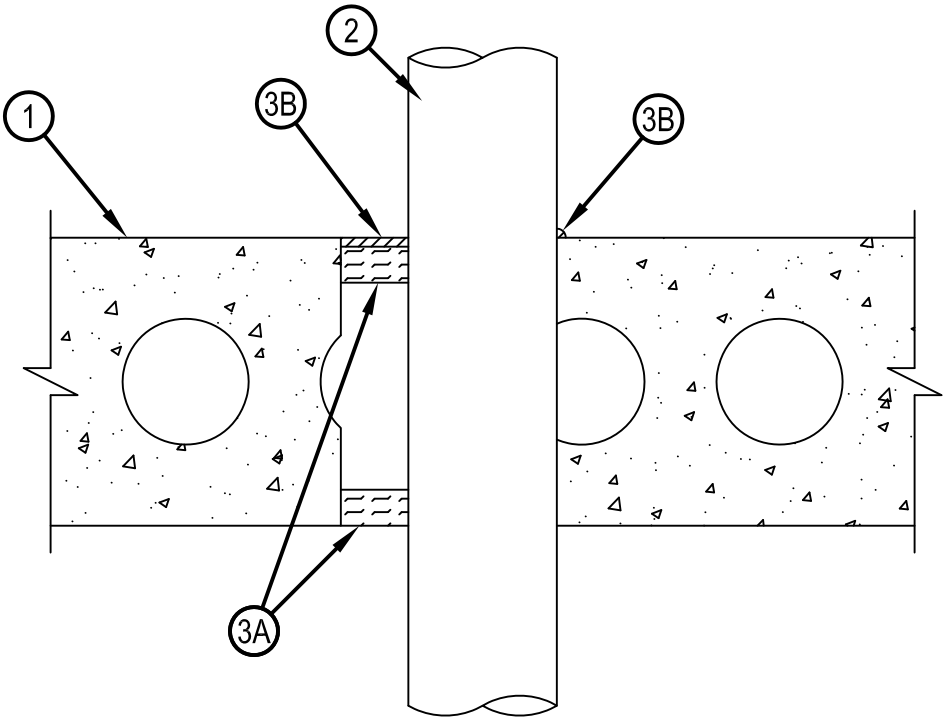
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. C-BJ-1046

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 1/4 Hr	FT Rating — 1/4 Hr
	FH Rating — 2 Hr
	FTH Rating — 1/4 Hr



1. Floor Assembly — Min 8 in. (203 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Floor assembly may also be constructed of any 8 in. (203 mm) thick UL Classified hollow-core Precast Concrete Units*. Max diameter of opening is 6 in. (152 mm).
   See Precast Concrete Units CFTV) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One metallic pipe, conduit or tubing to be installed concentrically or eccentrically within the firestop system. Annular space between pipe, conduit or tubing and edge of opening to be min 0 in. (point contact) to max 1-7/8 in. (48 mm). Pipe to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
   C. Conduit — Nom 4 in. (102 mm) diam (or smaller) rigid steel conduit.
   D. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic conduit.
   E. Copper Tubing — Nom 4 in.(102 mm) diam (or smaller) Type L (or heavier) copper tubing.
   F. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. Firestop System — The firestop system shall consist of the following:
   A. Packing Material — Min 1 in. (25 mm) thickness of 4 pcf mineral wool insulation tightly packed into the opening as a permanent form. Packing material to be installed flush with the bottom surface of floor assembly and recessed from the top surface of the assembly to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Materials*-Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor. An additional 1/4 in. (6 mm) bead shall be installed at penetrant/concrete interface on top surface of floor.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.