

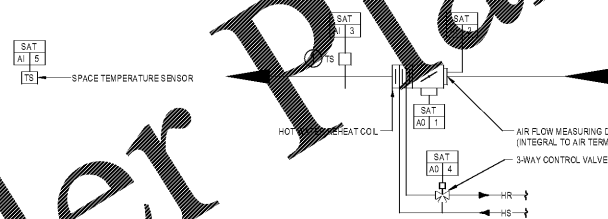
1 **DETAIL - HYDRONIC COIL (3-WAY)**
SCALE: N.T.S.

SEQUENCE OF OPERATION

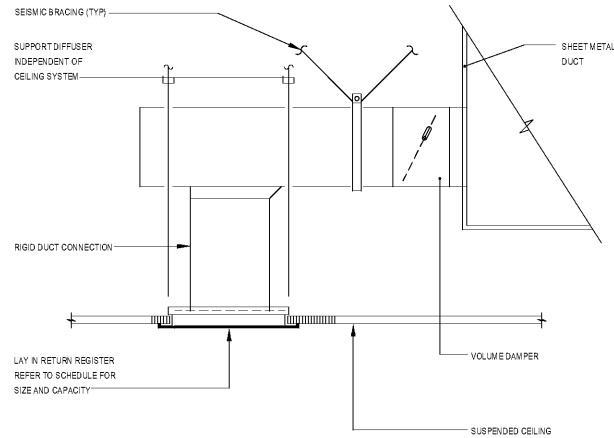
- A. THE VARIABLE VOLUME AIR TERMINAL SHALL OPERATE ON AN OCCUPIED/UNOCCUPIED SCHEDULE. OCCUPIED/UNOCCUPIED MODES SHALL BE AS DETERMINED BY THE OCCUPIED/UNOCCUPIED PROGRAM OF THE BUILDING AUTOMATION SYSTEM (BAS).
- B. OCCUPIED MODE
 1. WHEN THE SPACE TEMPERATURE IS BETWEEN ITS COOLING AND HEATING SETPOINTS THE SUPPLY AIR TERMINAL DAMPER SHALL BE AT ITS MINIMUM POSITION SET POINT.
 2. THE SUPPLY AIR TERMINAL DAMPER SHALL INITIALLY OPEN TO ITS MINIMUM POSITION.
 3. ON A RISE IN SPACE TEMPERATURE ABOVE SETPOINT, THE DAMPER SHALL MODULATE TOWARD ITS MAXIMUM POSITION SET POINT.
 4. ON A DROP IN SPACE TEMPERATURE BELOW COOLING SET POINT, THE DAMPER SHALL MODULATE TOWARD ITS MINIMUM POSITION SET POINT.
 5. WHEN THE DAMPER REACHES ITS MINIMUM POSITION SET POINT AND THE SPACE TEMPERATURE FALLS BELOW SETPOINT THE HEATING CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT.
 6. ON A CONTINUED FALL IN SPACE TEMPERATURE THE HEATING VALVE SHALL CONTINUE TO MODULATE OPEN UNTIL THE DISCHARGE AIR TEMPERATURE REACHES THE SCHEDULED DESIGN MAXIMUM.
 7. ON A FURTHER DROP IN SPACE TEMPERATURE WITH THE DISCHARGE AIR TEMPERATURE AT ITS DESIGN MAXIMUM, THE DAMPER SHALL MODULATE FROM ITS MINIMUM AIRFLOW TO ITS MAXIMUM HEATING AIRFLOW WHILE MAINTAINING THE SCHEDULED MAXIMUM DISCHARGE AIR TEMPERATURE.
 8. ON A RISE IN SPACE TEMPERATURE, THE REVERSE SHALL OCCUR.
- C. UNOCCUPIED MODE
 1. THE SUPPLY AIR TERMINAL UNIT DAMPER SHALL CLOSE TO MINIMUM POSITION AND THE HEATING CONTROL VALVE SHALL BE CLOSED WHEN THE UNOCCUPIED MODE IS INITIATED.
 2. THE UNOCCUPIED SEQUENCE OF OPERATION SHALL BE THE SAME AS THE OCCUPIED SEQUENCE OF OPERATION, CONTROLLING TO THE UNOCCUPIED SETPOINTS.
- D. WARM-UP MODE
 1. THE SUPPLY AIR TERMINAL DAMPER SHALL BE OPEN TO MAXIMUM HEATING POSITION AND THE HEATING VALVE SHALL ENERGIZE AND MODULATE TO MAINTAIN THE OCCUPIED ROOM TEMPERATURE SET POINT.
- E. COOL-DOWN MODE
 1. AIR TERMINAL UNIT DAMPER SHALL INITIALLY BE OPEN TO MAXIMUM COOLING POSITION AND SHALL MODULATE TO MAINTAIN THE OCCUPIED ROOM TEMPERATURE SET POINT.
- F. THE SYSTEM AND AIR TERMINAL UNITS MAY BE PLACED INTO THEIR OCCUPIED MODE FOR A SCHEDULED OVERRIDE PERIOD FROM A CENTRAL COMMAND FROM THE BAS, OR THE SYSTEM AND AIR TERMINAL UNITS MAY BE PLACED INTO THEIR OCCUPIED MODE FOR A 2-HOUR OVERRIDE PERIOD BY PUSHING THE OVERRIDE BUTTON LOCATED ON THE SPACE TEMPERATURE SENSOR SERVING THE AIR TERMINAL UNIT.
- G. UPON LOSS OF POWER, DAMPER SHALL FAIL TO THE LAST POSITION HELD PRIOR TO LOSS OF POWER.

DRAWING NOTES:

1. TEMPERATURE SENSOR SHALL BE INSTALLED TWO FEET DOWNSTREAM OF AIR TERMINAL UNIT.



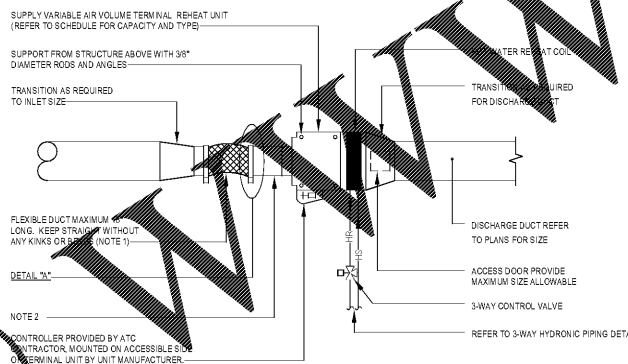
VARIABLE VOLUME SUPPLY AIR TERMINAL UNIT WITH REHEAT
SCALE: N.T.S.



NOTES:

1. DUCT INSULATION AND LINING SHALL BE PROVIDED AS SPECIFIED.
2. PROVIDE SEISMIC SWAY BRACING FOR ALL DUCTWORK AND HANGERS PER THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
3. CONTRACTOR SHALL VERIFY MAXIMUM LOADING ON DUCTWORK SUPPORT ASSEMBLIES.

2 **DETAIL - RETURN/EXHAUST AIR REGISTER BRANCH DUCT**
SCALE: N.T.S.



NOTE 2:

CONTROLLER PROVIDED BY ATC CONTRACTOR, MOUNTED ON ACCESSIBLE 5\"/>

NOTES:

1. FLEXIBLE DUCTWORK SHALL NOT BE INSTALLED THROUGH WALLS OR PARTITIONS. SOLID DUCTWORK THE SAME DIMENSION AS THE FLEXIBLE DUCTWORK SHALL BE USED THROUGH THE PENETRATION, THEN TRANSITION TO THE FLEXIBLE DUCTWORK AS INDICATED ON THE DETAIL.
2. A STRAIGHT SECTION OF UNRESTRICTED DUCT AT LEAST TWO (2) DIAMETERS LONG SHALL BE INSTALLED AT THE TERMINAL UNIT INLET.

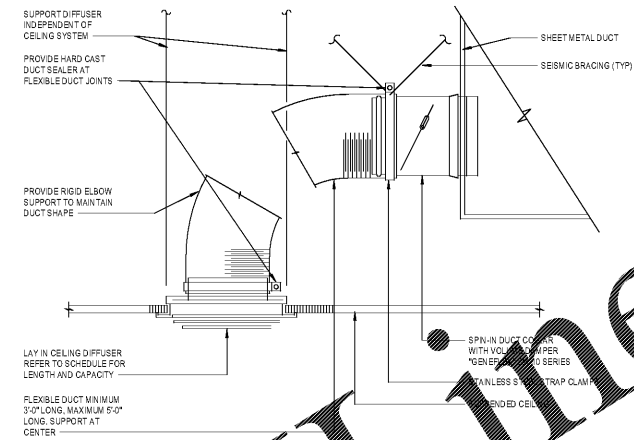
4 **DETAIL - VARIABLE AIR VOLUME TERMINAL REHEAT UNIT**
SCALE: N.T.S.

THERMOSTAT:

1. UNLESS OTHERWISE NOTED, DEVICES LOCATED IN OCCUPIED SPACES SHALL BE MOUNTED 48\"/>
2. COORDINATE FINAL SENSOR LOCATIONS WITH INTERIOR FINISH AND FURNITURE EQUIPMENT DRAWINGS PRIOR TO INSTALLATION.



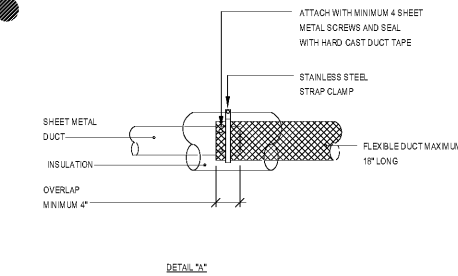
6 **SPACE SENSOR**
SCALE: N.T.S.



NOTES:

1. DUCT INSULATION SHALL BE PROVIDED AS SPECIFIED.
2. PROVIDE ADDITIONAL RIGID SUPPORT FOR FLEXIBLE DUCTWORK REQUIRED TO LIMIT SAG TO 5\"/>
3. MAXIMUM SAG 1/2\"/>
4. PROVIDE SEISMIC BRACING FOR ALL DUCTWORK AND HANGERS PER THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
5. CONTRACTOR SHALL VERIFY MAXIMUM LOADING ON DUCTWORK SUPPORT ASSEMBLIES.

3 **DETAIL - CEILING DIFFUSER BRANCH DUCTS**
SCALE: N.T.S.



DETAIL "A"



SEALS
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NOTES:

1. THE DRAWING SHALL BE USED IN ACCORDANCE WITH THE PROJECT MANUAL AND ALL APPLICABLE CODES AND REGULATIONS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS OF THE EXISTING FACILITY PRIOR TO COMMENCEMENT OF WORK.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT AREAS AND UTILITIES.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORATION OF ALL AREAS AFFECTED BY THE WORK.

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 PROJECT NUMBER: H51-50068
 DHEC PROJECT NUMBER: 580145
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MECHANICAL DETAILS AND CONTROLS

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|----------------|------------|
| SHEET NAME | |
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| CHECKED BY | CRB |
| DATE | 05/09/2018 |
| SCALE | N.T.S. |

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