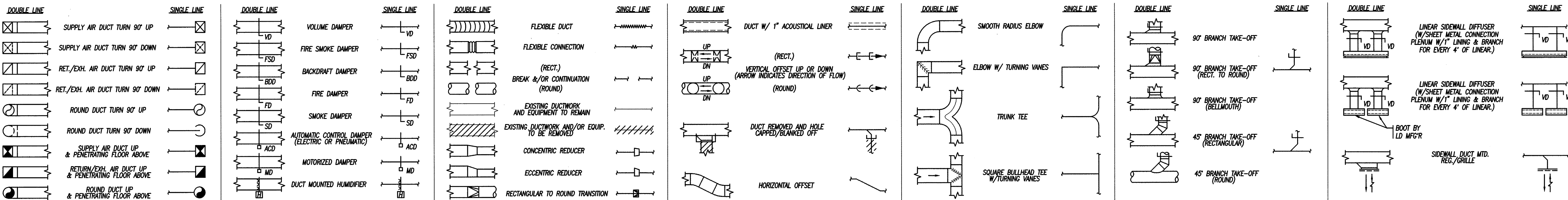


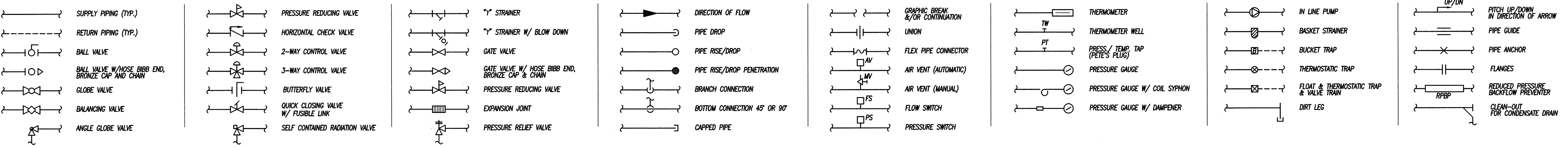
GENERAL ABBREVIATIONS

A COMPRESSED AIR	CFM CUBIC FEET PER MINUTE	EA EXHAUST AIR DEVICE	FPM FEET PER MINUTE	HWS HOT WATER SUPPLY	MTD MOUNTED	PS PRESSURE SWITCH	T TRANSFER AIR DEVICE
AC AIR CONDITIONING UNIT	CH CHILLER	EHC ELECTRIC HEATING COIL	FPS FEET PER SECOND	HX HEAT EXCHANGER	MTHW MEDIUM TEMPERATURE HOT WATER	PSIA POUNDS PER SQUARE INCH ABSOLUTE	TAC THRU WALL AIR CONDITIONER
ACCU AIR COOLED CONDENSING UNIT	CHWR CHILLED WATER RETURN	EAT ENTERING AIR TEMPERATURE	FS FLOW SWITCH	ID INSIDE DIAMETER	MUA MAKE-UP AIR	PSIG POUNDS PER SQUARE INCH GAGE	TB TERMINAL BOX
ACD AUTOMATIC CONTROL DAMPER	CHWS CHILLED WATER SUPPLY	EBB ELECTRIC BASEBOARD	FSD FIRE & SMOKE DAMPER	IU INDUCTION UNIT	MV AIR VENT (MANUAL)	R RETURN AIR DEVICE	TEMP TEMPERATURE
AD ACCESS DOOR	CM CONSTRUCTION MANAGER	EC ELECTRICAL CONTRACTOR	G NATURAL GAS	KW KILOWATT	NA NOT APPLICABLE	RA RETURN AIR	TSP TOTAL STATIC PRESSURE
AHU AIR HANDLING UNIT	CO CLEAN OUT	EF EXHAUST FAN	GA GAUGE	KWH KILOWATT HOUR	NC NORMALLY CLOSED	RAF RETURN AIR FAN	TW THERMOMETER WELL
AFF ABOVE FINISHED FLOOR	COND CONDENSATE	ESP EXTERNAL STATIC PRESSURE	GAL GALLONS	LAT LEAVING AIR TEMPERATURE	NO NOT IN CONTRACT	RC REHEAT COIL	TYP TYPICAL
AFMD AIR FLOW MEASURING DEVICE	CP CONDENSATE PUMP	ET EXPANSION TANK	GC GENERAL CONTRACTOR	LBS/HR POUNDS PER HOUR	NOM NORMALLY OPEN	RH RELATIVE HUMIDITY	UC UNDER CUT
AP ACCESS PANEL	CT COOLING TOWER	ETBR EXISTING TO BE REMOVED	GPH GALLONS PER HOUR	LPR LOW PRESSURE CONDENSATE RETURN	NTS NOT TO SCALE	RL REFRIGERANT LIQUID	UH UNIT HEATER
APD AIR PRESSURE DROP (INCHES OF WATER)	CTR COOLING TOWER RETURN	ETR EXISTING TO REMAIN	GPM GALLONS PER MINUTE	LPS LOW PRESSURE STEAM SUPPLY (2# TO 15#)	OB OUTSIDE AIR	RP RADIANT PANEL	UV UNIT VENTILATOR
AS AIR SEPARATOR	CTS COOLING TOWER SUPPLY	EUH ELECTRIC UNIT HEATER	GR GLYCOL RETURN	LRA LOCKED ROTOR AMPS	OD OUTSIDE DIAMETER	RPM REVOLUTIONS PER MINUTE	V VOLTS
ATC AUTOMATIC TEMPERATURE CONTROL	CU CONDENSING UNIT	EWT ENTERING WATER TEMPERATURE	GS GLYCOL SUPPLY	LTHW LOW TEMPERATURE HOT WATER	OBD OPPOSED BLADE DAMPER	RS REFRIGERANT SUCTION	VAV VARIABLE AIR VOLUME TERMINAL BOX
AV AIR VENT (AUTOMATIC)	CUH CABINET UNIT HEATER	EXP EXPANSION	GUH GAS UNIT HEATER	LWT LEAVING WATER TEMPERATURE	OD OUTSIDE DIAMETER	RTU ROOF TOP UNIT	VD VOLUME DAMPER
B BOILER	CW CITY WATER	F FILL	H HUMIDIFIER	MAX MAXIMUM	P PUMP	S SUPPLY AIR DEVICE	VFD VARIABLE FREQUENCY DRIVE
BDD BACKDRAFT DAMPER	D DRAIN	FA FRESH AIR	HG HOT GAS	MBH 1,000 BTU PER HOUR	PC PLUMBING CONTRACTOR	SA SUPPLY AIR	VP VACUUM PUMP
BHP BRAKE HORSE POWER	DBT DRY BULB TEMP. DEGREES F.	FCU FAN COIL UNIT	HP HORSEPOWER	MCF 1,000 CUBIC FEET	PCHWR PROCESSED CHILLED WATER RETURN	SAU SOUND ATTENUATING UNIT	VTR VENTED THROUGH ROOF
BTU/H BRITISH THERMAL UNITS PER HOUR	DA DIAMETER	FD FIRE DAMPER	HPR HIGH PRESSURE CONDENSATE RETURN	MD MOTORIZED DAMPER	PCHWS PROCESSED CHILLED WATER SUPPLY	SD SMOKE DAMPER	W WATTS
C CONTRACTOR	DOV DRAIN OFF VALVE	FF FINAL FILTER	HPS HIGH PRESSURE STEAM SUPPLY (60# AND UP)	MFG'R MANUFACTURER	PD PRESSURE DROP (FEET OF WATER)	SF SUPPLY AIR FAN	WAC WINDOW AIR CONDITIONER
CACU COMPUTER ROOM A.C. UNIT	DTR DUAL TEMPERATURE WATER RETURN	FLA FULL LOAD AMPS	HTHW HIGH TEMPERATURE HOT WATER	MIN MINIMUM	PF PRE-FILTER	SG SPECIFIC GRAVITY	WBT WET BULB TEMP. DEGREES F.
CC COOLING COIL	DTS DUAL TEMPERATURE WATER SUPPLY	FOR FUEL OIL RETURN	HV HEATING & VENTILATING UNIT	MPS MEDIUM PRESSURE CONDENSATE RETURN	PH PRE-HEAT COIL	SP STATIC PRESSURE (INCHES OF WATER)	WH WALL HEATER
CF CHEMICAL FEED	DX DIRECT EXPANSION	FOS FUEL OIL SUPPLY	HVAC HEATING, VENTILATING & AIR CONDITIONING	MPS MEDIUM PRESSURE STEAM SUPPLY (1# TO 59#)	PRV PRESSURE REDUCING VALVE	SPC STATIC PRESSURE CONTROLLER	WMS WIRE MESH SCREEN
CFH CUBIC FEET PER HOUR	E EXISTING (BEFORE SYMBOL)	FPB FAN POWERED TERMINAL BOX	HWR HOT WATER RETURN				WPD WATER PRESSURE DROP (FEET)

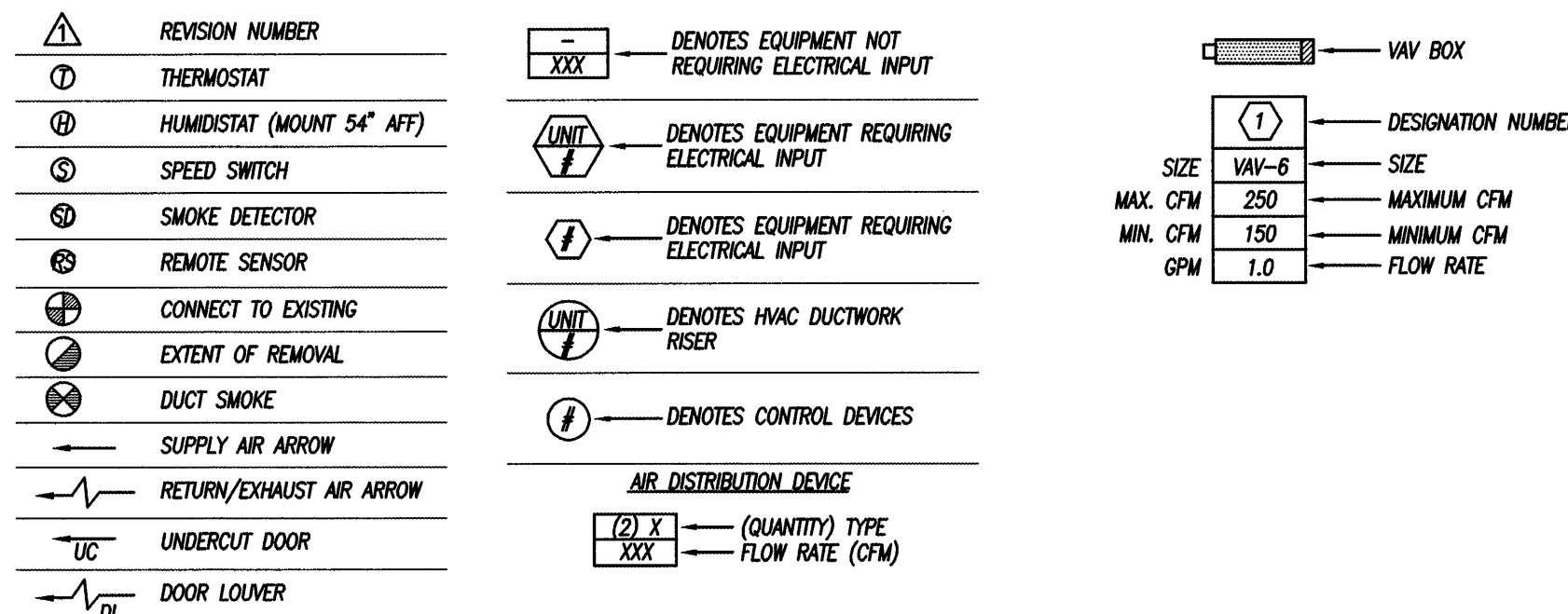
SHEETMETAL SYMBOLS



PIPING SYMBOLS



GENERAL SYMBOLS



GENERAL NOTES

- THE HEATING, VENTILATING AND AIR CONDITIONING (HVAC) CONTRACTOR SHALL VISIT THE SITE TO DETERMINE ALL PRE-EXISTING CONDITIONS AND WORK NECESSARY PRIOR TO SUBMISSION OF BID PRICE.
- THE HVAC CONTRACTOR SHALL BE FAMILIAR WITH ALL CONTRACT DOCUMENTS FOR ALL TRADES AND COORDINATE WITH OTHER CONTRACTORS.
- DRAWINGS ARE DIAGRAMMATIC ONLY. FINAL ROUTING OF DUCTWORK, PIPING AND EQUIPMENT LOCATIONS SHALL BE DETERMINED IN THE FIELD. ADDITIONAL OFFSETS, ELBOWS, ETC., SHALL BE PROVIDED AND INSTALLED WITHOUT ADDITIONAL COST TO THE OWNER.
- ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA STANDARDS.
- SUPPLY AND RETURN DUCT MAINS FROM AIR HANDLING EQUIPMENT SHALL BE INTERNALLY LINED AS PER SPECIFICATIONS A MINIMUM OF 15'-0" FROM THE UNIT UNLESS OTHERWISE NOTED. ALL DUCTWORK DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS.
- VOLUME DAMPERS SHALL BE INSTALLED AT ALL LOW PRESSURE SUPPLY, RETURN AND EXHAUST DUCTWORK BRANCHES, SPLITS, AND TAKE-OFFS.
- MINIMUM SIZE OF ALL HVAC PIPING SHALL BE 3/4" UNLESS OTHERWISE NOTED.
- PROVIDE SMOKE DETECTORS IN DUCT SYSTEMS IN ACCORDANCE WITH NFPA.
- THE HVAC CONTRACTOR SHALL COORDINATE ALL ELECTRICAL AND PLUMBING REQUIREMENTS WITH THE ELECTRICAL AND PLUMBING CONTRACTORS.
- THE HVAC CONTRACTOR SHALL FIELD MEASURE EXACT SIZES AND VERIFY ALL OPENINGS FOR SHAFTS AND LOUVERS PRIOR TO SUBMISSION OF SHOP DRAWINGS AND INSTALLATION.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR FINAL LOCATIONS OF DIFFUSERS, REGISTER, GRILLES, THERMOSTATS, ETC.
- THE HVAC CONTRACTOR SHALL FURNISH AND INSTALL ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE HVAC WORK COMPLETE AND READY FOR OPERATION.
- ALL HVAC WORK SHALL BE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
- ALL HVAC EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- FIRE DAMPERS AND ACCESS PANELS SHALL BE INSTALLED AT ALL 2-HOUR RATED PARTITIONS AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR PARTITION LOCATIONS.
- TRANSFER DUCTS IN RATED PARTITIONS SHALL BE INSTALLED WITH FIRE DAMPERS.
- ISOLATION VALVES SHALL BE INSTALLED IN SUPPLY AND RETURN PIPING ON EACH FLOOR AT EACH MAIN BRANCH AND AT EACH BRANCH OR RUN-OUT SERVING MORE THAN ONE PIECE OF EQUIPMENT.
- SHUTOFF VALVES SHALL BE INSTALLED IN THE SUPPLY AND RETURN PIPING TO ALL EQUIPMENT TO ALLOW FOR SERVICING. UNIONS OR FLANGES SHALL BE ARRANGED SUCH THAT EQUIPMENT CAN BE SERVICED WITHOUT CUTTING, AND WITH MINIMAL DISRUPTION OF PIPING SERVING THE EQUIPMENT.
- THE HVAC CONTRACTOR SHALL FURNISH TO THE GENERAL CONTRACTOR ALL INFORMATION REQUIRED FOR SETTING OF WALL, ROOF AND PARTITION OPENINGS FOR HVAC WORK. THIS INFORMATION SHALL BE FURNISHED IN A TIMELY MANNER SUCH THAT CONSTRUCTION SCHEDULE IS NOT JEOPARDIZED.
- THE HVAC CONTRACTOR SHALL INFORM AND COORDINATE WITH THE OWNER ALL NECESSARY INTERRUPTIONS TO EXISTING BUILDING SYSTEMS AND SERVICE THAT MAY AFFECT THE NORMAL OPERATION OF OCCUPIED PORTIONS OF THE BUILDING. THE OWNER SHALL BE INFORMED OF ANY INTERRUPTIONS AT LEAST TWO (2) WEEKS IN ADVANCE.
- THE HVAC CONTRACTOR SHALL COORDINATE ANY PREMIUM WORK REQUIRED FOR THIS PROJECT WITH THE GENERAL CONTRACTOR.
- THE HVAC CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR PHASING REQUIREMENTS OF THE PROJECT.
- THE AUTOMATIC TEMPERATURE CONTROL (ATC) CONTRACTOR SHALL COORDINATE THERMOSTAT LOCATION WITH ARCHITECTURAL FURNITURE PLANS. THERMOSTATS SHALL BE INSTALLED 54" ABOVE FINISHED FLOORS UNLESS OTHERWISE NOTED.

PERMIT ISSUE - 09/27/07

NO.	REVISION	DATE
SCALE: 3/32"=1' 0"		DRAWN BY: MJR
DATE: 09/27/07		CHECKED BY: JCL

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TITLE
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