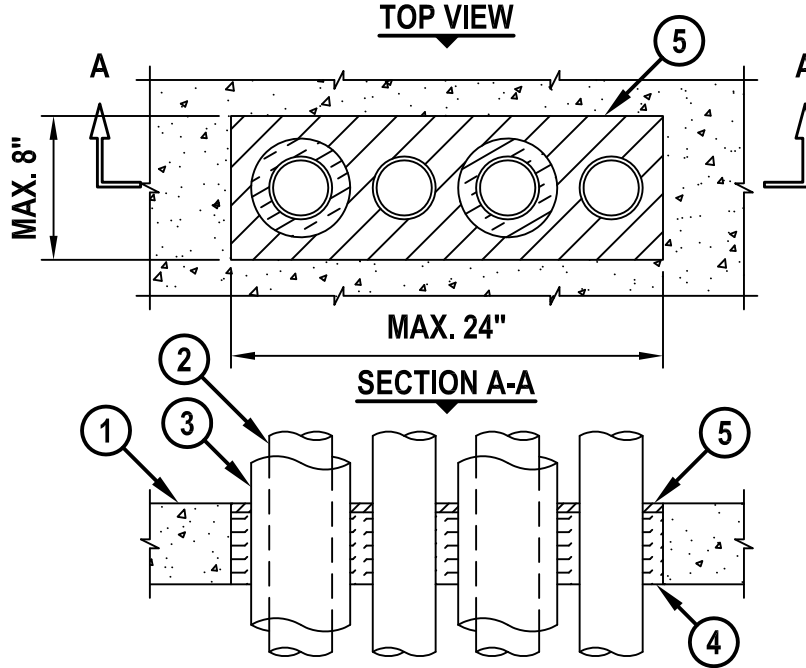


**MULTIPLE INSULATED/NON-INSULATED METAL PIPES THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL**

CAJ8041h.010615

F RATING = 3-HR.  
 T RATING = 0-HR. OR 1-HR.  
 L RATING AT AMBIENT = 10 CFM / SQ FT  
 L RATING AT 400°F = 6 CFM / SQ FT



1. CONCRETE FLOOR OR WALL ASSEMBLY (3-HR FIRE-RATING) :
  - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" THICK).
  - B. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 5" THICK).
  - C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. PENETRATING ITEMS TO BE ANY COMBINATION OF THE FOLLOWING (MAX. QTY. = 4) :
  - A. MAXIMUM 3" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
  - B. MAXIMUM 3" NOMINAL DIAMETER COPPER PIPE.
  - C. MAXIMUM 3" NOMINAL DIAMETER STEEL CONDUIT.
  - D. MAXIMUM 3" NOMINAL DIAMETER EMT.
3. [OPTIONAL] MAXIMUM 1" THICK GLASS FIBER PIPE INSULATION ON ANY OR ALL PIPES.
4. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.
5. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.

**NOTES :** 1. MAXIMUM AREA OF OPENING IS 192 SQUARE INCHES, WITH A MAXIMUM DIMENSION OF 24 INCHES.  
 2. ANNULAR SPACE BETWEEN PIPES = 1-1/2".  
 3. ANNULAR SPACE BETWEEN PIPES AND PERIPHERY OF OPENING = MINIMUM 1-5/8", MAXIMUM 2-1/2".  
 4. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL.



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Sheet	1 of 1
Scale	3/32" = 1"
Date	Jan. 06, 2015

Drawing No.  
**CAJ  
 8041h**