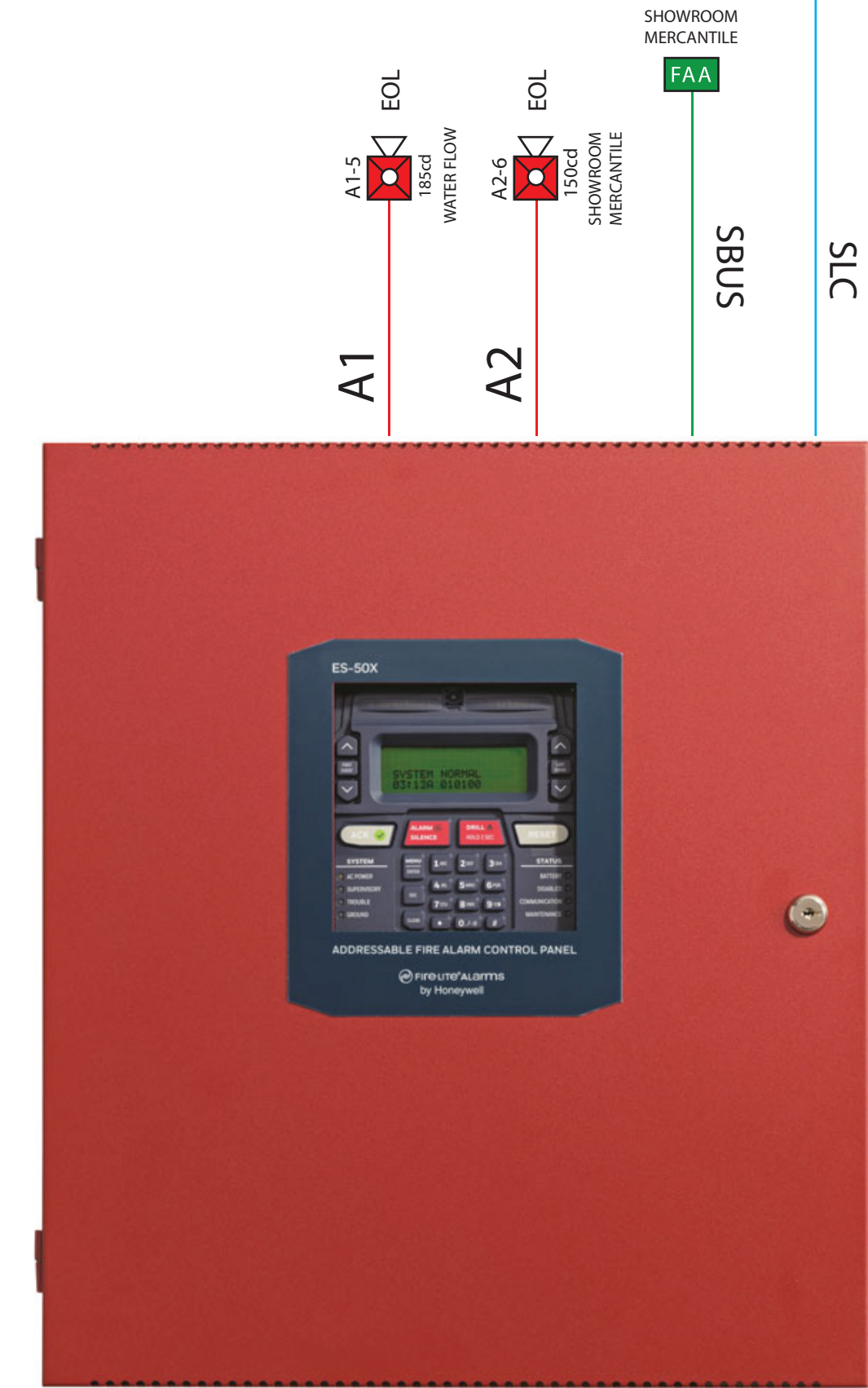


Fire Alarm Symbols NFPA-170 2013	
Item	Description
	Fire Alarm Control Panel
	Fire Alarm Annunciator
	End Of Line Resistor
	Photoelectric Smoke Detector
	Duct Detector (Return)
	Pull Station
	Alarm Horn/Strobe Ceiling Mount
	Alarm Horn/Strobe Wall Mount
	Remote Alarm Indicating And Test Switch
	Flow Detector/switch
	Low Temperature switch
	Addressable Input Monitor Module
	Dual Addressable Input Monitor Module
	Valve Supervisory Switch (tamper)
	Isolation Module
	Relay Module

RISER DIAGRAM



This system designed  
and installed according to  
NFPA 72

BUILDING IS  
100% SPRINKLED

Fire-UTE Alarms by Honeywell									
ES-50X Battery Calculation									
Secondary Power Source Requirements									
Device	Standby Current (amps)				Secondary Alarm Current (amps)				
	Qty	Current Draw	Total		Qty	Current Draw	Total		
Main Circuit Board	1	x 0.141000	= 0.141000		1	x 0.257000	= 0.257000		
IPOTS-COM Communicator	1	x 0.040000	= 0.040000		1	x 0.041000	= 0.04100		
4XTMF	0	x 0.005000	=		0	x 0.011000	=		
EOLR-1	0	x 0.020000	=		0	x 0.020000	=		
CELL-MOD-FL / CELL-CAB	0	x 0.055000	=		0	x 0.100000	=		
ANN-BUS Devices									
ANN-SEC Card	0	x 0.003000	=		0	x 0.003000	=		
ANN-80(-W)	1	x 0.015000	= 0.015000		1	x 0.040000	= 0.040000		
ANN-100	0	x 0.020000	=		0	x 0.025000	=		
ANN-(R)LED	0	x 0.028000	=		0	x 0.068000	=		
ANN-RLY	0	x 0.015000	=		0	x 0.075000	=		
ANN-I/O	0	x 0.035000	=		0	x 0.200000	=		
ANN-I/O LED	0	x 0.000000	=		0	x 0.010000	=		
ANN-S/PG	0	x 0.045000	=		0	x 0.045000	=		
Addressable Devices									
SD355	1	x 0.000300	= 0.000300						
D355PL	1	x 0.000300	= 0.000300						
MMF-300	4	x 0.000400	= 0.001600						
BG-12LX	1	x 0.000230	= 0.000230						
CRF-300	1	x 0.000270	= 0.000270						
I300	1	x 0.000400	= 0.000400						
Output Circuits									
NAC/Output #1		0.000000	=			0.222000	= 0.222000		
NAC/Output #2		0.000000	=			0.217000	= 0.217000		
FCPS (remote Sync)	0	x 0.000000	=		0	x 0.021700	=		
Total Standby Load				0.199100	Total Alarm Load				0.977000

Fire-ute Alarms by Honeywell		ES-50X Battery Calculation				
Calculation in Total Sheet						
		Required Standby Time in Hours				
		24 Hours				
Total Standby Current	0.1991 Amps	x	24	=	4.778 AH	
		Required Alarm Time in Minutes				
		5 Minutes				
Total Alarm Load	0.9770 Amps	x	0.084	=	0.082 AH	
Total Current Load					4.860 AH	
Multiply by the Derating Factor			1.2	=	x 1.20	
Total Ampere Hours Required					5.83 AH	

BUILDING INFORMATION	
ONE STORY METAL BUILDING, MERCHANDISING, AUTO SERVICE (MINOR REPAIR), INCIDENTAL STORAGE AREA.	
GROUND TOTAL	6,262 SF
Chapter 3 - OCCUPANCY CLASSIFICATION (MIXED)	
309.1 Occupancy Group M (Mercantile) - Showroom	
311.2 Occupancy Group S-1 (Moderate Hazard) - Inventory	
311.2 Occupancy Group S-1 (Moderate Hazard) - Service Areas	
Chapter 6 - TYPES OF CONSTRUCTION	
602.5 Type V-B	
Table 601 - Type V-B, Groups M & S-1	

Fire Alarm General Notes

- Wall mounted visual notification devices will be mounted so that the entire lens is not less than 80" and not greater than 96" AFF.
- Wall signal devices can be mounted on 4"x4"x2" with or without mud ring, 4"x4"x1.5" with or without mud ring, or 1-Gang box. Ceiling signal devices can be mounted on 4"x4"x2" box or 3-1/2" octagon box. Strobes shall be synchronized by floor and area.
- All horns and horn strobes will be 15dba above ambient noise.
- Pull stations will be mounted within 5' of the exit on each floor. The operable lever will not be less than 42" and not more than 48" AFF. Pull stations can be mounted on 4"x4"x2" box with or without mud ring, 4"x4"x1.5" with or without mud ring, or 1-Gang box.
- All modules will be mounted in 4"x4"x2" boxes.
- All wiring shall be ran according to code and if not ran in conduit it will be held high above finished ceiling and properly secured and supported.
- All fire alarm wiring below 7 feet will be in conduit.
- All devices will be clearly labeled.
- All open junction boxes related to fire alarm require a RED cover.
- Open ceiling wiring shall be ran in conduit if support is not available.
- Smoke detectors will be mounted no less than 36 inches from any air diffuser.
- General Alarm will sound when any device is in alarm.
- Ceiling mounted detectors Can be mounted on 3-1/2 in. Octagon box, 4"x4"x2" with or without mud ring, 4"x4"x1.5" with or without mud ring, or 1-Gang box.
- RTA and RTS can be mounted on single gang box or low voltage ring. RTS must be mounted no higher than 7 feet above finished floor.
- Air handlers shut down on any smoke indication.
- Duct detectors are programmed as supervisory devices.
- The SLC devices: will be wired together and wired back to the Fire Alarm Control Panel.

Fire Alarm Solutions  
3150 MERCIER SUITE 520  
KANSAS CITY, MO 64111  
816-753-4660

Date:	9/25/2020		
Job:	FIRESTONE		
Drawing:	1.0	Sheet	1 of 2
Scale:			

Description:  
New fire alarm system

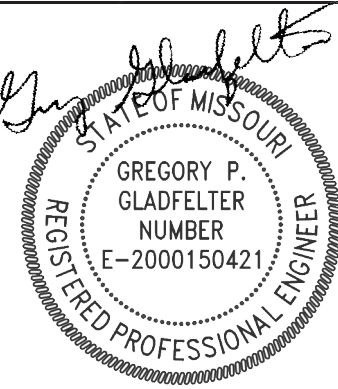
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09/28/2020

FIRE ALARM MATRIX																			
		ACTUATES ALARM CONDITION AT FIRE ALARM CONTROL PANEL																	
		ANNUNCIATES ALARM CONDITION AT REMOTE FIRE ALARM ANNUNCIATOR STATION																	
		TRANSMITS GENERAL ALARM SIGNAL TO APPROVED REMOTE SUPERVISING																	
		ACTUATES SUPERVISORY CONDITION AT FIRE ALARM CONTROL PANEL																	
		ANNUNCIATES SUPERVISORY CONDITION AT REMOTE FIRE ALARM ANNUNCIATOR STATION																	
		TRANSMITS SUPERVISORY SIGNAL TO APPROVED REMOTE SUPERVISING																	
		ACTUATES TROUBLE CONDITION AT FIRE ALARM CONTROL PANEL																	
		ANNUNCIATES TROUBLE CONDITION AT REMOTE FIRE ALARM ANNUNCIATOR STATION																	
		TRANSMITS TROUBLE SIGNAL TO APPROVED REMOTE SUPERVISING																	
		ACTUATES INTERIOR AUDIBLE VISUAL NOTIFICATION APPLIANCES																	
		ACTUATES EXTERIOR NOTIFICATION APPLIANCE																	
		SHUTS DOWN HVAC UNIT																	
FIRE SPRINKLER SYSTEMS																			
- WATERFLOW SWITCHES																			
- CONTROL VALVE TAMPER SWITCHES																			
MANUAL PULL STATION																			
- ADJACENT TO THE FAAN																			
SMOKE DETECTION DEVICES																			
- ABOVE FACP																			
- AIR HANDLING UNIT - RETURN SIDE																			
LOSS OF PRIMARY POWER AT THE FACP																			
ABNORMAL CIRCUIT (OPEN, GROUND FAULT, SHORT) OR DEVICE																			

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FIRE ALARM PLAN  
FRONT PAGE

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