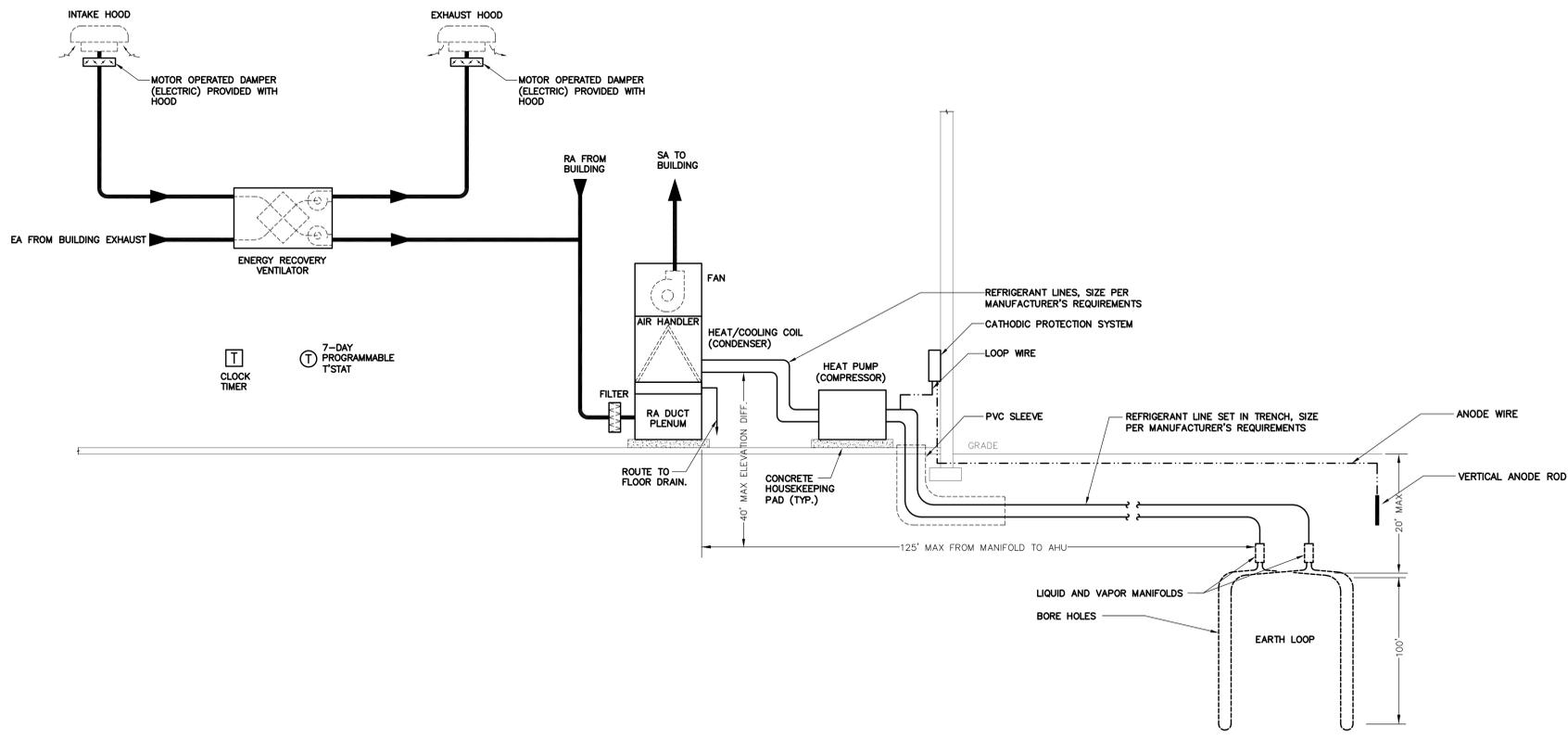


- GENERAL CONTROL NOTES**
- CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND DO NOT SHOW ALL REQUIRED CONTROL DEVICES AND COMPONENTS.
 - ALL WIRING, CONTROL COMPONENTS, DEVICES AND PROGRAMMING SHOWN ON THESE CONTROL DRAWINGS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
 - ALL ACTUATORS SHALL BE OF THE ELECTRICAL TYPE FOR THIS PROJECT (NO PNEUMATIC ACTUATORS ALLOWED).
 - ALL CONTROL COMPONENTS SUCH AS RELAYS, SWITCHES, ETC. SHALL BE MOUNTED IN STEEL ENCLOSURES WITH STEEL MOUNTING BACKPLATES.
 - MECHANICAL CONTRACTOR SHALL PROVIDE ALL WIRING, CONDUIT, TRANSFORMERS, FUSING AND ALL OTHER ELECTRICAL COMPONENTS REQUIRED FOR COMPLETE INSTALLATION.
 - ALL CONTROL WIRING SHALL BE INSTALLED IN CONDUIT.



1 MAINTENANCE BUILDING HVAC FLOW DIAGRAM/CONTROL SEQUENCE
NO SCALE

SEQUENCE OF OPERATION

GENERAL:

- AIR HANDLING UNIT/HEAT PUMP UNIT SHALL BE CONTROLLED AND OPERATED BY A 7-DAY PROGRAMMABLE THERMOSTAT.
- ENERGY RECOVERY VENTILATOR SHALL BE INDEXED TO RUN BY A CLOCK TIMER. WHEN INDEXED TO RUN/STOP THE DAMPERS SHALL OPEN/CLOSE AND FANS SHALL START/STOP. REFER TO OCCUPANCY SCHEDULE BELOW.

OCCUPIED: 6AM - 6PM (ADJ.)

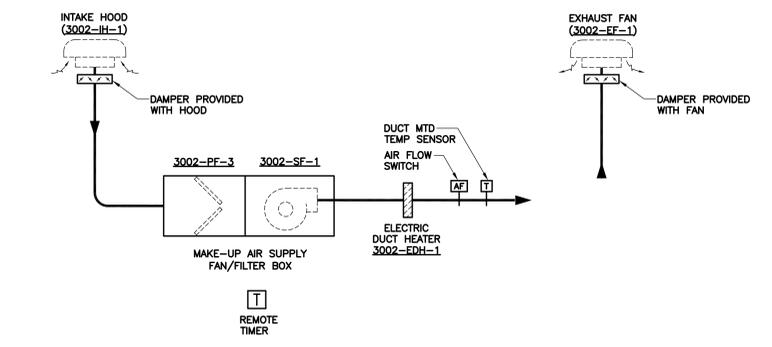
- AHU FAN SHALL RUN CONTINUOUSLY WHILE UNIT CYCLES HEATING OR COOLING TO MAINTAIN A SPACE SET POINT OF 75°F (ADJ.)
- ENERGY RECOVER VENTILATOR DAMPERS SHALL OPEN AND FANS SHALL RUN CONTINUOUSLY.

UNOCCUPIED: 6PM - 6AM (ADJ.)

- AHU SHALL CYCLE FAN AND HEATING OR COOLING COILS TO MAINTAIN A SPACE SET POINT OF 65°F (ADJ.) IN HEATING MODE AND 80°F (ADJ.) IN COOLING MODE.
- ENERGY RECOVER VENTILATOR SHALL BE DISABLED, DAMPERS SHALL BE CLOSED.

EMERGENCY HEAT:

- THE AIR HANDLER IS EQUIPPED WITH AN ELECTRIC HEATING COIL FOR EMERGENCY HEAT. IF HEAT PUMP/AIR COIL CANNOT MAINTAIN SPACE TEMPERATURE THE ELECTRICAL COIL SHALL BE ENABLED.



2 MAINTENANCE GARAGE AIR CONTROL DIAGRAM

SEQUENCE OF OPERATION

GENERAL:

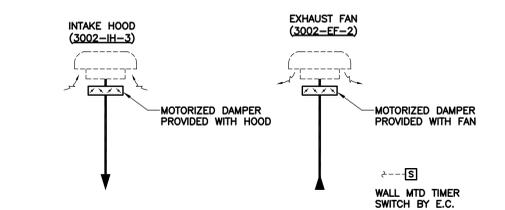
- SUPPLY FAN AND EXHAUST FAN SHALL BE CONTROLLED AND OPERATED BY A REMOTE TIMER. REFER BELOW FOR OCCUPANCY SCHEDULE
- ELECTRIC DUCT HEATER SHALL BE INDEXED TO RUN BY DUCT MOUNTED TEMPERATURE SENSOR.

OCCUPIED: 6AM - 6PM (ADJ.)

- DAMPERS SHALL FULLY OPEN, SUPPLY FAN AND EXHAUST FAN SHALL RUN CONTINUOUSLY WHILE DUCT HEATER CYCLES TO MAINTAIN A LEAVING AIR TEMP OF 60°F (ADJ.)

UNOCCUPIED: 6PM - 6AM (ADJ.)

- DAMPERS SHALL FULLY CLOSE, SUPPLY FAN AND EXHAUST FAN SHALL BE DISABLED.
- DURING UNOCCUPIED TIMES THE UNIT HEATER SHALL MAINTAIN SPACE TEMPERATURE, REFER TO UNIT HEATER CONTROL DIAGRAM.



4 EXHAUST FAN/INTAKE HOOD CONTROL DIAGRAM

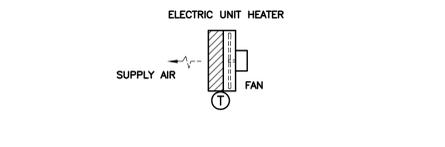
SEQUENCE OF OPERATION

GENERAL:

THE EXHAUST FAN, AND MOTOR OPERATED DAMPERS SHALL BE OPERATED BY A WALL MOUNTED TIMER SWITCH.

OPERATION:

EXHAUST FAN MOTOR SHALL ENERGIZE AND DAMPERS LOCATED AT INTAKE HOOD AND FAN INLET SHALL FULLY OPEN WHEN TIMER SWITCH IS TURNED ON. FAN MOTOR SHALL DE-ENERGIZE AND DAMPERS LOCATED AT INTAKE LOUVER AND FAN INLET SHALL FULLY CLOSE WHEN TIMER STOPS



3 UNIT HEATER CONTROL DIAGRAM

SEQUENCE OF OPERATION

GENERAL:

ELECTRIC UNIT HEATER SHALL BE CONTROLLED BY UNIT MOUNTED THERMOSTAT. THE ELECTRIC UNIT HEATER SHALL OPERATE TO MAINTAIN A ROOM TEMPERATURE SET POINT OF 65°F (ADJ.)

BID DOCUMENTS 7/1/2011

Revisions	Date

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I hereby certify that this Plan, Specification, or Report was prepared by me, or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Oregon.

Signature: Warren L. Lloyd
Name: Warren L. Lloyd
Discipline: Mechanical
Oregon Registration No. 78701PE Expiration date: 12.31.12
Date Issued: **/**

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NATIONAL CEMETERY ADMINISTRATION

Drawing Title
MAINTENANCE BLDG CONTROL DIAGRAMS
Approved: Director, Office of Construction Management

Project Title
REPLACE ADMINISTRATION AND MAINTENANCE BUILDING AND SITE IMPROVEMENTS
Building Number: **3002**
Checked: **DavBod**
Drawn: **JamTho**
Location: **EAGLE POINT NATIONAL CEMETERY 2763 RILEY ROAD EAGLE POINT, OR 97524**

Date: **7-1-2011**
Project No: **906CM3009**
DRAWING NO.: **H-3002-3.1**
Dwg. 129 OF 181