

UL SYSTEM NO. F-A-2154

PLASTIC/METAL PIPE TRANSITION THROUGH CONCRETE FLOOR ASSEMBLY

F-RATING = 2-HR.

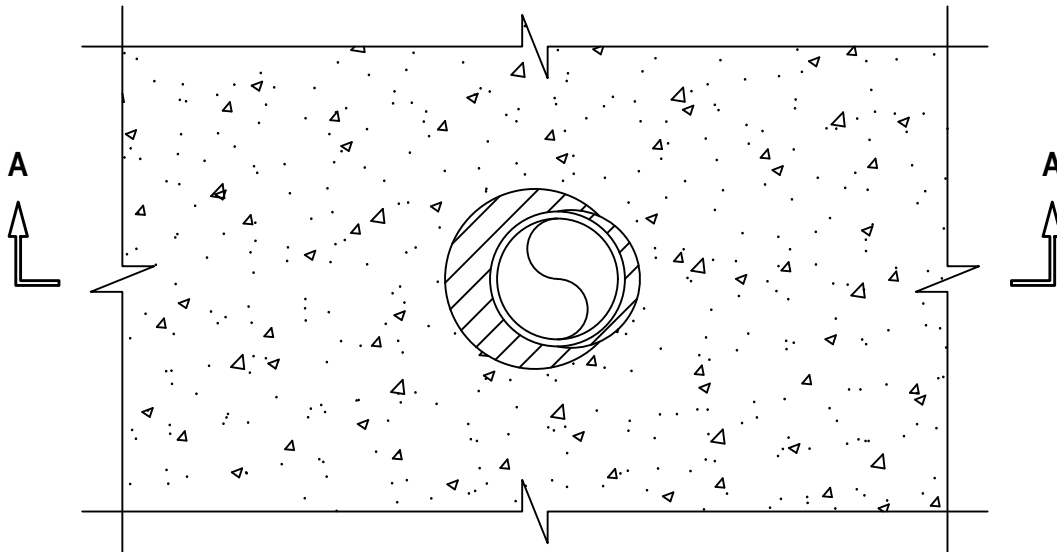
T-RATING = 3/4-HR.

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

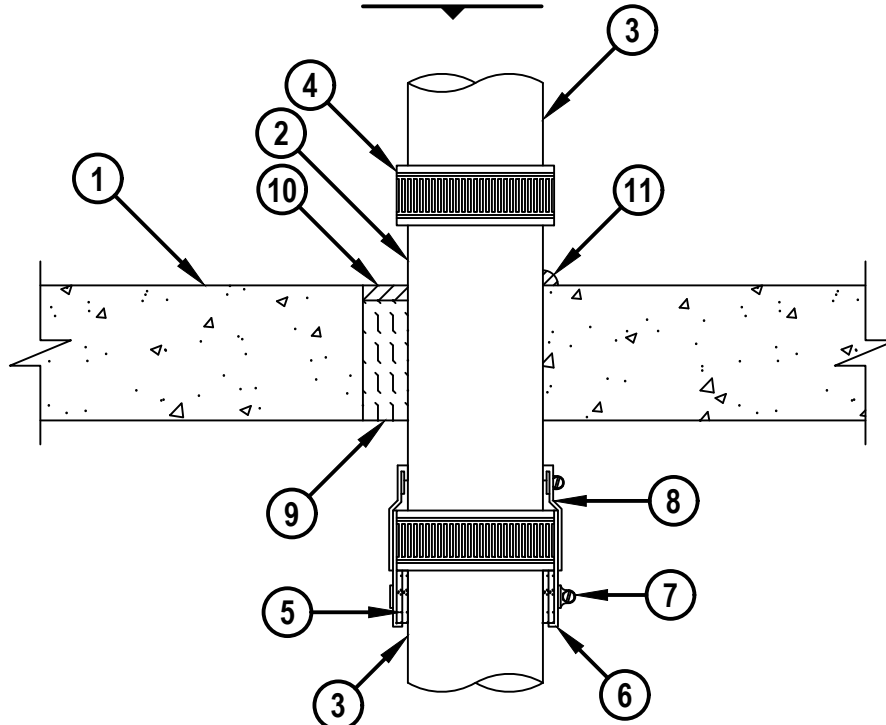
L-RATING AT 400°F = 4 CFM / SQ FT

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TOP VIEW



SECTION A-A



HILTI, Inc.
Plano, Texas USA (800) 879-8000

Sheet	1 of 2
Scale	5/32" = 1"
Date	Dec. 19, 2023

Drawing No.

**FA
2154d**

Saving Lives through Innovation and Education

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1. CONCRETE FLOOR ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" THICK).
 - B. PRECAST (HOLLOW-CORE) CONCRETE FLOOR (MINIMUM 6" THICK).
2. MAXIMUM 4" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER) OR CAST/DUCTILE IRON PIPE TO TERMINATE 1-1/2" TO 12" BELOW BOTTOM SURFACE OF FLOOR AND A MINIMUM 1-3/4" ABOVE TOP SURFACE OF FLOOR.
3. NONMETALLIC PIPE TO BE ANY OF THE FOLLOWING :
 - A. MAXIMUM 4" NOMINAL DIAMETER PVC PLASTIC PIPE (CELLULAR OR SOLID CORE).
 - B. MAXIMUM 4" NOMINAL DIAMETER CPVC PLASTIC PIPE (CLOSED PIPING SYSTEM ONLY).
 - C. MAXIMUM 4" NOMINAL DIAMETER ABS PLASTIC PIPE (CELLULAR OR SOLID CORE).
4. COMPRESSION TYPE COUPLING WITH ELASTOMERIC GASKET AND A STAINLESS STEEL JACKET WITH STAINLESS STEEL BAND CLAMPS USED TO SECURE METALLIC PIPE WITH NON-METALLIC PIPES.
5. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE NON-METALLIC PIPE BELOW FLOOR, COVERING TWO TIMES, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE. WRAP STRIP TO BE BUTTED UP AGAINST THE COMPRESSION COUPLING.
6. HILTI 1-3/4" RETAINING COLLAR WRAPPED OVER THE WRAP STRIPS, OVERLAPPING MINIMUM 1". ANCHOR TABS SHOULD REMAIN UNBENT.
7. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP(S) FASTENED AT MID-HEIGHT OF RETAINING COLLAR AND DIRECTLY ABOVE COMPRESSION COUPLING.
8. HANGER STRAPS (28 GA. STEEL) TO BE MINIMUM 1/2" WIDE TAPERING TO 1/4", EXTENDING MINIMUM 1" ONTO METAL PIPE ABOVE COMPRESSION COUPLING. HANGER STRAPS CAN BE MADE FROM ADDITIONAL ANCHOR TABS OF RETAINING COLLAR (SEE NOTE NO. 3 BELOW).
9. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED (SEE NOTE NO. 4 BELOW).
10. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.
11. MINIMUM 1/2" BEAD HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

NOTES :

1. MAXIMUM DIAMETER OF OPENING = 6-1/4".
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1-1/2".
3. HANGER STRAPS TO BE SECURED TO COLLAR ASSEMBLY INSERTING 1/4" END INTO OPENING IN RETAINING COLLAR ANCHOR TAB AND BENDING 180°. THE 1-1/2" END SHALL ALSO BE BENT 180° AND SLID OVER THE COLLAR CLAMP PRIOR TO TIGHTENING COLLAR CLAMP(S). TWO HANGERS ARE REQUIRED FOR NOMINAL 2" PIPES AND SMALLER. THREE HANGERS ARE REQUIRED FOR PIPES NOMINAL 2-1/2" TO 4".
4. WHEN HOLLOW-CORE FLOORS ARE USED, MINERAL WOOL MUST BE INSTALLED FLUSH WITH BOTTOM SURFACE OF FLOOR.
5. CLOSED OR VENTED PIPING SYSTEMS (PVC, ABS = SCHEDULE 40; CPVC = SDR 13.5).

**Hilti Firestop Systems**

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Sheet 2 of 2

Scale -

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