

| PLUMBING FIXTURE SCHEDULE / SPEC. 22 00 00 & 22 40 00 / ALL FIXTURES & FITTINGS MUST BE "LEAD FREE" | | | | | | | | | | |
|---|--|-------------------|---|--|---------------------|------|--------|--|-------------------------|---|
| MARK | DESCRIPTION | MANUFACTURER | CATALOG NUMBER | ACCESSORIES | PIPING REQUIREMENTS | | | REMARKS | APPROVED MANUFACTURER'S | CODE APPROVALS |
| | | | | | WASTE | VENT | SUPPLY | | | |
| H.W.C. | HANDICAP ACCESSIBLE WATER CLOSET (TANK TYPE) | AMERICAN STANDARD | CADET RIGHT HEIGHT BOWL RIM @ 16-1/2" H PRESSURE-ASSISTED TYPE 2467.016 | CHURCH 9500CT WHITE OPEN FRONT SEAT COMPLETE W/BOLT CAPS | 4" | 2" | 1/2" | LOW-CONSUMPTION 1.6 GPF MAX. MEETS ADA GUIDELINES | ZURN | ANSI A117.1, ADA COMPLIANT |
| LAV. | HANDICAP ACCESSIBLE LAVATORY (WALL MOUNTED) | AMERICAN STANDARD | LUCERNE 0355.012 4" CENTERS | ZURN #Z8737 FLAT GRID SINK STRAINER, DELTA #501-DST CLASSIC CENTERSET FAUCET, JAY R. SMITH #0700-M31 FLOOR MOUNTED LAVATORY SUPPORTS IN WALL | 2" | 2" | 3/4" | SEE NOTE 2. 1.5 GPM MAX. | ZURN | ANS A117.1, ASME A112.18.1, ASME A112.18.2, ADA COMPLIANT |
| M.V. | THERMOSTATIC MIXING VALVE | WATTS | #LFMMV-M1-US-1/2" | THERMOSTATIC MIXING VALVE | - | - | 1/2" | SEE DETAIL 3/P2 & NOTE #4 110°F MAXIMUM WATER TEMP. | WILKINS, POWERS | ASSE 1070, IAPMO, ADA COMPLIANT, CUPC, NSF/ANSI 61 |
| H.D.F. | BARRIER-FREE TWO STATION HI-LO DRINKING FOUNTAIN | ELKAY | EZSTL8LC | ACCESSORY APRON #LKAPREZL | 2" | 2" | 1/2" | REFER TO ARCHITECTURAL SHEETS FOR MOUNTING HEIGHTS | HALSEY TAYLOR | ADA COMPLIANT |
| F.D. | FLOOR DRAIN | ZURN | ZN415-B-P | 1/2" TRAP PRIMER CONNECTION | 2" | 2" | - | COMBINATION WASTE VENT | WADE & JAY R. SMITH | ASSE 1019-B |
| C.O. | CLEANOUT (INTERIOR) | JAY R. SMITH | 4100 | W/CARPET CLAMPING RING WHERE REQUIRED | SEE PLAN | - | - | SAME SIZE AS LINE | WADE & ZURN | - |
| C.O.1 | CLEANOUT (EXTERIOR) | JAY R. SMITH | 4250 | - | SEE PLAN | - | - | SAME SIZE AS LINE SEE DETAILS 2/P2 & 8/P2 | WADE & ZURN | - |
| W.H.A. | WATER HAMMER ARRESTER | SIOUX CHIEF | 652-A | - | - | - | - | - | WILLIAMS | - |
| H.B. | HOSE BIBB | WOODFORD | MODEL 65 | W/WALL CLAMP | - | - | 3/4" | W/VACUUM BREAKER. OPERATING ROD ASSEMBLY MUST BE ORDERED PER WALL WIDTH | - | - |
| M.B. | MOP BASIN | FIAT | FIAT MSB-2424 | FIAT #832-AA HOSE & BRACKET, FIAT #889-CC-24" MOP HANGER, ZURN #Z842M-WHK-5H SERVICE FAUCET | 3" | 2" | 3/4" | W/VACUUM BREAKER ON FAUCET. ALSO ADD HOSE CONNECTION VACUUM BREAKER (WATTS #B) ON FAUCET'S SPOUT | STERN-WILLIAMS | - |
| E.W. | EYE WASH | SPEAKMAN | SEF-9200 | SPEAKMAN THERMOSTATIC MIXING VALVE (SEF-TW), SEF-9200-ILR | - | - | 3/4" | SET MIXING VALVE TO DELIVER 80°F NOTE: TEPID WATER RANGE IS 60°F-100°F | BRADLEY, HAWS | ASME A112.18.1-2000, CSA B125-98, ANSI Z358-1, ASSE 1011 |
| SRBP | SPILL-RESISTANT BACKFLOW PREVENTER | WATTS | LF00BPCQT-1/2" | HEALTH HAZARD, ANTI-SIPHON, SPILL-RESISTANT BACKFLOW PREVENTER | - | - | 1/2" | MAY BE INSTALLED VERTICALLY | - | ASSE 1056 |
| URN. | URINAL (WALL MOUNTED) | ZURN | Z5755-U OMNI-FLO | SLOAN ROYAL #186-1 FLUSH VALVE, ZURN #Z1222 FLOOR MOUNTED URINAL SUPPORT | 2" | 2" | 3/4" | 1.0 GPF BACK OF URINAL TO BE MOUNTED FLUSH WITH THE FACE OF FINISHED WALL. SEE DETAIL 9/P2 | AMERICAN STANDARD | ASME A1212.19.2, ANSI A117.1, ADA COMPLIANT |

NOTES:
 1. COORDINATE ROUGH-IN OF ALL PLUMBING FIXTURES W/ARCHITECTURAL DRAWINGS.
 2. SINKS & LAVATORIES FOR HANDICAPPED ACCESS SHALL BE INSTALLED W/OFFSET TAILPIECES. ALL SINK & LAVATORY DRAIN & WATER LINES SHALL BE INSULATED W/PROTECTIVE DEVICES EQUAL TO "McGUIRE" #PW 2150 WC, WHITE MOLDED CLOSED CELL VINYL, OR "TRUEBRO" #103W, WHITE MOLDED VINYL.
 3. FOR HANDICAPPED-ACCESSIBLE WATER CLOSET, FURNISH & INSTALL W/THE FLUSH HANDLE ON THE WIDE SIDE OF THE RESTROOM.
 4. ALL LAVATORIES SHALL BE INSTALLED WITH A THERMOSTATIC MIXING VALVE.

OWNER SUPPLIED, CONTRACTOR INSTALLED

| | | | | | | | | | | |
|--------|----------------------------|------------|-------------|---|---|---|------|--|------------------|------------------------|
| W.H. | WATER HEATER (ELECTRIC) | A.O. SMITH | EJCS-20 | (19 GALLONS) 120V, 1 ϕ , 1.65 KW ELEMENT WITH T & P RELIEF VALVE | - | - | 3/4" | PIPE DRAIN LINE FROM P & T RELIEF VALVE DOWN IN SHELF PAN SEE DETAIL 5/P2 & 6/P2 | NO SUBSTITUTIONS | CSA, ASME RATED, NAECA |
| SHELF | WATER HEATER SHELF | HOLDRITE | #40-SWHP-WM | SUPPORTS WATER HEATERS UP TO 20 GALLON OR 300 LBS | - | - | - | PIPE DRAIN LINE FROM SHELF PAN SEE DETAIL 5/P2 & 6/P2 | NO SUBSTITUTIONS | - |
| T.E.A. | THERMAL EXPANSION ABSORBER | AMTROL | ST-12 | - | - | - | - | - | NO SUBSTITUTIONS | - |

NOTE: WATER HEATER, SHELF AND T.E.A. SHALL BE DIRECT ORDERED AND OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR:
 GRAYBAR ELECTRIC CO. INC. 11885 LACKLAND ROAD ST. LOUIS, MO 63146
 GRAYBAR O'REILLY TEAM EMAIL: oreilly@graybar.com TOLL FREE: (314) 573-2080

PLUMBING NOTES

- DRAWING IS DIAGRAMMATIC & IS NOT TO BE SCALED. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS.
- ALL PLUMBING WORK IS TO BE DONE IN ACCORDANCE WITH THE APPLICABLE CODE(S) NOTED ON THE CODE SUMMARY SHEET.
- VALVES ON WATER LINES SHALL BE BRONZE BALL VALVES. DO NOT SUBSTITUTE GATE OR GLOBE VALVES. VALVES SHALL BE THE SAME SIZE AS THEIR INLET PIPING. (SPEC 22 00 00)
- ALL PLUMBING FIXTURES ARE TO BE FURNISHED COMPLETE WITH NECESSARY STOPS, TRAPS, TAILPIECES, TRIM, ETC. (SPEC 22 40 00)
- THE CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS & SUBCONTRACTORS IN LAYING HIS OUT & INSTALLING HIS WORK. COOPERATION DOES NOT MEAN "I WAS HERE FIRST."
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE & FUNCTIONAL SYSTEM IN ACCORDANCE W/ THE INTENT OF THE PLANS, WHETHER OR NOT EVERY ELEMENT THEREOF IS SPECIFICALLY CALLED OUT.
- DO NOT INSTALL CAPPED AIR CHAMBERS AT FIXTURES. INSTALL WATER HAMMER ARRESTERS AS CALLED FOR ON PLAN. ARRESTERS ARE TO BE RATED FOR INSTALLATION IN CONCEALED LOCATIONS. (SPEC 22 00 00)
- ALL HOT & COLD WATER SUPPLY PIPING CONNECTION TO FIXTURES ARE TO BE 1/2" UNLESS NOTED OTHERWISE.
- PLUMBING PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS. PROVIDE REQUIRED CLEARANCES PER "N.E.C." COORDINATE ELECTRICAL PANEL LOCATIONS W/ THE ELECTRICAL CONTRACTOR.
- INSTALL PIPE INSULATION ON ALL DOMESTIC WATER LINES ABOVE FINISH FLOOR. (SPEC 22 07 19)
- CONTRACTOR SHALL COORDINATE WITH ALL STATE & LOCAL BUILDING REGULATION AGENCIES & UTILITY COMPANY(S) IN THE PROCUREMENT OF & PAYMENT OF ALL PERMITS, LICENSES, FEES & CHARGES REQUIRED FOR THE PERFORMANCE OF THE WORK.
- PROVIDE CHROME ESCUTCHEON COVERPLATES AT ALL PIPE PENETRATIONS OF FINISHED WALL SURFACES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ROUTE ALL WATER PIPING AROUND SPACES W/ TEMPERATURES BELOW FREEZING (i.e. ATTICS, CHASES, EXTERIOR WALLS, ETC.). IF FREEZING OF ANY WATER PIPING OCCURS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR THE PIPING THRU A NON-FREEZING SPACE TO THE FIXTURE/APPLIANCE ORIGINALLY SERVED BY THE FROZEN PIPING.
- ALL CAULKING ON BUILDING PENETRATIONS SHALL BE A 1-COMPONENT NON-SAG URETHANE SEALANT. ANY CONTRACTOR WHO USED SILICONE OR ANY OTHER CAULKING WILL BE REQUIRED TO REMOVE & REPLACE WITH A SPECIFIED SEALANT. (SPEC 07 92 00)
- PLUMBING SUB-CONTRACTOR SHALL INFORM THE ELECTRICAL SUB-CONTRACTOR OF THE VOLTAGE & POWER REQUIREMENTS OF ALL PLUMBING EQUIPMENT TO BE INSTALLED.
- ALL GAS PIPING INSTALLATIONS SHALL COMPLY WITH "NFPA-54" NATURAL GAS OR "NFPA-58" LP GAS (latest edition).
- ALL WATER HEATERS & HOT WATER STORAGE TANKS SHALL HAVE A DRAIN VALVE INSTALLED AT THE BOTTOM OF THE TANK AS REQUIRED BY CODE.

PLUMBING PIPE MATERIALS (SEE SPEC SECTION 22 00 00 FOR ADDITIONAL INFORMATION.)

- A. The following applications are for inside, below & above the building slab and ending at a point 5'-0" outside the perimeter building walls.
- Domestic Water Distribution Piping Below Ground: All interior domestic water piping shall be type "K" hard drawn copper tubing (SIL-FOS 2, FOS-FLO 7 or other silver brazing material). This is required for the water service line from the shut-off valve in the building to a point 5 feet outside the building.
 - Domestic Water Distribution Piping Above Ground: Hard copper tube, Type L
 - Soil, Waste, and Vent Piping Below Ground: Schedule 40 poly vinyl chloride (PVC) plastic DWV pipe;
 - Soil, Waste, and Vent Piping Above Ground: Schedule cast-iron soil pipe or Poly vinyl chloride (PVC) plastic DWV pipe
 - Note: PVC piping is not permitted in air-handling ceiling spaces, use only cast-iron or ductile iron pipe in these locations.
- B. The following applications are for only from 5'-0" outside the building to the utility point of connection (POC).
- Underground domestic water service piping from a point 5 feet outside the building to the POC. (See Site Utilities Plan for which piping material (Copper or PVC) is required):
- 3'-4" - 1-1/4", Schedule 40 PVC pipe with solvent-welded joints.
 - 1-1/2" - 3", SDR-21, PVC pipe (ASTM D2241) Class 200, Bell and Spigot with rubber gasketed joints.
 - 3/4" - 3", Type "K" hard drawn copper tubing (SIL-FOS 2, FOS-FLO 7 or other silver brazing material).
 - 4" and larger, SDR-18 PVC pipe (AWWA C-900) Class 150 Bell and Spigot with rubber gasketed joints.
- Underground sanitary sewer service piping from a point 5 feet outside the building to the POC.
- Polyvinyl chloride (PVC) sewer pipe shall conform to ASTM D3034 (SDR-35).
 - Cast iron or ductile iron pipe shall conform to USASI #A-21 class 50.
- C. GAS pipe material:
 Low-Pressure Gas Systems, above Ground within or outside Building:
 Use the following:
 1. 2" and Smaller: Steel pipe, malleable-iron, threaded fittings, and threaded joints.
 2. 2-1/2" and Larger: Steel pipe, butt-welding fittings, and welded joints.

SEISMIC RESTRAINTS (ONLY REQUIRED FOR SEISMIC DESIGN CATEGORIES C,D,E,F)
CONTRACTOR TO REFER TO ARCHITECTURAL SHEET G1.1 FOR SEISMIC DESIGN CATEGORY.
 IF REQUIRED SEE SEISMIC DETAILS SHEET ME1.

PIPING LEGEND

| | |
|--------|-------------------------------------|
| — WS — | WATER SERVICE (BELOW GRADE) |
| — HW — | HOT WATER |
| — CW — | COLD WATER |
| — S — | WASTE |
| — V — | WASTE (BELOW GRADE) |
| — V — | VENT |
| — G — | GAS |
| — GS — | GAS SERVICE (BELOW GRADE) |
| ⊥ | WATER HAMMER ARRESTER, SEE SCHEDULE |
| ⊙ | FLOOR DRAIN, SEE SCHEDULE |
| ○ | CLEANOUT (INTERIOR), SEE SCHEDULE |
| ○ | CLEANOUT (EXTERIOR), SEE SCHEDULE |
| ⊕ | BALL VALVE |

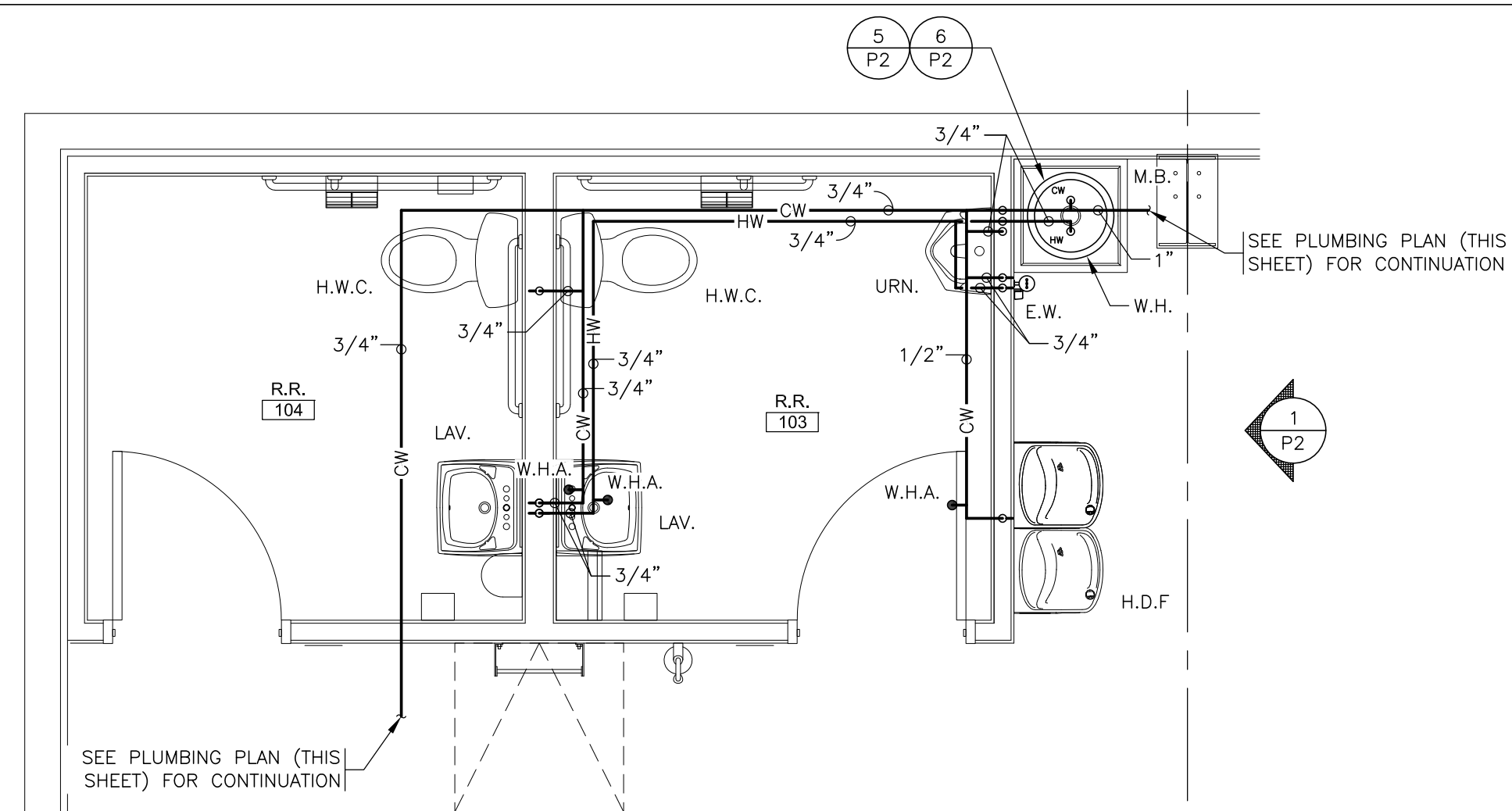
GAS LOAD

(PIPE SIZING BASED ON INTERNATIONAL FUELGAS CODE, TABLE 402.4(2))

| ITEM | MBH/INPUT |
|----------------------|-----------|
| ROOFTOP UNIT (RTU-1) | 180 |
| ROOFTOP UNIT (RTU-2) | 180 |
| ROOFTOP UNIT (RTU-3) | 150 |
| ROOFTOP UNIT (RTU-4) | 150 |
| TOTAL CONNECTED LOAD | 660 |

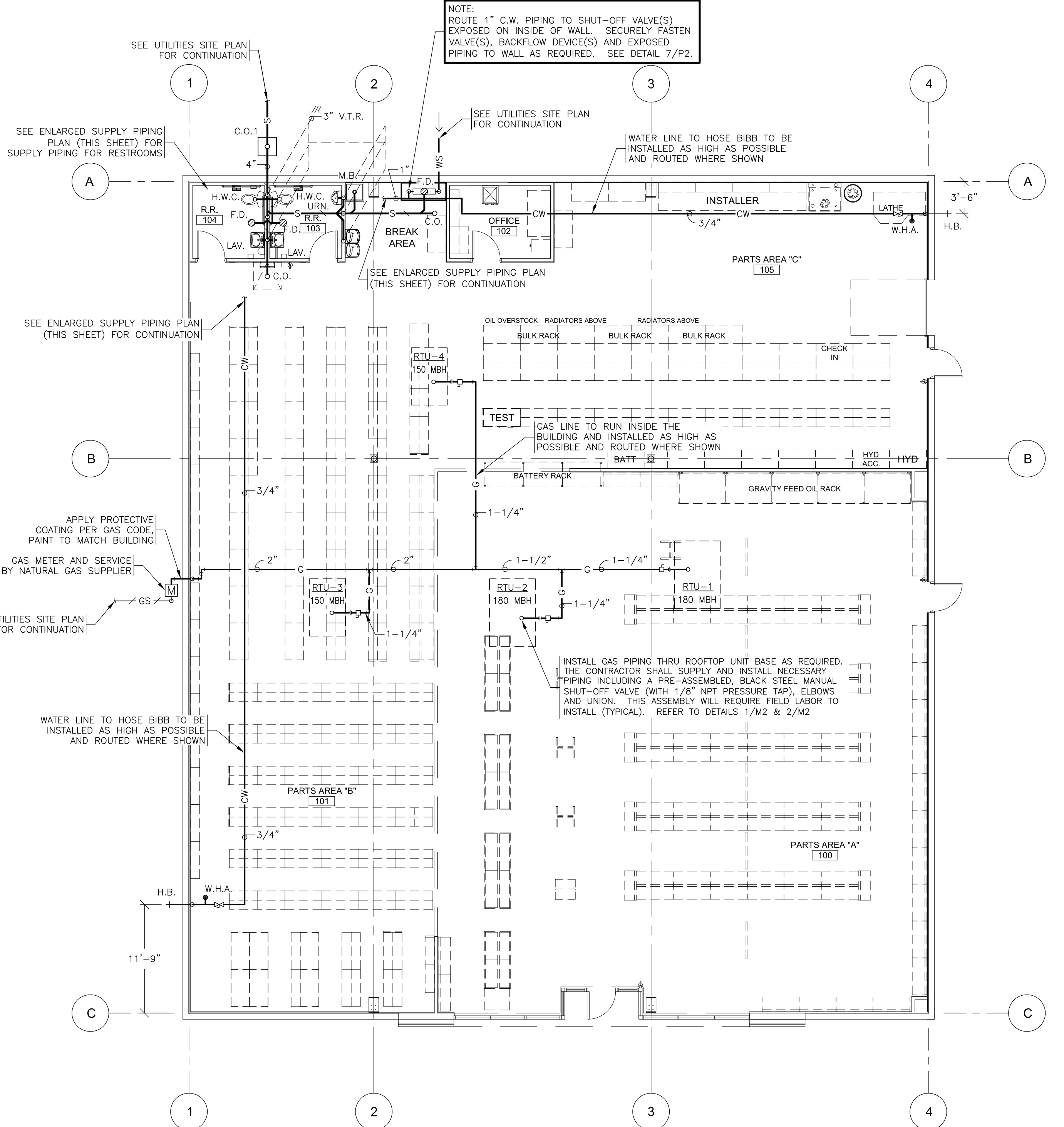
GAS PIPING SIZED USING LONGEST MAXIMUM RUN OF EQUIVALENT LENGTH OF PIPING = 150'-0"
 INLET PRESSURE = 7" W.C. OR 1/4 psig
 MAXIMUM PRESSURE DROP = .5 INCH W.C. AND .6 SPECIFIC GRAVITY

NOTE:
 SEE THE APPLICABLE PLUMBING CODE FOR MINIMUM WASTE PIPING SLOPE.



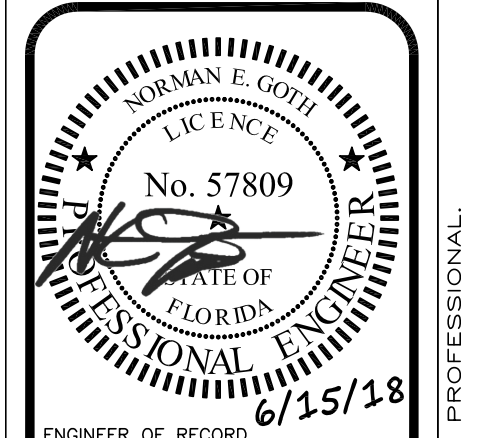
ENLARGED SUPPLY PIPING PLAN

SCALE: 3/8" = 1'-0"



PLUMBING PLAN

SCALE: 1/8" = 1'-0"



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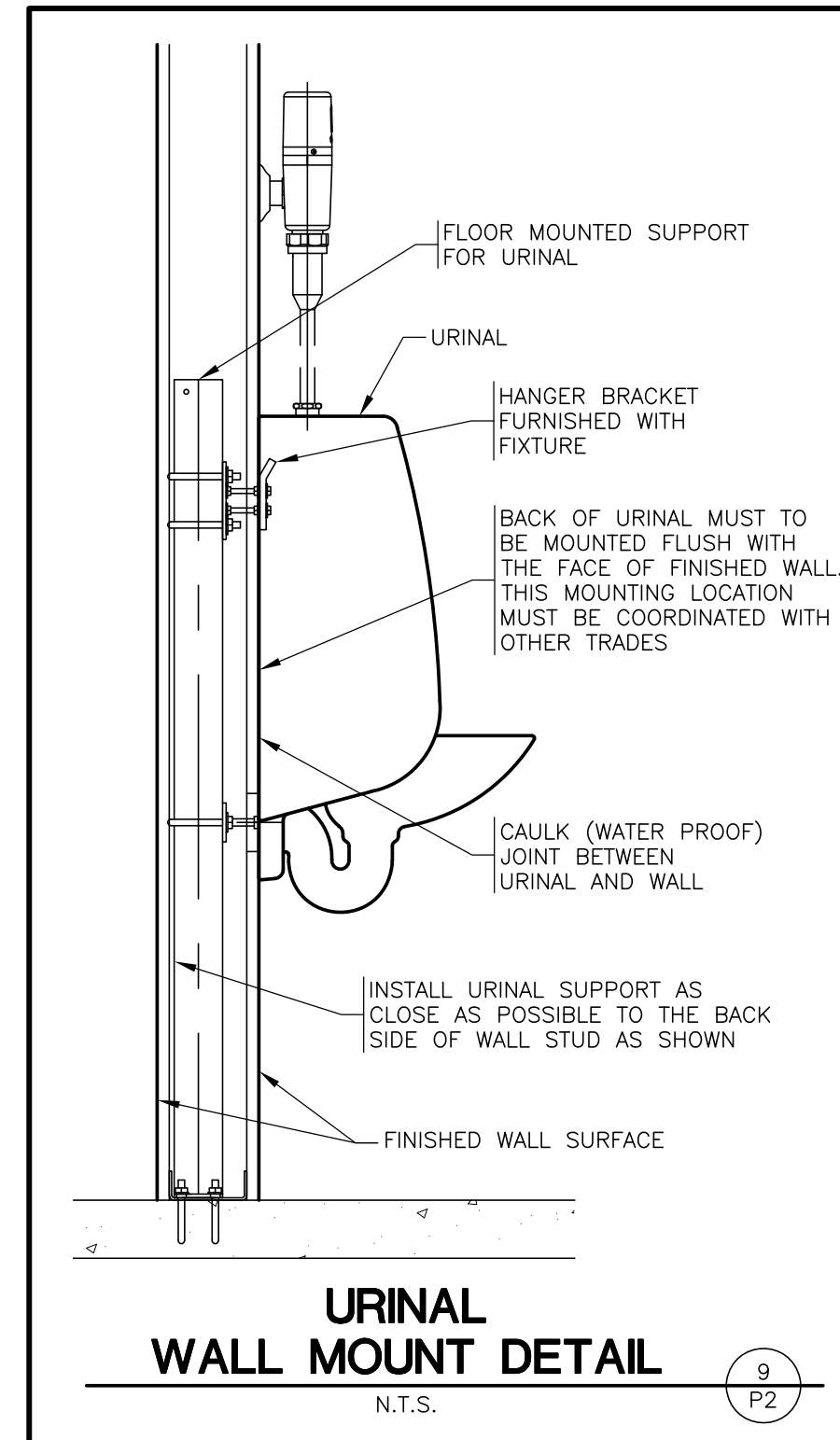
PLUMBING PLANS

O'Reilly AUTO PARTS
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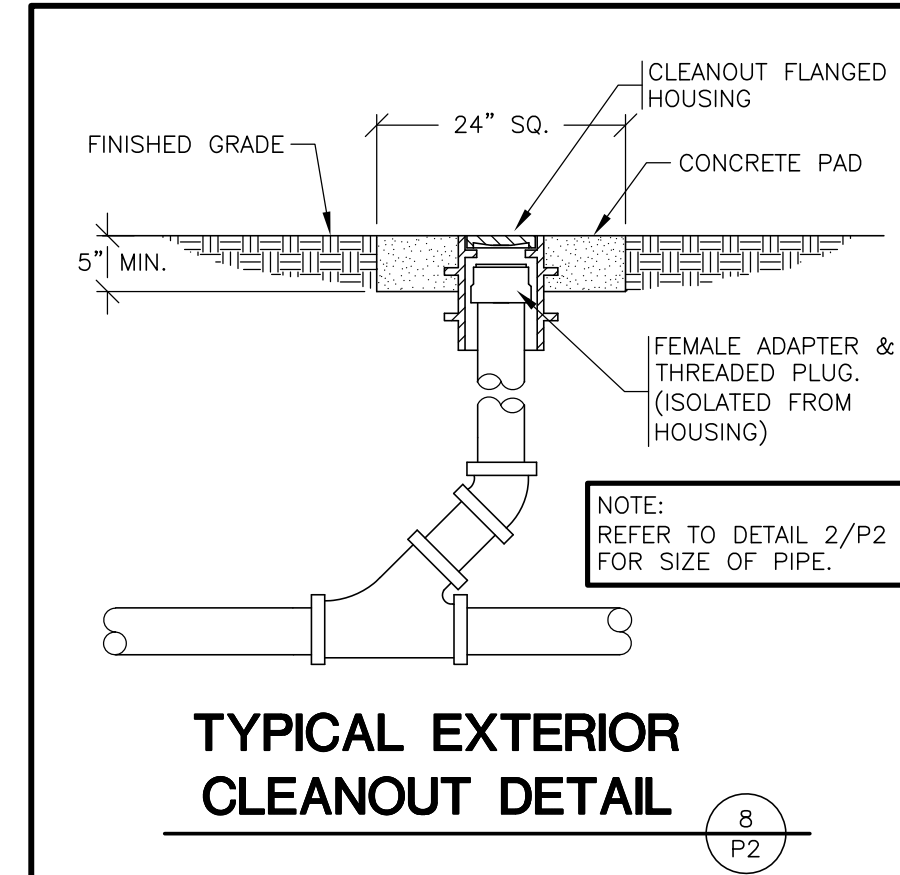
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P1

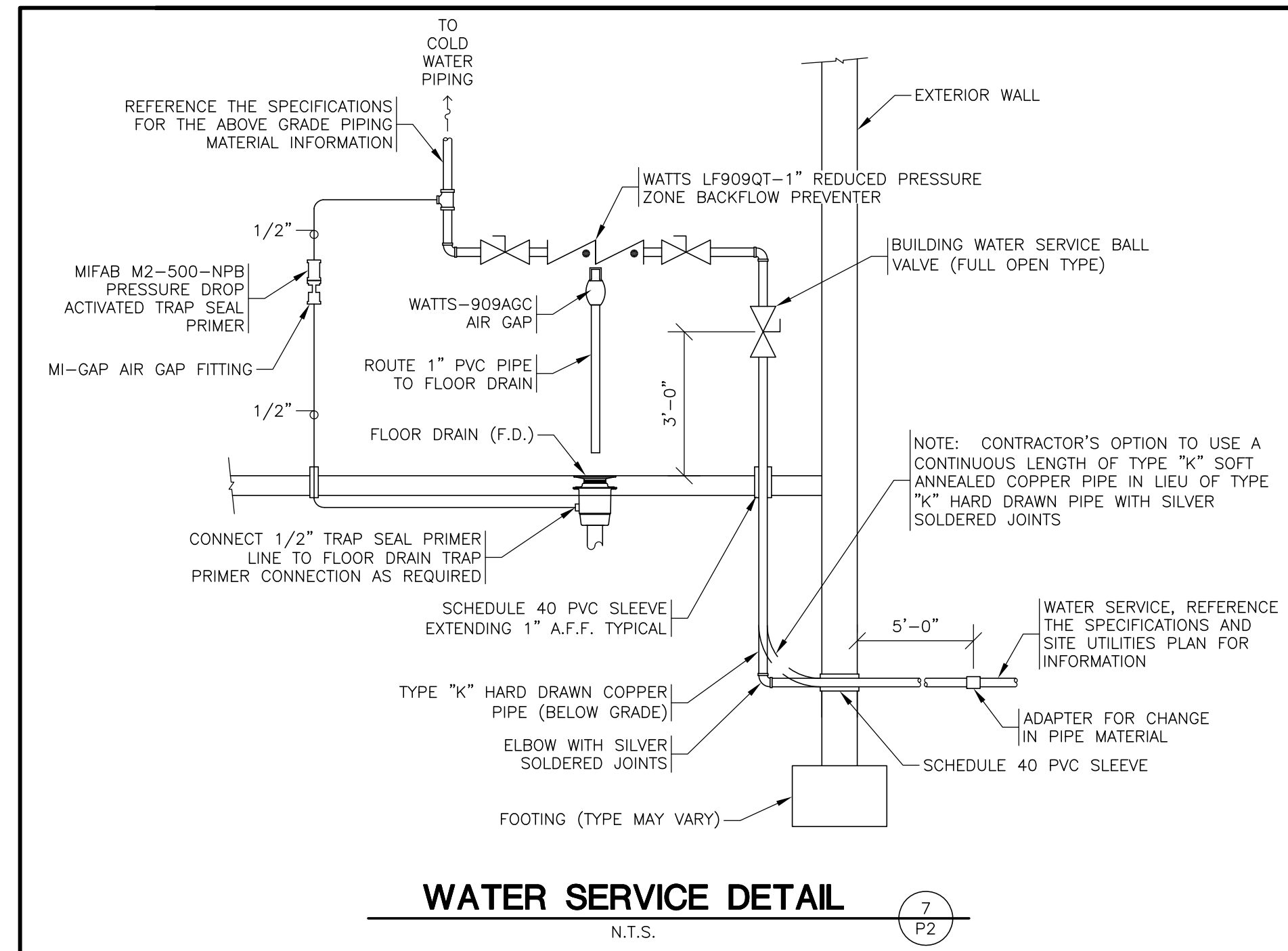
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URINAL WALL MOUNT DETAIL
N.T.S. 9 P2

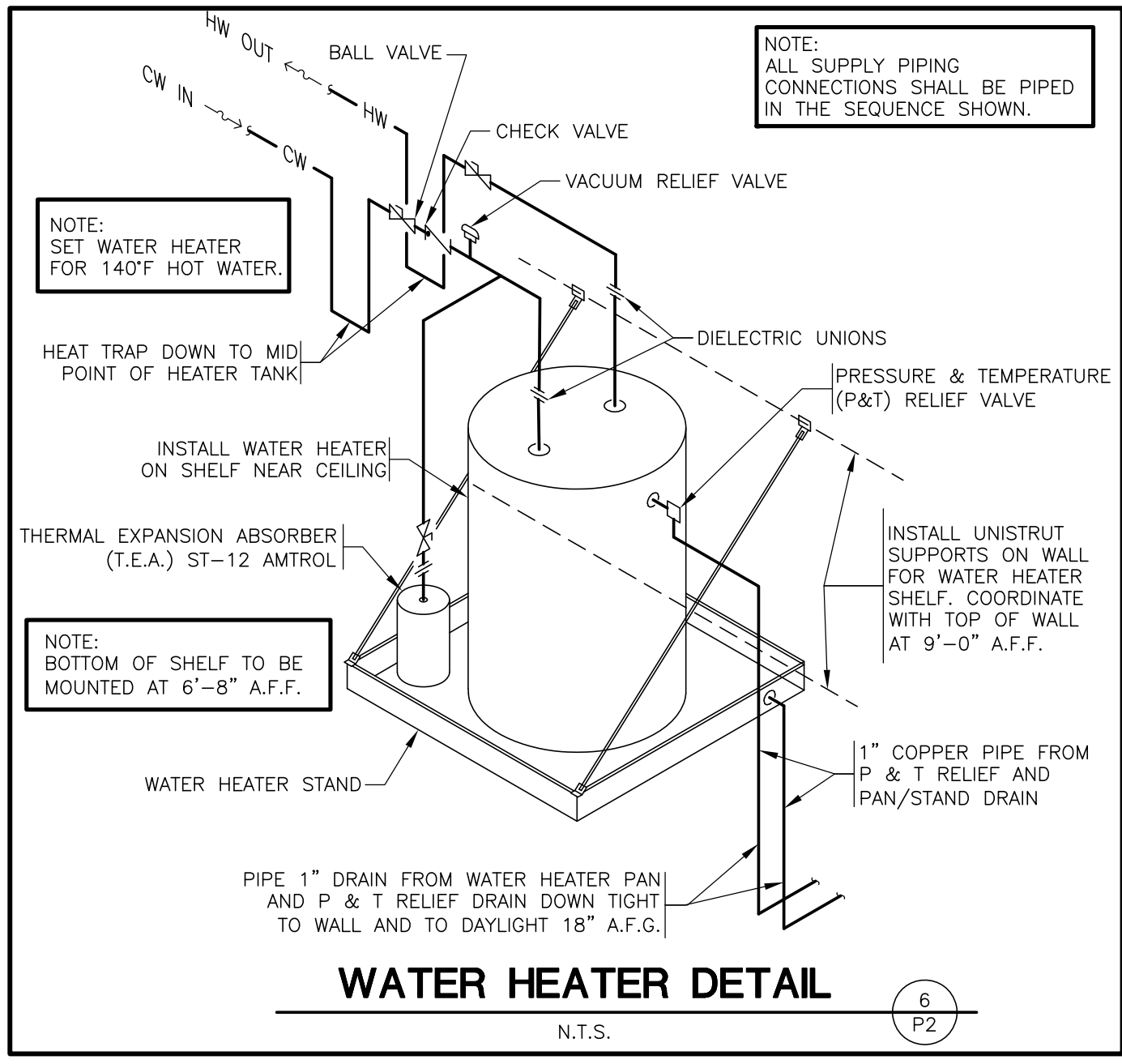


TYPICAL EXTERIOR CLEANOUT DETAIL
N.T.S. 8 P2

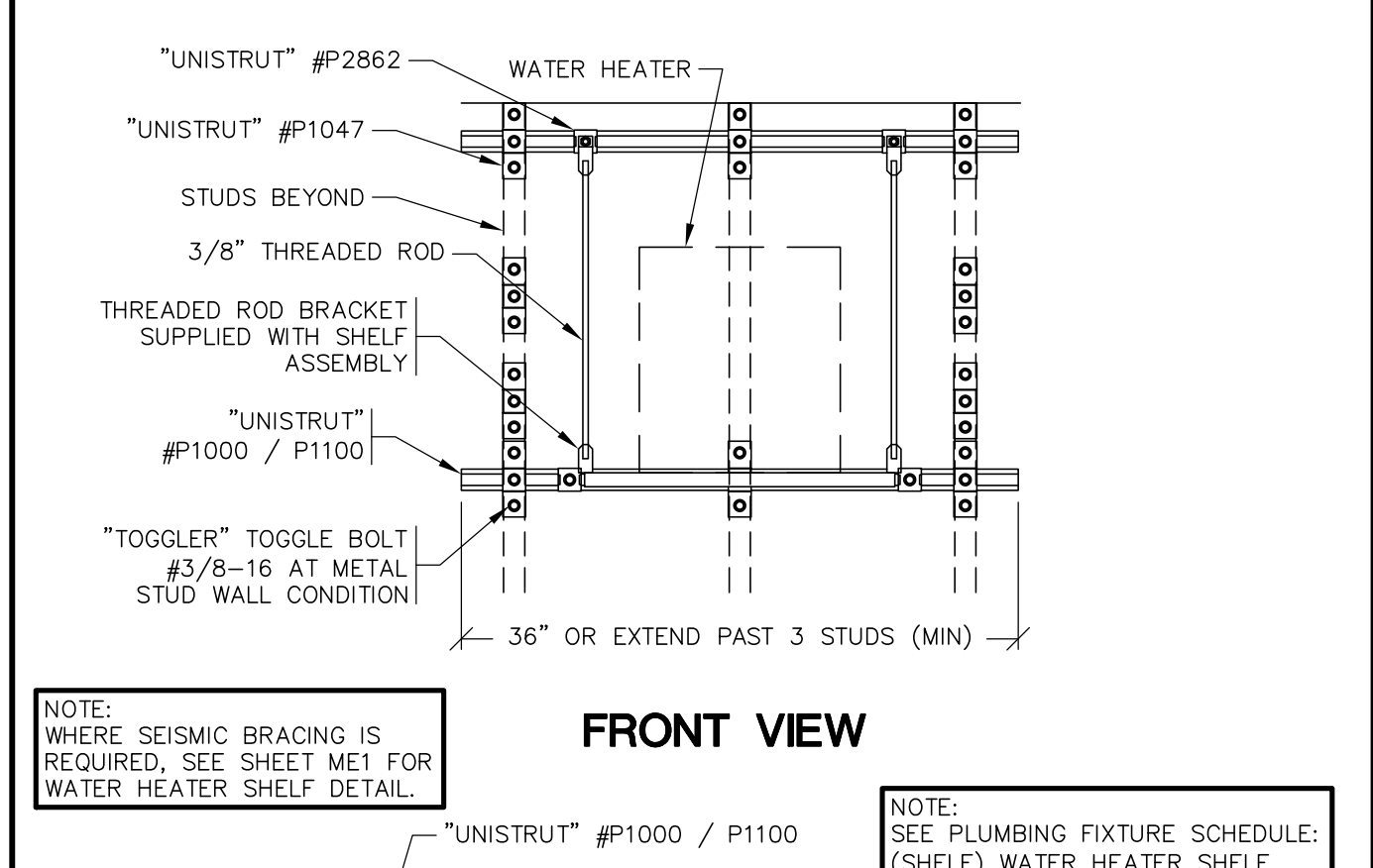


WATER SERVICE DETAIL
N.T.S. 7 P2

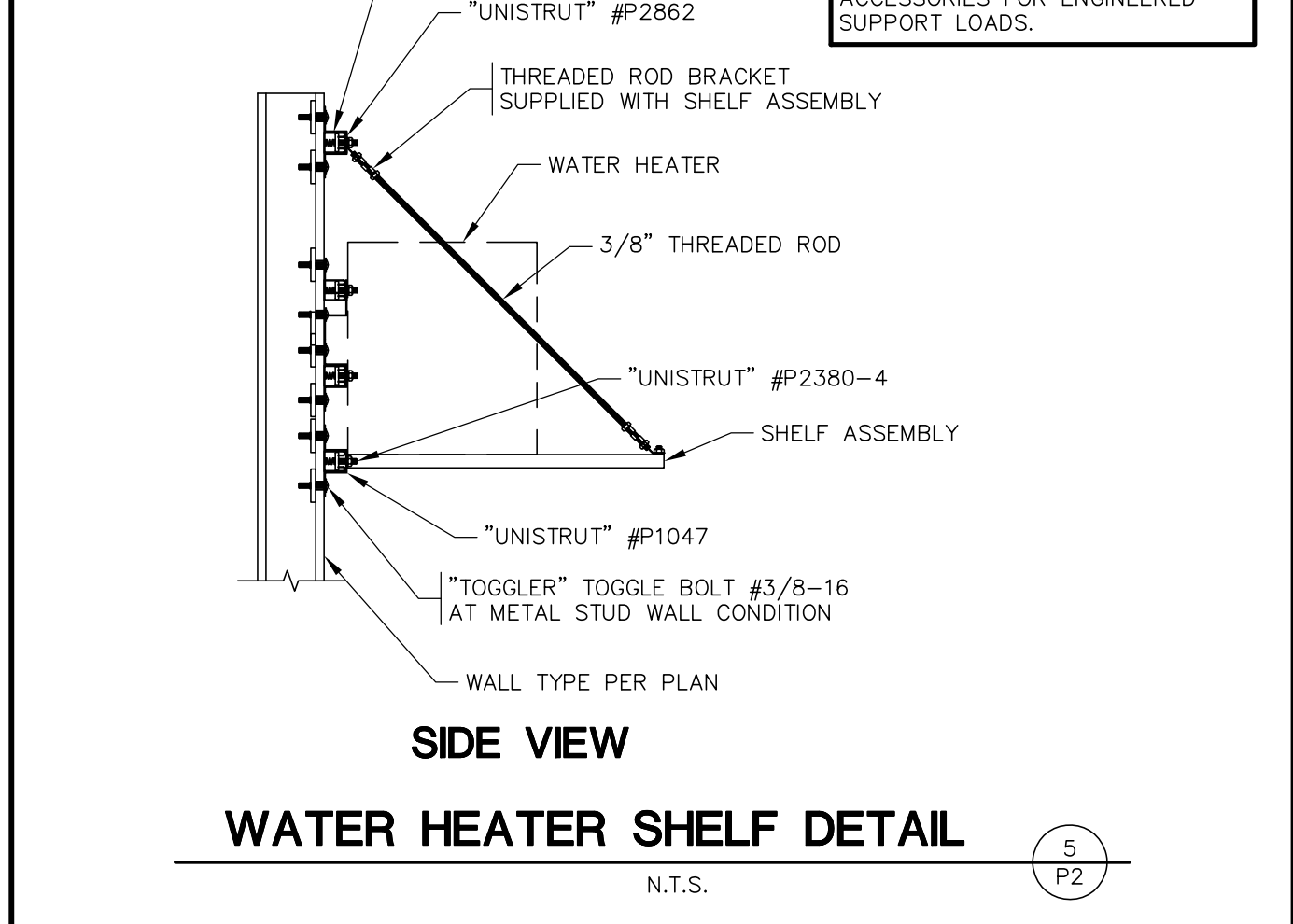
| PLUMBING CALCULATIONS | | | | | | |
|-------------------------|----------|--------------|----------------------|-------------|--------------|--------------|
| FIXTURE | QUANTITY | TOTAL-SFU | TOTAL | TOTAL-HW | DFU | TOTAL |
| W.C. (TANK) | 2 | 5 | 10 | 0 | 4 | 8 |
| URN. (URINAL) | 1 | 5 | 5 | 0 | 4 | 4 |
| LAV. (LAVATORY) | 2 | 2 | 4 | 1.5 | 3.00 | 4 |
| M.P. (MOP BASIN) | 1 | 3 | 3 | 1.5 | 1.50 | 2 |
| H.D.F. (FOUNTAIN) | 1 | 0.25 | 0.25 | 0 | 0 | 0.50 |
| H.B. (HOSE BIBB) | 2 | 3 | 6 | 0 | 0 | 0 |
| TOTAL | | 28.25 | TOTAL | 4.50 | TOTAL | 18.50 |
| TOTAL CW GPM | 20 | | AVERAGE DAILY FLOW = | 125 gal/DAY | | |
| COLD WATER SERVICE SIZE | 1" | | | | | |



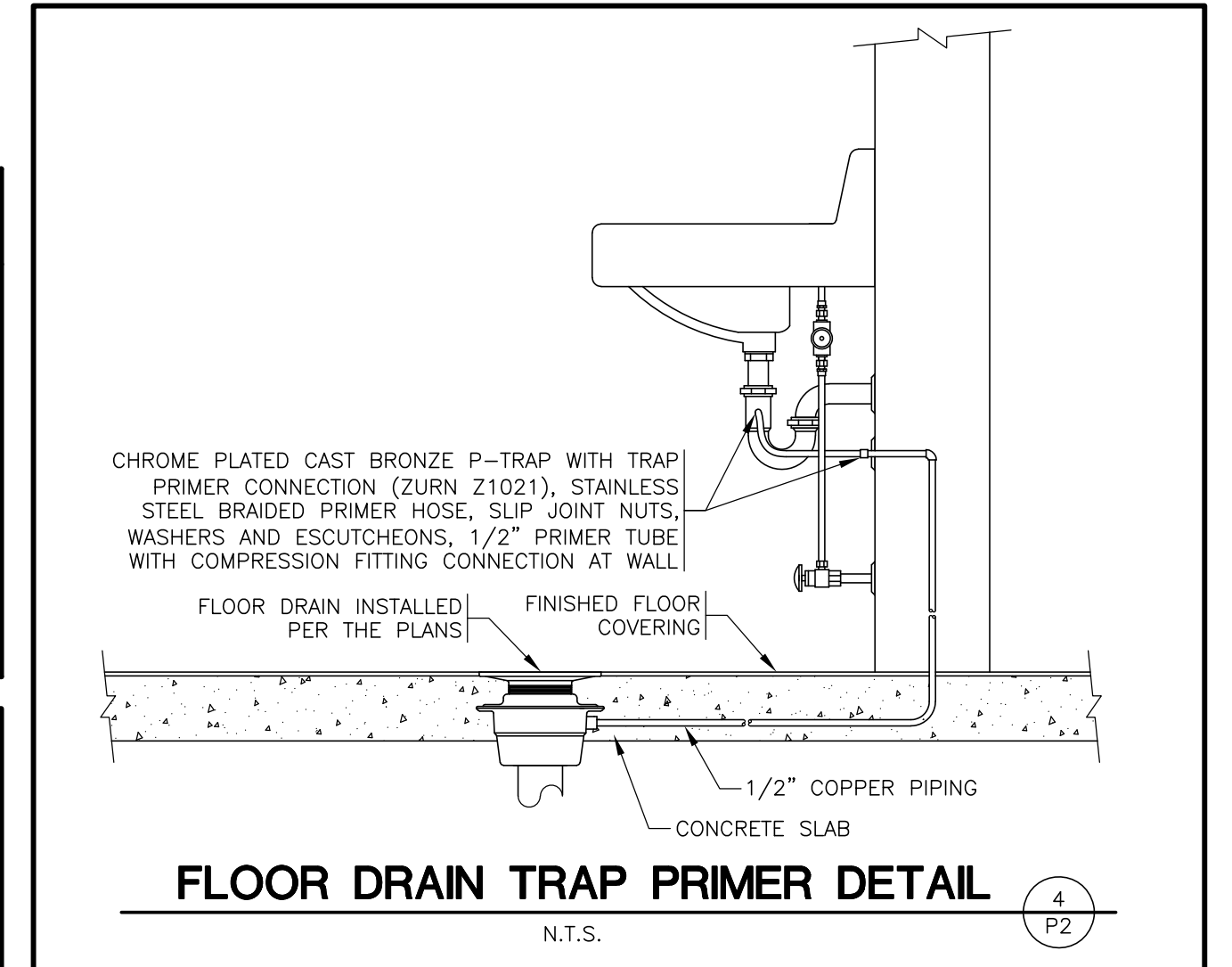
WATER HEATER DETAIL
N.T.S. 6 P2



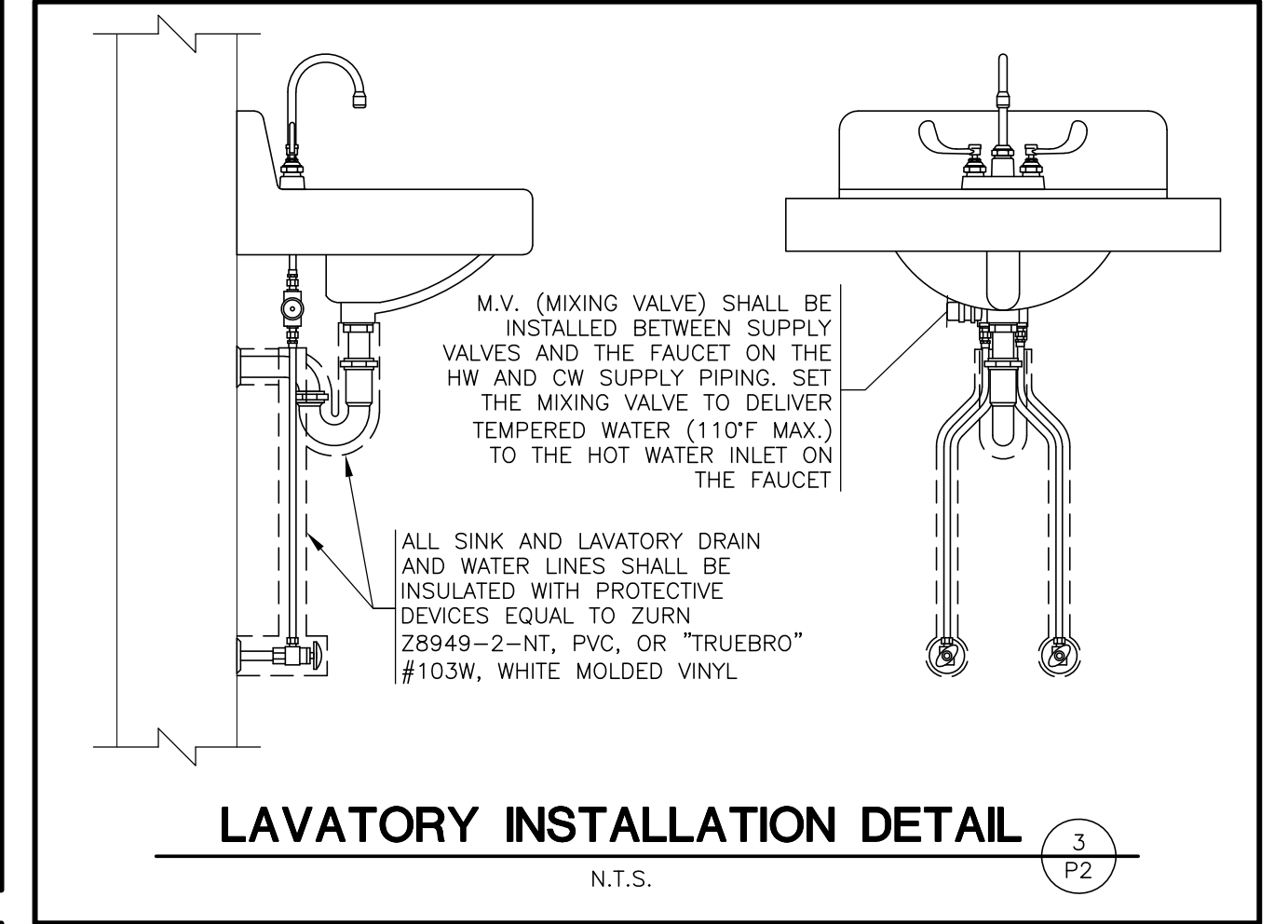
FRONT VIEW
N.T.S. 5 P2



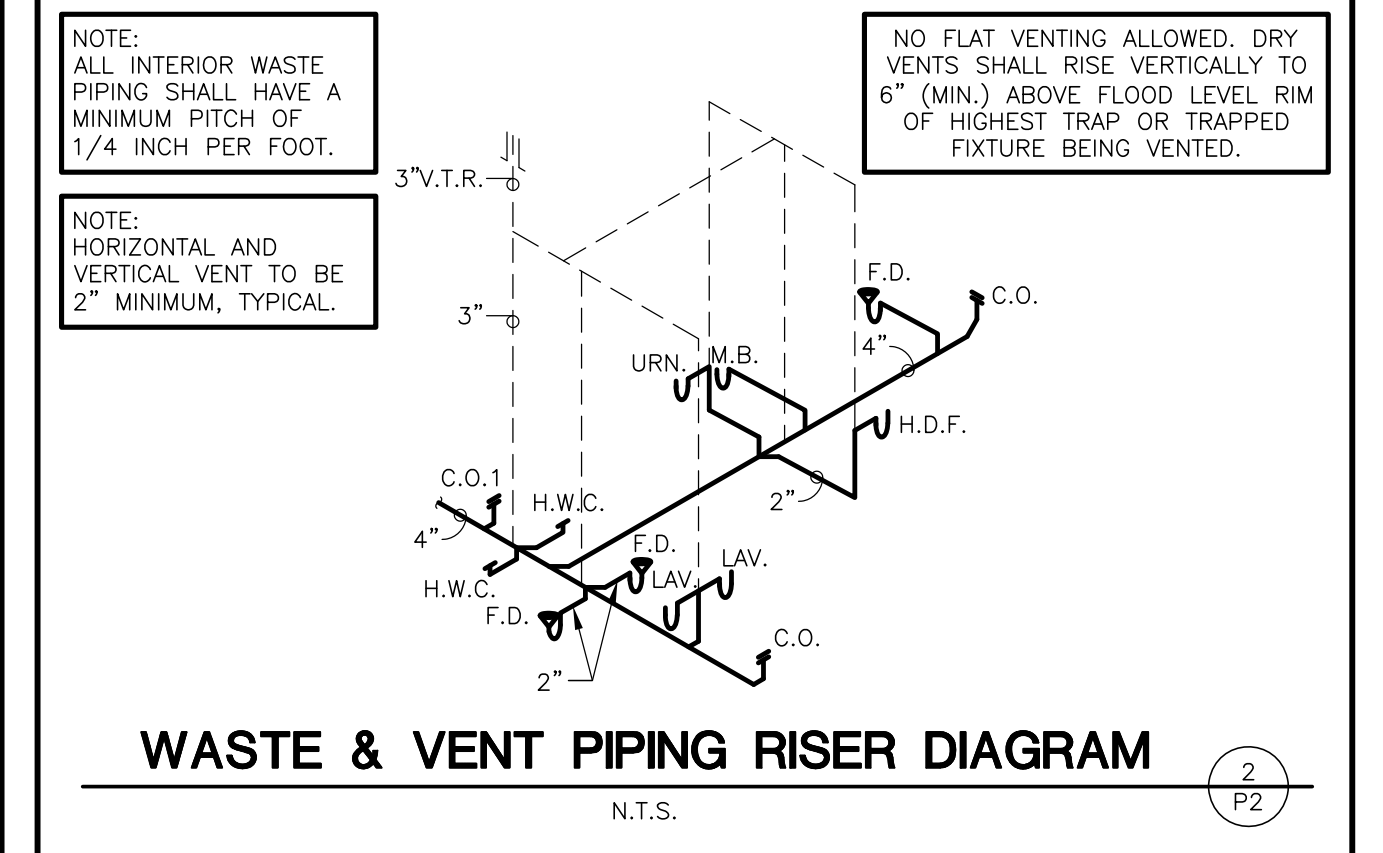
SIDE VIEW
WATER HEATER SHELF DETAIL
N.T.S. 5 P2



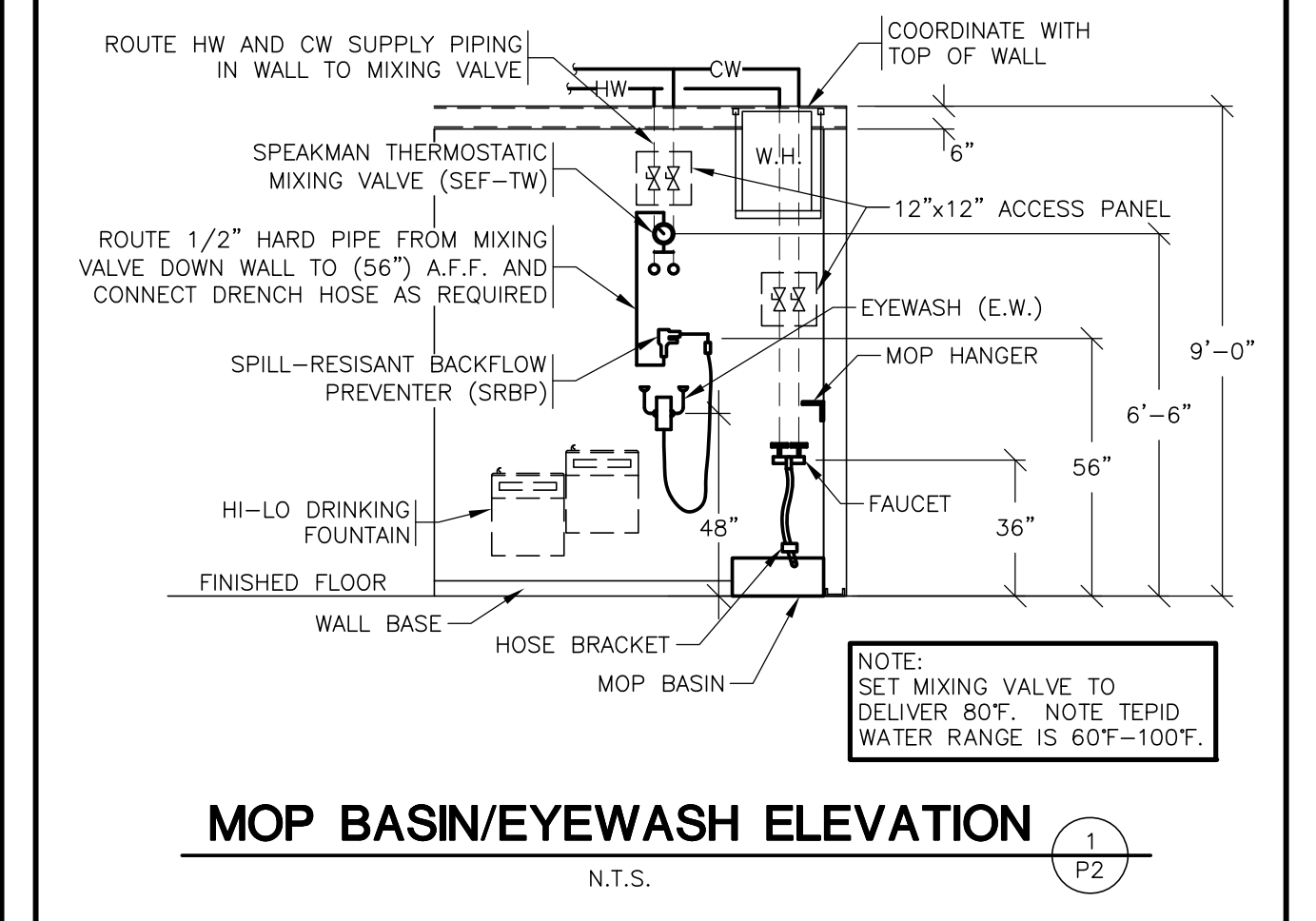
FLOOR DRAIN TRAP PRIMER DETAIL
N.T.S. 4 P2



LAVATORY INSTALLATION DETAIL
N.T.S. 3 P2



WASTE & VENT PIPING RISER DIAGRAM
N.T.S. 2 P2



MOP BASIN/EYEWASH ELEVATION
N.T.S. 1 P2

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