



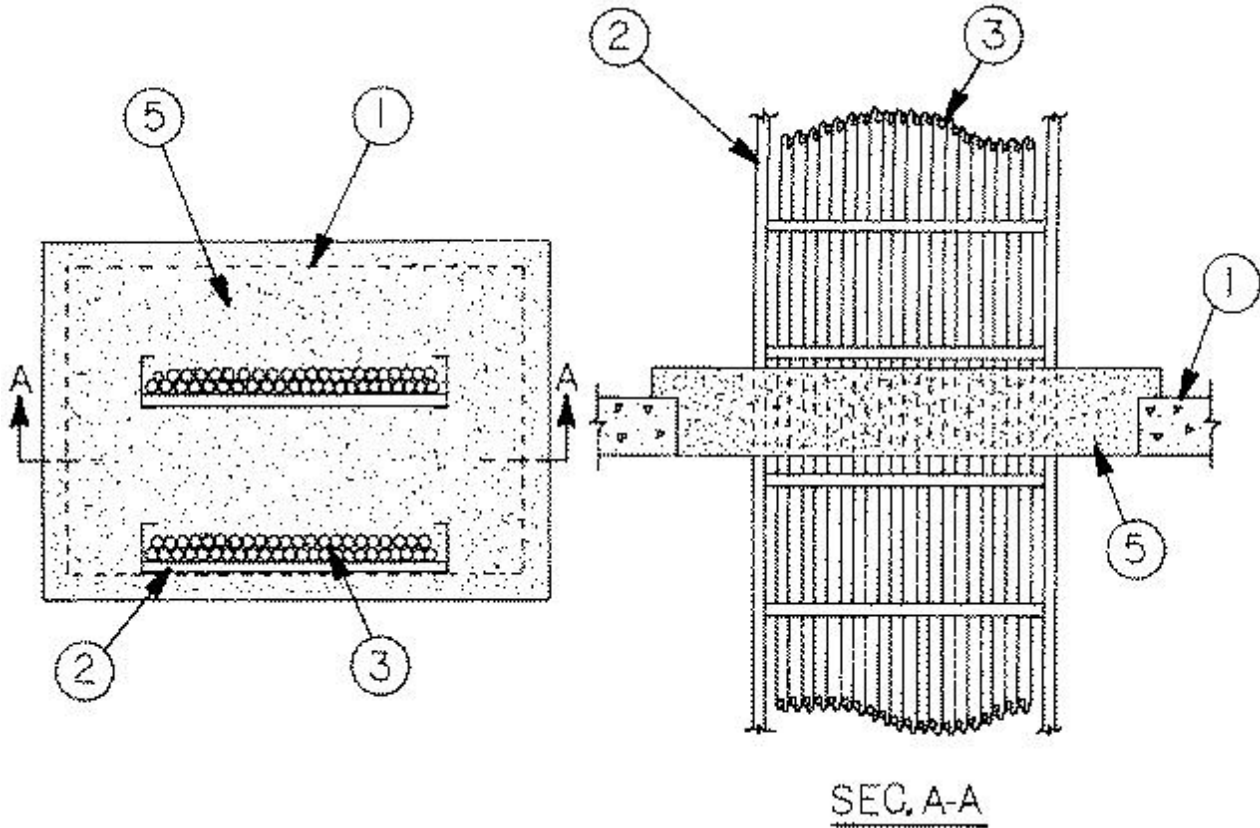
System No. C-AJ-4010

September 14, 2002

(Formerly System No. 276)

F Rating — 3 Hr

T Ratings — 1/2 and 3/4 Hr (See Item 3)



1. **Floor Or Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100 to 150 pcf) concrete floor or min 7 in. thick reinforced lightweight or normal weight concrete wall. Wall assembly may also be constructed of any UL Classified **Concrete Blocks***. Max area of opening 864 in. with max dimension of 36 in.

See **Concrete Block** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Cable Tray+** — Max 24 in. wide by 4 in. deep open ladder cable tray with channel-shaped side-rails formed of min 0.063 in. thick steel and with nom 1 in. wide by 3/4 in. deep rungs spaced 9 in. OC. Max of two cable trays installed in the opening with a min separation of 6 in. between the cable trays and with a min separation of 2 in. between the cable trays and the sides of the through opening. The max separation between the cable trays and between the cable trays and the sides of the through-opening is 9 in. In concrete floor assemblies, the cable tray may be installed to abut one side of the through opening provided that the fill material (Item 5) is curbed 2-1/2 in. above the top surface of the floor and extended at least 2 in. beyond the perimeter of the through opening on all sides of the through opening. Cable trays rigidly supported on both sides of floor or wall assembly.

3. **Cables** — Aggregate cross-sectional area of cables in cable tray to be max 39 percent of the cross-sectional area of the cable tray based on a max 3 in. cable loading depth within cable tray. Any combination of the following types and sizes of copper conductor cables may be used:

A. Max 300 kcmil single-conductor power cable; polyvinyl chloride (PVC) insulation. **When max 300 kcmil single-conductor power cable is used, T Rating is 1/2 hr.**

B. Max 7/C No. 12 AWG power and control cables; PVC insulation and jacket materials. **When max 12 AWG multiconductor cables are used, T Rating is 3/4 hr.**

4. **Forms** — (Not Shown) — Used as a form to prevent leakage of fill material during installation. Forms to be a rigid sheet material, cut to fit the contour of the penetrating item and fastened to the underside of floor or both sides of wall. When floor thickness is less than 7 in., a box shall be formed on the unexposed (top) side of the floor to increase the overall depth of the through-opening to 7 in. The inside dimensions of the "curbing" form shall be at least 4 in. greater than the inside dimensions of the through-opening such that the fill material "curb" laps a min of 2 in. on the top surface of the concrete floor on all sides of the through-opening. Forming material to be removed after fill material has cured.

5. **Fill, Void, or Cavity Material*** — **Mortar** — Min 7 in. thickness of fill material applied within annulus, flush with lower surface of floor or both surfaces of wall. Material to be mixed with water in accordance with mixing instructions on the bag and pumped or troweled into the through-opening.

RECTORSEAL — Bio K10+ Mortar

+Bearing the UL Listing Marking

*Bearing the UL Classification Mark