



Design No. L501
BXUV.L501
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.

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. L501

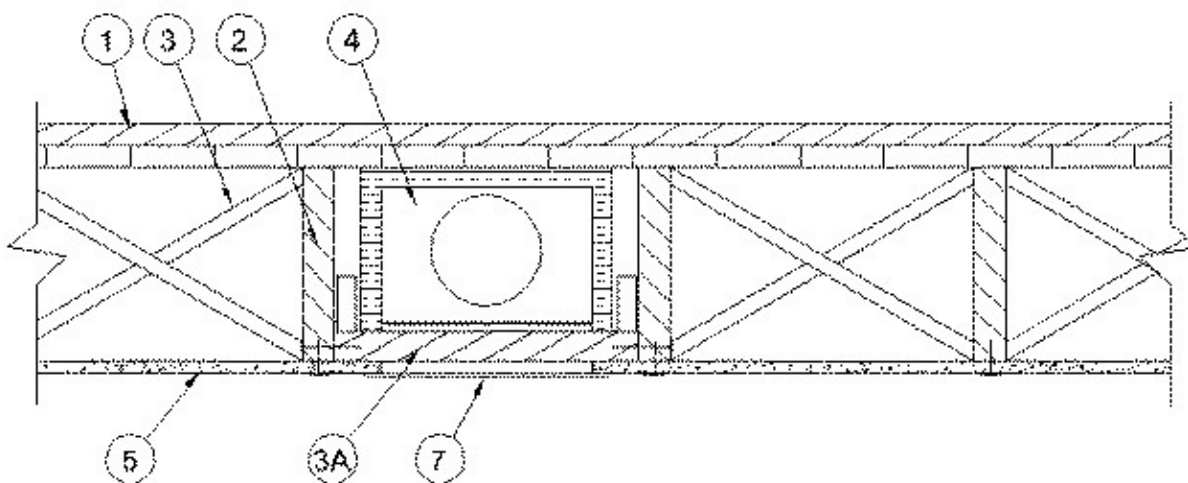
February 26, 2015

Unrestrained Assembly Rating — 1 Hr.

Finish Rating — (See Item 5 and 5A)

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 Systems** — The flooring system shall consist of one of the following:

System No. 1

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in.

thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

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 joists with end joints staggered. Panels fastened to the joists 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 — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring — Min 1 by 4 in. T & G lumber installed perpendicular to joists, or min 19/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered.

System No. 2

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

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

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. Floor topping thickness shall be as specified under **Floor Topping Mixture**.

GRASSWORX L L C — Type SC50

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

UNITED STATES GYPSUM CO — Type CSD, LRK, HSLRK

System No. 3

Subflooring — Min 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Floor Mat Materials* - (Optional) — Floor mat material nom 5/64 in. (2 mm) thick 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. Floor topping thickness a min 1 in. over the floor mat.

ECORE INTERNATIONAL INC — Type QTscu 4002

HACKER INDUSTRIES INC — Type Hacker Sound-Mat.

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/4 in. (6mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32mm) of floor-topping mixture.

ECORE INTERNATIONAL INC — Type QTrbm 3006-3

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/8 in. (3mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/4 in. (6mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Qurl 55/025

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 3/8 in. (10mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60/040

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 3/4 in. (19mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Qurl 65/075

Metal Lath (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor 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. 4

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

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

Finish Flooring - Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

ELASTIZELL CORP OF AMERICA — Type FF

System No. 5

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

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

Finish Flooring - Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.2 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

AERIX INDUSTRIES — Floor Topping Mixture

System No. 6

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

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

Finish Flooring - Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 62.5 lbs of Pea Gravel, 312.5 lbs of sand with 5-1/2 gal of water.

LITE-CRETE INC — Type I

System No. 7

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Finish Flooring - Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Mixture shall consist of 5 to 8 gal of water to 80 lbs of floor topping mixture to 2.1 cu ft of sand.

ULTRA QUIET FLOORS — UQF-A, UQF-Super Blend, UQF-Plus 200

System No. 8

Subflooring — Min 15/32 in. wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered.

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

Floor Mat Materials* - (Optional) — Nom 1/4 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. When floor mat material is used, min thickness of floor topping thickness is 1 in. 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)

Metal Lath (Alternate to Crack Suppression Mat (CSM)) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.

Fiber Glass Mesh Reinforcement — (Optional) — Maxxon Corp's "Maxxon Reinforcement (MR)" for use with or as an alternate to CSM or metal lath reinforcement, the materials consists of a plastic coated non-woven fiber glass mesh grid intended to suppress cracks in the Floor Topping Mixture. **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. Floor topping thickness shall be min 3/4 in. when used with Crack Suppression Mat (CSM), Metal Lath, or Maxxon Reinforcement (MR).

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 min 3/4 in. (1 in. for min 15/32 in. thick wood structural panels).

MAXXON CORP — Type Acousti-Mat LP-R

Metal Lath (Optional) — For use with floor mat materials, 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd or Maxxon Corp. UL Classified Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1 in.

MAXXON CORP — Type Crack Suppression Mat (CSM)

Fiber Glass Mesh Reinforcement — (Optional) — Maxxon Corp's "Maxxon Reinforcement (MR)" for use with or as an alternate to CSM or metal lath reinforcement, the materials consists of a plastic coated non-woven fiber glass mesh grid intended to suppress cracks in the Floor Topping Mixture

Finish Flooring - Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for min 19/32 or min 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Mixture shall consist of 3 to 7 gal of water to 80 lbs of floor topping mixture to 1.0 to 2.1 cu ft of sand.

MAXXON CORP — Type D-C, GC, GC2000, L-R, T-F, CT

System No. 9

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

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

Floor Mat Materials* - (Optional) — Nom 1/4 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. When floor mat material is used, min thickness of floor topping mixture is 1 in. 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)

Metal Lath (Alternate to Crack Suppression Mat (CSM)) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material. Floor topping thickness shall be min 1-1/2 in.

Fiber Glass Mesh Reinforcement — (Optional) — Maxxon Corp's "Maxxon Reinforcement (MR)" for use with or as an alternate to CSM or metal lath reinforcement, the materials consists of a plastic coated non-woven fiber glass mesh grid intended to suppress cracks in the Floor Topping Mixture.
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. Floor topping thickness shall be min 3/4 in. when used with Crack Suppression Mat (CSM), Metal Lath, or Maxxon Reinforcement (MR).

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 min 3/4 in. (1 in. for min 15/32 in. thick wood structural panels).

MAXXON CORP — Type Acousti-Mat LP-R

Metal Lath (Optional) — For use with floor mat materials, 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd or Maxxon Corp. UL Classified Crack Suppression Mat (CSM) loose laid over the floor mat material. Floor topping thickness shall be min 1 in.

MAXXON CORP — Type Crack Suppression Mat (CSM)

Fiber Glass Mesh Reinforcement — (Optional) — Maxxon Corp's "Maxxon Reinforcement (MR)" for use with or as an alternate to CSM or metal lath reinforcement, the materials consists of a plastic coated non-woven fiber glass mesh grid intended to suppress cracks in the Floor Topping Mixture

Finish Flooring - Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for min 19/32 or min 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1200 psi. Mixture shall consist of 4 to 7 gal of water to 80 lbs of floor topping mixture to 1.4 to 1.9 cu ft of sand.

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

System No. 10

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

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. 11

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

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

Finish Flooring - Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

ALLIED CUSTOM GYPSUM — Accu-Crete, AccuRadiant, AccuLevel G40 and AccuLevel SD30.

Alternate Floor Mat Material* - (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in. or 1 in. thick for 19/32 or 15/32 in. thick wood structural panels respectively.

ALLIED CUSTOM GYPSUM — Type AccuQuiet P80, Type AccuQuiet C40, AccuQuiet D13, and Type AccuQuiet D-18.

System No. 12

Subflooring — 15/32 or 19/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered.

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

Finish Flooring — Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 2100 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

BMI PRODUCTS OF NORTHERN ILLINOIS INC — Maxit 493**System No. 13**

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 14

Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Gypsum Board* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

Floor Mat Materials* — (As an alternate to the single layer gypsum board) - Floor mat material loose laid over the subfloor.

MAXXON CORP — Type Acousti-Mat I, Acousti-Mat II, Acousti-Mat II HP, Acousti-Mat 3, Acousti-Mat 3 HP, Enkasonic 9110, Enkasonic 9110 HP, Acousti-Mat LP-R.

Gypsum Board* — (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

System No. 15

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture for min 15/32 in. thick wood structural panels, having a min compressive strength of 2150 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

MAPEI CORP — Type Planitex SL 35

System No. 16

Subflooring — Min. 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered.

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 for 15/32 in. thick wood structural panels respectively, having a min compressive strength of 2100 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

THE STRONG CO INC — Type UltraLevel

System No. 17

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

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

Finish Flooring - Floor Topping Mixture* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

DEPENDABLE LLC — GSL M3.4, GSL K2.6 and GSL RH.

Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

2. **Wood Joists** — Min 2 by 10, spaced 16 in. OC and effectively fireblocked in accordance with local codes.

3. **Cross Bridging** — Min 1 by 3 in. or min 2 by 10 solid blocking.

3A. **Horizontal Bridging** — Used in lieu of Item 3 in same joist bay as ceiling damper (Item 4), when ceiling damper is employed. Wood 2 by 4 in. secured between joists with nails.

4. **Ceiling Damper* - (Optional)** — Max nom area shall be 198 sq in. Max rectangular size shall be 12 in. wide by 16-1/2 in. long. Max height of damper shall be 9-3/8 in. Aggregate damper openings shall not exceed 99 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 7) shall be installed in accordance with installation instructions.

AIR BALANCE INC — Type 299 (See Item 5A)

AIR KING VENTILATION PRODUCTS — Series AS, Series AK

AIR MANAGEMENT INC — Models AMI-50-CD-WG-B, AMI-50-CD-WG-B/VC

CENTRAL VENTILATION SYSTEMS CO L L C — Models C-S/R-HC(-A), C-RD-HC(-A)

GREENHECK FAN CORP — Model CRD-1WJ

METAL-FAB INC — Models MSCDHC, MRDCHD

METAL INDUSTRIES INC — Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

METROPOLITAN AIR TECHNOLOGY — Model C-S/R-HC

NCA MFG INC — Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

PRICE INDUSTRIES LTD — Models CD-S/R-HC, CD-RD-HC

RUSKIN COMPANY — Model CFD7

UNITED ENERTECH CORP — Models C-S/R-HC(-A), C-RD-HC(-A)

5. **Gypsum Board*** — (Finish Rating - 30 minutes unless otherwise noted) - Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1-7/8 in. long, 6d cement coated nails spaced 6 in. OC.

ACADIA DRYWALL SUPPLIES LTD — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — Types AGX-1, AG-C

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CERTAINTED GYPSUM INC — Types EGRG, GlasRoc, FRPC, SF3, Type C, Type X

CGC INC — Types C, IP-X1, IP-X2, IPC-AR, SCX, WRX

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC6A, LGFC-C/A.

GEORGIA-PACIFIC GYPSUM L L C — Types 5, 9, C, GPFS1, GPFS6, DA, DAP, DAPC, DGG, DS, Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, TG-C, GreenGlass Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 20 min), Veneer Plaster Base - Type LW2X (finish rating 20 min), Water Rated - Type LW2X (finish rating 20 min), Sheathing - Type LW2X (finish rating 20 min), Soffit - Type LW2X (finish rating 20 min).

NATIONAL GYPSUM CO — eXP-C, FSK, FSK-C, FSK-G, FSL, FSMR-C, FSW, FSW-2, FSW-3, FSW-C, FSW-G, FSW-6, FSW-8

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-3, PG-4, PG-5, PG-6, PG-9, PG-C, PG-11, PGS-WRS (Finish Rating 21 minutes)

PANEL REY S A — Type PRC

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type C, Type X

UNITED STATES GYPSUM CO — Types C, IP-X1, IP-X2, IPC-AR, SCX, WRX

USG MEXICO S A DE C V — Types C, IP-X1, IP-X2, IPC-AR, SCX, WRX

5A. **Gypsum Board*** — (Finish Rating - 16 min.) Required when Air Balance Inc. Type 299 ceiling damper (Item 4) is installed. Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1-7/8 in. long, 6d cement coated nails spaced 6 in. OC with the first nails located 1/2 in. and 3 in. from the board edges.

UNITED STATES GYPSUM CO — Type C

USG MEXICO S A DE C V — Type C

6. **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.

7. **Grille** — Steel grille, installed in accordance with the installation instructions provided with the ceiling damper.

8. **Steel Corner Fasteners** — (Optional-not shown) - Used to attach ends of gypsum board at wall intersection where joists run parallel to wall. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galvanized steel. Fasteners nailed to face of wall bearing plate through fastener tab with one No. 6d cement coated nail, spaced not greater than 16 in. OC and 2 in. from edge of gypsum board. Fasteners covered with gypsum board facing applied to intersecting wall.

*** 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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