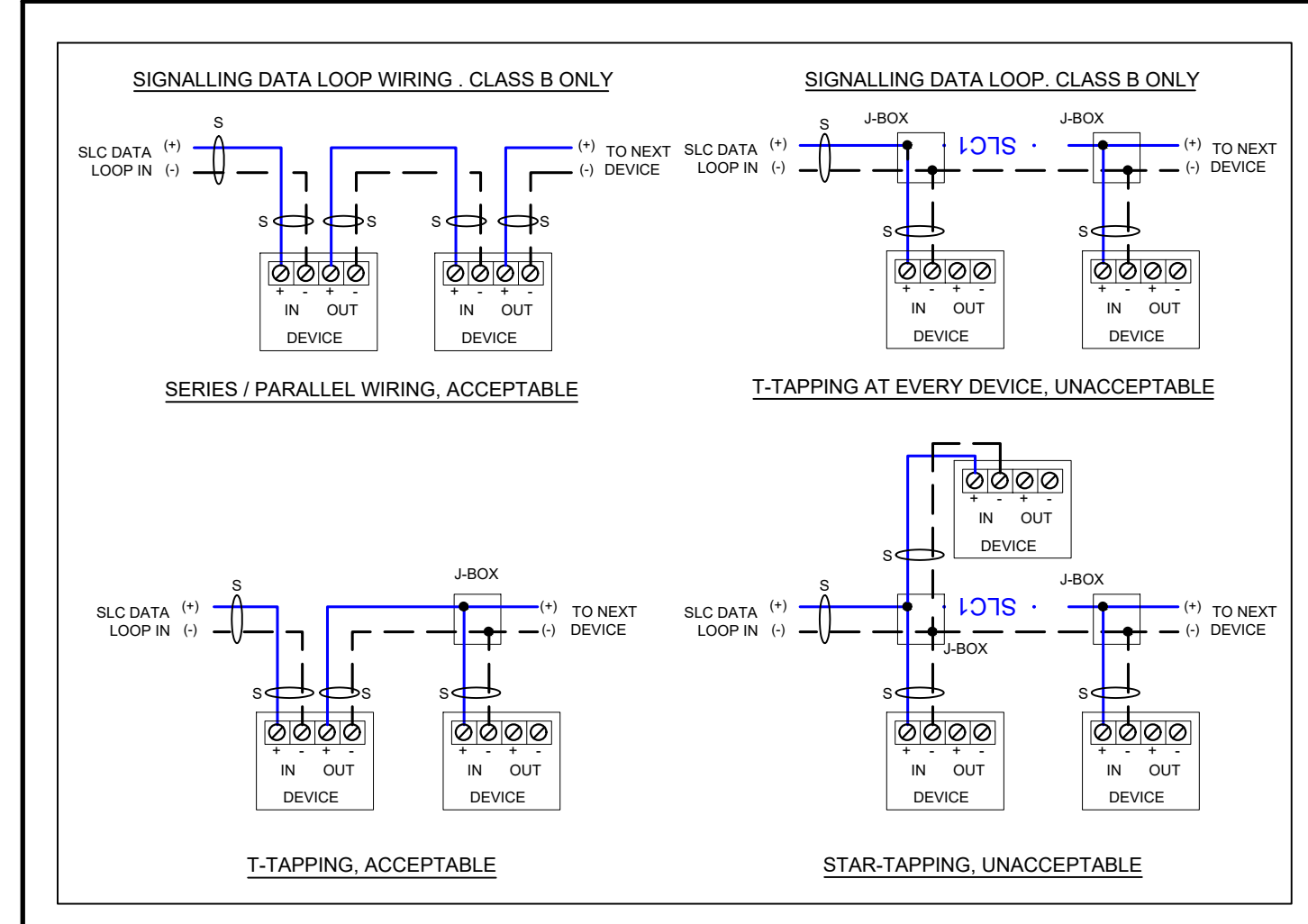


INITIATING WIRING



NOTIFICATION WIRING

SPEAKER CIRCUIT WIRING LIMITATIONS:

WIRE LENGTH LIMITATIONS:

THE MAXIMUM ALLOWABLE WIRE LENGTH IS THE FARTHEST DISTANCE THAT A SPEAKER CIRCUIT CAN EXTEND FROM THE AMPLIFIER TO THE LAST SPEAKER WITHOUT LOSING 0.5 dB OF SIGNAL. THE FOLLOWING ARE MAXIMUM DISTANCE BASED ON APPROXIMATE WATTAGE OF THE SPEAKER CIRCUIT. CIRCUIT LENGTHS ARE FURTHER BASED ON ORIGINATION OF A CIRCUIT FROM EITHER THE AMPLIFIER OR FROM THE CC1 MODULE.

- ALLOWABLE LENGTH AT 25 Vrms, WITH 0.5 dB LOSS
- 16AWG - 20 WATTS - 231'
 - 16AWG - 30 WATTS - 154'
 - 16AWG - 40 WATTS - 116'

- ALLOWABLE LENGTH AT 70 Vrms, WITH 0.5 dB LOSS
- 16AWG - 20 WATTS - 1815'
 - 16AWG - 30 WATTS - 1210'
 - 16AWG - 40 WATTS - 907'

NAC CIRCUIT (HORN, STROBE) WIRING LIMITATIONS:

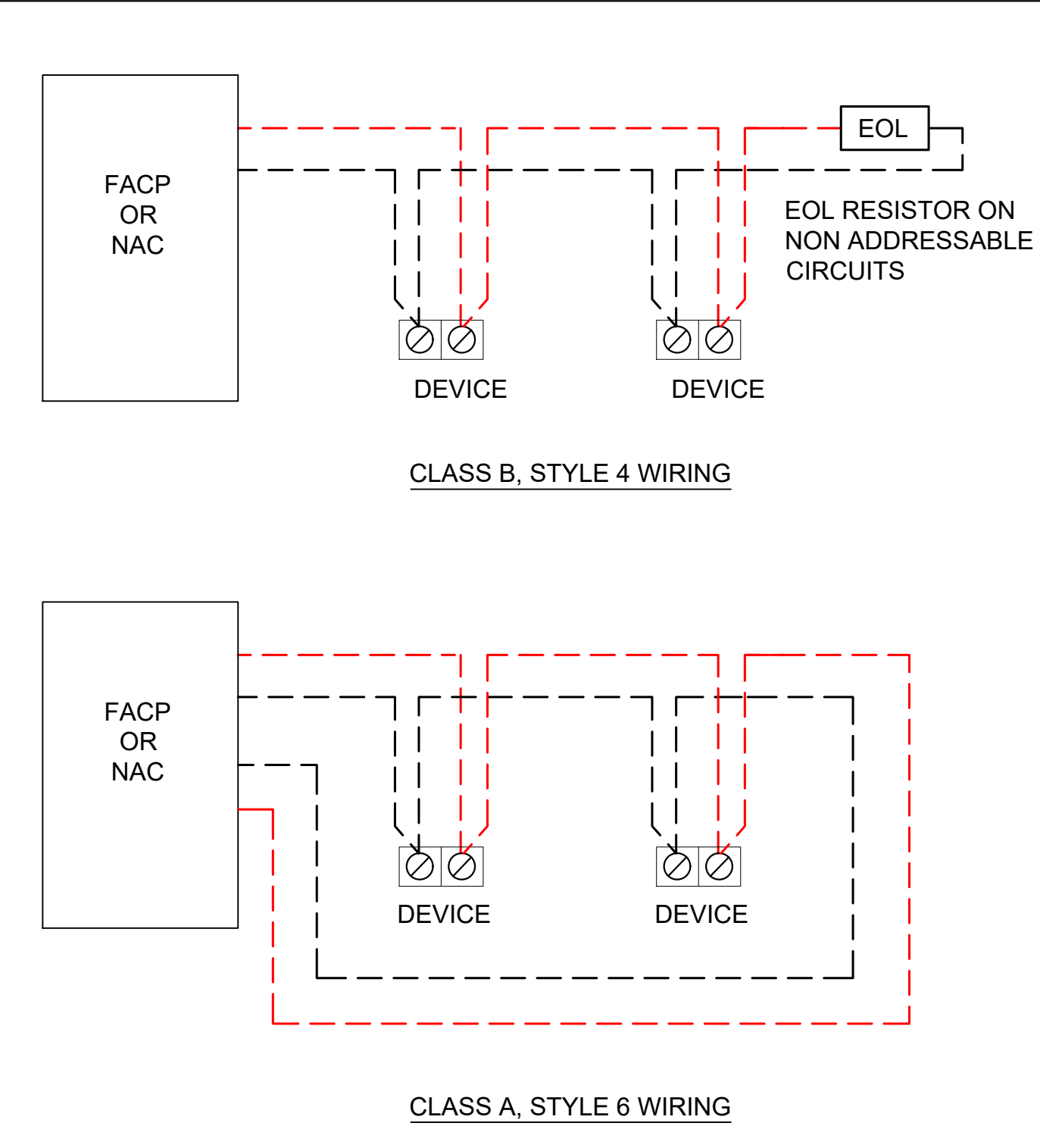
FOR 24VDC SYSTEMS, MINIMUM DEVICE OPERATING VOLTAGE IS 16VDC. VOLTAGE DROP CALCULATIONS ARE BASED ON 16VDC AND POWER SUPPLY DE-RATED AND ON DEPLETED BATTERY BACKUP PER THE PRESCRIBED PERIOD OF STANDBY AND ALARM RING TIME. THE VOLTAGE DROP WILL LIMIT THE CIRCUITS CAPACITY IN ALMOST ALL CASES AND CURRENT CANNOT BE USED AS THE ONLY CIRCUIT WIRING LIMITATION. ALTERATIONS TO CIRCUIT LENGTH FROM THOSE CALCULATED MAY CAUSE CIRCUITS TO BE OUT OF THE TOLERANCES GRANTED BY THE FIRE ALARM CODE. CHANGES TO DEVICE LOCATION OR CIRCUIT LENGTH SHALL BE COMMUNICATED TO THE ADT TEAM.

NAC CIRCUIT WIRING AND ROUTING MUST NOT EXCEED WHAT IS SHOWN ON THE DESIGN DRAWINGS AND CALCULATIONS. A VOLTAGE DROP TEST IS PART OF MOST FIRE FINALS AND IS REQUIRED BY NFPA. A FAILED FIRE FINAL MAY REQUIRE REWIRING OF THE FAILED CIRCUITS.

- WIRE RESISTANCE RATINGS USED FOR CALCULATIONS:
- 18AWG - 13 OHMS PER 1000'
 - 16AWG - 8 OHMS PER 1000'
 - 14AWG - 5.2 OHMS PER 1000'

EXAMPLE: 1.0 AMP CIRCUIT LOAD USING #14 WIRE = 409 FEET MAXIMUM.

CLASS A OR B NOTIFICATION WIRING



SEPARATION OF CLASS A CIRCUITS - INSTALLATION EXCEPTIONS:

CLASS A OUTGOING AND RETURN CONDUCTORS, EXITING AND RETURNING TO THE CONTROL PANEL, ARE TO BE ROUTED SEPARATELY. THE MINIMUM RECOMMENDED SEPARATION IS 1 FT. VERTICALLY AND 4 FT. HORIZONTALLY. THE FOLLOWING EXCEPTIONS STILL DO NOT ELIMINATE THE 2ND PAIR OF WIRES. THEY ALLOW YOU TO USE A SINGLE RACEWAY AND ELIMINATE THE SEPARATION FOR THESE CONDITIONS.

- WHEN MAXIMUM CABLE, ENCLOSURE, OR RACEWAY IS LESS THAN 10 FEET. NO LIMIT TO NUMBER OF DEVICES.
- UNLIMITED CONDUIT OR RACEWAY DROP TO AN INDIVIDUAL DEVICE.
- UNLIMITED CONDUIT OR RACEWAY DROP TO A ROOM NOT EXCEEDING 1000 SQ. FT. NO LIMIT TO THE NUMBER OF DEVICES.

RECORD DRAWINGS

AS-BUILT / RECORD DRAWING REQUIREMENTS:

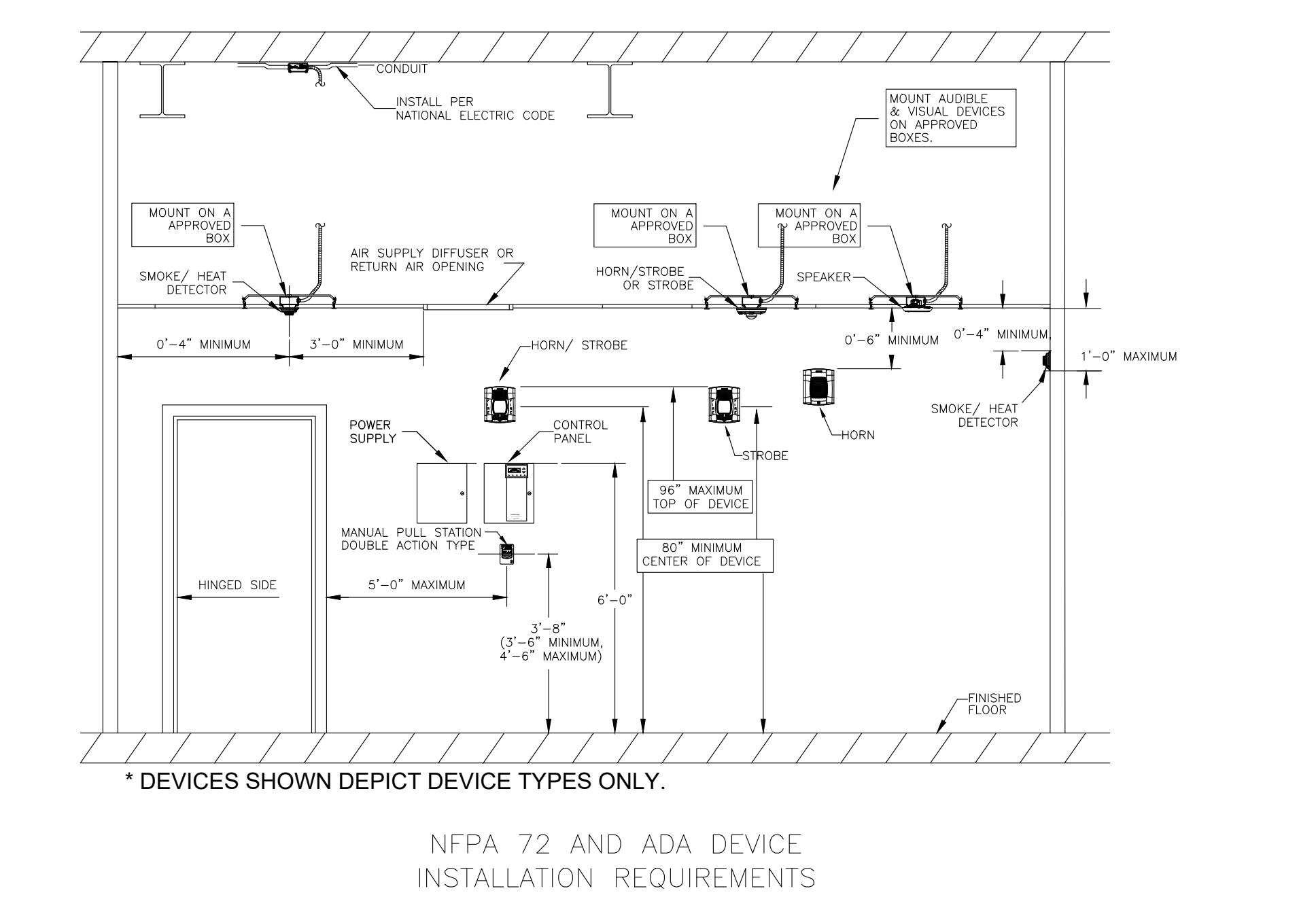
THE FOLLOWING INFORMATION SHOULD BE RECORDED ON A SEPARATE SET OF DRAWINGS FOR EACH PROJECT:

- ANY CHANGES IN THE LOCATION OF ANY ASSOCIATED FIRE ALARM OR INTERFACE EQUIPMENT. CONTROL PANELS, ANNUNCIATORS, DETECTORS, CONTROL RELAYS, INPUT AND OUTPUT MODULES, TERMINAL CABINETS, ETC.
- ANY CHANGES TO CIRCUIT WIRING. THIS INCLUDES DELETION OR ADDITIONAL WIRING RUNS. ANY RE-ROUTING OF CIRCUIT WIRING. ANY ADDITIONS OR DELETIONS TO THE NUMBER, LOCATION, AND ORDER OF DEVICE WIRING ON A CIRCUIT.
- ADDRESSES AND/OR LABELS FOR ALL ADDRESSABLE DEVICES.
- CANDELA SETTINGS OF ALL VISUAL NOTIFICATION DEVICES.
- WATTAGE TAP SETTINGS OF ALL SPEAKER NOTIFICATION DEVICES.

ANY CHANGES SHALL BE DISCUSSED WITH ADT PROJECT MANAGER TO ENSURE SYSTEM AND CODE PARAMETERS ARE MET. ADT SHALL NOT BE HELD ACCOUNTABLE FOR CHANGES MADE WITHOUT APPROVAL.

THIS INFORMATION SHALL BE NEAT AND LEGIBLE WHEN PRESENTED TO THE TECHNICIAN AT THE CONCLUSION OF THE PROJECT. PLEASE NOTE CONTACT INFORMATION ON DRAWINGS FOR INDIVIDUALS WITH FAMILIARITY OF INSTALLATION IN THE EVENT QUESTIONS ARISE DURING THE CLOSEOUT PROCESS.

MOUNTING HEIGHTS



REVISIONS
 REV # DESCRIPTION BY DATE
 1 ISSUED FOR PERMIT APL 12/28/2022
 2 Add additional detectors DK 03/20/24
 3 Description By
 4 Description By
 5 Description By
 6 Description By

SEQUENCE OF EVENTS

ALARM SYSTEM INPUTS	1	2	3	4	5	6	7	8	9	10
SMOKE DETECTOR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MANUAL PULL STATION	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SPRINKLER WATERFLOW	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HEAT DETECTOR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FUME HOOD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C.O. DETECTOR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SUPERVISORY SYSTEM INPUTS										
DUCT SMOKE DETECTOR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SPRINKLER TAMPER SWITCH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TROUBLE SYSTEM INPUTS										
LOSS OF AC POWER		✓	✓	✓	✓	✓	✓	✓	✓	✓
CHARGER FAILURE		✓	✓	✓	✓	✓	✓	✓	✓	✓
LOW BATTERY		✓	✓	✓	✓	✓	✓	✓	✓	✓
OPEN CIRCUIT		✓	✓	✓	✓	✓	✓	✓	✓	✓
GROUND FAULT		✓	✓	✓	✓	✓	✓	✓	✓	✓
FACP FUNCTIONS										
ACTIVATION OF SYSTEM SILENCE		✓	✓	✓	✓	✓	✓	✓	✓	✓
RESTORATION OF SYSTEM TO NORMAL			✓	✓	✓	✓	✓	✓	✓	✓
ELEVATOR RECALL										
1ST FLOOR ELEVATOR LOBBY SMOKE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2ND & UP ELEVATOR LOBBY SMOKE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ELEVATOR SHAFT OR MACH. ROOM SMOKE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MACHINE ROOM & TOP OF SHAFT HEAT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BOTTOM OF SHAFT HEAT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

PIERCE COLLEGE
STEM BUILDING
 1601 39th Avenue SE
 Puyallup, WA 98374

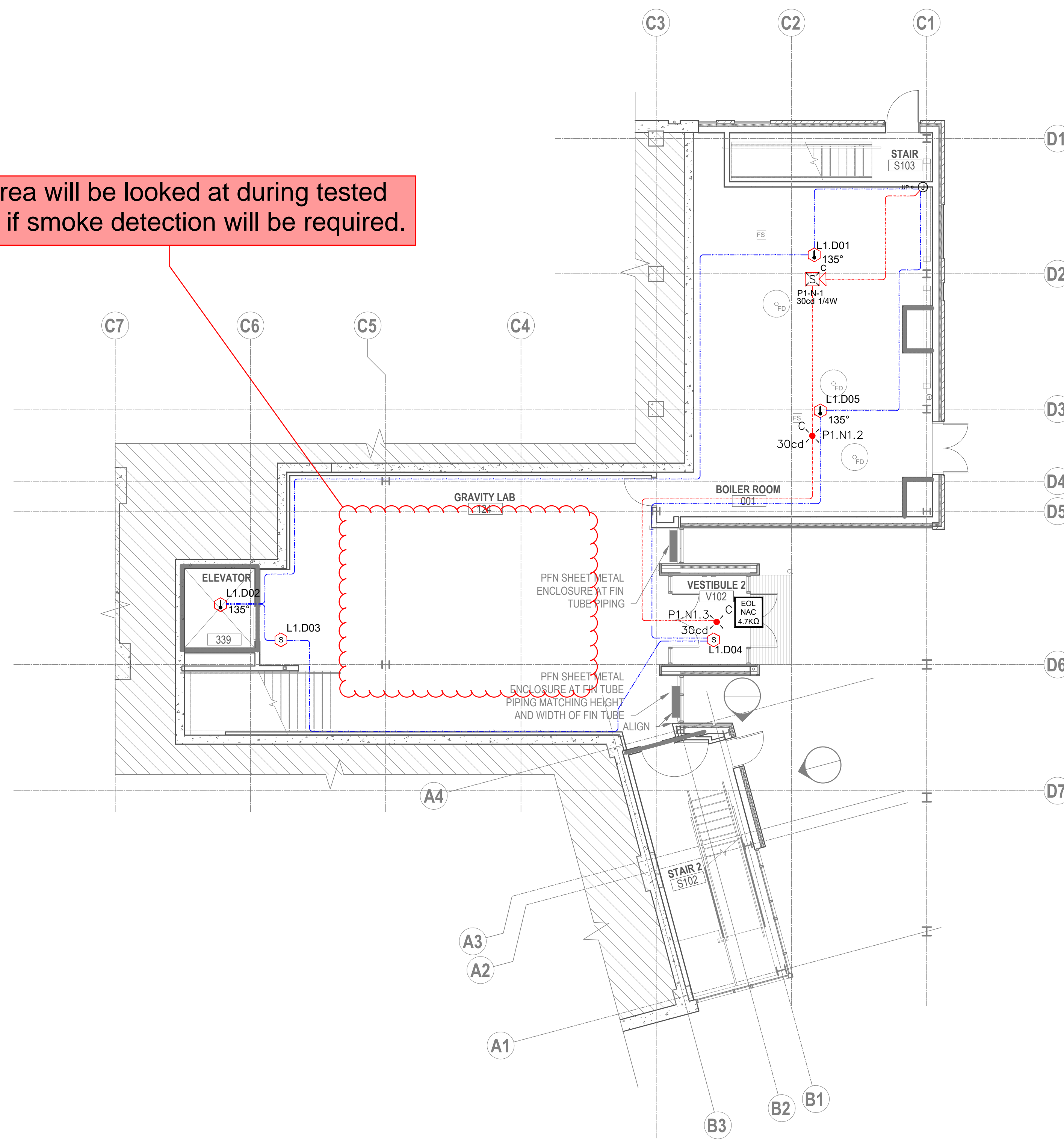
REV #	DESCRIPTION	BY	DATE
-	ISSUED FOR PERMIT	APL	12/28/2022
Rev#1	Add additional detectors	DK	03/20/24
Rev#	Description	By	date
Rev#	Description	By	date
Rev#	Description	By	date
Rev#	Description	By	date

SCALE: **As Shown**
 PREPARED BY: **APL**
 CHECKED BY: **RM**
 DATE: **01/30/2023**
 PROJECT NO: **281716084**

TITLE: **PROJECT NOTES**

SHEET: **FA-0-2**

This area will be looked at during tested to see if smoke detection will be required.



01 Fire Alarm Plan- 0 FLOOR (Basement)
Scale: 1/8" = 1'0"



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Building	Planning
Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE
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1601 39th Avenue SE
Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Add additional detectors	03/2024	DK
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

SCALE: As Shown

PREPARED BY: APL

CHECKED BY: RM

DATE: 01/30/2023

PROJECT NO: 281716084

TITLE:

0 FLOOR PLAN (Basement)

SHEET:
FA-1-0



NOTE:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE NATIONAL FIRE ALARM CODE (NFPA 72) AND THE NATIONAL ELECTRICAL CODE (NEC).

RISER	ADDRESSING
L1-M11	BACKFLOW - TAMPER
L1-M12	BACKFLOW - TAMPER
L1-M13	HIGH PRESSURE WATER - TAMPER
L1-M14	LOW PRESSURE AIR - TAMPER
L1-M15	WATERFLOW - TAMPER
L1-M16	RISER VALVE - TAMPER
L1-M18	RISER VALVE - TAMPER
L1-M19	RISER VALVE - TAMPER

CONTROLLER	ADDRESSING
L1-M20	PUMP RUN - TAMPER
L1-M21	PHASE REVERSAL - TAMPER
L1-M22	TROUBLE - TAMPER
L1-M23	LOW FUEL - TAMPER
L1-M24	LOSS OF AC - TAMPER

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Development & Permitting Services
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Engineering	Public Works
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**PIERCE COLLEGE
STEM BUILDING**
1601 39th Avenue SE
Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT	12/28/2022	APL
2	Add additional detectors	03/20/24	DK
3	Description	date	By
4	Description	date	By
5	Description	date	By
6	Description	date	By

SCALE: #####

PREPARED BY: APL

CHECKED BY: RM

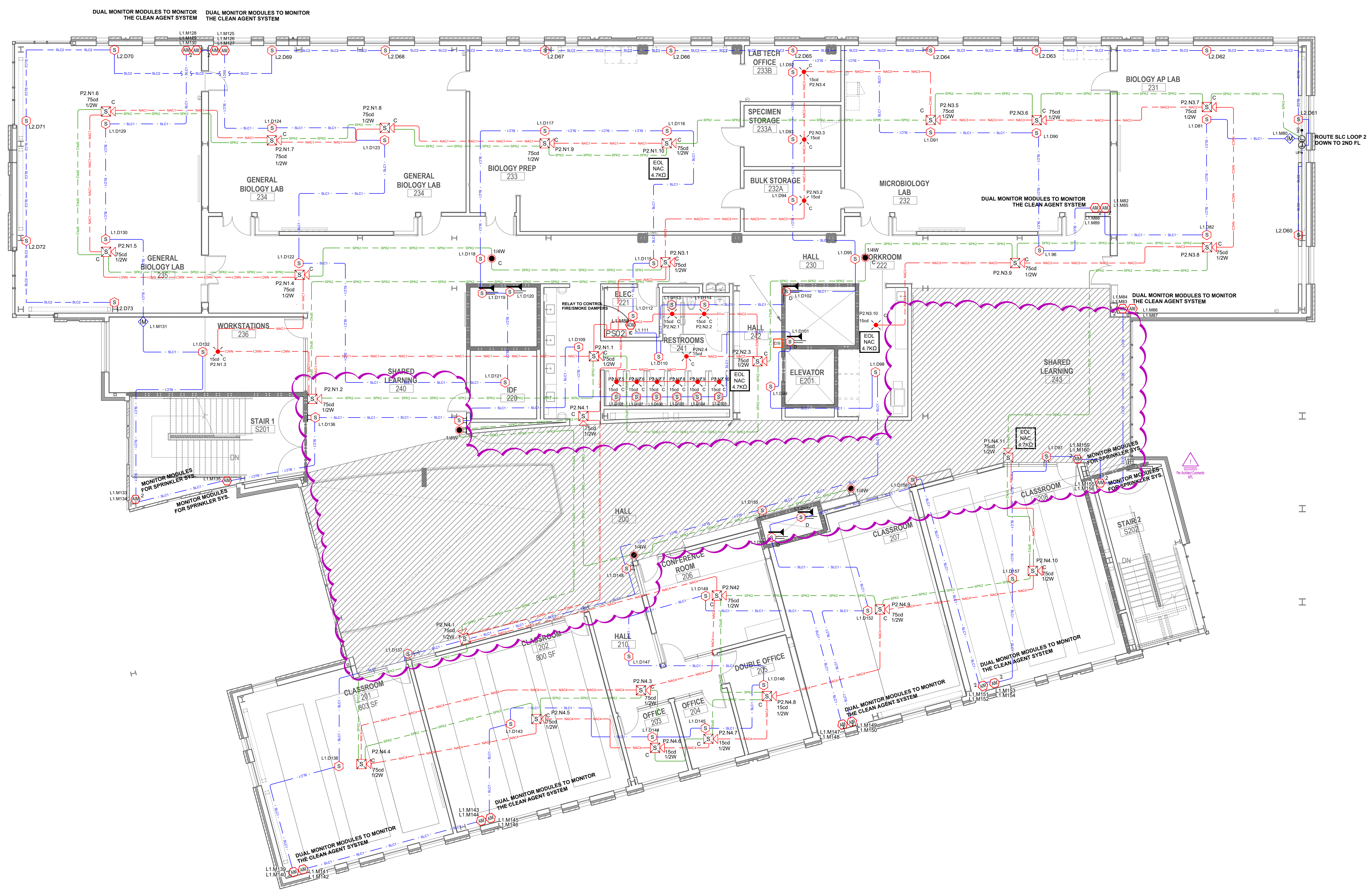
DATE: 01/30/2023

PROJECT NO: 281716084

TITLE: 1ST FLOOR PLAN

01 Fire Alarm Plan- 1ST FLR OVERALL
Scale: 1/8" = 1'0"
2' 4' 8' 10' 12' 14' 16' 18' 20'

NOTE:
 1. MOUNT CEILING DEVICES CENTER OF TILE WHERE APPLICABLE.
 2. SEVEN SMOKE DETECTORS TO BE WALL MOUNTED AS PER ARCHITECT.



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Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE
 STEM BUILDING**
 1601 39th Avenue SE
 Puyallup, WA 98374

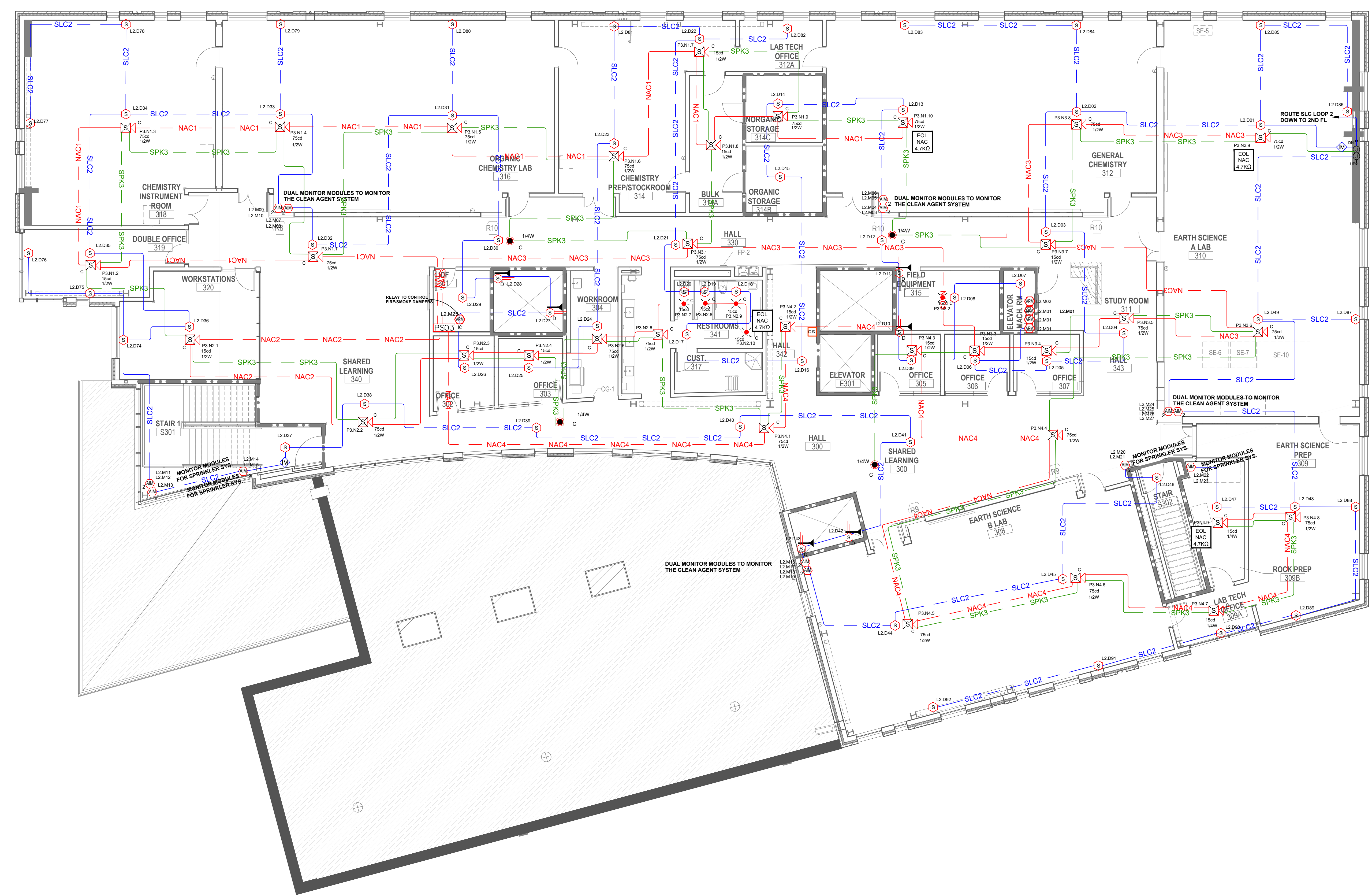
REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Add additional detectors	03/2024	DK
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

01 Fire Alarm Plan - 2ND FLR OVERALL
 Scale: 1/8" = 1'0"

SCALE:	As Shown
PREPARED BY:	APL
CHECKED BY:	RM
DATE:	01/30/2023
PROJECT NO:	281716084
TITLE:	2ND FLOOR PLAN
SHEET:	FA-1-2

NOTE:

1. All ceiling mount devices to be installed center of tile where applicable.
2. SMOKE DETECTORS LOCATED ABOVE CLOUDS NOT SHOWN ON PLAN, TO BE LOCATED DIRECTLY ABOVE SMOKE IN CLOUD.



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Development & Permitting Services
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Building	Planning
Engineering	Public Works
Fire	Traffic

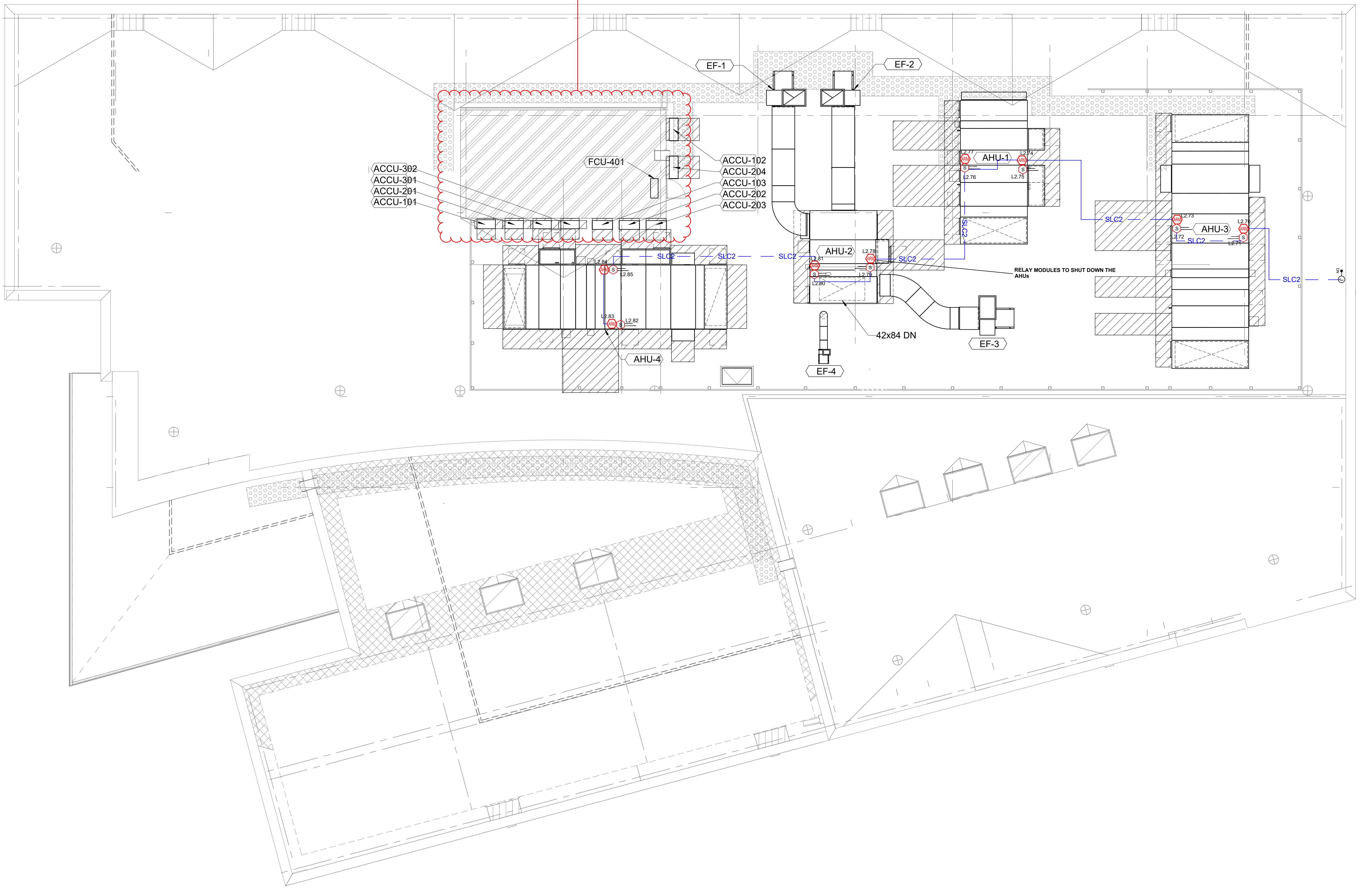
**PIERCE COLLEGE
STEM BUILDING**
1601 39th Avenue SE
Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Add additional detectors	03/2024	DK
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

01 Fire Alarm Plan— 3RD FLR OVERALL
Scale: 1/8" = 1'0"
2' 4' 6' 8' 10' 12' 14' 16' 18' 20'

SCALE: As Shown
PREPARED BY: APL
CHECKED BY: RM
DATE: 01/30/2023
PROJECT NO: 281716084
TITLE: 3RD FLOOR PLAN
SHEET: FA-1-3

Smoke detection is required, add smoke detection prior to Testing.



City of Puyallup
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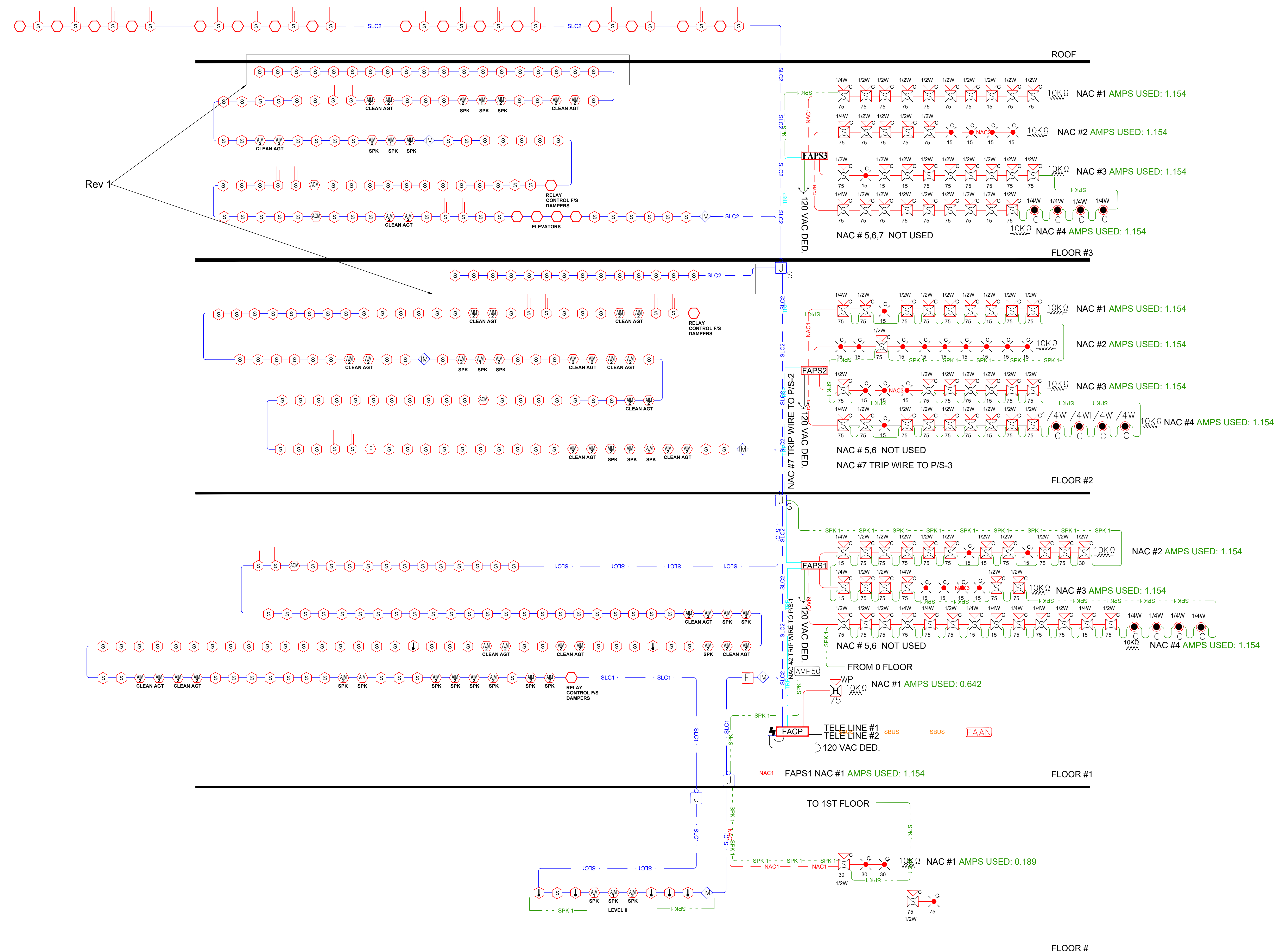
**PIERCE COLLEGE
STEM BUILDING**
1601 39th Avenue SE
Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Add additional detectors	03/2024	DK
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

01 Fire Alarm Plan— ROOF
Scale: 1/8" = 1'0"

SCALE: As Shown
PREPARED BY: APL
CHECKED BY: RM
DATE: 01/30/2023
PROJECT NO: 281716084
TITLE:

ROOF TOP PLAN
SHEET: FA-1-R



02 Schematic Riser Diagram
Scale: NTS

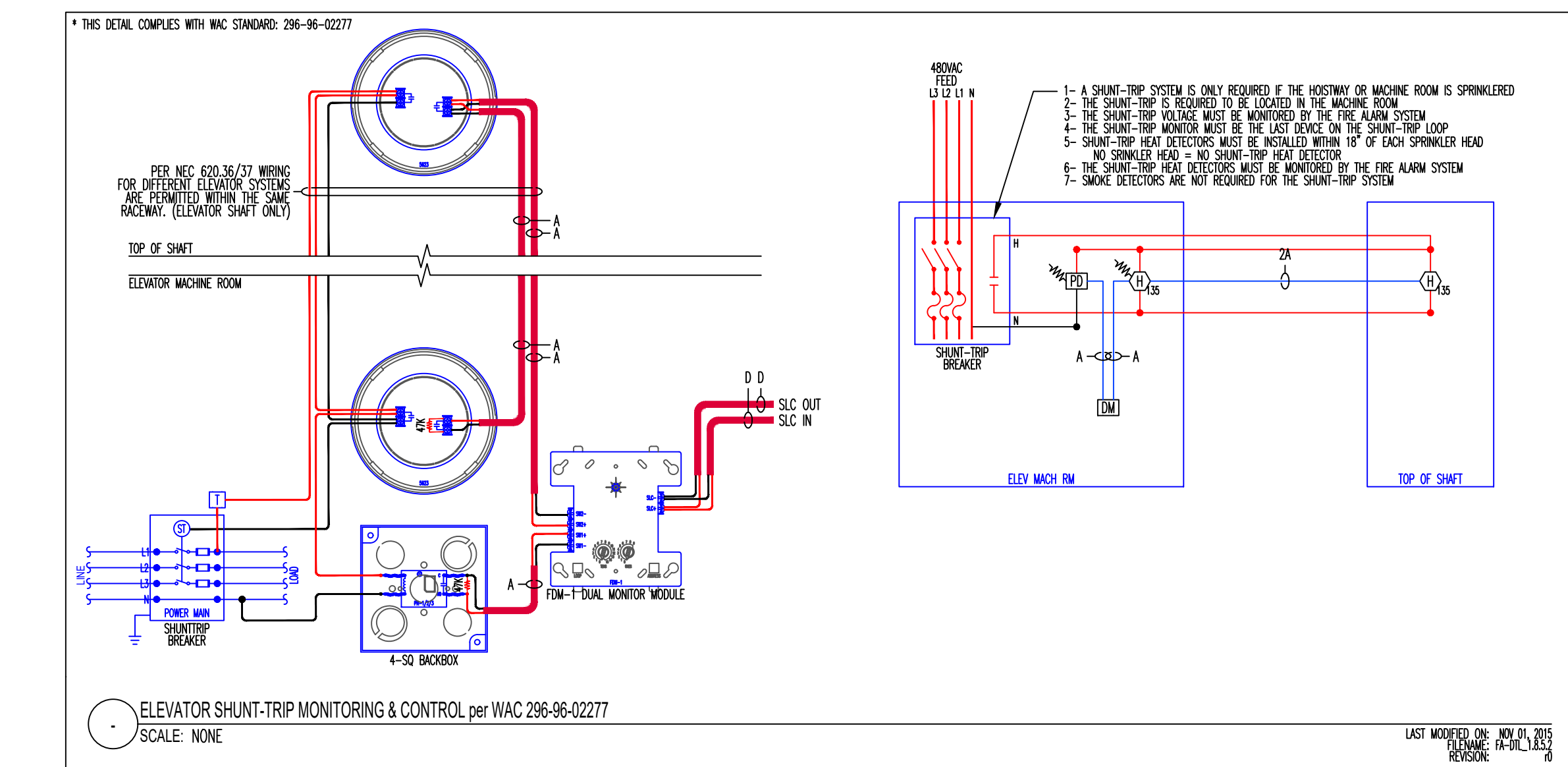
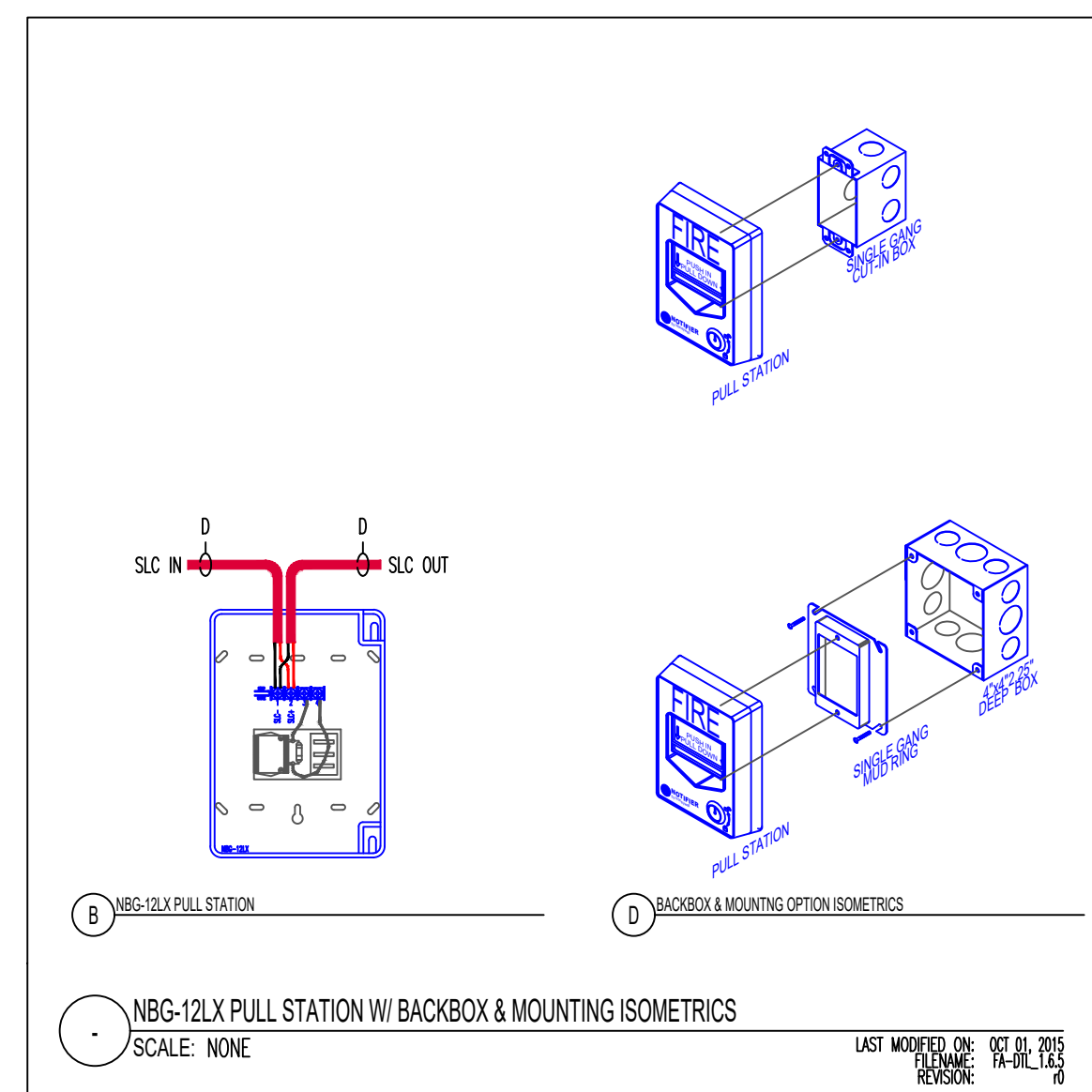
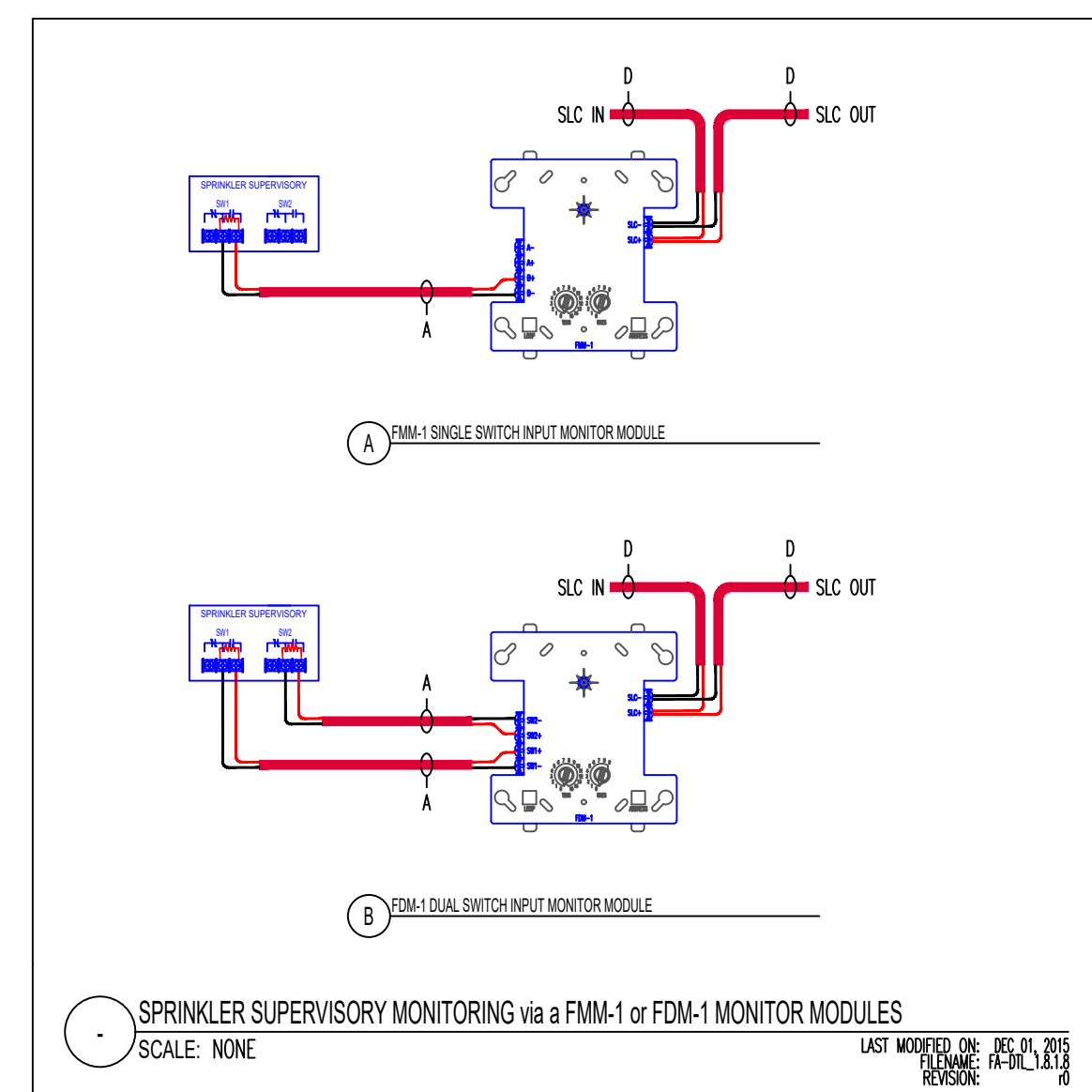
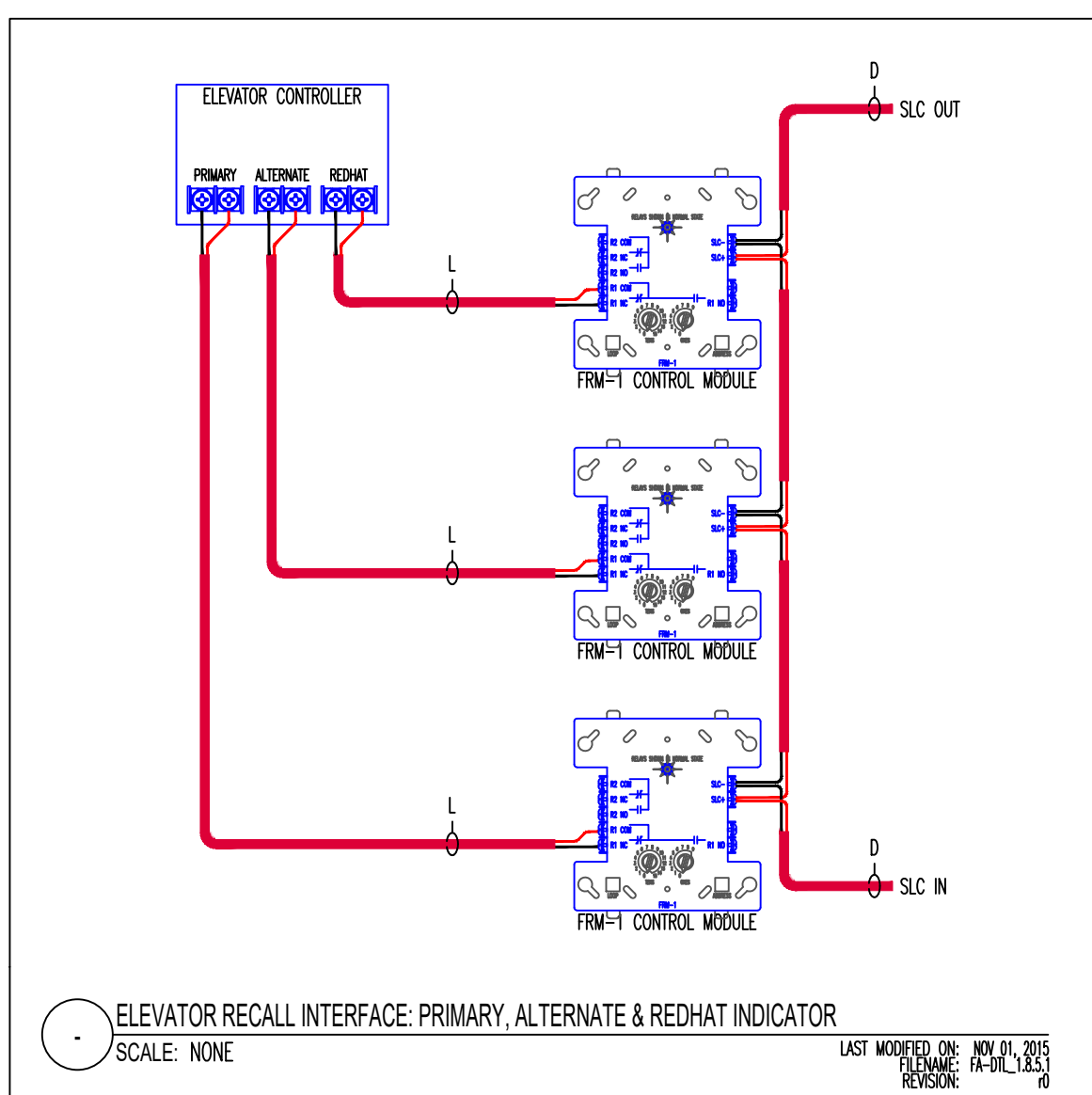
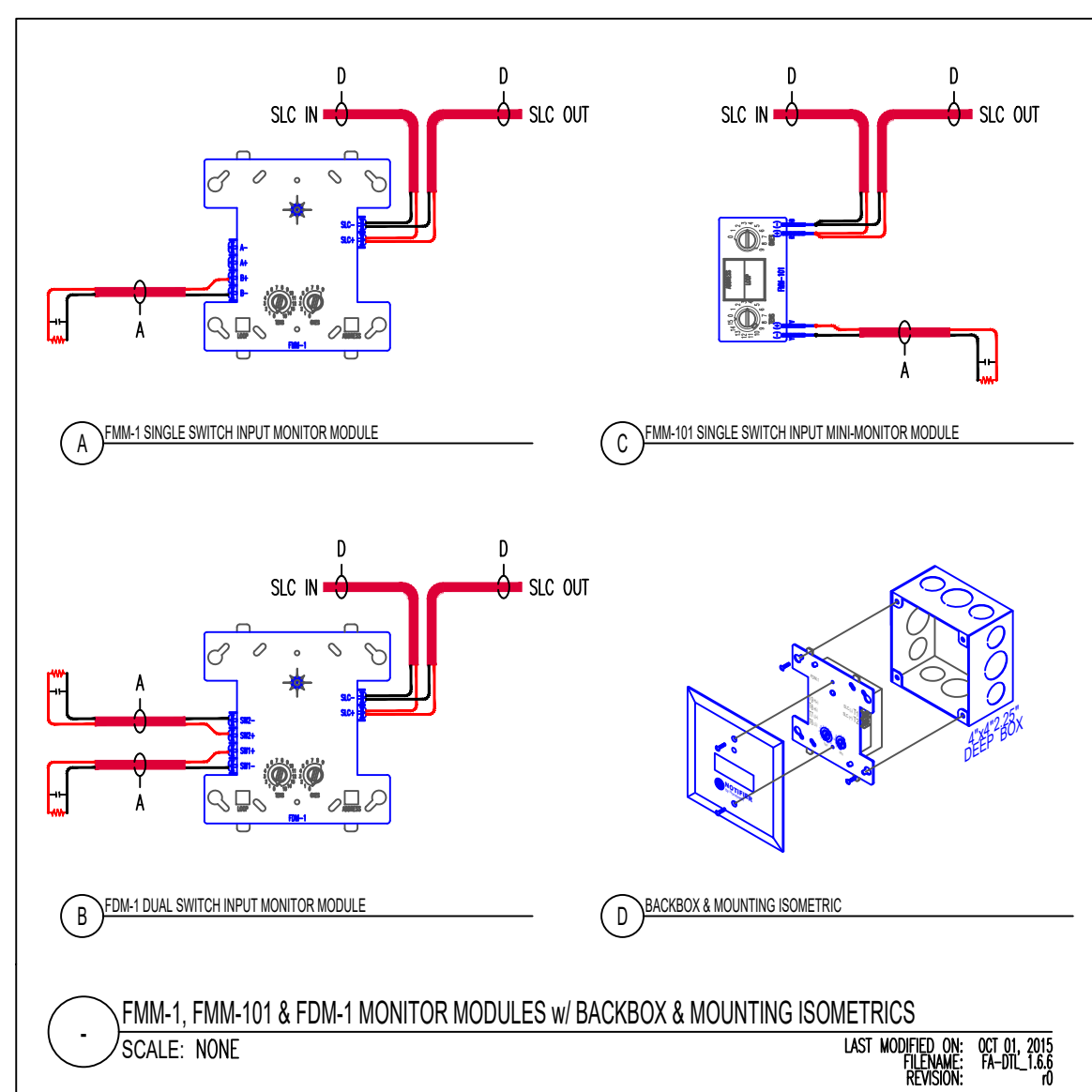
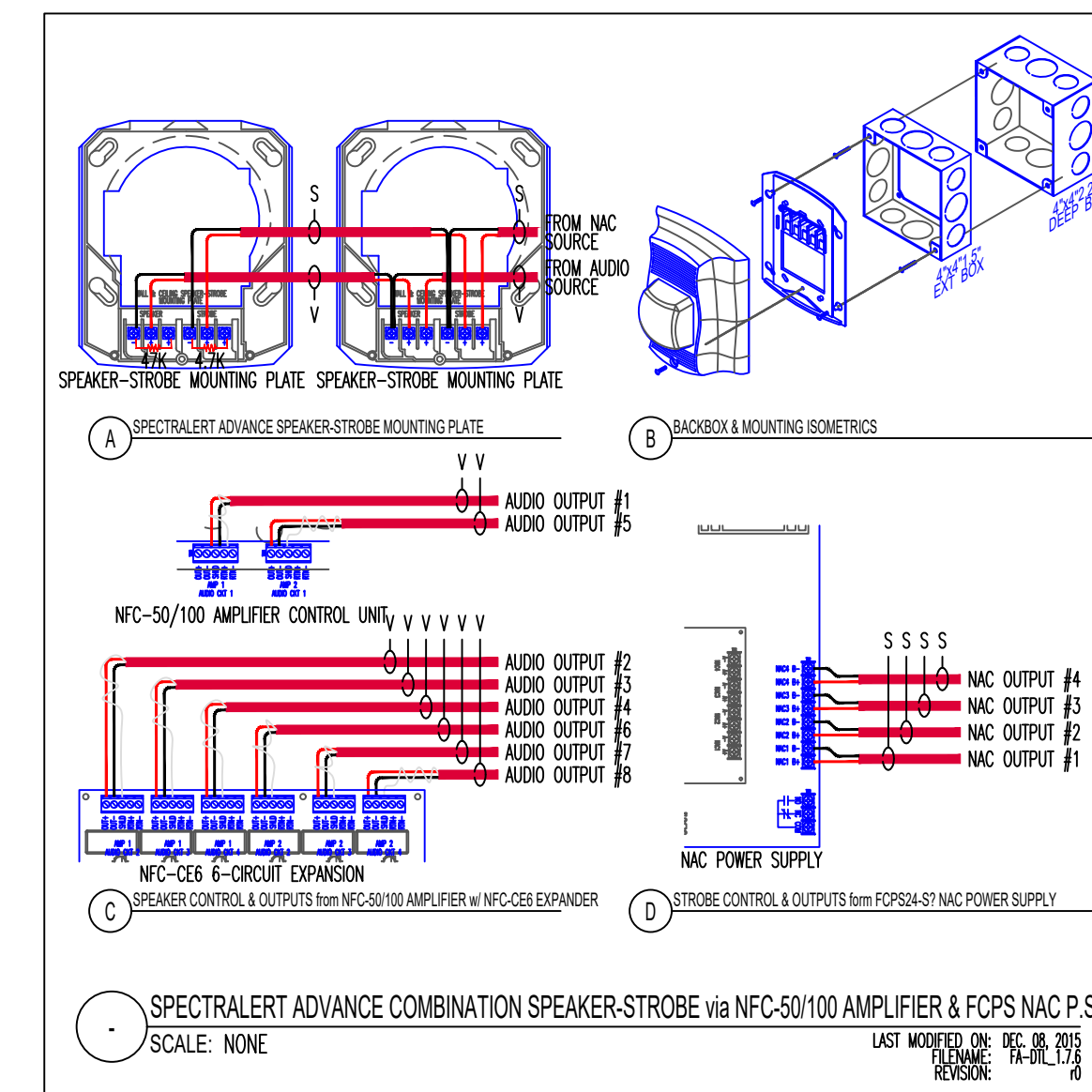
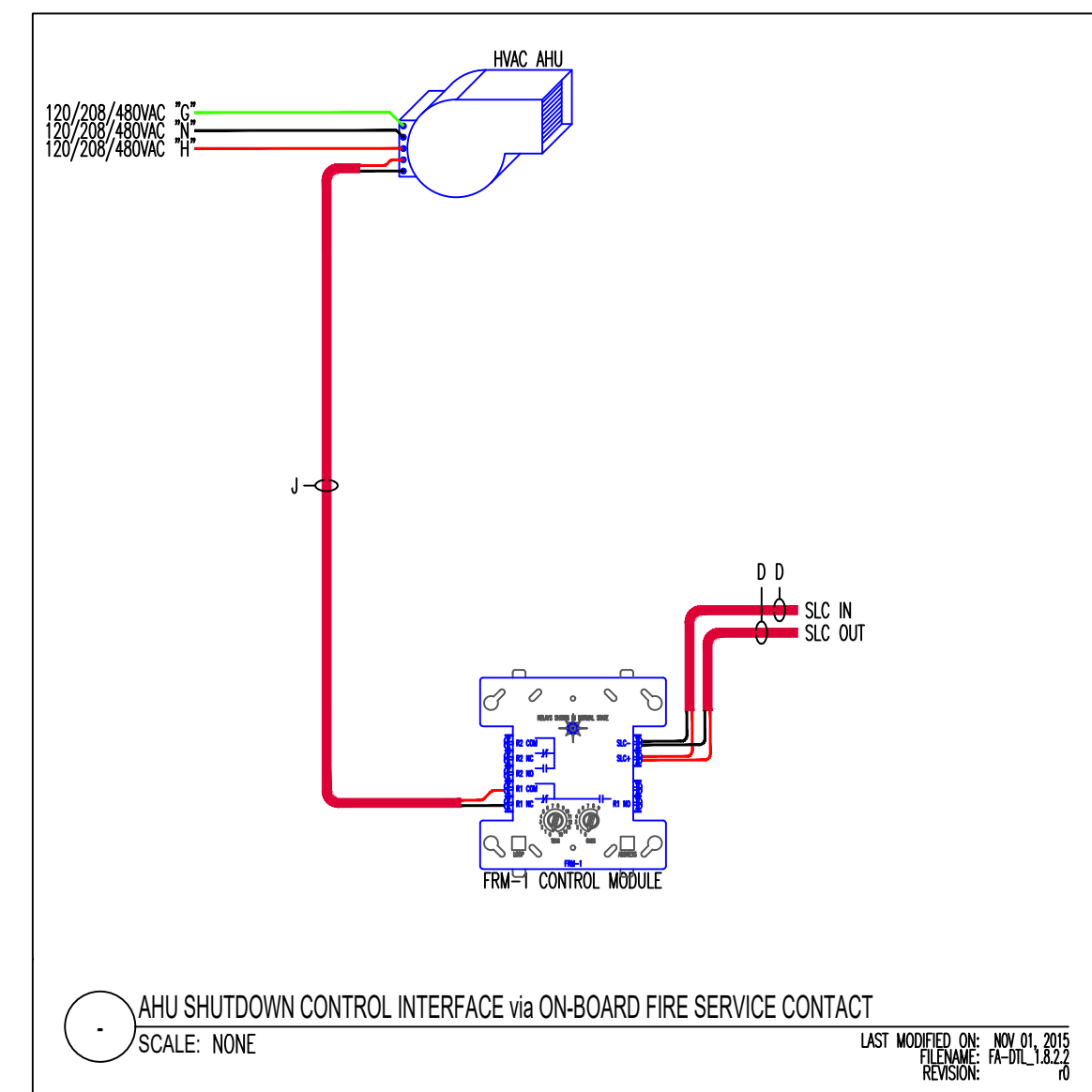
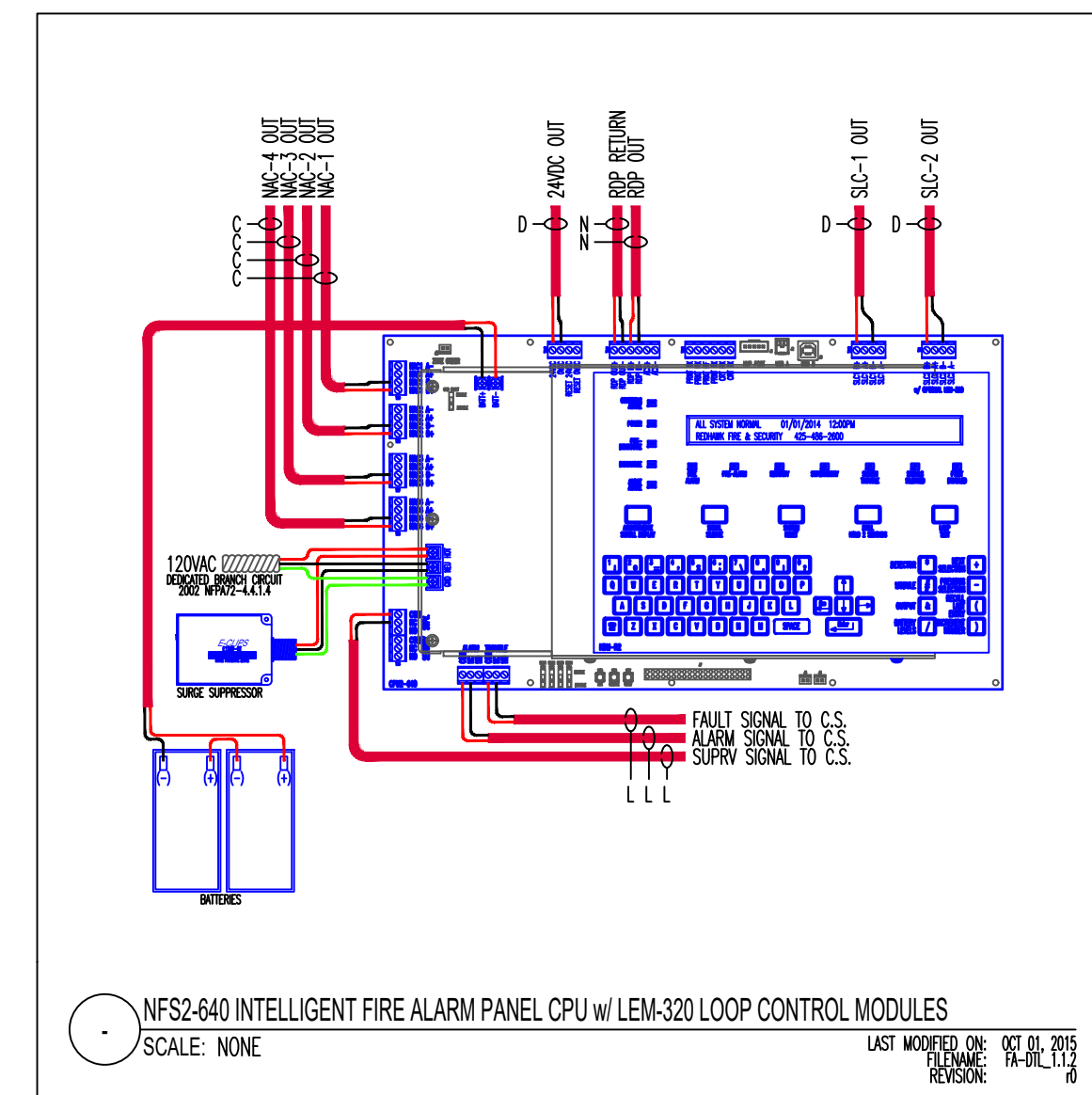
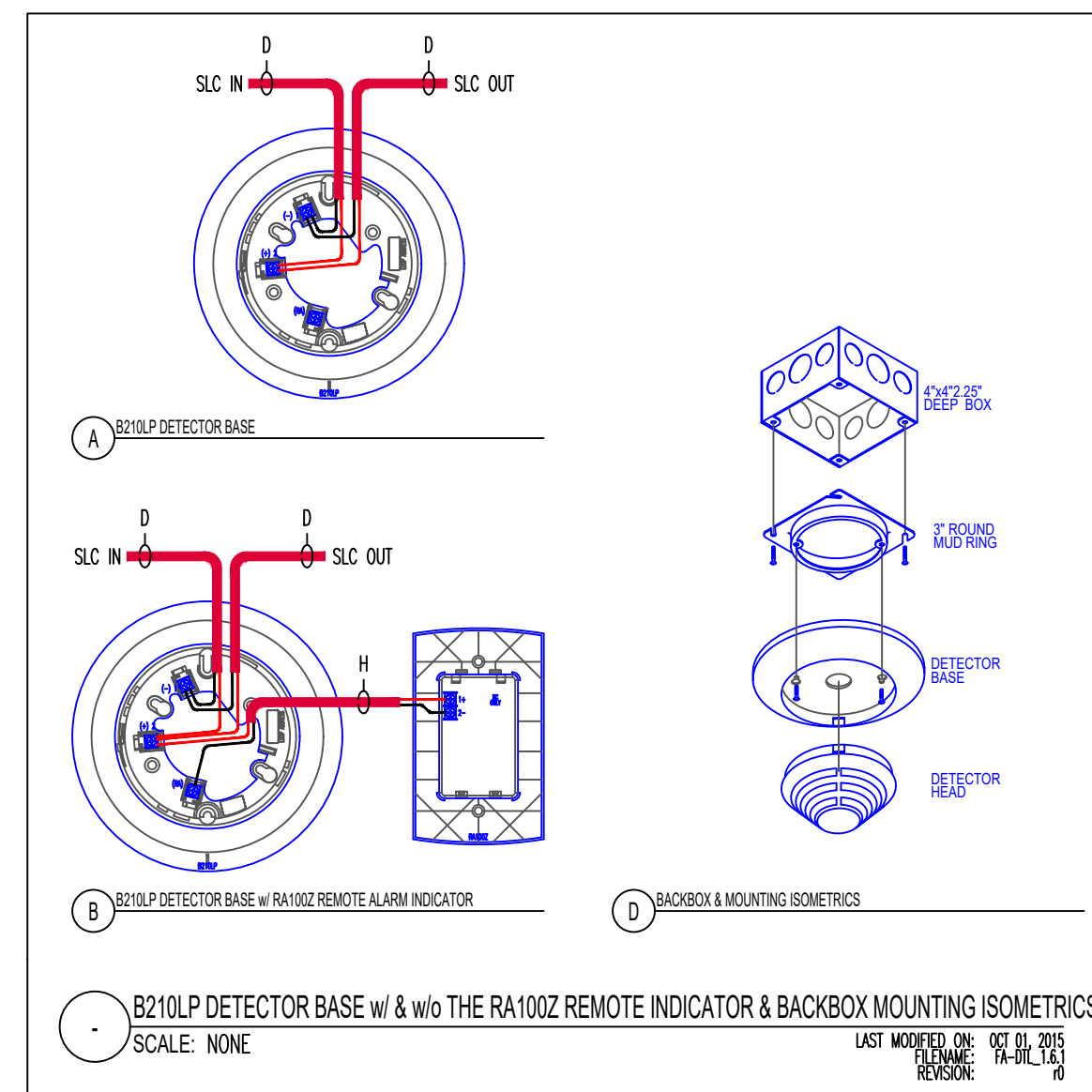
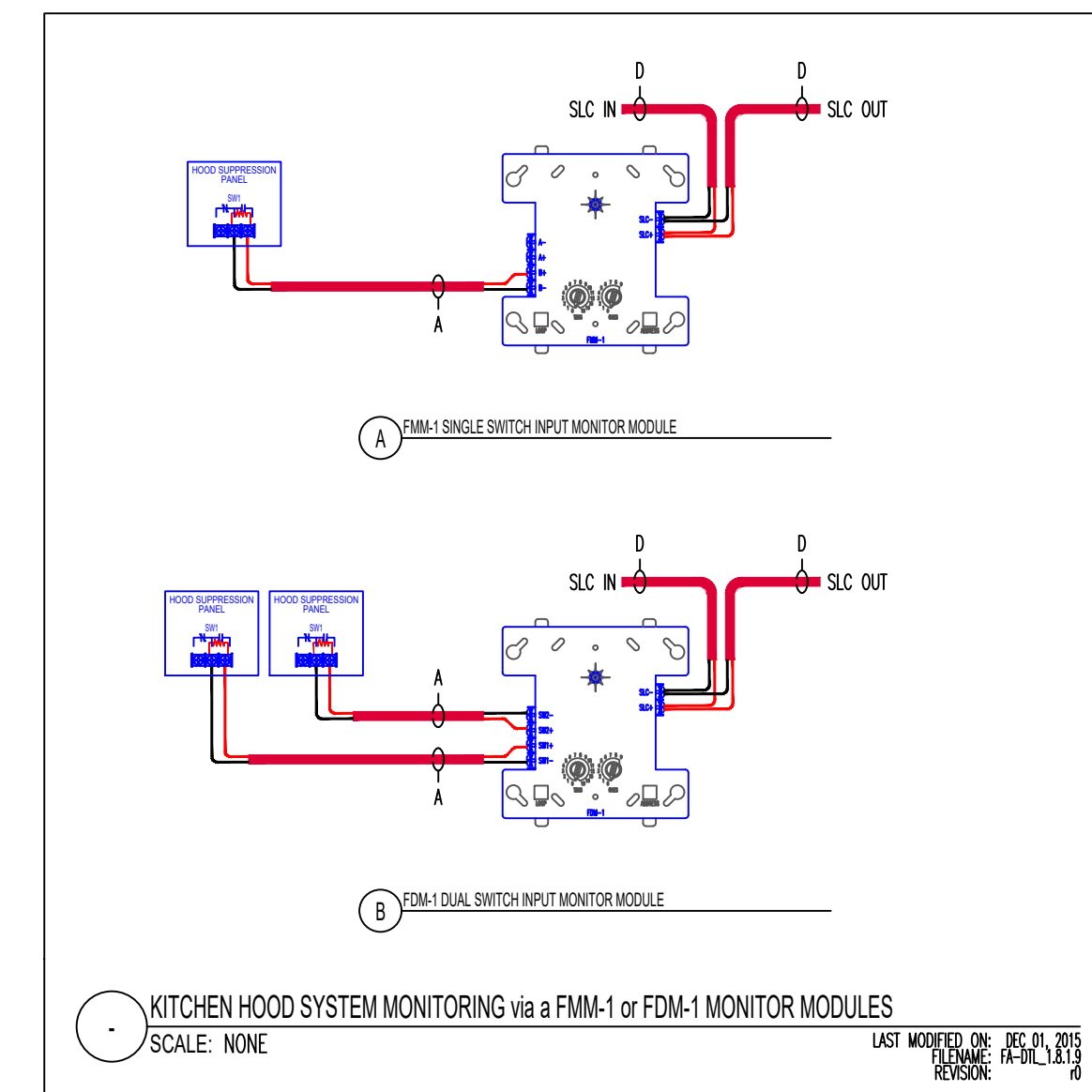
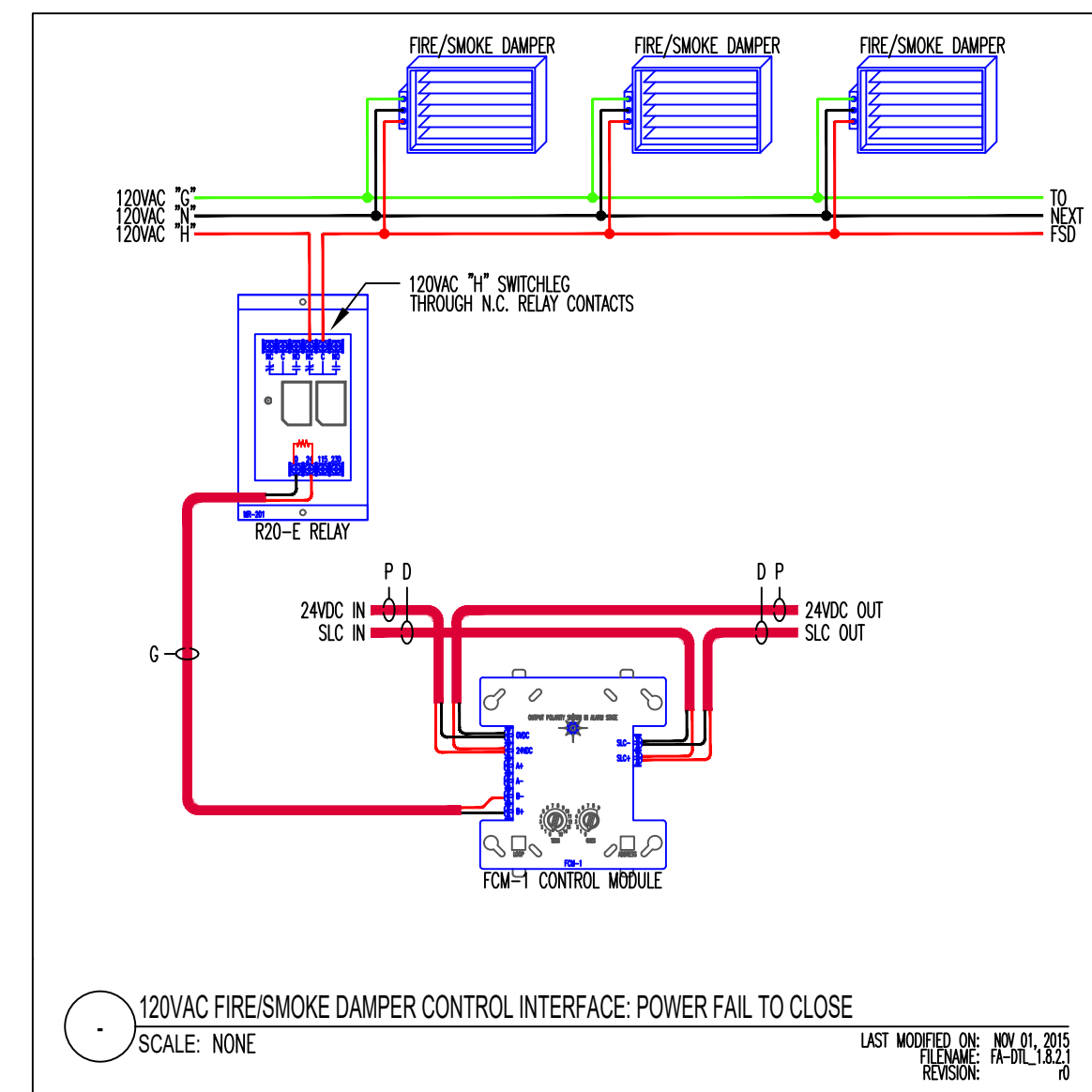
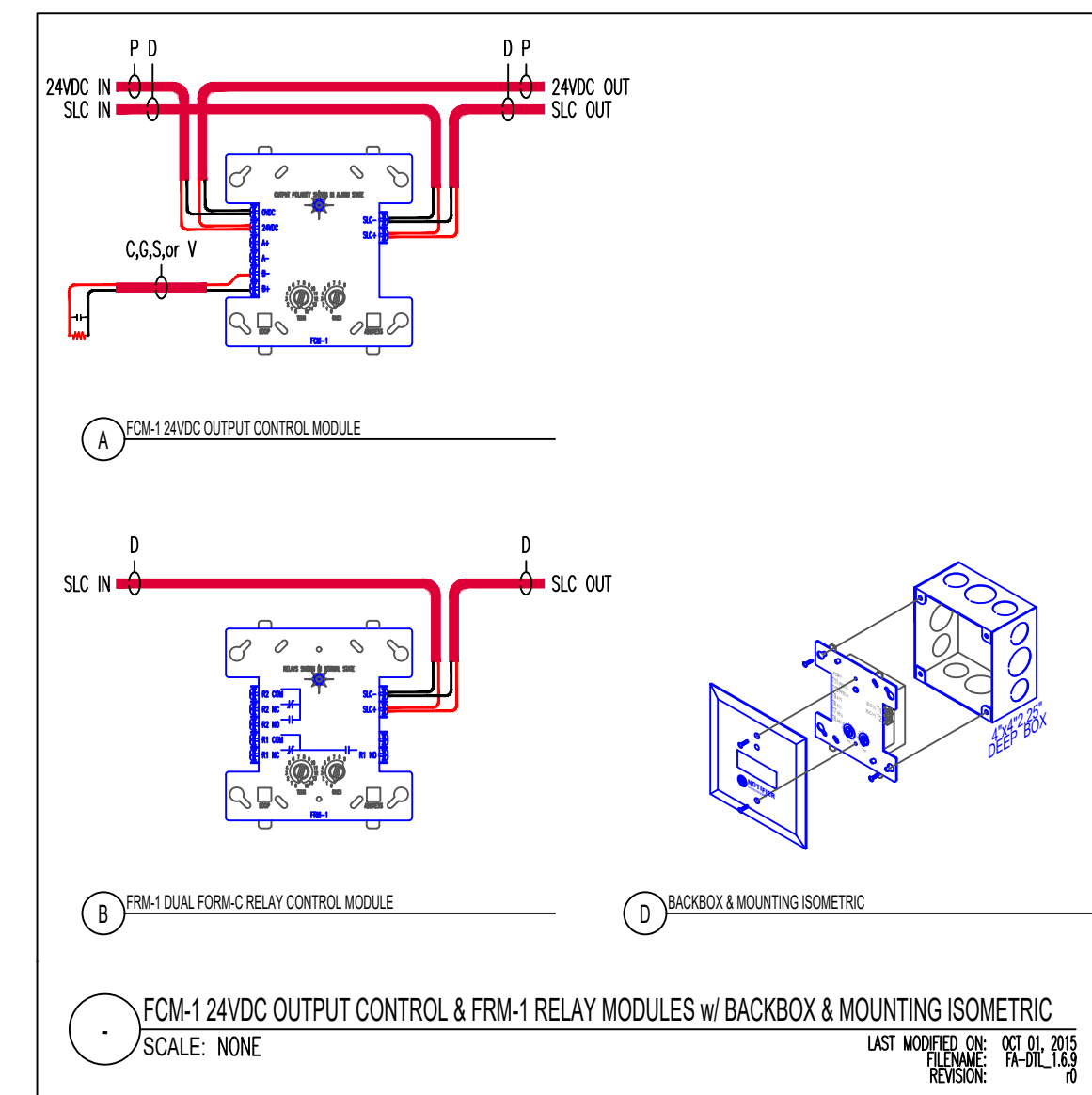
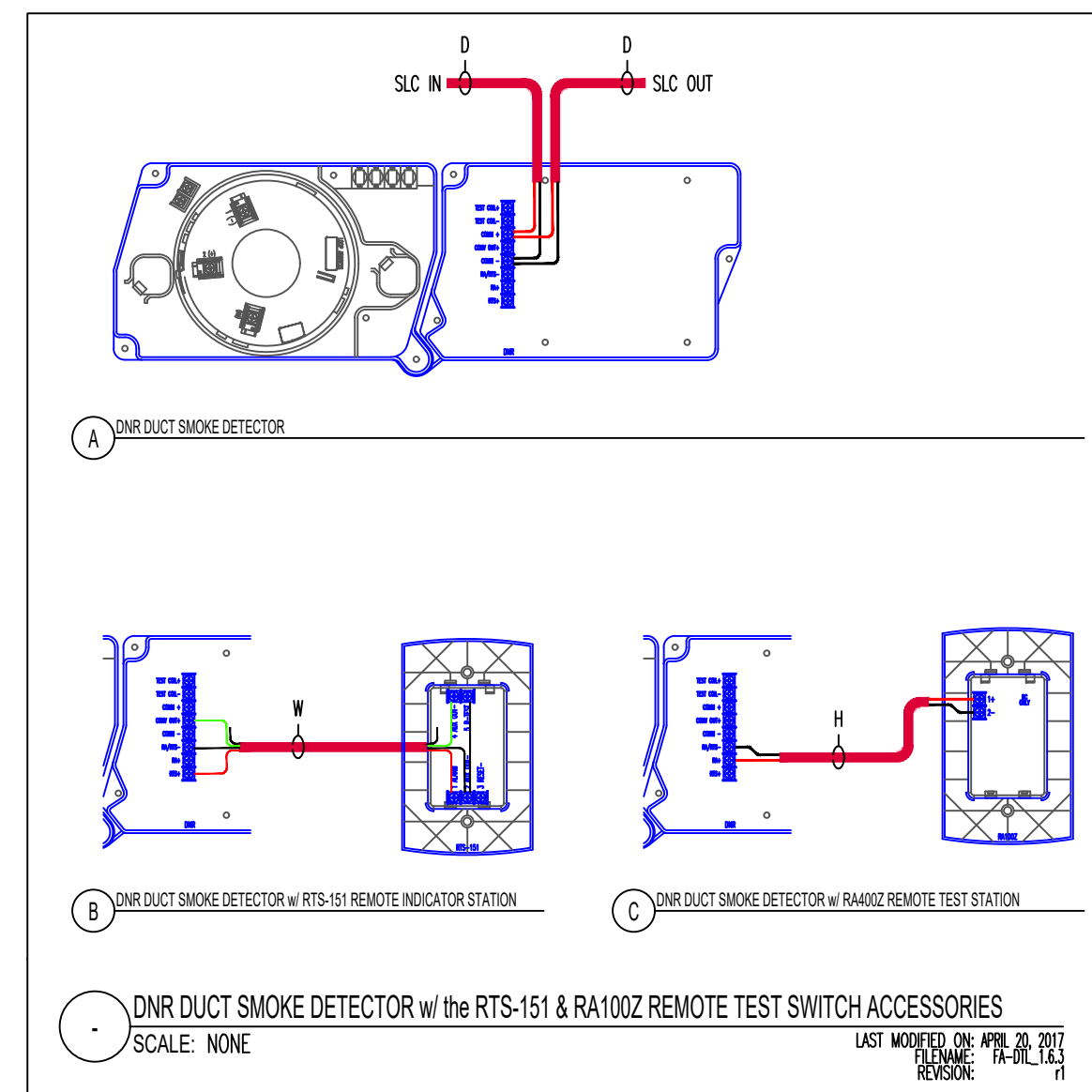
City of Puyallup
Development & Permitting Services
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Building	Planning
Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE
STEM BUILDING**
1601 39th Avenue SE
Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Add additional detectors	03/2/24	DK
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

SCALE: As Shown
PREPARED BY: APL
CHECKED BY: RM
DATE: 01/30/2023
PROJECT NO: 281716084
TITLE: RISER



**City of Puyallup
Development & Permitting Services
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Building	Planning
Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE
STEM BUILDING**
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Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Add additional detectors	03/2024	DK
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

SCALE: **As Shown**

PREPARED BY: **APL**

CHECKED BY: **RM**

DATE: **01/30/2023**

PROJECT NO: **281716084**

TITLE: **WIRING DETAILS**

SHEET: **FA-3-1**

NOTIFIER System Power Requirements

Notifier NFS2-640 Fire Alarm Control Panel

Protected Premises: PIERCE COLLEGE STEM BUILD Date: 4/11/2023
 Address: 1601 39TH AVE SE
 City: PUYALLUP State: WA Zip: 98374

Prepared By: ADT COMMERCIAL Phone: _____
 Address: 21312 30TH AVE SE Email: JOHNPELATA@ADT.COM
 City: BOTHELL State: WA Zip: 98021

Clear Project Information

AC Branch Current Requirements 5.00 AMPS @ 120 VAC

Current required by source to power the fire alarm system.

Primary Standby Load 0.64 Amps

Current load on the primary power supply during non-alarm conditions.

Primary Alarm Load 1.04 Amps

Current load on the primary power supply during alarm conditions.

Secondary Load Requirements 3.59 Amp Hours

Total Secondary Load from the calculation table below.

Current Draw	Time (hours)	Total (AH)
Secondary Standby Load 0.681 A	Required Standby Time 4 hours	2.73
Secondary Alarm Load 1.076 A	Required Alarm Time 0.25 hours	0.27
Total Secondary Load		2.99
Derating Factor x 1.2		3.59
Secondary Load Requirements (Amp Hours)		

Battery Selection 7 Amp Hours

Select batteries from the list below.
 7 AH BAT-1270 Battery (12 volt)

Battery Distribution Chart
 Shows amp-hour distribution of your selections.

Comments

- Batteries will fit in the FACP cabinet.
- Selected battery size meets secondary load requirements.
- The selected batteries (18AH) are within the charger range of this power supply (18-200AH).

Spare Battery Capacity	3.41	Battery Selection (AH) - Secondary Load Requirements (AH)	3.59
Secondary Standby Load	3.27	Secondary Standby Load (AH) * Derating Factor	3.93
Secondary Alarm Load	0.32	Secondary Alarm Load (AH) * Derating Factor	0.39

NOTIFIER System Power Requirements

NFC-50/100 Digital Audio Amplifier

Protected Premises: PIERCE COLLEGE STEM BUILD Date: 4/12/2023
 Address: 161 39TH AVE SE
 City: PUYALLUP State: WA Zip: 98374

Prepared By: ADT COMMERCIAL Phone: _____
 Address: 21312 30TH AVE SE Email: johnpelata@adt.com
 City: BOTHELL State: WA Zip: 98021

Clear Project Information

AC Branch Current Requirements 3.50 AMPS @ 120 VAC

Current required by source to power the fire alarm system.

Secondary Load Requirements 11.88 Amp Hours

Total Secondary Load from the calculation table below.

Current Draw	Time (hours)	Total (AH)
Secondary Standby Load 0.372 A	Required Standby Time 24 hours	8.93
Secondary Alarm Load 3.881 A	Required Alarm Time (hours) 0.25 hours	0.97
Total Secondary Load		9.90
Derating Factor x 1.2		11.88
Secondary Load Requirements		

Battery Selection 18 Amp Hours

Select batteries from the list below.
 18 AH BAT-12180 Battery (12 volt)

Battery Distribution Chart
 Shows amp-hour distribution of your selections.

Comments

- Batteries will fit in the FACP cabinet.
- Selected battery size meets secondary load requirements.
- The selected batteries (18AH) are within the charger range of this power supply (12-26AH).

Spare Battery Capacity	6.12	Battery Selection (AH) - Secondary Load Requirements (AH)	18
Secondary Standby Load	10.71	Secondary Standby Load (AH) * Derating Factor	12.85
Secondary Alarm Load	1.16	Secondary Alarm Load (AH) * Derating Factor	1.39

NOTIFIER Device Current Draw

NFC-50/100 Digital Audio Amplifier

Quantity x (device current draw) = total current draw per device (in amps)

Part Number	Qty	Primary Non-Alarm	Primary Alarm	Secondary Non-Alarm	Secondary Alarm
NFC-50/100 Primary Console	1	x [0.25000] = 0.25000	x [0.25000] = 0.25000	x [0.25000] = 0.25000	x [0.44600] = 0.44600
NFC-50A-50/70V Optional Amplifier	1	x [0.10000] = 0.10000	x [0.00000] = 0.00000	x [0.23500] = 0.23500	x [0.11200] = 0.11200
SPSCW15	7	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.01600] = 0.11200	x [0.11600] = 0.81200
SPSCW75	12	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.01600] = 0.19200	x [0.01600] = 0.19200
SPSCW15	13	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.03200] = 0.41600	x [0.03200] = 0.41600
SPSCW30	2	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.03200] = 0.06400	x [0.03200] = 0.06400
SPSCW75	63	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.03200] = 2.01600	x [0.03200] = 2.01600
SPSCW150	1	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.01600] = 0.01600	x [0.01600] = 0.01600
SPWL	3	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.03200] = 0.09600	x [0.03200] = 0.09600
SPCWL	9	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.03200] = 0.28800	x [0.03200] = 0.28800
Total (Amperes):		0.37200 A	0.37200 A	3.88100 A	3.88100 A

NOTIFIER Device Current Draw

NFS2-640 Fire Alarm Control Panel

Quantity x (device current draw) = total current draw per device (in amps)

Part Number	Qty	Primary Non-Alarm	Primary Alarm	Secondary Non-Alarm	Secondary Alarm
CPUZ-640	1	x [0.25000] = 0.25000	x [0.25000] = 0.25000	x [0.25000] = 0.25000	x [0.44600] = 0.44600
CPS-24	1	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.04000] = 0.04000	x [0.04000] = 0.04000
# of NACs in use	1	x [0.03500] = 0.03500	x [0.03500] = 0.03500	x [0.03500] = 0.03500	x [0.03500] = 0.03500
KDM-R2 (Backlight On)	1	x [0.10000] = 0.10000	x [0.10000] = 0.10000	x [0.10000] = 0.10000	x [0.10000] = 0.10000
LEM-320 (SLC2)	1	x [0.10000] = 0.10000	x [0.10000] = 0.10000	x [0.10000] = 0.10000	x [0.10000] = 0.10000
NFC-50/100	1	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.00000] = 0.00000
FDU-80	1	x [0.06430] = 0.06430	x [0.06430] = 0.06430	x [0.06430] = 0.06430	x [0.06430] = 0.06430
UDACT-2 Communicator	1	x [0.05200] = 0.05200	x [0.08700] = 0.08700	x [0.05200] = 0.05200	x [0.05200] = 0.05200
FSP-951	237	x [0.00020] = 0.04740	x [0.00000] = 0.00000	x [0.00020] = 0.04740	x [0.00020] = 0.04740
FST-951	4	x [0.00020] = 0.00080	x [0.00000] = 0.00000	x [0.00020] = 0.00080	x [0.00020] = 0.00080
FSP-951R	14	x [0.00020] = 0.00280	x [0.00000] = 0.00000	x [0.00020] = 0.00280	x [0.00020] = 0.00280
NBG-12LX	1	x [0.00038] = 0.00038	x [0.00000] = 0.00000	x [0.00038] = 0.00038	x [0.00038] = 0.00038
FRM-1	15	x [0.00026] = 0.00383	x [0.00000] = 0.00000	x [0.00026] = 0.00383	x [0.00026] = 0.00383
SLC Loop Device Activation Current	2	x [0.00000] = 0.00000	x [0.20000] = 0.40000	x [0.00000] = 0.00000	x [0.00000] = 0.00000
Total (Amperes):		0.6565 A	1.0363 A	0.6565 A	0.6565 A

Part Number	Qty	Secondary Alarm
Total Primary Alarm Load - C2	1	x [1.03630] = 1.03630
CPS-24	1	x [0.04000] = 0.04000
Total (Amperes):		1.0763 A

PSE-10 Battery Calculation

Note 1: You are fully responsible for verifying these calculations.
 Note 2: You only need to make entries in the yellow cells.

Calculation in Total Sheet

Standby Load Current (Amps)	0.1560 Amps	X	24 Hours	=	3.744 AH
Alarm Load Current (Amps)	3.5760 Amps	X	0.25 Hours	=	0.894 AH
Total Current Load		4.64 AH			
*Multiply by the Derating Factor		1.2	x 1.20		
Total Amperes Hours Required		5.57 AH			

PSE-10 Circuit Detail

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-30	1	x 0.00000 = 0.00000	0.00000	1	x 0.06300 = 0.06300	0.06300
SCWL-30	2	x 0.00000 = 0.00000	0.00000	2	x 0.06300 = 0.12600	0.12600
Total Standby Load		0.00000		Total Alarm Load		0.18900

PSE-10 Battery Calculation

Note 1: You are fully responsible for verifying these calculations.
 Note 2: You only need to make entries in the yellow cells.

Calculation in Total Sheet

Standby Load Current (Amps)	0.1560 Amps	X	24 Hours	=	3.744 AH
Alarm Load Current (Amps)	3.5410 Amps	X	0.25 Hours	=	0.885 AH
Total Current Load		4.63 AH			
*Multiply by the Derating Factor		1.2	x 1.20		
Total Amperes Hours Required		5.56 AH			

PSE-10 Circuit Detail

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-15	3	x 0.00000 = 0.00000	0.00000	3	x 0.04100 = 0.12300	0.12300
SPSCWL-75	7	x 0.00000 = 0.00000	0.00000	7	x 0.11100 = 0.77700	0.77700
Total Standby Load		0.00000		Total Alarm Load		0.90000

PSE-10 Battery Calculation

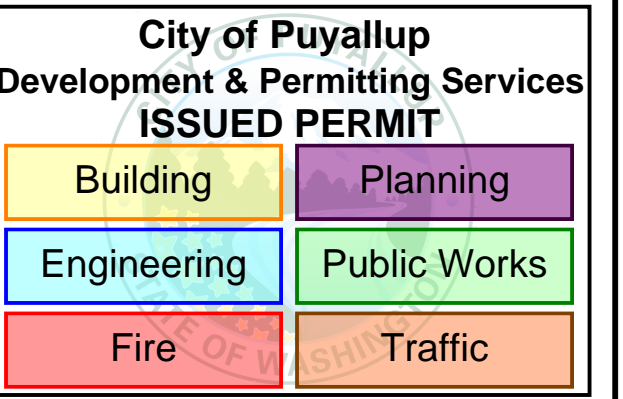
Note 1: You are fully responsible for verifying these calculations.
 Note 2: You only need to make entries in the yellow cells.

Calculation in Total Sheet

Standby Load Current (Amps)	0.1560 Amps	X	24 Hours	=	3.744 AH
Alarm Load Current (Amps)	4.0840 Amps	X	0.25 Hours	=	1.021 AH
Total Current Load		4.77 AH			
*Multiply by the Derating Factor		1.2	x 1.20		
Total Amperes Hours Required		5.72 AH			

PSE-10 Circuit Detail

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-75	9	x 0.00000 = 0.00000	0.00000	9	x 0.11100 = 0.99900	0.99900
SCWL-15	1	x 0.00000 = 0.00000	0.00000	1	x 0.04100 = 0.04100	0.04100
Total Standby Load		0.00000		Total Alarm Load		1.04000



PIERCE COLLEGE
 STEM BUILDING
 1601 39th Avenue SE
 Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Add additional detectors	03/20/24	DK
Rev#2	Description	date	By
Rev#3	Description	date	By
Rev#4	Description	date	By
Rev#5	Description	date	By

SCALE: As Shown
 PREPARED BY: APL
 CHECKED BY: RM
 DATE: 01/30/2023
 PROJECT NO: 281716084
 TITLE: Battery Calculations