG, ACIC, 300V) connects this to the RIO-P8040-1 section.
- Terminal Blocks:** TB05 (FU-5, 5+, 5-, S) and TB06 (FU-23, 23) are used for signal routing.
- Signal Lines:** P6659-1-1, P6659-1-2, P6659-1-3, and P6659-1-4 connect to the RIO-P8040-1 section.

RIO-P8040-1 and PLC-P8040 Section:

- AI/1.5.5:** Connected to terminals AI/1.5.5+ and AI/1.5.5-. It is labeled as AI/1.5.5, TI_P66593.T, and TT-P66593 TEMPERATURE.
- I/O.6.23:** Connected to terminals I/O.6.23 and I/O.6.23. It is labeled as I/O.6.23, YC_P66590.Run, and UH-P6659 RUNNING.
- Q/O.10.12:** Connected to terminals Q/O.10.12 and Q/O.10.12. It is labeled as Q/O.10.12, YC_P66590.CmdRun, and UH-P6659 RUN COMMAND.

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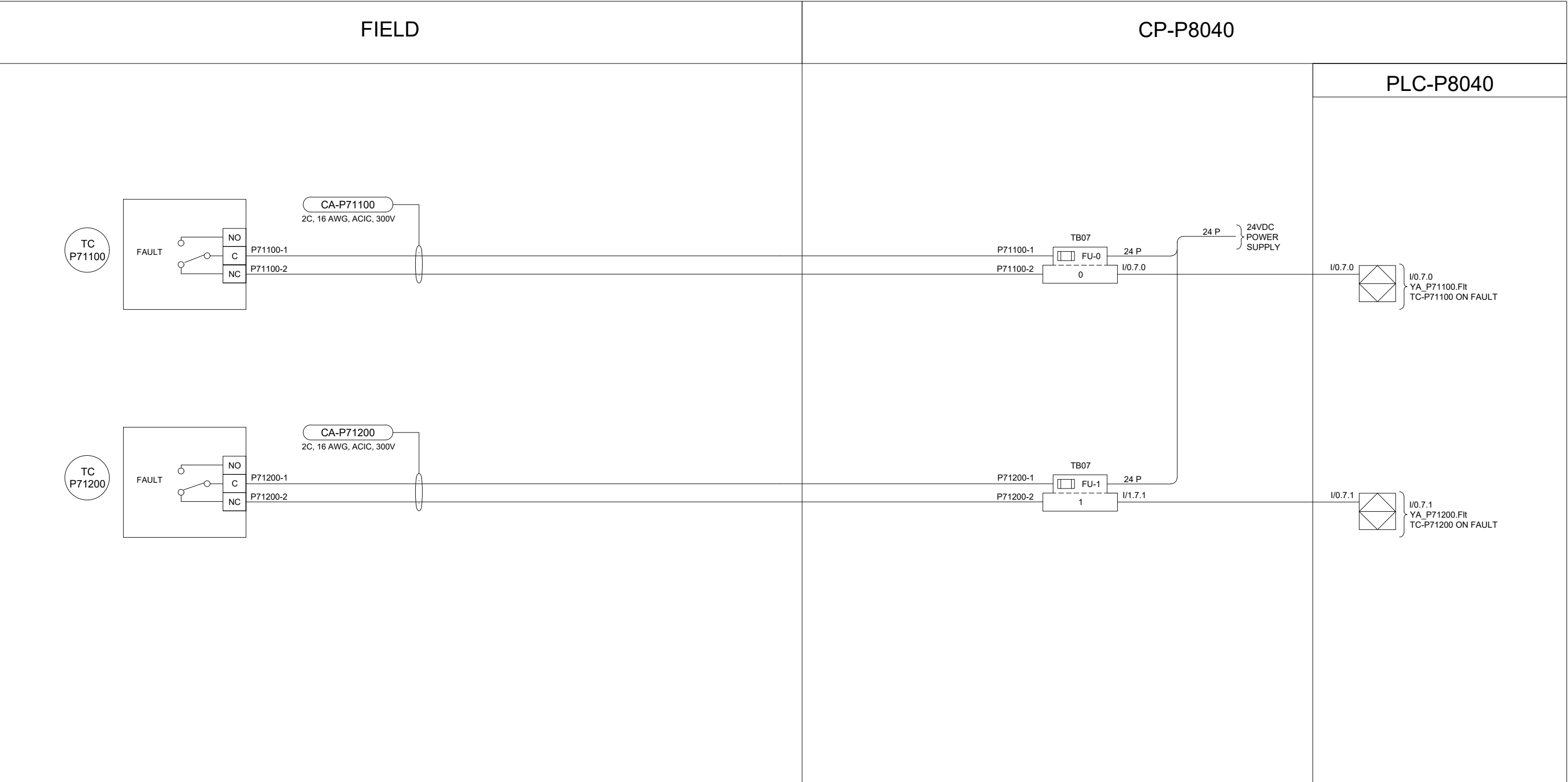
 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, MECH. ROOM 2-202, TT-66593, TSL-66592, UH-6659			
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	NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM HVAC HYDRONIC, MECH. ROOM 2-202, XV-P66591 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; padding: 5px;">CITY DRAWING NUMBER</td> <td style="width: 25%; padding: 5px;">SHEET</td> <td style="width: 15%; padding: 5px;">REV.</td> <td style="width: 27%; padding: 5px;">SIZE</td> </tr> <tr> <td style="text-align: center; font-size: 24px;">1-0101-AILD-P637</td> <td style="text-align: center; font-size: 24px;">002</td> <td style="text-align: center; font-size: 24px;">00</td> <td style="text-align: center; font-size: 24px;">B</td> </tr> </table>				CITY DRAWING NUMBER	SHEET	REV.	SIZE	1-0101-AILD-P637	002	00	B
CITY DRAWING NUMBER	SHEET	REV.	SIZE									
1-0101-AILD-P637	002	00	B									

B SIZE - 279mm x 432mm



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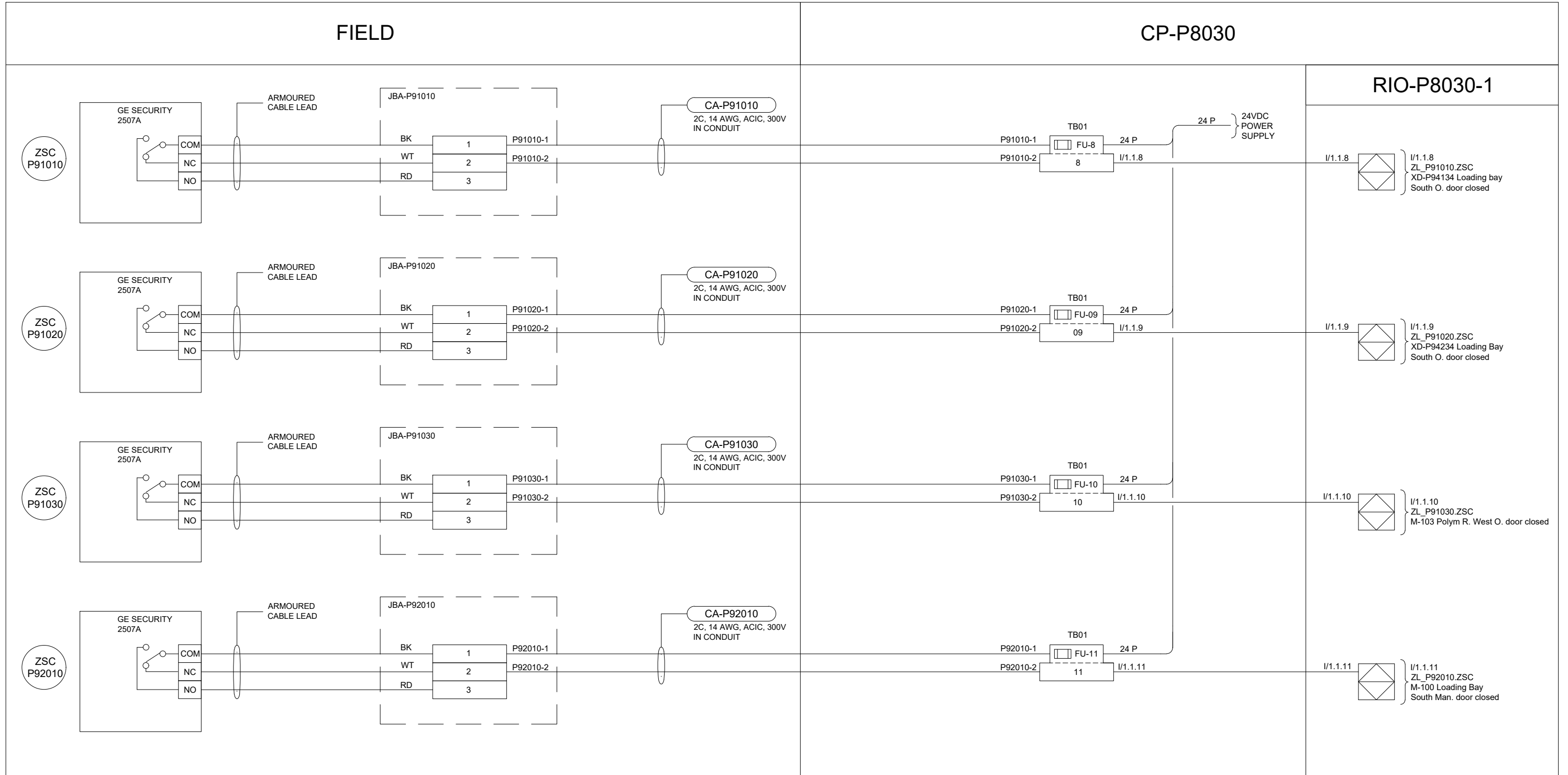
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**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
HEAT TRACE TC-71100, TC-71200

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P638	001	00	B

B SIZE - 279mm x 432mm



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THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

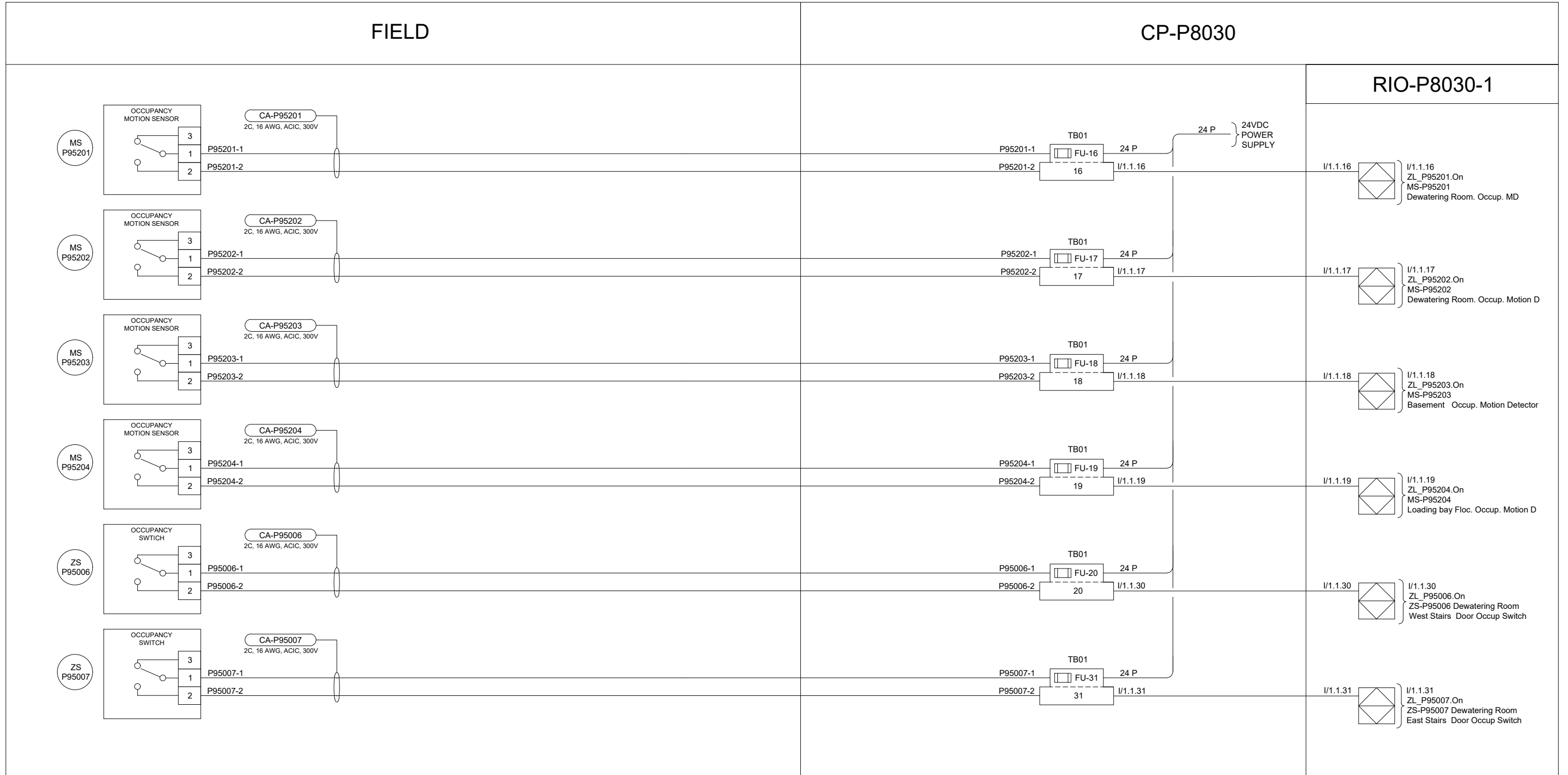
AUTOMATION

SCUM DEWATERING BUILDING - LOOP DIAGRAM

DOOR SWITCHES ZSC-P91010, ZSC-P91020, ZSC-P91030, ZSC-P92010

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P901	001	00	B

B SIZE - 279mm x 432mm



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WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

SCUM DEWATERING BUILDING - LOOP DIAGRAM

MS-P95201, MS-P95202, ZS-P95006, ZS-P95007

CITY DRAWING NUMBER

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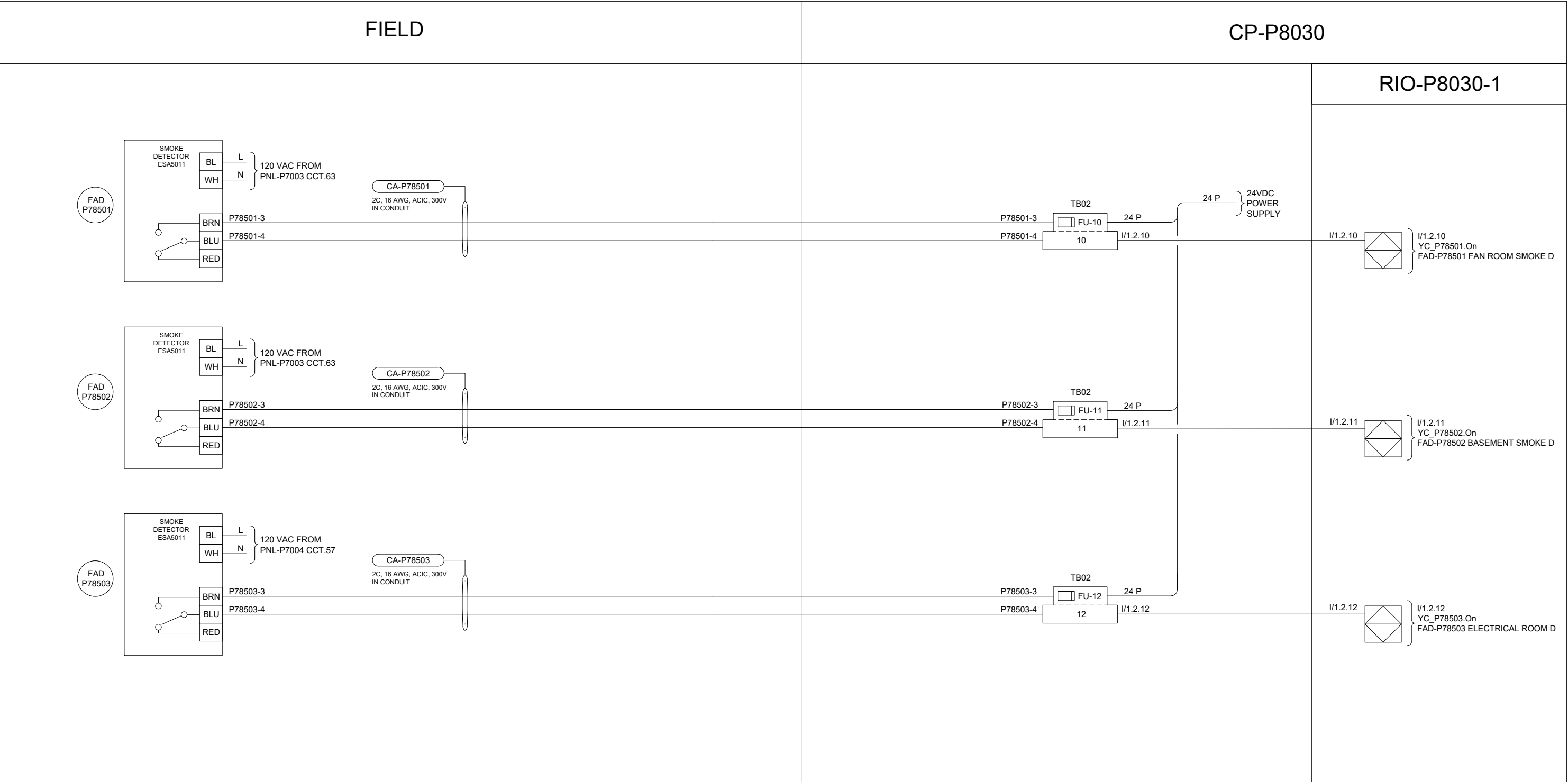
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 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM OCCUPANCY TIME OUT AA-P93000, AA-P94000			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P904	001	00	B

B SIZE - 279mm x 432mm



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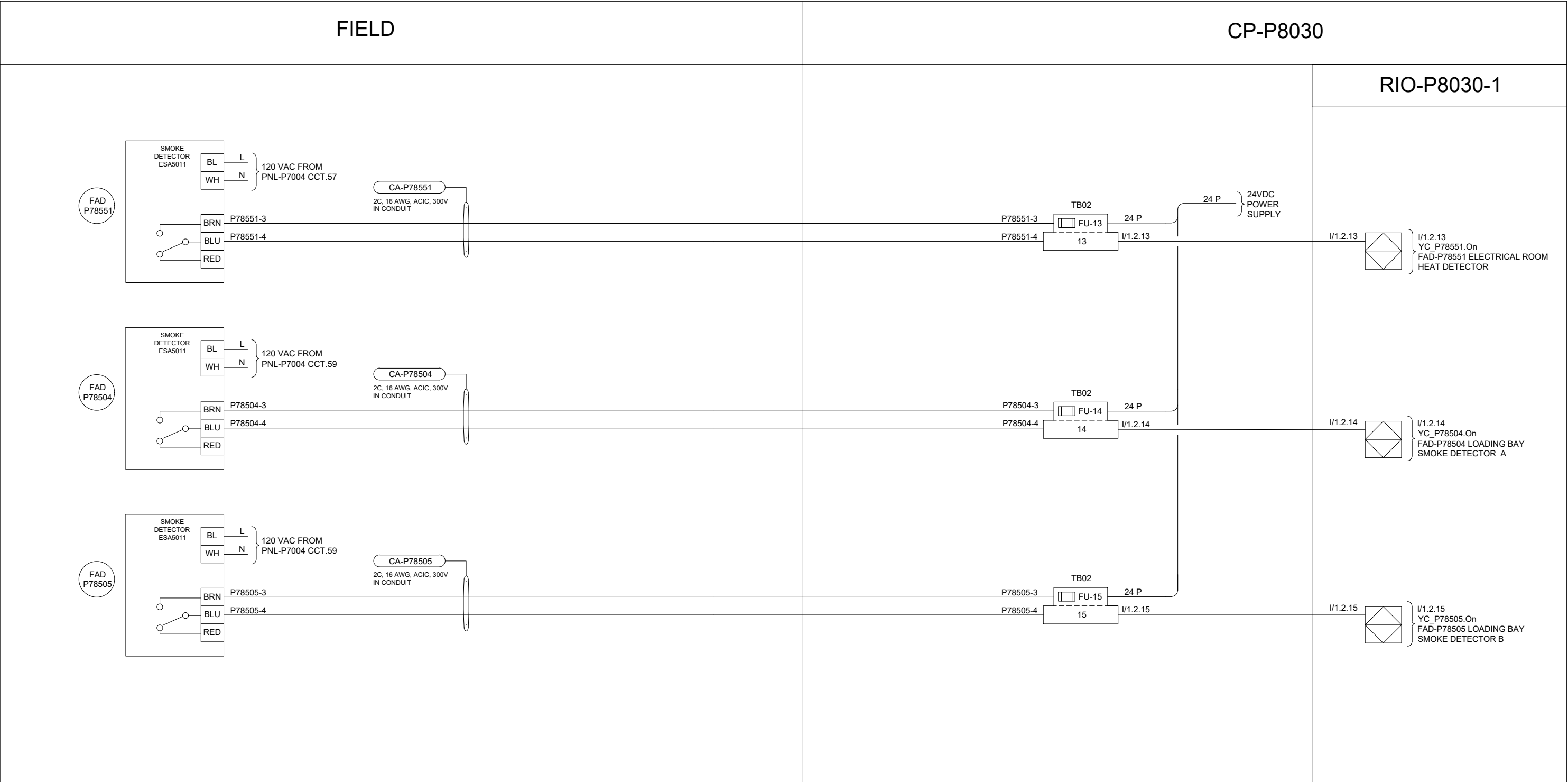
THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
SMOKE DETECTORS FAD-P78501, FAD-P78502, FAD-P78503

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P905	001	00	B

B SIZE - 279mm x 432mm



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NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
SMOKE AND HEAT DETECTORS FAD-P78551, FAD-P78504, FAD-P78505

CITY DRAWING NUMBER

1-0101-AILD-P906

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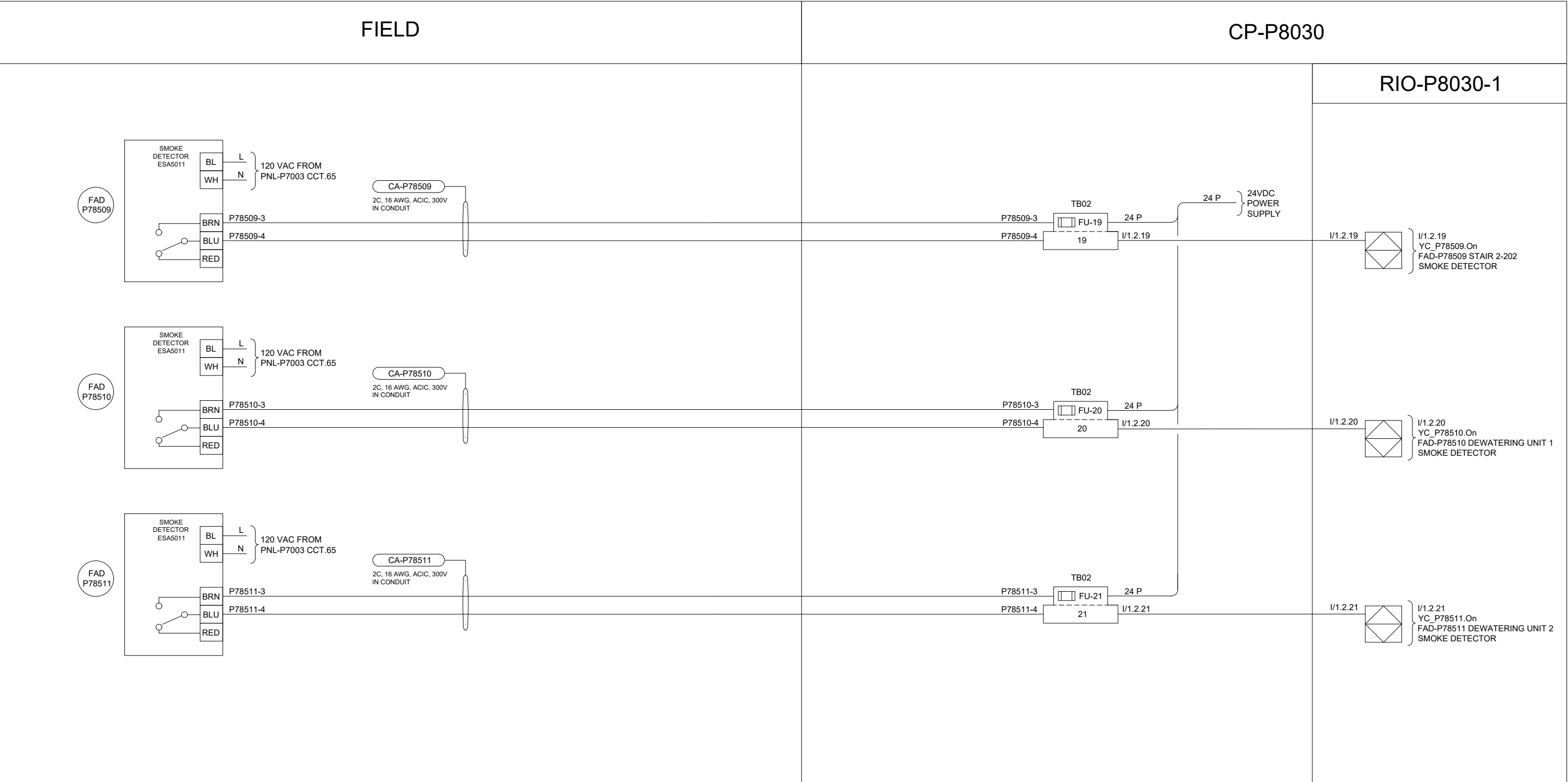
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 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM SMOKE DETECTORS FAD-P78506, FAD-P78507, FAD-P78508			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P907	001	00	B

B SIZE - 279mm x 432mm



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NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
SMOKE DETECTORS FAD-P78509, FAD-P78510, FAD-P78511

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P908	001	00	B

The diagram illustrates the wiring for two types of strobe and horn assemblies: AAH-P96020 and AAH-P96030. The system is divided into three main sections: FIELD, JBA-96020, and CP-P8030.

FIELD Section:

- AAH-P96020:** Includes STROBE BASEMENT and HORN BASEMENT. The STROBE BASEMENT is connected to CA-P96020-1 (2C, 16 AWG, ACIC, 300V IN CONDUIT). The HORN BASEMENT is connected to CA-P96020-2 (2C, 12 AWG, ACIC, 300V).
- AAH-P96030:** Includes STROBE LOADING BAY and HORN LOADING BAY. The STROBE LOADING BAY is connected to CA-P96030-1 (2C, 16 AWG, ACIC, 300V IN CONDUIT). The HORN LOADING BAY is connected to CA-P96030-2 (2C, 12 AWG, ACIC, 300V).

JBA-96020 Section:

- TB01:** Terminal block for 120 VAC FROM PNL-P7004 CCT.56. It has terminals L and N.
- TB03 R-11:** Relay for AAH-P96020. It has terminals 11, 14, and 1. The relay is connected to the L and N lines from TB01.
- TB03 R-12:** Relay for AAH-P96030. It has terminals 11, 14, and 1. The relay is connected to the L and N lines from TB01.

CP-P8030 Section:

- TB03:** Terminal block for 24VDC POWER SUPPLY. It has terminals 10 and 11. The terminal block is connected to the L and N lines from TB01.
- FU-10 and FU-11:** Fuses for AAH-P96020 and AAH-P96030 respectively. They are connected to the L and N lines from TB01.

Legend:

- Q/1.3.10:** YC_P96020.CmdAA
- Q/1.3.11:** YC_P96030.CmdAA
- AAH-P96020 STROBE AND HORN SMOKE DETECTOR BASEMENT**
- AAH-P96030 STROBE AND HORN SMOKE DETECTOR LOADING BAY**

Notes:

- CONDUIT SEAL
- CLASSIFIED AREA
- UNCLASSIFIED AREA

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 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM STROBE AND HORN AAH-P96020, AAH-P96030			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P909	001	00	B

The diagram illustrates the electrical wiring for a fire alarm system, organized into three main sections: FIELD, JBA-96040, and CP-P8030.

FIELD Section:

- Top Path (P96040):** Connects to STROBE MECHANICAL ROOM (AAH P96040 1) and HORN MECHANICAL ROOM (AAH P96040 2). Cables include CA-P96040-1 (2C, 16 AWG, ACIC, 300V IN CONDUIT) and CA-P96040-2 (2C, 12 AWG, ACIC, 300V). A CONDUIT SEAL is indicated.
- Bottom Path (P96050):** Connects to STROBE ROOF (AAH P96050 1) and HORN ROOF (AAH P96050 2). Cables include CA-P96050-1 (2C, 16 AWG, ACIC, 300V IN CONDUIT) and CA-P96050-2 (2C, 12 AWG, ACIC, 300V). A CONDUIT SEAL is indicated.
- A vertical dashed line separates the **CLASSIFIED AREA** (left) from the **UNCLASSIFIED AREA** (right).

JBA-96040 Section:

- Power Source:** 120 VAC FROM PNL-P7004 CCT.58, connected to TB01 (L, N).
- Terminal Blocks:** TB01 (1, 2, 3 for P96040; 4, 5, 6 for P96050) and TB03 (R-13, R-14).
- Relays:** TB03 R-13 and TB03 R-14, each with terminals 11, 14, A1, and A2.
- Wiring:** Shows connections from TB01 to TB03, including a fuse (11 to 14) and a resistor (A1 to A2).

CP-P8030 Section:

- Power Supply:** 24VDC POWER SUPPLY (24 P, C1) connected to TB03.
- Terminal Blocks:** TB03 (FU-12, 12 for P96040; FU-13, 13 for P96050).
- Output Devices:** Q/1.3.12 (AAH-P96040 STROBE AND HORN SMOKE DETECTOR MECHANICAL R) and Q/1.3.13 (AAH-P96050 STROBE AND HORN SMOKE DETECTOR ROOF).
- Wiring:** Shows connections from TB03 to the output devices, including a fuse (FU-12, FU-13) and a resistor (A1 to A2).

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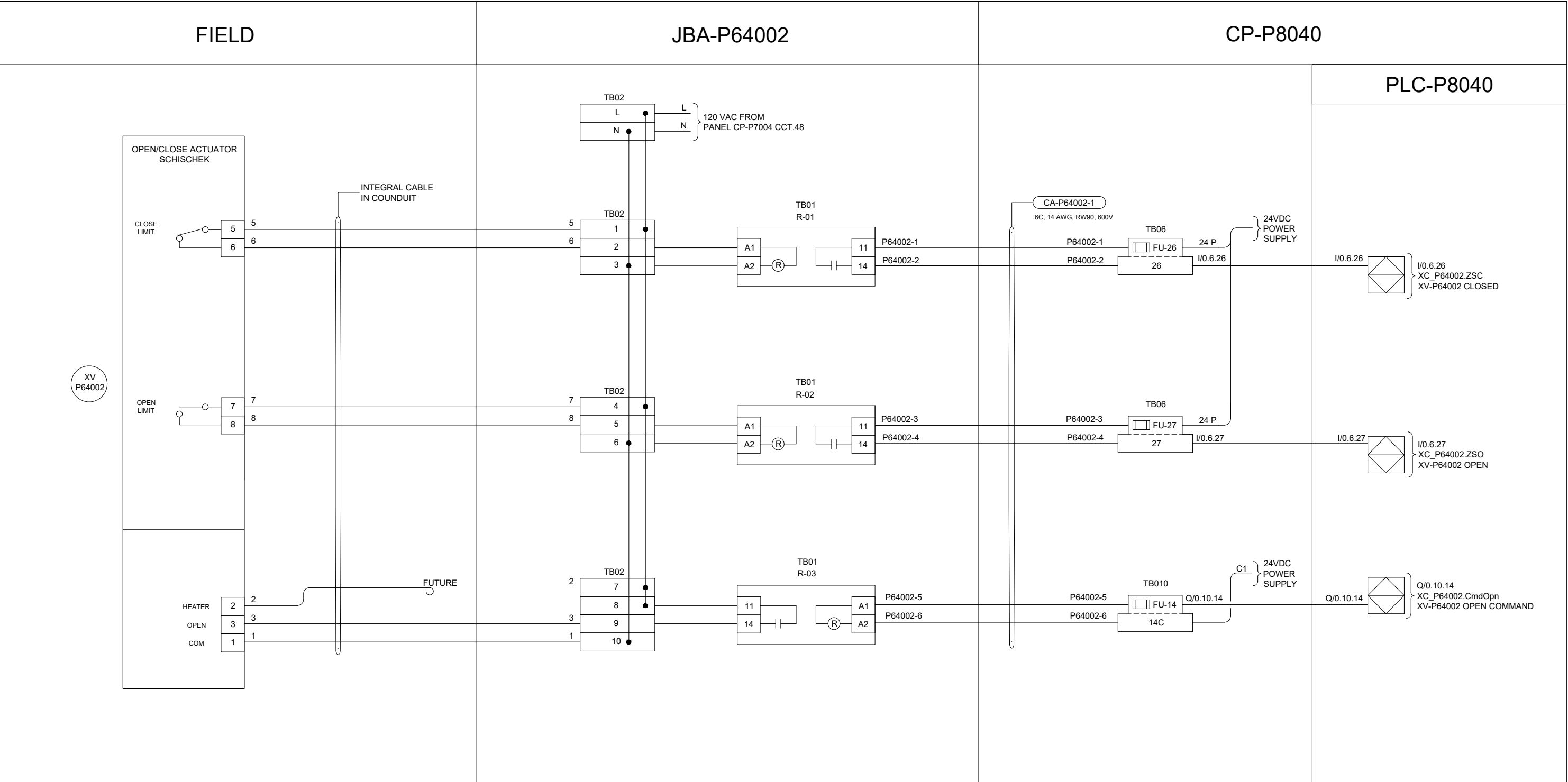
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						DESIGNED BY: DR	CHECKED BY: SB
						DRAWN BY: DR	APPROVED BY: NW
						SCALE: NTS	DATE: 2024-01-08
						ISSUED FOR CONSTRUCTION DATE:	
00	ISSUED FOR TENDER			2025-01-31	DR	SB	CONSULTANT NO.: P3-1697
	REVISIONS			DATE	DESIGN	CHECK	

 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT			
NORTH END SEWAGE TREATMENT PLANT PRIMARY CLARIFICATION PROJECT AUTOMATION SCUM DEWATERING BUILDING - LOOP DIAGRAM STROBE AND HORN AAH-P96040, AAH-P96050			
CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P910	001	00	B

B SIZE - 279mm x 432mm



**ENGINEERS
GEOSCIENTISTS
MANITOBA**

Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: 2025-01-31

AECOM				
			DESIGNED BY:	CHECKED BY:
			DR	SB
			DRAWN BY:	APPROVED BY:
			DR	NW
			SCALE:	DATE:
			NTS	2024-01-08
			ISSUED FOR CONSTRUCTION	
			BY: DATE:	
			CONSULTANT NO.: P3-I698	
00	ISSUED FOR TENDER	2025-01-31	DR	SB
	REVISIONS	DATE	DESIGN	CHECK

ENGINEER'S SEAL

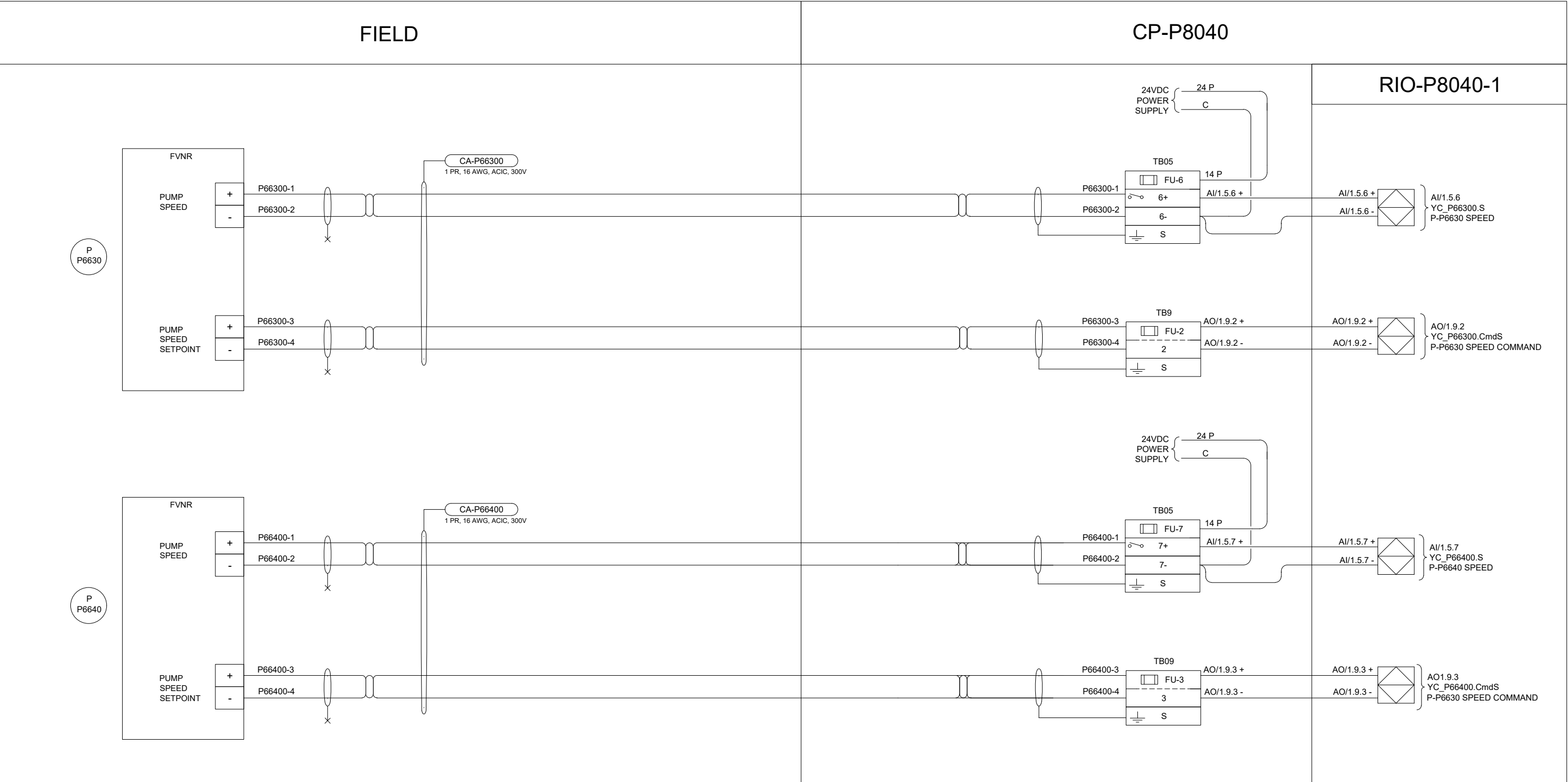


**THE CITY OF WINNIPEG**
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
PRIMARY CLARIFICATION PROJECT
AUTOMATION
SCUM DEWATERING BUILDING - LOOP DIAGRAM
AIR FLOW, XV-P64002

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P639	001	00	B

B SIZE - 279mm x 432mm



ENGINEERS
GEOSCIENTISTS
MANITOBA

Certificate of Authorization

AECOM Canada Ltd.

No. 4671 Date: 2025-01-31

AECOM				
00	ISSUED FOR TENDER	2025-01-31	DR	SB
	REVISIONS	DATE	DESIGN	CHECK

DESIGNED BY:	CHECKED BY:
DR	SB
DRAWN BY:	APPROVED BY:
DR	NW
SCALE:	DATE:
NTS	2024-01-08
BY:	ISSUED FOR CONSTRUCTION DATE:
CONSULTANTNO.: P3-I699	

ENGINEER'S SEAL

PROVINCE OF MANITOBA

BOGHOSSIAN

Member 33454

REGISTERED PROFESSIONAL ENGINEER

2025-01-30

Winnipeg

THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT

PRIMARY CLARIFICATION PROJECT

AUTOMATION

SCUM DEWATERING BUILDING - LOOP DIAGRAM

HVAC BASEMENT, P-P6630, P-P6640

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-AILD-P640	001	00	B