

1 BUILDING SECTION
SCALE: 1/8" = 1'

SYMBOLS	
Symbol	Description
10' - 0"	Ceiling Height
-(+0'0")	Elev. Below Top of Steel
-(+0'0")	Elev. Above Finished Floor
(F1)	Hydraulic Reference Points
(A)	Common Connection Point
(N)	Denotes Hanger Location
(C)	Rise up or down
(EL)	Electrical Light
(OH1)	Room Hazard Classification
(S)	Sprinkler Head Code

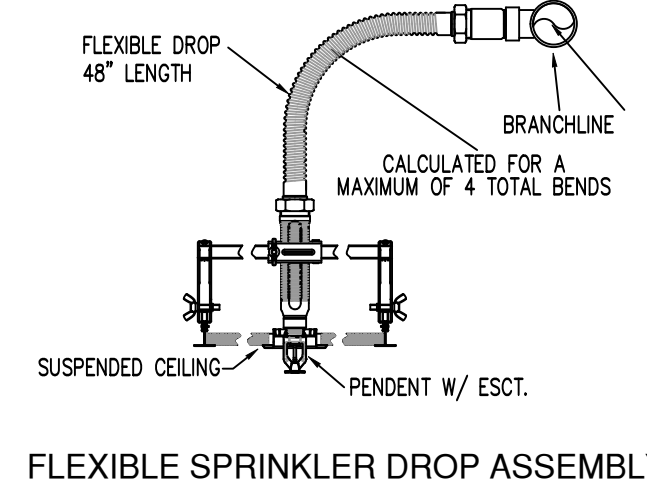
SPACE DYNAMIC LABS
1480 N. 700 EAST
LOGAN, UT, 84321



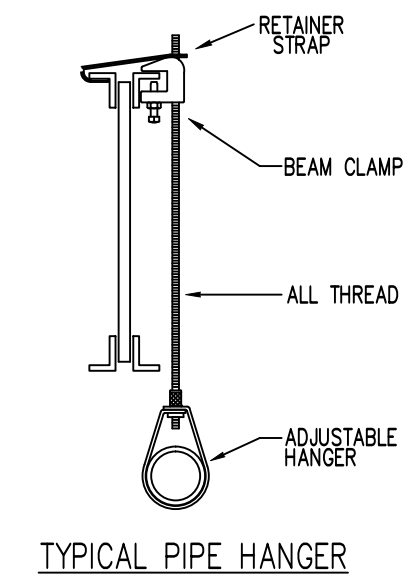
REVISIONS	
1	PLAN RE
2	ADDED S

PROJECT #:
DRAWN BY:
ISSUE DATE:

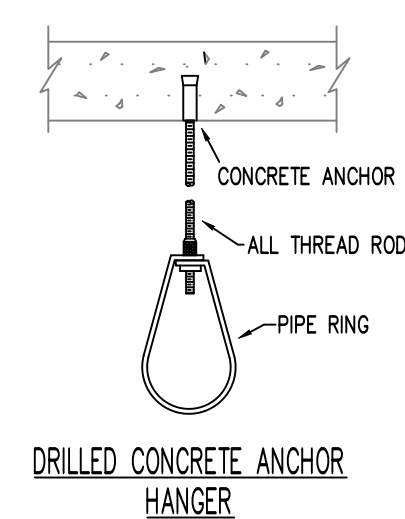
SHEET CONTENTS
FIRE SPRINKLER
PLANS, NOTES AND
DETAILS
F101



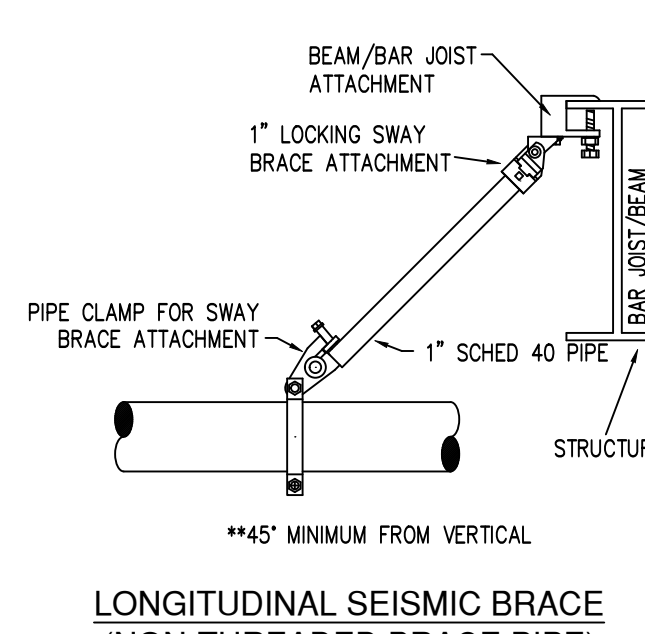
FLEXIBLE SPRINKLER DROP ASSEMBLY



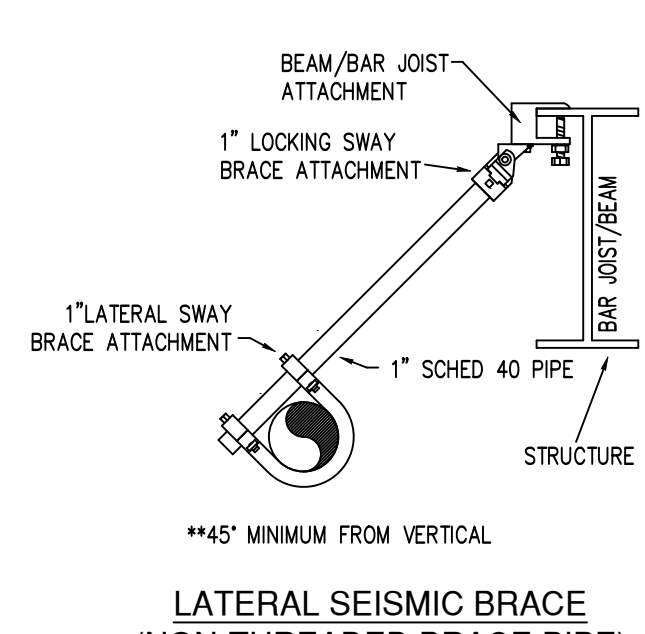
TYPICAL PIPE HANGER



DRILLED CONCRETE ANCHOR HANGER

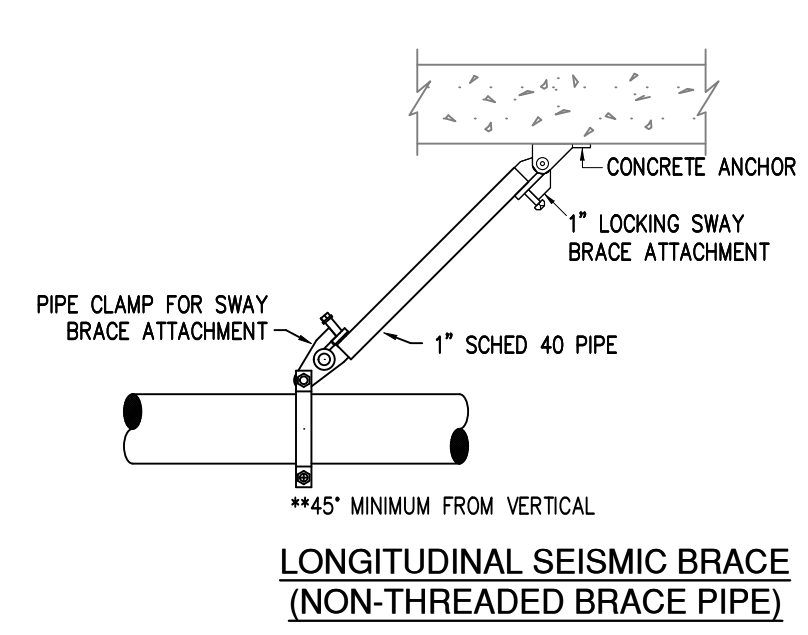


LONGITUDINAL SEISMIC BRACE (NON-THREADED BRACE PIPE)

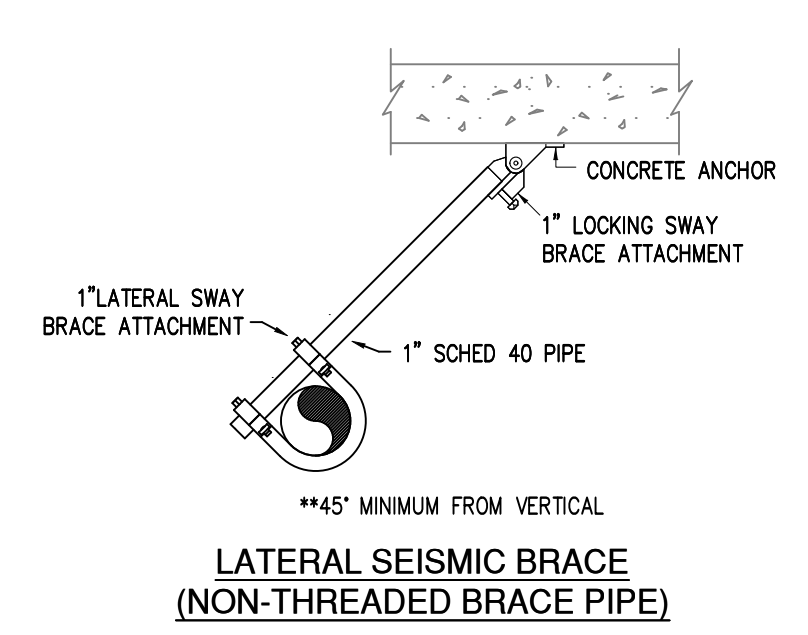


LATERAL SEISMIC BRACE (NON-THREADED BRACE PIPE)

HANGER DETAILS
SCALE: NONE



LONGITUDINAL SEISMIC BRACE (NON-THREADED BRACE PIPE)



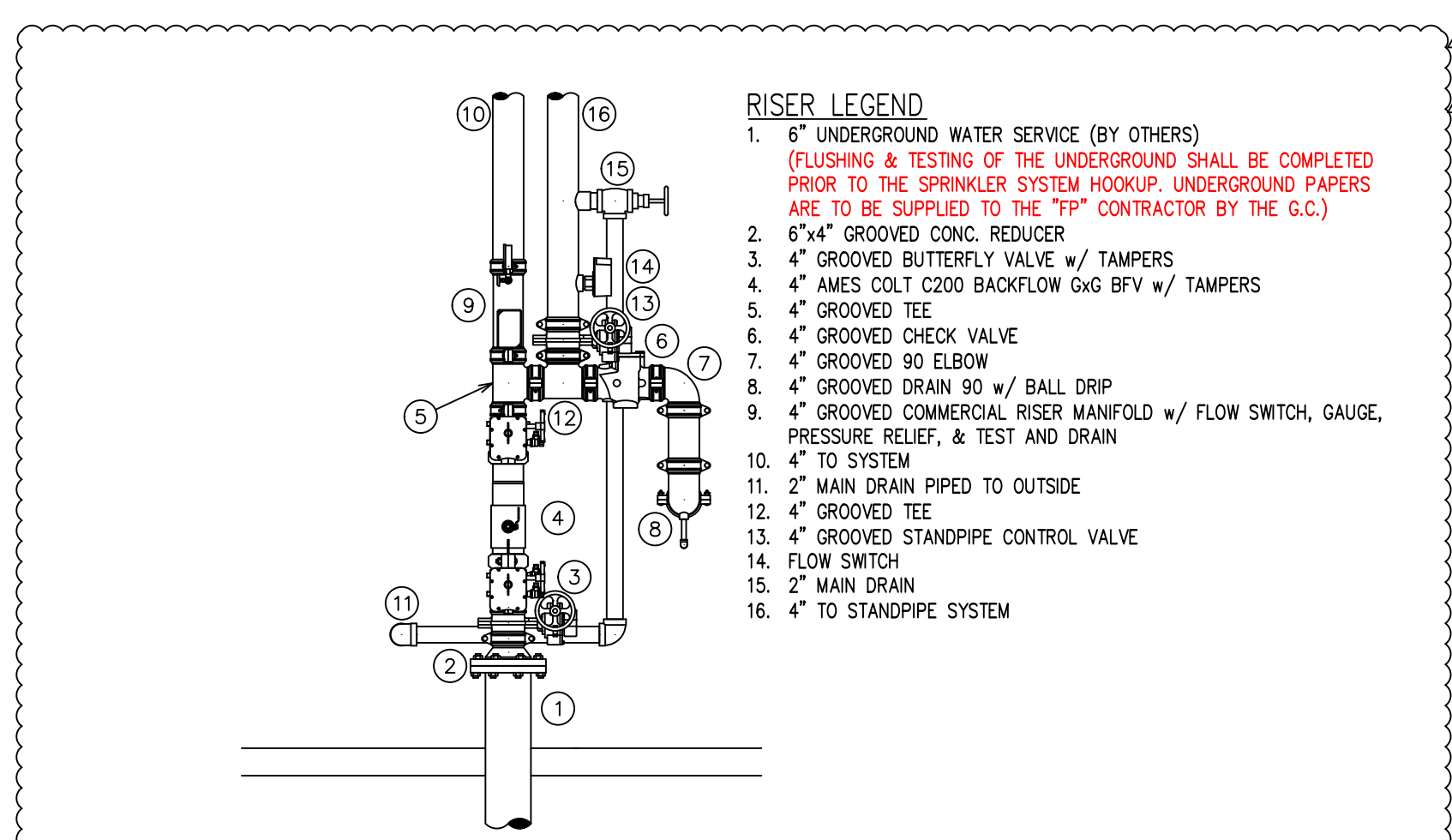
LATERAL SEISMIC BRACE (NON-THREADED BRACE PIPE)

SEISMIC DETAILS
SCALE: NONE

STEEL PIPE EXCEPT THREADED LIGHTWALL	MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)									
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
	NA	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0

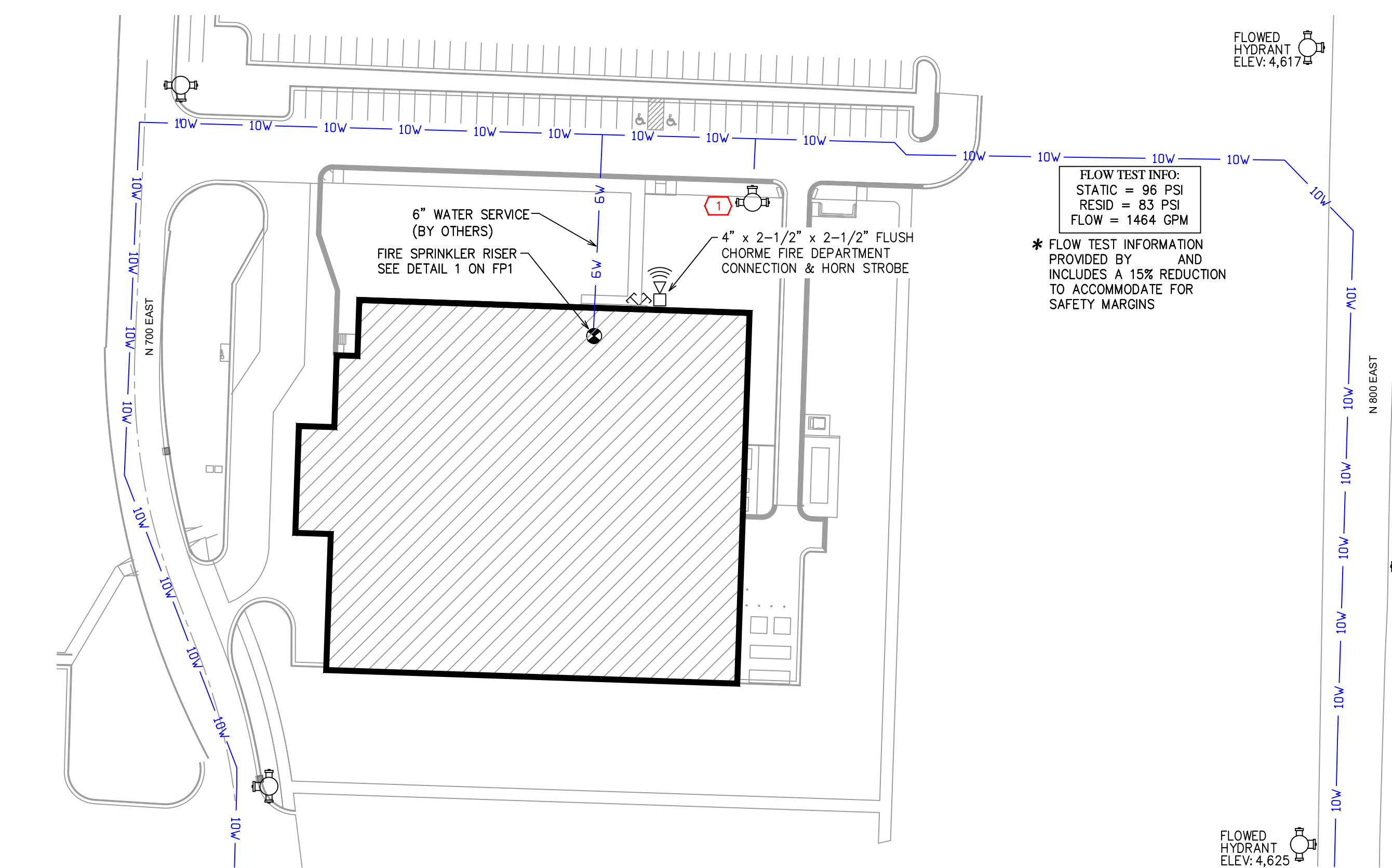
NFPA 13 HANGER SPACING

TOTAL HEAD COUNT							
SYMBOL	MODEL NO.	TYPE	FINISH	K-FACTOR	KIT	QTY	QTY
(S)	VICTAULIC V2708	SEMI-RECESS	WHITE	5.6	1/2"	155	70
(S)	VICTAULIC V2704	EXPOSED	BRASS	5.6	1/2"	200	417
(S)	VICTAULIC V3412	SEMI-RECESS	WHITE	11.2	3/4"	155	23
(S)	VICTAULIC V2709	EXPOSED	BRASS	5.6	1/2"	155	1
(S)	VICTAULIC V3802	CONCEALED	BRASS	5.6	1/2"	155	2
(S)	VICTAULIC V2704	EXPOSED	BRASS	5.6	1/2"	200	17
SPARE SPRINKLERS IN HEAD CABINET (N/A)							2 EA.
TOTAL SPRINKERS IN JOB							530



3 MAIN FIRE SYSTEM RISER
SCALE: 1/2" = 1'

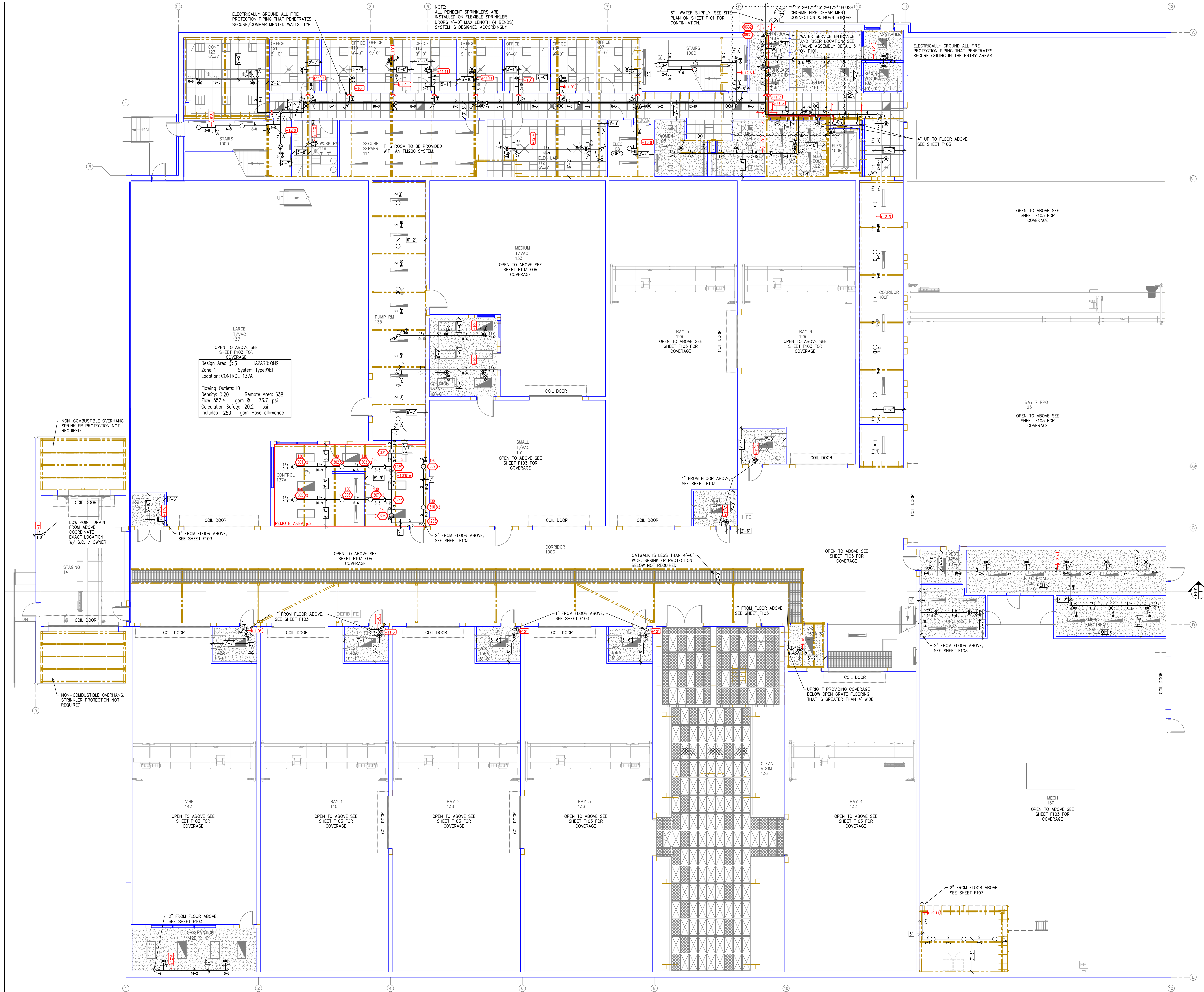
- RISER LEGEND**
- 6" UNDERGROUND WATER SERVICE (BY OTHERS) (FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "TP" CONTRACTOR BY THE G.C.)
 - 6"x4" GROOVED CONIC. REDUCER
 - 4" GROOVED BUTTERFLY VALVE w/ TAMPERS
 - 4" AMES COLT C200 BACKFLOW GxG BFV w/ TAMPERS
 - 4" GROOVED TEE
 - 4" GROOVED CHECK VALVE
 - 4" GROOVED 90 ELBOW
 - 4" GROOVED DRAIN 90 w/ BALL DRIP
 - 4" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, GAUGE, PRESSURE RELIEF, & TEST AND DRAIN
 - 4" TO SYSTEM
 - 2" MAIN DRAIN PIPED TO OUTSIDE
 - 4" GROOVED TEE
 - 4" GROOVED STANDPIPE CONTROL VALVE
 - FLOW SWITCH
 - 2" MAIN DRAIN
 - 4" TO STANDPIPE SYSTEM



SITE PLAN
SCALE: 1" = 50'

GENERAL NOTES

- INTERNATIONAL BUILDING CODE (2018)
 - OCCUPANCY/BUSINESS TYPE B
 - TYPE OF CONSTRUCTION: II-B UNPROTECTED NON-COMBUSTIBLE
 - SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - MAIN LEVEL = 9,055 S.F.
 - LEVEL 2 = 50,140 S.F.
 - ROOF LEVEL = 279 S.F.
 - TOTAL = 59,474 S.F.
 - INSTALLATION STANDARDS:
 - SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2016)
- SPRINKLER PIPE TYPES:
 - 1" BRANCH LINES TO BE BLK STEEL SCHEDULE 40 PIPING WITH THREADED FITTINGS
 - 1/2" THROUGH 4" MAIN & BRANCH LINES TO BE BLK STEEL SCHEDULE 40 PIPING WITH GROOVED FITTINGS
- DESIGN CRITERIA
 - CORRIDORS, VESTIBULES, OFFICES, WORK ROOM, & SIMILAR AREAS ARE DESIGNED TO LIGHT HAZARD
 - MECHANICAL, ELECTRICAL, & ROOMS ROOMS ARE DESIGNED TO ORDINARY HAZARD GROUP 1
 - LAB BAYS DESIGNED TO ORDINARY HAZARD GROUP 2
 - REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3
- NOTES:
 - ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
 - HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2016) - SEE PLAN FOR HANGING REQUIREMENTS
- SYMBOLS USED ON DRAWINGS:
 - (+0'0") PIPE ELEVATION A.F.F.
 - (-0'0") PIPE ELEVATION BELOW B.O.D.
 - (OH1) ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
 - (F1) HYDRAULIC CALCULATION JUNCTION POINT
 - 10' - 0" CEILING HEIGHT
- SCOPE OF WORK:
 - WE WILL BE INSTALLING A WET TYPE FIRE SPRINKLER SYSTEM THAT WILL CONSIST OF 1 ZONE IN THE NEW SPACE DYNAMICS LAB BUILDING AS SHOWN ON THE PLANS PROVIDED. WE WILL ALSO BE INSTALLING A STANDPIPE SYSTEM IN THE ROOF ACCESS STAIR THAT WILL PROVIDED HOSE VALVES AT THE MAIN FLOOR LANDINGS.
 - ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 (2016)



Design Area # 3 HAZARD: OH2
 Zone: 1 System Type: WET
 Location: CONTROL 137A
 Flowing Outlets: 10 Remote Area: 638
 Density: 0.20 Flow 552.4 gpm @ 73.7 psi
 Calculation Safety: 20.2 psi
 Includes 250 gpm Hose allowance

SYMBOLS	
Symbol	Description
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F1	Hydraulic Reference Points
A	Common Connection Point
N	Denotes Hanger Location
C	Rise up or down
EL	Electrical Light
OH1	Room Hazard Classification
OH1	Sprinkler Head Cage

SPACE DYNAMIC LABS
 1480 N. 700 EAST
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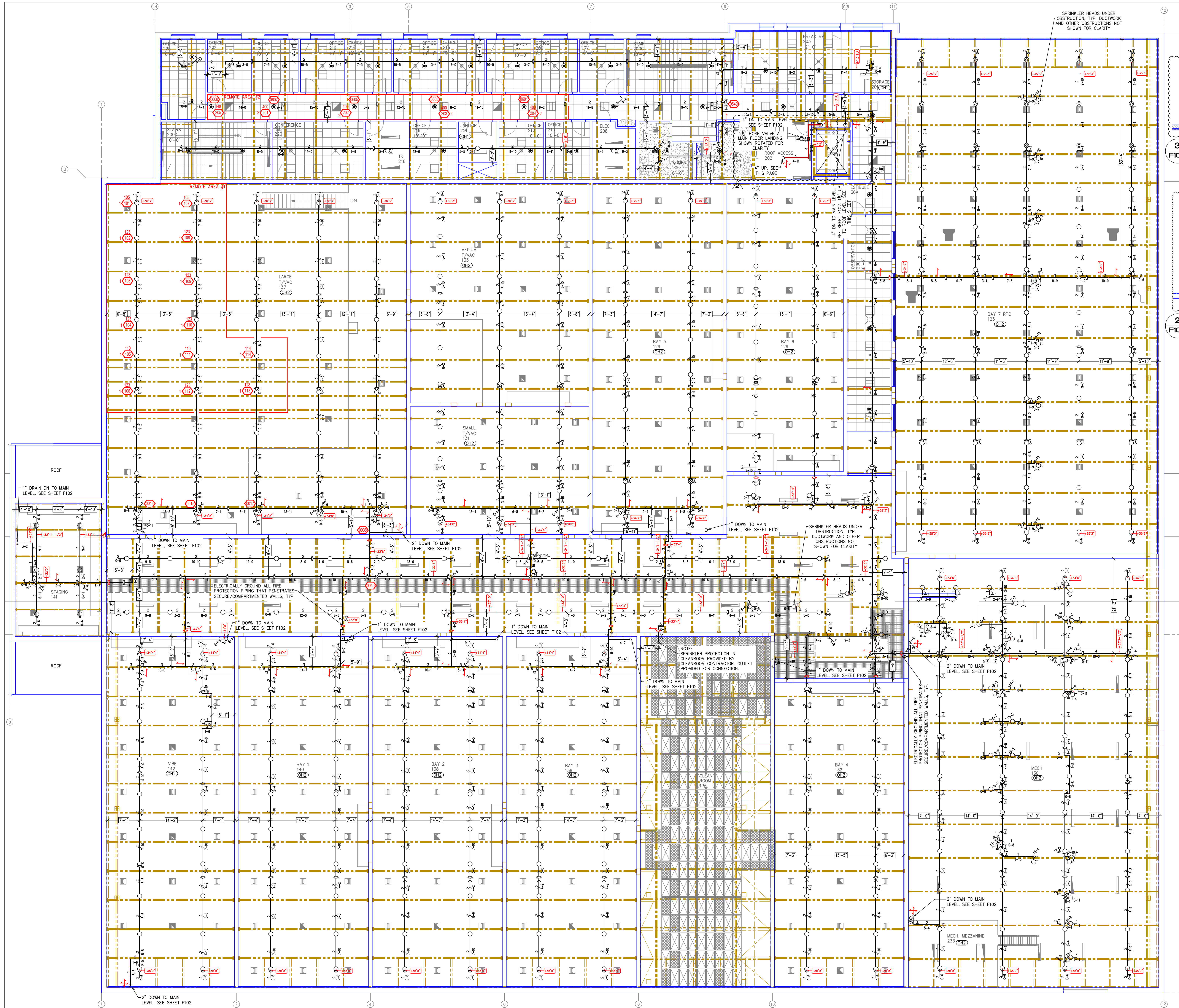
TOTAL HEAD COUNT						
TYPE	SIZE	IN	TYPE	SIZE	IN	QUANTITY
⊙	ICTALIC	1/2	SEM-RECESS	1/2	155	45
⊙	ICTALIC	1/2	EXPOSED	1/2	200	51
⊙	ICTALIC	3/4	SEM-RECESS	3/4	155	12
⊙	ICTALIC	3/4	EXPOSED	3/4	200	2
SPRINKLERS IN HEAD CABINET (N/A)						2 EA
						91

1 FIRE SPRINKLER PLAN MAIN LEVEL
 F102 SCALE: 1/8" = 1'



910 N. SYCAMORE AVENUE - STIOUX FALLS, SD 57110 PHONE: (605)-444-9290

SHEET CONTENTS
 FIRE SPRINKLER
 PLAN MAIN LEVEL
 F102

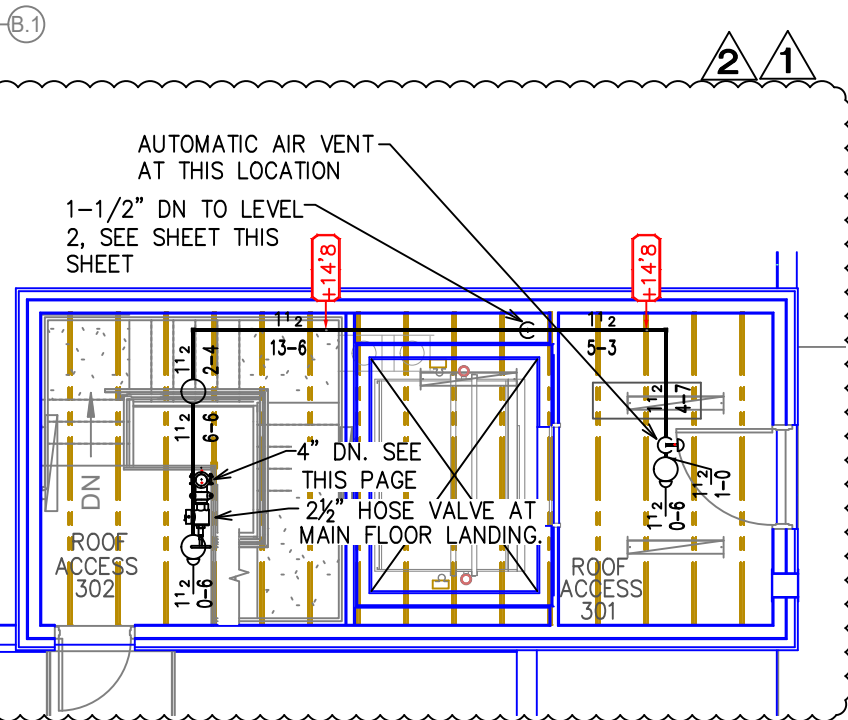


1 FIRE SPRINKLER PLAN LEVEL 2
F103 SCALE: 1/8" = 1'

3 FIRE SPRINKLER PLAN LOW ROOF LEVEL
F103 SCALE: 1/8" = 1'

2 FIRE SPRINKLER PLAN ROOF LEVEL 2
F103 SCALE: 1/8" = 1'

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F1	Hydraulic Reference Points
N	Common Connection Point
A	Denotes Hanger Location
U	Rise up or down
EL	Electrical Light
OH1	Room Hazard Classification
SC	Sprinkler Head Cage



CALC PLACARD

Design Area #1 HAZARD:OH2
Zone 1 System Type:WET
Location: LARGE T/VAC 137
Flowing Outlets:14 Remote Area: 1600
Density: 0.20 Flow 615.9 gpm @ 74 psi
Calculation Safety: 19.4 psi
Includes 250 gpm Hose allowance

Design Area #2 HAZARD:LIGHT
Zone 1 System Type:WET
Location: 2ND FLOOR CORRIDOR
Flowing Outlets:5 Remote Area: 457
Density: 0.20 Flow 295.3 gpm @ 59.9 psi
Calculation Safety: 35.4 psi
Includes 100 gpm Hose allowance

TOTAL HEAD COUNT		
SPRINKLER	QTY	TYPE
VICTALIC 12708 SEMI-RECESSED	25	155 WHITE
VICTALIC 12704 EXPOSED	28	155 N/A
VICTALIC 12702 CONCEALED	2	155 WHITE
VICTALIC 12704 EXPOSED	15	200 N/A
VICTALIC 12704 EXPOSED	2	200 N/A
TOTAL HEAD COUNT: 98		

SPACE DYNAMIC LABS

1480 N. 700 EAST

LOGAN, UT, 84321



SHEET CONTENTS

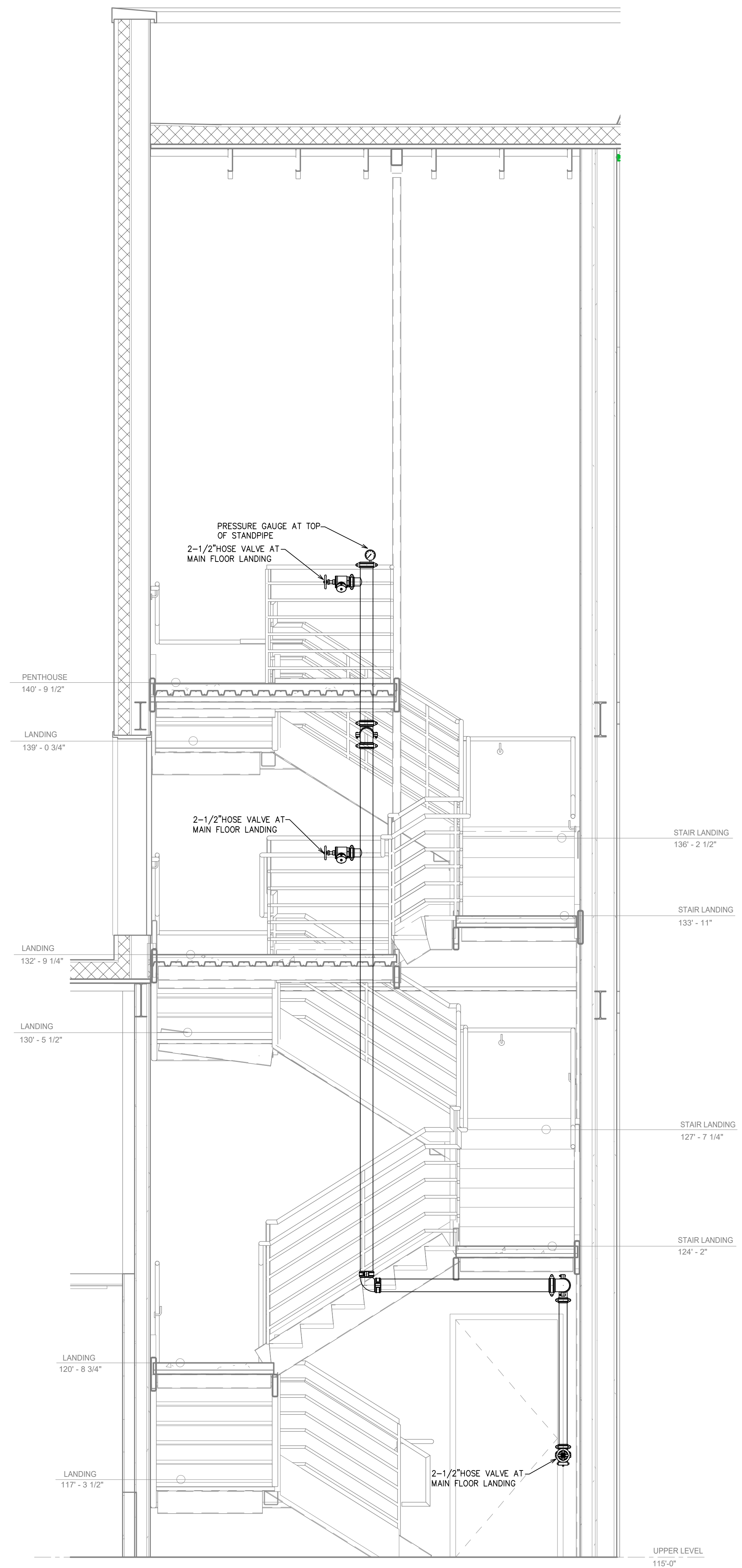
FIRE SPRINKLER PLAN UPPER LEVEL

F103

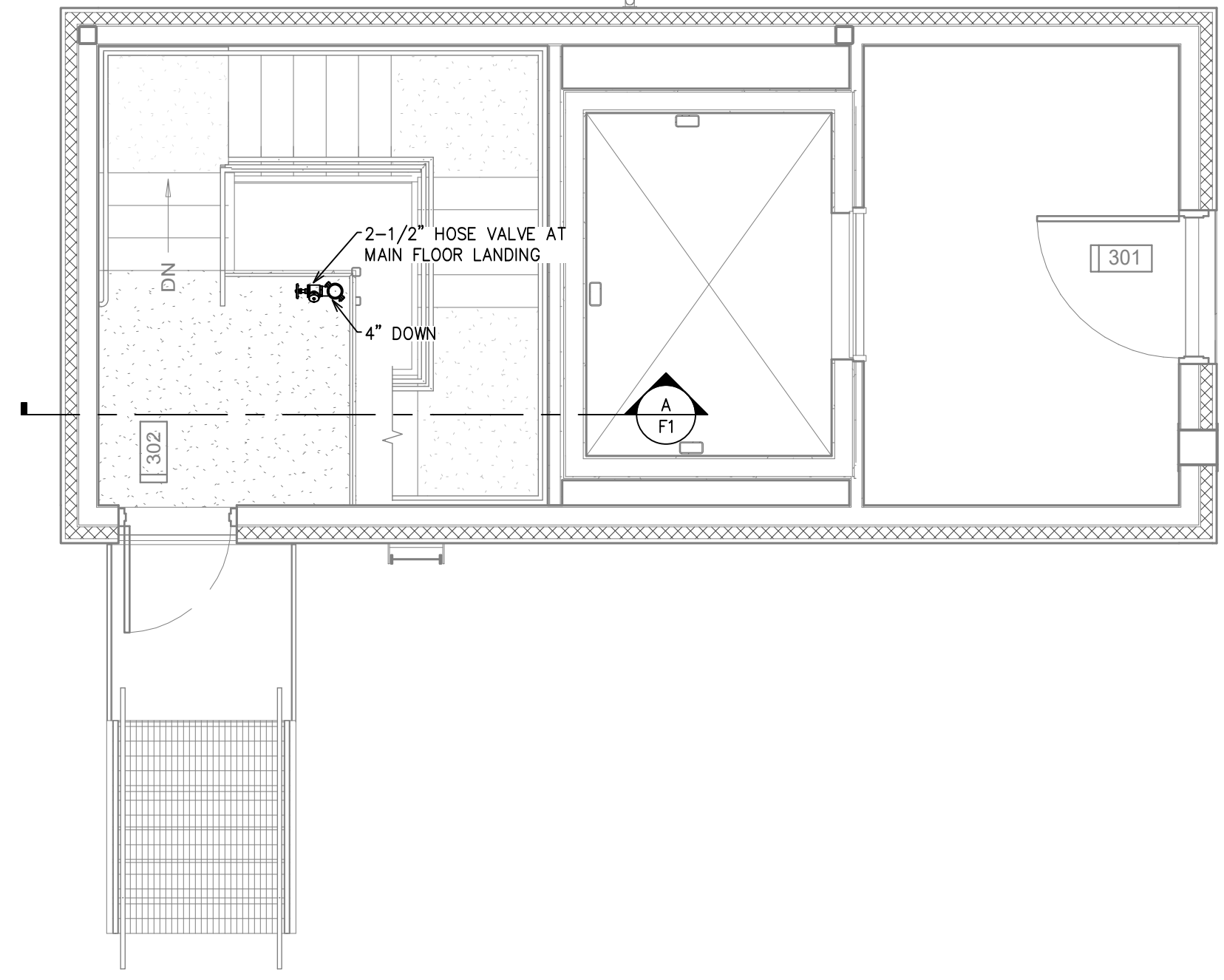
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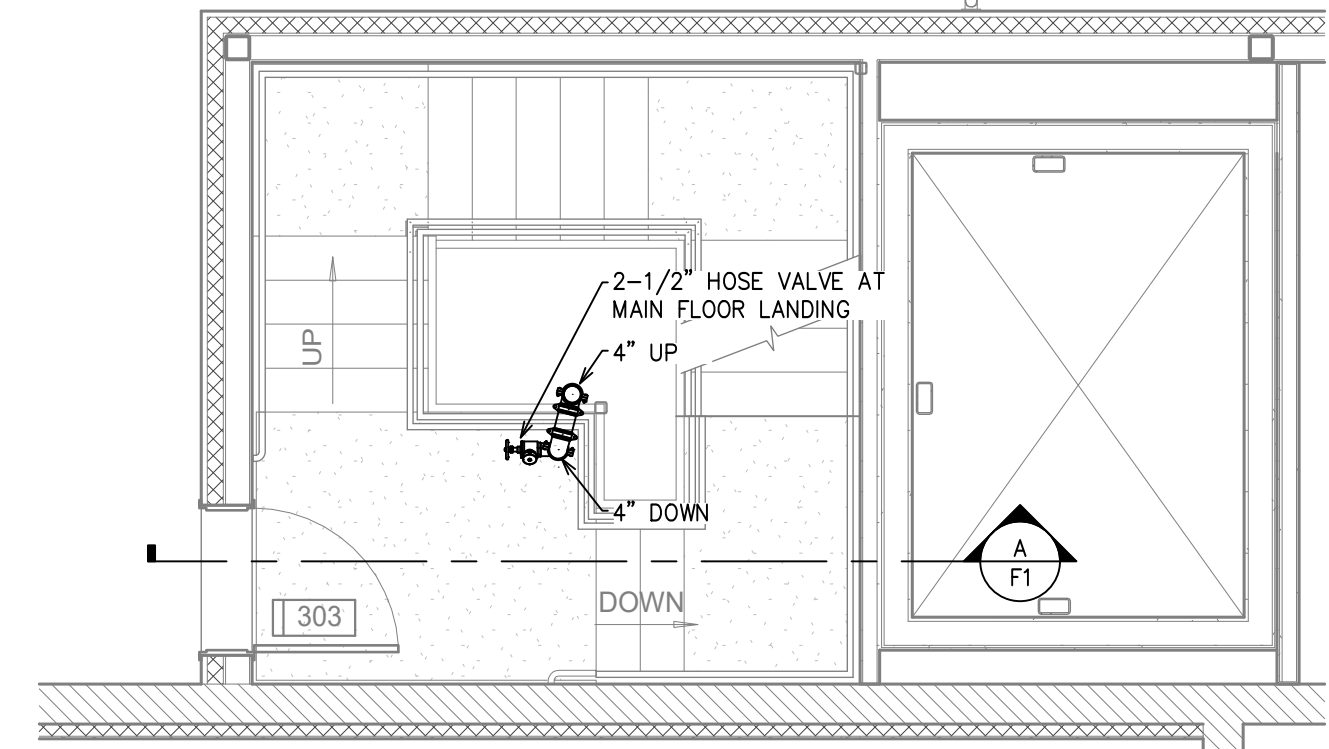
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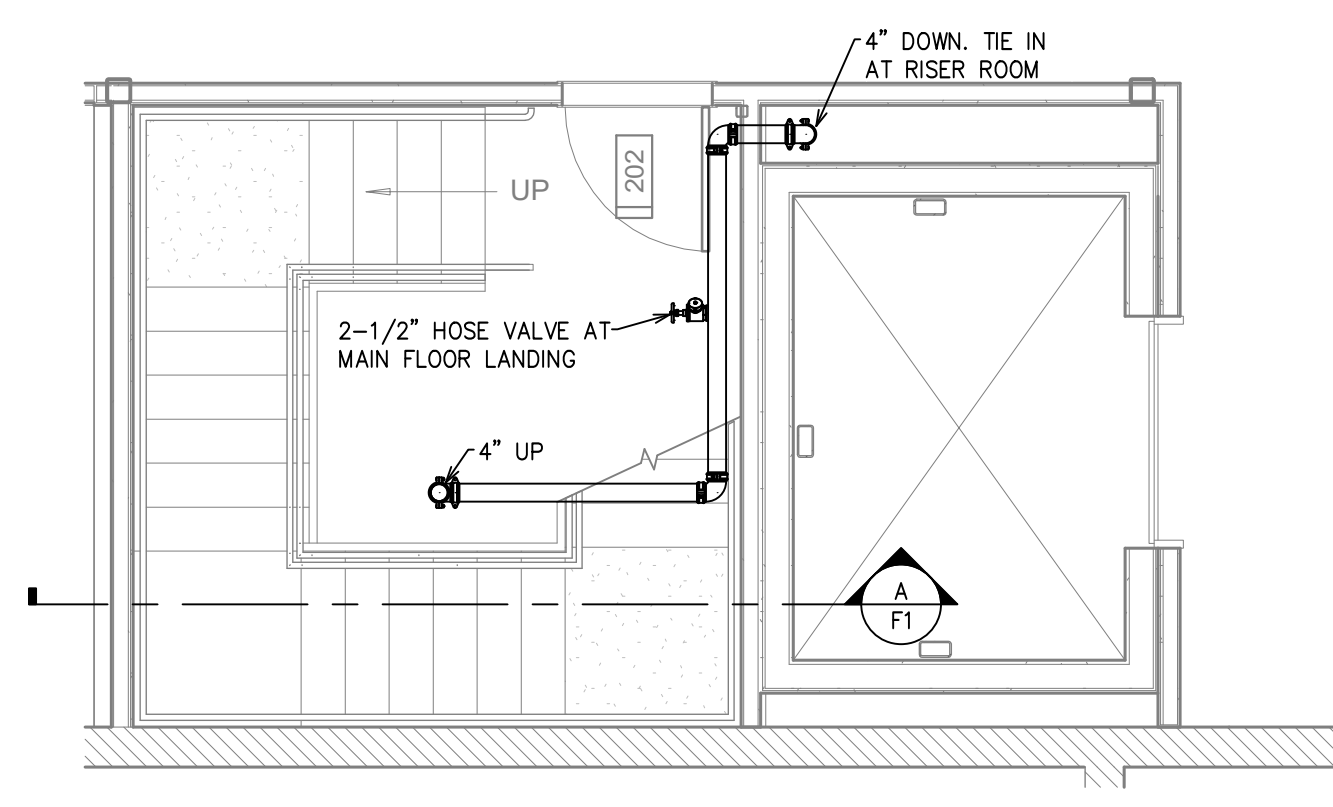
A ROOF STAIR SECTION
 F1 SCALE: 1/2" = 1'



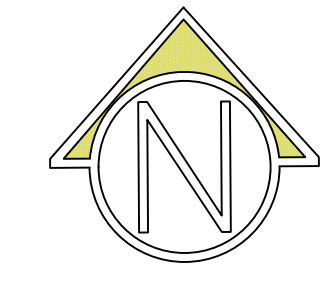
3 ROOF LEVEL ELEVATOR PLAN
 F1 SCALE: 1/4" = 1'



2 ROOF ACCESS STAIR LOW ROOF
 F1 SCALE: 1/4" = 1'



1 ROOF ACCESS STAIR LEVEL 2
 F1 SCALE: 1/4" = 1'



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SHEET CONTENTS	STANDPIPE PLAN	F104
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