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DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

HOMEWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

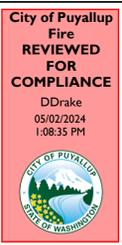
FIRE ALARM PROJECT DETAILS

SHEET NUMBER

FA 0.0

HOMEWOOD SUITES

FIRE ALARM SYSTEM



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.

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

INSTALLATION NOTES

- THESE DRAWINGS ARE DIAGRAMMATIC. REFER TO THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR TRADE SPECIFIC DETAILS.
- WIRING DEPICTED ON THESE PLANS IS SCHEMATIC - ACTUAL WIRE LOCATIONS MAY DIFFER FROM THESE PLANS. WIRING SHALL BE PERFORMED AS ACTUAL BUILDING CONSTRUCTION CONDITIONS ALLOW AND TO MINIMIZE PENETRATIONS THROUGH AREA SEPARATION WALLS AND FIRE WALLS. FIRE RATINGS SHALL BE MAINTAINED FOR ALL PENETRATIONS THROUGH FIRE-RATED CONSTRUCTION.
- ALL FIRE ALARM CABLING SHALL BE ACCEPTABLE TO THE FIRE ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE. CABLES USED IN VERTICAL RUNS SHALL BE TYPE FPLR. CABLE SPLICES OR TERMINATIONS SHALL BE MADE IN LISTED FITTINGS, BOXES, ENCLOSURES, FIRE ALARM DEVICES, OR UTILIZATION EQUIPMENT. WHERE INSTALLED EXPOSED, CABLES SHALL BE ADEQUATELY SUPPORTED AND INSTALLED IN SUCH A WAY THAT PROTECTION AGAINST PHYSICAL DAMAGE IS AFFORDED BY BUILDING CONSTRUCTION. WHERE EXPOSED CABLE IS LOCATED WITHIN 7 FT OF THE FLOOR, IT SHALL BE RUN IN RACEWAY.
- POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST REMAIN SEPARATED IN THE CABINET. ALL POWER-LIMITED CIRCUIT WIRING MUST REMAIN AT LEAST 0.25" AWAY FROM ANY NON-POWER LIMITED CIRCUIT WIRING. FURTHERMORE, ALL POWER-LIMITED AND NON-POWER LIMITED CIRCUIT WIRING MUST ENTER AND EXIT THE CABINET THROUGH DIFFERENT KNOCK OUTS AND/OR SEPARATE CONDUITS.
- THE FACP & ALL REMOTE POWER SUPPLIES WILL REQUIRE A DEDICATED 120VAC 20AMP CIRCUIT & A #12 TRUE EARTH GROUND AT THE FACP. A NOTICE PLACED IN THE FACP SHALL DIRECT PERSONNEL TO THE LOCATION OF THE ELECTRICAL PANEL THAT IS SUPPLYING DEDICATED POWER TO THE SYSTEM. THE DEDICATED CIRCUIT BREAKER THAT SERVES THE FIRE ALARM SYSTEM SHALL BE LABELED AND SECURED AGAINST TAMPERING WITH A RED BREAKER LOCKOUT.
- WHERE SMOKE DETECTION IS NOT REQUIRED DURING CONSTRUCTION, SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER ALL OTHER CONSTRUCTION TRADES HAVE COMPLETED THEIR FINAL CLEANING (NFPA-72 17.7.1.12.3).
- SMOKE DETECTOR SPACING IN CORRIDORS SHALL BE AT 21.5' x 41' SPACING PER2016 NFPA-72 A.17.6.3.1.(h).
- SMOKE DETECTION SHALL BE PROVIDED IN ALL ACCESSIBLE SPACES/AREAS (INCLUDING ABOVE SUSPENDED CEILINGS) PER THE CITY OF PUYALLUP'S REQUIREMENTS.
- LOCATE SMOKE DETECTORS A MINIMUM OF THREE (3) FEET FROM MECHANICAL DIFFUSERS. WALL-MOUNTED SMOKE DETECTORS SHALL BE LOCATED A MAXIMUM OF 12" FROM CEILING.
- SMOKE DETECTORS USED FOR ELEVATOR RECALL SHALL BE INSTALLED WITHIN 21' OF THE ELEVATOR DOOR CENTERLINE
- IN AREAS NOT PROTECTED BY AUTOMATIC SMOKE DETECTION, A SMOKE DETECTOR IS REQUIRED TO BE INSTALLED WITHIN 5' OF THE FSD OPENING, OR WITHIN THE HVAC DUCT WORK AT THE FSD'S ACCESS/SERVICE HATCH LOCATION.
- ADDRESSABLE SMOKE DETECTOR WITH LOW FREQUENCY SOUNDER BASE TO BE INSTALLED IN ALL GUESTROOMS. GUESTROOM SMOKE DETECTORS WILL BE LOCAL ONLY (SUPERVISORY) AND WILL NOT DISPATCH THE FIRE DEPARTMENT UPON ACTIVATION. THE SMOKE DETECTOR'S LOW FREQUENCY SOUNDER BASE WILL ACTIVATE WHEN THE GUESTROOM'S SMOKE DETECTOR IS ACTIVATED AND/OR ON A GENERAL FIRE ALARM SIGNAL. THE GUESTROOM SMOKE DETECTOR ACTIVATION WILL BE ANNUNCIATED ON THE FACP AND THE FIRE ALARM REMOTE ANNUNCIATOR LOCATED IN THE LOBBY.
- VISIBLE OCCUPANT NOTIFICATION IN GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3., SHALL BE ACTIVATED BY THE GUEST ROOM SMOKE DETECTORS AND THE BUILDING'S FIRE ALARM SYSTEM PER IFC 907.5.2.3.2. THE NAC SERVING EACH GUESTROOM WITH COMMUNICATION FEATURES SHALL BE HOME-RUN TO AN ADDRESSABLE NAC MODULE AS SHOWN. THE NAC MODULE WILL ACTIVATE THE GUESTROOM'S VISUAL OCCUPANT NOTIFICATION DEVICES WHEN THE GUESTROOM'S SMOKE DETECTOR IS ACTIVATED AND/OR WHEN THE BUILDING'S FIRE ALARM SYSTEM IS ACTIVATED.
- CARBON MONOXIDE DETECTION SHALL BE PROVIDED IN MECHANICAL ROOMS CONTAINING GAS FIRED WATER HEATERS AND IN ANY OTHER PLACES WITH A GAS FIRED FIREPLACE OR GAS APPLIANCE PER THE FIRE ALARM SPECIFICATIONS.
- ELEVATOR SHAFT HEAT DETECTION IS ONLY REQUIRED IF THE ELEVATOR DRIVING EQUIPMENT IS LOCATED AT THE TOP OF THE SHAFT, HEAT DETECTOR TO BE WITHIN 18" OF THE EQUIPMENT. IF THE SHAFT IS SPRINKLED, A SMOKE DETECTOR IS REQUIRED AT THE TOP OF THE SHAFT WITHIN 18" OF THE SPRINKLER HEAD. COORDINATE/VERIFY WITH THE ELEVATOR CONTRACTOR.
- WALL MOUNTED STROBES & HORN STROBES SHALL BE PLACED 80" MINIMUM TO 96" MAXIMUM ABOVE FLOOR LEVEL. (NFPA72 18.5.4.1). WALL MOUNTED STROBES SHALL BE SIZED IN ACCORDANCE WITH (NFPA72 TABLE 18.5.4.3.1(A)). CEILING MOUNTED STROBES SHALL BE PLACED AND SIZED IN ACCORDANCE WITH (NFPA72 TABLE 18.5.4.3.1(B)). WHEN MORE THAN TWO NOTIFICATION APPLIANCES ARE VISIBLE AT THE SAME TIME WHETHER THEY ARE IN THE SAME ROOM OR ADJACENT SPACE WITHIN THE FIELD OF VIEW, THE FLASH OF THOSE STROBES SHALL BE SYNCHRONIZED.
- THE OUTDOOR BELL/STROBE REQUIRED FOR APPROACHING EMERGENCY VEHICLES SHALL BE LOCATED AT A SERVICEABLE HEIGHT, AND MUST BE CLEARLY VISIBLE FROM THE EMERGENCY VEHICLE APPROACH PATH.
- UNLESS OTHERWISE NOTED, ALL MECHANICAL AND SPRINKLER EQUIPMENT TO BE PROVIDED, POWERED AND INSTALLED BY OTHERS.
- ALL SYSTEMS AND DEVICES SHALL BE INSTALLED AND TESTED PER THE MANUFACTURES LISTING AND THE AUTHORITY HAVING JURISDICTION. ALL INITIATING DEVICES AND DEVICES CONTAINING EOL'S SHALL HAVE A PHYSICAL LABEL IDENTIFYING THE DEVICE'S ADDRESS / END OF LINE RESISTOR.
- THE ANNUNCIATOR SHALL HAVE A SIGN POSTED IDENTIFYING THE LOCATION OF THE MAIN FACP. "FACP LOCATED IN " LETTERS SHALL BE WHITE ON A RED BACKGROUND. (SITE TO PROVIDE ALL REQUIRED SIGNAGE)
- INSTRUCTIONS FOR THE OPERATING, TESTING AND MAINTENANCE OF THE SYSTEM, ALONG WITH RECORD DRAWINGS OTHERWISE REFERRED TO AS ("AS-BUILT") AND EQUIPMENT SPECIFICATIONS SHALL BE KEPT IN THE FIRE ALARM DOCUMENT CABINET NEXT TO THE FACP (NFPA-72 10.18.2.3).
- PRIOR TO CALLING FOR INSPECTION, THE INSTALLER SHALL PROVIDE DOCUMENTATION TO THE LOCAL AHJ STATING THAT THE SYSTEM HAS BEEN INSTALLED, TESTED, EVALUATED AND CONFIRMED TO BE IN ACCORDANCE WITH ALL GOVERNING CODES AND THE APPROVED PLANS. THE FIRE ALARM SYSTEM INSTALLER SHALL COMPLETE AN NFPA-72 RECORD OF COMPLETION. THE COMPLETED RECORD OF COMPLETION SHALL BE PROVIDED TO THE AHJ INSPECTOR PRIOR TO REQUESTING A FIRE FINAL INSPECTION.
- AN APPROVED FIRE ALARM ZONE MAP SHALL BE PLACED AT THE ANNUNCIATOR AND/OR THE FACP. AHJ TO PROVIDE ACCEPTABLE LOCATIONS.
- UL CERTIFICATE WILL BE PROVIDED FOR THE SYSTEM PRIOR TO THE TIME OF FIRE FINAL. THE UL CERTIFICATE WILL BE POSTED AT THE FIRE ALARM CONTROL PANEL. FIRE PROTECTION INC WILL BE PROVIDING THE U.L. CERTIFICATE FOR THIS SITE.
- THE MEANS OF SIGNAL TRANSMISSION TO THE REMOTE SUPERVISING STATION SHALL BE VIA THE FACP'S ONBOARD DACT AND A UL LISTED AES WIRELESS RADIO COMMUNICATOR. THE AES RADIO IS BEING PROVIDED BASED ON FPI MONITORING THE FIRE ALARM SYSTEM WHICH IS THE INFORMATION PROVIDED DURING DESIGN/PERMIT SUBMITTAL. FPI IS NOT RESPONSIBLE FOR ANY COMMUNICATOR INSTALLATION AND RELATED PERMIT IF FPI WILL NOT BE MONITORING THE SYSTEM AT THE TIME OF FIRE FINAL (ANY MONITORING AGENCY CHANGE BETWEEN TIME OF PERMIT SUBMITTAL AND FIRE FINAL).

DEVICE - EQUIPMENT LEGEND

SYMBOL	QTY	MANUFACTURER	PART NO	DESCRIPTION	SIZE
FACP	1	GAMEWELL FCI	E3 SERIES FACP	ES SERIES FIRE ALARM CONTROL	N/A
	1	GAMEWELL FCI	E3BB-BCINCC	FACP ENCLOSURE "C" CABINET	19 3/8"W x 30"H x 4.5"D
	1	GAMEWELL FCI	ILS-E3	INTELLIGENT LOOP INTERFACE-EXPANSION BOARD	FACP COMPONENT
	1	GAMEWELL FCI	PM-9	POWER SUPPLY CARD	FACP COMPONENT
	1	GAMEWELL FCI	ASM-16	ADDRESSABLE SWITCH MODULE	FACP COMPONENT
	1	GAMEWELL FCI	E3-ILC-PLATE	"C" CABINET INNER MOUNTING PLATE	FACP COMPONENT
BATT	1	GAMEWELL FCI	LCD-E3	LCD KEYPAD DISPLAY	FACP COMPONENT
	1	GAMEWELL FCI	IL-MB-E3	INTELLIGENT LOOP INTERFACE-MAIN BOARD	FACP COMPONENT
DACT	1	HONEYWELL	HON-CGW-MBB	CLSS GATEWAY / FACP DACT	N/A
FAA	1	AES	7707P-88-ULP-M	UL LISTED FIRE ALARM RADIO COMMUNICATOR	13"H x 8.5"W x 4.5"D
	1	GAMEWELL FCI	LCD-E3	LCD KEYPAD DISPLAY	INCLUDED
F	1	GAMEWELL FCI	E3BB-FLUSH-LCD	ANNUNCIATOR ENCLOSURE	13.25"W x 10"H x 4.5"D
	19	GAMEWELL FCI	MS-7ASF	ADDRESSABLE PULL STATION	N/A
S	1	GAMEWELL FCI	MCS-COP3 WB300-6	INTELLIGENT MULTI-CRITERIA PHOTOCOD, W/ 6" FLANGED MOUNTING BASE, BRIGHT WHITE	N/A
S	212	GAMEWELL FCI	ASD-PL3 WB300-6	PHOTOELECTRIC SMOKE DETECTOR, W/ 6" FLANGED MOUNTING BASE, BRIGHT WHITE	N/A
S LF	173	GAMEWELL FCI	ASD-PL3 WB200S-LF-WH	PHOTOELECTRIC SMOKE DETECTOR, W/ INTELLIGENT ADDRESSABLE LOW FREQUENCY SOUNDER BASE, BRIGHT WHITE	N/A
S ISO	4	GAMEWELL FCI	ASD-PL3 WB224BH-WH	PHOTOELECTRIC SMOKE DETECTOR, BRIGHT WHITE, VELOCITI W/ ISOLATOR BASE, BRIGHT WHITE	N/A
H	2	GAMEWELL FCI	ATD-L3 WB300-6	THERMAL HEAT DETECTOR, 135°F FIXED, W/ 6" FLANGED MOUNTING BASE, BRIGHT WHITE	N/A
SR	1	GAMEWELL FCI	OSI-RI-GW	INTELLIGENT SINGLE-ENDED REFLECTIVE IMAGING BEAM SMOKE DETECTOR	N/A
	1	GAMEWELL FCI	BEAMHKR	HEATER KIT FOR BEAM REFLECTOR	N/A
E		INCLUDED	INCLUDED	SMOKE BEAM REFLECTOR	N/A
S	2	GAMEWELL FCI	DNRW WIASD-PL3	INTELLIGENT DUCT DETECTOR HOUSING, NON-RELAY, WATERTIGHT WIASD-PL3	N/A
S	1	SYSTEM SENSOR	5621	DETECTOR, HEAT 135D, DUAL CONTACT, CONVENTIONAL	N/A
S	2	THERMOTECH	302-ET-135	135°F VERTICAL or HORIZONTAL MOUNTED, THERMAL-TUBE, HEAT DETECTOR (RoR)	N/A
M ₂	15	GAMEWELL FCI	AMM-2IF	ADDRESSABLE DUAL MONITOR MODULE	N/A
M ₁₀	2	GAMEWELL FCI	MMI-10F	TEN-INPUT MONITOR MODULE	N/A
	2	GAMEWELL FCI	MBB-2	BACKBOX, 2 UNIT	N/A
COM	7	GAMEWELL FCI	AOM-2RF	ADDRESSABLE RELAY MODULE, 2 FORM-C DRY CONTACTS	N/A
COM NM	13	GAMEWELL FCI	AOM-2SF	ADDRESSABLE CONTROL MODULE	N/A
RPS	5	GAMEWELL FCI	HPF-PS10	10.0 A, 120 VAC REMOTE POWER SUPPLY	14.5"W x 20"H x 4.5"D
WP	1	SYSTEM SENSOR	P2RK	HORN STROBE, RED, OUTDOOR	N/A
WP	1	SYSTEM SENSOR	P2WK	HORN STROBE, WHITE, OUTDOOR	N/A
WP	39	SYSTEM SENSOR	P2WLED	HORN STROBE, WHITE	N/A
WP	3	SYSTEM SENSOR	PC2WLED	HORN STROBE, CEILING, WHITE	N/A
WP	1	SYSTEM SENSOR	SCWLED	STROBE, CEILING, WHITE	N/A
WP	41	SYSTEM SENSOR	SWLED	STROBE, WALL, WHITE	N/A
WP	1	SYSTEM SENSOR	P2WHK	HORN STROBE, WALL, WHITE, HIGH CD, WEATHER PROOF	N/A
WP	21	SYSTEM SENSOR	FM998	24V DOOR HOLDER	N/A
RL	1	GAMEWELL FCI	MR-101C/R	SPDT MULTI-VOLTAGE CONTROL RELAY	N/A
DOC	1	ACER BOX	SSU00625	FIRE ALARM DOCUMENT TUBE	6"W x 37"H
	2	DURACELL	12VDC26AH	12VDC 26Ah FACP BATTERY	N/A
	5	DURACELL	12VDC12AH	12VDC 12Ah AES/RPS BATTERY	N/A
	6	DURACELL	12VDC8AH	12VDC 8Ah RPS BATTERY	N/A
EQUIPMENT BY OTHERS					
FSD		PROVIDED BY OTHERS	PROVIDED BY OTHERS	FIRE SMOKE DAMPER	N/A
		PROVIDED BY OTHERS	PROVIDED BY OTHERS	WATERFLOW SWITCH	N/A
		PROVIDED BY OTHERS	PROVIDED BY OTHERS	VALVE TAMPER SUPERVISORY SWITCH	N/A

REQUIRED DEDICATED POWER LOCATIONS

LOCATIONS REQUIRING DEDICATED 120VAC CIRCUITS w/ BACK-UP BATTERY REQUIREMENTS				
SYMBOL	DESCRIPTION	LOCATION	PRIMARY DEDICATED POWER	BATTERY BACKUP
FACP	FACP	1ST FLOOR : ELECTRICAL ROOM 177	120VAC WHIP	2 X 26AMP
AES	AES	1ST FLOOR : ELECTRICAL ROOM 177	120VAC RECEPTACLE	1 X 12AMP
RPS	RPS 1	1ST FLOOR : ELECTRICAL ROOM 177	120VAC WHIP	2 X 12AMP
RPS	RPS 2	2ND FLOOR : ELECTRICAL ROOM 232	120VAC WHIP	2 X 12AMP
RPS	RPS 3	3RD FLOOR : ELECTRICAL ROOM 332	120VAC WHIP	2 X 8AMP
RPS	RPS 4	4TH FLOOR : ELECTRICAL ROOM 431	120VAC WHIP	2 X 8AMP
RPS	RPS 5	5TH FLOOR : ELECTRICAL ROOM 532	120VAC WHIP	2 X 8AMP

SHEET INDEX

#	SHEET DESCRIPTION	#	SHEET DESCRIPTION
FA 0.0	FIRE ALARM PROJECT DETAILS	FA 4.2	FLOOR PLAN - 4TH FLOOR SOUTH
FA 0.1	PROJECT DETAILS & OPERATIONAL MATRIX	FA 4.3	CEILING PLAN - 4TH FLOOR NORTH
FA 1.0	OVERALL FLOOR PLAN - 1ST FLOOR	FA 4.4	CEILING PLAN - 4TH FLOOR SOUTH
FA 1.1	FLOOR PLAN - 1ST FLOOR NORTH	FA 5.0	OVERALL FLOOR PLAN - 4TH FLOOR
FA 1.2	FLOOR PLAN - 1ST FLOOR SOUTH	FA 5.1	FLOOR PLAN - 5TH FLOOR NORTH
FA 1.3	CEILING PLAN - 1ST FLOOR NORTH	FA 5.2	FLOOR PLAN - 5TH FLOOR SOUTH
FA 1.4	CEILING PLAN - 1ST FLOOR SOUTH	FA 5.3	CEILING PLAN - 5TH FLOOR NORTH
FA 2.0	OVERALL FLOOR PLAN - 2ND FLOOR	FA 5.4	CEILING PLAN - 5TH FLOOR SOUTH
FA 2.1	FLOOR PLAN - 2ND FLOOR NORTH	FA 6.0	OVERALL ROOF PLAN
FA 2.2	FLOOR PLAN - 2ND FLOOR SOUTH	FA 7.0	SINGLE LINE RISER DIAGRAM - SLC
FA 2.3	CEILING PLAN - 2ND FLOOR NORTH	FA 7.1	SINGLE LINE RISER DIAGRAM - NAC / AUX PWR
FA 2.4	CEILING PLAN - 2ND FLOOR SOUTH	FA 7.2	SINGLE LINE RISER DIAGRAM - NAC / AUX PWR CONT.
FA 3.0	OVERALL FLOOR PLAN - 3RD FLOOR	FA 8.0	BATTERY AND VOLTAGE DROP CALCULATIONS - FACP
FA 3.1	FLOOR PLAN - 3RD FLOOR NORTH	FA 8.1	BATTERY AND VOLTAGE DROP CALCULATIONS - RPS1
FA 3.2	FLOOR PLAN - 3RD FLOOR SOUTH	FA 8.2	BATTERY AND VOLTAGE DROP CALCULATIONS - RPS2
FA 3.3	CEILING PLAN - 3RD FLOOR NORTH	FA 8.3	BATTERY AND VOLTAGE DROP CALCULATIONS - RPS3
FA 3.4	CEILING PLAN - 3RD FLOOR SOUTH	FA 8.4	BATTERY AND VOLTAGE DROP CALCULATIONS - RPS4
FA 4.0	OVERALL FLOOR PLAN - 4TH FLOOR	FA 8.5	BATTERY AND VOLTAGE DROP CALCULATIONS - RPS5
FA 4.1	FLOOR PLAN - 4TH FLOOR NORTH		

PROJECT DESCRIPTION

NEW CONSTRUCTION OF A FULLY SPRINKLED (5) STORY WOOD FRAMED HOTEL. THE BUILDING WILL BE PROVIDED WITH A FULLY ADDRESSABLE FIRE ALARM SYSTEM WITH A REMOTE ANNUNCIATOR LOCATED AT THE FRONT DESK. THE FIRE ALARM SYSTEM WILL PROVIDE TOTAL-COVERAGE DETECTION AS DEFINED IN 2019 NFPA-72 (17.5.3.1) AND PER CITY OF PUYALLUP'S REQUIREMENTS. THE FIRE ALARM SYSTEM WILL BE INTERFACED WITH THE (5) STOP ELEVATOR TO PROVIDE PHASE 1 ELEVATOR RECALL. THE FIRE ALARM SYSTEM SHALL MONITOR ALL FIRE ALARM INITIATING DEVICES, THE ERRCS / DAS SYSTEM (IF INSTALLED), ALL FIRE SPRINKLER FLOW DEVICES, AND FIRE SPRINKLER SUPERVISORY DEVICES. AUDIBLE AND VISIBLE OCCUPANT NOTIFICATION WILL BE PROVIDED THROUGHOUT ALL COMMON AREAS. TOTAL COVERAGE SMOKE DETECTION WILL BE PROVIDED THROUGHOUT THE BUILDING, INCLUDING ABOVE AND BELOW ALL SUSPENDED CEILINGS. SMOKE DETECTORS WITH 520Hz LOW FREQUENCY SOUNDER BASES WILL BE INSTALLED IN ALL HOTEL GUESTROOMS. FIRE ALARM VISIBLE OCCUPANT NOTIFICATION DEVICES SHALL BE PROVIDED IN GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4 AND ACTIVATED BY THE ASSOCIATED GUESTROOM SMOKE DETECTORS AND/OR THE BUILDINGS FIRE ALARM SYSTEM. ACTIVATION OF THE GUESTROOM SMOKE DETECTORS WILL BE A LOCAL ONLY SUPERVISORY SIGNAL, IT WILL NOT DISPATCH THE FIRE DEPARTMENT. ACTIVATION OF THE FIRE ALARM SYSTEM SHALL ACTIVATE THE OUTDOOR HORN/STROBE, ALL AUDIBLE / VISUAL OCCUPANT NOTIFICATION DEVICES, ALL 520Hz LOW-FREQUENCY SMOKE DETECTOR SOUNDER BASES IN GUESTROOMS, RELEASE MAGNETICALLY HELD FIRE DOORS, AND CLOSE FIRE/SMOKE DAMPERS IN RATED WALLS.

PROJECT CONTACT INFO

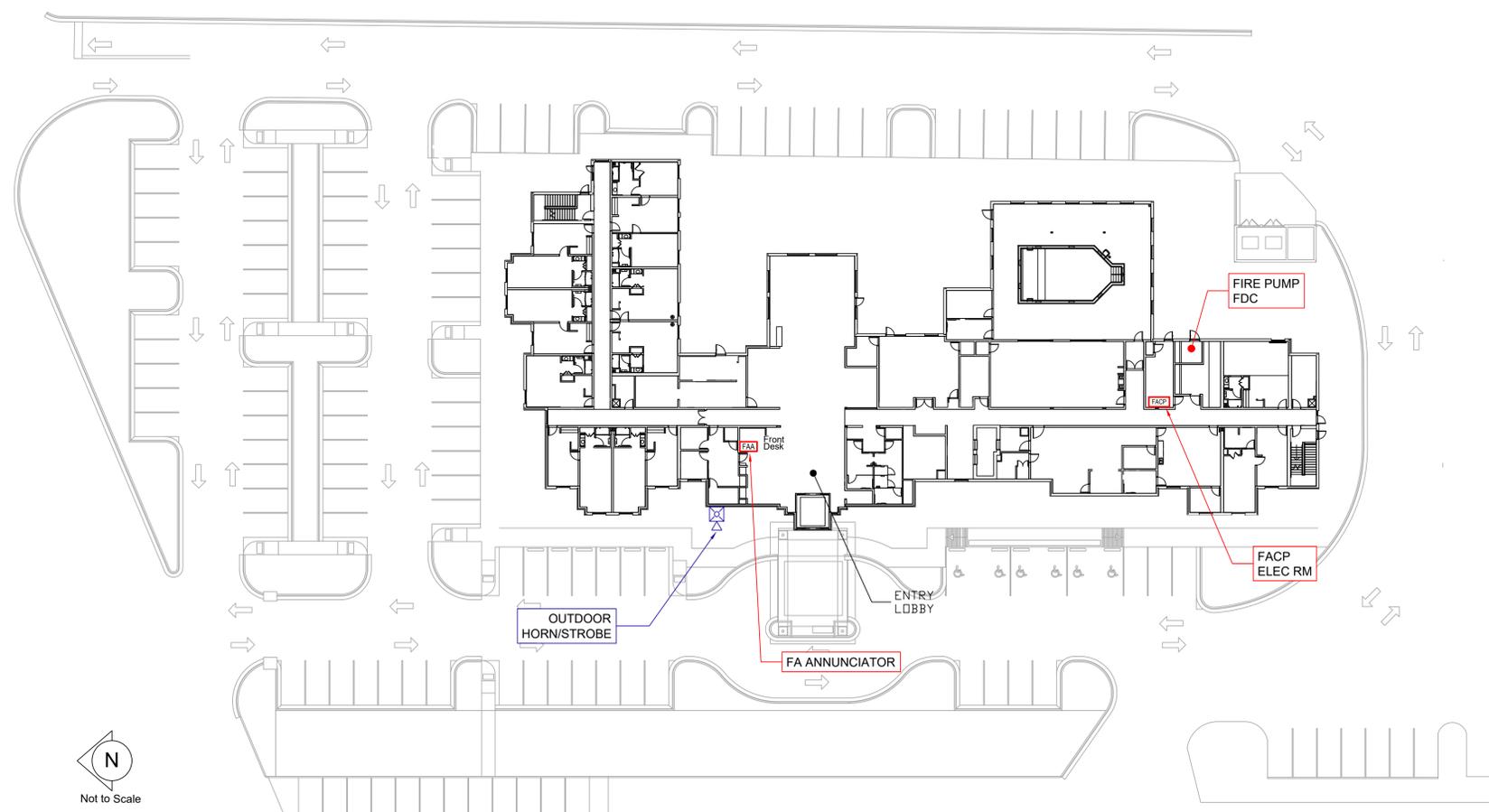
OWNER THARALDSON HOSPITALITY 4520 36TH AVE S. FARGO, ND 58104 PHONE : 701.551.8009 CONTACT : JEFF McKay jmckay@tharaldsonco.com	FIRE ALARM CONTRACTOR FIRE PROTECTION INC. 17410 ASH WAY, Ste 8 LYNNWOOD, WA 98037 PHONE : 425.290.9600 CONTACT : DAVID MOW david@fpiseattle.com
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CODE INFO

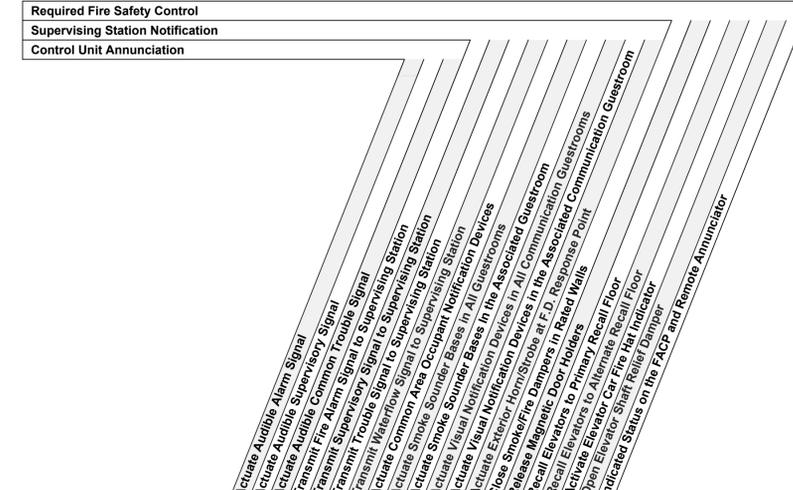
AUTHORITY HAVING JURISDICTION : CITY OF PUYALLUP
CURRENT BUILDING CODE : INTERNATIONAL BUILDING CODE, 2021 EDITION
CURRENT FIRE CODE : INTERNATIONAL FIRE CODE, 2021 EDITION
CITY OF PUYALLUP MUNICIPAL CODE
CURRENT ELECTRICAL CODE : 2020 NFPA-70 (N.E.C.)
MAIN OCCUPANCY AND USE : R-1 (FULLY SPRINKLED) | HOTEL
STANDARDS: 2019 NFPA-72 AND CITY OF PUYALLUP
CLASSIFICATION OF SUPERVISING STATION :UL REMOTE SUPERVISING STATION
UL REMOTE SUPERVISING STATION : SECURITAS , LACEY WA
UL LISTED PRIME FIRE ALARM CONTRACTOR : FIRE PROTECTION INC
PARCEL NUMBER : 6021010051

REQUIRED PRE-CON COORDINATION

- GENERAL CONTRACTOR :**
- LOCATION OF ERRCS/DAS HEAD-END EQUIPMENT IF INSTALLED.
 - CONFIRM FLOOR PLANS, FIRE RATED WALLS, ROOM NUMBERS/NAMES, AND THE REFLECTED CEILING PLANS SHOWN IN THIS DESIGN ARE CURRENT AND ACCURATE.
- ELECTRICAL :**
- LOCATION OF ELECTRICAL PANELS FEEDING FIRE/SMOKE DAMPERS AND MAGNETIC DOOR HOLDERS
 - LOCATION OF DEDICATED 120VAC CIRCUITS AND BREAKERS FOR FIRE ALARM HEAD-END EQUIPMENT. THIS INCLUDES FACP, FIRE ALARM COMMUNICATOR, AND REMOTE POWER SUPPLIES.
 - ELEVATOR AC-LOSS DRY CONTACT LOCATION FOR FIRE ALARM SUPERVISION.
 - CONNECTIONS TO THE ELEVATOR SHUNT HEAT DETECTORS IN THE ELEVATOR MACHINE ROOMS.
 - CONNECTIONS TO THE ELEVATOR SHAFT RELIEF DAMPER.
 - IS AN EMERGENCY GENERATOR BEING INSTALLED, IF SO WHERE IS THE CONTROL PANEL GOING TO BE LOCATED? IS IT REQUIRED TO BE MONITORED BY THE FA SYSTEM?
 - PROVIDE UNDERGROUND RACEWAY WITH PULL-STRING TO THE FIRE SPRINKLER PIV (IF INSTALLED).
- FIRE SPRINKLER :**
- LOCATION OF ALL FIRE SPRINKLER FLOW, PRESSURE, AND TAMPER SWITCHES.
 - IS THERE GOING TO BE A PIV?
 - LOCATION OF SPRINKLER HEADS, FLOW SWITCHES IN THE ELEVATOR SHAFT, PIT & MACHINE ROOM. IF THERE IS A SPRINKLER HEAD AT THE TOP OR BOTTOM OF THE ELEVATOR SHAFT, A FIRE ALARM HEAT DETECTOR WILL NEED TO BE INSTALLED WITHIN 18" OF THE SPRINKLER HEAD. IF THERE IS A SEPARATE WATER-FLOW SWITCH FOR THE PIT, THIS SWITCH WILL NEED TO BE MONITORED BY THE FA SYSTEM (IF APPLICABLE).
- MECHANICAL :**
- PROVIDE LOCATIONS OF ALL HVAC EQUIPMENT REQUIRED TO SHUTDOWN ON FIRE ALARM ACTIVATION
 - CONFIRM LOCATION OF ALL COMBINATION FIRE/SMOKE DAMPERS REQUIRED TO CLOSE ON FIRE ALARM ACTIVATION.
 - COORDINATE THE INSTALLATION OF THE DUCT SMOKE DETECTORS.



SYSTEM OUTPUTS



SYSTEM INPUTS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Alarm																				
1 FACP Smoke Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 Manual Pull-Station	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3 Corridor / Common Area Smoke Detectors	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4 Above Ceiling Smoke Detectors	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5 Pool Area Smoke Beam Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6 Elevator Machine Room Smoke Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7 Elevator Shunt Heat Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
8 1st Floor Elevator Lobby Smoke Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
9 2nd Floor Elevator Lobby Smoke Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10 3rd Floor Elevator Lobby Smoke Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11 4th Floor Elevator Lobby Smoke Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12 5th Floor Elevator Lobby Smoke Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13 Water-Flow Switches	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14 Dry-Flow Switches	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Supv																				
15 Sprinkler Hi/Low Air Switch			X	X																X
16 Sprinkler Tamper / PIV Switches			X	X																X
17 1st Floor Mechanical Room CO Detector			X	X																X
18 Guestroom Smoke Detectors			X	X																X
19 Guestrooms (w/ Communication) Smoke Detectors			X	X																X
20 Elevator AC Loss			X	X																X
21 Duct Smoke Detectors			X	X																X
22 ERRCS Trouble Condition			X	X																X
Trbl																				
23 Fire Alarm AC Power Failure / Low Battery				X	X															X
24 Fire Alarm System Trouble Condition				X	X															X
25 RPS AC Power Failure / Low Battery				X	X															X
26 RPS Trouble Condition				X	X															X
27 AES Radio AC Power Failure / Low Battery				X	X															X
28 AES Radio Trouble Condition				X	X															X
29 Open Circuit / Ground Fault				X	X															X
30 Circuit Short (SLC, AUX, NAC)				X	X															X

REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

HOMWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

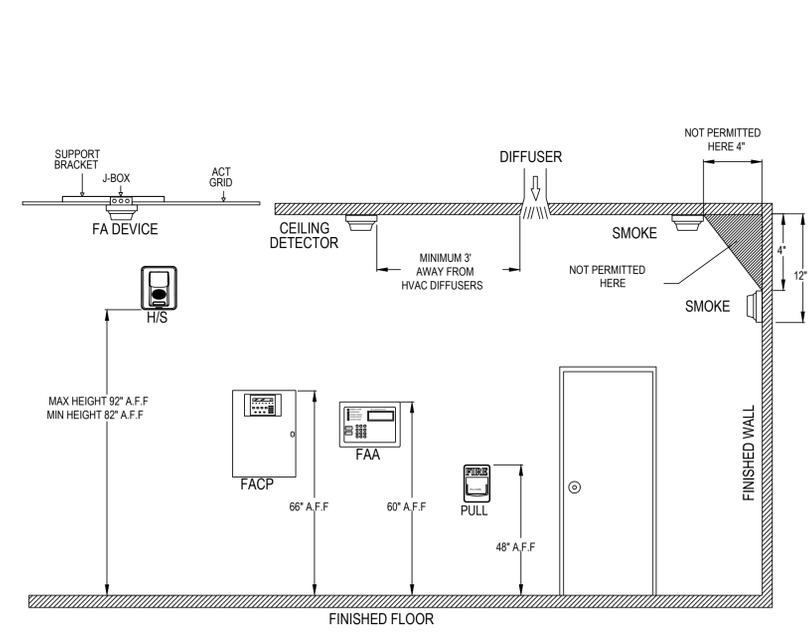
SHEET TITLE

FIRE ALARM PROJECT DETAILS CONTINUED

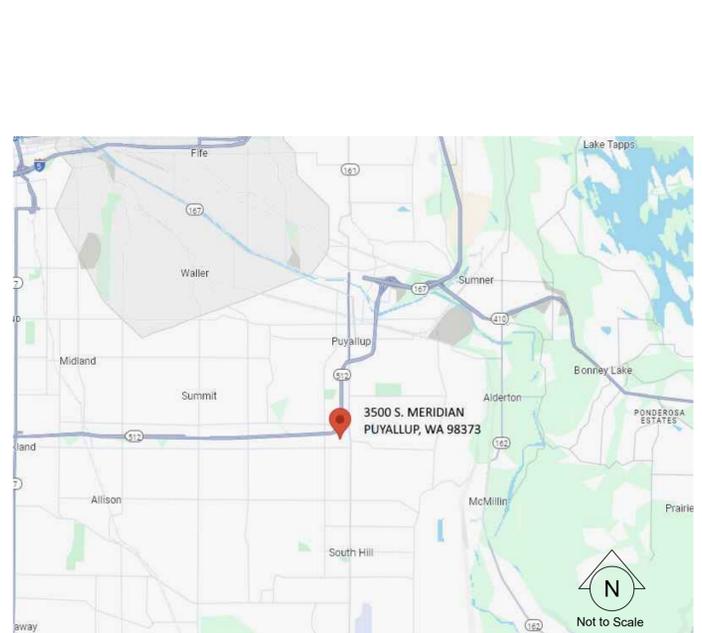
SHEET NUMBER

FA 0.1

TYPICAL INSTALLATION DETAILS

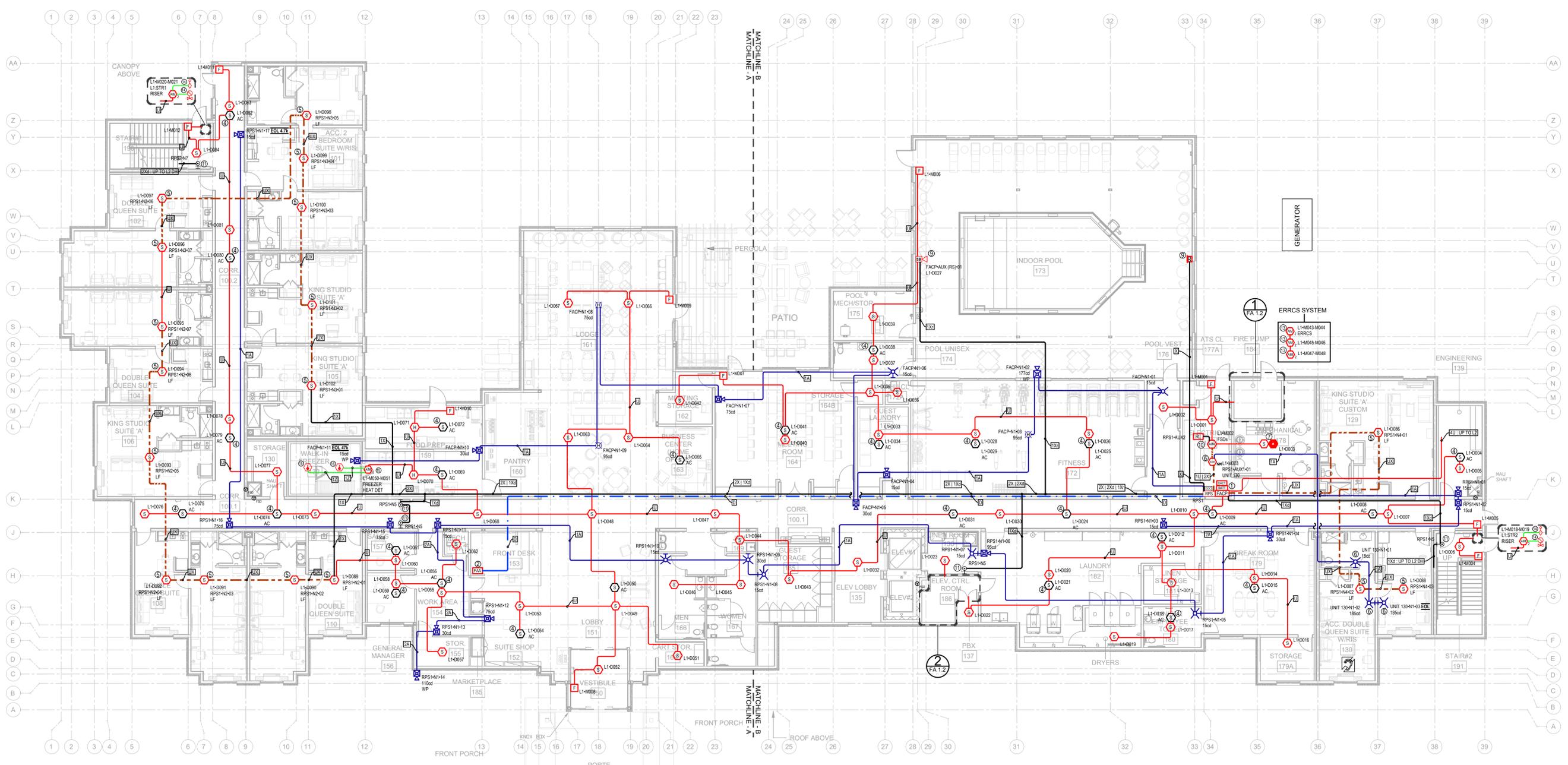


VICINITY MAP



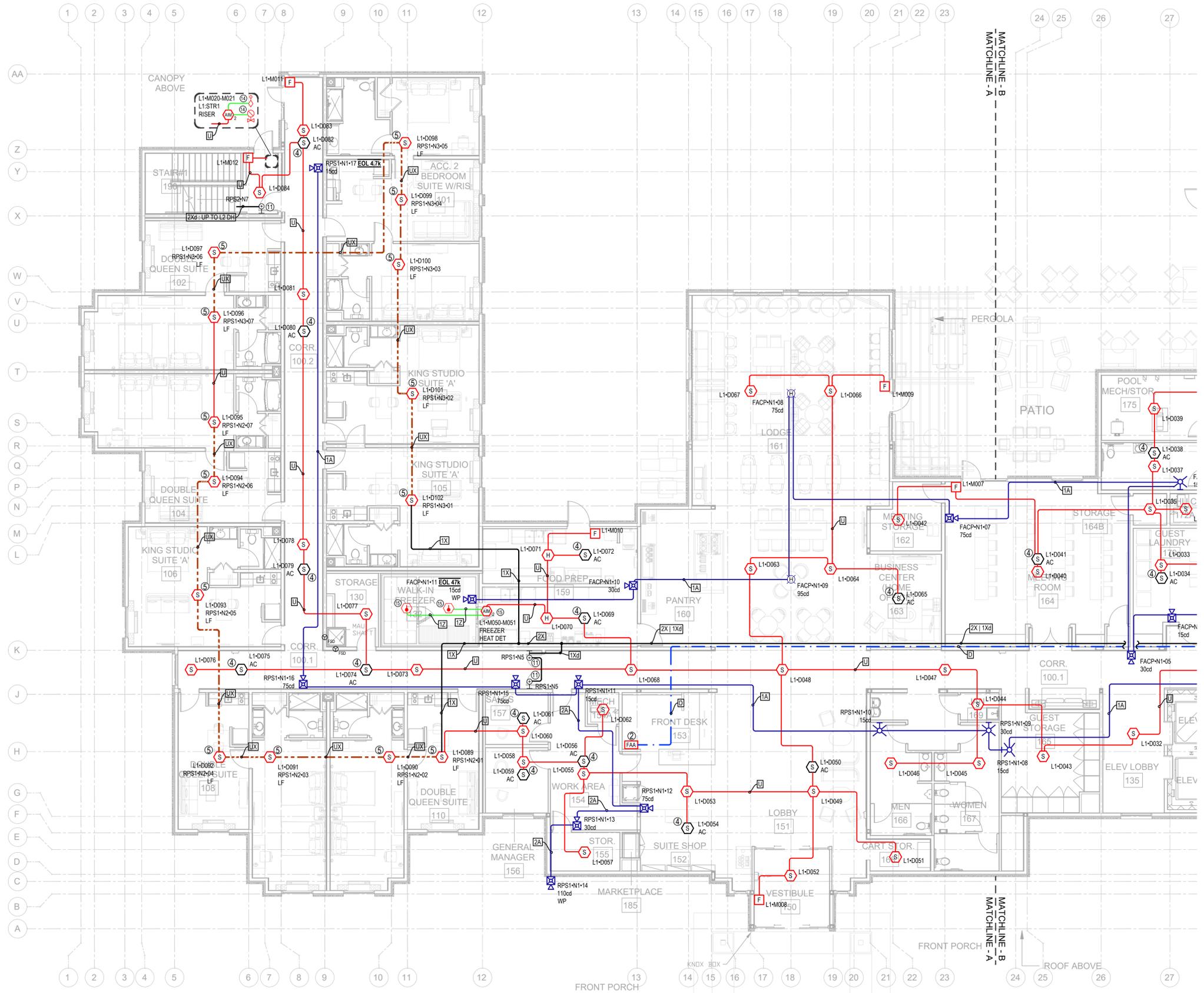
ABBREVIATIONS USED IN THE DRAWINGS

AC	ABOVE CEILING (SMOKE DETECTOR)	IDC	INITIATING DEVICE CIRCUIT (ANALOG)
AFF	ABOVE FINISHED FLOOR	IFC	INTERNATIONAL FIRE CODE
AHJ	AUTHORITY HAVING JURISDICTION	ISO	ISOLATION (SMOKE DETECTOR BASE)
AIM	ADDRESSABLE INPUT MODULE	L1	SLC LOOP 1
ALT	ALTERNATE RECALL (ELEVATOR)	L2	SLC LOOP 2
AOM	ADDRESSABLE OUTPUT MODULE (RELAY)	L3	SLC LOOP 3
AWG	AMERICAN WIRE GAUGE	L4	SLC LOOP 4
BF	BACK-FLOW	LF	LOW FREQUENCY (520Hz) SQUARE WAVE TONE
cd	CANDELA	M	MODULE (ADDRESSABLE)
CO	CARBON MONOXIDE	MACH	MACHINE
CO/SD	COMBINATION CO/SMOKE DETECTOR	MC	MECHANICAL CONTRACTOR
CONT.	CONTINUE	N#	NAC CIRCUIT NUMBER
D	DEVICE (ADDRESSABLE)	NAC	NOTIFICATION APPLIANCE CIRCUIT
DC	DUAL CIRCUIT	NEC	NATIONAL ELECTRIC CODE
DF	DRY CIRCUIT	NFPA	NATIONAL FIRE PROTECTION AGENCY
D/H	DOOR HOLD-OPENS (MAGNETIC)	NM	NAC MODULE
DN	DOWN	P.M.C.	CITY OF PUYALLUP MUNICIPAL CODE
DRY	DRY FIRE SPRINKLER SYSTEM	PRIM.	PRIMARY RECALL (ELEVATOR)
EC	ELECTRICAL CONTRACTOR	RESIST.	RESISTANCE (Ω Ohms)
ELEV	ELEVATOR	RPS	REMOTE POWER SUPPLY
EOL	END OF LINE RESISTOR	SD	SMOKE DETECTOR
EQUIP	EQUIPMENT	SLC	SIGNALING LINE CIRCUIT
FA	FIRE ALARM	STR	STORAGE
FAA	FIRE ALARM ANNUNCIATOR	S/P	STANDPIPE
FACP	FIRE ALARM CONTROL PANEL	STR	STAIRWELL
FDC	FIRE DEPARTMENT CONNECTION	TS	TAMPER SWITCH
FSD	FIRE/SMOKE DAMPER	VAC	VOLTS (AC) ALTERNATING CURRENT
FPLR	FIRE POWER LIMITED RISER	VDC	VOLTS (DC) DIRECT CURRENT
GC	GENERAL CONTRACTOR	WET	WET FIRE SPRINKLER SYSTEM
HAT	FIRE HAT RECALL (ELEVATOR)	WF	WATER-FLOW
IBC	INTERNATIONAL BUILDING CODE	WSCB	WASHINGTON STATE BUILDING CODE
		WP	WEATHERPROOF
		ZN	ZONE



FIRE ALARM - OVERALL FLOOR PLAN - 1ST FLOOR
SCALE : 3/32" = 1'





- INSTALLATION KEY NOTES**
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CABLE AND WIRE LEGEND

LINE TYPE	LABEL	CABLE TYPE	AWG	RESIST (Ω/MH)	DESCRIPTION
—	A	14/4 FPLR	14	3.07	NOTIFICATION APPLIANCE CIRCUIT
---	D	16/4 FPLR & 16/2 FPLR	16	4.87	ANNUNCIATOR CIRCUITS
---	X	14/2 FPLR	14	3.07	AUX POWER - 24VDC
---	Xd	14/2 FPLR	14	3.07	DOOR HOLDER POWER - 24VDC
---	Xr	14/2 FPLR	14	3.07	AUX POWER (RESETTABLE) - 24VDC
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DEVICE IDENTIFICATION LEGEND

NOTIFICATION DEVICES

N2-003

- DEVICE NUMBER
- NAC CIRCUIT NUMBER
- NAC CIRCUIT

ADDRESSABLE DEVICES

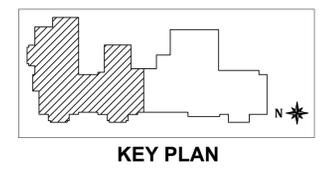
L1-D001

- DEVICE NUMBER
- DEVICE TYPE
- SLC CIRCUIT NUMBER
- SLC CIRCUIT

GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3

FLOOR	GUESTROOM NUMBERS
1ST FLOOR	130
2ND FLOOR	201 213
3RD FLOOR	310 324 327
4TH FLOOR	404 413 421
5TH FLOOR	505 512 519
TOTAL =	12 UNITS

FIRE ALARM - FLOOR PLAN - 1ST FLOOR NORTH
SCALE: 1/8" = 1'



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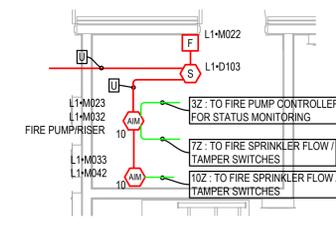
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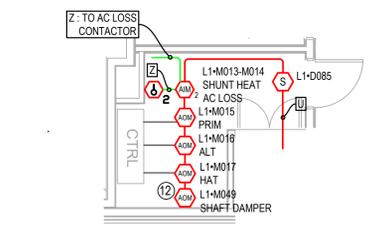
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— NAC CIRCUIT NUMBER
— NAC CIRCUIT

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— DEVICE TYPE
— SLC CIRCUIT NUMBER
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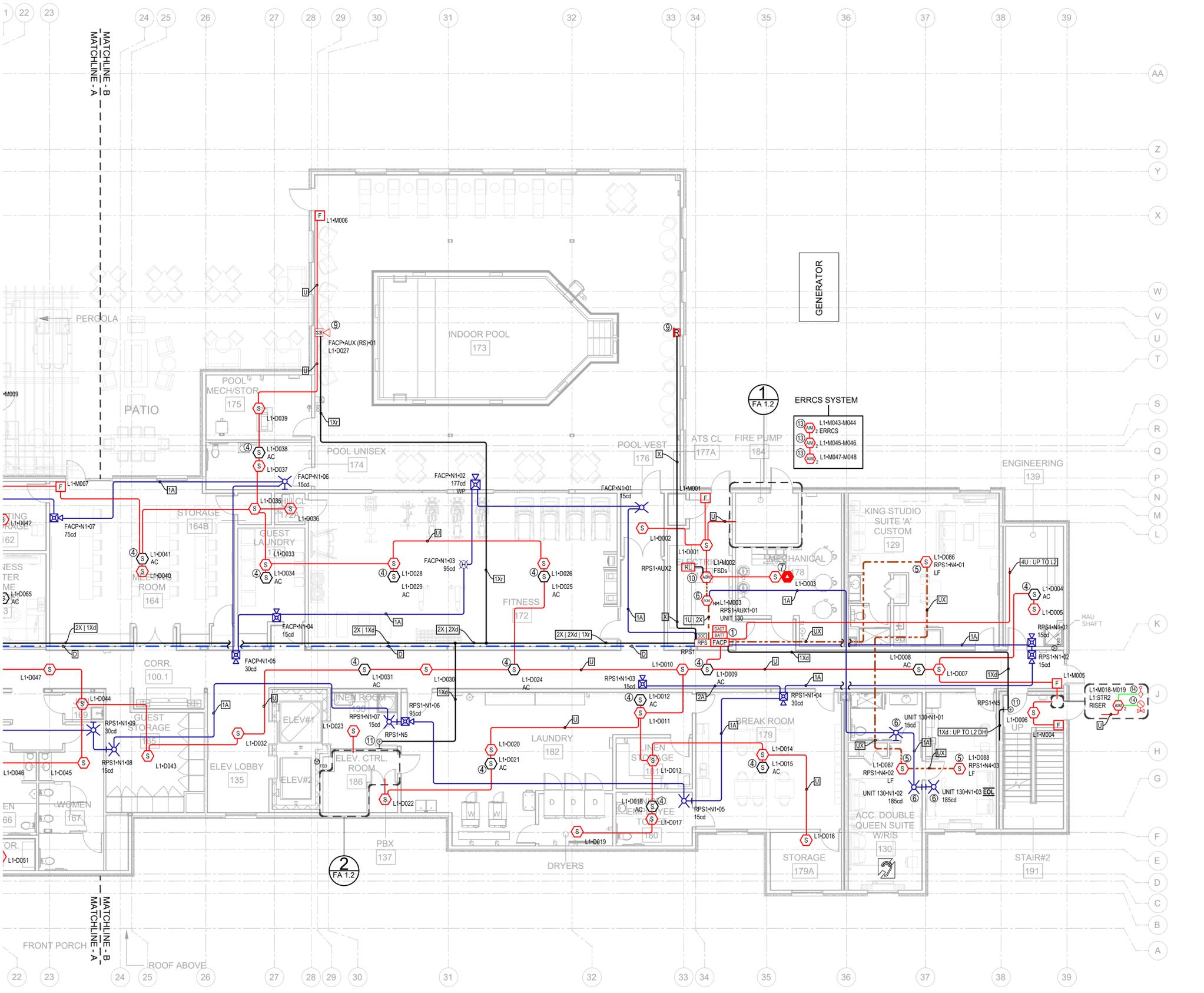
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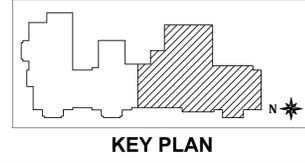
1 FIRE PUMP ROOM 184
NOT TO SCALE



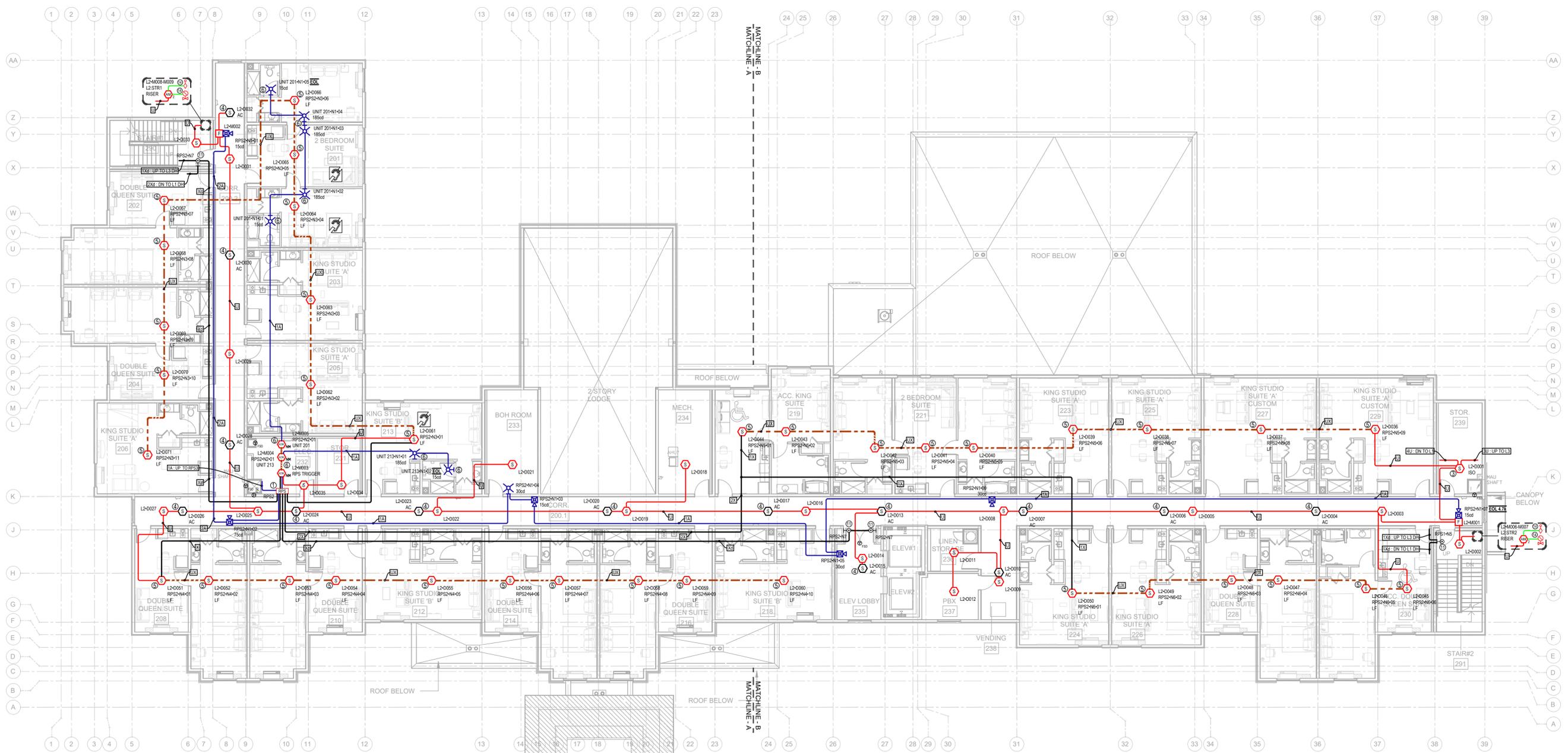
2 ELEV CTRL RM 186
NOT TO SCALE



FIRE ALARM - FLOOR PLAN - 1ST FLOOR SOUTH
SCALE: 1/8" = 1'



KEY PLAN



FIRE ALARM - OVERALL FLOOR PLAN - 2ND FLOOR
SCALE : 3/32" = 1'





DRAWN BY: DAVID MOW, SET
CHECKED BY: #420800
REVIEWED BY: ROY L. CATS NCIET IV
SEATTLE FIRE DEPT. #SCP-C-9885
L & L CATS' R/022CG
PROPERTY OF / ALL RIGHTS RESERVED F.P.I.
DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

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

DATE: **04.04.24**

HOMEWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
FLOOR PLAN
2ND FLOOR NORTH

SHEET NUMBER

FA 2.1

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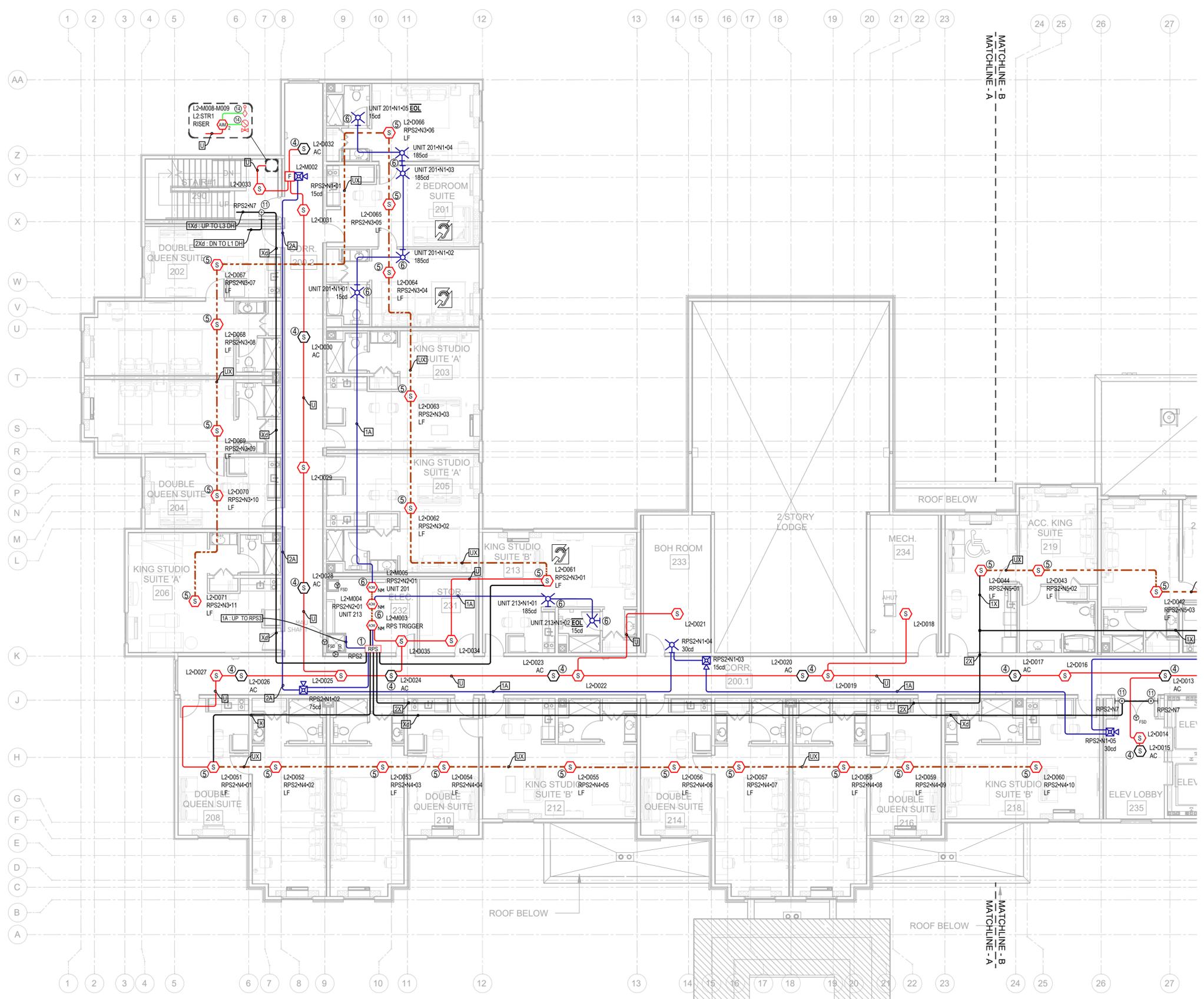
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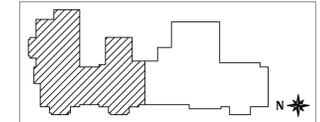
NOTIFICATION DEVICES
N2-003
— DEVICE NUMBER
— NAC CIRCUIT NUMBER
— NAC CIRCUIT

ADDRESSABLE DEVICES
L1-D001
— DEVICE NUMBER
— DEVICE TYPE
— SLC CIRCUIT NUMBER
— SLC CIRCUIT

GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3	
FLOOR	GUESTROOM NUMBERS
1ST FLOOR	130
2ND FLOOR	201 213
3RD FLOOR	310 324 327
4TH FLOOR	404 413 421
5TH FLOOR	505 512 519
TOTAL =	12 UNITS



FIRE ALARM - FLOOR PLAN - 2ND FLOOR NORTH
SCALE: 1/8" = 1'



KEY PLAN



DRAWN BY: DAVID MOW, SET
CHECKED BY: DAVID MOW, SET
REVIEWED BY: ROY L. CATS, NICET IV
SEATTLE FIRE DEPT. #SCP-C-9885
L & L CATS' R/022CG
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DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

HOMEWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
FLOOR PLAN
2ND FLOOR SOUTH

SHEET NUMBER

FA 2.2

#	INSTALLATION KEY NOTES
1	A DEDICATED 120VAC POWER CIRCUITS IS REQUIRED FOR EACH FACP, REMOTE POWER SUPPLIES & AES RADIO. COORDINATE CONNECTIONS AND DEDICATED POWER WITH THE E.C.
2	FLUSH MOUNTED REMOTE FIRE ALARM ANNUCIATOR TO BE INSTALLED IN A CONSTANTLY ATTENDED LOCATION.
3	SLC ISOLATION BASES TO BE INSTALLED ON EACH LEVEL, THE 1ST SMOKE DETECTOR ON THE CIRCUIT WILL BE PROVIDED WITH AN ISOLATION DETECTOR BASE.
4	ABOVE CEILING SMOKE DETECTOR, SEE REFLECTED CEILING PLANS FOR SUSPENDED CEILING LOCATIONS.
5	ADDRESSABLE SMOKE DETECTOR WITH LOW FREQUENCY SOUNDER BASE TO BE INSTALLED IN ALL GUESTROOMS. GUESTROOM SMOKE DETECTORS WILL BE LOCAL ONLY (SUPERVISORY) AND WILL NOT DISPATCH THE FIRE DEPARTMENT UPON ACTIVATION. THE SMOKE DETECTOR'S LOW FREQUENCY SOUNDER BASE WILL ACTIVATE WHEN THE GUESTROOMS SMOKE DETECTOR IS ACTIVATED AND/OR ON A GENERAL FIRE ALARM SIGNAL. THE GUESTROOM SMOKE DETECTOR ACTIVATION WILL BE ANNUNCIATED ON THE FACP AND THE FIRE ALARM REMOTE ANNUCIATOR LOCATED IN THE LOBBY.
6	VISIBLE OCCUPANT NOTIFICATION IN GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3, SHALL BE ACTIVATED BY THE GUEST ROOM SMOKE DETECTORS AND THE BUILDING'S FIRE ALARM SYSTEM PER IFC 907.5.2.3.2. THE NAC SERVING EACH GUESTROOM WITH COMMUNICATION FEATURES SHALL BE HOME-RUN TO AN ADDRESSABLE NAC MODULE AS SHOWN. THE NAC MODULE WILL ACTIVATE THE GUESTROOM'S VISUAL OCCUPANT NOTIFICATION DEVICES WHEN THE GUESTROOM'S SMOKE DETECTOR IS ACTIVATED AND/OR WHEN THE BUILDING'S FIRE ALARM SYSTEM IS ACTIVATED.
7	CARBON MONOXIDE DETECTION SHALL BE PROVIDED IN MECHANICAL ROOMS CONTAINING GAS FIRED WATER HEATERS AND IN ANY OTHER PLACES WITH A GAS FIRED FIREPLACE OR GAS APPLIANCE PER THE FIRE ALARM SPECIFICATIONS.
8	ADDRESSABLE DUCT DETECTORS WILL BE PROVIDED BY THE F.A. CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE ADDRESSABLE DUCT DETECTORS WILL BE POWERED FROM THE FACP. EXACT LOCATION TO BE COORDINATED WITH THE MECHANICAL CONTRACTOR PRIOR TO FIRE ALARM ELECTRICAL ROUGH-IN
9	ADDRESSABLE SINGLE-ENDED REFLECTIVE IMAGING BEAM SMOKE DETECTORw/ BUILT IN HEATER TO BE INSTALLED IN THE POOL AREA AT A MINIMUM OF 12" FROM THE CEILING. A HEATER WILL BE INSTALLED AT THE BEAM'S REFLECTOR TO ELIMINATE CONDENSATION BUILD UP. THE HEATER FOR THE BEAM'S REFLECTOR REQUIRES 24VDC.
10	FSD (FIRE SMOKE DAMPERS) TO BE PROVIDED/POWERED/INSTALLED BY OTHERS. A FIRE ALARM RELAY WILL BE INSTALLED NEAR THE ELECTRICAL PANEL THAT FEEDS THE FSDS. THE FIRE ALARM RELAY DRY CONTACTS ARE RATED FOR 2A @ 30VDC, 0.5A @ 125VAC. EXACT LOCATION TO BE COORDINATED WITH THE E.C.
11	MAGNETIC DOOR HOLDERS WILL BE PROVIDED, POWERED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. COORDINATE THE INSTALLATION OF THE ARMATURE WITH THE DOOR INSTALLATION COMPANY.
12	FIRE ALARM RELAY w/DRY CONTACTS FOR ELEVATOR SHAFT LOUVER ACTIVATION (IF REQUIRED). RELAY DRY CONTACTS ARE RATED FOR 2A @ 30VDC, 0.5A @ 125VAC. COORDINATE CONNECTIONS WITH THE E.C.
13	IF ERRCS IS INSTALLED, IT SHALL BE MONITORED BY THE FIRE ALARM SYSTEM. ADDRESSABLE MONITOR MODULES WILL BE INSTALLED NEXT TO THE ERRCS HEAD-END AND MONITOR THE FOLLOWING CONDITIONS: ANTENNA MALFUNCTION, SIGNAL BOOST FAIL, LOW BATTERY, LOSS OF AC POWER, FAILURE OF BATTERY CHARGING. ERRC EXACT LOCATION TO BE COORDINATED WITH THE G.C./E.C.
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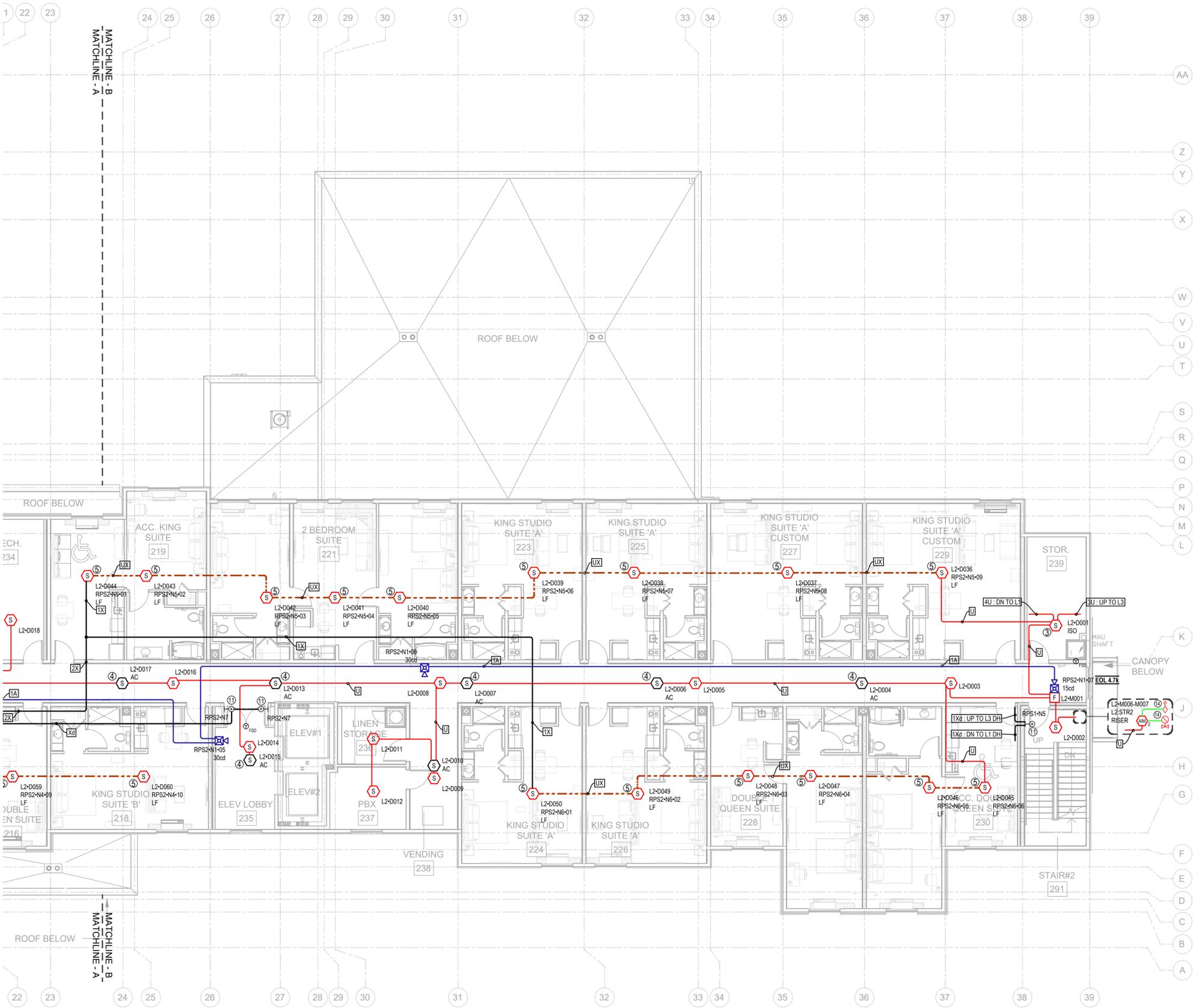
LINE TYPE	LABEL	CABLE TYPE	AWG	RESIST (Ω/MH)	DESCRIPTION
---	A	14/4 FPLR	14	3.07	NOTIFICATION APPLIANCE CIRCUIT
---	D	16/4 FPLR & 16/2 FPLR	16	4.87	ANNUNCIATOR CIRCUITS
---	X	14/2 FPLR	14	3.07	AUX POWER : 24VDC
---	Xd	14/2 FPLR	14	3.07	DOOR HOLDER POWER : 24VDC
---	Xr	14/2 FPLR	14	3.07	AUX POWER (RESETTABLE) : 24VDC
---	U	16/4 FPLR	16	4.87	SIGNALING LINE CIRCUIT
---	UX	16/4 FPLR	16	4.87	SIGNALING LINE CIRCUIT
---	Ux	14/2 FPLR	14	3.07	AUX POWER : 24VDC
---	Z	18/2 FPLR	18	3.07	IDC / ZONE CIRCUIT

ALL CONDUCTORS SHALL BE INSTALLED IN RACEWAYS SUITABLE FOR THE INSTALLATION CONDITIONS WHEN REQUIRED BY IBC, IFC, NFPA-72, NFPA-70, WSBC AND CITY OF PUYALLUP'S MUNICIPAL CODE.

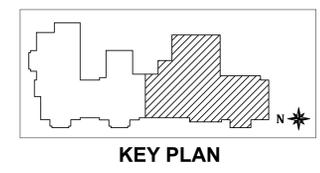
NOTIFICATION DEVICES
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— NAC CIRCUIT NUMBER
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ADDRESSABLE DEVICES
L1+0001
— DEVICE NUMBER
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FIRE ALARM - FLOOR PLAN - 2ND FLOOR SOUTH
SCALE: 1/8" = 1'





DRAWN BY: DAVID MOW, SET
NICET IV - #120800
REVIEWED BY ROY L. CATS NICET IV
SEATTLE FIRE DEPT. #SCP-C 9885
L & L CATS' R/022CG
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DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

HOMEWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

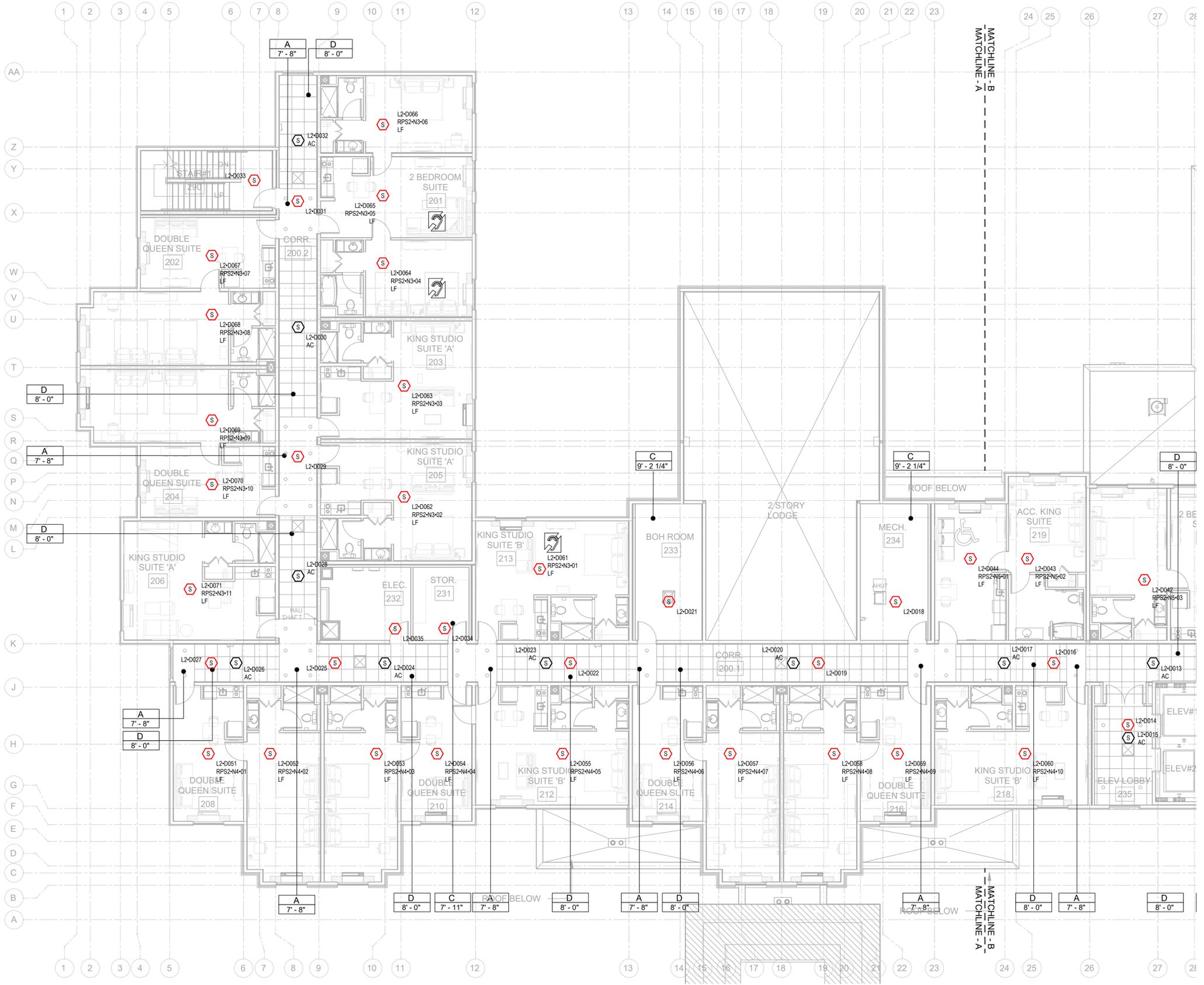
FIRE ALARM
CEILING PLAN
2ND FLOOR NORTH

SHEET NUMBER

FA 2.3

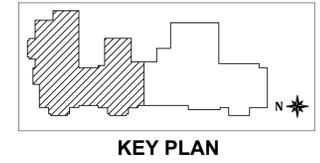
REFLECTED CEILING PLAN LEGEND	
A	PRIME & PAINTED GYPSUM BOARD
B	PRIME & PAINTED GYPSUM BOARD- MOISTURE RESISTANT
C	UNDERSIDE OF FLOOR / ROOF SYSTEM - PRIME & PAINTED TO RECEIVE FINAL FINISH
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F	PLASTIC LAMINATE PANELS. REFERENCE PLAN FOR SEAMING LOCATION.

A	← CEILING FINISH
15' - 0"	← CEILING HEIGHT



FIRE ALARM - CEILING PLAN - 2ND FLOOR NORTH

SCALE : 1/8" = 1'



REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

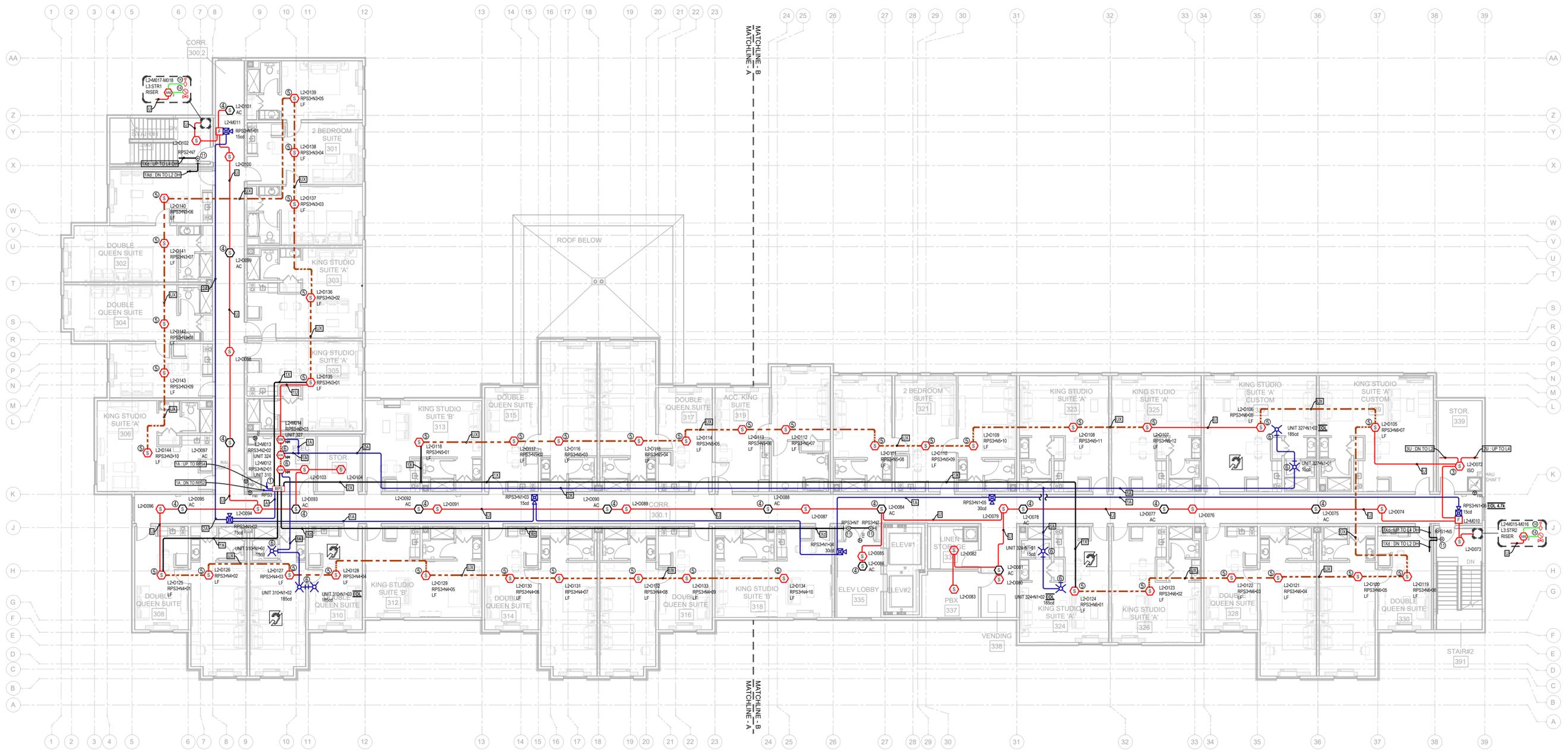
HOMWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
3RD FLOOR
OVERALL FLOOR PLAN

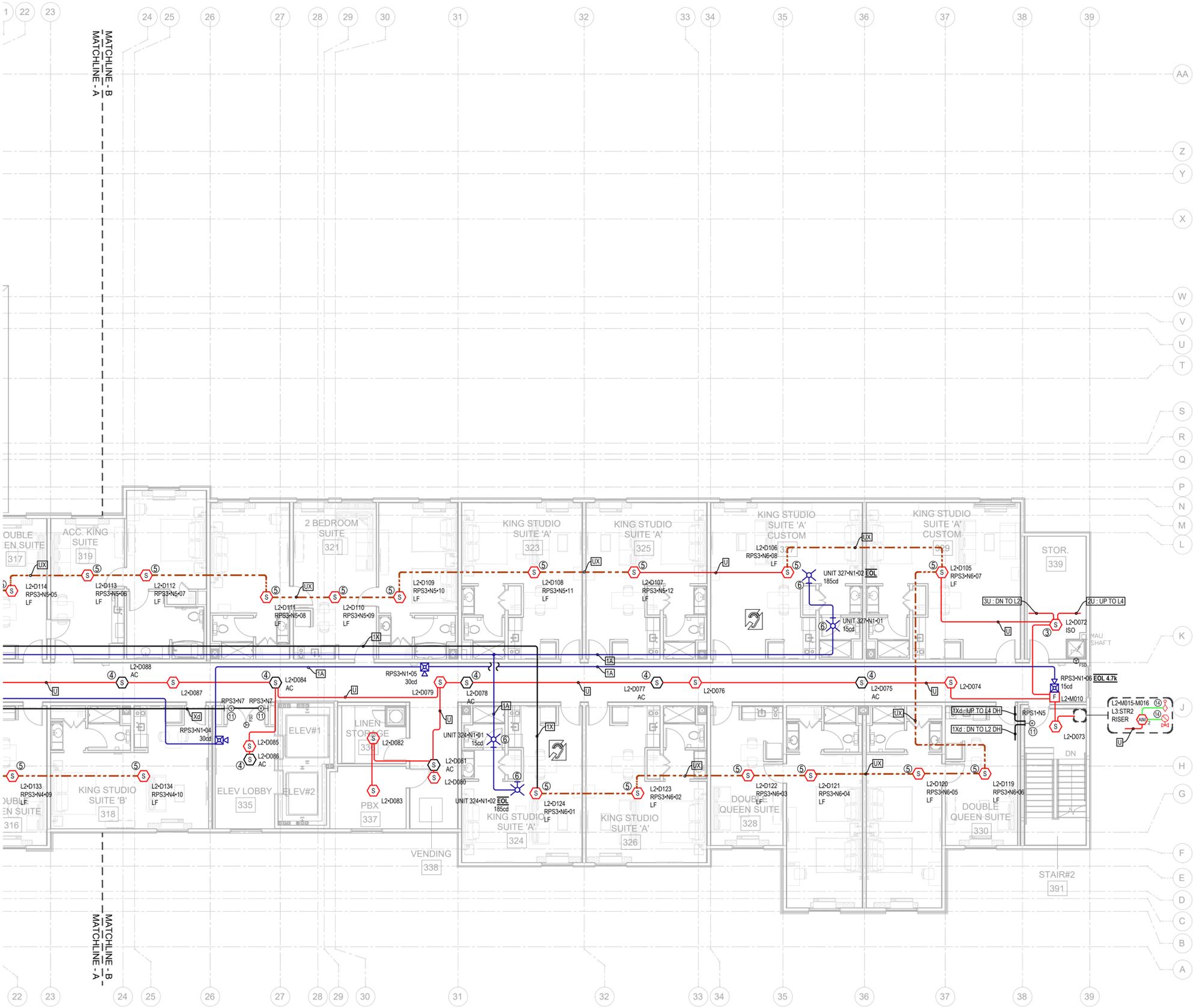
SHEET NUMBER

FA 3.0



FIRE ALARM - OVERALL FLOOR PLAN - 3RD FLOOR
SCALE : 3/32" = 1"





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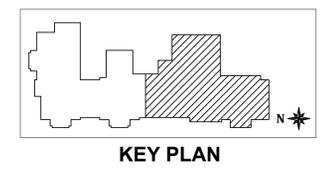
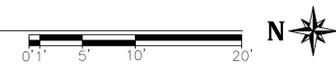
CABLE AND WIRE LEGEND					
LINE TYPE	LABEL	CABLE TYPE	AWG	RESIST (Ω/Mft)	DESCRIPTION
—	A	14/4 FPLR	14	3.07	NOTIFICATION APPLIANCE CIRCUIT
---	D	16/4 FPLR & 16/2 FPLR	16	4.87	ANNUNCIATOR CIRCUITS
—	X	14/2 FPLR	14	3.07	AUX POWER : 24VDC
—	Xd	14/2 FPLR	14	3.07	DOOR HOLDER POWER : 24VDC
—	Xr	14/2 FPLR	14	3.07	AUX POWER (RESETTABLE) : 24VDC
—	U	16/4 FPLR	16	4.87	SIGNALING LINE CIRCUIT
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DEVICE IDENTIFICATION LEGEND	
NOTIFICATION DEVICES	
N2-003	DEVICE NUMBER
NAC	NAC CIRCUIT NUMBER
NAC	NAC CIRCUIT
ADDRESSABLE DEVICES	
L1+0001	DEVICE NUMBER
L1	DEVICE TYPE
S	SLC CIRCUIT NUMBER
S	SLC CIRCUIT

GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3	
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1ST FLOOR	130
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3RD FLOOR	310 324 327
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5TH FLOOR	505 512 519
TOTAL =	12 UNITS

FIRE ALARM - FLOOR PLAN - 3RD FLOOR SOUTH
SCALE : 1/8" = 1'



FPI
FIRE PROTECTION INC.
17410 Ash Way, Ste 8
Lynnwood, WA 98037
(425) 290-9600
www.fpiseattle.com

NFPA
000805173

ROY L. CATS
CERTIFIED FIRE PROTECTION SPECIALIST
NFPA
CFPS
#1473

DRAWN BY: DAVID MOW, SET
CHECKED BY: DAVID MOW, SET
REVIEWED BY: ROY L. CATS, NICET IV
SEATTLE FIRE DEPT. #SCP-C-9885
L & L CATS' RUL022CG
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DAVID MOW:

REVISION RECORD	DATE / DESCRIPTION

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

DATE: **04.04.24**

HOMWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE
FIRE ALARM
FLOOR PLAN
3RD FLOOR SOUTH

SHEET NUMBER
FA 3.2



DRAWN BY: DAVID MOW, SET
 NICET IV - #120840
 REVIEWED BY ROY L. CATS, NICET IV
 SEATTLE FIRE DEPT. #SCP-C 9865
 L & I CATS/RU022CG
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 DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

HOMWOOD SUITES
 3500 S. MERIDIAN
 PUYALLUP, WA 98373

SHEET TITLE

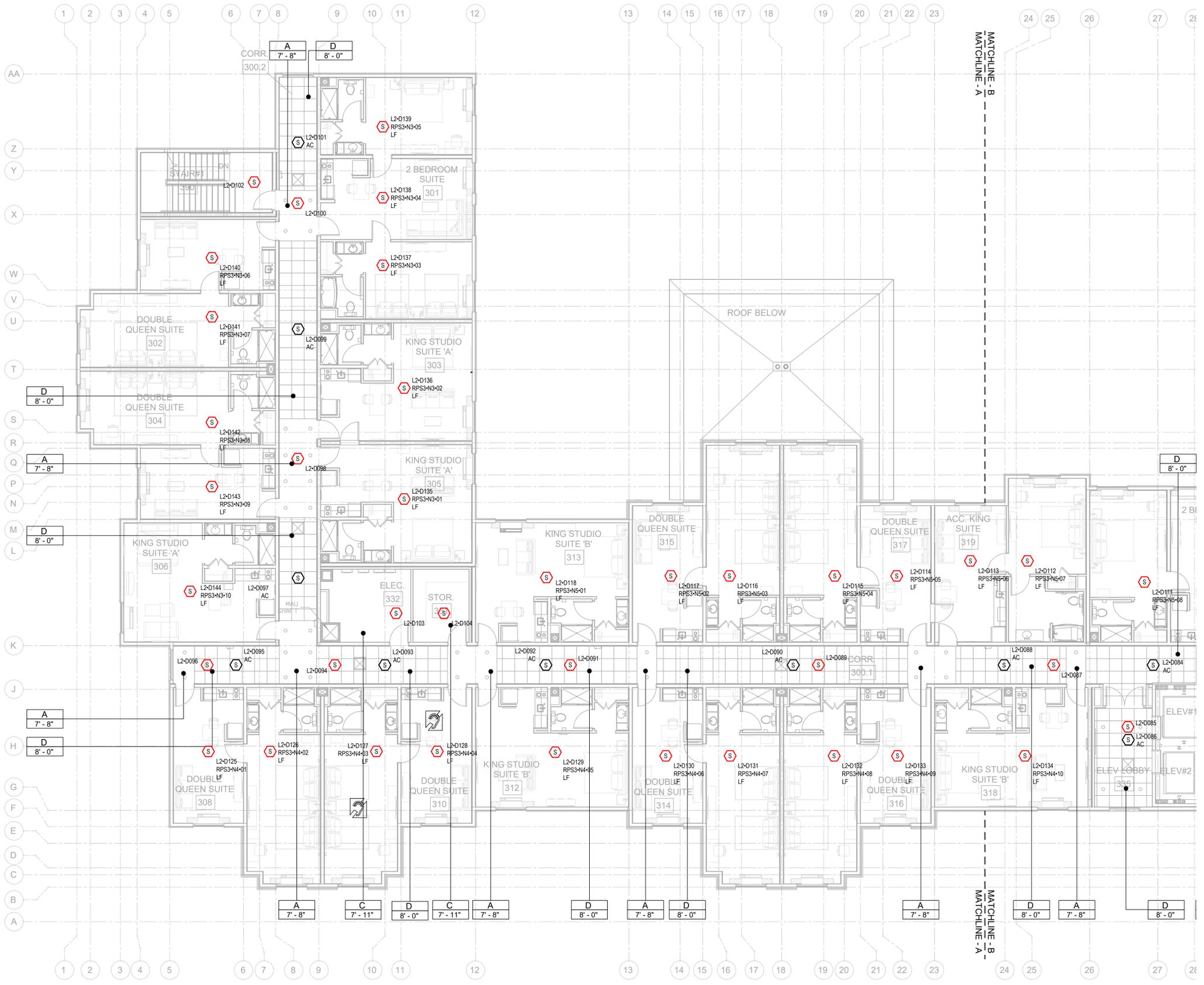
FIRE ALARM
 CEILING PLAN
 3RD FLOOR NORTH

SHEET NUMBER

FA 3.3

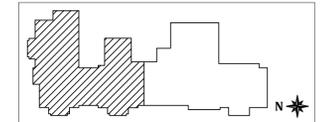
REFLECTED CEILING PLAN LEGEND	
A	PRIME & PAINTED GYPSUM BOARD
B	PRIME & PAINTED GYPSUM BOARD- MOISTURE RESISTANT
C	UNDERSIDE OF FLOOR / ROOF SYSTEM - PRIME & PAINTED TO RECEIVE FINAL FINISH
D	2x2 LAY-IN ACOUSTICAL CLG. TILE SUSPENDED FROM STRUCTURE.
E	2x2 LAY-IN ACOUSTICAL CLG. TILE SUSPENDED FROM STRUCTURE. MOISTURE RESISTANT
F	PLASTIC LAMINATE PANELS. REFERENCE PLAN FOR SEAMING LOCATION.

A	← CEILING FINISH
15' - 0"	← CEILING HEIGHT



FIRE ALARM - CEILING PLAN - 3RD FLOOR NORTH

SCALE : 1/8" = 1'



KEY PLAN



DRAWN BY: DAVID MOW, SET
 NICET IV - #420890
 REVIEWED BY ROY L. CATS, NICET IV
 SEATTLE FIRE DEPT. #SCP-C 9885
 L & L CATS/RU022CG
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 DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

City of Puyallup Development & Permitting Services ISSUED PERMIT	
Building	Planning
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HOMEWOOD SUITES
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PUYALLUP, WA 98373

SHEET TITLE

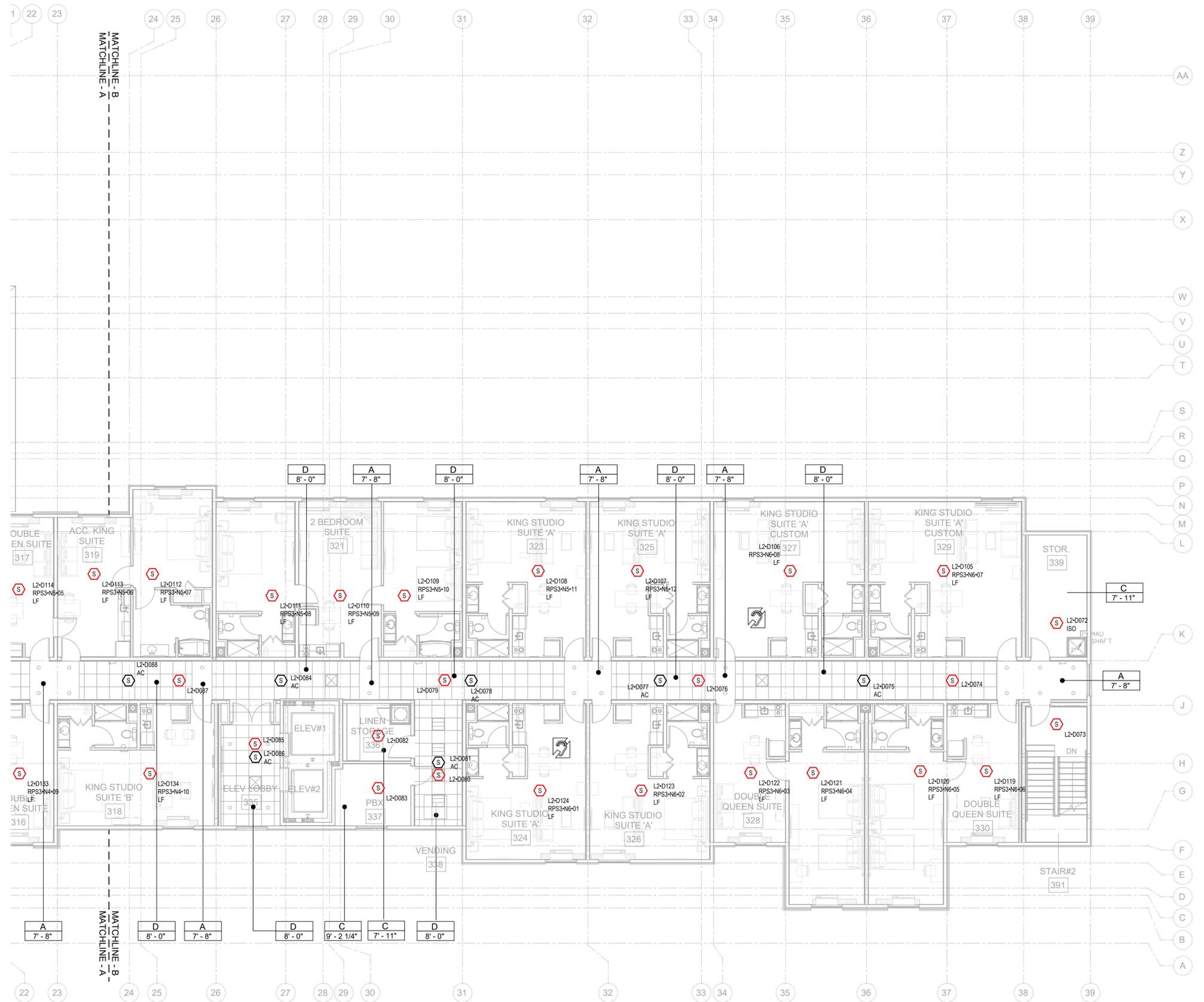
FIRE ALARM
CEILING PLAN
3RD FLOOR SOUTH

SHEET NUMBER

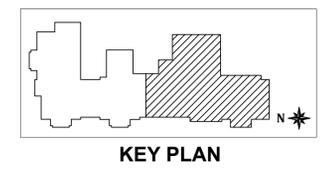
FA 3.4

REFLECTED CEILING PLAN LEGEND	
A	PRIME & PAINTED GYPSUM BOARD
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FIRE ALARM - CEILING PLAN - 3RD FLOOR SOUTH
SCALE: 1/8" = 1'



REVISION RECORD

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Building	Planning
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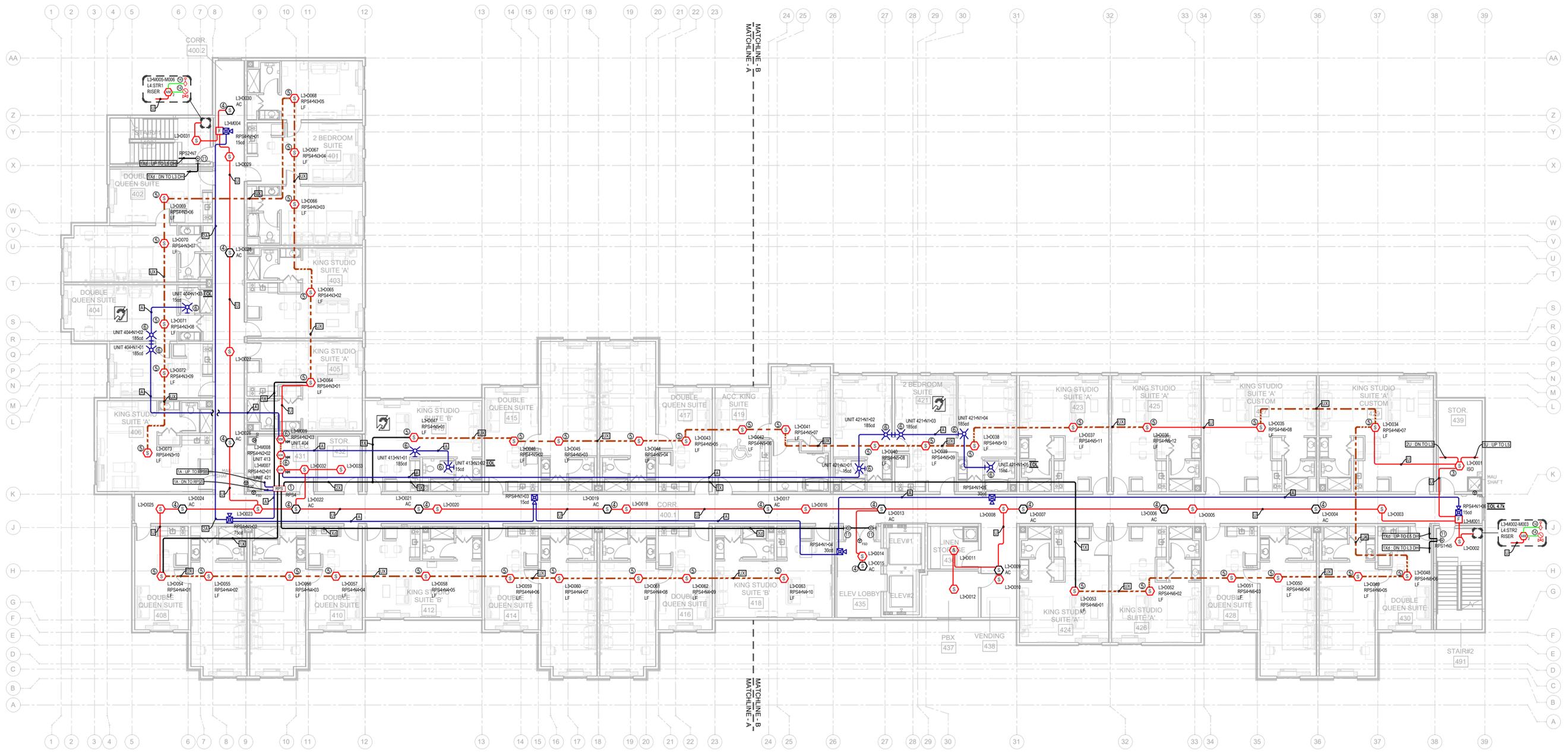
HOMEWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
4TH FLOOR
OVERALL FLOOR PLAN

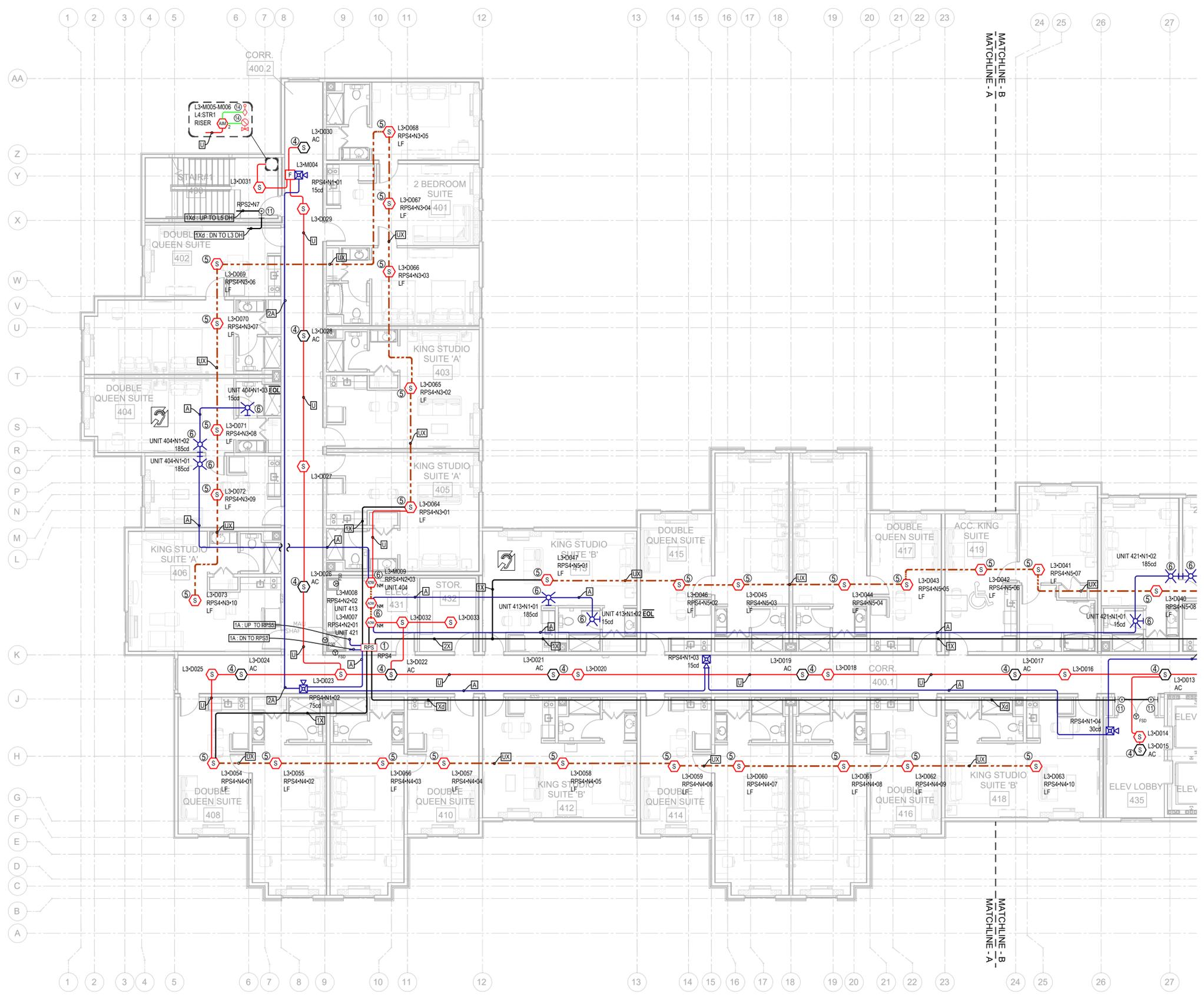
SHEET NUMBER

FA 4.0



FIRE ALARM - OVERALL FLOOR PLAN - 4TH FLOOR
SCALE : 3/32" = 1"





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1	A DEDICATED 120VAC POWER CIRCUITS IS REQUIRED FOR EACH FACP, REMOTE POWER SUPPLIES & AES RADIO. COORDINATE CONNECTIONS AND DEDICATED POWER WITH THE E.C.
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5	ADDRESSABLE SMOKE DETECTOR WITH LOW FREQUENCY SOUNDER BASE TO BE INSTALLED IN ALL GUESTROOMS. GUESTROOM SMOKE DETECTOR'S LOW FREQUENCY SOUNDER BASE WILL NOT DISPATCH THE FIRE DEPARTMENT UPON ACTIVATION. THE SMOKE DETECTOR'S LOW FREQUENCY SOUNDER BASE WILL ACTIVATE WHEN THE GUESTROOM'S SMOKE DETECTOR IS ACTIVATED AND/OR ON A GENERAL FIRE ALARM SIGNAL. THE GUESTROOM SMOKE DETECTOR ACTIVATION WILL BE ANNUNCIATED ON THE FACP AND THE FIRE ALARM REMOTE ANNUNCIATOR LOCATED IN THE LOBBY.
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7	CARBON MONOXIDE DETECTION SHALL BE PROVIDED IN MECHANICAL ROOMS CONTAINING GAS FIRED WATER HEATERS AND IN ANY OTHER PLACES WITH A GAS FIRED FIREPLACE OR GAS APPLIANCE PER THE FIRE ALARM SPECIFICATIONS.
8	ADDRESSABLE DUCT DETECTORS WILL BE PROVIDED BY THE F.A. CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE ADDRESSABLE DUCT DETECTORS WILL BE POWERED FROM THE FACP. EXACT LOCATION TO BE COORDINATED WITH THE MECHANICAL CONTRACTOR PRIOR TO FIRE ALARM ELECTRICAL ROUGH-IN
9	ADDRESSABLE SINGLE-ENDED REFLECTIVE IMAGING BEAM SMOKE DETECTOR/ BUILT IN HEATER TO BE INSTALLED IN THE POOL AREA AT A MINIMUM OF 12" FROM THE CEILING. A HEATER WILL BE INSTALLED AT THE BEAM'S REFLECTOR TO ELIMINATE CONDENSATION BUILD UP. THE HEATER FOR THE BEAM'S REFLECTOR REQUIRES 24VDC.
10	FSD (FIRE SMOKE DAMPERS) TO BE PROVIDED/POWERED/INSTALLED BY OTHERS. A FIRE ALARM RELAY WILL BE INSTALLED NEAR THE ELECTRICAL PANEL THAT FEEDS THE FSDS. THE FIRE ALARM RELAY DRY CONTACTS ARE RATED FOR 2A @ 30VDC, 0.5A @ 125VAC. EXACT LOCATION TO BE COORDINATED WITH THE E.C.
11	MAGNETIC DOOR HOLDERS WILL BE PROVIDED, POWERED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. COORDINATE THE INSTALLATION OF THE ARMATURE WITH THE DOOR INSTALLATION COMPANY.
12	FIRE ALARM RELAY w/DRY CONTACTS FOR ELEVATOR SHAFT LOUVER ACTIVATION (IF REQUIRED). RELAY DRY CONTACTS ARE RATED FOR 2A @ 30VDC, 0.5A @ 125VAC. COORDINATE CONNECTIONS WITH THE E.C.
13	IF ERRCS IS INSTALLED, IT SHALL BE MONITORED BY THE FIRE ALARM SYSTEM. ADDRESSABLE MONITOR MODULES WILL BE INSTALLED NEXT TO THE ERRCS HEAD-END AND MONITOR THE FOLLOWING CONDITIONS: ANTENNA MALFUNCTION, SIGNAL BOOST FAIL, LOW BATTERY, LOSS OF AC POWER, FAILURE OF BATTERY CHARGING. ERRC EXACT LOCATION TO BE COORDINATED WITH THE G.C./E.C.
14	EXACT LOCATION AND QUANTITIES OF FIRE PUMP AND FIRE SPRINKLER SWITCHES/CONTROL VALVES TO BE COORDINATED WITH THE SPRINKLER CONTRACTOR.
15	THERMAL TUBE RATE OF RISE HEAT DETECTORS TO BE INSTALLED IN THE FREEZER. ADDRESSABLE MONITOR MODULE TO BE INSTALLED IN THE KITCHEN AREA. SITE TO PROVIDE PENETRATIONS TO THE FREEZER. SEALING OF PENETRATIONS BY OTHERS.

LINE TYPE	LABEL	CABLE TYPE	AWG	RESIST (Ω/MH)	DESCRIPTION
---	A	14/4 FPLR	14	3.07	NOTIFICATION APPLIANCE CIRCUIT
---	D	16/4 FPLR & 16/2 FPLR	16	4.87	ANNUNCIATOR CIRCUITS
---	X	14/2 FPLR	14	3.07	AUX POWER - 24VDC
---	Xd	14/2 FPLR	14	3.07	DOOR HOLDER POWER - 24VDC
---	Xr	14/2 FPLR	14	3.07	AUX POWER (RESETTABLE) - 24VDC
---	U	16/4 FPLR	16	4.87	SIGNALING LINE CIRCUIT
---	UX	16/4 FPLR	16	4.87	SIGNALING LINE CIRCUIT
---	Z	18/2 FPLR	18	3.07	AUX POWER - 24VDC
---					IDC / ZONE CIRCUIT

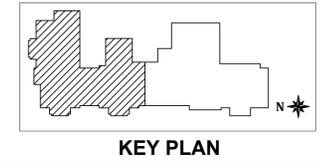
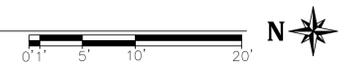
ALL CONDUCTORS SHALL BE INSTALLED IN RACEWAYS SUITABLE FOR THE INSTALLATION CONDITIONS WHEN REQUIRED BY IBC, IFC, NFPA-72, NFPA-70, WSBC AND CITY OF PUYALLUP'S MUNICIPAL CODE.

NOTIFICATION DEVICES
N2-003
— DEVICE NUMBER
— NAC CIRCUIT NUMBER
— NAC CIRCUIT

ADDRESSABLE DEVICES
L1-D001
— DEVICE NUMBER
— DEVICE TYPE
— SLC CIRCUIT NUMBER
— SLC CIRCUIT

GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3	
FLOOR	GUESTROOM NUMBERS
1ST FLOOR	130
2ND FLOOR	201 213
3RD FLOOR	310 324 327
4TH FLOOR	404 413 421
5TH FLOOR	505 512 519
TOTAL =	12 UNITS

FIRE ALARM - FLOOR PLAN - 4TH FLOOR NORTH
SCALE: 1/8" = 1'





DRAWN BY: DAVID MOW, SET
CHECKED BY: DAVID MOW, SET
REVIEWED BY: ROY L. CATS, NICET IV
SEATTLE FIRE DEPT. #SCP-C-9885
L & L CATS' R/022CG
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DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

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

DATE: **04.04.24**

HOMEWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
FLOOR PLAN
4TH FLOOR SOUTH

SHEET NUMBER

FA 4.2

#	INSTALLATION KEY NOTES
①	A DEDICATED 120VAC POWER CIRCUITS IS REQUIRED FOR EACH FACP, REMOTE POWER SUPPLIES & AES RADIO. COORDINATE CONNECTIONS AND DEDICATED POWER WITH THE E.C.
②	FLUSH MOUNTED REMOTE FIRE ALARM ANNUCIATOR TO BE INSTALLED IN A CONSTANTLY ATTENDED LOCATION.
③	SLC ISOLATION BASES TO BE INSTALLED ON EACH LEVEL, THE 1ST SMOKE DETECTOR ON THE CIRCUIT WILL BE PROVIDED WITH AN ISOLATION DETECTOR BASE.
④	ABOVE CEILING SMOKE DETECTOR, SEE REFLECTED CEILING PLANS FOR SUSPENDED CEILING LOCATIONS.
⑤	ADDRESSABLE SMOKE DETECTOR WITH LOW FREQUENCY SOUNDER BASE TO BE INSTALLED IN ALL GUESTROOMS. GUESTROOM SMOKE DETECTORS WILL BE LOCAL ONLY (SUPERVISORY) AND WILL NOT DISPATCH THE FIRE DEPARTMENT UPON ACTIVATION. THE SMOKE DETECTOR'S LOW FREQUENCY SOUNDER BASE WILL ACTIVATE WHEN THE GUESTROOMS SMOKE DETECTOR IS ACTIVATED AND/OR ON A GENERAL FIRE ALARM SIGNAL. THE GUESTROOM SMOKE DETECTOR ACTIVATION WILL BE ANNUNCIATED ON THE FACP AND THE FIRE ALARM REMOTE ANNUCIATOR LOCATED IN THE LOBBY.
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⑩	FSD (FIRE SMOKE DAMPERS) TO BE PROVIDED/POWERED/INSTALLED BY OTHERS. A FIRE ALARM RELAY WILL BE INSTALLED NEAR THE ELECTRICAL PANEL THAT FEEDS THE FSDs. THE FIRE ALARM RELAY DRY CONTACTS ARE RATED FOR 2A @ 30VDC, 0.5A @ 125VAC. EXACT LOCATION TO BE COORDINATED WITH THE E.C.
⑪	MAGNETIC DOOR HOLDERS WILL BE PROVIDED, POWERED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. COORDINATE THE INSTALLATION OF THE ARMATURE WITH THE DOOR INSTALLATION COMPANY.
⑫	FIRE ALARM RELAY w/DRY CONTACTS FOR ELEVATOR SHAFT LOUVER ACTIVATION (IF REQUIRED). RELAY DRY CONTACTS ARE RATED FOR 2A @ 30VDC, 0.5A @ 125VAC. COORDINATE CONNECTIONS WITH THE E.C.
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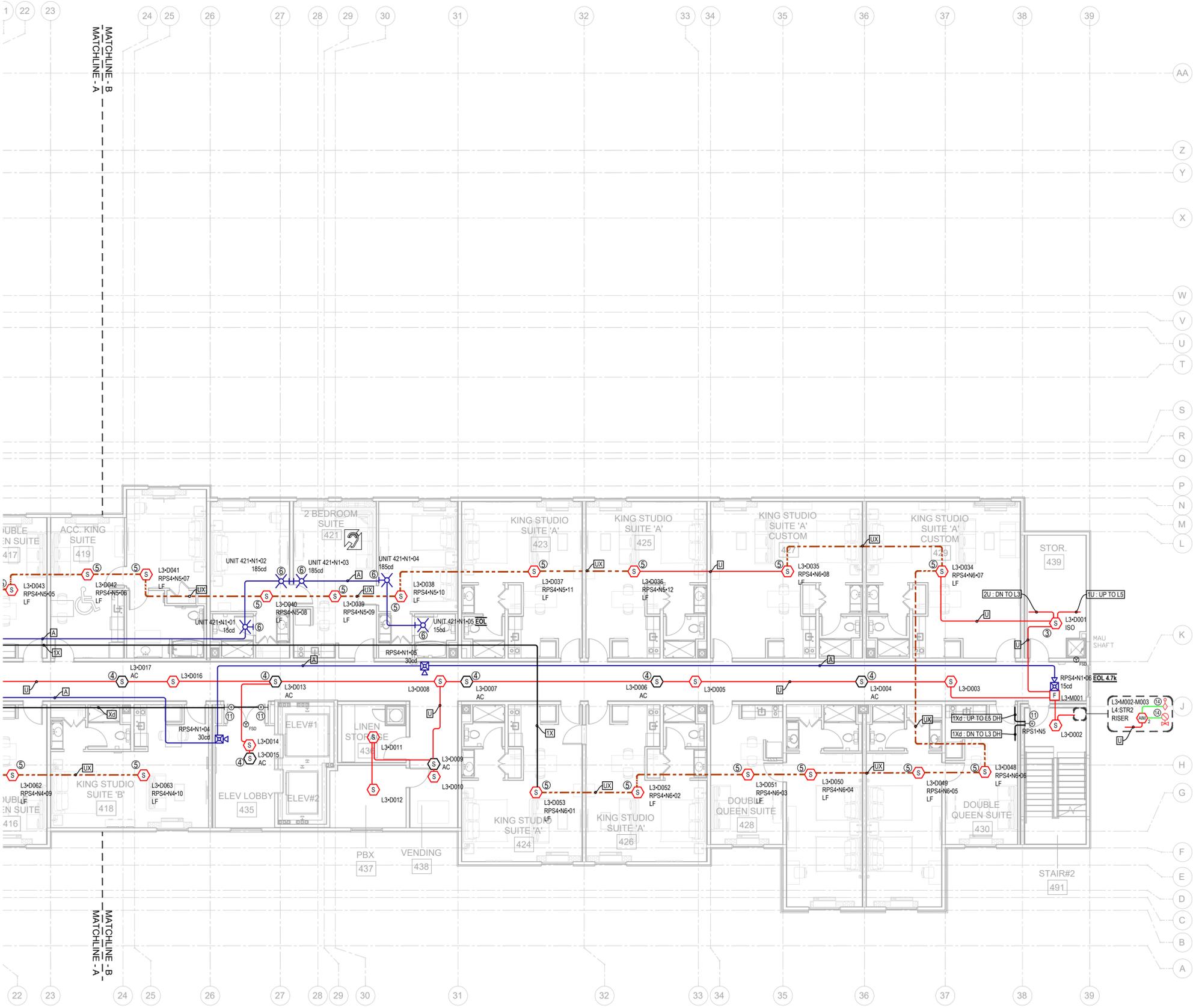
LINE TYPE	LABEL	CABLE TYPE	AWG	RESIST (Ω/Mft)	DESCRIPTION
—	A	14/4 FPLR	14	3.07	NOTIFICATION APPLIANCE CIRCUIT
---	D	16/4 FPLR & 16/2 FPLR	16	4.87	ANNUNCIATOR CIRCUITS
---	X	14/2 FPLR	14	3.07	AUX POWER : 24VDC
---	Xd	14/2 FPLR	14	3.07	DOOR HOLDER POWER : 24VDC
---	Xr	14/2 FPLR	14	3.07	AUX POWER (RESETTABLE) : 24VDC
---	U	16/4 FPLR	16	4.87	SIGNALING LINE CIRCUIT
---	UX	16/4 FPLR	16	4.87	SIGNALING LINE CIRCUIT
---	UX	14/2 FPLR	14	3.07	AUX POWER : 24VDC
---	Z	18/2 FPLR	18	3.07	IDC / ZONE CIRCUIT

ALL CONDUCTORS SHALL BE INSTALLED IN RACEWAYS SUITABLE FOR THE INSTALLATION CONDITIONS WHEN REQUIRED BY IBC, IFC, NFPA-72, NFPA-70, WSBC AND CITY OF PUYALLUP'S MUNICIPAL CODE.

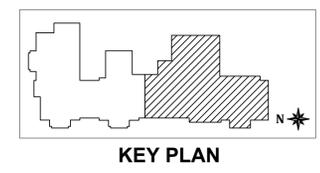
NOTIFICATION DEVICES
N2-003
— DEVICE NUMBER
— NAC CIRCUIT NUMBER
— NAC CIRCUIT

ADDRESSABLE DEVICES
L1+D001
— DEVICE NUMBER
— DEVICE TYPE
— SLC CIRCUIT NUMBER
— SLC CIRCUIT

GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3	
FLOOR	GUESTROOM NUMBERS
1ST FLOOR	130
2ND FLOOR	201 213
3RD FLOOR	310 324 327
4TH FLOOR	404 413 421
5TH FLOOR	505 512 519
TOTAL =	12 UNITS



FIRE ALARM - FLOOR PLAN - 4TH FLOOR SOUTH
SCALE: 1/8" = 1'





DRAWN BY: DAVID MOW, SET
NICET IV - #120890
REVIEWED BY ROY L. CATS, NICET IV
SEATTLE FIRE DEPT. #SCP-C 9985
L & L CATS' RUL022CG
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DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

HOMWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

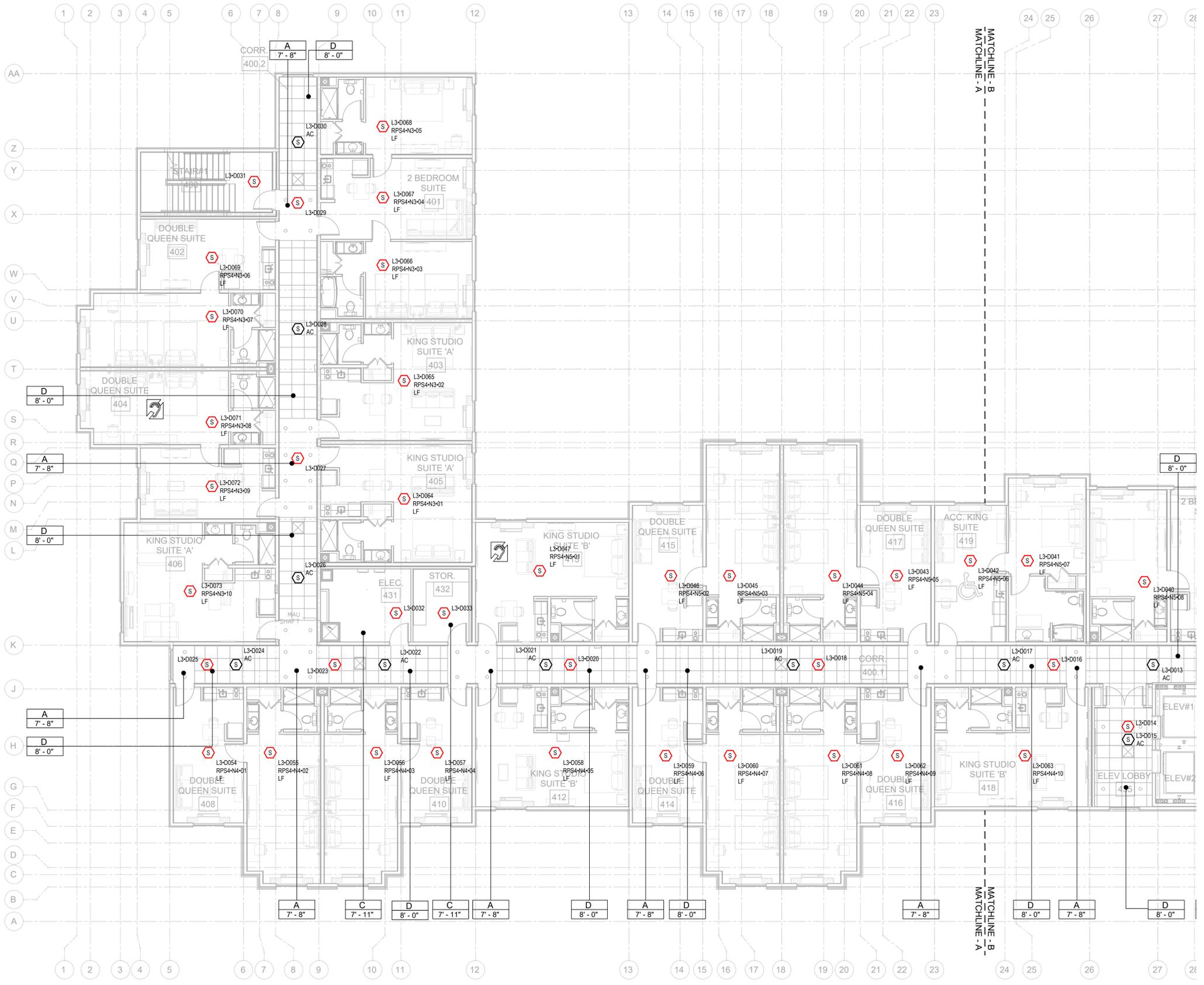
FIRE ALARM
CEILING PLAN
4TH FLOOR NORTH

SHEET NUMBER

FA 4.3

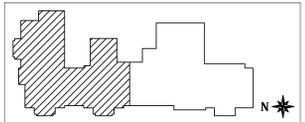
REFLECTED CEILING PLAN LEGEND	
A	PRIME & PAINTED GYPSUM BOARD
B	PRIME & PAINTED GYPSUM BOARD- MOISTURE RESISTANT
C	UNDERSIDE OF FLOOR / ROOF SYSTEM - PRIME & PAINTED TO RECEIVE FINAL FINISH
D	2x2 LAY-IN ACOUSTICAL CLG. TILE SUSPENDED FROM STRUCTURE.
E	2x2 LAY-IN ACOUSTICAL CLG. TILE SUSPENDED FROM STRUCTURE. MOISTURE RESISTANT
F	PLASTIC LAMINATE PANELS. REFERENCE PLAN FOR SEAMING LOCATION.

A	← CEILING FINISH
15' - 0"	← CEILING HEIGHT



FIRE ALARM - CEILING PLAN - 4TH FLOOR NORTH

SCALE : 1/8" = 1'



KEY PLAN



DRAWN BY: DAVID MOW, SET
NICET IV - #420890
REVIEWED BY ROY L. CATS, NICET IV
SEATTLE FIRE DEPT. #SCP-C 9985
L & L CATS/RLOJZCG
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DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

HOMEWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

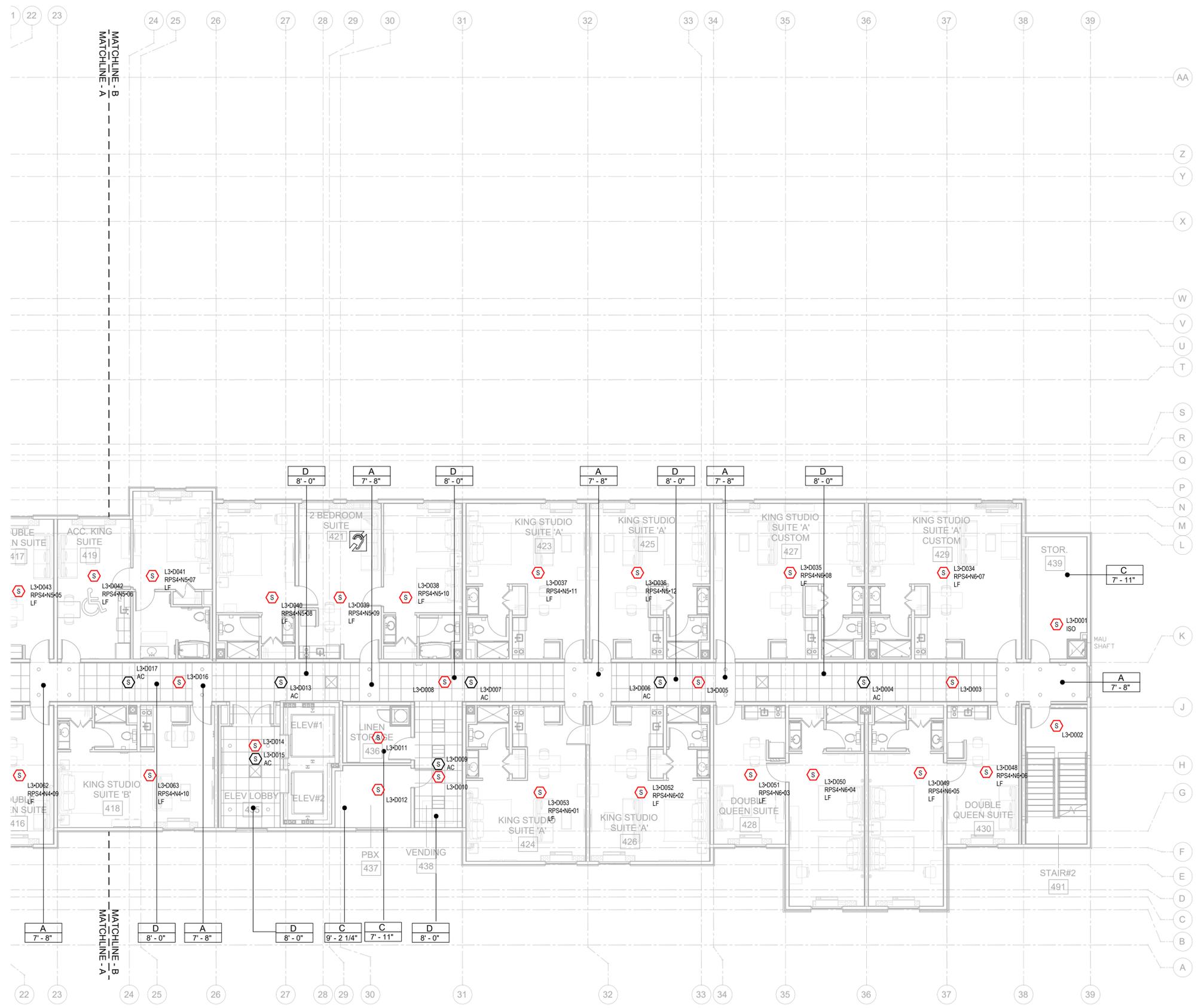
FIRE ALARM
CEILING PLAN
4TH FLOOR SOUTH

SHEET NUMBER

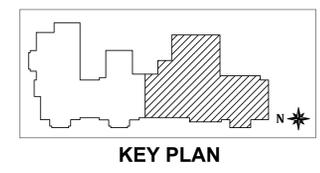
FA 4.4

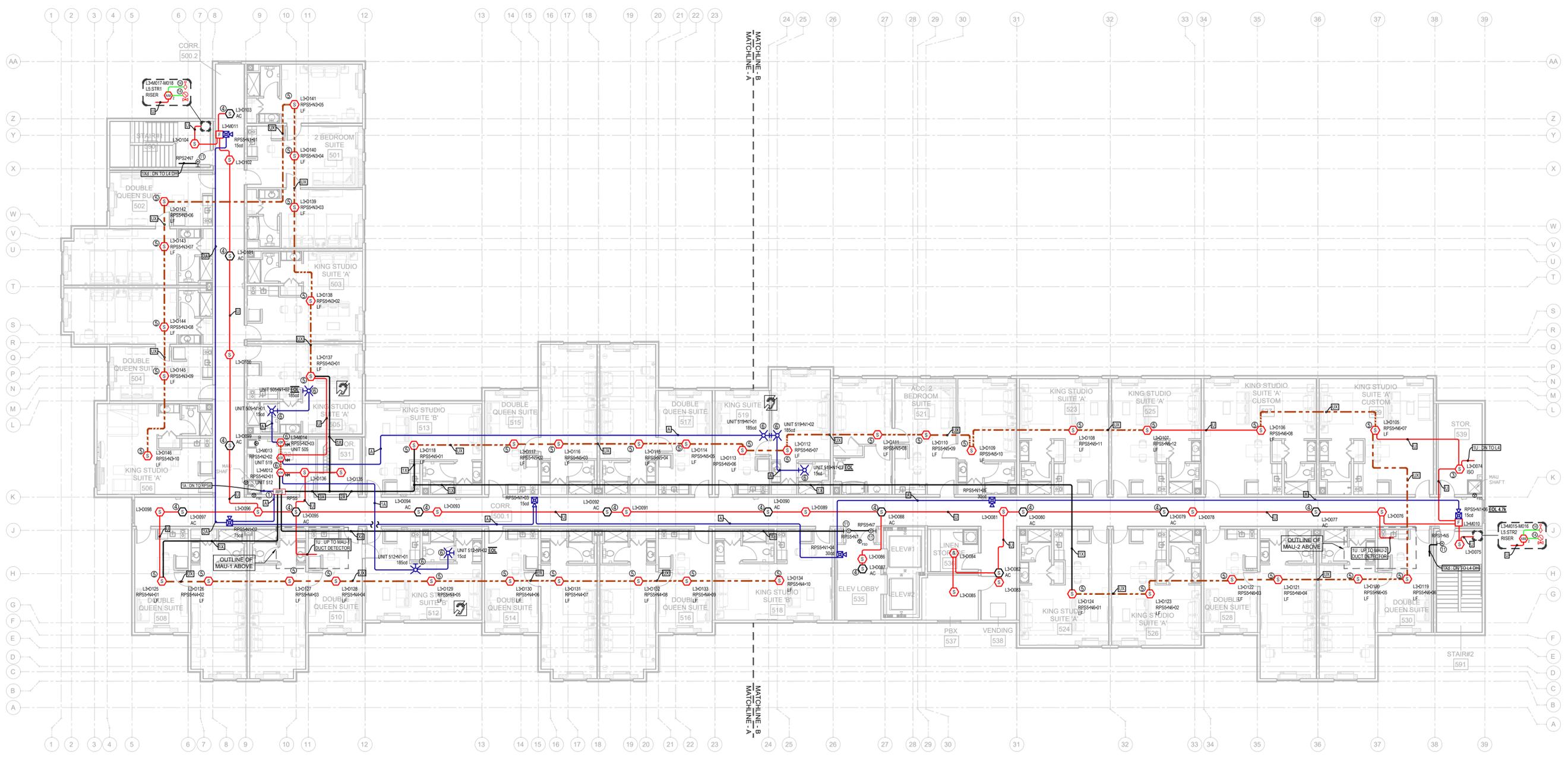
REFLECTED CEILING PLAN LEGEND	
A	PRIME & PAINTED GYPSUM BOARD
B	PRIME & PAINTED GYPSUM BOARD- MOISTURE RESISTANT
C	UNDERSIDE OF FLOOR / ROOF SYSTEM - PRIME & PAINTED TO RECEIVE FINAL FINISH
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E	2x2 LAY-IN ACOUSTICAL CLG. TILE SUSPENDED FROM STRUCTURE. MOISTURE RESISTANT
F	PLASTIC LAMINATE PANELS. REFERENCE PLAN FOR SEAMING LOCATION.

A	← CEILING FINISH
15' - 0"	← CEILING HEIGHT



FIRE ALARM - CEILING PLAN - 4TH FLOOR SOUTH
SCALE: 1/8" = 1'





FIRE ALARM - OVERALL FLOOR PLAN - 5TH FLOOR
SCALE: 3/32" = 1'





DRAWN BY: DAVID MOW, SET
CHECKED BY: DAVID MOW, SET
REVIEWED BY: ROY L. CATS, NCFE
SEATTLE FIRE DEPT. #83-C-9885
L & L CATS #R022CG
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DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

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

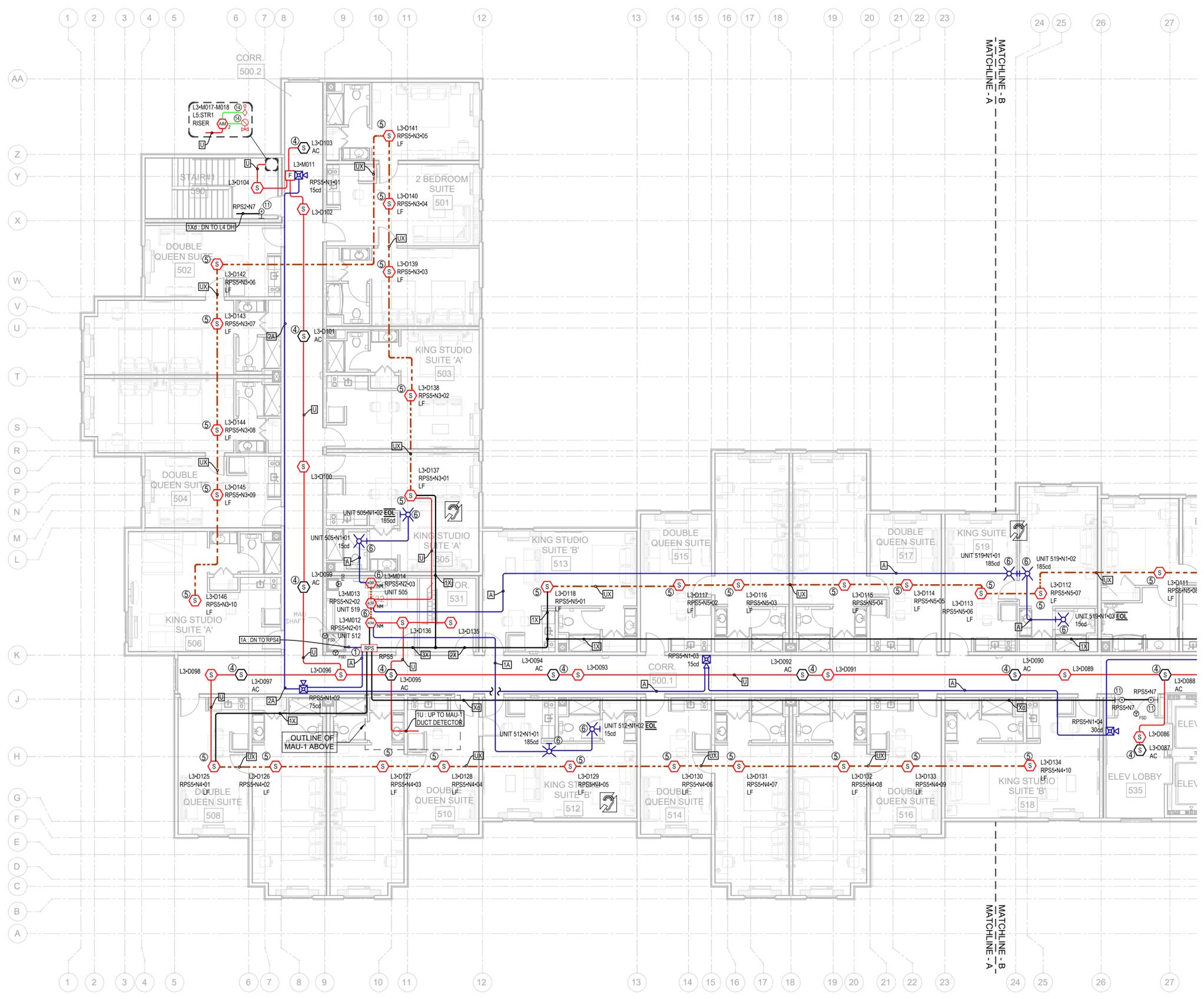
DATE: **04.04.24**

SHEET TITLE

FIRE ALARM
FLOOR PLAN
5TH FLOOR NORTH

SHEET NUMBER

FA 5.1



#	INSTALLATION KEY NOTES
1	A DEDICATED 120VAC POWER CIRCUITS IS REQUIRED FOR EACH FACP, REMOTE POWER SUPPLIES & AES RADIO. COORDINATE CONNECTIONS AND DEDICATED POWER WITH THE E.C.
2	FLUSH MOUNTED REMOTE FIRE ALARM ANNUCIATOR TO BE INSTALLED IN A CONSTANTLY ATTENDED LOCATION.
3	SLC ISOLATION BASES TO BE INSTALLED ON EACH LEVEL, THE 1ST SMOKE DETECTOR ON THE CIRCUIT WILL BE PROVIDED WITH AN ISOLATION DETECTOR BASE.
4	ABOVE CEILING SMOKE DETECTOR, SEE REFLECTED CEILING PLANS FOR SUSPENDED CEILING LOCATIONS.
5	ADDRESSABLE SMOKE DETECTOR WITH LOW FREQUENCY SOUNDER BASE TO BE INSTALLED IN ALL GUESTROOMS. GUESTROOM SMOKE DETECTORS WILL BE LOCAL ONLY (SUPERVISORY) AND WILL NOT DISPATCH THE FIRE DEPARTMENT UPON ACTIVATION. THE SMOKE DETECTOR'S LOW FREQUENCY SOUNDER BASE WILL ACTIVATE WHEN THE GUESTROOM'S SMOKE DETECTOR IS ACTIVATED AND/OR ON A GENERAL FIRE ALARM SIGNAL. THE GUESTROOM SMOKE DETECTOR ACTIVATION WILL BE ANNUNCIATED ON THE FACP AND THE FIRE ALARM REMOTE ANNUNCIATOR LOCATED IN THE LOBBY.
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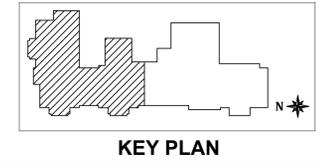
CABLE AND WIRE LEGEND					
LINE TYPE	LABEL	CABLE TYPE	AWG	RESIST (Ω/MH)	DESCRIPTION
—	A	14/4 FPLR	14	3.07	NOTIFICATION APPLIANCE CIRCUIT
—	D	16/4 FPLR & 16/2 FPLR	16	4.87	ANNUNCIATOR CIRCUITS
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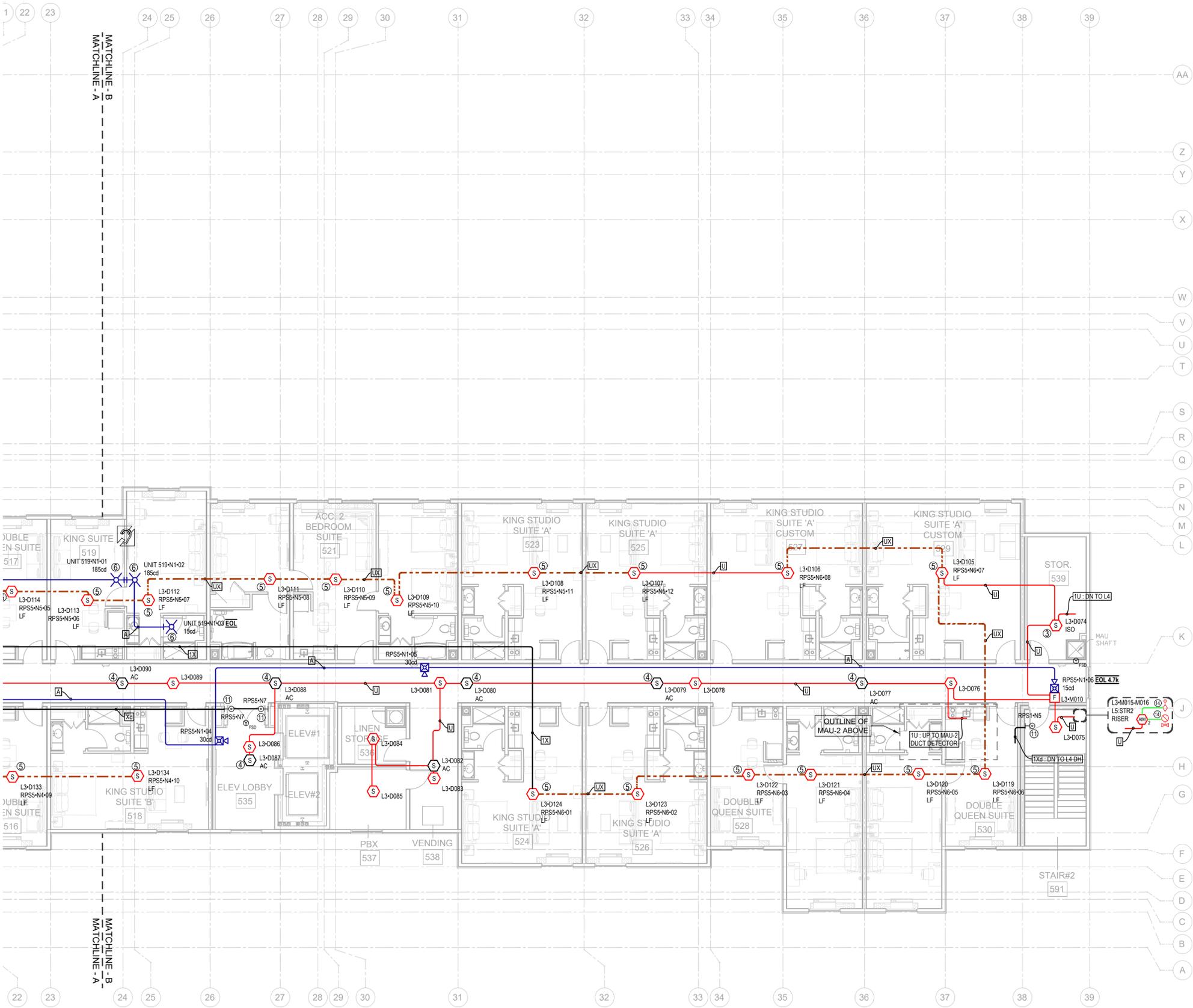
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DEVICE IDENTIFICATION LEGEND	
NOTIFICATION DEVICES	
N2-003	DEVICE NUMBER
NAC	NAC CIRCUIT NUMBER
NAC	NAC CIRCUIT
ADDRESSABLE DEVICES	
L1-D001	DEVICE NUMBER
L1-D	DEVICE TYPE
SLC	SLC CIRCUIT NUMBER
SLC	SLC CIRCUIT

GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3	
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1ST FLOOR	130
2ND FLOOR	201 213
3RD FLOOR	310 324 327
4TH FLOOR	404 413 421
5TH FLOOR	505 512 519
TOTAL =	12 UNITS

FIRE ALARM - FLOOR PLAN - 5TH FLOOR NORTH
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③	SLC ISOLATION BASES TO BE INSTALLED ON EACH LEVEL, THE 1ST SMOKE DETECTOR ON THE CIRCUIT WILL BE PROVIDED WITH AN ISOLATION DETECTOR BASE.
④	ABOVE CEILING SMOKE DETECTOR, SEE REFLECTED CEILING PLANS FOR SUSPENDED CEILING LOCATIONS.
⑤	ADDRESSABLE SMOKE DETECTOR WITH LOW FREQUENCY SOUNDER BASE TO BE INSTALLED IN ALL GUESTROOMS. GUESTROOM SMOKE DETECTORS WILL BE LOCAL ONLY (SUPERVISORY) AND WILL NOT DISPATCH THE FIRE DEPARTMENT UPON ACTIVATION. THE SMOKE DETECTOR'S LOW FREQUENCY SOUNDER BASE WILL ACTIVATE WHEN THE GUESTROOMS SMOKE DETECTOR IS ACTIVATED AND/OR ON A GENERAL FIRE ALARM SIGNAL. THE GUESTROOM SMOKE DETECTOR ACTIVATION WILL BE ANNUNCIATED ON THE FACP AND THE FIRE ALARM REMOTE ANNUNCIATOR LOCATED IN THE LOBBY.
⑥	VISIBLE OCCUPANT NOTIFICATION IN GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3, SHALL BE ACTIVATED BY THE GUEST ROOM SMOKE DETECTORS AND THE BUILDING'S FIRE ALARM SYSTEM PER IFC 907.5.2.3.2. THE NAC SERVING EACH GUESTROOM WITH COMMUNICATION FEATURES SHALL BE HOME-RUN TO AN ADDRESSABLE NAC MODULE AS SHOWN. THE NAC MODULE WILL ACTIVATE THE GUESTROOM'S VISUAL OCCUPANT NOTIFICATION DEVICES WHEN THE GUESTROOM'S SMOKE DETECTOR IS ACTIVATED AND/OR WHEN THE BUILDING'S FIRE ALARM SYSTEM IS ACTIVATED.
⑦	CARBON MONOXIDE DETECTION SHALL BE PROVIDED IN MECHANICAL ROOMS CONTAINING GAS FIRED WATER HEATERS AND IN ANY OTHER PLACES WITH A GAS FIRED FIREPLACE OR GAS APPLIANCE PER THE FIRE ALARM SPECIFICATIONS.
⑧	ADDRESSABLE DUCT DETECTORS WILL BE PROVIDED BY THE F.A. CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE ADDRESSABLE DUCT DETECTORS WILL BE POWERED FROM THE FACP. EXACT LOCATION TO BE COORDINATED WITH THE MECHANICAL CONTRACTOR PRIOR TO FIRE ALARM ELECTRICAL ROUGH-IN
⑨	ADDRESSABLE SINGLE-ENDED REFLECTIVE IMAGING BEAM SMOKE DETECTORw/ BUILT IN HEATER TO BE INSTALLED IN THE POOL AREA AT A MINIMUM OF 12" FROM THE CEILING. A HEATER WILL BE INSTALLED AT THE BEAM'S REFLECTOR TO ELIMINATE CONDENSATION BUILD UP. THE HEATER FOR THE BEAM'S REFLECTOR REQUIRES 24VDC.
⑩	FSD (FIRE SMOKE DAMPERS) TO BE PROVIDED/POWERED/INSTALLED BY OTHERS. A FIRE ALARM RELAY WILL BE INSTALLED NEAR THE ELECTRICAL PANEL THAT FEEDS THE FSDS. THE FIRE ALARM RELAY DRY CONTACTS ARE RATED FOR 2A @ 30VDC, 0.5A @ 125VAC. EXACT LOCATION TO BE COORDINATED WITH THE E.C.
⑪	MAGNETIC DOOR HOLDERS WILL BE PROVIDED, POWERED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. COORDINATE THE INSTALLATION OF THE ARMATURE WITH THE DOOR INSTALLATION COMPANY.
⑫	FIRE ALARM RELAY w/DRY CONTACTS FOR ELEVATOR SHAFT LOUVER ACTIVATION (IF REQUIRED). RELAY DRY CONTACTS ARE RATED FOR 2A @ 30VDC, 0.5A @ 125VAC. COORDINATE CONNECTIONS WITH THE E.C.
⑬	IF ERRCS IS INSTALLED, IT SHALL BE MONITORED BY THE FIRE ALARM SYSTEM. ADDRESSABLE MONITOR MODULES WILL BE INSTALLED NEXT TO THE ERRCS HEAD-END AND MONITOR THE FOLLOWING CONDITIONS: ANTENNA MALFUNCTION, SIGNAL BOOST FAIL, LOW BATTERY, LOSS OF AC POWER, FAILURE OF BATTERY CHARGING. ERRC EXACT LOCATION TO BE COORDINATED WITH THE G.C./E.C.
⑭	EXACT LOCATION AND QUANTITIES OF FIRE PUMP AND FIRE SPRINKLER SWITCHES/CONTROL VALVES TO BE COORDINATED WITH THE SPRINKLER CONTRACTOR.
⑮	THERMAL TUBE RATE OF RISE HEAT DETECTORS TO BE INSTALLED IN THE FREEZER. ADDRESSABLE MONITOR MODULE TO BE INSTALLED IN THE KITCHEN AREA. SITE TO PROVIDE PENETRATIONS INTO THE FREEZER. SEALING OF PENETRATIONS BY OTHERS.

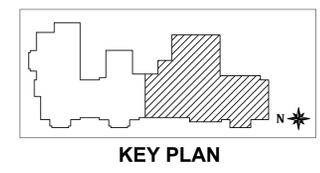
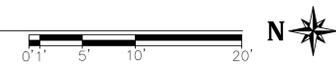
CABLE AND WIRE LEGEND					
LINE TYPE	LABEL	CABLE TYPE	AWG	RESIST (Ω/MH)	DESCRIPTION
—	A	14/4 FPLR	14	3.07	NOTIFICATION APPLIANCE CIRCUIT
---	D	16/4 FPLR & 16/2 FPLR	16	4.87	ANNUNCIATOR CIRCUITS
—	X	14/2 FPLR	14	3.07	AUX POWER : 24VDC
—	Xd	14/2 FPLR	14	3.07	DOOR HOLDER POWER : 24VDC
—	Xr	14/2 FPLR	14	3.07	AUX POWER (RESETTABLE) : 24VDC
—	U	16/4 FPLR	16	4.87	SIGNALING LINE CIRCUIT
—	UX	16/4 FPLR	16	4.87	SIGNALING LINE CIRCUIT
—	UX	14/2 FPLR	14	3.07	AUX POWER : 24VDC
—	Z	18/2 FPLR	18	3.07	IDC / ZONE CIRCUIT

ALL CONDUCTORS SHALL BE INSTALLED IN RACEWAYS SUITABLE FOR THE INSTALLATION CONDITIONS WHEN REQUIRED BY IBC, IFC, NFPA-72, NFPA-70, WSBC AND CITY OF PUYALLUP'S MUNICIPAL CODE.

DEVICE IDENTIFICATION LEGEND	
NOTIFICATION DEVICES	
N2-003	DEVICE NUMBER
NAC	NAC CIRCUIT NUMBER
NAC	NAC CIRCUIT
ADDRESSABLE DEVICES	
L1+0001	DEVICE NUMBER
L1	DEVICE TYPE
L1	SLC CIRCUIT NUMBER
L1	SLC CIRCUIT

GUESTROOMS WITH COMMUNICATION FEATURES PER ADAS 224.4, TABLE 224.4 & 806.3		
FLOOR	GUESTROOM NUMBERS	
1ST FLOOR	130	
2ND FLOOR	201 213	
3RD FLOOR	310 324 321	
4TH FLOOR	404 413 421	
5TH FLOOR	505 512 519	
TOTAL =	12 UNITS	

FIRE ALARM - FLOOR PLAN - 5TH FLOOR SOUTH
SCALE: 1/8" = 1'



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ROY L. CATS
CERTIFIED FIRE PROTECTION SPECIALIST
NFPA
CFPS
#1473

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SEATTLE FIRE DEPT. #SCP-C-9885
L & L CATS #R022CG
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DAVID MOW:

REVISION RECORD
DATE / DESCRIPTION

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

DATE: 04.04.24

HOMEWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
FLOOR PLAN
5TH FLOOR SOUTH

SHEET NUMBER

FA 5.2



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PUYALLUP, WA 98373

SHEET TITLE

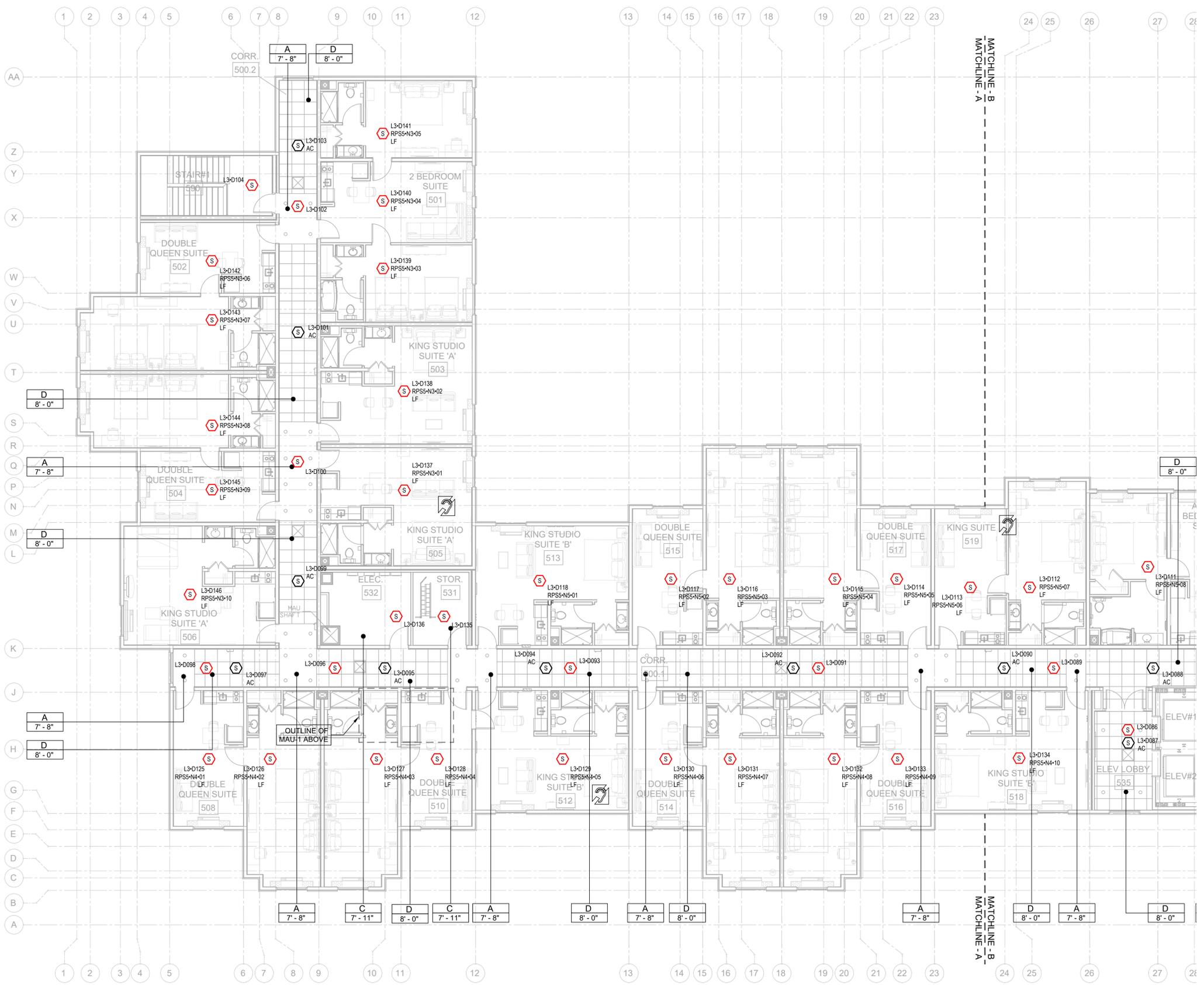
FIRE ALARM
CEILING PLAN
5TH FLOOR NORTH

SHEET NUMBER

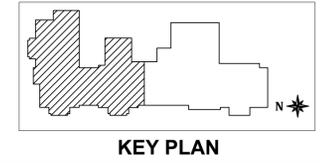
FA 5.3

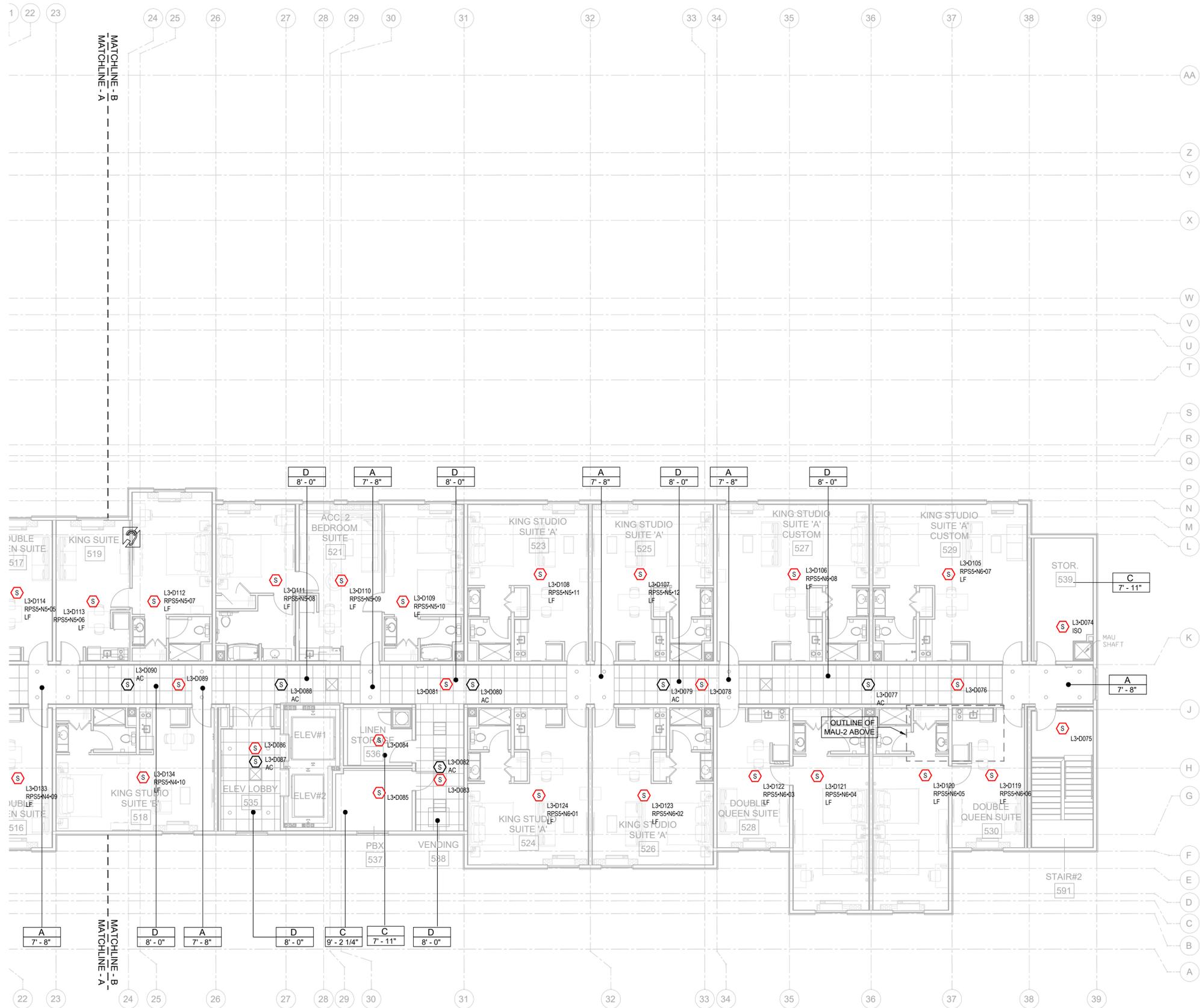
REFLECTED CEILING PLAN LEGEND	
A	PRIME & PAINTED GYPSUM BOARD
B	PRIME & PAINTED GYPSUM BOARD- MOISTURE RESISTANT
C	UNDERSIDE OF FLOOR / ROOF SYSTEM - PRIME & PAINTED TO RECEIVE FINAL FINISH
D	2x2 LAY-IN ACOUSTICAL CLG. TILE SUSPENDED FROM STRUCTURE.
E	2x2 LAY-IN ACOUSTICAL CLG. TILE SUSPENDED FROM STRUCTURE. MOISTURE RESISTANT
F	PLASTIC LAMINATE PANELS. REFERENCE PLAN FOR SEAMING LOCATION.

A	← CEILING FINISH
15' - 0"	← CEILING HEIGHT



FIRE ALARM - CEILING PLAN - 5TH FLOOR NORTH
SCALE : 1/8" = 1'



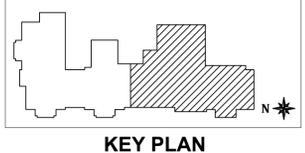
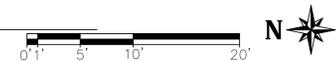


REFLECTED CEILING PLAN LEGEND	
A	PRIME & PAINTED GYPSUM BOARD
B	PRIME & PAINTED GYPSUM BOARD- MOISTURE RESISTANT
C	UNDERSIDE OF FLOOR / ROOF SYSTEM - PRIME & PAINTED TO RECEIVE FINAL FINISH
D	2x2 LAY-IN ACOUSTICAL CLG. TILE SUSPENDED FROM STRUCTURE.
E	2x2 LAY-IN ACOUSTICAL CLG. TILE SUSPENDED FROM STRUCTURE. MOISTURE RESISTANT
F	PLASTIC LAMINATE PANELS. REFERENCE PLAN FOR SEAMING LOCATION.

A	← CEILING FINISH
15' - 0"	← CEILING HEIGHT

FIRE ALARM - CEILING PLAN - 5TH FLOOR SOUTH

SCALE : 1/8" = 1'



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Engineering	Public Works
Fire	Traffic

DATE: 04.04.24

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 PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
 CEILING PLAN
 5TH FLOOR SOUTH

SHEET NUMBER

FA 5.4



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Engineering	Public Works
Fire	Traffic

DATE: 04.04.24

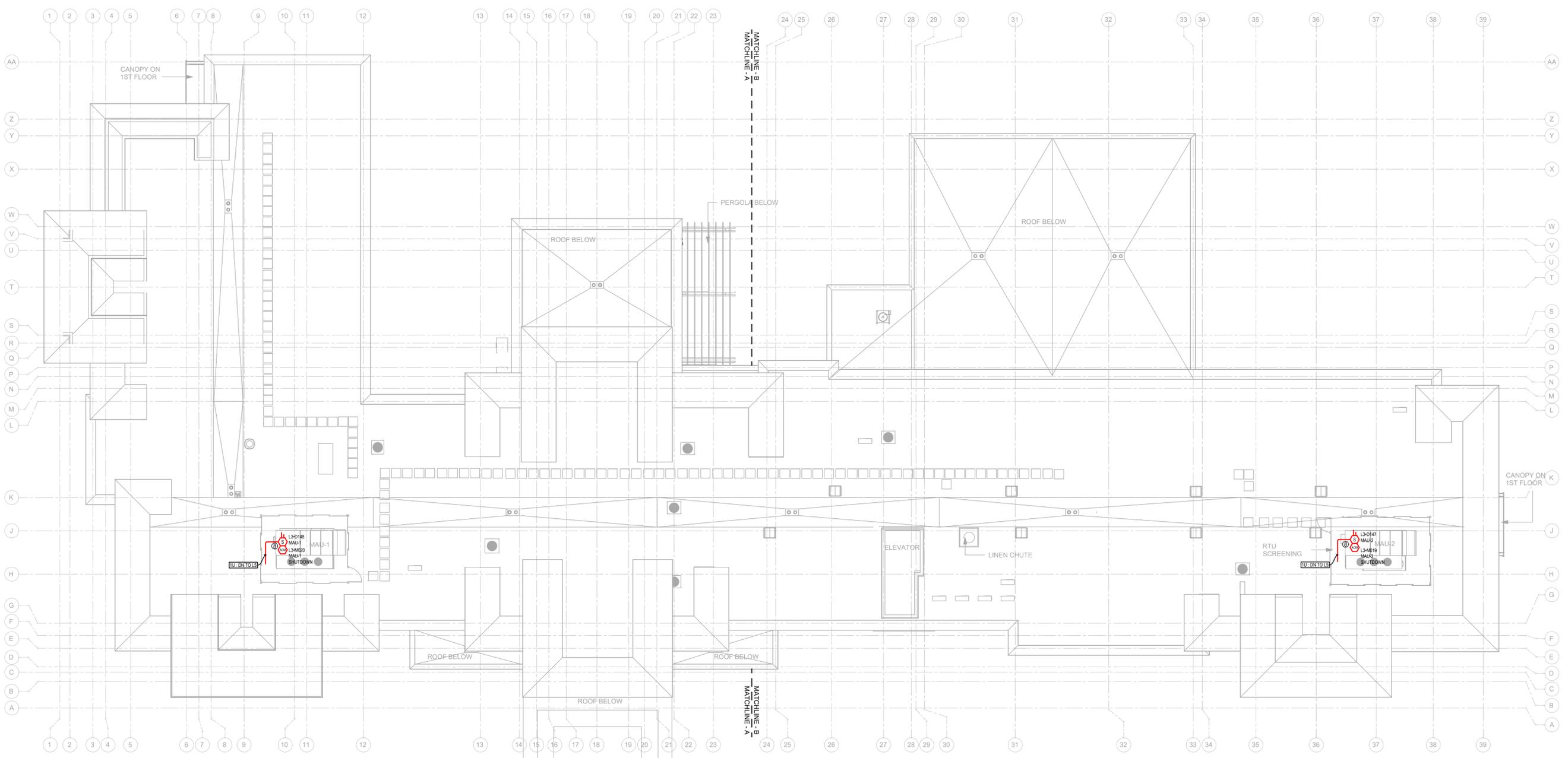
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 3500 S. MERIDIAN
 PUYALLUP, WA 98373**

SHEET TITLE

FIRE ALARM
 OVERALL ROOF PLAN

SHEET NUMBER

FA 6.0



FIRE ALARM - OVERALL ROOF PLAN
 SCALE: 3/32" = 1'





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DATE	DESCRIPTION
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	Building Planning
	Engineering Public Works
	Fire Traffic

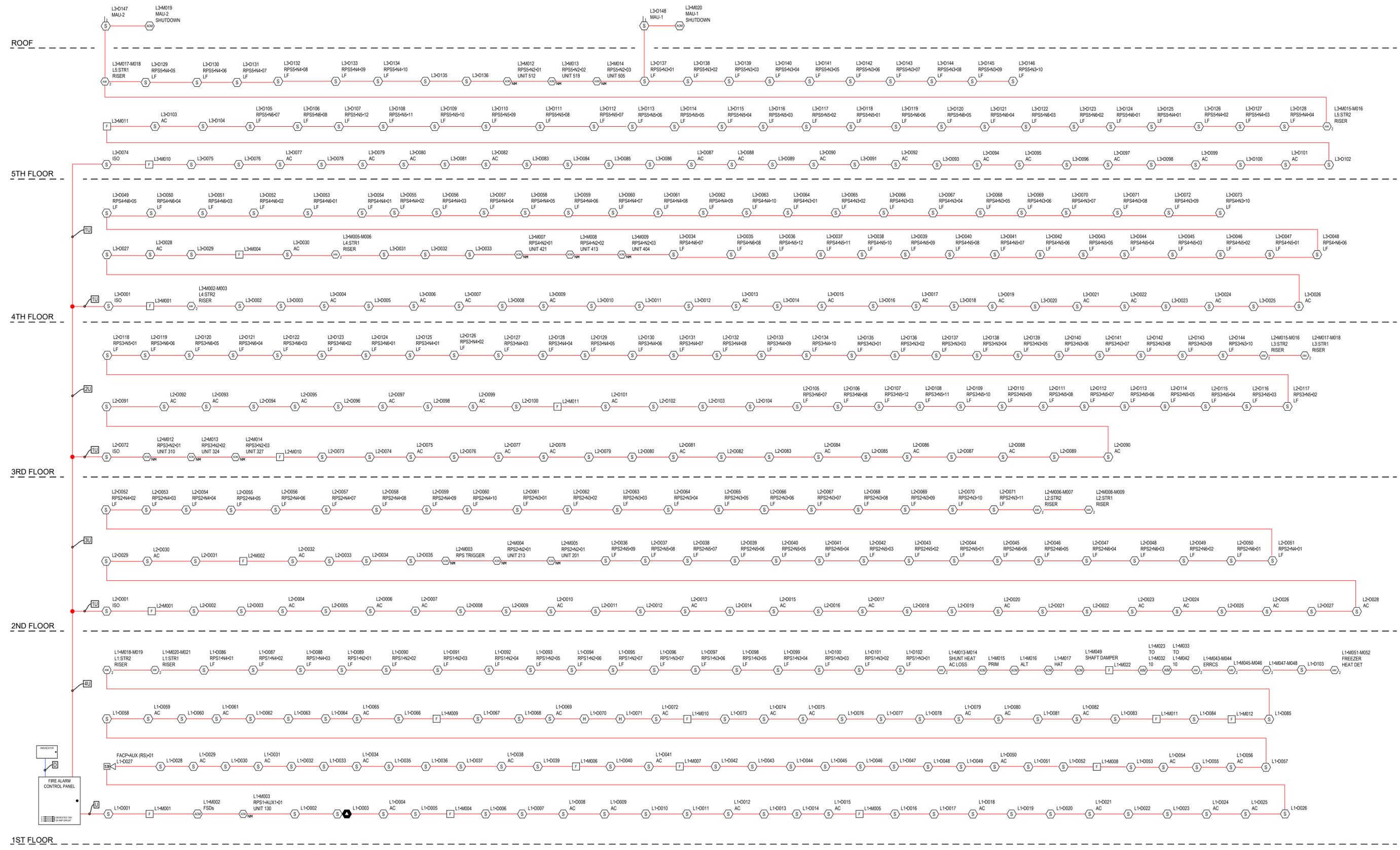
City of Puyallup
Development & Permitting Services
ISSUED PERMIT

DATE: 04.04.24

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3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE
FIRE ALARM
SLC SINGLE LINE
RISER DIAGRAM

SHEET NUMBER
FA 7.0



REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

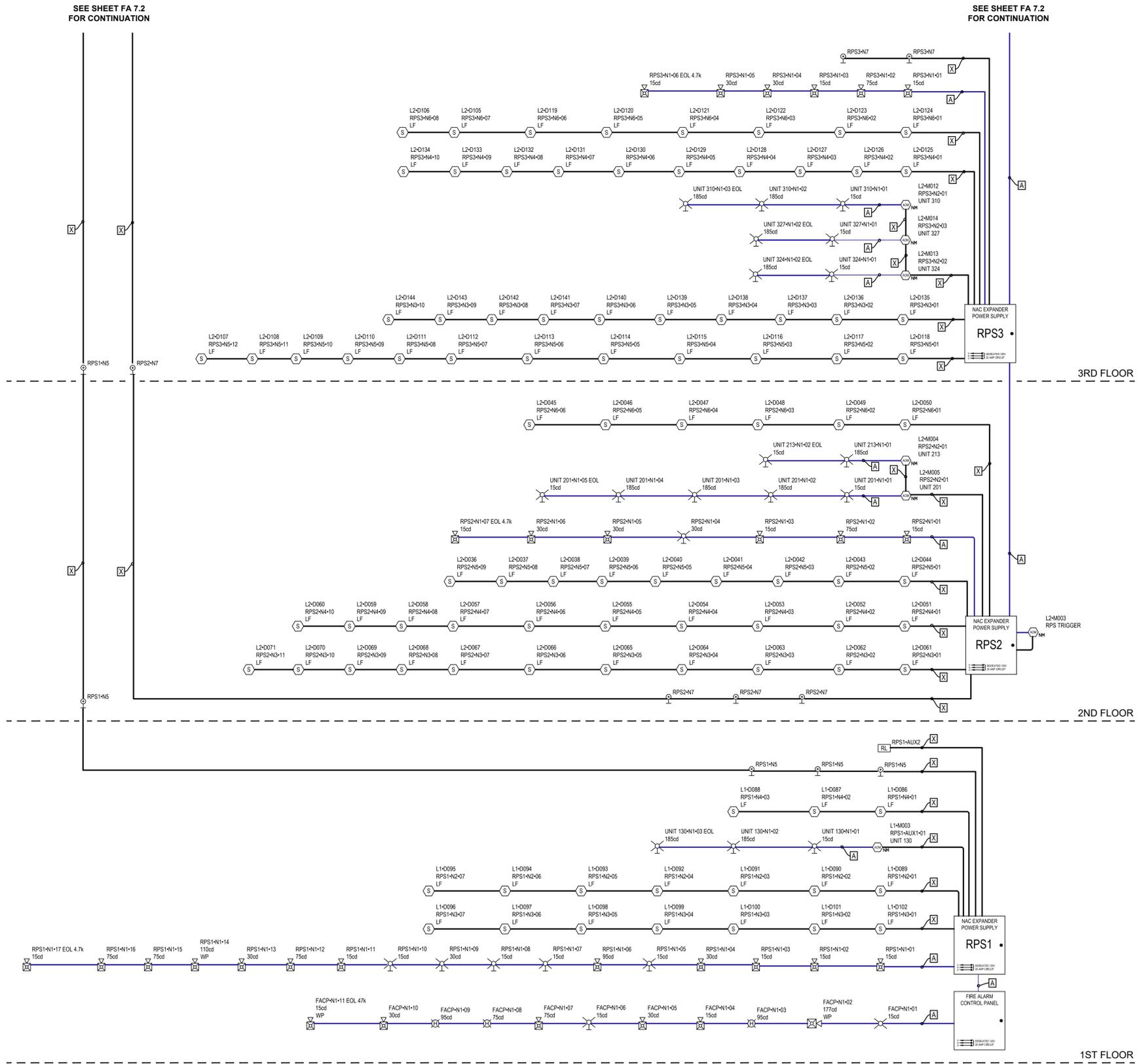
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3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
NAC & AUX POWER
SINGLE LINE
RISER DIAGRAM

SHEET NUMBER

FA 7.1





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

DATE: 04.04.24

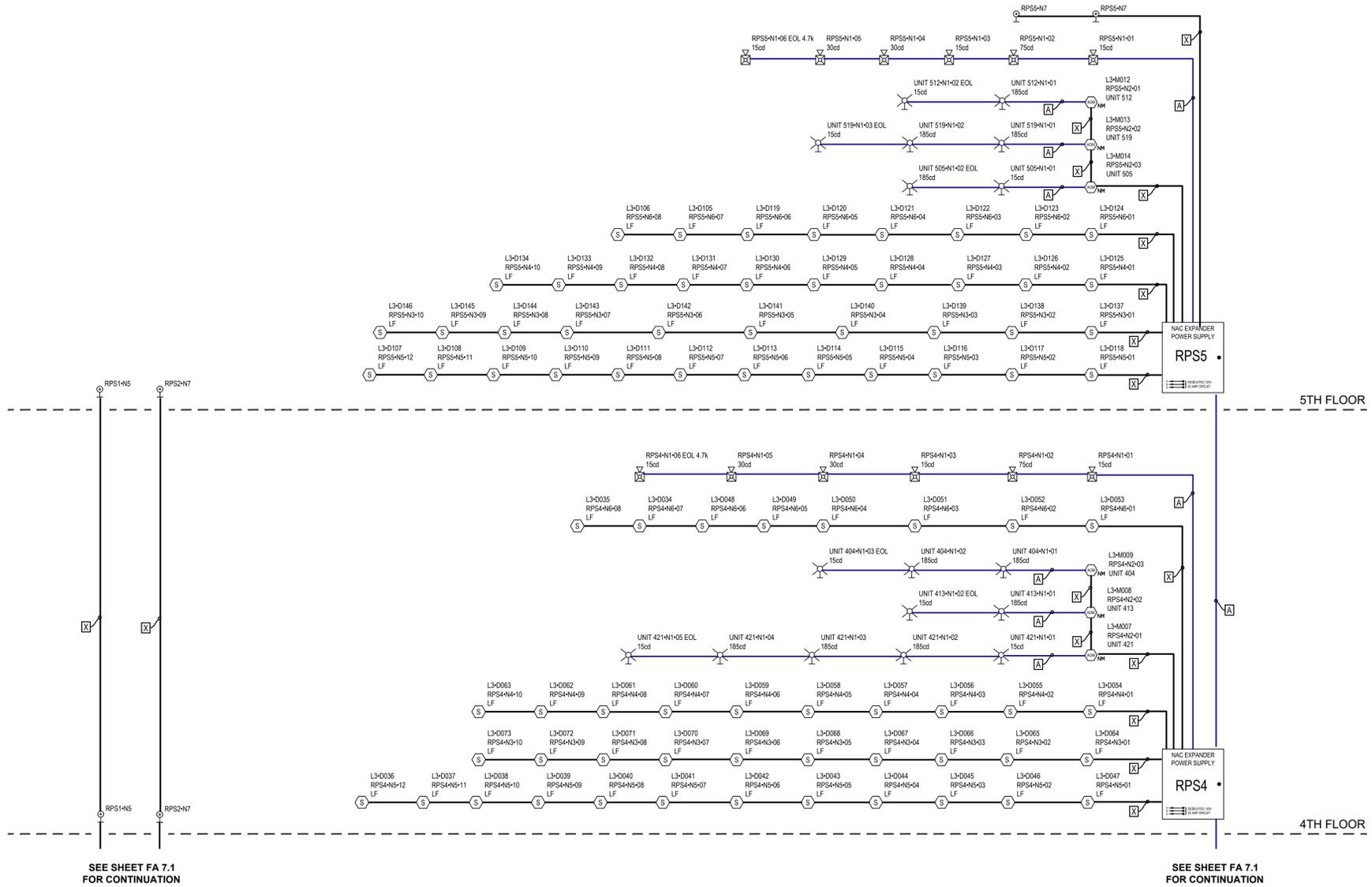
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SHEET TITLE

FIRE ALARM
 NAC & AUX POWER
 SINGLE LINE
 RISER DIAGRAM
 CONTINUED

SHEET NUMBER

FA 7.2



SEE SHEET FA 7.1
 FOR CONTINUATION

SEE SHEET FA 7.1
 FOR CONTINUATION



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BATTERY CALCULATION								
(SECONDARY POWER SOURCE REQUIREMENTS)								
PANEL POWER SUPPLY MAX CURRENT = 18A				TOTAL USED CAPACITY (IN ALARM) = 3.6685A (20.38 %)				
				STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)		
PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL	
	1	ASM-16	Addressable Switch Module	0.011	0.011	0.011	0.011	
	1	E3BB-BCINCC	FACP ENCLOSURE "C" CABINET	0	0	0	0	
	1	E3-ILJ-CPLATE	"C" CABINET INNER MOUNTING PLATE	0	0	0	0	
	1	IL-HB-E3	Intelligent Loop Interface-Main Board	0.081	0.081	0.15	0.15	
	1	IL-I-S-E3	Intelligent Loop Interface-Expansion Board	0.081	0.081	0.15	0.15	
	1	LCD-E3	LCD Keypad Display	0.024	0.024	0.028	0.028	
	1	PM-9	Power Supply Card	0.05	0.05	0.05	0.05	
CIRCUIT	QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)	
ANN	1	LCD-E3/E3BB-FLUSH-LCD	LCD Keypad Display w/E3BB-FLUSH-LCD	0	0	0	0	
FACP-AUX (RS)	1	OSI-RI-GW	Intelligent Single-ended Reflective Imaging Beam Smoke Detector	0.45	0.45	0.45	0.45	
FACP-N1	1	P2WHK	HORNSTROBE, WALL, HIGH OD, WEATHER PROOF 177cd	0	0	0.303	0.303	
	1	P2WIK	Horn Strobe, Standard cd, Outdoor 15cd	0	0	0.091	0.091	
	1	P2WLED	Horn Strobe, 15cd	0	0	0.035	0.035	
	2	P2WLED	Horn Strobe, 30cd	0	0	0.038	0.076	
	1	P2WLED	Horn Strobe, 75cd	0	0	0.087	0.087	
	1	PC2WLED	Horn Strobe, Ceiling, 75cd	0	0	0.087	0.087	
	2	PC2WLED	Horn Strobe, Ceiling, 95cd	0	0	0.092	0.184	
	1	SCWLED	Strobe, Ceiling, 15cd	0	0	0.018	0.018	
	1	SWLED	Strobe, Wall, 15cd	0	0	0.018	0.018	
		6	AMM-2IF	Addressable Dual Monitor Module	0.0007	0.0042	0.0007	0.0042
	4	AOM-2RF	Addressable Relay Module	0.0003	0.0012	0.0003	0.0012	
	1	AOM-2SF	Addressable Control Module	0.0004	0.0004	0.0004	0.0004	
L1	17	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0002	0.0034	0.0045	0.0765	
	82	ASD-PL3 w/B300-6	Photoelectric smoke detector,	0.0002	0.0164	0.0045	0.369	
	2	ATD-L3 w/B300-6	Thermal heat detector, 135°F fixed,	0.0002	0.0004	0.0045	0.009	
	1	MCS-COP3 w/B300-6	Intelligent multi-criteria photo/CO,	0.0002	0.0002	0.0045	0.0045	
	2	MMI-10F w/ MBB-2	MMI-10F w/ MBB-2 Backbox	0.0035	0.007	0.06	0.12	
	11	MS-7ASF	Addressable Pull Station	0.0003	0.0033	0.0003	0.0033	
	1	OSI-RI-GW	Intelligent Single-ended Reflective Imaging Beam Smoke Detector	0.014	0.014	0.015	0.015	
		4	AMM-2IF	Addressable Dual Monitor Module	0.0007	0.0028	0.0007	0.0028
		6	AOM-2SF	Addressable Control Module	0.0004	0.0024	0.0004	0.0024
		76	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0002	0.0152	0.0045	0.342
L2	2	ASD-PL3 w/B224BI-WH	Photoelectric smoke detector w/ Isolator base,	0.0002	0.0004	0.0045	0.009	
	66	ASD-PL3 w/B300-6	Photoelectric smoke detector,	0.0002	0.0132	0.0045	0.297	
	4	MS-7ASF	Addressable Pull Station	0.0003	0.0012	0.0003	0.0012	
	4	AMM-2IF	Addressable Dual Monitor Module	0.0007	0.0028	0.0007	0.0028	
	2	AOM-2RF	Addressable Relay Module	0.0003	0.0006	0.0003	0.0006	
	6	AOM-2SF	Addressable Control Module	0.0004	0.0024	0.0004	0.0024	
	80	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0002	0.016	0.0045	0.36	
	2	ASD-PL3 w/B224BI-WH	Photoelectric smoke detector w/ Isolator base,	0.0002	0.0004	0.0045	0.009	
	64	ASD-PL3 w/B300-6	Photoelectric smoke detector,	0.0002	0.0128	0.0045	0.288	
	2	DNRW w/ASD-PL3	Intelligent duct detector housing, non-relay, watertight w/ASD-PL3	0.0002	0.0004	0.0045	0.009	
	4	MS-7ASF	Addressable Pull Station	0.0003	0.0012	0.0003	0.0012	
				TOTAL STANDBY (A)	0.8193	TOTAL ALARM (A)	3.6685	
				REQUIRED STANDBY TIME = 24 HOURS				
				REQUIRED ALARM TIME = 5 MINUTES				
SECONDARY STANDBY LOAD (A)				0.8193	24	19.66		
SECONDARY ALARM LOAD (A)				3.6685	0.08	0.31		
STANDBY AND ALARM SUBTOTAL (AMP HOURS)				19.97				
DERATING FACTOR				1.2				
SECONDARY LOAD REQUIREMENTS (AMP HOURS)				23.96				
PROVIDE (2) 12V 26AH BATTERIES								

FACP-N1 POINT-TO-POINT REPORT							CIRCUIT SETTINGS		TOTALS	
Circuit Wiring Properties: 'A' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded							Starting Calculation Voltage:	20.4	Max. Voltage Drop:	0.99
Distance measured using drawn segment lengths with 10.00 % additional length calculated							Min. Operational Voltage:	16	End Of Line Voltage:	19.41
							Max. Circuit Current (A):	2	Voltage Drop Percent:	4.83 %
							Wire Resistance (Ω/kft):	3.07	Total Circuit Current (A):	0.899
							Total Circuit Length (ft):	366	Spare Current (A):	1.101
							Total Circuit Resistance (Ω):	2.244705	Spare Current (A) Percent:	55.05 %
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
FACP-N1-01	SCWLED	Strobe, Ceiling, 15cd	0.018	0.899	38	0.234383	0.21	20.19	0.21	1.03 %
FACP-N1-02	P2WHK	HORNSTROBE, WALL, WEATHER PROOF 177cd	0.303	0.881	32	0.19924	0.18	20.01	0.39	1.89 %
FACP-N1-03	PC2WLED	Horn Strobe, Ceiling, 95cd	0.092	0.578	15	0.092785	0.05	19.96	0.44	2.16 %
FACP-N1-04	P2WLED	Horn Strobe, 15cd	0.035	0.486	43	0.264866	0.13	19.83	0.57	2.79 %
FACP-N1-05	P2WLED	Horn Strobe, 30cd	0.038	0.451	12	0.075541	0.03	19.8	0.6	2.95 %
FACP-N1-06	SWLED	Strobe, Wall, 15cd	0.018	0.413	37	0.227081	0.09	19.7	0.7	3.41 %
FACP-N1-07	P2WLED	Horn Strobe, 75cd	0.087	0.395	46	0.284878	0.11	19.59	0.81	3.97 %
FACP-N1-08	PC2WLED	Horn Strobe, Ceiling, 75cd	0.087	0.308	49	0.302404	0.09	19.5	0.9	4.42 %
FACP-N1-09	PC2WLED	Horn Strobe, Ceiling, 95cd	0.092	0.221	33	0.200204	0.04	19.45	0.95	4.64 %
FACP-N1-10	P2WLED	Horn Strobe, 30cd	0.038	0.129	28	0.173935	0.02	19.43	0.97	4.75 %
FACP-N1-11 EOL 47k	P2WIK	Horn Strobe, Standard cd, Outdoor 15cd	0.091	0.091	31	0.189388	0.02	19.41	0.99	4.83 %
Calculation Methods:										
Resistance From Previous (Ω) = Wire Resistance (Ω/ft) x 2 x Dist. From Previous (ft)										
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

HOMWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
BATTERY AND VOLTAGE
DROP CALCULATIONS
FACP

SHEET NUMBER

FA 8.0

PANEL RPS2 (HPF-PS10) BATTERY CALCULATION							
PANEL POWER SUPPLY MAX CURRENT = 10A				TOTAL USED CAPACITY (IN ALARM) = 4.389A (43.89 %)			
				STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
	1	HPF-PS10 MAIN BOARD	Fire Alarm Power Supply Main Board	0.156	0.156	0.185	0.185
CIRCUIT	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
RPS2-N1	3	P2WLED	Horn Strobe, 15cd	0	0	0.035	0.105
	2	P2WLED	Horn Strobe, 30cd	0	0	0.038	0.076
	1	P2WLED	Horn Strobe, 75cd	0	0	0.087	0.087
RPS2-N2	1	SWLED	Strobe, Wall, 30cd	0	0	0.022	0.022
	1	AOM-2SF	Addressable Control Module	0	0	0.138	0.138
RPS2-N3	1	AOM-2SF	Addressable Control Module	0	0	0.396	0.396
	11	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.0055	0.09	0.99
RPS2-N4	10	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.005	0.09	0.9
RPS2-N5	9	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.0045	0.09	0.81
RPS2-N6	6	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.003	0.09	0.54
RPS2-N7	7	FM998	24V Door Holder	0.02	0.14	0.02	0.14
				TOTAL STANDBY (A)	0.314	TOTAL ALARM (A)	4.389
				REQUIRED STANDBY TIME = 24 HOURS			
				REQUIRED ALARM TIME = 5 MINUTES			
SECONDARY STANDBY LOAD (A)				0.314	24	7.54	
SECONDARY ALARM LOAD (A)				4.389	0.08	0.37	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)						7.9	
DERATING FACTOR						1.2	
SECONDARY LOAD REQUIREMENTS (AMP HOURS)						9.48	
PROVIDE (2) 12V 12AH BATTERIES							

RPS2 N1 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.51
Min. Operational Voltage:					16	End Of Line Voltage:				19.89
Max. Circuit Current (A):					3	Voltage Drop Percent:				2.50 %
Wire Resistance (DkFt):					3.07	Total Circuit Current (A):				0.29
Total Circuit Length (Ft):					527	Spare Current (A):				2.71
Total Circuit Resistance (Ω):					3.235026	Spare Current (A) Percent:				90.33 %
Circuit Wiring Properties: 'A' 14/2 FPL/PR (NAC) 14 AWG, 2 Cond. Solid Copper FPL/PR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS2-N1-01	P2WLED	Horn Strobe, 15cd	0.035	0.29	97	0.593191	0.17	20.23	0.17	0.84 %
RPS2-N1-02	P2WLED	Horn Strobe, 75cd	0.087	0.255	92	0.566862	0.14	20.08	0.32	1.55 %
RPS2-N1-03	P2WLED	Horn Strobe, 15cd	0.035	0.168	78	0.476557	0.08	20	0.4	1.94 %
RPS2-N1-04	SWLED	Strobe, Wall, 30cd	0.022	0.133	7	0.041669	0.01	20	0.4	1.97 %
RPS2-N1-05	P2WLED	Horn Strobe, 30cd	0.038	0.111	90	0.555468	0.06	19.94	0.46	2.27 %
RPS2-N1-06	P2WLED	Horn Strobe, 30cd	0.038	0.073	49	0.303226	0.02	19.91	0.49	2.38 %
RPS2-N1-07 EOL 4.7k	P2WLED	Horn Strobe, 15cd	0.035	0.035	114	0.690553	0.02	19.89	0.51	2.50 %
Calculation Methods:										
Resistance From Previous (Ω) = Wire Resistance (DkFt) x 2 x Dist. From Previous (Ft)										
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS2 N2 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.03
Min. Operational Voltage:					16	End Of Line Voltage:				20.37
Max. Circuit Current (A):					3	Voltage Drop Percent:				0.16 %
Wire Resistance (DkFt):					3.07	Total Circuit Current (A):				0.534
Total Circuit Length (Ft):					11	Spare Current (A):				2.466
Total Circuit Resistance (Ω):					0.065999	Spare Current (A) Percent:				82.20 %
Circuit Wiring Properties: 'A' 14/2 FPL/PR (NAC) 14 AWG, 2 Cond. Solid Copper FPL/PR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS2-N2-01	AOM-2SF	Addressable Control Module	0.138	0.534	8	0.047866	0.03	20.37	0.03	0.13 %
RPS2-N2-01	AOM-2SF	Addressable Control Module	0.396	0.396	3	0.018133	0.01	20.37	0.03	0.16 %
Calculation Methods:										
Resistance From Previous (Ω) = Wire Resistance (DkFt) x 2 x Dist. From Previous (Ft)										
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS2 N3 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.99
Min. Operational Voltage:					16	End Of Line Voltage:				19.41
Max. Circuit Current (A):					3	Voltage Drop Percent:				4.84 %
Wire Resistance (DkFt):					3.07	Total Circuit Current (A):				0.99
Total Circuit Length (Ft):					266	Spare Current (A):				2.01
Total Circuit Resistance (Ω):					1.630492	Spare Current (A) Percent:				67.00 %
Circuit Wiring Properties: 'A' 14/2 FPL/PR (NAC) 14 AWG, 2 Cond. Solid Copper FPL/PR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS2-N3-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.99	43	0.262397	0.26	20.14	0.26	1.27 %
RPS2-N3-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	37	0.226031	0.2	19.94	0.46	2.27 %
RPS2-N3-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	20	0.120504	0.1	19.84	0.56	2.75 %
RPS2-N3-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	25	0.156483	0.11	19.73	0.67	3.30 %
RPS2-N3-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	12	0.073348	0.05	19.68	0.72	3.53 %
RPS2-N3-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	13	0.077115	0.04	19.64	0.76	3.73 %
RPS2-N3-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	54	0.328576	0.15	19.49	0.91	4.46 %
RPS2-N3-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	10	0.064144	0.02	19.47	0.93	4.57 %
RPS2-N3-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	19	0.114572	0.03	19.44	0.96	4.72 %
RPS2-N3-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	11	0.069718	0.01	19.42	0.98	4.78 %
RPS2-N3-11	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	22	0.137604	0.01	19.41	0.99	4.84 %
Calculation Methods:										
Resistance From Previous (Ω) = Wire Resistance (DkFt) x 2 x Dist. From Previous (Ft)										
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS2 N4 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.65
Min. Operational Voltage:					16	End Of Line Voltage:				19.75
Max. Circuit Current (A):					3	Voltage Drop Percent:				3.21 %
Wire Resistance (DkFt):					3.07	Total Circuit Current (A):				0.9
Total Circuit Length (Ft):					194	Spare Current (A):				2.1
Total Circuit Resistance (Ω):					1.189873	Spare Current (A) Percent:				70.00 %
Circuit Wiring Properties: 'A' 14/2 FPL/PR (NAC) 14 AWG, 2 Cond. Solid Copper FPL/PR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS2-N4-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	49	0.295527	0.27	20.13	0.27	1.32 %
RPS2-N4-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	11	0.067387	0.05	20.08	0.32	1.59 %
RPS2-N4-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	19	0.115847	0.08	19.99	0.41	2.00 %
RPS2-N4-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	11	0.06625	0.04	19.95	0.45	2.20 %
RPS2-N4-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	22	0.136727	0.07	19.88	0.52	2.56 %
RPS2-N4-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	18	0.112509	0.05	19.83	0.57	2.81 %
RPS2-N4-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	11	0.070992	0.03	19.8	0.6	2.94 %
RPS2-N4-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	18	0.113447	0.03	19.77	0.63	3.09 %
RPS2-N4-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	11	0.069103	0.01	19.76	0.64	3.15 %
RPS2-N4-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	23	0.138984	0.01	19.75	0.65	3.21 %
Calculation Methods:										
Resistance From Previous (Ω) = Wire Resistance (DkFt) x 2 x Dist. From Previous (Ft)										
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS2 N5 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.94
Min. Operational Voltage:					16	End Of Line Voltage:				19.46
Max. Circuit Current (A):					3	Voltage Drop Percent:				4.63 %
Wire Resistance (DkFt):					3.07	Total Circuit Current (A):				0.81
Total Circuit Length (Ft):					277	Spare Current (A):				2.19
Total Circuit Resistance (Ω):					1.697738	Spare Current (A) Percent:				73.00 %
Circuit Wiring Properties: 'A' 14/2 FPL/PR (NAC) 14 AWG, 2 Cond. Solid Copper FPL/PR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS2-N5-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	121	0.743956	0.6	19.8	0.6	2.95 %
RPS2-N5-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	10	0.062156	0.04	19.75	0.65	3.17 %
RPS2-N5-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	25	0.150518	0.09	19.66	0.74	3.63 %
RPS2-N5-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	12	0.072528	0.04	19.62	0.78	3.83 %
RPS2-N5-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	11	0.068469	0.03	19.59	0.81	3.98 %
RPS2-N5-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	27	0.16882	0.06	19.53	0.87	4.28 %
RPS2-N5-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	17	0.105921	0.03	19.5	0.9	4.42 %
RPS2-N5-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	27	0.162745	0.03	19.47	0.93	4.56 %
RPS2-N5-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	27	0.163525	0.01	19.46	0.94	4.63 %
Calculation Methods:										
Resistance From Previous (Ω) = Wire Resistance (DkFt) x 2 x Dist. From Previous (Ft)										
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS2 N6 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.84
Min. Operational Voltage:					16	End Of Line Voltage:				19.56
Max. Circuit Current (A):					3	Voltage Drop Percent:				4.10 %
Wire Resistance (DkFt):					3.07	Total Circuit Current (A):				0.54
Total Circuit Length (Ft):					291	Spare Current (A):				2.46
Total Circuit Resistance (Ω):					1.786122	Spare Current (A) Percent:				82.00 %
Circuit Wiring Properties: 'A' 14/2 FPL/PR (NAC) 14 AWG, 2 Cond. Solid Copper FPL/PR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS2-N6-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	208	1.275793	0.69	19.71	0.69	3.38 %
RPS2-N6-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	18	0.111156	0.05	19.66	0.74	3.62 %
RPS2-N6-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	22	0.135687	0.05	19.61	0.79	3.86 %
RPS2-N6-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	11	0.066441	0.02	19.59	0.81	3.95 %
RPS2-N6-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	23	0.138267	0.02	19.57	0.83	4.07 %
RPS2-N6-06	ASD-PL3 w/B200									



FIRE PROTECTION INC.
17410 Ash Way, Ste 8
Lynnwood, WA 98037
(425) 290-9600
www.fpiseattle.com



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CHECKED BY: ROY L. CATTS, NFA
REVIEWED BY: ROY L. CATTS, NFA
SEATTLE FIRE DEPT. #SCP-C-9865
PROPERTY OF ALL RIGHTS RESERVED F.P.I.
DAVID MOW

REVISION RECORD

DATE / DESCRIPTION

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

DATE: 04.04.24

HOMEWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
BATTERY AND VOLTAGE
DROP CALCULATIONS
RPS 3

SHEET NUMBER

FA 8.3

PANEL RPS3 (HPF-PS10) BATTERY CALCULATION									
(SECONDARY POWER SOURCE REQUIREMENTS)									
PANEL POWER SUPPLY MAX CURRENT = 10A				TOTAL USED CAPACITY (IN ALARM) = 4.627A (46.27 %)					
PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)			
				CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)	TOTAL (A)	TOTAL (A)
	1	HPF-PS10 MAIN BOARD	Fire Alarm Power Supply Main Board	0.156	0.156	0.185	0.185		
CIRCUIT	3								
RPS3-N1	2	P2WLED	Horn Strobe, 15cd	0	0	0.035	0.105		
	1	P2WLED	Horn Strobe, 30cd	0	0	0.038	0.076		
	1	P2WLED	Horn Strobe, 75cd	0	0	0.087	0.087		
RPS3-N2	2	AOM-2SF	Addressable Control Module	0	0	0.138	0.276		
	1	AOM-2SF	Addressable Control Module	0	0	0.258	0.258		
RPS3-N3	10	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.005	0.09	0.9		
RPS3-N4	10	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.005	0.09	0.9		
RPS3-N5	12	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.006	0.09	1.08		
RPS3-N6	8	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.004	0.09	0.72		
RPS3-N7	2	FM998	24V Door Holder	0.02	0.04	0.02	0.04		
				TOTAL STANDBY (A)	0.216	TOTAL ALARM (A)	4.627		
				REQUIRED STANDBY TIME = 24 HOURS					
				REQUIRED ALARM TIME = 5 MINUTES					
SECONDARY STANDBY LOAD (A)				0.216	24	5.18			
SECONDARY ALARM LOAD (A)				4.627	0.08	0.39			
STANDBY AND ALARM SUBTOTAL (AMP HOURS)				5.57					
DERATING FACTOR				1.2					
SECONDARY LOAD REQUIREMENTS (AMP HOURS)				6.68					
PROVIDE (2) 12V 7AH BATTERIES									

RPS3 N1 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.46
Min. Operational Voltage:					16	End Of Line Voltage:				19.94
Max. Circuit Current (A):					3	Voltage Drop Percent:				2.27 %
Wire Resistance (Dk/Ft):					3.07	Total Circuit Current (A):				0.268
Total Circuit Length (Ft):					512	Spare Current (A):				2.732
Total Circuit Resistance (Ω):					3.146326	Spare Current (A) Percent:				91.07 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS3-N1-01	P2WLED	Horn Strobe, 15cd	0.035	0.268	96	0.587565	0.16	20.24	0.16	0.77 %
RPS3-N1-02	P2WLED	Horn Strobe, 75cd	0.087	0.233	92	0.566862	0.13	20.11	0.29	1.42 %
RPS3-N1-03	P2WLED	Horn Strobe, 15cd	0.035	0.146	78	0.476557	0.07	20.04	0.36	1.76 %
RPS3-N1-04	P2WLED	Horn Strobe, 30cd	0.038	0.111	84	0.513931	0.06	19.98	0.42	2.04 %
RPS3-N1-05	P2WLED	Horn Strobe, 30cd	0.038	0.073	49	0.303358	0.02	19.96	0.44	2.15 %
RPS3-N1-06 EOL 4.7k	P2WLED	Horn Strobe, 15cd	0.035	0.035	114	0.696053	0.02	19.94	0.46	2.27 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS3 N2 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.03
Min. Operational Voltage:					16	End Of Line Voltage:				20.37
Max. Circuit Current (A):					3	Voltage Drop Percent:				0.12 %
Wire Resistance (Dk/Ft):					3.07	Total Circuit Current (A):				0.534
Total Circuit Length (Ft):					12	Spare Current (A):				2.466
Total Circuit Resistance (Ω):					0.073441	Spare Current (A) Percent:				82.20 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS3-N2-01	AOM-2SF	Addressable Control Module	0.258	0.534	5	0.030572	0.02	20.38	0.02	0.08 %
RPS3-N2-02	AOM-2SF	Addressable Control Module	0.138	0.276	3	0.021089	0.01	20.38	0.02	0.11 %
RPS3-N2-03	AOM-2SF	Addressable Control Module	0.138	0.138	4	0.02178	0	20.37	0.03	0.12 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS3 N3 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.7
Min. Operational Voltage:					16	End Of Line Voltage:				19.7
Max. Circuit Current (A):					3	Voltage Drop Percent:				3.44 %
Wire Resistance (Dk/Ft):					3.07	Total Circuit Current (A):				0.9
Total Circuit Length (Ft):					218	Spare Current (A):				2.1
Total Circuit Resistance (Ω):					1.339653	Spare Current (A) Percent:				70.00 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS3-N3-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	32	0.197589	0.18	20.12	0.18	0.87 %
RPS3-N3-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	20	0.120504	0.1	20.22	0.28	1.35 %
RPS3-N3-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	25	0.156483	0.11	20.01	0.39	1.90 %
RPS3-N3-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	12	0.073348	0.05	19.97	0.43	2.13 %
RPS3-N3-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	13	0.077115	0.04	19.92	0.48	2.33 %
RPS3-N3-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	54	0.328576	0.15	19.78	0.62	3.06 %
RPS3-N3-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	10	0.064144	0.02	19.75	0.65	3.17 %
RPS3-N3-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	19	0.114572	0.03	19.72	0.68	3.32 %
RPS3-N3-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	11	0.069718	0.01	19.71	0.69	3.38 %
RPS3-N3-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	22	0.137604	0.01	19.7	0.7	3.44 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS3 N7 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.04
Min. Operational Voltage:					16	End Of Line Voltage:				20.36
Max. Circuit Current (A):					3	Voltage Drop Percent:				0.17 %
Wire Resistance (Dk/Ft):					3.07	Total Circuit Current (A):				0.04
Total Circuit Length (Ft):					147	Spare Current (A):				2.96
Total Circuit Resistance (Ω):					0.904738	Spare Current (A) Percent:				98.67 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS3-N7	FM998	24V Door Holder	0.02	0.04	142	0.872084	0.03	20.37	0.03	0.17 %
RPS3-N7	FM998	24V Door Holder	0.02	0.02	5	0.032654	0	20.36	0.04	0.17 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS3 N4 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.65
Min. Operational Voltage:					16	End Of Line Voltage:				19.75
Max. Circuit Current (A):					3	Voltage Drop Percent:				3.17 %
Wire Resistance (Dk/Ft):					3.07	Total Circuit Current (A):				0.9
Total Circuit Length (Ft):					193	Spare Current (A):				2.1
Total Circuit Resistance (Ω):					1.185291	Spare Current (A) Percent:				70.00 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS3-N4-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	47	0.289984	0.26	20.14	0.26	1.28 %
RPS3-N4-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	11	0.067387	0.05	20.08	0.32	1.55 %
RPS3-N4-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	19	0.115952	0.08	20	0.4	1.96 %
RPS3-N4-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	11	0.06625	0.04	19.96	0.44	2.16 %
RPS3-N4-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	21	0.129625	0.07	19.89	0.51	2.50 %
RPS3-N4-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	20	0.124467	0.06	19.83	0.57	2.78 %
RPS3-N4-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	11	0.070092	0.03	19.81	0.59	2.90 %
RPS3-N4-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	18	0.113447	0.03	19.78	0.62	3.05 %
RPS3-N4-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	11	0.069103	0.01	19.76	0.64	3.11 %
RPS3-N4-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	23	0.138984	0.01	19.75	0.65	3.17 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS3 N5 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS					TOTALS					
Starting Calculation Voltage:					20.4	Max. Voltage Drop:				0.87
Min. Operational Voltage:					16	End Of Line Voltage:				19.53
Max. Circuit Current (A):					3	Voltage Drop Percent:				4.27 %
Wire Resistance (Dk/Ft):					3.07	Total Circuit Current (A):				1.08
Total Circuit Length (Ft):					224	Spare Current (A):				1.92
Total Circuit Resistance (Ω):					1.376262	Spare Current (A) Percent:				64.00 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded										
Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS3-N5-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	1.08	44	0.267569	0.29	20.11	0.29	1.42 %
RPS3-N5-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.99	22	0.137338	0.14	19.98	0.42	2.08 %
RPS3-N5-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	10	0.063997	0.06	19.92	0.48	2.37 %
RPS3-N5-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	19	0.114818	0.09	19.82	0.58	2.82 %
RPS3-N5-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	11	0.067456	0.05	19.78	0.62	3.06 %
RPS3-N5-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	16	0.096672	0.06	19.71	0.69	3.36 %
RPS3-N5-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	10	0.062156	0.03	19.68	0.72	3.52 %
RPS3-N5-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	25	0.150518	0.07	19.61	0.79	3.85 %
RPS3-N5-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	12	0.072528	0.03	19.59	0.81	3.98 %
RPS3-N5-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	11					



FIRE PROTECTION INC.
17410 Ash Way, Ste 8
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CHECKED BY: ROY L. CATTS, NCEIT IV
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DAVID MOW:

REVISION RECORD

DATE / DESCRIPTION

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building Planning
Engineering Public Works
Fire Traffic

DATE: 04.04.24

HOMWOOD SUITES
3500 S. MERIDIAN
PUYALLUP, WA 98373

SHEET TITLE

FIRE ALARM
BATTERY AND VOLTAGE
DROP CALCULATIONS
RPS 4

SHEET NUMBER

FA 8.4

PANEL RPS4 (HPF-PS10) BATTERY CALCULATION							
PANEL POWER SUPPLY MAX CURRENT = 10A				TOTAL USED CAPACITY (IN ALARM) = 4.845A (48.45 %)			
PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
				CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
	1	HPF-PS10 MAIN BOARD	Fire Alarm Power Supply Main Board	0.156	0.156	0.185	0.185
CIRCUIT	QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
RPS4-N1	3	P2WLED	Horn Strobe, 15cd	0	0	0.035	0.105
	2	P2WLED	Horn Strobe, 30cd	0	0	0.038	0.076
	1	P2WLED	Horn Strobe, 75cd	0	0	0.087	0.087
RPS4-N2	1	AGM-2SF	Addressable Control Module	0	0	0.138	0.138
	1	AGM-2SF	Addressable Control Module	0	0	0.258	0.258
	1	AGM-2SF	Addressable Control Module	0	0	0.396	0.396
RPS4-N3	10	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.005	0.09	0.9
RPS4-N4	10	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.005	0.09	0.9
RPS4-N5	12	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.006	0.09	1.08
RPS4-N6	8	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base,	0.0005	0.004	0.09	0.72
				TOTAL STANDBY (A)	0.176	TOTAL ALARM (A)	4.845
				REQUIRED STANDBY TIME = 24 HOURS			
				REQUIRED ALARM TIME = 5 MINUTES			
SECONDARY STANDBY LOAD (A)				0.176	24	4.22	
SECONDARY ALARM LOAD (A)				4.845	0.08	0.4	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)				4.63			
DERATING FACTOR				12			
SECONDARY LOAD REQUIREMENTS (AMP HOURS)				5.55			
PROVIDE (2) 12V 7AH BATTERIES							

RPS4 N1 POINT-TO-POINT REPORT						
CIRCUIT SETTINGS						TOTALS
Starting Calculation Voltage:						20.4
Min. Operational Voltage:						16
Max. Circuit Current (A):						3
Wire Resistance (Ω/FT):						3.07
Total Circuit Length (FT):						512
Total Circuit Resistance (Ω):						3.146693
Voltage Drop From Previous:						0.16
Voltage At Device:						20.24
Total Voltage Drop:						0.16
Voltage Drop Percent:						0.77 %
Max. Voltage Drop:						0.46
End Of Line Voltage:						19.94
Total Voltage Drop Percent:						2.27 %
Total Circuit Current (A):						0.268
Spare Current (A):						2.732
Spare Current (A) Percent:						91.07 %
Circuit Wiring Properties: 'A' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded						
Distance measured using drawn segment lengths with 10.00 % additional length calculated						
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)
RPS4-N1-01	P2WLED	Horn Strobe, 15cd	0.035	0.268	96	0.588446
RPS4-N1-02	P2WLED	Horn Strobe, 15cd	0.035	0.233	92	0.566862
RPS4-N1-03	P2WLED	Horn Strobe, 15cd	0.035	0.146	78	0.476557
RPS4-N1-04	P2WLED	Horn Strobe, 30cd	0.038	0.111	84	0.513903
RPS4-N1-05	P2WLED	Horn Strobe, 30cd	0.038	0.073	49	0.30333
RPS4-N1-06 EOL 4.7k	P2WLED	Horn Strobe, 15cd	0.035	0.035	114	0.697595
Calculation Methods:						
Resistance From Previous (Ω) = Wire Resistance (Ω/FT) x 2 x Dist. From Previous (Ft)						
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)						

RPS4 N2 POINT-TO-POINT REPORT						
CIRCUIT SETTINGS						TOTALS
Starting Calculation Voltage:						20.4
Min. Operational Voltage:						16
Max. Circuit Current (A):						3
Wire Resistance (Ω/FT):						3.07
Total Circuit Length (FT):						12
Total Circuit Resistance (Ω):						0.072837
Voltage Drop From Previous:						0.02
Voltage At Device:						20.38
Total Voltage Drop:						0.02
Voltage Drop Percent:						0.12 %
Max. Voltage Drop:						0.04
End Of Line Voltage:						20.36
Total Voltage Drop Percent:						0.18 %
Total Circuit Current (A):						0.792
Spare Current (A):						2.208
Spare Current (A) Percent:						73.60 %
Circuit Wiring Properties: 'A' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded						
Distance measured using drawn segment lengths with 10.00 % additional length calculated						
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)
RPS4-N2-01	AOM-2SF	Addressable Control Module	0.396	0.792	5	0.029652
RPS4-N2-02	AOM-2SF	Addressable Control Module	0.138	0.396	3	0.020942
RPS4-N2-03	AOM-2SF	Addressable Control Module	0.258	0.258	4	0.022243
Calculation Methods:						
Resistance From Previous (Ω) = Wire Resistance (Ω/FT) x 2 x Dist. From Previous (Ft)						
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)						

RPS4 N3 POINT-TO-POINT REPORT						
CIRCUIT SETTINGS						TOTALS
Starting Calculation Voltage:						20.4
Min. Operational Voltage:						16
Max. Circuit Current (A):						3
Wire Resistance (Ω/FT):						3.07
Total Circuit Length (FT):						218
Total Circuit Resistance (Ω):						1.339613
Voltage Drop From Previous:						0.18
Voltage At Device:						20.22
Total Voltage Drop:						0.18
Voltage Drop Percent:						0.87 %
Max. Voltage Drop:						0.7
End Of Line Voltage:						19.7
Total Voltage Drop Percent:						3.44 %
Total Circuit Current (A):						0.9
Spare Current (A):						2.1
Spare Current (A) Percent:						70.00 %
Circuit Wiring Properties: 'A' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded						
Distance measured using drawn segment lengths with 10.00 % additional length calculated						
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)
RPS4-N3-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	32	0.196548
RPS4-N3-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	21	0.128265
RPS4-N3-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	24	0.148723
RPS4-N3-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	12	0.073348
RPS4-N3-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	13	0.077115
RPS4-N3-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	54	0.328576
RPS4-N3-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	10	0.064144
RPS4-N3-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	19	0.114572
RPS4-N3-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	11	0.069718
RPS4-N3-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	22	0.137604
Calculation Methods:						
Resistance From Previous (Ω) = Wire Resistance (Ω/FT) x 2 x Dist. From Previous (Ft)						
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)						

RPS4 N4 POINT-TO-POINT REPORT						
CIRCUIT SETTINGS						TOTALS
Starting Calculation Voltage:						20.4
Min. Operational Voltage:						16
Max. Circuit Current (A):						3
Wire Resistance (Ω/FT):						3.07
Total Circuit Length (FT):						193
Total Circuit Resistance (Ω):						1.186122
Voltage Drop From Previous:						0.26
Voltage At Device:						20.14
Total Voltage Drop:						0.26
Voltage Drop Percent:						1.29 %
Max. Voltage Drop:						0.65
End Of Line Voltage:						19.75
Total Voltage Drop Percent:						3.18 %
Total Circuit Current (A):						0.9
Spare Current (A):						2.1
Spare Current (A) Percent:						70.00 %
Circuit Wiring Properties: 'A' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded						
Distance measured using drawn segment lengths with 10.00 % additional length calculated						
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)
RPS4-N4-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	48	0.292612
RPS4-N4-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	11	0.067387
RPS4-N4-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	19	0.115847
RPS4-N4-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	11	0.06625
RPS4-N4-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	21	0.128691
RPS4-N4-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	20	0.123709
RPS4-N4-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	11	0.070092
RPS4-N4-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	18	0.113447
RPS4-N4-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	11	0.069103
RPS4-N4-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	23	0.138984
Calculation Methods:						
Resistance From Previous (Ω) = Wire Resistance (Ω/FT) x 2 x Dist. From Previous (Ft)						
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)						

RPS4 N5 POINT-TO-POINT REPORT						
CIRCUIT SETTINGS						TOTALS
Starting Calculation Voltage:						20.4
Min. Operational Voltage:						16
Max. Circuit Current (A):						3
Wire Resistance (Ω/FT):						3.07
Total Circuit Length (FT):						226
Total Circuit Resistance (Ω):						1.385734
Voltage Drop From Previous:						0.29
Voltage At Device:						20.11
Total Voltage Drop:						0.29
Voltage Drop Percent:						1.41 %
Max. Voltage Drop:						0.88
End Of Line Voltage:						19.52
Total Voltage Drop Percent:						4.31 %
Total Circuit Current (A):						1.08
Spare Current (A):						64.00 %
Spare Current (A) Percent:						64.00 %
Circuit Wiring Properties: 'A' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded						
Distance measured using drawn segment lengths with 10.00 % additional length calculated						
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)
RPS4-N5-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	1.08	43	0.266148
RPS4-N5-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.99	24	0.148231
RPS4-N5-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	10	0.063997
RPS4-N5-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	19	0.114818
RPS4-N5-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	11	0.067456
RPS4-N5-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	16	0.096672
RPS4-N5-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	10	0.062156
RPS4-N5-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	25	0.150518
RPS4-N5-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	12	0.072528
RPS4-N5-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	11	0.069926
RPS4-N5-11	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	27	0.167363
RPS4-N5-12	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	17	0.105921
Calculation Methods:						
Resistance From Previous (Ω) = Wire Resistance (Ω/FT) x 2 x Dist. From Previous (Ft)						
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)						

RPS4 N6 POINT-TO-POINT REPORT						
CIRCUIT SETTINGS						TOTALS
Starting Calculation Voltage:						20.4
Min. Operational Voltage:						16
Max. Circuit Current (A):						3
Wire Resistance (Ω/FT):						3.07
Total Circuit Length (FT):						359
Total Circuit Resistance (Ω):						2.20224
Voltage Drop From Previous:						0.92
Voltage At Device:						19.48
Total Voltage Drop:						0.92
Voltage Drop Percent:						4.53 %
Max. Voltage Drop:						1.22
End Of Line Voltage:						19.18
Total Voltage Drop Percent:						5.97 %
Total Circuit Current (A):						0.72
Spare Current (A):						2.28
Spare Current (A) Percent:						76.00 %
Circuit Wiring Properties: 'A' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded						
Distance measured using drawn segment lengths with 10.00 % additional length calculated						
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)
RPS4-N6-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	209	1.284385
RPS4-N6-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	18	0.107699
RPS4-N6-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	22	0.135687
RPS4-N6-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	11	0.066441
RPS4-N6-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	19	0.116241
RPS4-N6-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	12	0.071188
RPS4-N6-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	42	0.257074
RPS4-N6-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	27	0.163



DRAWN BY: DAVID MOW, SET
 CHECKED BY: DAVID MOW, SET
 REVIEWED BY: ROY L. CATS, NRCET IV
 SEATTLE FIRE DEPT. #83-C-9885
 L & L CATS' RU022CG
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REVISION RECORD	
DATE / DESCRIPTION	
	City of Puyallup Development & Permitting Services ISSUED PERMIT
	Building Planning
	Engineering Public Works
	Fire Traffic

DATE: 04.04.24

HOMEWOOD SUITES
 3500 S. MERIDIAN
 PUYALLUP, WA 98373

SHEET TITLE
 FIRE ALARM BATTERY AND VOLTAGE DROP CALCULATIONS RPS 5

SHEET NUMBER

FA 8.5

PANEL RPS5 (HPF-PS10) BATTERY CALCULATION (SECONDARY POWER SOURCE REQUIREMENTS)								
PANEL POWER SUPPLY MAX CURRENT = 10A			TOTAL USED CAPACITY (IN ALARM) = 4.627A (46.27 %)					
PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)		
				CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)	
		HPF-PS10 MAIN BOARD	Fire Alarm Power Supply Main Board	0.156	0.156	0.185	0.185	
CIRCUIT	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)	
RPS5-N1	3	P2WLED	Horn Strobe, 150d	0	0	0.035	0.105	
	2	P2WLED	Horn Strobe, 300d	0	0	0.038	0.076	
	1	P2WLED	Horn Strobe, 750d	0	0	0.087	0.087	
RPS5-N2	2	AOM-2SF	Addressable Control Module	0	0	0.138	0.276	
	1	AOM-2SF	Addressable Control Module	0	0	0.258	0.258	
RPS5-N3	10	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base.	0.0005	0.005	0.09	0.9	
RPS5-N4	10	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base.	0.0005	0.005	0.09	0.9	
RPS5-N5	12	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base.	0.0005	0.006	0.09	1.08	
RPS5-N6	8	ASD-PL3 w/B200S-LF-WH	Photoelectric smoke detector, addressable low frequency sounder base.	0.0005	0.004	0.09	0.72	
RPS5-N7	2	FM998	24V Door Holder	0.02	0.04	0.02	0.04	
			TOTAL STANDBY (A)		0.216	TOTAL ALARM (A)	4.627	
						REQUIRED STANDBY TIME = 24 HOURS		
						REQUIRED ALARM TIME = 5 MINUTES		
			SECONDARY STANDBY LOAD (A)		0.216		5.18	
			SECONDARY ALARM LOAD (A)		4.627		0.39	
			STANDBY AND ALARM SUBTOTAL (AMP HOURS)			5.57		
			DERATING FACTOR			1.2		
			SECONDARY LOAD REQUIREMENTS (AMP HOURS)			6.68		
			PROVIDE (2) 12V 7AH BATTERIES					

RPS5 N1 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS							TOTALS			
Starting Calculation Voltage:							20.4	Max. Voltage Drop:		0.46
Min. Operational Voltage:							16	End Of Line Voltage:		19.94
Max. Circuit Current (A):							3	Voltage Drop Percent:		2.27 %
Wire Resistance (Dk/Ft):							3.07	Total Circuit Current (A):		0.268
Total Circuit Length (Ft):							513	Spare Current (A):		2.732
Total Circuit Resistance (Ω):							3.14916	Spare Current (A) Percent:		91.07 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS5-N1-01	P2WLED	Horn Strobe, 150d	0.035	0.268	96	0.599311	0.16	20.24	0.16	0.77 %
RPS5-N1-02	P2WLED	Horn Strobe, 750d	0.087	0.233	92	0.567141	0.13	20.11	0.29	1.42 %
RPS5-N1-03	P2WLED	Horn Strobe, 150d	0.035	0.146	78	0.476836	0.07	20.04	0.36	1.76 %
RPS5-N1-04	P2WLED	Horn Strobe, 300d	0.038	0.111	84	0.514196	0.06	19.98	0.42	2.04 %
RPS5-N1-05	P2WLED	Horn Strobe, 300d	0.038	0.073	49	0.303623	0.02	19.96	0.44	2.15 %
RPS5-N1-06 EOL 4.7k	P2WLED	Horn Strobe, 150d	0.035	0.035	114	0.698053	0.02	19.94	0.46	2.27 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS5 N2 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS							TOTALS			
Starting Calculation Voltage:							20.4	Max. Voltage Drop:		0.03
Min. Operational Voltage:							16	End Of Line Voltage:		20.37
Max. Circuit Current (A):							3	Voltage Drop Percent:		0.13 %
Wire Resistance (Dk/Ft):							3.07	Total Circuit Current (A):		0.534
Total Circuit Length (Ft):							12	Spare Current (A):		2.466
Total Circuit Resistance (Ω):							0.072814	Spare Current (A) Percent:		82.20 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS5-N2-01	AOM-2SF	Addressable Control Module	0.138	0.534	5	0.029657	0.02	20.38	0.02	0.08 %
RPS5-N2-02	AOM-2SF	Addressable Control Module	0.258	0.396	3	0.021111	0.01	20.38	0.02	0.12 %
RPS5-N2-03	AOM-2SF	Addressable Control Module	0.138	0.138	4	0.022046	0	20.37	0.03	0.13 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS5 N3 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS							TOTALS			
Starting Calculation Voltage:							20.4	Max. Voltage Drop:		0.7
Min. Operational Voltage:							16	End Of Line Voltage:		19.7
Max. Circuit Current (A):							3	Voltage Drop Percent:		3.43 %
Wire Resistance (Dk/Ft):							3.07	Total Circuit Current (A):		0.9
Total Circuit Length (Ft):							217	Spare Current (A):		2.1
Total Circuit Resistance (Ω):							1.331027	Spare Current (A) Percent:		70.00 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS5-N3-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	34	0.209753	0.19	20.21	0.19	0.93 %
RPS5-N3-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	18	0.10776	0.09	20.12	0.28	1.35 %
RPS5-N3-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	25	0.156483	0.11	20.01	0.39	1.91 %
RPS5-N3-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	12	0.073348	0.05	19.97	0.43	2.13 %
RPS5-N3-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	12	0.073092	0.04	19.93	0.47	2.33 %
RPS5-N3-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	53	0.324553	0.15	19.78	0.62	3.04 %
RPS5-N3-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	10	0.064144	0.02	19.76	0.64	3.15 %
RPS5-N3-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	19	0.114572	0.03	19.73	0.67	3.31 %
RPS5-N3-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	11	0.069718	0.01	19.71	0.69	3.37 %
RPS5-N3-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	22	0.137604	0.01	19.7	0.7	3.43 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS5 N4 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS							TOTALS			
Starting Calculation Voltage:							20.4	Max. Voltage Drop:		0.65
Min. Operational Voltage:							16	End Of Line Voltage:		19.75
Max. Circuit Current (A):							3	Voltage Drop Percent:		3.18 %
Wire Resistance (Dk/Ft):							3.07	Total Circuit Current (A):		0.9
Total Circuit Length (Ft):							192	Spare Current (A):		2.1
Total Circuit Resistance (Ω):							1.179116	Spare Current (A) Percent:		70.00 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS5-N4-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	48	0.29489	0.27	20.13	0.27	1.30 %
RPS5-N4-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	11	0.066745	0.05	20.08	0.32	1.57 %
RPS5-N4-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	19	0.115847	0.08	20	0.4	1.97 %
RPS5-N4-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	11	0.06625	0.04	19.96	0.44	2.18 %
RPS5-N4-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	22	0.136727	0.07	19.88	0.52	2.54 %
RPS5-N4-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	18	0.112509	0.05	19.83	0.57	2.79 %
RPS5-N4-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	11	0.070092	0.03	19.81	0.59	2.91 %
RPS5-N4-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	18	0.113447	0.03	19.78	0.62	3.06 %
RPS5-N4-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	11	0.069103	0.01	19.76	0.64	3.12 %
RPS5-N4-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	22	0.133506	0.01	19.75	0.65	3.18 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS5 N5 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS							TOTALS			
Starting Calculation Voltage:							20.4	Max. Voltage Drop:		0.87
Min. Operational Voltage:							16	End Of Line Voltage:		19.53
Max. Circuit Current (A):							3	Voltage Drop Percent:		4.27 %
Wire Resistance (Dk/Ft):							3.07	Total Circuit Current (A):		1.08
Total Circuit Length (Ft):							227	Spare Current (A):		1.92
Total Circuit Resistance (Ω):							1.392717	Spare Current (A) Percent:		64.00 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Unshielded Distance measured using drawn segment lengths with 10.00 % additional length calculated										
Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
RPS5-N5-01	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	1.08	42	0.259276	0.28	20.12	0.28	1.37 %
RPS5-N5-02	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.99	24	0.144835	0.14	19.98	0.42	2.08 %
RPS5-N5-03	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.9	10	0.063997	0.06	19.92	0.48	2.36 %
RPS5-N5-04	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.81	19	0.114818	0.09	19.83	0.57	2.81 %
RPS5-N5-05	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.72	11	0.067456	0.05	19.78	0.62	3.05 %
RPS5-N5-06	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.63	15	0.089458	0.06	19.72	0.68	3.33 %
RPS5-N5-07	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.54	11	0.06453	0.03	19.69	0.71	3.50 %
RPS5-N5-08	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.45	25	0.151156	0.07	19.62	0.78	3.83 %
RPS5-N5-09	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.36	11	0.070055	0.03	19.59	0.81	3.96 %
RPS5-N5-10	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.27	14	0.087064	0.02	19.57	0.83	4.07 %
RPS5-N5-11	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.18	28	0.174151	0.03	19.54	0.86	4.22 %
RPS5-N5-12	ASD-PL3 w/B200S-LF-WH	Photo smoke detector, w/ LF sounder base	0.09	0.09	17	0.105921	0.01	19.53	0.87	4.27 %
Calculation Methods: Resistance From Previous (Ω) = Wire Resistance (Dk/Ft) x 2 x Dist. From Previous (Ft) Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)										

RPS5 N6 POINT-TO-POINT REPORT										
CIRCUIT SETTINGS							TOTALS			
Starting Calculation Voltage:							20.4	Max. Voltage Drop:		1.22
Min. Operational Voltage:							16	End Of Line Voltage:		18.18
Max. Circuit Current (A):							3	Voltage Drop Percent:		5.97 %
Wire Resistance (Dk/Ft):							3.07	Total Circuit Current (A):		0.72
Total Circuit Length (Ft):							359	Spare Current (A):		2.28
Total Circuit Resistance (Ω):							2.201533	Spare Current (A) Percent:		76.00 %
Circuit Wiring Properties: 'A' 14/2 FPLPR (NAC) 14 AWG, 2 Cond. Solid Copper FPLPR Analog Un										