

**PLUMBING LEGEND**

SYMBOL	DESCRIPTION
---	SOIL, WASTE, OR SANITARY SEWER
SS	SANITARY SEWER (ON SITE)
---	SANITARY VENT
GW	GREASE WASTE
OW	COMBINATION WASTE AND VENT
AW	ACID WASTE
AV	ACID VENT
---	COLD WATER
---	HOT WATER
---	HOT WATER RETURN
OW	OIL WASTE
ST	STORM DRAIN
D	INDIRECT DRAIN
ESD	SEWAGE EJECTOR DISCHARGE
SPD	SUMP PUMP DISCHARGE
G	NATURAL GAS (LOW PRESSURE GAS)
MPG	NATURAL GAS (MEDIUM PRESSURE GAS)
→	FLOW DIRECTION
◇	GATE VALVE
◇	GLOBE VALVE
◇	CHECK VALVE
◇	BALL VALVE
+	PLUG COCK, GAS COCK
◇	PRESSURE REDUCING VALVE
PL	PLUMBING FIXTURE
FD	FLOOR DRAIN
RD	ROOF DRAIN
AD	ACCESS DOOR
VTR	VENT THRU ROOF
HB	HOSE BIB
FHW	FREEZELESS WALL HYDRANT
CD	CLEANOUT PLUG
FCD	FLOOR CLEANOUT
WCD	WALL CLEANOUT
COTD	CLEANOUT TO GRADE
⊕	DENOTES SANITARY SEWER RISER
⊕	NEW CONNECTION TO EXISTING
⊕	DENOTES BUILDING RISER (WATER, WASTE, ETC.)

**Plumbing General Notes**

- BY NECESSITY, THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS, THE SOLUTION OF WHICH HAS IMPACTED THE DESIGNS OF OTHER TRADES (ELECTRICAL, STRUCTURAL, ETC.) IF ALTERNATE MANUFACTURERS, FUEL SOURCES, SIZES, OR MODEL NUMBERS ARE SUBMITTED OR BID, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO OTHER TRADES IF ALTERNATE EQUIPMENT IS BID OR INSTALLED AT THE CONTRACTORS OPTION.
- ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT. CONTRACTOR SHALL NOT SCALE DRAWINGS. EQUIPMENT SCHEDULES SHALL TAKE PRECEDENCE OVER CONFLICTING DRAWING INFORMATION. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND OTHER DRAWINGS FOR COMPLETE INFORMATION.
- EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.
- EXACT LOCATION OF ALL EQUIPMENT AND PIPING SHALL BE COORDINATED WITH OTHER TRADES. CEILING MOUNTED SPRINKLER, LIGHTING AND ELECTRICAL REQUIREMENTS TAKE PRECEDENCE OVER CEILING MOUNTED MECHANICAL REQUIREMENTS.
- ALL PLUMBING SYSTEMS SHALL BE INSTALLED AS PER SPECIFICATIONS AND GOVERNING CODES.
- INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS AND VICE-VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES, HVAC, STRUCTURAL, ETC. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DETAILS AND DIMENSIONS.
- REFER TO SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS AND MODELS OF PLUMBING FIXTURES AND EQUIPMENT, AND PROPER APPLICATIONS OF SAME.
- PROVIDE CLEANOUTS IN ALL SANITARY, STORM DRAINAGE & OVERFLOW LINES, WHETHER SHOWN OR NOT, AT INTERVALS NOT TO EXCEED 50 FEET, AT EACH DIRECTION 45 DEGREES AND GREATER, AND ON ALL VERTICAL RISERS AT A HEIGHT OF 30" A.F.F. AT THE BASE OF EACH STACK.
- PROVIDE PRESSURE REDUCERS IN WATER SUPPLY LINES TO KEEP PRESSURE BELOW 70 PSI AT ALL OUTLETS. MINIMUM PRESSURE ACCEPTABLE AT WATER OUTLETS IS 15 PSI AT DIRECT SUPPLY FLUSH VALVES AND 8 PSI AT ALL OTHER OUTLETS.
- INSULATE ALL WATER LINES ABOVE FLOOR. INSULATE ALL HORIZONTAL STORM LINES ABOVE FLOOR.
- INSULATE ALL CONDENSATE LINES INSIDE BUILDING AS PER INSULATION REQUIREMENTS FOR COLD WATER LINE, IN SPECIFICATIONS.
- ALL SANITARY LINES ARE 1/4" PER FOOT WHERE POSSIBLE, AND NOT LESS THAN 1/8" PER FOOT IN ANY CASE. VERIFY INVERTS WITH SITE DRAWINGS AND COORDINATE INSTALLATION TO ASSURE PROPER FLOW.
- SEAL ALL PIPE PENETRATIONS THRU RATED WALLS.
- PROVIDE WATER HAMMER ARRESTORS IN BRANCH WATER LINES AS REQUIRED BY GOOD PRACTICE OR MINIMUM OF ONE ARRESTOR FOR EACH FIXTURE OR BANK OF FIXTURES.
- PROVIDE STOP VALVES AT EVERY FIXTURE ON BOTH HOT AND COLD WATER SUPPLY LINES. VALVES, ESCUTCHEONS, FITTINGS, ETC. SHALL BE CHROMIUM PLATED WHERE EXPOSED. CHROME PLATED PIPE IS USED.
- ALL FLOOR DRAINS TO HAVE DEEP SEAL TRAPS. 4" DEEP SEAL MINIMUM.
- PROVIDE TRAP PRIMERS ON ALL RESTROOM FLOOR DRAINS, AS WELL AS FLOOR DRAINS IN FAN ROOMS, COIL ROOMS, SPRINKLER ROOMS, OR WHERE ANY DRAIN IS FOR INFREQUENT DISCHARGE OF WASTE WATER. LOCATE TRAP PRIMER VALVES IN ACCESSIBLE LOCATION OR PROVIDE ACCESS PANEL. DO NOT LOCATE TRAP PRIMER VALVES OR PIPING IN PUBLIC ACCESSIBLE AREAS.
- ALL PIPE DROPS FROM CEILING PLENUM TO BELOW FLOOR SHALL BE MADE IN FURR-OUTS AT COLUMNS IN WEBS OF BEAMS AT COLUMNS. OR IN WALLS UNLESS SHOWN OTHERWISE.
- ALL EXPOSED OR ACCESSIBLE P-TRAPS SHALL BE CHROME PLATED AND PROVIDED WITH BOTTOM CLEANOUT PLUGS.
- PROVIDE INSULATION AT ALL EXPOSED HOT WATER & DRAIN PIPING FOR HANDICAP FIXTURES PER ANSI A117.1 AND ADA REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE ALL SANITARY SEWER, STORM DRAIN, FIRE AND DOMESTIC WATER LINES AND NATURAL GAS LINES WITH CIVIL DRAWINGS. SEE CIVIL DRAWINGS FOR CONTINUATION OF ALL UTILITY LINES.
- ALL SEWER, WASTE, DRAIN, STORM DRAIN PIPING IS BELOW FLOOR OF THE PLAN SHOWN, UNLESS OTHERWISE INDICATED.

**ADA Requirements**

This applies to Handicapped Accessible fixtures only.

**Water Closets** - The height of water closets shall be 17" to 19" measured to the top of the toilet seat. Seats shall not be sprung to return to a lifted position. The water closet shall be located 18" from the side wall to the center line of the bowl. Hand operated flush controls shall be mounted on the wide side of toilet areas no more than 29" above the finish floor. See architectural drawings for grab bar locations.

**Urinals** - The urinals shall be wall hung with an elongated rim at a maximum of 17" above the finish floor. Hand operated flush controls shall be mounted no more than 44" above finish floor.

**Lavatories** - Lavatories shall be mounted with the rim or counter surface no higher than 34" above the finish floor. Provide a clearance of at least 29" above the finish floor to the bottom of the apron. Knee space shall be 8" from bottom edge of apron to the leading edge of the bottom of the bowl. The bottom of the bowl shall be a minimum of 27" above the finish floor. All water and drain piping under lavatories shall be insulated with a foam insert, covered with a 1/8" vinyl outer shell. Angle stops shall have a flip top access.

**Faucets - Bathtub** - Shower controls. Controls shall be lever handles operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lb.

**Bathtub** - An in tub seat or a seat at the head end of the tub shall be provided. Seats shall be mounted securely and shall not slip during use. In addition to the fixed shower head provide a hand held shower spray unit with a hose at least 60" long that can be used both as a fixed shower head and as a hand held shower head. In a 30"x60" shower unit a fixed seat shall be provided. It shall be a folding type and shall be mounted on the wall adjacent to the controls. See architectural drawings for grab bar locations.

**Shower** - A seat shall be provided in shower stalls 36"x36". The seat shall be mounted on the wall opposite of the controls and 17" to 19" from the bathroom floor and shall extend the full depth of the stall. Shower controls shall be mounted on the wall opposite of the seat and shall be located on the same wall as the shower head, at minimum height of 38" and a maximum height of 48". In addition to the fixed shower head provide a hand held shower spray unit with a hose at least 60" long that can be used both as a fixed shower head and as a hand held shower head. In a 30"x60" shower unit a fixed seat shall be provided. It shall be a folding type and shall be mounted on the wall adjacent to the controls. See architectural drawings for grab bar locations.

**Sinks** - Sinks shall be mounted with the rim or counter surface no higher than 34" above the finish floor. Provide a knee clearance of at least 27" high, 30" wide and 19" deep. Sinks shall be a maximum of 6 1/2" deep. All water and drain piping under sinks shall be insulated with a foam insert, covered with a 1/8" vinyl outer shell. Angle stops shall have a flip top access.

**Drinking Fountains / Water Coolers** - Where only one drinking fountain is provided on a floor there shall be a drinking fountain which is accessible to individuals who use wheel chairs and one accessible to those having difficulty bending or stooping. This can be accomplished by using a "two" fountain. Lowest spout shall be no higher than 36" above finished floor and highest spout shall be mounted at 40" above finish floor. Spouts shall be at front of the unit and shall direct the water flow in a trajectory that is parallel or nearly parallel to the front of the unit. The spout shall provide a flow of water at least 4" high. Controls shall be front mounted or side mounted near the front edge. Controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lb. Wall mounted units shall have a clear knee space of between the bottom of the apron and the finished floor at least 27" high, 30" wide, and 17" to 19" deep. Fountains shall not protrude more than 4" out into walkways.

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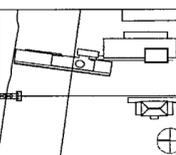
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**PLUMBING  
NOTES**

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