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PLUMBING SYMBOLS LIST	
NOTE: NOT ALL SYMBOLS MAY BE USED.	
SYMBOL	DESCRIPTION
	KEYNOTE (SEE LEGEND ON SHEET)
	REVISION TAG
	FLOW ARROW
	CONNECT TO EXISTING
	END OF DEMOLITION
	EXISTING PIPING
	DEMOLISHED PIPING
	NEW WORK PIPING
	PIPE CAPPED
	PIPE DOWN
	PIPE UP
	PIPE TEE DOWN
	PIPE REDUCER
	PIPE UNION
	PIPE GUIDES OR SLEEVES
	PIPE ANCHOR
	FLEXIBLE PIPE CONNECTION
	GENERAL SERVICE VALVE (SEE SPECIFICATIONS FOR VALVE TYPE PER APPLICATION)
	CHECK VALVE (ARROW INDICATES DIRECTION OF FLOW)
	MANUAL BALANCING VALVE
	AUTOMATIC BALANCING VALVE
	SOLENOID VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PICBV
	THERMOSTATIC MIXING VALVE
	PRESSURE REDUCING VALVE
	PRESSURE REGULATING VALVE
	VACUUM BREAKER
	PLUG VALVE
	SUPERVISED VALVE
	TEMPERATURE AND PRESSURE RELIEF VALVE
	DRAIN VALVE WITH THREADED HOSE CONNECTION
	REDUCED PRESSURE BACKFLOW PREVENTER
	PRESSURE GAUGE WITH STOPCOCK
	STRAINER WITH BLOW DOWN VALVE
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	TEMPERATURE/PRESSURE TEST PLUG (PETE'S PLUG)
	WATER FLOW SWITCH
	PRESSURE SWITCH
	TEMPERATURE SWITCH
	TEMPERATURE SENSOR
	PRESSURE SENSOR
	CLEANOUT
	WALL CLEANOUT
	FLOOR CLEANOUT
	GRADE CLEANOUT
	AREA DRAIN
	FLOOR DRAIN
	FLOOR SINK
	OVERFLOW ROOF DRAIN
	ROOF DRAIN
	HOSE BIBB
	WALL HYDRANT
	YARD HYDRANT
	ROOF HYDRANT
	FLOW METER
	THERMOMETER
	PITCH DOWN IN DIRECTION OF ARROW
	METER
	RISER OR STACK DESIGNATION & NUMBER
	HEAT TRACE CABLE START POINT
	HEAT TRACE CABLE TEE POINT
	HEAT TRACE CABLE END POINT

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VIRGINIA TECH  
VT 229-18699-000 - IMPROVE CENTER WOODS COMPLEX  
697 INVENTIVE LANE, BLACKSBURG, VA, 24061  
PERMIT SET

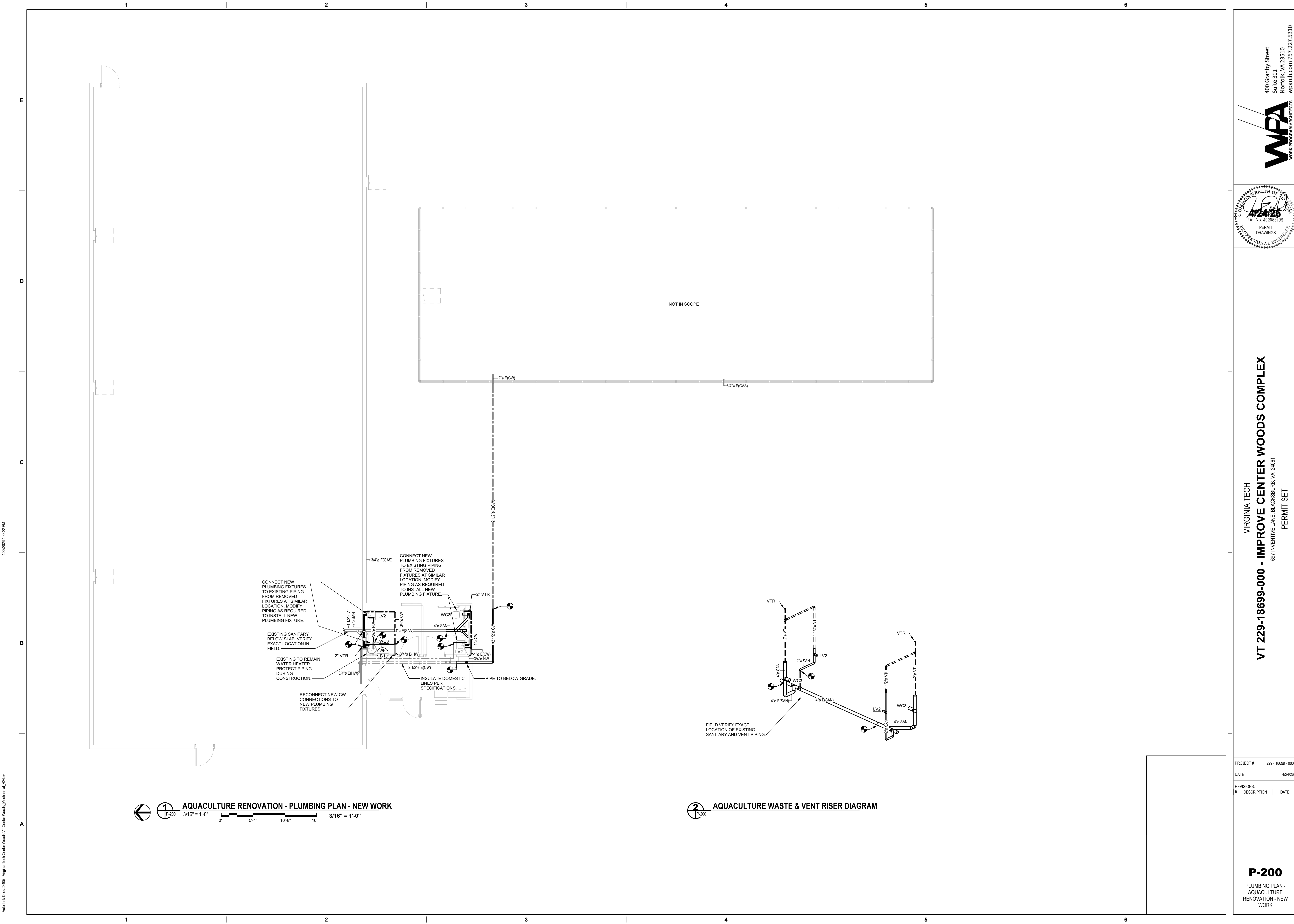
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**P-001**  
PLUMBING LEGEND

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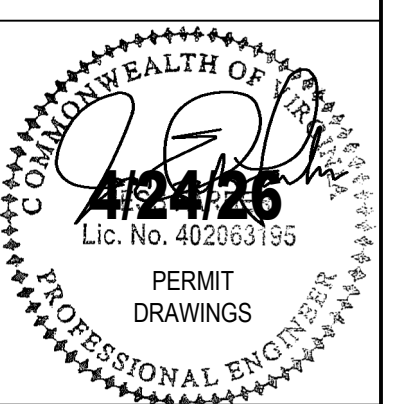


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**1** AQUACULTURE RENOVATION - PLUMBING PLAN - NEW WORK  
 P-200 3/16" = 1'-0" 0' 5'-4" 10'-8" 16' 3/16" = 1'-0"

**2** AQUACULTURE WASTE & VENT RISER DIAGRAM  
 P-200

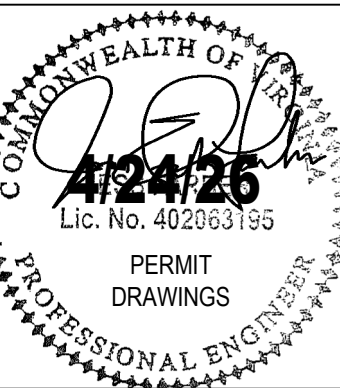


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**P-200**  
 PLUMBING PLAN -  
 AQUACULTURE  
 RENOVATION - NEW  
 WORK

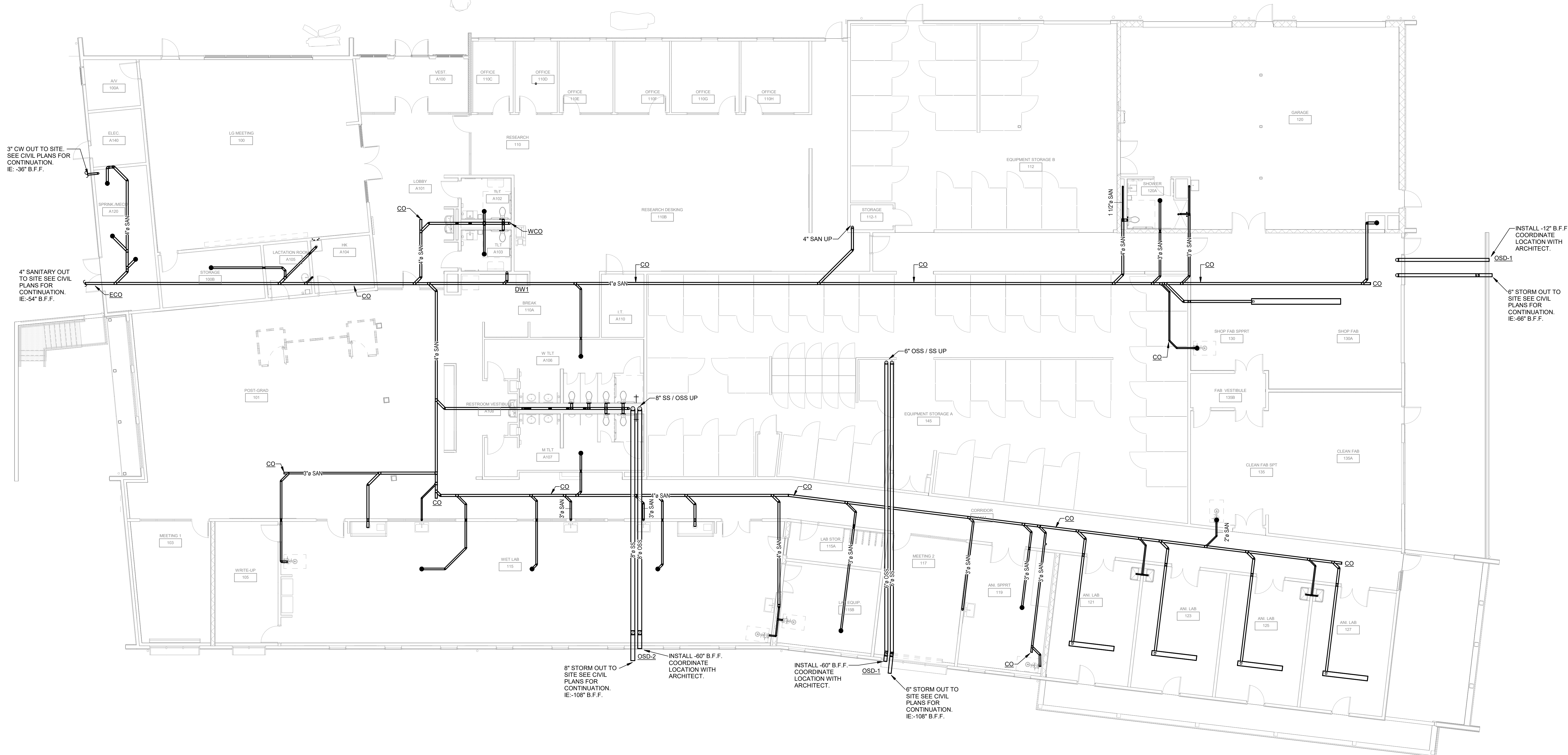
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**P-201**  
PLUMBING PLAN - UNDERGROUND



**1 PLUMBING FLOOR PLAN - UNDERLAB**  
1/8" = 1'-0"  
0 8 16 24  
1/8" = 1'-0"

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1 2 3 4 5 6

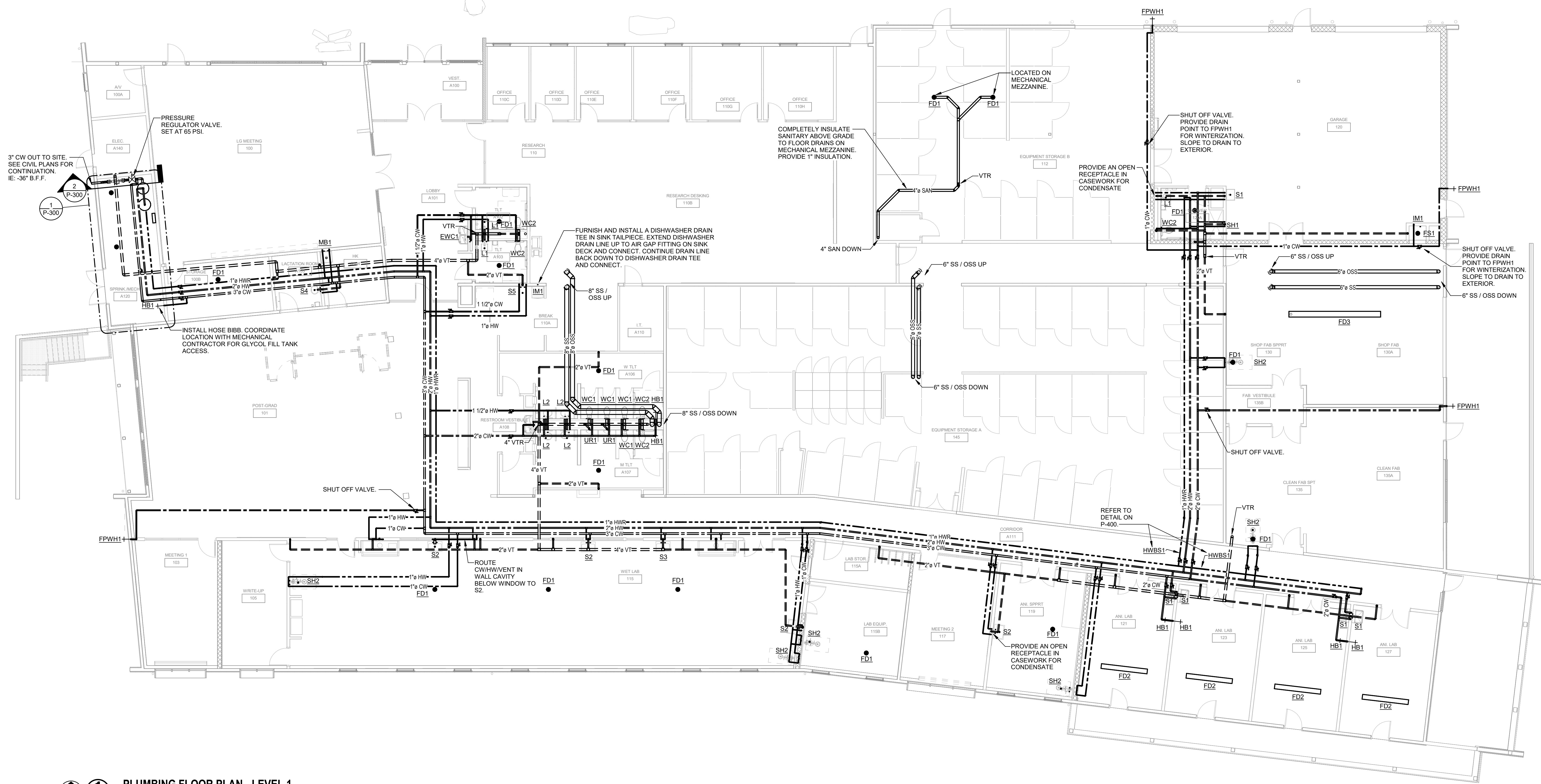
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**PLUMBING FLOOR PLAN - LEVEL 1**  
 1/8" = 1'-0"  
 0 8 16 24  
 1/8" = 1'-0"

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**P-202**  
 PLUMBING PLAN - LEVEL 1

1 2 3 4 5 6

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1 2 3 4 5 6

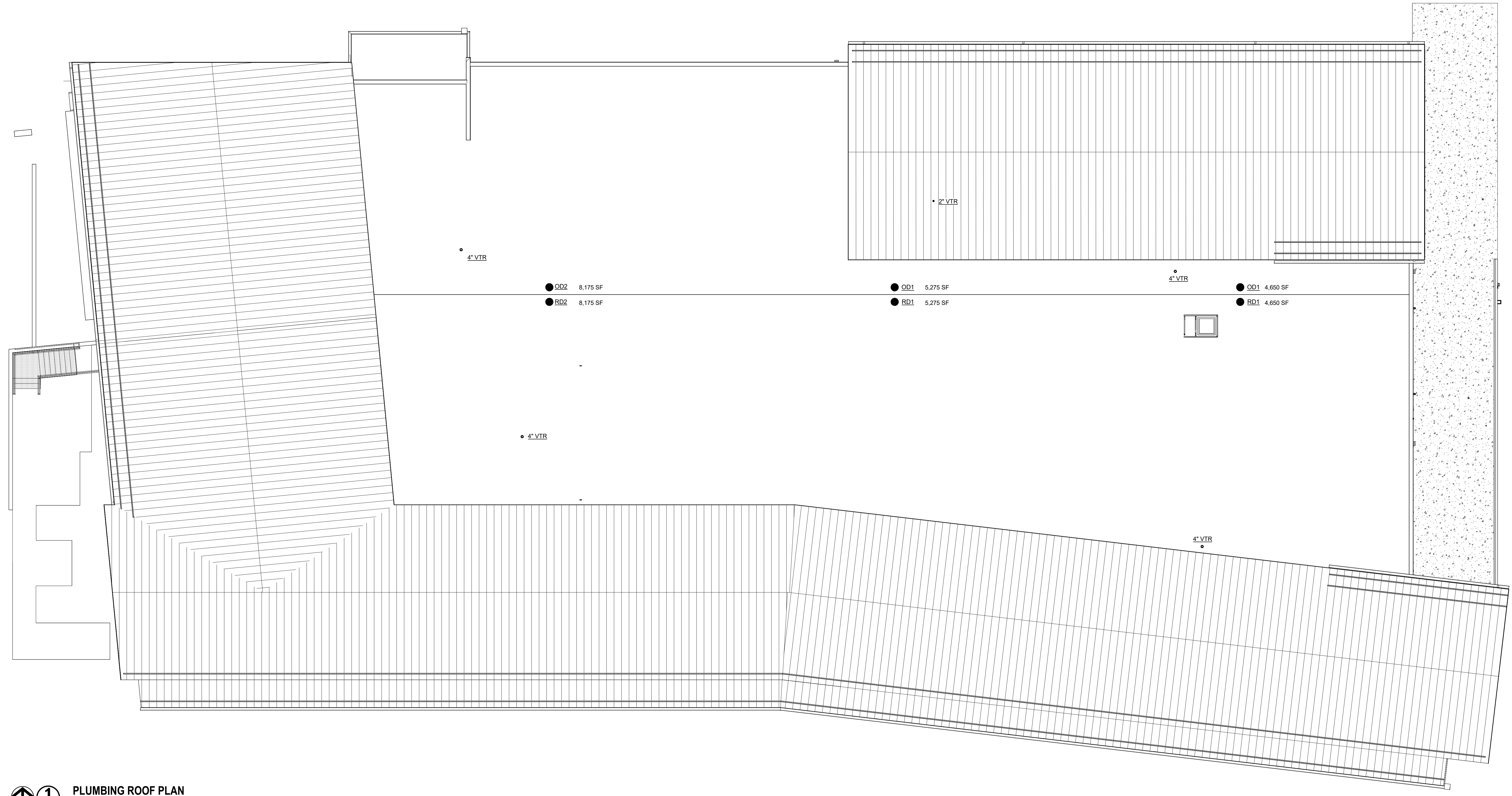
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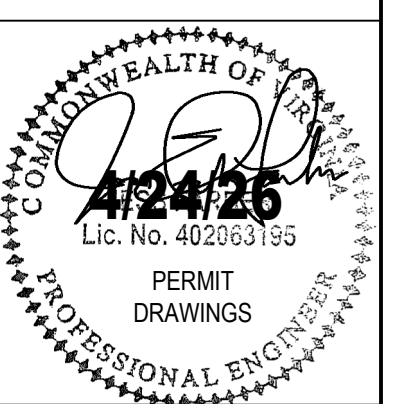
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**PLUMBING ROOF PLAN**  
 0' 8' 16' 24'  
 1/8" = 1'-0"



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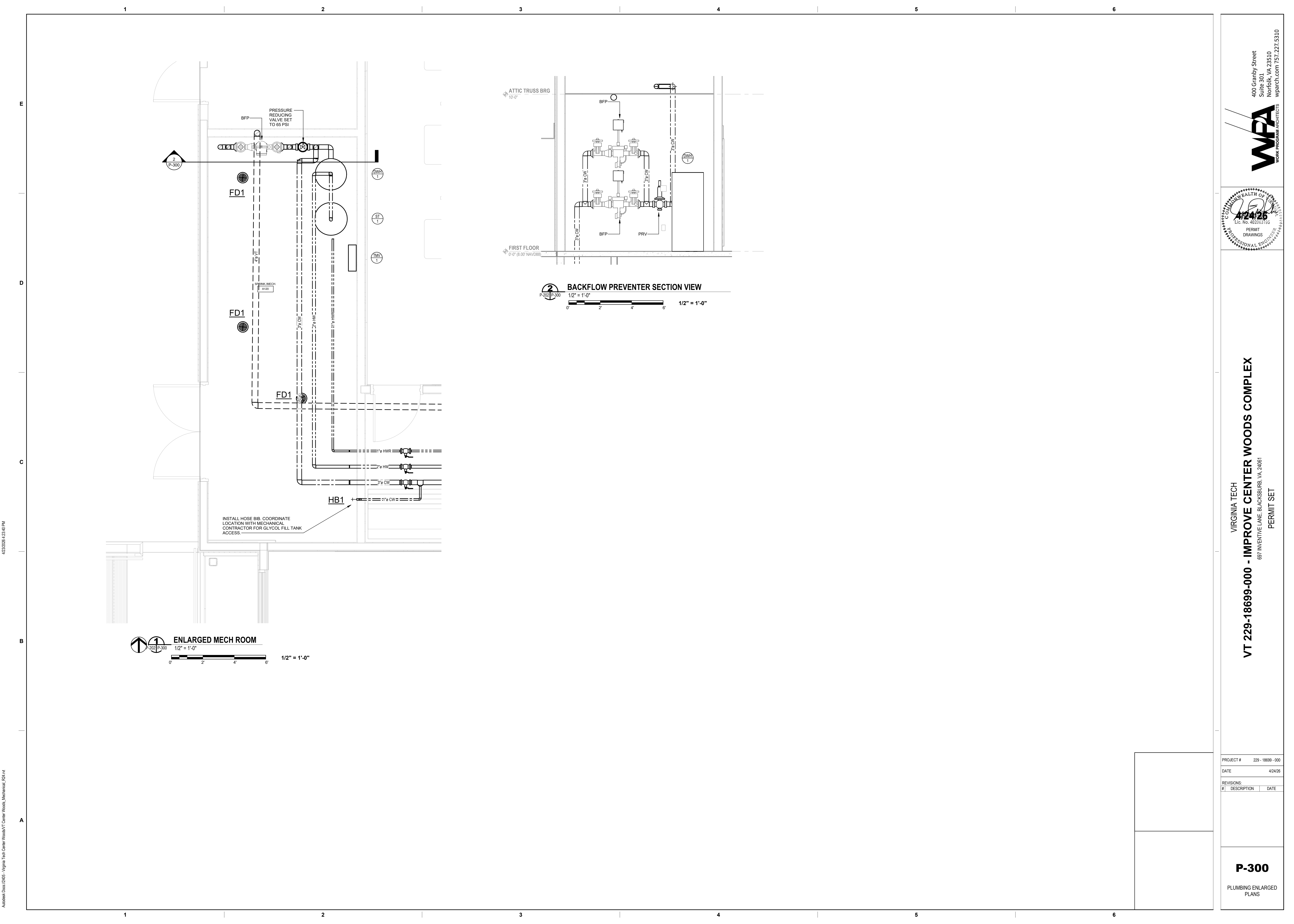
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**P-203**  
 PLUMBING PLAN - ROOF

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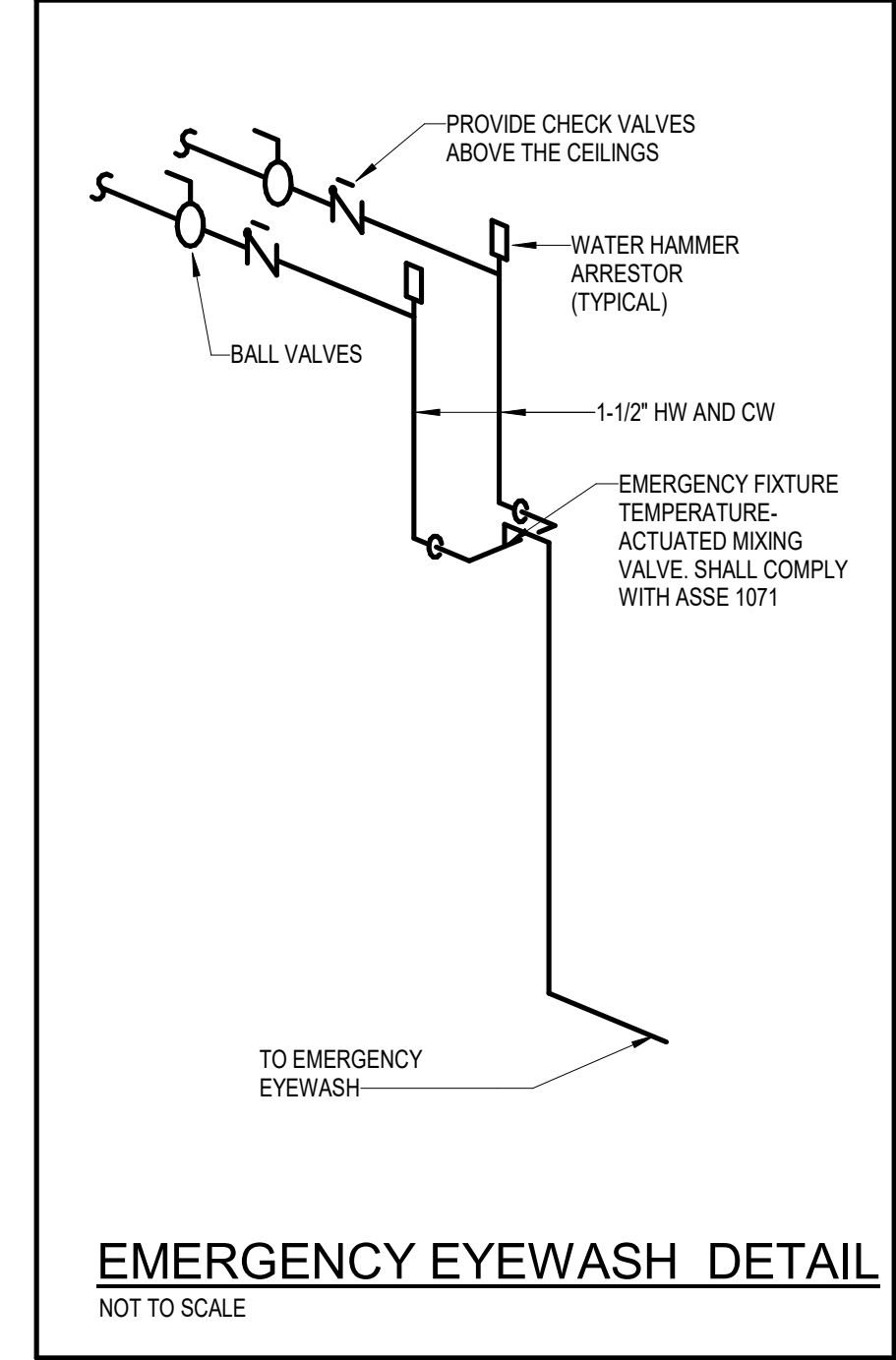
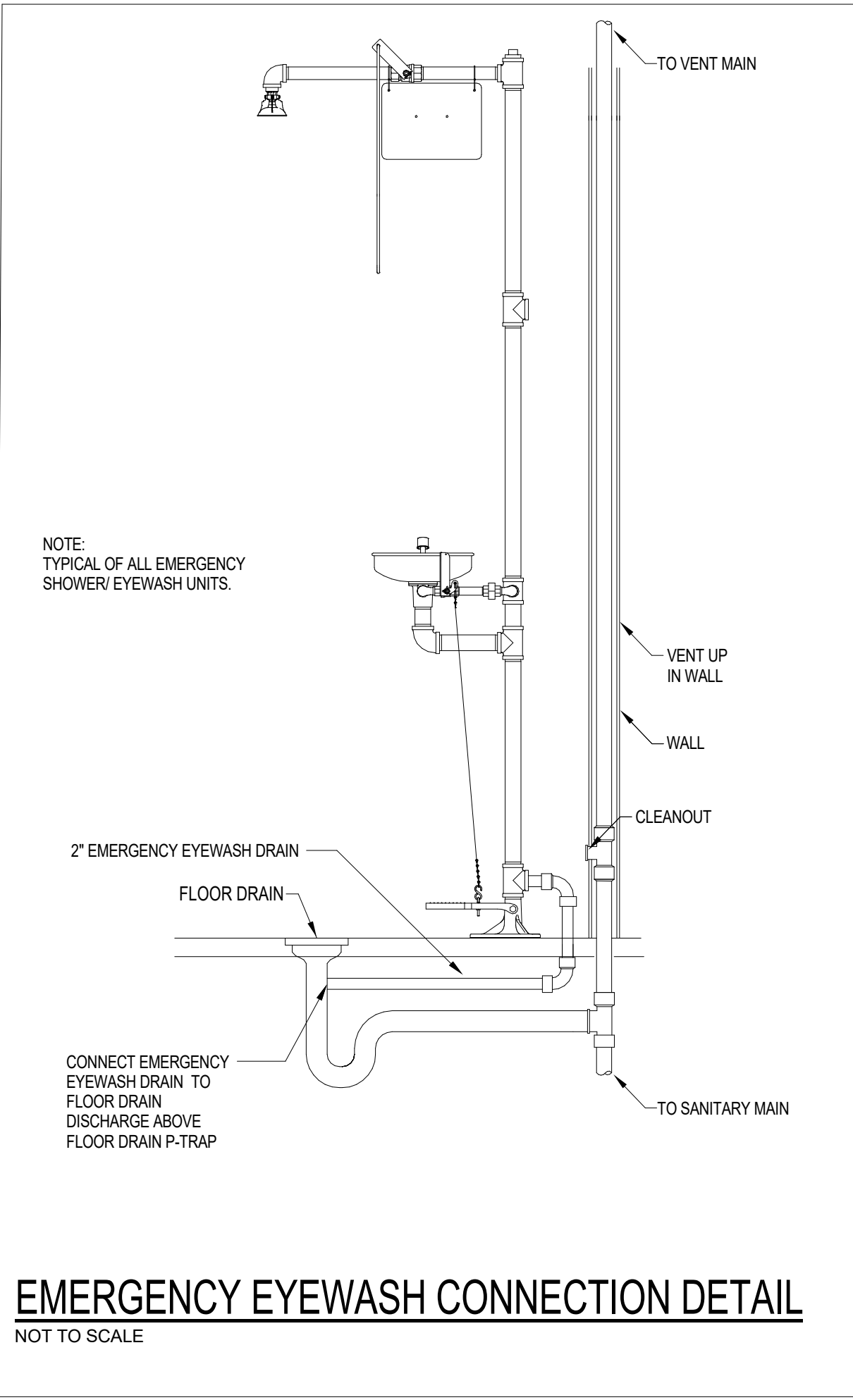
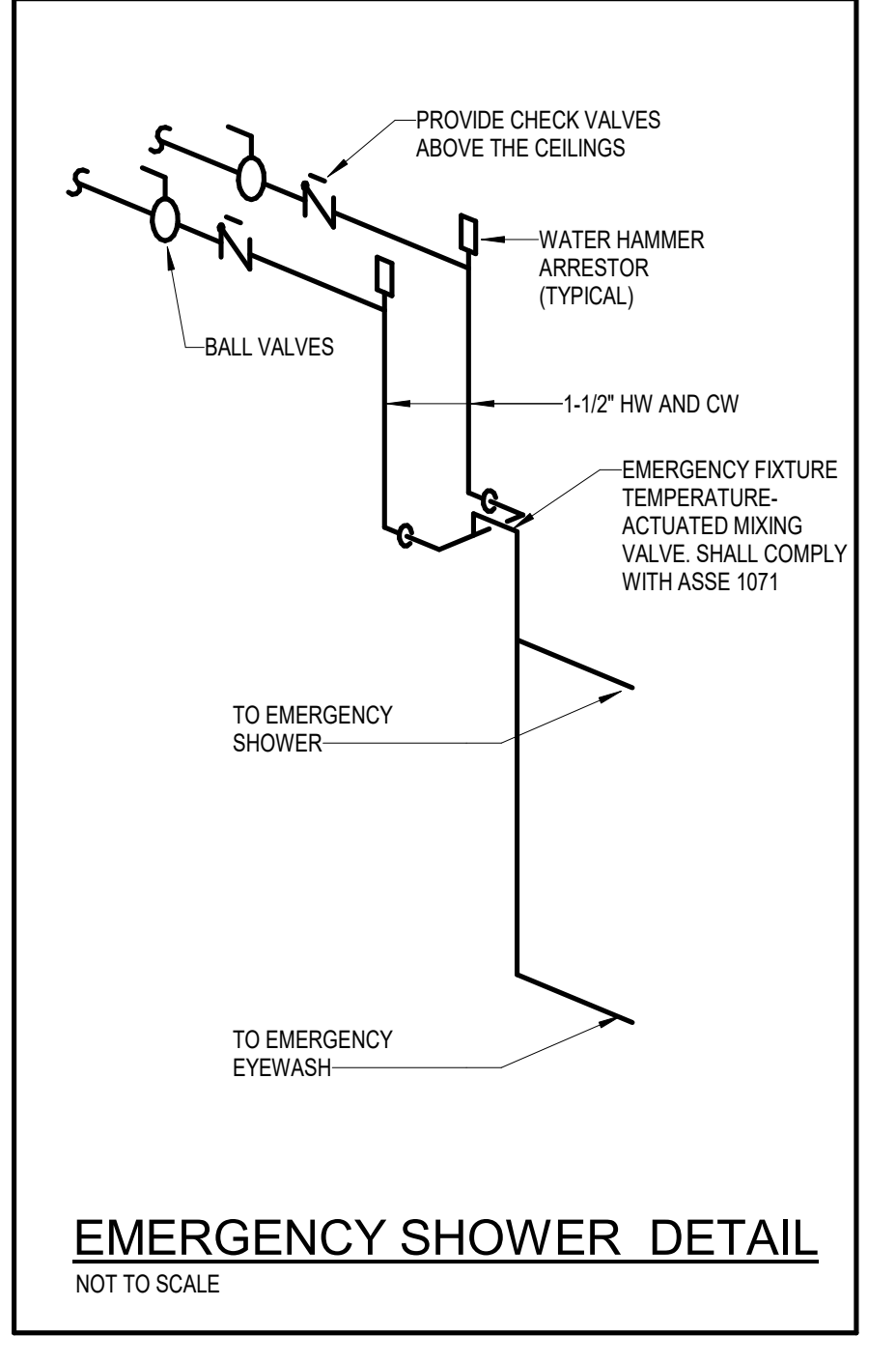
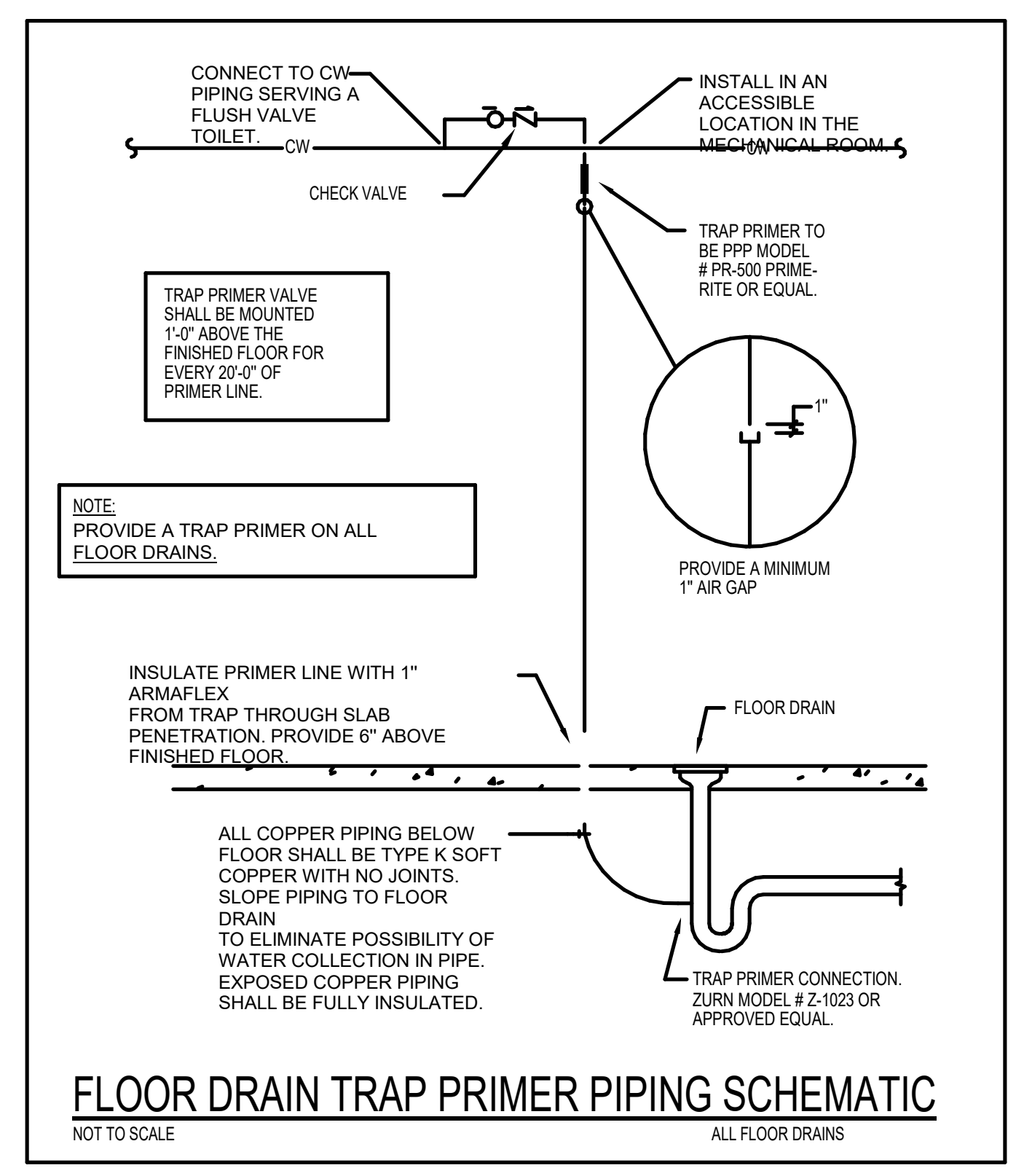
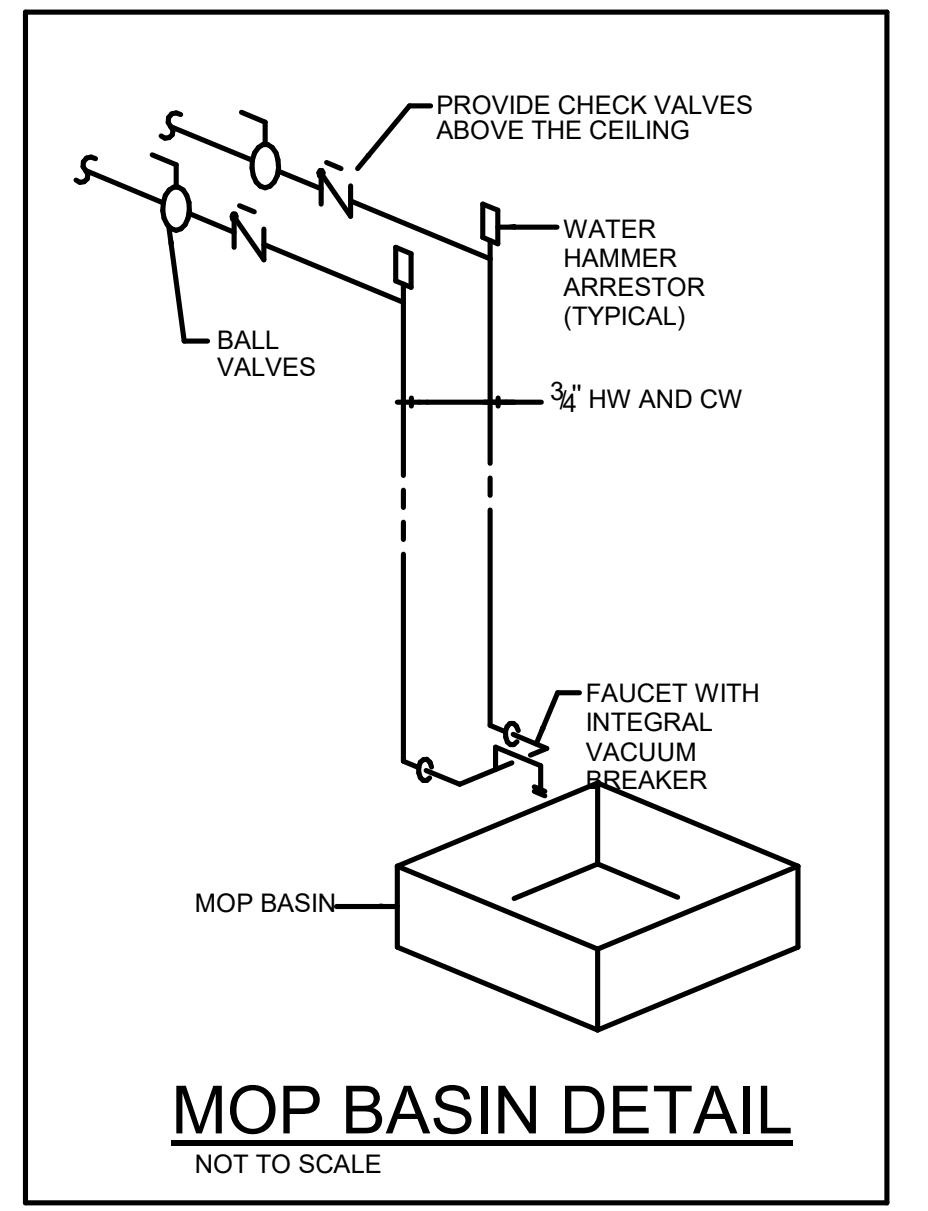
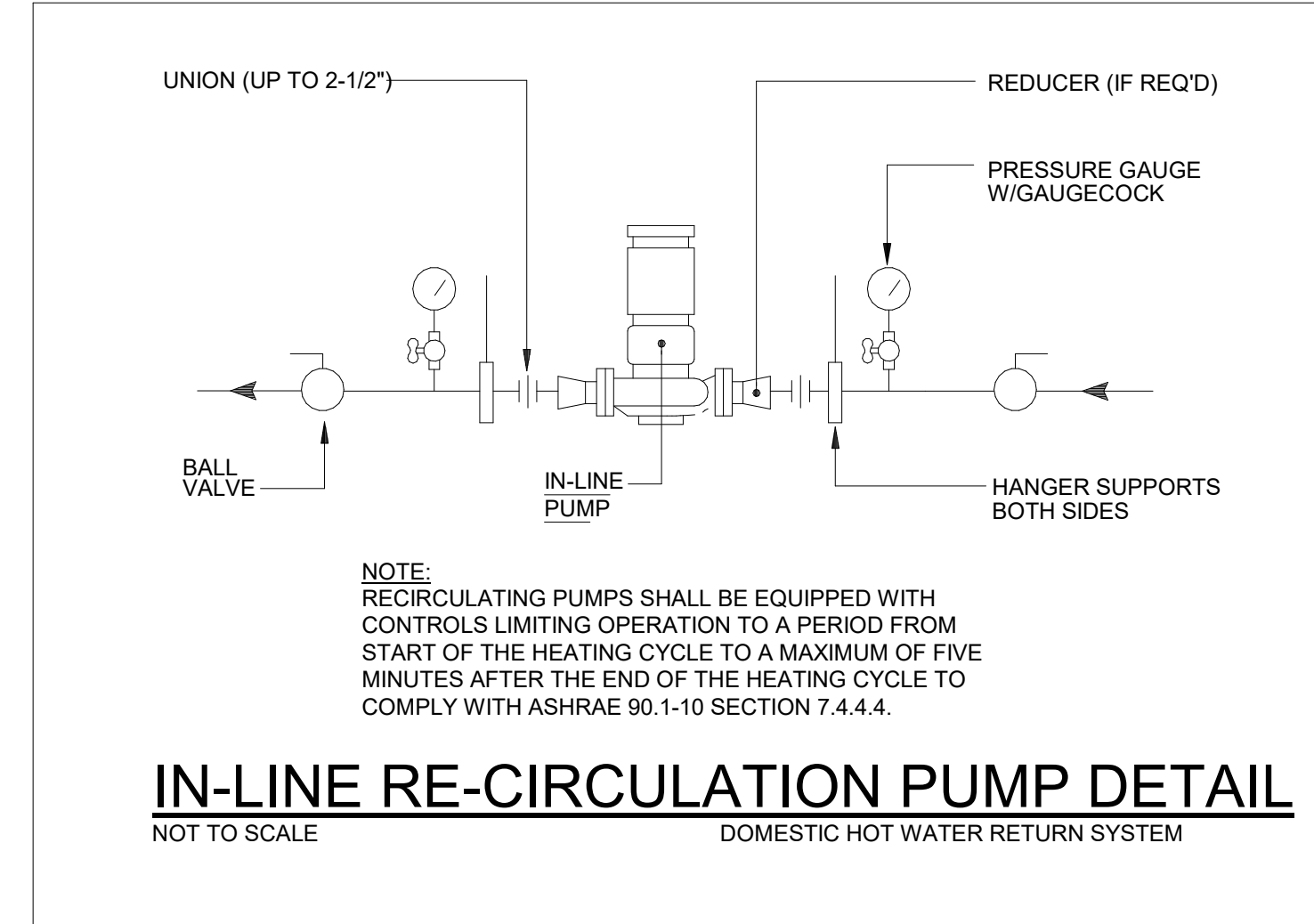
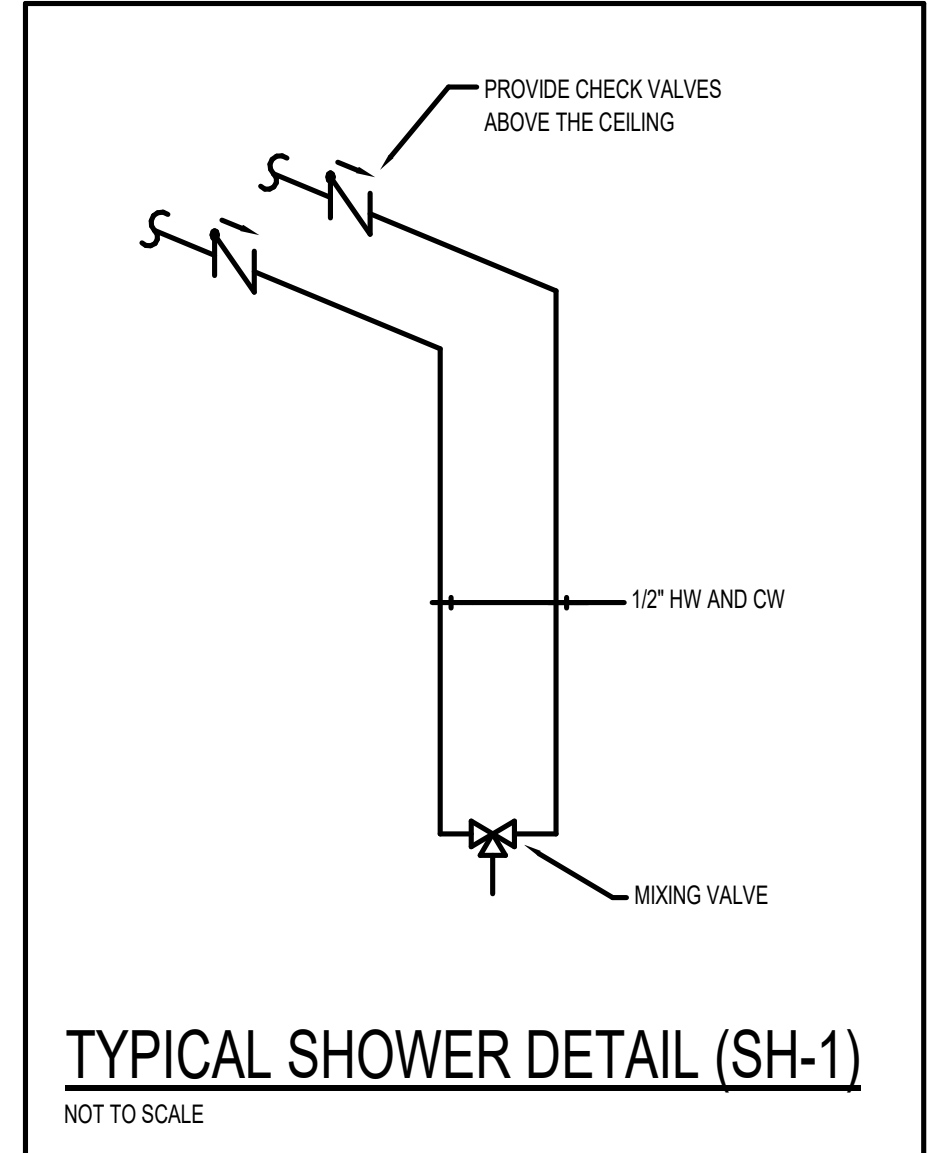
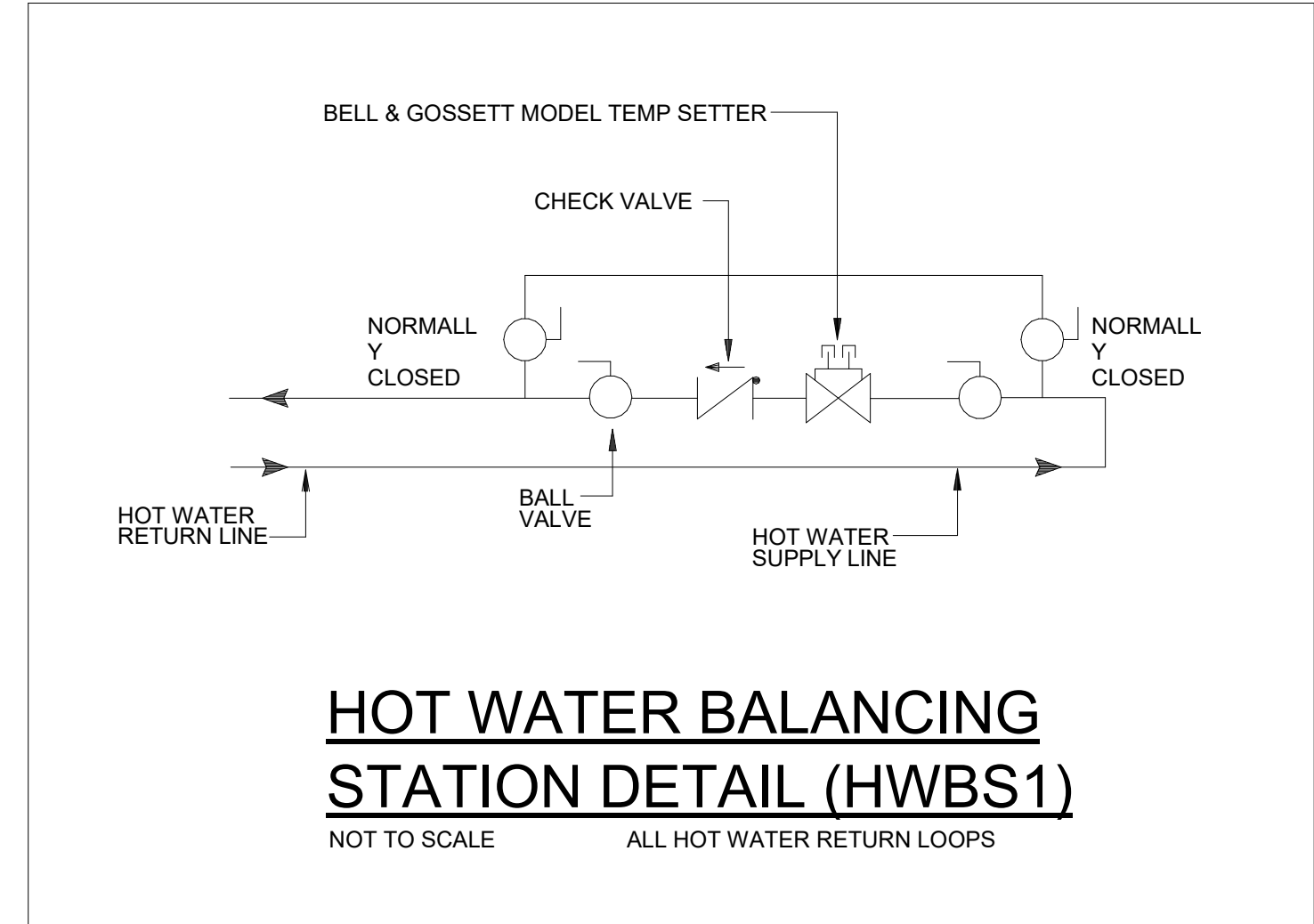
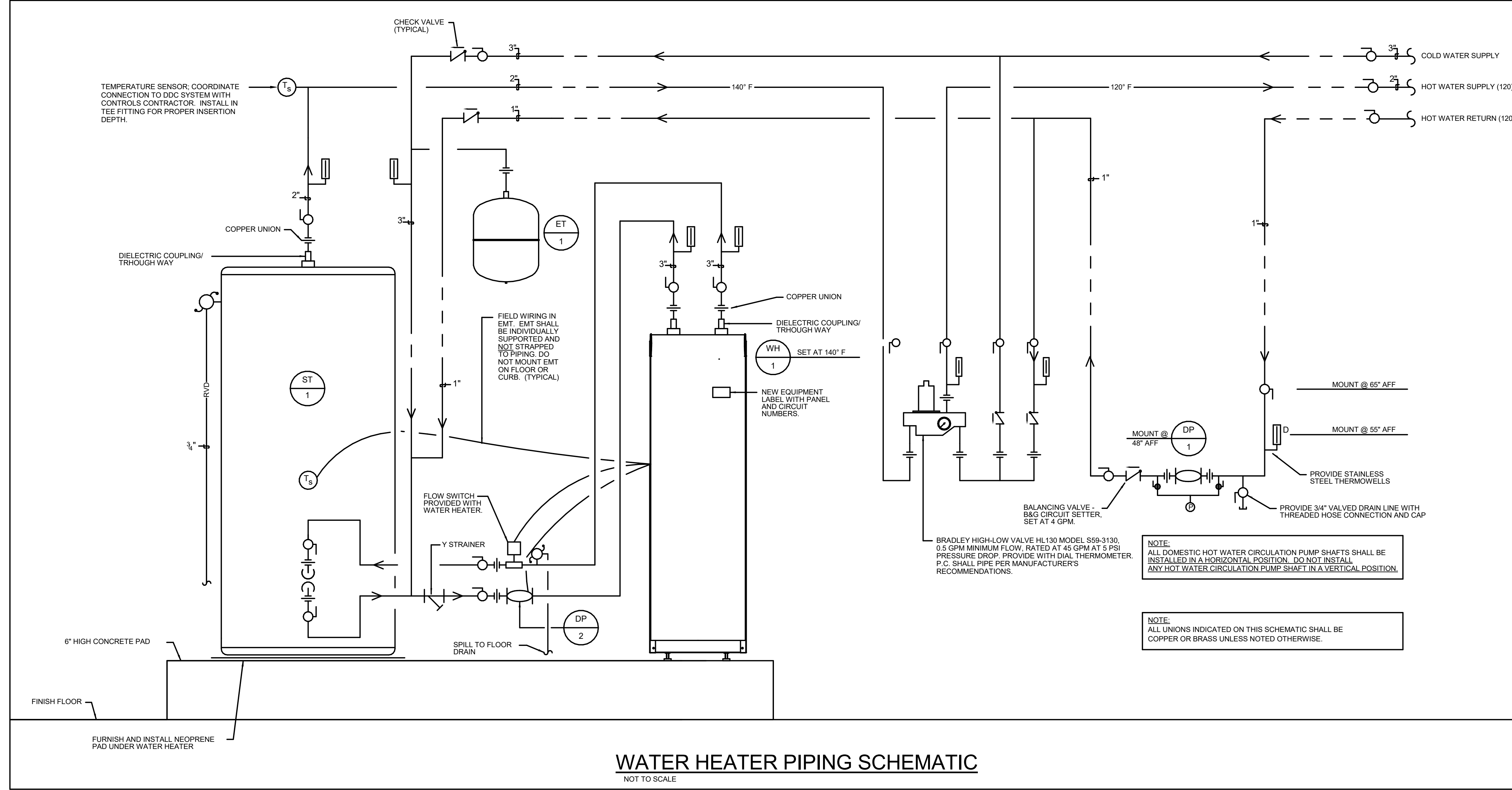


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<b>P-400</b>		
PLUMBING DETAILS		

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**PLUMBING FIXTURE SCHEDULE**

TAG	FUNCTION	UNIT DATA	DESCRIPTION	BASIS OF DESIGN		BASIS OF DESIGN TRIM		BASIS OF DESIGN SUPPLY/STOP		BASIS OF DESIGN P-TRAP		BASIS OF DESIGN MISC		ROUGH-IN SIZES (IN)				SCHEDULE NOTES
				MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANUFACTURER	MODEL	MANUFACTURER	MODEL	DCW	DHW	SAN	V	
EWC1	ELECTRIC WATER COOLER	FLOOR MOUNTED, REAR DISCHARGE WATER CLOSET, TANK TYPE, ADA-COMPLIANT		ELKAY	EZSTLBWS	---	---	MCGUIRE	LFBV09	---	---	---	---	1/2"	3/4"	2"	1 1/2"	
FPWH1	WALL HYDRANT	AUTOMATIC DRAINING, FREEZELESS WITH BACKFLOW PREVENTER, SINGLE CHECK HOSE CONNECTION, ANTI-SIPHON VACUUM BREAKER, 5 GPM, 8 PSI MINIMUM PRESSURE.		WOODFORD	67													
HB-1	HOSE BIBB	CONCEALED, MANUAL DRAINING, ANTI-SIPHON VACUUM BREAKER, MALE THREADED SPOUT		WOODFORD	B24													
IM1	WALL BOX	ICE MACHINE / DISHWASHER (BOX, IPS)												1/2"				
L1	LAVATORY	WALL MOUNTED LAVATORY, SINGLE HOLE, BLACK, SENSOR FAUCET.		NAMEEK TEOREMA	SCARABEO 5151-49	ZURN	ZG6913-TMV-1-E	MCGUIRE	LFBV175	MCGUIRE	8902	---	---	1/2"	1/2"	1 1/2"	1 1/2"	
L2	LAVATORY	UNDERMOUNT SINGLE BOWL SINK, VITREOUS CHINA, 19"X16" OVAL, 5" DEPTH, ADA COMPLIANT		ZURN	Z5220	ZURN	ZG6913-TMV-1-E	MCGUIRE	LFBV175	---	INCLUDED	SOAP DISPENSER: BRADLEY	6-3500	1/2"	1/2"	1 1/2"	1 1/2"	
MB1	MOP BASIN	2' X 2' CUT CORNER MOP BASIN.		FIAT	M58-24-24	CHICAGO FAUCET	897-CP	---	INTEGRAL	---	---	WALL GUARDS: FIAT	MSG	1/2"	1/2"	3"	1 1/2"	
S1	SINK	WALL MOUNTED SINGLE BOWL SINK, STAINLESS STEEL, GOOSENECK FAUCET, PROVIDE WITH GUARDIAN GBF1849LH-R BARRIER-FREE EYEWASH, DECK MOUNTED, SWING DOWN.		KOHLER	K-12794-0	ZURN	ZB12B4-3F	MCGUIRE	LFBV175	MCGUIRE	8902	---	---	1/2"	1/2"	1 1/2"	1 1/2"	
S2	SINK	UNDERMOUNT SINGLE BOWL LAB SINK, STAINLESS STEEL, GOOSENECK FAUCET, PULL DOWN SPRAY NOZZLE		ELKAY	ELUH281610	ELKAY	LK1410-LS	MCGUIRE	LFBV175	MCGUIRE	8902	---	---	1/2"	1/2"	2"	1 1/2"	
S3	SINK	UNDERMOUNT SINGLE BOWL LAB SINK, STAINLESS STEEL, GOOSENECK FAUCET, PULL DOWN SPRAY NOZZLE, ADA-COMPLIANT		ELKAY	ECTRUAD301755	ELKAY	LK1410-LS	MCGUIRE	LFBV175	MCGUIRE	8902	---	---	1/2"	1/2"	2"	1 1/2"	
S4	SINK	DROP-IN SINGLE BOWL SINK, VITREOUS CHINA, 19"X16" OVAL, 5" DEPTH, ADA COMPLIANT, STAINLESS STEEL TWO HANDLE PULL-DOWN FAUCET		ZURN	Z5220	DELTA	35749LF-PD	MCGUIRE	LFBV175	MCGUIRE	8902	---	---	1/2"	1/2"	1 1/2"	1 1/2"	
S5	SINK	UNDERMOUNT SINGLE BOWL, QUARTZ, GOOSENECK FAUCET, PULL DOWN SPRAY NOZZLE, BLACK, ADA-COMPLIANT		ELKAY	ELCUAD2519PD	ELKAY	LK1410-LS	MCGUIRE	LFBV175	MCGUIRE	8902	---	---	1/2"	1/2"	1 1/2"	1 1/2"	
SH1	SHOWER	PRE-FABRICATED SHOWER ENCLOSURE WITH ADA-COMPLIANT FOLD-UP SEAT, HANDRAILS, AND SHOWER ASSEMBLY WITH HANDHELD SHOWER, TRIM SHALL NOT INCLUDE DIVERTER AND TUB FILL.		AQUATIC	1363BFS0	---	---	---	INTEGRAL	---	---	---	---	1/2"	1/2"	2"	1 1/2"	
SH2	SHOWER+EYEWASH	PRE-FABRICATED GUARDIAN EMERGENCY SHOWER AND EYEWASH STATION - PLASTIC		ULINE	H-5101	---	---	---	INTEGRAL	---	---	---	---	1/2"	1/2"	2"	1 1/2"	
UR1	URINAL	WALL MOUNTED URINAL, SENSOR FLUSH VALVE, ADA-COMPLIANT.		TOTO	UT104E	PACKAGED	PACKAGED	---	INTEGRAL	---	INTEGRAL	---	---	3/4"		2"	1 1/2"	
WC1	WATER CLOSET	WALL MOUNTED, REAR DISCHARGE WATER CLOSET, SENSOR FLUSH VALVE, COMPLIANT.		TOTO	CT708E	PACKAGED	PACKAGED	---	INTEGRAL	---	INTEGRAL	SEAT: BEMIS	2155CT	1"		4"	2"	
WC2	WATER CLOSET	WALL MOUNTED, REAR DISCHARGE WATER CLOSET, SENSOR FLUSH VALVE, ADA-COMPLIANT.		TOTO	CT708E	PACKAGED	PACKAGED	---	INTEGRAL	---	INTEGRAL	SEAT: BEMIS	2155CT	1"		4"	2"	
WC3	WATER CLOSET	WALL MOUNTED, REAR DISCHARGE WATER CLOSET, SENSOR FLUSH VALVE, ADA-COMPLIANT.		TOTO	CST454CUGF	PACKAGED	PACKAGED	---	INTEGRAL	---	INTEGRAL	SEAT: BEMIS	2155CT	1"		4"	2"	

**ELECTRIC WATER HEATER SCHEDULE**

TAG	BASIS OF DESIGN		PERFORMANCE DATA			ELECTRICAL DATA		
	MANUFACTURER	MODEL	STORAGE CAPACITY (GAL)	RECOVERY @100°F RISE (GAL/HR)	WATER CONNECTION (IN)	CAPACITY (KW)	VOLTS	PHASE
DWH-1	AO-SMITH	DEN-80	80.0	49	0.75"	(2) 6.1	240	3

**REMARKS:**

- PROVIDE WITH DUAL HEATING ELEMENT.

**STORAGE TANK SCHEDULE**

TAG	BASIS OF DESIGN		PERFORMANCE DATA		
	MANUFACTURER	MODEL	TANK VOLUME (GAL)	MAX ACCEPTANCE PRESSURE (PSIG)	TANK CONSTRUCTION
ST-1	LOCHINVAR	LOCK-TEMP RJA120	80.0	150	GLASS LINED

**REMARKS:**

- TANKS SHALL BE JACKETED AND INSULATED TO A MINIMUM OF R-12.5 TO COMPLY WITH ASHRAE 90.1 TABLE 7.8.

**PLUMBING EXPANSION TANK SCHEDULE**

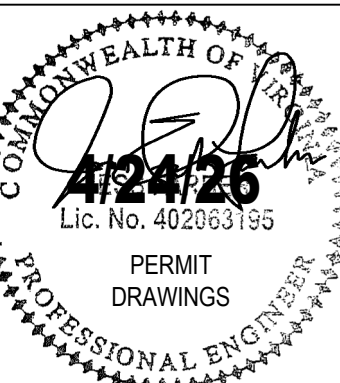
TAG	MANUFACTURER	BASIS OF DESIGN		MAX TEMPERATURE (° F)	TANK VOLUME (GAL.)	TANK ACCEPTABLE (GAL.)
		MODEL	MAX PRESSURE (PSI)			
ET-1	WATTS	DET-A-42	150.0	200.0	22.0	15.5

**REMARKS:**

- EQUAL EXPANSION TANKS BY AMTROL AND WILKINS.
- TANKS TO BE ASME RATED.

**RECIRCULATING PUMP**

TAG	MANUFACTURER	MODEL	VOLTAGE / PHASE		HP	FLOW (GPM)	HEAD (FT.)	ALL STAINLESS STEEL BODY	100% LEAD FREE
DP-1	BELL & GOSSETT	PL-55B	120 / 1	1/6	10	30		YES	YES
DP-2	BELL & GOSSETT	PL-45B	120 / 1	1/6	25	10		YES	YES



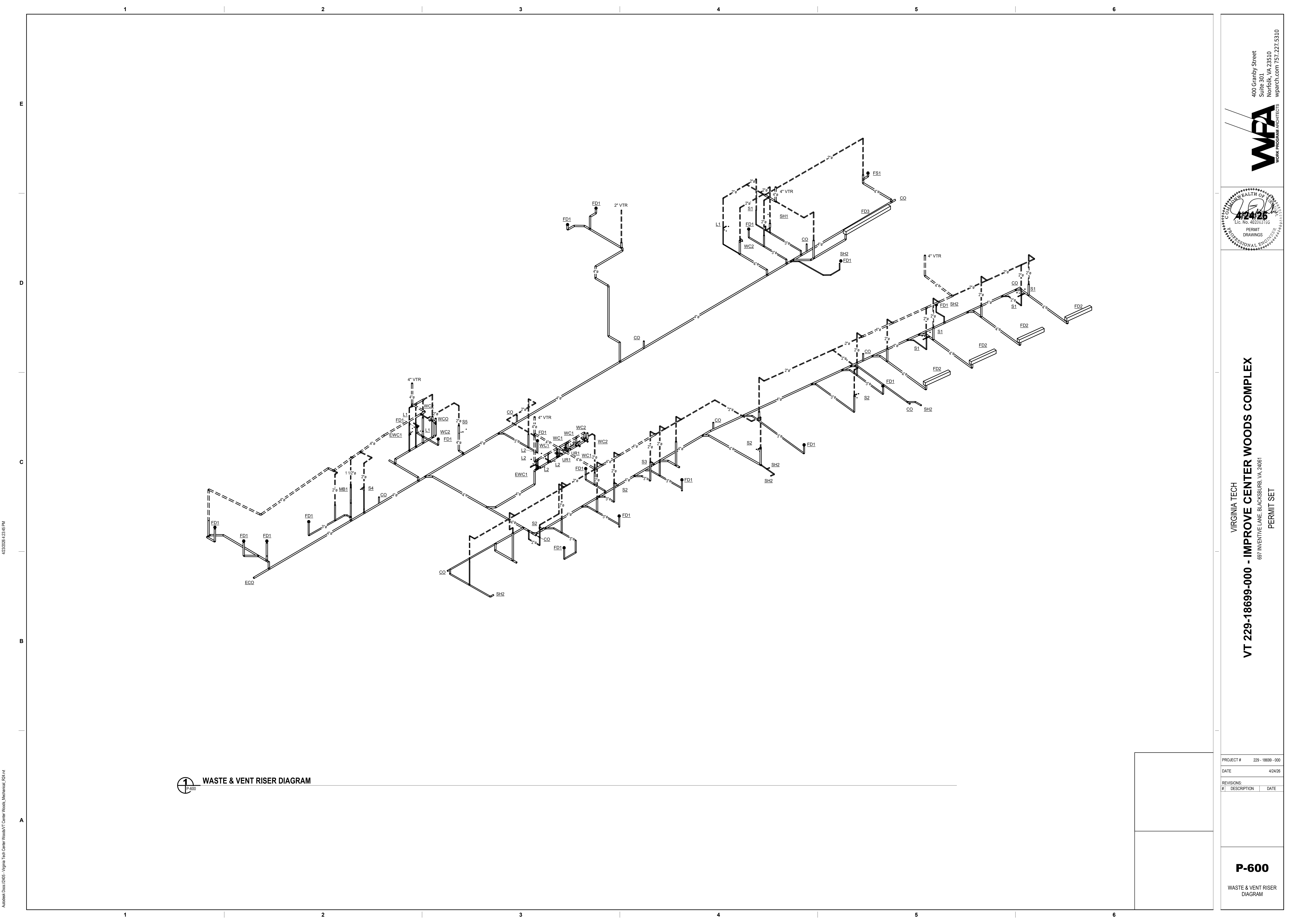
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**P-500**

PLUMBING SCHEDULES

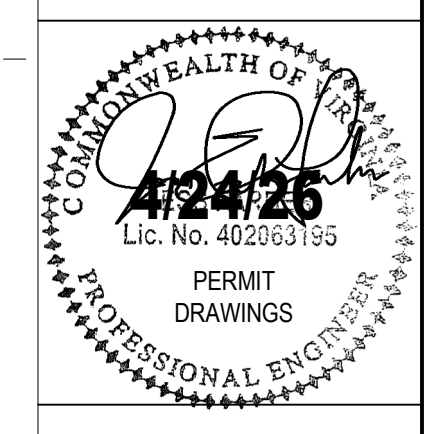
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**1** WASTE & VENT RISER DIAGRAM  
P-600

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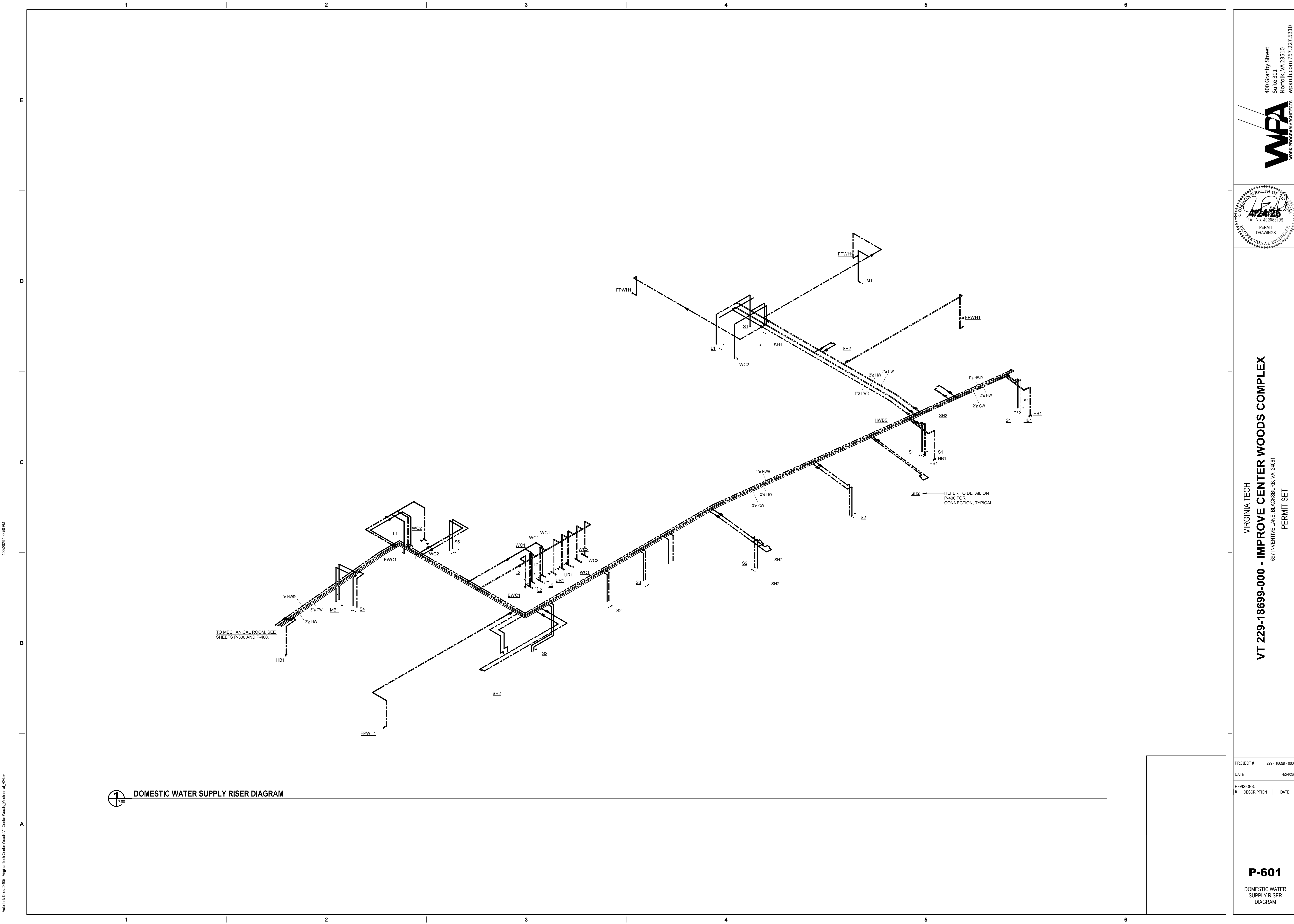
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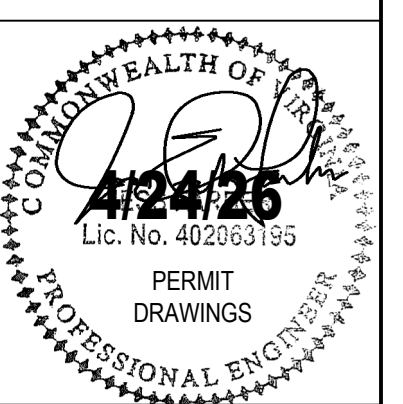
**P-600**  
WASTE & VENT RISER  
DIAGRAM



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**DOMESTIC WATER SUPPLY RISER DIAGRAM**



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**P-601**  
DOMESTIC WATER SUPPLY RISER DIAGRAM

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