

BXUV.G575 -

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

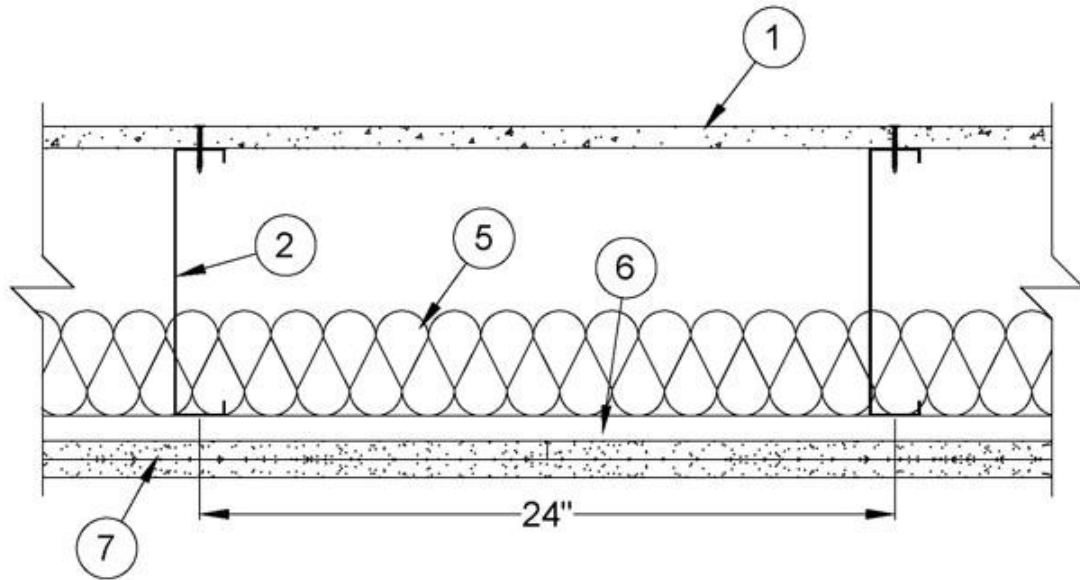
Design No. G575

November 21, 2019

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 3/4 in. thick. Long dimension of panels to be perpendicular to joists with end joints staggered a min of 4 ft and centered over the joists. Panels secured to steel joists with 1-1/4 in. long self-drilling, self-countersinking, bugle head steel screws spaced a max of 12 in. OC in the field with a screw located 1/2 in. from each edge, and 8 in. OC along the end joints and around the perimeter with a screw located 1/2 in. from each joint and the side edges of the panel.

DRAGONBOARD USA L L C — DragonBoard Flooring

Options with Item 1:

1a. **Steel Deck** — As an option below Item 1. Min 9/16 in. deep, 22 MSG galv corrugated fluted steel deck. Overlapped one corrugation at each side and attached to each joist with 3/4 in. long #10-16 TEK screws 10 in OC max.

1b. **Floor Mat Materials*** — (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to Item 1 with Floor Primer.

ECORE INTERNATIONAL INC — Type QTscu 4002, QTrbm3006-3

HACKER INDUSTRIES INC — Type Hacker Sound-Mat

2. **Structural Steel Members*** — The proprietary joists are channel-shaped, min 10 in. deep. Joists are fabricated from min No. 16 MSG galv steel. Joists spaced max 24 in. OC. 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 3/4 in. long No. 10 self-drilling steel TEK screws to each rim piece.

SUPER STUD BUILDING PRODUCTS — Type 10SSJ16

Alternates to Item 2:

2a. **Structural Steel Members — Joists** — C-shaped, galvanized steel section, min 10 in. deep with min 1-5/8 in. flanges and min 1/2 in. returns. Joists fabricated from min 16 MSG galv steel with Yield Strength of 50,000 psi. Joists spaced max 24 in. OC with center joists located 12 in. OC on either side of centerline.

2b. **Structural Steel Members** — Cold-formed, Min 16 MSG galvanized steel truss chord and web sections manufactured from steel conforming to ASTM A653 Grade 33 or higher yield strength. Steel thickness of truss chord and web sections as required by design to meet governing code requirements. Truss members connected together with No. 10-16 (min size) self-drilling screws or equivalent. Truss chord and web members to be designed in accordance with the American Iron and Steel Institute's Specification for the Design of Cold-Formed Steel Structural Members, 1996 Edition. Trusses spaced a max of 24 in. OC. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 12 in.

2c. **Structural Steel Members*** — Pre-fabricated steel truss system consisting of chord and web sections fabricated from min 16 MSG cold-formed, galvanized steel. Min. depth 12 in. Trusses spaced a max of 24 in. OC.

KEYMARK ENTERPRISES L L C — KeyTruss system

2d. **Structural Steel Members*** — Pre-fabricated light gauge steel truss system consisting of cold-formed, galv steel chord and web sections. Minimum truss depth 12. Min 16 MSG. Trusses spaced a maximum of 24 in. OC.

AEGIS METAL FRAMING, DIV OF MITEK — Ultra-Span, Pre-fabricated Light Gauge Steel Truss System

TRUSSTEEL, DIV OF ITW BUILDING COMPONENTS INC — TrusSteel

2e. **Structural Steel Members*** — Pre-fabricated light gauge steel truss system consisting of cold-formed, galvanized steel cord and web sections. Trusses fabricated from min 16 MSG steel. Trusses minimum 12 in. deep, spaced a max of 24 in. OC.

DOUGLASS COLONY GROUP INC — Type FRAMECAD

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 consists of No. 18 MSG galv steel channels, 2-1/2 in. wide by 22-3/8 in. long with 1/5/8 in. long web extensions at each end for screw-attachment to the bottom flange of the steel joists with a 3/4 in. long No. 10 self-drilling steel TEK screws. Solid bridging consisting of cut-to-length joist sections with a max spacing of 8 ft OC.

3A. **Joist Bridging** — As an alternate to Item 3 - Installed at the center of the joist span immediately after joists are erected and before construction loads are applied. The bridging consists of No. 18 MSG galv steel channels, 2-1/2 in. wide by 22-3/8 in. long with 1-5/8 in. long web extensions at each end for screw-attachment to the bottom flange of the steel joists with a 3/4 in. long No. 10 self-drilling steel TEK screws. Generic bridging consists of No. 18 MSG galv steel with 1 1/4" flanges having the same depth as the joists, attached to the top and bottom joist flanges with two #10 by 3/4" long self-drilling screws with a max spacing of 8 ft OC.

4. **Angle Clips** — Not shown - Nominal 2 x 4 x 9-7/8 in., No 16 ga clips used to fasten joists to joist rim track. 4 in. side of clip placed against inside web of joists and 2 in. side placed against joist rim track. Each side secured with three #10-3/4 in. TEK screws. Nominal 1-1/2 x 4 x 8 in., No. 16 ga clips used to fasten joist bridging with clip located on the web/flange side of the joist. Clip fastened with two #10-3/4 in. TEK screws per leg per clip. Nominal 1-1/2 x 1-1/2 x 8 in, No 16 ga clips used to fasten joist bridging with clip located on the web/non-flange side of the joist. Clip fastened with two #10-3/4 in. TEK screws per leg per clip.

5. **Batts and Blankets*** — 3-1/2 in. thick glass fiber batt insulation draped over the resilient channels (Item 5) or suspension system grid (Item 5A). 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.

6. **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.

6A. **Steel Framing Members*** — (Optional, Not Shown) — As an alternate to Resilient Channels, Item 6, 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 gypsum board butt joints, as described in Item 7.

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

7. **Gypsum Board*** — Any 5/8 in., thick, 4 ft. wide Gypsum Board UL Classified for Fire Resistance (CKNX) eligible for use in Design No. G512. Nom 5/8 in. thick, 48 in. wide gypsum panels. Base layer installed with long dimension perpendicular to resilient channels, 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 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 channels. Butt joints of face panels staggered a minimum of 12 in. from butt joints of base layer. When **Steel Framing Members** (Item 6A) are used, the butt joints in the gypsum board layers 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) at each end of the channel.

8. **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.

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Last Updated on 2019-11-21

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