



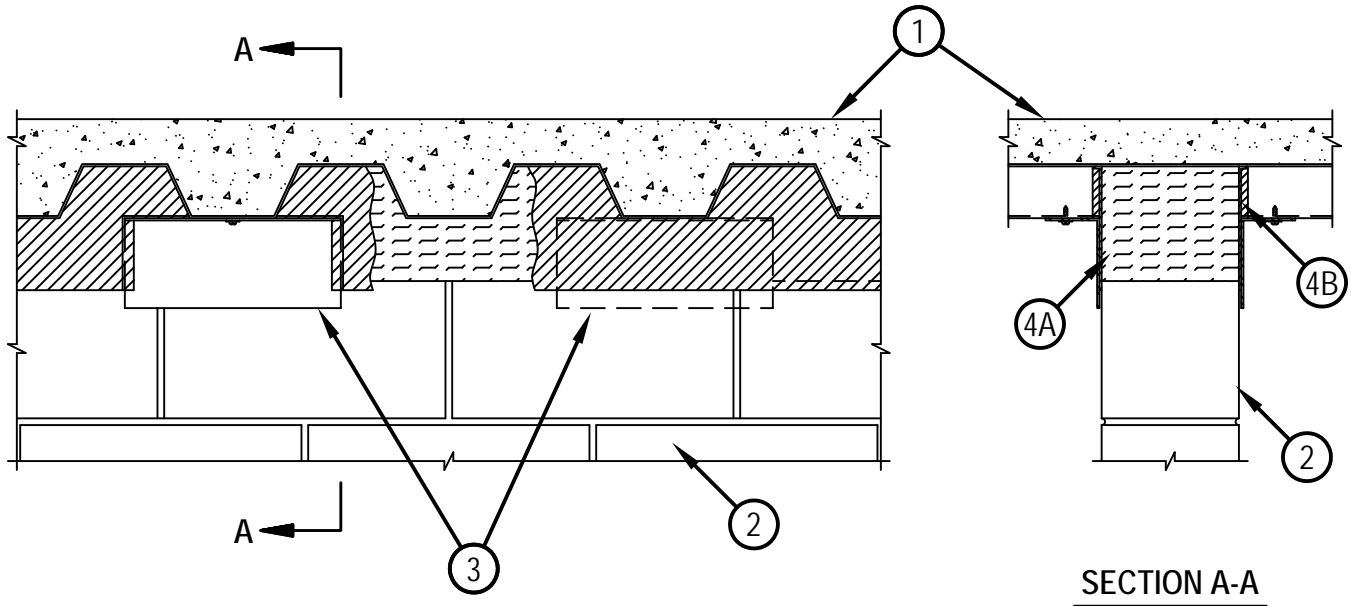
Classified by
Underwriters Laboratories, Inc.
to UL 2079 and CAN/ULC-S115

System No. HW-D-1044

Assembly Rating — 2 Hr
Nominal Joint Width — 3-1/2 In.

Class II Movement Capabilities — 14% Compression and Extension

HWD 1044



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. deep galv steel fluted floor units.
- B. Concrete — Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.
- C. Spray-Applied Fire Resistant Materials* — (Optional) - (Not Shown)-Prior to the installation of the forming material and fill, void or cavity material (Items 3A, 3B) the steel floor units may be sprayed with a min 5/16 in. to max 1-3/4 in. thickness of fire resistive material.
W R GRACE & CO - CONN — Type MK-6-HY

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 hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. 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 2-1/4 in. thick poured insulating concrete, as measured from the top plane of the floor units.

1B. Roof Assembly — As an alternate to Items 1 and 1A, a fire rated protected 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 P700 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:

- A. Steel Roof Deck — Max 3 in. deep galv steel fluted roof deck.
- B. Spray-Applied Fire Resistant Materials* — (Not Shown) - Prior to the installation of the steel ceiling runners, Forming Material and Fill, Void or Cavity Material (Items 2A, 3A, 3B), the roof assembly shall be sprayed with the type and thickness of fire resistive material indicated in the individual P700 Series design.
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Hilti Firestop Systems

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2. Wall Assembly — Min 8 in. thick steel reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified Concrete Blocks*.
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
3. Steel Angles — Nom 5 in. by 3 in. by 12 MSG (or heavier) steel angles, max 12 in. long, staggered max 24 in. OC on opposite sides of wall with 3 in. leg fastened to fluted steel floor units or roof deck.
4. Joint System — Max separation between bottom of floor units and top of concrete wall at time of installation is 3-1/2 in. The joint system is designed to accommodate a max 14 percent compression or extension from its installed width. The joint system shall consist of the following:
 - A. Forming Material* — Nominal 4 in thick pieces of nominal 4 pcf forming material sized to attain a min compression rate of 50 percent in the thickness direction firmly packed to completely fill the flutes. Additional pieces of batt insulation, min 8 in. wide, shall be compressed 50 percent in thickness and installed edge first into joint opening between bottom of fluted floor or roof units and top of concrete wall.
THERMAFIBER INC — Type SAF
 - A1. Forming Material*-Plugs — (Optional-Not Shown) Performed mineral wool plugs, formed to the shape of the fluted floor units, friction fit to completely fill the flutes above the ceiling runner. The plugs shall be flush with both wall surfaces. Additional forming material, described in Item 3A, to be used in conjunction with the plugs to fill the gap between the top of the wall and the bottom of the steel floor units.
HILTI CONSTRUCTION CHEMICALS, DIV OF
HILTI INC — CP777 Speed Plugs
 - B. Fill, Void or Cavity Material* - Sealant — A 1/8 in. wet thickness of fill material sprayed or trowled on each side of wall to completely cover mineral wool forming material and to overlap a min 1/2 in. onto steel angles, steel floor units and concrete wall. When spray-applied fire resistive material* is applied to the steel deck, the fill material is to overlap the steel angles and wall a min 1/2 in. and the spray-applied fire resistive material a min of 2 in. on both sides of the wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF
HILTI INC — CP672 Firestop Spray or CFS-SP WB Firestop Joint Spray

*Bearing the UL Classification Mark



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