

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

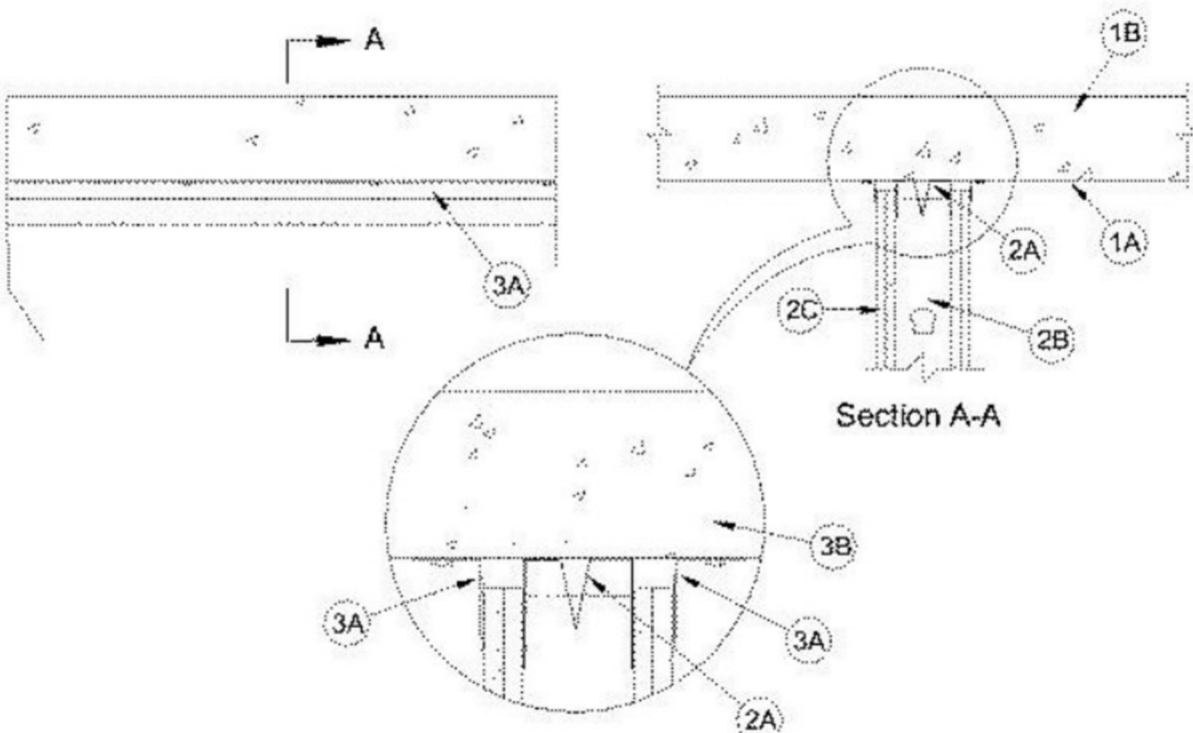
XHBN • Joint Systems

See General Information for Joint Systems

System No. HW-D-0419

June 21, 2023

Assembly Rating — 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1/2 in.
Class II and III Movement Capabilities - 100% Compression & Extension



1. **Floor Assembly** — Min 4-1/2 in. (114 mm) thick steel reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Floor may also be constructed of any min 6 in. thick UL Classified hollow-core **Precast Concrete Units**.
See **Precast Concrete Units (PCU)** category in the Fire Resistance Directory for names of manufacturers.

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

2. **Wall Assembly** — The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series **Wall and Partition** Design in the UL Fire Resistance Directory and shall include the following construction features:
A. Light Gauge Framing — M-Track ceiling runner to consist of galv steel with slotted V-section to accommodate steel studs (Item 2B). M-Track ceiling runner secured to floor assembly with steel masonry anchors spaced max 24 in. (610 mm) OC, alternating the fasteners from one side of M-Track to the other.
CEMCO, LLC — CMT

B. Studs — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 in. to 1 in. (13 to 25 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Studs to nest in M-Track ceiling runner without attachment.

C. Gypsum Board — Gypsum board sheets installed to a min total 5/8 in. (16 mm) or 1-1/4 in. (32 mm) thickness on each side of wall for 1 and 2 hr fire rated assemblies, respectively. **Wall** to be constructed as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory except that a max 1/2 in. (13 mm) gap shall be maintained between the top of the gypsum board and the bottom of the floor. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 to 3-1/2 in. (25 to 89 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System** — Max separation between bottom of floor and top of wall (at time of installation of joint system) is 1/2 in. (13 mm). The joint system is designed to accommodate a max 100 percent compression or extension from its installed width.
A. Fill, Void or Cavity Material — A nom 20 gauge steel angle provided with a nom 1 in. (25 mm) wide intumescent strip on one leg. Angle to be secured to floor assembly with steel masonry anchors spaced a max 12 in. (305 mm) OC with the intumescent strip against the outer face of gypsum board on both sides of wall.
CEMCO, LLC — Firestik

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

Last Updated on 2023-06-21

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System No. HW-D-0218

ANSI/UL2079	CANULC S115
Assembly Ratings — 1 and 2 Hr (See Item 2)	F Ratings — 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1-1/2 in.	FT Ratings — 1 and 2 Hr (See Item 2)
Class II Movement Capabilities — 25% Compression or Extension	FH Ratings — 1 and 2 Hr (See Item 2)
L Rating At Ambient — Less Than 1 CFM/in ft	FTH Ratings — 1 and 2 Hr (See Item 2)
L Rating At 400 F — Less Than 1 CFM/in ft	Nominal Joint Width - 1-1/2 in.
	Class II Movement Capabilities — 25% Compression or Extension
	L Rating At Ambient — Less Than 1 CFM/in ft
	L Rating At 400 F — Less Than 1 CFM/in ft

1. **Floor Assembly** — The fire-rated rated steel floor/uniconcrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 or D900 Series 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 concrete, as measured from the top plane of the floor units.
 - C. Structural Steel Support (Optional) — Steel beam or open-web steel joist, as specified in the individual D700 or D900 Series Floor-Ceiling Design, used to support steel floor units. Structural steel support oriented perpendicular to wall assembly. — Steel beam or open-web steel joist, as specified in the individual D700 or D900 Series Floor-Ceiling Design, used to support steel floor units. Structural steel support oriented perpendicular to wall assembly.
 - D. Steel Lath — Where open-web steel joists pass through the fire rated wall, 3/8 in. diamond mesh expanded steel lath having a nom weight of 1.7 to 3.4 lb per sq yd (0.9 to 1.8 kg/m²) shall be secured to one side of each joist with steel tie wire and the lath shall be fully covered with no min thickness requirement.

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- E. **Spray-Applied Fire Resistive Material** — After the installation of the ceiling runner, (Item 2A, 2A1 or 2A2) steel floor units to be sprayed with the thickness of material specified in the individual D700 Series Design or the structural steel supports to be sprayed in accordance with the specifications in the individual D900 Series Design. Material is to be excluded from the steel floor units, directly above the gypsum board and from the fanges of the ceiling runners.
- ISOLATEK INTERNATIONAL — Type 300
GCP APPLIED TECHNOLOGIES INC. — Type MK-6HY or MK-10HB
- 1A. **Roof Assembly** — (Not Shown) — As an alternate to the floor assembly, a fire rated rated 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 or 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 as applicable:
- A. Steel Roof Deck — Max 3 in. (76 mm) deep galv steel fluted roof deck.
 - B. Roof Insulation — Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the steel roof deck.
 - C. Structural Steel Support (Optional) — Steel beam or open-web steel joist, as specified in the individual P700 or P900 Series Roof-Ceiling Design, used to support steel roof deck. Structural steel support oriented perpendicular to wall assembly. Steel beam or open-web steel joist, as specified in the individual P700 or P900 Series Roof-Ceiling Design, used to support steel roof deck. Structural steel support oriented perpendicular to wall assembly.
 - D. Steel Lath — Where open-web steel joists pass through the fire rated wall, 3/8 in. diamond mesh expanded steel lath having a nom weight of 1.7 to 3.4 lb per sq yd (0.9 to 1.8 kg/m²) shall be secured to one side of each joist with steel tie wire and the lath shall be fully covered with no min thickness requirement.
- E. **Spray-Applied Fire Resistive Material** — After the installation of the ceiling runner, (Item 2A, 2A1 or 2A2) steel roof deck to be sprayed with the thickness of material specified in the individual P700 Series Design or the structural steel supports to be sprayed in accordance with the specifications in the individual P700 or P900 Series Design. Material is to be excluded from the steel roof deck, directly above the gypsum board and from the fanges of the ceiling runners.
- ISOLATEK INTERNATIONAL — Type 300
GCP APPLIED TECHNOLOGIES INC. — Type MK-6HY or MK-10HB
2. **Wall Assembly** — The 1 or 2 hr 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 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 (Item 2B). Flange height of ceiling runner shall be min 1/4 in. (6 mm) greater than max extended joint width. Ceiling runner centered beneath and parallel with valley of steel floor units (Item 1A). Ceiling runner secured to steel floor units with masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC. A clearance of 1-1/2 in. (38 mm) shall be maintained between the ceiling runner and the spray-applied fire resistive material on the structural steel support members.
 - A1. **Light Gauge Framing** — Slotted Ceiling Runner — As an alternate to the ceiling runner in Item 2A, slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Slotted ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, prior to the application of spray-applied fire resistive material, and secured with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC.
 - B. **BRADY CONSTRUCTION INNOVATIONS INC.** — SLP-TRK, SLP-TRK325
CALIFORNIA EXPANDED METAL PRODUCTS CO. — CST
CLARKDIE TRICH BUILDING SYSTEMS — Types SLT, SLT-H
MARINOWARE, DIV OF WAIVE INDUSTRIES INC. — Type SLT
RAM SALES L.L.C. — RAM Slotted Track
SCARCO STEEL STUD MANUFACTURING CO.
TELLING INDUSTRIES L.L.C. — Track-Action Deflection Track
 - A2. **Light Gauge Framing** — Vertical Deflection Ceiling Runner — As an alternate to the ceiling runners in Item 2A and 2A1, vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clips, provided with snap fasteners, for permanent fastening of steel studs. Flanges sized to accommodate steel studs (Item 2B). Vertical deflection ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, prior to the application of spray-applied fire resistive material, and secured with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC.

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- A3. **Light Gauge Framing** — Notched Ceiling Runner — As an alternate to the ceiling runners in Items 2A through 2A2, notched ceiling runners to consist of C-shaped galv steel channel with notched return flanges sized to accommodate steel studs (Item 2B). Notched ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, prior to the application of spray-applied fire resistive material, and secured with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC.
- CLAVIS SUPPLY INC. — Type SCS
- A4. **Light Gauge Framing** — Slotted Ceiling Runner — As an alternate to the ceiling runner in Item 2A through 2A3, ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Flange height of slotted ceiling runner shall be 3-1/4 in. (85 mm) with 2 in. (51 mm) deep side. Slotted ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, prior to the application of spray-applied fire resistive material, and secured with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC.
- SCARCO STEEL STUD MANUFACTURING CO. — Slotted Track-Type SDLT
- B. **Studs** — Steel studs to be min 3-5/8 in. (92 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in, nesting on and fastened to the floor runner and with top nesting in ceiling runner without attachment. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long washer head steel screws at midheight or slot on each side of wall. When vertical deflection runner (Item 2A2) is used, studs secured to vertical clip through slip fastening, supplied, with No. 8 by 1/2 in. (13 mm) steel screws at midheight or slot on each side. When slotted ceiling runner (Item 2A4) is used, steel studs cut in lengths 3/4 to 1-3/4 in. (19 to 44 mm) less than floor to ceiling height and secured to slotted ceiling runner with No. 8 by 1/2 (13 mm) long washer head steel screws at +/- 3/16 in. (5 mm) of the mid height of slot on each side of wall. A framed opening shall be constructed around each steel structural member. A min clearance of 1 in. (25 mm) to a max of 4 in. (102 mm) shall be maintained between the framing and the spray-applied fire resistive material on the two sides of the structural support. The clearance between the framing and the spray-applied fire resistive material on the bottom of the structural steel support shall be max 2 in. (51 mm). Stud spacing not to exceed 24 in. (610 mm) OC.
- C. **Gypsum Board** — 5/8 in. (16 mm) thick, 4 ft (12 m) wide with square or tapered edges. The gypsum board type, number of layers an sheet orientation shall be as specified in the individual U400, V400 or V400 Series Design in the Fire Resistance Directory, except that a max 1-1/2 in. (38 mm) gap shall be maintained between top of gypsum board and bottom plane of steel floor units and between the top edge of the gypsum board and the spray applied fire resistive material on the structural steel support. The top row of screws shall be installed into the studs 1-1/2 to 2 in. (38 to 51 mm) below the bottom of the ceiling runner.
- The hourly ratings of the joint system are dependent on the hourly rating of the wall.
3. **Joint System** — Max separation between bottom of floor units and top of gypsum board at time of installation is 1-1/2 in. (38 mm). Max separation between spray-applied fire resistive material on bottom of structural support and framed opening in top of wall is 2 in. (51 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** — Nominal 4 in. (102 mm) thick piece of nominal 4 psi (84 kPa) forming material, used to be fast with both surfaces of wall, placed to fully fill the framed opening around the structural steel support. Forming material to be installed with fibers vertical along the sides of the beam and pieces sized to attain a min compression rate of 25 percent in the thickness direction. Forming material to be installed with fibers horizontal at the bottom of the beam and pieces sized to attain a min compression rate of 50 percent in the thickness direction. Additional mineral wool batt insulation cut into strips to fill the gap between top of the gypsum board and bottom of floor units. Width of the strips shall be equal to the total thickness of the gypsum board. The strips of mineral wool shall be compressed 50 percent in thickness and firmly packed into the gap between the top of gypsum board and bottom of floor units.
 - INDUSTRIAL INSULATION GROUP L.L.C. — MinWool-220 Belling
JOHN MANVILLE — Saffing
ROCKWOOL MANUFACTURING CO. — Data Board
ROCKWOOL — SAFE
THERMAPRIMER INC. — Type SAF
 - B. **Fill, Void or Cavity Material** — Sealant — A min 1/16 in. (1.6 mm) dry thickness (min 1/8 in. or 3.2 mm wet thickness) of fill material sprayed or troweled on each side of wall to completely cover mineral wool forming material and to overlap min 1/2 in. (13 mm) onto gypsum board and min 2 in. (51 mm) onto the steel floor units or the spray applied material on the steel floor unit and on the structural support member on both sides of wall.
- HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. — CFS-SP WB Firestop Joint Spray

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

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System No. HW-D-0218

DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION

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9161724-7034

CONSULTANT LOGO:

REV	REVISION DESCRIPTION	DATE
2	ADDENDUM 1 (ACD-001)	10/17/2025

CONSTRUCTION DOCUMENTS

PROJECT NO.: 9557740
SHEET NO.: S241219-34-00
BUILDING: BLD-02841 - SURGERY AND EMERGENCY SERVICES PAVILION
FLOORING: 1ST FLOOR
PROJECT TITLE: SESEP 1P742 1P745 CT SCANNER REPLACEMENT
SHEET TITLE: WALL DETAILS

ARCH-LENGR	DOB& JOB NO.	SHEET NO.
E. TIEN	9557740	A
UCM& PROJECT MANAGER	SCALE	A632
Z. Price	AS SHOWN	
DESIGNED BY	DATE	
NLA	-	
DRAWN BY	CAD FILE	
NLA	-	
SHEET	-	OF