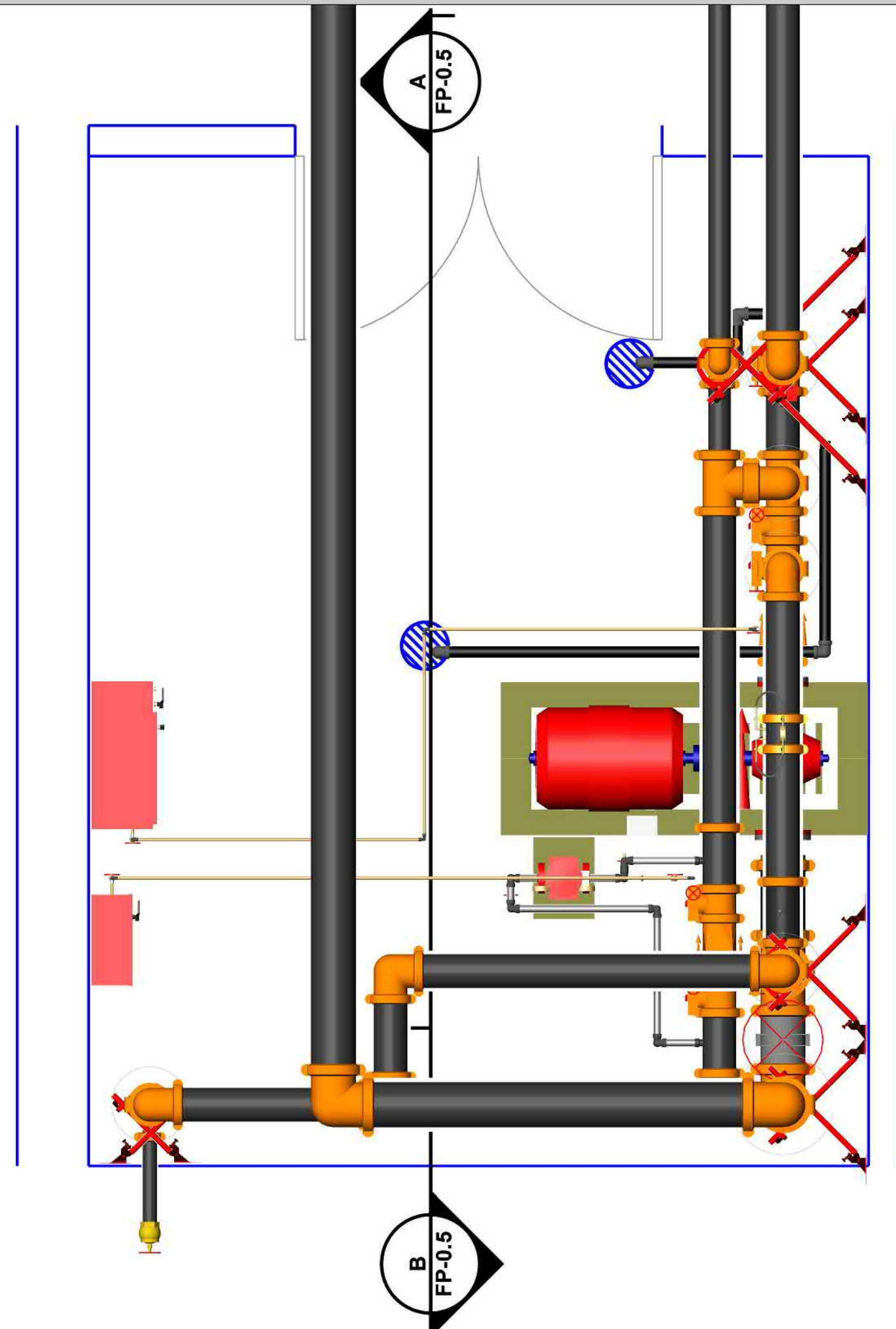
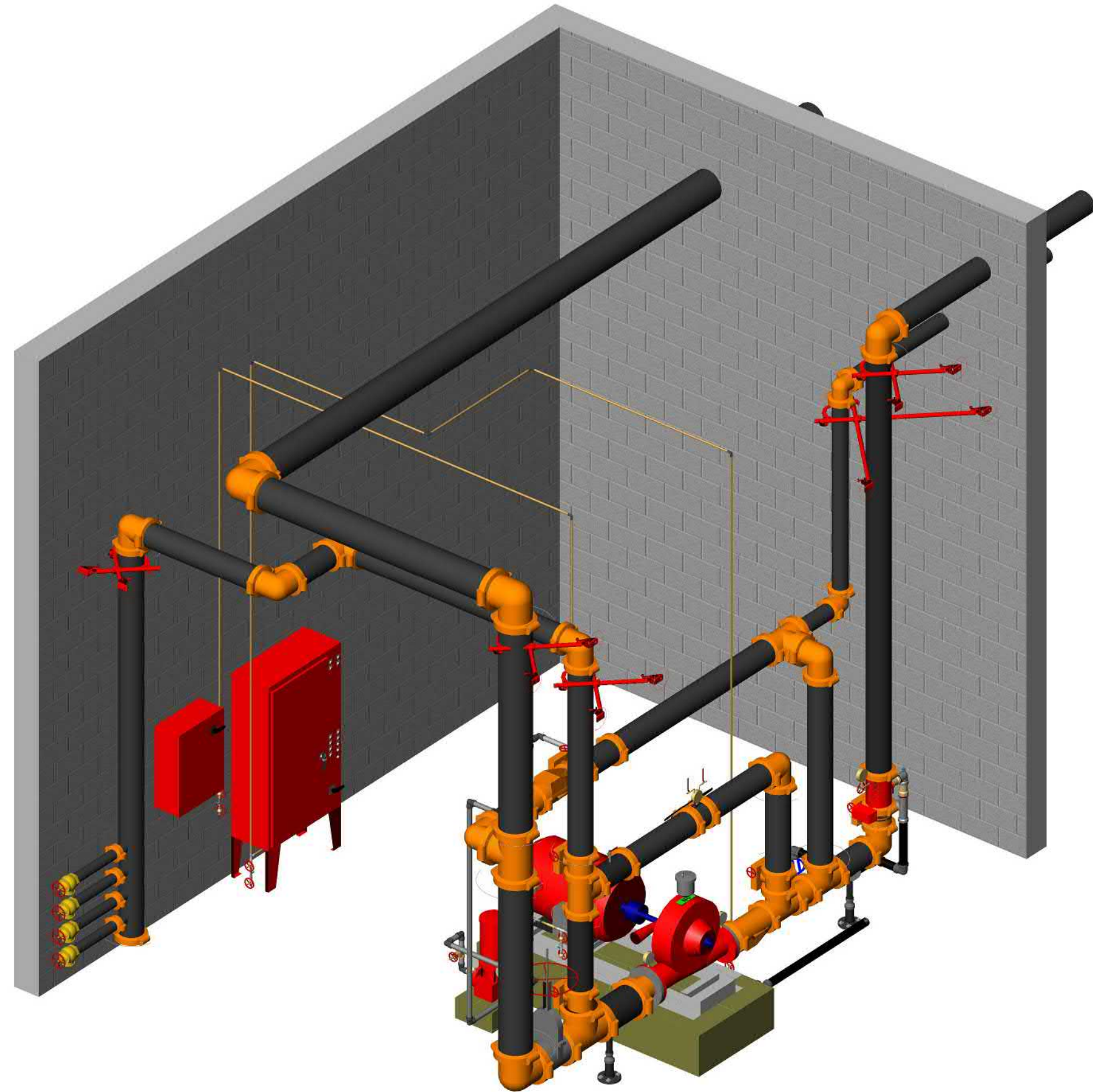


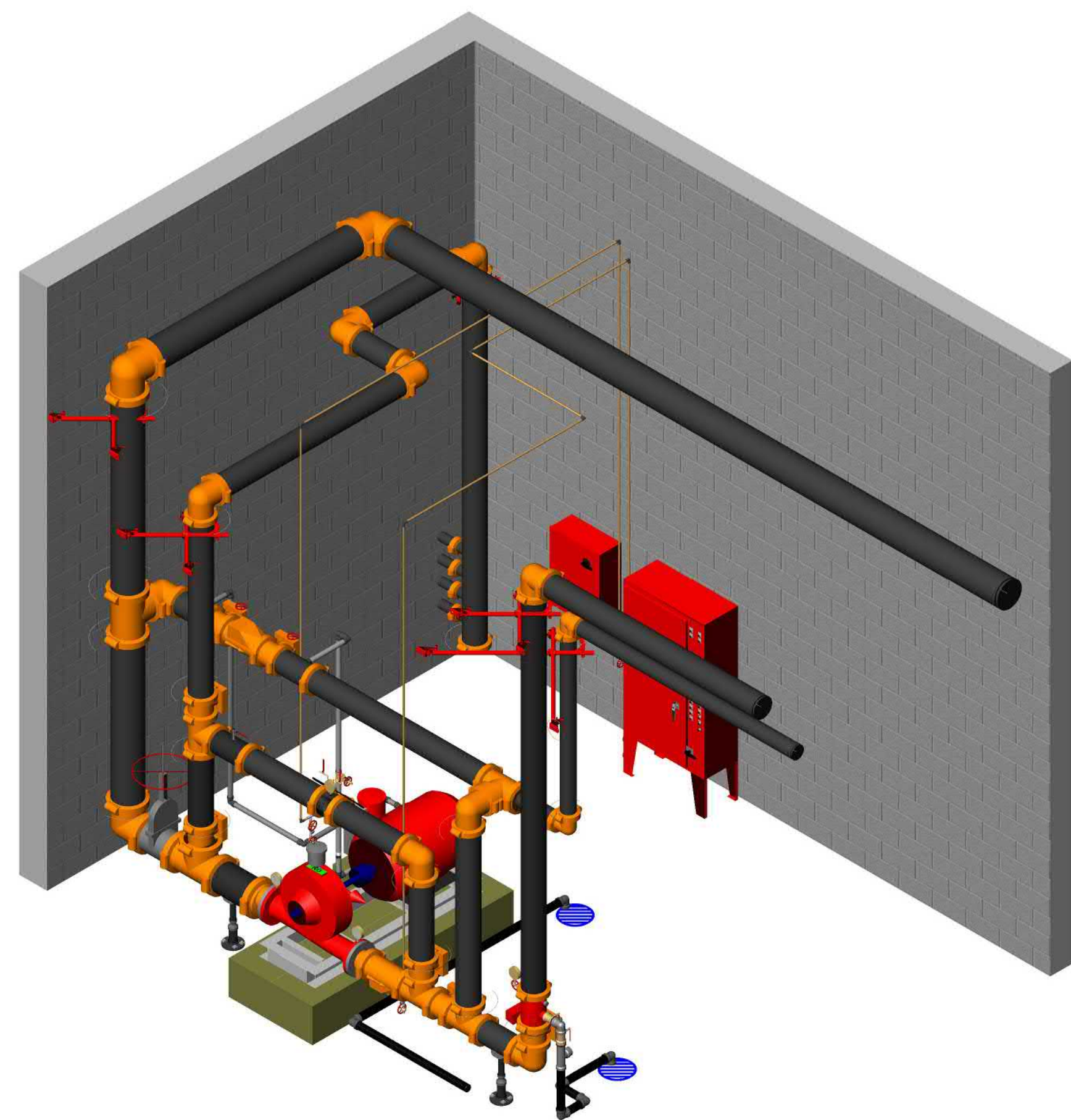
PUMP ROOM FLOOR PLAN



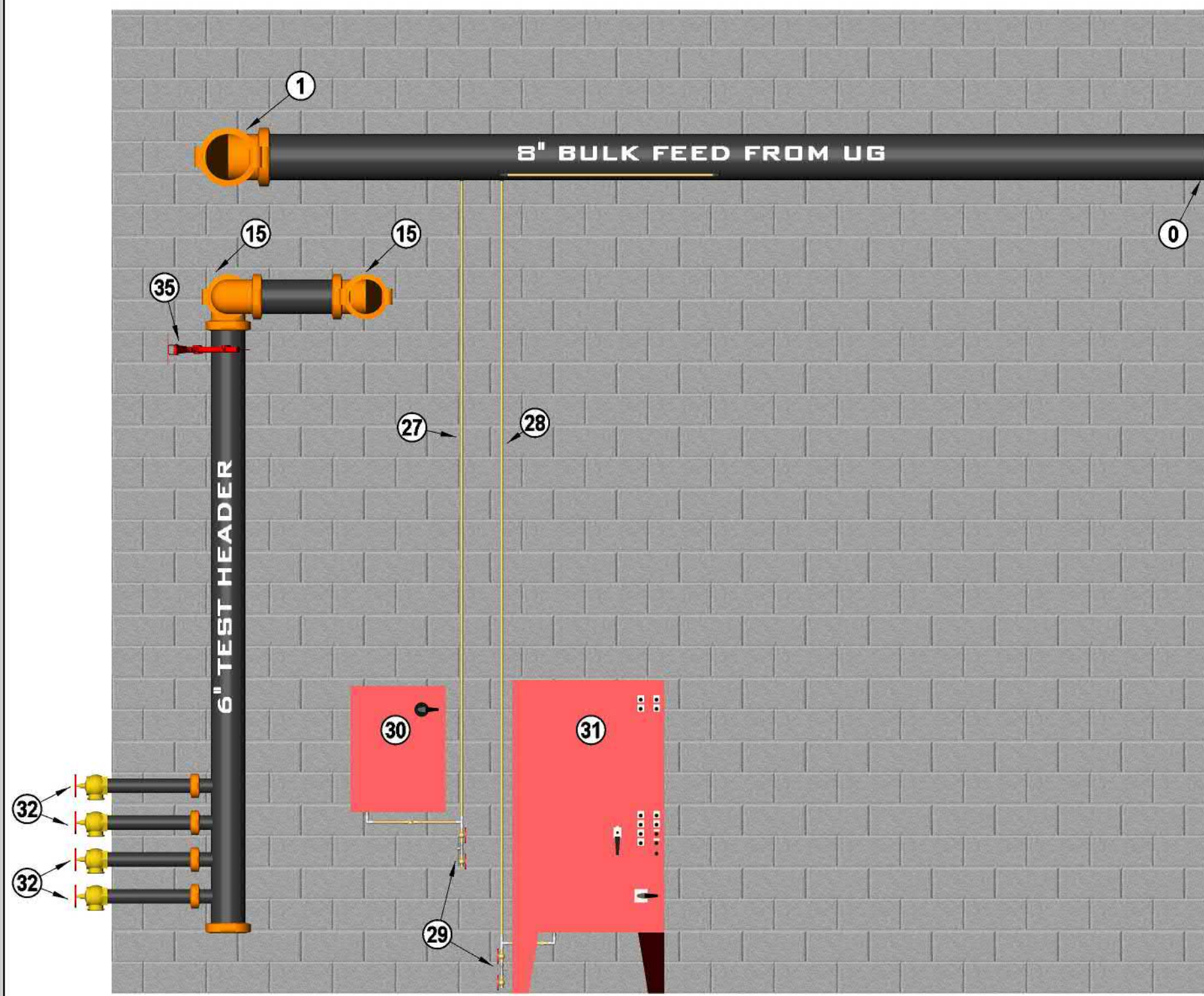
PUMP ROOM ISOMETRIC 1



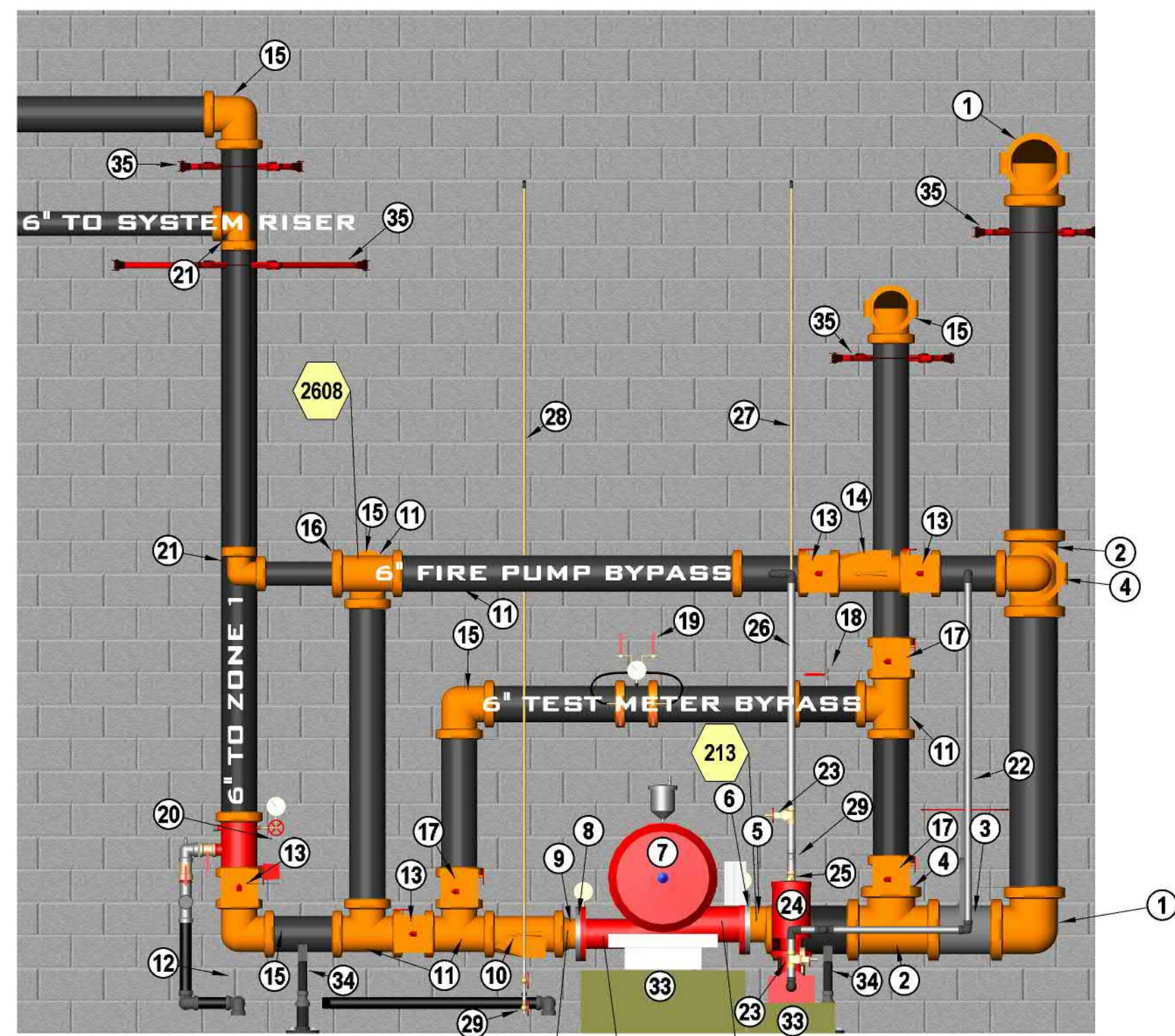
PUMP ROOM ISOMETRIC 2



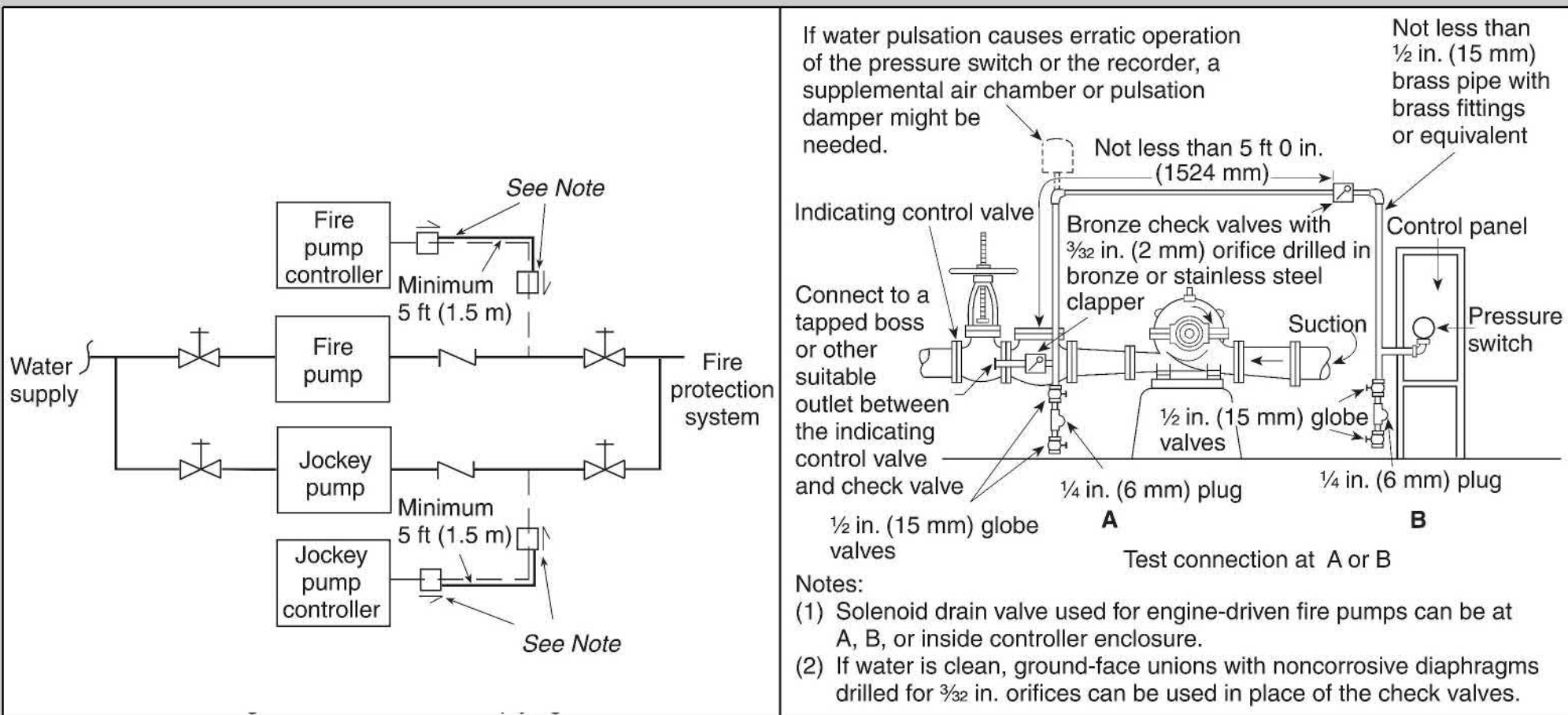
PUMP ROOM SECTION A



PUMP ROOM SECTION B



SENSING LINE DETAIL



PUMP ROOM LEGEND

#	DESCRIPTION	REMARKS
0	8" FROM GARAGE	
1	8" GROOVED ELBOW 90	
2	8" GROOVED TEE	
3	8" GROOVED OS&Y VALVE WITH TAMPER	
4	GROOVED 8" X 6" REDUCING COUPLING	
5	8" X 6" GROOVED ECCENTRIC REDUCER	
6	6" GROOVED FLANGE	
7	FIRE PUMP & DRIVER, SEE INFORMATION TABLE	
8	5" GROOVED FLANGE	
9	6" X 5" GROOVED CONCENTRIC REDUCER	
10	6" GROOVED CHECK VALVE	
11	6" GROOVED TEE	
12	2" MAIN DRAIN TO EXTERIOR	
13	6" GROOVED BUTTERFLY CONTROL VALVE, NORMALLY OPEN	
14	6" GROOVED CHECK VALVE	
15	6" GROOVED ELBOW 90	
16	6" X 4" REDUCING COUPLING	
17	6" GROOVED BUTTERFLY CONTROL VALVE, NORMALLY CLOSED	
18	1/2" BALL VALVE	
19	FIRE PUMP TEST METER	
20	6" GROOVED RISER MANIFOLD	
21	4" GROOVED ELBOW 90	
22	1-1/4" JOCKEY PUMP SUCTION PIPING	
23	1-1/4" OS&Y CONTROL VALVE WITH TAMPER	
24	JOCKEY PUMP, SEE INFORMATION TABLE	
25	1-1/4" CHECK VALVE	
26	1-1/4" JOCKEY PUMP DISCHARGE PIPING	
27	JOCKEY PUMP SENSING LINE	
28	FIRE PUMP SENSING LINE	
29	TEST ASSEMBLY PER NFPA 20	
30	JOCKEY PUMP CONTROLLER	
31	FIRE PUMP CONTROLLER	
32	2-1/2" HOSE VALVES	
33	CONCRETE PAD, BY OTHERS	
34	PIPE STAND	
35	SEISMIC BRACE	
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SYSTEM MONITORING

VALVE MONITORING, WATER-FLOW ALARM, AND TROUBLE SIGNALS SHALL BE AUTOMATICALLY TRANSMITTED TO AN APPROVED CENTRAL STATION. THIS WORK IS BY OTHERS.

TEST HEADER GREATER THAN 15' - 0

TEST HEADER HAS BEEN SIZED PER HYDRAULIC CALCULATIONS PER NFPA 20, SECTION 4.21.3.4 (2).	
TEST HEADER CALCULATION INFORMATION	
PUMP RATING IN GPM	1000
150% OF PUMP RATING	1500
NUMBER OF TEST HOSE STREAMS	4
SIZE OF FIRE HOSE	2.5"
DISCHARGE NOZZLE	
WHERE: P = PITOT PRESSURE IN PSI Q = FLOW RATE IN GPM C = NOZZLE DISCHARGE COEFFICIENT D = NOZZLE DIAMETER IN INCHES	
$P = \left(\frac{Q}{29.84 \cdot C \cdot D^2} \right)^2$	
FLOW RATE IN GPM (150% RATING / NUMBER OF STREAMS)	Q = 375
NOZZLE DISCHARGE COEFFICIENT	C = 0.97
NOZZLE DIAMETER IN INCHES	D = 1.75
PITOT PRESSURE REQUIRED	P = 17.90
FIRE HOSE FRICTION LOSS	
WHERE: FL = FRICTION LOSS IN PSI C = FRICTION LOSS COEFFICIENT Q = FLOW RATE IN GPM L = HOSE LENGTH	
$FL = C \cdot \left(\frac{Q}{100} \right)^2 \cdot \left(\frac{L}{100} \right)$	
FRICTION LOSS COEFFICIENT	C = 2
FLOW RATE IN GPM (150% RATING / NUMBER OF STREAMS)	Q = 375
HOSE LENGTH	L = 50
FRICTION LOSS IN PSI	FL = 14.06
TEST HEADER HOSE VALVE DISCHARGE:	375 GPM @ 31.96 PSI

FIRE PUMP DATA

MAKE & MODEL	PENTAIR 5-481-15
TYPE	HORIZONTAL SPLIT CASE
SIZE	6" X 5"
RATING	1000 GPM @ 65 PSI
RPM	1770
ROTATION	RIGHT HANDED
SUCTION SIZE	6 INCH
DISCHARGE SIZE	5 INCH
IMPELLER	13.63 INCH
ESTIMATED WEIGHT	730 LBS
START PRESSURE (FIELD VERIFY)	143 PSI
STOP PRESSURE (FIELD VERIFY)	158 PSI

DRIVER DATA

TYPE	ELECTRIC
POWER	75.00 HP
PHASE	3 PHASE
HERTZ	60 HZ
VOLTS	208V
RPM	1770
ESTIMATED WEIGHT	660 LBS

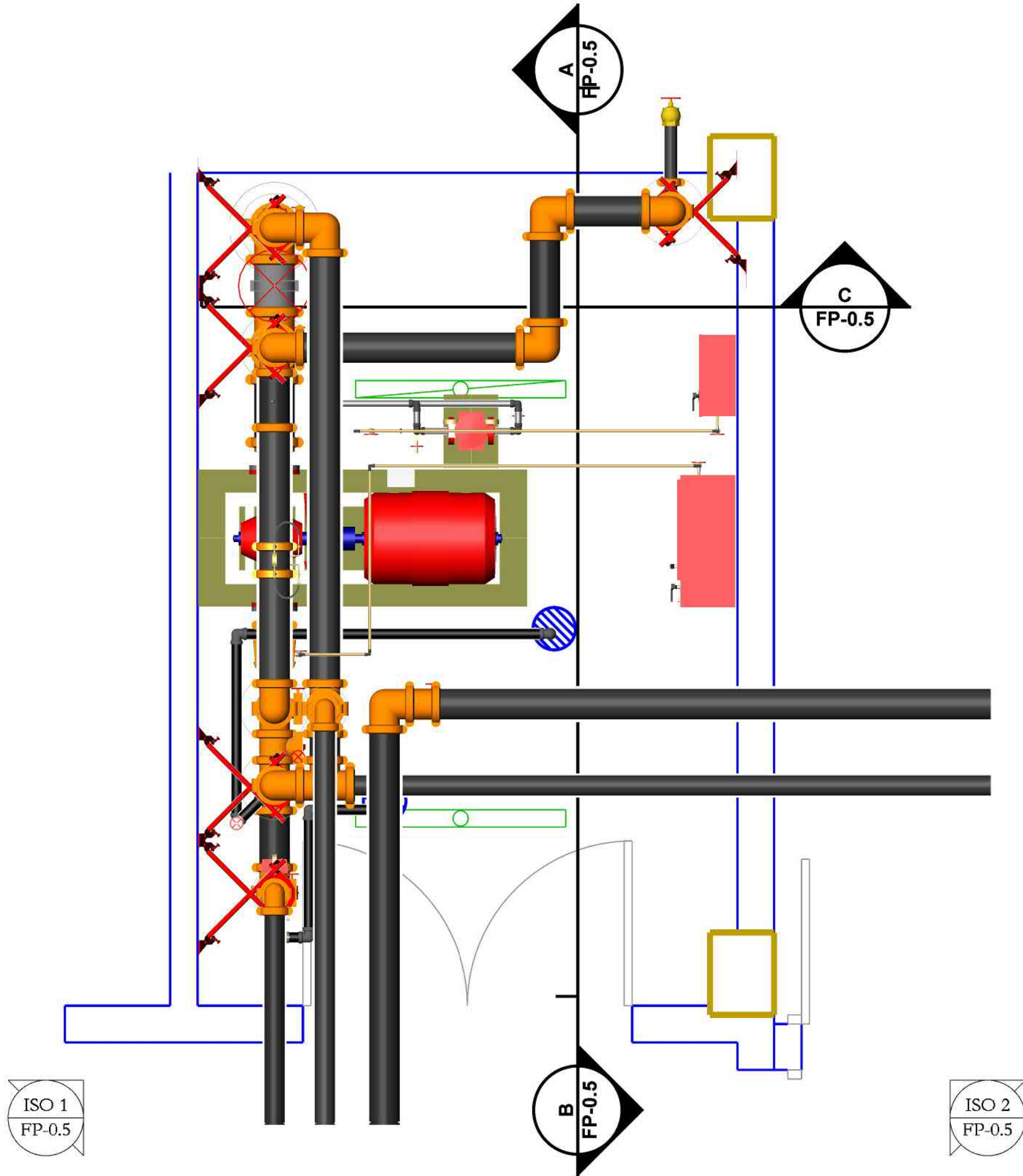
JOCKEY PUMP DATA

MAKE & MODEL	PENTAIR PVM1-9
RATING	10 GPM @ 80 PSI
SUCTION & DISCHARGE SIZE	1.25 INCH
POWER	1.00 HP
PHASE	3 PHASE
VOLTS	208 V
START PRESSURE (FIELD VERIFY)	148 PSI
STOP PRESSURE (FIELD VERIFY)	158 PSI

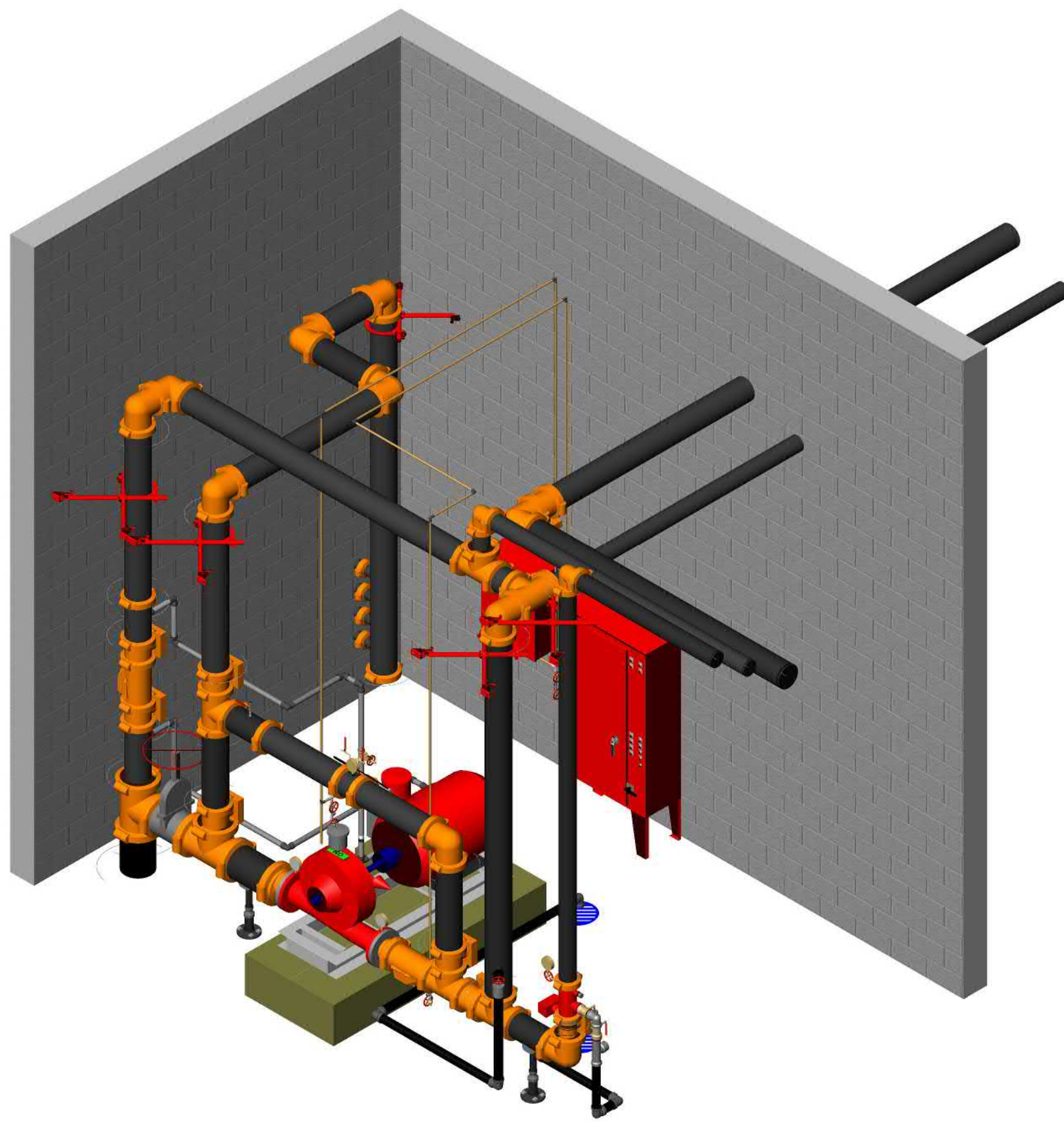
FIRE PUMP CONTROL PANEL DATA

MAKE & MODEL	EATON CULER HAMMER
VOLTAGE	208V
HP RANGE	5-400
SOFT START	NO
AUTOMATIC TRANSFER SWITCH	NO
REMOTE ALARMS	PHASE REVERSAL, MOTOR RUN, FAIL TO START

PUMP ROOM FLOOR PLAN

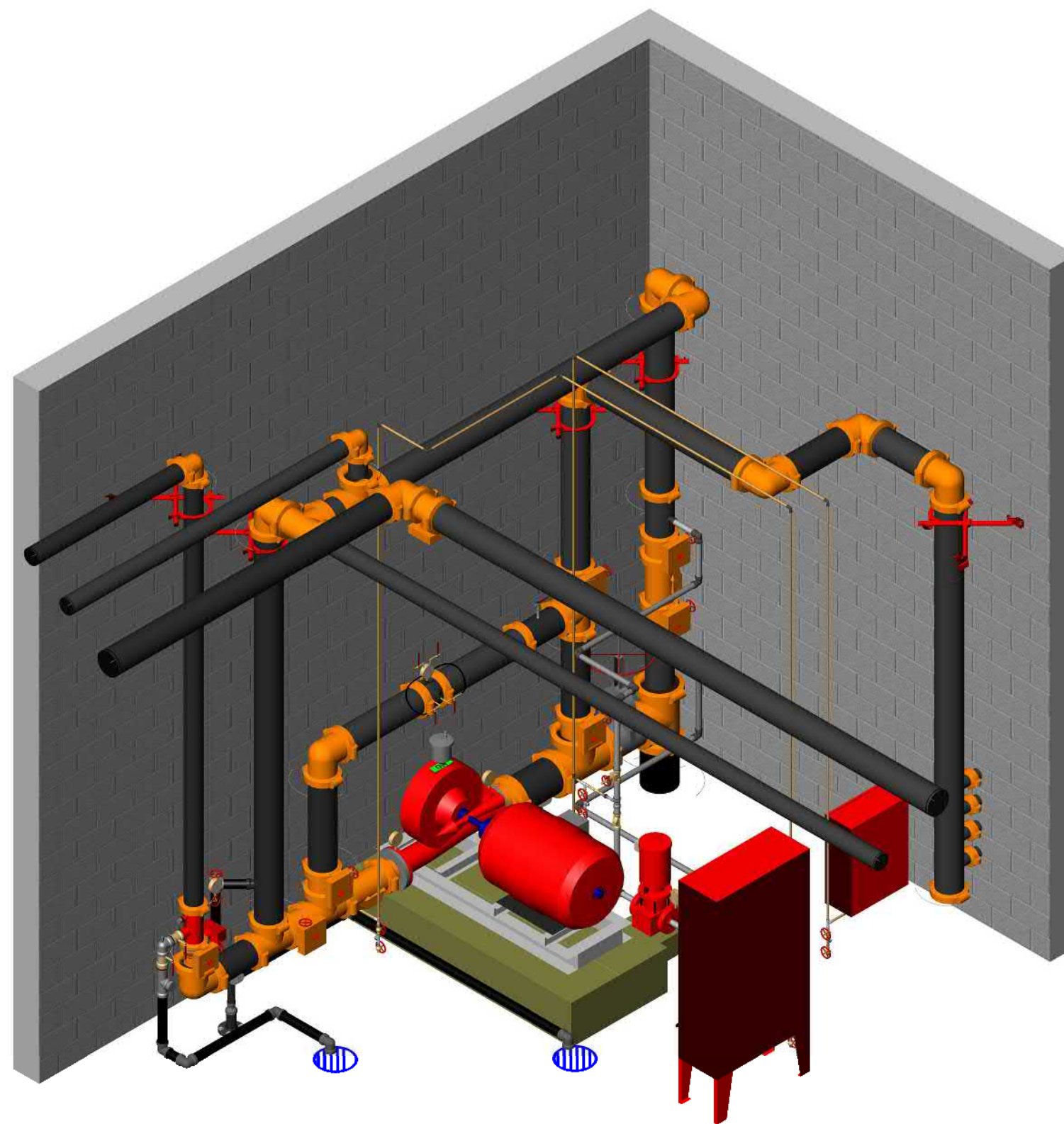


PUMP ROOM ISOMETRIC 1



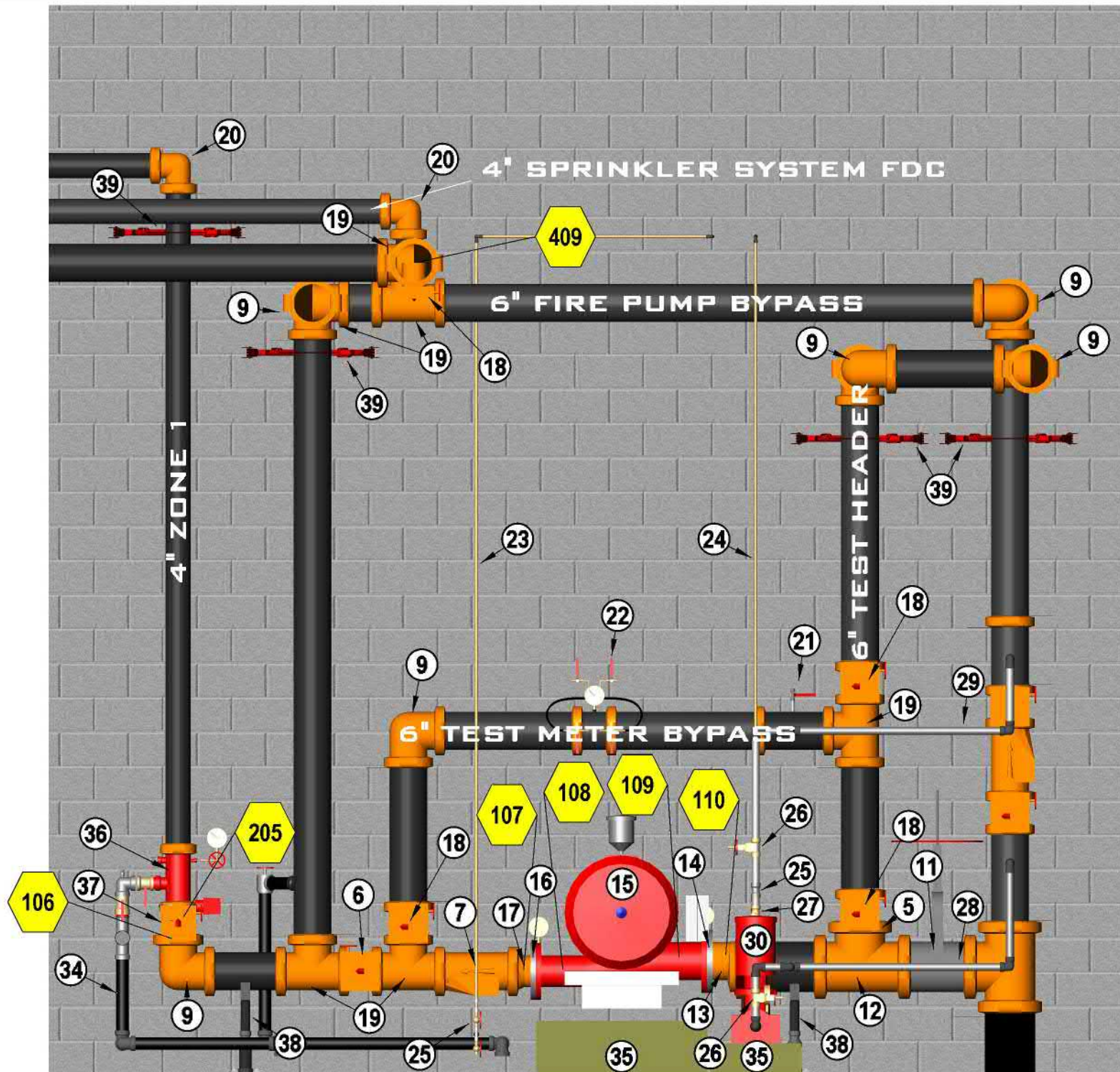
NOT TO SCALE

PUMP ROOM ISOMETRIC 2

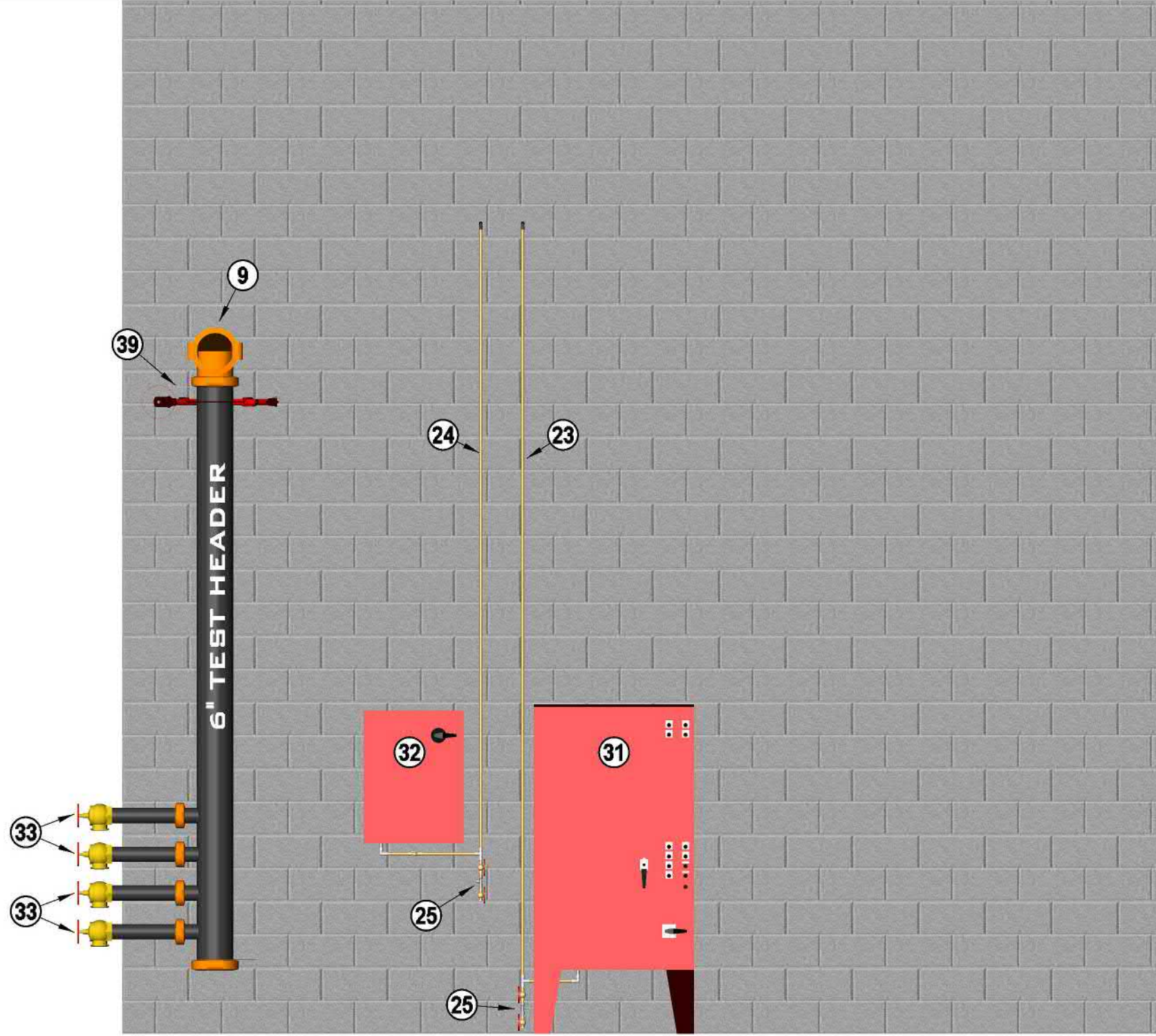


NOT TO SCALE

PUMP ROOM SECTION B



PUMP ROOM SECTION B



PUMP ROOM LEGEND

#	DESCRIPTION	REMARKS
0	8" FROM UNDERGROUND	
1	AEGIS TIE IN POINT	
2	NOT USED	
3	NOT USED	
4	8" GROOVED TEE	
5	8" X 6" REDUCING COUPLING	
6	6" GROOVED BUTTERFLY CONTROL VALVE, NORMALLY OPEN	
7	6" GROOVED CHECK VALVE	
8	4" GROOVED CHECK VALVE	
9	6" GROOVED ELBOW 90	
10	4" GROOVED ELBOW 90	
11	8" GROOVED OS&Y VALVE WITH TAMPER	
12	8" GROOVED TEE	
13	8" X 6" GROOVED ECCENTRIC REDUCER	
14	6" GROOVED FLANGE	
15	FIRE PUMP, SEE INFORMATION TABLE	
16	5" GROOVED FLANGE	
17	6" X 5" GROOVED REDUCER	
18	6" GROOVED BUTTERFLY CONTROL VALVE, NORMALLY CLOSED	
19	6" GROOVED TEE	
20	4" GROOVED ELBOW 90	
21	1/2" BALL VALVE	
22	FIRE PUMP TEST METER	
23	FIRE PUMP SENSING LINE	
24	JOCKEY PUMP SENSING LINE	
25	TEST ASSEMBLY PER NFPA 20	
26	1-1/4" OS&Y VALVE WITH TAMPER	
27	1-1/4" CHECK VALVE	
28	1-1/4" JOCKEY PUMP SUCTION PIPING	
29	1-1/4" JOCKEY PUMP DISCHARGE PIPING	
30	JOCKEY PUMP, SEE INFORMATION TABLE	
31	FIRE PUMP CONTROLLER	
32	JOCKEY PUMP CONTROLLER	
33	2-1/2" HOSE VALVE	
34	2" MAIN DRAIN TO EXTERIOR	
35	CONCRETE PAD BY OTHERS	
36	4" GROOVED RISER MANIFOLD	
37	4" GROOVED BUTTERFLY CONTROL VALVE, NORMALLY OPEN	
38	PIPE STAND	
39	SEISMIC BRACE	
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SYSTEM MONITORING

VALVE MONITORING, WATER-FLOW ALARM, AND TROUBLE SIGNALS SHALL BE AUTOMATICALLY TRANSMITTED TO AN APPROVED CENTRAL STATION. THIS WORK IS BY OTHERS.

TEST HEADER GREATER THAN 15' - D

TEST HEADER HAS BEEN SIZED PER HYDRAULIC CALCULATIONS PER NFPA 20, SECTION 4.21.3.4 (2).	
TEST HEADER CALCULATION INFORMATION	
PUMP RATING IN GPM	1000
150% OF PUMP RATING	1500
NUMBER OF TEST HOSE STREAMS	4
SIZE OF FIRE HOSE	2.5"
DISCHARGE NOZZLE	
WHERE: P = PITOT PRESSURE IN PSI Q = FLOW RATE IN GPM C = NOZZLE DISCHARGE COEFFICIENT D = NOZZLE DIAMETER IN INCHES	
$P = \left(\frac{Q}{29.84 \cdot C \cdot D^2} \right)^2$	
FLOW RATE IN GPM (150% RATING / NUMBER OF STREAMS)	Q = 375
NOZZLE DISCHARGE COEFFICIENT	C = 0.97
NOZZLE DIAMETER IN INCHES	D = 1.75
PITOT PRESSURE REQUIRED	P = 17.90
FIRE HOSE FRICTION LOSS	
WHERE: FL = FRICTION LOSS IN PSI C = FRICTION LOSS COEFFICIENT Q = FLOW RATE IN GPM L = HOSE LENGTH	
$FL = C \cdot \left(\frac{Q}{100} \right)^2 \cdot \left(\frac{L}{100} \right)$	
FRICTION LOSS COEFFICIENT	C = 2
FLOW RATE IN GPM (150% RATING / NUMBER OF STREAMS)	Q = 375
HOSE LENGTH	L = 50
FRICTION LOSS IN PSI	FL = 14.06
TEST HEADER HOSE VALVE DISCHARGE:	375 GPM @ 31.96 PSI

FIRE PUMP DATA

MAKE & MODEL	PENTAIR 5-481-15
TYPE	HORIZONTAL SPLIT CASE
SIZE	6" X 5"
RATING	1000 GPM @ 65 PSI
RPM	1770
ROTATION	RIGHT HANDED
SUCTION SIZE	6 INCH
DISCHARGE SIZE	5 INCH
IMPELLER	13.63 INCH
ESTIMATED WEIGHT	730 LBS
START PRESSURE (FIELD VERIFY)	143 PSI
STOP PRESSURE (FIELD VERIFY)	158 PSI

DRIVER DATA

TYPE	ELECTRIC
POWER	75.00 HP
PHASE	3 PHASE
HERTZ	60 HZ
VOLTS	208V
RPM	1770
ESTIMATED WEIGHT	660 LBS

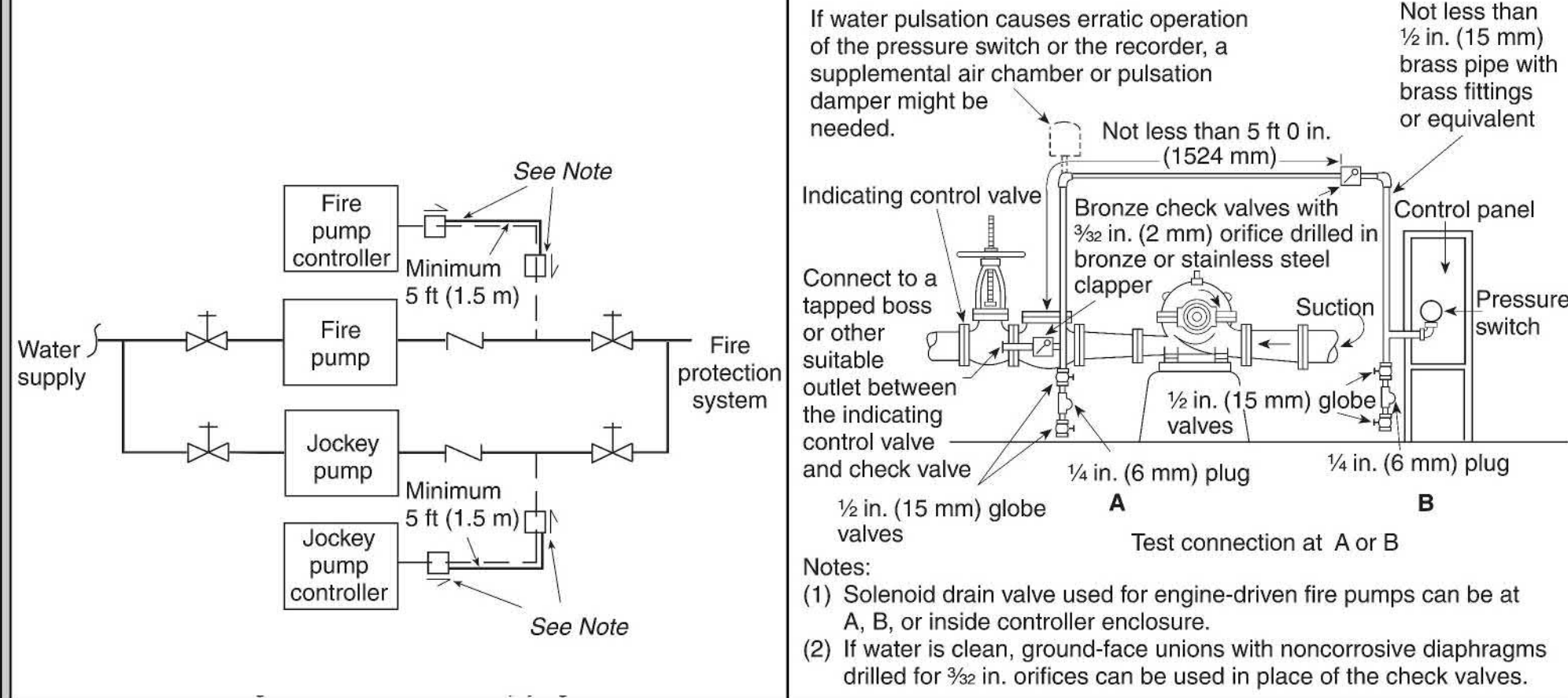
JOCKEY PUMP DATA

MAKE & MODEL	PENTAIR PVM1-9
RATING	10 GPM @ 80 PSI
SUCTION & DISCHARGE SIZE	1.25 INCH
POWER	1.00 HP
PHASE	3 PHASE
VOLTS	208 V
START PRESSURE (FIELD VERIFY)	148 PSI
STOP PRESSURE (FIELD VERIFY)	158 PSI

FIRE PUMP CONTROL PANEL DATA

MAKE & MODEL	EATON CULER HAMMER
VOLTAGE	208V
HP RANGE	5-400
SOFT START	NO
AUTOMATIC TRANSFER SWITCH	NO
REMOTE ALARMS	PHASE REVERSAL, MOTOR RUN, FAIL TO START

SENSING LINE DETAIL

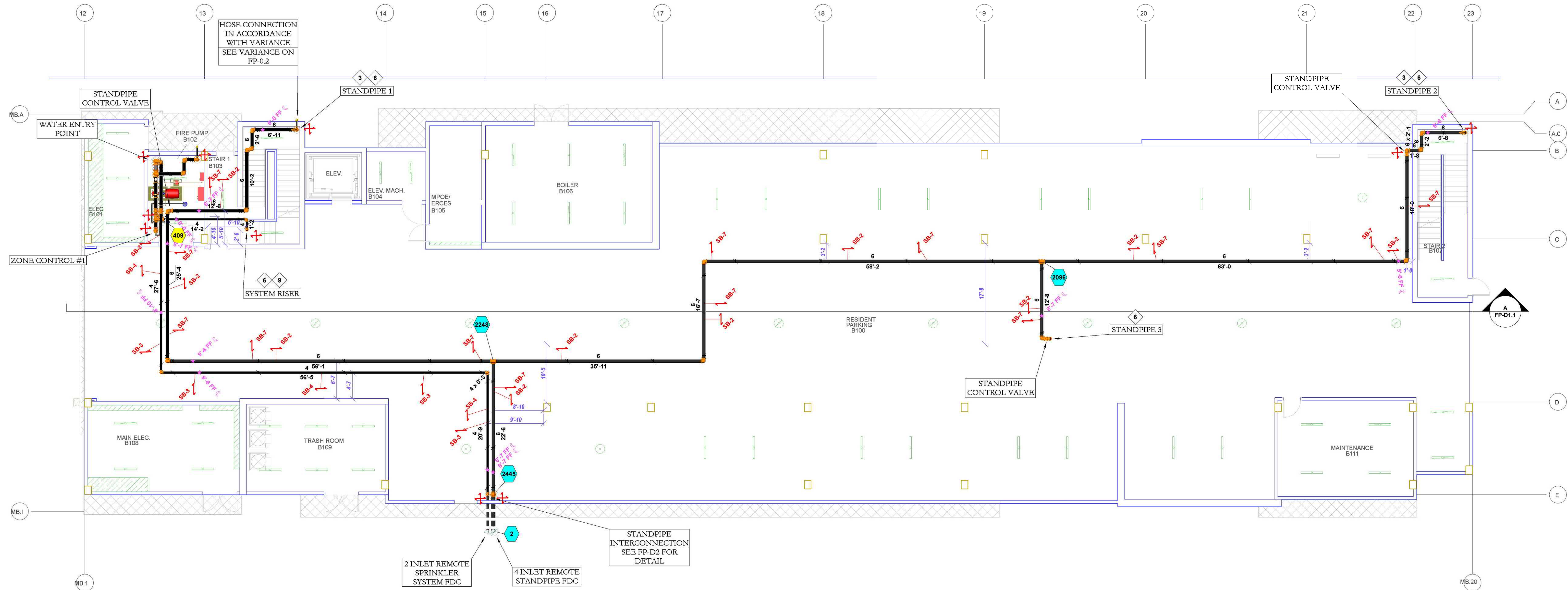
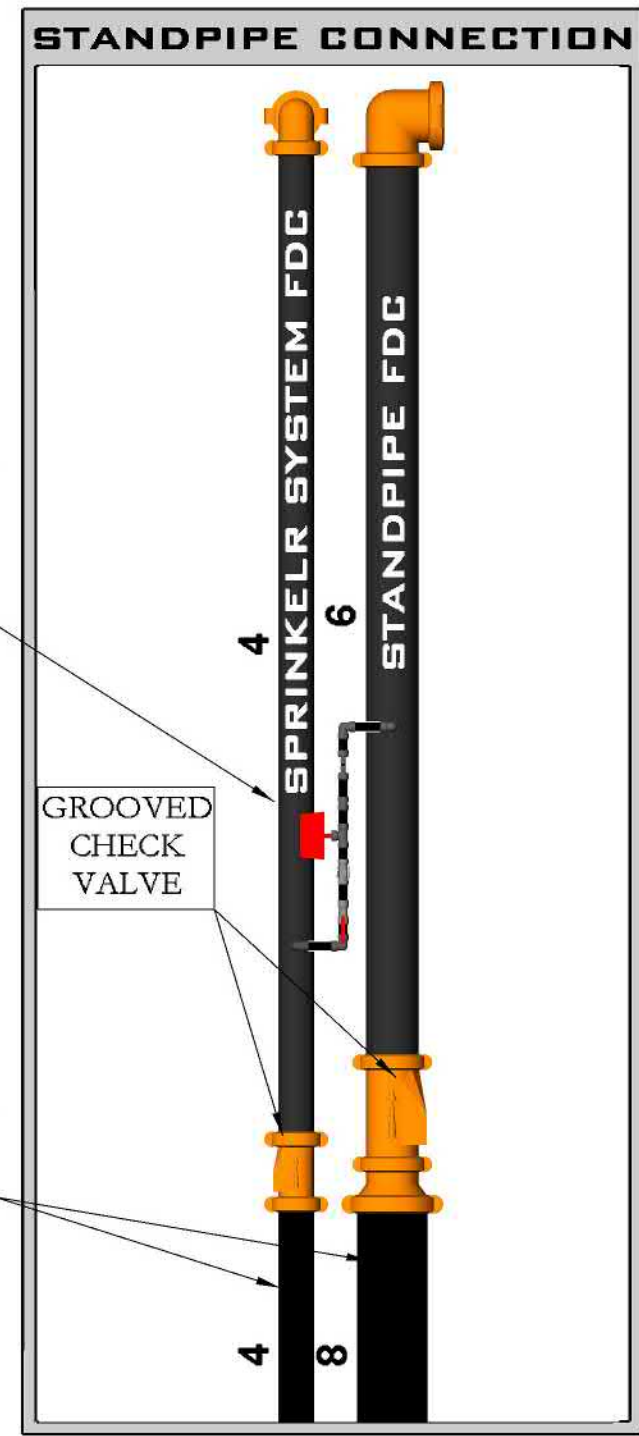


- KEY NOTES**
- 1 TYPICAL SYSTEM RISER
SEE DETAIL ON SHEET FP-D2
 - 2 TYPICAL COMBINATION STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 3 TYPICAL STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 4 6" TYPICAL STANDPIPE & HOSE VALVE CABINET
SEE DETAIL ON SHEET FP-D2
 - 5 4" OR 6" DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 6 4" OR 6" UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 7 2" DRAIN UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 8 2" DRAIN DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 9 2" DRAIN TO SANITARY CONNECTION
 - 10 1" AUXILIARY DRAIN
NIPPLE, VALVE & PLUG
 - 11 1" AUXILIARY DRAIN
PIPE TO SANITARY DRAIN
 - 12 9'-0 MAX. IN SMALL ROOMS
SEE DESIGN NOTE #1 ON SHEET FP-0.1
 - 13 SPRINKLER OMITTED FROM BATHROOM
SEE DESIGN NOTE #2 ON SHEET FP-0.1
 - 14 SPRINKLERS OMITTED FROM OVERHANG
SEE DESIGN NOTE #3 ON SHEET FP-0.1
 - 15 SPRINKLERS OMITTED FROM VERTICAL SHAFT
SEE DESIGN NOTE #4 ON SHEET FP-0.1
 - 16 LAUNDRY OR GARBAGE CHUTE SPRINKLER
PRE-INSTALLED & CONNECTED BY AEGIS
 - 17 CPVC TO STEEL PIPE ADAPTER
THREADED OR GROOVED AS APPLICABLE

- PIPING NOTES**
- 1 BRANCHLINE PIPING TO BE INSTALLED 6" FROM
BOTTOM OF SLAB TO CENTER OF PIPE, TYPICAL.
 - 2 BULK MAINS TO BE INSTALLED 1'-0" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 3 SYSTEM MAINS TO BE INSTALLED 1'-8" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 4 ALL EXPOSED PIPING SHALL BE STEEL PIPE PER
GENERAL NOTE # 17 ON SHEET FP-0.1.

PIPE LEGEND	
	WET CPVC PIPE
	WET STEEL PIPE
	UNDERGROUND PIPE

HATCH LEGEND	
	MODULAR SCOPE OF WORK - NOT IN SCOPE



- KEY NOTES**
- 1 TYPICAL SYSTEM RISER
SEE DETAIL ON SHEET FP-D2
 - 2 TYPICAL COMBINATION STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 3 TYPICAL STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 4 6" TYPICAL STANDPIPE & HOSE VALVE CABINET
SEE DETAIL ON SHEET FP-D2
 - 5 4" OR 6" DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 6 4" OR 6" UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 7 2" DRAIN UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 8 2" DRAIN DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 9 2" DRAIN TO SANITARY CONNECTION
 - 10 1" AUXILIARY DRAIN
NIPPLE, VALVE & PLUG
 - 11 1" AUXILIARY DRAIN
PIPE TO SANITARY DRAIN
 - 12 9'-0 MAX. IN SMALL ROOMS
SEE DESIGN NOTE #1 ON SHEET FP-0.1
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SEE DESIGN NOTE #2 ON SHEET FP-0.1
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SEE DESIGN NOTE #3 ON SHEET FP-0.1
 - 15 SPRINKLERS OMITTED FROM VERTICAL SHAFT
SEE DESIGN NOTE #4 ON SHEET FP-0.1
 - 16 LAUNDRY OR GARBAGE CHUTE SPRINKLER
PRE-INSTALLED & CONNECTED BY AEGIS
 - 17 CPVC TO STEEL PIPE ADAPTER
THREADED OR GROOVED AS APPLICABLE

AIR VENT NOTE

AS STATED IN NFPA 13 SECTION 16.7:
AT THE DISCRETION OF THE INSTALLER,
AUTOMATIC AIR VENTS ARE TO BE INSTALLED BY ONE
OF THE FOLLOWING METHODS
(1) MANUAL VALVE, MIN 1/2"
(2) AUTOMATIC AIR VENT
(3) REMOTE INSPECTOR'S TEST VALVE
(4) OTHER APPROVED MEANS

PIPE LEGEND

WET CPVC PIPE
WET STEEL PIPE
UNDERGROUND PIPE

HATCH LEGEND

MODULAR
SCOPE OF WORK
NOT IN SCOPE

SPRINKLER LEGEND											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Escutcheon
	Tyco	TY3131	TY-FRB	157	5.6	Upright	1/2"	Quick	Brass	200°F	N/A
	Tyco	TY3331	TY-FRB	1	5.6	Horizontal Sidewall	1/2"	Quick	Chrome	200°F	N/A
	Tyco	TY3231	TY-FRB	28	5.6	Pendent	1/2"	Quick	White	200°F	Recessed
				Total = 186							

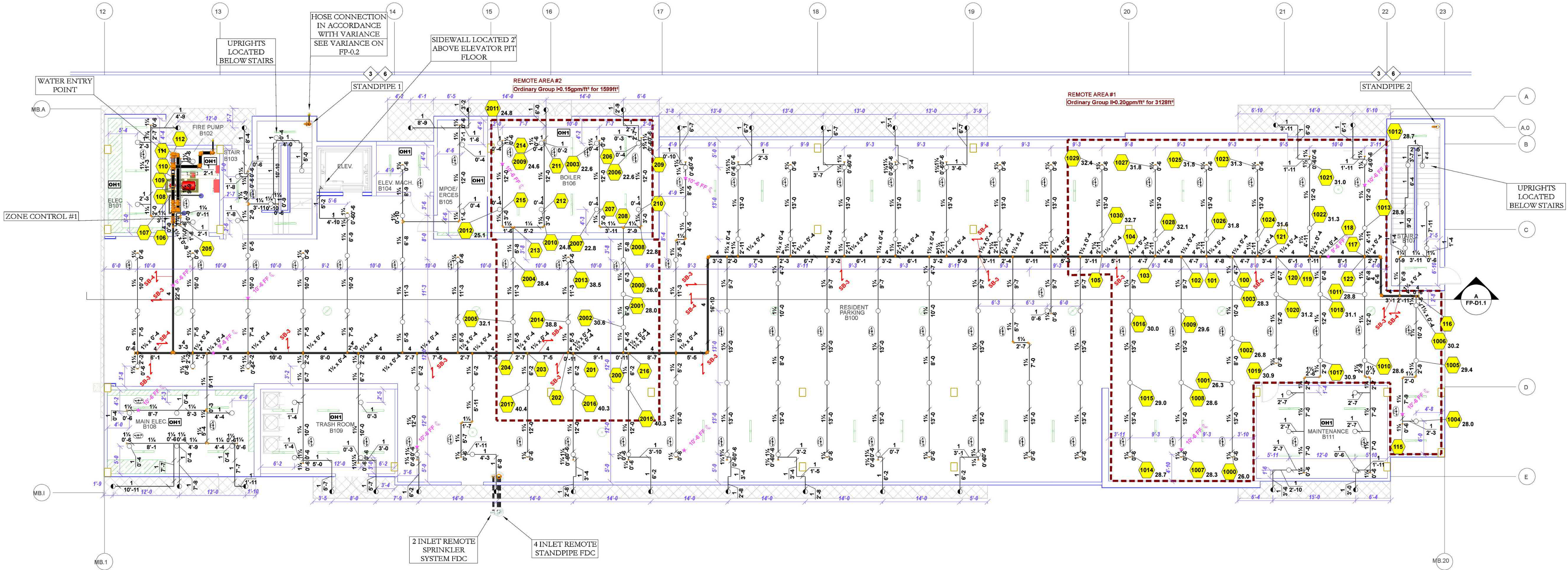
HYDRAULIC INFORMATION #1	
Remote Area 1	Remote Area 2
OCCUPANCY CLASSIFICATION	Ordinary Group I
DENSITY (gpm/ft ²)	0.20 for 1500ft ² (Actual 3128ft ²)
TOTAL HOSE STREAMS	250.0
TOTAL HEADS FLOWING	31
K-FACTOR	5.6
TOTAL WATER REQUIRED	1175.7
TOTAL PRESSURE REQUIRED	40.0
BASE OF RISER (gpm)	925.7
BASE OF RISER (psi)	24.1
SAFETY MARGIN (psi)	+26.4 (39.7%)

HYDRAULIC INFORMATION #1

REMOTE AREA #1 WAS CALCULATED IN
ACCORDANCE WITH THE VARIANCE H20-024.
SEE FP-0.2 FOR MORE INFORMATION

HYDRAULIC INFORMATION #2	
Remote Area 1	Remote Area 2
OCCUPANCY CLASSIFICATION	Ordinary Group I
DENSITY (gpm/ft ²)	0.15 for 1500ft ² (Actual 1599ft ²)
TOTAL HOSE STREAMS	250.0
TOTAL HEADS FLOWING	18
K-FACTOR	5.6
TOTAL WATER REQUIRED	783.4
TOTAL PRESSURE REQUIRED	-2.1
BASE OF RISER (gpm)	533.4
BASE OF RISER (psi)	-15.5
SAFETY MARGIN (psi)	+68.9 (103.2%)

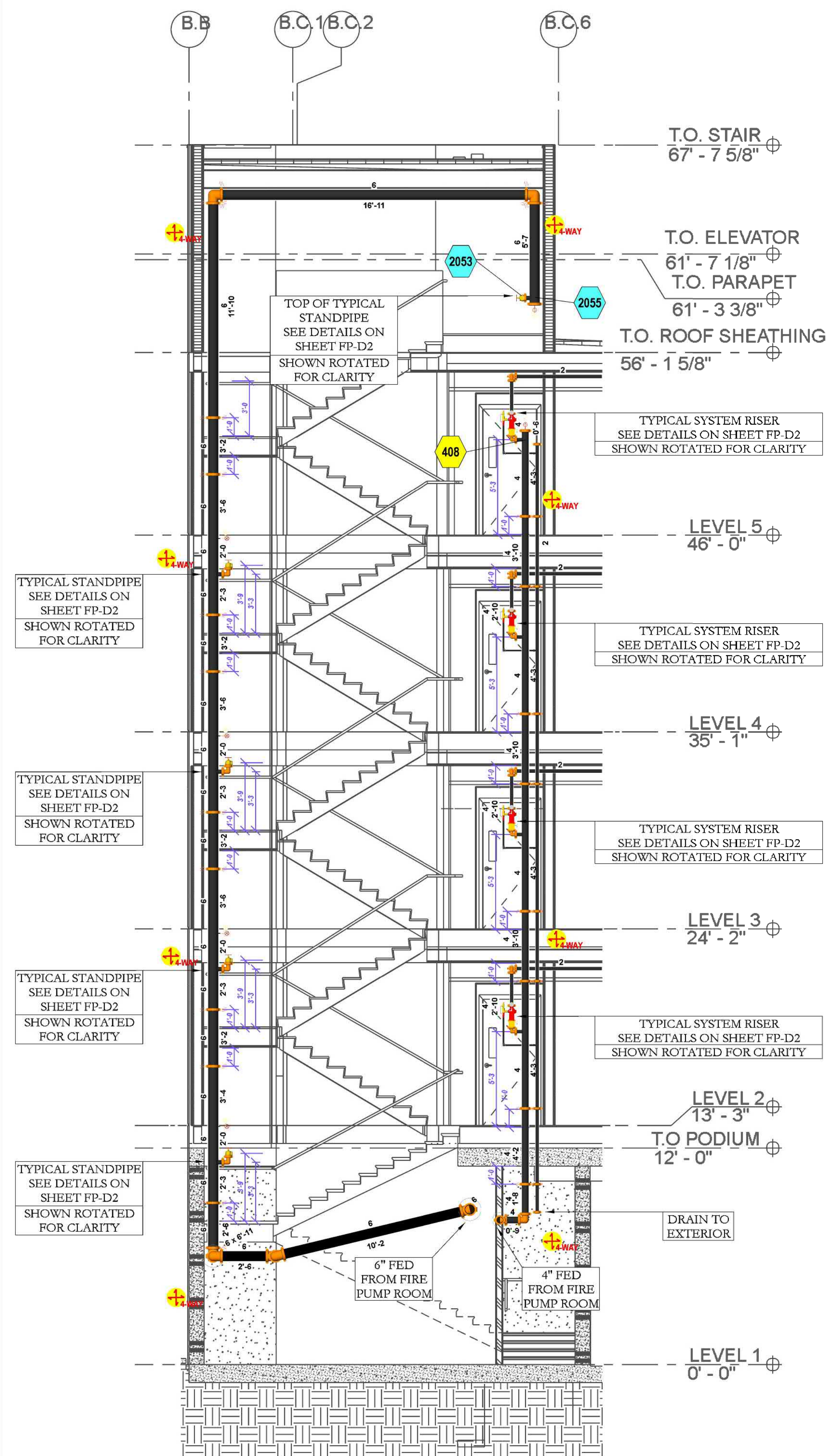
- PIPING NOTES**
- 1 BRANCHLINE PIPING TO BE INSTALLED 6" FROM
BOTTOM OF SLAB TO CENTER OF PIPE, TYPICAL.
 - 2 BULK MAINS TO BE INSTALLED 1'-0" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 3 SYSTEM MAINS TO BE INSTALLED 1'-8" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 4 ALL EXPOSED PIPING SHALL BE STEEL PIPE PER
GENERAL NOTE # 17 ON SHEET FP-0.1.



STAIR SECTION

NOTE: 4-WAY BRACES HAVE SHALL BE PERMITTED TO BE OMITTED WHERE RISERS PENETRATE INTERMEDIATE FLOORS WHERE THE CLEARANCE DOES NOT EXCEED THE LIMITS OF 18.4 PER NFPA 13 - 18.5.8.5.

LIMITED CLEARANCE AROUND A RISER EXTENDING THROUGH A SUBSTANTIAL FLOOR OR ROOF RESTRICTS MOVEMENT AND PROVIDES THE EQUIVALENT OF BRACING (SEE 18.5.8.3). FOR RISERS THAT EXTEND ABOVE A ROOF TO SERVE A STANDPIPE OUTLET, THE BRACING CAN BE LOCATED AT THE UNDERSIDE OF THE ROOF OR CAN BE PROVIDED BY THE CLEARANCE THROUGH THE ROOF STRUCTURE IN THIS MANNER.

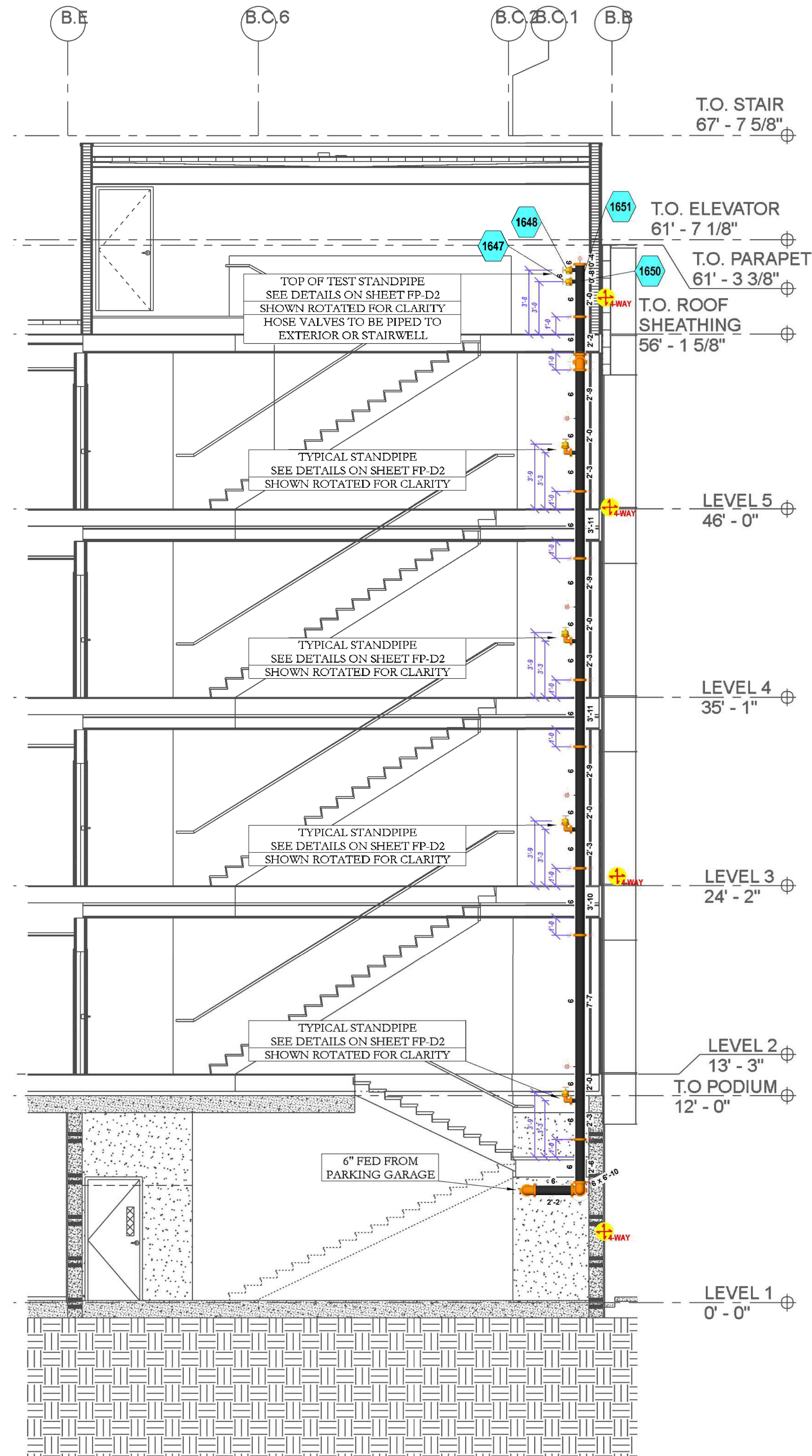


STAIR #1

STAIR SECTION

NOTE: 4-WAY BRACES HAVE SHALL BE PERMITTED TO BE OMITTED WHERE RISERS PENETRATE INTERMEDIATE FLOORS WHERE THE CLEARANCE DOES NOT EXCEED THE LIMITS OF 18.4 PER NFPA 13 - 18.5.8.5.

LIMITED CLEARANCE AROUND A RISER EXTENDING THROUGH A SUBSTANTIAL FLOOR OR ROOF RESTRICTS MOVEMENT AND PROVIDES THE EQUIVALENT OF BRACING (SEE 18.5.8.3). FOR RISERS THAT EXTEND ABOVE A ROOF TO SERVE A STANDPIPE OUTLET, THE BRACING CAN BE LOCATED AT THE UNDERSIDE OF THE ROOF OR CAN BE PROVIDED BY THE CLEARANCE THROUGH THE ROOF STRUCTURE IN THIS MANNER.

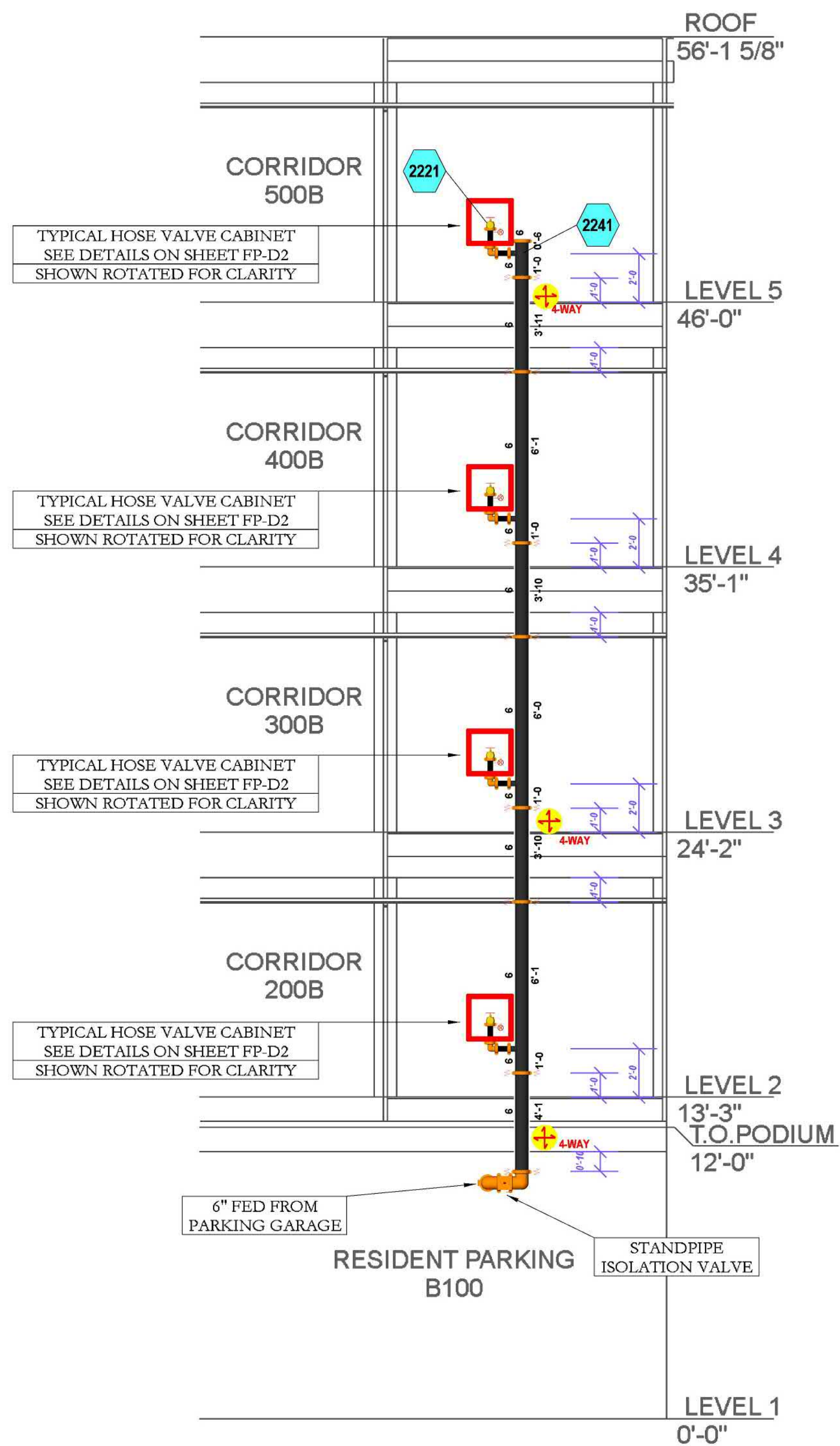


STAIR #2

CORRIDOR SECTION

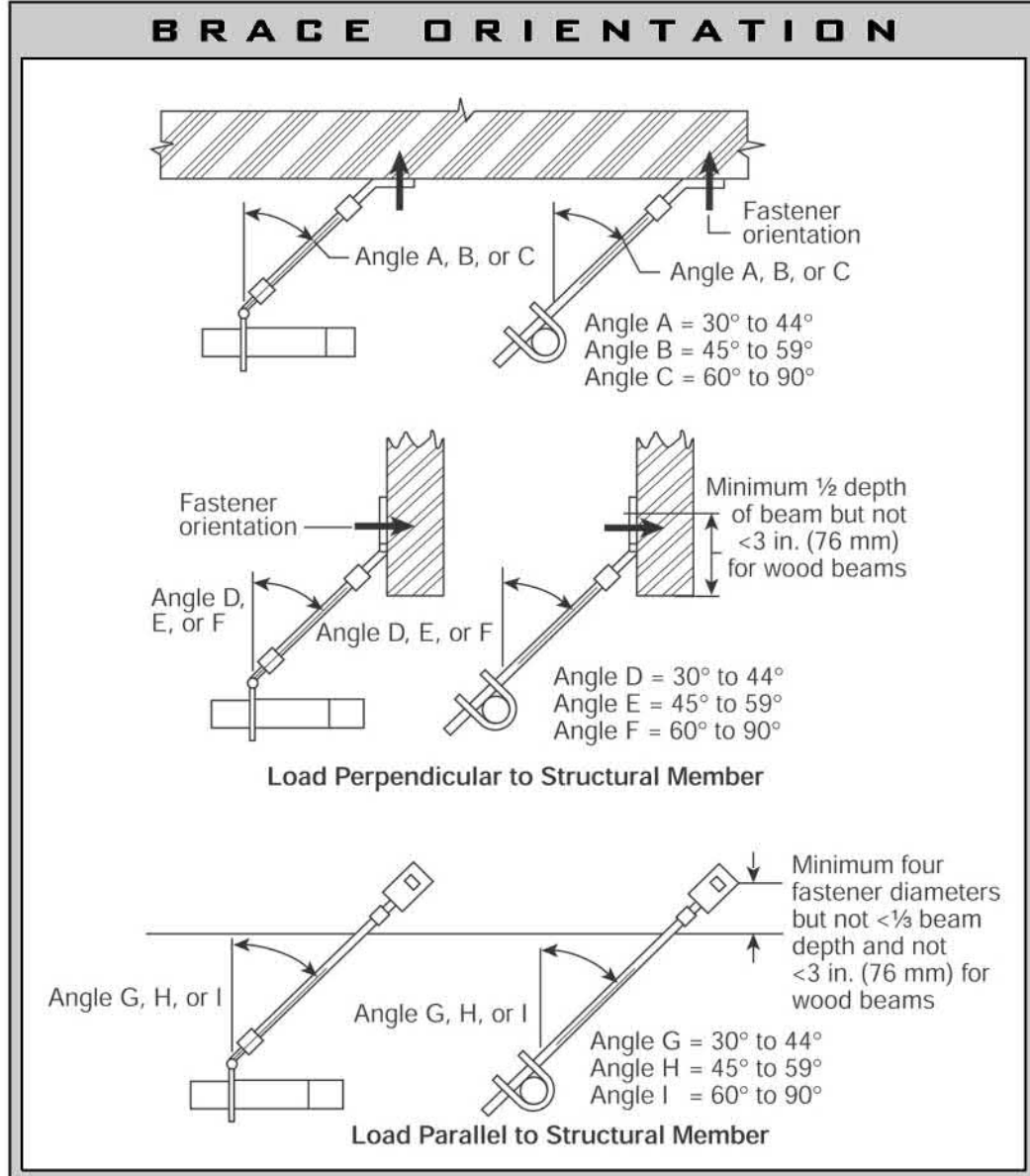
NOTE: 4-WAY BRACES HAVE SHALL BE PERMITTED TO BE OMITTED WHERE RISERS PENETRATE INTERMEDIATE FLOORS WHERE THE CLEARANCE DOES NOT EXCEED THE LIMITS OF 18.4 PER NFPA 13 - 18.5.8.5.

LIMITED CLEARANCE AROUND A RISER EXTENDING THROUGH A SUBSTANTIAL FLOOR OR ROOF RESTRICTS MOVEMENT AND PROVIDES THE EQUIVALENT OF BRACING (SEE 18.5.8.3). FOR RISERS THAT EXTEND ABOVE A ROOF TO SERVE A STANDPIPE OUTLET, THE BRACING CAN BE LOCATED AT THE UNDERSIDE OF THE ROOF OR CAN BE PROVIDED BY THE CLEARANCE THROUGH THE ROOF STRUCTURE IN THIS MANNER.



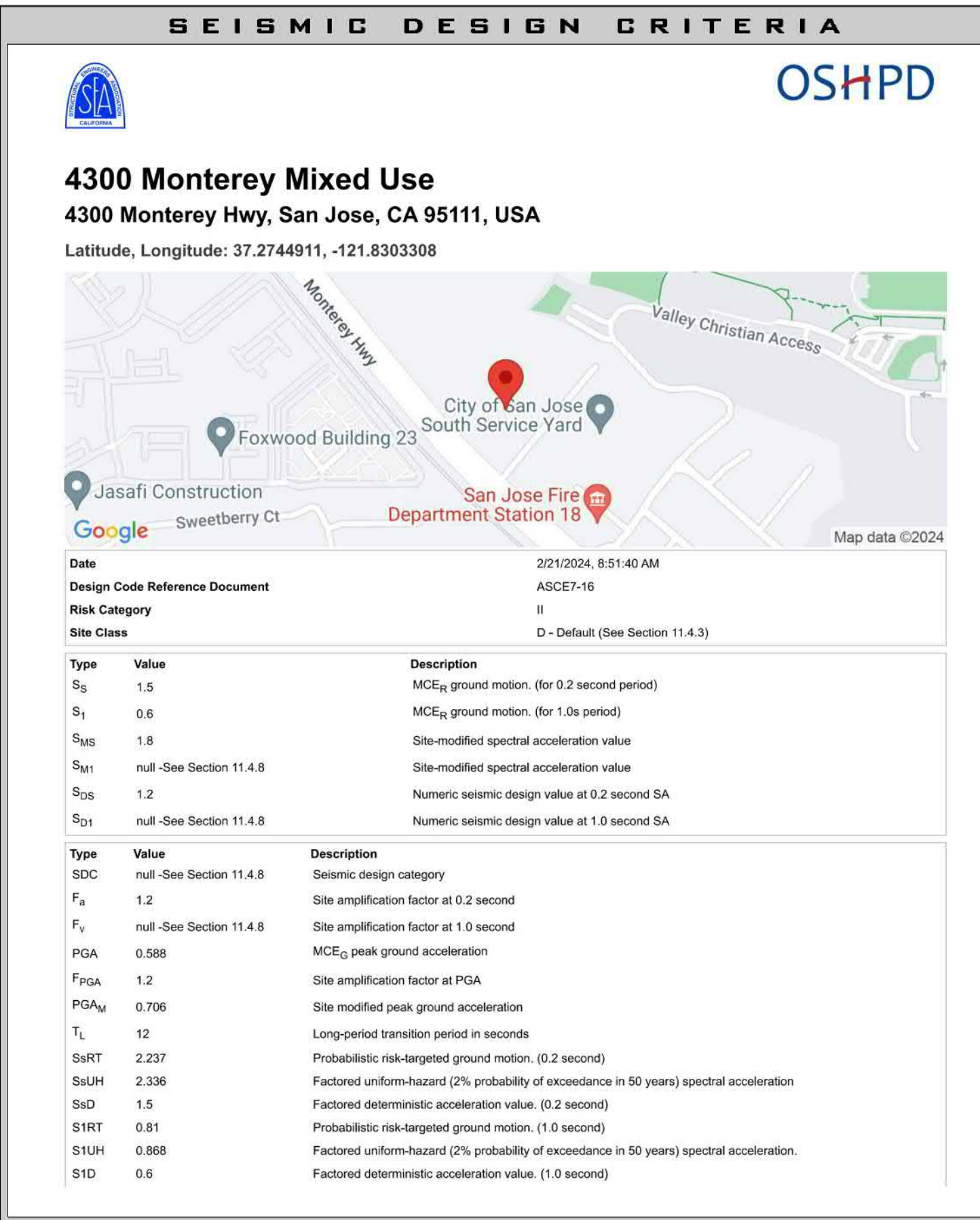
CORRIDOR

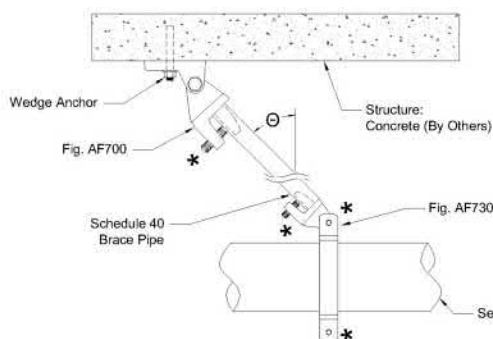
SWAY BRACE SPACING					
STEEL MAINS					
LATERALS TO CONCRETE STRUCTURE					
MAIN SIZE	EQB ATTACH. #	MIN. ANGLE	1" MAX. LENGTH	BULK MAINS	CROSS MAINS
8"	1 OR 2	45°	7'-0"	30'-0"	-
6"	1 OR 2	45°	7'-0"	40'-0"	35'-0"
4"	1 OR 2	45°	7'-0"	40'-0"	25'-0"
LONGITUDINALS TO CONCRETE STRUCTURE					
MAIN SIZE	EQB ATTACH. #	MIN. ANGLE	1" MAX. LENGTH	BULK MAINS	CROSS MAINS
8"	1 OR 2	45°	7'-0"	30'-0"	-
6"	1 OR 2	45°	7'-0"	50'-0"	50'-0"
4"	1 OR 2	45°	7'-0"	80'-0"	80'-0"
CPVC MAINS					
LATERALS TO WOOD STRUCTURE					
MAIN SIZE	EQB ATTACH. #	MIN. ANGLE	1" MAX. LENGTH	BULK MAINS	CROSS MAINS
2"	3 OR 4	45°	7'-0"	20'-0"	20'-0"
LONGITUDINALS TO WOOD STRUCTURE					
MAIN SIZE	EQB ATTACH. #	MIN. ANGLE	1" MAX. LENGTH	BULK MAINS	CROSS MAINS
2"	3 OR 4	45°	7'-0"	65'-0"	65'-0"



MAX. SWAY BRACE LOAD					
THROUGH BOLTS IN SAWN LUMBER OR GLUE-LAMINATED TIMBERS					
DIAMETER	ORIENTATION	LENGTH OF BOLT IN TIMBER (IN.)			
		1-1/2	2-1/2	3-1/2	5-1/2
1/2	A	115	140	172	-
	B	165	200	250	-
	C	200	240	305	-
	D	135	160	200	-
	E	230	280	350	-
	F	395	480	600	-
	G	130	165	200	-
	H	215	275	330	-
	I	310	410	485	-
5/8	A	135	160	200	280
	B	190	225	285	395
	C	235	280	345	485
	D	155	185	230	325
	E	270	320	400	560
	F	460	550	685	960
	G	155	190	235	315
	H	255	320	405	515
	I	380	495	635	735
3/4	A	155	180	220	310
	B	220	255	310	440
	C	270	310	380	535
	D	180	205	255	360
	E	310	360	440	620
	F	530	615	755	1065
	G	170	215	260	365
	H	300	365	455	610
	I	450	575	730	925

RESTRAINT SPACING					
MAX SPACING FOR STEEL PIPE					
PIPE SIZE (INCHES)	$C_p \leq 0.50$	$C_p > 0.50$ $C_p \leq 0.71$	$C_p > 0.71$ $C_p \leq 1.40$	$C_p > 1.40$	
1/2	34"	29"	26"	24"	
3/4	36"	32"	28"	26"	
1	43"	36"	26"	24"	
1-1/4	46"	39"	27"	24"	
1-1/2	49"	41"	29"	25"	
2	53"	45"	31"	27"	
MAX SPACING FOR CPVC, COPPER, & BRASS PIPE					
PIPE SIZE (INCHES)	$C_p \leq 0.50$	$C_p > 0.50$ $C_p \leq 0.71$	$C_p > 0.71$ $C_p \leq 1.40$	$C_p > 1.40$	
1/2	26"	22"	16"	14"	
3/4	31"	26"	18"	15"	
1	34"	28"	20"	17"	
1-1/4	37"	31"	22"	19"	
1-1/2	40"	34"	24"	20"	
2	45"	38"	27"	23"	



SEISMIC BRACING CALCULATION							
SB-2 - SEISMIC BRACE CALCULATIONS							
Seismic Project	4300-4310 Monterey Mixed Use - Anchors	Brace Name	SB-2				
Standard	NFPA 13-2022	Drawing Reference	FP-D4				
Brace Type	Longitudinal	Approval Agency	UL Listed				
STRUCTURE INFORMATION		SEISMIC BRACE ATTACHMENTS					
Structure	Cracked Concrete	Model	AF700	Size	3/4"		
Substrate	Normal Weight Cracked Concrete - 3000 psi	Swivel Att.	AF700	Adj. Load	1,333 lbf.		
Load Orientation	N/A	Pipe Att.	AF730	Size	6 NPS		
See Appendix A for alternate seismic brace attachments. All seismic brace attachments manufactured by ASC Engineered Solutions.							
BRACE INFORMATION							
Brace Member	1 NPS Sch 40	* - denotes hardware shown with the bolt head or nut broken off, as per the product installation instructions.					
Brace Length Max	7 ft 0 in	Net Vertical Reaction Forces do not need to be addressed per NFPA 13-2022.					
Brace Angle	45° - 59°						
Least Radius of Gyration	0.421 in.						
Ir Ratio Max	200						
Max Horizontal Load	1,310 lbf.						
FASTENER INFORMATION							
Fastener Name	KWIK Bolt T22						
Fastener Orientation	B						
Fastener Diameter	3/4 in.						
Nominal Embedment	4 in.						
Effective Embedment	3 1/4 in.						
Slab Thickness	5 1/2 in.						
Edge Distance 1	5 1/4 in.						
Max Horizontal Load	1,164 lbf.						
SPRINKLER SYSTEM LOAD CALCULATION (F _{rw} = C _p •W _s)							
C _p = 0.700							
Qty	Line	Description	Pipe Size/Type	Length	Weight/ft	Weight/Line	Total Weight
1	Main	Braced Pipe	6 NPS Steel Sch 10	50.00 ft.	23.03 lb/ft.	1,151.50 lb.	1,151.50 lb.
Total System Weight						1,151.50 lb.	
System Design Weight (W _s)						1,151.50 lb.	
Horizontal Seismic Load (F _{rw})						928 lbf.	

SEISMIC BRACING CALCULATION							
SB-4 - SEISMIC BRACE CALCULATIONS							
Seismic Project	4300-4310 Monterey Mixed Use - Anchors	Brace Name	SB-4				
Standard	NFPA 13-2022	Drawing Reference	FP-D4				
Brace Type	Longitudinal	Approval Agency	UL Listed				
STRUCTURE INFORMATION		SEISMIC BRACE ATTACHMENTS					
Structure	Cracked Concrete	Model	Size	Adj. Load			
Substrate	Normal Weight Cracked Concrete - 3000 psi	Swivel Att.	AF700	3/4"	1,333 lbf.		
Load Orientation	N/A	Pipe Att.	AF730	4 NPS	1,333 lbf.		
See Appendix A for alternate seismic brace attachments. All seismic brace attachments manufactured by ASC Engineered Solutions.							
* - denotes hardware shown with the bolt head or nut broken off, as per the product installation instructions. Net Vertical Reaction Forces do not need to be addressed per NFPA 13-2022.							
SPRINKLER SYSTEM LOAD CALCULATION ($F_{rw} = C_p \cdot W_s$)							
$C_p = 0.700$							
Qty	Line	Description	Pipe Size/Type	Length	Weight/ft	Weight/Line	Total Weight
1	Main	Braced Pipe	4 NPS Mega Flow	80.00 ft.	10.67 lb/ft.	853.60 lb.	853.60 lb.
Total System Weight						853.60 lb.	
System Design Weight (W_s)						982.00 lb.	
Horizontal Seismic Load (F_{rw})						688 lbf.	

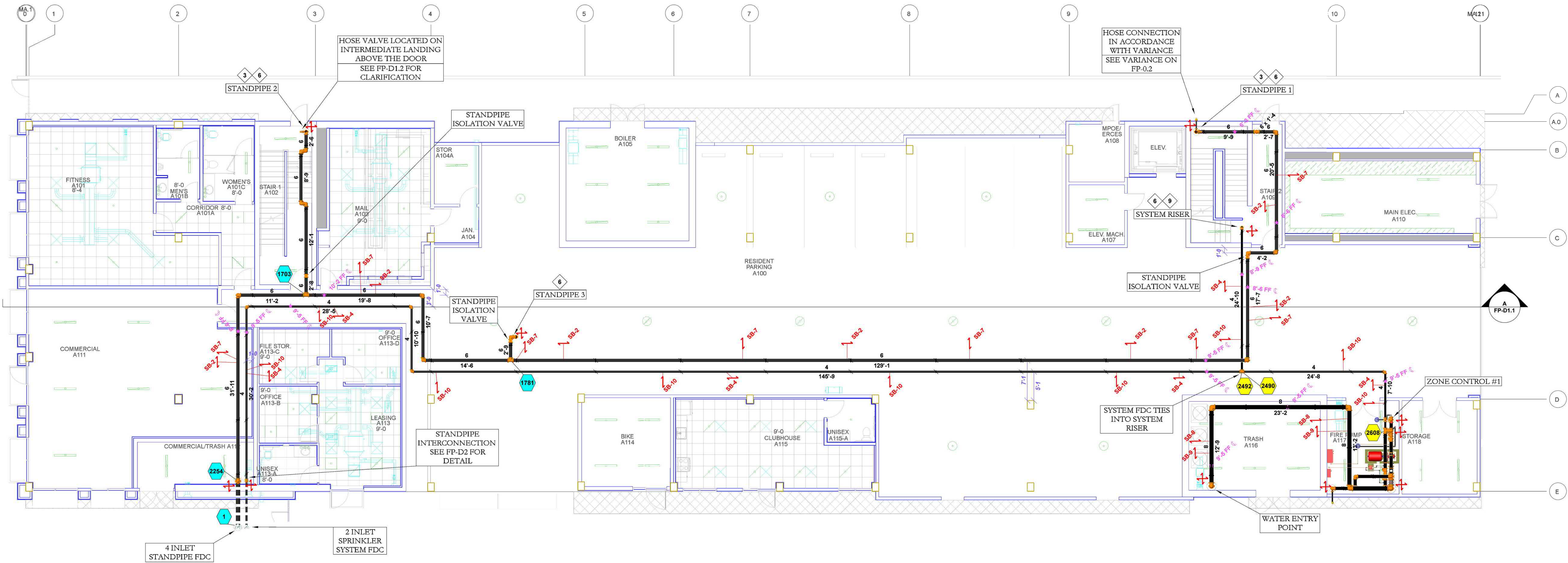
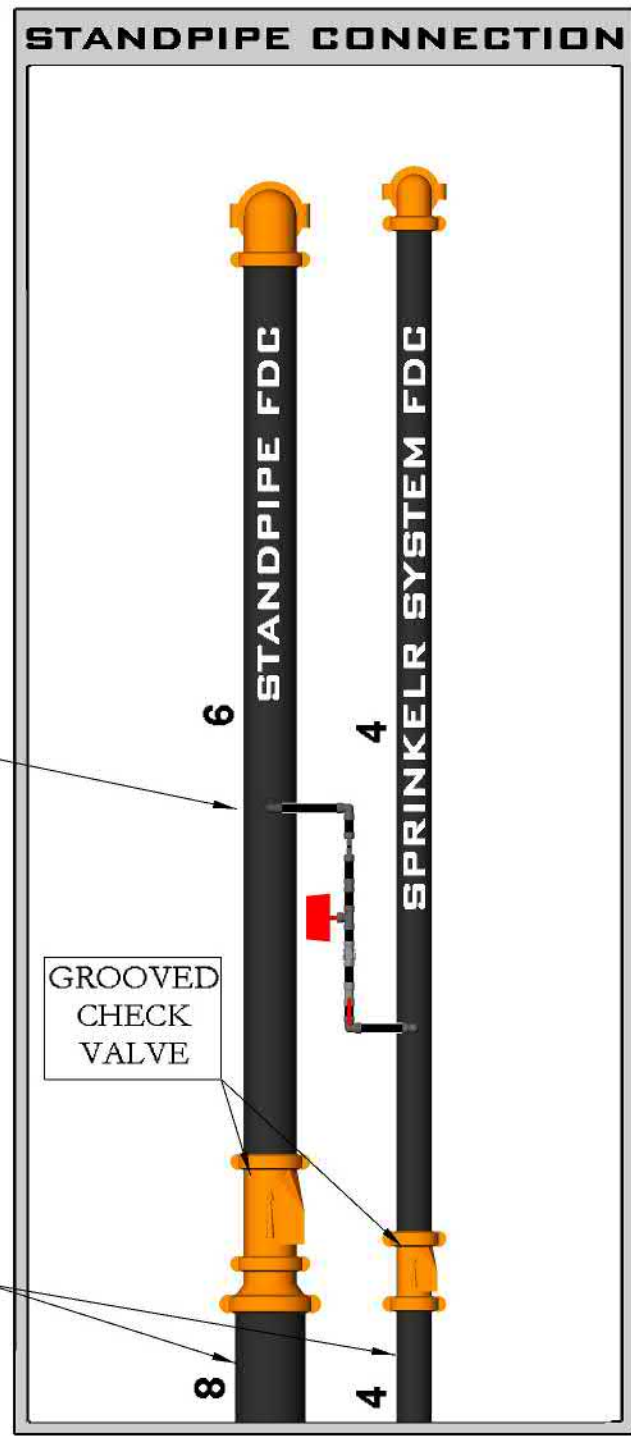
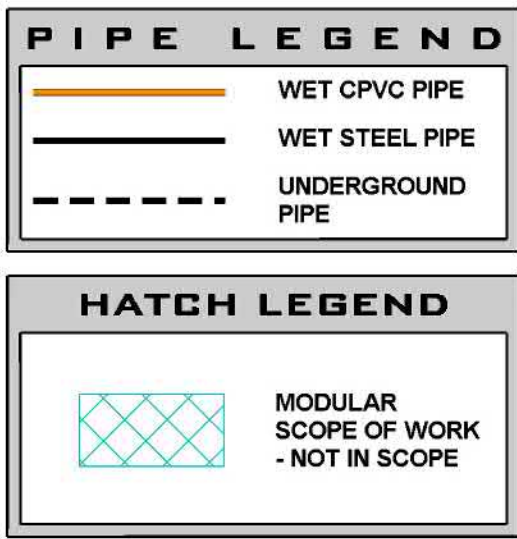
SEISMIC BRACING CALCULATION							
SB-1 - SEISMIC BRACE CALCULATIONS							
Seismic Project	4300-4310 Monterey Mixed Use - Cast In Place		Brace Name	SB-1			
Standard	NFPA 13-2022		Drawing Reference	FP-D4			
Brace Type	Lateral		Approval Agency	UL Listed			
STRUCTURE INFORMATION			SEISMIC BRACE ATTACHMENTS				
Structure	Cracked Concrete		Model	Size	Adj. Load		
Substrate	Normal Weight Cracked Concrete - 3000 psi		Swivel Att.	AF700	3/4"	1,333 lbf.	
Load Orientation	N/A		Pipe Att.	AF635	6 NPS x 1 NPS	1,333 lbf.	
See Appendix A for alternate seismic brace attachments. All seismic brace attachments manufactured by ASC Engineered Solutions.							
BRACE INFORMATION			FASTENER INFORMATION				
Brace Member	1 NPS Sch 40		Fastener Name KCM-WF 3/8-3/4				
Brace Length Max	7 ft 0 in		Fastener Orientation B				
Brace Angle	45° - 59°		Fastener Diameter 3/4 in.				
Least Radius of Gyration	0.421 in.		Nominal Embedment 3 1/5 in.				
Ir Ratio Max	200		Effective Embedment 3 in.				
Max Horizontal Load	1,310 lbf.		Slab Thickness 5 in.				
* - denotes hardware shown with the bolt head or nut broken off, as per the product installation instructions. Net Vertical Reaction Forces do not need to be addressed per NFPA 13-2022.							
SPRINKLER SYSTEM LOAD CALCULATION (F _{rw} = C _p •W _s)							
C _p = 0.700							
Qty	Line	Description	Pipe Size/Type	Length	Weight/ft	Weight/Line	Total Weight
1	Main	Braced Pipe	6 NPS Steel Sch 10	35.00 ft.	23.03 lb/ft.	806.05 lb.	806.05 lb.
1	Branch 1	Segment A	1 1/4 NPS Mega Flow	86.00 ft.	1.91 lb/ft.	164.26 lb.	164.26 lb.
1	Branch 1	Segment B	1 NPS Mega Thread	28.00 ft.	1.86 lb/ft.	52.08 lb.	52.08 lb.
1	Branch 1	Riser Nipple	1 1/4 NPS Mega Flow	1.00 ft.	1.91 lb/ft.	1.91 lb.	1.91 lb.
4	Branch 2	Segment A	1 1/4 NPS Mega Flow	20.00 ft.	1.91 lb/ft.	38.20 lb.	152.80 lb.
4	Branch 2	Segment B	1 1/4 NPS Mega Flow	1.00 ft.	1.91 lb/ft.	1.91 lb.	7.64 lb.
4	Branch 2	Riser Nipple	1 NPS Mega Thread	3.00 ft.	1.86 lb/ft.	5.58 lb.	22.32 lb.
Weakest Main Size		Spacing	Max Fpw	Total System Weight		1,207.06 lb.	
6 NPS Steel Sch 10		35 ft.	2,249 lbf.	System Design Weight (W _s)		1,389.00 lb.	
Branch	Riser Nipple	Section Mod	Fy Max	Fy	Horizontal Seismic Load (F _{rw})		
1	1 1/4 NPS Mega Flow	0.1250 in ³	30,000 psi	14,667 psi	973 lbf.		
2	1 NPS Mega Thread	0.1180 in ³	30,000 psi	9,676 psi			

SEISMIC BRACING CALCULATION							
SB-3 - SEISMIC BRACE CALCULATIONS							
Seismic Project	4300-4310 Monterey Mixed Use - Cast In Place	Brace Name	SB-3				
Standard	NFPA 13-2022	Drawing Reference	FP-D4				
Brace Type	Lateral	Approval Agency	UL Listed				
STRUCTURE INFORMATION		SEISMIC BRACE ATTACHMENTS					
Structure	Cracked Concrete	Model	AF700	Size	3/4"		
Substrate	Normal Weight Cracked Concrete - 3000 psi	Swivel Att.	AF700	Adj. Load	1,333 lbf.		
Load Orientation	N/A	Pipe Att.	AF635	Size	4 NPS x 1 NPS		
See Appendix A for alternate seismic brace attachments. All seismic brace attachments manufactured by ASC Engineered Solutions.							
BRACE INFORMATION							
FASTENER INFORMATION		* - denotes hardware shown with the bolt head or nut broken off, as per the product installation instructions. Net Vertical Reaction Forces do not need to be addressed per NFPA 13-2022.					
Fastener Name	KCM-WF 3/8-3/4						
Fastener Orientation	B						
Fastener Diameter	3/4 in.						
Nominal Embedment	3 1/5 in.						
Effective Embedment	3 in.						
Slab Thickness	5 1/2 in.						
Edge Distance 1	16 1/2 in.						
Max Horizontal Load	1,015 lbf.						
SPRINKLER SYSTEM LOAD CALCULATION ($F_{rw} = C_p \cdot W_s$)							
$C_p = 0.700$							
Qty	Line	Description	Pipe Size/Type	Length	Weight/ft	Weight/Line	Total Weight
1	Main	Braced Pipe	4 NPS Mega Flow	25.00 ft.	10.67 lb/ft.	266.75 lb.	266.75 lb.
1	Branch 1	Segment A	2 NPS Mega Flow	31.00 ft.	3.63 lb/ft.	112.53 lb.	337.59 lb.
1	Branch 1	Segment B	1 NPS Mega Thread	11.00 ft.	1.86 lb/ft.	20.46 lb.	61.38 lb.
3	Branch 1	Segment C	1 1/4 NPS Mega Flow	26.00 ft.	1.91 lb/ft.	49.66 lb.	148.98 lb.
3	Branch 1	Riser Nipple	2 NPS Mega Flow	1.00 ft.	3.63 lb/ft.	3.63 lb.	10.89 lb.
Weakest Main Size		Spacing	Max Fpw	Total System Weight		825.59 lb.	
4 NPS Mega Flow		25 ft	1,025 lbf.	System Design Weight (W _s)		950.00 lb.	
Branch		Riser Nipple	Section Mod	Fy Max	Fy	Horizontal Seismic Load (F _{rw})	
1		2 NPS Mega Flow	0.3200 in ³	30,000 psi	4,899 psi	665 lbf.	

SB-5 - SEISMIC BRACE CALCULATIONS							
Seismic Project	4300-4310 Monterey Mixed Use - Cast In Place		Brace Name	SB-5			
Standard	NFPA 13-2022		Drawing Reference	FP-D4			
Brace Type	Lateral		Approval Agency	UL Listed			
STRUCTURE INFORMATION		SEISMIC BRACE ATTACHMENTS					
Structure	Lumber/Timbers (Thru Bolt)		Model	Size	Adj. Load		
Substrate	Saw Lumber or Glue Laminated Timbers - SG = 0.35		AF700	3/4"	1,333 lbf.		
Load Orientation	N/A		AF035	2 NPS x 1 NPS	884 lbf.		
BRACE INFORMATION		See Appendix A for alternate seismic brace attachments. All seismic bracing manufactured by ASC Engineering Solutions.					
Brace Member	1 NPS Sch 40						
Brace Length Max	7 ft 0 in						
Brace Angle	45° - 59°						
Least Radius of Gyration	0.421 in.						
I/R Ratio Max	200						
Max Horizontal Load	1,310 lbf.						
FASTER INFORMATION							
Faster Name	Thru-Bolt per referenced edition of NFPA 13						
Faster Orientation	H						
Faster Diameter	3/4 in.						
Nominal Embedment	1 1/2 in.						
Max Horizontal Load	300 lbf.						
* denotes hardware shown with the bolt head or nut broken off, as per the product installation instructions.							
Net Vertical Reaction Forces do not need to be addressed per NFPA 13-2022.							
SPRINKLER SYSTEM LOAD CALCULATION (F _{WR} = C _t * W ₁)							
C _t = 0.700							
Qty	Line	Description	Pipe Size/Type	Length	Weight/ft	Weight/Line	Total Weight
1	Main	Branch Pipe	2 NPS CPVC Sch 40	20.00 ft.	2.22 lbf./ft.	44.40 lbf.	44.40 lbf.
2	Branch 1	Segment A	1 1/4 NPS CPVC Sch 40	18.00 ft.	1.08 lbf./ft.	19.44 lbf.	38.88 lbf.
2	Branch 1	Segment B	1 NPS CPVC Sch 40	67.00 ft.	0.68 lbf./ft.	45.56 lbf.	91.12 lbf.
2	Branch 1	Riser Nipple	1 1/4 NPS CPVC Sch 40	1.00 ft.	1.08 lbf./ft.	1.08 lbf.	2.16 lbf.
Weakest Main Size			Spacing	Max Fw	Total System Weight		176.56 lbf.
2 NPS CPVC Sch 40			20 ft.	161 lbf.	System Design Weight (W ₁)		204.00 lbf.
Branch Riser Nipple			Section Mod	Fy Max	Fy	Horizontal Seismic Load (F _{WR})	
1	1 1/4 NPS CPVC Sch 40	0.2350 in ²	8,000 psi	2,363 psi	143 lbf.		

- KEY NOTES**
- 1 TYPICAL SYSTEM RISER
SEE DETAIL ON SHEET FP-D2
 - 2 TYPICAL COMBINATION STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 3 TYPICAL STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 4 6" TYPICAL STANDPIPE & HOSE VALVE CABINET
SEE DETAIL ON SHEET FP-D2
 - 5 4" OR 6" DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 6 4" OR 6" UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 7 2" DRAIN UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 8 2" DRAIN DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 9 2" DRAIN TO SANITARY CONNECTION
 - 10 1" AUXILIARY DRAIN
NIPPLE, VALVE & PLUG
 - 11 1" AUXILIARY DRAIN
PIPE TO SANITARY DRAIN
 - 12 9'-0" MAX. IN SMALL ROOMS
SEE DESIGN NOTE #1 ON SHEET FP-0.1
 - 13 SPRINKLER OMITTED FROM BATHROOM
SEE DESIGN NOTE #2 ON SHEET FP-0.1
 - 14 SPRINKLERS OMITTED FROM OVERHANG
SEE DESIGN NOTE #3 ON SHEET FP-0.1
 - 15 SPRINKLERS OMITTED FROM VERTICAL SHAFT
SEE DESIGN NOTE #4 ON SHEET FP-0.1
 - 16 LAUNDRY OR GARBAGE CHUTE SPRINKLER
PRE-INSTALLED & CONNECTED BY AEGIS
 - 17 CPVC TO STEEL PIPE ADAPTER
THREADED OR GROOVED AS APPLICABLE

- PIPING NOTES**
- 1 BRANCHLINE PIPING TO BE INSTALLED 6" FROM
BOTTOM OF SLAB TO CENTER OF PIPE, TYPICAL.
 - 2 BULK MAINS TO BE INSTALLED 1'-0" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 3 SYSTEM MAINS TO BE INSTALLED 1'-8" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 4 ALL EXPOSED PIPING SHALL BE STEEL PIPE PER
GENERAL NOTE # 17 ON SHEET FP-0.1.



- KEY NOTES**
- 1 TYPICAL SYSTEM RISER
SEE DETAIL ON SHEET FP-D2
 - 2 TYPICAL COMBINATION STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 3 TYPICAL STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 4 6" TYPICAL STANDPIPE & HOSE VALVE CABINET
SEE DETAIL ON SHEET FP-D2
 - 5 4" OR 6" DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 6 4" OR 6" UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 7 2" DRAIN UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 8 2" DRAIN DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 9 2" DRAIN TO SANITARY CONNECTION
 - 10 1" AUXILIARY DRAIN
NIPPLE, VALVE & PLUG
 - 11 1" AUXILIARY DRAIN
PIPE TO SANITARY DRAIN
 - 12 9'-0" MAX. IN SMALL ROOMS
SEE DESIGN NOTE #1 ON SHEET FP-0.1
 - 13 SPRINKLER OMITTED FROM BATHROOM
SEE DESIGN NOTE #2 ON SHEET FP-0.1
 - 14 SPRINKLERS OMITTED FROM OVERHANG
SEE DESIGN NOTE #3 ON SHEET FP-0.1
 - 15 SPRINKLERS OMITTED FROM VERTICAL SHAFT
SEE DESIGN NOTE #4 ON SHEET FP-0.1
 - 16 LAUNDRY OR GARBAGE CHUTE SPRINKLER
PRE-INSTALLED & CONNECTED BY AEGIS
 - 17 CPVC TO STEEL PIPE ADAPTER
THREADED OR GROOVED AS APPLICABLE

AIR VENT NOTE

AS STATED IN NFPA 13 SECTION 16.7:
AT THE DISCRETION OF THE INSTALLER,
AUTOMATIC AIR VENTS ARE TO BE INSTALLED BY ONE
OF THE FOLLOWING METHODS
(1) MANUAL VALVE, MIN 1/2"
(2) AUTOMATIC AIR VENT
(3) REMOTE INSPECTOR'S TEST VALVE
(4) OTHER APPROVED MEANS

PIPE LEGEND

WET CPVC PIPE
WET STEEL PIPE
UNDERGROUND PIPE

HATCH LEGEND

MODULAR
SCOPE OF WORK
- NOT IN SCOPE

SPRINKLER LEGEND										
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature
	Tyco	TY3131	TY-FRB	127	5.6	Upright	½	Quick	Brass	200°F
	Tyco	TY4131	TY-FRB	16	8	Upright	¾	Quick	Brass	200°F
	Tyco	TY3231	TY-FRB	71	5.6	Pendent	½	Quick	White	200°F
	Tyco	TY3331	TY-FRB	1	5.6	Horizontal Sidewall	½	Quick	Chrome	200°F
	Tyco	TY2199	CC3	36	4.2	Upright	½	Quick	Brass	200°F
				Total = 251						
Escutcheon										

HYDRAULIC INFORMATION #1	
Remote Area 1	
OCCUPANCY CLASSIFICATION	Extra Hazard Group I
DENSITY (gpm/ft ²)	0.33 for 2500ft ² (Actual 3001ft ²)
TOTAL HOSE STREAMS	500.0
TOTAL HEADS FLOWING	41
K-FACTOR	5.6
TOTAL WATER REQUIRED	1596.0
TOTAL PRESSURE REQUIRED	43.1
BASE OF RISER (gpm)	1086.0
BASE OF RISER (psi)	28.1
SAFETY MARGIN (psi)	+22.9 (34.7%)

HYDRAULIC INFORMATION #2	
Remote Area 2	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft ²)	0.20 for 1500ft ² (Actual 3058ft ²)
TOTAL HOSE STREAMS	250.0
TOTAL HEADS FLOWING	37
K-FACTOR	5.6
TOTAL WATER REQUIRED	1444.9
TOTAL PRESSURE REQUIRED	46.0
BASE OF RISER (gpm)	1184.9
BASE OF RISER (psi)	30.3
SAFETY MARGIN (psi)	+20.2 (30.5%)

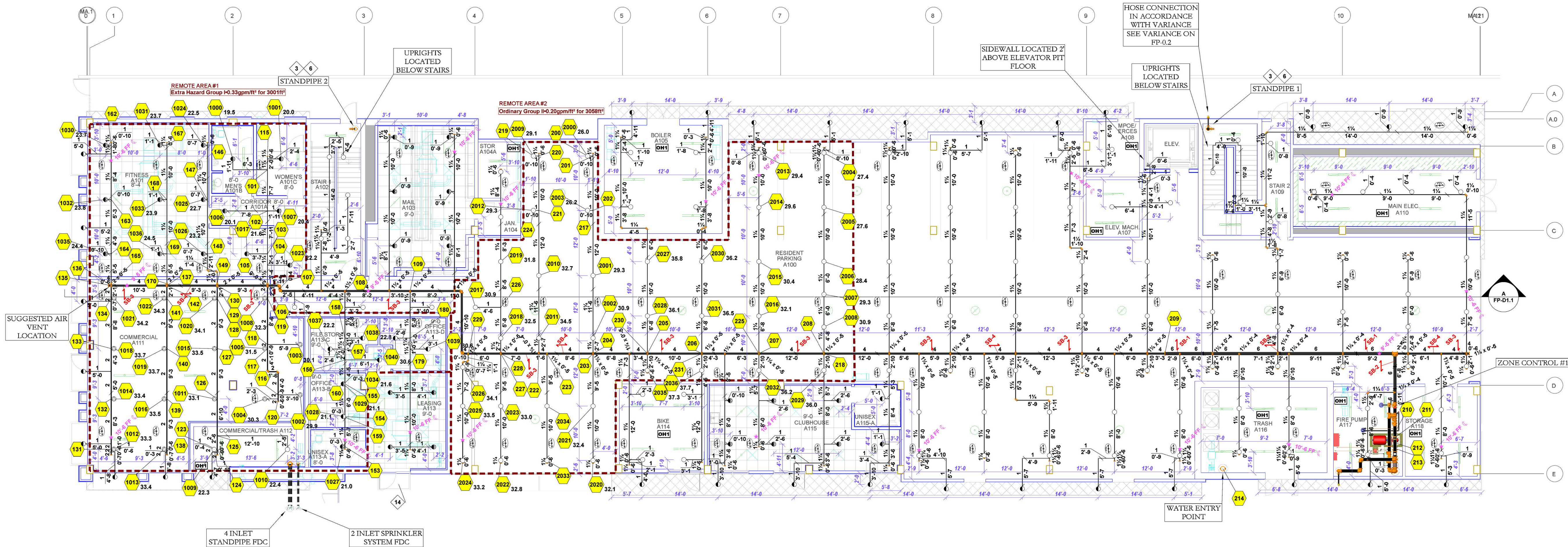
HYDRAULIC INFORMATION #1

REMOTE AREA #1 WAS CALCULATED IN
ACCORDANCE WITH SAN JOSE FIRE
DEPARTMENT REQUIREMENTS SECTION 3.3.3.

HYDRAULIC INFORMATION #2

REMOTE AREA #2 WAS CALCULATED IN
ACCORDANCE WITH THE VARIANCE H20-024.
SEE FP-0.2 FOR MORE INFORMATION

- PIPING NOTES**
- 1 BRANCHLINE PIPING TO BE INSTALLED 6" FROM
BOTTOM OF SLAB TO CENTER OF PIPE, TYPICAL.
 - 2 BULK MAINS TO BE INSTALLED 1'-0" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 3 SYSTEM MAINS TO BE INSTALLED 1'-8" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 4 ALL EXPOSED PIPING SHALL BE STEEL PIPE PER
GENERAL NOTE # 17 ON SHEET FP-0.1.



- KEY NOTES**
- 1 TYPICAL SYSTEM RISER
SEE DETAIL ON SHEET FP-D2
 - 2 TYPICAL COMBINATION STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 3 TYPICAL STANDPIPE
SEE DETAIL ON SHEET FP-D2
 - 4 6" TYPICAL STANDPIPE & HOSE VALVE CABINET
SEE DETAIL ON SHEET FP-D2
 - 5 4" OR 6" DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 6 4" OR 6" UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 7 2" DRAIN UP TO FLOOR ABOVE
ANNULAR CLEARANCE PER NFPA 13
 - 8 2" DRAIN DOWN TO FLOOR BELOW
ANNULAR CLEARANCE PER NFPA 13
 - 9 2" DRAIN TO SANITARY CONNECTION
 - 10 1" AUXILIARY DRAIN
NIPPLE, VALVE & PLUG
 - 11 1" AUXILIARY DRAIN
PIPE TO SANITARY DRAIN
 - 12 9'-0" MAX. IN SMALL ROOMS
SEE DESIGN NOTE #1 ON SHEET FP-0.1
 - 13 SPRINKLER OMITTED FROM BATHROOM
SEE DESIGN NOTE #2 ON SHEET FP-0.1
 - 14 SPRINKLERS OMITTED FROM OVERHANG
SEE DESIGN NOTE #3 ON SHEET FP-0.1
 - 15 SPRINKLERS OMITTED FROM VERTICAL SHAFT
SEE DESIGN NOTE #4 ON SHEET FP-0.1
 - 16 LAUNDRY OR GARBAGE CHUTE SPRINKLER
PRE-INSTALLED & CONNECTED BY AEGIS
 - 17 CPVC TO STEEL PIPE ADAPTER
THREADED OR GROOVED AS APPLICABLE

- PIPING NOTES**
- 1 BRANCHLINE PIPING TO BE INSTALLED 6" FROM
BOTTOM OF SLAB TO CENTER OF PIPE, TYPICAL.
 - 2 BULK MAINS TO BE INSTALLED 1'-0" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 3 SYSTEM MAINS TO BE INSTALLED 1'-8" FROM
BOTTOM OF DECK TO CENTER OF PIPE, TYPICAL.
 - 4 ALL EXPOSED PIPING SHALL BE STEEL PIPE PER
GENERAL NOTE # 17 ON SHEET FP-0.1.

AIR VENT NOTE

AS STATED IN NFPA 13 SECTION 16.7:
AT THE DISCRETION OF THE INSTALLER,
AUTOMATIC AIR VENTS ARE TO BE INSTALLED BY ONE
OF THE FOLLOWING METHODS
(1) MANUAL VALVE, MIN 1/2"
(2) AUTOMATIC AIR VENT
(3) REMOTE INSPECTOR'S TEST VALVE
(4) OTHER APPROVED MEANS

PIPE LEGEND

WET CPVC PIPE
WET STEEL PIPE

HATCH LEGEND

MODULAR
SCOPE OF WORK
- NOT IN SCOPE

SPRINKLER LEGEND													
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note	Escutcheon	
	Tyco	TY2236	LF71	158	4.9	Pendent	1/2	Fast	White	175°F	Max Spacing 18' x 18'	Recessed	
	Tyco	TY3231	TY-FRB	47	5.6	Pendent	1/2	Quick	White	200°F		Recessed	
	Tyco	TY2199	CC3	31	4.2	Upright	1/2	Quick	Brass	200°F		NA	
				Total = 236									

HYDRAULIC INFORMATION #3	
Remote Area 3	Ordinary Group I
OCCUPANCY CLASSIFICATION	0.15 for 1500ft ² (Actual 390ft ²)
DENSITY (gpm/ft ²)	290.0
TOTAL HOSE STREAMS	7
TOTAL HEADS FLOWING	5.6
K-FACTOR	382.9
TOTAL WATER REQUIRED	1.5
TOTAL PRESSURE REQUIRED	142.9
BASE OF RISER (gpm)	-9.0
BASE OF RISER (psi)	+65.5 (87.8%)
SAFETY MARGIN (psi)	

HYDRAULIC INFORMATION #3

REMOTE AREA #3 WAS CALCULATED IN
ACCORDANCE WITH THE VARIANCE H20-024.
SEE FP-0.2 FOR MORE INFORMATION

HYDRAULIC INFORMATION #4	
Remote Area 4	Light Hazard
OCCUPANCY CLASSIFICATION	0.10 for 1500ft ² (Actual 646ft ²)
DENSITY (gpm/ft ²)	100.0
TOTAL HOSE STREAMS	9
TOTAL HEADS FLOWING	4.9
K-FACTOR	264.4
TOTAL WATER REQUIRED	38.0
TOTAL PRESSURE REQUIRED	164.4
BASE OF RISER (gpm)	27.5
BASE OF RISER (psi)	+28.9 (43.2%)
SAFETY MARGIN (psi)	

HYDRAULIC INFORMATION #4

REMOTE AREA #4 WAS CALCULATED IN
ACCORDANCE WITH THE VARIANCE H20-024.
SEE FP-0.2 FOR MORE INFORMATION

