

SYMBOL LEGEND

SYMBOL	DESCRIPTION	REMARKS
	SMOKE DETECTOR, PHOTOELECTRIC ADDRESSABLE.	FRELITE
	SPRINKLER ALARM PULL STATION, MOUNT 42" AFF. ADDRESSABLE.	FRELITE
	FIRE SPRINKLER WATER FLOW SWITCH.	BY SPRINKLER CONTRACTOR.
	FIRE SPRINKLER VALVE SUPERVISORY SWITCH (TAMPER SWITCH).	BY SPRINKLER CONTRACTOR.
	LOW TEMP SENSOR, TEMP SETTING 40F. NORMALLY OPEN ROOM TEMPERATURE.	POTTER: RTS-0
	MONITOR MODULE ADDRESSABLE.	FRELITE
	WEATHER PROOF SPRINKLER ALARM STROBE/HORN, MOUNT 80" AFF. 75 dBA SOUND LEVEL. "XX" INDICATES CANDELA RATING. LISTED FOR OUT AND WET LOCATION.	FRELITE
	SPRINKLER ALARM CONTROL PANEL, SURFACE MOUNTED. ADDRESSABLE.	FRELITE
	SPRINKLER ALARM CELLULAR COMMUNICATOR WITH BATTERY BACKUP. SOLE PATH COMMUNICATION. CELLULAR SURFACE MOUNTED.	STARLINK SLE-TEV-FIRE
A.F.C.	ABOVE FINISHED CEILING	
A.F.F.	ABOVE FINISHED FLOOR - NOTE ALL MOUNTING DIMENSIONS GIVEN ARE TO THE BOTTOM OF THE OUTLET BOX	

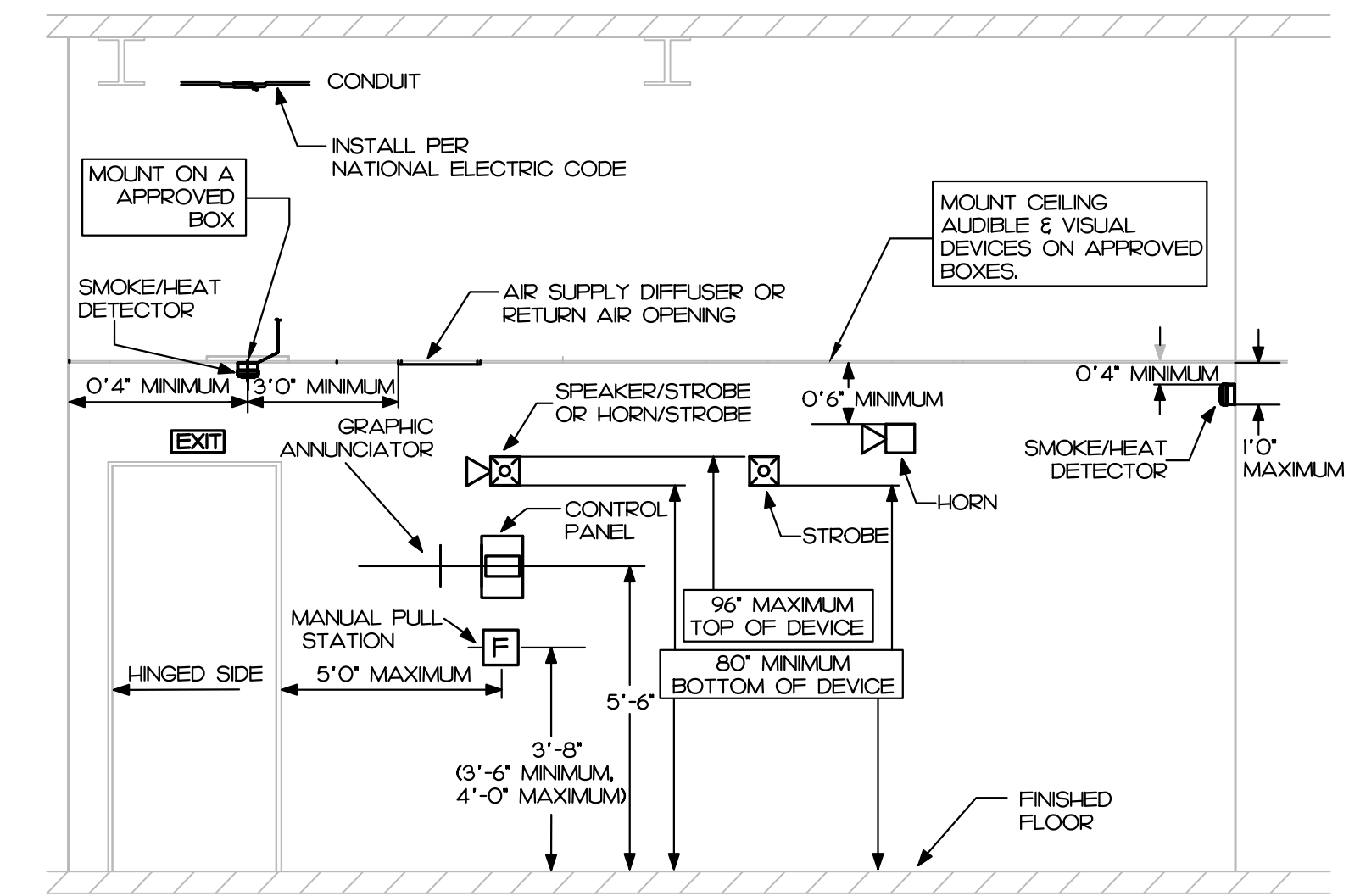
SPRINKLER ALARM NOTES

- SEE PLANS FOR QUANTITY AND LOCATION OF ALL EQUIPMENT.
- CONTRACTOR SHALL PROVIDE COMPLETE DOCUMENT PER 2018 FIRE CODE SECTION 907.11 AND 907.12 TO ENGINEER FOR APPROVAL PRIOR TO SUBMIT TO AND TESTING BY LOCAL FIRE MARSHAL'S OFFICE.
- PLACARD THE ENTIRE SPRINKLER ALARM SYSTEM. PROVIDE PANEL AND CIRCUIT NUMBERS ON A NAME PLATE AFFIXED TO THE FACE OF THE SPRINKLER ALARM CONTROL PANEL.
- CONTRACTOR SHALL PROVIDE ZONE MAPS COMPLETE WITH ADDRESSES FOR EACH SPRINKLER ALARM DEVICE IN WOODEN FRAME ADJACENT TO THE NEW SPRINKLER ALARM CONTROL PANEL.
- ELECTRICAL CONTRACTOR SHALL PROVIDE BATTERY CALCULATIONS AND OUT SHEETS FOR SPRINKLER ALARM SYSTEM TO ENGINEER FOR APPROVAL.
- ALL WIRING SHALL BE SUPERVISED.
- ALL WIRING SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
- ALL WIRING IN WALLS OR FURRED SPACES SHALL BE IN CONDUIT.
- WHERE PERMITTED BY CODE, WIRING ABOVE ACCESSIBLE CEILINGS MAY BE RUN EXPOSED AND THE FOLLOWING REQUIREMENTS SHALL BE MET:
 - WIRING SHALL BE PLENUM RATED WHERE APPLICABLE.
 - PROVIDE BRIDLE RINGS FOR INDEPENDENT SPRINKLER ALARM CABLE SUPPORT UNLESS SPECIFICALLY NOTED OTHERWISE. ANALOG LOOP WIRING INCOMING AND OUTGOING SHALL NOT BE SUPPORTED IN THE SAME BRIDLE RING.
- ADDRESSABLE SLC CIRCUIT REQUIREMENTS:
 - WIRING SHALL BE "CLASS B"
 - MINIMUM CAPACITY OF ANALOG SENSORS PER LOOP SHALL BE 48.
 - MINIMUM CAPACITY OF ADDRESSABLE MONITORING DEVICES PER LOOP SHALL BE 48.
 - MINIMUM CAPACITY OF ADDRESSABLE CONTROL RELAY MODULES PER LOOP SHALL BE 48.
- NOTIFICATION CIRCUIT REQUIREMENTS:
 - WIRING SHALL BE "CLASS B"
 - PROVIDE WITH "SYNC MODULE" AS REQUIRED PER NFPA 72.
 - FURNISH NOTIFICATION CIRCUITS AS REQUIRED TO ACCOMMODATE CIRCUIT LOADING. NO NOTIFICATION CIRCUIT SHALL BE LOADED TO MORE THAN 80% CAPACITY.
- DIGITAL ALARM COMMUNICATOR:
 - WHERE SINGLE COMMUNICATION PATH WITH INTERNET NETWORK IS ACCEPTABLE BY THE LOCAL FIRE MARSHAL, PROVIDE WITH THE COMMUNICATOR IN LIEU OF 2 LINE TELEPHONE IN COMPLIANCE WITH NFPA 72 26.6.3.15.
 - WHERE DUAL COMMUNICATION PATHS OF CELLULAR NETWORK AND INTERNET NETWORK ARE REQUIRED BY THE LOCAL FIRE MARSHAL, PROVIDE WITH COMMUNICATOR IN LIEU OF 2 LINE TELEPHONE.
 - FIELD COORDINATE TYPE MATCH MONITORING COMPANY.
- FOR SPRINKLER SYSTEM:
 - FIELD COORDINATE QUANTITY AND LOCATION OF FLOW AND TAMPER SWITCHES WITH SPRINKLER'S FINAL DRAWINGS AND/OR CIVIL FINAL DRAWING FOR TAMPER SWITCH FOR FIV VALVE.
 - PROVIDE MONITORING MODULES AS REQUIRED FOR SPRINKLER SYSTEM.

Reviewed for Fire Code Compliance

 Leslie Jackson
 11/25/2024 6:54:08 AM

NFPA 72 AND ADA DEVICE INSTALLATION REQUIREMENTS



REVISIONS				

NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 17382
 DAVID J. WHITNEY
 10/25/24

ATLANTEC
 ENGINEERS, PA
 FOR
IMEG
 CONSULTANTS CORP. No. F-1507

PREPARED FOR:
J+D SPRINKLER

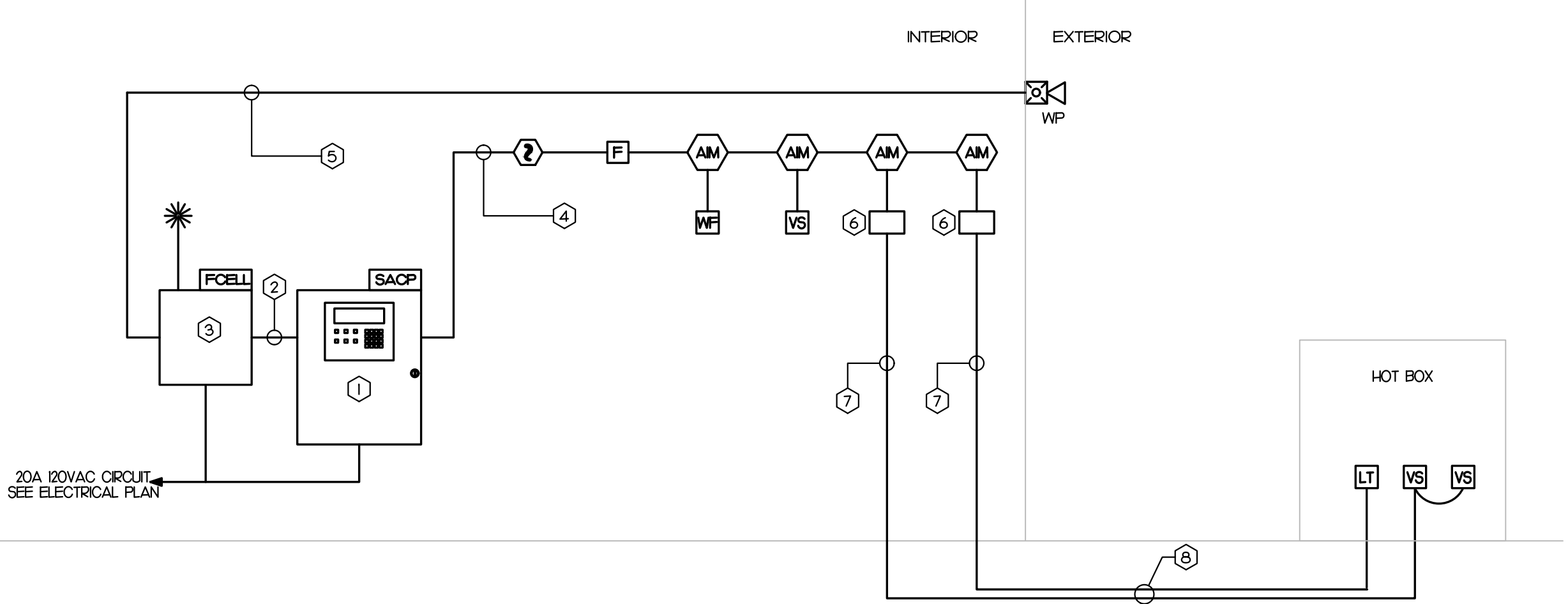
HARBOR FREIGHT SPRINKLER ALARM
 NORTH CAROLINA
 ERWIN

CONTENTS:
SPRINKLER ALARM RISER, NOTES, DETAILS

DATE:
OCTOBER 23, 2024

DESIGNER: **SWM**
 ENGINEER: **DJW**

SHEET NO.
SA-1
 OF 2



- ### KEY NOTES
- ADDRESSABLE FIRE ALARM CONTROL PANEL.
 - 2 LINE TELEPHONE CABLE IN CONDUIT.
 - CELLULAR DIGITAL ALARM COMMUNICATOR. SEE FIRE ALARM NOTE AND LEGEND FOR REQUIREMENTS.
 - ADDRESSABLE CIRCUIT.
 - NOTIFICATION APPLIANCE CIRCUIT.
 - PROVIDE SURGE PROTECTOR AS REQUIRED FOR INITIATING CIRCUIT TO INITIATING DEVICE LOCATED OUTSIDE BUILDING.
 - INITIATING CIRCUIT.
 - WIRING IN UNDERGROUND CONDUIT, MIN. SIZE OF 1/2" MIN. BURIAL DEPTH OF 24" BELOW FINISHED GRADE.

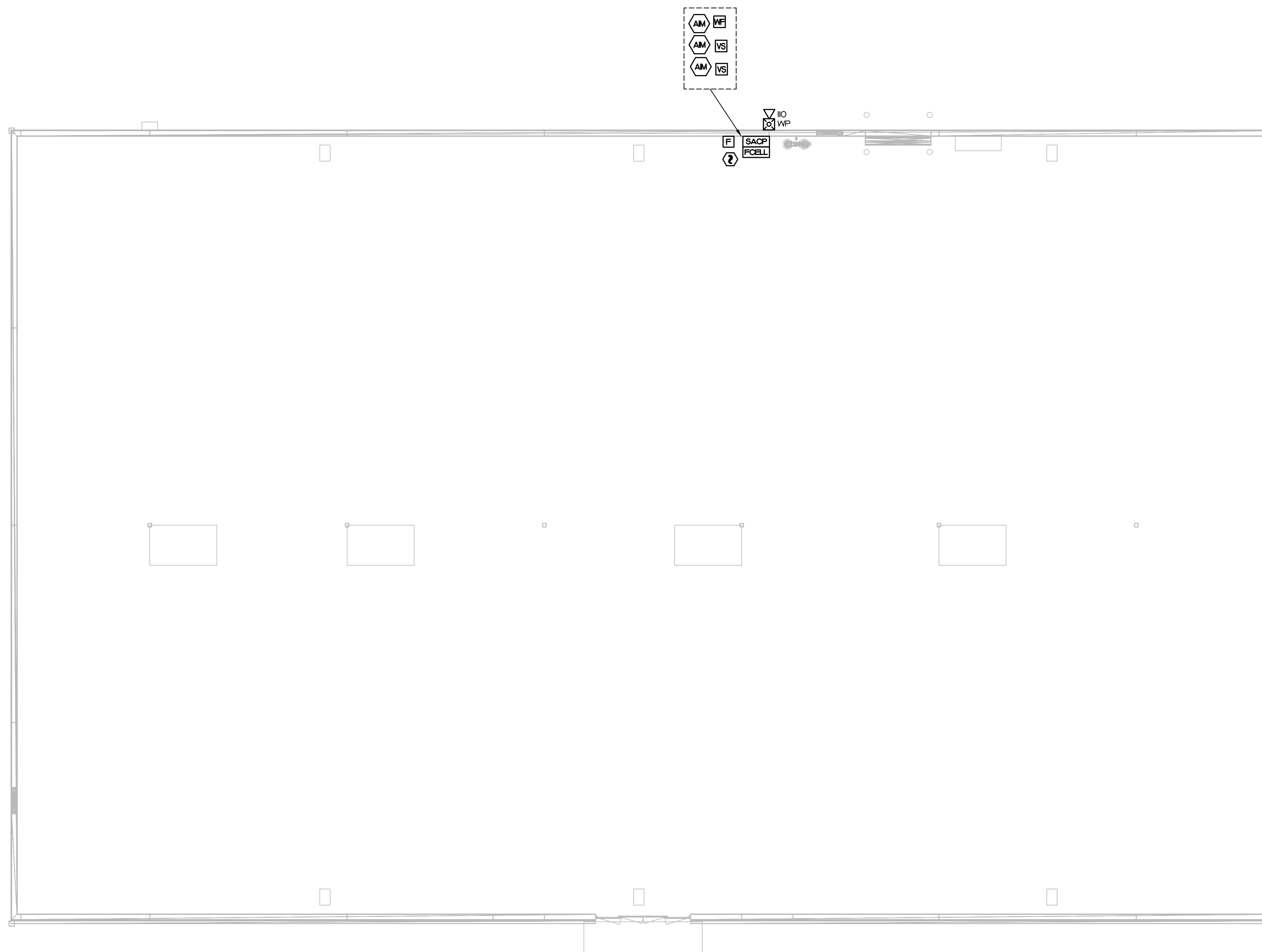
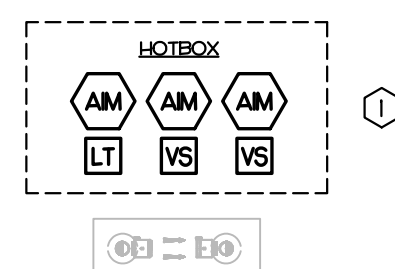
1 SPRINKLER ALARM RISER

NOT TO SCALE

SPRINKLER ALARM SYSTEM INPUT/OUTPUT MATRIX	SYSTEM OUTPUTS																			
	SACP ANNUNCIATION										NOTIFICATION					REQUIRED FIRE SAFETY CONTROL				
1. ACTIVATE COMMON ALARM SIGNAL INDICATOR																				
2. ACTIVATE COMMON ALARM SIGNAL																				
3. ACTIVATE COMMON TROUBLE SIGNAL																				
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39. ACTIVATE COMMON TROUBLE SIGNAL																				
40. ACTIVATE COMMON TROUBLE SIGNAL																				

KEY NOTES

① HOT BOX ON SITE FOR BACKFLOW PREVENTION. COORDINATE EXACT LOCATION WITH ARCHITECTURAL SITE PLAN.



REVISIONS

Professional Engineer Seal for David J. Whitley, No. 17324, State of North Carolina. Includes logos for IMEG Consultants Corp. and Atlantec Engineers, PA.

PREPARED FOR:
J+D SPRINKLER

**HARBOR FREIGHT
SPRINKLER ALARM**

ERWIN NORTH CAROLINA

CONTENTS:
**SPRINKLER
ALARM
PLAN**

DATE:
OCTOBER 23, 2024

DESIGNER: **SWM**
ENGINEER: **DJW**

SHEET NO.
SA-2
OF 2

1 SPRINKLER ALARM PLAN
SCALE: 1/8" = 1'-0"

2/1/24

J:\J & D Sprinkler\2024\24-1414 Harbor Freight, Erwin, NC\ENGINEERING\IN-HOUSE (SHOP DRAWINGS)\SHOP DRAWINGS\DWG\24-1414-00-FA02.DWG

HARBOR FREIGHT SPRINKLER ALARM MONITORING

ERWIN, NORTH CAROLINA 28339 FIRE ALARM SYSTEM



HARBOR FREIGHT
SPRINKLER ALARM MONITORING

J & D SPRINKLER COMPANY
315 WEST MAIN STREET
CLAYTON, NORTH CAROLINA 27520
919-553-2356



SHOP DRAWINGS
PREPARED BY:
JRH FIRE DESIGN & CONSULTING, LLC
DESIGN DRAWINGS BY NC PROFESSIONAL
ENGINEER DAVID J. WHITNEY
SEAL # 17382 & SIGNED 10/23/2024

INSTALLATION BY:
J & D SPRINKLER CO., INC.
NC SPECIAL RESTRICTED FIRE ALARM/
LOW VOLTAGE CLASSIFICATION LICENSE
RES# FA 113223 QUALIFIER
MARC LAKEY

JRH JOB #	24-1414
REVISION: 0	DATE: 11/01/2024
INITIAL RELEASE	
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:

DRAWING TITLE:
COVER SHEET, NFPA 72 & ADA DEVICE
INSTALL REQMT, SHEET/WIRE LEGEND,
FIRE ALARM SYSTEM SYMBOLS & MATRIX

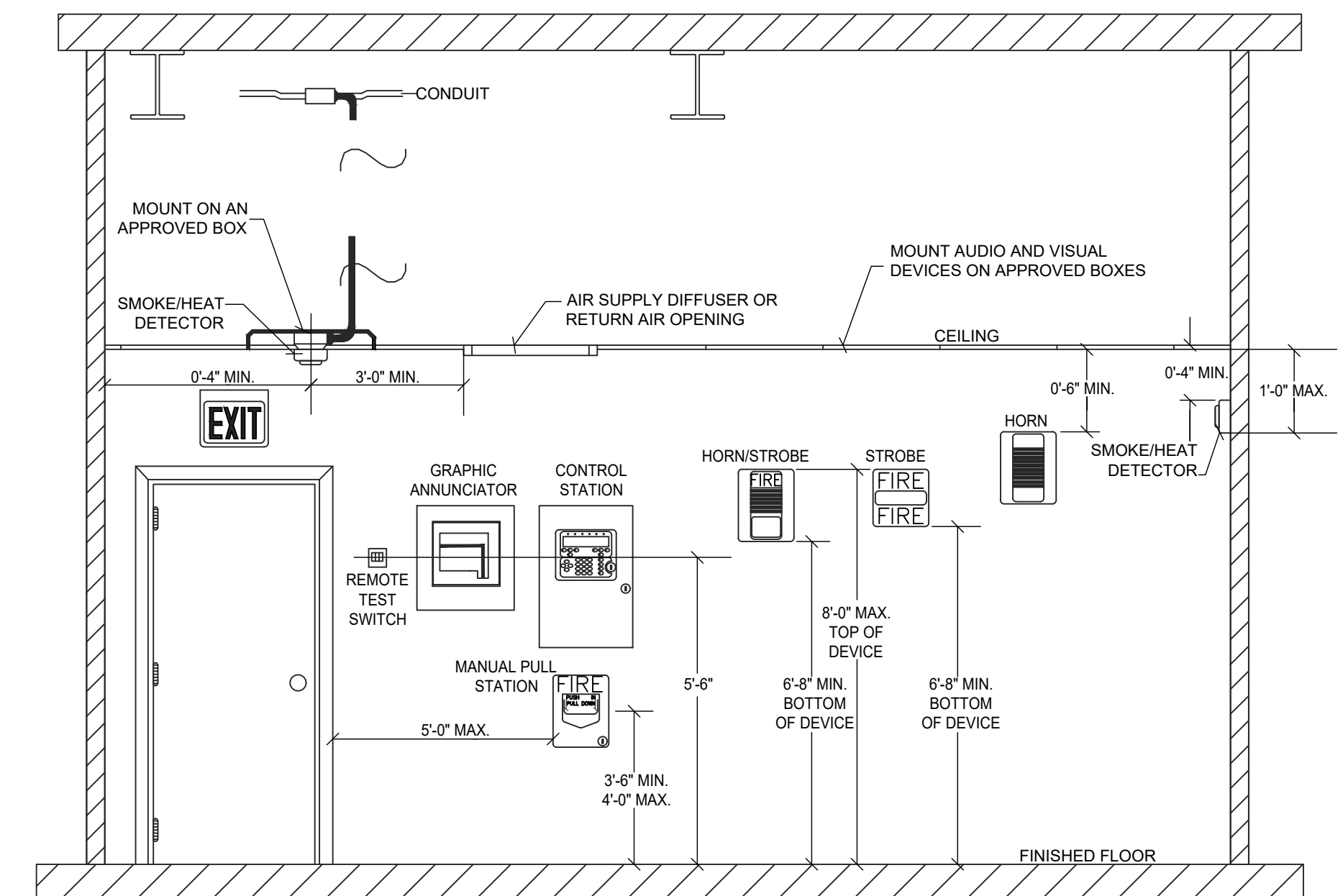
DRAWN BY: JRH
SALESMAN: ML
PROJECT MGR:
DATE: 11/01/2024
SCALE: AS SHOWN ON PLANS
SHEET NO. 1 OF 3

DRAWING NO.
FA-01

FIRE ALARM SYSTEM SYMBOL GUIDANCE (ADAPTED FROM NFPA 170 2018)

1. THE INTENTION OF THIS GUIDANCE IS TO PROVIDE GREATER CLARITY TO FIRE ALARM SYSTEM DESIGN AND SHOP DRAWINGS.
2. IT IS REQUESTED THAT FIRE ALARM DESIGN BE SHOWN ON THEIR OWN SHEETS AND OPPOSED TO BEING PRESENTED ON SHEETS WITH OTHER ELECTRICAL SYSTEMS.
3. PLEASE USE THE SYMBOLS SHOWN IN THE CHART IN LIEU OF THE CORRESPONDING SYMBOL AS SHOWN IN NFPA 170.
4. FOR SYMBOLS NOT SHOWN IN CHART BELOW, PLEASE USE THE SYMBOLS SHOWN IN NFPA 170.
5. LETTERING HEIGHT SHALL BE AT LEAST 1/8" ON PLANS (SYMBOLS BELOW ARE TO THIS SCALE).
6. NEW EQUIPMENT SHALL BE SHOWN USING A SOLID LINE. EXISTING EQUIPMENT SHALL BE SHOWN USING A DASHED LINE. EQUIPMENT TO BE DEMOLISHED SHALL BE NOTED ACCORDINGLY AND SPECIFICALLY.

SYMBOLS	QTY.	MANUFACTURE	MODULE NUMBER	DEVICE
	-	FIRE LITE	ES50x	FIRE S CONTROL PANEL
	1	SYSTEM SENSOR	P2WLED-P	WALL MOUNTED HORN/STROBE - WHITE PLAIN MARKINGS
	1	FIRE LITE		SMOKE DETECTOR
	1	FIRE LITE		DUAL-ACTION PULL STATION
	1	-	FMM 101	SPRINKLER WATER FLOW PROVIDED BY OTHERS
	2	-	-	SPRINKLER TAMPER SWITCH PROVIDED BY OTHERS
EOL	-	-	-	END OF LINE RESISTOR



SHEET LEGEND

SHEET NO.	DESCRIPTION
FA-0.1	COVER SHEET, NFPA 72 & ADA DEVICE INSTALLATION REQMTS, SHEET/WIRE LEGEND, FIRE ALARM SYSTEM SYMBOLS AND MATRIX
FA-1.1	SYSTEM NOTES AND SPRINKLER MONITORING SYSTEM - FIRE ALARM
FA-2.1	FIRE ALARM RISER DETAILS AND FIRE ALARM CALCULATIONS

WIRE LEGEND

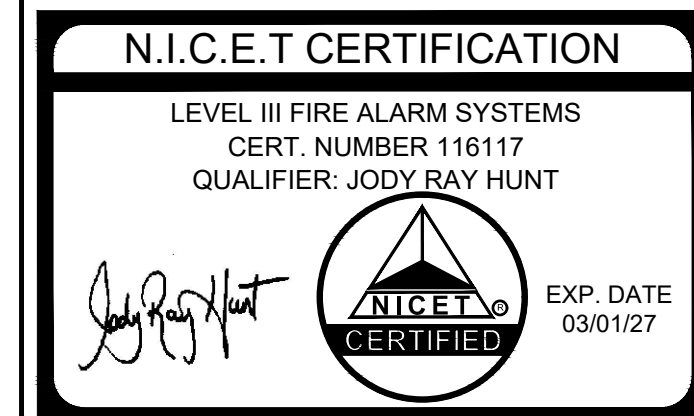
SHEET NO.	DESCRIPTION
NAC	(CONDUIT) (2) #18 AWG SOLID THHN/THWN, BLUE (+), BLACK (-). FREE AIR 18-2 AWG CABLE FPLP.
IDC	(CONDUIT) (2) #18 AWG SOLID THHN/THWN, RED (+), BLACK (-). FREE AIR 18-2 AWG CABLE FPLP.
SLC	(CONDUIT) (2) #18 AWG SOLID THHN/THWN, RED (+), BLACK (-). FREE AIR 18-2 AWG CABLE FPLP.

FIRE ALARM SYSTEM INPUT/OUTPUT MATRIX

SYSTEM INPUTS	SYSTEM OUTPUTS																									
	FACP ANNUNCIATION										NOTIFICATION								REQUIRED FIRE SAFETY CONTROL							
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
1 FIRE ALARM SYSTEM AC POWER FAILURE																										
2 FIRE ALARM SYSTEM LOW BATTERY																										
3 OPEN CIRCUIT																										
4 GROUND FAULT																										
5 NOTIFICATION APPLIANCE CIRCUIT SHORT																										
6 BUILDING MANUAL PULL STATIONS																										
7 AREA SMOKE DETECTORS																										
8 SPRINKLER TAMPER SWITCH																										
9 SPRINKLER WATER FLOW IN BUILDING																										
10 HOT BOX LOW TEMPERATURE																										

FIRE ALARM SYSTEM MATRIX

NOT TO SCALE



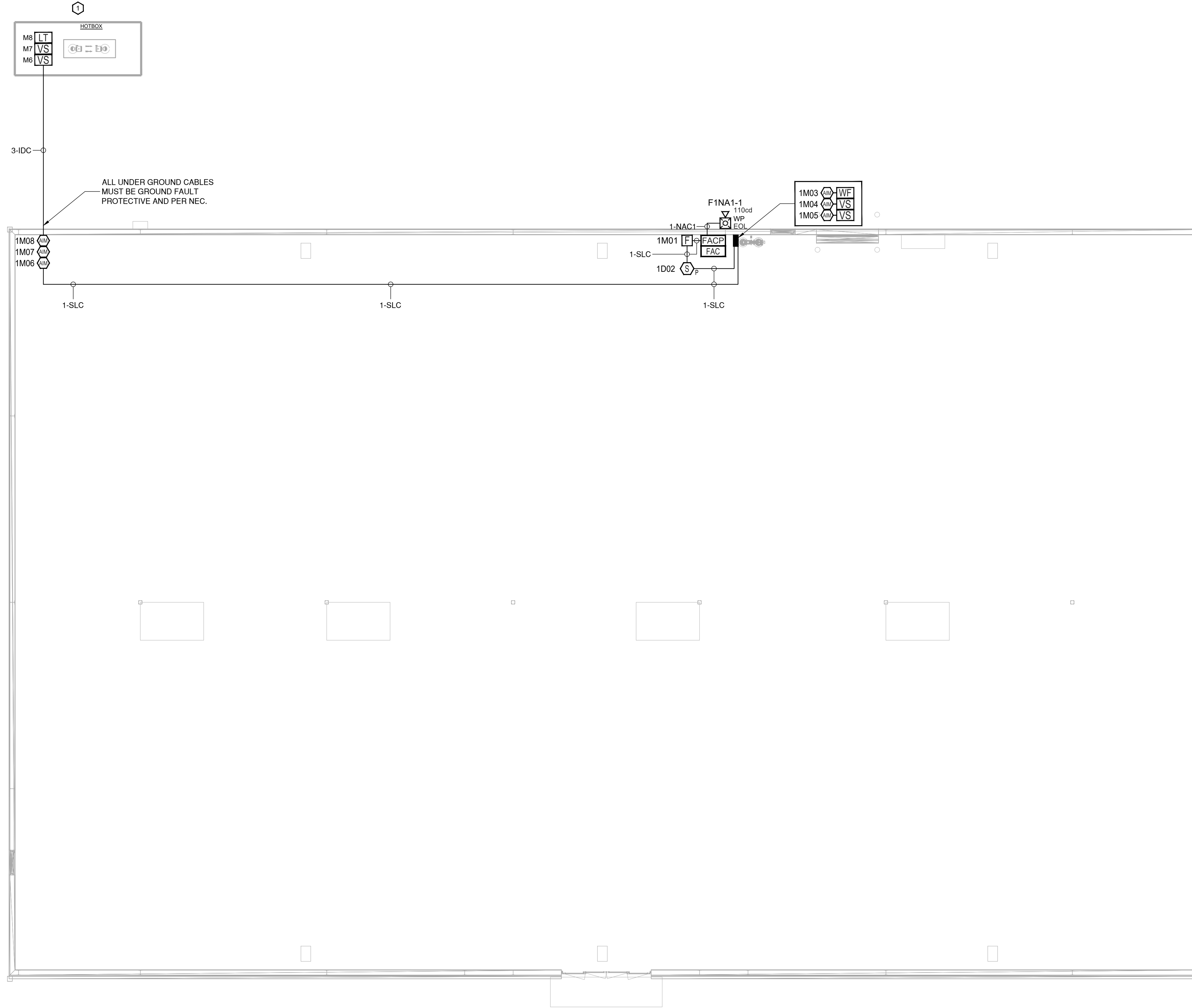
J:\J & D Sprinkler\2024\24-1414 Harbor Freight, Erwin, NC\ENGINEERING\IN-HOUSE (SHOP DRAWINGS)\SHOP DRAWINGS\DWG\24-1414-00-FA02.DWG

KEY NOTES

① HOT BOX ON SITE FOR BACKFLOW PREVENTION. COORDINATE EXACT LOCATION WITH ARCHITECTURAL SITE PLAN.

FIRE ALARM - SPRINKLER NOTES

- SEE PLANS FOR QUANTITY AND LOCATION OF ALL EQUIPMENT.
- CONTRACTOR SHALL PROVIDE COMPLETE DOCUMENT PER 2018 FIRE CODE SECTION 907.1.1 AND 907.1.2 TO TO ENGINEER FOR APPROVAL PRIOR TO SUBMIT TO AND TESTING BY LOCAL FIRE MARSHAL'S OFFICE.
- PLACARD THE ENTIRE FIRE ALARM SYSTEM. PROVIDE PANEL AND CIRCUIT NUMBERS ON A NAME PLATE AFFIXED TO THE FACE OF THE FIRE ALARM CONTROL PANEL.
- CONTRACTOR SHALL PROVIDE ZONE MAPS COMPLETE WITH ADDRESSES FOR EACH FIRE ALARM DEVICE IN WOODEN FRAME ADJACENT TO THE NEW FIRE ALARM CONTROL PANEL.
- ELECTRICAL CONTRACTOR SHALL PROVIDE BATTERY CALCULATIONS AND CUT SHEETS FOR FIRE ALARM SYSTEM TO ENGINEER FOR APPROVAL.
- ALL WIRING SHALL BE SUPERVISED.
- ALL WIRING SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
- ALL WIRING IN WALLS OR FURRED SPACES SHALL BE IN CONDUIT.
- WHERE PERMITTED BY CODE, WIRING ABOVE ACCESSIBLE CEILINGS MAY BE RUN EXPOSED AND THE FOLLOWING REQUIREMENTS SHALL BE MET:
 - WIRING SHALL BE PLENUM RATED WHERE APPLICABLE.
 - PROVIDE BRIDLE RINGS FOR INDEPENDENT FIRE ALARM CABLE SUPPORT UNLESS SPECIFICALLY NOTED OTHERWISE. ANALOG LOOP WIRING INCOMING AND OUTGOING SHALL NOT BE SUPPORTED IN THE SAME BRIDLE RING.
- ADDRESSABLE SLC CIRCUIT REQUIREMENTS:
 - WIRING SHALL BE 'CLASS B'.
 - MINIMUM CAPACITY OF ANALOG SENSORS PER LOOP SHALL BE 48.
 - MINIMUM CAPACITY OF ADDRESSABLE MONITORING DEVICES PER LOOP SHALL BE 48.
 - MINIMUM CAPACITY OF ADDRESSABLE CONTROL RELAY MODULES PER LOOP SHALL BE 48.
- NOTIFICATION CIRCUIT REQUIREMENTS:
 - WIRING SHALL BE 'CLASS B'.
 - PROVIDE WITH 'SYNC MODULE' AS REQUIRED PER NFPA 72.
 - FURNISH NOTIFICATION CIRCUITS AS REQUIRED TO ACCOMMODATE CIRCUIT LOADING. NO NOTIFICATION CIRCUIT SHALL BE LOADED TO MORE THAN 80% CAPACITY.
- DIGITAL ALARM COMMUNICATOR:
 - WHERE SINGLE COMMUNICATION PATH WITH INTERNET NETWORK IS ACCEPTABLE BY THE LOCAL FIRE MARSHAL, PROVIDE WITH THE COMMUNICATOR IN LIEU OF 2 LINE TELEPHONE IN COMPLIANCE WITH NFPA 72 26.6.3.1.5.
 - WHERE DUAL COMMUNICATION PATHS OF CELLULAR NETWORK AND INTERNET NETWORK ARE REQUIRED BY THE LOCAL FIRE MARSHAL, PROVIDE WITH COMMUNICATOR IN LIEU OF 2 LINE TELEPHONE.
 - FIELD COORDINATE TYPE MATCH MONITORING COMPANY.
- FOR SPRINKLER SYSTEM:
 - FIELD COORDINATE QUANTITY AND LOCATION OF FLOW AND TAMPER SWITCHES WITH SPRINKLER'S FINAL DRAWINGS AND/OR CIVIL FINAL DRAWING FOR TAMPER SWITCH FOR PIV VALVE.
 - PROVIDE MONITORING MODULES AS REQUIRED FOR SPRINKLER SYSTEM.



SPRINKLER MONITORING SYSTEM - FIRE ALARM
 SCALE: 1/8" = 1'-0"

HARBOR FREIGHT
 SPRINKLER ALARM MONITORING
 ERWIN, NORTH CAROLINA 28339
 FIRE ALARM SYSTEM

J & D SPRINKLER COMPANY
 315 WEST MAIN STREET
 CLAYTON, NORTH CAROLINA 27520
 919-553-2356



SHOP DRAWINGS
 PREPARED BY:
 JRH FIRE DESIGN & CONSULTING, LLC
 DESIGN DRAWINGS BY NC PROFESSIONAL ENGINEER DAVID J. WHITNEY
 SEAL # 17382 & SIGNED 10/23/2024

INSTALLATION BY:
 J & D SPRINKLER CO. INC.
 NC SPECIAL RESTRICTED FIRE ALARM/ LOW VOLTAGE CLASSIFICATION LICENSE
 RES/FA 1/13/2023 QUALIFIER
 MARC LAKEY

JRH JOB #	24-1414
REVISION: 0	DATE: 11/01/2024
INITIAL RELEASE	
REVISION:	DATE:
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DRAWING TITLE:
 SYSTEM NOTES & SPRINKLER MONITORING SYSTEM - FIRE ALARM

DRAWN BY:	JRH
SALESMAN:	ML
PROJECT MGR:	
DATE:	11/01/2024
SCALE:	AS SHOWN ON PLANS
SHEET NO. 2	OF 3

DRAWING NO.
FA-1.1

