

**International Mechanical Code 2015**

606.2.1 Return air systems. Smoke detectors shall be installed in return air systems with a design capacity greater than 2,000 cfm (0.9 m3/s). In the return air duct or plenum upstream of any filters, exhaust air connections, outdoor air connections, or decontamination equipment and appliances.

[F] 606.3 Installation. Smoke detectors required by this section shall be installed in accordance with NFPA 72. The required smoke detectors shall be installed to monitor the entire airflow conveyed by the system including return air and exhaust or relief air. Access shall be provided to smoke detectors for inspection and maintenance.

[F] 606.4 Controls operation. Upon activation, the smoke detectors shall shut down all operational capabilities of the air distribution system in accordance with the listing and labeling of appliances used in the system. Air distribution systems that are part of a smoke control system shall switch to the smoke control mode upon activation of a detector.

**NFPA 90A 2012**

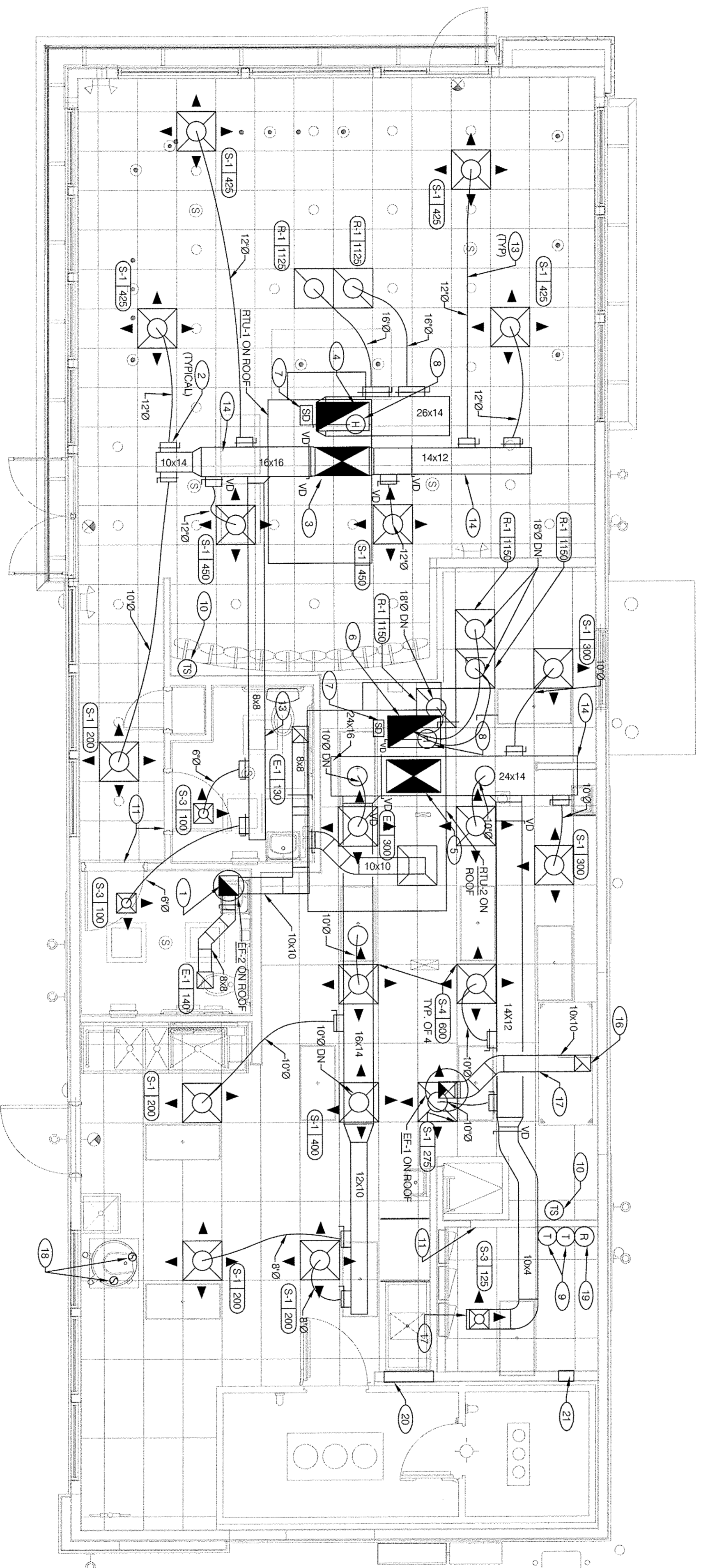
6.4.2.1 Smoke detectors listed for use in air distribution systems shall be located as follows:

- (1) Downstream of the air filters and ahead of any branch connections in air supply systems having a capacity greater than 944 L/sec (2000 ft3/min)

MECHANICAL PLANS RELEASED  
SUBJECT TO FIELD  
INSPECTION AND APPROVAL

FIRE SUPPRESSION SYSTEMS ARE NOT  
INCLUDED WITH THIS APPLICATION

A MECHANICAL PRE-CONSTRUCTION  
MEETING IS REQUIRED BEFORE  
INSTALLATION OF ALL HOOD SYSTEMS



**DUCT AND DIFFUSER PLAN** 1/4" = 1'-0"

1. DINING ROOM LIGHT FIXTURE LOCATIONS ARE CRITICAL. COORDINATE LOCATIONS. COORDINATE S.D.S AS NOT TO CONFLICT WITH LIGHT FIXTURE LOCATIONS.
2. THERMOSTATS SHALL BE PROGRAMMABLE THERMOSTAT WITH SQUEEZE REMOTE AND REMOTE HUMIDITY SENSORS (PROVIDED WITH TRANE PACKAGES).
3. HUMIDITY SENSOR LOCATION IS VARIABLE PER SITE SPECIFIC CONDITIONS. REFER TO TRANE UNIT SCHEDULE. MIN. 6' FROM PLACEMENT CONDITIONS.
4. COORDINATE DUCTWORK LOCATIONS WITH LIGHTING AND STRUCTURAL.

- 1-12x12 EXHAUST AIR DUCT UP THROUGH ROOF TO EF-2.
- 2-SEE DETAIL 8 ON DRAWING M-0 FOR SUPPLY AIR TAKE-OFF TO CEILING DIFFUSERS. RETURN OR EXHAUST AIR TAKE-OFFS SHALL BE SIMILAR.
- 3-34x14 SUPPLY AIR DUCT UP. CONNECT TO SUPPLY AIR PLENUM AT ROOFTOP UNIT RTU-1.
- 4-34x18 RETURN AIR DUCT UP. CONNECT TO RETURN AIR PLENUM AT ROOFTOP UNIT RTU-1.
- 5-36x20 SUPPLY AIR DUCT UP. CONNECT TO SUPPLY AIR PLENUM AT ROOFTOP UNIT RTU-2.
- 6-34x20 RETURN AIR DUCT UP. CONNECT TO RETURN AIR PLENUM AT ROOFTOP UNIT RTU-2.
- 7-FURNISH AND INSTALL SMOKE DETECTOR IN THE RETURN AIR DUCT. IN ACCORDANCE WITH LOCAL CODES. DUCT SMOKE DETECTOR WIRING BY ELECTRICAL CONTRACTOR. SEE SHEET E-2.
- 8-HUMIDITY SENSOR (REMOTE). HUMIDITY SENSOR LOCATION SHALL BE PLACED IN RETURN AIR DUCTWORK. VERIFY EXACT LOCATION. SEE RM-0.
- 9-LOCATE THERMOSTAT CONTROLS ON WALL IN OFFICE AT 48" A.F.F. COORD LOCATION WITH LIGHT SWITCHES.
- 10-MOUNT THERMOSTAT REMOTE SENSOR AT 6' ABOVE FINISHED FLOOR.
- 11-UNDERCUT RESTROOM DOORS AND OFFICE DOOR MIN. 3/4" FOR MAKE-UP AIR. NOT USED.

- 13-RUN DUCT THROUGH OPEN WEIRING OF ROOF JOISTS (WHERE POSSIBLE). COORDINATE WITH TRUSS DESIGN PRIOR TO DUCTWORK FABRICATION.
- 14-RUN DUCTWORK BETWEEN JOISTS AS HIGH AS POSSIBLE UNDER ROOF JOISTS. NOT USED.
- 15-10x12 EXHAUST AIR DUCT DOWN AND TRANSITION TO FIBER GLASS EXHAUST CONNECTION AT HOOD. EXHAUST DUCT SHALL RUN BETWEEN ROOF JOISTS TO DETAIL 15 ON SHEET M-0 FOR THE PROTECTION OF DUCTWORK. SEE DETAIL 18 ON SHEET M-0 FOR EXHAUST DUCT TRANSITION.
- 17-EXHAUST DUCTWORK RUN UP BETWEEN ROOF JOISTS AND THROUGH OPEN WEIRING (IF NEEDED) TO EF-1.
- 18-FURNISH AND INSTALL 3" PVC WATER HEATER INTAKE AND FLEE VENT TERMINATION ON ROOF. COORDINATE WORK WITH ALL TRADES.
- 19-NEW SMOKE DETECTOR RESET SWITCH WITH KEY. MFR. IS SYSTEM SENSOR MODEL # RT5151 KEY MOUNT NEXT TO THERMOSTATS @ 48" A.F.F. - INSTALL PER MFR. SPECIFICATIONS.
- 20-ACCESS OPENING TO SPACE ABOVE WALK-IN. SEE SHEET A7.1.
- 21-AIR TRANSFER GRILLS. SEE SECTION 'B' ON SHEET A5.2.

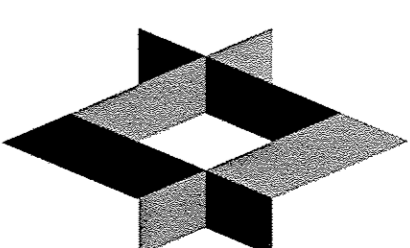
NOT USED

GENERAL NOTES

E

KEY NOTES

B



**MARK D. MCCLUGGAGE AIA, CCS**  
1525 E. Douglas Wichita, KS 67211  
Tel: (316) 265-8367  
Fax: (316) 265-5646  
www.gimv.com

**DEVITA & ASSOCIATES**  
PO Box 1586  
Greenville, SC 29602  
Phone: 864-232-6642  
FAX: 864-242-4878  
E-Mail: [Corp@devitaleinc.com](mailto:Corp@devitaleinc.com)

DAI PROJECT: 15002-28

DESIGNED BY: MAS  
CHECKED BY: AMP  
Professional Certification. I hereby certify that the design was prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of South Carolina, License No. 43220. Expiration Date: 01/02/2017



ADDRESS CHANGE 01/04/2016

DATE:	JULY 15, 2015
BUILDING TYPE:	MED-40-MCD
PLAN VERSION:	JUNE 2015
SITE NUMBER:	
ENTRY NUMBER:	

1300 HOLLTON LANE  
TAKOMA PARK, MD 20912



**LIVE MAS**  
MECHANICAL  
DIFFUSER AND  
DUCT PLAN

**M2.0**

PLOT DATE: 1-04-16