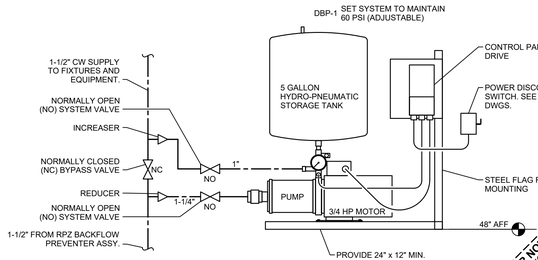



## BOOSTER PUMP DETAIL

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.

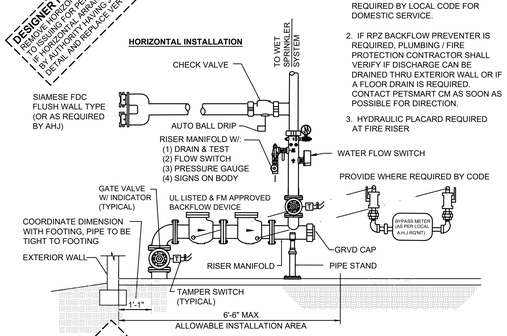
**DESIGNER NOTE:** PLUMBING DESIGNER SHALL DETERMINE AVAILABLE WATER PRESSURE AND CALCULATE PEAK DEMAND. PROVIDE PUMP SIZE, ELECTRICAL, PIPING, FITTINGS, BACKFLOW PREVENTER, ETC. IF THE WATER METER AND BACKFLOW PREVENTER IS LESS THAN 40 PSI, PROVIDE A PRESSURE BOOSTER SYSTEM. IF THERE IS ENOUGH PRESSURE AT ANY FIXTURE, THE INCOMING WATER PRESSURE IS THE WATER PRESSURE BOOSTER SYSTEM WILL BE REQUIRED. IF THE WATER PRESSURE IS NOT SHOWN AT THE INCOMING WATER METER, THE PLUMBING DESIGNER SHALL INCLUDE THE DETAIL ON THE ISSUED DRAWINGS.

**DESIGNER NOTE:** WHEN AVAILABLE, PROVIDE PUMP SUCTION FROM LOWER FLOOR MOUNT METHOD. WHEN FLOOR SPACE IS AVAILABLE (PREFERRED) PROVIDE FLOOR MOUNT METHOD. REFER TO DETAIL AND REPLACE VERTICAL RISER WITH HORIZONTAL RISER IF FLOOR SPACE IS NOT AVAILABLE.

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

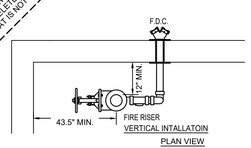
3 P1.0 DOMESTIC WATER PRESSURE BOOSTER PUMP DETAIL
SCALE: N.T.S.

**DESIGNER NOTE:** REPLACE WITH RISER LAYOUT PRIOR TO ISSUING FOR PERMIT. RISER LAYOUT PRIOR TO PERMIT WITH HANDWRITTEN NOTES IS REQUIRED IF PERMITTING HAND WRITTEN NOTES. REFER TO DETAIL AND REPLACE VERTICAL RISER.

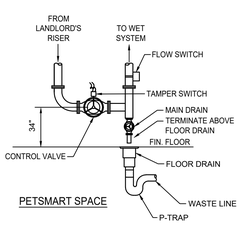



HORIZONTAL INSTALLATION

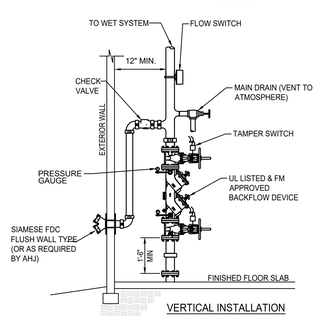
**DESIGNER NOTE:** VERTICAL FIRE RISER INSTALLATION IS PREFERRED. REPLACE WITH HORIZONTAL FIRE RISER IF PROPER SPACE IS AVAILABLE. FIRE JURISDICTION AND ARCHITECT MUST APPROVE SAVING ARRANGEMENT THAT IS NOT DESIRED.




VERTICAL INTALLATOIN
PLAN VIEW




ISOLATION VALVE INSTALLATION




VERTICAL INSTALLATION

GENERAL NOTES

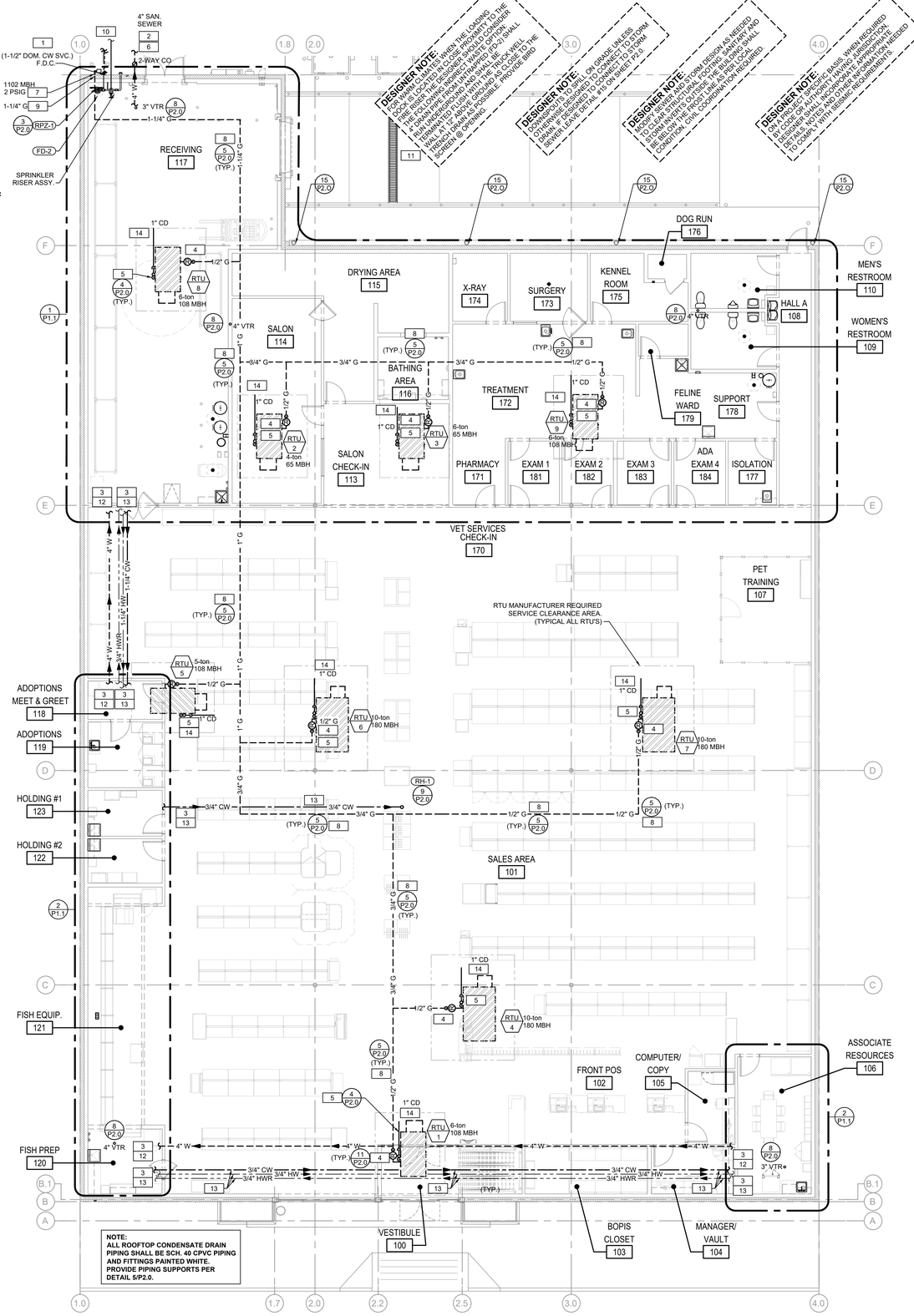
1. ADEQUATE CLEARANCE SHALL BE PROVIDED AROUND FIRE RISER: 18" MINIMUM FROM FACE OF PIPE TO THE BACK WALL, 18" ON SIDE AND 36" CLEAR IN FRONT. PROVIDE CLEARANCES REQUIRED BY LOCAL CODE FOR DOMESTIC SERVICE.
2. IF RPZ BACKFLOW PREVENTER IS REQUIRED, PLUMBING / FIRE PROTECTION CONTRACTOR SHALL VERIFY IF 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

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.**

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




**DESIGNER NOTE:** FOR WARM CLIMATES WHEN THE LOADING DOCK IS COVERED, PROVIDE DOWNSPOUTS TO THE FIRE PROTECTION SYSTEM. CONNECT TO A 1" DRAIN PIPE FROM DOWNSPOUT TO FIRE PROTECTION DRAIN. PROVIDE DOWNSPOUT WITH A 1" DRAIN PIPE FROM DOWNSPOUT TO FIRE PROTECTION DRAIN. PROVIDE 1" DRAIN PIPE UNDERGROUND AND SHALL BE TERMINATED FLUSH WITH THE TRUCK WELL WALL AT 12" ABOVE GROUND AS CLOSE TO THE FRENCH DRAIN AS POSSIBLE. PROVIDE BIRD SCREEN @ OPENING.

**DESIGNER NOTE:** COORDINATE WITH CIVIL ENGINEER ON GRADING, UNLESS OTHERWISE DESIGNED, TO CONNECT TO A STORM DRAIN IF PRESENT ON SITE. IF NOT PRESENT, CONNECT TO A SEWER. LEAVE DETAIL # 6/ ON SHEET P2.0.

**DESIGNER NOTE:** MODIFY SITE AND PLATFORM DESIGN AS NEEDED TO COMPLETE SITE DRAINAGE. SANITARY AND STORM SEWER PIPING SHALL BE BELOW THE POST TENSIONED SLAB. ADJUST 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 SCHEMATIC INFORMATION AS NEEDED TO COMPLY WITH SEISMIC 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

## PLUMBING KEY NOTES:

| # | |
|---|---|
| 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 PIPING 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 1/P3.1 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 SYSTOLIC 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 ALL NOTE # 14 WHERE AHJ REQUIRES CONDENSATE TO BE PIPED. PIPE TO DISCHARGE WITHIN 6" OF FLOOR. PROVIDE SPLASH BLOCK. PIPE TO DISCHARGE WITHIN 6" OF FLOOR. PROVIDE SPLASH BLOCK. PROVIDE CONDENSATE DRAIN PIPING AS APPROVED BY AHJ. PROVIDE SLEEVE FOR PENETRATION. FIELD VERIFY THE EXACT LOCATION. DRAIN PIPING ON ROOF CONDENSATE DRAIN PIPING TO THE CONDENSATE DRAIN FITTING. PROVIDE DROP 1'-0" MIN. AND MIN. 1% SLOPE WITH A 6" DEEP TRAP. PROVIDE