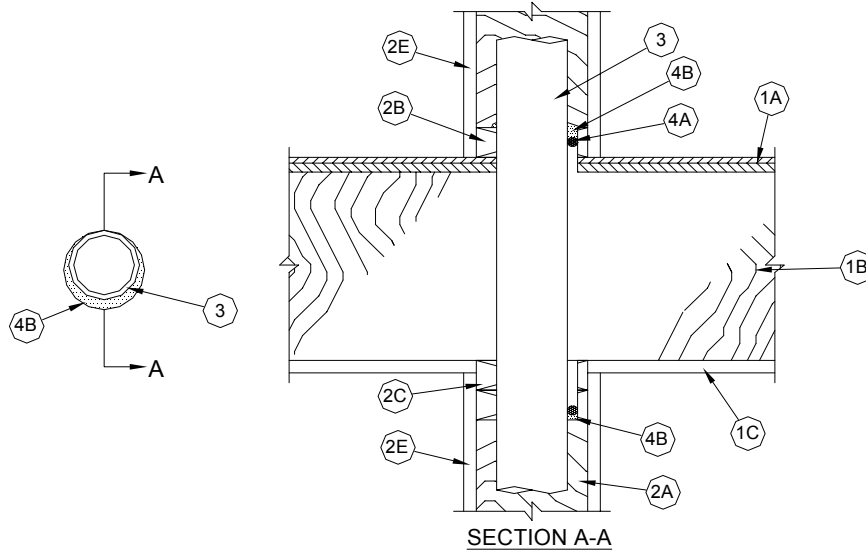


**Through-penetration Firestop Systems**  
**UL System No. F-C-2346**  
**F Rating - 1 Hr**  
**T Rating - 3/4 Hr**



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 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. Max. dia. of opening is 5 in. (127 mm).
  - B. **Wood 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. **Gypsum Board\*** - Nom. 4 ft (122 cm) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Gypsum board secured to wood joists as specified in the individual Floor-Ceiling Design.
2. **Chase Wall** - The through penetrants (Item 3) shall be routed through a 1 hr fire rated single, double or staggered wood stud/gypsum board chase wall constructed of the materials and in the manner specified in individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall have the following construction details:
  - A. **Studs** - Nom. 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
  - B. **Sole Plate** - Nom. 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted.
  - C. **Top Plate** - The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max. dia. of opening is 5 in. (127 mm).
  - D. **Gypsum Board\*** - Thickness, type number of layers and fasteners shall be as specified in individual Wall and Partition Design.

## UL System F-C-2346 continued...

3. **Through Penetrants** - One nonmetallic pipe to be installed either concentrically or eccentrically within the firestop system. Dia. of opening hole-sawed through flooring (Item 1A) and through both top plates (Item 2C) to be 1/2 in. (13 mm) larger than the outside dia. of pipe. The annular space between pipe and periphery of floor opening shall be min. 0 in. (point contact) to max. 1/2 in. (13 mm). Pipe to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of nonmetallic pipes may be used:

- A. **Polyvinyl Chloride (PVC) Pipe** - Nom. 4 in. (102 mm) dia. (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
- B. **Acrylonitrile Butadiene Styrene (ABS) Pipe** - Nom. 4 in. (102 mm) dia. Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
- C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** - Nom. 4 in. (102 mm) dia. (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.

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

- A. **Packing Material** - (Optional) - Foam backer rod firmly packed into the opening as a permanent form. Packing material to be recessed from top surface of sole plate and bottom surface of the lower top plate as required to accommodate the required thickness of fill material.
- B. **Fill, Void or Cavity Material\* - (Caulk)** - Min. 1/2 in. (13 mm) thickness of fill material applied within annulus, flush with top surface of sole plate. Additional fill material to be installed such that a min. 1/4 in. (6 mm) crown is formed around the pipe and lapping 1/4 in. (6 mm) beyond the periphery of the opening on the top surface of sole plate. Min. 1/4 in. (6 mm) (for Intumescent Sealant) or 1/2 in. (13 mm) (for Acrylic Sealant) thickness of fill material applied within annulus, flush with bottom surface of lower top plate.

**A/D FIRE PROTECTION SYSTEMS INC** - A/D FIREBARRIER Intumescent Sealant or  
A/D FIREBARRIER Acrylic Sealant

\*Bearing the UL Classification Mark