

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
ABV	ABOVE	IN	INCHES	THERM	THERMOMETER
AC OR A/C	AIR CONDITIONING, AT CEILING	Kw	KILOWATTS	THRU	THROUGH
ACH	AIR CHANGES PER HOUR	(L)	LINED	TI	TEMPERATURE INDICATOR
AFB	ABOVE FINISHED FLOOR	LAT	LEAVING AIR TEMPERATURE	TP	TOTAL PRESSURE
AFMS	AIR FLOW MEASUREMENT STATION	LBS	POUNDS	TSP	TOTAL STATIC PRESSURE
AH	AIR HANDLER	LRA	LOCKED ROTOR AMPS	TSTAT	THERMOSTAT
AMB	AMBIENT	LVG	LEAVING	TYP	TYPICAL
AMPS	AMPERES	MA	MIXED AIR	U/C	UNDERCUT
AS	AIR SEPARATOR	MAU	MAKE UP AIR UNIT	UNO	UNLESS NOTED OTHERWISE
AUX	AUXILIARY	MAX	MAXIMUM	UOS	UNLESS OTHERWISE SPECIFIED
BDD	BACKDRAFT DAMPER	MBH	ONE THOUSAND BTU'S PER HOUR	V	VOLTS
BC	BELOW GRADE	MCA	MINIMUM CIRCUIT AMPACITY	VAV	VARIABLE AIR VOLUME
BHP	BRAKE HORSEPOWER	MD	MOTORIZED DAMPER	VERT	VERTICAL
BOD	BOTTOM OF DUCT	MECH	MECHANICAL	VFD	VARIABLE FREQUENCY DRIVE
BOP	BOTTOM OF PIPE	MEZZ	MEZZANINE	W	WATTS
BTU	BRITISH THERMAL UNIT	MFS	MAXIMUM FUSE SIZE	W	WITH
BTUH	BRITISH THERMAL UNIT PER HOUR	MIN	MINIMUM, MINUTE	WB	WET BULB TEMPERATURE
CAP	CAPACITY	MOD	MODULATING	WC	WATER COLUMN
CAV	CONSTANT AIR VOLUME	MOP	MAXIMUM OVERCURRENT PROTECTION	WG	WATER GAUGE
CD	CONDENSATE DRAIN (A/C)	MUA	MAKE UP AIR	W/O	WITHOUT
CFM	CUBIC FEET PER MINUTE	MVD	MANUAL VOLUME DAMPER	WPDS	WEATHERPROOF DISCONNECT SWITCH
CHW	CHILLED WATER	NC	NORMALLY CLOSED, NOISE CRITERIA	WISA	WIRE SIZING AMPS
CLO	CEILING	NIC	NOT IN CONTRACT	WT	WEIGHT
CONN	CONNECTION	NO	NORMALLY OPEN, NUMBER		
CONT	CONTINUATION	NTS	NOT TO SCALE		
COP	COEFFICIENT OF PERFORMANCE	OA	OUTSIDE AIR		
CV	CONSTANT VOLUME	OBD	OPPOSED BLADE DAMPER		
DB	DRY BULB TEMPERATURE	OC	ON CENTER		
DDC	DIRECT DIGITAL CONTROL	OD	OUTSIDE DIAMETER or DIMENSION		
DIA. (Ø)	DIAMETER	ODP	OPEN DRIP PROOF		
DIST	DISTRIBUTION	OPD	OVERCURRENT PROTECTIVE DEVICE		
DL	DOOR LOUVER	OSA	OUTSIDE AIR		
DN	DOWN	ΔP	PRESSURE DIFFERENTIAL		
DP	DIFFERENTIAL PRESSURE	P	PUMP		
DS	DISCONNECT SWITCH	PCHW	PRIMARY CHILLED WATER		
DWG	DRAWING	PCR	PUMPED CONDENSATE RETURN		
(E) or E	EXISTING	PCV	PRESSURE CONTROL VALVE		
EA	EXHAUST AIR	PD	PRESSURE DROP		
EAT	ENTERING AIR TEMPERATURE	PG	PRESSURE GAGE		
EER	ENERGY EFFICIENCY RATIO	PH	PHASE		
EFF	EFFICIENCY	POC	POINT OF CONNECTION		
EG	EXHAUST GRILLE	PRESS	PRESSURE		
ELEV	ELEVATION	PRS	PRESSURE REDUCING STATION		
ENT	ENTERING	PRV	PRESSURE REDUCING VALVE		
EQUIP	EQUIPMENT	PSI	POUNDS PER SQUARE INCH		
ESP	EXTERNAL STATIC PRESSURE	PSIA	POUNDS PER SQUARE INCH ABSOLUTE		
ET	EXPANSION TANK	PSIG	POUNDS PER SQUARE INCH GAGE		
EVAP	EVAPORATIVE	PSV	PRESSURE RELIEF (SAFETY) VALVE		
EXT	EXTERNAL	QTY	QUANTITY		
°F	DEGREE FAHRENHEIT	(R)	RELOCATED		
(F) or F	FUTURE	RA	RETURN AIR		
FC	FAN COIL	RAU	RECIRCULATION AIR UNIT		
FD	FIRE DAMPER	REG	REGISTER		
FE	FUME EXHAUST	REQD	REQUIRED		
FEX	FUME EXHAUST VALVE (VENTURI)	RG	RETURN GRILLE		
FF	FINISHED FLOOR	RH	RELATIVE HUMIDITY		
FIN	FINISH	RHC	REHEAT COIL		
FLA	FULL LOAD AMPS	RL	REFRIGERANT LIQUID		
FLR	FLOOR	RLA	RUNNING LOAD AMPS		
FPM	FEET PER MINUTE	RM	ROOM		
FS	FLOW SWITCH	RPM	REVOLUTIONS PER MINUTE		
FSD	FIRE SMOKE DAMPER	RS	REFRIGERANT SUCTION		
FT	FEET	RV	RELIEF VENT		
GAL	GALLON(S)	SA	SOUND ATTENUATOR, SUPPLY AIR		
GEN	GENERATOR	SAV	SUPPLY AIR VALVE (VENTURI)		
GEX	GENERAL EXHAUST VALVE (VENTURI)	SD	SMOKE DAMPER, SMOKE DETECTOR		
GPM	GALLONS PER MINUTE	SEER	SEASONAL ENERGY EFFICIENCY RATIO		
HD	HEAD	SENS	SENSIBLE		
HHW	HEATING HOT WATER	SF	SQUARE FEET		
HORIZ	HORIZONTAL	SHT	SHEET		
HP	HORSEPOWER	SI	INTERNATIONAL SYSTEM OF UNITS		
HR	HOUR	SP	STATIC PRESSURE		
HSTAT	HUMIDISTAT	SS	STAINLESS STEEL		
HTG	HEATING	ΔT	TEMPERATURE DIFFERENTIAL		
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING	TDH	TOTAL DYNAMIC HEAD		
HX	HEAT EXCHANGER	TEMP	TEMPERATURE, TEMPORARY		
Hz	HERTZ	TG	TRANSFER GRILLE		

SOME ABBREVIATIONS MAY NOT BE USED IN THE DOCUMENTS THAT FOLLOW.

MECHANICAL LEGEND AND ABBREVIATIONS		
SYMBOL	ABBREVIATION	DESCRIPTION
		SQUARE ELBOW WITH TURNING VANES
		RADIUS ELBOW
	MVD	MANUAL VOLUME DAMPER
	MOD	MOTOR OPERATED DAMPER
	BDD	BACKDRAFT DAMPER
	FD	FIRE DAMPER
	SD	DUCT MOUNTED SMOKE DETECTOR
	FSD	COMBINATION FIRE/SMOKE DAMPER
	FLEX	FLEXIBLE CONNECTION (DUCTWORK)
	FLEX	FLEXIBLE CONNECTION OR SEISMIC JOINT
		LINED DUCTWORK (OR PLENUM)
		DUCT RISE IN DIRECTION OF FLOW
		DUCT DROP IN DIRECTION OF FLOW
		DUCT TRANSITION
		ROUND DUCT UP
		ROUND DUCT DOWN
		SUPPLY DUCT UP
		SUPPLY DUCT DOWN
	RA/OA	RETURN AIR DUCT/OUTSIDE AIR DUCT UP
		RETURN AIR DUCT/OUTSIDE AIR DUCT DOWN
		EXHAUST AIR DUCT UP
		EXHAUST AIR DUCT DOWN
	CD	CEILING DIFFUSER
	RR	RETURN REGISTER
	ER	EXHAUST REGISTER
	TSTAT	THERMOSTAT OR TEMPERATURE SENSOR (NUMBER INDICATES EQUIPMENT OR ZONE SERVED)
	HSTAT	HUMIDISTAT
		SYMBOL, SEE EQUIPMENT SCHEDULE

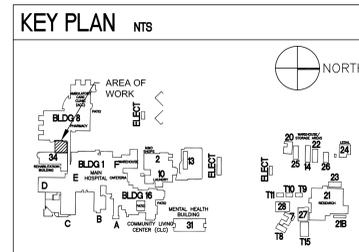
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MECHANICAL LEGEND AND ABBREVIATIONS		
SYMBOL	ABBREVIATION	DESCRIPTION
		REMOVE EXIST. EQUIPMENT OR PIPING SHOWN HATCHED
	POC	POINT OF CONNECTION
	POD	POINT OF DISCONNECT
		COORDINATE WITH ELECTRICAL
	HWS	HOT WATER SUPPLY
	HWR	HOT WATER RETURN
	CHW	CHILLED WATER
	CHWR	CHILLED WATER RETURN
	CHWS	CHILLED WATER SUPPLY
	RD	REFRIGERANT DISCHARGE
	RL	REFRIGERANT LIQUID
	RS	REFRIGERANT SUCTION
		PIPE DOWN
		PIPE UP
		PIPE RISE (OR DN FOR DROP)
		DIRECTION OF FLOW IN PIPE
	AV	AIR VENT (VALVE)
	CV	CHECK VALVE
	SD	SUCTION DIFFUSER
	CV (2W)	CONTROL VALVE (2-WAY)
	CV (3W)	CONTROL VALVE (3-WAY)
	FCD	AUTOMATIC FLOW CONTROL DEVICE
	GV	GATE VALVE
		GLOBE/BALL/BUTTERFLY VALVE
	BV	COMBINATION BALANCING & SHUT-OFF VALVE
	FEV	FLOW ELEMENT VENTURI
	CL	CAPPED LINE
	STR	STRAINER
	RV	PRESSURE RELIEF VALVE
	PG	PRESSURE GAUGE WITH BALL VALVE
	R	ECCENTRIC REDUCER
	R	CONCENTRIC REDUCER
	FC	FLEXIBLE CONNECTION (PIPE)
	TW	TEST WELL (PETE'S PLUG - PRESSURE AND/OR TEMP.)
	TI	THERMOMETER
	PA	PIPE ANCHOR
	U	UNION
	DN	DOWN OR DROP
	UP	RISE OR RISER
		VALVE ON RISE OR DROP
		HOSE BIBB

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General New Work Notes:

- COORDINATE ALL SERVICE INTERRUPTIONS WITH COITR.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- ALL HEATING WATER PIPING RUNOUTS TO VAV BOX REHEAT COILS SHALL BE 3/4" UNLESS OTHERWISE NOTED.
- ALL RUNOUTS TO VAV BOXES OR DIFFUSERS SHALL BE SAME SIZE AS NECK, UNLESS OTHERWISE NOTED.
- PROVIDE VOLUME DAMPERS AT ALL RUNOUTS TO GRILLES/DIFFUSERS.
- FABRICATION AND INSTALLATION OF HVAC WORK IS TO COMPLY WITH SMACNA AND ALL APPLICABLE CODES.
- INSTALL MANUAL AIR VENTS AT ALL HIGH POINTS OF CHWS/CHWR & HWS/HWR PIPING SYSTEMS. INSTALL FLEX PIPING CONNECTION AT ALL EQUIPMENT CONNECTIONS.
- ALL BALANCE REPORTS, OPERATION AND MAINTENANCE MANUALS AND START-UP REPORTS ARE TO BE SUBMITTED TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT.
- DUCT SIZES SHOWN ON PLANS INDICATED MINIMUM REQUIRED CLEAR INSIDE DIMENSIONS. SEE NOTES AND/OR SPECIFICATIONS FOR INSULATION TYPE AND STANDARDS.
- PROVIDE FLEXIBLE CONNECTION ON DUCT INLET AND OUTLET CONNECTIONS TO ALL AIR HANDLING UNITS, EXHAUST FANS, ETC. WHERE EQUIPMENT HAS ROTATION PARTS OR MOTORS.
- PROVIDE TURNING VANES AT ALL 90° RECTANGULAR ELBOWS. INSTALL VANES TANGENT TO THE AIR STREAM. WHERE DUCT DIMENSIONS REQUIRE TURNING VANES TO BE 24" OR GREATER IN LENGTH THE TURNING VANES MUST BE DOUBLE THICKNESS.
- COORDINATE FINAL PLACEMENT OF ALL THERMOSTATS AND/OR SENSORS WITH ARCHITECTURAL FINISHES, WALL MOUNTED DEVICES AND OWNER'S REPRESENTATIVE. MOUNT THERMOSTATS AT 60" A.F.F. ANY THERMOSTAT THAT IS REQUIRED TO BE MOUNTED ON AN EXTERIOR WALL MUST BE MOUNTED ON AN INSULATED PAD.
- PROVIDE AND INSTALL TYPE "L" COPPER P-TRAPPED CONDENSATE DRAIN LINES FOR EACH A/C UNIT OR COOLING COIL. P-TRAPS TO BE OF THE DEPTH AS REQUIRED TO PROVIDE A TRAP SEAL STATIC HEIGHT EQUIVALENT OF TWICE THE STATIC PRESSURE RATING OF THE FAN, BUT NO LESS THAN 2" DEPTH. ROUTE DRAINS AS REQUIRED.
- DURING CONSTRUCTION, AFTER START-UP OF HVAC SYSTEMS, CONTRACTOR MUST MAINTAIN AND/OR REPLACE ON A REGULAR SCHEDULE ALL FILTERS IN THE HVAC SYSTEM. (3) DAYS BEFORE EQUIPMENT IS TO BE TURNED OVER FOR OWNER ACCEPTANCE, THE CONTRACTOR MUST REPLACE ALL AIR FILTERS WITH NEW AIR FILTERS. DO NOT OPERATE HVAC SYSTEMS WITHOUT FILTERS IN PLACE.
- UNLESS NOTED OTHERWISE, PITCH OF STEAM PIPING SHALL BE 1:500, AND PITCH OF STEAM CONDENSATE SHALL BE 1:250. REDUCING FITTINGS SHALL BE ECCENTRIC TO MAINTAIN CONTINUOUS SLOPE AT BOTTOM OF FITTING.
- PROVIDE MINIMUM 12" STATIC LIFT FOR STEAM TRAP OPERATION. SPACE PERMITTING, PROVIDE 18" LIFT.



'BID SET'

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