

GENERAL NOTES:

- INSTALL ALL MODULES WITHIN SMOKE CONTROL INTERFACE CABINET AS INDICATED. INSTALL CABINET WITHIN 36" OF ASSOCIATED SMOKE CONTROL FAN CONTROLLER.
- WIRING BETWEEN MODULES AND TERMINALS NOT SHOWN FOR CLARITY.
- THIS DETAIL IS APPLICABLE TO ALL SMOKE CONTROL FANS.
- WIRING FROM FIRE ALARM MODULES TO INTERFACE EQUIPMENT BY DIVISION 28.
- INTERPOSING RELAYS AND ADDRESSABLE RELAYS SHALL BE CAPABLE OF OPERATING WITHIN THE VOLTAGE AND CURRENT LIMITATIONS OF THE FIRE ALARM SYSTEM CONTROL UNIT.
- INTERPOSING RELAYS SHALL BE ULK LISTED FOR USE IN SMOKE CONTROL APPLICATIONS.
- FACTORY WIRING SHALL BE BY PC CERTIFIED WIRING TECHNICIAN IN A CONTROLLED ISO 9001 REGISTERED ENVIRONMENT.

KEY NOTES:

EQUIPMENT:

- MONITOR MODULE (MM) SUPERVISION OF FAN POWER VOLTAGE RELAY.
- MM SUPERVISION OF LOCAL FAN MOTOR DISCONNECT POSITION.
- MM SUPERVISION OF DIFFERENTIAL PRESSURE SWITCH / CURRENT TRANSFORMER (CT) SENSOR.
- MM SUPERVISION OF AUTOMATIC CONTROL DAMPER (ACD) POSITION (OPEN).
- MM SUPERVISION OF ACD POSITION (CLOSED).
- RELAY MODULE (RM): START FAN.
- RM STOP FAN.
- RM OPEN/CLOSE AUTOMATIC CONTROL DAMPER.
- INTERPOSING RELAY (IR) FAN VOLTAGE MONITORING MR SERIES RELAY.
- IR AUTOMATIC CONTROL DAMPER CONTROL MR SERIES RELAY.

FIELD WIRING:

- SIGNALING LINE CIRCUIT (SLC) IN.
- SLC OUT.
- INITIATING DEVICE CIRCUIT (IDC) WIRING TO LOCAL DISCONNECT SWITCH FAN MOTOR.
- IDC WIRING TO DP SWITCH / CT SENSOR.
- IDC WIRING TO ACD "OPEN" END SWITCH.
- IDC WIRING TO "CLOSED" END SWITCH.
- RELAY WIRING TO FAN VARIABLE FREQUENCY DRIVE (VFD) START/STOP CONTACTS.
- RELAY WIRING TO FAN VFD SAFETY INTERLOCK CONTACTS.
- SUPERVISION WIRING TO FAN POWER CIRCUIT. MAKE CONNECTION DOWNSTREAM OF LOCAL DISCONNECT ON FAN VFD.
- 120VAC DAMPER POWER WIRING IN.
- 120VAC DAMPER POWER WIRING OUT.

FACTORY WIRING:

- SLC TO/FROM ADDRESSABLE MODULES.
- SLC IN/OUT OF ADDRESSABLE MODULE.
- IDC / RELAY / VOLTAGE WIRING TO FACTORY TERMINAL CONNECTION.
- IDC / RELAY / VOLTAGE WIRING FROM ADDRESSABLE MODULES / MR SERIES RELAYS.
- IDC WIRING TO FAN POWER VOLTAGE RELAY.
- RELAY WIRING TO DAMPER CONTROL RELAY.
- IDC / RELAY WIRING FROM ADDRESSABLE MODULES.
- PRE-LABELED FIELD TERMINAL CONNECTIONS.
- FACTORY TERMINAL CONNECTIONS.
- HIGH/LOW VOLTAGE CLEAR LEXAN DIVIDER.

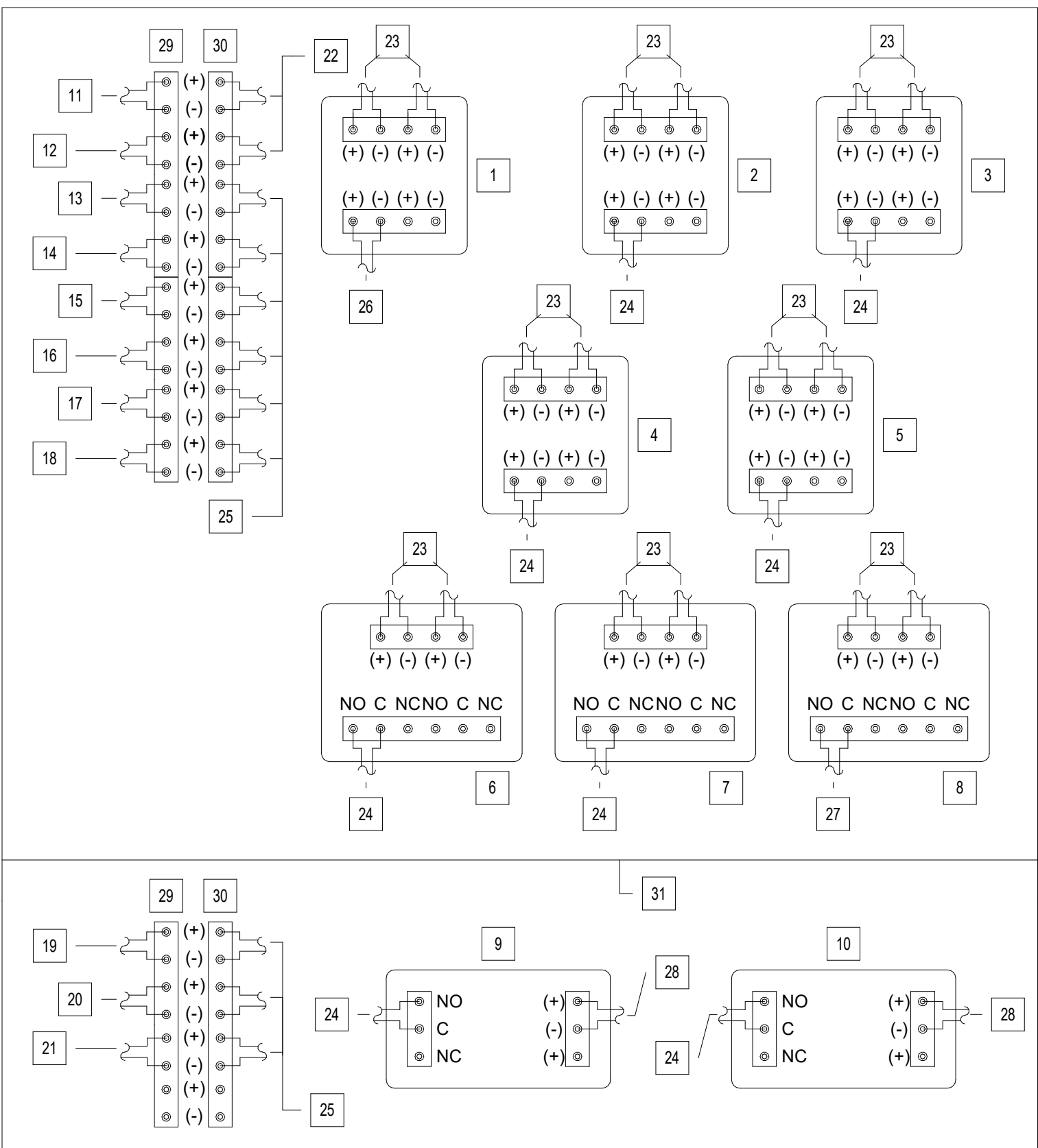
CABINET ENCLOSURE:

RED UL94H LISTED ACCESSORY CABINET ENCLOSURE KEYED TO MATCH FIRE ALARM SYSTEM CONTROL UNITS W/ "LEFT AWAY" HINGE FRONT DOOR WITH GROUNDING STUD SCREW.

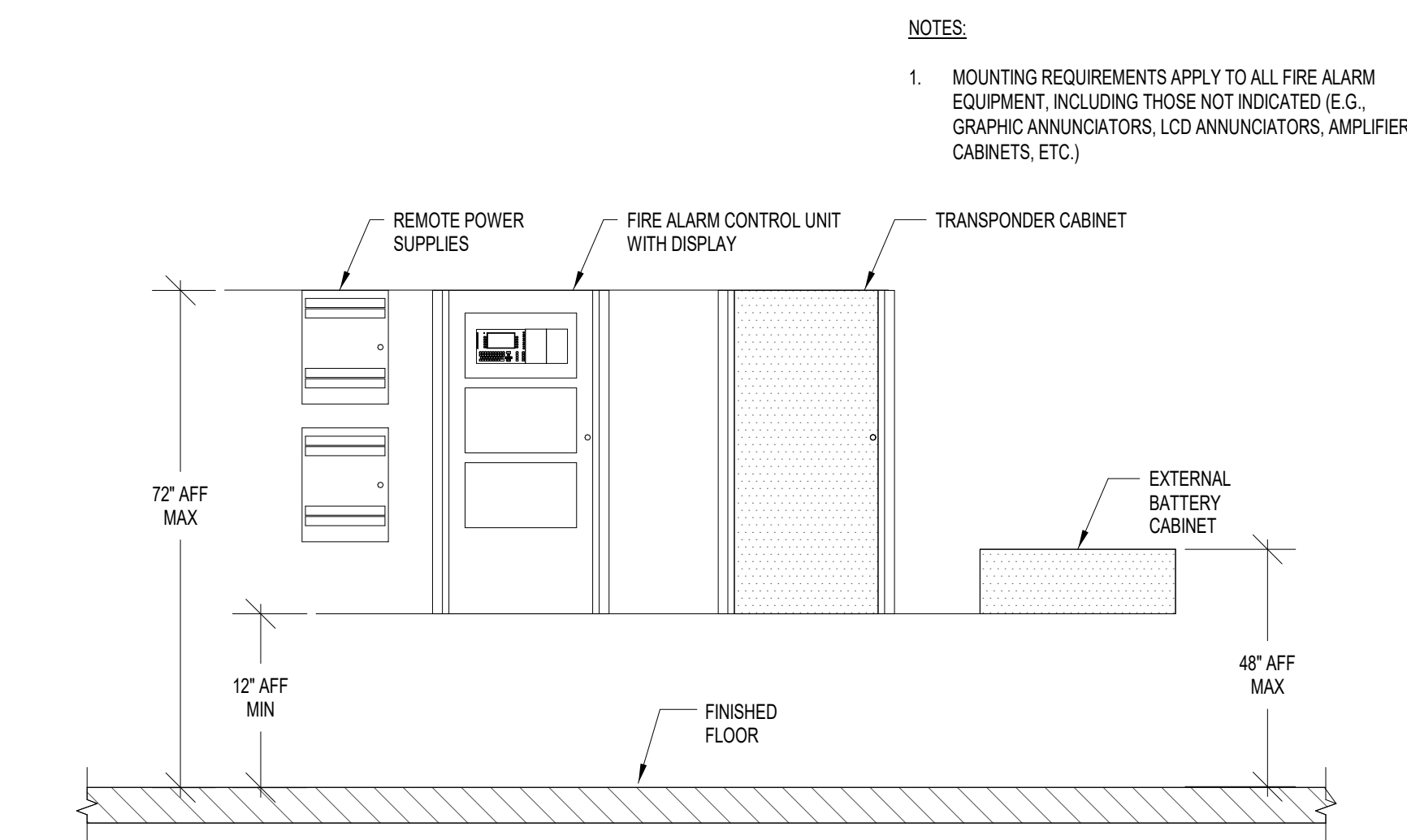
SMOKE CONTROL INTERFACE CABINET
FAN XX

MATCH FIRE FIGHTER'S SMOKE CONTROL PANEL FAN DESIGNATIONS

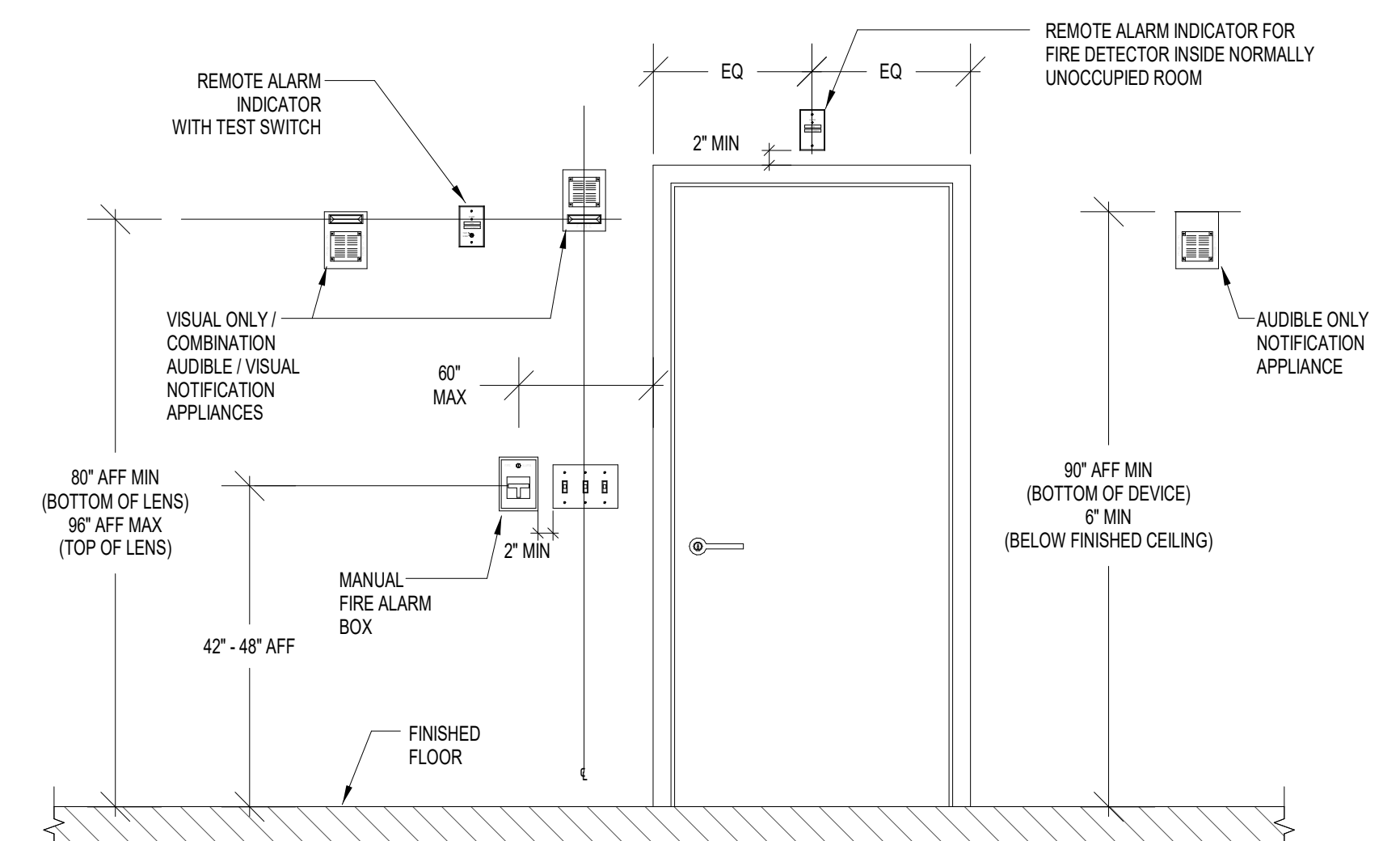
SMOKE CONTROL CABINET - FRONT VIEW



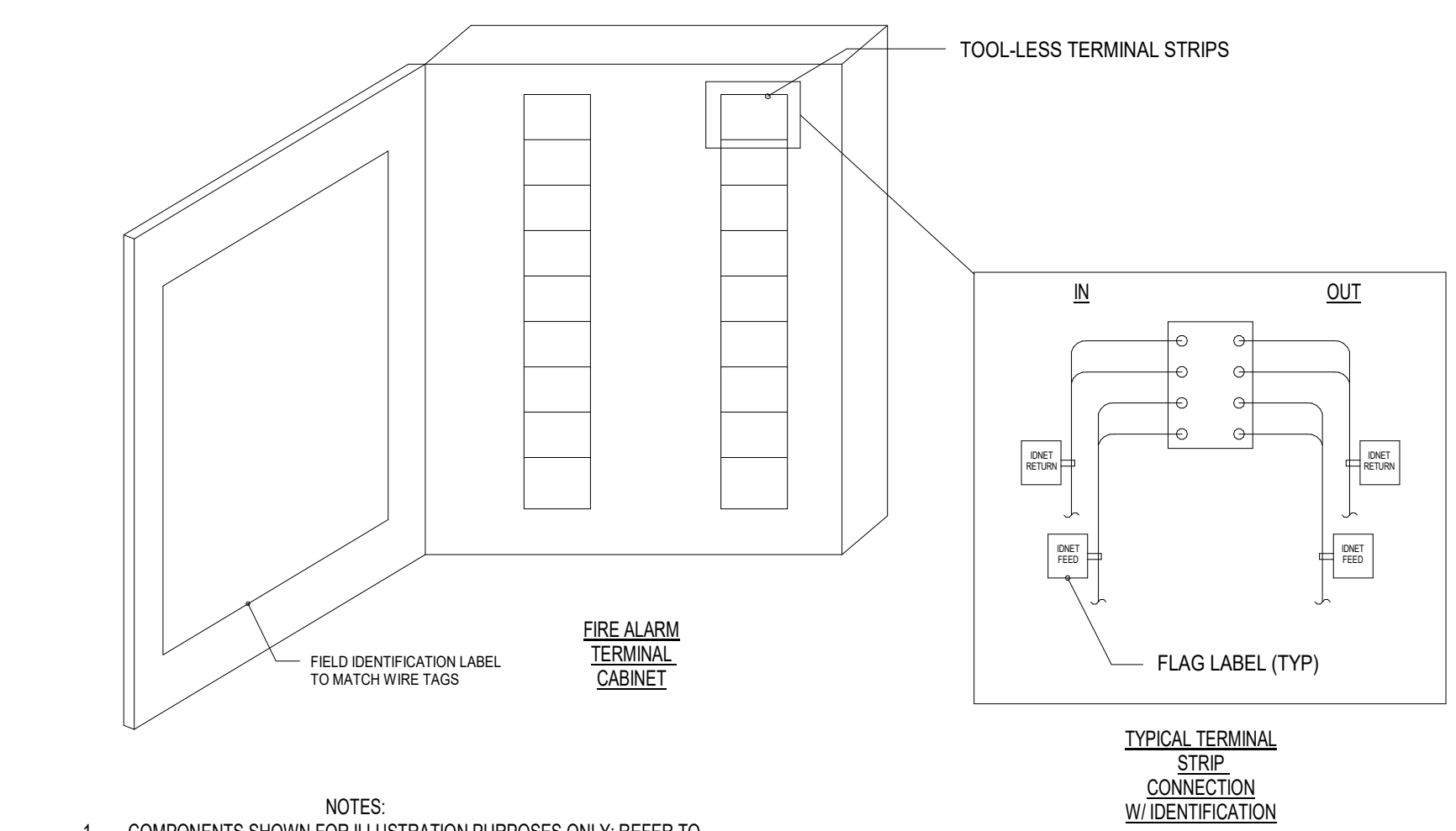
SMOKE CONTROL CABINET - INTERIOR VIEW



3 FIRE ALARM EQUIPMENT MOUNTING HEIGHTS (NTS)



4 HEIGHT REQUIREMENTS FOR WALL-MOUNTED FIRE ALARM DEVICES (NTS)

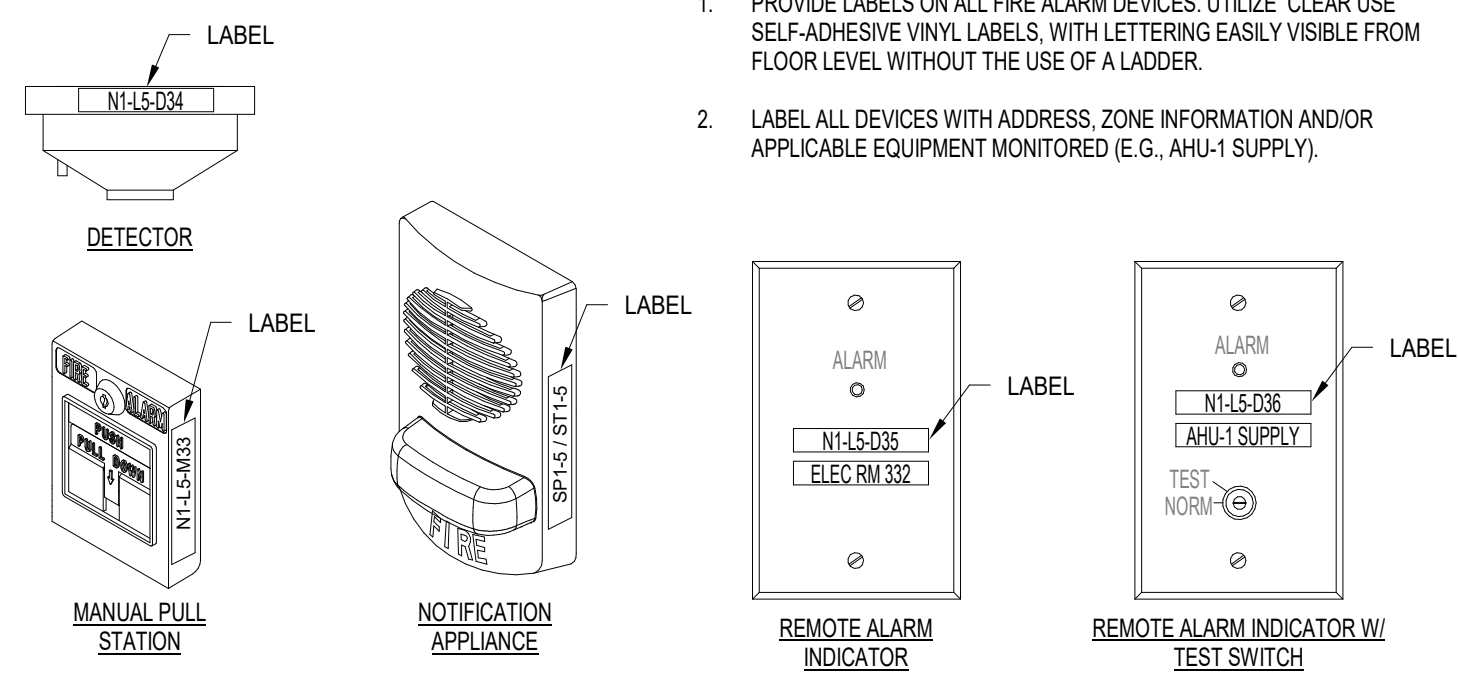


- NOTES:
- COMPONENTS SHOWN FOR ILLUSTRATION PURPOSES ONLY. REFER TO SPECIFICATION FOR TERMINAL CABINET REQUIREMENTS.
 - WIRE LABELS SHALL BE PENDULIT TP-FIN-ACT-7-40 STYLE MARKER TIE (OR APPROVED EQUAL).

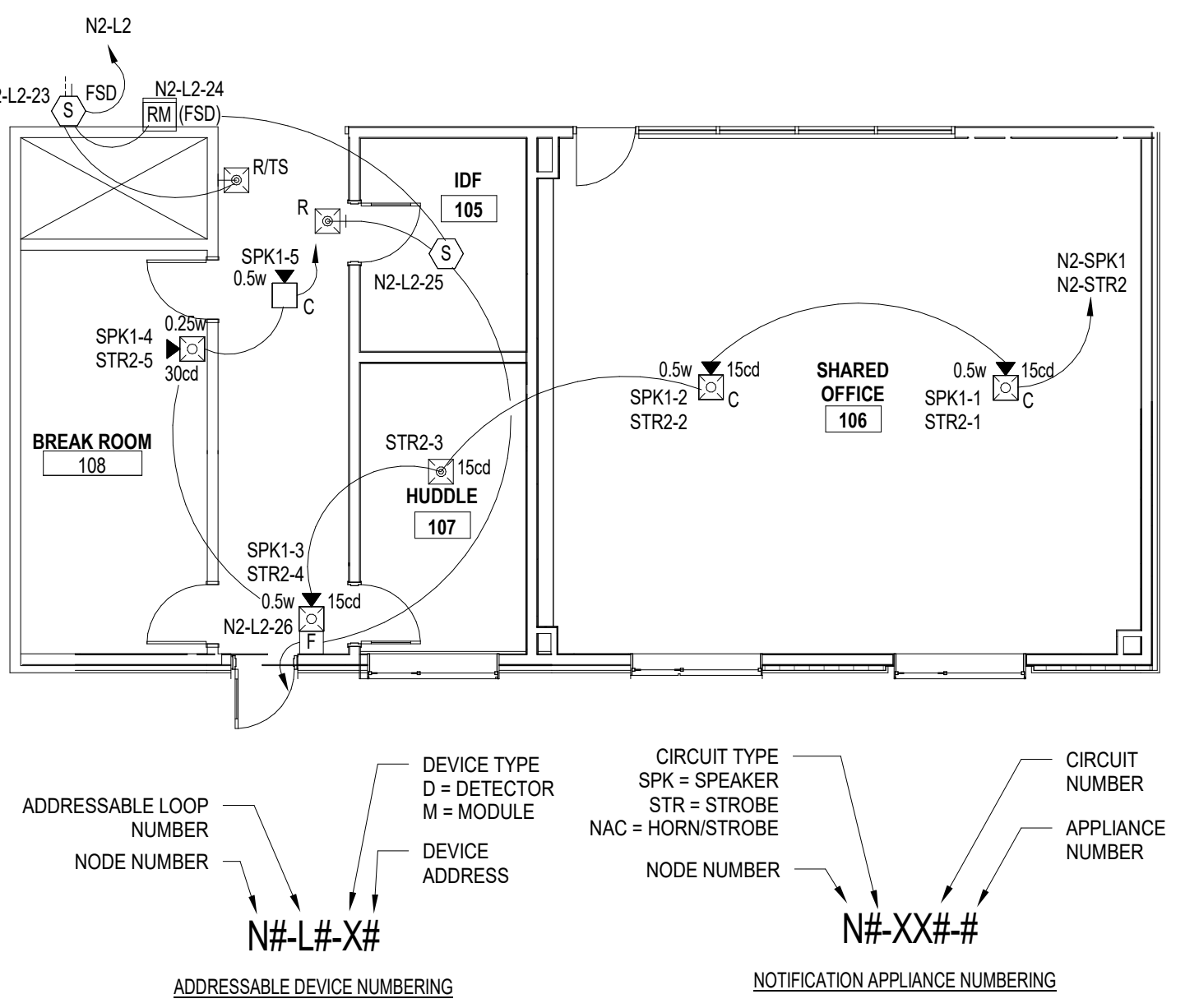
5 FATC WIRE TAGGING DETAIL (NTS)

NOTES:

- PROVIDE LABELS ON ALL FIRE ALARM DEVICES. UTILIZE CLEAR USE SELF-ADHESIVE VINYL LABELS WITH LETTERING EASILY VISIBLE FROM FLOOR LEVEL WITHOUT THE USE OF A LADDER.
- LABEL ALL DEVICES WITH ADDRESS, ZONE INFORMATION AND/OR APPLICABLE EQUIPMENT MONITORED (E.G., AHA-1 SUPPLY).



1 FIRE ALARM DEVICE LABELING REQUIREMENTS (NTS)



NOTES:

- PARTIAL PLAN / LAYOUT ABOVE IS INCLUDED AS AN EXAMPLE OF A PORTION OF A FIRE ALARM SHOP DRAWING AND THE REQUIRED LEVEL OF DETAIL.
- SHOP DRAWINGS SHALL IDENTIFY POINT TO POINT WIRING WITH CIRCUIT IDENTIFICATION.
- IDENTIFY ALL ISOLATION MODULES, END OF LINE RESISTORS, INTERPOSING RELAYS AND SIMILAR ACCESSORIES.
- SHOP DRAWINGS SHALL INCLUDE ADDRESSES FOR EACH INITIATING DEVICE. ALL INTERFACE MODULES SHALL BE LABELED FOR FUNCTION (E.G., FSD FOR FIRE SMOKE DAMPER AS INDICATED ON THE DETAIL ABOVE).
- SHOP DRAWINGS SHALL INCLUDE SPEAKER WATTAGE TAPS AND VISUAL NOTIFICATION APPLIANCE CANDLEA RATINGS.

2 FIRE ALARM SHOP DRAWING CONTENT REQUIREMENTS (NTS)

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FIRE ALARM DETAILS

FA7.01

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OCCUPANT SIGNALING SEQUENCE OF OPERATIONS

1. PARTIAL EVACUATION OCCUPANT SIGNALING SEQUENCE OF OPERATION:

A. ACTIVATE PRE-ALERT TONE AND GENERAL VOICE INSTRUCTIONS THROUGHOUT BUILDING AREA IN ALARM TOWERS A8 OR TOWER C1. REPEAT ALERT TONE AND GENERAL EVACUATION MESSAGE THREE TIMES.

B. AFTER THREE ROUNDS OF PRE-ALERT TONE AND VOICE MESSAGE ACTIVATE ALARM TOWERS 3 AND VISUAL EVACUATION SIGNALS ON FLOOR OF INCIDENT. FLOOR VOICES SHALL CONTINUE TO ACTIVATE UNTIL SYSTEM IS RESET AT THE MAIN FIRE ALARM CONTROL UNIT IN FIRE COMMAND CENTER.

C. IN THE EVENT A SUBSEQUENT ALARM IS RECEIVED BY A FLOOR THAT WAS PREVIOUSLY OUTSIDE THE ORIGINAL EVACUATION ZONE, THE EVACUATION ZONE SHALL AUTOMATICALLY BE EXPANDED TO INCLUDE THE ORIGINAL EVACUATION ZONE, THE SUBSEQUENT ALARM FLOOR, AND FLOORS ABOVE AND BELOW THE NEW EVACUATION ZONE. ACTUATE THE SEQUENCE OF OPERATION INDICATED IN 1.A ABOVE.

2. TOTAL BUILDING EVACUATION OCCUPANT SIGNALING SEQUENCE OF OPERATIONS:

A. ACTIVATE PRE-ALERT TONE AND GENERAL VOICE INSTRUCTIONS THROUGHOUT BUILDING ASSOCIATED MANUAL PULL STATION ACTIVATION (TOWERS A8 OR TOWER C1). REPEAT ALERT TONE AND GENERAL EVACUATION MESSAGE THREE TIMES.

B. AFTER THREE ROUNDS OF PRE-ALERT TONE AND VOICE MESSAGE ACTIVATE ALARM TOWERS 3 AND VISUAL EVACUATION SIGNALS THROUGHOUT ASSOCIATED BUILDING. SIGNALS SHALL CONTINUE TO ACTIVATE UNTIL SYSTEM IS RESET AT THE MAIN FIRE ALARM CONTROL UNIT IN FIRE COMMAND CENTER.

C. IN THE EVENT A SUBSEQUENT ALARM IS RECEIVED BY A FLOOR THAT WAS PREVIOUSLY OUTSIDE THE ORIGINAL EVACUATION ZONE, THE EVACUATION ZONE SHALL AUTOMATICALLY BE EXPANDED TO INCLUDE THE ORIGINAL EVACUATION ZONE, THE SUBSEQUENT ALARM FLOOR, AND FLOORS ABOVE AND BELOW THE NEW EVACUATION ZONE. ACTUATE THE SEQUENCE OF OPERATION INDICATED IN 2.A ABOVE.

3. PRE-RECORDED MESSAGES: THE FOLLOWING VERBALE (OR SIMILAR) SHALL BE PROVIDED:

A. GENERAL VOICE INSTRUCTIONS (PARTIAL EVACUATION): ATTENTION PLEASE. THE SIGNAL TONE YOU HAVE JUST HEARD INDICATES THE REPORT OF AN EMERGENCY IN THIS BUILDING. IF YOUR FLOOR EVACUATION SIGNALS SOUND AFTER THIS MESSAGE, TAKE THE TONE TO THE NEAREST STAIRWAY AND LEAVE THE FLOOR. WHILE THE NEXT THREE ROUNDS OF PRE-ALERT TONE AND VOICE MESSAGE SOUND, OTHER FLOORS SHOULD BE EVACUATING.

B. GENERAL VOICE INSTRUCTION (TOTAL EVACUATION): ATTENTION PLEASE. THE SIGNAL TONE YOU HAVE JUST HEARD INDICATES THE REPORT OF AN EMERGENCY IN THIS BUILDING WALK TO THE NEAREST STAIRWAY AND LEAVE THE FLOOR AND LEAVE THE BUILDING.

C. VISUAL CLEAR/ALARM CLEAR: THE BUILDING EMERGENCY CONDITION HAS BEEN CLEARED. YOU MAY RETURN TO YOUR NORMAL ACTIVITIES.

D. TEST AT EXTENSION PLACE: THE FIRE ALARM SYSTEM WILL BE INSPECTED AND TESTED TODAY BY THE FIRE ALARM VERIFIER. PLEASE DISREGARD ALL AUDIBLE AND VISUAL SIGNALS YOU MAY HEAR OR SEE UNTIL FURTHER NOTICE.

E. TEST ALL CLEAR: ATTENTION PLEASE. THE FIRE ALARM TESTING HAS BEEN COMPLETED FOR THE DAY.

A. WAF FILES UTILIZED FOR PRE-ALARM TONE AND ALARM TONE SIGNALS SHALL BE SQUARE WAVE AND EQUIVALENT EQUIVALENT ANNUNCIATING ALIQUITY WITH A FUNDAMENTAL FREQUENCY OF 200HZ +/- 10 PERCENT IN ACCORDANCE WITH NFPA 72 SECTION 16.4.3.3

5. LEVEL P1 AND LEVEL 1 OF TOWER C TO BE TREATED AS A SINGLE EVACUATION SIGNALING ZONE.

6. LEVEL P1 AND LEVEL 1 OF TOWER B TO BE TREATED AS A SINGLE EVACUATION SIGNALING ZONE.

SYSTEM INPUTS

SYSTEM INPUTS			SYSTEM OUTPUTS																		
			FACU & FA			REMOTE SIGNAL TRANSMISSION			STAR PRESSURIZATION SYSTEM			SMOKE CONTROL PANEL ANNUNCIATION									
SMOKE CONTROL EQUIPMENT	EXHIBIT	DESCRIPTION	ACTIVATE COMMON ALARM SIGNAL INDICATOR & AUDIBLE ALARM SIGNAL			ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR & AUDIBLE SUPERVISORY SIGNAL			DISPLAY LED CHANGE OF STATUS & PRINT EVENT			TRANSMIT ALARM SIGNAL TO SUPERISING STATION VIA CELLULAR COMMUNICATOR			TRANSMIT SUPERVISORY SIGNAL TO SUPERISING STATION VIA CELLULAR COMMUNICATOR			NOT USED			
			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
SWITCH KEY INTERFACE	1	ACTIVATION SIGNAL FROM FACU	●					●												1	
	2	DUCT MOUNTED SMOKE DETECTOR - STAR PRESSURIZATION FAN	●					●												2	
	3	KEY SWITCH OVERRIDE ENGAGED		●																3	
	4	SOP HOA CONTROL SET TO AUTO			●															4	
	5	SOP HOA CONTROL SET TO ON				●														5	
	6	SOP HOA CONTROL SET TO OFF					●													6	
	7	LAMP TEST BUTTON PUSHED						●												7	
	8	HORN SILENCE BUTTON PUSHED							●											8	
	9	STAR PRESSURIZATION FAN OUTSIDE AIR DAMPER "OPEN" STATUS NOT ACHIEVED WITHIN 75 SECONDS OF INITIATION SIGNAL				●														9	
	10	SMOKE PRESSURIZATION FAN "ON" STATUS NOT ACHIEVED WITHIN 60 SECONDS OF INITIATION SIGNAL				●														10	
	11	FAN FLOW PROVING CURRENT SENSOR ACTIVATED																		11	
	12	FAN FLOW PROVING CURRENT SENSOR DEACTIVATED												●						12	
	13	STAR PRESSURIZATION FAN POWER FAILURE (LOCAL FAN DISCONNECT IN OFF POSITION			●											●				13	
	14	STAR PRESSURIZATION FAN OUTSIDE AIR DAMPER END SWITCH IN OPEN POSITION														●				14	
	15	STAR PRESSURIZATION FAN OUTSIDE AIR DAMPER END SWITCH IN CLOSED POSITION															●			15	
	16	NOT USED																		16	

SOMMET BLANC
STAIR PRESSURIZATION INPUT/OUTPUT
MATRIX

STAIRWELL PRESSURIZATION SEQUENCE OF OPERATION

FOR EACH ALARM CONDITION NOTED IN THE FIRE ALARM INPUT/OUTPUT MATRIX AS HAVING A STAIRWELL PRESSURIZATION INITIATION FUNCTION, THE FIRE ALARM SYSTEM SHALL INITIATE THE FOLLOWING SEQUENCE OF OPERATION WITHIN 10 SECONDS OF ALARM INITIATION:

- OUTSIDE AIR DAMPERS AT FANS OPEN ON BUILDING AIR INFLATE (TOWERS AB OR TOWER C).
1. NORMAL OPERATION: (POWER SWITCH) MAKE WHEN IT'S SECONDS OF OPEN SIGNAL TRANSMISSION FROM THE FIRE ALARM SYSTEM GREEN INDICATOR LIGHT ASSOCIATED WITH THE FAN SHALL BE ILLUMINATED ON THE FIRE FIGHTER'S SMOKE CONTROL PANEL.
2. FAULT: IF DAMPER (POWER) SWITCH DOES NOT WORK WITHIN IT'S SECONDS OF SIGNAL TRANSMISSION FROM THE FIRE ALARM SYSTEM THE YELLOW INDICATOR LIGHT ASSOCIATED WITH THE FAN SHALL BE ILLUMINATED ON THE FIRE FIGHTER'S SMOKE CONTROL PANEL. THE FIRE ALARM SYSTEM WILL PROVIDE THE CHANGE IN STATUS OF THE DAMPER TO THE FIRE ALARM CONTROL UNIT SHALL ACTIVATE AND A SUPERVISORY SIGNAL SHALL BE TRANSMITTED TO THE SUPERVISING STATION.
- ONCE OUTSIDE AIR DAMPERS AT FANS MAKE THE ASSOCIATED FAN STARTS:
1. NORMAL OPERATION: (POWER SWITCH) MAKE WHEN IT'S SECONDS OF OPEN SIGNAL TRANSMISSION FROM THE FIRE ALARM SYSTEM GREEN INDICATOR LIGHT ASSOCIATED WITH THE FAN SHALL BE ILLUMINATED ON THE FIRE FIGHTER'S SMOKE CONTROL PANEL.
2. FAULT: IF DAMPER (POWER) SWITCH DOES NOT WORK WITHIN IT'S SECONDS OF SIGNAL TRANSMISSION FROM THE FIRE ALARM SYSTEM THE YELLOW INDICATOR LIGHT ASSOCIATED WITH THE FAN SHALL BE ILLUMINATED ON THE FIRE FIGHTER'S SMOKE CONTROL PANEL. THE FIRE ALARM SYSTEM WILL PROVIDE THE CHANGE IN STATUS OF THE DAMPER TO THE FIRE ALARM CONTROL UNIT SHALL ACTIVATE AND A SUPERVISORY SIGNAL SHALL BE TRANSMITTED TO THE SUPERVISING STATION.
3. THE FANS AND DAMPERS SHALL STOP ON AND OPEN UNTIL MANUALLY RESET AT THE FIRE FIGHTER'S SMOKE CONTROL PANEL.

SMOKE CONTROL AUTOMATIC WEEKLY SELF-TEST

1. WEEKLY SELF-TEST TO BE BYPASSED IN ACCORDANCE WITH EXCEPTION TO 2018 UTAH BUILDING CODE SECTION 908.12.1. PRESENCE OF POWER DOWNSTREAM OF ALL DISCONNECTS IS CONSTANTLY MONITORED BY THE FIRE ALARM SYSTEM AND TESTING OF ALL COMPONENTS BYPASSED FROM THE PRE-PROGRAMMED WEEKLY SELF-TEST WILL BE TESTED BY OWNER IN ACCORDANCE WITH SECTION 908.20.6 OF THE INTERNATIONAL FIRE CODE.

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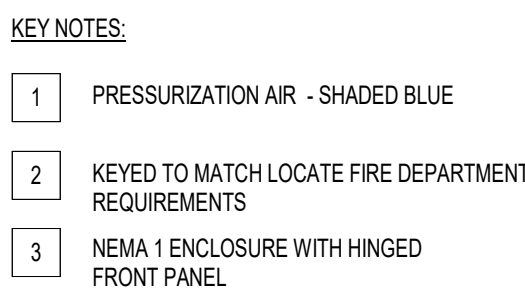
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