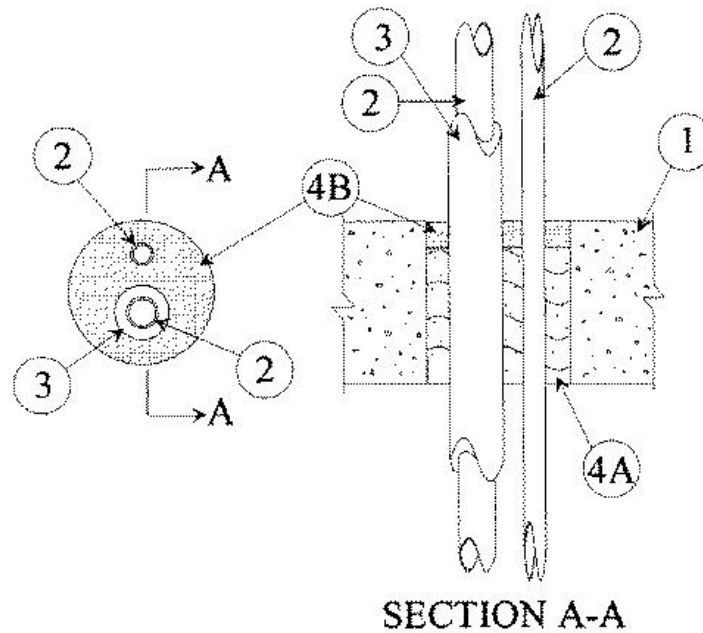


F Rating — 3 Hr
 T Rating — 0 Hr



1. **Floor or Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete floor or min 5-1/4 in. thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified **Concrete Blocks***. Floor may also be constructed of any min 6 in. thick UL Classified hollow-core **Precast Concrete Units***. Max diam of opening is 4 in.

See **Concrete Blocks (CAZT)** and **Precast Concrete Units (CFTV)** categories in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrants** — A max of two pipes, conduits or tubing to be installed within the opening. The space between pipes, conduits or tubing and periphery of opening shall be min 5/8 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall 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) electrical metallic tubing or steel conduit.
- C. **Copper Tubing** — Nom 3/4 n. diam (or smaller) type L (or heavier) copper tubing.
- D. **Copper Pipe** — Nom 3/4 in. diam (or smaller) regular (or heavier) copper pipe.

3. **Tube Insulation — Plastics+** — Nom 1/2 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing installed only on one pipe. The annular space between tube insulation and through penetrants (Item 2) shall be 1/2 in. The annular space between the tube insulation and periphery of opening shall be 3/8 in.

See **Plastics+** — (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

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

A. **Packing Material** — Min 3-3/4 in. thickness of min 4.5 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of solid concrete floor, or from both surfaces of wall or hollow-core floor as required to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material* — Caulk** — Min 3/4 in. thickness of fill material applied within the annulus, flush with top surface solid concrete floor, or with both surfaces of wall or hollow-core floor.

RECTORSEAL — [Metacaulk 1000](#)



*Bearing the UL Classification Marking

+Bearing the UL Recognized Component Mark

*,+ 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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