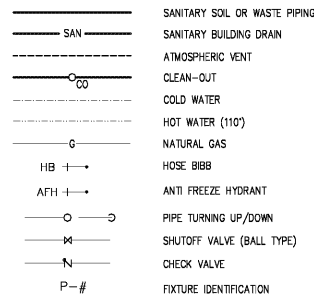


PIPING SYMBOL LEGEND



PLUMBING ABBREVIATION LEGEND

AAV	AIR ADMITTANCE VALVE, STUDOR OR EQUAL
ABV	ABOVE
AFH	ANTI-FREEZE HYDRANT
CLG	CEILING
CW	COLD WATER
CO	CLEAN-OUT
COV	CIRCUIT VENT
D.E.S.	DENTAL EQUIPMENT SUPPLIER
EC	ELECTRICAL CONTRACTOR
EW	ELECTRIC WATER COOLER
FD	FLOOR DRAIN
FS	FLOOR SINK
FW	FILTERED WATER
GCO	GRADE CLEAN OUT (AT FINISH GRADE IN CONC. PAD
GC	GENERAL CONTRACTOR
HB	HOSE BIBB
HW	HOT WATER
HWCP	HOT WATER CIRCULATION PUMP
MC	MECHANICAL CONTRACTOR
P-X	PLUMBING FIXTURE NO. "X", SEE FIXTURE SCHEDULE
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE
WCO	WALL CLEAN-OUT

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	MINIMUM CONNECTIONS				REMARKS	PLUMBING FIXTURE BASIS OF DESIGN
		WASTE	VENT	CW	HW		
P-1A	ACCESSIBLE (ADA) FLOOR MOUNT, FLUSH VALVE WATERCLOSET	3"	2"	1"	NA	WHITE VITREOUS CHINA, ELONGATED BOWL, WHITE OPEN FRONT ANTI-MICROBIAL SEAT W/ SELF-SUSTAINING CHECK HINGES, MANUAL 1.6 GPF FLUSH-VALVE, SEAT HEIGHT PER N.C. ACCESSIBILITY CODE.	TOTO MODEL # C1705ULN(G) ADA WATERCLOSET, SC534 SEAT, 1M11NCC-32 1.6 GPF MANUAL EXPOSED FLUSH VALVE, #01 COTTON COLOR FINISH
P-1	FLOOR MOUNT, FLUSH VALVE WATERCLOSET	3"	2"	1"	NA	WHITE VITREOUS CHINA, ELONGATED BOWL, WHITE OPEN FRONT ANTI-MICROBIAL SEAT W/ SELF-SUSTAINING CHECK HINGES, MANUAL 1.6 GPF FLUSH-VALVE, SAME AS P-1A EXCEPT STANDARD SEAT HEIGHT	TOTO MODEL # C1705E(G) WATERCLOSET, SC534 SEAT, 1M11NCC-32 1.6 GPF MANUAL EXPOSED FLUSH VALVE, #01 COTTON COLOR FINISH
P-2A	URINAL (ADA) FLUSH VALVE	2"	2"	3/4"	NA	WHITE VITREOUS CHINA, 0.5 GPF, MANUAL FLUSH VALVE WALL HUNG ON ZURN OR EQUAL FLOOR CARRIER DIMENSIONS AND MOUNTING PER N.C. ACCESSIBILITY CODE.	TOTO MODEL # U1447E(V) URINAL, 1M1LN12#CP 0.5 GPF MANUAL FLUSH VALVE, #01 COTTON COLOR FINISH
P-2	URINAL FLUSH VALVE	2"	2"	3/4"	NA	WHITE VITREOUS CHINA, 0.5 GPF, MANUAL FLUSH VALVE WALL HUNG ON ZURN OR EQUAL FLOOR CARRIER SAME AS P-2A EXCEPT STANDARD MOUNTING	TOTO MODEL # U1447E(V) URINAL, 1M1LN12#CP 0.5 GPF MANUAL FLUSH VALVE, #01 COTTON COLOR FINISH
P-3	ACCESSIBLE (ADA) COUNTER MOUNTED LAVATORY SINGLE LEVER	2"	2"	1/2"	1/2"	WHITE VITREOUS CHINA, SELF-RIMMING DROP-IN OVAL WITH MECHANICAL METERING FAUCET, C.P. GRID-STRAINER AND TAILPIECE WITH OFFSET P-TRAP W/ C.O., C.P. RIGID SUPPLIES W/ ANGLE STOPS, ADA TRAP AND SUPPLY INSULATION KIT	TOTO MODEL # LT502.4 LAVATORY, SYMMONS MODEL # SLC-6000-DP-G-ML SCOT METERING FAUCET (ASSE 1017/1070 MAXLINE THERMOSTATIC WATER TEMPERATURE LIMITING VALVE) #01 COTTON COLOR FINISH
P-4	ACCESSIBLE (ADA) SINGLE-BOWL STAINLESS STEEL SINK	2"	2"	1/2"	1/2"	18 GA. S.S SELF-RIMMING COUNTER MOUNTED DROP-IN SINK, SINGLE LEVER SWING-SPOUT FAUCET W/ PULL OUT HEAD C.P. CRUMB-CUP STRAINER TAILPIECES, P-TRAP W/ C.O. AND "Y" FITTINGS C.P. RIGID SUPPLIES W/ ANGLE STOPS, ADA TRAP AND SUPPLY INSULATION KIT	ELKAY MODEL # LRAD252155 18 GAUGE STAINLESS STEEL SINK, DELTA MODEL # 989-DST FAUCET (PULL-OUT SPRAY) WITH OPTIONAL ESCUTCHEON
P-5	MOP SINK	3"	2"	1/2"	1/2"	36X36 PRE-CAST RECEPTOR W/ FLOOR DRAIN ROUGH C.P. MIXING WALL FAUCET W/ VAC. BRKR., BUCKET HOOK, WALL BRACE, HOSE THREAD OUTLET, MOP RACK & S.S. WALL GUARDS.	ACORN ENGINEERING MODEL TSH-36-SSC-KD63-KFC-KH36-KMH-KWG(2-36)
P-6	SINGLE-BOWL STAINLESS STEEL SINK	2"	2"	1/2"	1/2"	18 GA. S.S SELF-RIMMING COUNTER MOUNTED DROP-IN SINK, DUAL HANDLE GOOSE NECK FAUCET, C.P. CRUMB-CUP STRAINER TAILPIECES, P-TRAP W/ C.O., C.P. RIGID SUPPLIES W/ ANGLE STOPS	ELKAY MODEL # BCR15 20 GAUGE STAINLESS STEEL SINK, ELKAY MODEL # LK2477OR FAUCET.
DW	DISHWASHER CONNECTIONS	NA	NA	NA	1/2"	HOT WATER AND DRAIN CONNECTION FROM P-4 FIXTURE	PER MANUFACTURER
IM	REFRIGERATOR ICE MAKER CONNECTION BOX	NA	NA	NA	1/2"	RECESSED WALL BOX WITH QUARTER-TURN BRASS BALL VALVE, WATER HAMMER ARRESTOR AND THREADED SUPPLY CONNECTION	IPS WATER TITE 87 SERIES
EW	ACCESSIBLE (ADA) ELECTRIC WATER COOLER	2"	2"	1/2"	NA	DUAL HEIGHT BASINS WITH FLOOR CARRIER CHAIR, 120V B-GPH, LEAD-FREE, OFC-FREE, BOTTLE FILLING STATION.	ELKAY MODEL # EMABFTLWSSK DUAL HEIGHT WATER COOLER W/ BOTTLE FILLER.
AFH	ANTI-FREEZE WALL-HYDRANT	NA	NA	NA	3/4"	NON-FREEZE KEY OPERATED WALL HYDRANT WITH CHROME PLATED FACE, INTEGRAL VACUUM BREAKER, SELF-DRAINING HOSE-THREADED OUTLET	WATTS HY-420 SERIES
EW	ELECTRIC WATER HEATER	NA	NA	3/4"	3/4"	40 GALLON STORAGE, 4500 WATT, 208V 1PH NON-SIMULTANEOUS ELEMENTS, W/ T&P RELIEF, VACUUM BREAKER, EXPANSION TANK AND CATCH-PAN.	A.O. SMITH DEN 40

PLUMBING SPECIFICATIONS

GENERAL  
 ALL PLUMBING WORK SHALL BE IN STRICT ACCORDANCE WITH THE CURRENTLY ADOPTED EDITION OF THE NORTH CAROLINA PLUMBING CODE THE AND APPLICABLE REFERENCED STANDARDS.  
 THE WORK INCLUDES PROVIDING MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM. ALL MATERIALS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AND FREE FROM DEFECTS. ANY ITEM NOT SPECIFICALLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS, BUT THAT IS NORMALLY REQUIRED TO CONFORM TO THE INTENT, ARE TO BE CONSIDERED A PART OF THE CONTRACT. THE WORK MAY ALSO INCLUDE ROUGH-IN AND FINAL CONNECTIONS TO EQUIPMENT PROVIDED BY OTHERS. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND/OR ORDINANCES AND IS SUBJECT TO INSPECTION.  
 HOOK-UP CHARGES, PERMITS, LOCAL FEES AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM SHALL BE INCLUDED IN THE CONTRACTORS BID. THE CONTRACTOR SHALL COOPERATE FULLY WITH LOCAL COMPANIES WITH RESPECT TO THEIR SERVICES.  
 THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATIONS & TYPES OF FIXTURES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.  
 COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.  
 DEFINITIONS  
 FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION. INSTALL MEANS TO PLACE IN POSITION AND MAKE CONNECTIONS FOR SERVICE OR USE. PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.  
 FIRESTOPPING IS A MATERIAL OR COMBINATION OF MATERIALS USED TO RETAIN INTEGRITY OF FIRE-RATED CONSTRUCTION IN ORDER TO MAINTAIN AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FLAME, SMOKE, AND HOT GASES THROUGH PENETRATIONS IN FIRE RATED WALL AND FLOOR ASSEMBLIES.  
 PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT.  
 PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

PIPING SYSTEMS  
 GENERAL:  
 MATERIALS PENETRATING FIRE RATED CONSTRUCTION SHALL BE PROVIDED AS LISTED ON AN APPROVED AND TESTED FIRESTOP SYSTEM.  
 ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIELECTRIC UNION. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.  
 SEWER AND WASTE PIPING:  
 PROVIDE ALL DRAINS AND SEWERS WITHIN THE BUILDING WITH CONNECTION TO THE EXISTING DRAINAGE SYSTEMS ON-SITE. SANITARY DRAINAGE PIPING ABOVE FLOOR SHALL BE HUBLESS CAST-IRON PIPE FITTINGS AND CONNECTIONS OR DWV PVC PLASTIC SCHEDULE 40 PIPING WITH SOLVENT WELD FITTINGS. SANITARY DRAINAGE PIPING BELOW GRADE SHALL BE 4" DWV PVC PLASTIC SCHEDULE 40 PIPING WITH SOLVENT WELD FITTINGS OR DWV PVC PLASTIC SCHEDULE 40 SIG WITH SOLVENT WELD FITTINGS.  
 FOR PLASTIC SEWER PIPING, AN INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO AND OVER THE FULL LENGTH OF THE PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE AT THE CLEANOUT BETWEEN THE BUILDING DRAIN AND BUILDING SEWER. THE TRACER WIRE SIZE SHALL BE NOT LESS THAN 14 AWG AND THE INSULATION TYPE SHALL BE LISTED FOR DIRECT BURIAL.  
 BUILDING SEWER PIPING WITHIN 5 FT OF WATER PIPING BELOW GRADE SHALL BE CAST-IRON PIPE PER ASTM A 74, CSPI 301, AND ASTM A 888 OR SHALL BE SCHEDULE 40 DWV PVC CONFORMING TO ASTM F 1488.  
 PIPE FITTINGS SHALL BE APPROVED FOR INSTALLATION WITH THE PIPING MATERIAL INSTALLED AND SHALL CONFORM TO THE RESPECTIVE PIPE STANDARDS REFERENCED IN THE N.C. PLUMBING CODE.  
 ALL DRAINAGE PIPING SHALL BE UNIFORMLY PITCHED, 1/4" PER FOOT MINIMUM (2" AND SMALLER), 1/8" PER FOOT MINIMUM (3" AND LARGER) UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON THE DRAWINGS.  
 CLEANOUTS  
 PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE, CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW.

VENTS:  
 PROVIDE A COMPLETE SYSTEM OF STANDARD WEIGHT CAST IRON NO-HUB VENT RISERS WHERE THE CEILING SPACE IS USED AS A RETURN AIR PLENUM OR USE DWV PLASTIC WHERE THERE IS A DUCTED RETURN AIR SYSTEM. DO NOT USE DWV PLASTIC IN RETURN AIR PLENUM SPACES.  
 THE VENT SYSTEM SHALL BE CARRIED THROUGH THE ROOF WITH APPROPRIATE FLASHING.  
 CONDENSATE AND INDIRECT DRAIN PIPING:  
 USE TYPE M COPPER TUBING UP TO 1" ID, USE TYPE DWV TUBING AND FITTINGS FOR 1-1/4" AND LARGER SIZES.  
 WATER DISTRIBUTION PIPING:  
 LAYOUT WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE 1/2" MIN. TYPE L COPPER TUBING WITH WROUGHT COPPER FITTINGS AND SWEAT CONNECTIONS. PROVIDE WATER HAMMER ARRESTERS AT EACH FIXTURE OR GROUP OF FIXTURES AS REQUIRED. INSTALL CHROME PLATED BRASS ESCUTCHEON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES (INCLUDING CABINET INTERIORS). USE TIN-ANTIMONY SOLDER, 95/5 FOR ALL SWEAT FITTINGS OF COPPER PIPING.  
 TEST WATER SYSTEM AND PROVE TIGHT UNDER A WATER PRESSURE OF NOT LESS THAN 100 PSI OR FOR PIPING SYSTEMS OTHER THAN PLASTIC, BY AN AIR TEST OF NOT LESS THAN 100 PSI. WATER SHALL BE OBTAINED FROM A POTABLE SOURCE OF SUPPLY. WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP IS DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST UNTIL STANDARDS ARE ACHIEVED.  
 INSULATE ALL HOT WATER SUPPLY AND RETURN PIPING & CW PIPING OUTSIDE OF BUILDING INSULATION ENVELOPE (EXCEPT AT FIXTURE CONNECTIONS) WITH 1 INCH OF INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.28 BTU PER INCH/H\*F. INSULATE COLD WATER PIPING WITH 1/2 INCH OF INSULATION TO PREVENT CONDENSATION. INSULATE ANY EXPOSED CONDENSATE PIPING WITH WASTE TEMPERATURE BELOW 60 DEGREES F.  
 SHUTOFF VALVES WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE EQUAL TO JENKINS BALL VALVE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING, 400 LB. W.O.G., SOLDER END.  
 INSTALLATION  
 FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLING, CONNECTING, AND ADJUSTING ALL EQUIPMENT AND PLUMBING SYSTEM COMPONENTS.  
 THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS RAPIDLY AS CONSTRUCTION WILL PERMIT. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL, FOR SANITARY JOINT, AND OMIT ESCUTCHEONS.  
 ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES, ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILINGS, ACCESS PANELS ARE NOT REQUIRED.  
 WATER HEATERS OR HOT WATER STORAGE TANKS INSTALLED IN REMOTE LOCATIONS SUCH AS SUSPENDED CEILING SPACES OR ATTICS SHALL REST IN A GALVANIZED STEEL OR OTHER METAL PAN OF EQUAL CORROSION RESISTANCE HAVING A THICKNESS AT LEAST EQUAL TO 0.0278 INCHES (0.7 MM) GALVANIZED SHEET STEEL. ELECTRIC WATER HEATERS MAY REST IN HIGH IMPACT PLASTIC PAN OF AT LEAST 1/16 INCH (1.6 MM) THICKNESS. THE PAN SHALL BE NOT LESS THAN 1.5 INCHES DEEP AND SHALL BE OF SUFFICIENT SIZE AND SHAPE TO RECEIVE ALL DRIPPINGS OR CONDENSATE FROM THE TANK OR WATER HEATER. THE PAN SHALL BE DRAINED BY AN INDIRECT WASTE PIPE HAVING A MINIMUM DIAMETER OF 1 INCH (19 MM). THE PAN DRAIN SHALL EXTEND FULLY AND TERMINATE OVER A SUITABLY LOCATED INDIRECT WASTE RECEPTOR OR FLOOR DRAIN OR EXTEND TO THE EXTERIOR OF THE BUILDING AND TERMINATE NOT LESS THAN 6" (152 MM) AND NOT MORE THAN 24 INCHES (610 MM) ABOVE THE ADJACENT GROUND SURFACE.  
 ROOF PENETRATIONS SHALL COMPLY WITH "SMACNA" AND "NRCA" STANDARDS, AND WITH THE REQUIREMENTS OF THE ROOFING WARRANTY, IF APPLICABLE. DO NOT PERFORM ROOFING PENETRATIONS IN A MANNER WHICH WOULD VOID OR OTHERWISE LIMIT THE ROOFING WARRANTY.

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OF 3

PLUMBING FIXTURE SCHEDULE, SYMBOLS & NOTES

NO SCALE