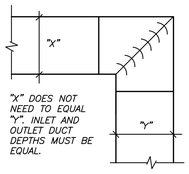
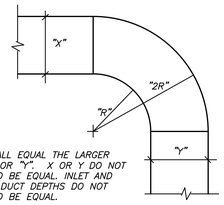


"X" DOES NOT NEED TO EQUAL "Y". INLET AND OUTLET DUCT DEPTHS MUST BE EQUAL.

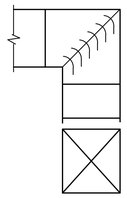
WHEN X DOES NOT EQUAL Y, PROVIDE SPECIAL PROVISIONS TO TURNING VANES. CONSTRUCT VANE EDGES TO PROJECT TANGENTS PARALLEL TO DUCT SIDES. VANES AS USED WHEN X=Y ARE NOT ACCEPTABLE FOR FOR SIZE CHANGE RECTANGULAR ELBOWS WITHOUT MODIFICATION.

SQUARE THROAT ELBOW



"R" SHALL EQUAL THE LARGER OF "X" OR "Y". X OR Y DO NOT NEED TO BE EQUAL. INLET AND OUTLET DUCT DEPTHS DO NOT NEED TO BE EQUAL.

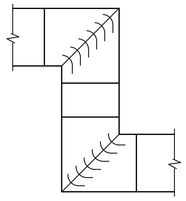
FULL RADIUS ELBOW



ALL DUCT FABRICATION SHALL BE ACCORDING TO SMACNA EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE INDICATED. ALL JOINTS SHALL BE SEALED TO SMACNA SEAL CLASS A.

RECTANGULAR ELBOWS TURNING IN DIFFERENT PLANES SHALL HAVE TURNING VANES WITH A TRAILING EDGE.

SQUARE THROAT ELBOWS IN DIFFERENT PLANES

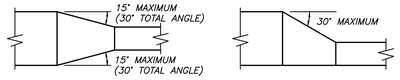


RECTANGULAR ELBOWS IN SERIES SHALL HAVE TURNING VANES WITH A TRAILING EDGE.

SQUARE THROAT ELBOWS IN SERIES

6 / M0.3 DUCT ELBOW DETAILS

SCALE: NONE



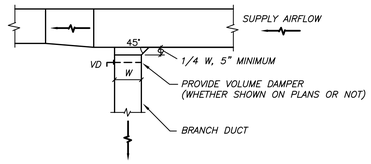
DOUBLE SIDED

SINGLE SIDED

PLAN OR SIDE VIEW

5 / M0.3 DUCT TRANSITION DETAIL

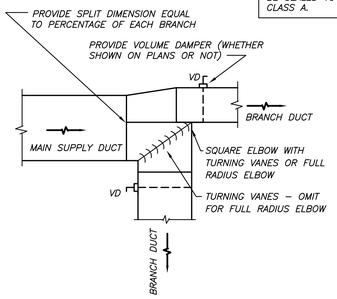
SCALE: NONE



NOTE:
REVERSE THE ARRANGEMENT FOR EXHAUST AIR OR RETURN AIR FLOW.

SIDE TAP

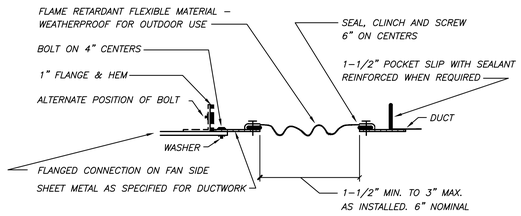
ALL DUCT FABRICATION SHALL BE ACCORDING TO SMACNA EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE INDICATED. ALL JOINTS SHALL BE SEALED TO SMACNA SEAL CLASS A.



NESTED FITTING BRANCH TAKEOFF

3 / M0.3 RECTANGULAR BRANCH DUCT DETAIL

SCALE: NONE



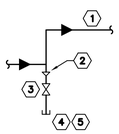
NOTE:
PROVIDE FLEX CONNECTION AT CONNECTING DUCTWORK TO INLETS AND OUTLETS OF ALL FANS, AIR HANDLING UNITS, FAN COIL UNITS, HEAT RECOVERY VENTILATORS AND CURB MOUNTED FANS.

4 / M0.3 FAN FLEX CONNECTION

SCALE: NONE

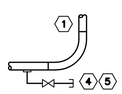
1. TYPICAL HYDRONIC PIPING
2. REDUCER, IF REQUIRED
3. 3/4" SHUT–OFF VALVE
4. ADAPTER TO 3/4" HOSE THREAD
5. PROVIDE THREADED HOSE CAP & CHAIN

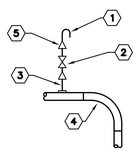
1. 1/4" COPPER TUBING
2. 1/2" SHUT–OFF VALVE
3. 1/2" x 4" NIPPLE
4. HYDRONIC PIPING HIGH POINT
5. REDUCER (TYPICAL)



DRAIN THE BOTTOM OF ALL PIPING RISERS, COILS, HEAT EXCHANGERS AND PUMPS.

DRAIN



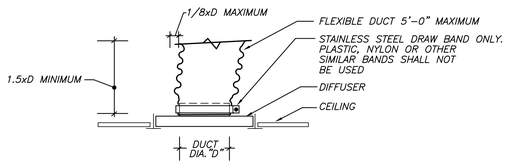


VENT THE TOP OF ALL CHILLED WATER AND HOT WATER PIPING RISERS, COOLING AND HEATING COILS AND PIPING HIGH POINTS

VENT

7 / M0.3 PIPING DRAIN AND VENT DETAIL

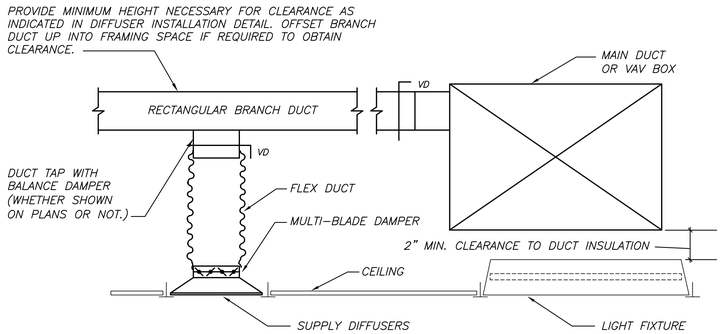
SCALE: NONE



NOTE:
- DETAIL APPLIES TO LAY IN CEILING MOUNTED SUPPLY DIFFUSERS, RETURN AND EXHAUST GRILLES. DO NOT USE FLEX DUCT FOR SECURITY GRILLES.
- TAP OFF SIDE OR BOTTOM OF SUPPLY DUCT AND ENSURE THAT MINIMUM CLEARANCE NEEDED IS AVAILABLE TO OBTAIN STRAIGHT RUN TO DIFFUSERS.
- PROVIDE FLEX DUCT HANGER ABOVE DIFFUSER TO SECURE VERTICAL DROP TO DIFFUSER FOR SIDE OUTLET BRANCH DUCTS.
- DUCT TAPE FLEX DUCT LINER TO DUCT TAP DRAW BAND. DUCT TAPE OUTER INSULATION JACKET TO DUCT TAP. SECOND OUTER DRAW BAND OPTIONAL.

2 / M0.3 DIFFUSER INSTALLATION DETAIL

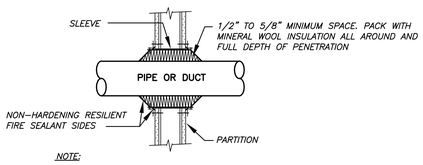
SCALE: NONE



NOTE: VAV BOXES SHALL BE INSTALLED OVER ACCESSIBLE CEILING TILES. COORDINATE WITH LIGHT FIXTURE, SPRINKLER HEAD AND CEILING LAYOUT.

1 / M0.3 DUCT CLEARANCE DETAIL

SCALE: NONE



NOTE:
DETAIL APPLIES TO ALL INTERIOR WALLS EXTENDING UP TO DECK. UL LISTED FIRE SEALANT SYSTEMS INSTALLED PER MANUFACTURER INSTRUCTIONS MAY BE SUBSTITUTED AT FIRE RATED PARTITIONS WHEN APPROVED BY ENGINEER.

8 / M0.3 PIPE OR DUCT PENETRATION THROUGH INTERIOR WALL

SCALE: NONE

Revisions	Date
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Drawing Title: MECHANICAL DETAILS

Approved: Project Director

Project Title: SYRACUSE VAMC RENOVATE POLICE STATION

Location: SYRACUSE VA MEDICAL CENTER NY

Date: 4/19/13 | Checked: - PJM | Drawn: - PJM

Project Number: 528A7-12-708

Building Number: 1

Drawing Number: M0.3

Dwg. 16 of 31

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231