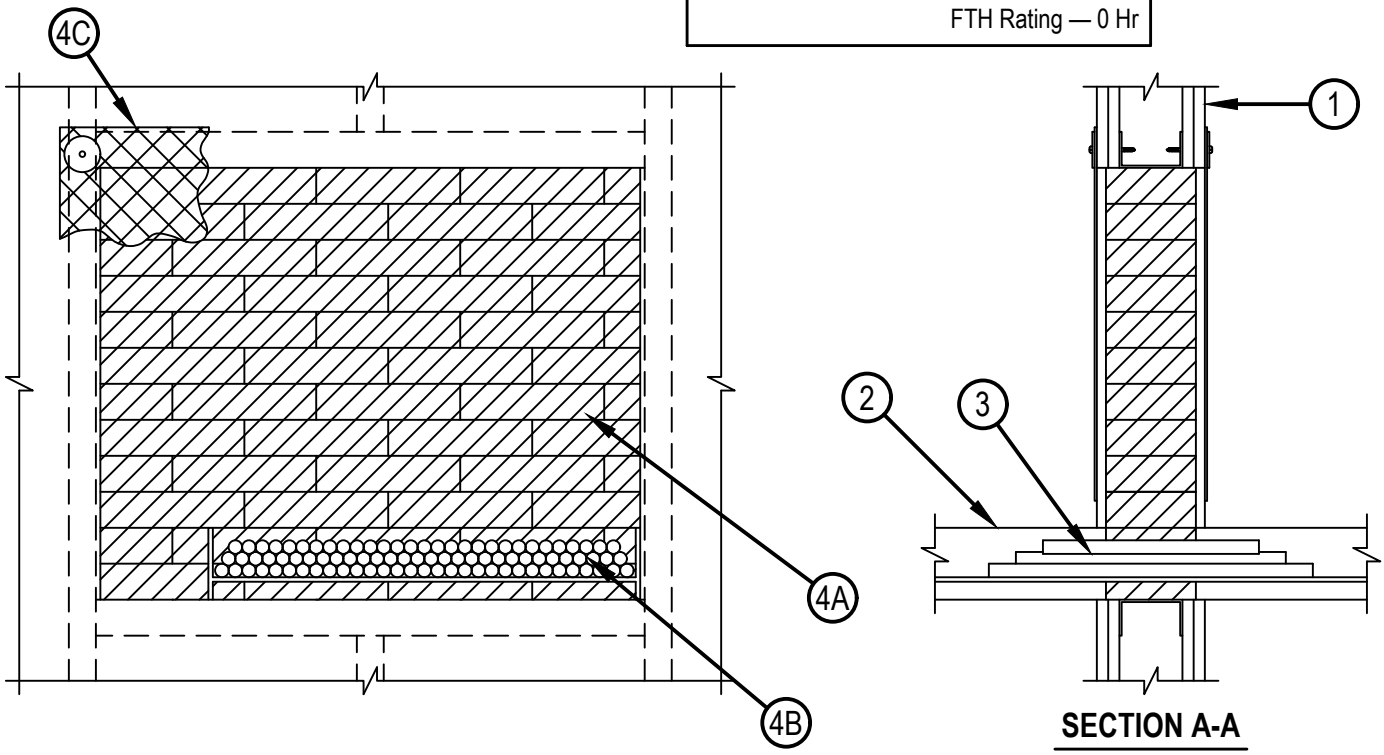
System No. W-L-4038

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 Rating — 0 Hr	FT Rating — 0 Hr
	FH Ratings — 1 and 2 Hr (See Item 1)
	FTH Rating — 0 Hr



SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing shall consist of either wood studs or channel shaped steel studs. Wood studs to consist of 2 in. (51 mm) by 4 in. (102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 (64 mm) wide, fabricated from min 25 MSG galvanized steel, spaced max 24 in. (610 mm) OC. Additional framing members shall be used to completely frame around opening.
   B. Gypsum Board* — Nom 5/8 in. (16 mm) thick with square or tapered edges. The gypsum board type, number of layers and sheet orientation shall be as specified in the individual Wall and Partition Design Number. Max area of opening is 900 sq in. (5806 cm2) with max dimension of 30 in. (762 mm).
   The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
2. Cable Tray* — Max 24 in. (610 mm) wide by 4 in. (102 mm) deep open-ladder or solid-back cable tray with channel-shaped side rails formed of 0.10 in. (2.54 mm) thick aluminum or 0.060 in. (1.53 mm) thick steel and with 1 in. wide by 1 in. deep tubular channel-shaped rungs spaced 9 in. (229 mm) OC or a 0.029 in. (0.74 mm) thick steel solid back, respectively. For steel stud walls, the annular space between the periphery of the opening shall be min 0 in. (point contact) to max 26 in. (660 mm). For wood stud walls, the annular space between the periphery of the opening shall be min 1 in. (25 mm) to max 26 in. (660 mm). Cable tray to be rigidly supported on both sides of wall assembly.
3. Cables — Aggregate cross-sectional area of cables in cable tray to be max 45 percent of the cross-sectional area of the cable tray based on a max 3 in. (76 mm) cable loading depth within the cable tray. Any combination of the following types and sizes of copper conductor cables may be used:
   A. 1/C, 750 kcmil (or smaller) power cable with EPR polyvinyl chloride (PVC) insulation and jacket.
   B 300 pair - No. 24 AWG telephone cable with PVC insulation and jacket.
   C. 24 fiber optic cable with PVC outer and subunit jacket.
   D. 3/C No. 12 AWG copper conductor Metal Clad+ cable with PVC insulation.

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

A. Fill, Void or Cavity Material*-Fire Blocks — For walls incorporating max 3-5/8 in. (92 mm) steel studs or max 2 in. (51 mm) by 4 in. (102 mm) wood studs, fire block installed with 5 in. (127 mm) dimension projecting through and centered in opening. For walls constructed of larger steel or wood studs, fire block installed with long dimension passing through and centered in opening. Blocks may or may not be cut flush with both surfaces of wall. When multiple layers of gypsum board are, blocks may be recessed 1/2 in. (13 mm) from surface of wall Blocks to be firmly packed and completely fill the entire opening. Either one or a combination of the block types specified below may be used.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS 657 Fire Block or CFS-BL Firestop Block

B. Fill, Void or Cavity Material* — Fill material to be forced into interstices of cables, between cables and cable tray and in obvious openings between blocks and between blocks and the periphery of the opening to the max extent possible on both surfaces of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant, FS-ONE MAX Intumescent Sealant, CP618 Firestop Putty Stick, CP 660 Firestop Foam or CP 620 Fire Foam

C. Wire Mesh — When the annular space exceeds 4 in. (102 mm) to the periphery above or below the cable tray, or 6 in. (152 mm) between tray and the side of opening, a nom 2 in. (51 mm) by 2 in. (51 mm) wire fencing shall be used to keep the blocks in place. The wire fencing shall be fabricated from min No. 16 SWG (0.060 in.) (1.53 mm) galv steel wire. The wire mesh shall begin max 2-1/2 in. (64 mm) above the cable tray and overlap min 3 in. (76 mm) beyond the periphery of the opening. Wire fencing secured to both surfaces of the wall assembly by means of 1/4 in. (6 mm) diam long steel hollow wall anchors and 1/4 in. (6 mm) by 1-1/2 in. (38 mm) diam fender washers spaced max 8 in. (203 mm) OC, or attached to steel studs with steel screws and 1-7/16 in. (37 mm) diam steel washers spaced max 6 in. (152 mm) OC.

C1. Steel Plate/Steel Strut System (Not Shown) — As an alternative to wire mesh, when the annular space exceeds 4 in. (102 mm) to the periphery above or below the cable tray, or 6 in. (152 mm) between tray and the side of opening, a min 22 MSG steel plate shall be used to keep the blocks in place. The steel plate shall be attached to nom 13/16 in. (21 mm) deep, 12 MSG steel struts with 1/4 in. (6 mm) diam strut nuts, spaced 8 in. (203 mm) OC. The plate shall begin max 2-1/2 in. (64 mm) above or to the sides of the cable tray and overlap min 3 in. (76 mm) beyond the periphery of the opening. The struts shall be secured to both surfaces of the wall assembly by means of 1/4 in. (6 mm) diam long steel hollow wall anchors or attached to steel studs with steel screws and washers spaced max 12 in. (305 mm) OC.

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

+Bearing the UL Listing Mark