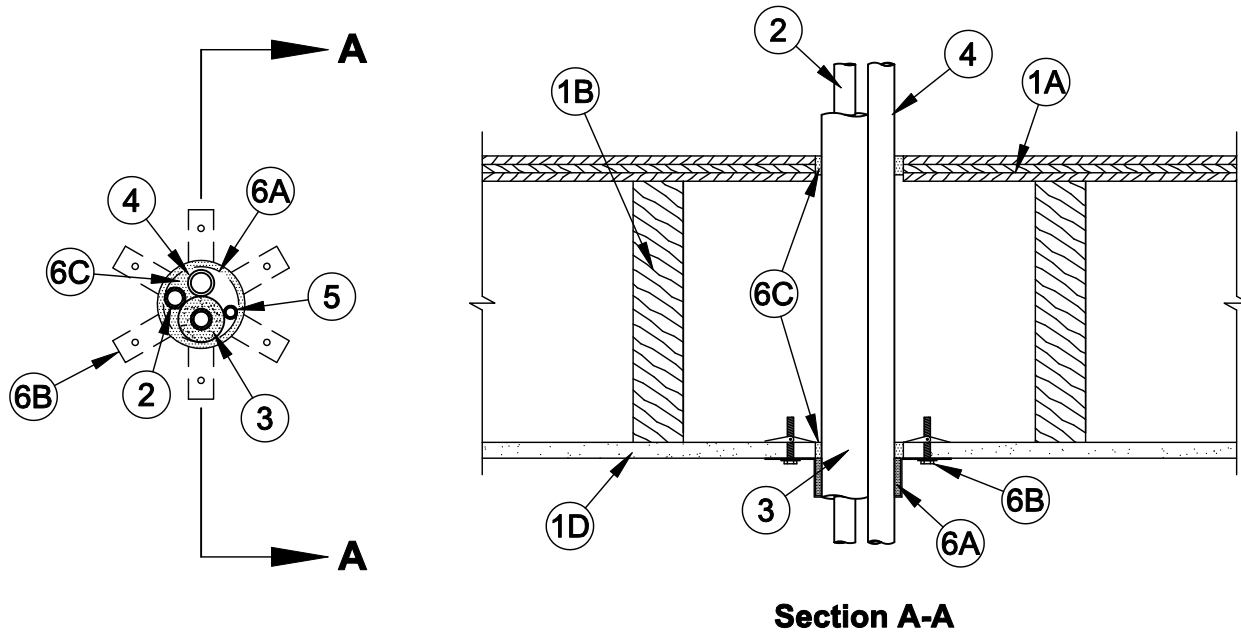




System No. F-C-8010

F Rating - 1 Hr
T Rating - 1 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 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 3-1/2 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 diam of ceiling opening is 3-1/2 in.
2. **Through Penetrants** - One or more metallic pipes, conduits or tubing to be installed within the firestop system. Pipes, conduits or tubing to be spaced a min 0 in. (point contact) to a max 1/8 in. from the other penetrants (Items 4, 5, and 6). The space between the pipes, conduits or tubing and the periphery of the opening shall be a min 1/4 in. to a max 3/4 in. Pipes, conduits or tubing to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - A. **Steel Pipe** - Nom 3/4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. **Conduit** - Nom 3/4 in. diam (or smaller) steel electrical metallic tubing or 3/4 in. diam galv steel conduit.
 - C. **Copper Tubing** - Nom 3/4 in. diam (or smaller) Type L (or heavier) copper tubing.
 - D. **Copper Pipe** - Nom 3/4 in. diam (or smaller) Regular (or heavier) copper pipe.



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3. **Tube Insulation - Plastics#** - Nom 1/2 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Tube insulation to be installed on a one or more of the metallic pipes or tubing. Insulated pipes or tubing shall be spaced a min 0 in. (point contact) to a max 1/8 in. from the other through-penetrants (Items 3, 5 and 6). The space between insulated and periphery of opening shall be a min 1/4 in. to a max 3/4 in.
4. **Nonmetallic Through Penetrants** - One nonmetallic pipe or conduit to be installed within the firestop system. Pipe or conduit shall be spaced a min 0 in. (point contact) to max 1/8 in. from the other through penetrants (Items 3, 4, and 6). The annular space between pipe or conduit and the periphery of the opening shall be a min 1/4 in. to a max 3/4 in. 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:
 - A. **Polyvinyl Chloride (PVC) Pipe** - Nom 1 in. diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply or vented) (drain, waste or vent) piping system.
 - B. **Rigid Nonmetallic Conduit+** - Nom 1 in. diam (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 3/4 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply or vented) (drain, waste or vent) piping systems.
5. **Cables** - One 4 pair No. 18 AWG (or smaller) cable with PVC insulation and jacket materials. Cables to be spaced a min 0 in. (point contact) to a max 1/8 in. from the other through-penetrants (Items 2, 4 and 5). The annular space between the cable and periphery of opening shall be a min 1/4 in. into a max 3/4 in. Cables to be rigidly supported on both sides of floor-ceiling assembly.
6. **Firestop System** - The firestop system shall consist of the following:
 - A. **Fill, Void or Cavity Material* - Wrap Strip** - Nom 1/4 in. thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. wide strips. One layer of wrap strip is wrapped around the group of through-penetrants at its egress from bottom surface of ceiling with ends butted and held in place with a single layer of aluminum foil tape.
SPECIFIED TECHNOLOGIES INC - SpecSeal RED Wrap Strip
 - B. **Steel Collar** - Collar fabricated from coils of precut 0.016 in. thick (30 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 1-1/2 in. deep with min four 1 in. wide by 2 in. long anchor tabs for securement to underside of ceiling. Retainer tabs, 3/4 in. wide tapering down to 1/4 in. wide and located opposite the anchor tabs, are folded 90 degree toward the through-penetrant surface to maintain the annular space around the through-penetrants and retain to the wrap strips. Steel collar wrapped around wrap strip and through-penetrant with a 1 in. wide overlap along its perimeter joint and secured together by means of a min 1/2 in. wide by 0.028 in. thick stainless steel hose clamp at mid-depth of the steel collar. As an alternate to the steel hose clamp, the steel collar may be secured together by means of three No. 8 by 1/4 in. long steel sheet metals screws. Collar secured to ceiling with 3/16 in. diam by min 2-1/2 in. long toggle bolts in conjunction with min 1/4 in. by 1 in. diam steel fender washers.
 - C. **Fill, Void or Cavity Material* - Sealant** - At the top of assembly, min 3/4 in. thickness of fill material applied within annulus flush with top surface of floor. At the bottom of assembly, min 5/8 in. thickness applied within annulus flush with bottom surface of ceiling. On both top and bottom of assembly, fill material forced into interstices within group of penetrating items (Items 2, 4 and 5) to max extent possible.
SPECIFIED TECHNOLOGIES INC - SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

* Bearing the UL Classification Marking

+ Bearing the UL Listing Mark

Bearing the UL Recognized Component Mark



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