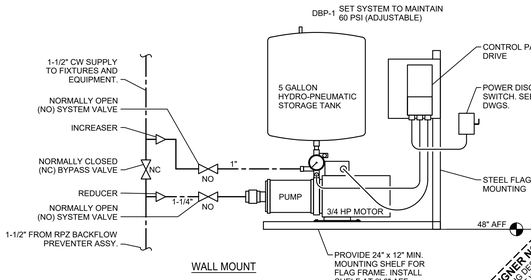


BOOSTER PUMP DETAIL

IF THE INCOMING WATER STATIC PRESSURE IS BELOW 60 PSI, PROVIDE PROVIDE LINE ITEM PRICING FOR LABOR AND MATERIALS FOR THE PROVISION OF A PRESSURE BOOSTER PUMP SYSTEM INSTALLED PER ALL APPLICABLE CODES AND STANDARDS.

THE PRESSURE BOOSTER PUMP ASSEMBLY SHALL BE EQUAL TO TOWLE WHITNEY MODEL #TW1000-20W-40 AND SHALL BE MOUNTED WHERE SHOWN NEAR THE RPZ BACKFLOW PREVENTER ASSEMBLY.

BOOSTER PUMP ASSEMBLY PIPING CONNECTIONS TO THE 1-1/2" DOMESTIC WATER RISER SHALL INCLUDE A 1-1/2" QUARTER TURN BALL VALVE BY-PASS.

THE BOOSTER PUMP ASSEMBLY SHALL OPERATE AT 480V/3 PHASE AND SHALL BE A FACTORY ASSEMBLED, WIRED, AND TESTED PACKAGE PRESSURE BOOSTING SYSTEM. THE BOOSTER SYSTEM SHALL BE A FLAG FRAME MOUNTED PACKAGE CONSISTING OF PUMP, ELECTRICAL CONTROL PANEL, VARIABLE FREQUENCY DRIVE WITH TRANSDUCER, A PRE-PIPED 5 GALLON HYDRO-PNEUMATIC STORAGE TANK, PRESSURE GAUGE, RELIEF AND CHECK VALVES, TANK TEE, BRASS NIPPLE AND COPPER FITTINGS. THE SYSTEM SHALL BE SHIPPED WITH ALL COMPONENTS, SOME ASSEMBLY MAY BE REQUIRED. FOLLOW THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR PROPER ASSEMBLY. PROVIDE WITH VIBRATION ISOLATION.

THE SYSTEM SHALL BE UL AND NSF61 LISTED. THE PUMP SHALL BE SIZED FOR 30 GPM WITH A 30 PSI BOOST. ELECTRICAL DESIGN IS BASED ON A SINGLE 3/4 HP PUMP. COORDINATE WITH THE ELECTRICAL CONTRACTOR IF PUMP HORSEPOWER IS DIFFERENT.

PRESSURE BOOSTER PUMP ASSEMBLIES MANUFACTURED BY GRUNDFOS, SYNCROFLO, AND BELL & GOSSETT ARE ACCEPTABLE FOR BID.

NOTE:
SHOP DRAWING SUBMITTAL IS REQUIRED FOR THE WATER PRESSURE BOOSTER PUMP SYSTEM.

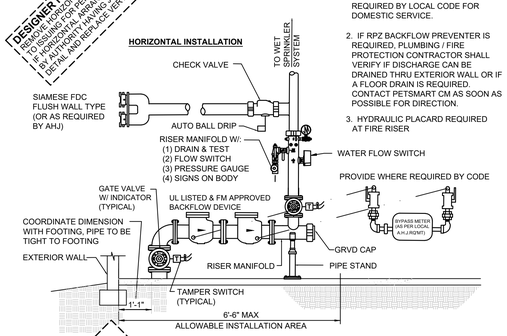
DESIGNER NOTE: PLUMBING DESIGNER SHALL DETERMINE AVAILABLE WATER PRESSURE AND CALCULATE PRESSURE LOSS THROUGH WATER METER, BACKFLOW PREVENTER, FITTINGS, ETC. TO DETERMINE IF THE BACKFLOW PREVENTER, ETC. IS THE LIMITING FACTOR. IF THE WATER PRESSURE IS LESS THAN 40 PSI, THE WATER PRESSURE AT ANY FIXTURE IS BOOSTED TO 40 PSI, AND THE WATER PRESSURE AT THE INCOMING WATER METER IS LESS THAN 60 PSI, THE WATER PRESSURE AT ANY FIXTURE IS BOOSTED TO 60 PSI, THEN A PRESSURE BOOSTER SYSTEM IS REQUIRED. IF THE WATER PRESSURE IS NOT KNOWN AT THE TIME WATER PRESSURE IS BOOSTED, ON THE ISSUED DRAWINGS, INCLUDE THE DETAIL ON THE ISSUED DRAWINGS.

DESIGNER NOTE: WHEN ADEQUATE SPACE IS AVAILABLE (PREFERRED) PROVIDE FLOOR MOUNT METHOD. WHEN FLOOR MOUNT METHOD IS NOT AVAILABLE, PROVIDE WALL MOUNT METHOD.

DESIGNER NOTE: REPLACE LOWER FIRE RISER DETAIL WHEN RISER BROUGHT TO SPACE FROM LANDLORD ROOM. REMOVE IF LOWER DETAILS ARE USED.

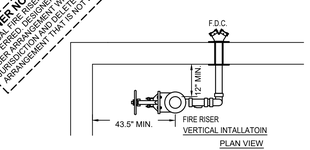
3 P1.0 DOMESTIC WATER PRESSURE BOOSTER PUMP DETAIL
SCALE: N.T.S.

DESIGNER NOTE: REPLACE FIRE RISER LAYOUT PRIOR TO PERMITTING. IF RISER ARRANGEMENT IS REQUIRED IN A JURISDICTION HAVING AHJ, REVISE DETAIL AND REPLACE VERTICAL RISER DETAIL.

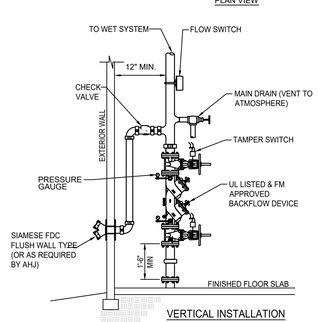


HORIZONTAL INSTALLATION

DESIGNER NOTE: VERTICAL FIRE RISER INSTALLATION IS PREFERRED. IF FIRE RISER SPACE IS REQUIRED BY JURISDICTION AND HAS LETTER HAVING ARRANGEMENT THAT IS NOT DESIRED.



VERTICAL INTALLATOIN
PLAN VIEW

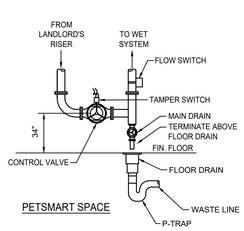


VERTICAL INSTALLATION

2 P1.0 FIRE SPRINKLER RISER
SCALE: N.T.S. (FOR REFERENCE ONLY)

GENERAL NOTES

1. ADEQUATE CLEARANCE SHALL BE PROVIDED AROUND FIRE RISER: 18" MINIMUM FROM FACE OF PIPE TO THE BACK WALL, 18" ON SIDE AND 36" CLEAR IN FRONT. PROVIDE CLEARANCES REQUIRED BY LOCAL CODE FOR DOMESTIC SERVICE.
2. IF RPZ BACKFLOW PREVENTER IS REQUIRED, PLUMBING / FIRE PROTECTION CONTRACTOR SHALL VERIFY IF DISCHARGE CAN BE DRAINED THRU EXTERIOR WALL OR IF A FLOOR DRAIN IS REQUIRED. CONTACT PETSMART CM AS SOON AS POSSIBLE FOR DIRECTION.
3. HYDRAULIC PLACARD REQUIRED AT FIRE RISER

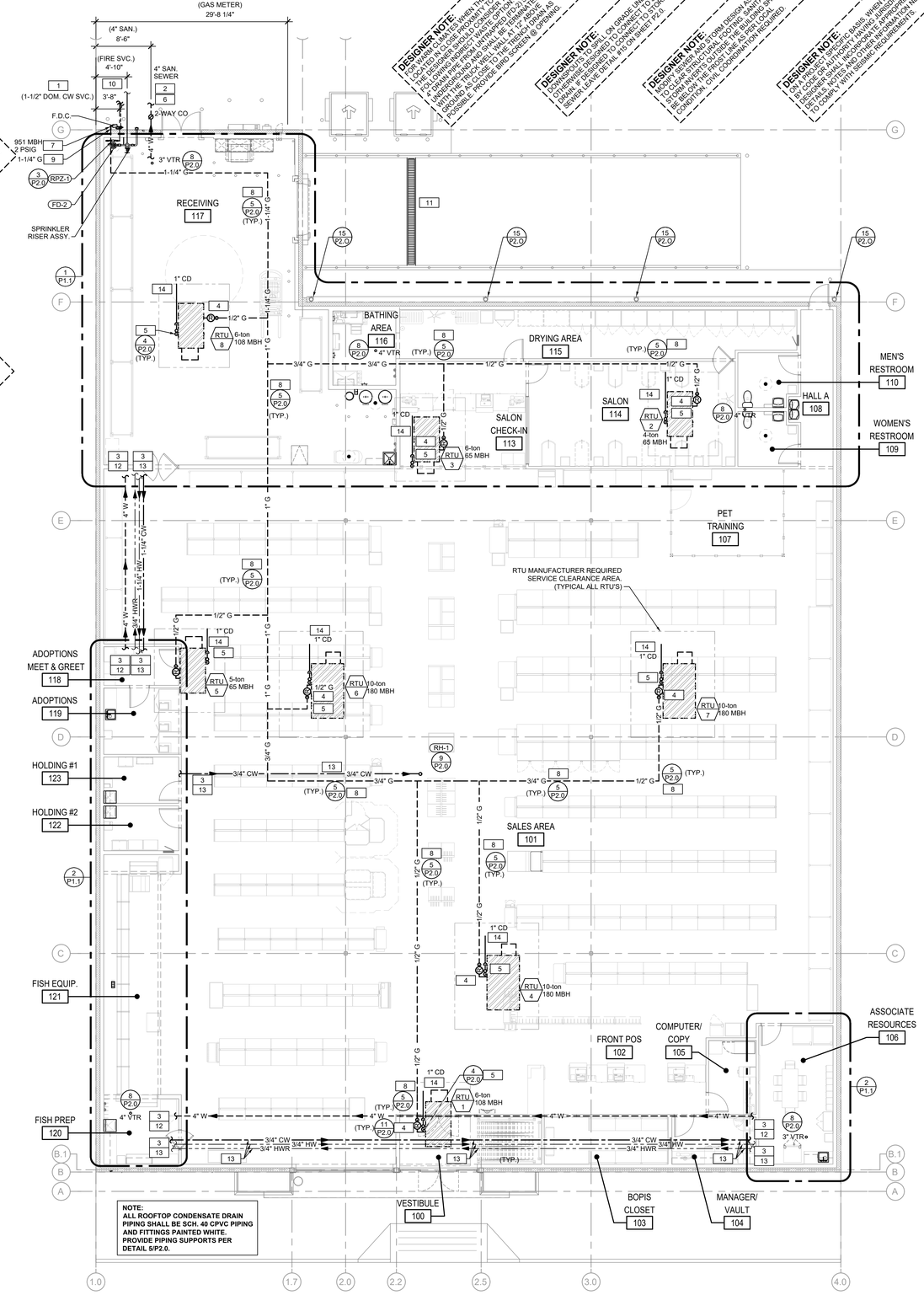


ISOLATION VALVE INSTALLATION

GENERAL NOTES
1. IF RPZ BACKFLOW PREVENTER IS REQUIRED, PLUMBING / FIRE PROTECTION CONTRACTOR SHALL VERIFY IF DISCHARGE CAN BE DRAINED THRU EXTERIOR WALL OR IF A FLOOR DRAIN IS REQUIRED. CONTACT PETSMART CM AS SOON AS POSSIBLE FOR DIRECTION.

NOTE:
THE PURPOSE OF DETAIL 2/P1.0 IS TO SHOW A GENERAL LAYOUT FOR THE INSTALLATION OF A FIRE SPRINKLER ISOLATION VALVE. IT IS THE RESPONSIBILITY OF THE PLUMBING AND FIRE PROTECTION CONTRACTORS TO CONTACT ALL PARTIES HAVING JURISDICTION TO VERIFY / CONFIRM THE TYPE AND QUANTITY OF DEVICES NEEDED AND THE INSTALLATION REQUIREMENTS.

NOTE:
THE PURPOSE OF DETAIL 2/P1.0 IS TO SHOW A GENERAL LAYOUT FOR THE INSTALLATION OF A VERTICAL FIRE RISER. IT IS THE RESPONSIBILITY OF THE PLUMBING AND FIRE PROTECTION CONTRACTORS TO CONTACT ALL PARTIES HAVING JURISDICTION TO VERIFY / CONFIRM THE TYPE AND QUANTITY OF DEVICES NEEDED AND THE INSTALLATION REQUIREMENTS.



NOTE:
ALL ROOFTOP CONDENSATE DRAIN PIPING SHALL BE SCH. 40 CPVC PIPING AND FITTINGS PAINTED WHITE. PROVIDE PIPING SUPPORTS PER DETAIL 5/P2.0.

1 P1.0 PLUMBING FLOOR PLAN
SCALE: 1/8" = 1'-0"

NORTH

DESIGNER NOTE: FOR WARM CLIMATES WHEN THE LOADING DOCK IS LOCATED IN CLOSE PROXIMITY TO THE FIRE RISER, THE DESIGNER SHOULD CONSIDER THE PLUMBING SYSTEM CONFIGURATION. IF THE PLUMBING SYSTEM IS CONFIGURED TO DRAIN IMPERMISSIBLE MATERIAL INTO THE SANITARY SEWER, THE DESIGNER SHALL INCORPORATE A TRAP WITH THE FLOOR DRAIN. THE TRAP SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE TRENCH DRAIN AS GROUND AS POSSIBLE. PROVIDE BIRD SCREEN @ OPENING.

DESIGNER NOTE: COORDINATE WITH CIVIL ENGINEER ON DRAIN LINES. CONFIRM IF PLUMBING SHALL CONNECT TO A DRAIN IF PRESENT, OR TO CONNECT TO A SEWER. LEAVE DETAIL #6 ON SHEET P2.0.

DESIGNER NOTE: MODIFY SANITARY AND STORM DESIGN AS NEEDED TO COMPLY WITH PLUMBING CODE. SANITARY AND STORM STRUCTURES, PIPING, AND SEWER SHALL BE BELOW THE POST-DEVELOPMENT FINISH GRADE CONDITION. CIVIL COORDINATION REQUIRED.

DESIGNER NOTE: ON A PROJECT SPECIFIC BASIS, WHEN REQUIRED BY CODE OR AUTHORITY HAVING JURISDICTION, DESIGNER SHALL INCORPORATE APPROPRIATE DETAILS AND NOTES INCLUDING ANY ADDITIONAL INFORMATION NEEDED TO COMPLY WITH SEISMIC REQUIREMENTS.

PLUMBING KEY NOTES:

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1	1-1/2" UNDERGROUND DOMESTIC WATER SERVICE FROM THE DOMESTIC WATER METER. REFER TO CIVIL DWGS. BY OTHERS FOR CONTINUATION. FIELD VERIFY THE EXACT LOCATION, SIZE, AND BURY DEPTH OF THE CONNECTION POINT PRIOR TO ROUGH-IN OF NEW WATER PIPING.
2	EXTEND WASTE LINE 5'-0" OUTSIDE OF BUILDING. COORDINATE WITH CIVIL PLANS. INVERT ELEVATION IS ---' AT EXIT POINT OF BUILDING. THIS IS BASED ON A --- F.F.E. AND TOTAL DEVELOPED LENGTH OF --- FT. AT 1/4" SLOPE, AND A STARTING INVERT OF ---
3	SEE ENLARGED AREA PLANS ON SHEET P1.1 FOR PIPING CONTINUATION.
4	GAS LINE WITH REGULATOR TO RTU - SEE GAS PIPING DETAIL 11/P2.0.
5	CPVC CONDENSATE DRAINS SHALL MATCH UNIT DRAIN CONNECTION. PROVIDE DRAIN WITH 6" DEEP TRAP AND VENT PER DETAIL 4/P2.0. EXTEND CPVC CONDENSATE DRAIN PIPING ABOVE THE ROOF AS SHOWN AT 1% MIN. SLOPE. SEE DETAIL 5/P2.0 FOR PIPING SUPPORT. PROVIDE COPPER CONDENSATE DRAIN PIPING IF REQUIRED BY CODE OR LOCAL OFFICIAL. PAINT ALL CONDENSATE DRAIN PIPING WHITE.
6	EXTERIOR GRADE TWO-WAY GRADE CLEANOUT. SEE DETAIL 6/P2.0.
7	GAS METER, PRIMARY REGULATOR AND UNDERGROUND SERVICE PIPING BY GAS UTILITY COMPANY (FIELD VERIFY). SEE 2/P3.0 FOR SIZING CRITERIA AND LOADS. SEE DETAIL 1/P2.0 FOR MORE INFORMATION.
8	PAINT GAS PIPING ON ROOF TRAFFIC YELLOW, SUPPORT PIPING PER DETAIL 5/P2.0.
9	1" GAS RISER. ROUTE EXPOSED AND TIGHT TO THE EXTERIOR WALL TO THE ROOF. PROVIDE SYSTEM HOUSE VALVE AT GAS METER OUTLET. PAINT HOUSE VALVE AND RISER TO MATCH BLDG. COLOR OR PER GAS UTILITY COMPANY DIRECTION. SLEEVE THRU THE PARAPET WALL AT THE ROOF LEVEL AND SEAL ALL AROUND.
10	6" UNDERGROUND FIRE SERVICE. REFER TO CIVIL DWGS. BY OTHERS FOR CONTINUATION. COORDINATE FINAL CONNECTION WITH THE SITE UTILITIES CONTRACTOR AND THE LOCAL WATER AUTHORITY AS APPLICABLE. FIELD VERIFY THE EXACT LOCATION, SIZE, AND BURY DEPTH OF THE CONNECTION POINT PRIOR TO ROUGH-IN OF NEW WATER PIPING. THE FIRE RISER SHALL BE SIZED IN ACCORDANCE WITH THE INSURANCE CARRIER AND HYDRAULIC CALCULATION REQUIREMENTS. REFER TO SPRINKLER SHOP DRAWINGS FOR ADDITIONAL INFORMATION.
11	CONNECT TO STORM DRAIN - FIELD VERIFY LOCATION AND INVERT. COORDINATE WITH CIVIL PLAN.
12	INSTALL SANITARY PIPING WITH SLOPE PER APPLICABLE CODE. COORDINATE EXACT ROUTING WITH STRUCTURAL FOOTING AND ALL CONSTRUCTION TRADES PRIOR TO ROUGH-IN.
13	INSTALL PIPING AS HIGH AS POSSIBLE ABOVE THE BOTTOM CHORD OF ROOF JOISTS THROUGHOUT THE STORE WHERE OPEN TO STRUCTURE. COORDINATE EXACT ROUTING WITH ALL CONSTRUCTION TRADES PRIOR TO INSTALLATION.
14	CONDENSATE DRAIN TO DISCHARGE ON ROOF MINIMUM 3'-0" FROM LOW SIDE OF ROOFTOP UNIT ONTO SPLASH BLOCK OR WALK MAT.

DESIGNER NOTE: REPLACE AHU REPLACEMENTS WITH EQUAL. REPLACE CONDENSATE DRAIN PIPING WHERE REQUIRED. PIPE TO DRAIN WHERE REQUIRED. APPROVED EQUAL SHALL INCLUDE CONDENSATE DRAIN PIPING, 4" SLEEVE, 2" PENETRATION, DRAIN PIPING ON ROOF, LOCATION, DROP 1'-0" CPVC TO THE CONDENSATE DRAIN TEE, AND MIN. 1" PIPE TO THE EXACT