

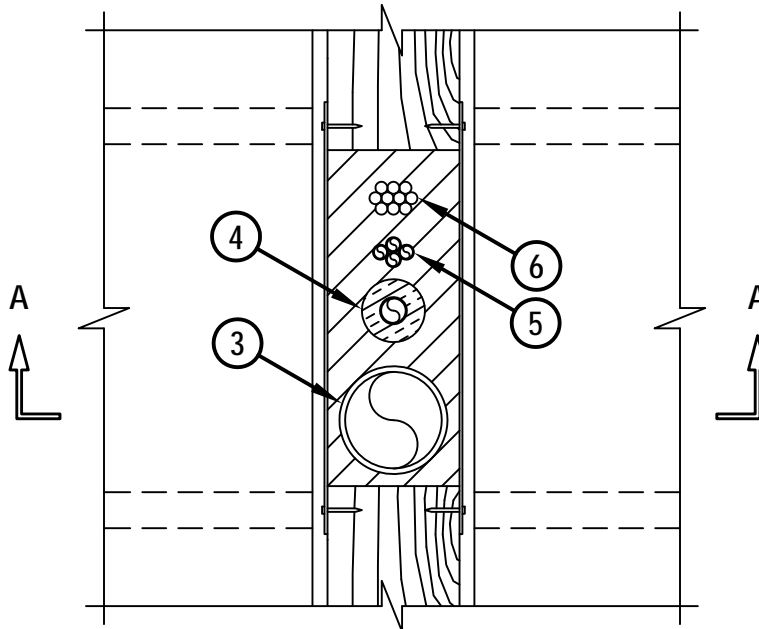
UL/cUL SYSTEM NO. F-C-8044

# MULTIPLE PENETRANTS THROUGH WOOD FLOOR/CEILING ASSEMBLY

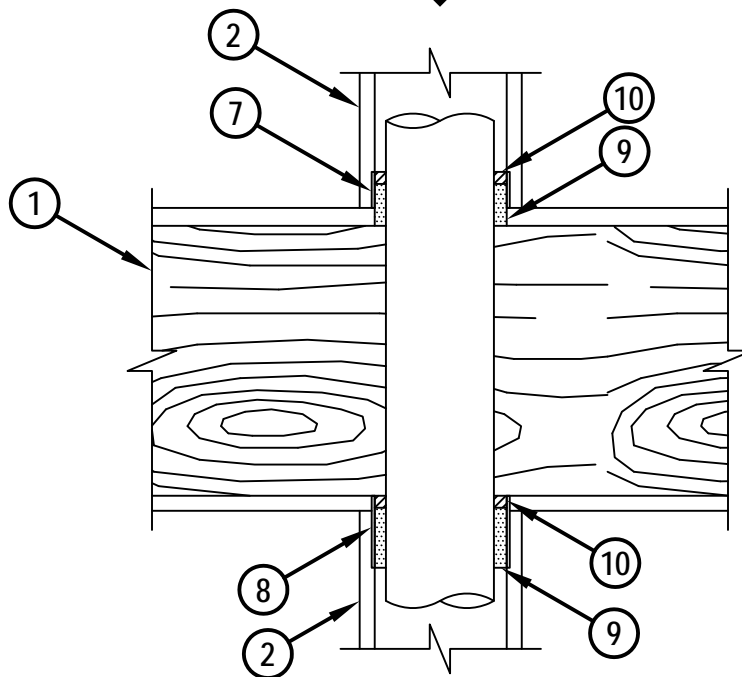
F-RATING = 1-HR.

T-RATING = 1/4-HR. OR 1-HR.

TOP VIEW



SECTION A-A



FC80344c.122013



HILTI, Inc.  
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Sheet	1 of 2
Scale	1/8" = 1"
Date	Dec. 20, 2013

Drawing No.

**FC  
8044c**

**Saving Lives through Innovation and Education**

**MULTIPLE PENETRANTS THROUGH WOOD FLOOR/CEILING ASSEMBLY**

F-RATING = 1-HR.

T-RATING = 1/4-HR. OR 1-HR.

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1. WOOD FLOOR/CEILING ASSEMBLY (UL CLASSIFIED L500 SERIES) (1-HR. FIRE-RATING).
2. GYPSUM WALL ASSEMBLY (UL CLASSIFIED U300 SERIES) (1-HR. FIRE-RATING) (NOMINAL 2" x 6" LUMBER PLATES AND STUDS).
3. ONE OR MORE OF THE FOLLOWING METALLIC PIPES, CONDUITS OR TUBING MAY BE USED :
  - A. MAXIMUM 4" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 5 OR HEAVIER).
  - B. MAXIMUM 4" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
  - C. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE OR TUBING.
  - D. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
4. NOMINAL 3/4" THICK AB/PVC PIPE INSULATION MAY BE INSTALLED ON METALLIC PIPES OR TUBES (ITEM NO. 3A, 3B AND 3C) NOT EXCEEDING NOMINAL 1" DIAMETER.
5. MAXIMUM 1/2" DIAMETER SDR 9 PEX TUBING (CLOSED OR VENTED PIPING SYSTEM) (MAX. QTY. = 4, BUNDLED TOGETHER).
6. MAXIMUM 3" DIAMETER CABLE BUNDLE CONSISTING OF ANY COMBINATION OF THE FOLLOWING :
  - A. MAXIMUM 25 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
  - B. MAXIMUM 3/C NO. 8 STEEL METAL CLAD CABLE.
  - C. MAXIMUM RG/U COAXIAL CABLE WITH FLUORINATED ETHYLENE JACKET.
  - D. MAXIMUM 3/C NO. 2 AWG ALUMINUM SER CABLE WITH PVC JACKET.
7. MINIMUM 1-1/2" WIDE (MIN. 30 GA.) STEEL STRAPS TO BRIDGE OPENING ON BOTH SIDES OF WALL WHEN SOLE PLATE IS REMOVED (SEE NOTE NO. 4 BELOW).
8. MINIMUM 3" WIDE (MIN. 30 GA.) STEEL STRAPS TO BRIDGE OPENING ON BOTH SIDES OF WALL WHEN DOUBLE TOP PLATES ARE REMOVED (SEE NOTE NO. 4 BELOW).
9. MINIMUM 1-3/4" AND 2-1/2" THICK MINERAL FIBER (MIN. 4 PCF DENSITY) TIGHTLY PACKED INTO OPENINGS WITHIN SOLE PLATE AND TOP PLATES, RESPECTIVELY. PACKING MATERIAL RECESSED TO ACCOMMODATE FIRESTOP SEALANT.
10. MINIMUM 1/2" DEPTH HILTI CP 604 SELF-LEVELING FIRESTOP SEALANT OR HILTI CFS-S SIL SL FIRESTOP SILICONE SEALANT.

NOTES : 1. MAXIMUM SIZE OF OPENING = 14" x 5-1/2".  
 2. ANNULAR SPACE BETWEEN PENETRANTS AND PERIPHERY OF OPENING = MINIMUM 0", MAXIMUM 1-1/2".  
 3. ANNULAR SPACE BETWEEN PENETRANTS = MINIMUM 1/4", MAXIMUM 1-1/2".  
 4. STEEL STRAPS TO OVERLAP PLATES MINIMUM 2" ON EACH SIDE OF OPENING AND SECURED WITH MINIMUM OF 2 NAILS OR SCREWS ON EACH SIDE.



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Scale	-
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