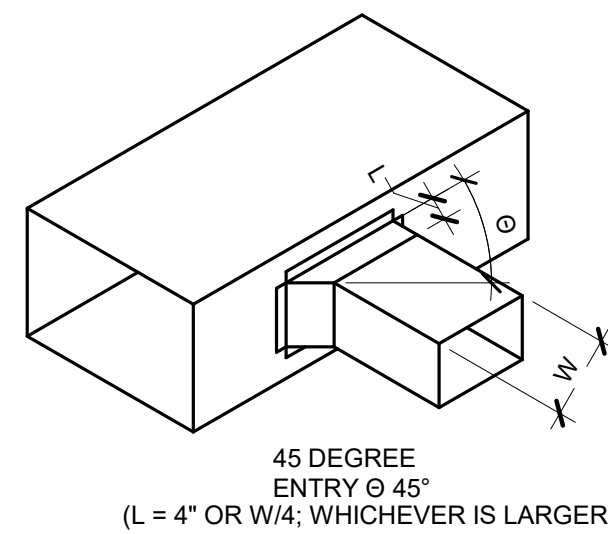
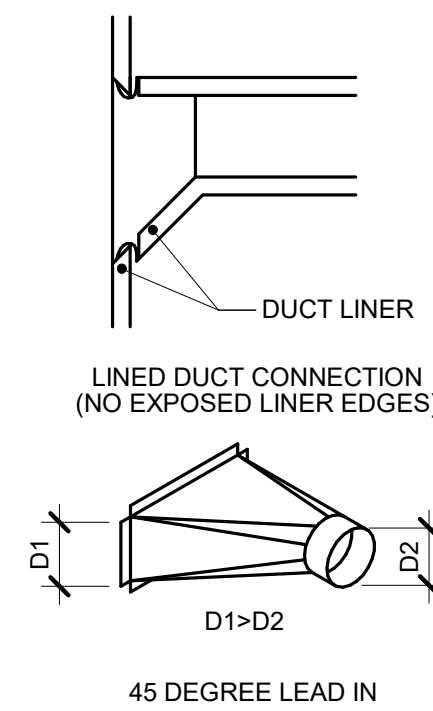


**NOTES:**  
1. ALL ROOF FLASHING SHALL BE PER ROOFING MANUFACTURERS RECOMMENDATIONS.

**1 EXHAUST FAN CURB**  
NO SCALE

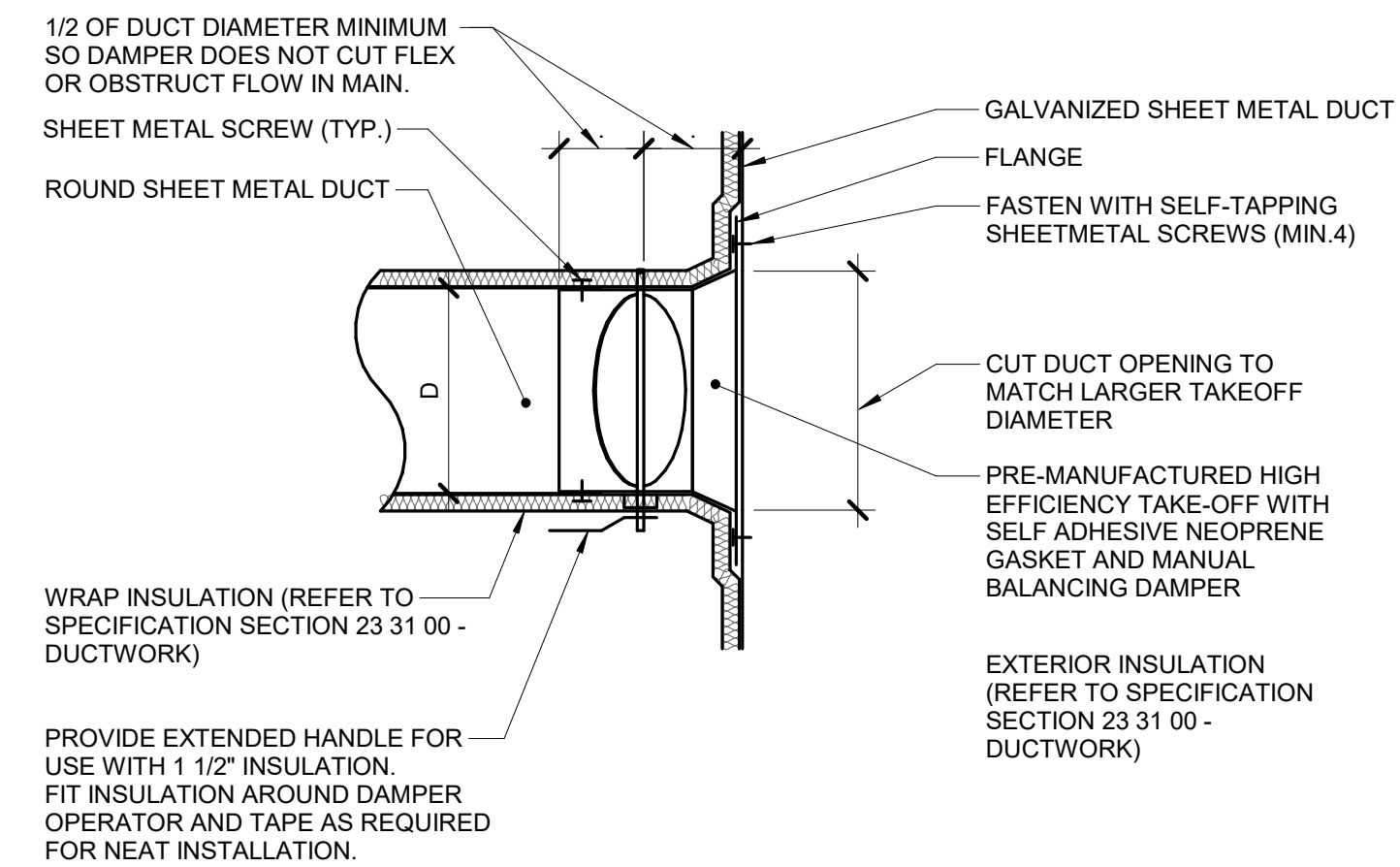


45 DEGREE ENTRY @ 45°  
(L = 4" OR W/4; WHICHEVER IS LARGER)



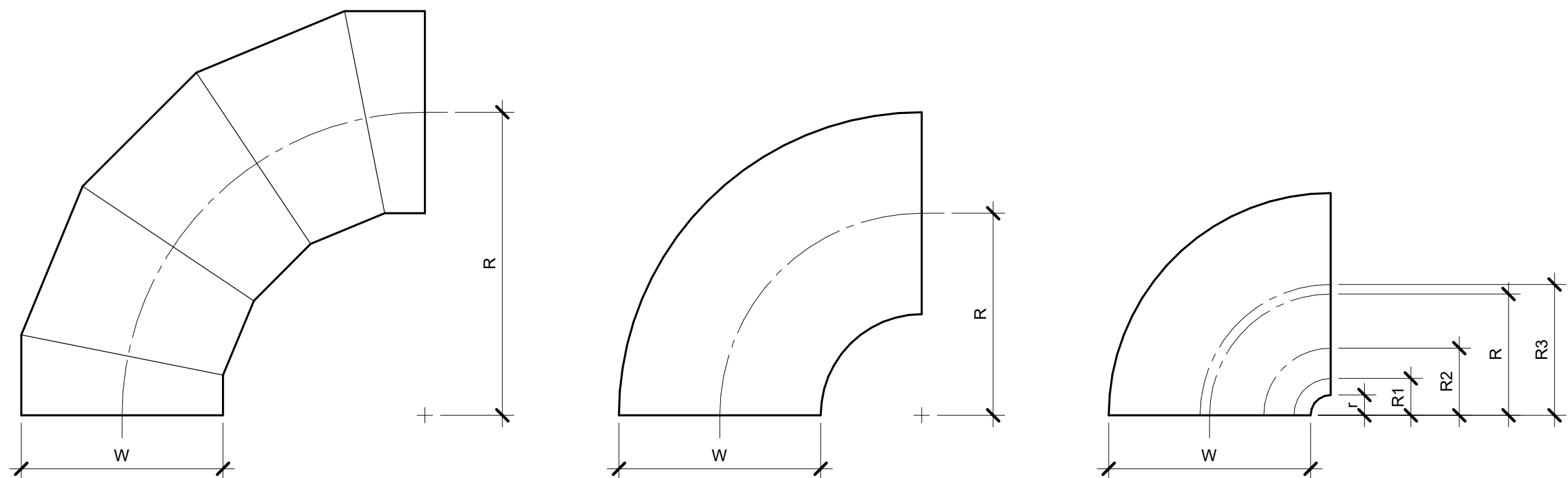
**NOTES:**  
1. DO NOT USE CONNECTIONS WITH SCOOPS.  
2. FIT ALL CONNECTIONS TO AVOID VISIBLE OPENINGS AND SECURE THEM SUITABLY FOR THE PRESSURE CLASS.  
3. ADDITIONAL MECHANICAL FASTENERS ARE REQUIRED FOR 4"W.G. AND OVER.  
4. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

**2 DUCT - BRANCH CONNECTIONS**  
NO SCALE



**NOTES:**  
1. THIS DETAIL APPLIES ONLY TO TAPS OFF UNLINED DUCTS.  
2. TAP DOES NOT NEED TO BE CONICAL IF THE TAP IS NOT LOCATED BETWEEN FANS AND TERMINAL AIR BOXES, DUCT IS NOT OVER 2" PRESSURE CLASS, AND ROUND DUCT IS NOT OVER 12" DIAMETER.  
3. MANUFACTURED TAP/DAMPER COMBINATIONS WITH LESS THAN 1/2 DUCT DIAMETER SPACING BETWEEN THE MAIN DUCT AND THE DAMPER SHAFT ARE ACCEPTABLE ONLY IF THE DAMPER SHAFT IS INSTALLED PARALLEL TO THE AIR FLOW IN THE MAIN DUCT.

**3 DUCT - HARD HIGH EFFICIENCY TAKE-OFF TO WRAPPED DUCT CONNECTION**  
NO SCALE

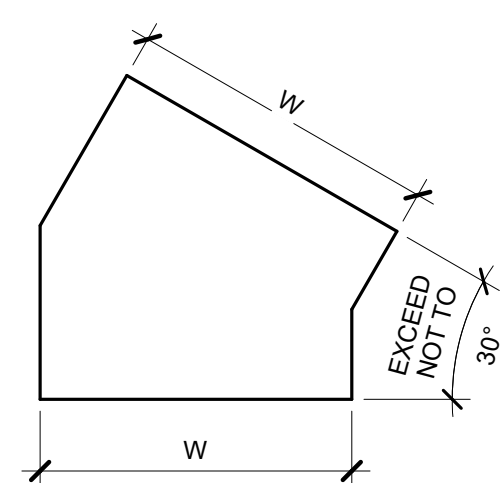


**OVAL / ROUND RADIUS ELBOW SMOOTH OR 5 GORE (MINIMUM)**  
R/W = 1.5 (MINIMUM)

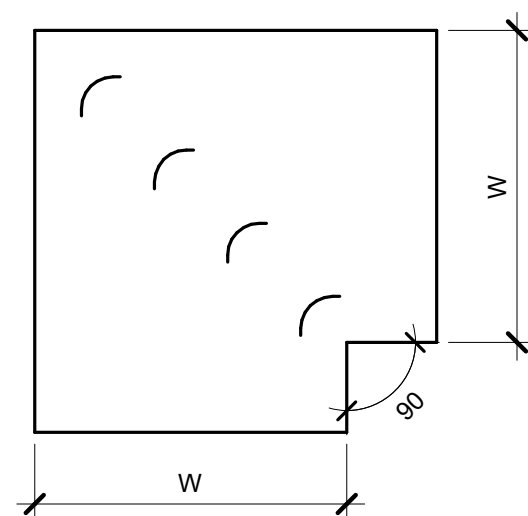
**RECTANGULAR RADIUS ELBOW TYPE RE1**  
R/W = 1.0 (MINIMUM)  
R/W < 1.0 SHALL BE TYPE RE3

**RECTANGULAR RADIUS ELBOW WITH VANES TYPE RE3**

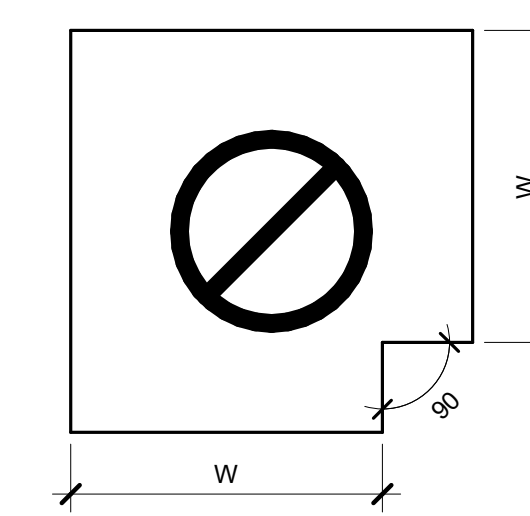
REFER TO SMACNA HVAC SYSTEMS DUCT DESIGN MANUAL, FOURTH EDITION, SECTION 5.14 "SPLITTER VANES" AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS, THIRD EDITION, FIGURES 4-2 AND 4-9 AND CHARTS 4-1 AND 4-1M. ELBOW SHALL HAVE THREE SPLITTER VANES AND  $r/W = 0.10$  ( $R/W = 0.60$ ) UNLESS NOTED OTHERWISE.



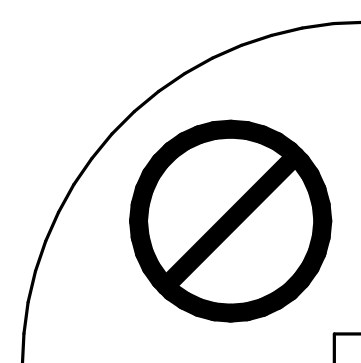
**RECTANGULAR MITERED ELBOW WITH VANES TYPE RE2**



**RECTANGULAR MITERED ELBOW WITHOUT VANES TYPE RE4**



**RECTANGULAR RADIUS ELBOW WITH SQUARE THROAT**

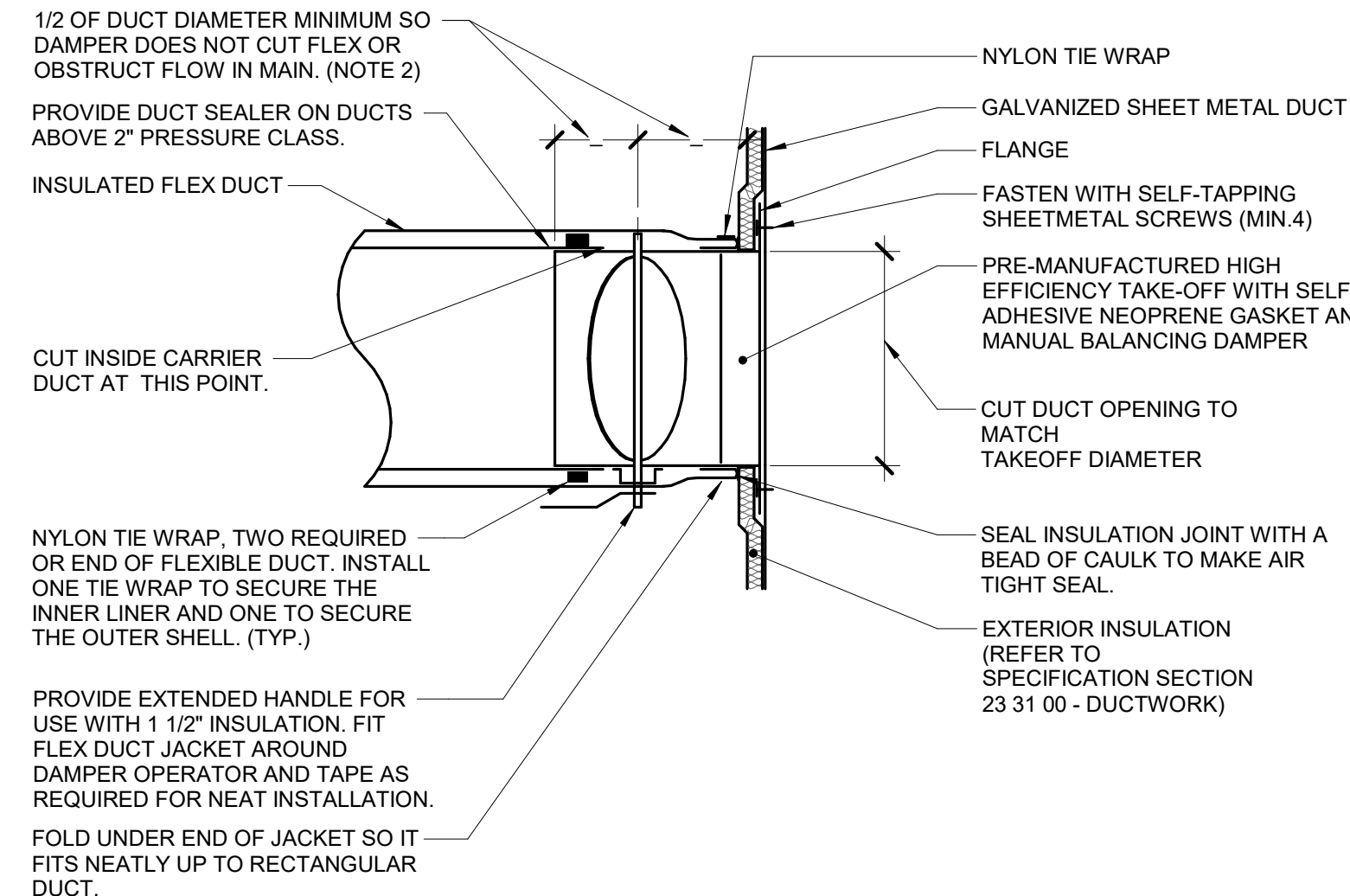


**RECTANGULAR RADIUS ELBOW WITH SQUARE THROAT**

USE ONLY AS PART OF OFFSETS AND TRANSITIONS PER FIGURE 4-7 TYPE 2 OR AS SHOWN ON DRAWINGS. OFFSETS ABOVE 30° SHALL BE TYPE RE1.

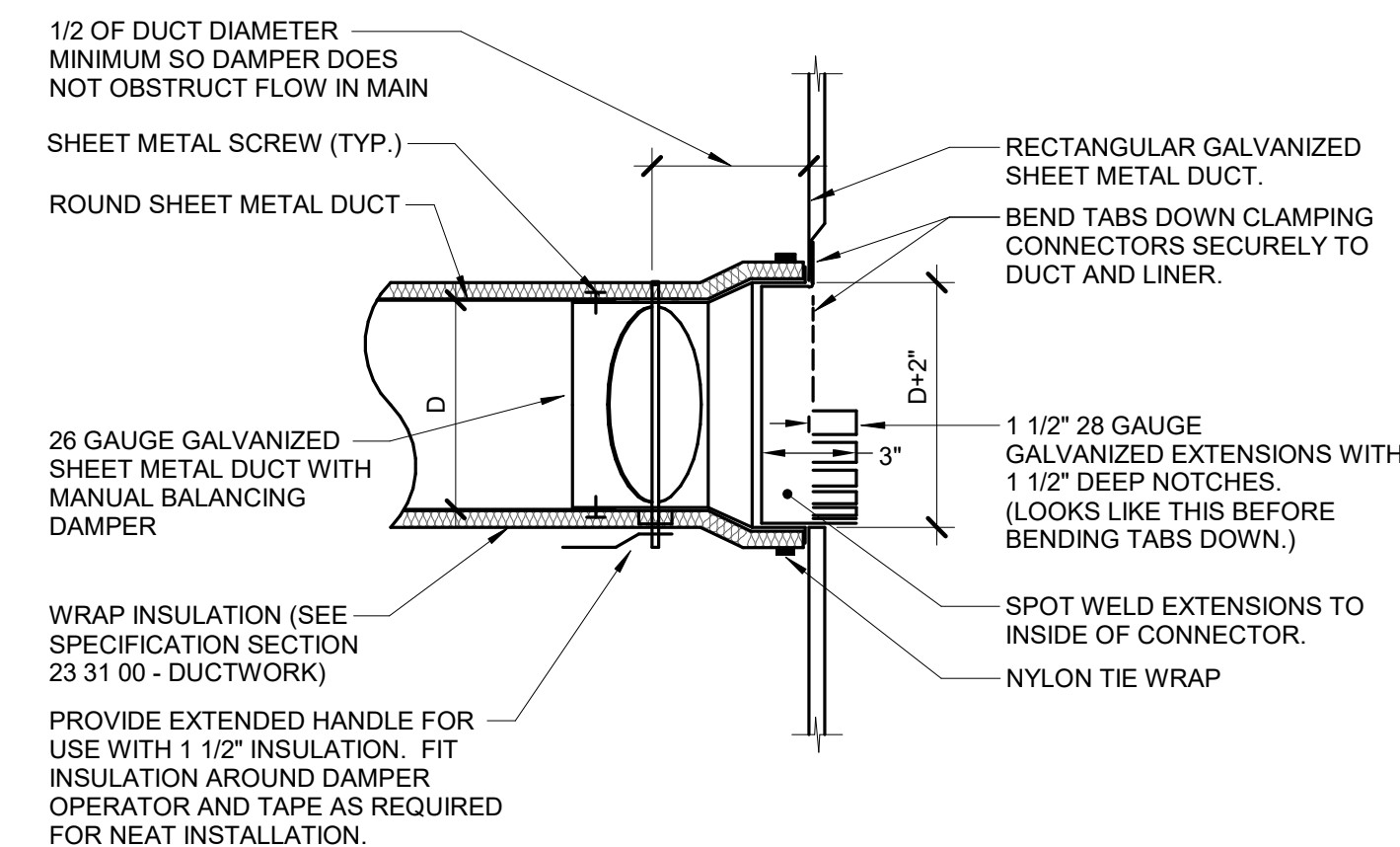
**NOTES:**  
1. BEAD, CROSSBREAK, AND REINFORCE FLAT SURFACES AS IN STRAIGHT DUCT.  
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.  
3. DEFAULT ELBOW SHALL BE TYPE "RE1".  
4. ELBOW TYPES SHALL BE INSTALLED AS SHOWN AND NOT BE SUBSTITUTED WITHOUT PERMISSION. EXCEPTION: RE1 OR RE3 MAY BE SUBSTITUTED FOR RE2.

**4 DUCT - ELBOW CONSTRUCTION**  
NO SCALE



**NOTES:**  
1. THIS DETAIL APPLIES ONLY TO TAPS OFF UNLINED DUCTS.  
2. MANUFACTURED TAP/DAMPER COMBINATIONS WITH LESS THAN 1/2 DUCT DIAMETER SPACING BETWEEN THE MAIN DUCT AND THE DAMPER SHAFT ARE ACCEPTABLE ONLY IF THE DAMPER SHAFT IS INSTALLED PARALLEL TO THE AIR FLOW IN THE MAIN DUCT.

**5 DUCT - FLEX HIGH EFFICIENCY TAKE-OFF TO WRAPPED DUCT W/BALANCING DAMPER**  
NO SCALE



**NOTES:**  
1. THIS DETAIL APPLIES ONLY TO TAPS OFF LINED DUCTS.

**6 DUCT - FLEX HIGH EFFICIENCY TAKE-OFF TO LINED DUCT W/BALANCING DAMPER**  
NO SCALE

A/E FIRMS PRIME/ARCH: STRATA ARCHITECTURE 1703 OAK STREET, SUITE 100 KANSAS CITY, MO T: 816.474.0900 MEP/ENG: IMEG CORP. 1400 BALTIMORE STREET, SUITE 300 KANSAS CITY, MO T: 816.842.8437	DESIGNED: SGB	SUB SHEET NO. <b>01</b> <b>M5.0</b>	TITLE OF SHEET <b>MAURICE BATHHOUSE</b> <b>MECHANICAL DETAILS</b>	DRAWING NO. <b>626</b> <b>180065</b>
	CADD: WMM			PMIS/PKG NO. 318674
TECH. REVIEW: SGB	DATE: 10.27.2023		REHABILITATE BATHHOUSES HOT SPRINGS NATIONAL PARK	SHEET 151 OF 286



10.27.2023