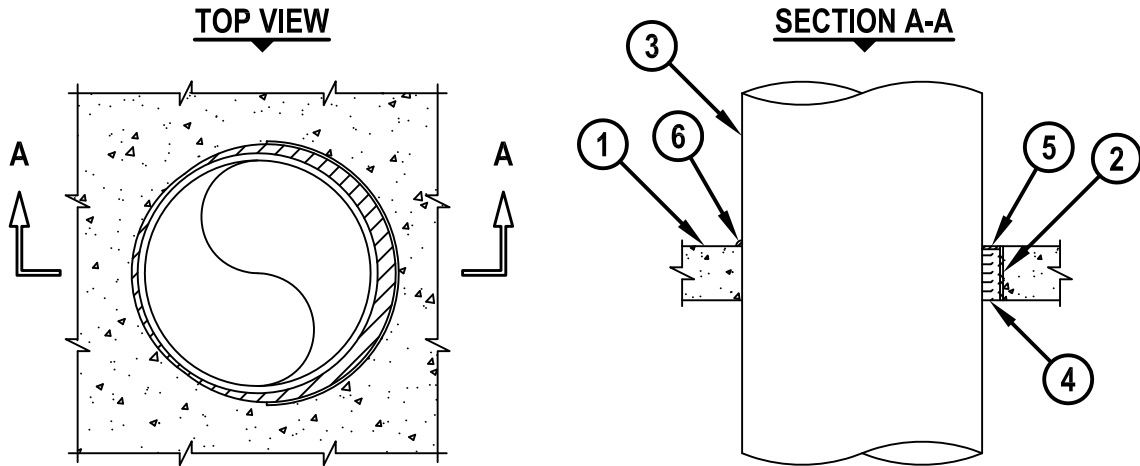


**METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL**

F-RATING = 3-HR.  
T-RATING = 0-HR.

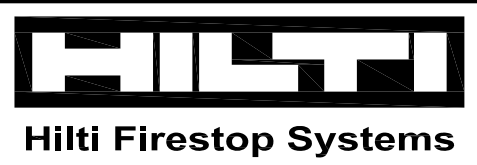
L-RATING AT AMBIENT = LESS THAN 1 CFM / SQ FT  
L-RATING AT 400° F = 4 CFM / SQ FT

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1. CONCRETE FLOOR OR WALL ASSEMBLY (3-HR. FIRE-RATING) :
  - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
  - B. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. [OPTIONAL] ANY OF THE FOLLOWING STEEL SLEEVES MAY BE USED :
  - A. MAXIMUM 32" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 40 OR HEAVIER) MAY EXTEND MAXIMUM 3" ABOVE FLOOR OR BEYOND BOTH SURFACES OF WALL.
  - B. MAXIMUM 6" (MIN. 26 GA.) OR 12" (MIN. 24 GA.) DIAMETER GALVANIZED STEEL SLEEVE WITH SQUARE FLANGE SPOT WELDED TO BOTTOM OR MID-HEIGHT OF SLEEVE AND SIZED MINIMUM 2" LARGER THAN SLEEVE DIAMETER. SLEEVE MAY EXTEND MAXIMUM 1" ABOVE TOP SURFACE OF FLOOR, AND MAXIMUM 4" BELOW BOTTOM SURFACE OF FLOOR.
3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
  - A. MAXIMUM 30" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
  - B. MAXIMUM 30" NOMINAL DIAMETER CAST IRON PIPE.
  - C. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
  - D. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
  - E. MAXIMUM 4" NOMINAL DIAMETER EMT.
4. MINIMUM 4" THICKNESS MINERAL WOOL (MINIMUM 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE FIRESTOP SEALANT.
5. MINIMUM 1/4" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT FLUSH WITH TOP SURFACE OF PIPE SLEEVE OR FLOOR ASSEMBLY.
6. MINIMUM 1/4" BEAD HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 32".  
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1-7/8".  
 3. MINIMUM 1/4" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.  
 4. PIPE MAY BE INSTALLED WITH CONTINUOUS POINT OF CONTACT.



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Sheet	1 of 1
Scale	1/16" = 1"
Date	Apr. 13, 2016

Drawing No.  
**CAJ  
1226p**