



Design No. L565
BXUV.L565
Fire Resistance Ratings - ANSI/UL 263

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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

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. L565

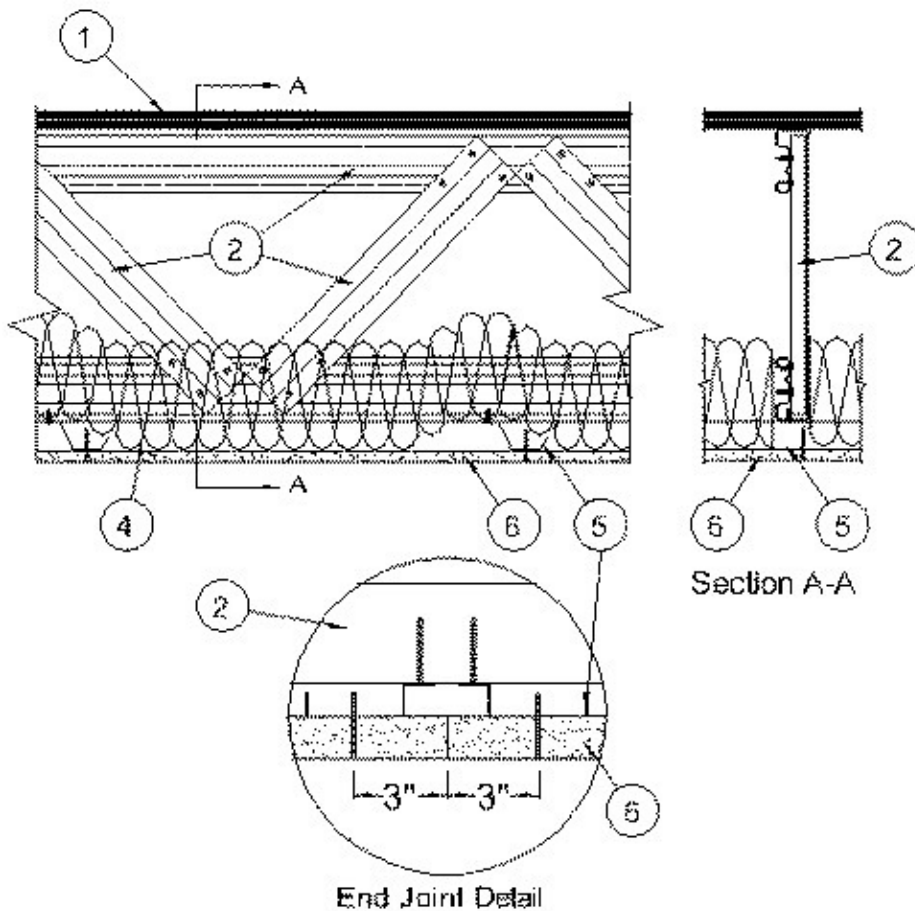
February 26, 2015

Unrestrained Assembly Rating - 1 Hr

Unrestrained Beam 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. **Flooring System** — The flooring system shall consist of one of the following:

System No. 1

Subflooring — Min 23/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panel mechanically fastened to trusses 12 in. OC in conjunction with construction adhesive.

Subflooring (Alternate) - Structural Cement-Fiber Units* — Nominal 19 mm (3/4 in.) thick tongue and groove structural cement-fiber units. Long dimension of panels to be perpendicular to trusses with end joints staggered. Panels fastened to the trusses with #10 self-drilling, self-tapping cement board screws 1-3/4 in. long. Screws shall be spaced 6 in. OC along the perimeter of each sheet and 12 in. OC in the field of each sheet. Screws shall be spaced 1/2 in. from end joints and 1 in. from side joints.

ECTEK INTERNATIONAL INC — Armoroc Panel

Vapor Barrier - (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring — Min 1 by 4 in. T & G lumber installed perpendicular to trusses, or min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

System No. 2

Subflooring — Min 23/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panel mechanically fastened to trusses 12 in. OC in conjunction with construction adhesive.

Floor Mat Materials* - (Optional) — Nom 1/4 in. thick floor mat material adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. When floor mat material is used, min thickness of floor topping mixture is 1-1/2 in.

HACKER INDUSTRIES INC — Type Sound-Mat

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant

System No. 3

Subflooring — Min 23/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panel mechanically fastened to trusses 12 in. OC in conjunction with construction adhesive.

Finish Floor - Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 4

Subflooring — Min 23/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panel mechanically fastened to trusses 12 in. OC in conjunction with construction adhesive.

Vapor Barrier — (Optional) - Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) - Nom 3/8 in. thick floor mat material loose laid over the subfloor.

GRASSWORX L L C — Type SC50

System No. 5

Subflooring — Min 23/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panel mechanically fastened to trusses 12 in. OC in conjunction with construction adhesive.

Vapor Barrier — (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — 3 to 7 gal of water mixed with 80 lbs of floor topping mixture and 1.0 to 2.1 cu ft of sand. Compressive strength to be 1000 psi min. Min thickness to be 3/4 in.

MAXXON CORP — Type D-C, GC, GC 2000, L-R, T-F, CT

Floor Mat Materials* — (Optional) — Floor mat material nom 1/4 in. thick loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness a min 1 in. over the floor mat. Floor topping thickness a min 3/4 in. over Acousti-Mat I floor mat.

MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP

Alternate Floor Mat Materials* — (Optional) — Nom 0.8 in. thick floor mat material loose laid over the subfloor with Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.

MAXXON CORP — Type Acousti-Mat 3, Acousti-Mat 3 HP, Crack Suppression Mat (CSM)

Alternate Floor Mat Materials* — (Optional) — Nom 0.4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be min 1 in.

MAXXON CORP — Type Enkasonic 9110, Enkasonic 9110 HP

Alternate Floor Mat Materials* — (Optional) — Nom 0.2 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer may be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be as specified under **Floor Topping Mixture**.

MAXXON CORP — Type Acousti-Mat LP-R

Alternate Floor Mat Materials* — (Optional) — Not Shown — Nom 0.80 in. thick floor mat material loose laid over the subfloor. Floor topping thickness min 1-1/2 in. over the floor mat.

MAXXON CORP — Type Acousti-Mat SD

System No. 6

Subflooring — Min 23/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered 4 ft. Plywood or panel mechanically fastened to trusses 12 in. OC in conjunction with construction adhesive.

Vapor Barrier — (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — 4 to 7 gal of water mixed with 80 lbs of floor topping mixture and 1.4 to 1.9 cu ft of sand. Compressive strength to be 1200 psi min. Min thickness to be 3/4 in.

RAPID FLOOR SYSTEMS — Type RF, RFP, RFU, RFR, Ortecrete

Floor Mat Materials* — (Optional) — Floor mat material nom 1/4 in. thick loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness a min 1 in. over the floor mat. Floor topping thickness a min 3/4 in. over Acousti-Mat I floor mat.

MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP

Alternate Floor Mat Materials* — (Optional) — Nom 0.8 in. thick floor mat material loose laid over the subfloor with Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.

MAXXON CORP — Type Acousti-Mat 3, Acousti-Mat 3 HP, Crack Suppression Mat (CSM)

Alternate Floor Mat Materials* — (Optional) — Nom 0.4 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be min 1 in.

MAXXON CORP — Type Enkasonic 9110, Enkasonic 9110 HP

Alternate Floor Mat Materials* — (Optional) — Nom 0.2 in. thick floor mat material loose laid over the subfloor. Maxxon Floor Primer may be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness shall be as specified under **Floor Topping Mixture**.

MAXXON CORP — Type Acousti-Mat LP-R

Alternate Floor Mat Materials* — (Optional) — Not Shown — Nom 0.80 in. thick floor mat material loose laid over the subfloor. Floor topping thickness min 1-1/2 in. over the floor mat.

MAXXON CORP — Type Acousti-Mat SD

2. **Structural Steel Members*** — Pre-fabricated light gauge steel truss system consisting of cold-formed, galvanized steel chord and web sections. Trusses fabricated in various sizes, depths, and from various steel thickness. Trusses spaced max 48 in. OC.

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

ALLIED STUDCO — Amkey System, Pre-fabricated Light Gauge Steel Truss System

STEEL CONSTRUCTION SYSTEMS INC — Pre-fabricated Light Gauge Steel Truss System

TRUSSTEEL, DIV OF ITW BUILDING COMPONENTS INC — TrusSteel

3. **Bridging - (Not Shown)** — Location of lateral bracing for truss chord and web sections to be specified on truss engineering.

4. **Batts and Blankets* (Optional)** — Any thickness of mineral wool or glass fiber insulation fitted in the concealed space, draped over the resilient channels and gypsum board ceiling membrane. Any mineral wool or glass fiber 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.

4A. **Loose Fill Material* - (Optional)** — As an alternate to Item 4, any thickness of loose fill material installed on top of gypsum board ceiling membrane. Any loose fill material 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 **Loose Fill Materials** (BPHX) category in the Building Materials Directory for names of manufacturers.

5. **Resilient Channels** — Resilient channels formed of 25 MSG galv steel, installed perpendicular to the trusses spaced max 16 in. OC. When batt insulation (Item 4) is fitted in the concealed space and draped over the resilient channel/gypsum board ceiling membrane, or when loose fill insulation (Item 4A) is used, resilient channel spacing shall be max 12 in. OC. Channels secured to each truss with 1/2 in. long Type S12 steel screws. Channel splices located beneath trusses and overlapped 4 in. Two channels, spaced 6 in. OC, oriented opposite each gypsum board end joint as shown in end joint detail. Additional channels shall extend min 6 in. beyond each side edge of board. As an alternate to the resilient channels, furring channels (Item 5A) may be used.

5A. **Furring Channels - (Not Shown)** — As an alternate to Item 5, resilient channels, double legged formed of 25 MSG galv steel, 2-7/8 in. wide by 1/2 in. deep, installed perpendicular to the trusses spaced max 16 in. OC. When batt insulation (Item 4) is fitted in the concealed space and draped over the resilient channel/gypsum board ceiling membrane, or when loose fill insulation (Item 4A) is used, resilient channel spacing shall be max 12 in. OC. Channels secured to each truss with 1/2 in. long Type S12 steel screws or with No. 18 SWG galv steel wire double strand saddle ties. Channel splices located beneath trusses and overlapped 4 in. Channels tied together at splices with double strand of No. 18 SWG galv steel wire at each end of overlap. Two channels, spaced 6 in. OC, oriented opposite each gypsum board end joint as shown in end joint detail. Additional channels shall extend min 6 in. beyond each side edge of board.

6. **Gypsum Board*** — Nom 5/8 in. thick, 48 in. wide gypsum board installed with long dimension perpendicular to resilient channels. Gypsum board secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC along butted end joints and in the field. End joints secured to both pieces of resilient channel as shown in end joint detail.

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

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.

8. **Steel Beam - (Optional, Not Shown)** — W8x35 min size, used to support structural steel members (Item 2) at ends.

*** 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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