



Sea-Tac International Airport

Facilities and Infrastructure System Mechanical System Standards

APPENDIX A

Mechanical Legend, Symbols, Abbreviations, and General Notes

Revised January 1, 2023

ABBREVIATION

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AC	AIR CONDITIONING	IPLV	INTEGRATED PART LOAD VALUE
AC	ALTERNATING CURRENT		
AF	AIRFOIL	KH	KITCHEN HOOD
AFF	ABOVE FINISHED FLOOR	KW	KILOWATT
AH	AIR HANDLING UNIT	KWH	KILOWATT HOURS
AMB	AMBIENT		
AMP	AMPS	LAT	LEAVING AIR TEMPERATURE
ARCH	ARCHITECTURAL	LB/HR	POUNDS PER HOUR
		LBS	POUNDS
BD	BALANCING DAMPER	LD	LINEAR DIFFUSER
BDD	BACKDRAFT DAMPER	LF	LINEAR FEET
BF	BLIND FLANGE	LVG	LEAVING
BFP	BACKFLOW PREVENTER	LWT	LEAVING WATER TEMPERATURE
BFW	BOILER FEED WATER		
BHP	BRAKE HORSEPOWER	MA	MAKE-UP AIR
BI	BACKWARD INCLINED	MATL	MATERIAL
BLDG	BUILDING	MAV	MANUAL AIR VENT
BOD	BOTTOM OF DUCT	MAX	MAXIMUM
BOP	BOTTOM OF PIPE	MBH	THOUSAND BTU PER HOUR
BTU/HR	BRITISH THERMAL UNIT PER HOUR	MCC	MOTOR CONTROL CENTER
		MOD	MOTOR OPERATED DAMPER
		MTR	MOTOR
		MVD	MEDIUM VELOCITY DAMPER
		MZU	MULTI-ZONE UNIT
CAP	CAPACITY		
CB	CATCH BASIN	N/A	NOT APPLICABLE
CC	COOLING COIL	NC	NORMALLY CLOSED
CD	CEILING DIFFUSER	NC	NOT IN CONTRACT
CF	CABINET FAN	NO	NORMALLY OPEN
CFM	CUBIC FEET PER MINUTE	NOM	NOMINAL
CFP	CHEMICAL FEED PUMP	NPW	NON POTABLE WATER
CFT	CHEMICAL FEED TANK		
CHLR	CHILLER		
CHM	CHEMICAL		
CHWP	CHILLED WATER PUMP	Ø	DIAMETER
CI	CAST IRON	OA	OUTSIDE AIR
CLG	CEILING/COOLING	OAT	OUTSIDE AIR TEMPERATURE
CMPSR	COMPRESSOR	OB	OPPOSED BLADE DAMPER
CND	CONDENSER	OC	ON CENTER
CNDS	CONDENSATE	OPER	OPERATING
CNTFGL	CENTRIFUGAL CLEAN-OUT	OSA	OUTSIDE AIR
		OV	OUTLET VELOCITY
COP	COEFFICIENT OF PERFORMANCE		
CP	CIRCULATING PUMP	PBD	PARALLEL BLADE DAMPER
CU	CONDENSING UNIT	PD	PRESSURE DISCHARGE
CU.FT.	CUBIC FEET	PFT	PARALLEL FAN TERMINAL
Cv	FLOW COEFFICIENT	PH	PHASE
CVTR	CONVERTER	POC	POINT OF CONNECTION
CW	COLD WATER	PRESS	PRESSURE
CWP	CONDENSER WATER PUMP	PRV	PRESSURE RELIEF VALVE
		PRV	PRESSURE REDUCING VALVE
		PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
		PSIG	PSI GAUGE
		PW	PUMPED WASTE
D	DRAIN		
DB	DRY BULB/DECIBELS		
DCVA	DOUBLE CHECK VALVE ASSEMBLY		
DCW	DOMESTIC COLD WATER		
DIA	DIAMETER		
DIFF	DIFFUSER	RA	RETURN AIR
DISCH	DISCHARGE	REF	REFERENCE
DMPR	DAMPER	RF	RETURN FAN
DN	DOWN	RG	RETURN GRILLE
DWDI	DOUBLE WIDTH DOUBLE INLET	RA	RETURN AIR
		RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EAT	ENTERING AIR TEMPERATURE	RWL	RAIN WATER LEADER
EER	ENERGY EFFICIENCY RATIO		
EF	EXHAUST FAN		
EFF	EFFICIENCY	SA	SUPPLY AIR
EG	EXHAUST GRILLE	SCFM	STANDARD CUBIC FEET PER MINUTE
EJ	EXPANSION JOINT	SDS	STORM DRAINAGE SYSTEM
EL	ELEVATION	SF	SUPPLY FAN
ENT	ENTERING	SFD	SMOKE FIRE DAMPER
ELEC	ELECTRICAL	SFT	SERIES FAN TERMINAL
ESP	EXTERNAL STATIC PRESSURE	SG	SUPPLY GRILLE
EWC	ELECTRIC WATER COOLER	SH	SENSIBLE HEAT
EWT	ENTERING WATER TEMPERATURE	SP	STATIC PRESSURE/SEWAGE PUMP
EXT	EXTERNAL	SS	SANITARY SEWER
		STIA	SEATAC INTERNATIONAL AIRPORT
		STM	STEAM
F	FAHRENHEIT	STRUCT	STRUCTURAL
FC	FOWARD CURVED	SUCT	SUCTION
FCO	FLOOR CLEANOUT	SW	SERVICE WATER
FD	FIRE DAMPER/FLOOR DRAIN	SWSI	SINGLE WIDTH SINGLE INLET
FDC	FIRE DEPARTMENT CONNECTION		
FLA	FULL LOAD AMPS		
FLR	FLOOR	T	THERMOMETER/TRAP
FOR	FUEL OIL RETURN	TCV	TEMPERATURE CONTROL VALVE
FOS	FUEL OIL SUPPLY	TDH	TOTAL DYNAMIC HEAD
FOV	FUEL OIL TANK VENT	TG	TRANSFER GRILLE
FPM	FEET PER MINUTE	TI	TOP INVERT
FT	FEET	TOD	TOP OF DUCT
FT2	SQUARE FEET	TOS	TOP OF STEEL
FV	FACE VELOCITY	TP	TOTAL PRESSURE/TRAP PRIMER
		TSP	TOTAL STATIC PRESSURE
GA	GAUGE	TSTAT	THERMOSTAT
GAL	GALLONS	TWR	TOWER
GALV	GALVANIZED STEEL	TYP	TYPICAL
GI	GREASE INTERCEPTOR		
GPD	GALLONS PER DAY	UC	UNDERCUT
GPH	GALLONS PER HOUR	UH	UNIT HEATER
GPM	GALLONS PER MINUTE	UPC	UNIFORM PLUMBING CODE
GSM	GALVANIZED SHEET METAL		
		V	VENT/VOLT
HB	HOSE BIBB	VAC	VACUUM
HC	HEATING COIL	VEL	VELOCITY
HD	HEAVY DUTY	VFD	VARIABLE FREQUENCY DRIVE
HDR	HEADER	VOL	VOLUME
HOA	HAND-OFF-AUTOMATIC	VTR	VENT THROUGH ROOF
HP	HORSEPOWER		
HPS	HIGH PRESSURE STEAM		
HW	HOT WATER	W/	WITH
HW	HOT WATER CIRCULATING	WAC	WASHINGTON ADMINISTRATIVE CODE
HWCP	HOT WATER CIRCULATING PUMP	WB	WET BULB
HWP	HEATING WATER PUMP	WCO	WALL CLEAN OUT
HX	HEAT EXCHANGER	WG	WATER GAGE
		WH	WALL HYDRANT
IBC	INTERNATIONAL BUILDING CODE	WH	WATER HEATER
IE	INVERT ELEVATION	WS	WASTE STACK
IMC	INTERNATIONAL MECHANICAL CODE	WS	WASHINGTON STATE ENERGY CODE
IMP	IMPELLER	WSEC	WASHINGTON STATE ENERGY CODE

MECHANICAL LEGEND

SYMBOLS	ABBREVIATION	DESCRIPTION	SYMBOLS	ABBREVIATION	DESCRIPTION	SYMBOLS	ABBREVIATION	DESCRIPTION	SYMBOLS	ABBREVIATION	DESCRIPTION
		HEAVY LINE INDICATES NEW WORK			LIGHT LINE INDICATES EXISTING WORK OR BACKGROUND		BDD	BACKDRAFT DAMPER		F	FIRE SPRINKLER LINE
		CENTERLINE			MATCHLINE		MOD	MOTOR OPERATED DAMPER			PENDENT HEAD
		WORK TO BE REMOVED			PIPELINE - NORMAL DIRECTION OF FLOW		AMU	AIR MEASURING UNIT (PROVIDE ACCESS DOOR UPSTREAM AND DOWNSTREAM)			UPRIGHT HEAD
		FLOW ARROW (SUPPLY AIR SHOWN)		GV	GATE VALVE		HC/CC	HEATING OR COOLING COIL			DRY SIDEWALL HEAD
	1	NOTE CALLOUT			GLOBE VALVE		SL	SOUND LINED DUCT			WET ALARM VALVE
	(P-1)	PLUMBING FIXTURE OR DRAIN CALLOUT, SEE SCHEDULE			GAS COCK			FLEXIBLE CONNECTION			ALARM BELL
	1-CWS-4.0	PIPE CALLOUT: GPM (REFERENCED FOR INFORMATION ONLY) SYSTEM DESCRIPTOR PIPE SIZE (IN)		PRV	PRESSURE REGULATING VALVE		FDC	FIRE DEPARTMENT CONNECTION			SUPERVISED VALVE
	HCP.AH01	EQUIPMENT CALLOUT, SEE SCHEDULE			BALANCING VALVE						
	CD2-300	EQUIPMENT IDENTIFICATION NUMBER UNIT LOCATION SYSTEM			WATER HAMMER ARRESTER (PDI SIZE "C" SHOWN)						
	0.00	DIFFUSER OR GRILLE CALLOUT, SEE SCHEDULE			RELIEF VALVE						
	0.00	VOLUME FLOW RATE (CFM), NONE INDICATED FOR TRANSFER GRILLE			BALL VALVE						
	0.00	DIFFUSER OR GRILLE TYPE, SEE SCHEDULE			BUTTERFLY VALVE						
	0.00	TE TOP ELEVATION			PRESSURE REDUCING VALVE						
	0.00	IE INVERT ELEVATION			UNION						
		PIPE TURNING UP OR TOWARD			FLEXIBLE CONNECTION						
		PIPE TURNING DOWN OR AWAY			PIPE ANCHOR						
	SS	SS SANITARY SEWER			PIPE GUIDE						
	ST	ST STORM SEWER			PRESSURE GAGE						
	S OR W	S OR W SOIL OR WASTE			THERMOMETER						
	S OR W	S OR W SOIL OR WASTE BURIED			SIGHT GLASS						
	V	V VENT			STEAM TRAP ASSEMBLY F&T = FLOAT & THERMOSTATIC F = FLOAT; T = THERMOSTATIC B = BUCKET; IB = INVERTED BUCKET LB = LBS/HR RATING						
	RWL	RWL RAIN WATER LEADER			REDUCER CONCENTRIC						
	ORL	ORL OVERFLOW RAIN LEADER			REDUCER ECCENTRIC						
	IWS	IWS INDUSTRIAL WASTE SYSTEM			REDUCER ECCENTRIC						
	CW	CW DOMESTIC COLD WATER			BASKET STRAINER						
	HW	HW DOMESTIC HOT WATER			WYE STRAINER						
	HWC	HWC DOMESTIC HOT WATER CIRCULATION			CHECK VALVE						
	A	A COMPRESSED AIR			AUTOMATIC CONTROL VALVE (PNEUMATIC OPERATOR)						
	G	G NATURAL GAS			AUTOMATIC CONTROL VALVE (ELECTRIC OPERATOR)						
	PD	PD PRESSURE DISCHARGE			STRAINER WITH BLOW-DOWN VALVE						
	D	D CONDENSATE DRAIN		BFP	BACKFLOW PREVENTER RPBP= REDUCED PRESSURE BACKFLOW PREVENTER DCV = DOUBLE CHECK VALVE AUTOMATIC FLOW CONTROL VALVE						
	SW	SW SERVICE WATER		P/T	PRESSURE/TEMPERATURE TEST PORT						
	MPS	MPS MEDIUM PRESSURE STEAM		MAV	MANUAL AIR VENT						
	MPC	MPC MEDIUM PRESSURE CONDENSATE		AAV	AUTOMATIC AIR VENT						
	LPS	LPS LOW PRESSURE STEAM			ROUND DUCT (UP)						
	C	C CONDENSATE			ROUND DUCT (DOWN)						
	PR	PR PUMPED RETURN			90° ELBOW (RADIUS = 1.5 x ELBOW DIAMETER) DUCT: 1ST SIZE (IN) INDICATES SIDE SHOWN, 2ND SIZE (IN) INDICATES SIDE NOT SHOWN, INSIDE FREE AREA						
	PW	PW PUMPED WASTE			DUCT - RISE IN ARROW DIRECTION						
	HWS	HWS HEATING WATER SUPPLY		AD	ACCESS DOOR (AD) OR ACCESS PANEL (AP)						
	HWR	HWR HEATING WATER RETURN		AP	ACCESS DOOR (AD) OR ACCESS PANEL (AP)						
	HPS	HPS HIGH PRESSURE STEAM			SUPPLY AIR DUCT (UP)						
	HPC	HPC HIGH PRESSURE CONDENSATE			SUPPLY AIR DUCT (DOWN)						
	SCHS	SCHS SECONDARY CHILLED WATER SUPPLY			EXH. OR RET. AIR DUCT (UP)						
	SCHR	SCHR SECONDARY CHILLED WATER RETURN			EXH. OR RET. AIR DUCT (DOWN)						
	CHS	CHS CHILLED WATER SUPPLY		TP	TRAP PRIMER						
	CHR	CHR CHILLED WATER RETURN			METER						
	CWS	CWS CONDENSER WATER SUPPLY		SFD	COMBINATION SMOKE/FIRE DAMPER (PROVIDE ACCESS)						
	CWR	CWR CONDENSER WATER RETURN		FD	FIRE DAMPER (PROVIDE ACCESS)						
	GCHS	GCHS GLYCOL CHILLED WATER SUPPLY									
	GCHR	GCHR GLYCOL CHILLED WATER RETURN									
	GHWS	GHWS GLYCOL HEATING WATER SUPPLY									
	GHWR	GHWR GLYCOL HEATING WATER RETURN									

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER:
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

Port of Seattle SEA-TAC INTERNATIONAL AIRPORT
PROJECT: MECHANICAL STANDARDS
SHEET TITLE:
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.