

BXUV.G515 - Fire-resistance Ratings - ANSI/UL 263



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. G515

February 04, 2021

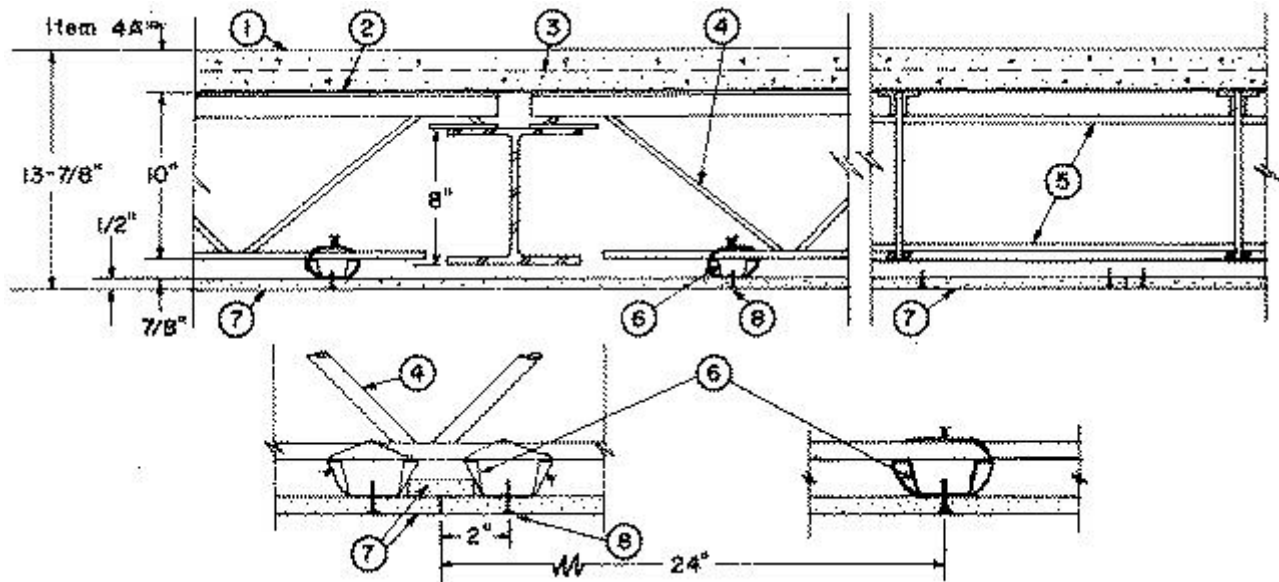
Restrained Assembly Rating – 2 Hr.

Unrestrained Assembly Rating – 2 Hr.

Unrestrained Beam 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.**



Beam — W8X15, min size.

1. Normal-Weight Concrete — Carbonate or siliceous aggregate, 145 + or - 3 pcf unit wt, 3500 psi compressive strength.

2. Metal Lath — 3/8 in. rib, 3.4 lb/sq yd expanded steel; tied to each joist at every other rib, and midway between joists at side lap with 18 SWG galv steel wire. As an alternate, the form material for the concrete may be corrugated steel deck 9/16 in. deep of 28 MSG (min) galv steel welded to supports 15 in. O.C. with washers. The concrete thickness shall be measured to the top plane of the steel deck.

3. Welded Wire Fabric — 6X6, 10/10 SWG.

4. Steel Joists — Type 10J3 min size; used only with 2-1/2 in. thick concrete slab over metal lath or corrugated steel deck, spaced 24 in. O.C., welded to end supports.

4A. Structural Steel Members — * — (not shown) As an alternate to steel joists (Item 4), Composite joists with top chord and web partially embedded in concrete slab. Concrete shall flow into the space between the top chord angles to insure embedment of top chord angles in the slab. Max. joist spacing 49-1/4 in. O.C. The composite joists may be used with either 3 in. thick concrete slab cast on removable forms or 2-3/4 in. thick concrete topping over the corrugated steel deck specified in Item 2. When the composite steel joists are used with 3 in. concrete slab cast on removable forms, the ceiling support system will be limited to either the alternate system described in Item 6 or the system described in Item 6A. When the composite steel joists are used with 2-3/4 in. thick concrete topping over the corrugated steel deck, shoring may be required with joists spaced more than 24 in. O.C. to limit dead load deflection to $L/240$, and only the alternate ceiling support system specified in Item 6 may be used. The composite joist floor shall be loaded no more than the manufacturer's recommended published loadings.

Midwestern Joists, Inc. — Type C.

5. Bridging — 1/2 in. diam continuous steel bar stock, welded to top and bottom chords of each joist.

6. Furring Channels — 25 MSG galv steel, 2-5/8 in. wide at top and 1-3/8 in. wide at bottom by 7/8 in. deep, spaced 24 in. O.C. Channels secured to bottom chord of joists with a double strand of 18 SWG galv steel wire. Channels spliced with adjoining pieces overlapped 6 in. and tied together with double strand of 18 SWG galv steel wire at each end of overlap. At wallboard end joints a second furring channel, either continuous or spanning across three joists when the joists are spaced 49-1/4 in. O.C. or across four joists when the joists are spaced 24 in. O.C. and extending 6 in. beyond the outside joists. The second furring channel shall be spaced 4 in. O.C. from the primary furring channel and shall be wire tied to the bottom chord of each joist with a double strand of 18 SWG galv steel wire. If the second furring channel is continuous, spacing of wire ties shall be the same as for the primary furring channel.

6A. Alternate Suspension System — (not shown) Cold-rolled channels spaced 48 in. OC and suspended perpendicular from lower chord of joists, with 8 SWG galv steel wire spaced 48 or 49-1/4 in. OC along channels. Furring channels, as

described in Item 6, positioned perpendicular to the cold-rolled channels and spaced 24 in. OC except at the wallboard end joints as noted above. The furring channels are secured with double strand of 18 SWG galv steel wire to each cold-rolled channel.

7. Gypsum Board* — 1/2 or 5/8 in. thick, 4 ft wide. Sheets of wallboard or lath installed with long dimension perpendicular to furring channels. When furring channels are tied directly to bottom chord of joists, side joints of wallboard sheets shall be located midway between steel joists. Wallboard sheets fastened to furring channels with wallboard screws spaced 12 in. OC and located 1-1/2 in. from butted side joints. At end joints wallboard fastened to each of the two furring channels (approx. 2 in. from end of each board) with screws spaced 12 in. OC. End joints of wallboard sheets in adjacent courses need not be staggered. Protection at end joints is provided by 2 in. wide strip of 1/2 or 5/8 in. thick wallboard placed on top of joint, between furring channels, for entire length of end joint.

AMERICAN GYPSUM CO — Types AG-C.

CABOT MANUFACTURING ULC — Type C

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

CGC INC — Type C, IP-X2 or ICP-AR, ULIX.

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

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

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-C.

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C.

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C

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

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Type C, IP-X2 or IPC-AR.

8. Screw, Wallboard — No. 6 Phillips-type, self-drilling and self-tapping, 1 in. long with 11/32-in. diam screw head. Screw heads may be either exposed or covered with joint cement.

9. Alternate Finishing System — (Not Shown, optional) — Wallboard joints covered with 2-1/2 in. wide pressure-sensitive glass fiber tape, or glass fiber tape attached with wire staples. For tapered, rounded-edge wallboard, joints covered with fiber tape and joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

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