

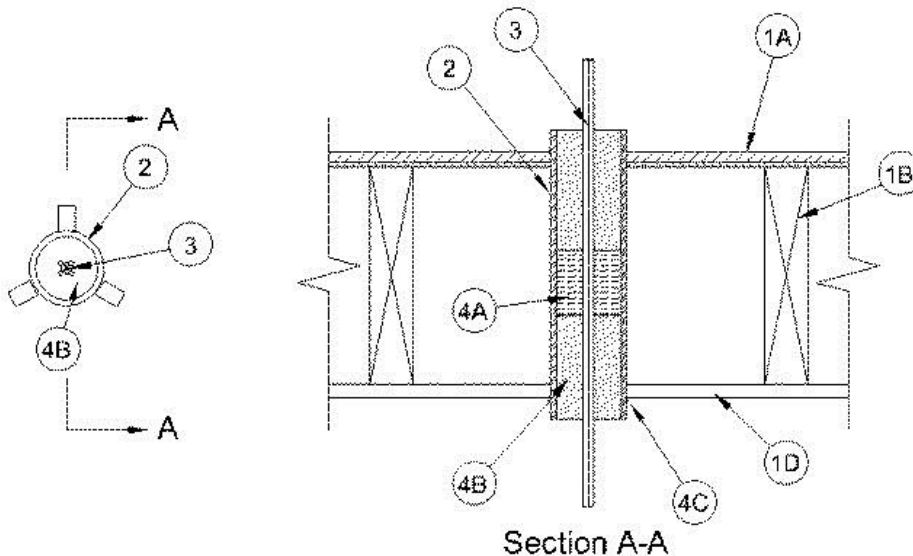
Through-penetration Firestop Systems

System No. F-C-3090

November 07, 2008

F Rating — 1 Hr

T Rating — 1 Hr



1. **Floor or Wall Assembly** — The 1 hr fire-rated wood joist, wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500 Series Design in the UL Fire Resistance Directory and shall include the following construction features:

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 diam of floor opening is 3 in. (76 mm).

B. **Joists** — Nom 2 by 10 in. (51 by 254 mm) deep (or deeper) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped or steel or combination lumber and steel joists, trusses or **Structural Wood Members*** with bridging as required and with ends firestopped.

C. **Furring Channels** — (Not Shown) - Resilient galv steel furring channels installed perpendicular to wood joists (Item 1B) as required in the individual Floor-Ceiling Design.

D. **Gypsum Board*** — Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Max diam of opening is 3 in. (76 mm).

1. **Chase Wall** — (Optional, Not Shown) - The through penetrant (Item 2) may 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 the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

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. Max diam of opening is 3 in. (76 mm).

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 diam of opening is 3 in. (76 mm).

D. **Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.

2. **Steel Sleeve** — Cylindrical sleeve fabricated from min 0.030 in. (0.76 mm) thick galv sheet steel and having a min 1 in. (25 mm) lap along the longitudinal seam. Length of sleeve to be equal to thickness of floor-ceiling assembly plus 2 in. (51 mm) such that, when installed, the ends of the sleeve will project approx 1 in. (25 mm) above the top surface of floor and 1 in. (25 mm) below the bottom surface of ceiling or lower top plate of chase wall assembly. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the plywood floor and gypsum board ceiling or top plates of chase wall assembly. As a final step, three nom 1/2 in. (13 mm) wide by 1 in. (25 mm) long mounting tabs shall be formed bent at 90° towards the surface of the floor.

3. **Cables** — Aggregate cross-sectional area of cables in opening to be max 5 percent of the aggregate cross-sectional area of the opening. Cable bundle to be centered within opening and rigidly supported on both sides of floor-ceiling assembly. Any combination of the following types and sizes of cables may be used:

- A. Max 2 /C No. 18 AWG with polyvinyl chloride (PVC) insulation and jacket materials.
- B. Max 4 pair No. 24 AWG telephone cable with PVC insulation and jacket materials.
- C. Max RG/U (or smaller) coaxial cable with fluorinated ethylene insulation and jacket materials.
- D. Max 3/C (with ground) No. 14 AWG (or smaller) nonmetallic sheathed (Romex) cable with PVC insulation and jacket materials.

4. **Firestop System** — The details of the firestop system shall be as follows:

A. **Packing Material** — Min 3 in. (76 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor and bottom surface of ceiling or lower top plate of chase wall assembly to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Materials* - Foam** — Min 4-1/2 in. (114 mm) thickness of fill material applied within the annulus on both top and bottom surfaces of mineral wool insulation. Foam installed flush with both ends of steel sleeve.

ACCUMETRIC L L C — Boss 813 FR Expanding Foam

C. **Fill, Void or Cavity Material* - Sealant** — Prior to the fabrication of the mounting tabs of the steel sleeve (Item 2), min 1/4 in. (6 mm) diam bead of fill material applied around the outer circumference of steel sleeve at on top surface of floor and bottom surface of ceiling or lower top plate of chase wall assembly.

ACCUMETRIC L L C — Boss 136 or 139 Sealant

*Bearing the UL Classification Mark