

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.
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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

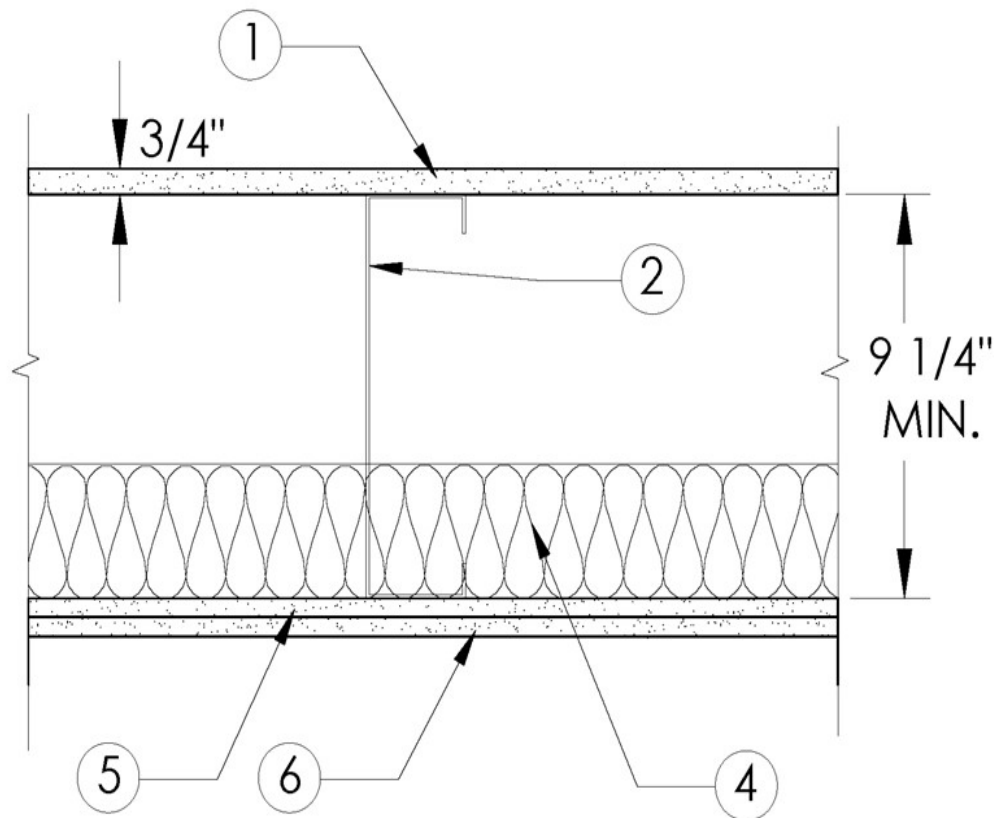
Design No. **H527**

August 26, 2022

Unrestrained Assembly Rating - 2 Hr

**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 System - Building Units* —Nom $\frac{3}{4}$ in. thick, tongue and grooved boards. 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 1- $\frac{1}{4}$ in. long self-drilling, self-countersinking, bugle head steel 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 $\frac{1}{2}$ in. from end joint.

ECTEK INTERNATIONAL INC — Type MegaBoard

2. Structural Steel Members* —The proprietary joists are channel-shaped, min 9- $\frac{1}{4}$ in. deep. Joists are fabricated from min No. 16 MSG galv steel. Joists spaced max 24 in. OC. Joists attached to joist rim with three min $\frac{3}{4}$ in. long No. 10 x 16 self-drilling steel TEK screws through tab to the outside of the web. At joist rim splices bearing on supports, joists rims are connected using an overlapping section of a 12 in. long splice plate (a joist piece), with four min $\frac{3}{4}$ in. long No. 10 x 16 self-drilling steel TEK screws to each rim piece.

CLARKDIETRICH BUILDING SYSTEMS — Types TDJ24, TDW24, TDJ48, TDW48 Floor Joists, TD Rim Joist

3. Joist Bridging - (Not Shown) — Installed at the center of the joist span immediately after joists are erected and before construction loads are applied. The bridging (2- $\frac{1}{2}$ TDSB18) consists of No. 18 MSG galv steel channels, 2- $\frac{1}{2}$ in. wide by 1- $\frac{1}{4}$ in. deep by 21- $\frac{3}{4}$ in. long with 2- $\frac{1}{8}$ in. long web extensions at each end for screw-attachment to the bottom flange of the steel joists with a min $\frac{3}{4}$ in. long No. 10 x 16 self-drilling steel TEK screw. Solid bridging consisting of cut-to-length joist sections placed between the outermost joists and between the centermost joists with a max spacing of 8 ft OC. Solid blocking is screw-attached at joist web using a No. 16 MSG, min 50 ksi steel support clip (EasyClip S-Series) with

three min 3/4 in. long No. 10 x 16 self-drilling steel TEK screws per leg on the outside of the joist web, and with a No. 16 MSG, min 50 ksi steel support clip (EasyClip E-Series) with three min 3/4 in. long No. 10 x 16 self-drilling steel TEK screws per leg on the inside of the joist web. Alternatively, blocking may consist of min 925JB24 prefabricated joist blocking attached with two No. 10-16 TEK screws at each connection angle.

4. Batts and Blankets* — 3-5/8 in. thick glass fiber batt insulation draped over the resilient channels (Item 5). Any glass fiber batt insulation bearing the UL Classification Marking for Surface Burning Characteristics having a flame spread index of 25 or less and a smoke developed index of 50 or less may be used. See **Batts and Blankets** (BKNV) category in the Building Materials Directory for names of manufacturers.

5. Resilient Channels — Formed of No. 25 MSG galv steel, 1/2 in. deep, spaced max 12 in. OC, perpendicular to joists. Channel splices located beneath joists and overlapped 4 in.. Channels secured to each joist with one 1/2 in. long Type S-12 low profile steel screw. Two channels, spaced 6 in. OC, oriented opposite each gypsum board end joint. Additional channels shall extend min 6 in. beyond each side edge of board.

5A. Steel Framing Members* — (Optional, Not Shown) — As an alternate to Item 5 — Furring channels and Steel Framing Members as described below:

a. Furring channels — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 12 in. OC, perpendicular to joists. Channel secured to joists 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. Additional channels shall be positioned so that the distance from the end of the board to the center of the first channel is 3 in. and from the board end to the center of the next channel is 12 in.

b. Steel Framing Members* — Used to attach furring channels (Item a) to joists (Item 2). Clips spaced 48 in. OC and secured to the bottom chord of joists with min 1-5/8 in. long No. 8 self-drilling, self-tapping, bugle, flat or hex head screw through the center grommet. Furring channels are friction fitted into clips. Additional clips required to hold furring channel that supports the gypsum board butt joints.

PLITEQ INC — Type Genie Clip

5B. Alternate Steel Framing Members* — (Optional, Not Shown) — As an alternate to Items 5 and 5A, furring channels and Steel Framing Members as described below.

a. Furring channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 12 in. OC, perpendicular to joists. Channels secured to joists 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 and RSIC-1 (2.75) clips secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall 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. RSIC-1 (2.75) clips for use with 2-23/32 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. Additional clips required to hold furring channel that supports the wallboard butt joints, as described in Item 6.

PAC INTERNATIONAL L L C — Types RSIC-1 or RSIC-1 (2.75)

6. Gypsum Board* — Nom 5/8 in. thick, 48 in. wide gypsum panels. Base layer installed with long dimension perpendicular to resilient channels, furring channels or cross tees, secured with 1 in. long Type S bugle-head screws spaced 12 in. OC, with screws located 6 in. from and on each side of the gypsum panel, in both the field and the perimeter, and 1-1/2 in. from side edges of the panels. Face layer installed with long dimension perpendicular to resilient/furring channels or cross tees with joints offset 24 in. from base layer, secured with 1-5/8 in. long Type S bugle-head screws spaced 8 in., OC, with screws located 4 in. from and on each side of the gypsum panel midspan, in both the field and the perimeter, and 1-1/2 in. from side edges of the panel. Butt joints of face layer panels secured to base layer with 1-1/2 in. long Type G screws spaced 8 in. OC and 1-1/2 in. from side edges of the panels, with butt joints located between resilient/furring channels. Butt joints of face panels staggered a minimum of 12 in. from butt joints of base layer. When **Steel Framing Members** (Item 5A or 5B) are used, the butt joints in the gypsum board shall be supported by two furring channels. The two furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the joist with one RSIC-1, RSIC-1 (2.75) or Genie clip at each end of the channel.

CERTAINTED GYPSUM INC — Type C, Type LGFC-C/A

CGC INC — Type ULIX

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

NATIONAL GYPSUM CO — Types FSK-C, FSW-C, FSW-G.

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

7. Finishing System - (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer 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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