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University of Southern Maine

**Science Building Lab A203 Renovation**

70 Falmouth Street  
Portland, ME 04104

NO.	DESCRIPTION	DATE
ISSUED FOR PERMIT		03/17/2016

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

**P-000**

Project Phase: **BID DOCUMENTS**

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	PIPE ELBOW TURNED DN		GLOBE VALVE		STEAM TRAP (FLOAT & THERMOSTATIC INDICATED T.T.= THERMOSTATIC TRAP, B.T.= BUCKET TRAP)		EXPANSION LOOP		CHANGE IN ELEVATION (UP, DOWN, RISE OR DROP)		MOTORIZED DAMPER		REGISTER, GRILLE & DIFFUSER TAG DIFFUSER, REGISTER OR GRILLE No. QUANTITY CFM AIR FLOW
	PIPE ELBOW TURNED UP		LOCKABLE BALL VALVE		PUMP - POINT OF TRIANGLE INDICATES DIRECTION OF FLOW		EXPANSION LOOP (BRAIDED/MANUFACTURED)		SUPPLY DUCT TURNED UP/DN		FLEXIBLE CONNECTION		FIN TUBE TAG FIN TUBE No. LENGTH GPM
	PIPING TEE DOWN		PLUG VALVE		GAS SHUT-OFF VALVE		FLOOR DRAIN		RETURN DUCT TURNED UP/DN		TEMPERATURE SENSOR OR THERMOSTAT (AS SPECIFIED)		VAV TAG VAV No. MINIMUM CFM MAXIMUM CFM GPM
	PIPING TEE UP		2-WAY CONTROL VALVE		HOSE END DRAIN VALVE W/CAP		SHOCK ABSORBER (WATER HAMMER ARRESTER)		EXHAUST DUCT TURNED UP/DN		HUMIDISTAT OR HUMIDITY SENSOR (AS SPECIFIED)		EQUIPMENT TAG TYPE DESIGNATOR NUMBER
	PIPE RISER		3-WAY CONTROL VALVE		THERMOMETER WITH COCK		FIRE DEPARTMENT CONNECTION		ROUND DUCT TURNED UP/DN		ACCESS PANEL		EQUIPMENT TAG (ON FLOOR/ROOF ABOVE) TYPE DESIGNATOR NUMBER
	45° ELBOW DOWN		CHECK VALVE		SOLENOID VALVE		FREE STANDING FIRE DEPARTMENT CONNECTION		MITERED DUCT ELBOW W/TURNING VANES		DUCT SMOKE DETECTOR		DETAIL REFERENCE SYMBOL DETAIL No. SHEET DETAIL LOCATED ON
	PIPING TO BE REMOVED		BALANCING VALVE CIRCUIT SETTER		ORIFICE FLOWMETER		WATER GONG		RADIUS DUCT ELBOW		ROOFTOP EXHAUST FAN		SECTION REFERENCE SYMBOL SECTION No. SHEET SECTION LOCATED ON
	CAPPED PIPING		AIR VENT - REFER TO SPECIFICATIONS		DIFFERENTIAL PRESSURE TRANSMITTER		DUCTWORK - FIRST DIMENSION IS SIDE SHOWN IN INCHES S= SUPPLY, R= RETURN, E= EXHAUST AIR, OA= OUTSIDE AIR, F.O.= FLAT OVAL		DUCT/PIPE CAP (SINGLE/DOUBLE LINE)		ROOFTOP SUPPLY FAN		CEILING DIFFUSER
	CAPPED BELOW FINISHED FLOOR		EXPANSION VALVE (AUTOMATIC)		HUMIDIFIER (DUCT/AHU MOUNTED)		DUCTWORK TO BE REMOVED		VOLUME DAMPER		CEILING DIFFUSER - 4-WAY BLOW		CEILING DIFFUSER - 3-WAY BLOW
	CONCENTRIC REDUCER		RELIEF/SAFETY VALVE		FINNED TUBE BASEBOARD		DUCTWORK TO BE REMOVED		FIRE DAMPER		CEILING DIFFUSER - 2-WAY BLOW		CEILING DIFFUSER - CORNER BLOW
	ECCENTRIC REDUCER		PRESSURE GAUGE WITH COCK		HOSE BIB/WALL HYDRANT		DUCT TRANSITION		SMOKE DAMPER		CEILING RETURN GRILLE		CEILING EXHAUST GRILLE
	DIRECTION OF FLOW		SIGHT GLASS		FLOOR CLEANOUT		SQUARE TO ROUND DUCT TRANSITION		FIRE AND SMOKE DAMPER		POINT OF CONNECTION - EXISTING TO NEW		DIRECTION OF AIR FLOW
	PIPE PITCHES DOWN		PRESSURE REDUCING VALVE		FUSIBLE LINK VALVE		FLEX DUCT - DOUBLE LINE		BACKDRAFT DAMPER				
	PIPE GUIDE		FLOW SWITCH		WALL CLEANOUT		FLEX DUCT - SINGLE LINE						
	EXPANSION JOINT		SELF-CONTAINED TEMP. CONTROL VALVE WITH REMOTE SENSOR		AQUASTAT								

**E1 SYMBOLS LEGEND**

NONE

	ACID WASTE		LOW PRESSURE CONDENSATE		AUTOMATIC AIR VENT		COPPER; CONDENSING UNIT		GRAVITY VENTILATOR		OPPOSED BLADE DAMPER		UNIT HEATER
	AIR RELIEF		LOW PRESSURE STEAM		ABOVE CEILING		CABINET UNIT HEATER		HUMIDIFIER		OUTSIDE DIAMETER		UP IN CHASE
	BOILER BLOW/DOWN		MEDICAL AIR		AIR COOLED CONDENSER		HOSE BIB/B		OPEN ENDED DUCT		UP IN WALL		UNIT VENTILATOR
	CONDENSATE (HVAC DRAIN PAN)		MEDIUM PRESSURE CONDENSATE		AIR CONDITIONING UNIT		COLD WATER; CLOCKWISE		PLUMBING FIXTURE TAG		VENT		VACUUM
	CONDENSATE (HVAC DRAIN PAN)		MEDIUM PRESSURE STEAM		AMERICANS WITH DISABILITIES ACT		DOUBLE CONTAINED		PUMPED DISCHARGE		VACUUM BREAKER		VALVE & CAP FOR FUTURE
	COMPRESSED AIR		MAKE-UP WATER		ACCESS DOOR		DIRECT DIGITAL CONTROL		PRESSURE REDUCING VALVE		VENT TO ROOF		VALVE
	CHILLED WATER RETURN		NITROGEN		ACID EXHAUST		DETAIL		RETURN AIR		WASTE		VENT STACK
	CHILLED WATER SUPPLY		NATURAL GAS		ACID WASTE		DIAMETER		ROOF DRAIN		VOLUME DAMPER - MANUAL		VENT TO ROOF
	CONDENSER WATER RETURN		NATURAL GAS		ABOVE FINISHED FLOOR		DOWN IN CHASE		RECOMMENDATION		WASTE		VENT TO ROOF
	CONDENSER WATER SUPPLY		NITROUS OXIDE		AIR HANDLING UNIT		DOWN IN WALL		REGULAR		WASTE		VENT TO ROOF
	DRAIN		NON-POTABLE WATER		ACCESS PANEL		DOWN		RETURN FAN		WASTE		VENT TO ROOF
	CHILLED WATER RETURN		OXYGEN		APPROXIMATE; APPROXIMATELY		DOWNSPOUT		REHEAT COIL		WASTE		VENT TO ROOF
	CHILLED WATER SUPPLY		PUMPED CONDENSATE		AS PER MFR'S RECOMMENDATIONS		DROP AND TRANSITION		REHEAT COIL		WASTE		VENT TO ROOF
	CONDENSER WATER RETURN		PROCESS COLD WATER RETURN		AUTOMATIC TEMPERATURE CONTROL		DRAIN VALVE		ROOM		WASTE		VENT TO ROOF
	CONDENSER WATER SUPPLY		PROCESS COLD WATER RETURN		ACID WASTE		DRAWING		REDUCED PRESSURE BFP		WASTE		VENT TO ROOF
	DOMESTIC COLD WATER		PROCESS COLD WATER SUPPLY		AIR VENT		EXHAUST AIR		RETURN REGISTER		WASTE		VENT TO ROOF
	DOMESTIC HOT WATER		REFRIGERANT DISCHARGE		BALANCING COCK		EXHAUST GRILLE		RELIEF VALVE		WASTE		VENT TO ROOF
	DOMESTIC HOT WATER RECIRC.		REFRIGERANT LIQUID		BACKDRAFT DAMPER		ELEVATION		RAIN WATER		WASTE		VENT TO ROOF
	DRAIN		REFRIGERANT SUCTION		BARRIER FREE		ELONGATE		SUPPLY AIR		WASTE		VENT TO ROOF
	PUMP FORCE MAIN		REVERSE OSMOSIS WATER		BACKFLOW PREVENTER		ENCLOSURE		SHOCK ABSORBER OF PDI SIZE (" ) AS INDICATED		WASTE		VENT TO ROOF
	FUEL OIL FILL		REFRIGERANT DISCHARGE		BRAKE HORSEPOWER		EXHAUST REGISTER		SELF-CONTAINED VALVE		WASTE		VENT TO ROOF
	FUEL OIL RETURN		REFRIGERANT LIQUID		BUILDING		EXTERNAL STATIC PRESSURE		SMOKE DAMPER		WASTE		VENT TO ROOF
	FUEL OIL SUPPLY		REFRIGERANT SUCTION		BOTTOM OF DUCT		EXPANSION TANK		SUPPLY FAN		WASTE		VENT TO ROOF
	FUEL OIL TANK VENT		REVERSE OSMOSIS WATER		BRITISH THERMAL UNIT		EXISTING		SUPPLY GRILLE		WASTE		VENT TO ROOF
	FEEDWATER		RAIN WATER - ABOVE FLOOR		CONVECTOR		FLOAT AND THERMOSTATIC		SINGLE		WASTE		VENT TO ROOF
	GLYCOL RETURN		RAIN WATER - BELOW GRADE		COUNTER CLOCKWISE		FURNISHED BY OTHERS		SHEET		WASTE		VENT TO ROOF
	GLYCOL SUPPLY		SPRINKLER MAIN PIPING		CUBIC FEET PER MINUTE		FACE AND BYPASS		SPRINKLER		WASTE		VENT TO ROOF
	HUMIDIFICATION LINE		SANITARY SOIL VENT - ABOVE FLOOR		CEILING		FLEXIBLE CONNECTION		SQUARE FEET		WASTE		VENT TO ROOF
	HYDROGEN GAS		TRAP PRIMER - ABOVE FLOOR		CONSTRUCTION MANAGER		FLOOR CLEANOUT		SUPPLY REGISTER		WASTE		VENT TO ROOF
	HEAT PUMP WATER RETURN		TRAP PRIMER - BELOW GRADE		COUNTER; COUNTER TOP		FLOOR DRAIN TAG		SHUT-OFF		WASTE		VENT TO ROOF
	HEAT PUMP WATER SUPPLY		TEMPERED WATER RETURN		CONNECT; CONNECTION		FIRE DAMPER		STAINLESS STEEL		WASTE		VENT TO ROOF
	HIGH PRESSURE CONDENSATE		TEMPERED WATER SUPPLY		CONTINUE; CONTINUATION		FINISH		TRENCH DRAIN		WASTE		VENT TO ROOF
	HIGH PRESSURE STEAM		SANITARY SOIL VENT - ABOVE FLOOR		COORDINATE		FLOOR		TRANSFER GRILLE		WASTE		VENT TO ROOF
	HIGH-TEMP HOT WATER RETURN		SANITARY SOIL VENT - BELOW GRADE		CORRIDOR		FOOTING		TOP OF DUCT		WASTE		VENT TO ROOF
	HOT WATER RETURN		VACUUM (AIR)		CHEMICAL RESISTING		FINNED TUBE RADIATION		TRAP PRIMER		WASTE		VENT TO ROOF
	HOT WATER SUPPLY		VACUUM CLEANING (HOUSE)		COOLING TOWER		FLOW SWITCH		TOTAL STATIC PRESSURE		WASTE		VENT TO ROOF
	INDUSTRIAL WASTE		VACUUM PUMP DISCHARGE		CONNECT TO EXISTING		FORCE MAIN		TIGHT TO STEEL		WASTE		VENT TO ROOF
	INDIRECT WASTE		SANITARY SOIL WASTE - ABOVE FLOOR		CENTER		GENERAL CONTRACTOR		TURNING VANE		WASTE		VENT TO ROOF
	LIQUID NITROGEN		SANITARY SOIL WASTE - BELOW GRADE		CENTERLINE		GENERAL CONTRACTOR		TEMPERED WATER		WASTE		VENT TO ROOF
	LIQUID OXYGEN		SANITARY WET VENT - ABOVE FLOOR				GALLONS PER MINUTE		TYPICAL				
	LOW PRESSURE CONDENSATE		SANITARY WET VENT - BELOW GRADE										
	LIQUID PETROLEUM GAS												

**A1 PIPING LINETYPE LEGEND**

NONE

**A5 ABBREVIATIONS**

NONE

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