

**INSULATED METAL PIPE THROUGH CONCRETE FLOOR OR CONCRETE FLOOR
OVER METAL DECKING**

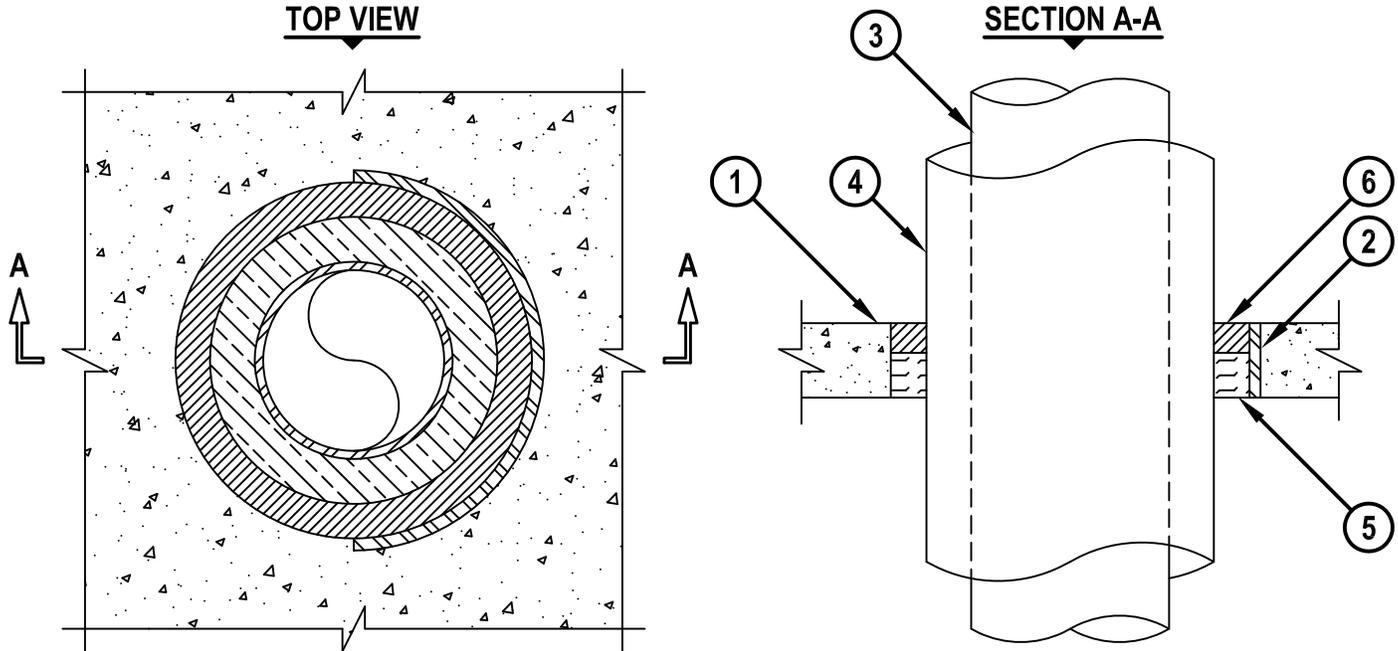
F-RATING = 2-HR.

T-RATING = 0-HR.

L-RATING AT AMBIENT= 4 CFM / SQ FT

L-RATING AT 400°= LESS THAN 1 CFM / SQ FT

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1. CONCRETE FLOOR ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 2-1/2" THICK).
 - B. STEEL FLOOR UNIT/FLOOR ASSEMBLY - LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 2-1/2" THICK) OVER METAL DECKING.
2. [OPTIONAL] ANY OF THE FOLLOWING SLEEVES MAY BE USED :
 - A. MAXIMUM 18" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 10 OR HEAVIER).
 - B. MAXIMUM 6" (MIN. 26 GA.) OR 12" (MIN. 24 GA.) DIAMETER GALVANIZED STEEL SLEEVE WITH SQUARE FLANGE SPOT WELDED TO BOTTOM OF SLEEVE AND SIZED MINIMUM 2" LARGER THAN SLEEVE DIAMETER. SLEEVE MAY EXTEND MAXIMUM 1" ABOVE TOP SURFACE OF FLOOR. WHEN USED ON METAL DECKS, STEEL FLANGE SPOT WELDED TO THE SLEEVE AT APPROXIMATE MID-HEIGHT AND MAY EXTEND A MAXIMUM OF 4" BELOW THE BOTTOM OF THE DECK.
3. PENETRATING ITEM TO BE ANY ONE OF THE FOLLOWING :
 - A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 - B. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
4. NOMINAL 1-1/2" THICK GLASS-FIBER PIPE INSULATION.
5. MINIMUM 1-1/2" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.
6. MINIMUM 1" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 18".
2. ANNULAR SPACE = MINIMUM 1/2", MAXIMUM 1-7/8".



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Sheet	1 of 1
Scale	5/32" = 1"
Date	Jan. 07, 2015

Drawing No.

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