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**SMART**  
 INTERIORS  
 ENERGY

PROJECT NO. 17033 PROJECT MGR. JCDRAWN JAE OF RECORD  
 DRL JC KOD

ISSUED FOR CONSTRUCTION	DATE: 12/21/17
STATUS:	BY:
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PROJECT NO.	DESIGN	CHKD	DRAWN

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**MECHANICAL LEGEND AND ABBREVIATIONS**  
 OF:  
**VERTICAL CIRCULATION IMPROVEMENTS**  
 1001 WESTBROOK STREET  
 PORTLAND, MAINE 04102

DATE	SCALE
12/21/17	NOT TO SCALE
2.M-001	

### AIR DISTRIBUTION SYMBOLS

	RECTANGULAR DUCT. (FIRST NUMBER IS SIDE SHOWN) DIMENSIONS IN INCHES
	12 INCH ROUND DUCT
	MOTORIZED DAMPER
	FLEXIBLE DUCT
	DUCT FLEXIBLE CONNECTOR (FC)
	DUCT DROPS AND RISES IN DIRECTION OF AIR FLOW
	RETURN DUCT TURNED UP OR DOWN (DASHED)
	SUPPLY DUCT TURNED UP OR DOWN (DASHED)
	EXHAUST DUCT TURNED UP OR DOWN (DASHED)
	ACOUSTICAL LINING (DUCT DIM. FOR NET FREE AREA)
	ROUND DUCT ELBOW DOWN
	ROUND DUCT ELBOW UP
	TRANSITION
	CAP (DUCT AND/OR PIPE)
	INDICATES DUCT, PIPING, EQUIPMENT TO BE REMOVED.
	EA EXHAUST AIR
	RA RETURN AIR
	SA SUPPLY AIR
	VOLUME DAMPER
	FIRE DAMPER
	SMOKE DAMPER
	COMBINATION FIRE/SMOKE DAMPER
	RECTANGULAR ELBOW W/TURNING VANES
	DIRECTION OF AIR FLOW (IN)
	DIRECTION OF AIR FLOW (OUT)
	HUMIDISTAT OR HUMIDITY SENSOR
	THERMOSTAT (T'STAT) OR TEMP. SENSOR
	SMOKE DETECTOR
	AIR TERMINAL I.D.
	DIFFUSER, REGISTER OR GRILLE TAG
	CFM AIR FLOW
	QUANTITY

### PIPING SYMBOLS

	UNION		PG PRESSURE GAUGE AND COCK
	FLANGE		THERMOMETER AND WELL
	PIPE ANCHOR		TEMPERATURE AND PRESSURE TAP (PETE'S PLUG)
	PIPE GUIDE OR SLEEVE		HOSE END DRAIN VALVE WITH CAP
	PIPE ELBOW TURNED DOWN		ORIFICE FLOWMETER
	PIPE ELBOW TURNED UP		FLEXIBLE CONNECTOR
	PIPING TEE-DOWN		EXPANSION JOINT
	PIPING TEE-UP		STEAM TRAP (FLOAT AND THERMOSTATIC INDICATED T.T. THERMOSTAT, B.T. BUCKET TRAP, T.D. THERMODYNAMIC TRAP)
	PIPE RISER		CONCENTRIC REDUCER/INCREASER
	PIPE PITCHES DOWN		ECCENTRIC REDUCER/INCREASER
	GATE VALVE		DIRECTION OF FLOW
	BALL VALVE		PUMP
	BUTTERFLY VALVE (MANUAL)		FINNED TUBE BASEBOARD
	2-WAY CONTROL VALVE		HUMIDIFIER
	3-WAY CONTROL VALVE		DP DIFFERENTIAL PRESSURE TRANSMITTER
	BALANCING VALVE (CIRCUIT SETTER)		FTR-1 FINNED TUBE I.D.
	CHECK VALVE		FTR-10' FINNED TUBE RADIATION TAG
	PLUG VALVE		FTR-2 GPM LENGTH OF FINNED ELEMENT
	GLOBE VALVE		FLOW
	NEEDLE VALVE		
	BACKFLOW PREVENTER		
	SOLENOID VALVE		
	PRESSURE REGULATING VALVE		
	PRESSURE RELIEF VALVE		
	STRAINER		
	STRAINER W/ BLOWDOWN		
	MANUAL AIR VENT		
	AUTOMATIC AIR VENT		
	PRESSURE SWITCH		
	FLOW SWITCH		
	VALVE WITH TAMPER SWITCH		

### GENERAL SYMBOLS

	A1 DETAIL I.D.
	MH401 DETAIL TAG
	1 KEYED NOTE
	EF-1 MECHANICAL EQUIPMENT TAG
	LIMIT OF DEMOLITION
	CONNECTION OF NEW WORK TO EXISTING

### ABBREVIATIONS

AAV AUTOMATIC AIR VENT	ENC ENCLOSURE	PSE PROCESS SOLVENT EXHAUST
ACC AIR COOLED CONDENSER	ER EXHAUST REGISTER	PP POLY-PROPYLENE
ACU AIR CONDITIONING UNIT	(E) EXISTING	PPE PREPURCHASED EQUIPMENT
AD ACCESS DOOR	EXIST EXISTING	PRS PRESSURE REDUCING STATION
AE ACID EXHAUST	FBO FURNISHED BY OWNER	PRV PRESSURE REDUCING VALVE
AFF ABOVE FINISHED FLOOR	FBP FACE AND BYPASS	PVD PNEUMATIC VOLUME DAMPER
AFMS AIR FLOW MEASURING STATION	FC FLEXIBLE CONNECTOR	(R) REMOVE
AHU AIR HANDLING UNIT	FD FIRE DAMPER	RA RETURN AIR
ATC AUTOMATIC TEMPERATURE CONTROL	FG FIBERGLASS	(REL) RELOCATED
AV AIR VENT	F&T FLOAT AND THERMOSTATIC	RF RETURN FAN
BB BASEBOARD	FO FLAT OVAL	RG RETURN GRILLE
BDD BACKDRAFT DAMPER	FTR FINNED TUBE RADIATION	RHC REHEAT COIL
BG BLAST GATE	FS FLOW SWITCH	RM ROOM
BLDG BUILDING	GC GENERAL CONTRACTOR	RR RETURN REGISTER
BOD BOTTOM OF DUCT	GPM GALLONS PER MINUTE	RV RELIEF VALVE
BOP BOTTOM OF PIPE	H HUMIDIFIER	SA SUPPLY AIR
BTU BRITISH THERMAL UNIT	HB HOSE BIBB	SCV SELF CONTAINED VALVE
CBD COUNTER BALANCED DAMPER	HRR HEAT RECOVERY UNIT	SD SMOKE DETECTOR
CD CEILING DIFFUSER	HTR HEATER	SF SUPPLY FAN
CFF CAPPED FOR FUTURE	H & V HEATING AND VENTILATING	SG SUPPLY GRILLE
CFM CUBIC FEET PER MINUTE	HVAC HEATING, VENTILATING AND AIR CONDITIONING	SR SUPPLY REGISTER
CLG CEILING	HW HOT WATER	SS STAINLESS STEEL
CONT CONTINUATION	HX HEAT EXCHANGER	TE TEMPERATURIZED ELEMENT (SENSOR)
CONV CONVECTOR	IN WG INCHES WATER GAUGE	TG TRANSFER GRILLE
COORD COORDINATION	MAU MAKEUP AIR UNIT	TOD TOP OF DUCT
CT COOLING TOWER	MAX MAXIMUM	TOP TOP OF PIPE
CTE CONNECT TO EXISTING	MBH 1000 BTU/HR	TTS TIGHT TO STEEL
CU COPPER	MD MOTORIZED DAMPER	TV TURNING VANE(S)
CUH CABINET UNIT HEATER	ME MECHANICAL ENGINEER	TYP TYPICAL
CV CONTROL VALVE	MFR MANUFACTURER	UH UNIT HEATER
CW COLD WATER	MIN MINIMUM	UIC UP IN CHASE
DC DOUBLE CONTAINED	MPV MULTI-PURPOSE VALVE	UIW UP IN WALL
DDC DIRECT DIGITAL CONTROL	MTD MOUNTED	UV UNIT VENTILATOR
DIA DIAMETER	MUA MAKE UP AIR	VAV VARIABLE AIR VOLUME BOX
DIC DOWN IN CHASE	NPW NON-POTABLE WATER	VB VACUUM BREAKER
DIW DOWN IN WALL	NTS NOT TO SCALE	VCF VALVED AND CAPPED FOR FUTURE
DN DOWN	OA OUTSIDE AIR	VD MANUAL VOLUME DAMPER
DT DROP AND TRANSITION	OBD OPPOSED BLADE DAMPER	VFD VARIABLE FREQUENCY DRIVE
DWG DRAWING	OED OPEN ENDED DUCT	VRF VARIABLE REFRIGERANT FLOW
DWH DOMESTIC WATER HEATER	PAE PROCESS ACID EXHAUST	VOC VOLITILE ORGANIC COMPOUND
EA EXHAUST AIR	PHE PROCESS HEAT EXHAUST	VTR VENT THROUGH ROOF
EF EXHAUST FAN		W/ WITH

**GENERAL NOTE:**  
 1. ALL GENERAL NOTES, SYMBOL LISTS, AND DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL MECHANICAL DRAWINGS FOR THIS PROJECT. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION INTO THE DESIGN.

### PIPING SYSTEMS

	CONDENSATE DRAIN		REFRIGERANT LIQUID
	CHILLED WATER SUPPLY		REFRIGERANT SUCTION
	CHILLED WATER RETURN		TEMPERED CHILLED WATER SUPPLY
	CONDENSER WATER SUPPLY		TEMPERED CHILLED WATER RETURN
	CONDENSER WATER RETURN		ZONE VALVE BOX
	DISTRIBUTION VALVE BOX		
	FREE COOLING SUPPLY		
	FREE COOLING RETURN		
	FUEL OIL SUPPLY		
	FUEL OIL RETURN		
	FUEL OIL VENT		
	GRAVITY STEAM CONDENSATE RETURN		
	GLYCOL		
	HOT/CHILLED WATER RETURN		
	HOT/CHILLED WATER SUPPLY		
	HOT GAS		
	HIGH PRESSURE STEAM		
	HIGH PRESSURE CONDENSATE RETURN		
	HOT WATER SUPPLY		
	HOT WATER RETURN		
	LOW PRESSURE STEAM		
	LOW PRESSURE RETURN		
	MEDIUM PRESSURE STEAM		
	MEDIUM PRESSURE RETURN		
	NON-POTABLE COLD WATER		
	PROCESS COOLING WATER RETURN		
	PUMPED STEAM CONDENSATE		
	PUMPED DISCHARGE		
	POTABLE WATER		
	RELIEF LINE		