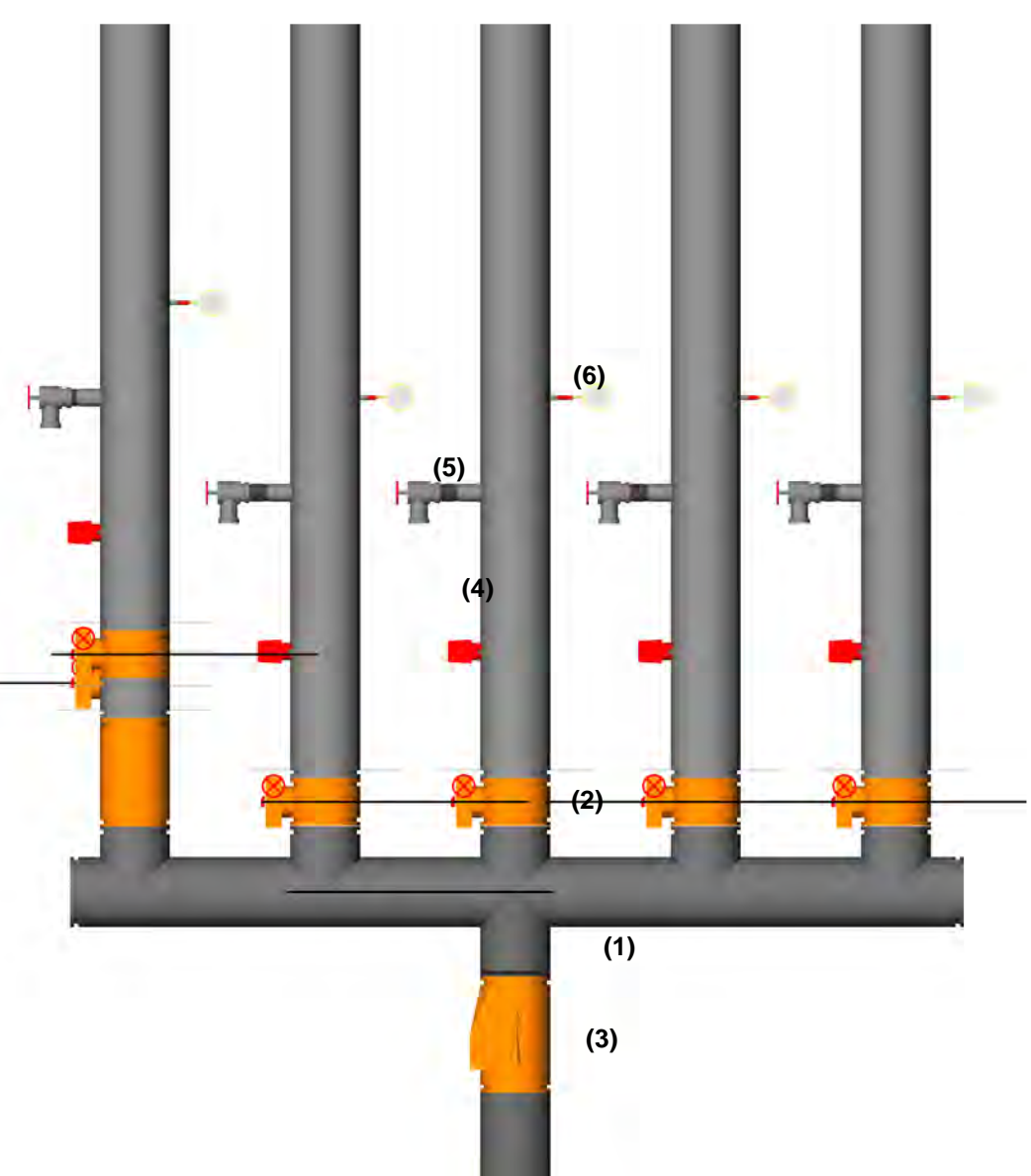
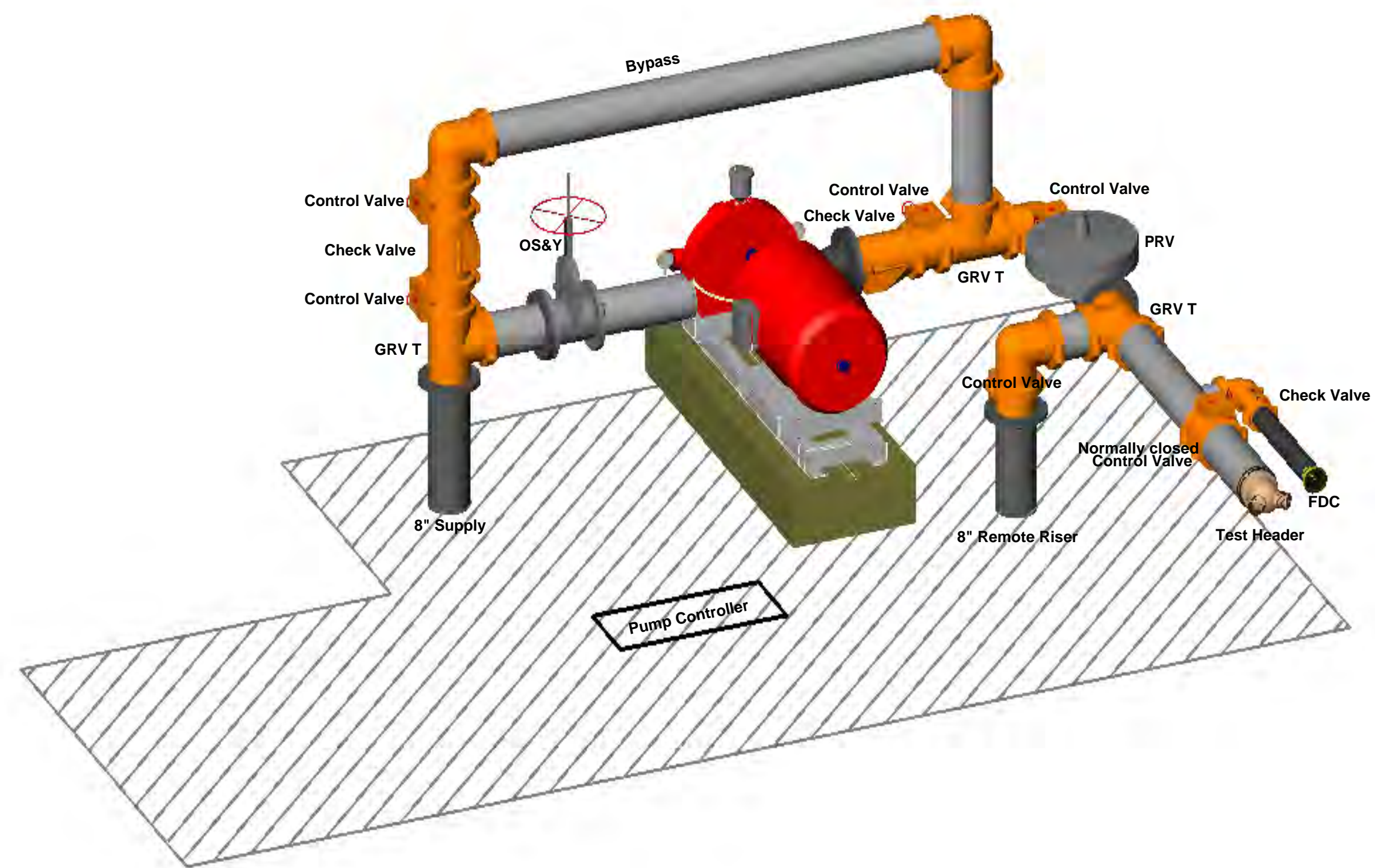


C Column 11 Remote Riser  
0 1/2" = 1 Foot

- 1) Riser Manifold
- 2) Control Valve
- 3) Check Valve
- 4) Flow Switch
- 5) Main System Drain w/ Pressure relief valve (piped to outside)
- 6) Gage



E Remote Riser Section  
0 1/2" = 1 Foot







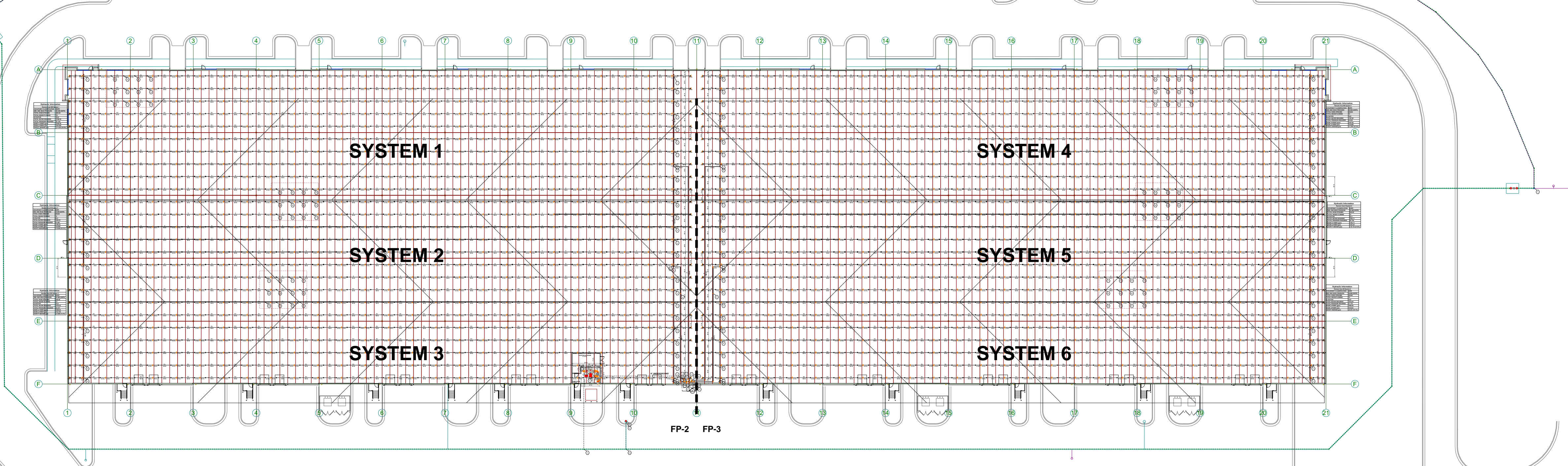
**PUMP ROOM LAYOUT**  
PUMP COMPONENTS 8"

FLOW TEST  
Date: 6/15/23  
Time: 1:20 PM  
  
Static PSI: 82  
Residual PSI: 50  
Flow GPM: 1900

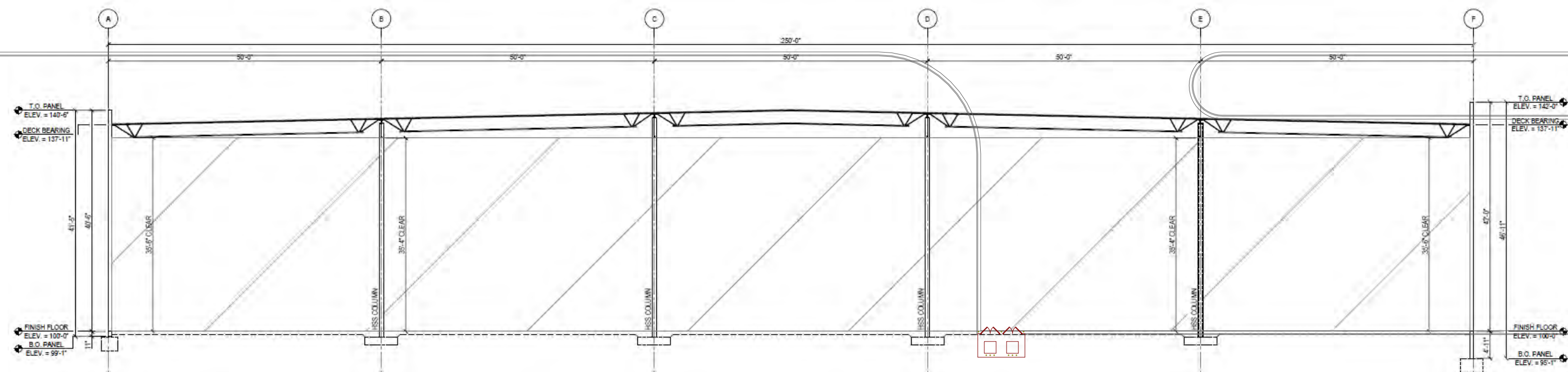
LOCATION:  
NE TOWN CENTER BLVD &  
NE INDEPENDENCE AVE  
  
COMPLETED BY CITY OF  
LEE'S SUMMIT

LINE PIPING TO BE 0-7" CENTERLINE FROM TOS  
8" MAIN PIPING TO BE 2-10" CENTERLINE FROM TOS  
LINE PIPE TO BE SCH 7 2-1/2 - 3"  
MAIN PIPING TO BE SCH10 4-8"

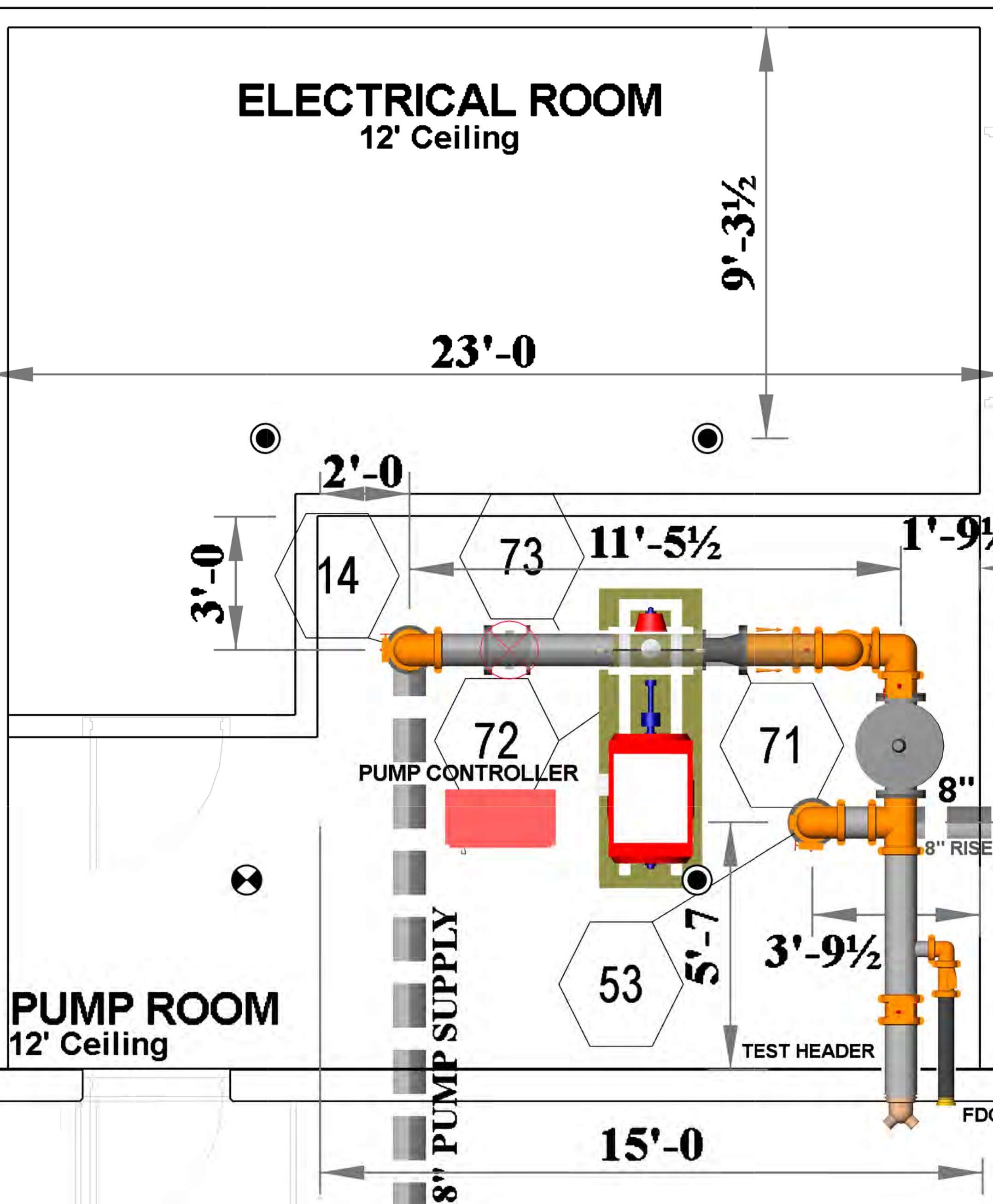
Sprinkler Legend											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
	Viking	VK503	ESFR	1728	16.8	Pendent	1/2"	Quick	Brass	165 °F	EC 20 X 20 Pump/Elec Pump Room
	Viking	VK506	ESFR	972	22.4	Pendent	1"	Quick	Brass	165 °F	
	Viking	VK534	EC/GREC	3	11.2	Pendent	3/4"	Quick	Chrome	175 °F	
	Viking	VK3021		1	5.6	Pendent	1/2"	Quick	Chrome	175 °F	
				Total = 2704							



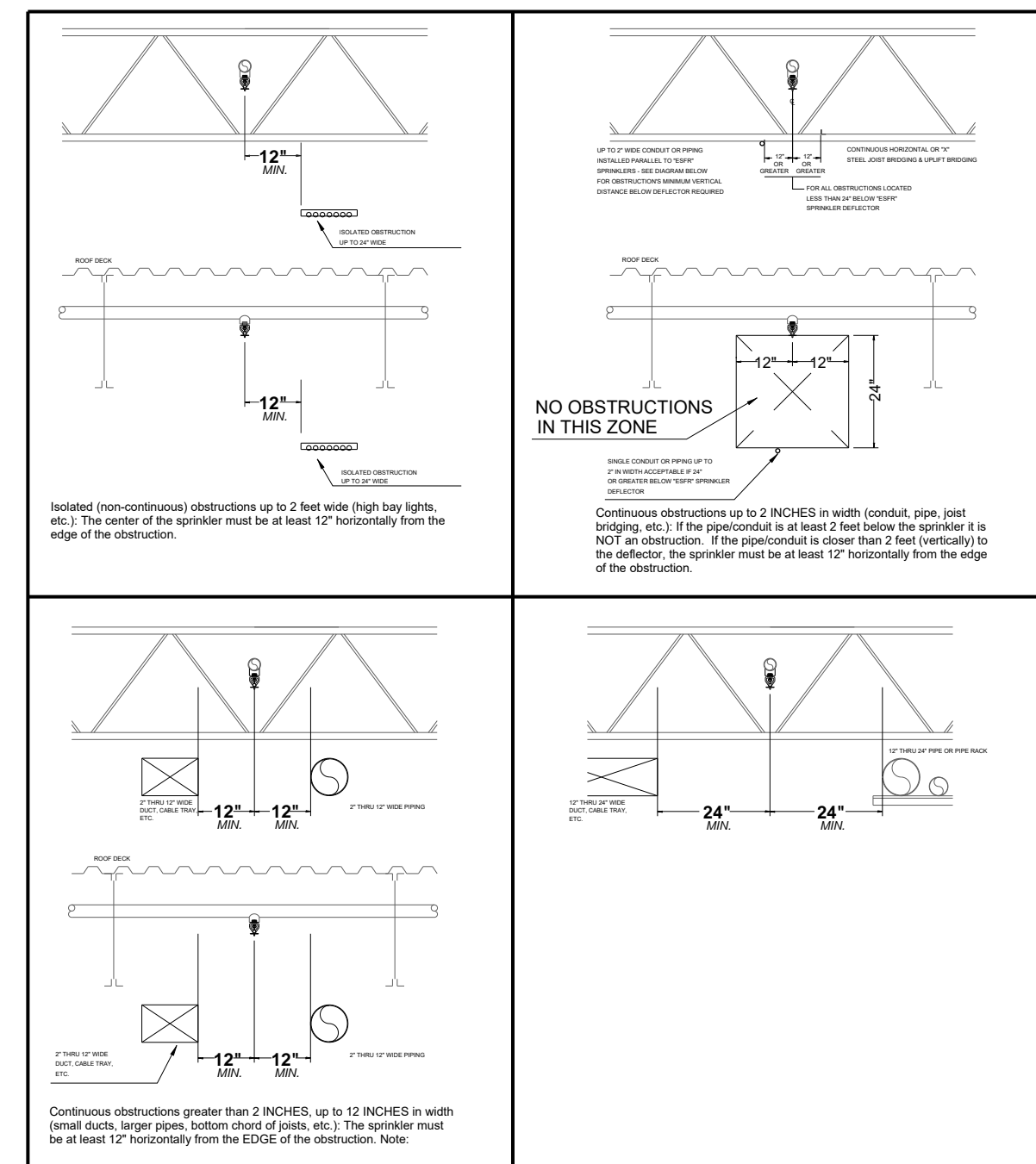
**OVERALL BUILDING PLAN**



**CROSS SECTION A-F**



- #1: 3/8" TOP BEAM CLAMP, 3/8" ALL THREAD ROD, SPLIT HANGER RING. FOR 2-1/2" THROUGH 4" PIPE IS MAINLY HUNG WITH THIS HANGER.
- #2: 1/2" TOP BEAM CLAMP, 1/2" ALL THREAD ROD, SPLIT HANGER RING. FOR 6"-8" PIPE IS MAINLY HUNG WITH THIS HANGER.



**ESFR OBSTRUCTION GUIDELINES**

ALL STRUCTURAL BRACING (WIND BRACING / DIAGONAL BRACING) TO BE AT LEAST 1'-2" FROM ESFR LINES

ALL LIGHTS TO BE AT MINIMUM 1'-2" AWAY FROM ESFR OVERHEAD LINE

ALL CONTINUOUS OBSTRUCTIONS OVER 1'-0" IN WIDTH (DUCTWORK, PIPING, CABLE TRAYS, ETC.) TO BE AT MINIMUM 2'-2" AWAY FROM ESFR OVERHEAD LINE

HVAC DROPPING FROM ROOF DECK TO BE CENTERED BETWEEN ESFR HEADS AND AT LEAST 2'-2" FROM ESFR LINES

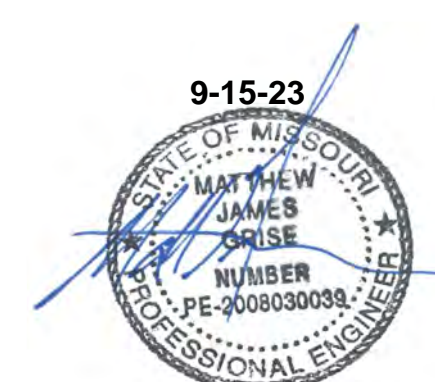
ALL HVLS FANS TO BE CENTERED BETWEEN 4 ESFR SPRINKLER HEADS

ADDITIONAL HEADS REQUIRED UNDER ALL OBSTRUCTIONS OVER 2'-0" WIDE

**FIRE PROTECTION PLAN:**  
Under 40' K16.8 ESFR 12 at 52PSI  
Over 40' K22.4 ESFR 12 at 40PSI  
  
Based on NFPA 13 2016 and specific application UL Listing.  
For protection of rack storage of commodities class 1 to 4 and cartoned, unexpanded plastics or lesser hazards.  
  
For areas with roof deck under 40' - 12 heads discharging at 52 psi.  
For areas with roof deck over 40' - 12 heads discharging at 40 psi.  
250gpm hose stream allowance.

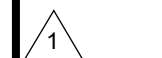


SEAL:



1. FIRE SPRINKLER DESIGN PER NFPA 13 2016 EDITION.
2. OWNER SHALL MAINTAIN SYSTEM PER NFPA 25.
3. ALL MATERIALS USED SHALL COMPLY WITH SPECIFIED REQUIREMENTS.
4. CONTINUOUS CENTRAL MONITORING OF ALARM COMPONENTS PER NFPA 72 SHALL BE BY OTHERS.
5. ALL ALARM AND ELECTRICAL WORK ASSOCIATED WITH INSTALLED COMPONENTS SHALL BE BY OTHERS.
6. ALL UNDERGROUND WORK BY OTHERS. FIRE LINE SHALL BE FLUSHED PER NFPA 24 REQUIREMENTS OVER AND ABOVE LOCAL WATER JURISDICTION REQUIREMENTS. NFPA TEST PAPERS FILLED OUT AND SIGNED BY INSTALLER SHALL BE SUBMITTED TO GENERAL CONTRACTOR PRIOR TO THE ABOVEGROUND SYSTEM BEING PUT INTO SERVICE.
7. ANY PAINTING OF PIPE BY OTHERS.
8. CONDITIONING OF BUILDING ENVELOPE TO PREVENT WATER FREEZING IN PIPES SHALL BE BY OTHERS BEFORE AND AFTER OCCUPANCY.
9. ANY LABELING OF PIPE BY OTHERS.
10. 6" & 8" PIPE WITH GROOVED ENDS SHOULD BE SCHEDULE 10. 4"-1 1/2" SHOULD BE SCHEDULE 7 EDDY FLOW.
11. PIPE WITH THREADED ENDS SHALL BE SCHEDULE 40.

REVISIONS:



SCALE: Varies



PLOT DATE: 09/15/23 FILE NAME: Town Center 22 draw

DRAWN BY: DB  
DATE: 9-15-23  
JOB #: NC 1403

SHEET NO:  
1 OF 3

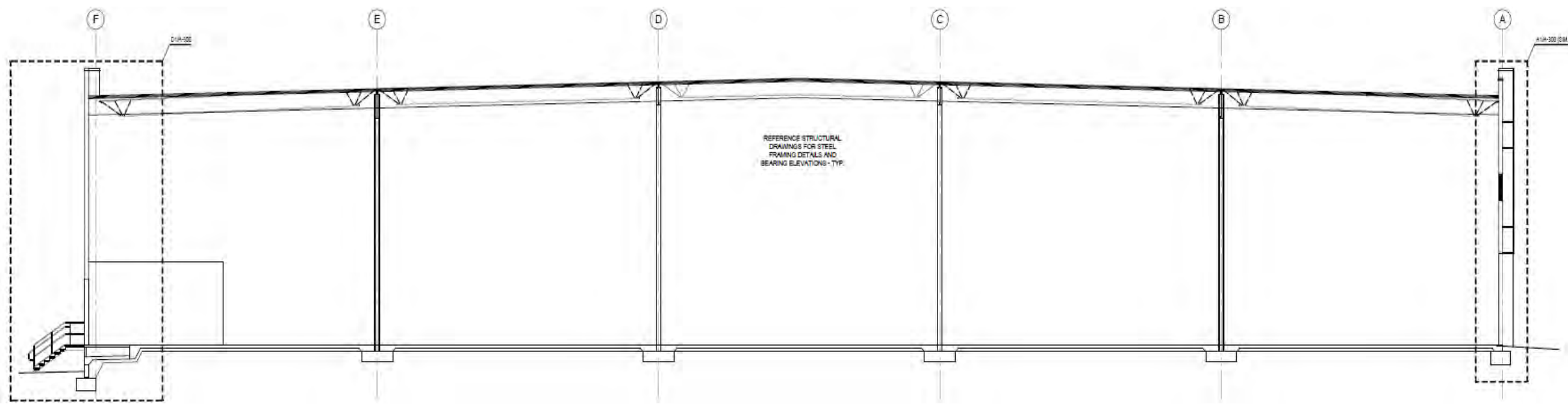
JOB NAME:  
**Town Center 22**  
NE Town Center Blvd, Lee's Summit MO 64064

CONTRACTOR:  
**Fogel-Anderson**  
1212 E 8th St, Kansas City, MO 64106



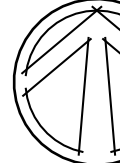
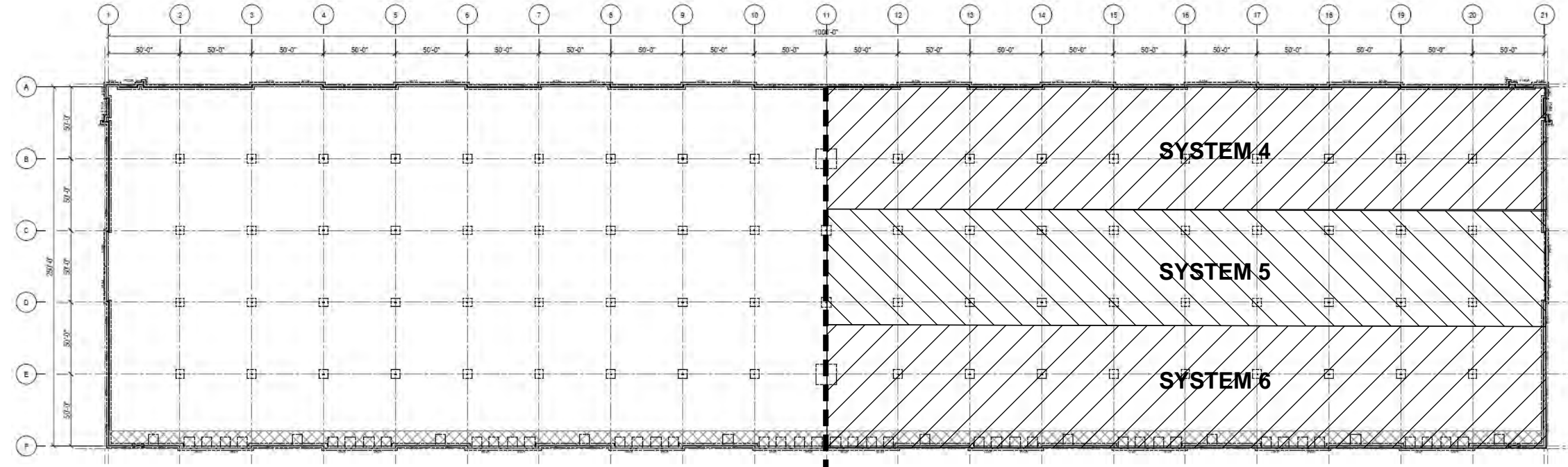






CROSS SECTION A-F

LINE PIPING TO BE 0-8" CENTERLINE FROM TOS  
MAIN PIPING TO BE 2-10" CENTERLINE FROM TOS



FP-1 FP-2

KEY PLAN  
- NOT TO SCALE -

11

12

13

14

15

16

17

18

19

20

21



A

B

C

D

E

F

Hydraulic Information

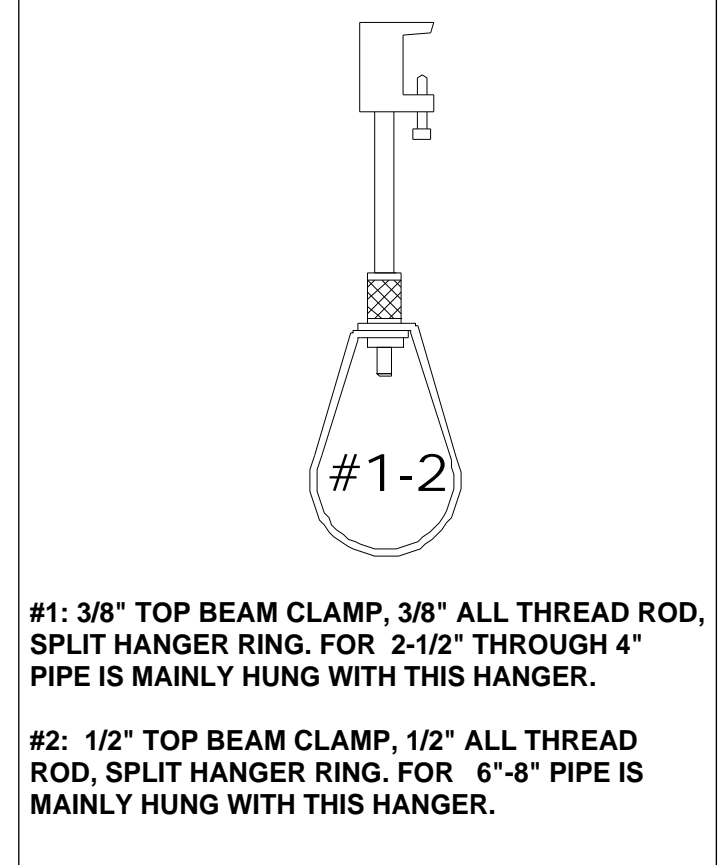
System Area (sq ft)	10,000
Occupancy Classification	ESFR
Min. Required Pressure	100.00 (ESFR)
Total Hose Streams	100.00
Total Head Loss	100.00
Flow	100.00
Location	100.00
Total Pressure Required	100.00
Base of Head Loss	100.00
Base of Head Loss	100.00
Safety Margin (psi)	100.00 (21.00)

Hydraulic Information

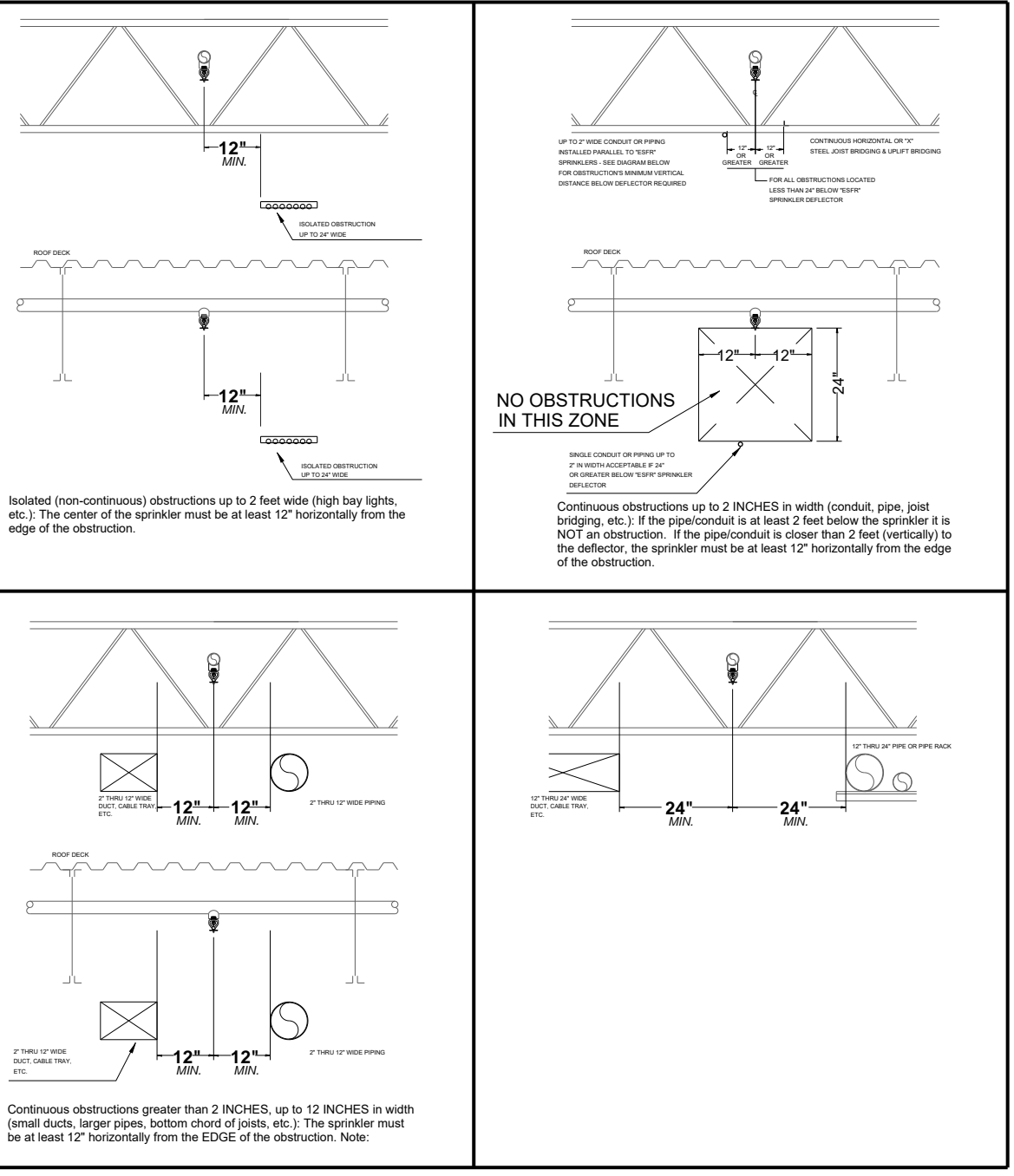
System Area (sq ft)	10,000
Occupancy Classification	ESFR
Min. Required Pressure	100.00 (ESFR)
Total Hose Streams	100.00
Total Head Loss	100.00
Flow	100.00
Location	100.00
Total Pressure Required	100.00
Base of Head Loss	100.00
Base of Head Loss	100.00
Safety Margin (psi)	100.00 (21.00)

Hydraulic Information

System Area (sq ft)	10,000
Occupancy Classification	ESFR
Min. Required Pressure	100.00 (ESFR)
Total Hose Streams	100.00
Total Head Loss	100.00
Flow	100.00
Location	100.00
Total Pressure Required	100.00
Base of Head Loss	100.00
Base of Head Loss	100.00
Safety Margin (psi)	100.00 (21.00)



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For areas with roof deck under 40' - 12 heads discharging at 52 psi.

For areas with roof deck over 40' - 12 heads discharging at 40 psi.

250gpm hose stream allowance.

SEAL:



Sprinkler Legend										
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature
○	Viking	VK503	ESFR	864	16.8	Pendent	1/2"	Quick	Brass	165 °F
●	Viking	VK506	ESFR	486	22.4	Pendent	1"	Quick	Brass	165 °F
Total = 1350										

1. FIRE SPRINKLER DESIGN PER NFPA 13 2016 EDITION.
2. OWNER SHALL MAINTAIN SYSTEM PER NFPA 25.
3. ALL MATERIALS USED SHALL COMPLY WITH SPECIFIED REQUIREMENTS.
4. CONTINUOUS CENTRAL MONITORING OF ALARM COMPONENTS PER NFPA 72 SHALL BE BY OTHERS.
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11. PIPE WITH THREADED ENDS SHALL BE SCHEDULE 40.

REVISIONS:



SCALE: 1/16" = 1'



**Job #:** NC 1403  
**Drawn By:** DB  
**Date:** 9-15-23  
**Sheet No:** 3 OF 3

**Job Name:** Town Center 22  
**Location:** NE Town Center Blvd, Lee's Summit MO 64064  
**Contractor:** Fogel-Anderson  
**Address:** 1212 E 8th St, Kansas City, MO 64106

PLOT DATE: 09/15/23 FILE NAME: Town Center 22 draw