KEYNOTES - DEMOLITION

ED1 DISCONNECT ELECTRICAL CONNECTIONS TO EXISTING UNIT HEATER AND MAKE SAFE FOR CONNECTION TO NEW UNIT. REFER TO NEW WORK PLANS FOR ADDITIONAL INFORMATION.

ED2 DISCONNECT AND REMOVE EXISTING LOW VOLTAGE OCCUPANCY SENSOR AND REPLACE WITH NEW. REFER TO NEW WORK PLANS FOR ADDITIONAL INFORMATION.

MD1 REMOVE EXISTING STEAM UNIT HEATER, DISCONNECT SUPPLY AND OUTSIDE AIR DUCTWORK. CLEAN AND DISINFECT ASSOCIATED DUCTWORK, DAMPERS, DIFFUSERS, AND REGISTERS. REMOVE OUTSIDE AIR DAMPER ACTUATOR. PROVIDE DUCTWORK CAPS DURING CONSTRUCTION. REMOVE STEAM AND CONDENSATE PIPING BACK TO SHUT OFF VALVE, REPLACE SHUT OFF VALVE IN KIND. PROVIDE INSULATED PIPING CAP DURING CONSTRUCTION. REMOVE CONTROL WIRING BACK TO THE ASSOCIATED WALL THERMOSTAT. REMOVE ASSOCIATED THERMOSTAT, PATCH THE WALL TO MATCH EXISTING.

KEYNOTES - NEW WORK

E1 RECONNECT EXISTING ELECTRICAL BRANCH CIRCUIT TO NEW UNIT HEATER. COORDINATE CONNECTION POINT WITH DIV. 23. PROVIDE WIRE AND CONDUIT TO MATCH EXISTING, AS REQUIRED.

E2 PROVIDE LOW VOLTAGE OCCUPANCY SENSOR WITH AUXILIARY CONTACTS, ACUITY BRANDS CM-PDT-10-R OR EQUAL. CONNECT NEW OCCUPANCY SENSOR TO EXISTING POWER PACK. PROVIDE WIRING PER MANUFACTURER REQUIREMENTS. COORDINATE CONNECTION TO BUILDING MANAGEMENT SYSTEM WITH DIV. 23 CONTRACTOR.

E3 PROVIDE 120V, 1PH. POWER FOR HVAC CONTROLS VIA LOCAL UNSWITCHED RECEPTACLE CIRCUIT. COORDINATE EXACT LOCATION WITH DIV. 23.

M1 PROVIDE NEW STEAM UNIT HEATER, EXTEND EXISTING SUPPLY AND OUTSIDE AIR DUCTWORK AND CONNECT TO THE NEW UNIT WITH A FLEXIBLE DUCT CONNECTION. PROVIDE NEW INTERNALLY INSULATED RETURN AIRPLENUM WITH FILTER ACCESS. EXTEND EXISTING STEAM AND CONDENSATE PIPING AND CONNECT TO THE UNIT, REFER TO TYPICAL DETAILS FOR MORE INFORMATION. PROVIDE HANGER-MOUNT VIBRATION ISOLATORS.

M2 EXISTING OUTSIDE AIR DUCT, CONTRACTOR SHALL FIELD VERIFY DUCT SIZES.

M3 1" EXISTING STEAM AND 3/4" CONDENSATE PIPING; CONTRACTOR SHALL FIELD VERIFY PIPING SIZES.

M4 LINED RETURN PLENUM AND FILTER BOX, PROVIDE 24x10 RETURN OPENING WITH 1/2x1/2 SCREEN MESH.

M5 NEW DUCTWORK. COORDINATE DUCT TRANSITION SIZE IN THE FIELD. PROVIDE FLEXIBLE DUCT CONNECTION. RE-BALANCE EXISTING DIFFUSERS' AIRFLOW IN THE CLASSROOM.
STEAM FAN COIL UNIT SCHEDULE

**GENERAL**

<table>
<thead>
<tr>
<th>Tag</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Location</th>
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**PHYSICAL PERFORMANCE**

<table>
<thead>
<tr>
<th>Type</th>
<th>Watts</th>
<th>CFM ESP (In WG)</th>
<th>Fan Bottom To Space</th>
<th>Inlet Pressure (PSI)</th>
<th>Leaving DB (°F)</th>
<th>MBH</th>
<th>Weight (LB)</th>
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**ELECTRICAL**

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<tr>
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<th>Volts</th>
<th>Features</th>
<th>Phase</th>
<th>Install</th>
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**REMARKS**

- **TYPE REMARKS**
- **RATINGS REMARKS**
- **PHASE REMARKS**
- **INSTALL REMARKS**

1. **COIL PERFORMANCE CERTIFIED IN ACCORDANCE TO** ARI 410, AT 40.0°F EAT
2. SEE DETAIL 1/ME-101
3. CONTRACTOR SHALL FIELD VERIFY AND CHECK COIL ORIENTATION BEFORE ORDERING
4. **UNIT SHALL BE ACOUSTICALLY INSULATED WITH CLOSED CELL INSULATION**

**SEQUENCE OF OPERATION**

1. CONTROLLER SHALL MODULATE THE STEAM VALVE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE. DISCHARGE AIR TEMPERATURE SHALL NOT BE MORE THAN 110°F.
2. **WHEN MIXED AIR TEMPERATURE IS LESS THAN 38°F, THE OUTSIDE AIR DAMPER SHALL CLOSE AND THE FAN SHALL RAMP UP TO MAXIMUM FLOW.**
3. UPON A SIGNAL FROM THE FREEZE STAT, THE OUTSIDE AIR DAMPER SHALL CLOSE, THE FAN SHALL BE AT MAX FLOW, AND AN ALARM SHALL BE GENERATED.
4. CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE USING PROPORTIONAL - INTEGRAL PI CONTROL LOOP MECHANISM.
5. HEATING AND COOLING SYSTEMS IN THE SPACE SHALL BE INTERLOCKED. WHEN THE HEATING SYSTEM IS ENABLED, THE COOLING SYSTEM SHALL BE DISABLED AND VICE VERSA.
6. **WHEN THE SPACE IS UNOCCUPIED FOR HALF AN HOUR, DRAFT THE TEMPERATURE SETPOINT FIVE DEGREES BELOW THE SETPOINT.**
7. TEMPERATURE SETPOINT SHALL BE BY THE BMS BASED ON OCCUPIED/UNOCCUPIED SCHEDULE.
8. OCCUPANTS SHALL BE ABLE TO ADJUST THE SPACE TEMPERATURE SET POINT ±4 DEGREES (ADJ.); BMS SHOULD OVERRIDE THE SETPOINT ACCORDING TO A PRESET SCHEDULE.

**RETURN AIR**

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<th>500 CFM</th>
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| SUPPLY AIR |
| 1000 CFM |

| OUTSIDE AIR |
| MAX 500 CFM |

**CO2**

**AUXILIARY CONTACT**

**LIGHTING OCCUPANCY SENSOR**

**SPACE THERMOSTAT**

**DISCHARGE AIR TEMPERATURE**

**FREEZE STAT**

**MIXED AIR TEMPERATURE**

**OUTSIDE AIR DAMPER**

**MODULATING STEAM VALVE**

**CONTROLLER**

**NOTES:**

1. **EXISTING AC INDOOR UNIT**
2. **EXISTING AC CONDENSING UNIT**
3. **PROVIDE A CURRENT SWITCH TO READ THE STATUS OF THE UNIT.**
4. **PROVIDE A RELAY TO ENABLE/DISABLE THE SYSTEM.**
5. **PROVIDE (2) 24VAC TRANSFORMER FOR THE NEW HVAC CONTROLLER.**

**REVISIONS:**

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