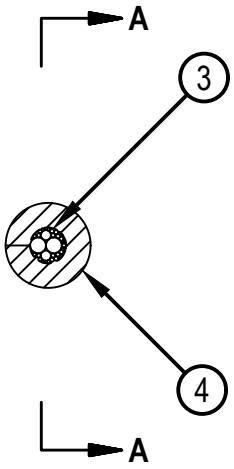
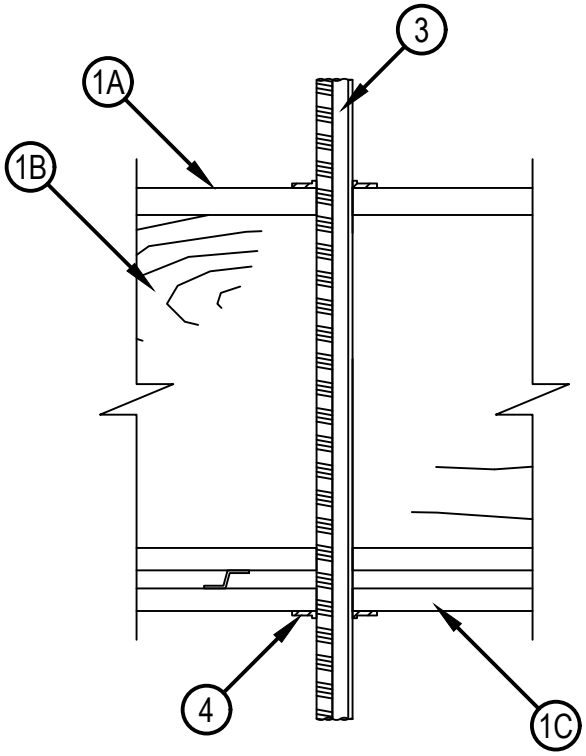
System No. F-C-3110

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

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 1 and 2 Hr (See Item 3)	FT Ratings — 1 and 2 Hr (See Item 3)
L Rating at Ambient — Less than 1 CFM/Opening	FH Ratings — 1 and 2 Hr (See Item 1)
L Rating at 400 F — Less than 1 CFM/Opening	FTH Ratings — 1 and 2 Hr (See Item 3)
	L Rating at Ambient — Less than 1 CFM/Opening
	L Rating at 400 F — Less than 1 CFM/Opening





SECTION A-A

1. Floor-Ceiling Assembly — The 1 or 2 hr fire-rated solid or trussed lumber joist Floor-Ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:
   - A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Opening may be round, rectangular or irregular with a max diam or dimension of 1 in. (25 mm).
   - B. Joists — Nom 10 in. (254 mm) deep (or deeper) lumber and steel joist, trusses or Structural Wood Members* with bridging as required and with ends firestopped.
   - C. Gypsum Board* — Nom 4 ft (122 cm) wide by 5/8 in. (16 mm) thick. Gypsum board direct-attached to joists or screw-attached to furring channels as specified in the individual Floor-Ceiling Design. Opening may be round, rectangular or irregular with a max diam or dimension of 1 in. (25 mm).

   The F and FH Rating of the firestop system is equal to the rating of the floor-ceiling assembly.

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2. Chase Wall — (Optional. Not Shown) — The through penetrants (Item 3) may be routed through a fire-rated or non-rated single, double or staggered wood stud/gypsum board chase wall constructed of the materials and Partition design in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or 2 by 8 in. (51 by 203 mm) lumber studs.
   B. Sole Plate — Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or 2 by 8 in. (51 by 203 mm) lumber plates. Opening to be centered in sole plate. Opening may be round, rectangular or irregular with a max diam or dimension of 1 in. (25 mm).
   C. Top Plate — The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or 2 by 8 in. (51 by 203 mm) lumber. Opening to be centered in top plate. Opening may be round, rectangular or irregular with a max diam or dimension of 1 in. (25 mm).
   D. Gypsum Board* — Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.
3. Cables — Single or tight bundle of cables to be installed within the opening. Aggregate cross-sectional area of cables in opening to have a visual fill of min 0% to max 100%. The annular space between the cable bundle and the periphery of the opening to be min 0 in. (point contact). Cables to be rigidly supported on both sides of the floor-ceiling assembly. Any combination of the following types and sizes of cables may be used:
   A. Max 3/C No. 8 AWG NM copper conductor cable (Romex) with PVC insulation and jacket.
   B. Max 7/C-No. 12 AWG copper conductor control cable with PVC or XLPE insulation and jacket.
   C. Max 100 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with PVC or plenum rated insulation and jacketing.
   D. Max 4 pr No. 22 AWG (or smaller) Cat 5 or Cat 6 computer cables with PVC or plenum rated insulation and jacketing.
   E. Type RG/U coaxial cable with fluorinated ethylene or PVC insulation and jacketing having a max outside diameter of 1/2 in. (13 mm).
   F. Max 24 fiber optic cable with polyvinyl chloride (PVC) or polyethylene (PE) jacket and insulation.
   G. Through Penetrating Product* — Max two copper conductor No. 18 AWG (or smaller) Power or Non-Power Limited Fire Alarm Cable with or without a jacket under a metal armor.
   AFC CABLE SYSTEMS INC
   H. Maximum 3/C No. 10 AWG copper conductor metal-clad cable.
   The T, FT and FTH Rating of the firestop system is equal to the rating of the floor-ceiling assembly. For blank openings with no cables, the F, FT, FH and FTH Rating is equal to the rating of the floor-ceiling assembly.
4. Fill, Void or Cavity Material* — Nom 60 mm diam by 3 mm thick putty disc with one seam at radius. Paper-backer of disc to be removed and disc firmly pressed around the cable/cable bundle lapping nom 5 mm onto cables to completely cover opening and firmly pressed to lap onto the floor and ceiling around periphery of opening. Disc seam to be firmly pressed and sealed tight, Disc to be installed at both sides of opening in floor-ceiling assembly.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-D 1" Firestop Putty Disc

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