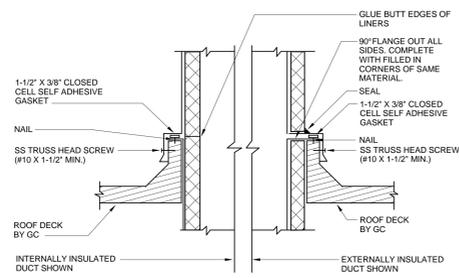


TYPICAL ESCUTCHEON

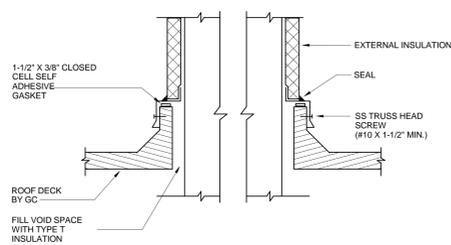
NOTES:
 (1) THIS DETAIL APPLIES FOR INSULATED DUCTS THRU WALL WHERE FIRE DAMPER IS NOT REQUIRED.
 (2) WHERE WALL IS FIRE RATED, COMBINATION OF SEALANT AND BACKING MATERIAL SHALL MEET THIS RATING. REFER TO SPECIFICATION SECTION 20 0573 FOR FIRE STOPPING SYSTEM MANUFACTURERS.

8 DUCT PENETRATION THRU INTERIOR WALL (NON-INSULATED DUCTS)
 NTS



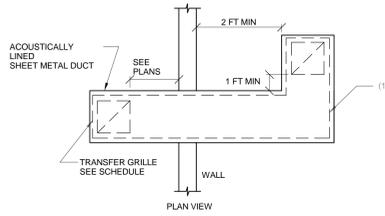
NOTES:
 (1) CURB AND FLASHING BY GC UNLESS OTHERWISE SPECIFIED.

9 DUCT PENETRATION THRU ROOF
 NTS



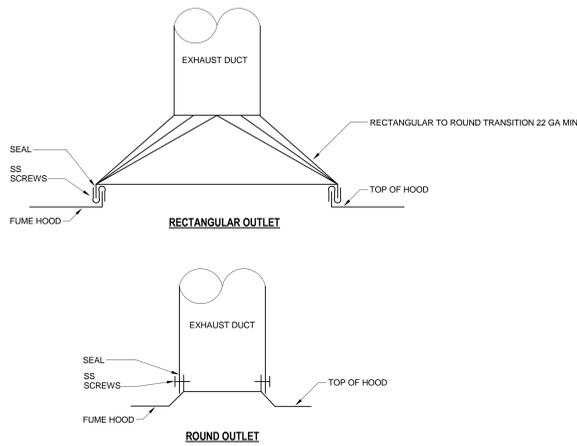
NOTES:
 (1) CURB AND FLASHING BY GC UNLESS OTHERWISE SPECIFIED.

10 FUME HOOD EXHAUST DUCT PENETRATION THRU ROOF
 NTS

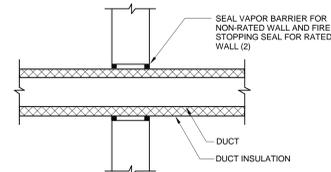


NOTES:
 (1) REFER TO PLAN FOR DUCT DIMENSIONS AND LOCATION OF GRILLES.

5 TRANSFER DUCT (DUCT WITH GRILLES)
 NTS



6 FUME HOOD OUTLET CONNECTION (NON-REMOVABLE)
 NTS

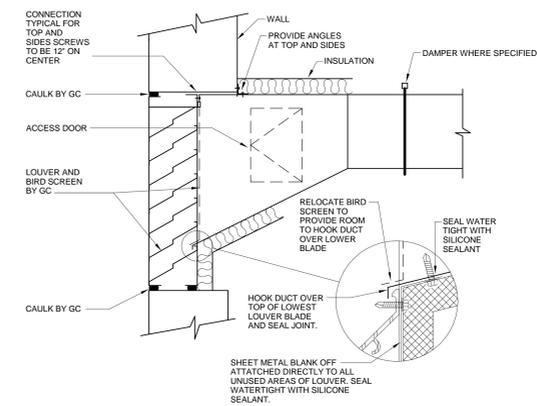


NOTES:
 (1) THIS DETAIL APPLIES FOR INSULATED DUCTS THRU WALL WHERE FIRE DAMPER IS NOT REQUIRED.
 (2) WHERE WALL IS FIRE RATED, COMBINATION OF SEALANT, BACKING MATERIAL AND INSULATION SHALL MEET THIS RATING. REFER TO SPECIFICATION SECTION 115084 / 20 0573 FOR FIRE STOPPING SYSTEM MANUFACTURERS.

7 DUCT PENETRATION THRU INTERIOR WALL (INSULATED DUCTS)
 NTS

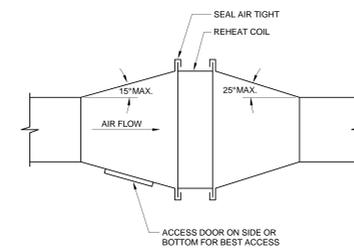
DESCRIPTION	DOUBLE LINE	SINGLE LINE
ELBOW		
TAKE-OFF TEE (CONICAL TEE)		
REDUCER		
45 deg Y - FITTING		

1 HIGH PRESSURE DUCT FITTINGS (PRESSURE CLASS 3IN AND OVER)
 NTS

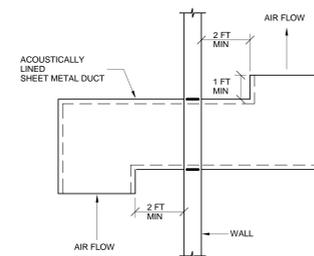


NOTES:
 (1) PLENUM CONNECTION TO LOUVER IS SIMILAR.

2 DUCT CONNECTION TO LOUVER
 NTS



3 REHEAT COIL DUCT CONNECTION (ACCESS DOOR AT INLET SIDE ONLY)
 NTS



NOTES:
 (1) REFER TO PLAN FOR DUCT DIMENSIONS.
 (2) ELBOWS MAY BE INSTALLED VERTICALLY OR HORIZONTALLY.

4 TRANSFER DUCT (DUCT WITHOUT GRILLES)
 NTS

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SEALS AND SIGNATURES



ISSUED FOR CONSTRUCTION 07/02/12

REV. NO. DESCRIPTION BY APVD DATE

Argonne NATIONAL LABORATORY

FMS Facilities Management Services

PROJECT TITLE ADVANCED PROTEIN CRYSTALLIZATION FACILITY, ARGONNE NATIONAL LABORATORY

PROJECT NO 08541-00

DRAWING TITLE MECHANICAL DETAILS

DESIGNED SPF A/E CAD FILE M6.1.0 FACILITY (NOI)

DRAWN LW A/E DWG. NO. M6.1.0

CHECKED SPF CAD NO.

PROJECT MANAGER DWG STATE ANL - JESSE ADAMS DWG ORDER DATE - 08/18/11 BIND ORDER

FACILITY DOCUMENT NUMBER J446-101-W- M6.1.0 REV. NO.