

REVISIONS

REV	DESCRIPTION	DATE	APPROVED

CONSTRUCTION DOCUMENTS

PIPING SYMBOLS

SYMBOL	DESCRIPTION
---	DOMESTIC COLD WATER (POTABLE)
---	DOMESTIC HOT WATER
---	DOMESTIC HOT WATER RECIRCULATION
LA	LABORATORY AIR
LW	LABORATORY WASTE
G	NATURAL GAS PIPING
----	SANITARY PIPING BELOW GRADE

COMPONENTS AND SPECIALTIES

SYMBOL	DESCRIPTION
—○+HB	COLD WATER INTERIOR HOSE BIBB
○	FLOOR DRAIN

PLUMBING ABBREVIATIONS

NOTE: THIS IS A STANDARD ABBREVIATION LIST. SOME ABBREVIATIONS MAY NOT APPEAR ON THE ACCOMPANYING DRAWINGS.

A	COMPRESSED AIR	L	LONG LENGTH
AAV	AUTOMATIC AIR VENT	LA	LABORATORY AIR
ADV	AUTOMATIC CONTROL VALVE	LAT	LEAVING AIR TEMPERATURE
AD	ACCESS DOOR, AREA DRAIN	LBS	POUNDS
AF	ANTIFREEZE	LBS/HR	POUNDS PER HOUR
AFF	ABOVE FINISHED FLOOR	LN	LIQUID NITROGEN
ARG	ARGON GAS	LP	LIQUID PROPANE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS	LPG	LIQUID PETROLEUM GAS
ATC	AUTOMATIC TEMPERATURE CONTROL	LPR	LOW PRESSURE STEAM RETURN
BAS	BUILDING AUTOMATION SYSTEM	LPS	LOW PRESSURE STEAM SUPPLY
BBD	BOILER BLOWDOWN	LV	LABORATORY VENT, LABORATORY VACUUM
BCHWR	BEARING COOLING WATER RETURN	LW	LABORATORY WASTE
BCHWS	BEARING COOLING WATER SUPPLY	LWT	LEAVING WATER TEMPERATURE
BDD	BACKDRAFT DAMPER	MA	MEDICAL AIR
BFP	BACKFLOW PREVENTER	MAV	MANUAL AIR VENT
BHP	BRAKE HORSEPOWER	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
BMS	BUILDING MANAGEMENT SYSTEM	MCC	MOTOR CONTROL CENTER
BO	BLOW OFF	MO	MOTOR OIL PIPING
BTU	BRITISH THERMAL UNIT	MOD	MOTOR OPERATED DAMPER
BTUH	BRITISH THERMAL UNIT PER HOUR	MPR	MEDIUM PRESSURE STEAM RETURN
°C	DEGREE(S) CELSIUS	MPS	MEDIUM PRESSURE STEAM SUPPLY
CA	CONTROL AIR	MV	MEDICAL VACUUM
CSB	CONTINUOUS BLOWDOWN	N	NITROGEN
CC	CAMPUS CONDENSATE	NA	NOT APPLICABLE
CCMS	CENTRAL CONTROL AND MONITORING SYSTEM	NC	NOISE CRITERIA, NORMALLY CLOSED
CD	CONDENSATE DRAIN	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CF	CHEMICAL FEED	NO	NORMALLY OPEN, NITROUS OXIDE
CFM	CUBIC FEET PER MINUTE	NPSH	NET POSITIVE SUCTION HEAD
CHR	CHILLED WATER RETURN	O	OXYGEN
CHS	CHILLED WATER SUPPLY	OA	OUTSIDE AIR
CO	CLEANOUT	OD	OVERFLOW DRAIN
CO2	CARBON DIOXIDE	OED	OPEN ENDED DUCT
CW	COLD WATER, CITY WATER	OS&Y	OUTSIDE STEM AND YOKE
CWR	CONDENSER WATER RETURN	P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
CWS	CONDENSER WATER SUPPLY	PA	PLANT AIR
D	DEEP, DRAIN WATER	PC	PUMPED CONDENSATE
DB	DECIBEL, DRY BULB	PCR	PUMPED CONDENSATE RECIRCULATION
DDC	DIRECT DIGITAL CONTROL	PCHR	PRIMARY CHILLED WATER RETURN
DHR	DISTRIBUTION HEATING WATER RETURN	PCHS	PRIMARY CHILLED WATER SUPPLY
DHS	DISTRIBUTION HEATING WATER SUPPLY	PCWR	PROCESS COOLING WATER RETURN
DHSR	DIVISION OF HEALTH SERVICE REGULATION	PCWS	PROCESS COOLING WATER SUPPLY
DIR	DEIONIZED WATER RETURN	PD	PRESSURE DROP, PUMP DISCHARGE
DIS	DEIONIZED WATER SUPPLY	PGR	PROCESS GLYCOL WATER RETURN
DL	DOOR LOUVER	PH	PHASE
DN	DOWN	PHR	PRIMARY HEATING RETURN
DSP	DRY SPRINKLER PIPE	PHS	PRIMARY HEATING SUPPLY
DTR	DUAL TEMPERATURE RETURN	PV	POST INDICATING VALVE
DTS	DUAL TEMPERATURE SUPPLY	PPH	POUNDS PER HOUR
DW	DISTILLED WATER	PRV	PRESSURE REDUCING VALVE, PRESSURE REGULATING VALVE
EA	EXHAUST AIR	PSI	POUNDS PER SQUARE INCH
EAT	ENTERING AIR TEMPERATURE	PSIG	POUNDS PER SQUARE INCH GAUGE
EJ	EXPANSION JOINT	RA	RETURN AIR, RELIEF AIR
EMS	ENERGY MANAGEMENT SYSTEM	RD	REFRIGERANT DISCHARGE
ESP	EXTERNAL STATIC PRESSURE	RH	RELATIVE HUMIDITY
ETC	ETCETERA	RHR	REHEAT WATER RETURN
EVAC	GAS EVACUATION	RHS	REHEAT WATER SUPPLY
EWT	ENTERING WATER TEMPERATURE	RL	REFRIGERANT LIQUID
EX	EXISTING	ROR	REVERSE OSMOSIS WATER RETURN
°F	DEGREE(S) FAHRENHEIT	ROS	REVERSE OSMOSIS WATER SUPPLY
F	FIRE LINE	RP	REVOLUTIONS PER MINUTE
FC	FLEXIBLE CONNECTION	RS	REFRIGERANT SUCTION
FD	FIRE DAMPER, FOUNDATION DRAIN	RV	RELIEF VENT, REFRIGERANT VENT
FDV	FIRE DEPARTMENT VALVE	RX	REMOVE EXISTING
FF	FINISHED FLOOR	SA	SUPPLY AIR
FFE	FINISHED FLOOR ELEVATION	SA	SANITARY, SOIL WASTE
FIN/FT	FINS PER FOOT	SCHR	SECONDARY CHILLED WATER RETURN
FIN/INCH	FINS PER INCH	SCHS	SECONDARY CHILLED WATER SUPPLY
FM	FLOWMETER	SD	STORM DRAIN, SMOKE DETECTOR
FMF	FLOWMETER FITTING	SF	SQUARE FOOT
FOF	FUEL OIL FILL	SHR	SECONDARY HEATING WATER RETURN
FOO	FUEL OIL OVERFLOW	SHS	SECONDARY HEATING WATER SUPPLY
FOR	FUEL OIL RETURN	SL	SOUND LINING
FOS	FUEL OIL SUPPLY	SP	STATIC PRESSURE
FOT	FUEL OIL TRANSFER	SPR	SPRINKLER LINE
FOV	FUEL OIL VENT	SS	STAINLESS STEEL
FPM	FEET PER MINUTE	SO FT	SQUARE FOOT
FPS	FEET PER SECOND	SW	SOFT WATER
FS	FLOW SWITCH	ΔT	TEMPERATURE DIFFERENCE
FT	FOOT, FEET	TS	TAMPER SWITCH
FWR	FEED WATER RETURN	TSP	TOTAL STATIC PRESSURE
FWS	FEED WATER SUPPLY	TWR	TEMPERED WATER RETURN
G	NATURAL GAS	TWS	TEMPERED WATER SUPPLY
GHR	GLYCOL HEATING RETURN	TW	TREATED WATER
GHS	GLYCOL HEATING SUPPLY	TYP	TYPICAL
GPH	GALLONS PER HOUR	UCD	UNDERCUT DOOR
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORIES
GR	AUTOMOTIVE LUBRICATION PIPING	V	VACUUM, VOLTS
H	HIGH	VD	VOLUME DAMPER
HB	HOSE BIBB	VFD	VARIABLE FREQUENCY DRIVE
HED	HOSE END DRAIN VALVE	VPD	VACUUM PUMP DISCHARGE
HP	HORSEPOWER	VSD	VARIABLE SPEED DRIVE
HPR	HIGH PRESSURE STEAM RETURN	VTR	VENT THROUGH ROOF
HPS	HIGH PRESSURE STEAM SUPPLY	W	WATTS, WIDE
HR	HEATING WATER RETURN	WB	WET BULB
HRR	HEAT RECOVERY RETURN	WC	WATER COLUMN
HRS	HEAT RECOVERY SUPPLY	WG	WATER GAUGE
HS	HEATING WATER SUPPLY	WH	WALL HYDRANT
HT	HEIGHT	WFW	WELDED WIRE FABRIC
HTHR	HIGH TEMPERATURE HEATING WATER RETURN	WWM	WELDED WIRE MESH
HTHS	HIGH TEMPERATURE HEATING WATER SUPPLY		
HW	HOT WATER		
HWR	HOT WATER RECIRCULATION		
HZ	HERTZ		
IA	INDUSTRIAL AIR		
ICW	INDUSTRIAL COLD WATER		
IHW	INDUSTRIAL HOT WATER		
IN	INDUSTRIAL HOT WATER RECIRCULATION		
IN	INCH, INCHES		
INV EL	INVERT ELEVATION		
KW	KILOWATTS		

GENERAL SYMBOLS

SYMBOL	DESCRIPTION	DESIGNATION	DESCRIPTION
—○—	PIPE DROP	▲	NORTH ARROW
—○—	PIPE RISE	●	POINT OF CONNECTION TO EXISTING
—○—	PIPE CAP	○	POINT OF DISCONNECTION
—○—	BRANCH TAKE OFF	○	
—○—	PIPE DROP TEE	○	
—○—	PIPE RISE TEE	○	
—○—	SHUTOFF VALVE	○	

DESIGNATION	DESCRIPTION	SYMBOL	DESCRIPTION
AND		∩	
AT		∩	
°	DEGREE(S) FAHRENHEIT	°	
°C	DEGREE(S) CELSIUS	°	
Ø	DIAMETER, PHASE	Ø	
\$/	DIVIDE BY, PER	\$/	
\$	DOLLAR	\$	
=	EQUALS, EQUAL TO	=	
'	FEET, FOOT	'	
>	GREATER THAN	>	
>=	GREATER THAN OR EQUAL TO	>=	
INCH(ES)		INCH(ES)	
<	LESS THAN	<	
<=	LESS THAN OR EQUAL TO	<=	
-	MINUS	-	
x	MULTIPLY BY, BY	x	
#	NUMBER, POUND	#	
%	PERCENT	%	
+	PLUS	+	
±	PLUS OR MINUS	±	

DESIGNATION	DESCRIPTION
— — — —	DEMOLITION WORK
—·—·—·—·—·	EXISTING WORK
—·—·—·—·—·	FUTURE WORK
—·—·—·—·—·	NEW WORK
②	REVISION NUMBER 2
②	DRAWING NOTE NUMBER 2
ⓧ	ENLARGED PLAN CALLOUT

EQUIPMENT DESIGNATIONS

DESIGNATION	DESCRIPTION
FD-X	FLOOR DRAIN DESIGNATION
P-X	PLUMBING FIXTURE DESIGNATION

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PLUMBING SYMBOLS, LEGEND & ABBREVIATIONS

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