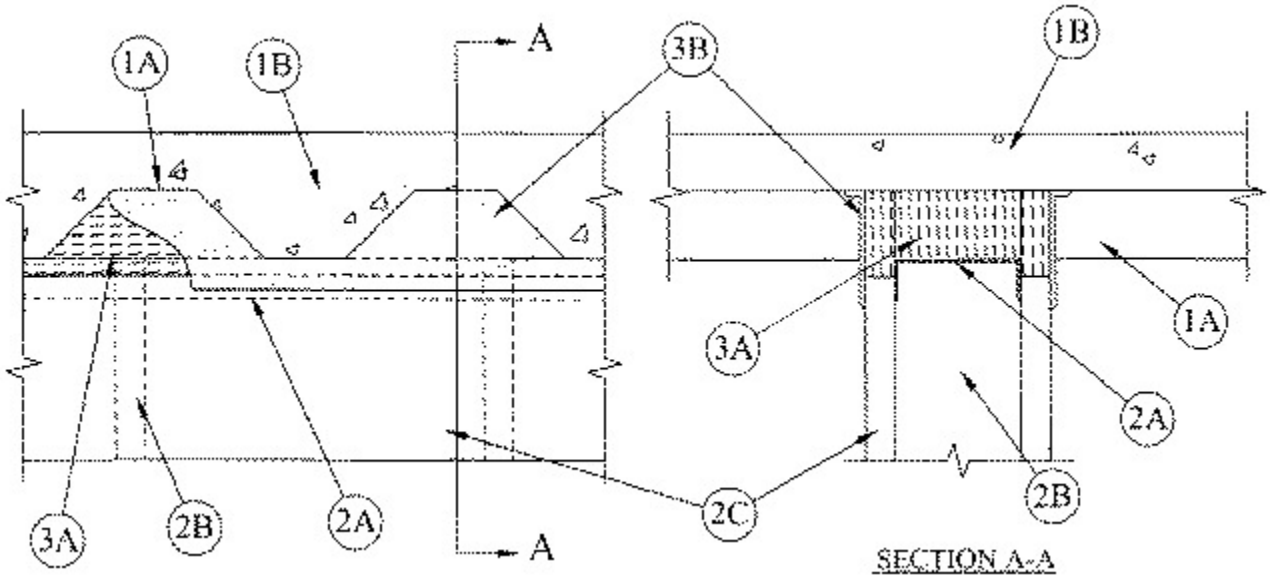
UL System No. HW-D-0282

January 28, 2003

Assembly Rating — 1 Hr

Nominal Joint Width — 1 In.

Class II Movement Capabilities — 20% Compression or Extension



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

A. **Steel Floor and Form Units* —** Max 3 in. deep galv steel fluted units.

B. **Concrete —** Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.

1A. **Roof Assembly —** (Not Shown)-As an alternate to the floor assembly, a fire-rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. deep galv steel fluted roof deck.

B. **Roof Insulation —** Min 2-1/2 in. thick poured insulating concrete, as measured from the top plane of the roof deck.

The hourly rating of the floor or roof assembly shall be equal to or greater than the hourly rating of the wall assembly.

2. **Wall Assembly —** The 1 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 series Wall and 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. Ceiling runner to be provided with min 1-1/2 in. flanges. Ceiling runner secured to valleys of steel floor units with steel fasteners or by welds spaced max 12 in. OC.

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

C. **Gypsum Board* —** Wallboard sheets installed to a min total thickness of 5/8 in. on each side of wall for 1 hr rated assemblies. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a nom 1 in. gap shall be maintained between the top of the gypsum board and the bottom of the steel floor units and the top row of screws shall be installed into the studs 1 in. below the bottom of the ceiling runner. The hourly fire rating of the joint system is equal to the hourly fire rating on the wall.

3. **Joint System —** Max width of joint (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 20 percent compression or extension from its installed width. The joint system shall consist of the following:

A. **Forming Material* —** Min 4 in. thickness of min 4 pcf mineral wool batt insulation cut to the shape of the fluted deck, approx 20 percent larger than the area of the flutes and compressed into flutes of the steel floor units between the top of the ceiling runner and the steel deck and compressed in thickness to be flush with the outside faces of gypsum board. Additional pieces of min 4 pcf mineral wool are cut 5/8 in. in width by 1.2 in. in thickness and compressed into the gap between the top of gypsum board and bottom of steel floor units on both sides of the wall.

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B. **Fill, Void or Cavity Material* —** Seal - Min 1/8 in. wet film thickness of seal sprayed on each side of the wall in the flutes of the steel floor units and between the top of the wall and the bottom of the steel floor units. Additional min thickness of 1/8 in. of seal to overlap onto gypsum board and steel floor units a min 1/2 in. on both sides of wall.

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*Bearing the UL Classification Mark