

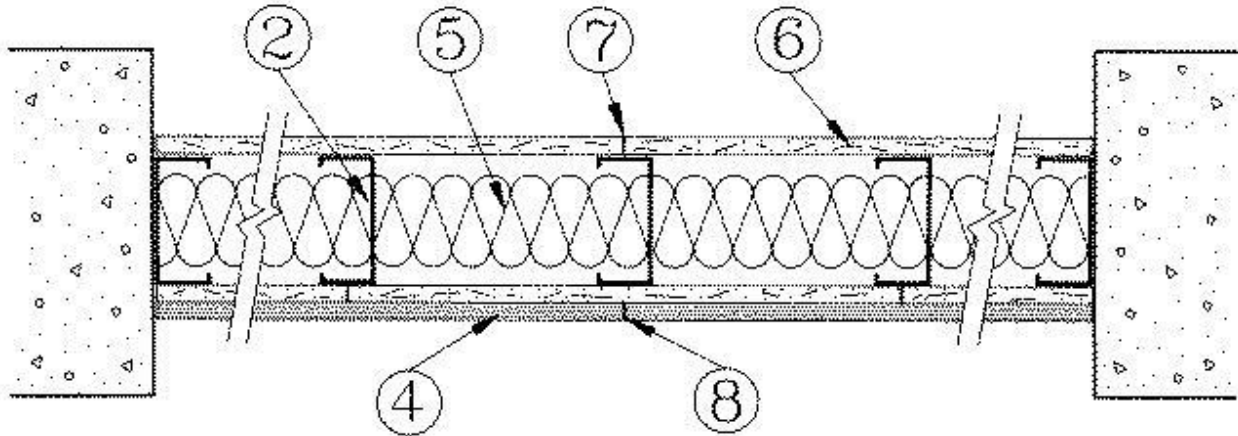
# Design No. U473

October 19, 2022

## Bearing Wall 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. Steel Floor and Ceiling Tracks** — Top and bottom tracks of wall assemblies shall consist of steel members, min No. 20 MSG (0.0329 in., min bare metal thickness) steel or min No. 20 GSG (0.036 in. thick) galv steel or No. 20 MSG (0.033 in. thick) primed steel, that provide a sound structural connection between steel studs and to adjacent assemblies such as floors, ceilings, and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. O.C.
- 2. Steel Studs** — Corrosion protected steel studs, min No. 20 MSG (0.0329 in., min bare metal thickness) min 3-1/2 in. wide, min No. 20 GSG (0.036 in. thick) galv steel or No. 20 MSG (0.033 in. thick) primed steel, cold formed, shall be designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute. All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer and shall meet the requirements of all applicable local code agencies. The max stud spacing of wall assemblies shall not exceed 16 in. O.C. Studs attached to floor and ceiling tracks with 1/2 in. long Type S-12 steel screws on both sides of studs or by welded or bolted connections designed in accordance with the AISI specifications.

3. **Lateral Support Members** — (Not shown) — Where required for lateral support of studs, support may be provided by means of steel straps, channels or other similar means as specified in the design of a particular steel stud wall system.

4. **Cementitious Backer Units\*** — Board 1/2 or 5/8 in. thick, square edge, attached to studs with 1-5/8 in. long corrosion resistance, wafer-head steel screws, spaced 8 in. OC. Joints covered with glass fiber mesh tape.

**UNITED STATES GYPSUM CO** — Type DCB

**USG MEXICO S A DE C V** — Type DCB.

5. **Batts and Blankets\*** — Placed to fill interior of stud cavity; 3 in. min thickness.

**THERMAFIBER INC** — Type SAFB.

6. **Gypsum Board\*** — Applied vertically 5/8 in. thick, attached to studs with 1 in. Type S-12 steel screws, spaced 8 in. OC along the edges of the board and 12 in. OC in the field of the board. When attached to Item 11 (furring channels), wallboard is screw attached to furring channels with 1 in. long, Type S steel screws spaced 12 in. OC.

**AMERICAN GYPSUM CO** — Type AGX-1, M-Glass, AG-C, LightRoc

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

**CABOT MANUFACTURING ULC** — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

**CERTAINTEED GYPSUM INC** — Type EGRG, GlasRoc, Type C, GlasRoc-2, SilentFX, Type LWTX

**CGC INC** — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, ULIX, USGX, WRC, WRX (Joint tape and compound, Item 7, optional for use with Type USGX).

**CERTAINTEED GYPSUM INC** — Types LGFC2A, LGFC6A, LGFC-C/A, LGFC-WD, LGLLX, CLLX.

**GEORGIA-PACIFIC GYPSUM L L C** — Types 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFS6, LS, TG-C, Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, GreenGlass Type X, Type X ComfortGuard Sound Deadening Gypsum Board, 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, Type SBWB , RSX.

**NATIONAL GYPSUM CO** — Riyadh, Saudi Arabia — Type FR, or WR.

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

**PANEL REY S A** — Types PRX, PRX2, PRC, PRC2

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

**THAI GYPSUM PRODUCTS PCL** — Type C

**THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO** — Types C and SCX

**UNITED STATES GYPSUM CO** — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, WRC, WRX, USGX (Joint tape and compound, Item 7, optional for use with Type USGX)

**USG BORAL DRYWALL SFZ LLC** — Types C, SCX, USGX (Joint tape and compound, Item 7, optional for use with Type USGX)

**USG MEXICO S A DE C V** — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC or WRX (Joint tape and compound, Item 7, optional for use with Type USGX).

6A. **Gypsum Board\*** — (As an alternate to Item 6) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 6.

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

6B. **Gypsum Board\*** — (As an alternate to Item 6) — 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 6.

**CERTAINTEED GYPSUM INC** — 5/8" Easi-Lite Type X

**THAI GYPSUM PRODUCTS PCL** — Type X

6C. **Gypsum Board\*** — (As an alternate to 5/8 in. Type FSW in Item 6) - 2 layers 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 6, spaced 24 in. OC. Outer layer attached per Item 6.

**NATIONAL GYPSUM CO** — Type FSW.

6D. **Wall and Partition Facings and Accessories\*** — (As an alternate to Item 6) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 6.

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

7. **Joint Tape and Compound** — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

8. **Joints** — Treated with glass fiber tape and latex modified Portland cement mortar or ANSI A 136.1 type organic adhesive.

9. **Vapor Permeable Water Barrier** — (Optional) — As required.

10. **Water Barrier** — (Optional - Not Shown) — Commercial asphalt saturated and/or coated felt.

11. **Furring Channel** — (Optional, Not Shown) - Not for use on side of wall utilizing cementitious backer units (Item 4). Formed of No. 25 MSG galv steel. 2-3/8 in., 2-9/16 in., 2-1/2 in., or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Channels secured to studs as described in Item 11A-11D.

11A. **Steel Framing Members\*** — Used to attach furring channels (Item 11) to studs (Item 2). Clips spaced 48 in. OC., and secured to studs with 1-5/8 in. wafer or hex head Type S steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.

**PAC INTERNATIONAL L L C** — Types RSIC-1, RSIC-1 (2.75).

11B. **Steel Framing Members\*** — Used to attach furring channels (Item 11) to studs (Item 2). Clips spaced max. 48 in. OC. GENIE CLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels, 2-3/8 in wide, are friction fitted into clips.

**PLITEQ INC** — Type GENIE CLIP

11C. **Steel Framing Members\*** — Used to attach furring channels (Item 11) to studs (Item 2). Clips spaced max. 48 in. OC. and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.

**STUDCO BUILDING SYSTEMS** — RESILMOUNT Sound Isolation Clips - Type A237R

11D. **Steel Framing Members\*** — Used to attach furring channels (Item 11) to studs (Item 2). Clips spaced max. 48 in. OC and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

**REGUPOL AMERICA** — Type SonusClip

11E. **Steel Framing Members\*** — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not for use on side of wall utilizing cementitious backer units (Item 4):

a. **Resilient Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 6.

b. **Steel Framing Members\*** — Used to attach resilient channels (Item 11Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.

**KEENE BUILDING PRODUCTS CO INC** — Type RC+ Assurance Clip

12. **Wall and Partition Facings and Accessories\*** — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the steel framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

**PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM** — Type QuietRock QR-500 and QR-510

**\* 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 2022-10-19