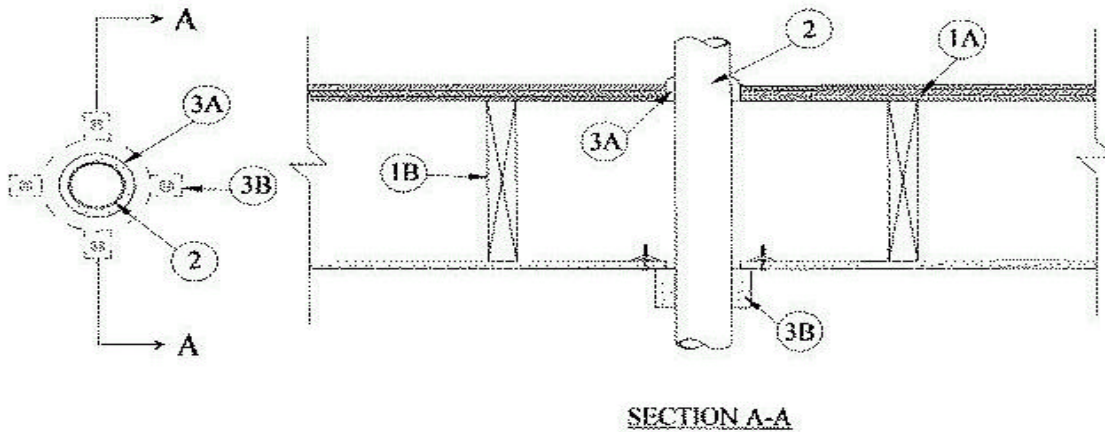


**UL System No. F-C-2154**

**F Rating — 1 Hr**

**T Rating — 3/4 Hr**



**1. Floor-Ceiling Assembly** The fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in 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 sub-floor with finish floor of lumber, plywood or **Floor Topping Mixture\*** as specified in the individual Floor-Ceiling Design. Max dia. of floor opening is 5 in.

**B. Wood Joists** Nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 10 in. 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 wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Wallboard secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max dia. of ceiling opening is 5 in.

**2. Through Penetrants** One nonmetallic pipe or conduit to be installed approximately midway between wood joists and centered within the firestop system. Dia. of openings hole-sawed through flooring system and through gypsum wallboard ceiling to be nom 1/2 in. larger than the outside dia. of through-penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

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A. **Polyvinyl Chloride (PVC) Pipe** Nom 4 in. dia. (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping systems.

B. **Rigid Nonmetallic Conduit+** Nom 4 in. dia. (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70).

C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** Nom 4 in. dia. (or smaller) SDR 17 CPVC 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. **Fill, Void or Cavity Material\*** — **Sealant** Min 1-1/4 in. thickness of fill material applied within annulus on top surface of floor. Additional fill material to be installed such that a min 1/4 in. crown is formed around the through penetrant on top surface of floor.

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B. **Firestop Device\*** Galv. steel sleeve lined with an intumescent material sized to fit the specific dia. of the through penetrant. Device to be wrapped around outer circumference of through penetrant and secured together in accordance with the installation instructions supplied with the product. Device secured to bottom surface of gypsum wallboard ceiling by means of 1/8 in. dia. by 2 in. long molly bolts in conjunction with 1/4 in. by 3/4 in. dia. steel washers and 1/4 in. by 1-1/4 in. dia. steel fender washers at each anchor tab.

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\*Bearing the UL Classification Marking

+Bearing the UL Listing Mark