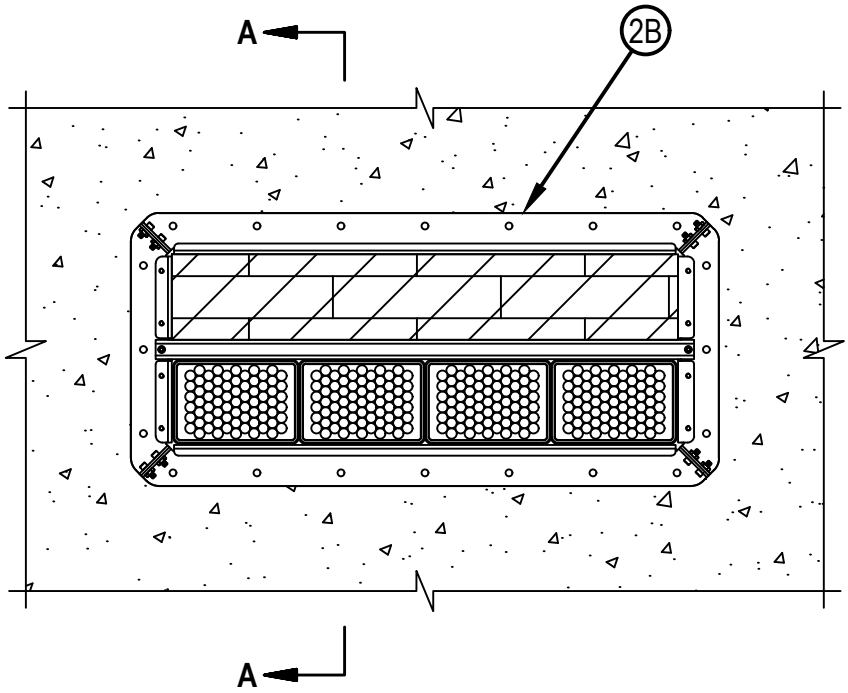
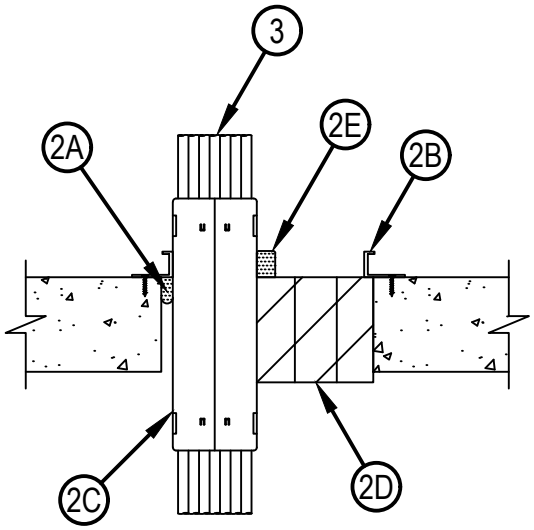
System No. F-A-3089

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

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Ratings — 0, 1/2, and 1-1/2 Hr (See Item 3)	FT Ratings — 0, 1/2, and 1-1/2 Hr (See Item 3)
	FH Rating — 2 Hr
	FTH Ratings — 0, 1/2, and 1-1/2 Hr (See Item 3)





SECTION A-A

1. Floor Assembly — Min 4-1/2 in. (114.3 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Opening to be max 25 in. (635 mm) by 10 in. (254 mm).
2. Firestop System — The firestop system shall consist of the following:
   A. Fill, Void, Cavity Material* - Top Track Seal — Factory supplied foam seal cut in half lengthwise at dotted line or tear strip and length. Cut 1 in. (25.4 mm) longer than each side of floor opening. Adhesive strip placed on top of floor such that the foam hangs over the perimeter edges of the opening and installed underneath floor grid (Item 2B).
      HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-TTS R OS, CFS-TTS OS Firestop Top Track Seal
   B. Floor Grid* — Floor grid fabricated from four steel rails fastened together to form a rectangle, with one separating bar positioned to accommodate top track seal (Item 2E) and firestop device (Item 2C). Floor grid is anchored to top surface of concrete floor with a min two, nom 1-3/4 in. (44 mm) concrete screws, at pre-drilled holes in each rail. Top track firestop seal (Item 2E) centered on and draped over steel separating bar. After installation of modular sleeve firestop devices (Item 2C) and firestop blocks (Item 2D), separating bars to be secured to floor grid rails with provided bolts.
      HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-MSL FGR 24x9" Floor Grid
   C. Firestop Device* — Firestop devices each consist of a rectangular outer steel sleeve formed with two half housings, connected and secured together with metal tabs and metal hooks. Multiple firestop devices are connected together with ganging clips and bolted to a floor grid with provided support brackets, in accordance with accompanying installation instructions. Firestop devices to completely fill across entire width of one row of floor grid.

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Maximum Size of Floor Opening, in. (mm)	Max Dimensions of Floor Grid (Item 2B), in.	Annular Space from Device to Periphery of Opening	
		Min, in. (mm)	Max, in. (mm)
25 by 10 (635 by 254)	24 by 9	3/16 (4.8)	5-1/2 (139.7)

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-MSL L 6" x 4", CFS-MSL M 3" x 4", CFS-MSL S 3" x 2" Modular Sleeves

D. Fill, Void, Cavity Material* - Fire Blocks — Fire blocks installed with 5 in. (127 mm) dimension projecting through the opening, flush with top of floor, compressing top track seal (Item 2A). Blocks to be firmly packed and completely fill the entire area of opening between the floor and firestop devices (Item 2C).

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-BL Firestop Block

E. Fill, Void, Cavity Material* - Top Track Seal — Factory supplied foam seal centered and draped over the steel separating bar within the floor grid, after installation of modular sleeve firestop devices (Item 2C) and firestop blocks (Item 2D).

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-TTS 358, CFS-TTS R OS Firestop Top Track Seal

3. Cables — Within the loading area for each modular sleeve firestop device (Item 2C), the cables may represent a 0 to 100 percent visual fill. Cables to be tightly bundled and rigidly supported on both sides of floor assembly. Any combination of the following types and sizes of copper conductor cables may be used:

A. Max 100 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with polyvinyl chloride (PVC) jacketing and insulation.

B. Max 7/C No. 12 AWG copper conductor control cable with PVC or XLPE jacket and insulation.

C. Max 4/0 AWG Type RHH ground cable.

D. Max 4 pr No. 23 AWG Cat 7 computer cables.

E. Max RG 6/U coaxial cable with fluorinated ethylene insulation and jacketing.

F. Fiber optic cable with polyvinyl chloride (PVC) or polyethylene (PE) jacket and insulation having a max diam of 1/2 in. (13 mm).

G. Max 20/C No. 22 AWG shielded printer cable with PVC jacket.

H. Max. 1/4 in. (6 mm) diameter S-Video Cable consisting of 2 max 24 AWG 75 ohm coax or twisted pair cable with PE insulation and PVC jacket.

I. Through-Penetrating Product* — Two copper conductors 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

J. Max 3/C No 12 AWG MC Cable.

K. Through Penetrating Product* — Any cables, Armored Cable+ or Metal Clad Cable+currently Classified under the Through Penetrating Product category. See Through Penetrating Product (XHLY) category in the Fire Resistance Directory for names of manufacturers.

The T, FT, and FTH Ratings for the firestop system are 1-1/2 hr when Item 3 is not used.

The T, FT, and FTH Ratings for the firestop system are 1/2 hr when 3A through 3I are used. When cable types 3J or 3K are used, the T, FT, and FTH Ratings are 0 hr.

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