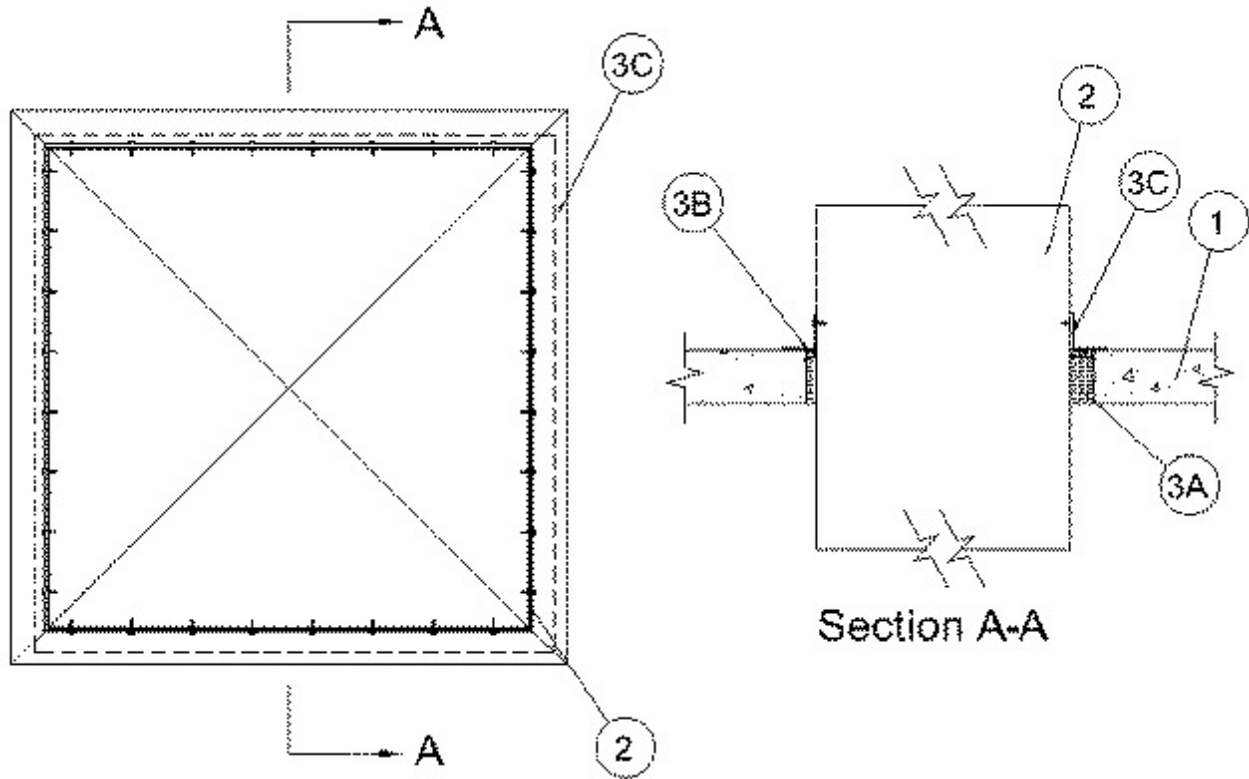


## System No. F-A-7017

November 13, 2008

F Rating — 2 Hr

T Rating — 0 Hr



1. **Floor Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. Max area of opening shall be 13.4 ft<sup>2</sup> (1.25 m<sup>2</sup>) with max dimension of 44 in. (1.12 m).

2. **Through-Penetrants - Coated Ducts\*** — Rectangular or square coated steel air duct with a max perimeter dimension of 160 in. (4.06 m) and a max individual dimension of 40 in. (1.02 m). One duct to be installed concentrically or eccentrically within the firestop system. The annular space between the through penetrant shall be min of 1/2 in. (13 mm) to max of 2 in. (51 mm). Duct sections to be assembled as specified in Ventilation Duct Assembly No. 18. See Ventilation Duct Assemblies in Vol. 2 of the Fire Resistance Directory.

**FIRESPRAY INTERNATIONAL LTD — FLAMEBAR BW11 FIRE RATED DUCTWORK**

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

A. **Packing Material** — Min 4 in. (102 mm) thickness of min 6 pcf (96 kg/m<sup>3</sup>) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material\* - Sealant** — Min 1/2 in. (13 mm) thickness of fill material within the annulus, flush with top surface of floor. As an option, min 1/4 in. (6 mm) bead of fill material may be applied on the concrete surface around the periphery of the opening prior to the installation of the steel angles.

**RECTORSEAL** — BioStop 500+ Caulk

C. **Steel Angles** — Nom 3 by 3 by 1/4 in. (76 by 76 by 6 mm) thick steel angles installed around perimeter of opening on top surface of floor. Steel angles shall lap a min of 1 in. (25 mm) onto the concrete on all sides of the opening. Steel angles shall be attached to through penetrant (Item 2) by means of nom 3/16 in. (5 mm) diam stainless steel pop rivets or min No. 8 steel sheet metal screws spaced within 2 in. (52 mm) of each end and a max of 5 in. (127 mm) OC.

\*Bearing the UL Classification Mark