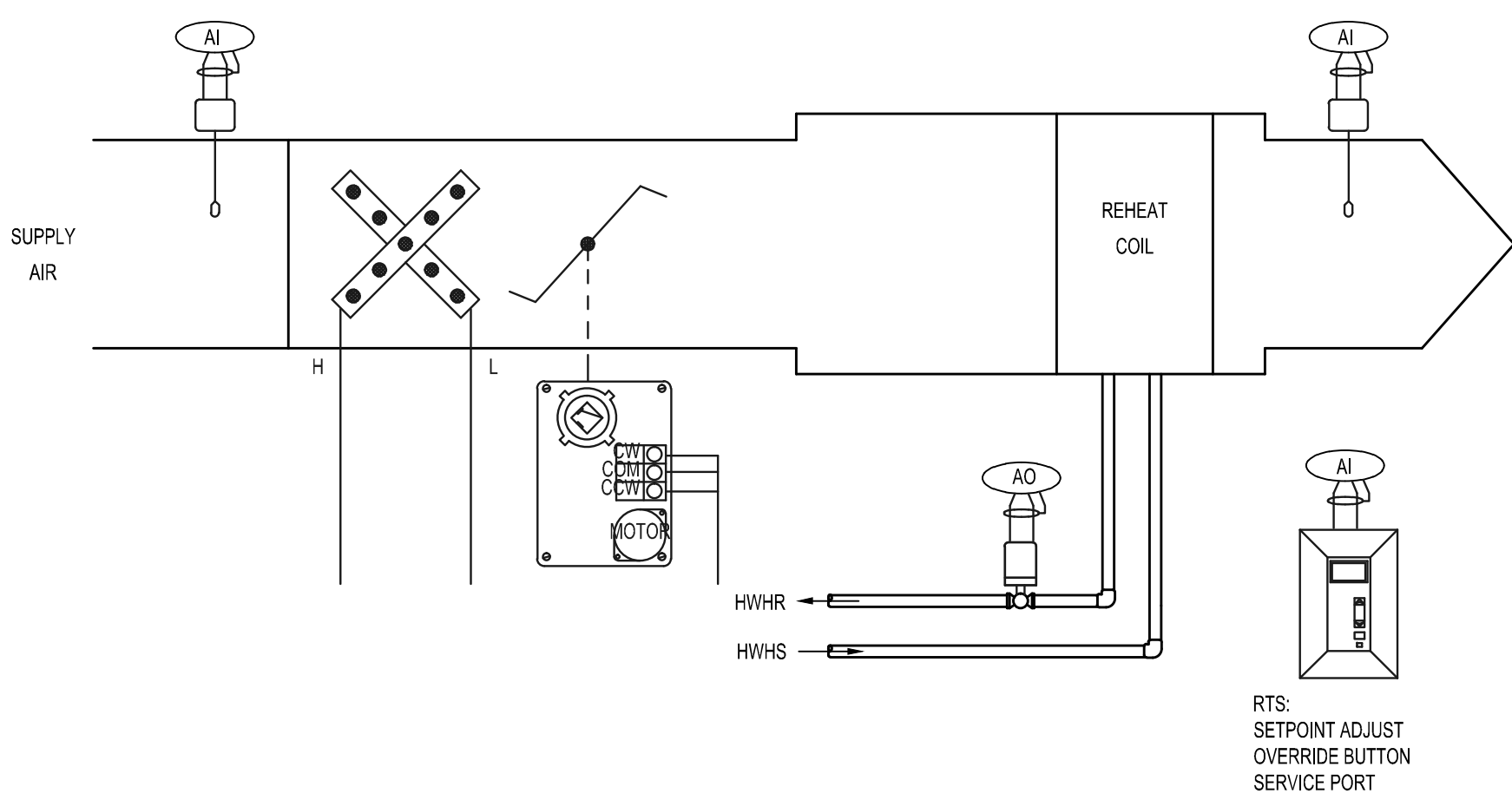


- KEYED NOTES:**
1. REMOVE EXISTING CONTROL, VALVE, STRAINER, ISOLATION VALVES AND APPURTENANT DEVICES, COMPLETE. INSTALL NEW CONTROL, VALVE AND APPURTENANT DEVICES, REFER TO DETAIL. FIELD VERIFY ALL EXISTING PIPE SIZES.
- GENERAL NOTES:**
1. REMOVE AND REINSTALL EXISTING 2X2 LAY-IN CEILING AS REQ'D TO REMOVE/REPLACE EXISTING EQUIPMENT AND INSTALL NEW EQUIPMENT. REPLACE ANY DAMAGED CEILING TILES OR GRID WITH MATERIALS TO MATCH EXISTING CEILING SYSTEM.
 2. PATCH AND PAINT ANY WALLS DAMAGED DURING CONSTRUCTION TO MATCH EXISTING WALL COLOR AND TEXTURE.

1 LEVEL 4, AREA E: HVAC PIPING PLAN
1/8"=1'-0"



TERMINAL AIR BOX W/ REHEAT SEQUENCE OF OPERATION

THE VAV TERMINAL UNIT IS CONTROLLED WITHIN USER DEFINED SEPARATE HEATING AND COOLING MAXIMUM AND MINIMUM SUPPLY AIR VOLUME SETTINGS. THE TERMINAL EQUIPMENT CONTROLLER MONITORS THE ROOM TEMPERATURE SENSOR AND AIR VELOCITY SENSOR. THROUGH 3 PROPORTIONAL, INTEGRAL, AND DERIVATIVE ALGORITHMS, THE CONTROLLER MODULATES THE SUPPLY AIR DAMPER AND REHEAT VALVE TO MAINTAIN THE DESIRED ROOM TEMPERATURE.

DAY (OCCUPIED) OPERATION:

COOLING:

THE COOLING OPERATION FUNCTIONS AS FOLLOWS:

THE ROOM TEMPERATURE IS COMPARED TO THE COOLING SETPOINT.

THE CONTROLLER WILL MODULATE THE SUPPLY AIR DAMPER TO MAINTAIN THE COOLING SETPOINT.

THE SUPPLY AIR VOLUME WILL BE LIMITED BY THE COOLING MINIMUM AND MAXIMUM SUPPLY AIR VOLUME SETTINGS.

THE REHEAT VALVE IS CLOSED.

HEATING:

THE HEATING OPERATION FUNCTIONS AS FOLLOWS:

THE ROOM TEMPERATURE IS COMPARED TO THE HEATING SETPOINT.

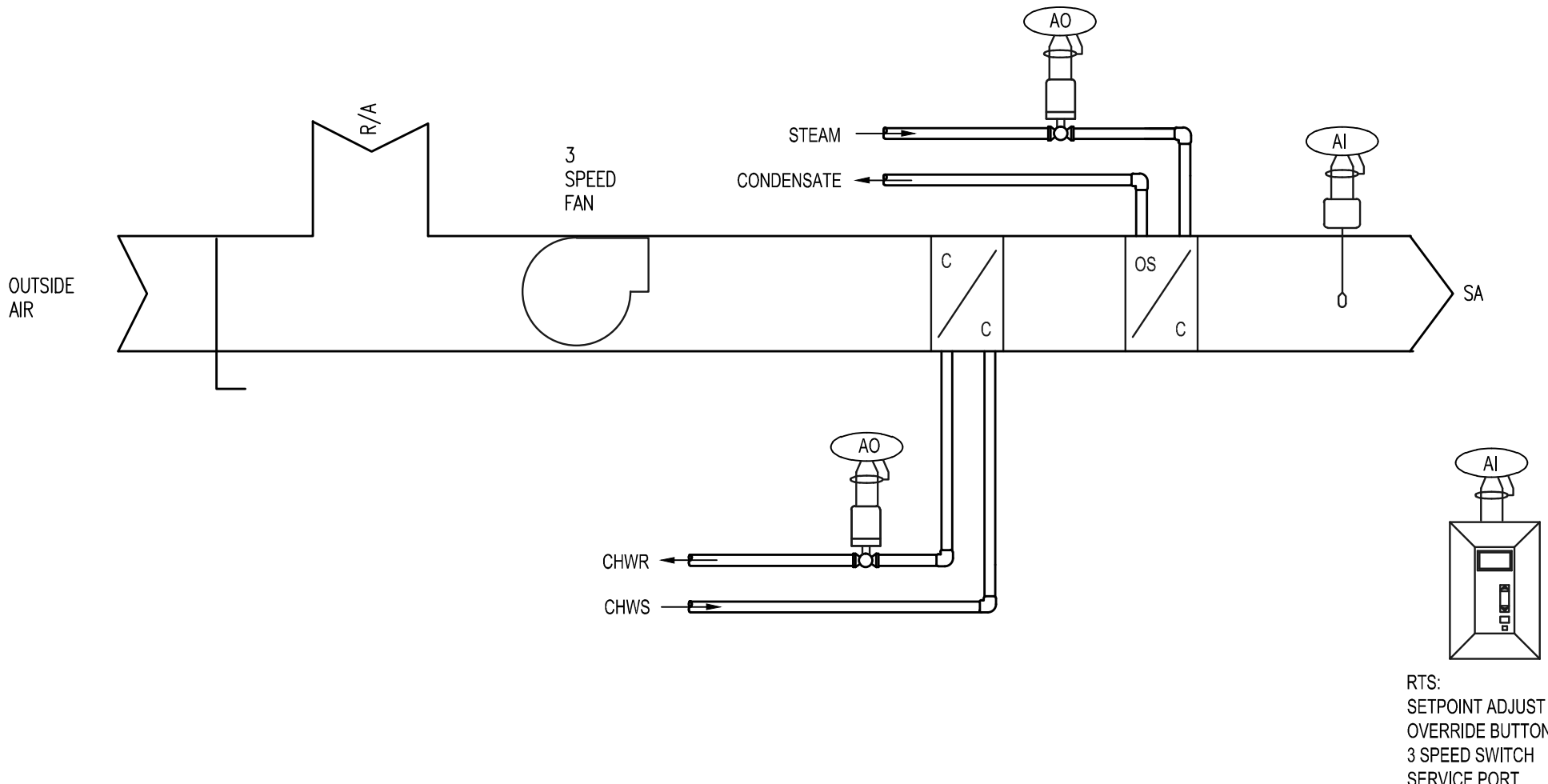
DURING THE HEATING OPERATION, THE CONTROLLER POSITIONS THE SUPPLY AIR DAMPER TO THE HEATING MINIMUM VOLUME SETTING.

THE CONTROLLER WILL MODULATE THE REHEAT VALVE TO MAINTAIN THE HEATING SETPOINT.

NIGHT (UNOCCUPIED) OPERATION:

UPON COMMAND FROM THE STAND-ALONE CONTROL UNIT TO CHANGE OVER TO NIGHT MODE, THE TERMINAL BOX CONTROLLER WILL CONTROL USING THE NIGHT COOLING AND HEATING SETPOINTS.

THE CONTROLLER MAY BE RESET TO THE DAY MODE FOR A PREDETERMINED TIME PERIOD UPON A SIGNAL FROM THE CONTROL SYSTEM OR MANUALLY AT THE ROOM SENSOR.

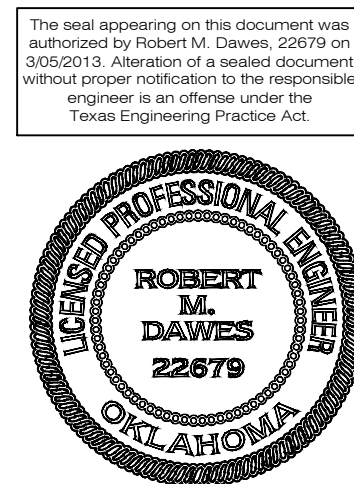
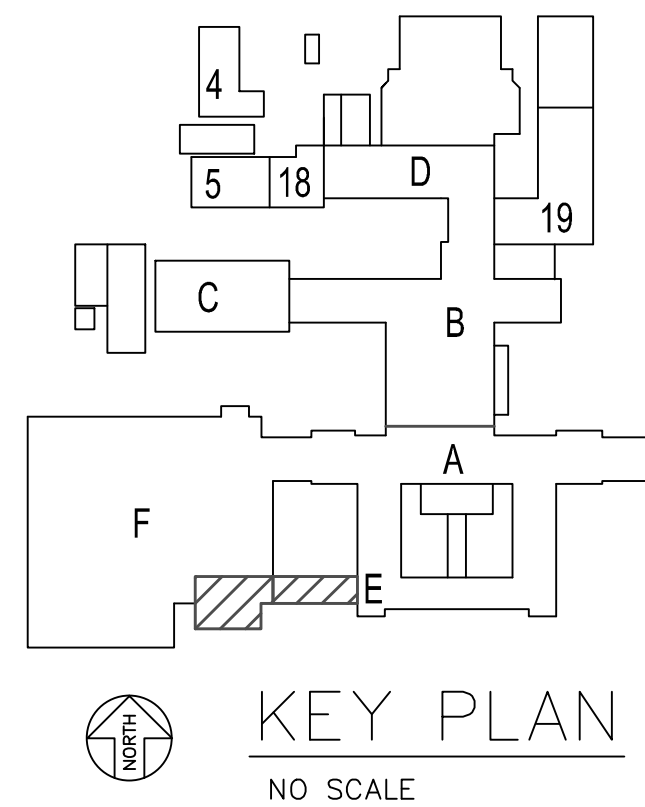


FCU WITH STEAM REHEAT

| TERMINAL AIR DEVICE W/ RE-HEAT CONTROL SCHEDULE | | | |
|---|---------|------------------|--------------------------|
| ROOM TEMPERATURE | °F (-C) | HEATING SETPOINT | COOLING SETPOINT °F (+C) |
| FULL OPEN | | | |
| MAXIMUM AIR | | | |
| SUPPLY AIR | | | |
| REHEAT VALVE | | | |
| HEATING AIR | | | |
| MINIMUM AIR | | | |
| CLOSED | | | |

| REVISIONS: | |
|------------|-----------|
| 1 | 3-28-2013 |
| 2 | |
| 3 | |
| 4 | |
| 5 | |

- GENERAL NOTES:**
1. EXISTING CONDITIONS SHOWN WERE DERIVED FROM OWNER FURNISHED DRAWINGS AND FIELD OBSERVATIONS. FIELD VERIFY LOCATION, SIZE, ROUTING AND QUANTITY OF ALL EQUIPMENT, PIPING, CONDUIT AND SYSTEMS.
 2. SOME EXISTING SYSTEMS AND EQUIPMENT ARE NOT SHOWN FOR CLARITY. FIELD VERIFY EXISTING CONDITIONS.
 3. REUSE EXISTING HANGERS AS APPLICABLE. REPAIR/REPLACE/PROVIDE NEW HANGERS AS REQUIRED. REMOVE HANGERS NOT UTILIZED DURING CONSTRUCTION.
 4. FIELD VERIFY LOCATION AND ROUTING OF ALL MEDICAL GAS PIPING AND EQUIPMENT. WORK ON THESE SYSTEMS IS NOT INCLUDED IN THE SCOPE OF WORK.



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OKLAHOMA REGISTERED ENGINEERING FIRM: 5183

Drawing Title
**LEVEL 4, AREA E:
HVAC PIPING PLAN**
Approved: Division Chief
Approved: Service Director

Project Title
**CORRECT HVAC
DEFICIENCIES IN 5B100
AND BREEZEWAYS**
Building Number
1
Checked
Drawn
Location
**VA MEDICAL CENTER
OKLAHOMA CITY, OKLAHOMA**

Date
MARCH 5, 2013
Project No.
635-12-313
DRAWING NO.
1-M2.01
Dwg. **3** of **12**

DEPARTMENT of
VETERANS AFFAIRS