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PLOT DATE: 08-Jul-2025 CAD FILE: L:\(2) active jobs\lc241005 - cascade christian portables- ray ossman\(5) designs\(1) fire alarm\CAD DWG\PHASE 2\FA0.00 Project Info.dwg

CASCADE CHRISTIAN SCHOOL CAMPUS

FIRE ALARM

811 21ST ST SE, PUYALLUP, WA 98372

TENANT IMPROVEMENT

SYMBOL LEGEND

SYMBOL	PART #	QTY	MANUFACTURER	DESCRIPTION	MOUNT DEVICE	MOUNT ACCESSORY
FAXP	SK-5895XL	1	SILENT KNIGHT	6 AMP FIRE ALARM NOTIFICATION POWER EXPANDER	SURFACE MOUNT	MANUFACTURER PROVIDED
NAC	SK-5495	1	SILENT KNIGHT	6 AMP POWER SUPPLY	SURFACE MOUNT	
AMP	EVS-50	1	SILENT KNIGHT	INTELLIGENT 50W AMPLIFIER	SG ON 4 SQ DP	SG RING
	SWL	4	SYSTEM SENSOR	STROBE WALL	SG ON 4 SQ DP	SG RING
	SK-HEAT	4	SILENT KNIGHT	HEAT DETECTOR		
	SK-PHOTO	8	SILENT KNIGHT	SMOKE DETECTOR		
P	SK-PULL	4	SILENT KNIGHT	PULL STATION		

FIRE ALARM WIRE LEGEND

SYMBOL	DESCRIPTION	CONDUCTOR COLOR	AWG	CIRCUIT TYPE
A	ADDRESSABLE INITIATING CIRCUIT	(-) BLACK	#16	THWN-SOLID
		(+) RED	#16	
B	NOTIFICATION APPLIANCE CIRCUIT	(-) GREEN	#14	THWN-SOLID
		(+) WHITE	#14	
C	FIRE FIGHTER PHONE VOICE CIRCUIT	(-) BLACK	#16	THWN-SOLID
		(+) RED	#16	
D	FIRE FIGHTER PHONE SLC CIRCUIT	(-) BLACK	#16	THWN-SOLID
		(+) RED	#16	
E	ANNUNCIATOR CIRCUIT W/ 24VDC PWR	(-) BLACK	#16	THWN-SOLID
		(+) RED	#16	THWN-SOLID
		(-) GREEN	#16	THWN-SOLID
		(+) WHITE	#16	THWN-SOLID
F	2-WAY COMMUNICATION SYSTEM POWER			
G	2-WAY COMMUNICATION VOICE CIRCUIT			CI-TSP (2-PAIR) CMR
H	TELCO SERVICE CONNECTION			
I	VOICE EVACUATION SPEAKER CIRCUIT	(-) BLACK	#16	TSP-W/DRAIN FPLP
		(+) RED	#16	
J	24 VDC AUX POWER CIRCUIT	(-) BLACK	#16	THWN-SOLID
		(+) RED	#16	
K	2-WAY COMMUNICATION POWER SUPERVISION CIRCUIT			16/2 FPLP
S	RS485-UNDERGROUND RATED VOICE EVACUATION SPEAKER CIRCUIT	(-) BLACK	#16	TSP-W/DRAIN FPLP
		(+) RED	#16	

INSTALLATION & GENERAL WIRING NOTES:

GENERAL NOTES:

1. HVAC CONTRACTOR SHALL PROVIDE, INSTALL AND PROVIDE POWER TO ANY REQUIRED DUCT DETECTORS. HVAC CONTRACTOR SHALL ALSO MAKE ALL CONNECTIONS AND TERMINATIONS TO HVAC SYSTEMS TO FACILITATE FAN SHUT DOWN FROM DUXT DETECTORS AND HVAC CONTRACTOR SHALL ALSO MAKE AVAILABLE A COMMON TERMINATION POINT FOR CONNECTION TO THE FIRE ALARM SYSTEM TO FACILITATE SHUT DOWN UPON RECEIPT OF A GENERAL FIRE ALARM IF SUCH A FUNCTION IS REQUIRED PER APPLICABLE BUILDING CODES.
1. ELEVATOR CONTRACTOR SHALL MAKE ALL NECESSARY CONTROL CONNECTIONS INSIDE ELEVATOR CONTROL EQUIPMENT AND PROVIDE A REPRESENTATIVE IN A TIMELY MANNER TO FACILITATE AN ELEVATOR SYSTEMS PRETEST PRIOR TO REQUESTING AN ELEVATOR SYSTEMS FINAL INSPECTION.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED 120V 20 AMP DEDICATED CIRCUITS AS NECESSARY TO POWER ALL FIRE ALARM CONTROL EQUIPMENT AND LABEL ELECTRICAL SERVICE PANEL CLEARLY IN RED TO INDICATE FIRE ALARM POWER CIRCUITS. ALL FIRE ALARM POWER CIRCUIT BREAKERS WILL HAVE LOCK OUT DEVICES INSTALLED BY ELECTRICAL CONTRACTOR.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND TERMINATE ALL REQUIRED CONNECTIONS TO SMOKE DAMPERS IF PRESENT AND PROVIDE AND TERMINATE THE LINE VOLTAGE POWER CONNECTIONS TO A 24VDC COIL RELAY LOCATED AT THE FIRE ALARM CONTROL PANEL TO FACILITATE CONNECTION TO SAID RELAY FOR THE PURPOSE OF ACTIVATING SMOKE DAMPER UPON RECEIPT OF GENERAL FIRE ALARM.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT NECESSARY TO FACILITATE ACCESS TO OTHERWISE UNREACHABLE PORTIONS OF THE STRUCTURE AND/OR LOCATIONS DETACHED FROM THE STRUCTURE THAT REQUIRE CONNECTION TO THE FIBER ALARM SYSTEM INCLUDING BUT NOT LIMITED TO THE SPRINKLER SYSTEM POST INDICATOR, VALVES REMOTE WATER SUPPLY PITS THAT WILL CONTAIN TAMPER SWITCHES, ETC.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL BOXES AND HARDWARE NECESSARY TO FACILITATE ABOVE LISTED ELECTRICAL SCOPE OF SYSTEMS INTEGRATION.
6. GENERAL CONTRACTOR SHALL COORDINATE AND BE MADE RESPONSIBLE FOR THE COMPLETION OF ALL TRADES INVOLVED IN THE FIRE ALARM SYSTEM INSTALLATION PROCESS.
7. THESE DRAWINGS RELATE TO FIRE ALARM INSTALLATION ONLY AND IN NO WAY SHOULD BE CONSTRUED AS GENERAL CONSTRUCTION DOCUMENTS OR AN ADDENDUM TO ANY OTHER CONSTRUCTION DRAWINGS.

INSTALLATION NOTES:

1. ALL CIRCUITS TO BE CLASS B SUPERVISION, FIRE ALARM SYSTEM TO REPORT BY DEVICE ADDRESSABLE POINT IN MULTIPLEX SYSTEM OR BY ZONE IN CONVENTIONAL SYSTEMS AS NOTED IN SUBMITTAL DOCUMENTS AND THIS PAGE.
2. ALL WIRING TO BE POWER LIMITED AND PROPERLY RATED FOR INSTALLATION ENVIRONMENT.
3. SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 36" OF ANY AIR DIFFUSER..
   - 3.1. ANY SMOKE DETECTORS THAT HAVE BEEN INSTALLED PRIOR TO CLEAN-UP MUST BE CLEANED OR REPLACED AND WILL BE INVOICED ON A T&M BASIS.
4. WALL MOUNTED NOTIFICATION DEVICES BACKBOX BETWEEN A MINIMUM OF 80" AFF TO A MAXIMUM OF 96" AFF.
   - 4.1. DEVICES THAT ARE UNABLE TO BE MOUNTED WITHIN THAT RANGE MUST BE VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
5. ALL MANUAL PULL STATIONS ARE TO BE MOUNTED AT A HEIGHT NO GREATER THAN 48" TO TOP AND NO LOWER THAN 36" TO BOTTOM (PER ADA REQUIREMENTS).
6. FACP TO BE OPERATED AT A TEMPERATURE NO LOWER THAN 32 DEGREES.
7. FIELD VERIFY ALL SPRINKLER MONITORING DEVICES WITH FIRE PROTECTION CONTRACTOR
8. FIELD VERIFY ALL HVAC, FAN CONTROL, FIRE/SMOKE DAMPERS AND DUCT DETECTORS LOCATIONS WITH MECHANICAL CONTRACTOR
9. FACP SHALL NOT BE ENERGIZED WITHOUT THE PRESENCE OF LINX INTEGRATED TECHNICIANS.
10. NO TAPPING OF SIGNALING OR INITIATING ZONE CIRCUITS ARE ALLOWED. T-TAPPING OF STYLE 4 ADDRESSABLE CIRCUITS IS ALLOWED PROVIDING A SPLICE IS PROFESSIONALLY INSTALLED, POLARITY IS OBSERVED AND SHIELDS ARE CONTINUOUS AND FREE OF GROUNDS. SHIELDS MUST BE TERMINATED AT FACP ONLY.
    - 10.1. CABLE SHIELDS SHALL BE SPLICED TOGETHER AT EVERY JUNCTION BETWEEN THE FACP AND THE LAST DEVICE ON EACH CABLE RUN. SHIELDS AND OTHER FIRE ALARM CONDUCTORS (EXCEPT POWER GROUNDS) SHALL BE INSULATED AND COMPLETELY FREE FROM CONDUIT OR EARTH GROUNDS. SHIELDS WILL BE TIES TO GROUND ONLY AT THE FACP BY THE LINX INTEGRATED FIELD TECHNICIAN.

SHEET SCHEDULE:

PAGE #	SHEET #	DESCRIPTION
1	FA-0.0	COVER PAGE
2	FA-0.1	BATTERY CALCS
3	FA-1.1	SITE PLAN
4	FA-1.2	PORTABLES 1-5
5	FA-1.3	PORTABLES 6-10

FIRE ALARM / LIFE SAFETY PROVIDER:

LINX INTEGRATED

11409 58TH AVE E | PUYALLUP | WA | 98373

P: 253-848-3036 F: 253-848-0542

SALES / ESTIMATOR:	PROJECT MANAGER:	DESIGNER:
DAVID JUSTICE	DAVID JUSTICE	ALEXANDRA DISLA
david-j@linxnw.com	david-j@linxnw.com	alexandrad@linxnw.com
253-241-4125	253-241-4125	253-389-2372

1 AREA MAP

SCALE: NO SCALE

City of Puyallup Fire REVIEWED FOR COMPLIANCE DDrake 07/11/2025 10:44:48 AM

THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

LINX integrated PUYALLUP ■ SPOKANE

11409 58Th Ave E-Puyallup, WA. PH 253-848-6998 FX 253-848-0542

DESIGNER OF RECORD

PAUL J. POWLOSKI
Engineering Technician, Level III
Fire Alarm Systems
NICET Certifcation Number: 148653
Authorizing Signature:

CITY APPROVAL STAMP

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

CASCADE CHRISTIAN SCHOOL CAMPUS
FIRE ALARM
811 21ST ST SE, PUYALLUP, WA 98372
TENANT IMPROVEMENT

TYPE OF WORK

REV	DATE	BY	DESCRIPTION
0	DATE	XXX	DESCRIPTION
1	DATE	XXX	DESCRIPTION
2	DATE	XXX	DESCRIPTION
3	DATE	XXX	DESCRIPTION
4	DATE	XXX	DESCRIPTION
5	DATE	XXX	DESCRIPTION

PROJECT NUMBER: LC24XXXX

SHEET TITLE: PROJECT INFO

DESIGNER: ALEXANDRA DISLA, FIRE ALARM DESIGNER | DATE: 07/02/2024

SHEET: FA-0.0

WHEN PRINTED ON ARCH-D (24x36)

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5820XL-EVS Calculations
Version 10.24.14

Global Project Values:

Project Name:	CASCADE CHRISTIAN JR HIGH	Standby Hours:	24
Project ID:	PO180002	Alarm Mins:	15
Prepared By:	DAVID JUSTICE	Derating Factor:	1.2
Date:	10/18/2023	Voltage Drop Warning Threshold %:	15

Panel ID:	5820XL-EVS	Model:	5820XL-EVS Add, Fire Alarm Control
Location:	SPRINKLER RISER ROOM	Volts:	24 VDC

Max NAC Current: 3.0 Amps
Max Panel Current: 6.0 Amps

Ckt.#	Circuit Name	Qty	Current Draw Standby	Current Draw Alarm	Wire AWG & Type	Ohms Per 1000 Ft.	Length(ft) One-Way	Actual Ohms	Volts @ EOL	%Drop
5820XL-EVS	5820XL-EVS CTRL Panel	1	0.275	0.440						
SK	Photo, Photo-T, Photo-R	162	0.049	0.049						
SK	Ion		0.000	0.000						
SK	Heat, Heat-HT		0.000	0.000						
SK	Heat ROR	0	0.000	0.000						
SK	Beam, Beam-T		0.000	0.000						
SK	Duct	2	0.001	0.001						
SK	Acclimate		0.000	0.000						
SK	Fire-CO		0.000	0.000						
SK	Control	1	0.000	0.000						
SK	Control-R		0.000	0.000						
SK	Monitor, Minimon	11	0.004	0.004						
SK	Monitor-2	0	0.000	0.000						
SK	Monitor-10		0.000	0.000						
SK	Pull-SA, Pull-DA	10	0.004	0.004						
SK	Relay	4	0.001	0.001						
SK	Relay-6		0.000	0.000						
SK	Zone		0.000	0.000						
SK	Zone-6		0.000	0.000						
SK	Relay-Mom-2		0.000	0.000						
SK	Isolator Module		0.000	0.000						
B224RB	Isolator Base		0.000	0.000						
B200SR	Sounder Base		0.000	0.000						
B200S	Sounder Base		0.000	0.000						
B200SB-LF	Low Freq Sounder Base		0.000	0.000						
B200S-LF	Low Freq Sounder Base		0.000	0.000						
B224RB	Relay Base		0.000	0.000						
RTS151	Magnetic Remote Test		0.000	0.000						
RTS151KEY	Key Activated Test		0.000	0.000						
RA100Z	Remote LED		0.000	0.000						
5815XL	SLC Loop Expander	1	0.055	0.055						
5880	LCD Remote Annunc	1	0.020	0.020						
5824	Serial/Parallel Module		0.000	0.000						
5496	Power Expander		0.000	0.000						
5895XL	Power Expander		0.000	0.000						
5865-4	LED Annunciator (4G)		0.000	0.000						
5865-3	LED Annunciator (3G)		0.000	0.000						
5880	LED Driver Module		0.000	0.000						
5883	Relay Module		0.000	0.000						
EVS-VOM	Voice Control Module		0.000	0.000						
EVS-SW24	Switch Expander		0.000	0.000						
EVS-AMP	50W, 100W, or 125W	1	0.010	0.010						
EVS-RVM	Remote Voice Module		0.000	0.000						
EVS-100WBU	Backup Amp Card		0.000	0.000						
PGM-FD #1	Notification Appl Circuit	+Bb	0.000	0.160	#14 SHIELD	2.52	30	0.15	20.38	0.12%
PGM-FD #2	Notification Appl Circuit	+Bb	0.000	0.202	#14 SHIELD	2.52	20	0.10	20.38	0.10%
PGM-FD #3	Notification Appl Circuit	+Bb	0.000	0.000	#14 SHIELD	2.52		0.00	20.40	0.00%
PGM-FD #4	Notification Appl Circuit	+Bb	0.000	0.000	#14 SHIELD	2.52		0.00	20.40	0.00%
PGM-FD #5	Notification Appl Circuit	+Bb	0.000	0.000	#14 SHIELD	2.52		0.00	20.40	0.00%
PGM-FD #6	Notification Appl Circuit	+Bb	0.000	0.000	#14 SHIELD	2.52		0.00	20.40	0.00%
	Total Standby Current (Amps)		0.416	0.004	Total Alarm Current (Amps)					
	Standby Time In Hours		24	0.250	Alarm Time In Minutes / 60			(15 Mins)		
	Total Standby AH Required		10.042	0.001	Total Alarm AH Required					
	Total Combined AH Required		10.04							
	Multiply By The Derating Factor		1.20							
	Minimum Battery Amphours Required		12.05							

Command Shortcuts

dB LINE LOSS CALCULATION

CASCADE CHRISTIAN JR High

INT-80

SPEAKERS

50.00 WATTS AVAILABLE
15.75 WATTS USED
34.25 WATTS SPARE

	DEVICE POWER (WATTS)	SIGNAL CIRCUIT 1 QTY	SIGNAL CIRCUIT 1 WATTS	SIGNAL CIRCUIT 2 QTY	SIGNAL CIRCUIT 2 WATTS	SIGNAL CIRCUIT QTY	SIGNAL CIRCUIT WATTS	SIGNAL CIRCUIT QTY	SIGNAL CIRCUIT WATTS	SIGNAL CIRCUIT QTY	SIGNAL CIRCUIT WATTS	SIGNAL CIRCUIT QTY	SIGNAL CIRCUIT WATTS	SIGNAL CIRCUIT QTY	SIGNAL CIRCUIT WATTS	QTY TOTAL
Speaker 25V																
Speaker - 1/8 Watt Tap	0.13		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 1/4 Watt Tap	0.25		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 1/2 Watt Tap	0.50		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 1 Watt Tap	1.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 2 Watt Tap	2.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 4 Watt Tap	4.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 7.5 Watt Tap	7.50		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 8 Watt Tap	8.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 15 Watt Tap	15.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker 70.7V																
Speaker - 1/8 Watt Tap	0.13		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 1/4 Watt Tap	0.25	50	12.50	13	3.25		0.00		0.00		0.00		0.00		0.00	63
Speaker - 1/2 Watt Tap	0.50		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 1 Watt Tap	1.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 2 Watt Tap	2.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 4 Watt Tap	4.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 7.5 Watt Tap	7.50		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 8 Watt Tap	8.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
Speaker - 15 Watt Tap	15.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	0
TOTAL POWER ON CIRCUIT		12.50 WATTS		3.25 WATTS		0.00 WATTS		0.00 WATTS		0.00 WATTS		0.00 WATTS		0.00 WATTS		
LOAD RESISTANCE		400 OHMS		1538 OHMS		0 OHMS		0 OHMS		0 OHMS		0 OHMS		0 OHMS		
TOTAL WIRE LENGTH		2500 FT.		1700 FT.		FT.		FT.		FT.		FT.		FT.		
WIRE SIZE		16 AWG		16 AWG		16 AWG		16 AWG		16 AWG		16 AWG		16 AWG		
TOTAL WIRE RESISTANCE		25.4 OHMS		17.272 OHMS		0 OHMS		0 OHMS		0 OHMS		0 OHMS		0 OHMS		
POWER LINE LOSS (dB)		-0.27 dB		-0.05 dB		dB		dB		dB		dB		dB		
CIRCUIT LOCATION		-0.61, 1 & 2														

TOTAL WIRE RESISTANCE (WR)= (RESISTANCE / 1000) x DISTANCE

WIRE RESISTANCE (Ohms/Kft)*
16 AWG = 8.08
16 AWG = 5.08
14 AWG = 3.26
12 AWG = 2.05

LOAD RESISTANCE (LR)= (VOLTAGE x VOLTAGE) / POWER

POWER LINE LOSS (dB) = 10 x Log (1- (WR / (WR+LR))

*Values per NFPA 70

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LINX integrated
PUYALLUP ■ SPOKANE
11409 56Th Ave E-Puyallup, WA. PH 253-848-6988 FX 253-848-0542

DESIGNER OF RECORD

Paul J. Pinkston
Fire Protection Engineering Technician 4
NICET Certification

CITY APPROVAL STAMP

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

CASCADE CHRISTIAN SCHOOL CAMPUS
FIRE ALARM
TENANT IMPROVEMENT

TYPE OF WORK

REV.	DATE	BY	DESCRIPTION
1	DATE	XXX	DESCRIPTION
2	DATE	XXX	DESCRIPTION
3	DATE	XXX	DESCRIPTION
4	DATE	XXX	DESCRIPTION
5	DATE	XXX	DESCRIPTION
6	DATE	XXX	DESCRIPTION

PROJECT NUMBER: LC24XXXX
SHEET TITLE: BATTERY CALCS
DESIGNER: ALEXANDRA DELA
FIRE ALARM DESIGNER
DATE: 07/02/2024
SHEET: FA-1.0

WHEN PRINTED ON ARCH-D (24X36)

PLOT DATE: 08-Jul-2025 CAD FILE: L:\(2) active jobs\lc241005 - cascade christian portables - roy ossman\(5) designs\(1) fire alarm\CAD DWGs\PHASE 2\FA1.00 Project Info.dwg

5895XL Calculations

Version 10.24.14

Global Project Values:

Project Name:	CASCADE CHRISTIAN	Standby Hours:	24
Project ID:	PORTABLES	Alarm Mins:	15
Prepared By:	DAVID JUSTICE	Derating Factor:	1.2
Date:	7/9/2024	Voltage Drop Warning Threshold % :	10

Panel ID:	5895XL	Model:	5895XL Power Expander	Max NAC Current:	3.0 Amps
Location:	PORTABLE #5 MECH ROOM	Volts:	24 VDC	Max Panel Current:	6.0 Amps

Part.#	Description	Qty	Current Draw Standby	Current Draw Alarm	Wire AWG & Type		Ohms Per 1000 Ft.	Length(ft) One-Way	Actual Ohms	Volts @ EOL	%Drop
5895XL	5895XL Pwr Module	1	0.040	0.160							
SD500-AIM	Addr. Input Mod		0.000	0.000							
SD500-MIM	Mini-Input Module		0.000	0.000							
SD500-ARM	Addr. Relay Module		0.000	0.000							
SD500-PS	Addr. Pull Station	7	0.004	0.004							
SD505-AIS	Addr. Ion Smoke Det		0.000	0.000							
SD505-AHS	Addr. Heat Detector		0.000	0.000							
SD505-APS	Addr. Photo Smoke Det	36	0.020	0.020							
SD505-DUCTR	Addr. Duct w/Relay		0.000	0.000							
SD505-DUCT	Addr. Duct		0.000	0.000							
SD500-ANM	Addr. Notification Module		0.000	0.000							
SD500-LED	Addr. LED Module		0.000	0.000							
SD500-SDM	Addr. Smoke Det. Mod.		0.000	0.000							
SD505-6RB	Addr. Det. Relay Base		0.000	0.000							
SD505-6SB	Addr. Det. Sounder Base		0.000	0.000							
SD505-6IB	Addr. Det. Isolator Base		0.000	0.000							
SD500-LIM	Line Isolation Module		0.000	0.000							
5815XL	SLC Expander		0.000	0.000							
5860	LCD Remote Annunc		0.000	0.000							
5824	Serial/Parallel Module		0.000	0.000							
5496	Power Expander		0.000	0.000							
5895XL	Power Expander		0.000	0.000							
5865-4	LED Annunciator (4G)		0.000	0.000							
5865-3	LED Annunciator (3G)		0.000	0.000							
5880	LED Driver Module		0.000	0.000							
5883	Relay Module		0.000	0.000							
EVS-SW24	Switch Expander		0.000	0.000							
EVS-AMP	50W, 100W, or 125W	1	0.010	0.010							
EVS-RVM	Remote Voice Module		0.000	0.000							
EVS-100WBU	Backup Amp Card		0.000	0.000							
PGM-I/O #1	Notification Appl Circuit	cfg.	0.000	0.528	#14 Solid	▽	2.52	150	0.76	20.00	1.96%
PGM-I/O #2	Notification Appl Circuit	cfg.	0.000	1.264	#14 Solid	▽	2.52	300	1.51	18.49	9.37%
PGM-I/O #3	Notification Appl Circuit	cfg.	0.000	0.000	#12 Solid	▽	1.59		0.00	20.40	0.00%
PGM-I/O #4	Notification Appl Circuit	cfg.	0.000	0.000	#12 Solid	▽	1.59		0.00	20.40	0.00%
PGM-I/O #5	Notification Appl Circuit	cfg.	0.000	0.000	#12 Solid	▽	1.59		0.00	20.40	0.00%
PGM-I/O #6	Notification Appl Circuit	cfg.	0.000	0.000	#12 Solid	▽	1.59		0.00	20.40	0.00%
	Total Standby Current (Amps)		0.074	1.986	Total Alarm Current (Amps)						
	Standby Time In Hours		24	0.250	Alarm Time In Minutes / 60			(15 Mins)			
	Total Standby AH Required		1.768	0.496	Total Alarm AH Required						
	Total Combined AH Required		2.26								
	Multiply By The Derating Factor		1.20								
	Minimum Battery AmpHours Required		2.72								

NA

Command Shortcuts

Circuit Configuration

Project Information

Project Name:	CASCADE CHRISTIAN	Project ID:	PORTABLES
Prepared By:	DAVID JUSTICE	Date:	7/9/2024

Ckt. Number:	PGM-I/O #1	Panel ID:	5895XL
Ckt. Name:	Notification Appl Circuit	I/O Use:	Notification Appl Circuit ▽

Qty	Device		Current Draw Each Standby	Current Draw Each Alarm	Current Draw Total Standby	Current Draw Total Alarm
8	System Sensor S/SC Strobe (15cd)	▽	0.000	0.066	0.000	0.528
	Unused	▽	0.000	0.000	0.000	0.000
	Unused	▽	0.000	0.000	0.000	0.000
	Unused	▽	0.000	0.000	0.000	0.000
					0.000	0.000
				Totals	0.000	0.528

< Return To Main | Edit Device Database

Ckt. Number:	PGM-I/O #2	Panel ID:	5895XL
Ckt. Name:	Notification Appl Circuit	I/O Use:	Notification Appl Circuit ▽

Qty	Device		Current Draw Each Standby	Current Draw Each Alarm	Current Draw Total Standby	Current Draw Total Alarm
8	System Sensor S/SC Strobe (75cd)	▽	0.000	0.158	0.000	1.264
	Unused	▽	0.000	0.000	0.000	0.000
	Unused	▽	0.000	0.000	0.000	0.000
	Unused	▽	0.000	0.000	0.000	0.000
					0.000	0.000
				Totals	0.000	1.264

5495 Power Expander Calculations

Version 02.18.09

Global Project Values:

Project Name:	CASCADE CHRISTIAN PORTABLES	Standby Hours:	24
Project ID:	LC241005	Alarm Mins:	15
Prepared By:	DAVID JUSTICE	Derating Factor:	1.2
Date:	7/16/2024	Voltage Drop Warning Threshold % :	10

Panel ID:	5495	Model:	5495 Power Expander	Max NAC Current:	3.0 Amps
Location:	SPRINKLER RISER ROOM	Volts:	24 VDC	Max Panel Current:	6.0 Amps

Ckt.#	Circuit Name		Current Draw Standby	Current Draw Alarm	Wire AWG & Type		Ohms Per 1000 Ft.	Length(ft) One-Way	Actual Ohms	Volts @ EOL	%Drop
5495	5495 Pwr Module	1	0.075	0.205							
NAC #1	FUTURE PORTABLES 1-4	cfg.	0.000	0.384	#14 Solid	▽	2.52	500	2.52	19.43	4.74%
NAC #2	PORTABLES 11&12	cfg.	0.000	0.192	#14 Solid	▽	2.52	500	2.52	19.92	2.37%
NAC #3	5495 Circuit 3	cfg.	0.000	0.000	#14 Solid	▽	2.52		0.00	20.40	0.00%
NAC #4	5495 Circuit 4	cfg.	0.000	0.000	#14 Solid	▽	2.52		0.00	20.40	0.00%
Aux	5495 Aux Power Out	cfg.	0.000	0.000	#14 Solid	▽	2.52		0.00	20.40	0.00%
	Total Standby Current (Amps)		0.075	0.781	Total Alarm Current (Amps)						
	Standby Time In Hours		24	0.250	Alarm Time In Minutes / 60			(15 Mins)			
	Total Standby AH Required		1.800	0.195	Total Alarm AH Required						
	Total Combined AH Required		2.00								
	Multiply By The Derating Factor		1.20								
	Minimum Battery AmpHours Required		2.39								

Wire resistances are based upon an ambient temperature of 72 degrees F. Because of the minimal difference between solid and stranded wire no differential was made.

Circuit Configuration

Project Information

Project Name:	CASCADE CHRISTIAN PORTABLES	Project ID:	LC241005
Prepared By:	DAVID JUSTICE	Date:	7/16/2024

Ckt. Number:	NAC #1	Panel ID:	5495
Ckt. Name:	FUTURE PORTABLES 1-4	Max Circuit Current:	3 Amps

Qty	Device		Current Draw Each Standby	Current Draw Each Alarm	Current Draw Total Standby	Current Draw Total Alarm
4	System Sensor Speaker/Strobe 75cd	▽	0.000	0.096	0.000	0.384
	Unused	▽	0.000	0.000	0.000	0.000
	Unused	▽	0.000	0.000	0.000	0.000
	Unused	▽	0.000	0.000	0.000	0.000
					0.000	0.000
				Totals	0.000	0.384

< Return To Power Supply Config | Edit Device Database

Ckt. Number:	NAC #2	Panel ID:	5495
Ckt. Name:	PORTABLES 11&12	Max Circuit Current:	3 Amps

Qty	Device		Current Draw Each Standby	Current Draw Each Alarm	Current Draw Total Standby	Current Draw Total Alarm
2	System Sensor Speaker/Strobe 75cd	▽	0.000	0.096	0.000	0.192
	Unused	▽	0.000	0.000	0.000	0.000
	Unused	▽	0.000	0.000	0.000	0.000
	Unused	▽	0.000	0.000	0.000	0.000
					0.000	0.000
				Totals	0.000	0.192

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DESIGNER OF RECORD

PAUL J. POWLOSKI
Engineering Technician, Level III
Fire Alarm Systems
NICET Certifcation Number: 148653
Authorizing Signature:

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CASCADE CHRISTIAN SCHOOL CAMPUS

FIRE ALARM

TENANT IMPROVEMENT

TYPE OF WORK

REV	DATE	BY	DESCRIPTION
0	DATE	XXX	DESCRIPTION
1	DATE	XXX	DESCRIPTION
2	DATE	XXX	DESCRIPTION
3	DATE	XXX	DESCRIPTION
4	DATE	XXX	DESCRIPTION
5	DATE	XXX	DESCRIPTION

PROJECT NUMBER: LC24XXXX

SHEET TITLE: BATTERY CALCS

DESIGNER: ALEXANDRA DISLA, FIRE ALARM DESIGNER | DATE: 07/02/2024

SHEET: FA-1.1

WHEN PRINTED ON ARCH-D (24x36)

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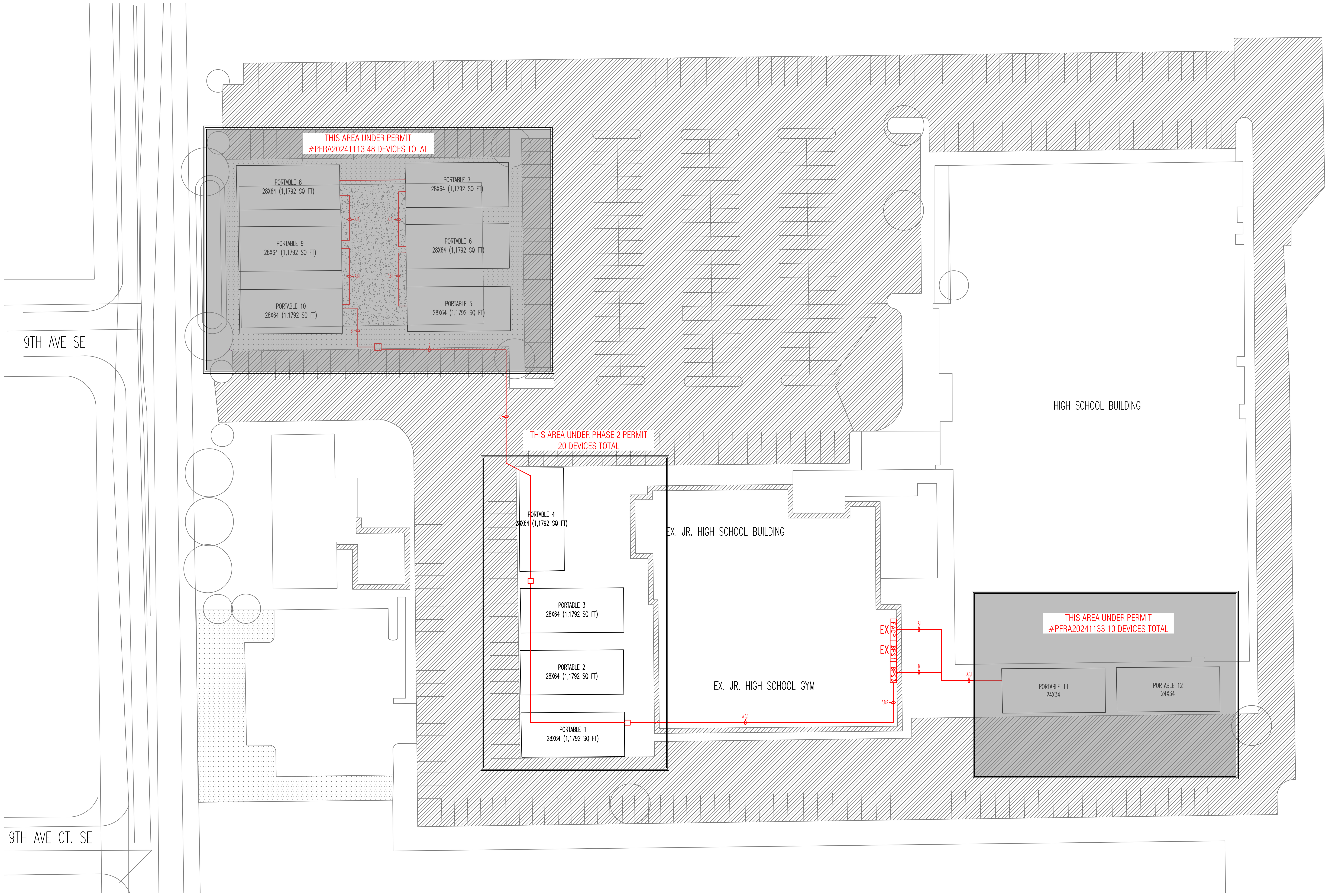
PLOT DATE: 08-Jul-2025 CAD FILE: L:\(2) active jobs\lc241005 - cascade christian portables- ray ossman\(5) designs\(1) fire alarm\CAD DWG\PHASE 2\FA0.00 Project Info.dwg



SITE PLAN

SCALE: 1/32" = 1'-0"

N E S W

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CASCADE CHRISTIAN SCHOOL CAMPUS

FIRE ALARM

TENANT IMPROVEMENT

TYPE OF WORK

REV	DATE	BY	DESCRIPTION
0	DATE	XXX	DESCRIPTION
1	DATE	XXX	DESCRIPTION
2	DATE	XXX	DESCRIPTION
3	DATE	XXX	DESCRIPTION
4	DATE	XXX	DESCRIPTION
5	DATE	XXX	DESCRIPTION

PROJECT NUMBER: LC24XXXX

SHEET TITLE: SITE PLAN

DESIGNER: ALEXANDRA DISLA, FIRE ALARM DESIGNER

DATE: 07/02/2024

SHEET: FA-2.1

WHEN PRINTED ON ARCH-D (24x36)

PLOT DATE: 08-Jul-2025 CAD FILE: L:\(2) active jobs\lc241005 - cascade christian portables- roy ossman\(5) designs\(1) fire alarm\CAD DWG\PHASE 2\Level 01 FAS Layout.dwg

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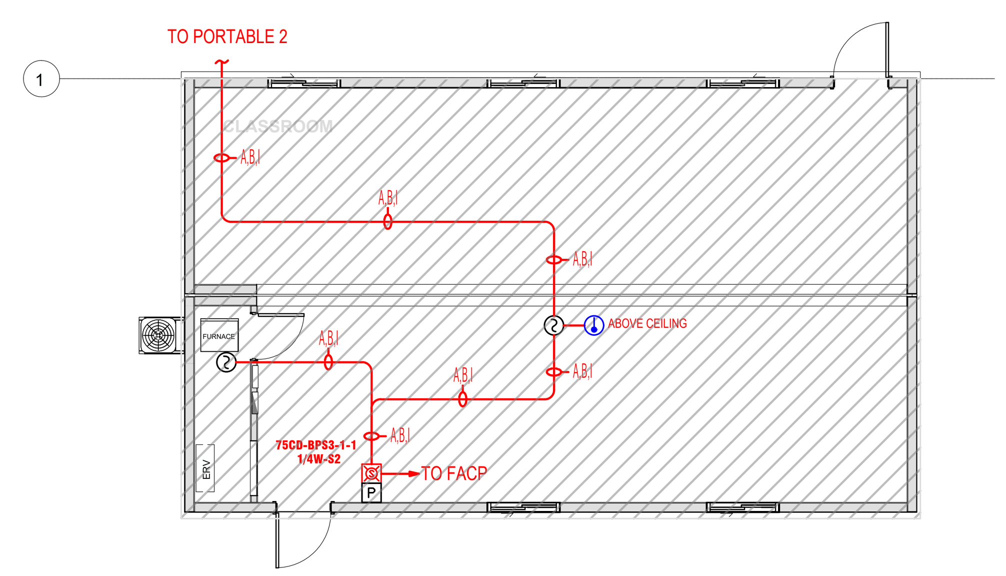
THIS AREA UNDER PHASE 2 PERMIT
20 DEVICES TOTAL



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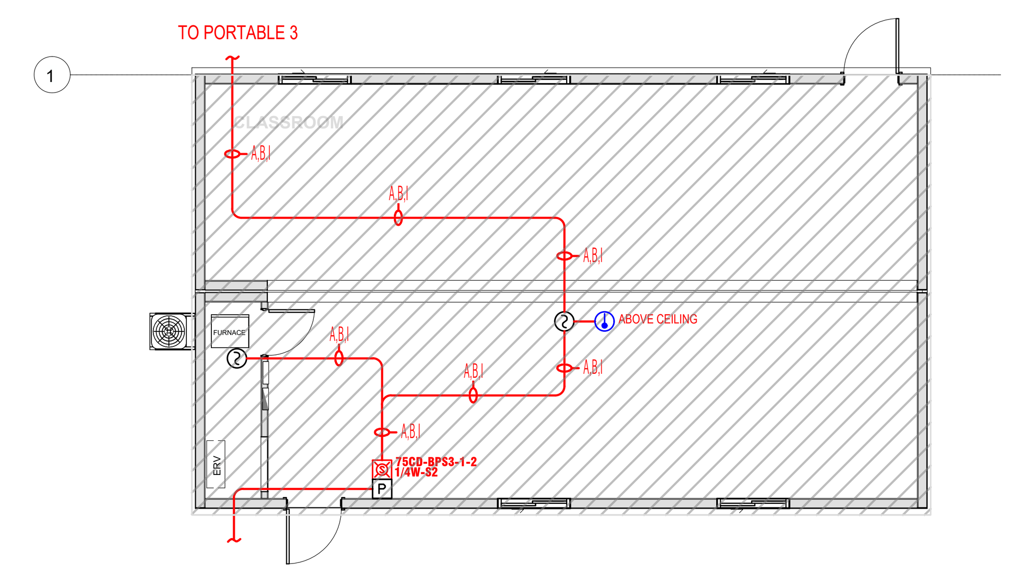

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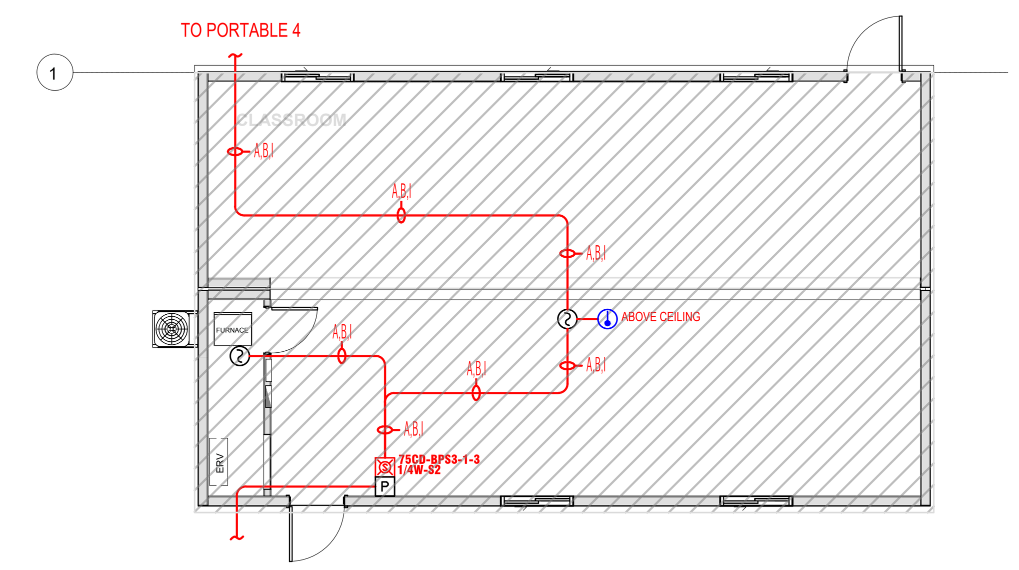

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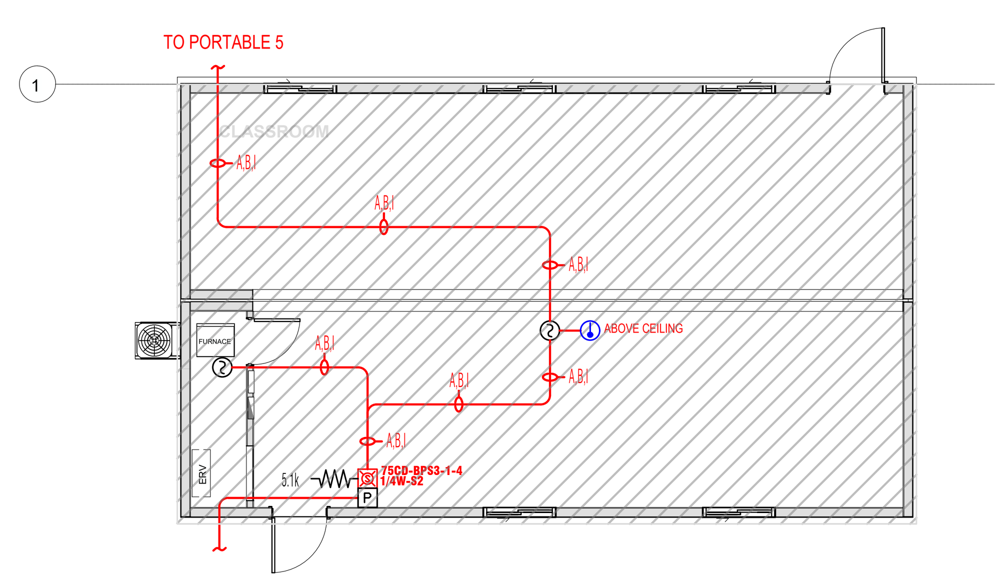

PORTABLE 4 - FUTURE
SCALE: 1/8" = 1'-0"

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CASCADE CHRISTIAN SCHOOL CAMPUS
FIRE ALARM
TENANT IMPROVEMENT

TYPE OF WORK

REV	DATE	BY	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION

PROJECT NUMBER: LC24XXXX
SHEET TITLE: PORTABLES 1-5
DATE: 07/02/2024
SHEET: FA-2.2

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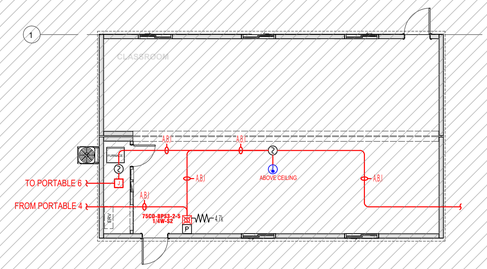
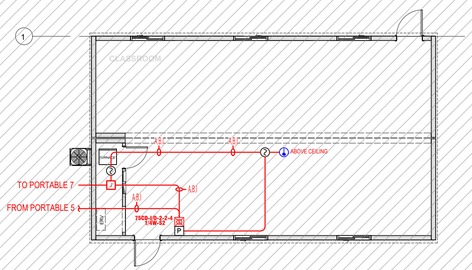
THIS AREA UNDER PERMIT #PFRA20241113 48 DEVICES TOTAL



PORTABLE 5
SCALE 1/8" = 1'-0"



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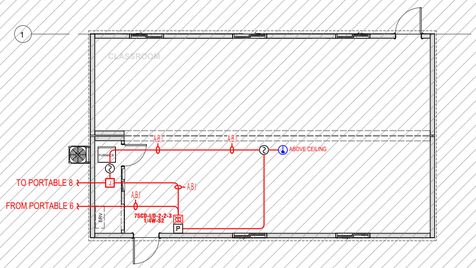

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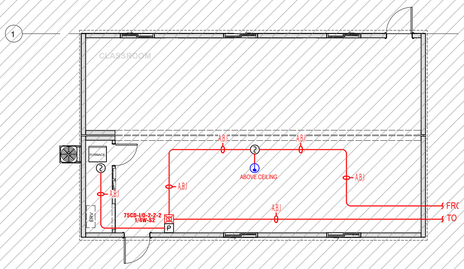

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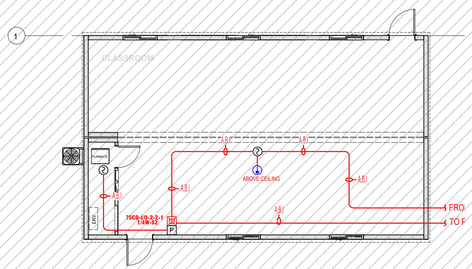

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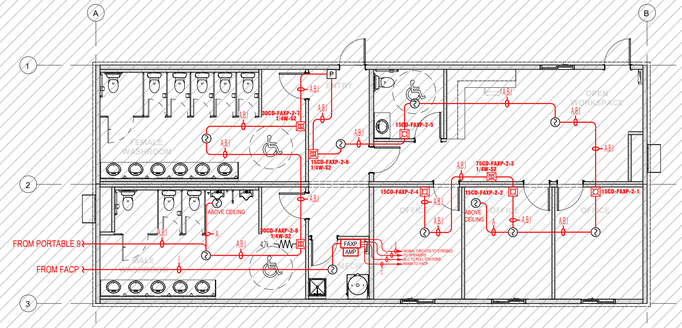

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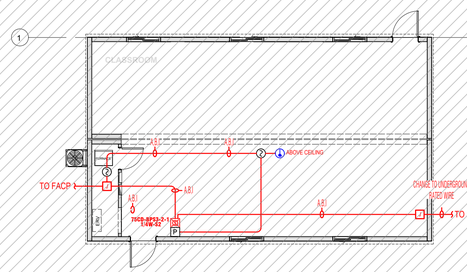
THIS AREA UNDER PERMIT #PFRA20241133 10 DEVICES TOTAL



PORTABLE 11
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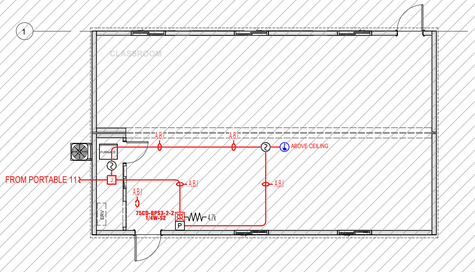

PORTABLE 12
SCALE 1/8" = 1'-0"

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TYPE OF WORK

REV	DATE	BY	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION
	DATE	XXX	DESCRIPTION

PROJECT NUMBER LC24XXXX

SHEET TITLE PORTABLES 6-10

DESIGNER ALEXANDRA DOLA
FIRE ALARM DESIGNER

DATE 07/02/2024

SHEET FA-2.3

WHEN PRINTED ON ARCH-D (24X36)

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