

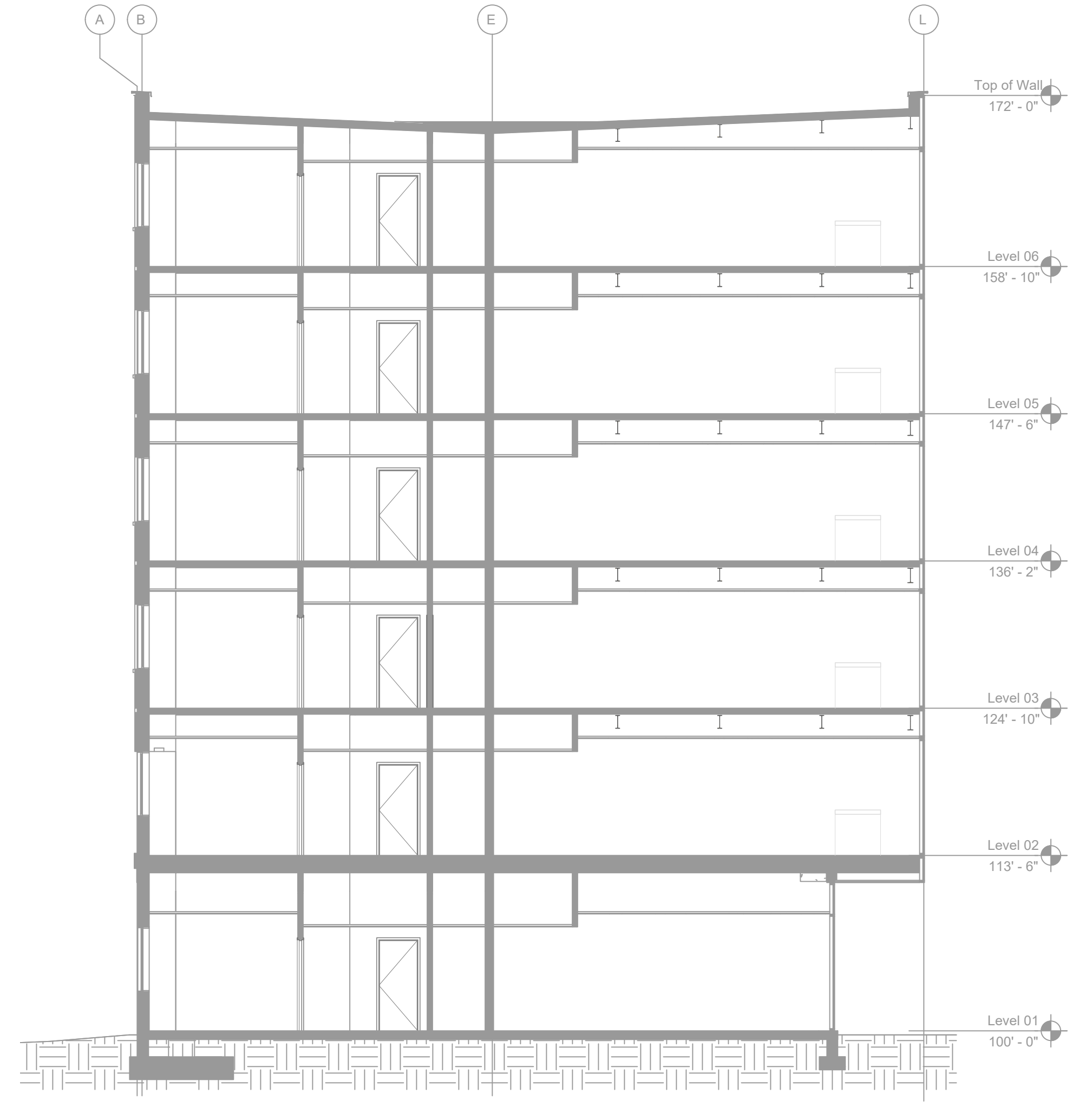
CALC PLACARD

Design Area #.02 HAZARD:OHT1
Zone: 1 System Type:WET
Location: MECHANICAL

Flowing Outlets:10
Density: 0.15 Remote Area: 1020
Flow 476.5 gpm @ 59.4 psi
Calculation Safety: 3.2 psi
Includes 250 gpm Hose allowance

TOTAL HEAD COUNT

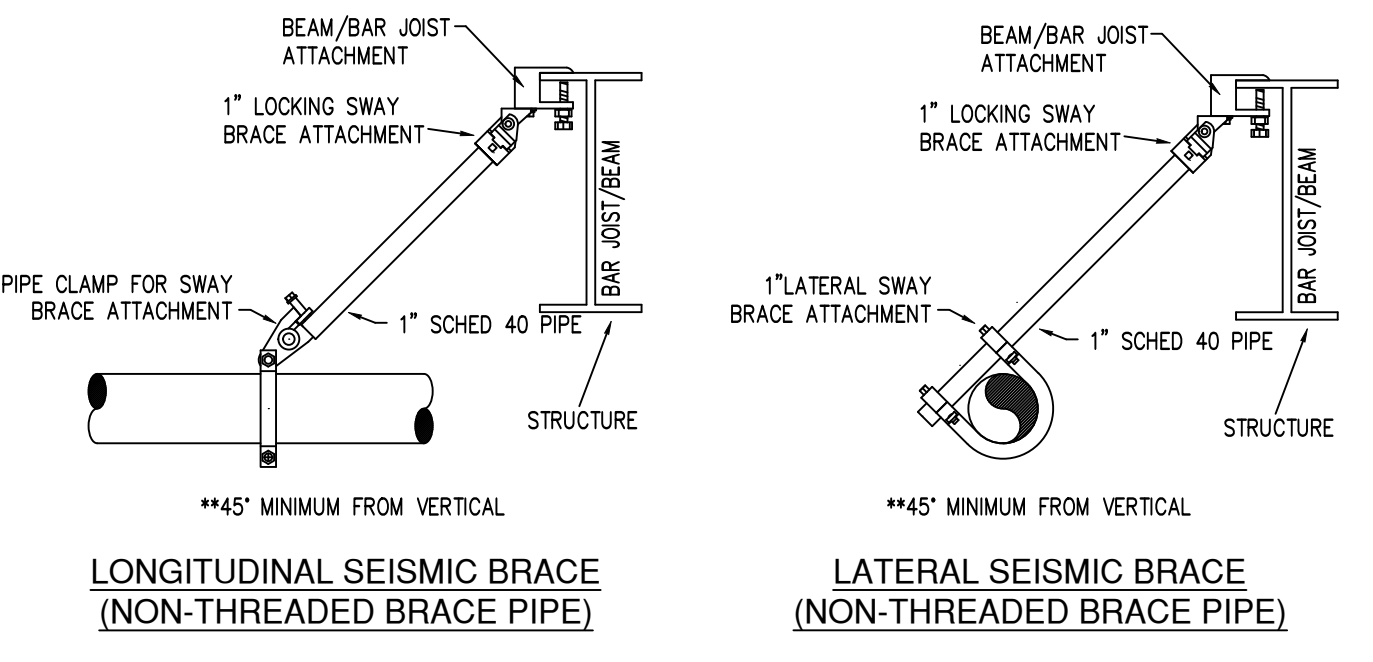
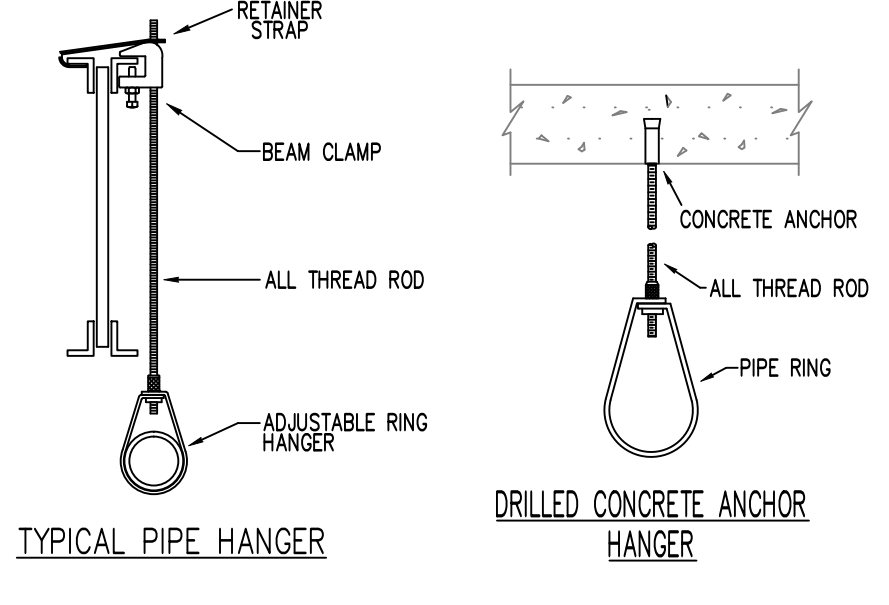
SYMBOL	MODEL NO.	TYPE	HEAD	1/2" RISE	WT	TEMP	ORGT	QTY
○	VICTAULIC V2704	UPRIGHT	BRASS	5.60	1/2"	200	NONE	45
○	VICTAULIC V2704	SPRNG	BRASS	5.60	1/2"	200	NONE	20
○	VICTAULIC V3406	PENDENT	WHITE	8.00	3/4"	286	WHITE	4
○	VICTAULIC V2710	SIWALL	BRASS	5.60	1/2"	200	NONE	1
SPARE SPRINKLERS IN HEAD CABINET (MIN)								2 EA.
TOTAL SPRINKLERS THIS FLOOR								70



MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)

	NOMINAL PIPE SIZE (N.)							
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
STEEL PIPE EXCEPT THREADED LIGHTWALL	NA	12-0	12-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	NA	12-0	12-0	12-0	12-0	NA	NA	NA
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	NA	NA
BLAZEMASTER CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	NA

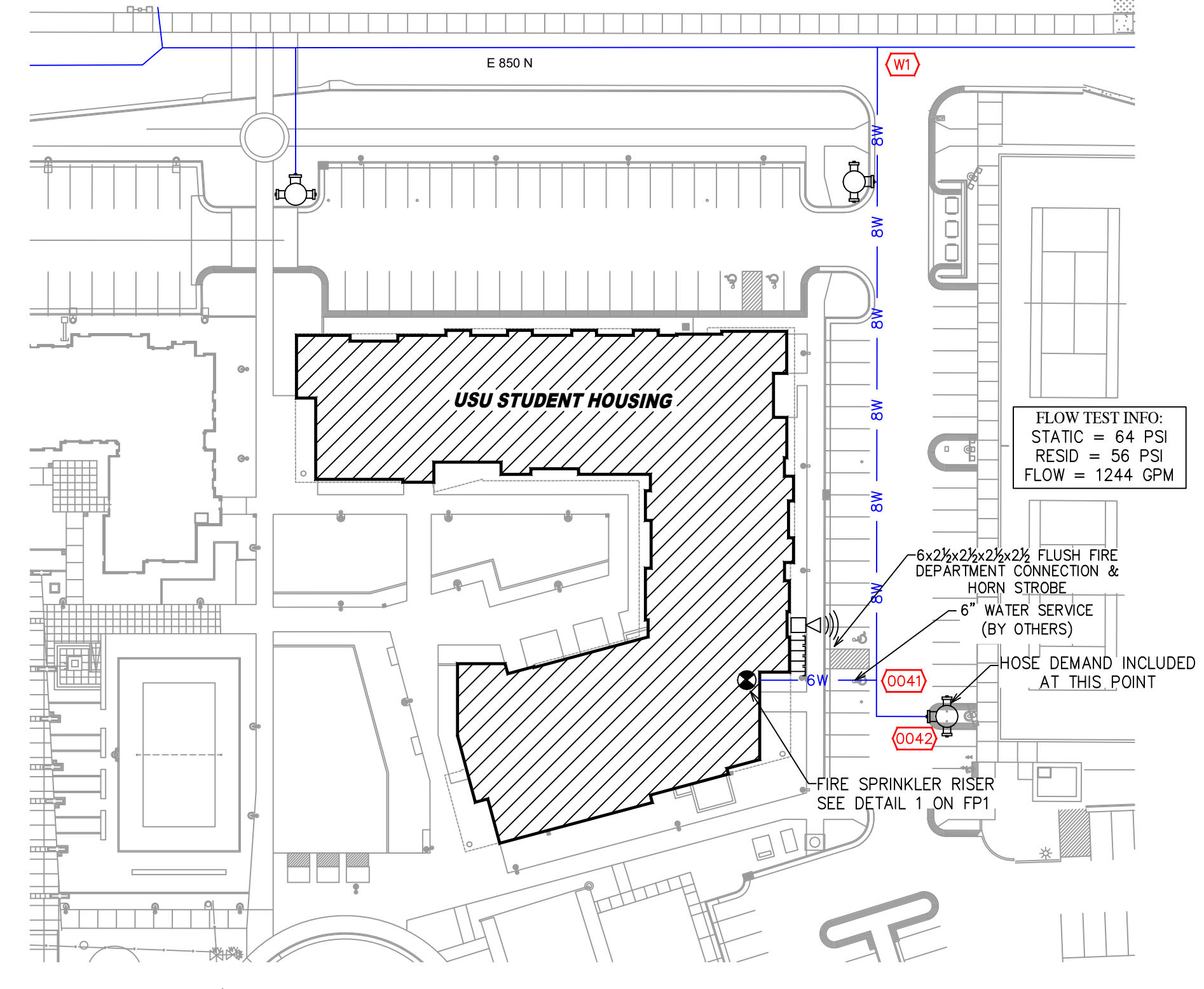
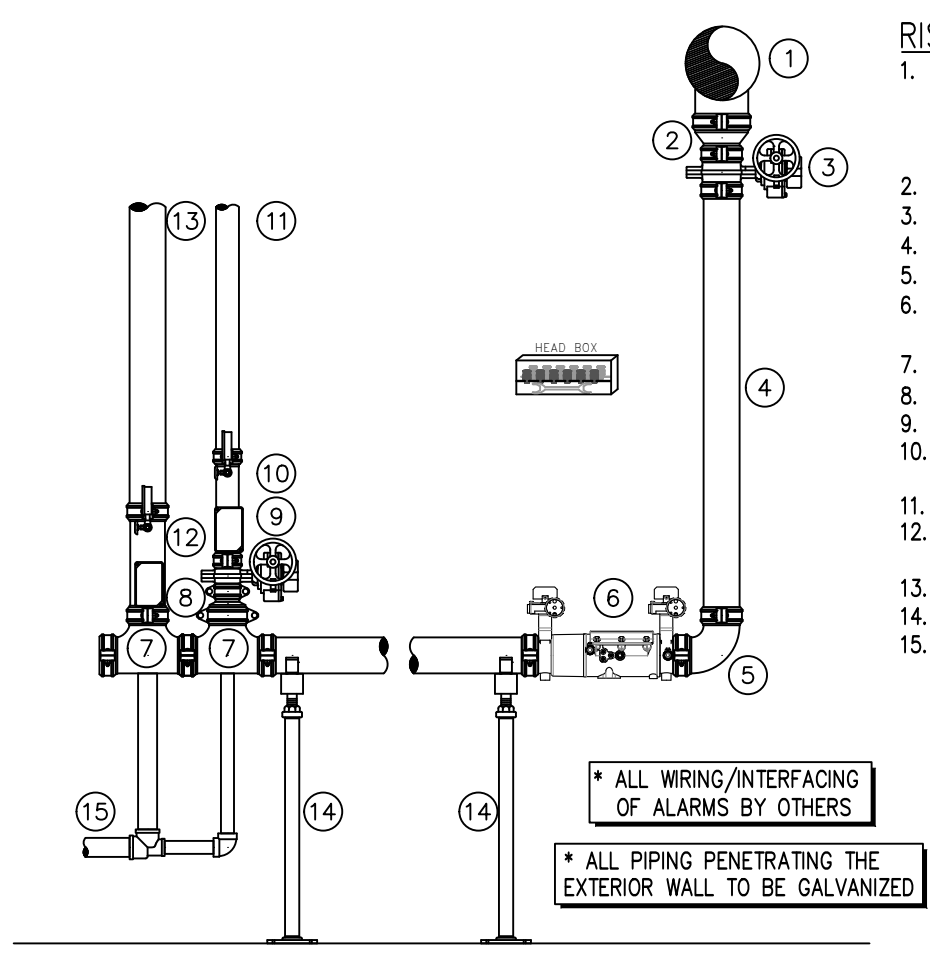
NFPA 13 HANGER SPACING



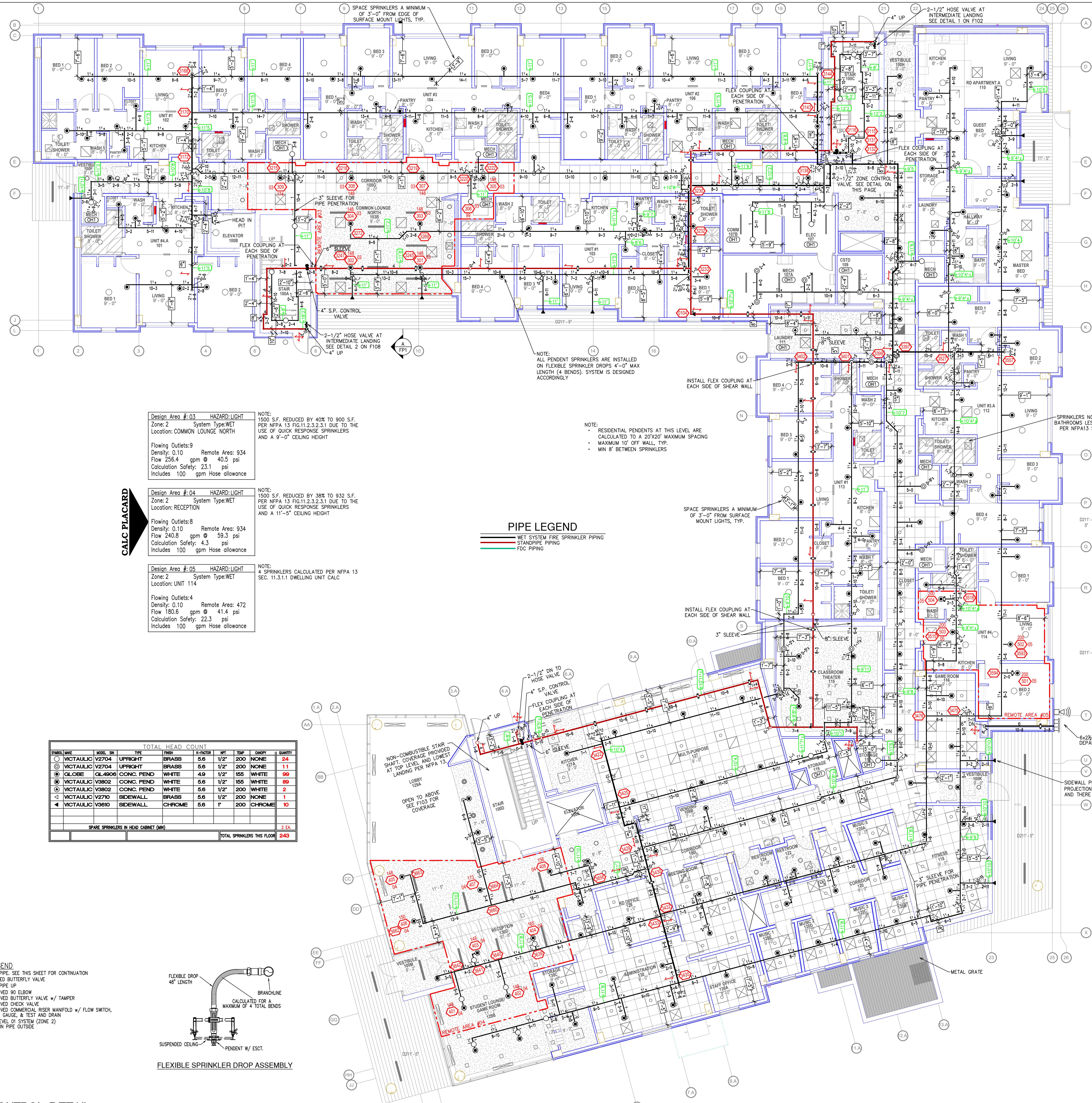
MANUAL WET STANDPIPE

LOCATION: LEVEL 06 STAIR A,C,D
REQUIRED FLOW: 1000GPM
OUTLET PSI: 100
REQUIRED INLET PSI: 154

STANDPIPE PLACARD



- GENERAL NOTES**
- INTERNATIONAL BUILDING CODE (2018)
 - OCCUPANCY: RESIDENTIAL TYPE R-2; DORMITORY
 - TYPE OF CONSTRUCTION: I-A (FIRE RESISTIVE, NON-COMBUSTIBLE CONSTRUCTION) LEVEL 00 AND LEVEL 01; II-B (UNPROTECTED, NON-COMBUSTIBLE CONSTRUCTION) LEVEL 02 THRU LEVEL 02
 - SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - LEVEL 00 = 5,859 S.F.
 - LEVEL 01 = 21,807 S.F.
 - LEVEL 02 = 20,850 S.F.
 - LEVEL 03 = 20,370 S.F.
 - LEVEL 04 = 20,370 S.F.
 - LEVEL 05 = 20,370 S.F.
 - LEVEL 06 = 20,370 S.F.
 - TOTAL = 123,396 S.F.
 - INSTALLATION STANDARDS: SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13, NFPA-114 (2016)
 - SPRINKLER PIPE TYPES:
 - WET-
 - 2.1. 1" THROUGH 2" BRANCH LINES TO BE BLK SCHEDULE 40 PIPING WITH THREADED FITTINGS
 - 2.2. 2 1/2" THROUGH 6" MAINS TO BE BLK SCHEDULE 40 PIPING WITH GROOVED FITTINGS
 - DESIGN CRITERIA
 - CORRIDORS, LOBBIES STAIRWELLS, AND SIMILAR AREAS DESIGNED TO LIGHT HAZARD
 - MECHANICAL, ELECTRICAL, AND STORAGE AREAS DESIGNED TO ORDINARY HAZARD 1
 - RESIDENTIAL UNITS ARE DESIGNED TO NFPA 13 CRITERIA FOR RESIDENTIAL OCCUPANCIES
 - 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:
 - 6'-0" PIPE ELEVATION A.F.F.
 - +12" PIPE ELEVATION BELOW B.O.D.
 - OHT ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
 - FP HYDRAULIC CALCULATION JUNCTION POINT
 - 8'-0" CEILING HEIGHT
 - SCOPE OF WORK:
 - WE WILL BE INSTALLING A WET TYPE FIRE SPRINKLER SYSTEM IN THE NEW USU STUDENT HOUSING BUILDING. THE SYSTEM WILL CONSIST OF 7 ZONES ONE OF WHICH WILL BE FED FROM THE RISER ROOM. THE OTHERS WILL BE FED OFF OF A COMBINED STANDPIPE IN THE N.E. STAIR TOWER. THE CONTROL VALVE FOR EACH ZONE WILL BE LOCATED AT THE INTERMEDIATE LANDINGS AS SHOWN ON THE PLANS. THE STANDPIPE CONTROL VALVES WILL ALSO BE LOCATED AT THE INTERMEDIATE LANDINGS.
 - ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 (2016)



SYMBOLS	
Symbol	Description
8' - 0"	Ceiling Height
-10'0"	Elev. Below Top of Steel
+0'0"	Elev. Above Finished Floor
F1	Hydraulic Reference Points
⊙	Common Connection Point
⊗	Denotes Hanger Location
↕	Rise up or down
⊕	Electrical Light
OHT	Room Hazard Classification
⊙	Sprinkler Head Code

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 1050 E. 800 NORTH
 LOGAN, UT, 84321

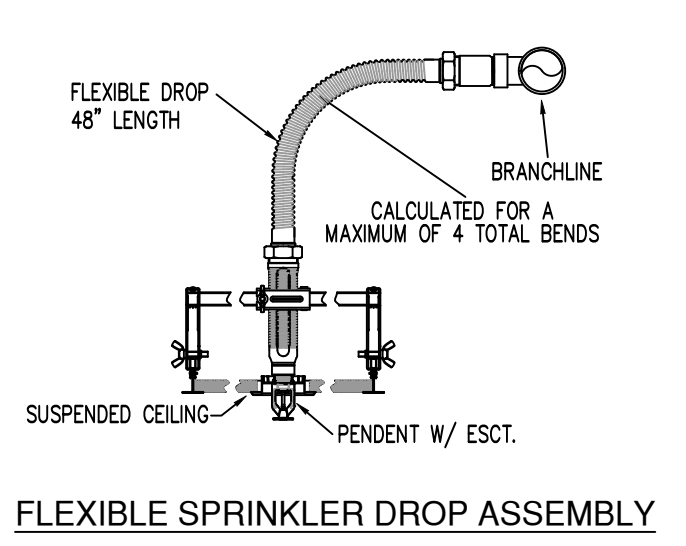
Design Area #: 03 HAZARD: LIGHT
 Zone: 2 System Type: WET
 Location: COMMON LOUNGE NORTH
 Flowing Outlets: 9 Remote Area: 934
 Density: 0.10 Flow 256.4 gpm @ 40.5 psi
 Calculation Safety: 23.1 psi
 Includes 100 gpm Hose allowance

Design Area #: 04 HAZARD: LIGHT
 Zone: 2 System Type: WET
 Location: RECEPTION
 Flowing Outlets: 8 Remote Area: 934
 Density: 0.10 Flow 240.8 gpm @ 59.3 psi
 Calculation Safety: 4.3 psi
 Includes 100 gpm Hose allowance

Design Area #: 05 HAZARD: LIGHT
 Zone: 2 System Type: WET
 Location: UNIT 114
 Flowing Outlets: 4 Remote Area: 472
 Density: 0.10 Flow 180.8 gpm @ 41.4 psi
 Calculation Safety: 22.3 psi
 Includes 100 gpm Hose allowance

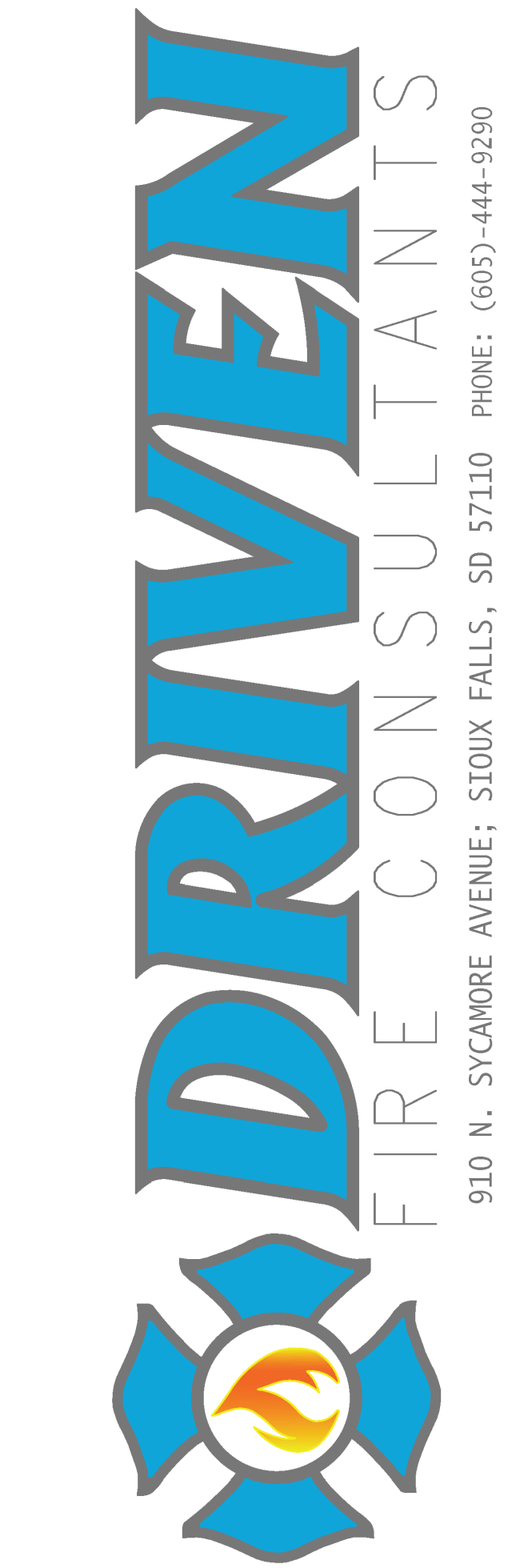
TOTAL HEAD COUNT									
SYMBOL	MODEL	TYPE	FRASS	K-FACTOR	WT	TEMP	ORNGY	QUANTITY	
⊙	VICTAULIC V2704	UPRIGHT	BRASS	5.6	1/2"	200	NONE	24	
⊙	VICTAULIC V2704	UPRIGHT	BRASS	5.6	1/2"	200	NONE	11	
⊙	GLOBE QL4906	CONC. PEND	WHITE	4.9	1/2"	155	WHITE	99	
⊙	VICTAULIC V3802	CONC. PEND	WHITE	5.6	1/2"	155	WHITE	89	
⊙	VICTAULIC V3802	CONC. PEND	WHITE	5.6	1/2"	200	WHITE	2	
⊙	VICTAULIC V2710	SIDEWALL	BRASS	5.6	1/2"	200	NONE	1	
⊙	VICTAULIC V3610	SIDEWALL	CHROME	5.6	1"	200	CHROME	10	
SPARE SPRINKLERS IN HEAD CABINET (MIN)									2 EA.
TOTAL SPRINKLERS THIS FLOOR									243

- RISER LEGEND**
- 4" STANDPIPE SEE THIS SHEET FOR CONTINUATION
 - 4" GROOVED BUTTERFLY VALVE
 - 4" STANDPIPE UP
 - 2 1/2" GROOVED 90 ELBOW
 - 2 1/2" GROOVED BUTTERFLY VALVE w/ TAMPER
 - 2 1/2" GROOVED CHECK VALVE
 - 2 1/2" GROOVED COMMERCIAL RISER MANFOLD w/ FLOW SWITCH, PRESSURE GAUGE, & TEST AND DRAIN
 - 2 1/2" TO LEVEL 01 SYSTEM (ZONE 2)
 - MAIN DRAIN PIPE OUTSIDE

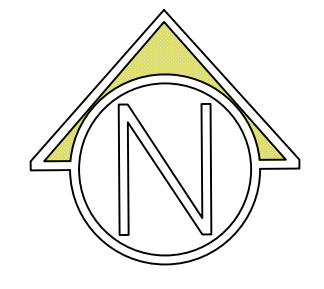


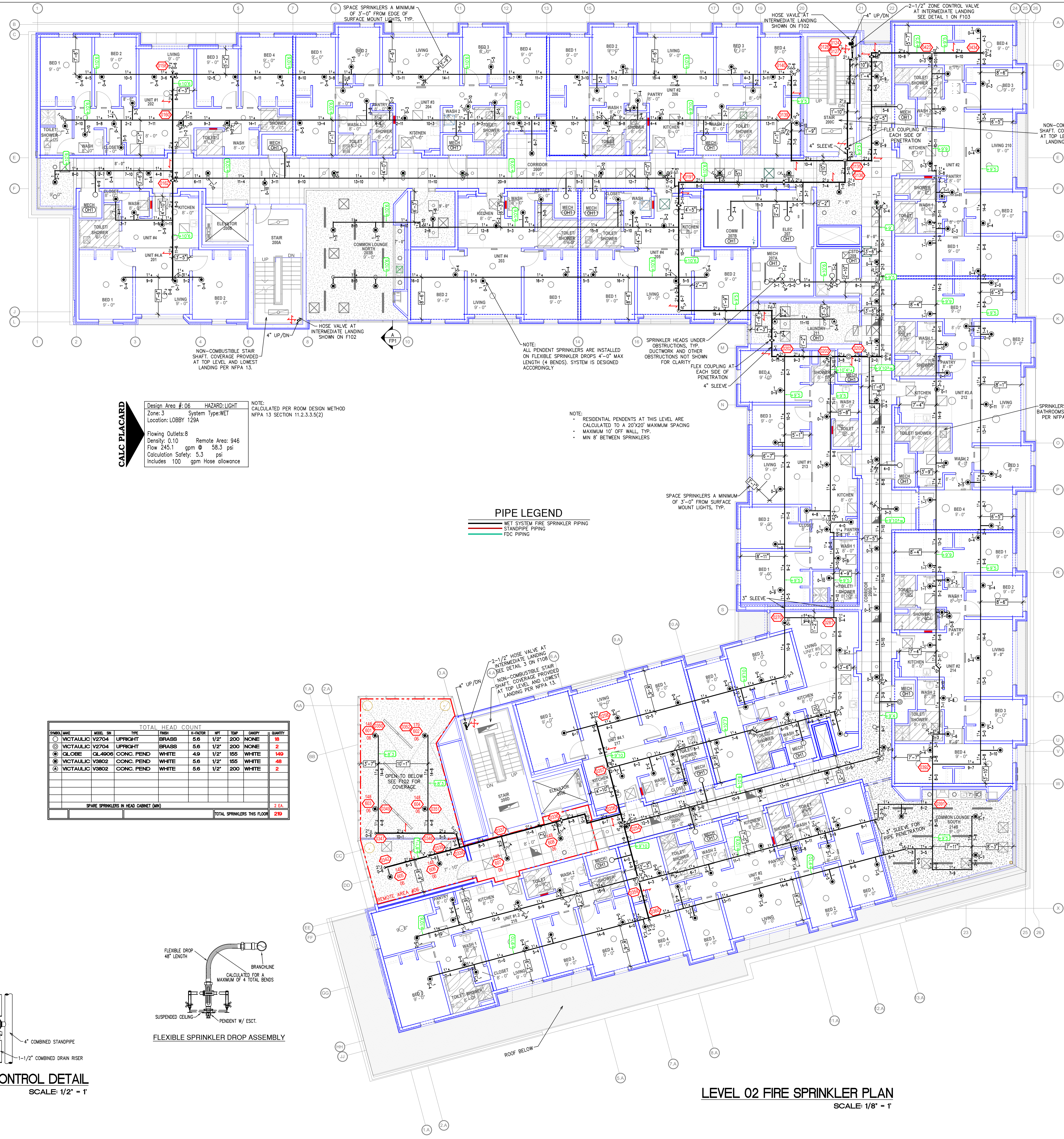
1 LEVEL 01 ZONE CONTROL DETAIL
 F102 SCALE: 1/2" = 1'

LEVEL 01 FIRE SPRINKLER PLAN
 SCALE: 1/8" = 1'



SHEET CONTENTS
 FIRE SPRINKLER
 PLANS, NOTES AND
 DETAILS
 F102





SYMBOLS	
Symbol	Description
8' - 0"	Ceiling Height
-10'0"	Elev. Below Top of Steel
+0'0"	Elev. Above Finished Floor
F1	Hydraulic Reference Points
A	Common Connection Point
⊗	Denotes Hanger Location
↕	Rise up or down
⊕	Electrical Light
OHT	Room Hazard Classification
⊗	Sprinkler Head Code

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 LOGAN, UT, 84321

CALC PLACARD

Design Area #: 06 HAZARD LIGHT
 Zone: 3 System Type: WET
 Location: LOBBY 129A

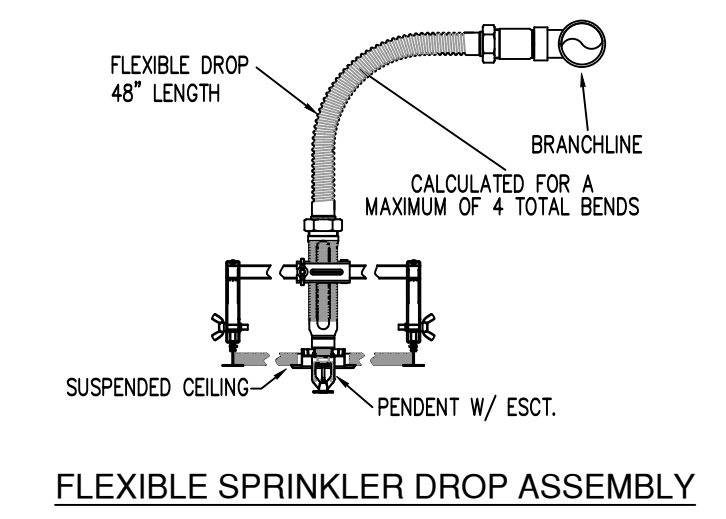
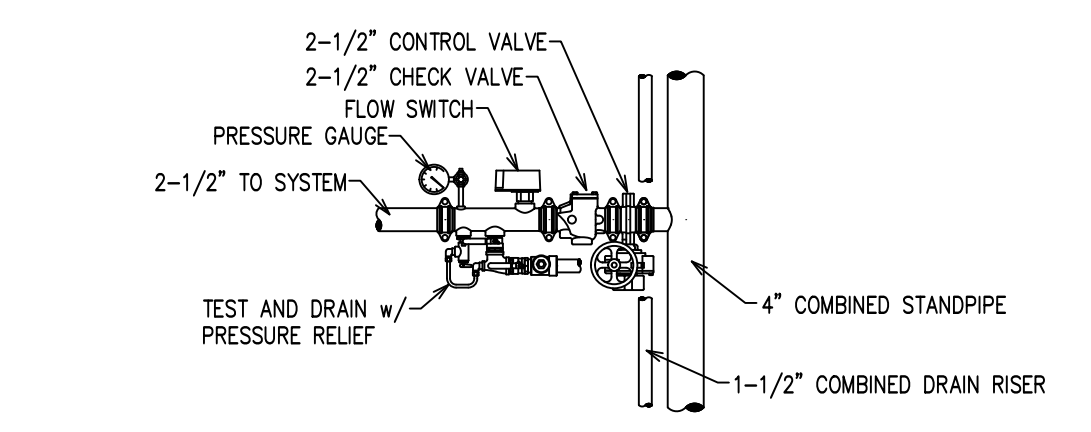
Flowing Outlets: 8
 Density: 0.10 Remote Area: 946
 Flow: 245.1 gpm @ 58.3 psi
 Calculation Safety: 5.3 psi
 Includes 100 gpm Hose allowance

NOTE:
 CALCULATED PER ROOM DESIGN METHOD
 NFPA 13 SECTION 11.2.3.3.5(2)

PIPE LEGEND

WET SYSTEM FIRE SPRINKLER PIPING
 STAINLESS STEEL PIPING
 FDC PIPING

TOTAL HEAD COUNT										
SYMBOL	NAME	MODEL	SRI	TYPE	FR	K-FACTOR	WT	TEMP	CRNCY	QUANTITY
⊕	WCTAULIC	V2704		UPRIGHT	BRASS	5.6	1/2"	200	NONE	18
⊕	WCTAULIC	V2704		UPRIGHT	BRASS	5.6	1/2"	200	NONE	2
⊕	GLGLOE	GL4906		CONC. PEND	WHITE	4.9	1/2"	155	WHITE	140
⊕	WCTAULIC	V3802		CONC. PEND	WHITE	5.6	1/2"	155	WHITE	48
⊕	WCTAULIC	V3802		CONC. PEND	WHITE	5.6	1/2"	200	WHITE	2
SPARE SPRINKLERS IN HEAD CABINET (MIN)										2 EA.
TOTAL SPRINKLERS THIS FLOOR										219



1 LEVEL 02 ZONE CONTROL DETAIL
 F103 SCALE: 1/2" = 1'

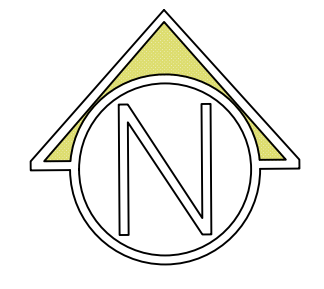
LEVEL 02 FIRE SPRINKLER PLAN
 SCALE: 1/8" = 1'

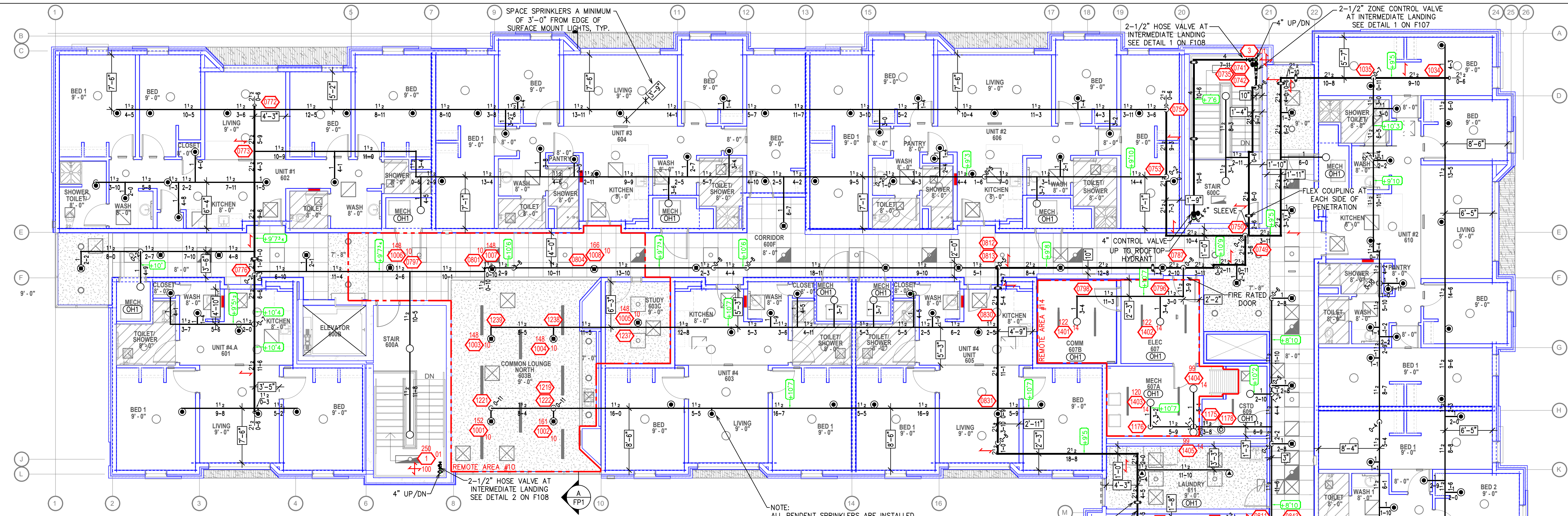


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SHEET CONTENTS
 FIRE SPRINKLER
 PLANS, NOTES AND
 DETAILS

F103





SYMBOLS	
Symbol	Description
8' - 0"	Ceiling Height
-10'0"	Elev. Below Top of Steel
+0'0"	Elev. Above Finished Floor
F1	Hydraulic Reference Points
○	Common Connection Point
⊙	Denotes Hanger Location
↕	Rise up or down
⊞	Electrical Light
OHT	Room Hazard Classification
⊙	Sprinkler Head Code

USU STUDENT HOUSING
 1050 E. 800 NORTH
 LOGAN, UT, 84321



SHEET CONTENTS
 FIRE SPRINKLER
 PLANS, NOTES AND
 DETAILS
 F107

Design Area #10 HAZARD: LIGHT
 Zone: 7 System Type: WET
 Location: COMMON LOUNGE NORTH
 Flowing Outlets: 8
 Density: 0.10 Remote Area: 941
 Flow 230.9 gpm @ 59.8 psi
 Calculation Safety: 3.8 psi
 Includes 100 gpm Hose allowance

NOTE:
 1500 S.F. REDUCED BY 40% TO 900 S.F.
 PER NFPA 13 FIG. 11.2.3.2.3.1 DUE TO THE
 USE OF QUICK RESPONSE SPRINKLERS
 AND A 9'-0" CEILING HEIGHT

Design Area #13 HAZARD: LIGHT
 Zone: 7 System Type: WET
 Location: COMMON LOUNGE SOUTH
 Flowing Outlets: 8
 Density: 0.10 Remote Area: 735
 Flow 228.6 gpm @ 62.7 psi
 Calculation Safety: 1 psi
 Includes 100 gpm Hose allowance

NOTE:
 CALCULATED PER ROOM DESIGN METHOD
 NFPA 13 SECTION 11.2.3.3.5(2)

Design Area #11 HAZARD: LIGHT
 Zone: 7 System Type: WET
 Location: CORRIDOR 600H
 Flowing Outlets: 5
 Density: 0.10 Remote Area: 477
 Flow 176.9 gpm @ 58.9 psi
 Calculation Safety: 4.8 psi
 Includes 100 gpm Hose allowance

NOTE:
 CALCULATED 5 SPRINKLERS IN CORRIDOR
 PER NFPA 13 SEC. 11.2.3.3.6

Design Area #14 HAZARD: OHT
 Zone: 7 System Type: WET
 Location: ELEC 607
 Flowing Outlets: 5
 Density: 0.15 Remote Area: 400
 Flow 341.9 gpm @ 60.6 psi
 Calculation Safety: 2.6 psi
 Includes 250 gpm Hose allowance

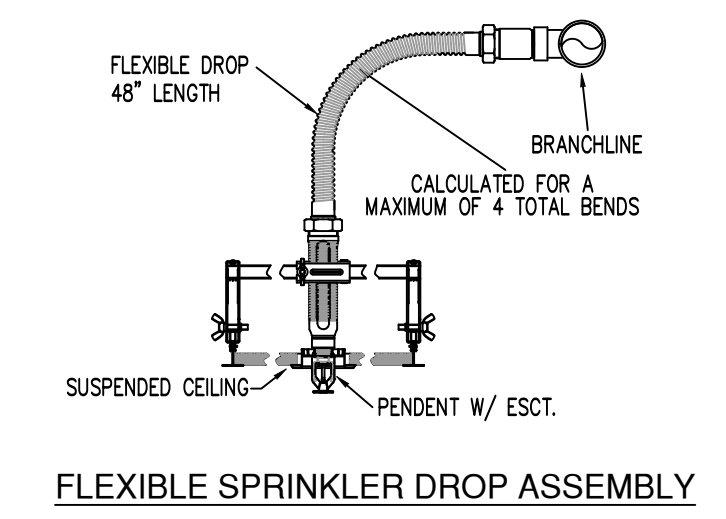
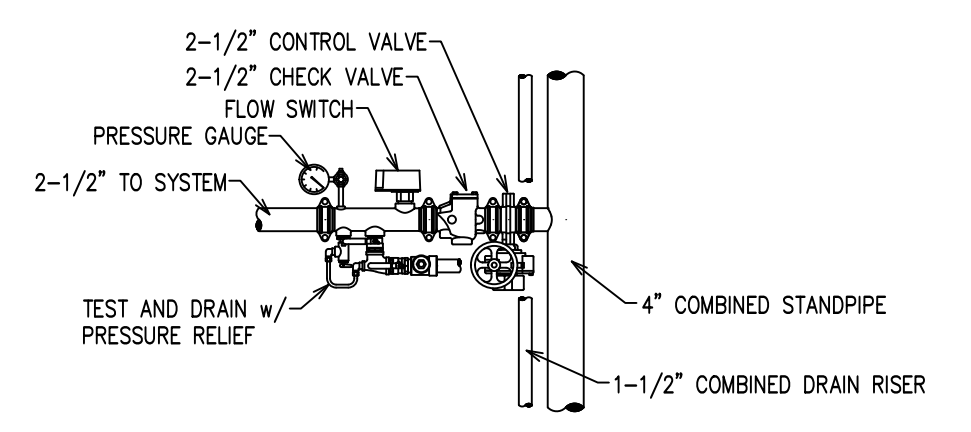
NOTE:
 CALCULATED PER ROOM DESIGN METHOD
 NFPA 13 SECTION 11.2.3.3.5(3)

Design Area #12 HAZARD: LIGHT
 Zone: 7 System Type: WET
 Location: UNIT 614
 Flowing Outlets: 4
 Density: 0.10 Remote Area: 375
 Flow 168.8 gpm @ 58.9 psi
 Calculation Safety: 4.9 psi
 Includes 100 gpm Hose allowance

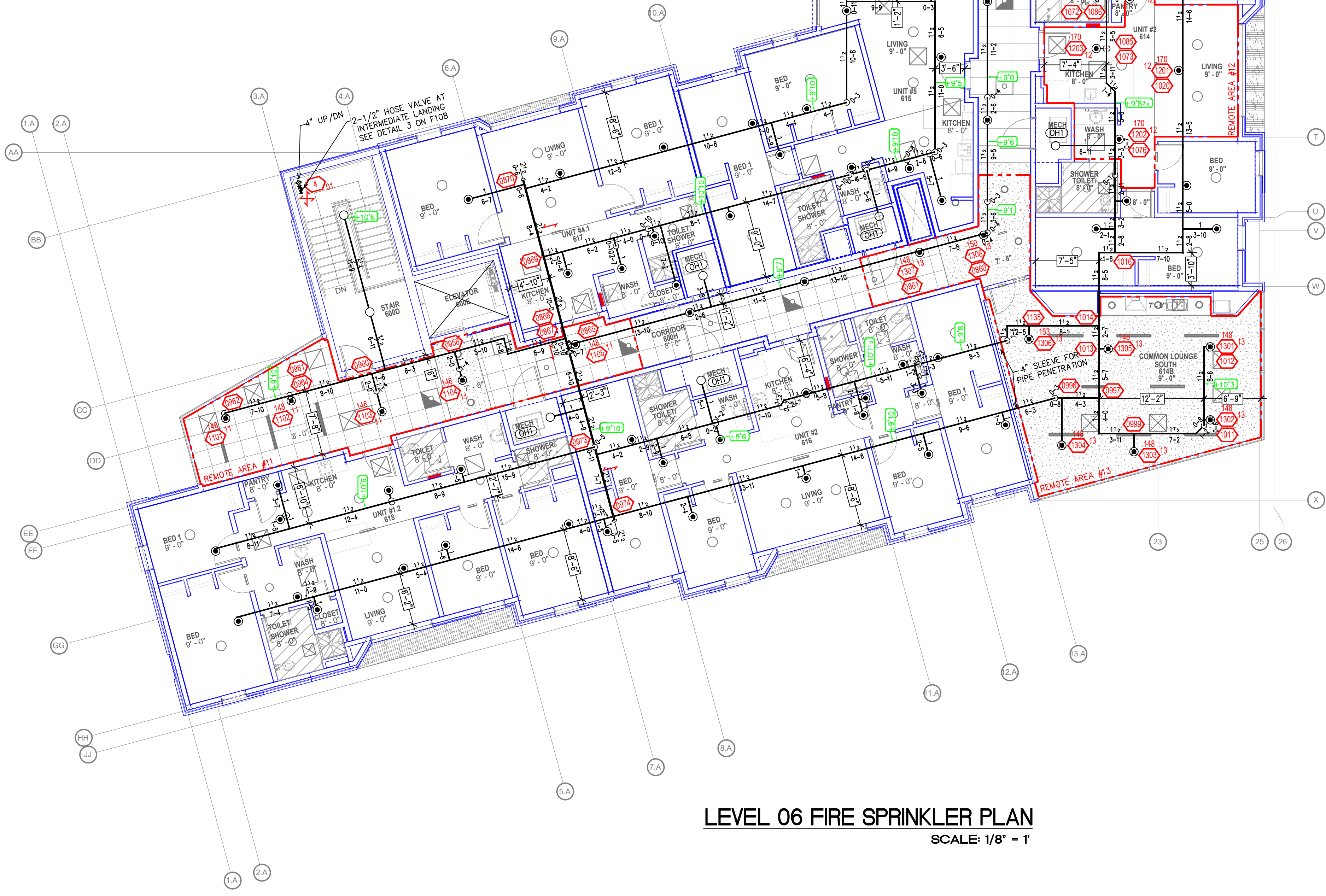
NOTE:
 4 SPRINKLERS CALCULATED PER NFPA 13
 SEC. 11.3.1.1 DWELLING UNIT CALC



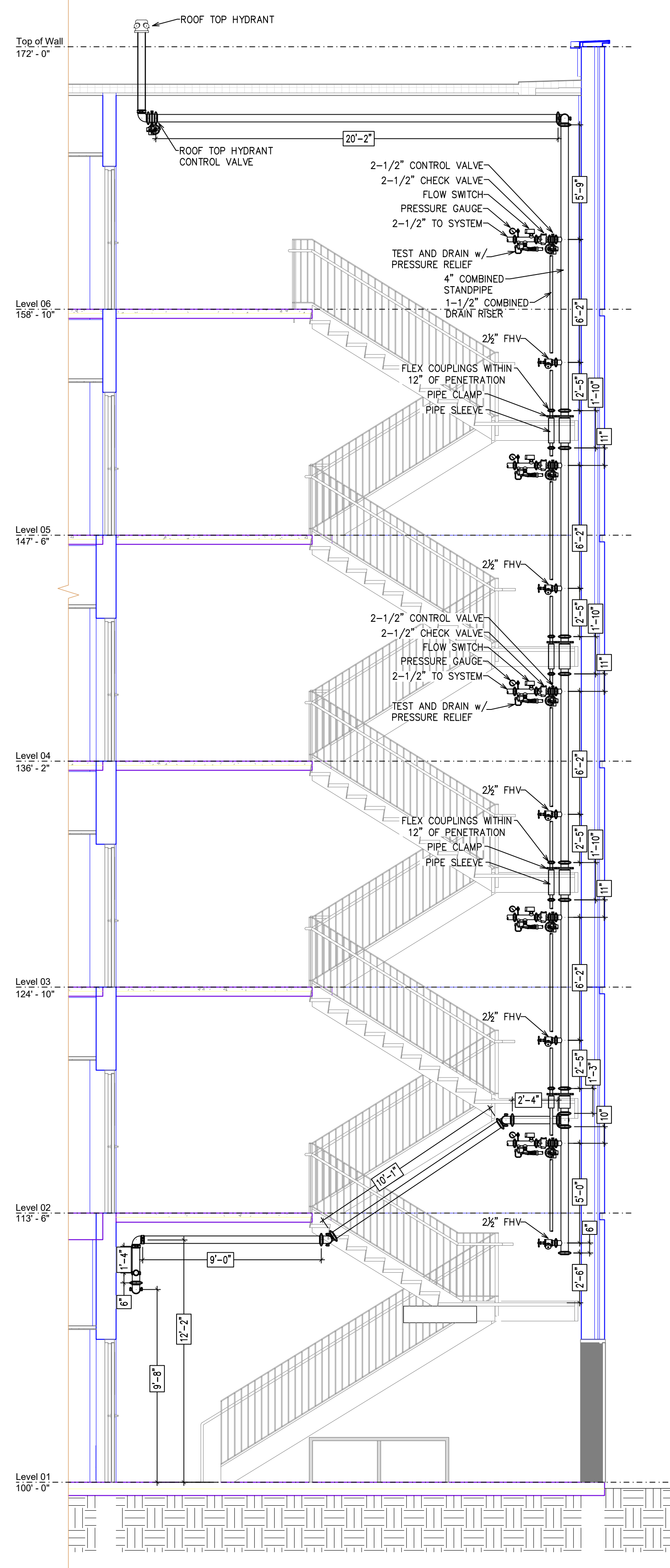
TOTAL HEAD COUNT										
SYMBOL	NAME	MODEL	SRI	TYPE	FRESH	K-FACTOR	WT	TEMP	OROPY	QUANTITY
○	WCTAULIC	V2704	UPRIGHT	BRASS	5.6	1/2"	200	NONE		26
○	WCTAULIC	V2704	UPRIGHT	BRASS	5.6	1/2"	200	NONE		1
○	CLOSE	QL4906	CONC. PEND	WHITE	4.9	1/2"	155	WHITE		151
○	WCTAULIC	V3802	CONC. PEND	WHITE	5.6	1/2"	155	WHITE		46
○	WCTAULIC	V3802	CONC. PEND	WHITE	5.6	1/2"	200	WHITE		2
SPARE SPRINKLERS IN HEAD CABINET (MIN)										2 EA.
TOTAL SPRINKLERS THIS FLOOR										226



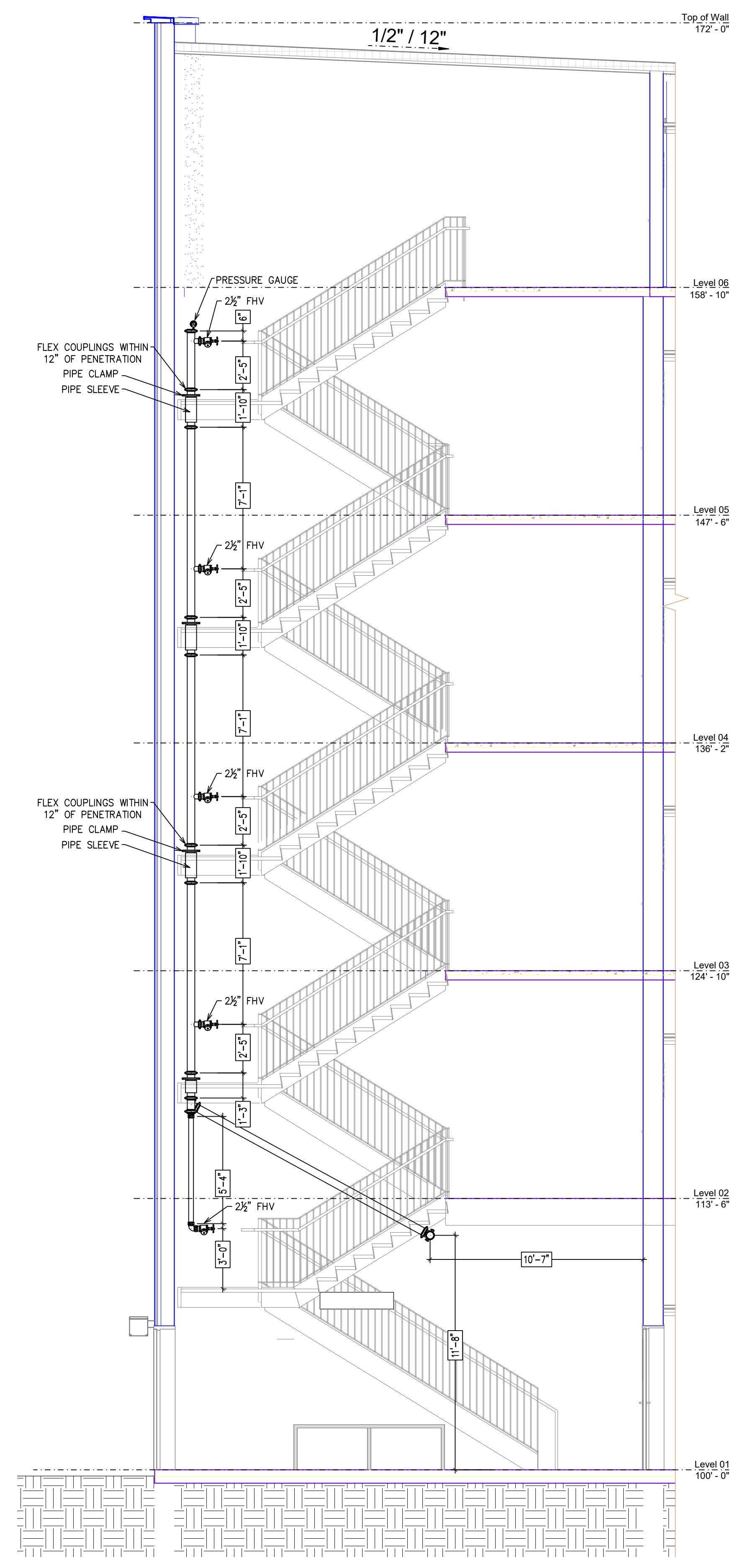
1 LEVEL 06 ZONE CONTROL DETAIL
 F107 SCALE: 1/2" = 1'



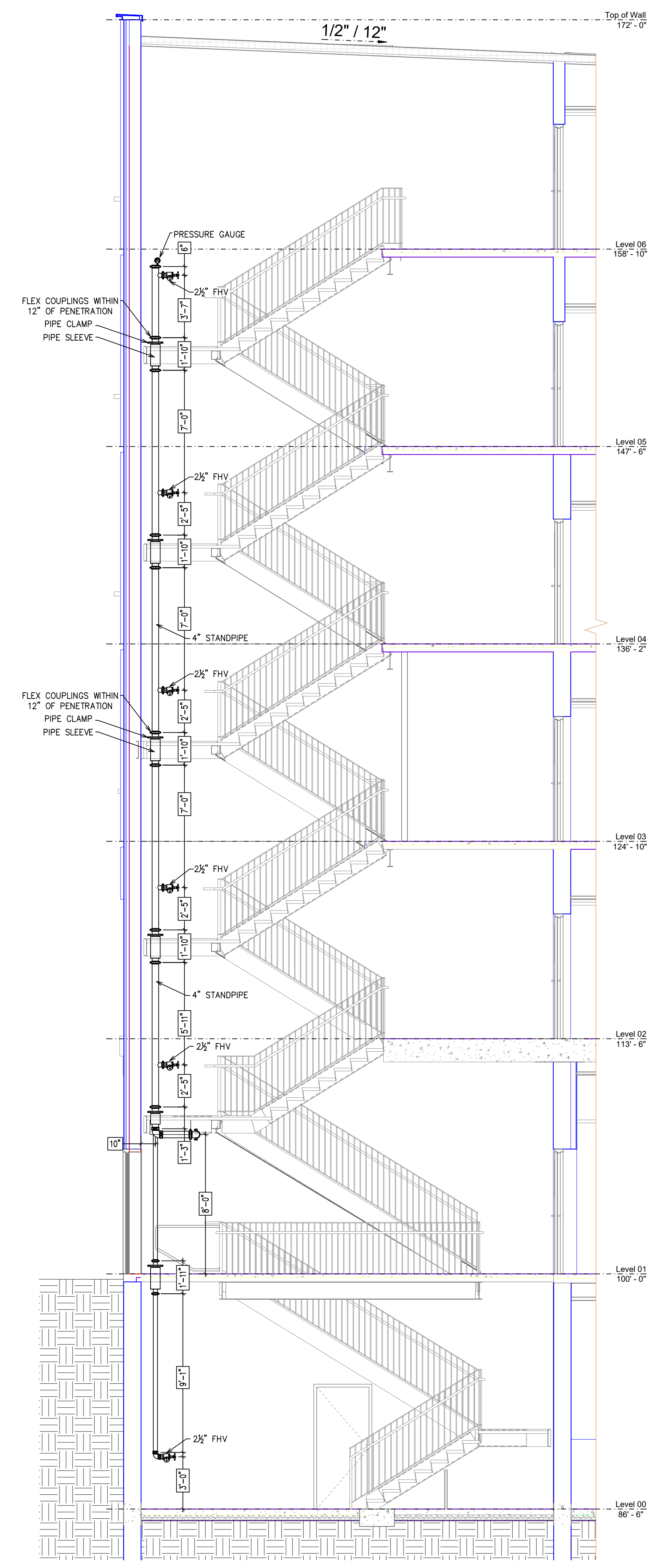
LEVEL 06 FIRE SPRINKLER PLAN
 SCALE: 1/8" = 1'



1 NE STAIR STANDPIPE DELAIL
 F108 SCALE: 1/8" = 1'



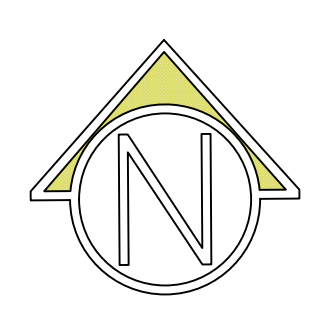
2 NW STAIR STANDPIPE DELAIL
 F108 SCALE: 1/8" = 1'



3 S. STAIR STANDPIPE DELAIL
 F108 SCALE: 1/8" = 1'

SYMBOLS	
Symbol	Description
8' - 0"	Ceiling Height
-1'0"0"	Elev. Below Top of Steel
+1'0"0"	Elev. Above Finished Floor
F1	Hydraulic Reference Points
⊙	Common Connection Point
⊗	Denotes Hanger Location
C	Rise up or down
⊠	Electrical Light
OHT	Room Hazard Classification
⊗	Sprinkler Head Cage

USU STUDENT HOUSING
 1050 E. 800 NORTH
 LOGAN, UT, 84321



SHEET CONTENTS
 FIRE SPRINKLER
 PLANS, NOTES AND
 DETAILS

F108