

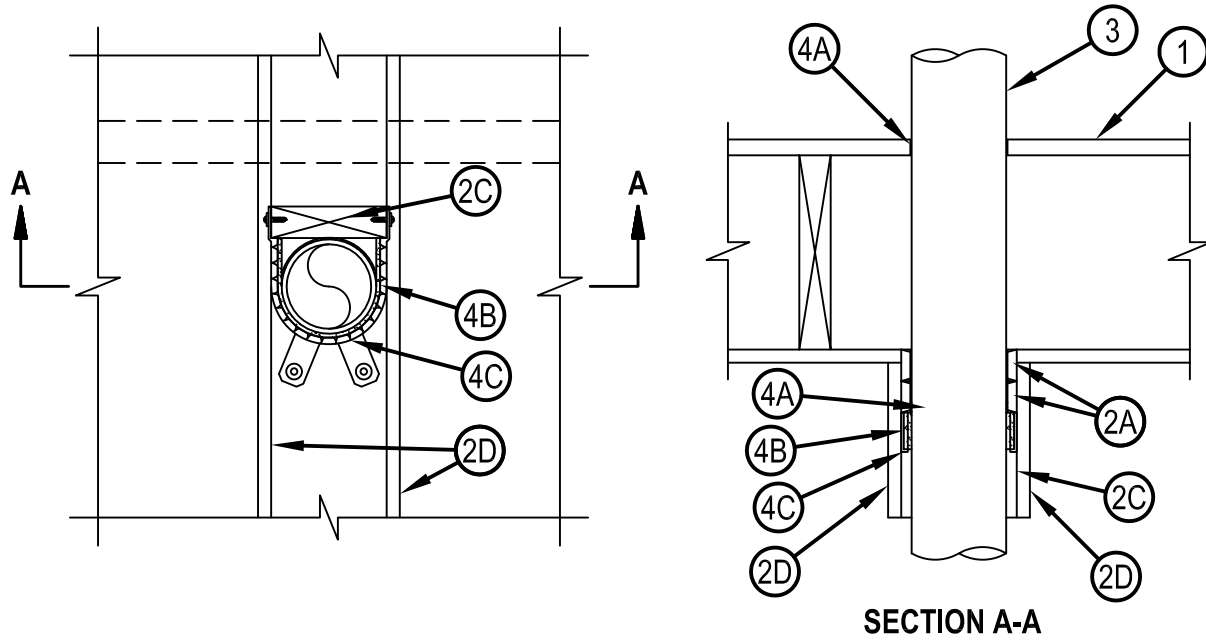


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479

## System No. F-C-2401

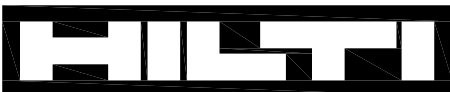
F Rating - 1 Hr  
T Rating - 1 Hr

F-C-2401



1. Floor-Ceiling Assembly — The 1 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. The general construction details of the floor-ceiling assembly are 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. Diam of floor opening shall be 1/8 in. (3.2 mm) larger than the outside diam of the through-penetrant (Item 3).
- B. Wood Joists — Nom 2 by 10 in. (51 by 254 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required with ends firestopped.
- C. Furring Channels — (Not shown) — Resilient galv steel furring installed perpendicular to wood joists (Item 1B) between wallboard (Item 1D) and wood joists as required in the individual Floor-Ceiling Design.
- D. Gypsum Board\* — Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design.



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2. Chase Wall — The through penetrant (Item No. 3) shall be routed through a wood stud/gypsum board chase wall and shall include the following construction features:
  - A. Studs — Nom 2 by 6 in. (51 by 152 mm) lumber studs.
  - B. Sole Plate — Nom 2 by 6 in. (51 by 152 mm) lumber plates. Diam of opening shall be 1/8 in. (3.2 mm) larger than the outside diam of the through-penetrant.
  - C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates. Diam of opening shall be 1/8 in. (3.2 mm) larger than the outside diam of the through-penetrant.
  - D. Gypsum Board — Min 5/8 in. (16 mm) thick rated or nonrated gypsum board.
3. Through Penetrant — One nonmetallic pipe to be centered within the opening. The annular space between the through penetrant and the periphery of the opening shall be 1/16 in. (1.6 mm). Pipe to be min 1/16 in. (1.6 mm) from chase wall stud. Pipe to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes may be used.
  - A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core PVC for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
4. Firestop System — The firestop system shall consist of the following:
  - A. Fill, Void or Cavity Material\* - Sealant — Min 1/2 in. (13 mm) crown of fill material applied over the annulus, flush with top surface of floor or sole plate. Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with bottom surface of lower top plate.  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant
  - B. Fill, Void or Cavity Material\* - Wrap Strip — Nom 3/16 in. (4.8 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. Min two layers of wrap strip wrapped around pipe in a U-Shaped manner with the ends tightly butted against the chase wall stud. Wrap strip butted tightly against lower surface of top plates.  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E W45/1-3/4" Wrap Strip
  - C. Steel Collar — Collar fabricated from coils of precut min 0.017 in. (0.43 mm) thick (No. 28 MSG) galv steel available from the sealant manufacturer. Collar shall be nom 1-3/4 in. (44 mm) deep with 1 in. (25 mm) wide by 2 in. (51 mm) long anchors tabs on 2 in. (51 mm) centers for securement to floor/ceiling assembly. The opposite side incorporates retainer tabs, 1/2 in. (13 mm) wide by 3/16 in. (4.8 mm) long, pre-bent toward the pipe surface. Collar shall be tightly wrapped over the wrap strip, overlapping min. 1 in. (25 mm) onto chase wall stud at both ends. A min two anchor tabs of collar to be secured to top plate opposite the stud with min 1/4 in. (6 mm) diam by 1-1/2 in. (38 mm) long steel wood screws in conjunction with min 3/4 in. (19 mm) diam steel washers. Both ends of collar to be secured to the stud with min 1/4 in. (6 mm) diam by 1-1/2 in. (38 mm) long steel wood screws in conjunction with min 3/4 in. (19 mm) diam steel washers.

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



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