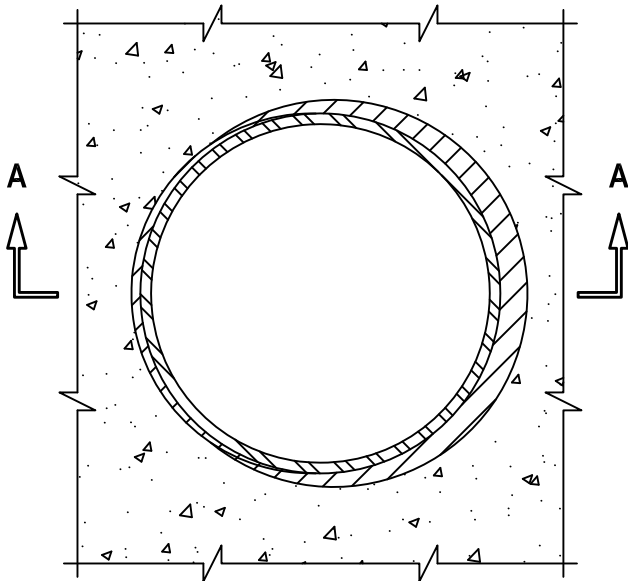


**METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY**

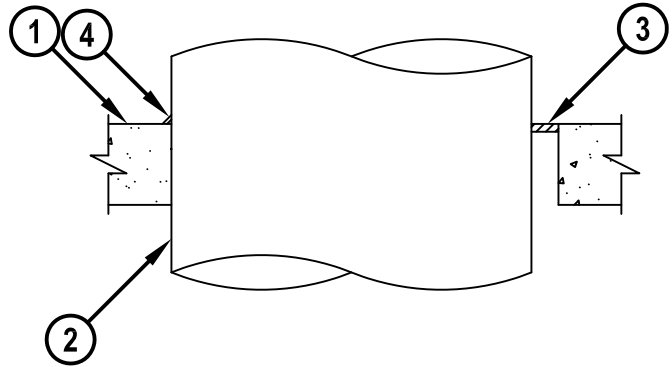
F-RATING = 3-HR.  
T-RATING = 0-HR.

CAJ1278e.123014

**TOP VIEW**



**SECTION A-A**



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. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
  - A. MAXIMUM 30" DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
  - B. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
  - C. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
  - D. MAXIMUM 4" NOMINAL DIAMETER EMT.
3. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.
4. MINIMUM 1/4" CROWN HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

**NOTES :** 1. MAXIMUM DIAMETER OF OPENING = 30-7/8".  
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 7/8".  
 3. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.



HILTI, Inc.  
Tulsa, Oklahoma USA (800) 879-8000

Sheet	1 of 1
Scale	3/32" = 1"
Date	Dec. 30, 2014

Drawing No.  
**CAJ  
1278e**