

PLUMBING SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED HERE ARE USED IN THE DRAWINGS AND MAY NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE DRAWINGS.

PLUMBING ABBREVIATIONS

AB ABOVE	ACC ACCESS	ADJ ADJUSTABLE	AFF ABOVE FINISHED FLOOR	AFG ABOVE FINISHED GRADE	ALT ALTERNATE	AP ACCESS PANEL	APPROX APPROXIMATELY	ARCH ARCHITECTURAL	ASSY ASSEMBLY	AVG AVERAGE	BFF BELOW FINISHED FLOOR	BLDG BUILDING	BOT BOTTOM	BOP BOTTOM OF PIPE	BT BATHTUB	BTU BRITISH THERMAL UNITS	BTUH BRITISH THERMAL UNITS PER HOUR	BTW BETWEEN	CAP CEILING ACCESS PANEL	CFCI CONTRACTOR FURNISHED CONTRACTOR INSTALLED	CFH CUBIC FEET PER HOUR	CFM CUBIC FEET PER MINUTE	CL CENTERLINE	CLG CEILING	CMU CONCRETE MASONRY UNIT	CO CLEANOUT	COND CONDUCTOR	CONT CONTRACTOR	COP COEFFICIENT OF PERFORMANCE	CTR CENTER	CU COPPER	CW COLD WATER	CWFU COLD WATER FIXTURE UNITS	DD DRAIN DECK	DEG DEGREES	DET DETAIL	DFU DRAINAGE FIXTURE UNITS	DIA DIAMETER	DIM DIMENSION	DN DOWN	DS DOWNSPOUT	DT DRAIN TILE	DWG DRAWING	E EXISTING	EA EACH	EC ELECTRICAL CONTRACTOR	EEW EMERGENCY EYEWASH	EFF EFFICIENCY	EJ EXPANSION JOINT	ELEC ELECTRICAL	ELEV ELEVATION	EM EMERGENCY	EQUIP EQUIPMENT	ES EMERGENCY SHOWER	ET EXPANSION TANK	ETR EXISTING TO REMAIN	EWC ELECTRIC WATER COOLER	EWV ELECTRIC WATER HEATER	EWV ENTERING WATER TEMPERATURE	EXH EXHAUST	EXP EXPANSION	EXST EXISTING	EXT EXTERIOR	F FUTURE	FCO FLOOR CLEANOUT	FD FLOOR DRAIN	FFE FINISHED FLOOR ELEVATION	FLA FULL LOAD AMPS	FLR FLOOR	FM FACTORY MUTUAL	FP FIREPROOF	FPM FEET PER MINUTE	FPS FEET PER SECOND	F&T FLOAT AND THERMOSTATIC	FT FEET	FTG FOOTING	FU FIXTURE UNITS	GA GAUGE	GAL GALLON	GALV GALVANIZED	GC GENERAL CONTRACTOR	GPM GALLONS PER MINUTE	GPH GALLONS PER HOUR	HB HOSE BIBB	HD HUB DRAIN	HP HORSE POWER	H.P. HIGH POINT	HVAC HEATING, VENTILATING & AIR CONDITIONING	HW HOT WATER	HWFU HOT WATER FIXTURE UNITS	HWR HOT WATER RETURN	ID INSIDE DIAMETER	IE INVERT ELEVATION	IN INCHES	KO KNOCK-OUT	L LAVATORY	LBS POUNDS	LBHR POUNDS PER HOUR	L.F. LINEAR FEET	LP LOW POINT	LTG LIGHTING	LWT LEAVING WATER TEMPERATURE	MAX MAXIMUM	MOP BASIN	MBH THOUSANDS OF BTU PER HOUR	MC MECHANICAL CONTRACTOR	MCA MINIMUM CIRCUIT AMPACITY	MCC MOTOR CONTROL CENTER	MEP MECHANICAL, ELECTRICAL AND PIPING	MER MECHANICAL EQUIPMENT ROOM	MEZZ MEZZANINE	MFR MANUFACTURER	MNL MANHOLE	MISC MISCELLANEOUS	MTD MOUNTED	MTG MOUNTING	NA NOT APPLICABLE	NIC NOT IN CONTRACT	NO NUMBER	NPS NOMINAL PIPE SIZE	NPSH NET POSITIVE SUCTION HEAD	NPT NATIONAL PIPE THREAD	NR NEAR	NTS NOT TO SCALE	OC ON CENTER	OD OUTSIDE DIAMETER	OFCI OWNER FURNISHED CONTRACTOR INSTALLED	OFCO OWNER FURNISHED, OWNER INSTALLED	OLP OVERLOAD PROTECTION	OV OUTLET VELOCITY	P PUMP	PC PLUMBING CONTRACTOR	PCF POUNDS PER CUBIC FOOT	PD PRESSURE DROP	PH PHASE	PIV POST INDICATOR VALVE	PLBG PLUMBING	POC POINT OF CONNECTION	PP POLYPROPYLENE	PPH POUNDS PER HOUR	PRV PRESSURE RELIEF VALVE	PSF POUNDS PER SQUARE FOOT	PSI POUNDS PER SQUARE INCH	PSIA POUNDS PER SQUARE INCH ABSOLUTE	PSIG POUNDS PER SQUARE INCH GAUGE	PVC POLYVINYL CHLORIDE	RAD RADIUS	RCR REINFORCED CONCRETE PIPE	RD ROOF DRAIN	REC RECESSED	RECT RECTANGLE	REQD REQUIRED	RF ROOF	RI ROUGH-IN	RPM REVOLUTIONS PER MINUTE	RPZ REDUCED PRESSURE ZONE VALVE	RV RELIEF VALVE	S SLOPE	SCH SCHEDULE	SDR STANDARD DIMENSION RATIO	SH SHOWER	SHT SHEET	SOG SLAB ON GRADE	SPEC SPECIFICATION	SO SQUARE	SS SERVICE SINK	SSS STAINLESS STEEL	STD STANDARD	STRU STRUCTURAL	T&P TEMPERATURE AND PRESSURE TO BE REMOVED	TBR TRENCH DRAIN	TD TOTAL DRAIN FIXTURE UNITS	TEMP TEMPERATURE	TOB TOP OF BEAM	TOD TOP OF DECK/DECK	TOJ TOP OF JOIST	TOP TOP OF PIPE	TOS TOP OF SLAB	T STAT THERMOSTAT	TWFU TOTAL WATER FIXTURE UNITS TYPICAL	UNO UNLESS OTHERWISE NOTED	V VENT	VEL VELOCITY	VIB VALVE IN BOX	VOL VOLUME	W WIDTH	WI WITH	W/O WITHOUT	WC WATER COLUMN	WSFU WATER SUPPLY FIXTURE UNITS	WG WATER GAUGE
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PIPING SYSTEMS LABELS

WATER PIPING SYSTEMS:		GAS AND AIR PIPING SYSTEMS:	
— SCW —	COLD SOFT WATER	— A —	COMPRESSED AIR
— — —	COLD WATER	— H2 —	HYDROGEN
— F —	FIRE PROTECTION	— G —	NATURAL GAS
— — —	HOT WATER	— N2 —	NITROGEN
— — — — —	HOT WATER RETURN	— VAC —	VACUUM (AIR)
— NPW —	NON-POTABLE WATER		
— TW —	TEMPERED WATER		
— RO —	REVERSE OSMOSIS WATER		

WASTE AND VENT SYSTEMS:		SITE PIPING SYSTEMS:	
— CD —	CONDENSATE DRAIN	— F —	FIRE MAIN
— CWV —	CLEARWATER VENT	— FM —	FORCE MAIN
— CWW —	CLEARWATER WASTE	— SAN —	SANITARY SEWER
— FM —	FORCE MAIN	— ST —	STORM SEWER
— IW —	INDIRECT WASTE	— W —	WATER LINE
— OD —	OVERFLOW DRAIN LINE		
— ST —	STORM		
— SSD —	SUBSOIL DRAIN LINE		
— — —	UNDERFLOOR FOR WASTE OR SOIL, SUBSOIL, STORM & FORCE MAIN		
— — — SV —	VENT		
— SAN —	WASTE OR SOIL LINE		

PIPE FITTINGS

	FLANGE		ELBOW DOWN
	UNION		ELBOW UP
	ANCHOR		TEE DOWN
	PIPE GUIDE		TEE UP
	ECCENTRIC REDUCER		PIPE CAP
	CONCENTRIC REDUCER		VALVE IN VERTICAL
	TEE BRANCH		DOUBLE WYE
	LINE CONTINUATION BREAK		WYE
	PLUMBING FIXTURE STOPS		WYE WITH VENT UP
	PIPELINE STRAINER		

DRAINS AND CLEANOUTS

	FLOOR DRAIN		FIXTURE WASTE TRAP
	FLOOR SINK		CLEANOUT
	HUB DRAIN		FLOOR CLEANOUT
	FLOOR SINK		GROUND CLEANOUT
			DOUBLE CLEANOUT

PIPING VALVES AND SPECIALTIES

	ANGLE VALVE		AIR VENT, AUTOMATIC
	BALANCING VALVE		AIR VENT, MANUAL
	BALL VALVE		BACKFLOW PREVENTER
	BUTTERFLY VALVE		CONSTANT FLOW REGULATOR
	CHECK VALVE		DEMOLITION OF PIPING, DEVICE, ETC.
	DIAPHRAGM VALVE		DIRECTION OF FLOW
	DRAIN VALVE		DIRECTION OF PITCH RISE (R) OR DROP (D)
	FLOAT OPERATED VALVE		DRAIN PLUG
	GAS SHUTOFF VALVE		EXPANSION JOINT
	GATE VALVE		FLEXIBLE CONNECTION
	GLOBE VALVE		FLOW SWITCH
	PLUG VALVE		FLOW SENSING DEVICE
	POST INDICATOR VALVE		GAS REGULATOR
	PRESSURE REDUCING VALVE		GAS OUTLET
	PRESSURE RELIEF VALVE		HOSE BIBB
	QUICK OPENING VALVE		PET'S PLUG
	SHUTOFF VALVE		PRESSURE GAUGE
	SOLENOID VALVE		PRESSURE SWITCH
	TRIPLE DUTY VALVE		STEAM TRAP
	2-WAY CONTROL VALVE (VALVE BODY AS SPECIFIED)		THERMOMETER
	3-WAY MIXING VALVE		WALL HYDRANT
	4-WAY VALVE WITH ARROW INDICATING FAIL POSITION		WATER HAMMER ARRESTOR
	VALVE IN BOX		

PLUMBING MATERIALS, NOTES AND SYMBOLS

COLD WATER PIPING (UNDERGROUND)	COPPER TYPE "K"
COLD WATER PIPING (ABOVE GROUND)	COPPER TYPE "L"
HOT WATER PIPING	COPPER TYPE "L"
SANITARY SEWER (UNDER GROUND)	SCHEDULE 40 DWV PVC
SANITARY SEWER (ABOVE GROUND - PLENUM RETURN)	HUBLESS CAST IRON
SANITARY SEWER (ABOVE GROUND - DUCTED RETURN)	SCHEDULE 40 DWV PVC
SANITARY VENT (PLENUM RETURN)	HUBLESS CAST IRON
SANITARY VENT (DUCTED RETURN)	SCHEDULE 40 DWV PVC
STORM PIPING	SCHEDULE 40 DWV PVC
NATURAL GAS PIPING (UNDERGROUND)	THERMOPLASTIC POLYETHYLENE
NATURAL GAS PIPING (ABOVE GROUND)	GAS PRESSURE PIPE BLACK STEEL SCHEDULE 40

PLUMBING FIXTURES MUST MEET WATER SAVINGS STANDARDS AS REQUIRED BY ANSI, CITY CODE AND SPECIFICATIONS.

WATER CLOSET	2" VENT, 4" WASTE, 1-1/4" COLD WATER
URINAL	2" VENT, 3" WASTE, 1-1/4" COLD WATER
LAVATORY	2" VENT, 2" WASTE, 3/4" HOT & COLD WATER
SINK	2" VENT, 2" WASTE, 3/4" HOT & COLD WATER
KITCHEN SINK	2" VENT, 2" WASTE, 3/4" HOT & COLD WATER
DISH WASHER	WASTE TO K SINK, 3/4" HOT & COLD WATER
FLOOR DRAIN	2" VENT, 3" WASTE
MOP SINK	2" VENT, 3" WASTE
MINIMUM PIPE SIZE TO TAIL PIECE IS 3/4".	

GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER AND SHALL COMPLY WITH ALL ADOPTED LOCAL, STATE, AND NATIONAL CODES.
- DO NOT SCALE THE DRAWINGS.
- FIELD VERIFY EXACT LOCATION OF ALL CONNECTION POINTS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL INSPECT SITE THOROUGHLY TO FAMILIARIZE THEMSELVES WITH THE AREA OF WORK. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND ACTUAL CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTIONS PRIOR TO BID PRICING. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF EXISTING OR NEW CONDITIONS.
- PROVIDE BALL VALVES ON ALL BRANCH LINES FOR BUILDING ISOLATION WHETHER SHOWN OR NOT.
- OFFSET ALL PIPING AS REQUIRED TO AVOID STRUCTURAL MEMBERS, CANTS, FLASHING, MECHANICAL OR ELECTRICAL EQUIPMENT.
- CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF EXISTING WASTE, DIRECTION OF FLOW, DEPTH, ADEQUATE SLOPE AND INTEGRITY OF LINE PRIOR TO INSTALLATION.
- MAINTAIN A MINIMUM CLEARANCE OF 25 FEET BETWEEN ALL VENT PENETRATIONS AND AIR INTAKES.
- ALL WATER PIPING (ABOVE CEILING, IN WALLS AND BELOW SLAB, ETC.) SHALL BE INSULATED.

FIRE SPRINKLER GENERAL NOTES

- BUILDING IS PROTECTED BY AUTOMATIC FIRE SPRINKLER SYSTEM. CONTRACTOR SHALL ADD OR RELOCATED SPRINKLER HEADS RENOVATED AREA AS REQUIRED TO PROVIDE FULL COVERAGE PER NFPA CHAPTER 13.

PRE-CONSTRUCTION CHECK

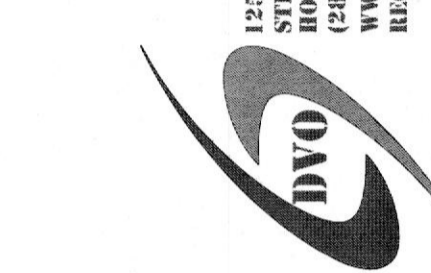
- THE PLUMBING CONTRACTOR SHALL PERFORM THE FOLLOWING PRE-CONSTRUCTION CHECK, AFTER THE AWARD OF CONTRACT, AND BEFORE BEGINNING CONSTRUCTION:
- TEST ALL EXISTING FIXTURES, EQUIPMENT, AND WATER HEATERS TO VERIFY ALL ITEMS ARE FULLY OPERATIONAL AND REQUIRE NO REPAIRS.
- THE CONTRACTOR SHALL NOTIFY THE BUILDING OWNER IN WRITING OF ANY DEFICIENCIES FOUND AND SHALL OBTAIN WRITTEN INSTRUCTIONS FROM THE BUILDING OWNER PRIOR TO BEGINNING CONSTRUCTION REGARDING ANY ACTION TO BE TAKEN. ITEMS NOT ADDRESSED IN THE PRE-CONSTRUCTION CHECK SHALL BE CORRECTED BY THE CONTRACTOR PRIOR TO COMPLETION OF CONSTRUCTION AT NO ADDITIONAL COST TO OWNER.

DATE: 03/26/2018
JOB NO: 11247
DRAWN: JAH
CHECKED: WD



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REVISIONS	
ISSUE FOR CONSTRUCTION	3/26/18
W-ISSUE	DATE
C-ISSUE	DATE
D-ISSUE	DATE
E-ISSUE	DATE
F-ISSUE	DATE

PLUMBING SYMBOLS & ABBREVIATIONS

SHEET NUMBER

P0.00