

		CONTROL UNIT	ANNUNCIATION	NOTIFICATION	EMERGENCY FLUCTION
		ACTIVATE COMMON ALARM SIGNAL INDICATOR			
		ACTIVATE AUDIBLE ALARM SIGNAL			
		ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR			
		ACTIVATE COMMON SUPERVISORY SIGNAL			
		ACTIVATE COMMON TROUBLE SIGNAL INDICATOR			
		ACTIVATE AUDIBLE COMMON TROUBLE SIGNAL			
		DISPLAY/PRINT CHANGE OF STATUS			
		ACTIVATE EVACUATION SIGNALS			
		TRANSMIT FIRE ALARM SIGNAL TO SUPERVISING STATION			
		TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION			
		TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION			
		RECALL ELEVATORS TO PRIMARY RECALL FLOOR			
		ELEVATOR DISCONNECT SWITCH			
		CLOSE SMOKE/FIRE DAMPERS			
		INITIAL SHUT - DOWN			
		UNLOCK STAIRWELL ENTRANCE			
DUCT SMOKE DETECTOR	1	X			
SMOKE DETECTOR	2	X	X		
SMOKE DETECTOR (HOSTWAY, MACHINE ROOM, LOBBY)	3	X	X		
MANUAL FIRE ALARM PULL STATION	4	X	X		
HEAT DETECTOR (HOSTWAY, AND MACHINE ROOM)	5	X	X	X	
ALARM CHECK VALVE PRESSURE SWITCH	6	X	X		
SPRINKLER CONTROL VALVE TAMPER SWITCH	7		X		
FIRE ALARM AC POWER FAILURE	8			X	
FIRE ALARM SYSTEM LOW BATTERY	9		X	X	
OPEN CIRCUIT	10		X	X	
GROUND FAULT	11		X	X	
NOTIFICATION APPLUANCE CIRCUIT FAULT	12		X	X	

[illegible]

Diagram illustrating the installation of a fire alarm cable (FP200) through a wall and ceiling, showing the cable path and components:

- FROM OTHER FIRE ALARM DEVICE
- TO NEXT FIRE ALARM DEVICE
- FIRE RESISTANT FP200 CABLE INSIDE 20mm PVC CONDUIT
- OCTAGONAL BOX
- DROP CEILING
- 20mm PVC FEMALE ADAPTOR WITH MALE BUSHING (TYP.)
- MANUAL PULL STATION
- SINGLE GANG RING
- SQUARE BOX
- FP200 CABLE INSIDE 20mm PVC IN DRY WALL
- F.F.L.

GENERAL NOTES

1. THIS DRAWING IS ISSUED FOR PERMIT AND IS INTENDED TO DESCRIBE THE GENERAL DESIGN INTENT BY WHICH THE FIRE ALARM PANEL CAN CORRECTLY PLAN THE SYSTEM(S). SOME PARTS OF THE SYSTEM MAY NOT BE DEPICTED, AND ADDITIONAL DEVICES MAY BE REQUIRED. REFER TO SPECIFICATION SECTION 28.3111 FOR COMPLETE PERFORMANCE REQUIREMENTS.
2. DUCT SMOKE DETECTORS ARE TO BE INSTALLED IN SUPPLY AND RETURN AIR SYSTEMS WITH A CAPACITY GREATER THAN 2000 CFM, PER IAC AND NFPA 90A. SEE HVAC CONTROLS DRAWING(S) FOR RELATED INFORMATION.
3. LOCATION OF PULL STATION SUBJECT TO APPROVAL OF AHJ

CODE REQUIREMENTS:	CODE SECTION:	
USE & OCCUPANCY CLASSIFICATION	GROUP R ST. STORAGE	IBC 309
TYPE OF CONSTRUCTION:	V-B, SPRINKLERED	IBC 602.5
PROPOSED HEIGHT:	REFER TO ARCHITECT	
NUMBER OF STORIES:	FIVE(5)	
PROPOSED TOTAL SQUARE FOOTAGE:	REFER TO ARCHITECT	
FIRE SPRINKLER REQUIRED:	YES	IBC 903
FIRE SPRINKLER PROVIDED:	YES	

CODE REQUIREMENTS:	CODE SECTION:	
USE & OCCUPANCY CLASSIFICATION	GROUP R ST. STORAGE	IBC 309
TYPE OF CONSTRUCTION:	V-B, SPRINKLERED	IBC 602.5
PROPOSED HEIGHT:	REFER TO ARCHITECT	
NUMBER OF STORIES:	FIVE(5)	
PROPOSED TOTAL SQUARE FOOTAGE:	REFER TO ARCHITECT	
FIRE SPRINKLER REQUIRED:	YES	IBC 903
FIRE SPRINKLER PROVIDED:	YES	

Diagram illustrating the installation of an optical type smoke detector. The detector is mounted on a concrete slab. A fire-resistant cable saddle clamp is clipped to the ceiling. An optical type smoke detector is connected to the cable. A fire-resistant FP200 cable is clipped to the ceiling.


Diagram illustrating the assembly components and steps:

- ADDRESS SETTING UNDER RESEALABLE LABEL
- 4" (102 MM) SQUARE BOX, 2-1/8" (54 MM) MINIMUM DEPTH.
- DOUBLE GANG BLANK COVER PLATE AND MOUNTING SCREWS, FOR USE WHEN LED IS NOT REQUIRED TO BE EXTERNALLY VIEWED

The diagram illustrates the installation of an optical type smoke detector within a concrete ceiling slab. A horizontal cross-section of the slab is shown, containing two parallel 25mm PVC conduits. One conduit is labeled '25mm PVC CONDUIT BUSHING' and the other is labeled '25mm PVC CONDUIT EMBEDDED IN CEILING SLAB'. An 'OPTICAL TYPE SMOKE DETECTOR' is shown mounted on the bottom of the embedded conduit. The detector is connected to the other conduit, which is labeled 'BACK BOX EMBEDDED IN CEILING SLAB'. The entire assembly is embedded within the concrete slab, which is shown with a textured surface and small circles representing aggregate.

SYMBOLS		FIRE ALARM NOTES	
SYMBOL	DESCRIPTION		
	FIRE ALARM CONTROL PANEL	<p>A. A FIRE ALARM CONTROL UNIT (FACP) SHALL BE PROVIDED TO MONITOR ALL FIRE SPRINKLER SYSTEM RELATED FIRE PUMP SUPERVISORY SIGNALS, WATER FLOW AND VALVE TAMPER SWITCHES, MANUAL PULL STATIONS, SMOKE DETECTORS, HEAT DETECTORS, AND AUTOMATIC SUPPRESSION SYSTEMS. THE NEW SYSTEM SHALL BE A FULLY FIELD PROGRAMMABLE MICROPROCESSOR BASED SYSTEM CAPABLE OF TWO-WAY COMMUNICATION OVER SIGNALING LINE CIRCUITS BETWEEN ADDRESSABLE INTERFACING/CONTROL MODULES AND THE FACP.</p> <p>B. ALL PANELS AND PERIPHERAL DEVICES SHALL BE THE STANDARD PRODUCT OF A SINGLE MANUFACTURER AND SHALL DISPLAY THE MANUFACTURER'S NAME ON EACH COMPONENT-EQUIPMENT AND COMPONENTS SHALL BEAR THE UL OR FM LABEL OR MARKING, AND ALL MATERIALS SHALL BE NEW AND IN GOOD CONDITION, FREE OF DEFECTS, SCRATCHES, CORROSION AND CONTAMINATION. USED EQUIPMENT SHALL NOT BE ALLOWED.</p> <p>C. THE FACP PRIMARY POWER SUPPLY SHALL BE PROTECTED BY A SEPARATE UL-LISTED FAST ACTING ELECTRICAL TRANSIENT SURGE SUPPRESSOR THAT INCORPORATES LOW Z EARTH GROUNDING. THE DEVICE SHALL MEET THE REQUIREMENTS OF U.L. 1449.</p> <p>D. ALL LOW VOLTAGE CIRCUITS LEADING FROM THE FACP, INCLUDING INITIATING AND NOTIFICATION CIRCUITS, AS WELL AS TELEPHONE LINES, SHALL BE PROTECTED BY A SEPARATE U.L. LISTED FAST-ACTING ELECTRICAL TRANSIENT SURGE SUPPRESSOR WHICH INCORPORATES LOW Z EARTH GROUNDING. THE DEVICE SHALL MEET THE REQUIREMENTS OF U.L. 497B.</p> <p>E. SELECTION OF CABLE TYPES AND WIRE WITH RESPECT TO CONDUCTOR SIZE, SHIELDING REQUIREMENTS, AND SEPARATION BETWEEN CIRCUITS SHALL BE IN FULL COMPLIANCE WITH THE REQUIREMENTS OF THE MANUFACTURER OF THE FACP. WITHOUT EXCEPTION, ALL CIRCUIT WIRE/CABLE SHALL BE SPECIFICALLY LISTED FOR USE WITH FIRE ALARM SYSTEMS.</p> <p>F. THE FACP SHALL BE DESIGNED FOR FUTURE EXPANSION AND MODIFICATION. IN NO CASE SHALL CIRCUIT AND/OR MODULE LOADING EXCEED EIGHTY (80) PERCENT OF THE DESIGN CAPACITY AS SPECIFIED BY THE MANUFACTURER.</p> <p>G. THE DESIGN, EQUIPMENT, MATERIALS, INSTALLATION, AND WORKMANSHIP SHALL BE IN STRICT ACCORDANCE WITH THE REQUIRED AND ADVISORY PROVISIONS OF NFPA 70 (2014 EDITION), ABA/ADA AND WITH ALL OTHER REQUIREMENTS IDENTIFIED IN THE SPECIFICATIONS. THE ADVISORY PROVISIONS (APPENDICES) OF THE NFPA PUBLICATIONS REFERRED TO HEREIN SHALL BE CONSIDERED TO BE MANDATORY. AS THOUGH THE WORD "SHALL" HAD BEEN SUBSTITUTED FOR "SHOULD" WHEREVER IT APPEARS. IF THERE ARE ANY CONFLICTS BETWEEN THESE SPECIFICATIONS AND THE REFERENCED STANDARDS AND PUBLICATIONS, THE MOST STRINGENT REQUIREMENT SHALL APPLY.</p>	
	SUB-FIRE ALARM CONTROL UNIT		
	PRE-ACTION CONTROL PANEL		
	REMOTE LED ANNUNCIATOR		
	FIRE PUMP CONTROLLER		
	FIRE ALARM TERMINAL CABINET		
	NOTIFICATION APPLIANCE EXTENDER PANEL		
	REMOTE FIRE ALARM POWER SUPPLY		
	FIRE ALARM ANNUNCIATOR		
	PRINTER		
	SURGE SUPPRESSOR	<p>H. THE FIRE ALARM SUB-CONTRACTOR (CONTRACTOR) SHALL BE RESPONSIBLE FOR OBTAINING, AND PAYING FOR, ANY AND ALL PERMITS REQUIRED PRIOR TO BEGINNING WORK AT THE DIRECTION OF THE GENERAL CONTRACTOR.</p> <p>I. THE CONTRACTOR SHALL PROVIDE, AS PART OF THE INSTALLED COST OF THIS FIRE ALARM SYSTEM, A WARRANTY AND SERVICE AGREEMENT TO COVER THE INSTALLATION OF THE COMPLETE SYSTEM FOR A PERIOD OF AT LEAST ONE YEAR FOLLOWING FINAL SYSTEM ACCEPTANCE.</p> <p>J. ALL EQUIPMENT SHALL BE INSTALLED IN AN AESTHETIC AND SKILLED MANNER IN ACCORDANCE WITH NFPA CODES AND STANDARDS AND OTHER APPLICABLE STANDARDS REFERENCED IN THE PROJECT SPECIFICATIONS. FINAL APPEARANCE OF ALL SYSTEMS AND EQUIPMENT SHALL BE NEAT AND CLEAN.</p> <p>K. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SYSTEM REQUIREMENTS WITH ALL CONDITIONS OF THE BUILDING AND SITE INCLUDING, BUT NOT LIMITED TO, BLIND SPACES, SHELVING, LIGHTS, GRILLES AND DIFFUSERS, PIPING, DUCT WORK, DOORS, WINDOWS, EQUIPMENT PLATFORMS, WALLS (FIRE-RATED AND NON-FIRE-RATED), BEAMS, JOISTS, COLUMNS, HVAC EQUIPMENT, ELECTRICAL PANELS AND EQUIPMENT, CEILINGS, AREAS WITHOUT CEILINGS, WALL CONSTRUCTION, FLOORS AND ALL CONSTRUCTION, EQUIPMENT AND BUILDING APURTENANCES.</p> <p>L. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING, DOCUMENTING, AND CERTIFYING REQUISITE INSPECTION AND TESTS IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS FOR ALL EQUIPMENT FURNISHED UNDER THIS PROJECT. AFTER COMPLETING HIS TESTING, THE CONTRACTOR SHALL DEMONSTRATE FULL OPERATIONAL CAPABILITY OF THE FIRE ALARM SYSTEM, AS WELL AS FULL COMPLIANCE WITH ALL DESIGN DOCUMENTS, CODES AND STANDARDS, TO THE SATISFACTION OF THE CDO/DPS/FIR/ETC.</p> <p>M. SEE MECHANICAL DRAWINGS, HVAC ZONE MAPS, FOR REFERENCE WHEN PROGRAMMING AND SEQUENCING OF FSD CLOSURES AND HVAC SHUT DOWN.</p> <p>N. THIS DRAWING IS ISSUED FOR REVIEW AND IS INTENDED TO DESCRIBE THE GENERAL DESIGN INTENT BY WHICH THE FIRE ALARM PLANNER CAN CORRECTLY PLAN THE SYSTEM(S). SOME PARTS OF THE SYSTEM MAY NOT BE DEPICTED, AND ADDITIONAL DEVICES MAY BE REQUIRED. REFER TO SPECIFICATION SECTION 28 3100 FOR COMPLETE PERFORMANCE REQUIREMENTS.</p>	
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	ALARM CHECK VALVE PRESSURE SWITCH		
	SPRINKLER WATER FLOW SWITCH		
	SPRINKLER SUPERVISORY SWITCH		
	LIQUID LEVEL INDICATOR SWITCH		
	ELEVATOR RECALL		
	DUCT SMOKE DETECTOR		
	SMOKE DETECTOR		
	SMOKE DETECTOR, WALL MOUNTED		
	BEAM TYPE SMOKE DETECTOR, CEILING MOUNTED (BT = TRANSMITTER, BR = REFLECTOR)	<p>1</p> <p>1</p> <p>SP-1</p> <p>MATCHLINE SEE FA111</p> <p>DRAWING TITLE 1 SCALE: 1/8"=1'-0" SHEET SCALE SHEET DETAIL NUMBER</p> <p>DIRECTION VIEWED DRAWING IDENTIFICATION SHEET IDENTIFICATION 1 FA301</p> <p>DRAWING IDENTIFICATION SHEET IDENTIFICATION 1 FA401</p> <p>1 FA401</p>	
	HEAT DETECTOR		
	MANUAL PULL STATION		
	ADDRESSABLE INPUT MODULE		
	ADDRESSABLE OUTPUT MODULE		
	STROBE, CEILING MOUNTED		
	STROBE, WALL MOUNTED		
	HORN		
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	FIRE SPRINKLER BELL		
	SPEAKER ONLY		
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GENERAL SYMBOLS		SYMBOL	DESCRIPTION
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GENERAL SYMBOLS		SYMBOL	DESCRIPTION
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			EQUIPMENT TAG
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<h1>ABBREVIATIONS</h1>		 <h2>AMERICAN Consulting Engineers</h2> <p>8615 Gravois Rd, St Louis, MO 63123 Website: www.ace-inc.us Email: info @ ace-inc.us Phone: (314) 899 0599</p> <hr/> <p>Engineer of Record</p> <hr/>	
ABBREV.	DESCRIPTION	<hr/> <hr/> <p>DONG P. HUYNH, PE MO LICENSE # : 2019017835</p> <hr/> <p>(R) Copyright 2024 American Consulting Engineers</p> <p>Drawings and Specifications as instruments of service are and shall remain the property of the Engineer. They are not to be used on other projects or extensions to this project except by agreement in writing with appropriate compensation to the Engineer.</p> <p>Contractor is responsible for construction means methods and techniques, sequences or procedures or for safety precautions and programs in connection with the project.</p> <hr/>	
AFF	ABOVE FINISHED FLOOR	<h2>BUSINESS RENOVATON (ADULT DAYCAFE FACILITY)</h2> <p>1105 OLIVE ST, ST. LOUIS, MO 63101</p> <h2>FIRE ALARM NOTES AND DETAILS</h2> <hr/> <p>FINISH ON: 111524</p> <p>FIRST REVISION ON:</p> <p>SECOND REVISION ON:</p> <hr/> <p>Project #: 11247979</p> <hr/> <p>Drawings are for building permit applications only. Not for construction until a permit issued</p> <hr/> <p>SHEET NUMBER:</p> <h1>FA1.0</h1> <p>PERMIT DRAWING</p>	
AHJ	AUTHORITY HAVING JURISDICTION		
AHU	AIR HANDLER UNIT SHUTDOWN		
AIM	ADDRESSABLE INPUT MODULE		
ALT	ELEVATOR RECALL, ALTERNATE		
AOM	ADDRESSABLE OUTPUT MODULE		
AS	AUTOMATIC SPRINKLER		
BOB	BOTTOM OF BEAM		
BOD	BOTTOM OF DECK		
BOP	BOTTOM OF PIPE		
BOR	BOTTOM OF RISER		
BV	BUTTERFLY VALVE		
C	CENTERLINE		
CAC	COMPOUND ACCESS CONTROL FACILITIES		
CV	CHECK VALVE		
DOCV	DOUBLE DETECTOR CHECK VALVE ASSEMBLY		
DIP	DUCTILE IRON PIPE		
DN	DROP NIPPLE		
(E)	EXISTING		
EC	EXTENDED COVERAGE		
EL	ELEVATION		
F	FAHRENHEIT		
FAA	FIRE ALARM ANNUNCIATOR		
FACP	FIRE ALARM CONTROL PANEL		
FDC	FIRE DEPARTMENT CONNECTION		
FF	FINISHED FLOOR		
FFL	FLOOR FLANGE		
FHC	FIRE HOSE CABINET		
FHS	FIRE HOSE STATION		
FLT	FIRE PUMP FAULT		
FS	FLOW SWITCH		
FSD	FIRE SMOKE DAMPER		
FT	FEET		
G	GRADE		
GPM	GALLONS PER MINUTE		
GSO	SUPPORT ANNEX		
GV	GATE VALVE		
H	HANGER		
HDPE	HIGH DENSITY POLYETHYLENE		
HSW	HORIZONTAL SIDE WALL		
HV	HOSE VALVE		
ID	INSIDE DIAMETER		
IN	INCHES		
IE	INVERT ELEVATION		
KH	KITCHEN HOOD INTERFACE		
LOW	FIRE PUMP LOW FUEL		
MAX	MAXIMUM		
MIN	MINIMUM		
(N)	NEW		
NAC	NOTIFICATION APPLIANCE CIRCUIT		
NIC	NOT IN CONTRACT		
NO	NUMBER		
NTS	NOT TO SCALE		
OBJ	OPEN BAR JOIST		
OD	OUTSIDE DIAMETER		
OS&Y	OUTSIDE SCREW & YOKE		
PIV	POST INDICATOR VALVE		
PRI	ELEVATOR RECALL, PRIMARY		
PRV	PRESSURE RELEASE VALVE		
PS	PRESSURE SWITCH		
(R)	REMOVE		
(RL)	RELOCATE		
RN	RISER NIPPLE		
RM	ROOF MANIFOLD		
RUN	FIRE PUMP RUNNING		
S	SOUNDER BASE		
SLC	SIGNALING LINE CIRCUIT		
ST	ELEVATOR, SHUNT TRIP		
STS	ELEVATOR, SHUNT TRIP SUPERVISION		
TMP	LOW SPACE TEMP		
TNK	WATER TANK LEVEL		
UT	UTILITY BUILDING		
VTL	VALVE TAMPER SWITCH		
WHS	WAREHOUSE		
WP	WEATHERPROOF		

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Engineer of Record

DONG P. HUYNH, PE
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FINISH ON: 111524

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SECOND REVISION ON:

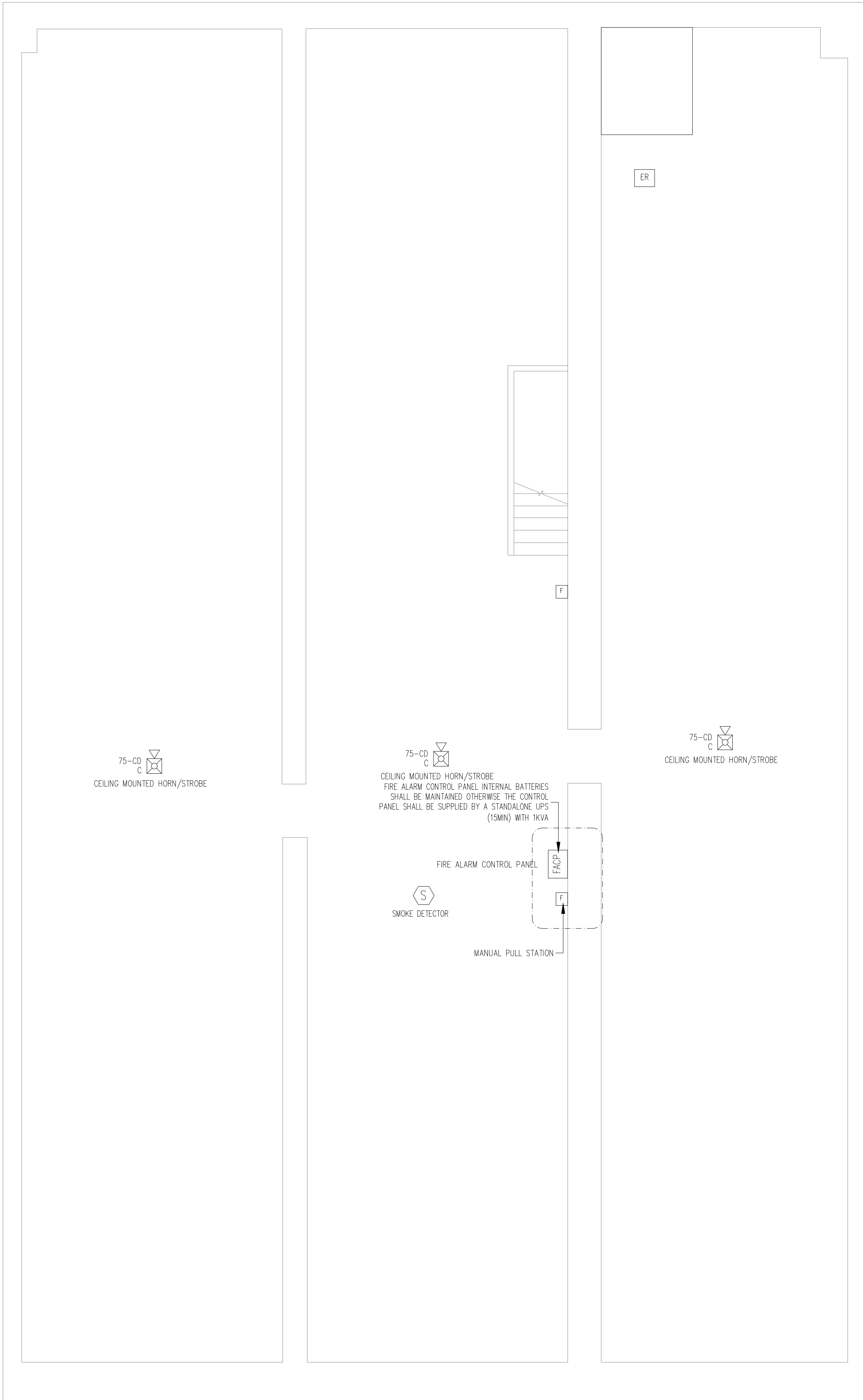
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FA1.0

PERMIT DRAWINGS



1
FA2.0

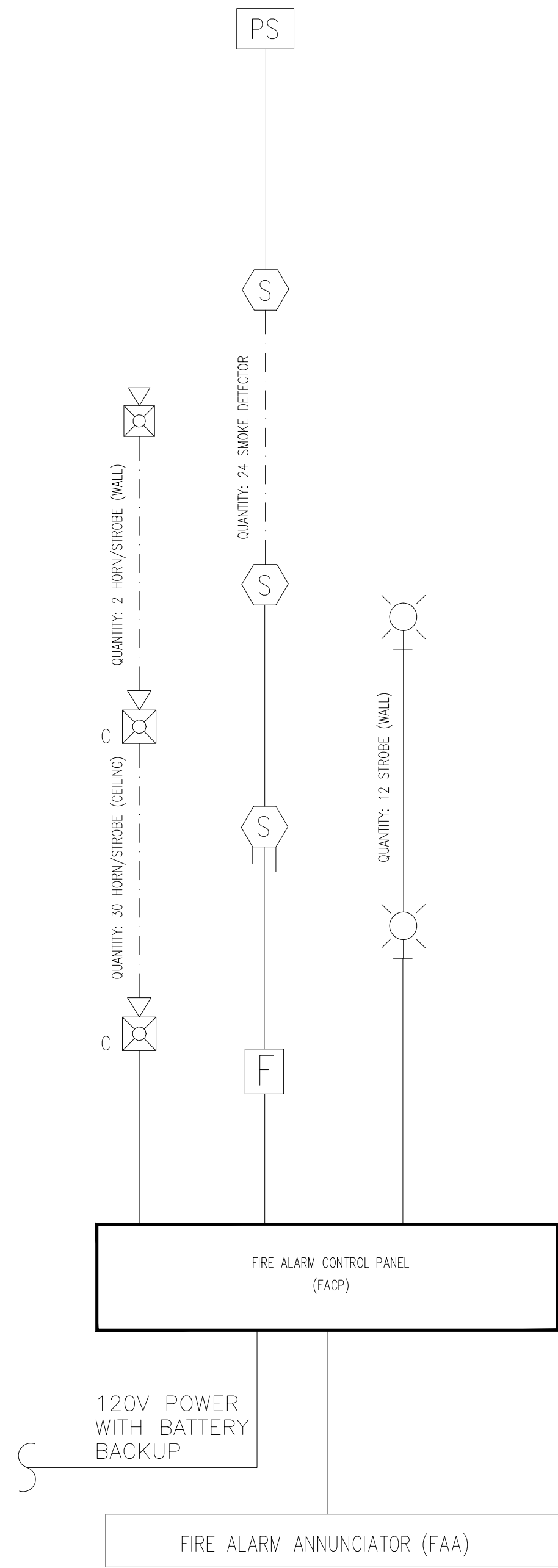
FIRE ALARM BASEMENT PLAN

SCALE: 3/16" = 1'-0"

2
FA2.0

FIRE ALARM RISER DIAGRAM

SCALE: NONE



ALL PANELS, COMPONENTS, DEVICES AND WIRING SHALL COMPLY WITH MANUFACTURER REQUIREMENTS AND INSTALLATION INSTRUCTIONS FOR THE UL LISTED EQUIPMENT TO BE INSTALLED. CONTRACTOR TO PROVIDE BATTERY CALCS

ALL SYSTEMS SHALL BE REVIEWED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION INCLUDING ALL FIRE DISTRICT APPROVALS & STATE FIRE MARSHAL REQUIREMENTS.



AMERICAN Consulting Engineers

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Engineer of Record

DONG P. HUYNH, PE
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BUSINESS RENOVATON (ADULT DAYCAFE FACILITY)

1105 OLIVE ST,
ST. LOUIS, MO 63101

FIRE ALARM BASEMENT PLAN

FINISH ON: 111524

FIRST REVISION ON:

SECOND REVISION ON:

Project #: 11247979

Drawings are for building permit applications only. Not for construction until a permit issued

SHEET NUMBER:

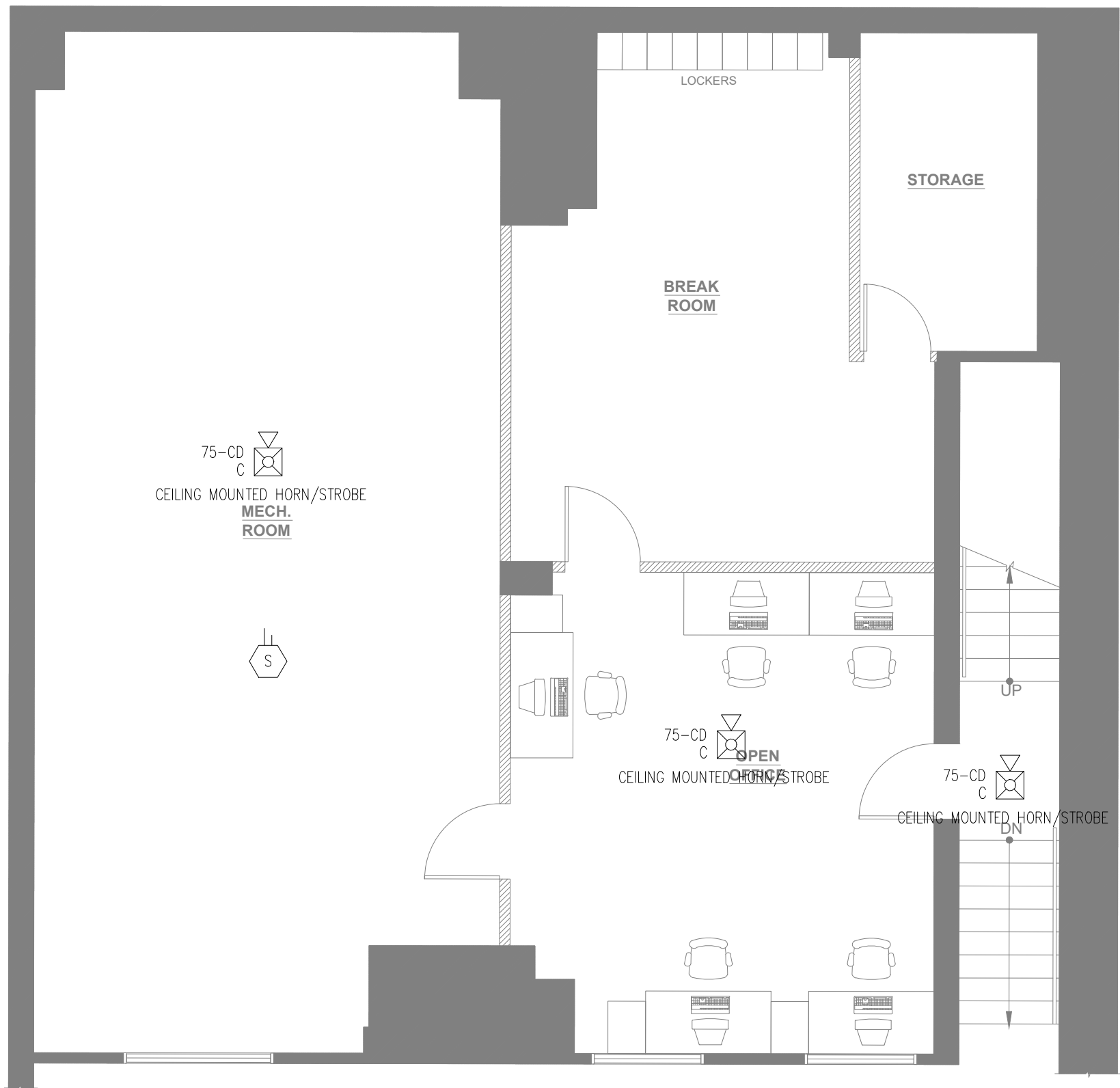
FA2.0

PERMIT DRAWINGS

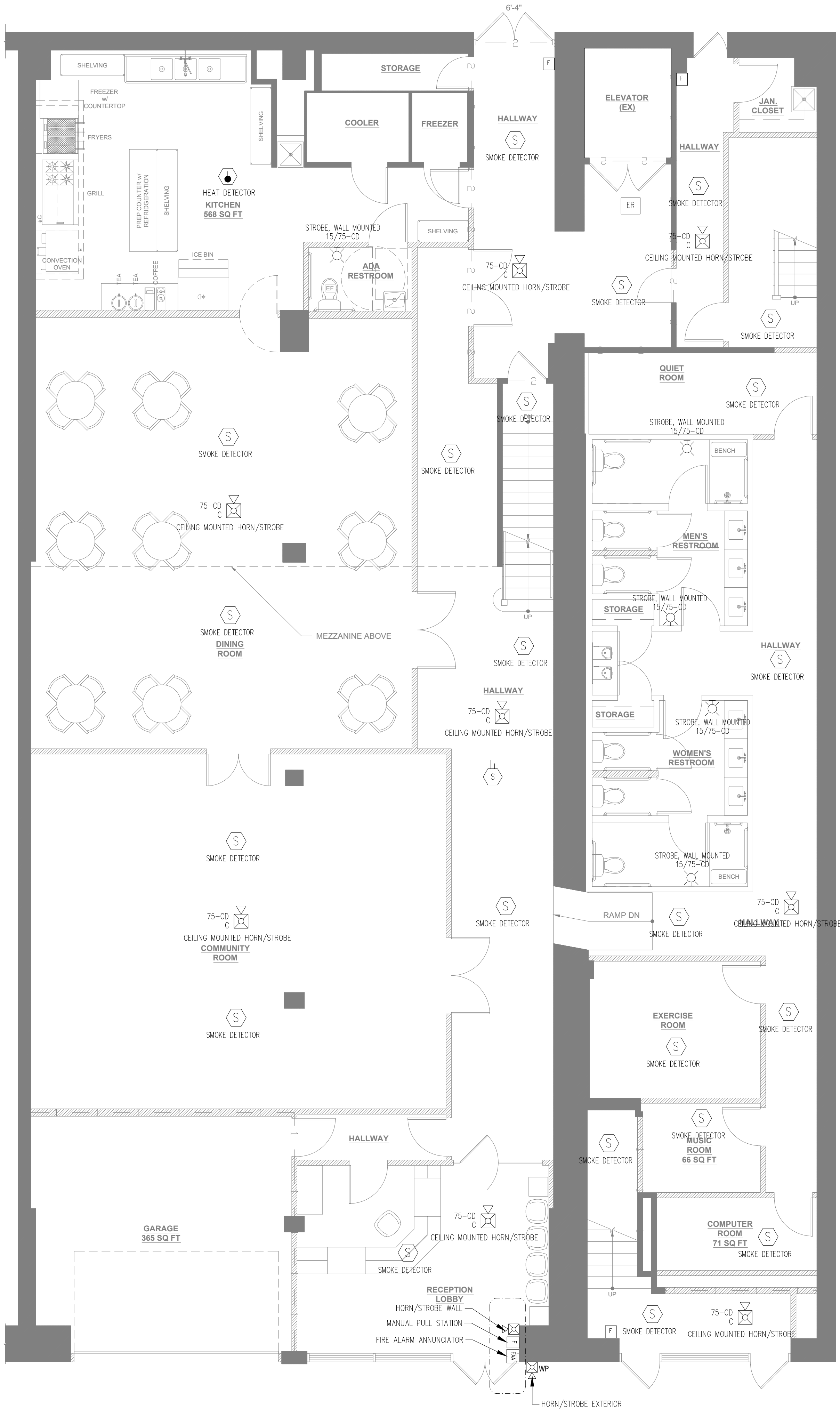
NOTES:

SCOPE OF WORK:

1. ONLY DESIGN FROM BASEMENT TO SECOND FLOOR, THE UPPER FLOORS ARE NOT TO BE FINISHED AT THIS TIME, HOWEVER, HORN STROBES WILL BE PROVIDED.
2. THE UPPER FLOORS WILL ALSO BE PROVIDED WITH ELEVATOR RECALL (ER) IN ELEVATOR LOBBY



1
FA3.0
FIRE ALARM MEZZANINE PLAN
SCALE: 3/16" = 1'-0"



2
FA3.0
FIRE ALARM FIRST FLOOR PLAN
SCALE: 3/16" = 1'-0"



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BUSINESS
RENOVATON
(ADULT DAYCAFE
FACILITY)

1105 OLIVE ST,
ST. LOUIS, MO 63101

FIRE ALARM MEZZANINE
AND FIRST FLOOR PLAN

FINISH ON: 111524

FIRST REVISION ON:

SECOND REVISION ON:

Project #: 11247979

Drawings are for building permit applications only. Not for construction until a permit issued.

SHEET NUMBER:

FA3.0

PERMIT DRAWINGS



1
FA4.0

FIRE ALARM SECOND FLOOR PLAN
SCALE: 3/16" = 1'-0"



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BUSINESS
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(ADULT DAYCAFE
FACILITY)

1105 OLIVE ST,
ST. LOUIS, MO 63101

FIRE ALARM SECOND
AND THIRD FLOOR PLAN

FINISH ON: 111524
FIRST REVISION ON:
SECOND REVISION ON:

Project #: 11247979

Drawings are for building permit applications only. Not for construction until a permit issued

SHEET NUMBER:

FA4.0

PERMIT DRAWINGS