## BOILER REPLACEMENT AT HIGHLAND JR. HIGH SCHOOL

**OGDEN SCHOOL DISTRICT**

325 GRAMERCY AVENUE

OGDEN, UTAH

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**MECHANICAL ENGINEERS**

547 WEST 500 SOUTH SUITE #140

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**PROJECT ENGINEER:**

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**CONSULTANTS**

**ELECTRICAL ENGINEER:**

ENVISION ENGINEERING

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SALT LAKE CITY, UT

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**GENERAL NOTES:**

1. CONTRACTOR SHALL USE DAVIS BACON WAGES DUE TO FEDERAL FUNDING SOURCE.

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### GENERAL
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**PROJECT INFORMATION**

**REVISION:**

**ISSUE TYPE:**

**CONSTRUCTION DOCUMENTS**

**ISSUE DATE:**

MARCH 23, 2022

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**G101**
KEYED NOTES FOR

1. EXISTING UNIT VENTILATOR TO REMAIN.
2. EXISTING FAN COIL UNIT TO REMAIN.
3. EXISTING DRAIN PIPE TO REMAIN.
4. REMOVE BACKDRAFT DAMPER AND ADD NEW RELIEF CONTROL DAMPER (APPROX. 48"X48", FIELD VERIFY). SEE DETAIL FOR INSTALLATION.
5. EXISTING RELIEF HOOD ON ROOF.
6. REPLACE EXISTING HYDROSTATIC DEVICES WITH DIRECT DIGITAL CONTROL DAMPER ACTUATORS.
7. REMOVE HYDROSTATIC DEVICES ON COIL AND RE-PIPE COIL AS PER DETAIL.
8. REMOVE PNEUMATIC THERMOSTAT AND REPLACE WITH DDC THERMOSTAT.
9. REMOVE ALL PNEUMATIC CONTROLS FROM AIR HANDLING UNIT AND REPLACE WITH DDC CONTROLS AS PER DETAIL.
10. REMOVED PREVIOUS BIAS DAMPER TO PROVIDE BIAS PRESSURE IN CHILLER AND CHERRY PIPE AT THIS LOCATION FOR VAV CONTROLS.
11. PROVIDE DIFFERENTIAL PRESSURE SENSOR IN C/HWS AND C/HWR PIPE AT THIS LOCATION AS PART OF BASE BID.
12. PROVIDE DIFFERENTIAL PRESSURE SENSOR IN C/HWS AND C/HWR PIPE AT THIS LOCATION AS PART OF BASE BID.
13. OUTSIDE AIR LOUVER ABOVE LOCKER ROOM AREA.
14. EXISTING WALL MOUNTED FAN COIL TO REMAIN.
15. EXISTING AIR COOLED CHILLER.
16. PROVIDE 120 VOLTS IN J-BOX AT THIS LOCATION FOR VAV CONTROLS.
17. PROVIDE 120 VOLTS IN J-BOX AT THIS LOCATION FOR VAV CONTROLS.
18. PROVIDE 120 VOLTS IN J-BOX AT THIS LOCATION FOR VAV CONTROLS.
19. PROVIDE 120 VOLTS IN J-BOX AT THIS LOCATION FOR VAV CONTROLS.
20. PROVIDE 120 VOLTS IN J-BOX AT THIS LOCATION FOR VAV CONTROLS.
21. PROVIDE 120 VOLTS IN J-BOX AT THIS LOCATION FOR VAV CONTROLS.
BOILER REPLACEMENT AT
HIGHLAND JR. HIGH SCHOOL

DIVISION 26.

1. REMOVE STEAM BOILER RATED AT 5,500,000 BTUH IMPUT; 4,400,000 BTUH OUTPUT.
2. REMOVE STEAM HEADER AND PIPING.
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40. REMOVE STEAM HEADER AND PIPING.

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**EXISTING PUMP SCHEDULE**

<table>
<thead>
<tr>
<th>PUMP TYPE</th>
<th>DISCHARGE</th>
<th>HEAD</th>
<th>FLOW</th>
<th>HP</th>
<th>USE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5&quot; 10 HP</td>
<td>1000 GPM</td>
<td>120</td>
<td>350</td>
<td>300</td>
<td>200</td>
<td>200</td>
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**AIR HANDLING UNIT SCHEDULE**

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<thead>
<tr>
<th>UNIT TYPE</th>
<th>CAPACITY</th>
<th>HSPF</th>
<th>SEER</th>
<th>CFM</th>
<th>HP</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-TON</td>
<td>100</td>
<td>15</td>
<td>12</td>
<td>300</td>
<td>5</td>
<td>5</td>
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</tbody>
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**CONDENSING HOT WATER BOILER SCHEDULE**

<table>
<thead>
<tr>
<th>BOILER</th>
<th>CAPACITY</th>
<th>EFFICIENCY</th>
<th>HEAT</th>
<th>VOLT</th>
<th>AMP</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 HP</td>
<td>100</td>
<td>30%</td>
<td>110</td>
<td>230</td>
<td>10</td>
<td>10</td>
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**HVAC PIPE INSULATION SCHEDULE**

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>INSULATION THICKNESS</th>
</tr>
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| 1" | 3/4"

**PLUMBING FIXTURE SCHEDULE**

<table>
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<tr>
<th>FIXTURE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
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<tr>
<td>TOILET</td>
<td>10&quot;</td>
<td>SPECIFIED</td>
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**CHEMICAL POT FEEDER SCHEDULE**

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<thead>
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<th>FEEDER</th>
<th>CAPACITY</th>
<th>DIAPHRAGM</th>
<th>REMARKS</th>
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<tr>
<td>500 LBS</td>
<td>500</td>
<td>SPECIFIED</td>
<td>500</td>
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</tbody>
</table>

**NATURAL GAS LOAD SUMMARY**

<table>
<thead>
<tr>
<th>LOAD</th>
<th>DESIGN LOAD</th>
<th>MAXIMUM LOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>1000</td>
<td>1500</td>
</tr>
</tbody>
</table>

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**NOTES**

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- **BOXTALF, UTAH 84010**
- **MECHANICAL ENGINEERS & ASSOCIATES**
- **DAVID L. JENSEN**
- **547 WEST 500 SOUTH SUITE #140**

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**M601**
3. CONTROLS UPGRADE FOR AH-1 SHALL BE AS ALTERNATIVE #1.  
4. CONTROLS UPGRADE FOR AH-2 SHALL BE AS ALTERNATIVE #2.  
5. HYDROFOCIC DIFFERENTIAL PRESSURE GYM LOOP (OFFICE, AUDITORIUM, BAND, ART)

1. NEW COIL CONTROL VALVE FOR AH-1 BID AS ALTERNATE #1. SENSOR WILL ONLY BE ON AH-1 AND BE USED TO CONTROL P-1 PARENT.
2. CONTROLS UPGRADE FOR AH-1 SHALL BE TO CONTROL P-5 AND P-6.
4. SAFETIES CIRCUIT SHALL SHUT DOWN AHU ALTERNATE #2.
3. CHILLED WATER ISOLATION VALVE

-- CHILLER/BOILER PLANT CONTROL DIAGRAM --

-- DOMESTIC HOT WATER CONTROL DIAGRAM --

-- AIR HANDLING UNIT CONTROL DIAGRAM --