

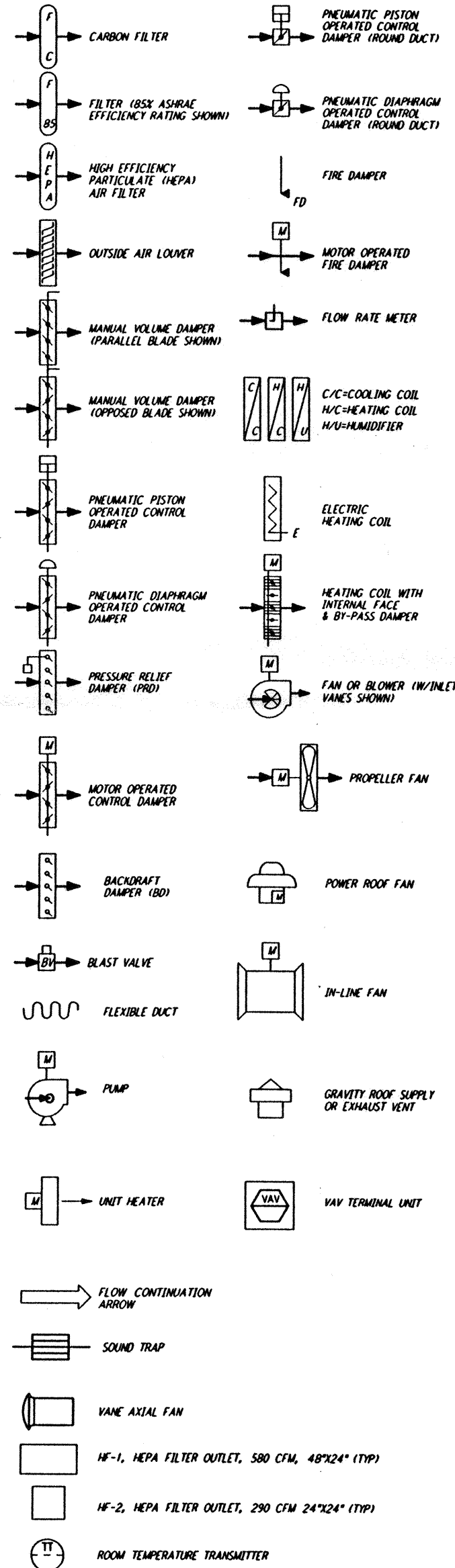
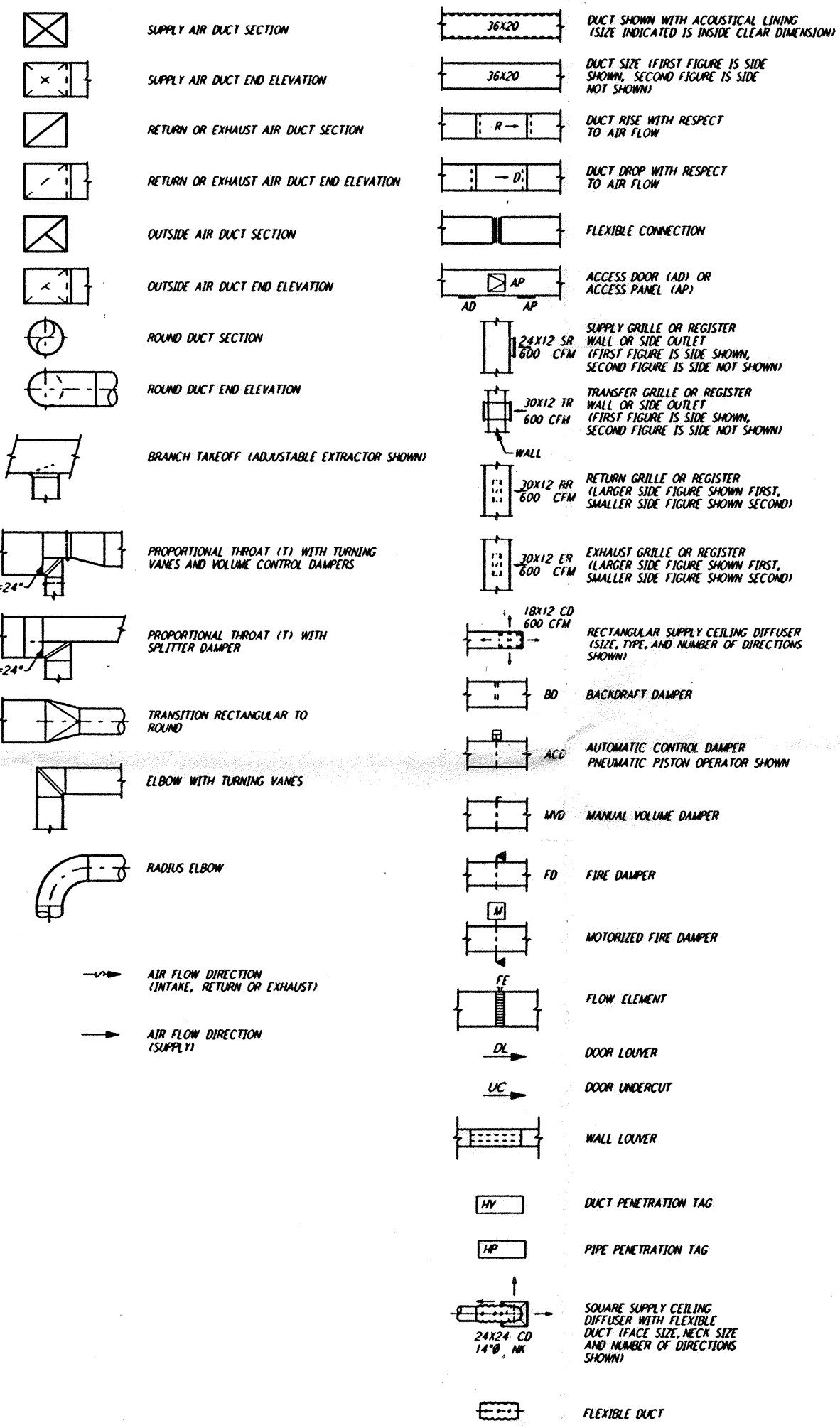
HEATING, VENTILATING AND AIR CONDITIONING LEGEND, SYMBOLS AND ABBREVIATIONS

DOUBLE LINE

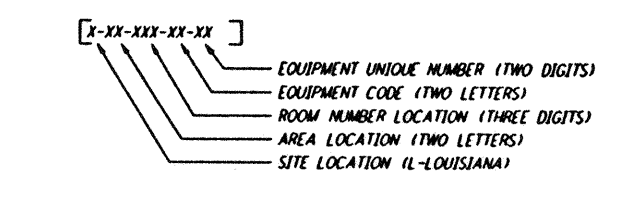
SINGLE LINE

ABBREVIATIONS

EQUIPMENT IDENTIFICATION



ABBREV	WORD OR TERM	ABBREV	WORD OR TERM
ABV	ABOVE	IN FT	INCH
AC	AIR CONDITIONING	INSTR	INSTRUMENT
ACFM	ACTUAL CUBIC FEET PER MINUTE	INSUL	INSULATION
ACH	AIR CHANGES/HR	IN W	INCHES WATER COLUMN
ACH	ABOVE FINISHED FLOOR	IN WG	INCHES WATER GAUGE
AFMS	AIR FLOW MEASURING STATION	KW	KILOWATT
AI	ANALOG IN	L	LONG
AD	ANALOG OUT	LB	POUND
APPROX	APPROXIMATE	LG	LENGTH
ARCH	ARCHITECTURAL	LRA	LOCKED ROTOR AMPERES
ATM	ATMOSPHERE	LVG	LEAVING
AUTO	AUTOMATIC	MAIN	MAINTENANCE
BD	BACKDRAFT DAMPER	MAX	MAXIMUM
BELOW	BELOW	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
BHP	BRAKE HORSEPOWER	MCC	MOTOR CONTROL CENTER
BLDG	BUILDING	MECH	MECHANICAL
BOO	BOTTOM OF DUCT	MFR	MANUFACTURER
BOG	BOTTOM OF GRILLE	MIN	MINIMUM
BOL	BOTTOM OF LOUVER	MNTD	MOUNTED
BOP	BOTTOM OF PIPE	MFG	MANUFACTURING
BOU	BOTTOM OF REGISTER	MTR	MOTOR
BOU	BOTTOM OF UNIT	NC	NORMALLY CLOSED
BTUH	BRITISH THERMAL UNITS PER HOUR	NEG	NEGATIVE
CL	CENTER LINE	NI	NOT IN CONTRACT
C	DEGREES CENTIGRADE	NR	NECK
COMP	COMPRESSED AIR	NO	NORMALLY OPEN
CAP	CAPACITY	NTS	NOT TO SCALE
CCMS	CENTRAL CONTROL MONITORING SYSTEM	OA	OUTSIDE AIR
CCW	COUNTERCLOCKWISE	OBD	OPPOSED BLADE DAMPER
CD	CEILING DIFFUSER	OC	ON CENTER
CFM	CUBIC FEET PER MINUTE	OD	OUTSIDE DIAMETER
CFM	CUBIC FEET PER HOUR	ODP	OPEN DRIP PROOF
CG	CEILING GRILLE	OPER	OPERATING / OPERATOR
CHW	CHILLED WATER RETURN	OPN	OPENING
CWS	CHILLED WATER SUPPLY	ORD	ORDER
CLG	CENTRIFUGAL	PD	PRESSURE DROP
COL	COLUMN	PENET	PENETRATIONS
CONC	CONCRETE	PF	PREFILTER
COND	CONDENSATE	PH	PHASE
CONN	CONNECTION	PL	PLATE
CONT	CONTINUATION OR CONTROL	PNEU	PNEUMATIC
CR	CEILING REGISTER/CONDENSATE RETURN	PNL	PANEL
CS	CARBON STEEL (GALVANIZED)	POC	POINT OF CONNECTION
CW	CLOCKWISE	POS	POSITIVE
CWS	CONDENSER WATER RETURN	PRESS	PRESSURE
CWS	CONDENSER WATER SUPPLY	PSIG	POUNDS PER SQUARE INCH GAUGE
D	DRAIN	P	PRESSURE DIFFERENTIAL
DA	DIRECT ACTING	QTY	QUANTITY
DDC	DIRECT DIGITAL CONTROL	R	ROWS
DDCP	DIRECT DIGITAL CONTROL PANEL	RA	RETURN AIR
DET	DETAIL	RD	REFRIGERANT DISCHARGE
DISCH	DISCHARGE	REF	REFERENCE
DN	DOWN	REG	REGISTER
DO	DIGITAL OUT	REQD	REQUIRED
DP	DRAIN PROOF	RET	RETURN
DWG	DRAWING	RFGT	REFRIGERANT RETURN GRILLE
Ø/DIA	DIAMETER	RH	RELATIVE HUMIDITY
EA	EACH	RHC	REHEAT COIL
EFF	EFFICIENCY	RL	REFRIGERANT LIQUID
EG	EXHAUST GRILLE	RLA	RATED LOAD AMPERES
EL	ELEVATION	RM	ROOM
ELB	ELBOW	RPM	REVOLUTIONS PER MINUTE
ELECT	ELECTRICAL	RR	RETURN REGISTER
ENT	ENTERING	RS	REFRIGERANT SUCTION
EP	EXPLSION PROOF	RV	REFRIGERANT VENT
EQUIP	EQUIPMENT	SA	SUPPLY AIR
ER	EXHAUST REGISTER	SCFM	STANDARD CUBIC FEET PER MINUTE
ESP	EXTERNAL STATIC PRESSURE	SCHED	SCHEDULE
EXH	EXHAUST	SD	SMOKE DETECTOR
F	FEET	SEC	SECONDARY
F	FEET PER MINUTE	SG	SUPPLY GRILLE
F	FEET PER HOUR	SG	SHEET
F	FEET PER MINUTE	SHT	SOUND LINING
F	FEET PER MINUTE	SL	STATIC PRESSURE
F	FEET PER MINUTE	SPEC	SPECIFICATION
F	FEET PER MINUTE	SR	SUPPLY REGISTER
F	FEET PER MINUTE	SS	STAINLESS STEEL
F	FEET PER MINUTE	STD	STANDARD
F	FEET PER MINUTE	STL	STEEL
F	FEET PER MINUTE	STN	STEAM
F	FEET PER MINUTE	STRUCT	STRUCTURAL
F	FEET PER MINUTE	SV	SOLENOID VALVE
F	FEET PER MINUTE	SW	SWITCH
F	FEET PER MINUTE	TA	THROW AWAY
F	FEET PER MINUTE	TEFC	TOTALLY ENCLOSED FAN COOLED
F	FEET PER MINUTE	TEMP	TEMPERATURE
F	FEET PER MINUTE	TG	TRANSFER GRILLE
F	FEET PER MINUTE	TOC	TOP OF CONCRETE
F	FEET PER MINUTE	TOP	TOP OF DUCT
F	FEET PER MINUTE	TOS	TOP OF STEEL
F	FEET PER MINUTE	TR	TRANSFER REGISTER
F	FEET PER MINUTE	TRANSF	TRANSFER
F	FEET PER MINUTE	TSP	TOTAL STATIC PRESSURE
F	FEET PER MINUTE	TYP	TYPICAL
F	FEET PER MINUTE	UC	UNDERCUT DOOR
F	FEET PER MINUTE	UG	UNDERGROUND
F	FEET PER MINUTE	UV	UNIT VENTILATOR
F	FEET PER MINUTE	V	VENT
F	FEET PER MINUTE	VEL	VELOCITY
F	FEET PER MINUTE	VERT	VERTICAL
F	FEET PER MINUTE	VFD	VARIABLE FREQUENCY DRIVE
F	FEET PER MINUTE	VIV	VARIABLE INLET VANES
F	FEET PER MINUTE	W	WIRE
F	FEET PER MINUTE	WITH	WITH
F	FEET PER MINUTE	WC	WATER COLUMN
F	FEET PER MINUTE	WG	WATER GAUGE
F	FEET PER MINUTE	WR	WORK
F	FEET PER MINUTE	WN	WELD NECK
F	FEET PER MINUTE	WP	WORKING POINT
F	FEET PER MINUTE	WT	WEIGHT
F	FEET PER MINUTE	WTR	WATER



CODE	EQUIPMENT
AC	AIR CONDITIONING UNIT/COMPRESSOR (AIR)
AF	FILTER
AH	AIR HANDLING UNIT
AS	SEPARATOR (AIR)
AU	AIR COOLED CONDENSING UNIT
BR	BOILER
CC	COOLING COIL
CH	CHILLER
CT	COOLING TOWER
CU	CONDENSATE RETURN UNIT
DE	DEHUMIDIFIER
DR	DEAERATOR
DV	VARIABLE AIR VOLUME BOX (DOUBLE DUCT)
EF	EXHAUST FAN
FC	FAN COIL UNIT
GP	GLYCOL MIX FEED PUMP
HT	CONVECTOR HEATER
HU	HUMIDIFIER
HC	HEATING COIL
HE	HEAT EXCHANGER
PA	PACKAGED AIR CONDITIONING UNIT
PF	PRESSURIZATION FAN
RC	COMPRESSOR (REFRIGERATION)
RE	RECEIVER
RF	RETURN FAN
ST	SUPPLY FAN
ST	SOUND TRAP/DUCT SILENCER
SV	VARIABLE AIR VOLUME BOX (SINGLE DUCT)
TR	TANK
TP	STEAM TRAP
UH	UNIT HEATER
WP	CIRCULATING WATER PUMP

CODE	SITE LOCATION
L OR LA	LOUISIANA

CODE	AREA LOCATION
CS	CORNER STATION
MA	MID STATION "A"
MB	MID STATION "B"
EA	END STATION "A"
EB	END STATION "B"

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C	7-24-96	CLP	MS	AA	TDW	ISSUED FOR BID
B	6-14-96	CLP	ME	AA	TDW	FINAL DESIGN REVIEW
A	10-31-95	CLP	ME	AA	TDW	PRELIMINARY DESIGN REVIEW

NO.	DATE	BY	CHKD	ENGR	PROJ	DESCRIPTION
1						
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DRAWN	CLP
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100 WEST WALNUT STREET
PASADENA, CALIFORNIA

LIGO
CALIFORNIA INSTITUTE OF TECHNOLOGY
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LASER INTERFEROMETER
GRAVITATIONAL-WAVE OBSERVATORY
SITE NO. 2 - LIVINGSTON, LOUISIANA

TITLE	HVAC LEGEND & ABBREVIATIONS
SCALE	NONE
PROJECT NUMBER	PP150969
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