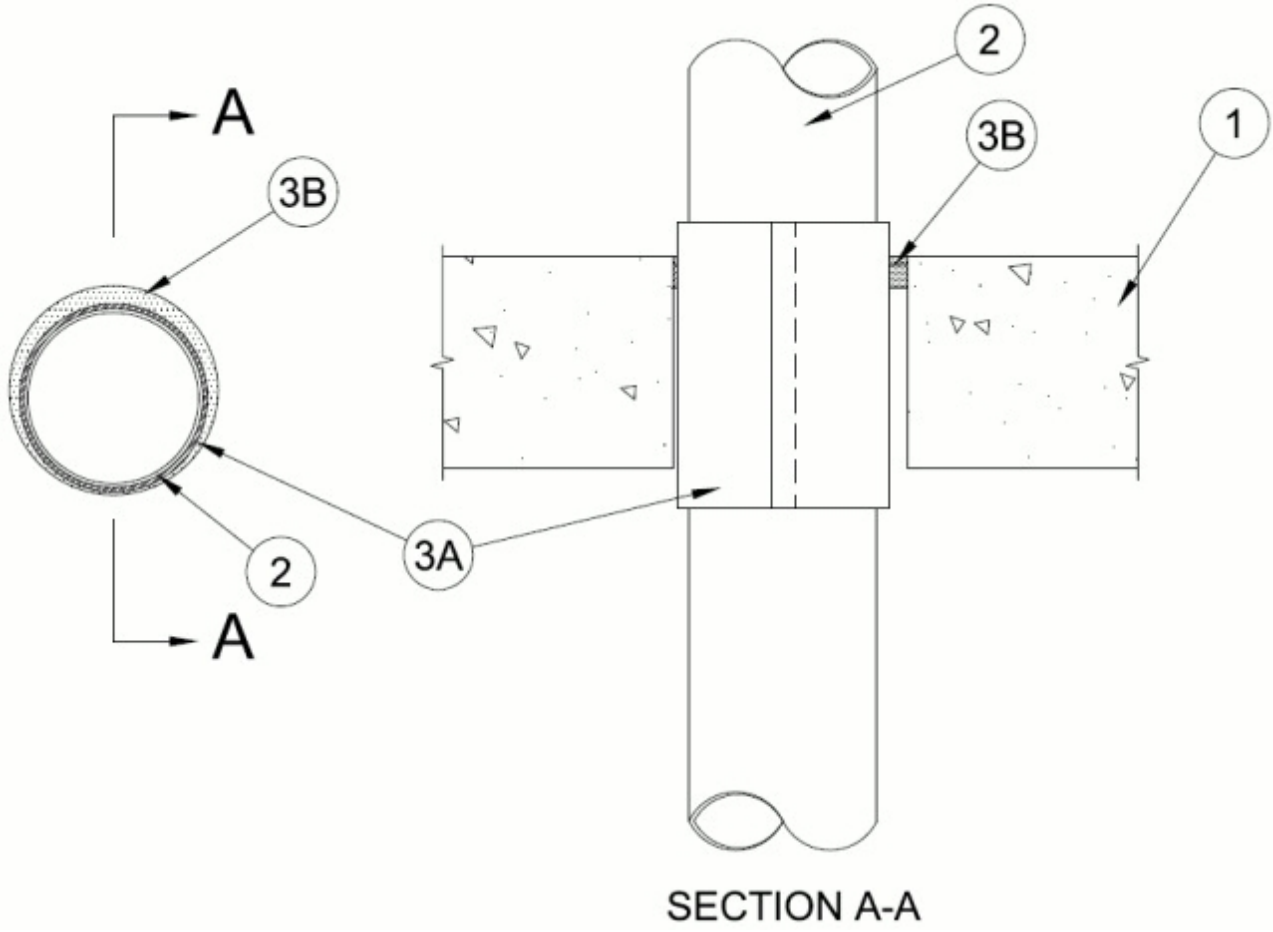
System No. C-AJ-2701

August 28, 2014

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



SECTION A-A

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. **Floor or Wall Assembly —** Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks*.** Floor may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units*.** Max diam of opening is 5 in. (127 mm).

See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) categories in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrants —** One nonmetallic penetrant to be installed either concentrically or eccentrically within the firestop system. The annular space between the penetrant and periphery of opening shall be min 1/4 in. (6 mm) to max 5/8 in. (16 mm). Penetrant to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:

A. **Crosslinked polyethylene (PEX) Tubing —** Nom 3 in. (76 mm) diam (or smaller) UPONOR

- WIRSBO PEX-a SDR 9 tube for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. **Crosslinked polyethylene (PEX) Tubing —** Nom 4 in. (102 mm) diam (or smaller) UPONOR - WIRSBO hePEX crosslinked polyethylene (PEX) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. **Firestop System —** The firestop system shall consist of the following:

A. **Firestop Device —** Galv steel sleeve lined with an intumescent material. Device to be installed in accordance with the manufacturer's installation instructions along with the following. Device to be wrapped around outer circumference of through penetrant and installed through the annular space of the opening, centered within the floor or wall and extending equally beyond each surface of the floor or wall. In floors and walls having a nominal thickness greater than 8 in. (203 mm) , two devices shall be installed within the opening with butted ends and extending equally beyond each surface of the floor or wall. The device shall be temporarily secured in place by means of electrical tape, duct tape, fiberglass tape, hose clamps or tie wires around the outer circumference of through penetrant so that the sealant (Item 3B) can be installed.

RECTORSEAL — FlameSafe® Intumescent Sleeve 234, Metacaulk Intumescent Sleeve 234 or Biostop Intumescent Sleeve 234

B. **Fill, Void or Cavity Material* — Sealant —** Min 1/2 in. (13 mm) thickness of fill material applied within the annulus between sleeve and periphery of opening, flush with top surface of floor or both surfaces of wall. In hollow-core floors, sealant shall be applied within annulus flush with both sides of floor. As an option, after installation of the sealant, the device fasteners (tape, hose clamps etc) referenced in Item 3A can be removed.

RECTORSEAL — Metacaulk 1000, Biostop 500+, FlameSafe 1900

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