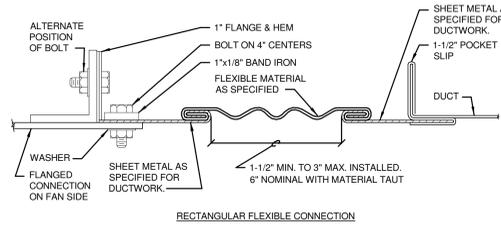
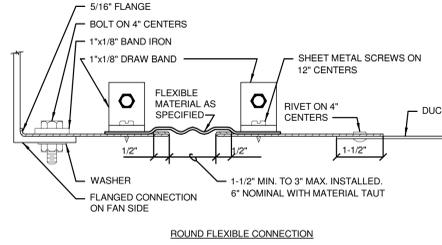


- NOTES:**
- RIGID STRAIGHT TERMINAL UNIT INLET LENGTH SHALL BE A MINIMUM OF 3 TIMES THE DIAMETER OF INLET SO AS TO ACHIEVE ACCURATE AIRFLOW SENSOR READINGS.
  - A FLEXIBLE AIR DUCT CONNECTOR IS NOT MANDATORY FOR INLET TO THIS BOX, BUT ALLOWED TO ACCOMMODATE MINOR OFFSETS. MAXIMUM LENGTH 3'-0".
  - PROVIDE DUCT TRANSITION WHERE SCHEDULED DUCT RUNOUT SIZE TO UNIT IS DIFFERENT THAN TERMINAL UNIT INLET SIZE.
  - FLEXIBLE AIR DUCT CONNECTORS, WHEN USED FROM TERMINAL UNIT SUPPLY AIR DUCT TO DIFFUSER, SHALL NOT EXCEED 5'-0". USE RIGID ELBOWS FOR CHANGE OF DIRECTION GREATER THAN 45°.
  - COMPONENT ARRANGEMENT MAY VARY BY MANUFACTURER. PROVIDE INSULATION W/VAPOR BARRIER FOR CONNECTING DUCT SECTIONS.
  - PROVIDE SOUND ATTENUATOR IF REQUIRED TO MEET DESIGN ROOM NC. PROVIDE DUCT TRANSITION BETWEEN TERMINAL UNIT AND SOUND ATTENUATOR WHERE ATTENUATOR SIZE DIFFERS FROM TERMINAL UNIT OUTLET SIZE.
  - DUCT RUNOUT TO DIFFUSERS SHALL BE SAME SIZE AS THE DIFFUSER NECK SIZE UNLESS OTHERWISE NOTED.

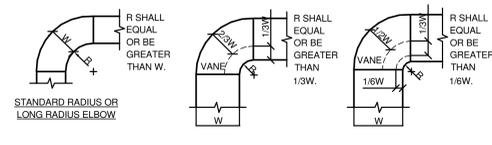
**DUCT CONNECTIONS-AIR TERMINAL UNITS**



RECTANGULAR FLEXIBLE CONNECTION

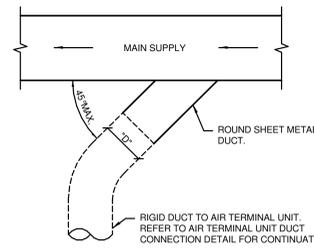


ROUND FLEXIBLE CONNECTION



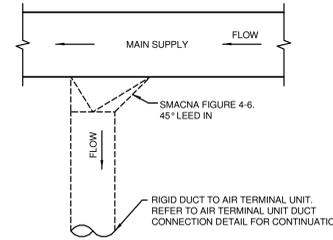
- NOTES:**
- THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
  - ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

**DUCTWORK RADIUS ELBOWS**



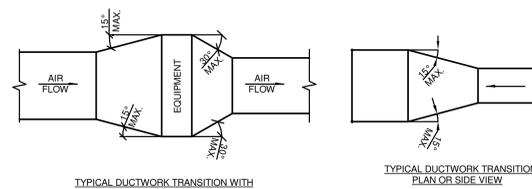
PLAN VIEW

**SUPPLY DUCT TAKEOFF - AIR TERMINAL UNITS**



PLAN VIEW

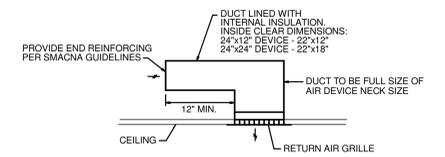
**ALTERNATE SUPPLY DUCT TAKEOFF - AIR TERMINAL UNITS**



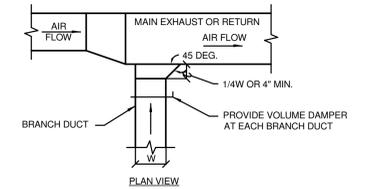
TYPICAL DUCTWORK TRANSITION WITH EQUIPMENT ISOLATED IN DUCT PLAN OR SIDE VIEW

NOTE: UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.

**DUCTWORK TRANSITIONS**

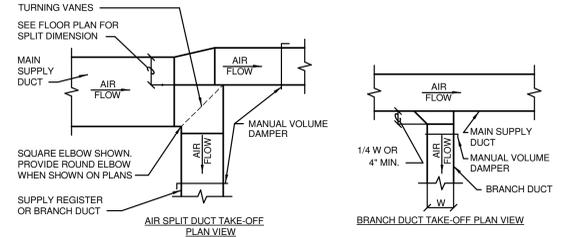


**RETURN AIR GRILLE WITH SOUNDBOOT DUCT DETAIL**



PLAN VIEW

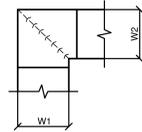
**EXHAUST OR RETURN BRANCH DUCTWORK**



BRANCH DUCT TAKE-OFF PLAN VIEW

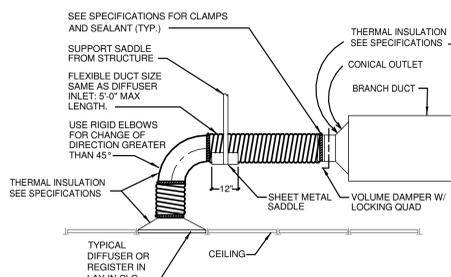
THE BRANCH DUCT TAKE-OFF MAY BE USED FOR UP TO 15% OF THE MAIN DUCT CFM ANYTIME, AND UP TO 40% WHEN THE MAIN DUCT VELOCITY IS 1000 FPM OR LESS. THE AIR SPLIT DUCT TAKE-OFF SHALL BE USED IN ALL OTHER CASES.

**SUPPLY DUCTWORK TAKE-OFFS**

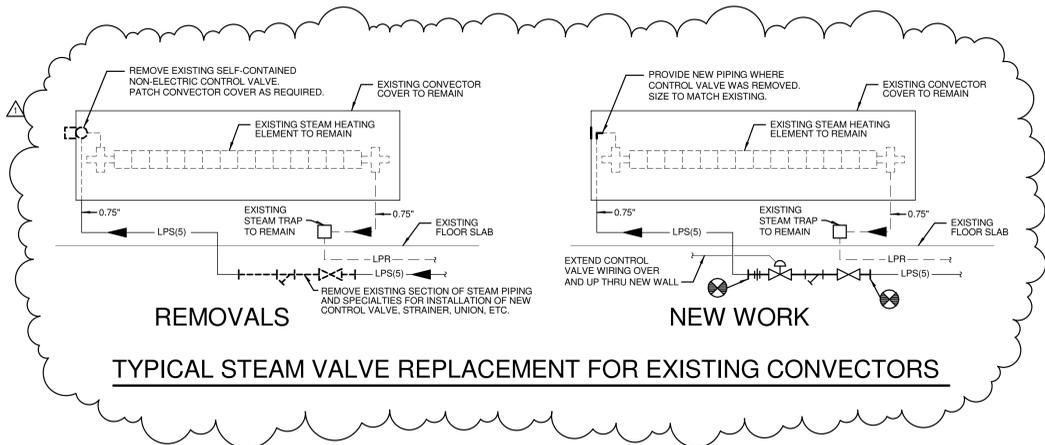


- NOTES:**
- ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
  - WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
  - ALL SINGLE THICKNESS VANES SHALL HAVE A 2" RADIUS, 1 1/2" MAXIMUM SPACE BETWEEN VANES AND A 3/4" TRAILING EDGE.
  - WHEN W EQUALS W2 AND W1 IS GREATER THAN 20", VANES SHALL BE DOUBLE VANE TYPE.

**DUCTWORK SQUARE VANE ELBOWS**



**FLEXIBLE AIR DUCT CONNECTOR**



**TYPICAL STEAM VALVE REPLACEMENT FOR EXISTING CONVECTORS**

**RETURN OR EXHAUST GRILLE/REGISTER CONNECTION**

- NOTES:**
- BRANCH DUCT TAKE-OFF WITH MANUAL DAMPER.
  - BRANCH DUCT SIZES, UNLESS NOTED ON PLANS ARE TO BE SIZED AS FOLLOWS:  
100 CFM AND LESS - 6" DIA.  
101 CFM TO 250 CFM - 8" DIA.  
251 CFM TO 400 CFM - 10" DIA.  
401 CFM TO 700 CFM - 12" DIA.

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1. ADDENDUM 3	Date
Revisions	

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Revised By:	
Drawing Title	<b>DETAILS</b>
Project Title	MODERNIZE MENTAL HEALTH SERVICES
Approved: Project Manager	CHRIS MOORHEAD
Approved: Service Chief	PHILIP KIRK

Building Number	302	Checked	DLE	Drawn	WJS
Location	4100 WEST THIRD STREET DAYTON, OH 45428				

Date	05/29/2014
Project No.	552-14-103
Drawing No.	<b>H0.6</b>