

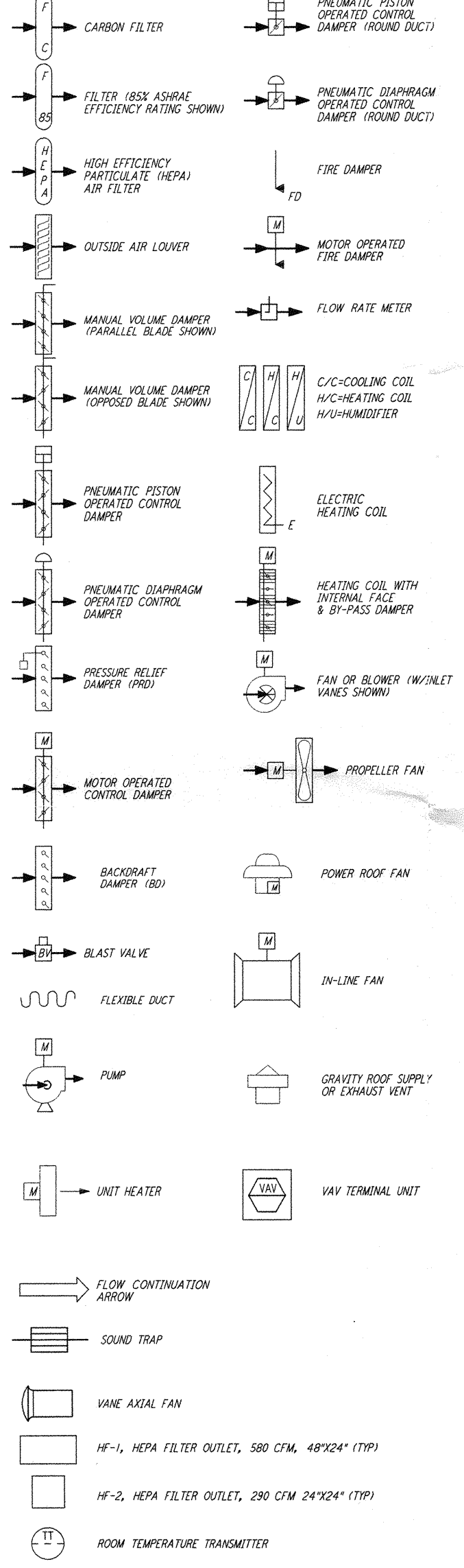
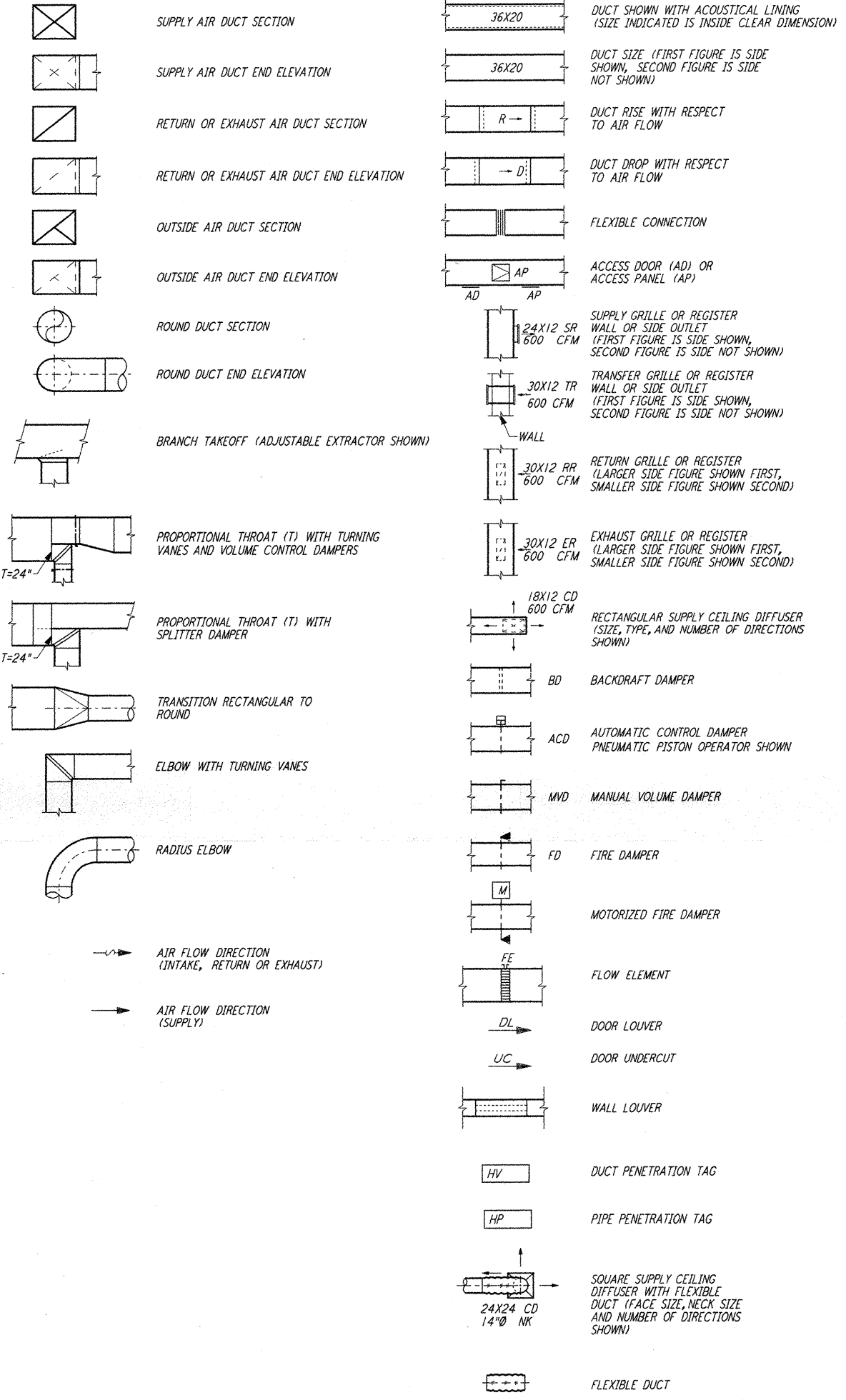
HEATING, VENTILATING AND AIR CONDITIONING LEGEND, SYMBOLS AND ABBREVIATIONS

DOUBLE LINE

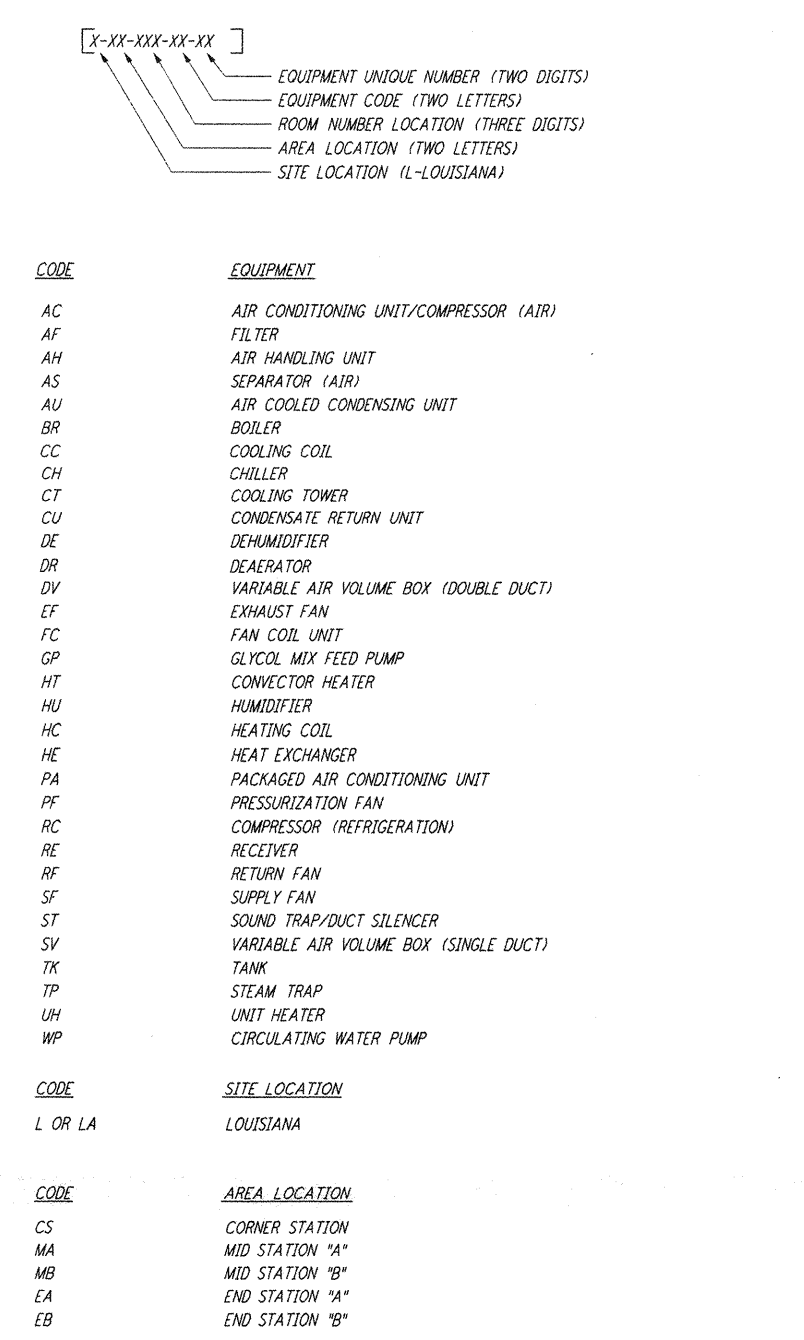
SINGLE LINE

ABBREVIATIONS

EQUIPMENT IDENTIFICATION



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



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NO.	DATE	BY	CHKD	ENGR	PROJ	DESCRIPTION
1	8-7-98	DJB	AA	AA		ISSUED FOR AS-BUILT

ISSUED FOR CONSTRUCTION	CLP	11-15-96
DRAWN	MN	10-25-96
CHECKED	AA	1-23-96
ENGINEER	TDM	11-15-96
PROJ		

AS-BUILT DRAWINGS

PARSONS

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PASADENA, CALIFORNIA

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CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LIGO-D960960-01-0

LASER INTERFEROMETER
GRAVITATIONAL-WAVE OBSERVATORY
SITE NO. 2 - LIVINGSTON, LOUISIANA

SCALE: NONE CONTRACT NUMBER: PPI50969 PROJECT NUMBER: 8094

TITLE: HVAC LEGEND & ABBREVIATIONS SHEET NUMBER: LA-H-001 REVISIONS:

5 4 3 2 1 A B C D E