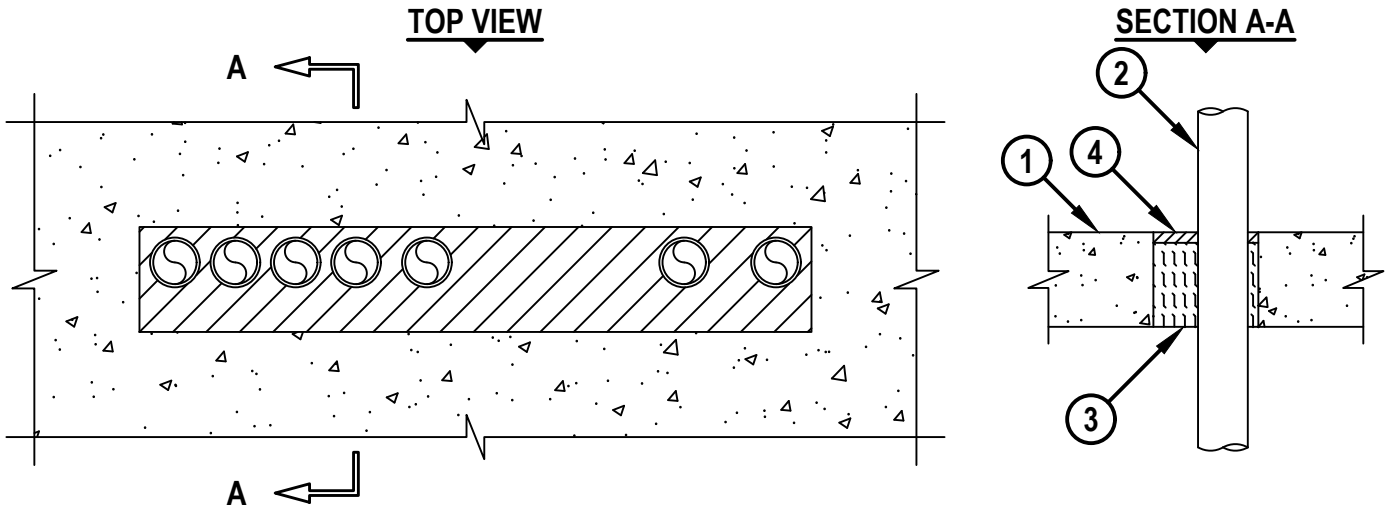


MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F-RATING = 2-HR.

T-RATING = 1/2-HR. OR 2-HR.

CAJ8333b.011223



SYSTEM TESTED WITH A PRESSURE DIFFERENTIAL OF 2.5 PA BETWEEN THE EXPOSED AND THE UNEXPOSED SURFACES WITH THE HIGHER PRESSURE ON THE EXPOSED SIDE.

1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" THICK).
 - B. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 5" THICK).
 - C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. ONE OR MORE OF THE FOLLOWING PIPES OR CONDUITS (IN ANY COMBINATION) MAY BE INSTALLED WITHIN THE OPENING :
 - A. MAXIMUM 2" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
 - B. MAXIMUM 2" NOMINAL DIAMETER PVC PLASTIC PIPE (SCHEDULE 40) (CELLULAR OR SOLID CORE) (CLOSED OR VENTED PIPING SYSTEM).
 - C. MAXIMUM 2" NOMINAL DIAMETER CPVC PLASTIC PIPE (SDR 13.5) (CLOSED PIPING SYSTEM ONLY).
 - D. MAXIMUM 2" NOMINAL DIAMETER RIGID NONMETALLIC CONDUIT (RNC).
3. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED FROM TOP SURFACE OF FLOOR, OR BOTH SURFACES OF WALL.
4. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.

NOTES : 1. MAXIMUM AREA OF SQUARE, RECTANGULAR, OR CIRCULAR OPENING IS 160 SQ. IN., WITH A MAXIMUM DIMENSION OF 32".

2. ANNULAR SPACE BETWEEN PENETRANTS AND PERIPHERY OF OPENING = MINIMUM 1/2".

3. ANNULAR SPACE BETWEEN NONMETALLIC PENETRANTS = MINIMUM 1/2".

4. ANNULAR SPACE BETWEEN NONMETALLIC PENETRANTS (CLOSED SYSTEMS) AND METALLIC PENETRANTS = MINIMUM 1".

5. ANNULAR SPACE BETWEEN NONMETALLIC PENETRANTS (VENTED SYSTEMS) AND METALLIC PENETRANTS = MINIMUM 2".

6. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL.



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Sheet	1 of 1
Scale	7/64" = 1"
Date	Jan. 12, 2023

Drawing No.
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