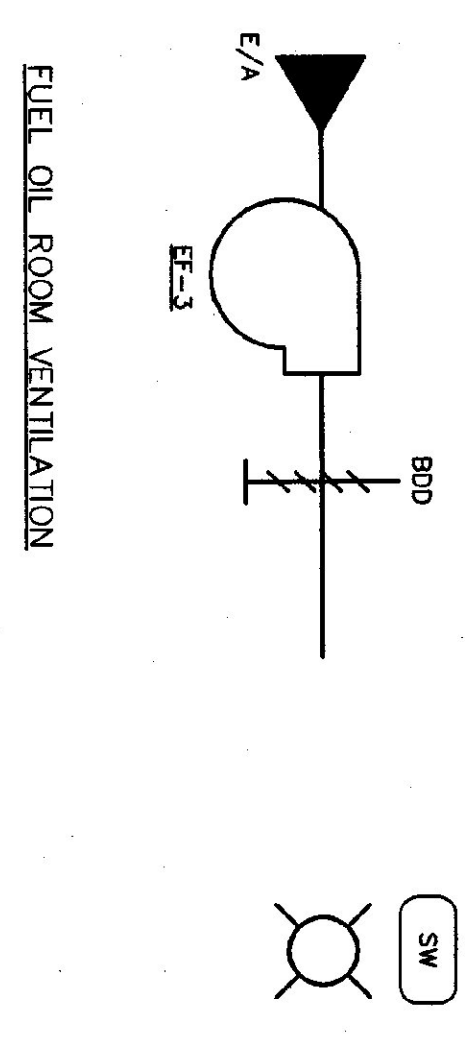


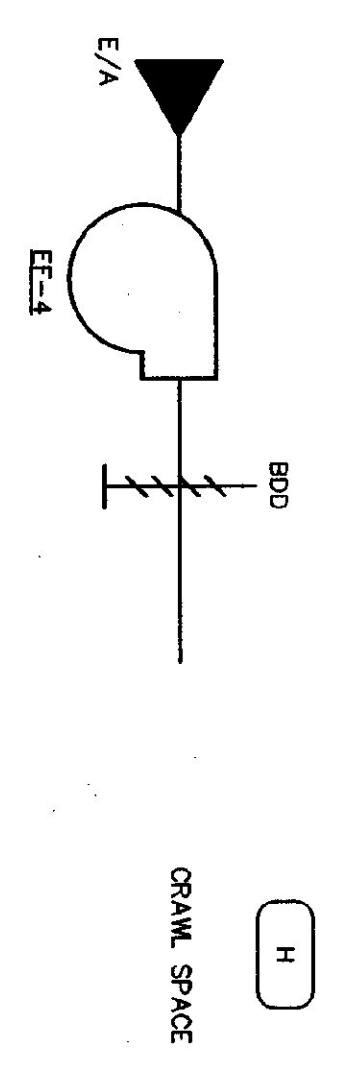
**BOILER COMBUSTION AIR CONTROL**

Provide combustion air and associated ventilation motor operated dampers as indicated for each boiler. Provide controls and interlocks to open one combustion air and associated ventilation damper when its dedicated boiler operates and to close when boiler is not operating.



**FUEL OIL ROOM VENTILATION**

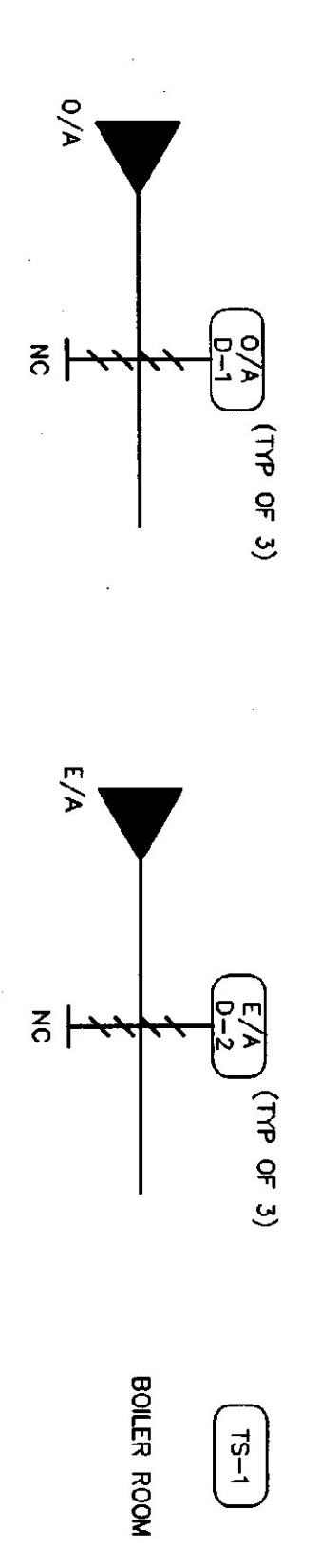
A wall mounted switch with pilot light shall be manually switched ON/OFF to start/stop EF-3. Make-up air will be provided by building infiltration. Control and wiring shall be provided by Electrical Contractor per Electrical Drawings.



**FUEL OIL ROOM HUMIDITY CONTROL (EF-4)**

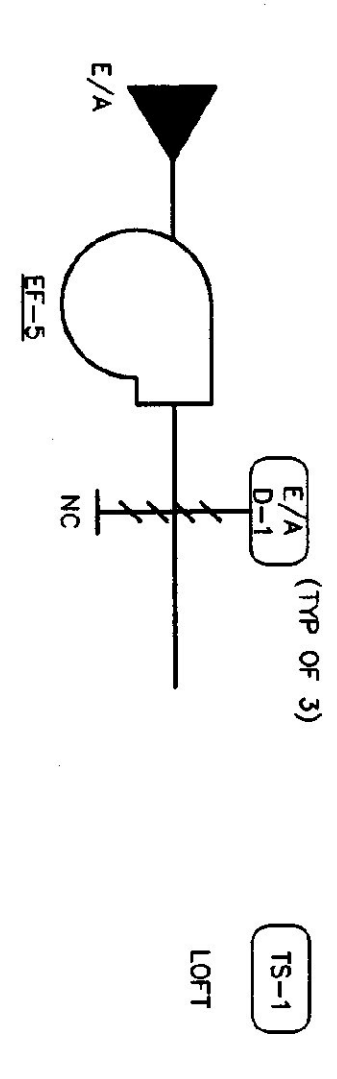
**CRAWL SPACE HUMIDITY CONTROL (EF-4)**

A line voltage humidity switch shall start EF-4 when set point is exceeded. When humidity is reached for set stop. Humidity shall be supplied by ATC Contractor and wires and installed by Electrical Contractor per Electrical Drawings.



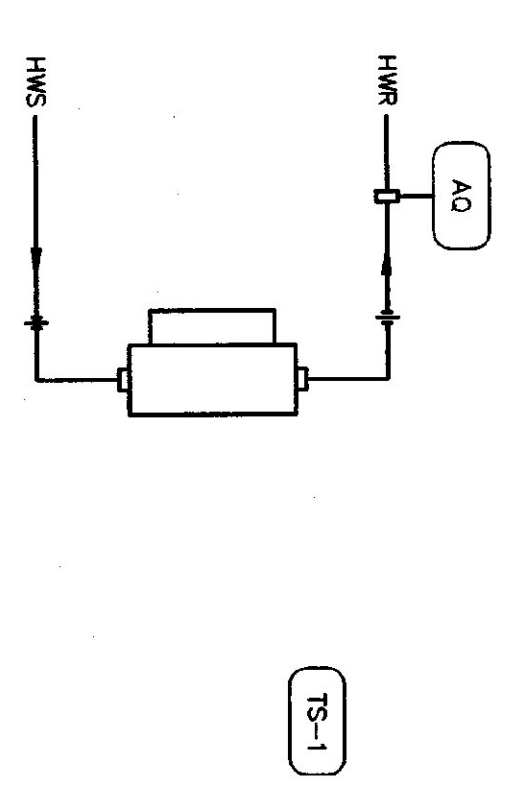
**MECHANICAL ROOM GRAVITY VENTILATION**

A low voltage electric thermostat (rev. acting) shall open the two position outside air dampers (2a) (low combustion air dampers) and two position outside air dampers (2b) (high ventilation dampers) when set point is exceeded. When thermostat is satisfied dampers shall close. Note: These are the same automatic dampers used for boiler combustion air control.



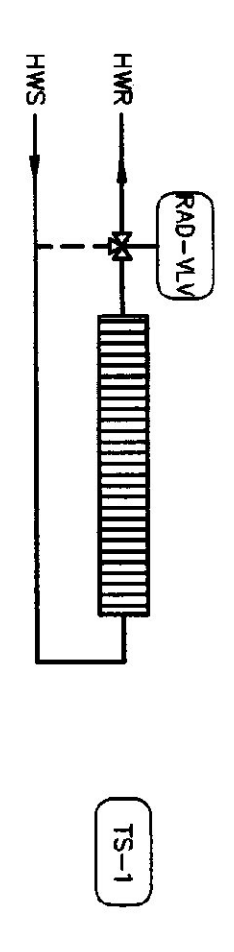
**LOFT VENTILATION (Mechanical)**

An electric line voltage thermostat (rev. acting) as indicated shall open EF-5 E/A damper when set point is exceeded. A damper limit switch shall start EF-5 when damper is open.



**UNIT HEATER CONTROL**

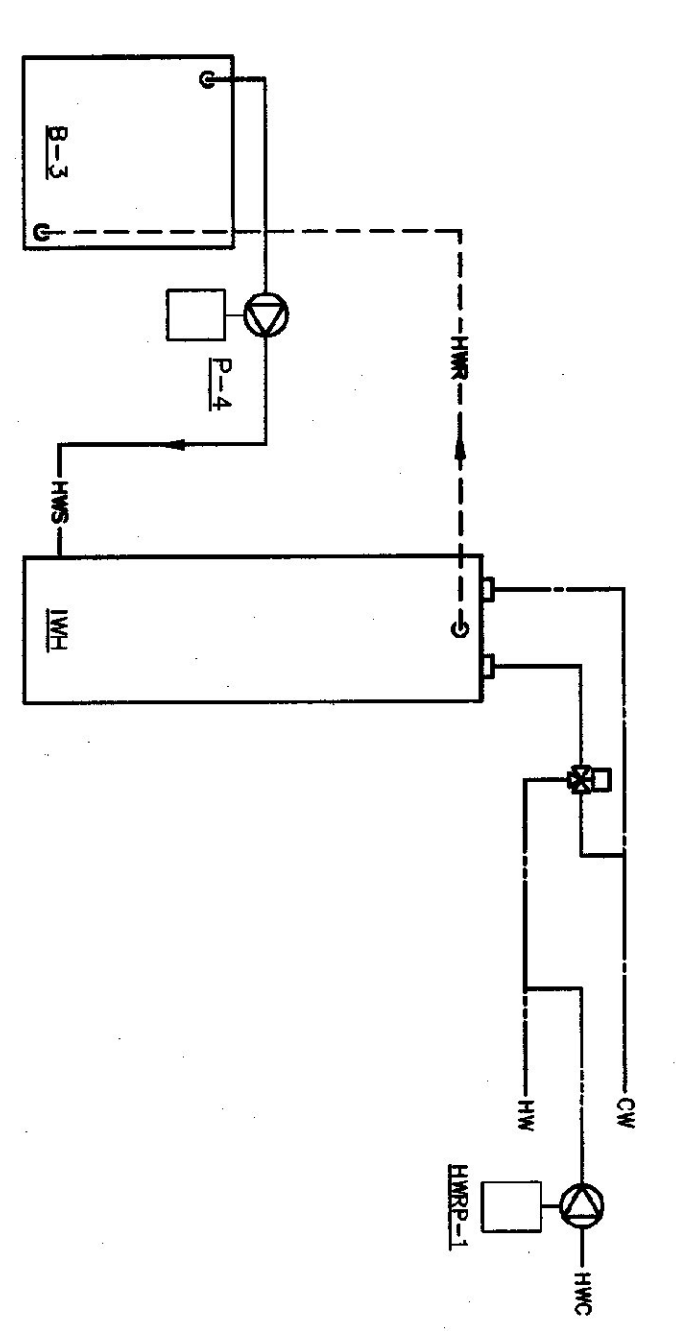
A wall mounted line voltage thermostat (as indicated) shall start the heater fan when room temperature is below heating set point. A stop-on-line voltage thermostat shall stop the heater fan when room temperature reaches 120°F. ATC shall furnish thermostat and equivalent to Electrical Contractor for wiring per electrical drawings.



**PANEL RADIATION CONTROL**

**RADIATION CONTROL**

Provide a low voltage heating thermostat as indicated. When space temperature drops below set point, 3-way HW valve shall allow flow through radiation. When space temperature reaches set point, 3-way HW valve shall by-pass radiation. HW valve shall be "fail open" type. (flow through radiation)



**DOMESTIC HOT WATER HEATING CONTROL**

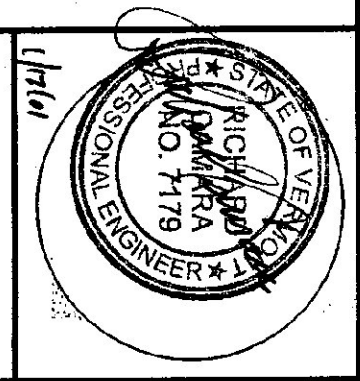
**DOMESTIC HW HWL CONTROL**

1. On a call for heating by tank temperature sensor (furnished by HWL) valve B-3 shall fire and P-4 shall start. When temperature sensor is satisfied boiler B-3 and P-4 shall stop. Tank temperature sensor shall be set for 120°F (adj). Thermostatic mixing valve (by others) is used as an anti-scald valve for fixtures reaching 120°F hot water.

2. Building hot water re-circulation pump HWRF-1 shall operate continuously in occupied time period and shall be off during unoccupied time period.

**GENERAL NOTES:**

ALL MOTORS, INCLUDING DAMPER OPERATORS SHALL BE PROVIDED WITH HAND-OFF-AUTO SWITCHES.



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**WILLISTON INFORMATION CENTER**  
189 SOUTHBOUND  
STATE PROJECT # IM-BLDG (4)

**HVAC FLOW SCHEMATIC**

DRAWN:	PROJNO:
J.LAMOTHE	10215
CHECKED:	DATE:
W.COOK	JAN 15, 2001

**H-7sb**