

REFERENCE CODES & STANDARDS:

- 2018 SOUTH CAROLINA BUILDING CODE & FIRE CODE
- 2016 NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE

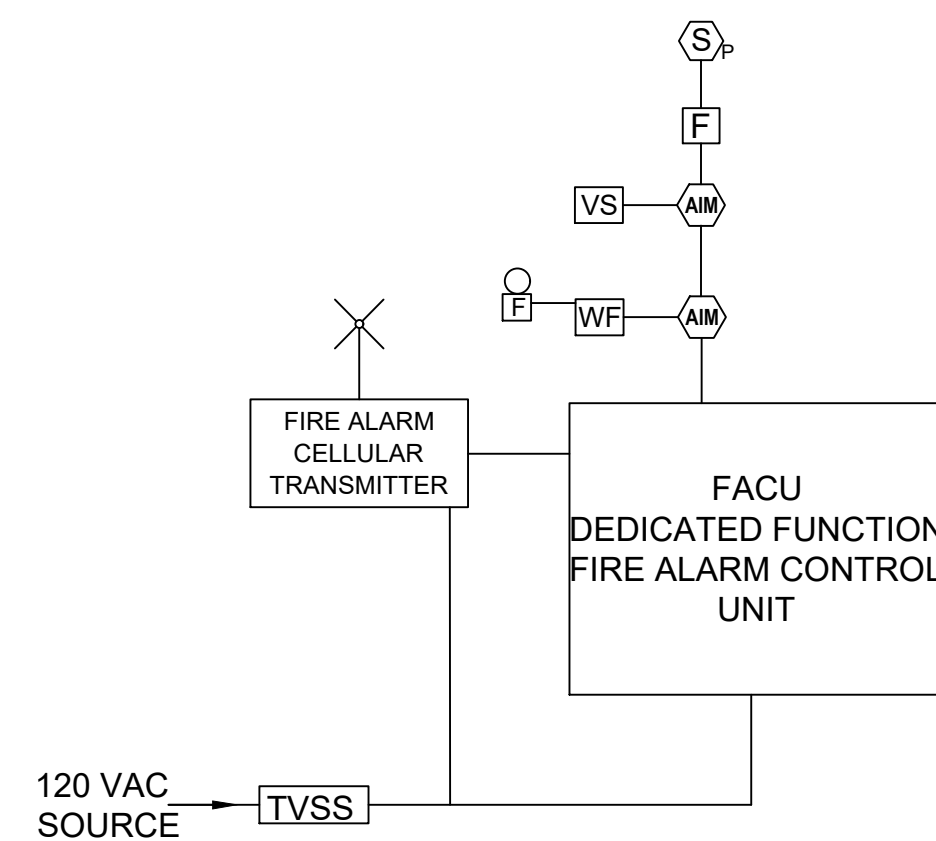
GENERAL NOTES:

- PROVIDE A NEW DEDICATED FUNCTION FIRE ALARM SYSTEM TO MONITOR THE SPRINKLER SYSTEM.
- IT IS THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR TO INSTALL ALL EQUIPMENT AS SHOWN ON DRAWINGS AND THE REFERENCED CODES.
- THE FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR ALL FIRE ALARM SYSTEM WIRING INCLUDING WIRING INSTALLED BY OTHER CONTRACTORS OR SUBCONTRACTORS. CONNECTION OF ALL FIRE ALARM DEVICES AND CONNECTION INSIDE THE CONTROL UNIT WILL BE DONE BY THE NICET CERTIFIED FIRE ALARM TECHNICIAN.
- THESE PLANS DO NOT SHOW A COMPLETE DETAILED DESCRIPTION OF THE APPARATUS, MATERIALS, EQUIPMENT, ETC. REQUIRED TO MAKE A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM. THE FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED MATERIAL, EQUIPMENT, COORDINATION, AND LABOR REQUIRED TO INSTALL A COMPLETE AND APPROVED FIRE ALARM SYSTEM.
- AT THE COMPLETION OF THE SYSTEM TESTING, THE FIRE ALARM CONTRACTOR SHALL COMPLETE A RECORD OF COMPLETION PER NFPA 72, WITH APPROPRIATE SUPPLEMENTS.
- ALL SIGNALING LINE CIRCUITS SHALL BE CLASS B PER NFPA 72.
- ALL FIRE ALARM CIRCUITS WILL BE COLOR CODED AND THE COLORS MUST NOT CHANGE WITHIN THE CIRCUIT.
- ANY DEVICES MOUNTED ON THE EXTERIOR OF THE BUILDING SHALL BE WEATHERPROOF WITH EXTERIOR RATED CONDUIT AND FITTINGS PER NFPA 70.

		SYSTEM ALARM					
		A	B	C	D	E	F
		TRANSMIT ALARM CONDITION TO MONITORING STATION					
		SYSTEM SUPERVISORY					
		TRANSMIT SUPERVISORY CONDITION TO MONITORING STATION					
		SYSTEM TROUBLE					
		TRANSMIT TROUBLE CONDITION TO MONITORING STATION					
1	MANUAL PULL STATION	X	X				
2	AREA SMOKE DETECTOR	X	X				
3	SPRINKLER WATER FLOW SWITCH	X	X				
4							
5	SPRINKLER VALVE SUPERVISORY SWITCH			X	X		
6							
7	A/C POWER FAILURE					X	X
8	LOW BATTERY					X	X
9	OPEN CIRCUIT					X	X
10	GROUND FAULT					X	X
11	SHORT CIRCUIT					X	X

DEDICATED FUNCTION FIRE ALARM SYSTEM I/O MATRIX

FIRE ALARM SYMBOL LEGEND	
[FACU]	DEDICATED FUNCTION FIRE ALARM CONTROL UNIT
[XMTR]	FIRE ALARM TRANSMITTER - CELLULAR
[TVSS]	TRANSIENT VOLTAGE SURGE SUPPRESSOR
[F]	FIRE ALARM PULL STATION
[S _P]	SMOKE DETECTOR - PHOTOELECTRIC
[VS]	VALVE SUPERVISORY SWITCH
[WF]	WATER FLOW SWITCH
[AIM]	ADDRESSABLE INPUT MONITOR MODULE
[E]	ELECTRIC BELL PROVIDED BY SPRINKLER CONTRACTOR WIRED BY FIRE ALARM CONTRACTOR



DEDICATED FUNCTION FIRE ALARM SYSTEM RISER

THIS SYSTEM RISER IS DIAGRAMMATIC AND DOES NOT INDICATE ACTUAL QUANTITIES, REFER TO PLAN FOR ALL DEVICES AND LOCATIONS

DATE	REVISIONS

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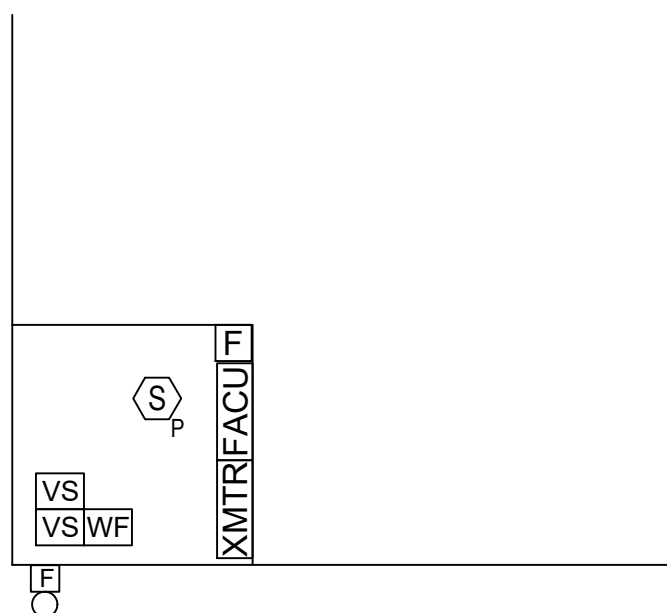
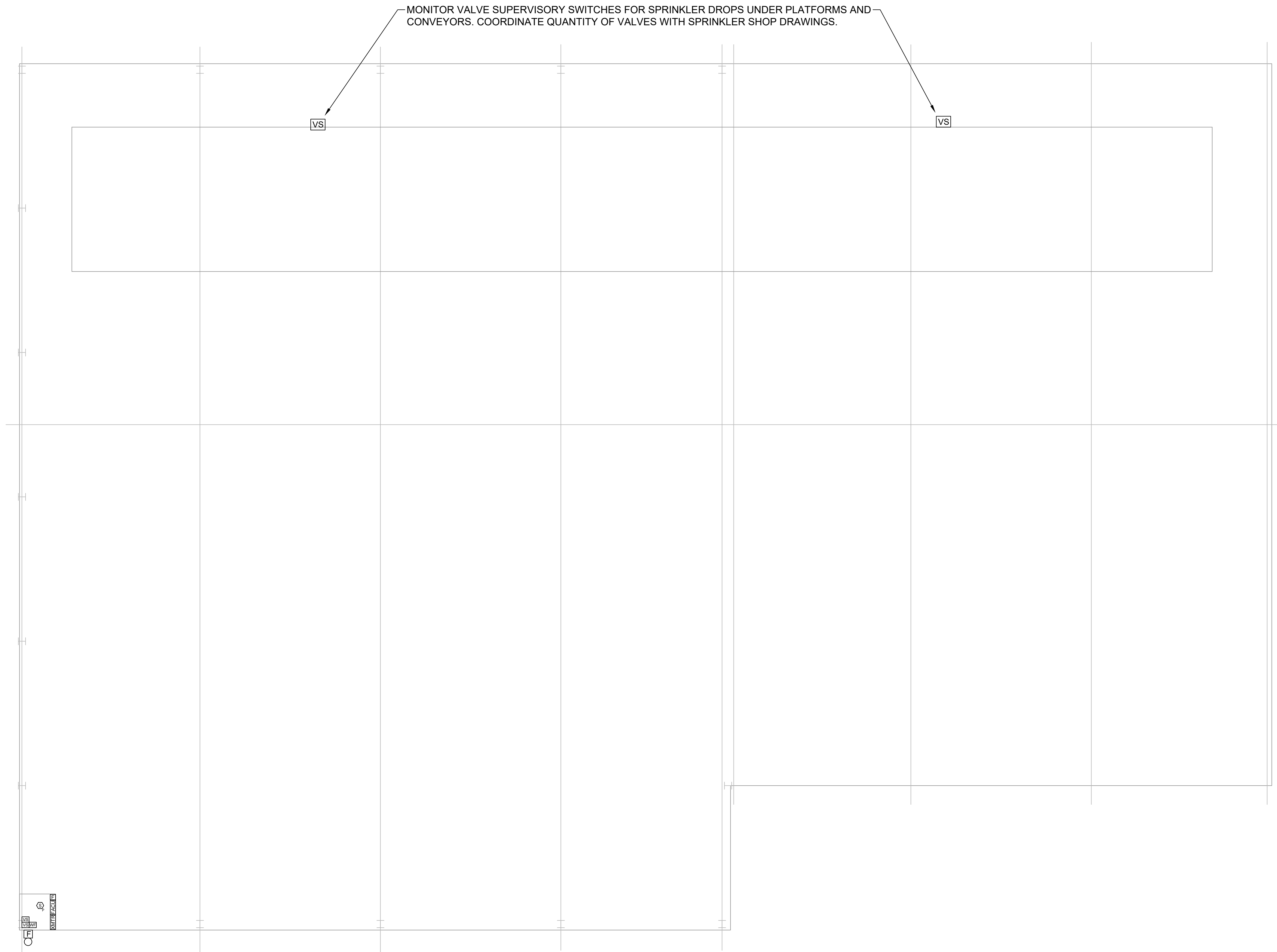
Foster Engineering & Consulting, LLC
FIRE PROTECTION ENGINEERING

NORTH AUGUSTA RECYCLING CENTER
67 CLAYPIT ROAD
NORTH AUGUSTA, SC 29841

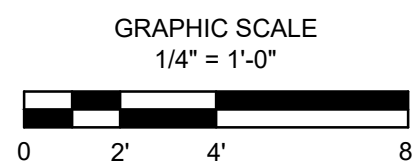
SHEET TITLE: FIRE ALARM SYSTEM NOTES & DETAILS

SHEET NO. **FA001**
DATE: 12/23/2022

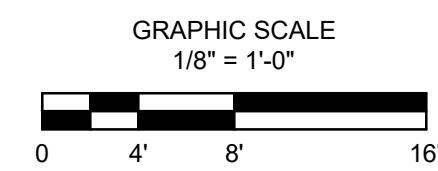
FIRE ALARM SYMBOL LEGEND	
[FACU]	DEDICATED FUNCTION FIRE ALARM CONTROL UNIT
[XMTR]	FIRE ALARM TRANSMITTER - CELLULAR
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[F]	FIRE ALARM PULL STATION
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[VS]	VALVE SUPERVISORY SWITCH
[WFI]	WATER FLOW SWITCH
[AIM]	ADDRESSABLE INPUT MONITOR MODULE
[F]	ELECTRIC BELL PROVIDED BY SPRINKLER CONTRACTOR WIRED BY FIRE ALARM CONTRACTOR



2 RISER ROOM
1/4" = 1'-0"



1 DEDICATED FUNCTION FIRE ALARM SYSTEM
1/8" = 1'-0"



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SHEET NO.	FA101
SHEET TITLE	DEDICATED FUNCTION FIRE ALARM SYSTEM
DATE:	12/23/2022

CODES & STANDARDS:

- 2018 SOUTH CAROLINA BUILDING CODE & FIRE CODE
- 2016 NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS

GENERAL NOTES:

1. ALL NEW WORK SHALL COMPLY WITH THE CODES AND STANDARDS REFERENCED
2. IT IS NOT THE INTENT OF THESE PLANS TO PROVIDE A COMPLETE DETAILED DESCRIPTION OF THE APPARATUS, MATERIALS, EQUIPMENT, ETC. WHICH IS REQUIRED TO MAKE A COMPLETE AND FUNCTIONAL INSTALLATION OF THIS SPECIFIC FIRE PROTECTION SYSTEM. IT SHALL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO PROVIDE ALL REQUIRED MATERIAL AND EQUIPMENT AND PERFORM ALL WORK REQUIRED TO INSTALL A COMPLETE AND APPROVED INSTALLATION.
3. SPRINKLER SYSTEM DESIGN CRITERIA - SEE FIRE SPRINKLER SYSTEM SPECIFICATION SHEET (FSSSS)

SCOPE OF WORK:

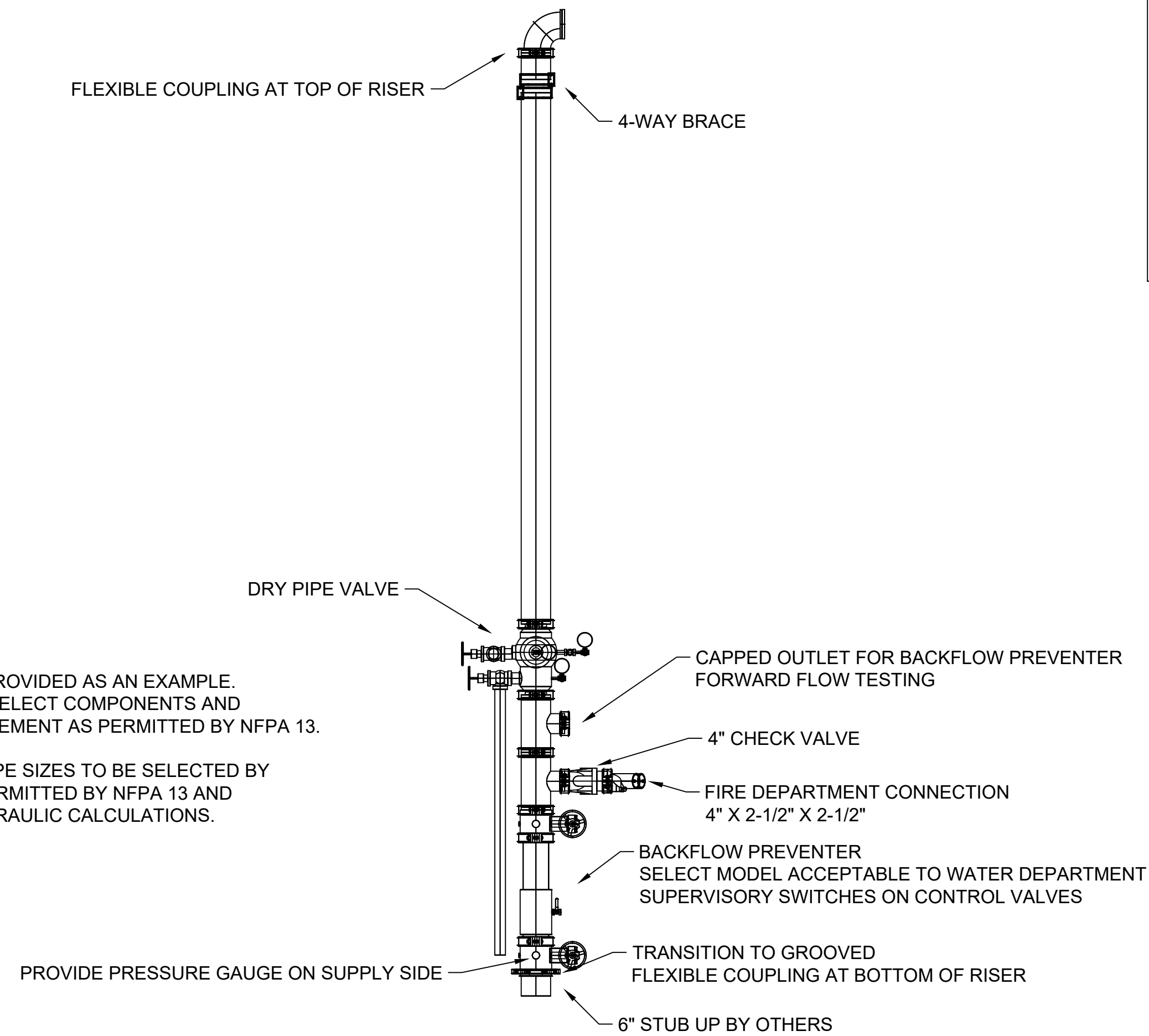
4. PROVIDE NEW DRY PIPE SPRINKLER SYSTEM FOR PROTECTION THROUGHOUT THE BUILDING.
5. PROVIDE SPRINKLERS UNDER PLATFORMS, CONVEYORS, AND OTHER OBSTRUCTIONS THAT MEET THE FOLLOWING:
 - 5.1. MORE THAN 4 FT IN WIDTH
 - 5.2. MORE THAN 2 FT CLEARANCE BELOW THE OBSTRUCTION TO THE FLOOR
6. PROVIDE WATER SHIELDS FOR SPRINKLERS UNDER OPEN GRATINGS.
7. PROVIDE SPRINKLER GUARDS FOR SPRINKLERS LESS THAN 7 FT ABOVE A WALKING SURFACE, OR OTHERWISE SUBJECT TO MECHANICAL DAMAGE.
8. SPRINKLER DROPS TO LOWER STRUCTURES REQUIRE FLEXIBLE COUPLINGS AT TOP AND BOTTOM REGARDLESS OF PIPE SIZE.

BID OPTIONS:

9. PROVIDE BID OPTION FOR NITROGEN GENERATOR.

ACCEPTANCE TESTING AND DOCUMENTATION:

10. PERFORM A HYDROSTATIC TEST AND AIR LEAKAGE TEST AS REQUIRED BY NFPA 13 25.2.1 AND 25.2.2.
11. PERFORM OPERATIONAL TESTS AS REQUIRED BY NFPA 13 25.2.3.
12. PERFORM FORWARD FLOW TEST OF BACKFLOW PREVENTER AS REQUIRED BY NFPA 13 25.2.5.
13. AT THE COMPLETION OF SYSTEM TESTING, THE SPRINKLER CONTRACTOR SHALL PROVIDE TO THE OWNER A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR ALL NEWLY INSTALLED SYSTEM COMPONENTS.



RISER DIAGRAM IS PROVIDED AS AN EXAMPLE. CONTRACTOR MAY SELECT COMPONENTS AND DETERMINE ARRANGEMENT AS PERMITTED BY NFPA 13.

COMPONENT AND PIPE SIZES TO BE SELECTED BY CONTRACTOR AS PERMITTED BY NFPA 13 AND SUPPORTED BY HYDRAULIC CALCULATIONS.

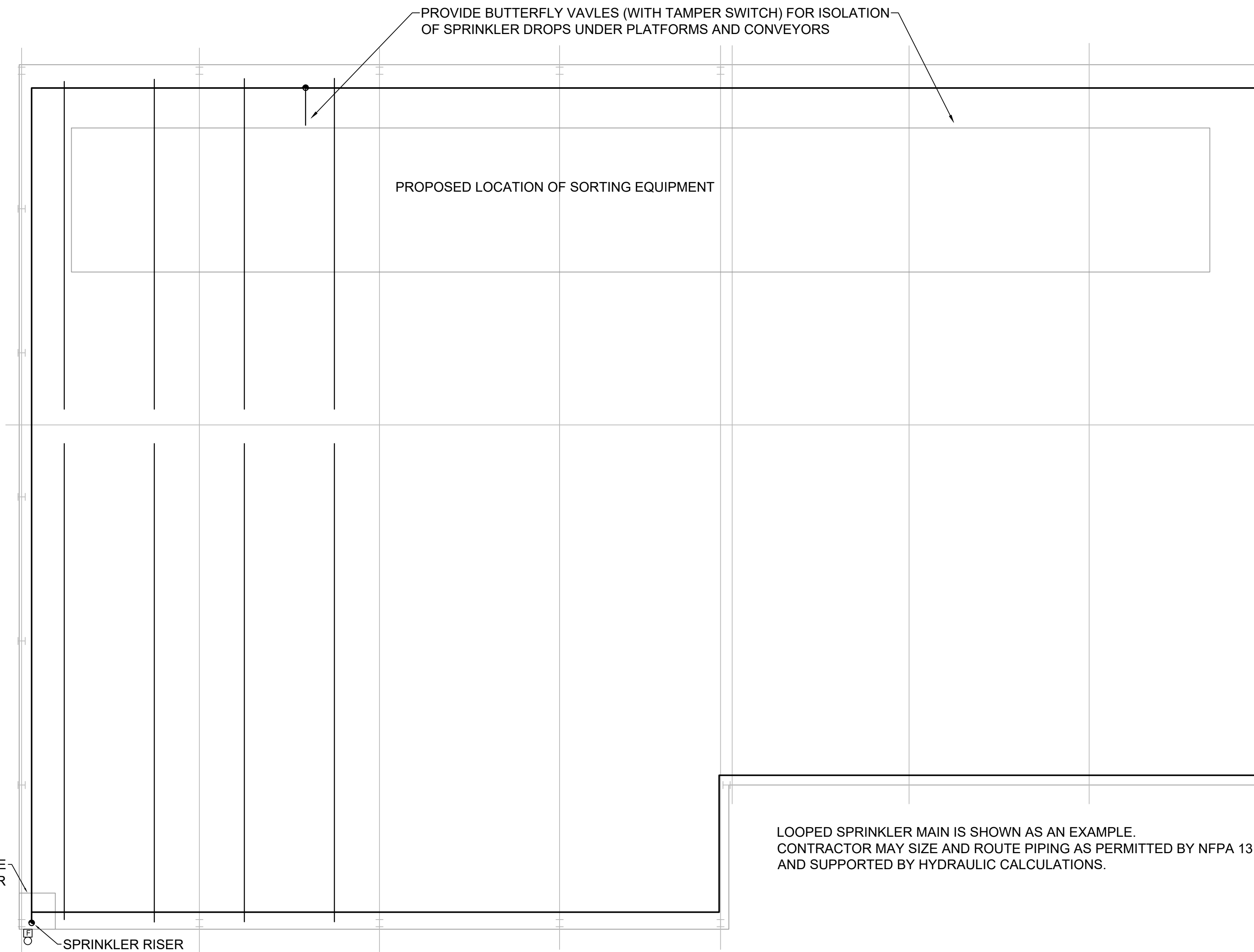
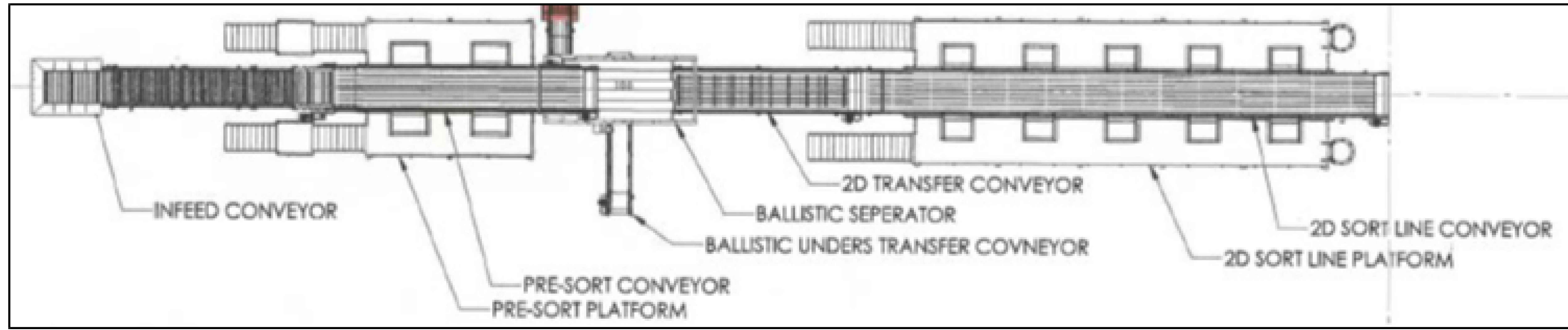
1 SAMPLE RISER DIAGRAM NOT TO SCALE

Fire Sprinkler System Specification Sheet
(Per §48-10-250)

Project Data			
Project name:	North Augusta Recycling Center		
Location in South Carolina:	Address (street # & street name): 67 Claypit Road	County: Aiken	State project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
City: North Augusta			
State project #: N/A			
Water Supply Information			
Date test conducted:	11/15/2022	Static pressure: 95 psi	Residual pressure: 41 psi
Distances of test gauges relative to the base of the riser:		Horizontal: ±200 ft	Vertical: 0 ft
Source of water supply:	<input checked="" type="checkbox"/> Municipal dead-end <input type="checkbox"/> Municipal circulation <input type="checkbox"/> Existing fire pump <input type="checkbox"/> Other: Pipe Size (in.): 6"		
Test data by/from:	Name: James Sutton	Title: Director of Public Services	Telephone #: 803-441-4240
Organization:	City of North Augusta		
Fire pump:	<input type="checkbox"/> New <input type="checkbox"/> Existing	Pump Capacity:	Churn Pressure:
<input checked="" type="checkbox"/> No Pump	Rated Pressure:	Pressure @ 150% flow:	
On-site water storage:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> New <input type="checkbox"/> Existing <input type="checkbox"/> Tank <input type="checkbox"/> Other:	Capacity (gal):
NFPA Hazard Classification			
Area #	Class or Code Reference	Description of Hazard Protected (commodity description, storage height, and arrangement as applicable.)	
1	Ordinary Hazard Group II	Manufacturing (recycling sorting), low pile storage, sprinkler riser room	
Design Parameters			
Area #	System Type	Density (gpm/ft ²) / Area (ft ²) or Other (reference code section)	Inside Hose (gpm) Outside Hose (gpm)
1	Dry	0.20 gpm/ft ² / 1950 ft ²	0 250
Seismic Design Data:		S _s = 0.27g	Site Classification = D Seismic Design Category = C
Codes and Standards			
Applicable Codes, Standards & Editions for the Scope of Work on the Sprinkler System			
2016 NFPA 13; 2018 IBC			
Scope of work and notes:			
1. Scope of work begins 1 ft above finished floor. Underground sprinkler piping by others.			
2. Lateral sway braces and branch line restraints may be omitted when pipe hangers are installed per NFPA 13 9.3.5.5, 10 and 9.3.6.5.			
3. Low pile storage of Class I-IV commodities and Group A plastics per NFPA 13-13.1.1(5) & (6) and Table 13.2.1.			
a. Class I-IV commodities solid piled, palletized, and shelf up to 12 ft			
b. Class I-III commodities on open racks up to 12 ft; Class IV commodities on open racks up to 10 ft			
c. Group A plastics solid piled, palletized, racks, shelf up to 5 ft			
4. Provide bid option for nitrogen generator.			
Specifier's Information			
Name:	Eric D. Mondor, PE		
Engineering services provided through a firm:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Firm name:	Foster Engineering & Consulting, LLC		
Address:	2711 Middleburg Drive, Suite 214		
City:	Columbia		
State:	SC		
Zip:	29204		
Phone #:	(803) 787-4757		
Fax #:	n/a		
E-mail:	Eric@FosterEngr.com		
Revision No.:	0		Date: 19-Dec-22
Page 1 of 1		Certificate of Authorization Professional Engineer's Seal	

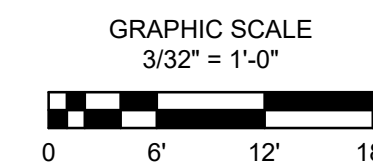
<North Augusta Recycling Center FSSSS>

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<p>SHEET TITLE FIRE SPRINKLER NOTES AND DETAILS</p>	
<p>SHEET NO. FX001</p>	
<p>DATE: 12/23/2022</p>	



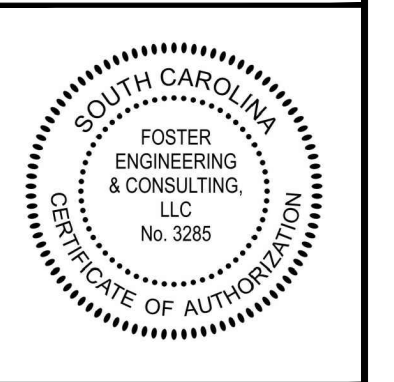
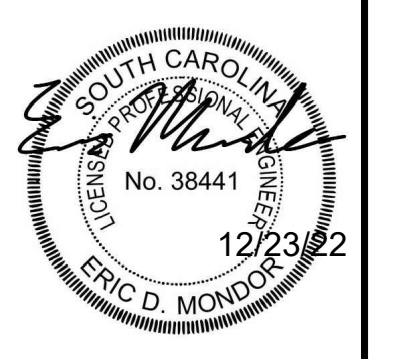
1 FIRE SPRINKLER PLAN

3/32" = 1'-0"



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 67 CLAYPIT ROAD
 NORTH AUGUSTA, SC 29841
 FIRE SPRINKLER PLAN

SHEET NO. **FX101**
 DATE: 12/23/2022