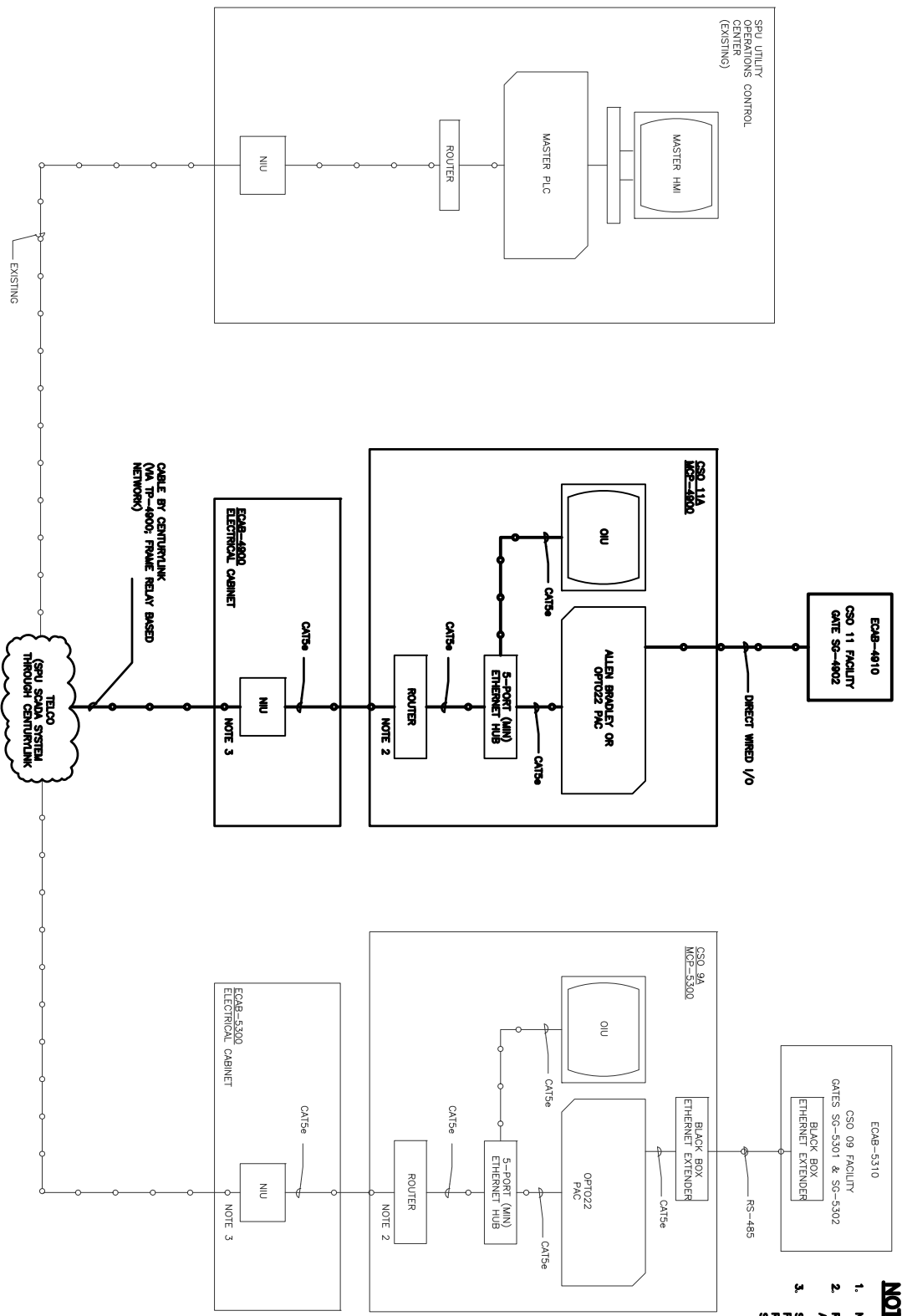
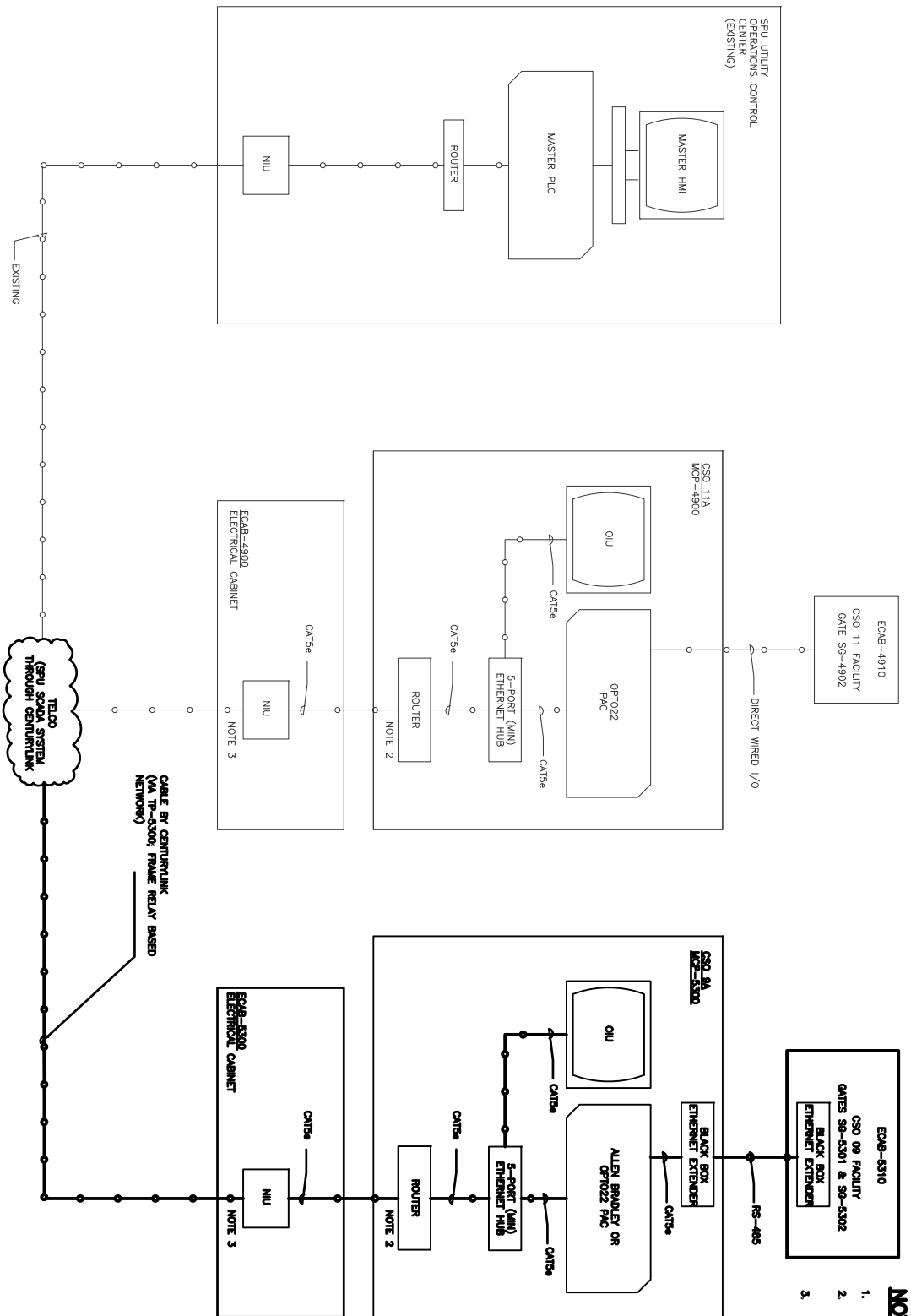


TYPICAL ALAN BRADLEY
PANEL CONFIGURATION



- NOTES:**
1. NOT USED.
 2. ROUTER AND DC POWER CABLE FURNISHED AND INSTALLED BY OWNER (SPU).
 3. SPU WILL ORDER FRAME RELAY CIRCUIT FROM CENTURLINK. CENTURLINK RESPONSIBLE FOR INSTALLING NIU. PROVIDE SPACE FOR NIU IN ECAB-4800.

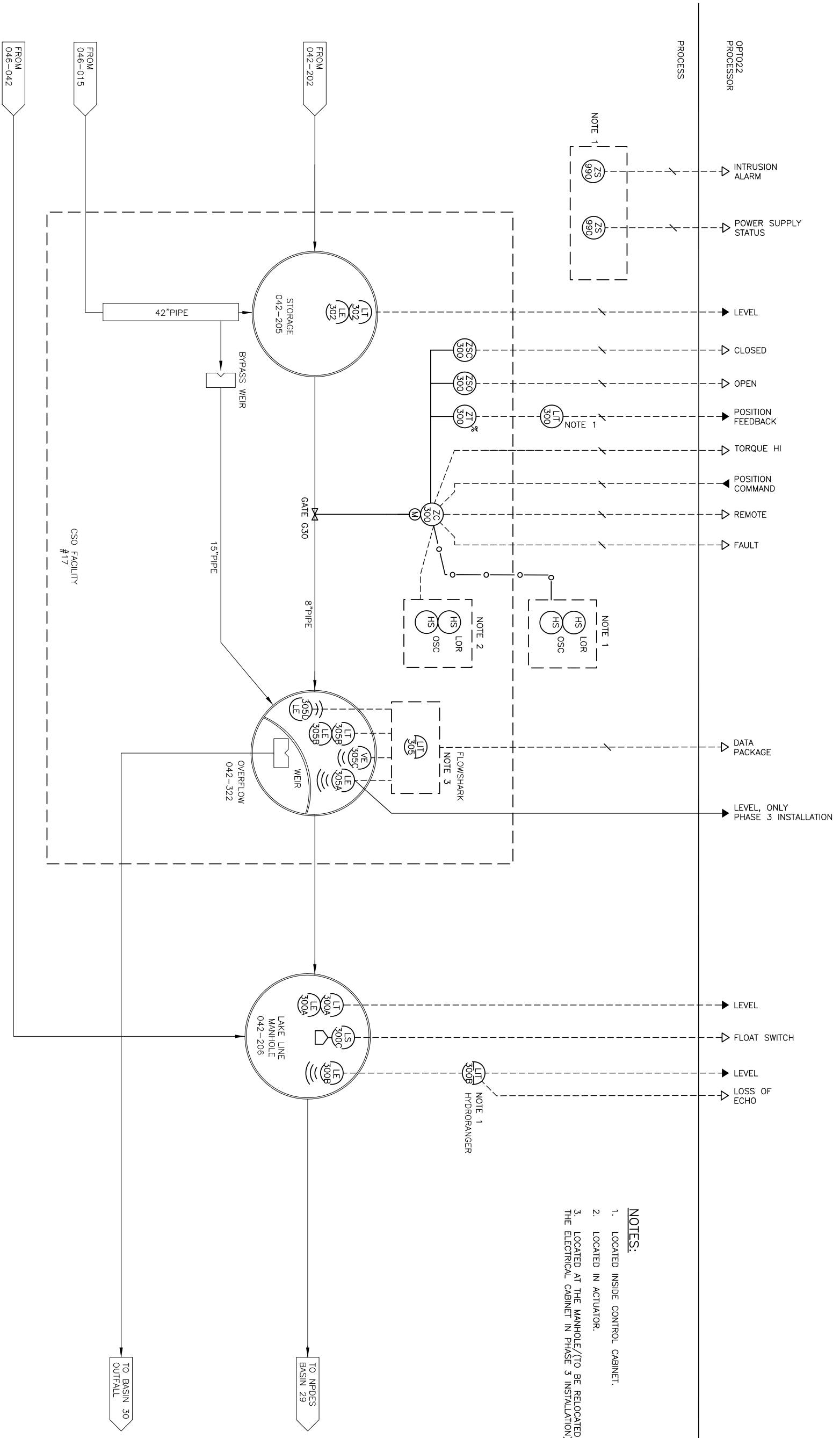
TYPICAL NETWORK COMMUNICATIONS
(LARGE PROJECT) 1 of 2



- NOTES:**
1. NOT USED.
 2. ROUTER AND DC POWER CABLE FURNISHED AND INSTALLED BY OWNER (SRU).
 3. SPU WILL ORDER FEMALE RELAY CIRCUIT FROM CENTURLINK. CENTURLINK RESPONSIBLE FOR INSTALLING NIU. PROVIDE SPACE NIU IN ECAB-5300.

TYPICAL NETWORK COMMUNICATIONS (LARGE PROJECT) 2 of 2

VAULT SERIAL NO.	DATE	MARK	NATURE	MADE	CHK'D	REV'D
			REVISIONS			



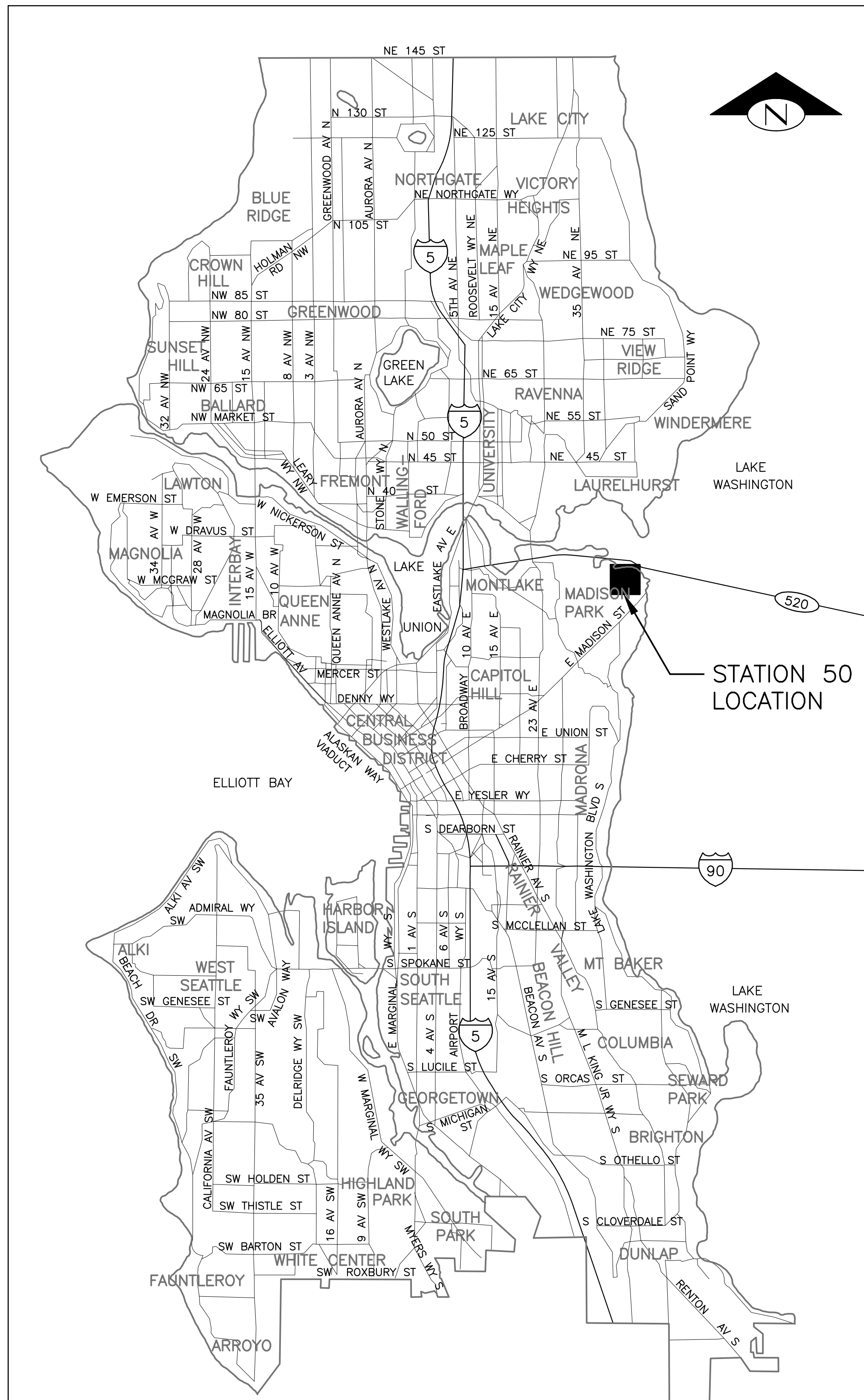
- NOTES:**
1. LOCATED INSIDE CONTROL CABINET.
 2. LOCATED IN ACTUATOR.
 3. LOCATED AT THE MANHOLE/(TO BE RELOCATED TO THE ELECTRICAL CABINET IN PHASE 3 INSTALLATION)

AS-BUILT

CSO SYSTEM INSTRUMENT P&ID DIAGRAM

APPROVED FOR ADVERTISING LINNETH RILEY-HALL DEPARTMENT OF EXECUTIVE ADMINISTRATION SEATTLE, WASHINGTON 20		NAME OR INITIALS AND DATE DESIGNED CL CHECKED TK, IS DRAWN CL CHECKED TN, SP, IS, 02/28/2011		INITIALS AND DATE REVISED: 05/11/2010 CONST. PROJ. MGR. REVISED AS BUILT 7/27/22	
BY: DIRECTOR, CONTRACTING SERVICES				City of Seattle Ray Hoffman, Director APPROVED INSPECTOR'S BOOK	
ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CITED FOR IN SECTION 0-20.3 OF THE PROJECT MANUAL.		LESCHI BASIN CSO SCADA INTEGRATION		SHEET 3 OF 13	

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ABBREVIATION & LEGENDS:

- AIO1 = ANALOG INPUT MODULE AT SLOT "01"
- CB1 = CIRCUIT BREAKER "1"
- CM05 = COMMUNICATION MODULE AT SLOT "05"
- CR1 = CONTROL RELAY "1"
- CT1 = CURRENT TRANSFORMER "1"
- DIO0 = DIGITAL INPUT MODULE AT SLOT "00"
- FU1 = FUSE TERMINAL "1"
- HOA1 = HAND, OFF, AUTO KEYED SWITCH "1"
- ISO1 = INTRINSIC BARRIER "01"
- LS = LIMIT SWITCH
- LE/LT = LEVEL ELEMENT & TRANSDUCER
- LSH = LEVEL SWITCH HIGH
- LSHH = LEVEL SWITCH HIGH HIGH
- M1 = MOTOR STARTER CONTACTOR "1"
- PR1 = POWER RELAY "1"
- PFR = PHASE FAIL RELAY
- P1 = PUMP #1
- TB01 = TERMINAL BLOCK "01"
- XOO = CLOSE, OPEN, OPEN SWITCH POSITION

- = TWISTED SHIELDED PAIR
- = TWISTED PAIR
- = ELECTRICAL CONNECTION
- = ELECTRONIC COMPONENT TERMINALS
- = SCADA CABINET FILED ACCESS TERMINALS
- = SCADA CABINET INTERNAL TERMINALS
- = SCADA CABINET INTERNAL WIRING
- = SCADA CABINET FIELD WIRING

SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
1	PROJECT COVER PAGE
2	SCADA PANEL DOOR LAYOUT
3	CABINET BACK PANEL LAYOUT
4	BILL OF MATERIAL SHEET 1 OF 2
5	BILL OF MATERIAL SHEET 2 OF 2
6	COMMUNICATION DIAGRAM
7	POWER DISTRIBUTION DIAGRAM
8	DIGITAL OUTPUT SCHEMATIC
9	DIGITAL INPUT SCHEMATIC SHEET 1 OF 3
10	DIGITAL INPUT SCHEMATIC SHEET 2 OF 3
11	DIGITAL INPUT SCHEMATIC SHEET 3 OF 3
12	ANALOG INPUT SCHEMATIC SHEET 1 OF 2
13	ANALOG INPUT SCHEMATIC SHEET 2 OF 2
14	TYPICAL MCC & SCADA CONTROL
15	PANEL I/O ASSIGNMENTS SHEET 1 OF 2
16	PANEL I/O ASSIGNMENTS SHEET 2 OF 2

REVISION INDEX

REVISION RECORD	RECORDED DATE	DESCRIPTIONS OF NATURE	SHEET #
A	7/14/2015	ADDED "GO" LIGHT TO CR5	SHEET 7
B	2/22/2016	UPDATED PER PS-50 CONTRACT DRAWINGS	SHEETS 1-15
C	3/7/2016	ADDED DRYWELL EXHAUST FAN LOW AIR FLOW	SHEETS 3, 8 & 11

GENERAL NOTES

UNLESS OTHERWISE NOTED:

- THE VICINITY MAP ONLY SHOWS PROXIMITY WASTEWATER PUMP STATION LOCATION. FOR MORE LOCATION DETAIL, CONTACT ELECTRICIAN CREW CHIEF.
- REFER TO SPECIFIC SITE I/O ASSIGNMENT LIST FOR MORE INFORMATION.

SHOP AS-BUILT DRAWINGS REV C

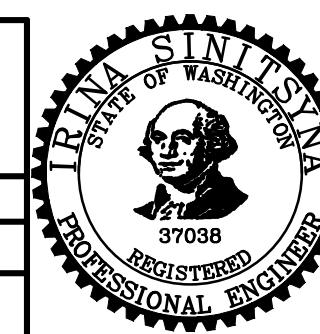
PROJECT COVER PAGE

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 DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
 SEATTLE, WASHINGTON 20

BY: PURCHASING & CONTRACTING SERVICES DIRECTOR

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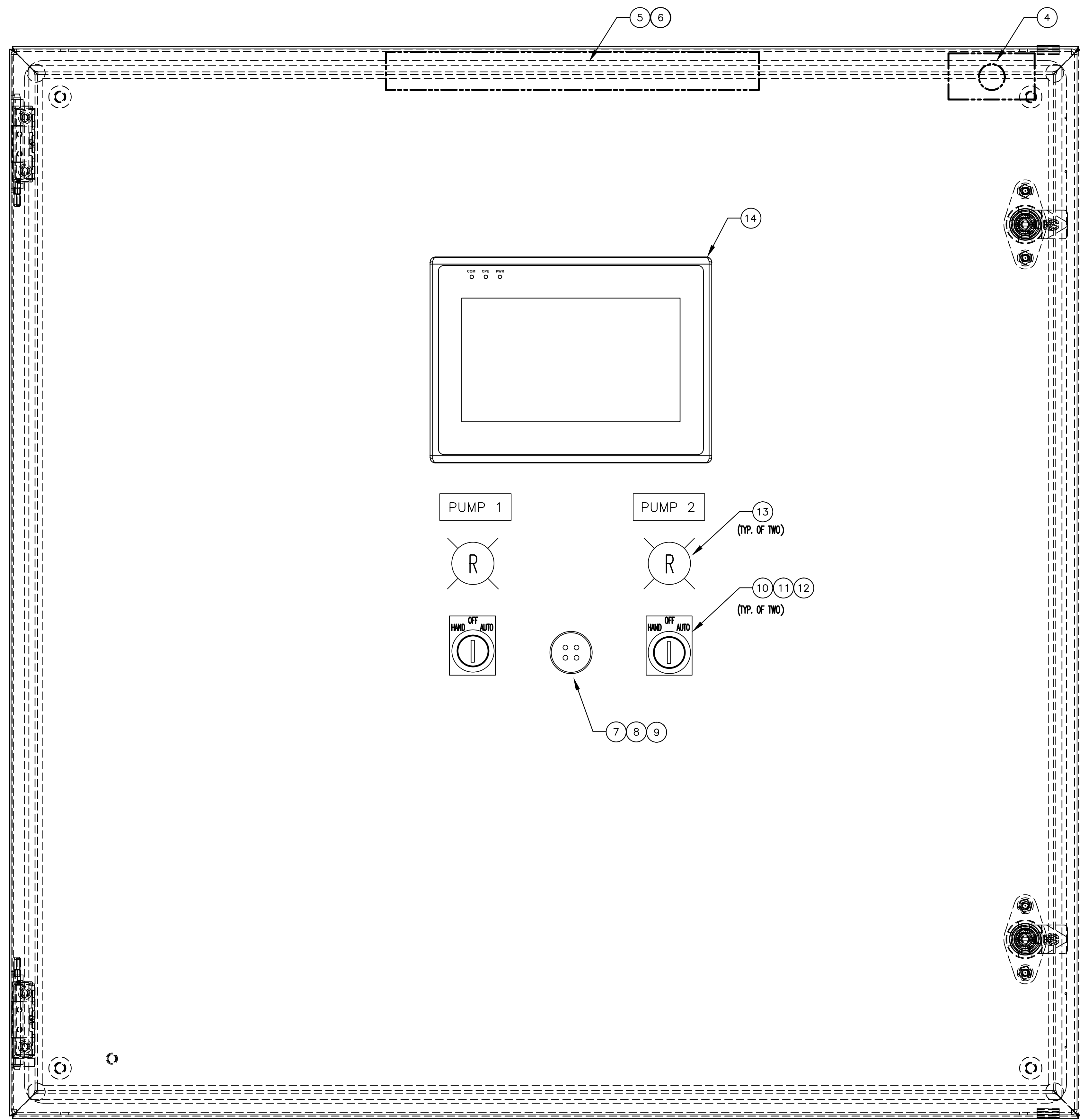
Seattle Public Utilities
 City of Seattle
 Ray Hoffman, Director

ORDINANCE NO. Ordinance Number
 FUND: Fund
 SCALE: AS SHOWN

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PUMP STATION 050
 AIRLIFT REPLACEMENT:
 2534 39TH AVE. E.

NO. PC C314050
 JOB R/W
 CO C314050
 VAULT PLAN NO.
 SHEET 1 OF 16



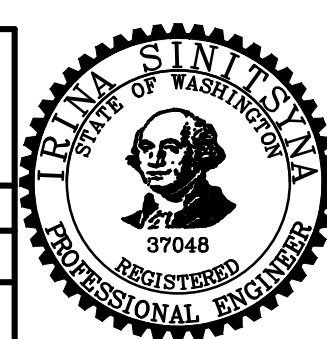
MADE	CHK'D	REV'D
NATURE	REVISIONS	
DATE	MARK	
VAULT SERIAL NO.		

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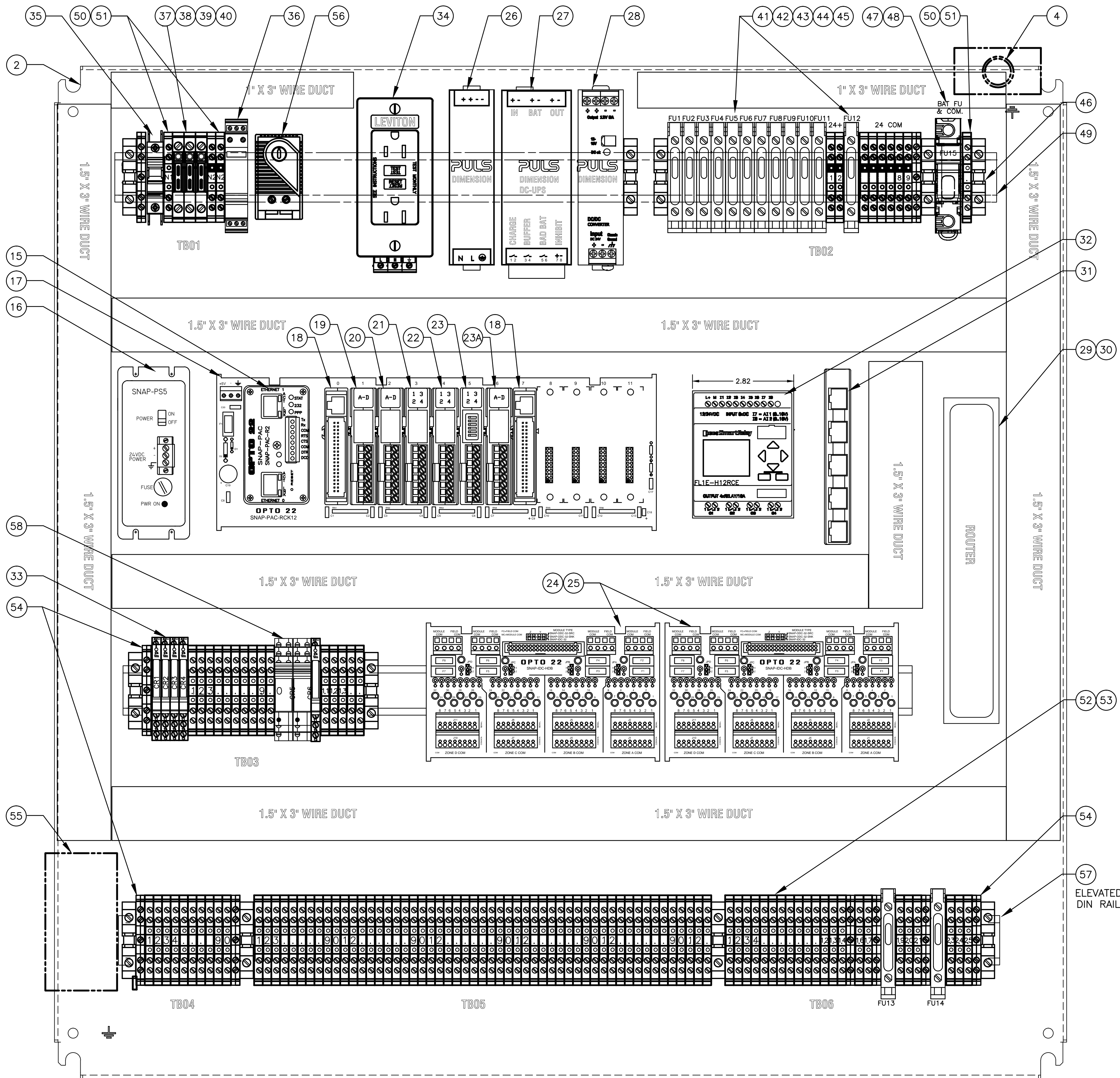
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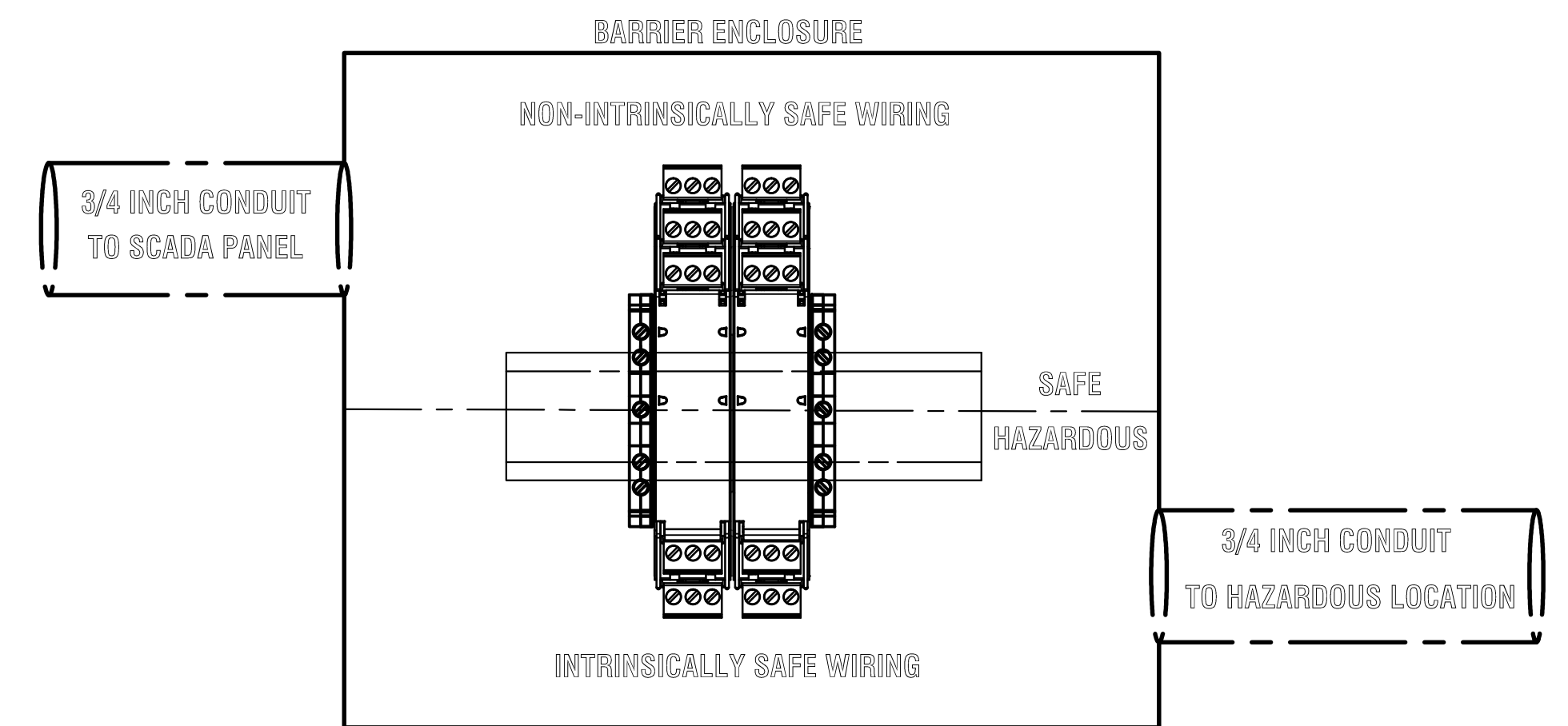
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**PUMP STATION 050
 AIRLIFT REPLACEMENT:
 2534 39TH AVE. E.**

JOB NO.	PC	C314050
R/W		
CO		C314050
VAULT PLAN NO.		
SHEET 2 OF 16		



- NOTES:
1. INTRINSIC BARRIERS AS REQUIRED.
 2. BLUE TERMINALS ARE TO HAZARDOUS AREA.
 3. FOLLOW NEC ARTICLE 500 & 504 REQUIREMENTS.
 4. REUSE EXISTING BARRIER ENCLOSURE OR REPLACE IN-KIND.

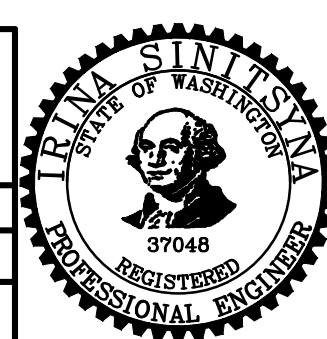


SHOP AS-BUILT DRAWINGS REV C

CABINET BACK PANEL LAYOUT

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 AIRLIFT REPLACEMENT:
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NO. JOB CO
 PC C314050
 R/W
 CO C314050
 VAULT PLAN NO.
 SHEET 3 OF 16

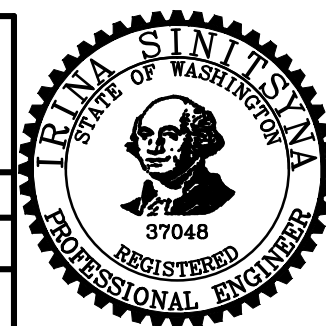

MADE	CHK'D	REV'D
DATE	MARK	
NATURE OF REVISIONS		
VAULT SERIAL NO.	DATE	MARK

Removed for Security

ITEM NO.	ID	QTY.	MANUFACTURE ORDER PART NO	MANUFACTURE PART NO	MANUFACTURES	DESCRIPTIONS
1	CAB	1	303012-SD		B-Line	Concept NEMA 12 enclosure 30x30x12 ANSI 61 Gray
2	CAB	1	3030P		B-Line	30x30 equipment panel
3	CAB	1	WMHPTO		B-Line	Padlocking handle
4	CAB	1	2DM1		Honeywell	Mechanical DPDT Limit Switch (with mounting brkt.)
5	CAB	1	WLB32C285PB		Banner	12" LED Light Bar, 12 to 30VDC, 600 Lumens
6	CAB	1	LMBWLB32MAG		Banner	Magnetic Mounts for LED Light Bar, set of 2
7	CAB	1	MS3102R14S-2S		Amphenol Industrial	Amphenol 4-pin connector, female, box-mount
8	CAB	1	10-40450-14		Amphenol Industrial	Gasket for Amphenol 4-pin connector
9	CAB	1	MS25043-14D		Amphenol Industrial	Cover for Amphenol 4-pin connector
10	CAB	2	XB4BG03	Harmony	SquareD	3-position switch Stay put, 2 NO contacts
11	CAB	4	ZBE101	Harmony	SquareD	Contact block for the 3-pos switch (HOA)
12	CAB	2	HOA Label	custom		Label plate (HOA)
13	CAB	2	XB4BVB4	Harmony	SquareD	Pilot Light, Round, Integral LED-Red, 24V
14	CAB	1	G307K200	G307K200	Red Lion	Operator Interface Unit (OIU) Color touch screen with 7" display, 24VDC, Ethernet Com.
15	PAC	1	SNAP-PAC-R2		Opto 22	SNAP controller
16	PAC	1	SNAP-PS5-24DC		Opto 22	24 VDC to 5 VDC power supply
17	PAC	1	SNAP-PAC-RCK12		Opto 22	12 slot rack
18	PAC	2	SNAP-IDC-32	Slot 0, Slot 7	Opto 22	32-channel digital input module
19	PAC	1	SNAP-AIV2-i	Slot 1	Opto 22	2-ch analog isolated voltage input module, 0- 100VDC
20	PAC	1	SNAP-AIMA-i	Slot 2	Opto 22	2-ch analog isolated current module, 4-20 mA
21	PAC	1	SNAP-ODC5SRC	Slot 3	Opto 22	4 channel digital output module, non-isolated
22	PAC	1	SNAP-ODC5-I	Slot 4	Opto 22	4 channel digital output module, isolated
23	PAC	1	SNAP-SCM-485-422	Slot 5	Opto 22	2-channel RS485 module
23A	PAC	1	SNAP-AIMA4	Slot 6	Opto 22	4 channel current input module, 4-20 mA
24	PAC	2	SNAP-HD-BF6		Opto 22	6' header cable for SNAP 32-ch DI
25	PAC	2	SNAP-IDC-HDB		Opto 22	Breakout rack is used with one 32-ch DI module
26	PS	1	CS10.243		Puls	Dimension C-series 24 VDC, 10 A power supply
27	PS	1	UB10.242		Puls	DC-UPS, 24 VDC output, 10A, Allowed batteries 17-130 Ah
28	PS	1	CD5.121		Puls	DC-DC Converter, 24 VDC to 12VDC
29	NETW	1	NETVANTA3200		ADTRAN	Network Router (Supplied by Owner)
30		1	Support Bracket		Custom	Support bracket for Network Router
31	NETW	1	IE-SW-BL05-5TX		WIEDMULLER	5 Port Ethernet Switch, unmanaged
32	SMART	1	FL1E-H12RCE		IDEC	Smart relay
33	RLY	5	29 66 171 (PLC-RSC-24VDC/21)		PHOENIX	24V Relay module, 250VAC switching voltage /6A continuous
34	AC	1	N7599-DIN		Leviton	120VAC, 15 Amp max dual GFCI receptacle, DIN rail mount

SHOP AS-BUILT DRAWINGS REV C

BILL OF MATERIAL SHEET 1 OF 2

APPROVED FOR ADVERTISING NANCY LOCKE DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES SEATTLE, WASHINGTON 20 BY: PURCHASING & CONTRACTING SERVICES DIRECTOR	INITIALS AND DATE DESIGNED RL CHECKED IS	INITIALS AND DATE REVIEWED: DES. CONST. SDOT PROJ. MGR. RECEIVED REVISED AS BUILT		 City of Seattle Ray Hoffman, Director ORDINANCE NO. Ordinance FUND: Fund Number SCALE: AS SHOWN	PUMP STATION 050 AIRLIFT REPLACEMENT: 2534 39TH AVE. E.	PC C314050 R/W CO C314050 VAULT PLAN NO.
	ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL.					APPROVED INSPECTOR'S BOOK

VAULT SERIAL NO. DATE MARK NATURE REVISIONS MADE CHECKED REV'D
 Removed for Security

ITEM NO.	ID	QTY.	MANUFACTURE ORDER PART NO	MANUFACTURE PART NO	MANUFACTURES	DESCRIPTIONS
35	AC	1	5SJ4118-7HG41	CB-1	Siemens	MAIN CIRCUIT BREAKER CB1, 15 A
36	AC	1	28 56 812 (PT2-PE/s-120 AC/FM)		PHOENIX	Din rail Mount Type 3 Pluggable Surge Protector
37	AC	1	07 12 314 (TCP-10A)	CB-3	PHOENIX	CIRCUIT BREAKER, 10A (duplex receptacle)
38	AC	1	07 12 194 (TCP-1A)	CB-2	PHOENIX	CIRCUIT BREAKER, 1A (heater)
39	AC	1	07 12 275 (TCP-6A)	CB-4	PHOENIX	CIRCUIT BREAKER, 6A (DC power supply)
40	AC	3	31 18 203 (UK 6-FSI/C)		PHOENIX	Terminal block circuit breaker base
41	TERM	14	30 04 265 (UK 6,3-HESILED24)		PHOENIX	Fuse terminal block with Blown fuse indicator, 15-30 VDC
42	FUSE	1	AGC-5	FU-10	Bussman	Fast acting, glass fuse, 5A
43	FUSE	6	AGC-1	FU-2, FU-4, FU-8, FU-11, FU-12, FU-13	Bussman	Fast acting, glass fuse, 1A
44	FUSE	6	AGC-2	FU-1, FU-5, FU-6, FU-7, FU-9, FU-14	Bussman	Fast acting, glass fuse, 2A
45	FUSE	1	AGC-0.5	FU-3	Bussman	Fast acting, glass fuse, 0.5A
46	TERM	12	12 01 442 (E/UK)		PHOENIX	End Block (thick, din rail)
47	TERM	1	CHM1		Bussmann	Fuse Holder for Battery Fuse
48	FUSE	1	FNM-30	FU-15	Bussmann	Battery Fuse, 30A, Low-Peak, Rated at 300V DC
49	TERM	1	08 01 733	NS 35/7 5 perforated	PHOENIX	35 mm din rail, 2m
50	TERM	4	27 74 017 (UKK 5)		PHOENIX	Terminal block (din rail) double feed isolated, AC Terminals
51	TERM	2	27 70 024 (D-UKK 3/5)		PHOENIX	UKK 5 Terminal Block (end cover, thin plate, din rail)
52	TERM	4	27 75 113 (D-UDK 4)		PHOENIX	Terminal Block (end cover, thin plate, din rail)
53	TERM	100	27 75 016 (UDK 4)		PHOENIX	Feed thru modular terminal Block (din rail)
54	TERM	10	27 75 184 (UDK4-PE)		PHOENIX	Terminal Block ground (din rail)
55	HTR	1	Blizzard 50H 40W		DBK Blizzard	Panel Heater, 120 VAC, 40W
56	THERM	1	A-TEMNC		Hoffman	Thermostat NC
57	DIN	1	1492-DR6	Used for TB04, TB05 & TB06	Allen Bradley	Aluminum, 35mm x 7.5mm x 57.4mm Raised DIN Rail
58	RLY	2	29 67 060 (PLC-RSC-24VDC/21-21)	CR5,CR6	PHOENIX	2 Pole, 24V Relay module, 250VAC switching voltage /6A continuous
59						
60						

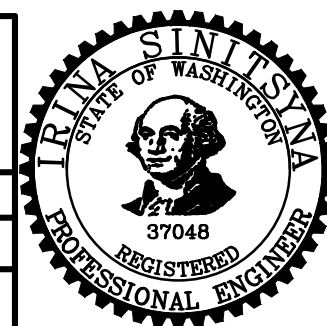
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BILL OF MATERIAL SHEET 2 OF 2

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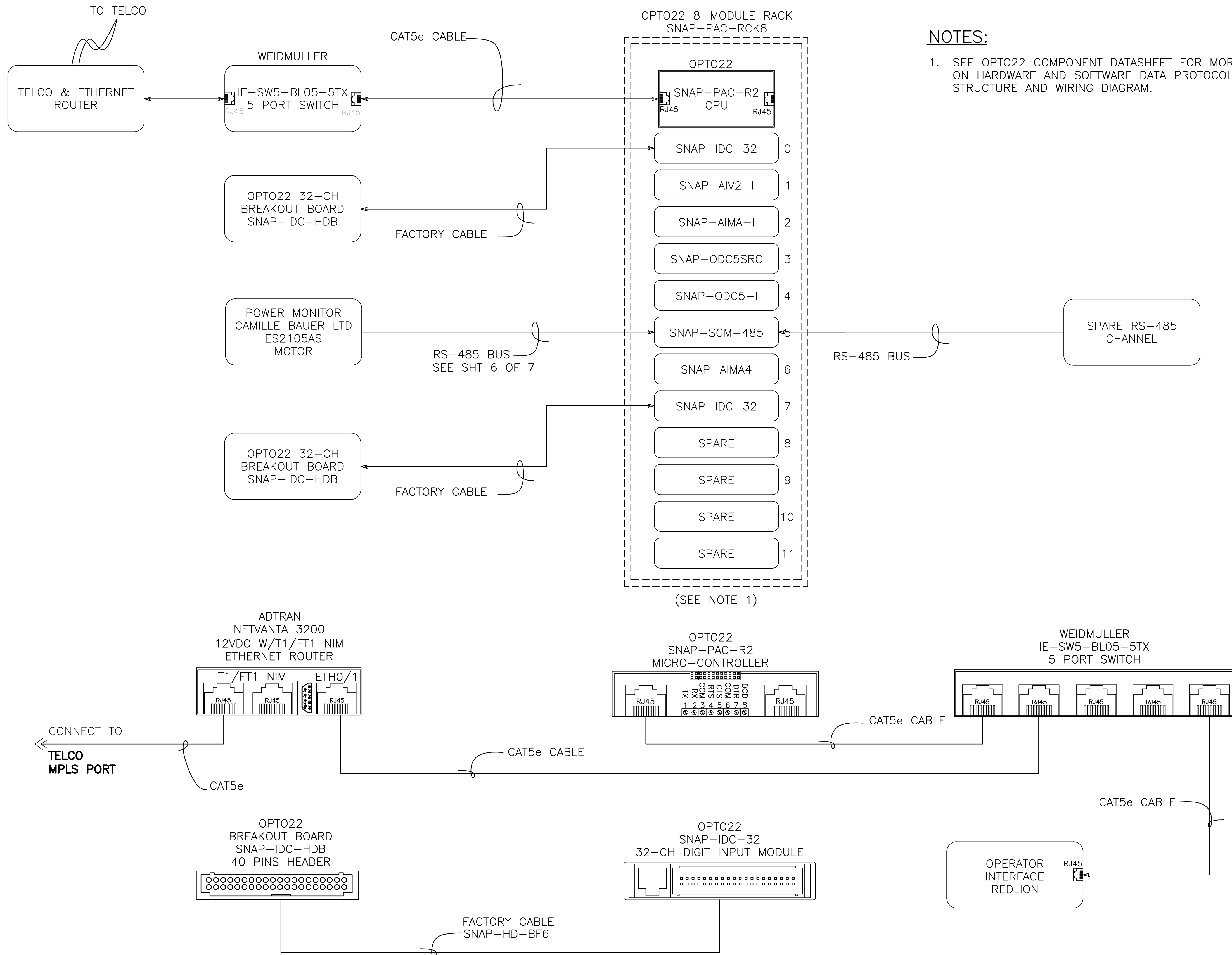


Seattle Public Utilities
 City of Seattle
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ORDINANCE NO. Ordinance Number
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**PUMP STATION 050
 AIRLIFT REPLACEMENT:
 2534 39TH AVE. E.**

NO. JOB NO. PC R/W CO C314050
 VAULT PLAN NO.
 SHEET 5 OF 16



NOTES:

1. SEE OPTO22 COMPONENT DATASHEET FOR MORE DETAILS ON HARDWARE AND SOFTWARE DATA PROTOCOL STRUCTURE AND WIRING DIAGRAM.

(SEE NOTE 1)

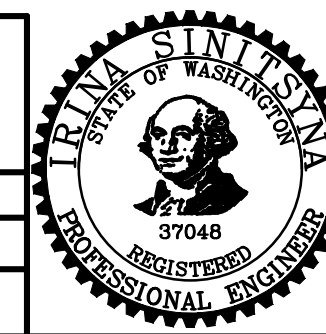
SHOP AS-BUILT DRAWINGS REV C

COMMUNICATION DIAGRAM

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 DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
 SEATTLE, WASHINGTON 20

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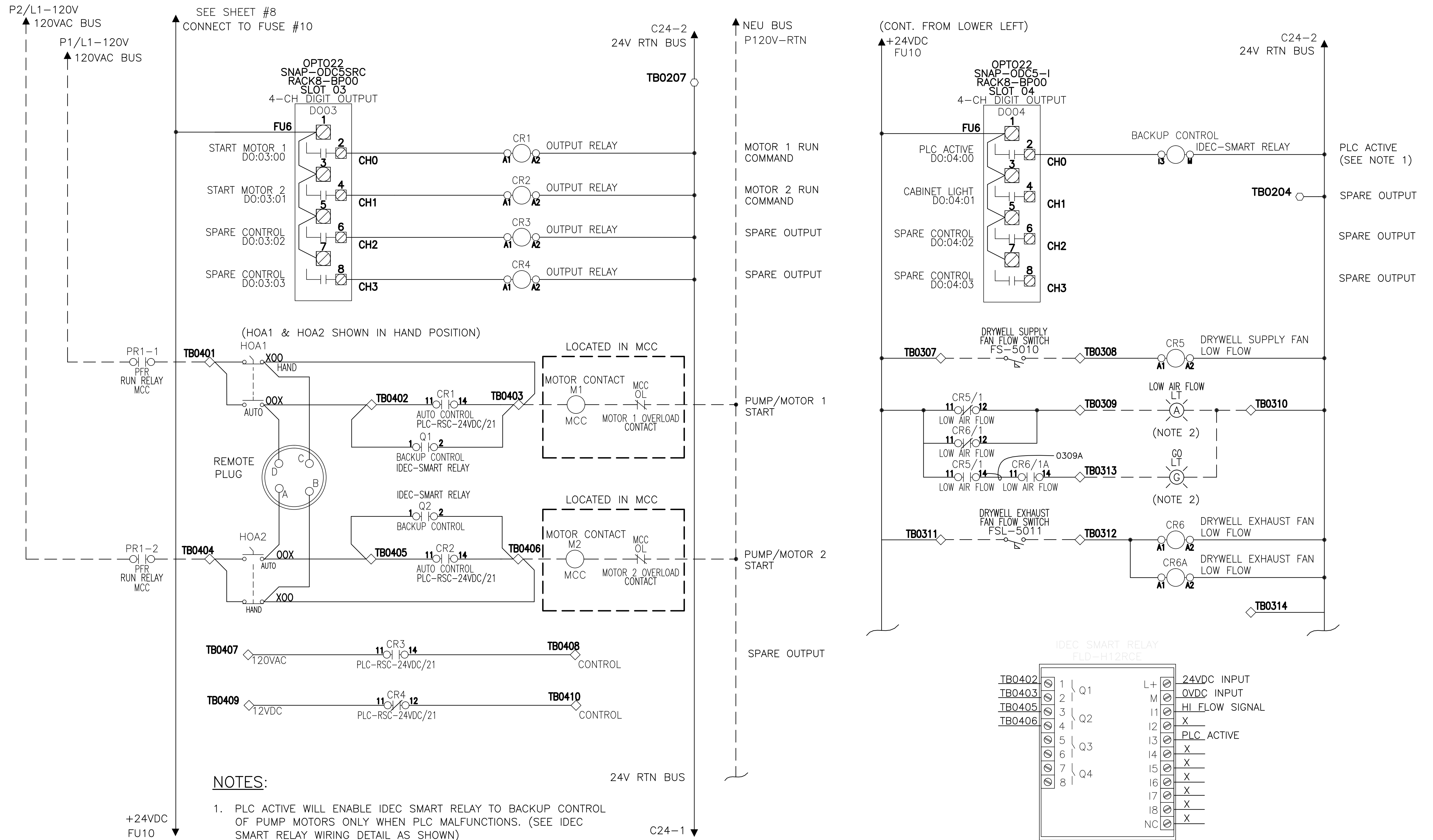
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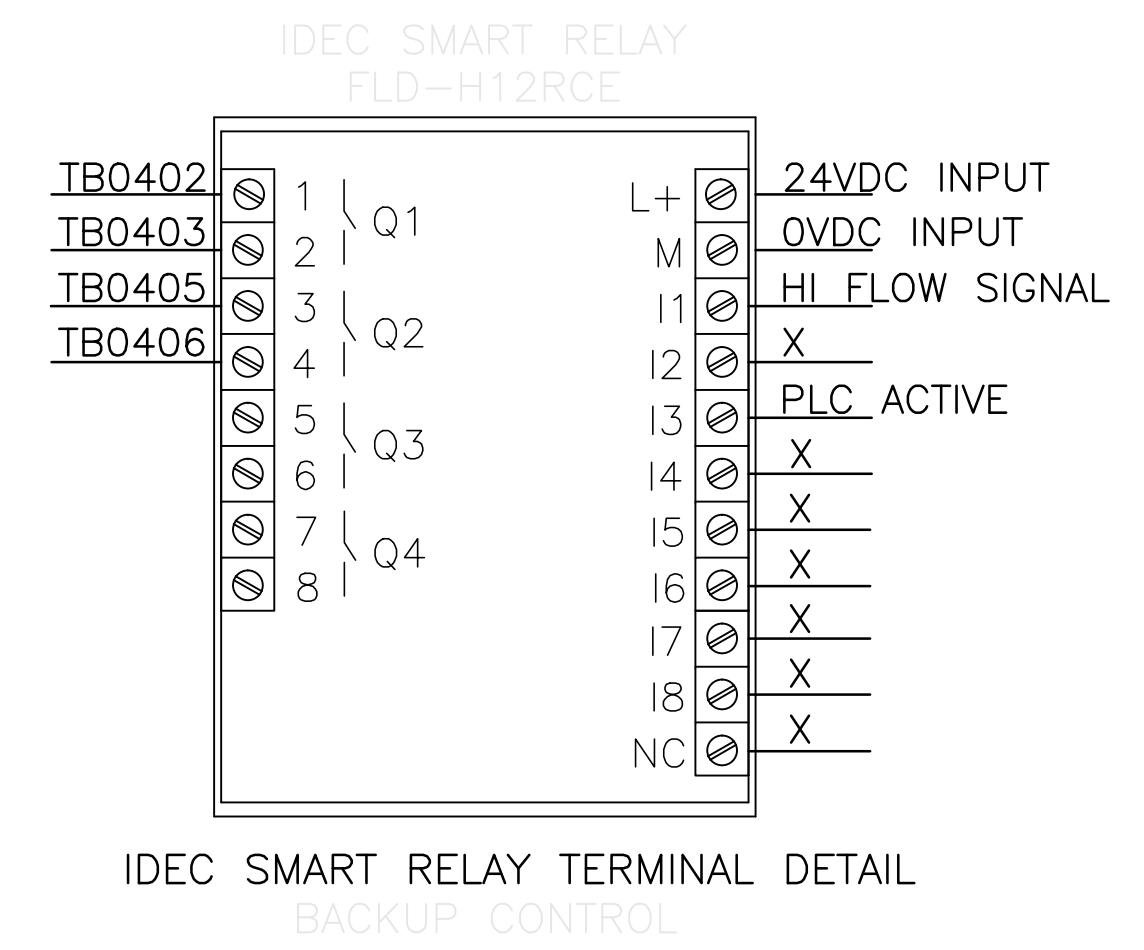
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**PUMP STATION 050
 AIRLIFT REPLACEMENT:
 2534 39TH AVE. E.**

PC	C314050
R/W	
CO	C314050
VAULT PLAN NO.	
SHEET	6 OF 16



- NOTES:**
1. PLC ACTIVE WILL ENABLE IDEC SMART RELAY TO BACKUP CONTROL OF PUMP MOTORS ONLY WHEN PLC MALFUNCTIONS. (SEE IDEC SMART RELAY WIRING DETAIL AS SHOWN)
 2. DRYWELL SUPPLY FAN LOW FLOW AND GO LIGHT MOUNTED AT ACCESS HATCH.



SHOP AS-BUILT DRAWINGS REV C

DIGITAL OUTPUT SCHEMATIC

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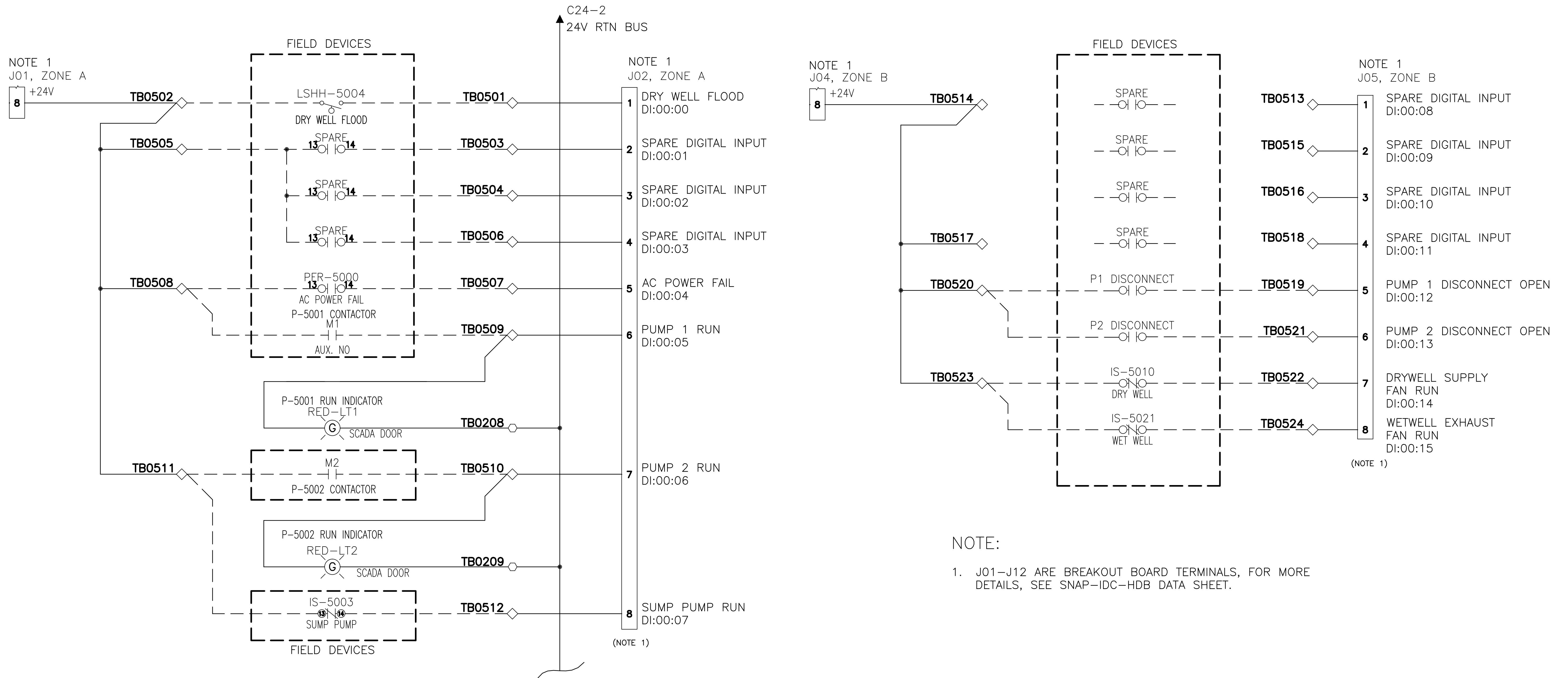
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**PUMP STATION 050
 AIRLIFT REPLACEMENT:
 2534 39TH AVE. E.**

NO. PC C314050
 JOB R/W
 CO C314050
 VAULT PLAN NO.
 SHEET 8 OF 16

2. DRYWELL SUPPLY FAN LOW FLOW AND GO LIGHT MOUNTED AT ACCESS HATCH.

IDEC SMART RELAY TERMINAL DETAIL
BACKUP CONTROL



NOTE:
1. J01-J12 ARE BREAKOUT BOARD TERMINALS, FOR MORE DETAILS, SEE SNAP-IDC-HDB DATA SHEET.

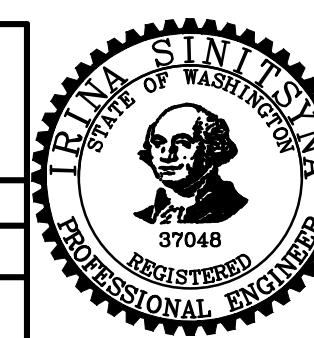
MADE	CHK'D	REV'D
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DATE	MARK	
VAULT SERIAL NO.		

SHOP AS-BUILT DRAWINGS REV C

DIGITAL INPUT SCHEMATIC SHEET 1 OF 3

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AIRLIFT REPLACEMENT:
2534 39TH AVE. E.

NO. JOB	PC	C314050
	R/W	
	CO	C314050
	VAULT PLAN NO.	
	SHEET	9 OF 16

SEE WIRING DETAIL OF IDEC SMART RELAY ON SHEET #8

IDEC SMART RELAY

FLD-H12RCE 11

TB0605

INTRINSIC SAFETY BARRIER 2
KFD2-SR2-EX2.W

IS2-1 7 8

WW HI FLOAT SW 1

3

IS2-2 10 11

WW OVERFLOW 4 6

(NOTE 2)

NOTE 1
J08, ZONE C

1 WET WELL HIGH FLOAT
DI:00:16

2 WET WELL OVERFLOW
DI:00:17

3 PUMP 5001 HI TEMP
DI:00:18

4 PUMP 5001 SEAL LEAK
DI:00:19

5 PUMP 5002 HI TEMP
DI:00:20

6 PUMP 5002 SEAL LEAK
DI:00:21

(NOTE 1)

(SEE THE INTRINSIC SAFETY BARRIER WIRING DETAIL AS SHOWN ON THIS SHEET)

NOTE 1
J07, ZONE C

8 +24V

LSH-5002

HI LEVEL FLOAT

FACTORY CABLE

LSHH-5003

WW OVERFLOW

FACTORY CABLE

NOTE 1
J07, ZONE C

8 +24V

TB0611

MCC P-5001

7 CR2 8

MOTOR OVERTEMP

10 CR3 11

PUMP SEAL LEAK

MCC P-5002

7 CR2 8

MOTOR OVERTEMP

10 CR3 11

PUMP SEAL LEAK

NOTE 1
J07, ZONE C

7

+24VDC

NOTE 1
J10, ZONE D

7

+24V

NOTE 1
J10, ZONE D

8

+24V

SCADA CABINET DOOR

P-5001

H 0 A X00

2 1 HAND

4 3 AUTO

OOX

4 3 AUTO

P-5002

H 0 A X00

2 1 HAND

4 3 AUTO

OOX

4 3 AUTO

PULS DC-UPS, UB10.245

1 READY 2

3 BUFFERING 4

5 REPLACE BAT. 6

LS1

SCADA CABINET DOOR

NOTE 1
J08, ZONE C

7

P-5001 SW HAND POSITION
DI:00:22

8

P-5001 SW AUTO POSITION
DI:00:23

NOTE 1
J11, ZONE D

1

P-5002 SW HAND POSITION
DI:00:24

2

P-5002 SW AUTO POSITION
DI:00:25

3

SPARE DIGIT INPUT
DI:00:26

4

BATTERY CHARGED
DI:00:27

5

BUFFERING MOD
DI:00:28

6

REPLACE BATTERY DI:00:29

7

CABINET DOOR
DI:00:30

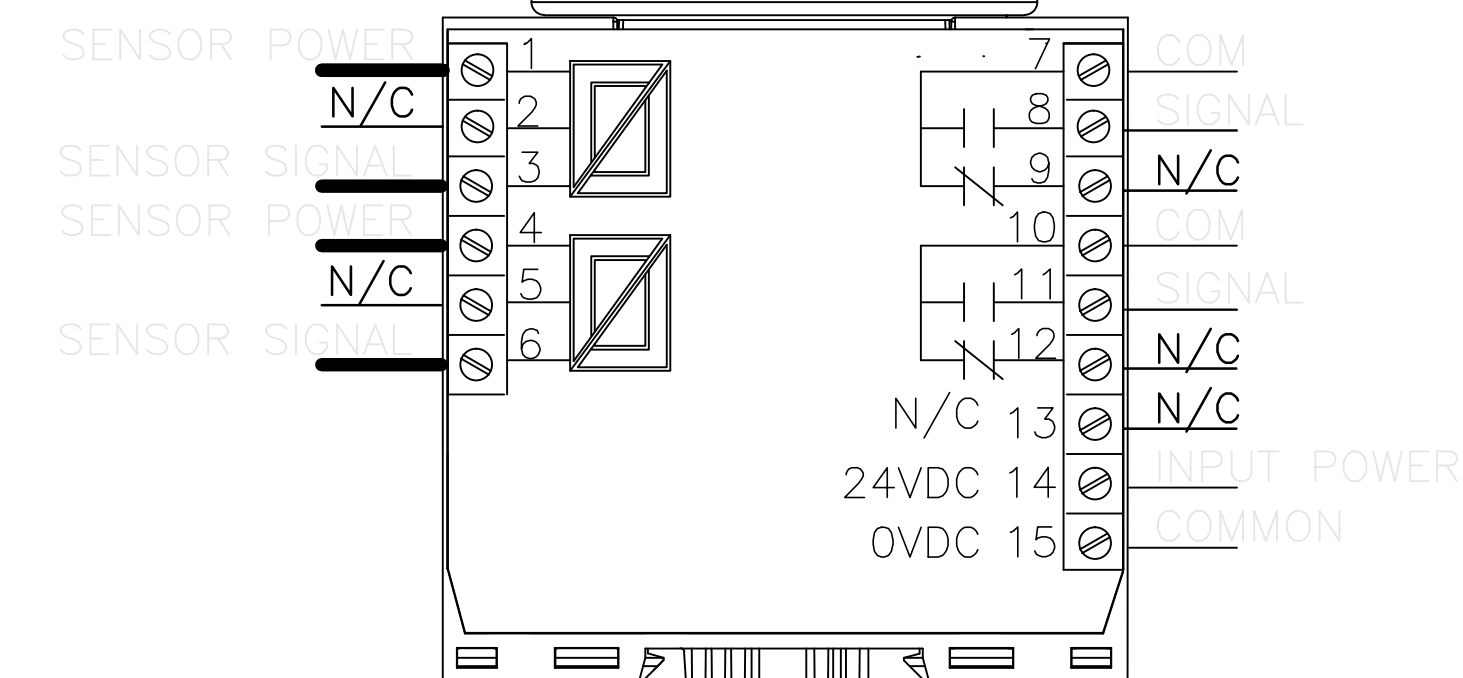
N/C

8

SPARE DIGIT INPUT
DI:00:31

(NOTE 1)

INTRINSIC SAFETY BARRIER
KFD2-SR2-EX2.W



INTRINSIC SAFETY BARRIER WIRING DETAILS

NOTE:

- J01-J12 ARE BREAKOUT BOARD TERMINALS, FOR MORE DETAILS, SEE SNAP-IDC-HDB DATA SHEET.
- INTRINSIC BARRIERS ARE MOUNTED IN EXTERIOR PANEL. WILL BE WIRED TO TB06 TERMINALS AT INSTALLATION.

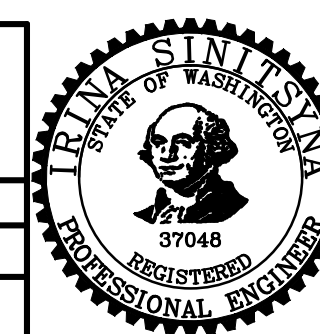
SHOP AS-BUILT DRAWINGS REV C

DIGITAL INPUT SCHEMATIC SHEET 2 OF 3

APPROVED FOR ADVERTISING
NANCY LOCKE
DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20

INITIALS AND DATE	INITIALS AND DATE
DESIGNED RL	REVIEWED: DES. CONST.
CHECKED IS	SDOT PROJ. MGR.
DRAWN RL	RECEIVED
CHECKED IS	REVISED AS BUILT

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL.



Seattle Public Utilities
City of Seattle
Ray Hoffman, Director

ORDINANCE NO. Ordinance Number
FUND: Fund Number
SCALE: AS SHOWN

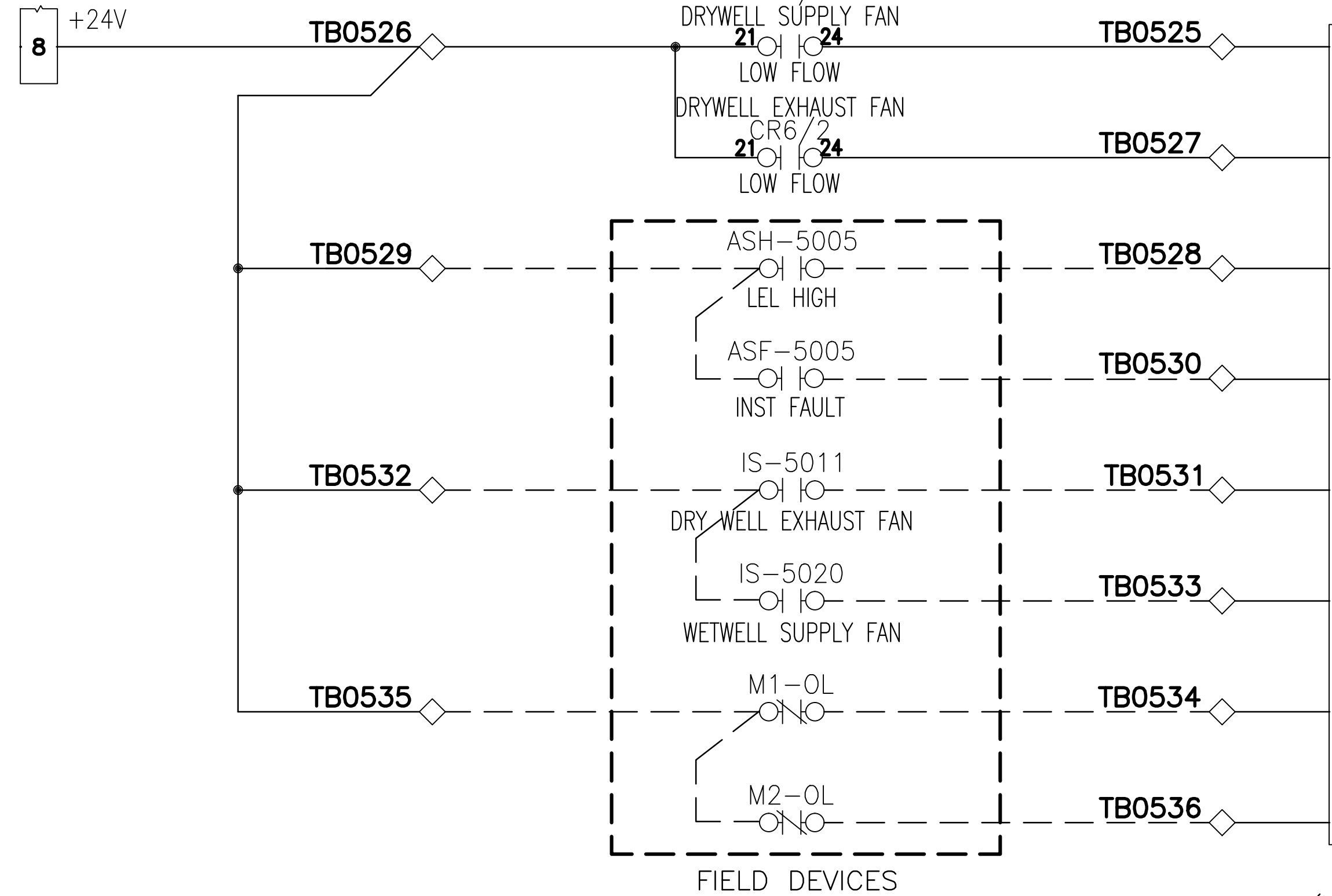
APPROVED
INSPECTOR'S BOOK

PUMP STATION 050
AIRLIFT REPLACEMENT:
2534 39TH AVE. E.

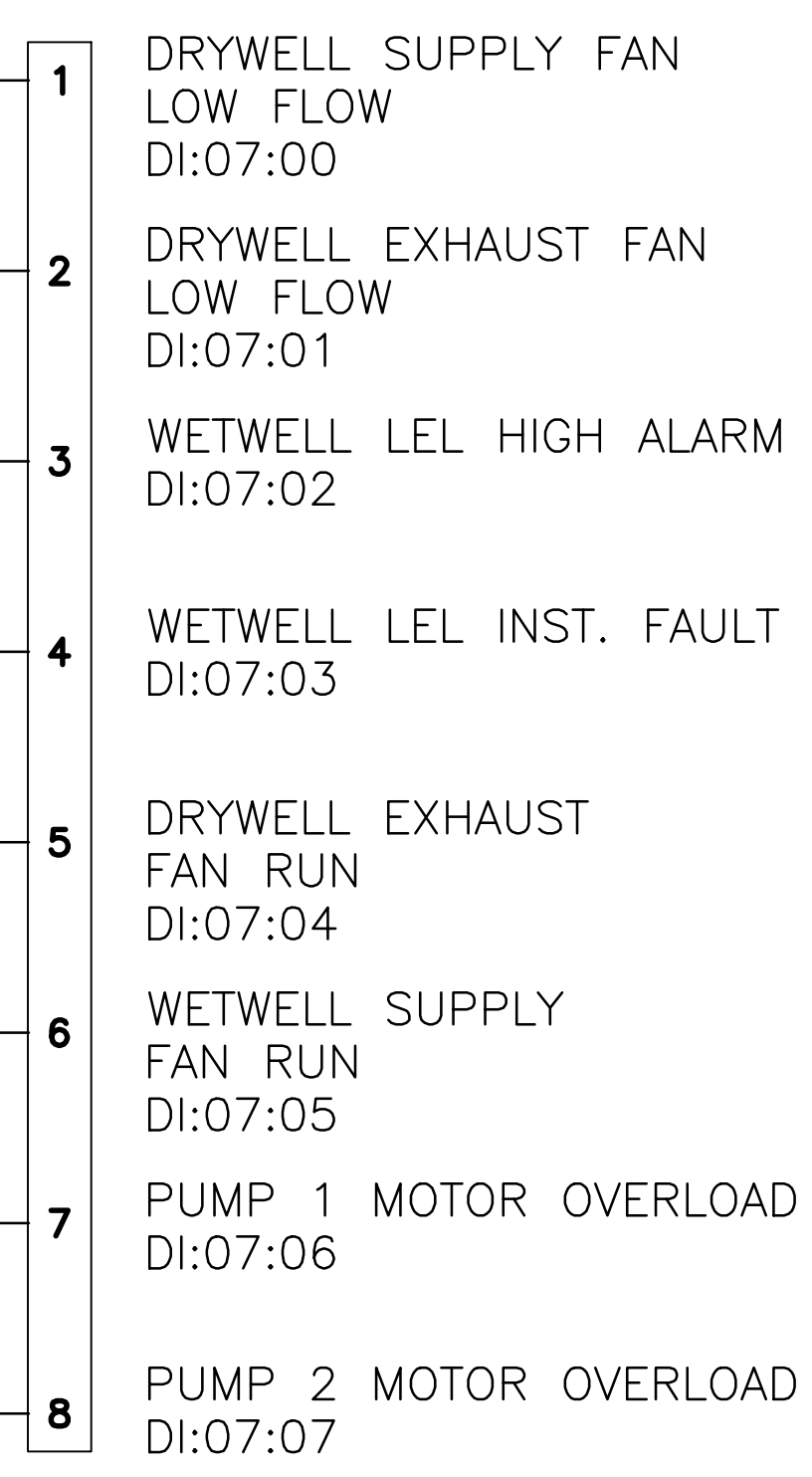
PC C314050
R/W
CO C314050
VAULT PLAN NO.
SHEET 10 OF 16

Removed for Security	MADE	CHK'D	REV'D
	NATURE	REVISIONS	
	DATE	MARK	
	VAULT SERIAL NO.		

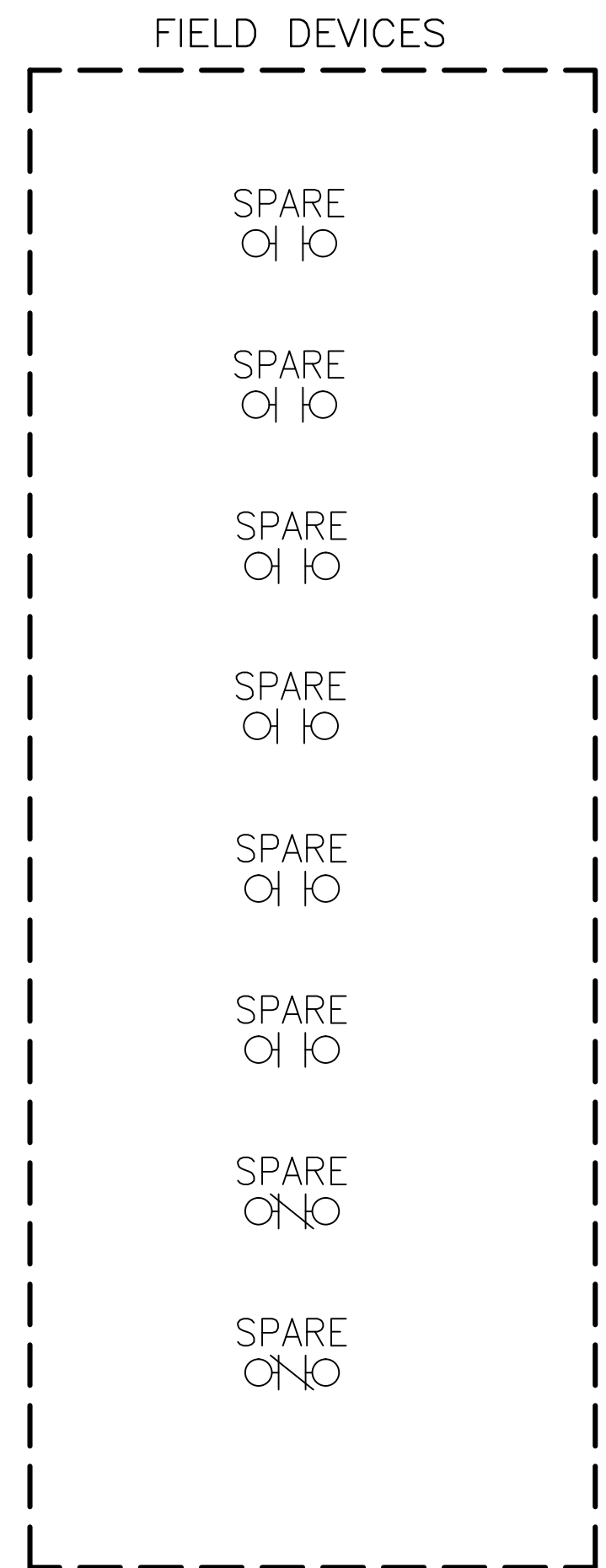
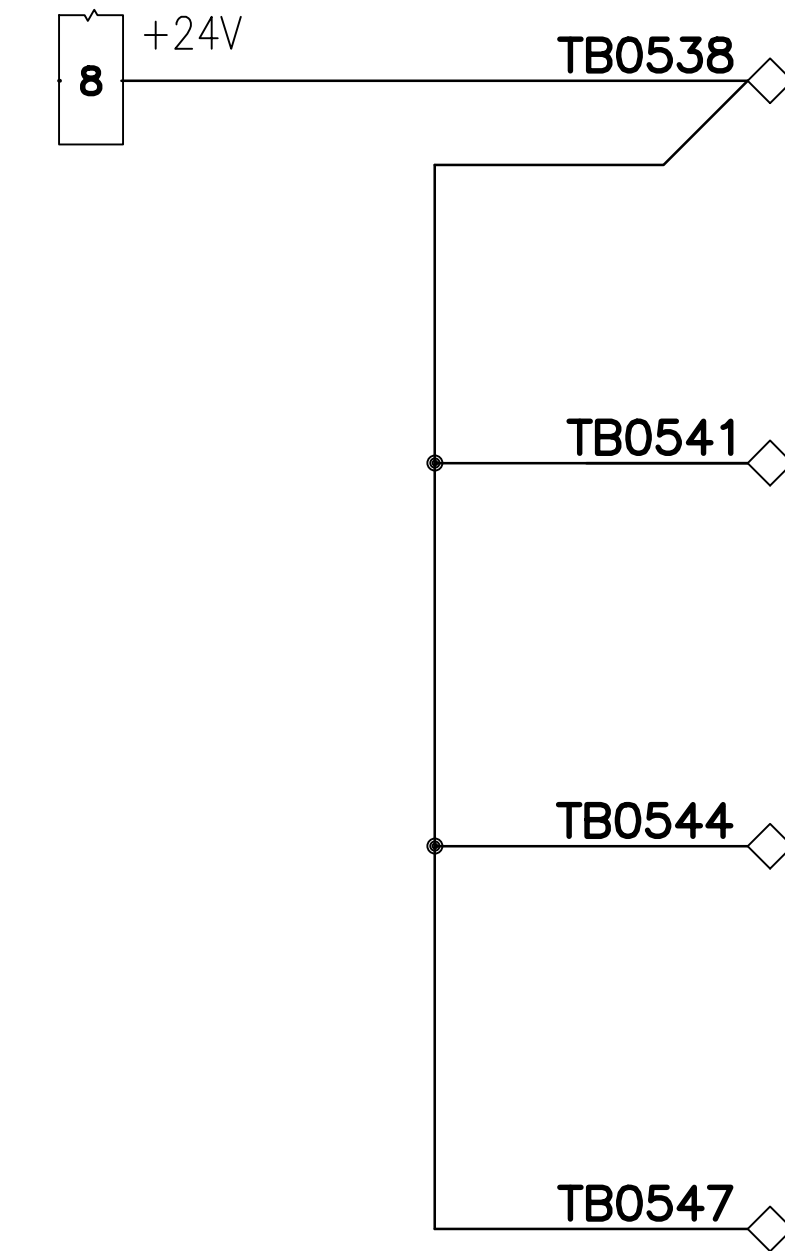
NOTE 1
J01, ZONE A



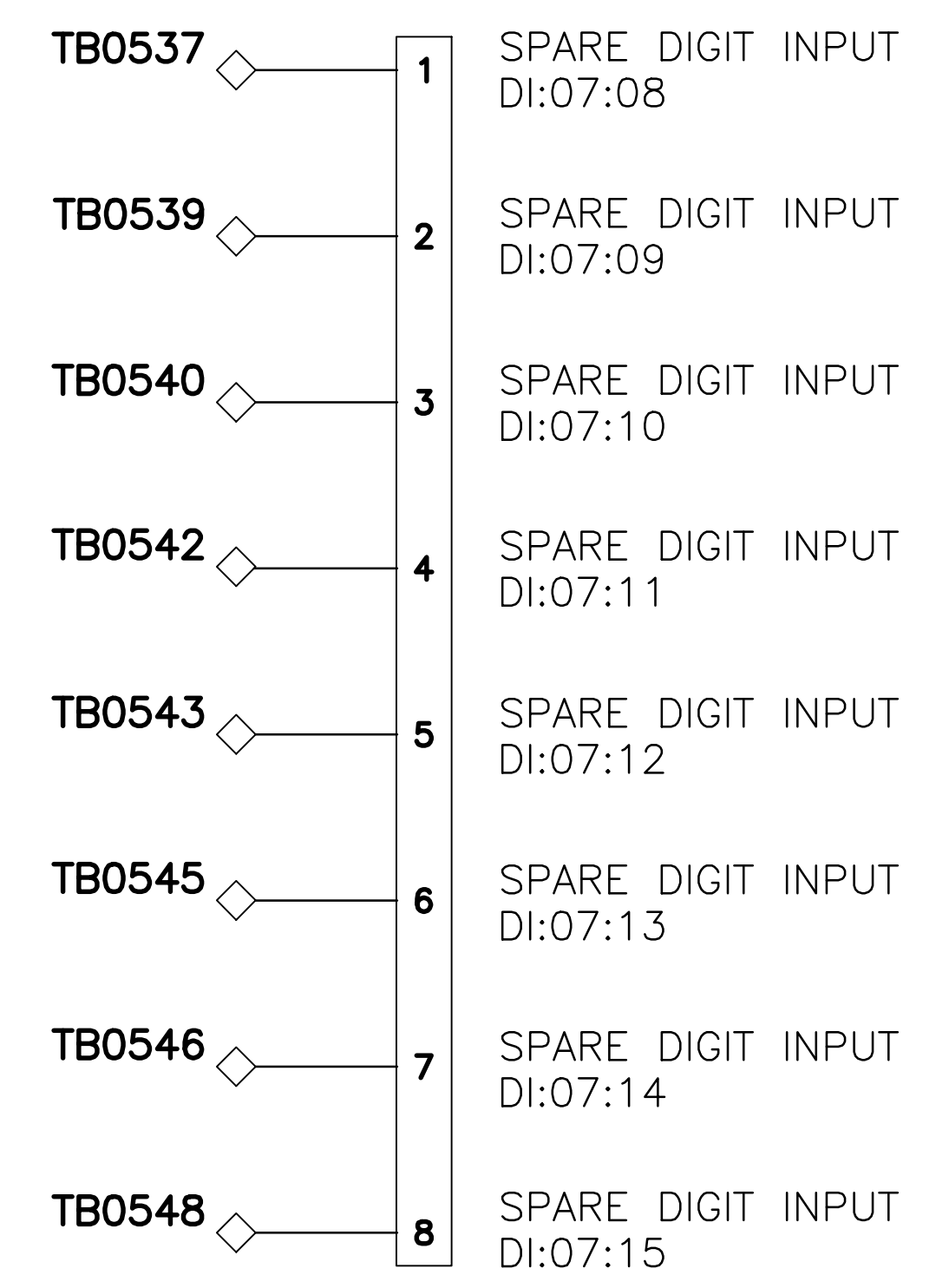
NOTE 1
J02, ZONE A



NOTE 1
J04, ZONE B



NOTE 1
J05, ZONE B



NOTE:

- J01-J12 ARE BREAKOUT BOARD TERMINALS, FOR MORE DETAILS, SEE SNAP-IDC-HDB DATA SHEET.
- ONLY FIRST 16 INPUTS WIRED TO TERMINALS.

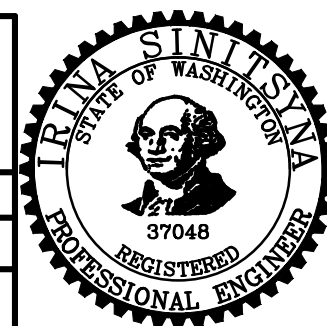
SHOP AS-BUILT DRAWINGS REV C

DIGITAL INPUT SCHEMATIC SHEET 3 OF 3

APPROVED FOR ADVERTISING
NANCY LOCKE
DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20

BY:
PURCHASING & CONTRACTING SERVICES DIRECTOR

INITIALS AND DATE		INITIALS AND DATE	
DESIGNED RL	CHECKED IS	REVIEWED: DES. SDOT	CONST. PROJ. MGR.
DRAWN RL	CHECKED IS	RECEIVED	REVISED AS BUILT
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Seattle Public Utilities
City of Seattle
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ORDINANCE NO. Ordinance Number
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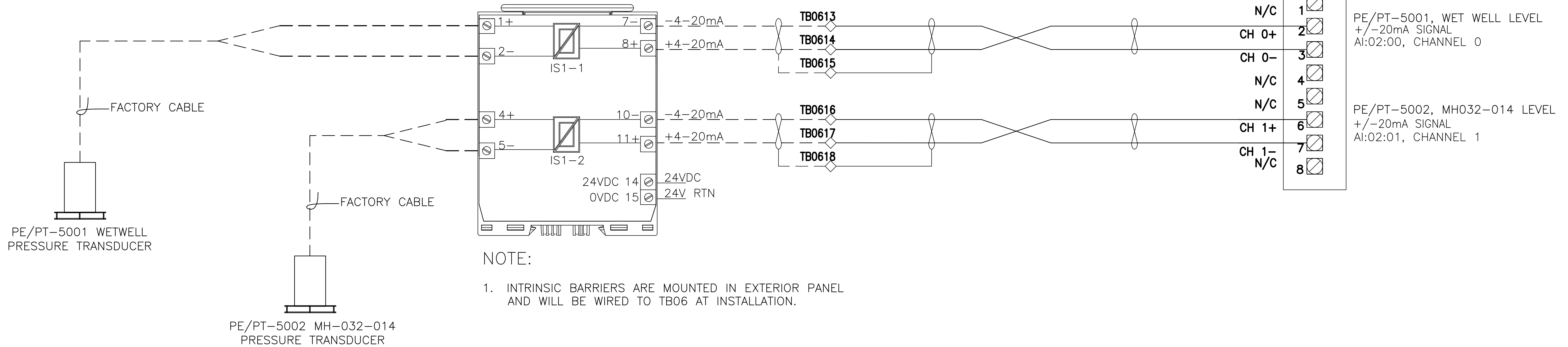
APPROVED
INSPECTOR'S BOOK

PUMP STATION 050
AIRLIFT REPLACEMENT:
2534 39TH AVE. E.

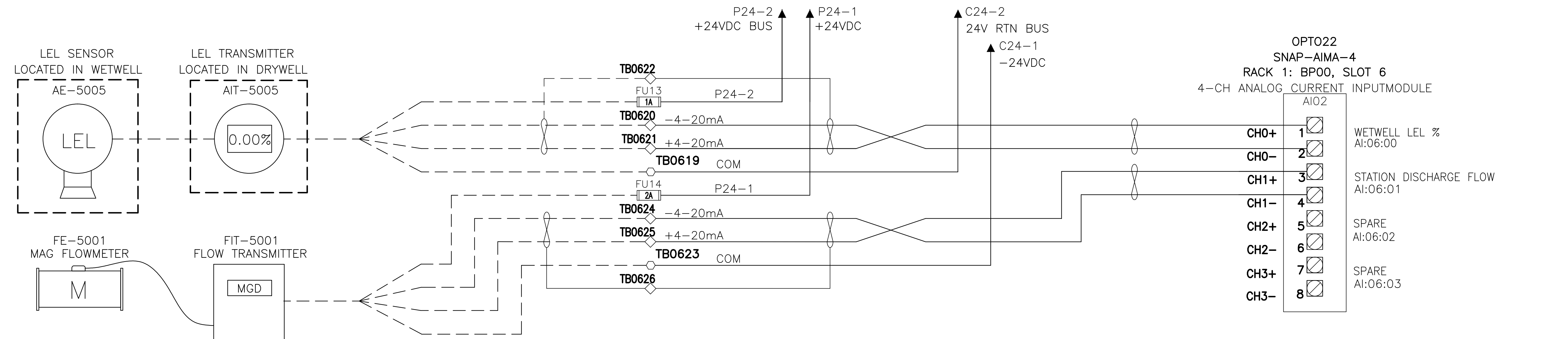
NO. J05	PC	C314050
	R/W	
	CO	C314050
VAULT PLAN NO.		
SHEET 11 OF 16		

OPTO22
 SNAP-AIMA-1
 RACK 1: BP00, SLOT 2
 2-CH ISOLATED ANALOG INPUT

INTRINSIC BARRIER #1
 KFD2-STC4-Ex2



OPTO22
 SNAP-AIMA-4
 RACK 1: BP00, SLOT 6
 4-CH ANALOG CURRENT INPUTMODULE



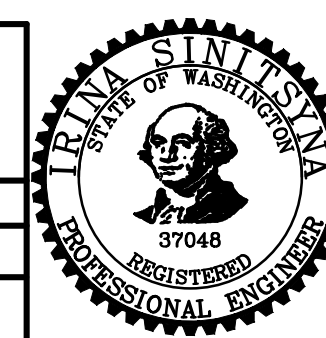
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ANALOG INPUT SCHEMATIC SHEET 2 OF 2

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 DRAWN RL
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 RECEIVED
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 City of Seattle
 Ray Hoffman, Director

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 FUND: Fund Number
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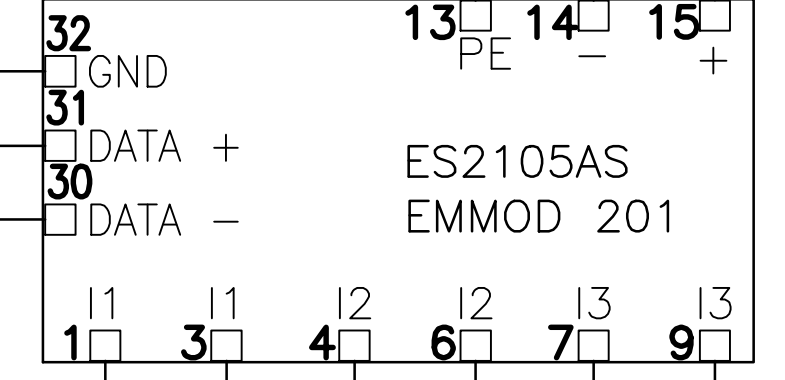
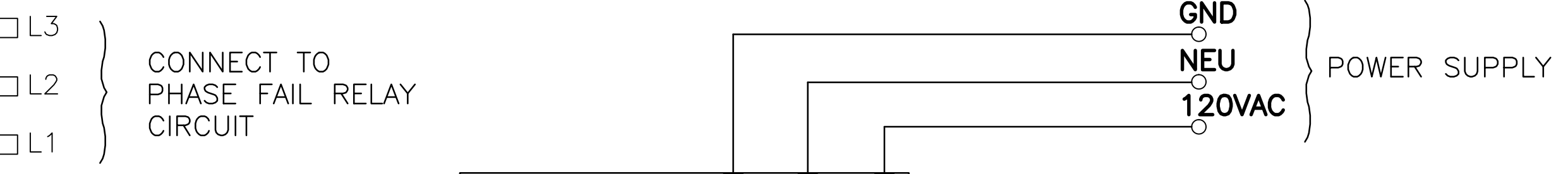
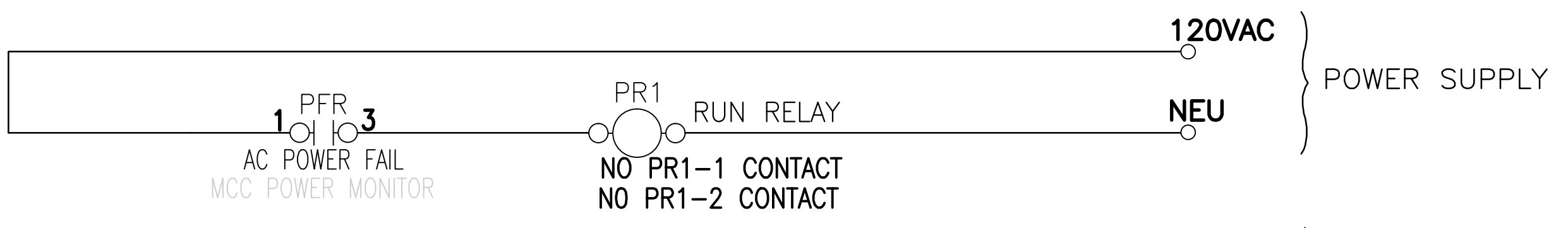
PUMP STATION 050
 AIRLIFT REPLACEMENT:
 2534 39TH AVE. E.

NO. PC C314050
 JOB R/W
 CO C314050
 VAULT PLAN NO.
 SHEET 13 OF 16

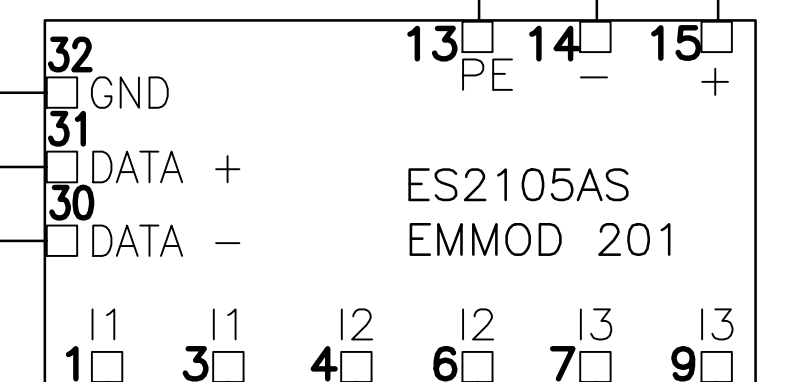
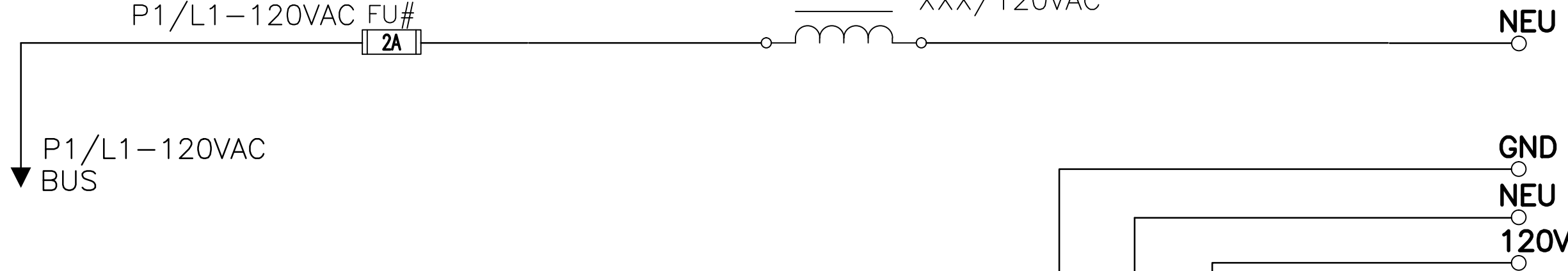
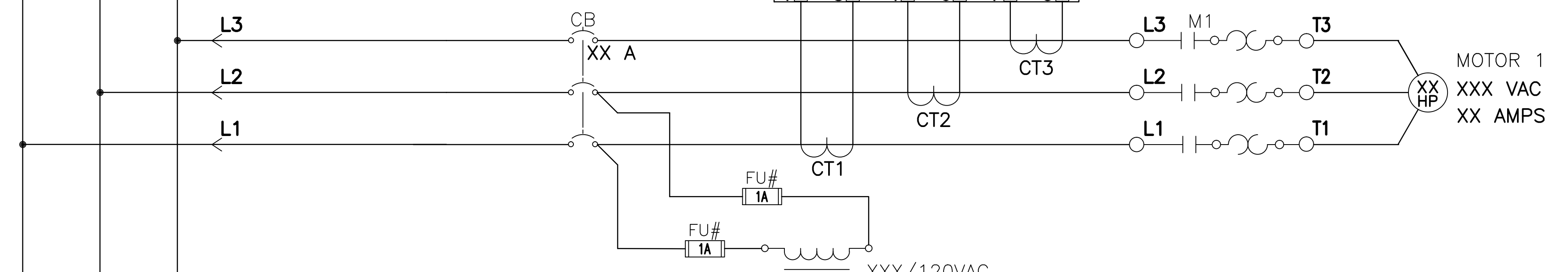
SCADA TERMINALS

FIELD ACCESS TERMINALS
 TB0551 RS485-GND BUS
 TB0550 RS485-DATA- BUS
 TB0549 RS485-DATA+ BUS

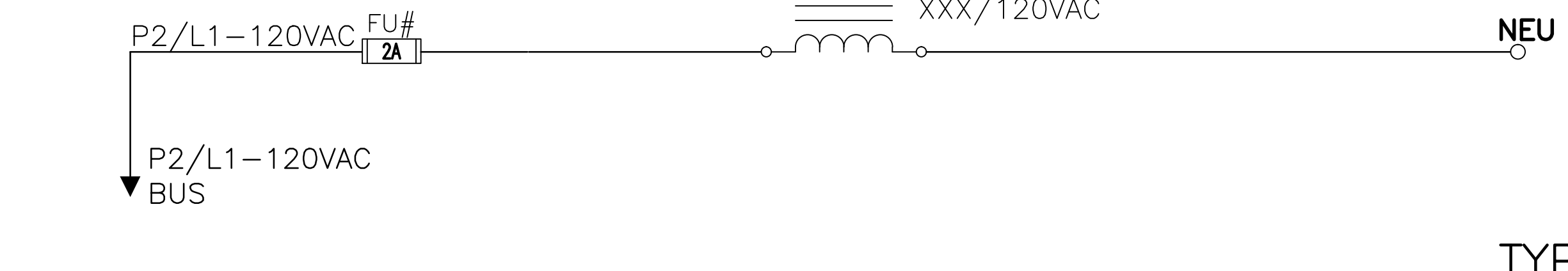
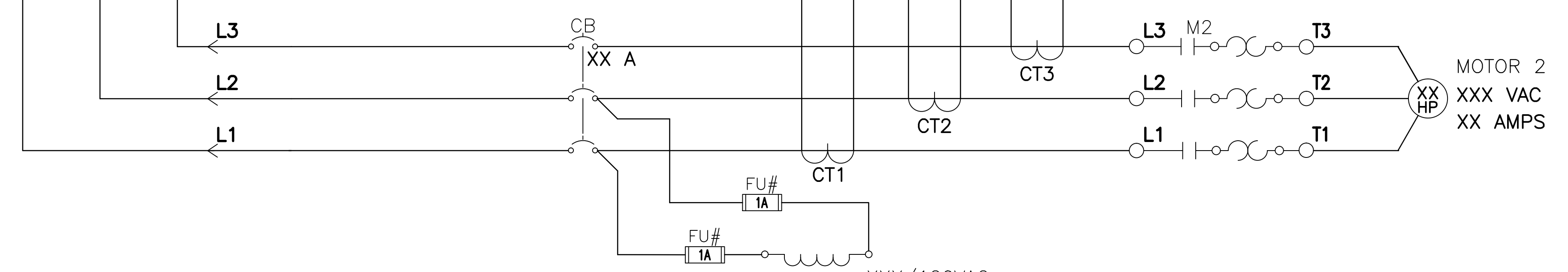
L1 L2 L3
 TO MAIN BUS



CAMILLE BAUER LTD
 POWER MONITOR
 ES2105AS WITH
 EMMOND201
 INTERFACE



CAMILLE BAUER LTD
 POWER MONITOR
 ES2105AS WITH
 EMMOND201
 INTERFACE



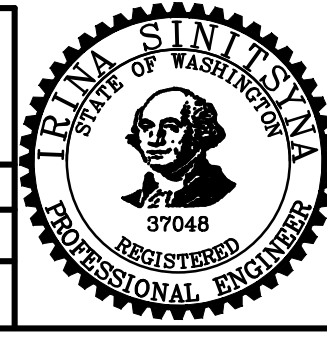
TYP. MCC PANEL

SHOP AS-BUILT DRAWINGS REV C

TYPICAL MCC & SCADA CONTROL

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DRAWN RL	CHECKED IS	RECEIVED	REVISED AS BUILT



Seattle Public Utilities
 City of Seattle
 Ray Hoffman, Director

PUMP STATION 050
 AIRLIFT REPLACEMENT:
 2534 39TH AVE. E.

NO. PC	C314050
JOB NO. R/W	
CO	C314050
VAULT PLAN NO.	
SHEET	14 OF 16

Removed for Security

VAULT SERIAL NO.	DATE	MARK	NATURE	REVISIONS

BY: PURCHASING & CONTRACTING SERVICES DIRECTOR

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL.

ORDINANCE NO. Ordinance Number
 FUND: Fund
 SCALE: AS SHOWN
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I/O FUNCTION TABLE						
MODULE	DEVICE TAG	DESCRIPTION	CHANNEL	SIGNAL TYPE	MIN/0	MAX/1
IDC-32	LSHH-5002	DRYWELL FLOOD	00:00	0 OR 24VDC	ALARM	NORMAL
			00:01	0 OR 24VDC		
			00:02	0 OR 24VDC		
			00:03	0 OR 24VDC		
			00:04	0 OR 24VDC	ALARM	NORMAL
			00:05	0 OR 24VDC	OFF	ON
			00:06	0 OR 24VDC	OFF	ON
			00:07	0 OR 24VDC	OFF	ON
			00:08	0 OR 24VDC		
			00:09	0 OR 24VDC		
			00:10	0 OR 24VDC		
	00:11	0 OR 24VDC				
	PFR-5000	AC POWER FAIL	00:04	0 OR 24VDC	ALARM	NORMAL
	P-5001	PUMP 5001 RUNNING	00:05	0 OR 24VDC	OFF	ON
	P-5002	PUMP 5002 RUNNING	00:06	0 OR 24VDC	OFF	ON
	IS-5003	SUMP PUMP RUNNING	00:07	0 OR 24VDC	OFF	ON
			00:08	0 OR 24VDC		
			00:09	0 OR 24VDC		
			00:10	0 OR 24VDC		
			00:11	0 OR 24VDC		
	QL-5001	PUMP 1 DISCONNECT OPEN	00:12	0 OR 24VDC	ALARM	NORMAL
	QL-5002	PUMP 2 DISCONNECT OPEN	00:13	0 OR 24VDC	ALARM	NORMAL
	IS-5010	DRYWELL SUPPLY FAN RUNNING	00:14	0 OR 24VDC	ON	OFF
	IS-5021	WETWELL EXHAUST FAN RUNNING	00:15	0 OR 24VDC	ON	OFF
	LSH-5002	WETWELL HIGH LEVEL	00:16	0 OR 24VDC	ALARM	NORMAL
	LSHH-5003	WETWELL OVERFLOW	00:17	0 OR 24VDC	ALARM	NORMAL
	TH-5001	PUMP 5001 MOTOR OVERTEMP	00:18	0 OR 24VDC	NORMAL	ALARM
	SLK-5001	PUMP 5001 SEAL LEAK	00:19	0 OR 24VDC	ALARM	NORMAL
	TH-5002	PUMP 5002 MOTOR OVERTEMP	00:20	0 OR 24VDC	NORMAL	ALARM
	SLK-5002	PUMP 5002 SEAL LEAK	00:21	0 OR 24VDC	ALARM	NORMAL
	HS-5001	P-5001 HOA IN HAND POSITION	00:22	0 OR 24VDC	OFF	HAND
		P-5001 HOA IN AUTO POSITION	00:23	0 OR 24VDC	OFF	AUTO
	HS-5002	P-5002 HOA IN HAND POSITION	00:24	0 OR 24VDC	OFF	HAND
		P-5002 HOA IN AUTO POSITION	00:25	0 OR 24VDC	OFF	AUTO
			00:26	0 OR 24VDC		
	YI-5001	BATTERY READY	00:27	0 OR 24VDC	ALARM	NORMAL
	YI-5002	BATTERY DISCHARGING	00:28	0 OR 24VDC	NORMAL	ALARM
	YI-5003	REPLACE BATTERY	00:29	0 OR 24VDC	NORMAL	ALARM
	ZS-5000	SCADA CABINET INTRUSION	00:30	0 OR 24VDC	ALARM	NORMAL
				00:31	0 OR 24VDC	
AIV-2-i	EE-5000	BATTERY VOLTAGE	01:00	0 - 100 VDC	0.00VDC	100 VDC
				01:01	0 - 100 VDC	
AIMai	PE/PT-5001	WETWELL LEVEL PRESSURE	02:00	4-20mA	0.00'	TBD
	PE/PT-5002	MH032-014 LEVEL PRESSURE	02:01	4-20mA	0.00'	TBD
ODC5-SRC	CR-1	PUMP 5001 START COMMAND	03:00	0 OR 24VDC	OFF	ON
	CR-2	PUMP 5002 START COMMAND	03:01	0 OR 24VDC	OFF	ON
	CR-3		03:02	0 OR 24VDC		
	CR-4		03:03	0 OR 24VDC		

MADE	CHK'D	REV'D
NATURE	REVISIONS	
DATE	MARK	
VAULT SERIAL NO.		

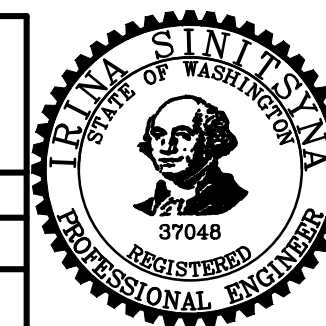
Removed for Security

SHOP AS-BUILT DRAWINGS REV C

PANEL I/O ASSIGNMENTS SHEET 1 OF 2

APPROVED FOR ADVERTISING
 NANCY LOCKE
 DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
 SEATTLE, WASHINGTON 20

INITIALS AND DATE	INITIALS AND DATE
DESIGNED RL	REVIEWED: DES. CONST.
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DRAWN RL	RECEIVED
CHECKED IS	REVISED AS BUILT



Seattle Public Utilities
 City of Seattle
 Ray Hoffman, Director

ORDINANCE NO. Ordinance Number
 FUND: Fund
 SCALE: AS SHOWN

APPROVED
 INSPECTOR'S BOOK

**PUMP STATION 050
 AIRLIFT REPLACEMENT:
 2534 39TH AVE. E.**

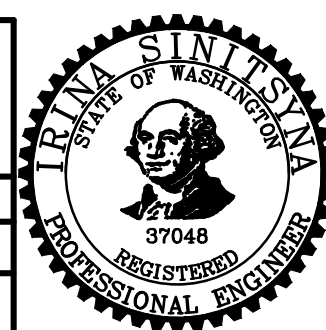

JOB NO. PC C314050
 R/W
 CO C314050
 VAULT PLAN NO.
 SHEET 15 OF 16

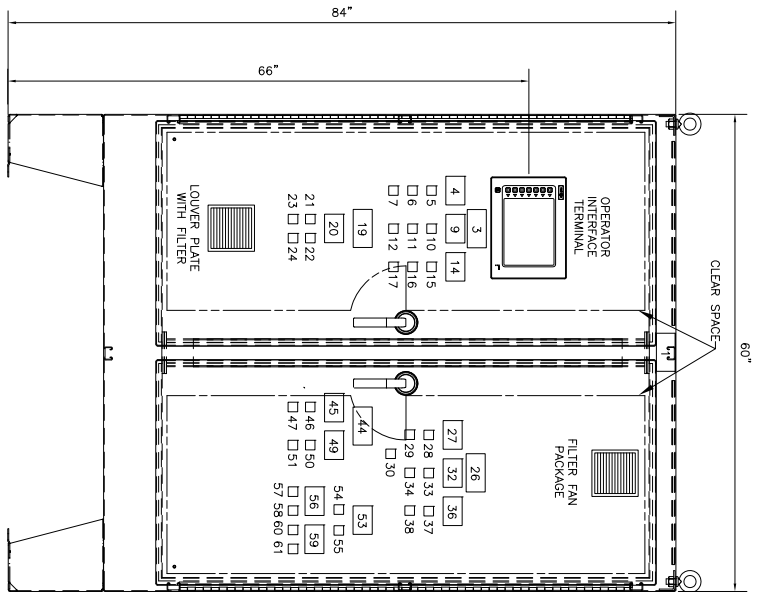
I/O FUNCTION TABLE						
MODULE	DEVICE TAG	DESCRIPTION	CHANNEL	SIGNAL TYPE	MIN/0	MAX/1
ODC5i	IDEC SMT RLY	PLC ACTIVE TO IDEC SMART RELAY	04:00	0 OR 24VDC	FAIL	ACTIVE
			04:01	0 OR 24VDC		
			04:02	0 OR 24VDC		
			04:03	0 OR 24VDC		
SCM-485		PUMP P-5001 & P-5002 MOTOR DATA	05:CH:A	MODBUS	VARIES	
			05:CH:B	MODBUS		
AIMA-4	AIT-5005	WETWELL LEL CONCENTRATION % LEL	06:00	4-20mA	0.00%	100%
	FIT-5001	PS-50 DISCHARGE FLOW	06:01	4-20mA	0.00 GPM	TBD
			06:02	4-20mA		
IDC-32	CR5/2	DRYWELL SUPPLY AIR FAN LOW FLOW (FSL-5010)	07:00	0 OR 24VDC	ALARM	NORMAL
	CR6/2	DRYWELL EXHAUST AIR FAN LOW FLOW (FSL-5011)	07:01	0 OR 24VDC	ALARM	NORMAL
	ASH-5005	WETWELL LEL HIGH ALARM	07:02	0 OR 24VDC	NORMAL	ALARM
	ASF-5005	WETWELL LEL INSTRUMENT FAULT	07:03	0 OR 24VDC	ALARM	NORMAL
	IS-5011	DRYWELL EXHAUST FAN RUNNING	07:04	0 OR 24VDC	ON	OFF
	IS-5020	WETWELL SUPPLY FAN RUNNING	07:05	0 OR 24VDC	ON	OFF
		PUMP 1 DISCONNECT OPEN	07:06	0 OR 24VDC	ALARM	NORMAL
		PUMP 2 DISCONNECT OPEN	07:07	0 OR 24VDC	ALARM	NORMAL
			07:08	0 OR 24VDC		
			07:09	0 OR 24VDC		
		07:10	0 OR 24VDC			
		07:11	0 OR 24VDC			
		07:12	0 OR 24VDC			
		07:13	0 OR 24VDC			
		07:14	0 OR 24VDC			
		07:15	0 OR 24VDC			
		NOT WIRED	07:16	0 OR 24VDC		
		NOT WIRED	07:17	0 OR 24VDC		
		NOT WIRED	07:18	0 OR 24VDC		
		NOT WIRED	07:19	0 OR 24VDC		
		NOT WIRED	07:20	0 OR 24VDC		
		NOT WIRED	07:21	0 OR 24VDC		
		NOT WIRED	07:22	0 OR 24VDC		
		NOT WIRED	07:23	0 OR 24VDC		
		NOT WIRED	07:24	0 OR 24VDC		
		NOT WIRED	07:25	0 OR 24VDC		
		NOT WIRED	07:26	0 OR 24VDC		
		NOT WIRED	07:27	0 OR 24VDC		
		NOT WIRED	07:28	0 OR 24VDC		
		NOT WIRED	07:29	0 OR 24VDC		
		NOT WIRED	07:30	0 OR 24VDC		
		NOT WIRED	07:31	0 OR 24VDC		

Removed for Security	VAULT SERIAL NO.	DATE	MARK	NATURE	REVISIONS	MADE	CHK'D	REV'D
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SHOP AS-BUILT DRAWINGS REV C

PANEL I_0 ASSIGNMENTS SHEET 2 OF 2

APPROVED FOR ADVERTISING NANCY LOCKE DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES SEATTLE, WASHINGTON 20 BY: PURCHASING & CONTRACTING SERVICES DIRECTOR	INITIALS AND DATE DESIGNED RL CHECKED IS	INITIALS AND DATE REVIEWED: DES. CONST. SDOT PROJ. MGR. RECEIVED REVISED AS BUILT		 City of Seattle Ray Hoffman, Director ORDINANCE NO. Ordinance Number FUND: Fund Number SCALE: AS SHOWN	PUMP STATION 050 AIRLIFT REPLACEMENT: 2534 39TH AVE. E.	JOB NO. PC C314050 R/W CO C314050 VAULT PLAN NO.
	ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL.					APPROVED INSPECTOR'S BOOK

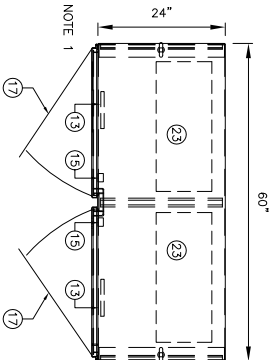


NEMA 4X SS ENCLOSURE
 FRONT VIEW ELEVATION
 MAIN CONTROL PANEL MCP-4900
 NTS

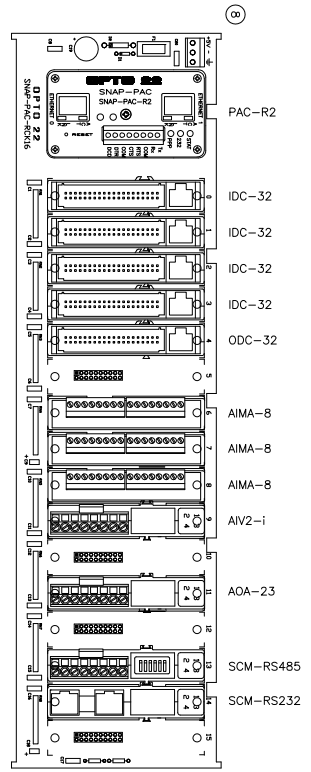
- NOTES:
1. PROVIDE OSHA APPROVED ELECTRICAL DANGER SIGN ON DOOR INDICATING MULTIPLE POWER SOURCES/BREAKERS.
 2. PANEL DEVICES NOT TO SCALE. SHOWN LARGER THAN ACTUAL SIZE FOR CLARITY.

MCP-4900 NAMEPLATE SCHEDULE		
ITEM NUMBER	LEGEND PLATE INSCRIPTION (LINE 1 / LINE 2 / LINE 3)	NAMEPLATE INSCRIPTION (LINE 1 / LINE 2 / LINE 3)
1		MAIN CONTROL PANEL/MCP-4900
2		
3		CSO 11A/STORAGE TANK/DRAIN PUMPS
4		STORAGE TANK/DRAIN PUMP NO. 1/P-4921
5	RUNNING	
6	HAND-OFF-AUTO	
7	RESET/LEAK & HIGH TEMP	
8		
9		STORAGE TANK/DRAIN PUMP NO. 2/P-4922
10	RUNNING	
11	HAND-OFF-AUTO	
12	RESET/LEAK & HIGH TEMP	
13		
14		STORAGE TANK/DRAIN PUMP NO. 3/P-4923
15	RUNNING	
16	HAND-OFF-AUTO	
17	RESET/LEAK & HIGH TEMP	
18		
19		ODOR CONTROL
20		ODOR CONTROL FAN/EF-4940
21	RUNNING	
22	HAND-OFF-AUTO	
23	SHUTDOWN	
24	RESET	
25		
26		CLEAN WATER SYSTEM
27		TIPPING BUCKET/FILL PUMP NO. 1/P-4981
28	RUNNING	
29	HAND-OFF-AUTO	
30	RESET/LOW LEVEL	
31		
32		TIPPING BUCKET/FILL PUMP NO. 2/P-4982
33	RUNNING	
34	HAND-OFF-AUTO	
35		
36		TIPPING BUCKET/DRAIN VALVE/VV-4980
37	HAND-OFF-AUTO	
38	OPEN-STOP-CLOSE	
39		
40		
41		
42		
43		

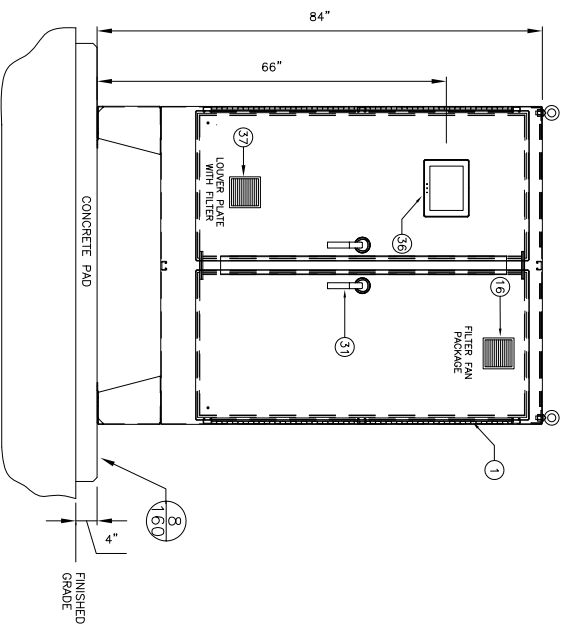
MCP-4900 NAMEPLATE SCHEDULE CONTINUED		
ITEM NUMBER	LEGEND PLATE INSCRIPTION (LINE 1 / LINE 2 / LINE 3)	NAMEPLATE INSCRIPTION (LINE 1 / LINE 2 / LINE 3)
44		TIPPING BUCKET/FILL VALVES
45		
46	HAND-OFF AUTO	TIPPING BUCKET/FILL VALVE NO. 1/PV-4981
47	OPEN-STOP-CLOSE	
48		
49		TIPPING BUCKET/FILL VALVE NO. 2/PV-4982
50	HAND-OFF AUTO	
51	OPEN-STOP-CLOSE	
52		
53		AIR GAP TANK VALVES
54	FILL	
55	STOP (LOS)	
56		FILL VALVE FV-4946
57	OPEN	
58	CLOSED	
59		FILL VALVE FV-4947
60	OPEN	
61	CLOSED	
62		
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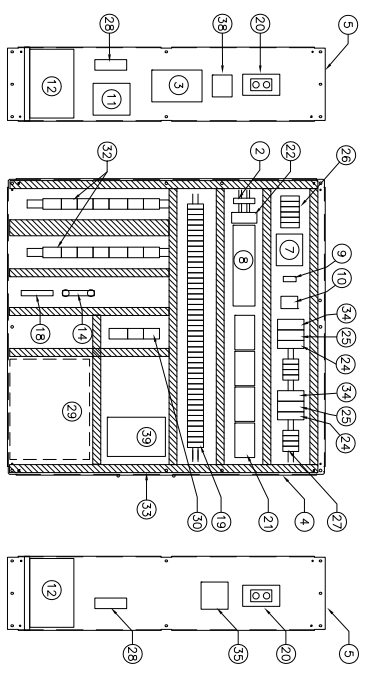
CONTROL CABINET (INTERIOR VIEW W/ DOORS)



TYPICAL PLC RACK LAYOUT



CONTROL CABINET EXTERIOR ELEVATION



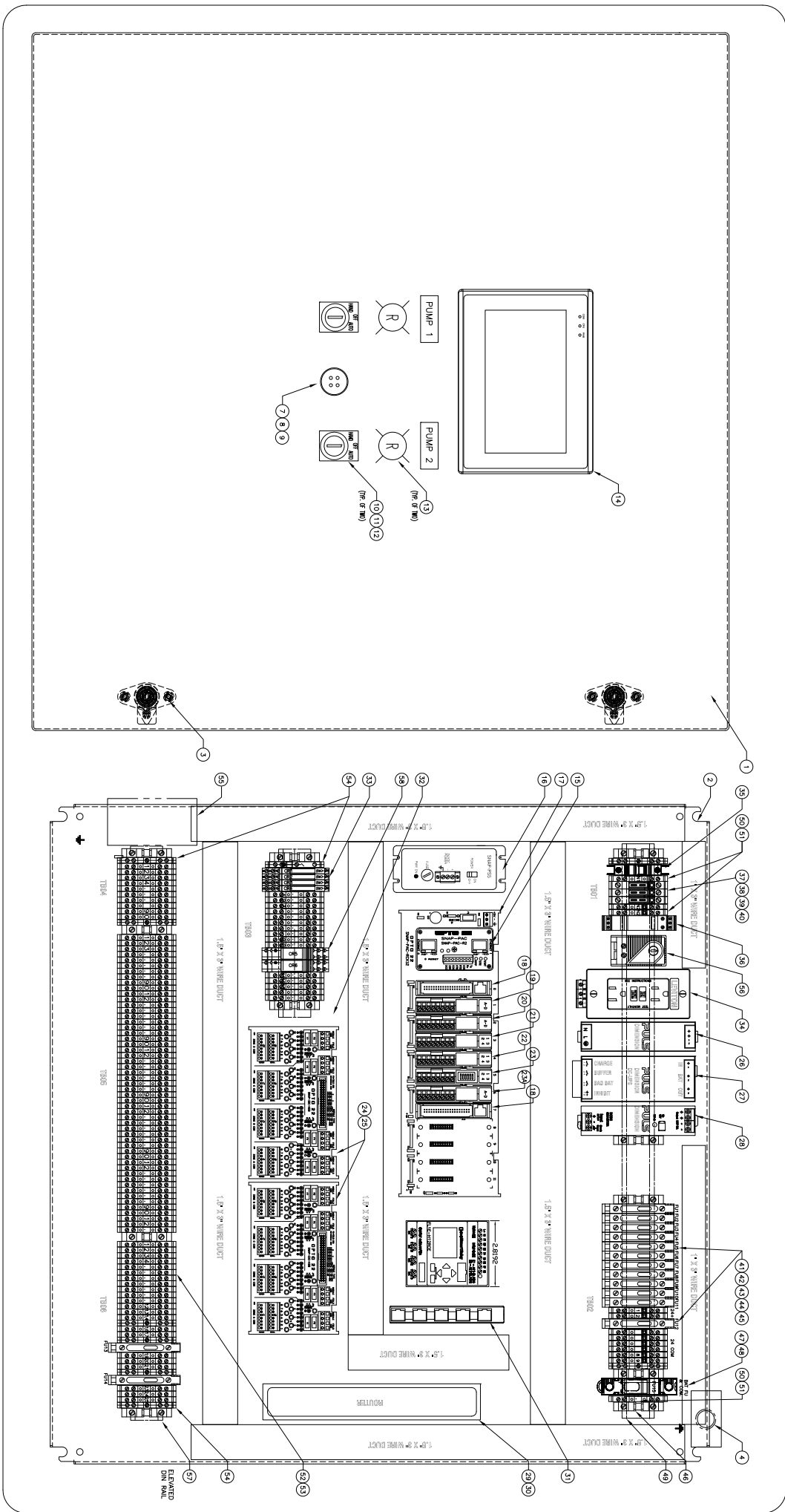
CONTROL CABINET (ELEVATION INTERIOR VIEW)

GENERAL NOTES:
1. COMPONENTS MOUNTED ON BACK PANEL NOT SHOWN IN PLAN VIEW.

FRONT VIEW ELEVATION

KEYNOTES:

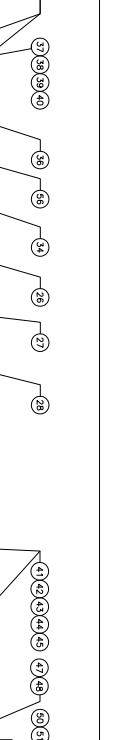
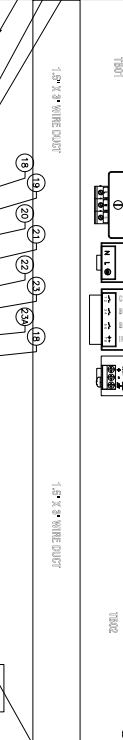
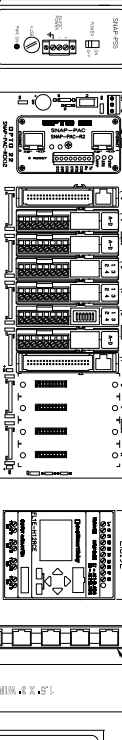
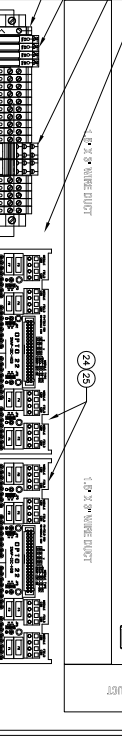
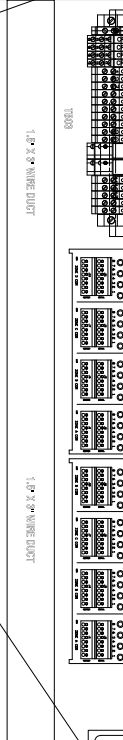
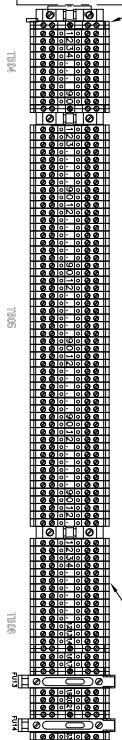
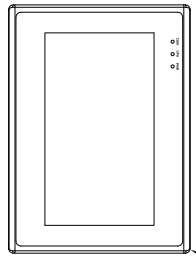
- 1 MCP ENCLOSURE
- 2 ETHERNET SWITCH
- 3 ROUTER (SUPPLIED BY SPJ)
- 4 BACK PANEL
- 5 SIDE PANEL
- 6 NETWORK INTERFACE UNIT (NIU) SUPPLIED BY CENTRILINK
- 7 SURGE PROTECTIVE DEVICE (TVSS) FOR I & O COMPARTMENT
- 8 PAC RACK (CPU & I/O MODULES)
- 9 AC POWER FAIL RELAY
- 10 COOLING THERMOSTAT
- 11 HEATER
- 12 DC UPS BATTERY (MOUNTED ON SHELF)
- 13 LED STRIP LIGHT, DOOR SWITCH ACTIVATED
- 14 ISOLATED GROUND BUS FOR ANALOG SHIELD GROUNDING
- 15 INTRUSION DOOR SWITCH; (FALL SAFE) DISCRETE INPUT AS ENCLOSURE
- 16 SUPPLY FAN UNIT, MUST MAINTAIN SAME NEMA RATING AS ENCLOSURE
- 17 DOUBLE DOORS WITH EASILY REMOVABLE CENTER SUPPORT POST
- 18 GROUND BUS
- 19 RELAYS
- 20 OFCI RECEPTACLE
- 21 OPTO D/I INTERFACE BOARDS
- 22 OPTO 22 POWER SUPPLY
- 23 CONDUIT ENTRY AREA
- 24 POWER SUPPLY (24V DC-12V DC)
- 25 DC-UPS WITH BATTERY CHARGER
- 26 AC CIRCUIT BREAKERS AND FUSES
- 27 DC CIRCUIT BREAKERS AND FUSES
- 28 30 AMP BATTERY CIRCUIT BREAKER
- 29 INTRINSICALLY SAFE AREA, INCLUDING INTRINSIC SAFETY BARRIERS, DESICCANT BOXES, ETC.
- 30 ANALOG TERMINALS
- 31 L-SHAPED QUARTER TURN, PADLOCKABLE HANDLE, TYPICAL
- 32 TERMINAL BLOCKS
- 33 WIREWAY (SIZED AS REQUIRED)
- 34 POWER SUPPLY (120V AC - 24V DC)
- 35 PULSAR BLACKBOX UT-5311 TRANSMITTER
- 36 OPERATOR INTERFACE
- 37 EXHAUST FLOUNDER, MUST MAINTAIN SAME NEMA RATING AS ENCLOSURE
- 38 MEDIA CONVERTER, ETHERNET TO SERIAL
- 39 GREYLINE FLOW TRANSMITTER



PUMP 1



PUMP 2



ROUTER

7304

7305

7306

7308

7309

7310

7301

7302

7303

1.5" X 3" WIRE DUCT

1.2" X 2" WIRE DUCT

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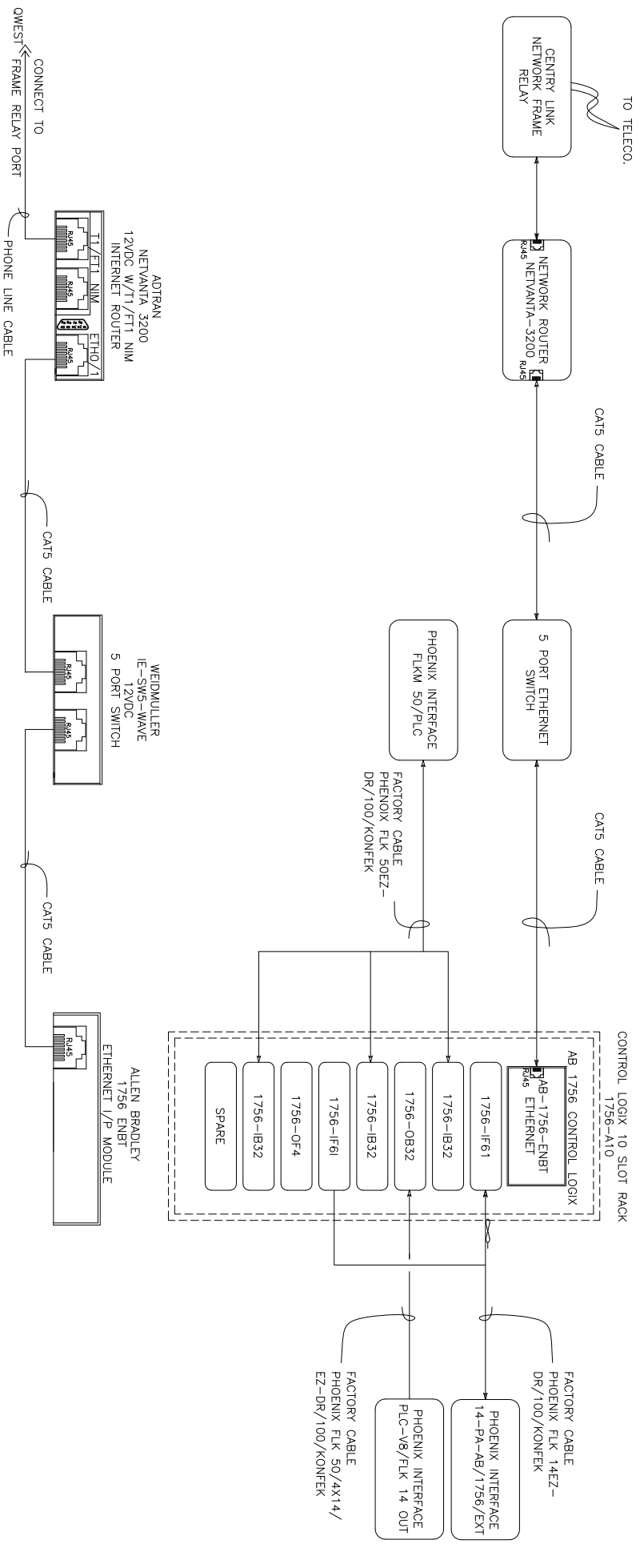
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1.2" X 2" WIRE DUCT



TYPICAL ALAN BRADLEY COMMUNICATIONS DIAGRAM