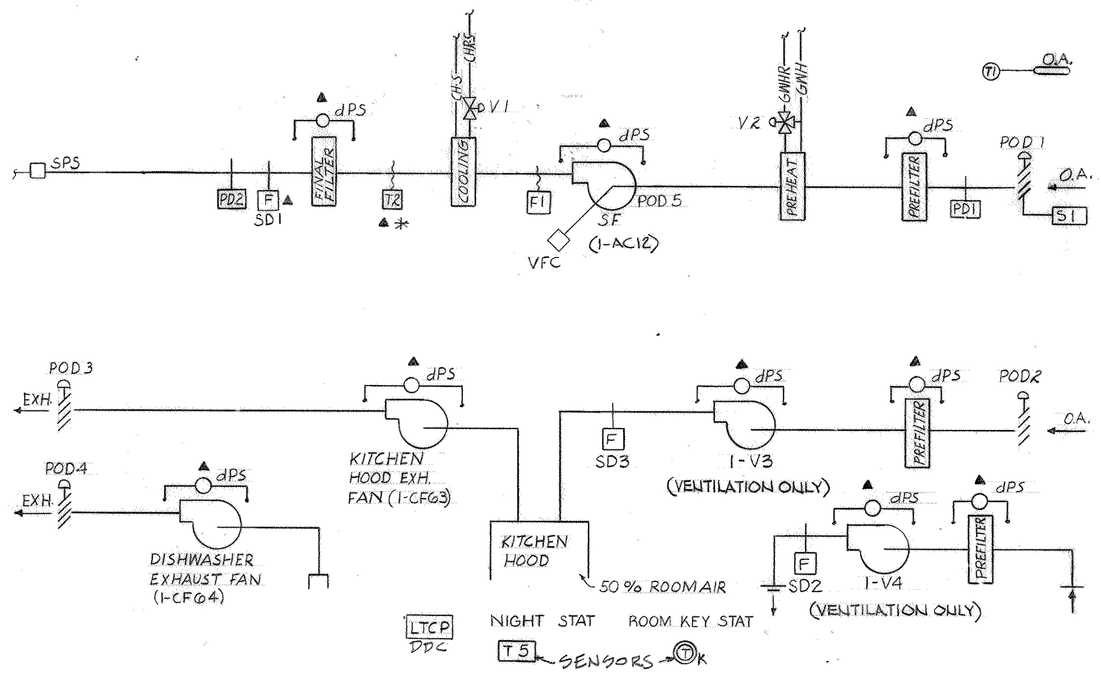


CANTEEN SYSTEM - MEDIUM PRESSURE 100% O.A.
1-AC12, 1-H&V3, 1-H&V4

OPERATING SEQUENCE

1. SYSTEM OPERATION IS STARTED AND STOPPED FROM THE ECC. WHEN STARTED, POD1 OPENS. WHEN POD1 IS OPENED, END SWITCH S1 STARTS SF, 1-CF63, 1-CF64, VENTILATING UNITS 1-V3 AND 1-V4 AND POD2, POD3 AND POD4 OPEN. WHEN STOPPED, SF, 1-CF63, 1-CF64, VENTILATING UNITS 1-V3 AND 1-V4 STOP. POD2, POD3 AND POD4 CLOSE, AND AFTER 2-MINUTE DELAY (ADJUSTABLE 0 TO 5 MINUTES), POD1 CLOSES. COMMANDS FROM ECC ARE VIA DDC PANEL.
2. DURING OPERATION, T-2 MODULATES V-2 TO MAINTAIN 54°F.
3. DURING OPERATION, T-2 MODULATES V-1 TO MAINTAIN 54°F. (SEE SUPPLY AIR TEMPERATURE RESET BELOW.)
4. DURING OPERATION WHEN OA AT T-1 IS ABOVE 55°F., T-1 CLOSES V-2 TO COIL.
5. ELECTRIC FREEZESTAT F1 STOPS SF WHENEVER TEMPERATURE IS BELOW 36°.

STARTING AND STOPPING

1. WHEN SYSTEM OPERATION IS STARTED FROM ECC, PRESSURE SWITCH PD1 STOPS SUPPLY FAN SHOULD O.A. PLENUM PRESSURE FALL BELOW MINUS 2" W.G. PRESSURE SWITCH PD2 STOPS SF SHOULD PRESSURE RISE ABOVE 4" W.G.

FAN CAPACITY CONTROL

1. SEE DWG. 1-H93.

OCCUPIED-UNOCCUPIED MODES

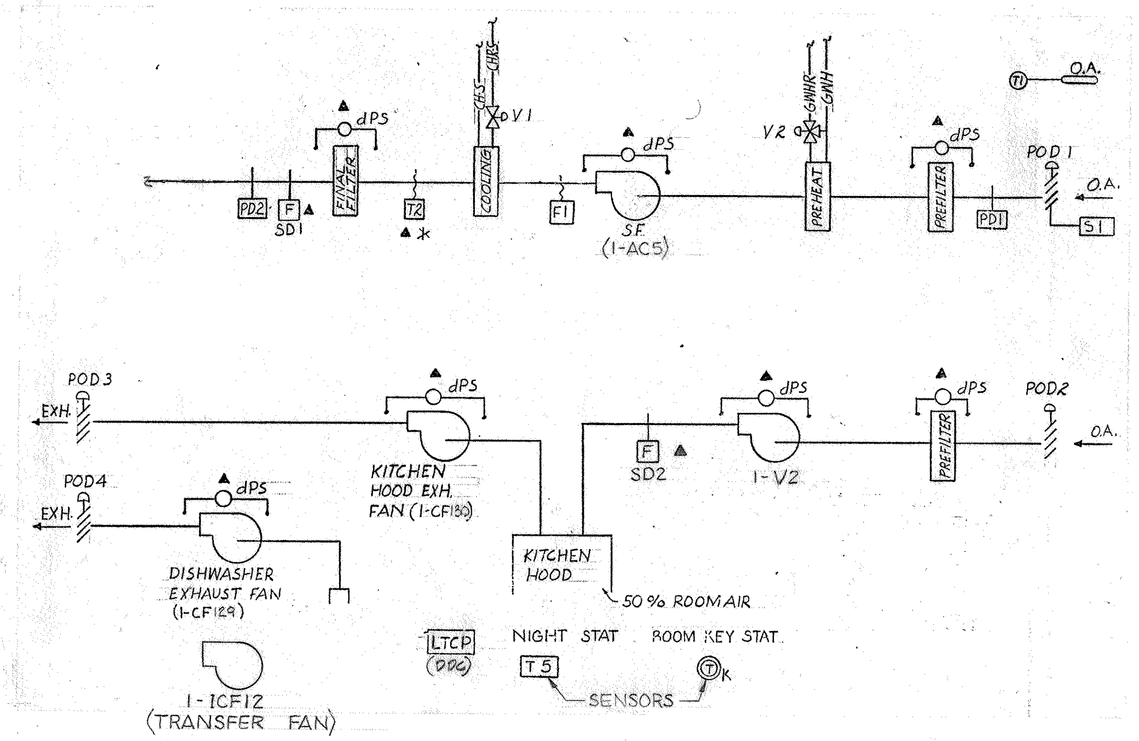
1. SYSTEM MODE IS CONTROLLED BY ECC PROGRAM TIMER AS FOLLOWS. ON OCCUPIED MODE, SYSTEM OPERATES AS INDICATED ABOVE. ON UNOCCUPIED MODE, SYSTEM IS STOPPED AND WHEN O.A. AT T1 IS BELOW 50°F., NIGHT STAT T-5 CYCLES SF WITH POD1 OPEN TO MAINTAIN 72°F.
2. OCCUPIED MODE IS 0600 TO 2100.

SMOKE CONTROL

1. WHEN SMOKE IS SENSED AT SD1 OR SD2 OR SD3, SF, VENTILATING UNITS 1-V3 AND 1-V4 STOP. POD1 AND POD2 CLOSE; AND 1-CF63 AND 1-CF64 RUN.

SUPPLY AIR TEMPERATURE RESET (OCCUPIED CYCLE)

1. KEY ROOMSTAT WITH GREATEST COOLING DEMAND RESETS T-2 TO MINIMUM TEMPERATURE REQUIRED.
2. KEY ZONES ARE INDICATED ON DRAWINGS.



DIETETIC SYSTEM-MEDIUM PRESURE 100% OA.
1-AC5, 1-V2

OPERATING SEQUENCE

1. SYSTEM OPERATION IS STARTED AND STOPPED FROM THE ECC. WHEN STARTED, POD1 OPENS. WHEN POD1 IS OPENED, END SWITCH S1 STARTS SF, 1-CF129, 1-CF130, 1-ICF12 AND VENTILATING UNIT 1-V2 AND OPENS POD2, POD3 AND POD4. WHEN SYSTEM IS STOPPED, SF, 1-CF129, 1-CF130, 1-ICF12, AND VENTILATING UNIT 1-V2 STOP. POD2, POD3 AND POD4 CLOSE, AND AFTER 2-MINUTE DELAY (ADJUSTABLE 0 TO 5 MINUTES), POD1 CLOSES. COMMANDS FROM ECC ARE VIA DDC PANEL.
2. DURING OPERATION, T-2 MODULATES V-2 TO MAINTAIN 54°F.
3. DURING OPERATION, T-2 MODULATES V-1 TO MAINTAIN 54°F. (SEE SUPPLY AIR TEMPERATURE RESET BELOW.)
4. DURING OPERATION WHEN OA AT T-1 IS ABOVE 55°F., T-1 CLOSES V-2 TO COIL.
5. ELECTRIC FREEZESTAT F1 STOPS SF WHENEVER TEMPERATURE IS BELOW 36°.

STARTING AND STOPPING

1. WHEN SYSTEM OPERATION IS STARTED FROM ECC, PRESSURE SWITCH PD1 STOPS SUPPLY FAN SHOULD O.A. PLENUM PRESSURE FALL BELOW MINUS 2" W.G. PRESSURE SWITCH PD2 STOPS SF SHOULD PRESSURE RISE ABOVE 4" W.G.

OCCUPIED-UNOCCUPIED MODES

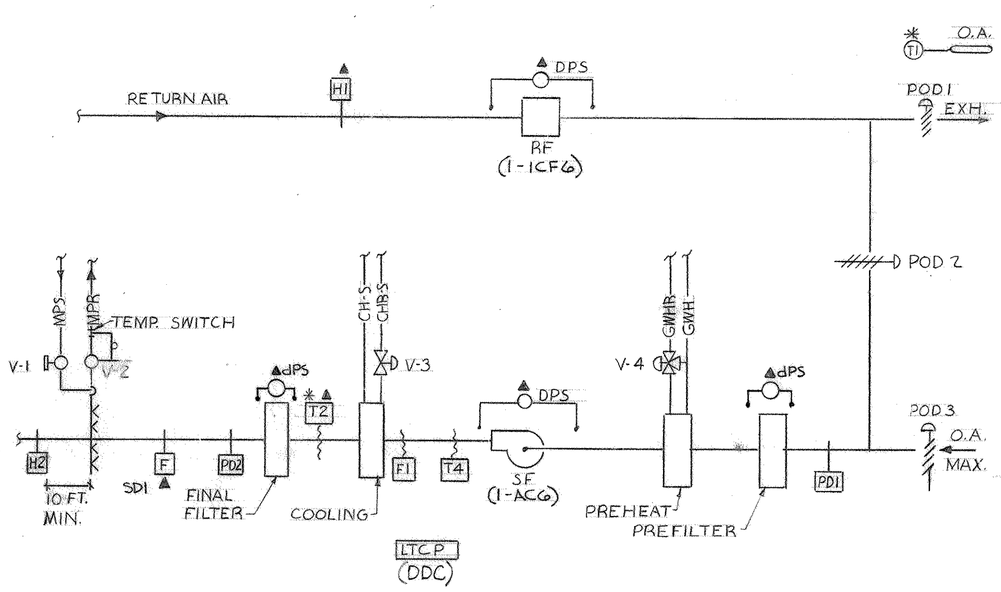
1. SYSTEM MODE IS CONTROLLED BY ECC PROGRAM TIMER AS FOLLOWS. ON OCCUPIED MODE, SYSTEM OPERATES AS INDICATED ABOVE. ON UNOCCUPIED MODE, SYSTEM IS STOPPED AND WHEN O.A. AT T-1 IS BELOW 50°F., NIGHT STAT T-5 CYCLES SF WITH POD1 OPEN TO MAINTAIN 72°F.
2. OCCUPIED MODE IS 0600 TO 1800.

SMOKE CONTROL

1. WHEN SMOKE IS SENSED AT SD1 OR SD2, SF AND VENTILATING UNIT 1-V2 STOP; POD1 AND POD2 CLOSE; POD3 AND POD4 OPEN; AND 1-CF129 AND 1-CF130 RUN. 1-ICF12 STOPS.

SUPPLY AIR TEMPERATURE RESET (OCCUPIED CYCLE)

1. KEY ROOMSTAT WITH GREATEST COOLING DEMAND RESETS T-2 TO MINIMUM TEMPERATURE REQUIRED THROUGH SELECTOR RELAY SR.
2. KEY ZONES ARE INDICATED ON DRAWINGS.



MEDIUM PRESSURE, CONSTANT VOLUME, RETURN AIR SYSTEM
1-AC6 24 HR

OPERATING SEQUENCE

1. SYSTEM OPERATION IS STARTED FROM THE ECC AND RUNS CONTINUOUSLY. WHEN STARTED, SF AND RF START, POD1 AND POD3 OPEN TO MINIMUM POSITION, POD2 REMAINS OPEN. WHEN STOPPED, SF AND RF STOP, POD1 AND POD3 CLOSE, POD2 REMAINS OPEN. COMMANDS FROM ECC ARE VIA DDC PANEL.
2. DURING OPERATION WHEN OA AT T-1 IS BELOW 60°F., T-2 MODULATES V-4, THEN POD1, POD2 AND POD3 AND MODULATES V-3, ALL IN SEQUENCE, ON TEMPERATURE RISE TO MAINTAIN 57°F. PNEUMATIC FREEZESTAT.T-4 OVERRIDES T-2 TO LIMIT MIXED AIR TO 40°F. MINIMUM.
3. DURING OPERATION WHEN OA AT T-1 IS ABOVE 68°F., POD3 OPENS TO MINIMUM, POD1 OPENS, POD2 CLOSES TO MINIMUM; T-2 MODULATES V-3 TO MAINTAIN 57°F. T-1 CLOSES V-4 TO COIL.
4. ELECTRIC FREEZESTAT F1 STOPS SF WHENEVER TEMPERATURE IS BELOW 36°.

STARTING AND STOPPING

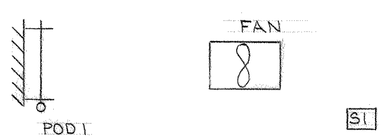
1. WHEN SYSTEM OPERATION IS STARTED FROM ECC, PRESSURE SWITCH PD1 STOPS SUPPLY FAN SHOULD MIXING PLENUM PRESSURE FALL BELOW MINUS 2" W.G. PRESSURE SWITCH PD2 STOPS SF SHOULD PRESSURE RISE ABOVE 4" W.G.

HUMIDITY CONTROL

1. O.A. THERMOSTAT T-1 SHALL CLOSE ON-OFF TWO-WAY CONTROL VALVE V-1 WHEN OUTSIDE AIR RISES ABOVE 70°F., AND OPEN VALVE V-1 WHEN OUTSIDE AIR DROPS BELOW 70°F.
2. DUCT HUMIDITY SENSOR H-1 SHALL MODULATE VALVE V-2 TO MAINTAIN THE DESIRED RELATIVE HUMIDITY (30% RH) SUBJECT TO ITS MODULATING TYPE HIGH LIMIT DUCT HUMIDITY SENSOR H-2 SET AT 80% RELATIVE HUMIDITY. VALVE V-2 SHALL CLOSE WHENEVER SUPPLY FAN IS OFF. VALVE V2 SHALL BE INTERLOCKED WITH TEMPERATURE SWITCH TO KEEP HUMIDIFIER OFF UNTIL CONDENSATE APPROACHES STEAM TEMPERATURE.

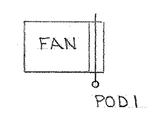
SMOKE CONTROL

1. WHEN SMOKE IS SENSED AT SD1, SF STOPS, RF STOPS, POD1 AND POD3 CLOSE. POD2 IS OPEN.



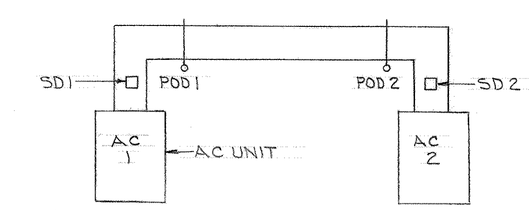
INTERSTITIAL VENTILATION
FANS 1-VAF 49 THROUGH 55
FANS 1-VAF 57 THROUGH 62

1. WHEN FAN IS STARTED BY MANUAL START-STOP BUTTON OR ECC, FAN IS ENERGIZED AND POD1 OPENS. POD1 CLOSES WHEN FAN IS OFF.
2. FANS ONLY TO OPERATE WHEN VENTILATION IS REQUIRED FOR MAINTENANCE PERSONNEL.



GARAGE EXHAUST FANS
(1-VAF39, 40, 41, 42, 43, 44)

1. WHEN FAN IS ENERGIZED BY CO MONITORING SYSTEM, POD1 OPENS (TYPICAL FOR 6 FANS).
2. WHEN FAN IS DEENERGIZED, POD1 CLOSES.
3. SEE C.O. MONITORING SYSTEM SPECIFICATION.



TELEPHONE EQUIPMENT ROOM

1. WHEN TELEPHONE EQUIPMENT ROOM A.C. UNIT (AC1) IS ENERGIZED, POD #1 OPENS AND POD2 CLOSES.
2. WHEN TELEPHONE EQUIPMENT ROOM AC UNIT (AC2) IS ENERGIZED, POD2 OPENS AND POD1 CLOSES.
3. AC1 IS STANDBY FOR AC2.
4. IF SMOKE IS SENSED AT SD1 OR SD2, UNITS ARE SHUT DOWN.

8-0-1-1351

Revisions	Date
"AS BUILT"	6-17-94

RECORD DRAWING
CORRECTED ON BASIS OF DATA
FURNISHED BY THE RESIDENT ENGINEER

RTKL/CSD/HENRY ADAMS (J.V.)
ARCHITECTS AND ENGINEERS
400 E. PRATT STREET
BALTIMORE, MD 21202

Drawing Title: CONTROL DIAGRAMS HVAC

Approved Project Director: Albert Miller

Scale

Checked

Project Title: 324 - BED REPLACEMENT HOSPITAL PHASE II

Building Number: 1

Location: VAMC - BALTIMORE, MD.

Date: 9/1/88

Project No.: 511-001D

DRAWING No.: 1-H91

Dwg. 118 of 123

Veterans Administration

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