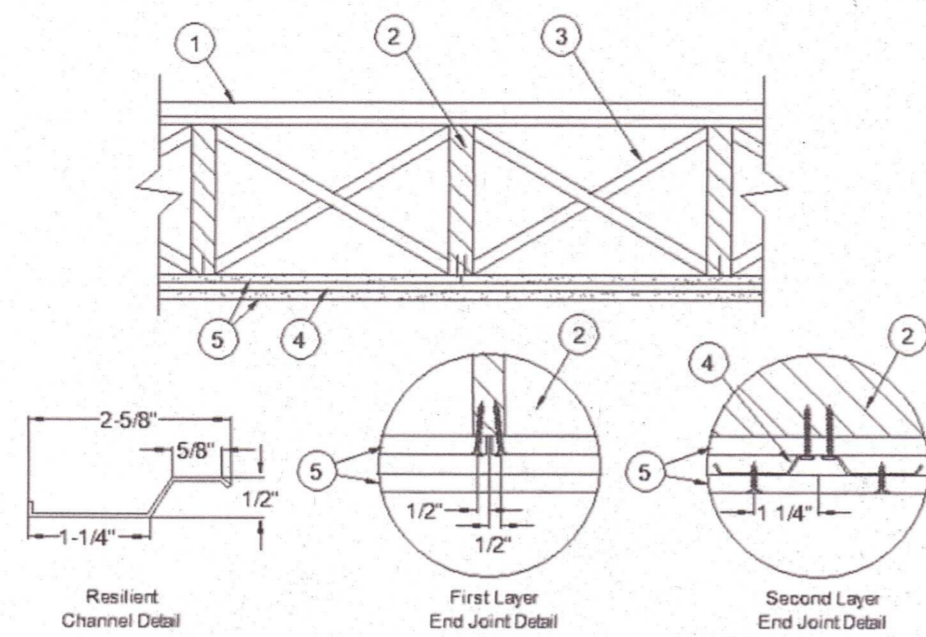


Design No. L511

Unrestrained Assembly Rating — 2 Hr.
Finish Rating — 71 Min.



1. **Flooring Systems** — The flooring system shall consist of the following:

System No. 10

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 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

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.

4. **Resilient Channels** — Formed of 25 MSG galv steel, spaced 24 in. OC perpendicular to joists and located 12 in. from each side edge of base layer gypsum board. Channels placed with 1/4 in. clearance at the ends and fastened to each joist with 1-7/8 in. long Type S bugle head screws. Min end clearance of channels to walls: 3/8 in. Additional channels 60 in. long, placed adjacent to continuous channels at end joints of second layers of gypsum board (Item 5) and similarly secured. Channel ends to extend 6 in. beyond each side of joint.

4A. **Steel Framing Members (Not Shown)*** — As an alternate to Item 4, 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 24 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 joists. Clips spaced 48 in. OC, and 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. 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 5.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75).

4B. **Alternate Steel Framing Members — (Not Shown)*** — As an alternate to Items 4, furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 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 wood joists (Item 2). Clips spaced 48 in. OC, and 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. 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 5.
PLITEQ INC — Type Genie Clip

4C. **Alternate Steel Framing Members — (Not Shown)*** - As an alternate to Item 4, furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to joists. Channels secured to joists as described in Item b.

b. **Steel Framing Members*** — Used to attach furring channels (Item a) to the wood joists (Item 2). Clips spaced at 24" OC and secured to the bottom of the joists with one No. 10 x 2-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and screwed with four No. 8 x 1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum Butt joints and side joints as described in Item 5.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

5. **Gypsum Board*** — Two layers of nom 5/8 in. thick, 4 ft wide gypsum board. When resilient channels (Item 4) are used, first layer installed perpendicular to joists with end joints located over bottom of joists. Gypsum board attached to joists with 6d cement coated cooler nails spaced 1 in., 6 in. and 21 in. from each side edge in the field of the board. Butt edges shall occur under joists, fastened with nails spaced 1 in., 6 in., 15 in. and 21 in. from side edges of board, and 1/2 in. back from butt edge. Second layer of gypsum board secured to resilient channels with 1 in. long Type S bugle head screws spaced 12 in. OC with additional screws placed 3 in. from each side edge. End joints of second layer offset from end joints in first layer, and secured to both resilient channels as shown in end joint detail. Screws located 3/4 in. and 1-1/4 in. from side and end joints of boards. When Steel Framing Members (Item 4A or 4B) are used, sheets installed with long dimensions parallel with joists. Base layer attached to the furring channels using 1 in. long Type S bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints shall be staggered min 2 ft. within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. 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 or Genie clip at each end of the channel. Butted base layer end joints to be offset a min of 24 in. in adjacent courses. Outer layer attached to the furring channels using 1-1/8 in. long Type S bugle head steel screws spaced 8 in. OC at butted joints and 12 in. OC in the field. Butted end joints to be offset a min of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min 18 in. from butted side joints of base layer. When Steel Framing Members (Item 4C) are used, base layer of gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long

Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 72 in. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end, spaced approximately 2 in. in from joint. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Butt joint furring channels shall be attached with a RESILMOUNT Sound Isolation Clip secured to underside of every joist that is located over the butt joint. Over all Gypsum Board side joints, approximately 20 in. lengths of furring channel shall be installed parallel to joists (Item 2) between main furring channels. Side joint furring channels shall be attached to underside of the joist with RESILMOUNT Sound Isolation Clips - Type A237R located approximately 2 in. from each end of the approximate 20 in. length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge. Face layer installed per Item 5.

AMERICAN GYPSUM CO — Type AG-C

CERTAINTED GYPSUM INC — Type FRPC, Type C

CGC INC — Types C, IP-X2, IPC-AR

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

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

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

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

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

USG BORAL ZAWAWI DRYWALL L L C SFZ — Type C

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

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 the gypsum board.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

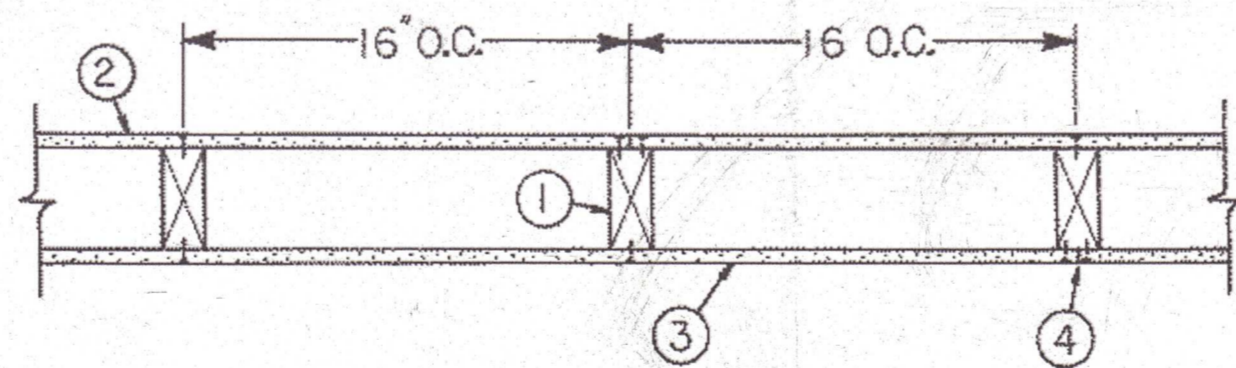
Design No. U337

Bearing Wall Rating — 1 HR.

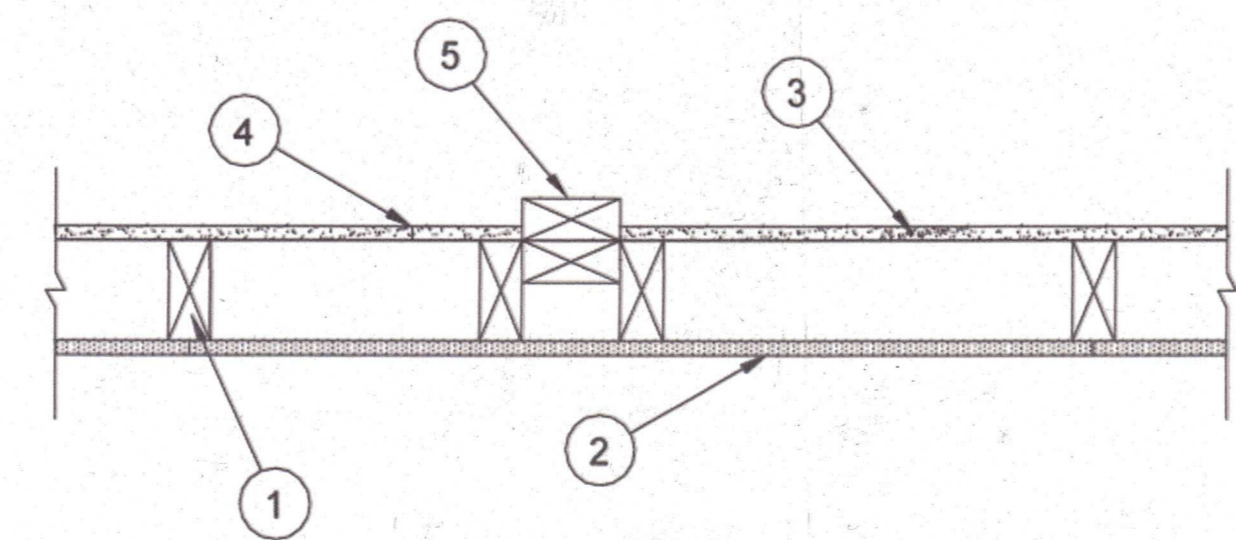
Finish Rating — See Item 2

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.



INTERIOR SIDE



- Wood Studs** — Nominal 2 by 4 in. spaced 16 in. on center, effectively cross braced at mid-height and fire stopped at top and bottom.
- Gypsum Board*** — 5/8 in. thick, 4 ft wide, applied vertically. Gypsum board attached to studs and bearing plates with 1-3/4 in. long galv nails with 0.128 in. diam shank and 7/16 in. diam head, spaced 8 in. on center.

GEORGIA-PACIFIC GYPSUM L L C — Type DGG (finish rating 20 min), Type DAP, DAPC, DD, DS.

3. **Gypsum Board*** — 5/8 in. thick, 4 ft wide, applied vertically. Gypsum board attached to studs and bearing plates with 1-3/4 in. long galv nails with 0.128 in. diam shank and 7/16 in. diam head, spaced 8 in. on center.

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

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 23 min.), M-Glass (finish rating 23 min.), AG-C.

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 (finish rating 24 min).

CERTAINTED GYPSUM INC — Type EGRG or GlasRoc (finish rating 23 min), Type SilentFX (finish rating 24 min).

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC2A, Type LGFC6A (finish rating 34 min), Type LGFC-C/A, Type LGFC-WD, Type LGLLX.

GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, Type DGG (finish rating 20 min), Type GPFS2 (finish rating 24 min), Type GPFS6 (finish rating 20 min), Type DS, Type DAP, Type DD (finish rating 20 min), DA, DAPC, LS (finish rating 23 min), TG-C, Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min), Type LWX, Veneer Plaster Base - Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type-DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LW2X, Water Rated - Type LW2X, Sheathing - Type LW2X, Soffit - Type LW2X, Type DGL2W, Water Rated - Type DGL2W, Sheathing - Type DGL2W.

NATIONAL GYPSUM CO — Types FSK, FSMR-C, FSW, FSW-3, FSW-6, FSW-8, FSL, SoundBreak XP Type X Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-9, PG-11, PGS-WRS.

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min)

3A. **Gypsum Board*** — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 23 min.), M-Glass, AG-C.

3B. **Gypsum Board*** — (As an alternate to Items 3, and 3A) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed as described in Item 3. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

GEORGIA-PACIFIC GYPSUM L L C — GreenGlass Type X, Type DGG.

3C. **Gypsum Board*** — As an alternate to Items 3, 3A, and 3B.) - 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter.

CGC INC — Type USGX (finish rating 22 min).

UNITED STATES GYPSUM CO — Type USGX (finish rating 22 min).

USG MEXICO S A DE C V — Type USGX (finish rating 22 min).

3D. **Gypsum Board*** — (As an alternate to Items 3 through 3C) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 3.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.

3E. **Gypsum Board*** — (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3.

CERTAINTED GYPSUM INC — 5/8" Easi-Lite Type X (finish rating 24 min)

3F. **Wall and Partition Facings and Accessories*** — (As an alternate to Items 3 through 3E) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 3.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

3G. **Gypsum Board*** — (As an alternate to 5/8 in. Type FSW in Item 3) - 2 layer Nom. 5/16 in. thick gypsum panels applied vertically. Horizontal joints on the same side need not be staggered. Inner layer attached with fasteners, as described in Item 3, spaced 24 in. OC. Outer layer attached per Item 3.

NATIONAL GYPSUM CO — Type FSW.

3H. **Gypsum Board*** — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

4. **Joints and Nailheads** — Exposed or covered with paper tape and joint compound. For tapered, rounded-edge wallboard, joints covered with paper tape and joint compound.

5. **Non-Bearing Wall Partition Intersection** — (Optional) Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or Cul Certification (such as Canada), respectively.