

## System No. HW-D-0327

September 04, 2015

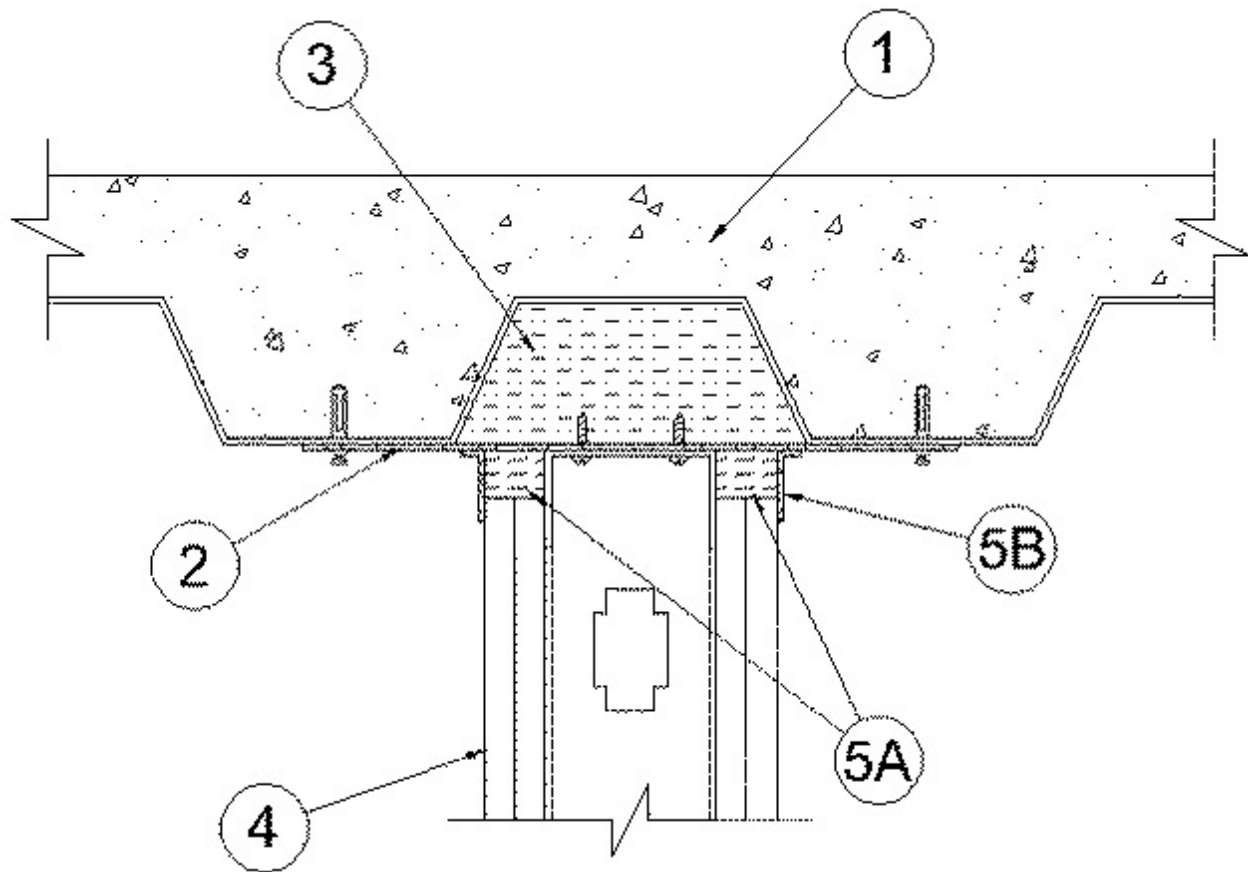
**Assembly Rating — 1 and 2 Hr (See Item 1)**

**Nominal Joint Width — 1 In.**

**Class II Movement Capabilities — 25% Compression and Extension**

**L Rating At Ambient - Less Than 1 CFM/Lin Ft**

**L Rating At 400 F - Less Than 1 CFM/Lin Ft**



**1. Floor Assembly** — The fire-rated fluted steel floor unit/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the Fire Resistance Directory and shall include the following construction features:

**A. Steel Floor and Form Units\*** — Max 3 in. (76 mm) deep galv steel fluted floor units.

**B. Concrete** — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete, as measure from the top plane of the floor units.

**2. Steel Straps** — Min 2 in. (51 mm) wide 16 MSG galv steel straps cut to a length to span the flute and overlap the adjacent valleys of fluted floor units by 1-1/2 in. (38 mm). Straps spaced max 24 in. (610 mm) OC and fastened to floor assembly with 1/4 in. (6 mm) diam by 1-1/2 in. (38 mm) long steel concrete anchors.

**3. Forming Material\* - Plugs** — Preformed mineral wool plugs, formed to the shape of the fluted floor units, friction fit to completely fill the flutes above the steel straps. Adjacent lengths of plugs to be tightly butted with butted seams spaced min 24 in. (610 mm) apart along the length of the plugs.

**ROCK WOOL MANUFACTURING CO** — Delta Deck Plugs

**4. Wall Assembly** — The 1 or 2 h fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

**A. Steel Floor and Ceiling Runners** — Floor and ceiling runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with 2 in. (51 mm) flanges. Ceiling runner installed parallel to direction of fluted steel floor units, directly beneath steel straps and secured to straps with two No. 8 self-drilling, self-tapping steel screws per strap.

**B. Studs** — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 in. (13 mm) to 3/4 in. (19 mm) less in length than assembly height with bottom nesting in and resting on the floor runner and with top nesting in ceiling runner without attachment. Stud spacing not to exceed 24 in. (610 mm) OC.

**C. Gypsum Board\*** — For 1 hr assembly, one layer of 5/8 in. (16 mm) thick gypsum board as specified in the individual Wall and Partition Design. For 2 hr assembly, two layers of 5/8 in. (16 mm) thick gypsum board are specified in the individual Wall and Partition Design. For both hourly ratings, a nom 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the steel floor units and the top row of screws shall be installed into the studs 3 in. (76 mm) below the valleys of the steel floor units.

**5. Joint System** — **Max separation between bottom of floor and top of wall is 1 in. (25 mm) The joint system is designed to accommodate a max 25 percent compression or extension from its installed width.** The joint system consists of a forming material and a fill material between the top of the gypsum board and the bottom of the floor, as follows:

**A. Forming Material\*** — Min 4 pcf (64 kg/m<sup>3</sup>) density mineral wool batt insulation cut shall be cut into strips to fill the gap between the top of gypsum board and bottom of the floor units. The width of the strips shall be equal to the total thickness of the gypsum board. The strips of mineral wool are compressed 50 percent in thickness and firmly packed into the gap between the top of the gypsum board and bottom of the mineral wool plug or steel floor units.

**IIG MINWOOL L L C** — MinWool-1200 Safing

**ROCK WOOL MANUFACTURING CO** — Delta Safing Board

**ROCKWOOL MALAYSIA SDN BHD** — SAFE

**ROXUL INC** — SAFE

**THERMAFIBER INC** — SAF

**B. Fill, Void or Cavity Material\* - Sealant** — Min 1/8 in. (3.2 mm) wet thickness or 1/16 in. (1.6 mm) dry thickness of fill material sprayed or troweled on each side of the wall to completely cover the mineral wool forming material and to overlap a min of 1/2 in. (13 mm) onto gypsum board, steel floor units and steel straps on both sides of the wall.

**RECTORSEAL** — FlameSafe FS3000, Metacaulk 1200, 1500 or Biostop 750, 800 Spray

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.