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.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

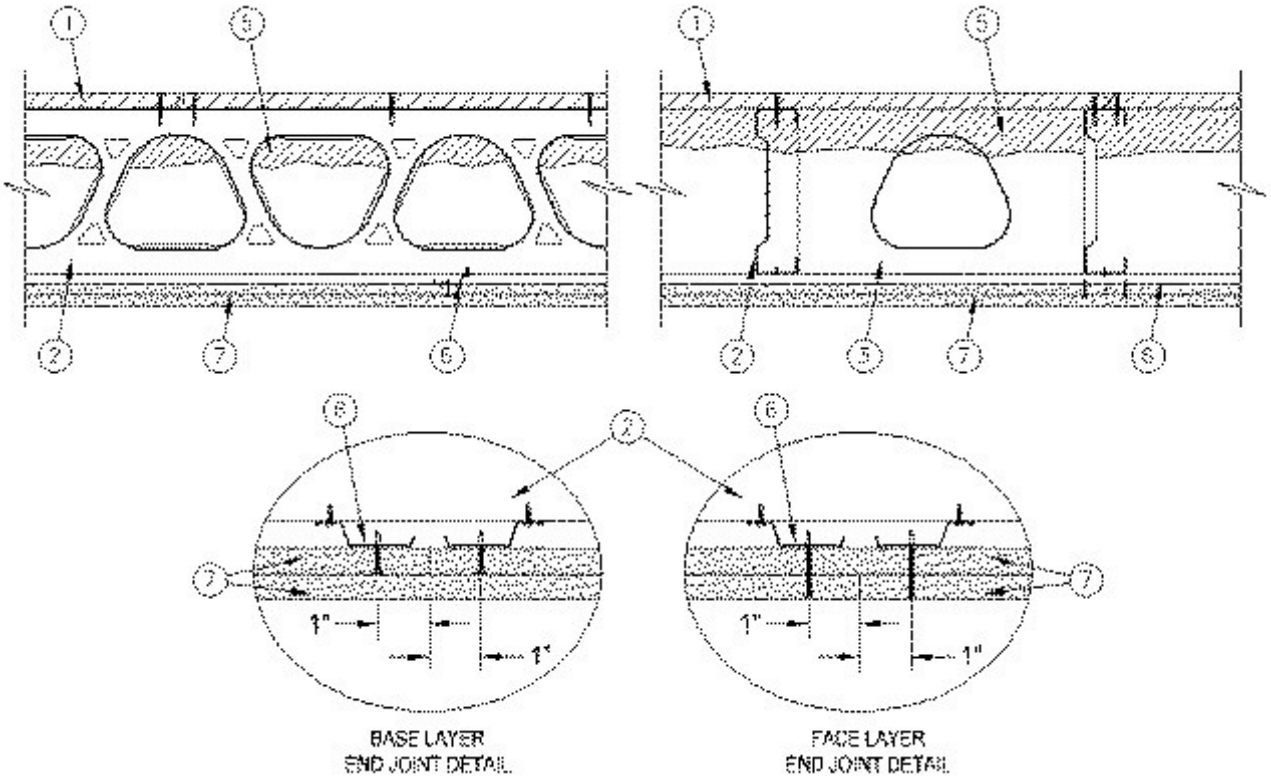
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. L580

November 13, 2025

Unrestrained Assembly Ratings - 1 Hr
Load Restriction: 70% (See Item 2)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



1. **Flooring —** Shall be one of the following:

System No. 1

Subfloor — Min 3/4 in. thick T & G plywood, min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered. Plywood secured to joists with polyurethane based construction adhesive (optional) along with 1-7/16 in. long No. 10 Phillips wafer head winged plywood screws spaced 12 in. OC in the field and 6 in. OC along edges of board. Screws located 5/8 in from end joints and 1 in from side joints of board. Adhesive may be applied on top of joists prior to placing plywood sheets.

System No. 2

Subflooring — Building Units* — Nom 3/4 in. thick, tongue and grooved boards. Long dimension of boards to be perpendicular to trusses with end joints staggered a min of 4 ft. and centered over the trusses. Boards secured to trusses with 2 in. long self-drilling, self- tapping screws spaced a max of 12 in. OC in the field with screws located 1 in. from long edge, and max 8 in. OC along the end joints with screws located 1/2 in. from end joint.
ECTEK INTERNATIONAL INC — Type MegaBoard

System No. 3

Subfloor - Building Units* — Nom 3/4 in. thick, ship-lap or tongue-in-groove edge detail. Long dimension of boards to be perpendicular to joists with end joints staggered a min of 4 ft. and centered over the joists. Boards secured to steel joists with #8 x 1-5/8 in. long self-drilling, self-countersinking, steel cement board screws spaced a max of 12 in. OC in the field and 8 in. OC along butt ends. Fasteners located 1/2 in. butt edges and 2 in. from long edge of the board.

AMERIFORM LLC — Type Nocom

2. **Structural Steel Members* —** JoistRite channel-shaped joists, channel-shaped, min 10 in. deep with min 2 in. wide flanges and 3/4 in. long stiffening flanges. The joists are fabricated from min 16 MSG galv steel. Joists spaced max 16 in. OC. Floor joists attached to rim joist using channel-shaped steel web stiffeners. **Allowable loading must be calculated so as to stress the steel studs to a maximum of 70% of the stress calculated in accordance with the allowable stress design approach outlined in the manufacturer's load tables.**
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Type JR JoistRite floor joists, Type JT JoistRite track

3. **Blocking & Bridging —** Installed before construction loads are applied. The blocking consists of JoistRite solid blockimg placed between joists spaced max 5 ft-4 in. OC perpendicular to the joists and max 4 ft-8 in. OC along the joist length.

4. **Web Stiffeners —** (not shown) — Min 3-5/8 in. wide, 16 GA, JoistRite web stiffeners. Secured to each joist and track with 1/2 in. long No. 10 x 16 low profile steel screws.

5. **Mineral and Fiber Board* —** Nom 4 in. thick mineral wool insulation friction-fit to underside of plywood between structural steel members. Any mineral wool insulation bearing the UL Classification Marking for Surface Burning Characteristics having a flame spread index of 25 or less, a smoke developed index of 50 or less and a min density of 4.0 lb/cu ft may be used
See **Mineral and Fiber Board** (BQXR) category in the Building Materials Directory for names of manufacturers

6. **Resilient Channels —** Resilient channels, formed of No. 25 MSG galv steel, 1/2 in. deep, spaced max 16 in. OC perpendicular to joists. Channels secured to each joist with one 5/8 in. long No. 10 x16 low profile steel screw. Two additional rows of channels, spaced 3-1/2 in. OC, oriented opposite each gypsum board end joint as shown in end joint detail.

6A. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 6.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced 16 in. OC, perpendicular to joists. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels used at end joints of gypsum board (Item 7), each extending a min of 6 in. beyond both side edges of the board.

b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to joists, friction-fitted into the channel caddy on the Steel Framing Members (Item

6Ac) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Steel Framing Members* —** Spaced 48 in. OC. max along joist, and secured to the joist on alternating joists with two, No. 10-16 TEK screws through mounting holes on the hanger bracket.

d. **Blocking —** Where joist design does not permit direct, full contact of the hanger bracket, a piece of nominal 3-5/8" x 20 ga. steel stud (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the joist at the top and bottom of the blocking at each Steel Framing Member (Item 6Ac) location minimum 2-1/2 in. screws.
PAC INTERNATIONAL L L C — Type RSIC-SI-CRC EZ Clip

6B. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 6.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to joists and friction fit into Steel Framing Members (Item 6Bb). Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels used at end joints of gypsum board (Item 7). Butt joint channels held in place by strong back channels placed upside down, on top of, and running perpendicular to primary furring channels, extending 6 in. longer than length of gypsum side joint. Strong back channels spaced maximum 48 in. OC. Strong back channels secured to every intersection of primary furring channels with four 7/16 in. pan head screws, two along each of the legs at intersections. Butt joint channels run perpendicular to strong back channels and shall be minimum 6 in. longer than length of joint, secured to strong back channels with 7/16 in. pan head screws, two along each of the legs at intersection with strong back channels.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ba) to joists. Clips spaced 48 in. OC and secured along joist webs at each furring channel intersection with min. 3/4 in. long self-drilling No. 10-16 TEK screws through each of the provided hole locations. Furring channels are friction fitted into clips.

c. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 3-5/8" x 20 ga. steel stud (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Bb) location with 16d nails or minimum 2-1/2 in. screws.
PAC INTERNATIONAL L L C — Type RSIC-S1-1 Ultra

6C. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 6.

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. in. wide by 7/8 in. deep, spaced as described in item 6, perpendicular to joist. Channels secured to joist as described in Item b. Ends of

adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv. steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the steel joists (Item 2). Clips spaced a max of 48 in. OC. RSIC-1 clips secured to joist with No. 8 x 1-5/8 in. fine thread screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clips for use with 2-9/16 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel.
PAC INTERNATIONAL L L C — Type RSIC-1

7. **Gypsum Board* —** Two layers of 1/2 in. thick by 48 in. wide gypsum board installed with long dimension perpendicular to resilient channels. Base layer secured to resilient channel using 1 in. long Type S bugle head steel screws spaced 12 in. OC in the field and 6 in. OC along the end joints of the board. Screws located 5/8 in. from end joints and 1 in. from long edges. End joints secured to both resilient channels as shown in end joint detail. Face layer attached to resilient channels through upper layer with 1-1/4 in. long Type S bugle head steel screws spaced a max 12 in. OC in the field and 6 in. OC along the end joints of the board. Screws located 5/8 in. from end joint and 1 in. from the long edges. End joints secured to both resilient channels as shown in end joint detail. All joints in face layer boards to be offset from joints in base layer by min 16 in.
When **Steel Framing Members** (Item 6A) are used, Two layers nom 1/2 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Adjacent butt joints staggered minimum 48 in. OC.

When **Steel Framing Members** (Item 6B) are used, Two layers nom 1/2 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Butt joints staggered minimum 24 in. OC.

When **Steel Framing Members** (Item 6C) are used gypsum panels installed with long dimensions perpendicular to furring channels. Panels attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 8 in. OC along butted end joints and in the field of the panel. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum panel shall be supported by a single length of furring channel equal to the width of the gypsum panel plus 6 in. on each end. The two support furring channels shall be spaced approximately 3-1/2 in. OC, and be attached with one clip at each end of the channel. Outer layer attached as described in Item 6.

AMERICAN GYPSUM CO — Types AG-C

CERTAINTEED GYPSUM INC — Type C

CGC INC — Types C, IP-X2, IPC-AR

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C.

NATIONAL GYPSUM CO — Types eXP-C, FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

7A. **Gypsum Board* —** (Not Shown) - As an alternate to Item 7. Two layers of 5/8 in. thick by 48 in. wide gypsum board installed as described in Item 7.
CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type ULIX

8. **Finishing System —** (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads on both first and second layers of gypsum board. Nom 2 in. wide paper tape embedded in first coat of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

*** 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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