



**Design No. P302**  
**BXUV.P302**  
**Fire-resistance Ratings - ANSI/UL 263**

[Page Bottom](#)

---

**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**

**BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada**

[See General Information for Fire-resistance Ratings - ANSI/UL 263](#)

[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada](#)

**Design No. P302**

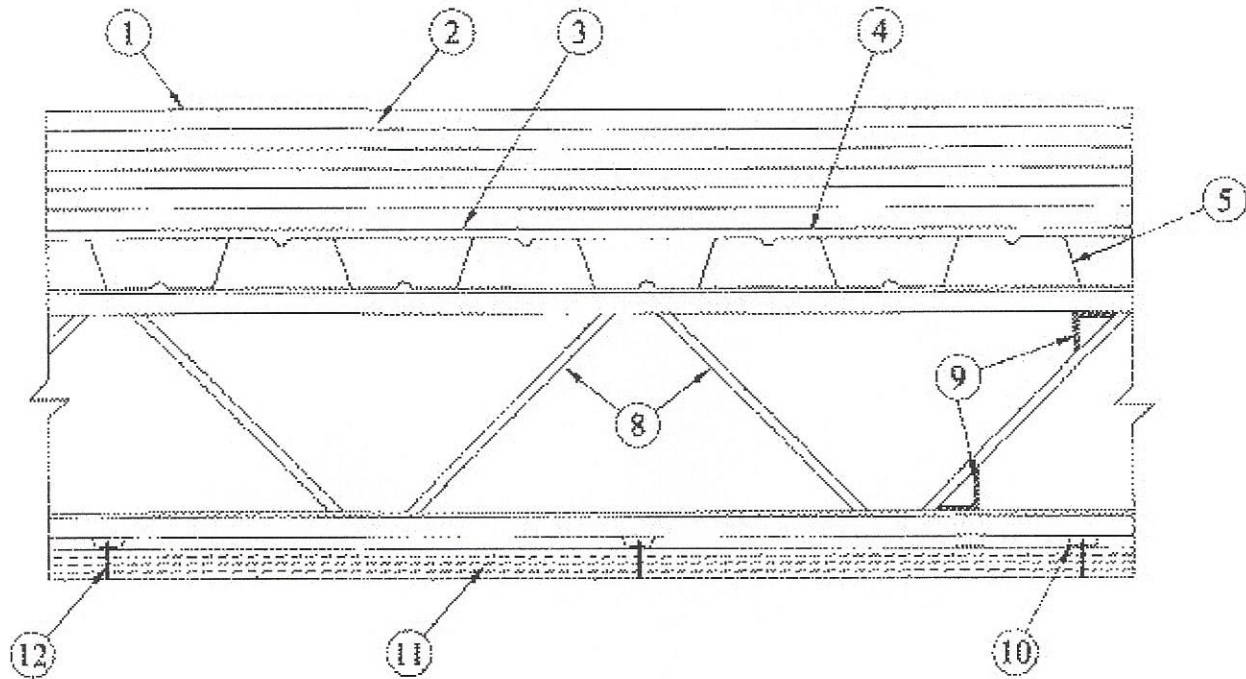
September 06, 2016

**Restrained Assembly Rating - 1 Hr**

**Unrestrained Assembly Rating - 1 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. **Roof Covering\*** — Consisting of hot mopped or cold application materials compatible with insulation(s) described herein which provide Class A, B or C coverings.

See Roofing Materials and Systems Directory—Roof Covering Materials (TEVT).

1A. In lieu of Item 1, roof covering consisting of single-ply **Roofing Membrane\*** that is either ballasted, adhered or mechanically attached as permitted under the respective manufacturer's Classification. See Fire Resistance Directory — Roofing Membranes (CHCI).

2. **Mineral and Fiber Boards\*** — 24 by 48 in. min size, max size 48 by 96 in. to be applied in one or more layers. Boards to be installed perpendicular to gypsum wallboard direction with end joints staggered 2 ft in adjacent rows. When applied in more than one layer, each layer of board to be offset in both directions from layer below a min of 12 in. in order to lap all joints. Min thickness 1 in. (no limit on max overall thickness).

When only one layer is used, it may be bonded to gypsum wallboard or laid loosely. When two or more layers are used, the insulation may be fastened to steel roof deck (through wallboard) with mechanical fasteners (Item 7) and/or bonded to wallboard or vapor barrier and/or bonded to additional layers of insulation with adhesive (Item 6) or hot asphalt (Item 6A). Adhesive may be omitted from between components secured together by mechanical fasteners.

**BMCA INSULATION PRODUCTS INC** — Rigid mineral fiber boards

**GAF** — Rigid mineral fiber boards

**OWENS CORNING HT INC, DIV OF OWENS CORNING** — Rigid glass fiber boards

2A. **Roof Insulation—Foamed Plastic\*** — As an alternate to Item 2, any thickness polystyrene foamed plastic insulation boards bearing the UL Classification Marking, having a density of 2.5 pcf max, shall be installed on top of min 1 in thick Mineral and Fiber Boards\* (Item 2) and covered with either the Built-Up Roof Covering (Item 1) or single-ply Roofing Membrane (Item 1A). The 1 in. thick Mineral and Fiber boards to be installed over the gypsum wallboard (Item 4). See Foamed Plastic\* (BRYX) category in the Building Materials Directory or Foamed Plastic\* (CCVW) category in the Fire Resistance Directory for list of manufacturers.

2B. **Foamed Plastic\*** — As an alternate to Item 2 or 2A, polyisocyanurate foamed plastic insulation boards, nom 48 or 96 in. to be applied in one or more layers over the gypsum wallboard (Item 4). Min thickness is 1.3 in. with no limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows. When applied in more than one layer, each layer to be offset in both directions from layer below a min of 6 in. in order to lap all joints.

**ATLAS ROOFING CORP** — ACfoam II, ACfoam III, ACfoam II SL, ACfoam IV.

**CARLISLE SYNTEC INCORPORATED** — Types HP, HP-H, HP-N, HP-W.

**FIRESTONE BUILDING PRODUCTS CO L L C** — "ISO 95+ GL", "ISO 95+ FK", "ISO 95+ CAN", "ISO 95+ GL NH", "ISOGARD HD Composite Board" or "RESISTA".



**GENFLEX ROOFING SYSTEMS L L C** — "GenFlex ISO"

**HUNTER PANELS** — H Shield

**JOHNS MANVILLE** — ENRGY-3, ISO-1, PSI 25

**LOADMASTER SYSTEMS INC** — Loadmaster Polyisocyanurate Insulation

**MARTIN FIREPROOFING CORP** — "Perform-A-Deck I"

**RMAX OPERATING L L C** — Multi-Max-3, Multi-Max FA-3, Ultra-Max, Ultra-Max Plus, Tapered Ultra-Max Plus, Tapered Thermo-roof-3, Tapered Thermo-roof FA-3, Tapered Ultra-Max.

**SIKA SARNAFIL INC** — Sarnatherm r, Sarnatherm r Ultra, Sarnatherm r Tapered, Sarnatherm r Ultra Tapered.

**SOPREMA INC** — Sopra-ISO s, Sopra-ISO s Tapered, Sopra-ISO+ s, Sopra-ISO+ s Tapered, Sopra-ISO H+ s and Sopra-ISO H+ s Tapered.

2C. **Foamed Plastic\*** — Optional - (Not Shown) - Maximum 1 in. thick polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in. Boards may be applied as the top layer in addition to the specified minimum thickness of any roofing system described herein, as long as the roofing system states that there is no limit on maximum thickness. Joints offset in both directions from layer below.

**FIRESTONE BUILDING PRODUCTS CO L L C** — "ISOGARD HD"

2D. **Roof Insulation — Foamed Plastic\* — AS an alternate to Items 2 through 2C** — Polyurethane foamed plastic roof insulation. Formed by the simultaneous spraying of two liquid components applied over the gypsum wallboard (item 4) in accordance with the manufacturer's instructions. Minimum nominal thickness is 1.3 in. No limit on max overall thickness.

**BASF CORP** — Types FE 303 2.7, FE-348, FE348-2.5, FE348-2.7, FE348-2.8, FE348-3.0, ELASTOSPRAY 81255, ELASTOSPRAY 81275, ELASTOSPRAY 81285 or ELASTOSPRAY 81305.

**BASF CORP** — Elastospray 5100-2.0, Elastospray 5100-2.5, Elastospray 81302, Elastospray 81272, Elastospray Alpha System, Elastospray 81252

3. **Sheating Material\*** — (Optional)—Vinyl film vapor barrier, applied with adhesive to gypsum wallboard. Adjacent sheets overlapped 2 in.

**BMCA INSULATION PRODUCTS INC**

4. **Gypsum Board** — (Classified or unclassified) — Supplied in sheets nom 2 by 4 ft to 4 by 12 ft by nom 5/8 in. thick. Min weight 2.0 psf. Applied perpendicular to steel roof deck directly with adhesive or laid loosely. End joints to occur over crests of steel roof deck with end joints staggered 2 ft in adjacent rows.

**ACADIA DRYWALL SUPPLIES LTD** ([View Classification](#)) — CKNX.R25370

**AMERICAN GYPSUM CO** ([View Classification](#)) — CKNX.R14196

**BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO** ([View Classification](#)) — CKNX.R19374

**CERTAINTED GYPSUM INC** ([View Classification](#)) — CKNX.R3660

**CGC INC** ([View Classification](#)) — CKNX.R19751

**CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C** ([View Classification](#)) — CKNX.R18482

**GEORGIA-PACIFIC GYPSUM L L C** ([View Classification](#)) — CKNX.R2717

**LOADMASTER SYSTEMS INC** ([View Classification](#)) — CKNX.R11809

**NATIONAL GYPSUM CO** ([View Classification](#)) — CKNX.R3501

**PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM** ([View Classification](#)) — CKNX.R7094

**PANEL REY S A** ([View Classification](#)) — CKNX.R21796

**SIAM GYPSUM INDUSTRY (SARABURI) CO LTD** ([View Classification](#)) — CKNX.R6937

**THAI GYPSUM PRODUCTS PCL** ([View Classification](#)) — CKNX.R27517

**UNITED STATES GYPSUM CO** ([View Classification](#)) — CKNX.R1319

**USG MEXICO S A DE C V** ([View Classification](#)) — CKNX.R16089

5. **Steel Floor and Form Units\*** — Noncomposite fluted or corrugated, min 0.034 in. thick (22 gauge), 1-1/2 in. deep painted or galv steel units. Spacing of welds attaching units to supports shall not exceed 12 in. OC. Adjacent units welded or secured together with No. 12 by 1/2 in. self-drilling, self-tapping steel screws, 36 in. OC along side joints.

**BOWMAN METAL DECK/WHEELING CORRGTNG CO, DIV OF WHLNG PTTSBRGH STL CORP** — Type B

**CANAM STEEL CORP** — Type P-3606 or P-3615

**VULCRAFT, DIV OF NUCOR CORP** — Types 1.5A, 1.5B, 1.5BI, 1.5PLB, 1.5F

6. **Adhesive** — Optional (not shown)—May be applied between crests of steel roof deck and gypsum wallboard in 1/2 in. wide ribbons, 6 in. OC at 0.4 gal per 100 sq ft. May also be applied in 1/2 in. wide ribbons 6 in. OC, at 0.4 gal per 100 sq ft between gypsum wallboard and vapor barrier, and between vapor barrier, and mineral and fiber boards, or directly between gypsum boards and roof insulation when vapor barrier is omitted. May also be applied at the same rate between layers of roof insulation.

**BMCA INSULATION PRODUCTS INC**

7. **Mechanical Fasteners** — (Not Shown) Any steel nail or steel clip type fastener designed for the purpose may be used to attach one or more layers of insulation to steel roof deck (through gypsum board). As an alternate, the gypsum wallboard may be attached directly to the steel roof deck with the mechanical fasteners.

7A. **Hot Asphalt or Coal Tar Pitch** — (Not Shown)—May be used as an alternate to adhesive between layers of roof insulation at a rate not to exceed 35 lb per 100 sq ft.

8. **Steel Joists** — Type 10K1, min size, spaced, spaced a max 48 in. OC.

9. **Bridging** — Steek bars, 1/2 in. diam welded to top and bottom chords of each joist. Number and spacing of bridging bars per Steel Joist Institute Specifications.

10. **Furring Channels** — No. 26 MSG galv steel 2-5/8 in. wide by 7/8 in. deep; spaced 24 in. OC, perpendicular to joists. Channels secured to each joist with No. 18 SWG galv steel wire double strand saddle ties. Channels spliced below joists with adjoining pieces overlapped 6 in. Channels tied together with double strand No. 18 SWG galv steel wire at each end of overlap.

11. **Mineral and Fiber Board\*** — Min nominal 1 in. thick, 4 X 6 ft. wide installed with long dimension perpendicular to furring channels and butt joints located between joists. Main board to be fastened to furring channels using screws and washers (Items 12 and 13 respectively). A 3 in. wide strip of mineral and fiber board shall be centered over the entire length of butt joints. Strips fastened to main board from the ceiling side using spiral fasteners spaced 6 in. OC. Butt joints in adjacent rows to be staggered min of 2 ft. Edge joints shall occur at and be centered over furring channels and be fastened in the manner specified in Items 12 and 13.

**ALBI MFG, DIV OF STANCHEM INC** — Type Dri-Clad

12. **Fasteners** — 1-5/8 in. long Type S, self-drilling and self-tapping screw, with bugle head. Spaced 6 in. OC along each furring channel.
13. **Washers (not shown)** — 1 in. diameter or 1 in. square steel plate washer. One washer required per fastener (Item 12).

**\* 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 2016-09-06

[Questions?](#)

[Print this page](#)

[Terms of Use](#)

[Page Top](#)

© 2016 UL LLC

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2016 UL LLC".