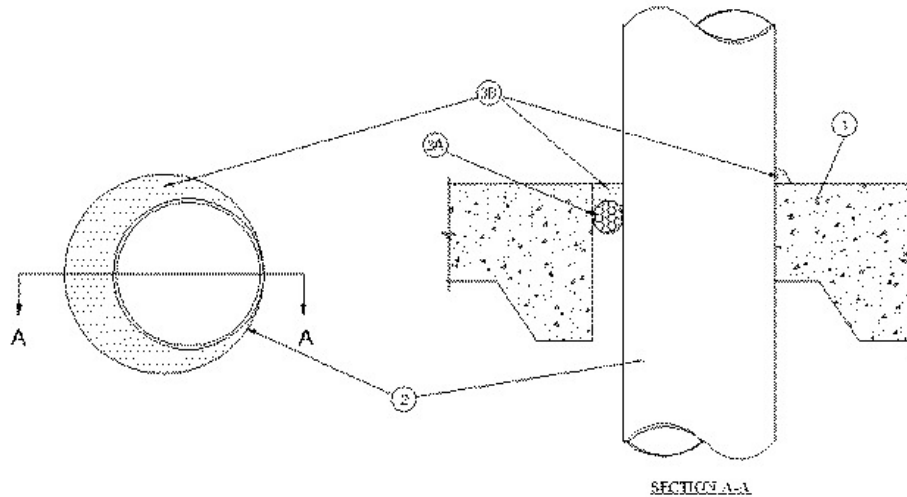


F Rating — 2 Hr
 T Rating — 1/4 Hr



1. Floor Assembly — The fire rated unprotected concrete and steel floor assembly shall be constructed of the materials and in the manner specified in the individual D900 Series designs in the UL Fire Resistance Directory and as summarized below:

A. **Concrete** — Min 2-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete.

B. **Steel Floor and Form Units*** — Composite or non-composite max 3 in. deep galv steel fluted units as specified in the individual Floor-Ceiling Design. Max diam of opening is 14 in.

1A. **Floor Assembly** — As an alternate to the concrete and steel floor assembly above, min 2-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Max diam of opening is 14 in.

2. Through Penetrants — One metallic penetrant to be installed eccentrically or concentrically within the firestop system. The annular space between pipe and periphery of opening shall be min of 0 in. (point contact) to max 1-1/4 in. Pipe to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipes, tubing or conduit may be used:

A. **Steel Pipe** — Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 12 in. diam (or smaller) cast or ductile iron pipe.

C. **Conduit** — Nom 4 in. diam (or smaller) steel electrical metallic tubing.

D. **Conduit** — Nom 6 in. diam (or smaller) rigid steel conduit.

E. **Copper Tubing** — Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.

F. **Copper Pipe** — Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

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

A. **Packing Material** — Foam backer rod firmly packed into opening as a permanent form. Packing material to be recessed from the top surface of the floor to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Materials*-Sealant** — Min 1/2 in. thickness of sealant applied within annular space, flush with top surface of floor. At the point contact location between pipe and concrete, a min 1/2 in. diam bead of fill material shall be applied at the concrete/pipe interface on the top surface of floor.

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*,+ 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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