

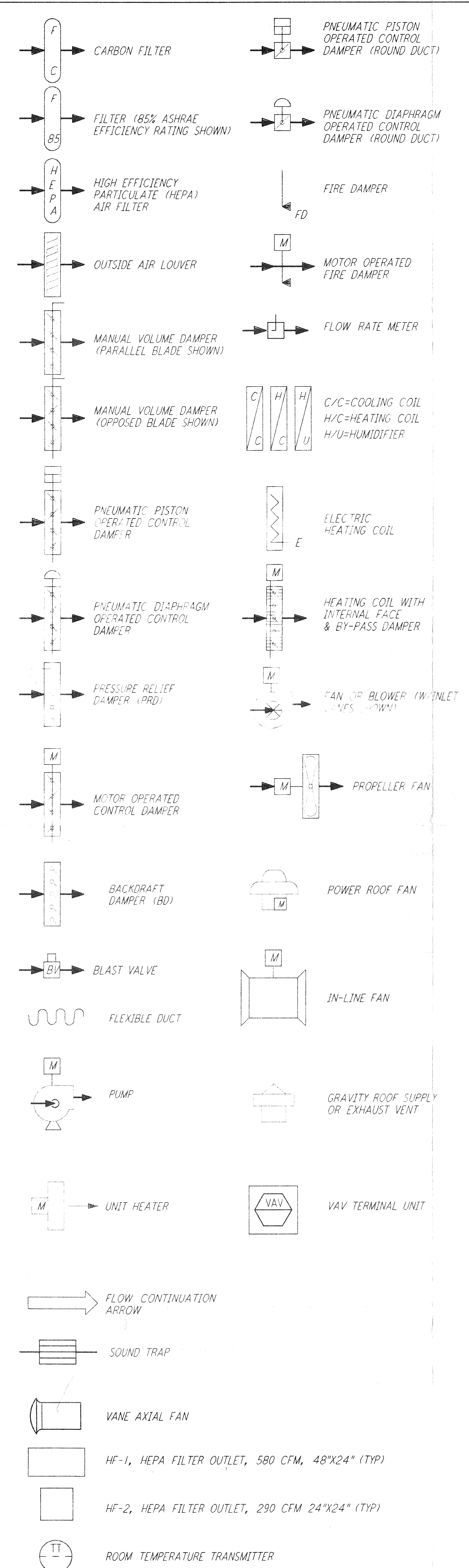
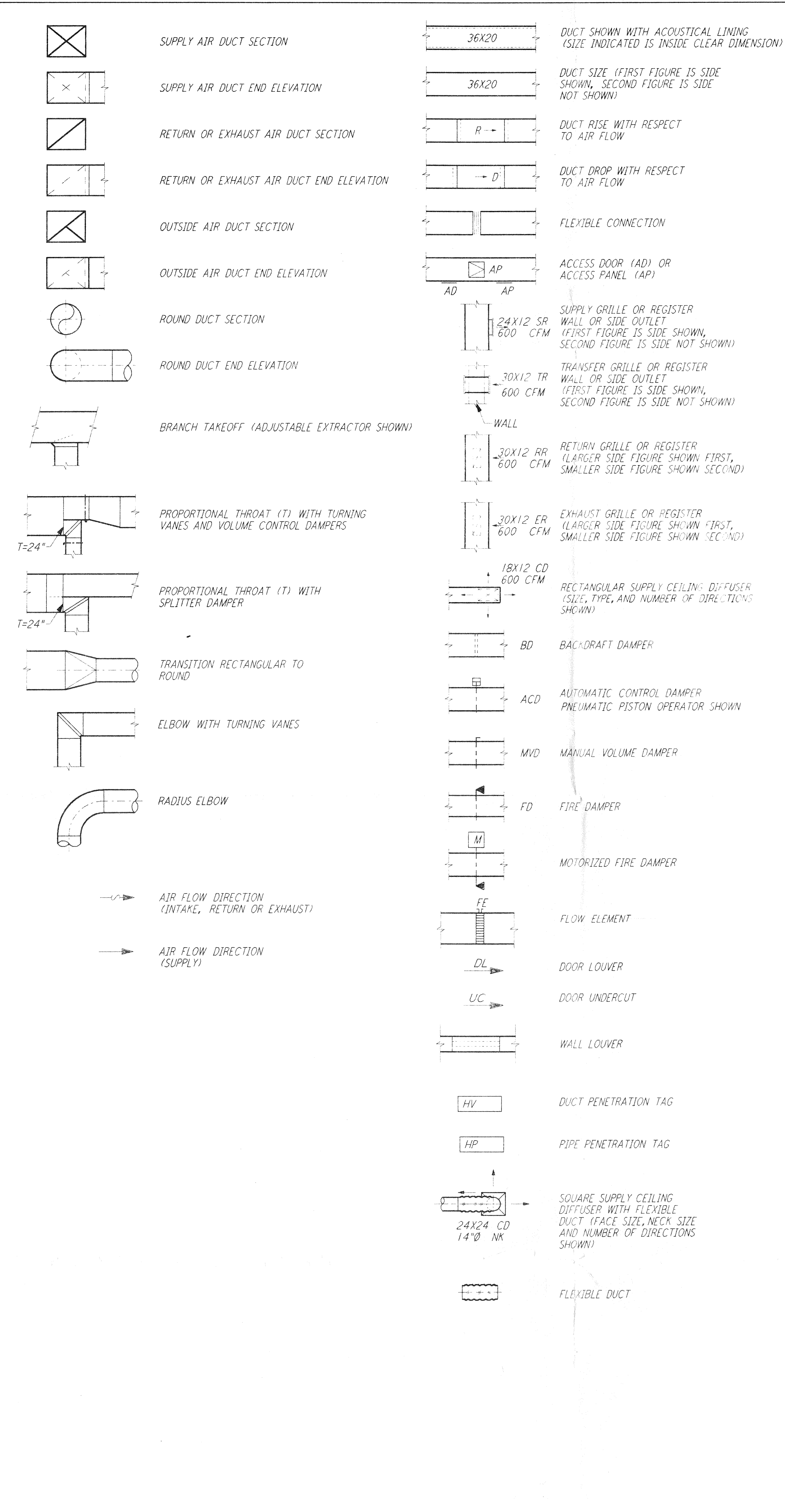
HEATING, VENTILATING AND AIR CONDITIONING LEGEND, SYMBOLS AND ABBREVIATIONS

DOUBLE LINE

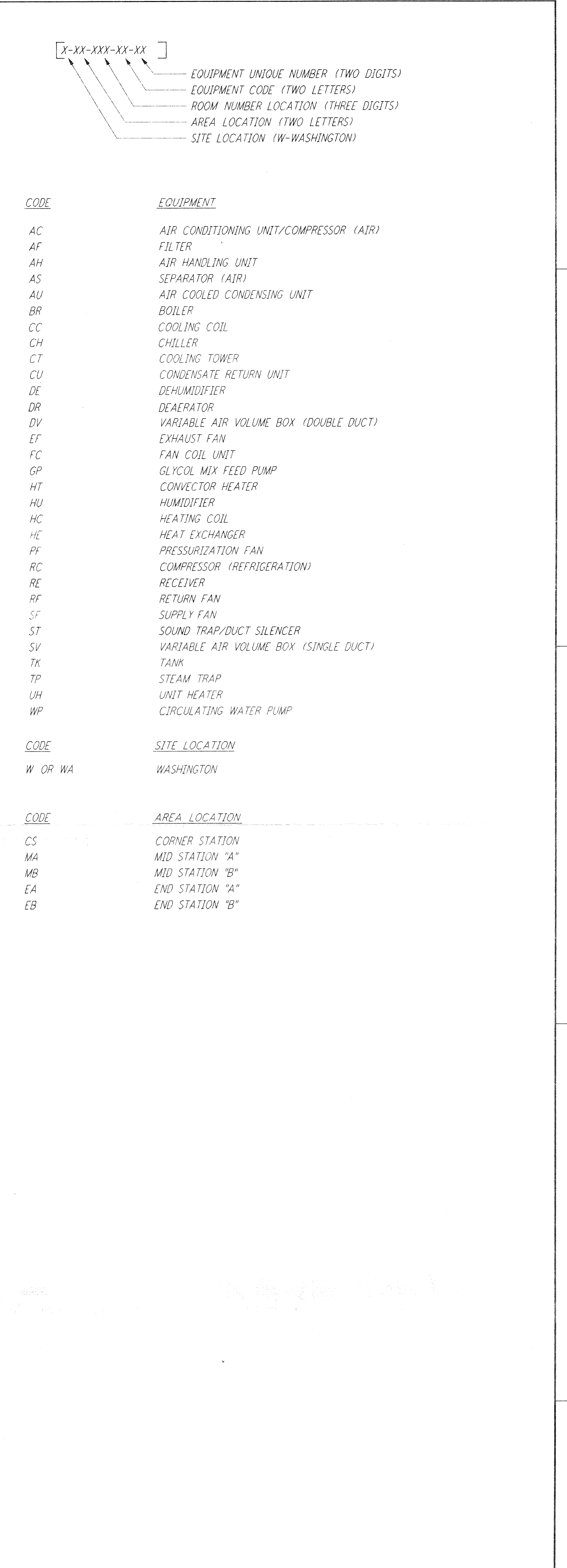
SINGLE LINE

ABBREVIATIONS

EQUIPMENT IDENTIFICATION



ABBREV	WORD OR TERM	ABBREV	WORD OR TERM
ABV	ABOVE	IN (")	INCH
AC	AIR CONDITIONING	INSTR	INSTRUMENT
ACFM	ACTUAL CUBIC FEET PER MINUTE	INSUL	INSULATION
ACH	AIR CHANGES/HR	IN WC	INCHES WATER COLUMN
AFF	ABOVE FINISHED FLOOR	IN WG	INCHES WATER GAUGE
AFMS	AIR FLOW MEASURING STATION	KW	KILOWATT
AI	ANALOG IN	L	LONG
AO	ANALOG OUT	LB	POUND
APPROX	APPROXIMATE	LG	LEVEL GAUGE
ARCH	ARCHITECTURAL	LGTH	LENGTH
ATM	ATMOSPHERE	LRA	LOCKED ROTOR AMPERES
AUTO	AUTOMATIC	LVG	LEAVING
BD	BACKDRAFT DAMPER	MAIN	MAINTENANCE
BEL	BELOW	MAX	MAXIMUM
BF	BOTTOM FLAT	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
BHP	BRAKE HORSEPOWER	MCC	MOTOR CONTROL CENTER
BLDG	BUILDING	MECH	MECHANICAL
BOG	BOTTOM OF DUCT	MFR	MANUFACTURER
BOL	BOTTOM OF LOUVER	MIN	MINIMUM
BOP	BOTTOM OF PIPE	MTD	MOUNTING
BOR	BOTTOM OF REGISTER	MTG	MOUNTING
BOT	BOTTOM	MTR	MOTOR
BOU	BOTTOM OF UNIT	NC	NORMALLY CLOSED
BTUH	BRITISH THERMAL UNITS PER HOUR	NEG	NEGATIVE
CL	CENTER LINE	NIC	NOT IN CONTRACT
C	DEGREES CENTIGRADE	NK	NECK
CAP	CAPACITY	NO	NORMALLY OPEN
CCMS	CENTRAL CONTROL MONITORING SYSTEM	NO. (")	NO. TO SCALE
CCW	COUNTERCLOCKWISE	NTS	NOT TO SCALE
CD	CEILING DIFFUSER	OA	OUTSIDE AIR
CFM	CUBIC FEET PER HOUR	OBD	OPPOSED BLADE DAMPER
CG	CUBIC FEET PER MINUTE	OC	ON CENTER
CHR	CHILLED WATER RETURN	OD	OUTSIDE DIAMETER
CHS	CHILLED WATER SUPPLY	ODP	OPEN DRIP PROOF
CLG	COOLING	OPER	OPERATING / OPERATOR
CNTFGL	CENTRIFUGAL	OPNG	OPENING
COL	COLUMN	ORD	ORDER
CONC	CONCRETE	PD	PRESSURE (DROP)
COND	CONDENSATE	PENET	PENETRATIONS
CONN	CONNECTION	PF	PREFILTER
CONT	CONTINUATION OR CONTROL	PH	PHASE
CR	CEILING REGISTER/CONDENSATE RETURN	PL	PLATE
CS	CARBON STEEL (GALVANIZED)	PNEU	PNEUMATIC
CS	CLOCKWISE	PNL	PANEL
CWR	CONDENSER WATER RETURN	POC	POINT OF CONNECTION
CWS	CONDENSER WATER SUPPLY	POS	POSITIVE
D	DRAIN	PRESS	PRESSURE
DA	DIRECT ACTING	PSIG	POUNDS PER SQUARE INCH GAUGE
DDC	DIRECT DIGITAL CONTROL	Δ P	PRESSURE DIFFERENTIAL
DDCP	DIRECT DIGITAL CONTROL PANEL	QTY	QUANTITY
DET	DETAIL	R	ROWS
DI	DIGITAL IN	RA	RETURN AIR
DISCH	DISCHARGE	RD	REFRIGERANT DISCHARGE
DN	DOWN	REF	REFERENCE
DO	DIGITAL OUT	REG	REGISTER
DP	DRIP PROOF	REQD	REQUIRED
DWG	DRAWING	RET	RETURN
Ø/DIA	DIAMETER	RFGT	REFRIGERANT RETURN GRILLE
EA	EACH	RH	RELATIVE HUMIDITY
EFC	EFFICIENCY	RHC	REHEAT COIL
EG	EXHAUST GRILLE	RL	REFRIGERANT LIQUID
EL	ELEVATION	RLA	RATED LOAD AMPERES
ELB	ELBOW	RM	ROOM
ELECT	ELECTRICAL	RPM	REVOLUTIONS PER MINUTE
ENT	ENTERING	RR	RETURN REGISTER
EP	EXPLOSION PROOF	RS	REFRIGERANT SUCTION
EQUIP	EQUIPMENT	RV	REFRIGERANT VENT
ER	EXHAUST REGISTER	SA	SUPPLY AIR
ESP	EXTERNAL STATIC PRESSURE	SCFM	STANDARD CUBIC FEET PER MINUTE
EXFIL	EXFILTRATION	SCHED	SCHEDULE
EXH	EXHAUST	SD	SMOKE DETECTOR
*F	DEGREES FAHRENHEIT	SEC	SECONDARY
*F DB	DEGREES FAHRENHEIT, DRY BULB (AIR)	SF	SUPPLY FAN
*F WB	DEGREES FAHRENHEIT, WET BULB (AIR)	SG	SUPPLY GRILLE
FC	FAIL CLOSED	SHT	SHEET
FD	FIRE DAMPER	SL	SOUND LINING
FIN	FINISHED	SP	STATIC PRESSURE
FL	FAIL LOCKED	SPEC	SPECIFICATION
FLA	FULL LOAD AMPERES	SR	SUPPLY REGISTER
FLEX	FLEXIBLE	SS	STAINLESS STEEL
FLG	FLANGE	STD	STANDARD
FLR	FLOOR	STL	STEEL
FLTR	FILTER	STM	STEAM
FO	FAIL OPEN	STRUCT	STRUCTURAL
FP	FIRE PROTECTION	SV	SOLENOID VALVE
FPM	FPM PER INCH	SW	SWITCH
FT	FEET PER MINUTE	TA	THROW AWAY
FT ²	FEET SQUARE	TEFC	TOTALLY ENCLOSED FAN COOLED
FT ³	CUBIC FEET	TEMP	TEMPERATURE
FURN	FURNISHED	TG	TRANSFER GRILLE
FWD CRV	FORWARD CURVED	TOC	TOP OF CONCRETE
G	GAUGE	TOD	TOP OF DUCT
GAL	GALLON	TOS	TOP OF STEEL
GALV	GALVANIZED	TR	TRANSFER REGISTER
GPE	GOVERNMENT FURNISHED EQUIPMENT	TRNSF	TRANSFER
GPM	GALLONS PER MINUTE	TSP	TOTAL STATIC PRESSURE
H	HIGH	TYP	TYPICAL
H	HEAD	UC	UNDERCUT DOOR
HEPA	HIGH EFFICIENCY PARTICULATE AIR FILTER	UG	UNDERGROUND
HF	HEPA FILTER OUTLET	UV	UNIT VENTILATOR
HOR	HAND/OFF/AUTO	V	VENT
HORIZ	HORIZONTAL	VEL	VELOCITY
HP	HORSEPOWER	VERT	VERTICAL
HR	HOUR	VFD	VARIABLE FREQUENCY DRIVE
HT	HEIGHT	VIV	VARIABLE INLET VANES
HTG	HEATING	W	WIDE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	W/	WITH
HWR	HEATING HOT WATER RETURN	WC	WATER COLUMN
HWS	HEATING HOT WATER SUPPLY	WG	WATER GAUGE
HZ	HERTZ	WK	WORK
ID	INSIDE DIAMETER	WN	WELD NECK
I.E.	THAT IS	WP	WORKING POINT
		WTR	WATER



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NO.	DATE	BY	CHKD	ENGR	PROJ	DESCRIPTION

ISSUED FOR CONSTRUCTION	CLP	6-24-96
DRAWN	ME	7/5/96
CHECKED	AP	7/21/96
ENGINEER		
PROJ		

10-8-96

PARSONS

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PASADENA, CALIFORNIA

LIGO

CALIFORNIA INSTITUTE OF TECHNOLOGY
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LASER INTERFEROMETER
GRAVITATIONAL-WAVE OBSERVATORY
SITE NO. 1 - HANFORD, WASHINGTON

HVAC
LEGEND &
ABBREVIATIONS

SCALE: NONE
CONTRACT NUMBER: PPI50969
PROJECT NUMBER: 8094

SHEET NUMBER: **WA-H-001**

LIGO-D960343-00-0