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MECHANICAL SYMBOLS AND ABBREVIATIONS

(SOME SYMBOLS MAY NOT BE USED ON THIS PROJECT)

GENERAL	PIPING SYMBOLS (SINGLE LINE)	DUCTWORK	MECHANICAL ABBREVIATIONS
VENTURI AUTOMATIC AIR VENT BACK FLOW PREVENTER BALL JOINT BASKET STRAINER ASSEMBLY BLIND FLANGE STEAM TRAP CAP CONCENTRIC REDUCER ECCENTRIC REDUCER EXPANSION JOINT FLEXIBLE CONNECTION (PIPE) FLOW DIRECTION PRESSURE SWITCH FLOW SWITCH GAUGE COCK CONNECTION GAUGE COCK & PRESSURE GAUGE PIPE ANCHOR PIPE DROP PIPE RISER PIPING GUIDE REFRIGERANT SIGHT GLASS STRAINER (Y TYPE) W/ BLOWDOWN & CAP THERMOMETER TEST WELL UNION CONDENSATE DRAIN EXISTING PIPING FUEL OIL FILL FUEL OIL RETURN FUEL OIL SUPPLY FUEL OIL VENT SPRING ISOLATOR - PIPE OR EQUIPMENT VIBRATION ISOLATOR NEW EQUIPMENT EXISTING EQUIPMENT NEW PIPING/DUCTWORK/EQUIPMENT PIPING/DUCTWORK/EQUIPMENT TO REMAIN PIPING/DUCTWORK/EQUIPMENT TO BE REMOVED PUMP (SCHEMATIC) TURBINE METER ASSEMBLY ORIFICE ASSEMBLY	BALL VALVE BUTTERFLY VALVE CHECK VALVE EXPANSION VALVE FLOAT VALVE GATE VALVE GLOBE VALVE LIQUID SOLENOID VALVE MOTOR OPERATED, STRAIGHT THRU VALVE MOTOR OPERATED, 3-WAY CONTROL VALVE O.S. & Y. GATE VALVE PLUG VALVE PRESSURE REDUCING VALVE PRESSURE RELIEF VALVE PRESSURE & TEMP. RELIEF VALVE THERMOSTATIC EXPANSION VALVE VALVE W/ HOSE THREAD <p style="text-align: center;">PIPING SYMBOLS (DOUBLE LINE)</p> <p style="text-align: center;">PLAN VIEW</p> CHECK VALVE BUTTERFLY VALVE, LEVER OPERATED, TOP MOUNTED BUTTERFLY VALVE, LEVER OPERATED, SIDE MOUNTED BUTTERFLY VALVE, GEAR OPERATED, SIDE MOUNTED BUTTERFLY VALVE, GEAR OPERATED, TOP MOUNTED BUTTERFLY VALVE, CONTROL VALVE, SIDE MOUNTED BUTTERFLY VALVE, CONTROL VALVE, TOP MOUNTED GLOBE VALVE PLUG VALVE, GEAR TYPE GATE VALVE PLUG VALVE, LEVER TYPE WATER VALVE <p style="text-align: center;">ELEVATION VIEW</p> CHECK VALVE GLOBE VALVE GATE VALVE PLUG VALVE, GEAR TYPE PLUG VALVE, LEVER TYPE	ROUND DUCT SECTION FLAT OVAL DUCT SECTION 12" DIA. ROUND DUCT 12" BY 24" FLAT OVAL DUCT SUPPLY DUCT SECTION, POSITIVE PRESS. EXH., RET., O.A. DUCT SECTION NEGATIVE PRESS. DUCTWORK, FIRST NO. IS VISIBLE DIM. EXISTING DUCTWORK (LIGHT LINES) DUCTWORK TO BE REMOVED ACOUSTICALLY LINED DUCT DUCT ACCESS DOOR FLEXIBLE CONNECTION (DUCT) CHANGE OF ELEVATION IN DIRECTION SHOWN R-RISE D-DROP FIRE DAMPER TYPE "A" SMOKE DAMPER FIRE & SMOKE DAMPER BRANCH DUCT WITH VOLUME DAMPER <p style="text-align: center;">SIDEWALL REGISTER</p> DUCT WITH TURNING VANES PROPORTIONAL SPLIT - DIMENSIONS INDICATE SPLIT DAMPER TYPE INDICATED (OBD, PBD) MOTORIZED DAMPER TYPE INDICATED (OBD, PBD) BACKDRAFT DAMPER, ARROW SHOWS DIRECTION OF AIRFLOW VANED ELBOW (PROVIDE FULL SQUARE OR RECTANGULAR ELBOWS W/ VANES EVEN IF SYMBOL IS MISSING) VANED ELBOW (SHORT RADIUS) STANDARD RADIUS ELBOW SUPPLY AIR DEVICE RETURN AIR DEVICE EXHAUST AIR GRILLE LINEAR SUPPLY AIR DEVICE LINEAR RETURN AIR DEVICE FLEXIBLE DUCT (SINGLE LINE REPRESENTATION) FLEXIBLE DUCT (DOUBLE LINE REPRESENTATION) FAN (SCHEMATIC) DIFFERENTIAL PRESSURE GAUGE	<p>ABV ABOVE</p> <p>AC ABOVE CEILING</p> <p>A/C AIR CONDITIONED</p> <p>ACC AIR COOLED CHILLER</p> <p>AD ACCESS DOOR</p> <p>AF AIR FOL</p> <p>AFI ABOVE FINISHED FLOOR</p> <p>AHU AIR HANDLING UNIT</p> <p>AMCA AIR MOVING AND CONDITIONING ASSOCIATION, INC.</p> <p>AP ACCESS PANEL</p> <p>APPROX APPROXIMATE</p> <p>ARCH ARCHITECTURAL</p> <p>ARI AIR CONDITIONING & REFRIGERATION INSTITUTE</p> <p>ANSI AMERICAN NATIONAL STANDARD INSTITUTE</p> <p>ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS</p> <p>ASTM AMERICAN SOCIETY FOR TESTING MATERIALS</p> <p>AV AUTOMATIC AIR VENT ASSEMBLY</p> <p>B BOILER</p> <p>BDD BACK DRAFT DAMPER</p> <p>BHP BRAKE HORSEPOWER</p> <p>BI BACKWARD INCLINED</p> <p>BLDG BUILDING</p> <p>BSTAT BRITISH THERMAL UNIT</p> <p>BTU BRITISH THERMAL UNIT</p> <p>CD CONDENSATE DRAIN LINE</p> <p>CFM CUBIC FEET PER MINUTE</p> <p>CH CHILLER</p> <p>CHP CHILLED WATER PUMP</p> <p>CLG CONDENSER WATER PUMP</p> <p>CO COIL</p> <p>CONN CONNECTION</p> <p>CONT CONTROLS</p> <p>CP COOLING PUMP</p> <p>CU CONDENSING UNIT</p> <p>DW DRINKING WATER</p> <p>ENTER LINE ENTER LINE</p> <p>DR DRAIN</p> <p>DRY BULB DRY BULB</p> <p>DATA COLLECTION PANEL DATA COLLECTION PANEL</p> <p>DG DOOR GRILLE</p> <p>DIA DIAMETER</p> <p>DN DOWN</p> <p>DWG DRAWING</p> <p>DX DIRECT EXPANSION</p> <p>EACH EACH</p> <p>EAT ENTERING AIR TEMPERATURE</p> <p>EDH ELECTRIC DUCT HEATER</p> <p>EF EXHAUST FAN</p> <p>ELEC ELECTRICAL</p> <p>ELEV ELEVATION</p> <p>EG EXHAUST GRILLE</p> <p>ENT ENTERING</p> <p>EQUIP EQUIPMENT</p> <p>ER EXHAUST REGISTER</p> <p>ESP EXTERNAL STATIC PRESSURE</p> <p>EWT ENTERING WATER TEMPERATURE</p> <p>EXH EXHAUST</p> <p>EXIST EXISTING</p> <p>F DEGREES FAHRENHEIT</p> <p>FBF FAN-POWERED BOX</p> <p>FCU FAN & COIL UNIT</p> <p>FD FIRE DAMPER</p> <p>FLEX FLEXIBLE</p> <p>FLG FLANGE</p> <p>FLR FLOOR</p> <p>FM FACTORY MUTUAL</p> <p>FO FLAT OVAL DUCT</p> <p>FPM FEET PER MINUTE</p> <p>FT FEET, FOOT</p> <p>FS FLOW SWITCH</p> <p>GAL GALLON</p> <p>GALV GALVANIZED</p> <p>GPM GALLONS PER MINUTE</p> <p>HOB HOSE BIBB</p> <p>HR HIGH, HEIGHT</p> <p>HVAC HEATING/VENTILATING/AIR CONDITIONING</p> <p>HWP HOT WATER PUMP</p> <p>HZ HERTZ</p> <p>ID INSIDE DIAMETER</p> <p>IE INVERT ELEVATION (FLOW LINE)</p> <p>IN INCHES</p> <p>INSUL INSULATION</p> <p>IN WG INCHES OF WATER</p> <p>KW KILOWATT(S)</p> <p>L LENGTH</p> <p>LAT LEAVING AIR TEMPERATURE</p> <p>LB POUND</p> <p>LVR LOUVER</p> <p>MAX MAXIMUM</p> <p>MD MANUAL DAMPER</p> <p>MCH MECHANICAL</p> <p>MIN MINIMUM</p> <p>MS MOTOR STARTER</p> <p>NA NOT APPLICABLE</p> <p>N/C NORMALLY CLOSED</p> <p>NC NOT IN CONTACT</p> <p>NO NORMALLY OPEN</p> <p>NT NOT TO SCALE</p> <p>O.A. OUTSIDE AIR</p> <p>OAH OUTSIDE AIR INTAKE HOOD</p> <p>OBD OPPOSED BLADE DAMPER</p> <p>OC ON CENTER</p> <p>PBD PARALLEL BLADE DAMPER</p> <p>PCHP PRIMARY CHILLED WATER PUMP</p> <p>PRESS PRESSURE</p> <p>PRV PRESSURE REDUCING VALVE</p> <p>PSIG POUNDS PER SQUARE INCH (GAUGE)</p> <p>PHL PRESSURE HIGH LIMIT</p> <p>R-22 REFRIGERANT (TYPE AS NOTED)</p> <p>RA RETURN AIR</p> <p>RE:4/M7.01 REFER TO DETAIL 4, SHEET M7.01</p> <p>RET RETURN</p> <p>RG RETURN GRILLE</p> <p>RH RELATIVE HUMIDITY</p> <p>RID DIAMETER</p> <p>RPM REVOLUTIONS PER MINUTE</p> <p>RTU ROOF TOP UNIT</p> <p>SA SUPPLY AIR</p> <p>SCHD SCHEDULE</p> <p>SDHP SECONDARY CHILLED WATER PUMP</p> <p>SD SMOKE DAMPER</p> <p>SEC SECOND</p> <p>SF SUPPLY FAN</p> <p>SMACNA -</p> <p>SP STATIC PRESSURE</p> <p>SPEC SPECIFICATION</p> <p>SF SQUARE FOOT</p> <p>STD STANDARD</p> <p>STL STEEL</p> <p>SW SWITCH</p> <p>TEMP TEMPERATURE</p> <p>THL TEMPERATURE HIGH LIMIT</p> <p>TLL TEMPERATURE LOW LIMIT</p> <p>TSTAT THERMOSTAT</p> <p>TXV THERMOSTATIC EXPANSION VALVE</p> <p>TYP TYPICAL</p> <p>UF UNDER FLOOR</p> <p>UH UNIT HEATER</p> <p>UL UNDERWRITERS LABORATORIES</p> <p>V-12 CONTROL VALVE NUMBER</p> <p>VAV VARIABLE AIR VOLUME</p> <p>VB VALVE BOX</p> <p>VEL VELOCITY</p> <p>VENT VENTILATE</p> <p>VF VENTILATION FAN</p> <p>VOL VOLUME</p> <p>VOLT VOLTAGE</p> <p>W WIDE, WIDTH</p> <p>W/ WITH</p> <p>WB WET BULB</p> <p>W/O WITHOUT</p>
<p>AIR CONDITIONING</p> <p>CMR CONDENSER WATER RETURN</p> <p>CMS CONDENSER WATER SUPPLY</p> <p>CHR CHILLED WATER RETURN</p> <p>CHS CHILLED WATER SUPPLY</p> <p>RL REFRIGERANT LIQUID</p> <p>RS REFRIGERANT SUCTION</p> <p>RHG REFRIGERANT HOT GAS</p> <p>U MAKE-UP WATER</p> <p>D DRAIN LINE</p>	<p>CONTROLS</p> <p>① THERMOSTAT - REWRITE BUILDING</p> <p>② THERMOSTAT SERVING ZONE 3</p> <p>③ HUMIDISTAT SERVING ZONE 3</p> <p>④ THERMOSTAT</p> <p>⑤ HUMIDITY SENSOR</p> <p>⑥ HUMIDITY SENSOR</p>	<p>GENERAL NOTES</p> <p>1. ALL PIPING & DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN FURRED CHASES OR SUSPENDED CEILING.</p> <p>2. FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.</p> <p>3. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF AIR DEVICES.</p> <p>4. INSULATED PIPEWORK SHALL BE SPACED TO ENSURE THAT FULL THICKNESS INSULATION CAN BE APPLIED TO EACH PIPE.</p> <p>5. ALL FLOOR BRANCHES OFF PIPED RISERS SHALL BE PROVIDED W/ SHUT OFF VALVES & VALVED AND CAPPED DRAIN CONNECTION.</p>	<p>MECHANICAL ABBREVIATIONS</p> <p>SA SUPPLY AIR</p> <p>SCHD SCHEDULE</p> <p>SDHP SECONDARY CHILLED WATER PUMP</p> <p>SD SMOKE DAMPER</p> <p>SEC SECOND</p> <p>SF SUPPLY FAN</p> <p>SMACNA -</p> <p>SP STATIC PRESSURE</p> <p>SPEC SPECIFICATION</p> <p>SF SQUARE FOOT</p> <p>STD STANDARD</p> <p>STL STEEL</p> <p>SW SWITCH</p> <p>TEMP TEMPERATURE</p> <p>THL TEMPERATURE HIGH LIMIT</p> <p>TLL TEMPERATURE LOW LIMIT</p> <p>TSTAT THERMOSTAT</p> <p>TXV THERMOSTATIC EXPANSION VALVE</p> <p>TYP TYPICAL</p> <p>UF UNDER FLOOR</p> <p>UH UNIT HEATER</p> <p>UL UNDERWRITERS LABORATORIES</p> <p>V-12 CONTROL VALVE NUMBER</p> <p>VAV VARIABLE AIR VOLUME</p> <p>VB VALVE BOX</p> <p>VEL VELOCITY</p> <p>VENT VENTILATE</p> <p>VF VENTILATION FAN</p> <p>VOL VOLUME</p> <p>VOLT VOLTAGE</p> <p>W WIDE, WIDTH</p> <p>W/ WITH</p> <p>WB WET BULB</p> <p>W/O WITHOUT</p>
<p>HEATING</p> <p>HPC HIGH PRESSURE STEAM CONDENSATE</p> <p>LPC LOW PRESSURE STEAM CONDENSATE</p> <p>315 WATER (PRESSURE IS NOTED)</p> <p>PCR PUMPED CONDENSATE RETURN</p> <p>HWR HEATING HOT WATER RETURN</p> <p>HWS HEATING HOT WATER SUPPLY</p> <p>BFW BOILER FEED WATER</p> <p>TR THERMOSTATIC TRAP</p> <p>FT FLOAT THERMOSTATIC TRAP</p>	<p>DRAWING SYMBOLS</p> <p>① EQUIPMENT MARK NUMBER - CHIP</p> <p>② KEYED NOTE 2</p> <p>③ DETAIL OR PLAN NUMBER 1</p> <p>④ SECTION ARROW - SECTION 1, SHEET M-2</p> <p>⑤ POINT OF CONNECTION/TERMINATION</p> <p>⑥ TYPE "A" AIR DEVICE, 150 CFM</p> <p>⑦ 6" FLEX CONNECTION</p>		

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CONSTRUCTION REISSUE SET

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MECHANICAL COVER SHEET