UL Product iQ®

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
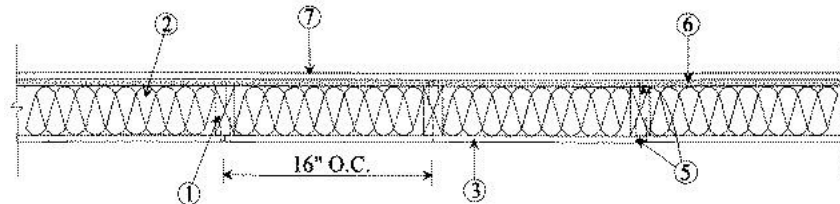Design Criteria and Allowable Variances

Design No. U355

August 30, 2023

(Exposed to Fire On Interior Face Only)
Bearing Wall Rating — 1 Hr
Finish Rating — 23 Min
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. **Wood Studs —** Nom 2 by 4 in. spaced 16 in. OC. Cross braced at midheight and effectively firestopped at top and bottom of wall.

2. **Batts and Blankets* —** Unfaced glass fiber batts, min 3-1/2 in. thick, min density of 0.72 pcf, pressure fit in wall cavities between studs and cross bracing. See **Batts and Blankets*** (BZJZ) category for names of Classified Companies.

2A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 2) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product.
Applegate Greenfiber Acquisition LLC — Insulmax and SANCTUARY for use with wet or dry application. INS515LD and INS541LD are to be used for dry application only

2B. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 2) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

3. **Gypsum Board* —** 5/8 in. thick 4 ft wide gypsum boards, paper, glass mat or vinyl surfaced, with beveled, square, or tapered edges, applied vertically. Wallboard nailed 8 in. OC with 6 d cement-coated nails or No. 6 bugle head drywall screws, 1-7/8 in. long.
AMERICAN GYPSUM CO — Types AGX-1 (finish rating 23 min), M-Glass (finish rating 23 min), AGX-11 (finish rating 26 min), Type AG-C, LightRoc (finish rating 23 min),

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

CABOT MANUFACTURING ULC — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type EGRG or GlasRoc (finish rating 23 min), GlasRoc-2, Type X-1 (finish rating 26 min), Easi-Lite Type X-2, Type LWTX, Type C

CGC INC — Type AR (finish rating 26 min), Type C (finish rating 26 min), Type IP-X1 (finish rating 26 min), Type IP-X2 (finish rating 26 min), Type SCX (finish rating 26 min), Type SHX (finish rating 26 min), Type WRC (finish rating 26 min), Type WRX (finish rating 26 min), Type IP-AR (finish rating 26 min), Type IPC-AR (finish rating 26 min), Type ULIX (finish rating 20 min.), Type ULX (finish rating 22 min), Type USGX (Joint tape and compound, Item 5, optional for use with Type USGX)

CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX, CLLX

GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS6 (finish rating 26 min), Type DS, Type DAP, Type DD (finish rating 20 min), Type DAPC, LS (finish rating 23 min), Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, TG-C, GreenGlass 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 — Type eXP-C, Type FSK (finish rating 20 min), FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), FSW-5, Type FSW-6 (finish rating 20 min), Type FSW-8, Type FSW-G (finish rating 20 min), FSK-C, FSW-C or Type FSMR-C, Type FSL (finish rating 24 min), RSX.

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

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Type PG-6 (finish rating 23 min), Types PG-3WS, PG-5WS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11, Type PG-C, Type PGS-WRS, Type PGI

PANEL REY S A — Types GREX, GRIX, PRX, RHX, MDX, ETX, PRC or PRC2

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

THAI GYPSUM PRODUCTS PCL — Type X, Type C

UNITED STATES GYPSUM CO — Type AR (finish rating 26 min), Type C (finish rating 26 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 26 min), Type IPC-AR (finish rating 26 min), Type IP-X1 (finish rating 26 min), Type IP-X2 (finish rating 26 min), Type SHX (finish rating 26 min), Type SCX (finish rating 26 min), Type ULIX (finish rating 20 min.), Type ULX (finish rating 22 min), Type USGX (Joint tape and compound, Item 5, optional for use with Type USGX), Type WRX (finish rating 26 min), Type WRC (finish rating 26 min)

USG BORAL DRYWALL SFZ LLC — Types C, SCX, USGX (Joint tape and compound, Item 5, optional for use with Type USGX)

USG MEXICO S A DE C V — Type AR (finish rating 26 min), Type C (finish rating 26 min), Type IP-X1 (finish rating 26 min), Type IP-X2 (finish rating 26 min), Type SCX (finish rating 26 min), Type SHX (finish rating 26 min), Type WRC (finish rating 26 min), Type WRX (finish rating 26 min), Type IP-AR (finish rating 26 min), Type IPC-AR (finish rating 26 min), Type ULX (finish rating 22 min), Type USGX (Joint tape and compound, Item 5, optional for use with Type USGX)

3A. **Gypsum Board*** — As an alternate to Item 3 — (Not Shown) — 5/8 in. thick, 4 ft. wide gypsum panels, with beveled, square, or tapered edges, applied 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 screw 1 in. from edge of board.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc

CABOT MANUFACTURING ULC — Type X, 5/8 Type X

CERTAINTEED GYPSUM INC — Type C, Type X-1, Easi-Lite Type X-2

CGC INC — Type AR, Type C, Type FCV, Type IP-X1, Type IP-X2, Type SCX, Type SHX, Type WRC, Type WRX, Type IP-AR, Type IPC-AR, Type ULIX, Type ULX

PANEL REY S A — Types PRC or PRC2

THAI GYPSUM PRODUCTS PCL — Type C or Type X

UNITED STATES GYPSUM CO — Type AR, Type C, Type FRX-G, Type IP-X1, Type IP-X2, Type IP-AR, Type IPC-AR, Type SCX, Type SHX, Type ULIX, Type ULX, Type WRX, Type WRC

USG MEXICO S A DE C V — Type AR, Type C, Type IP-X1, Type IP-X2, Type SCX, Type SHX, Type WRC, Type ULX, Type WRX, Type IP-AR, Type IPC-AR

3B. **Gypsum Board*** — (As an alternate to Item 3) — Nom 3/4 in. thick, installed as described in Item 3.
CGC INC — Types AR, IP-AR

UNITED STATES GYPSUM CO — Types AR, IP-AR

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

3B. **Gypsum Board*** — **(As an alternate to Items 3 and 3A)** — 5/8 in. thick, 24 to 54 in. wide, applied horizontally to one side of the assembly. Secured as described in Item 3. When used in widths other than 48 in., gypsum panels to be installed horizontally.
CGC INC — Type SHX

UNITED STATES GYPSUM CO — Type FRX -G, SHX

USG MEXICO S A DE C V — Type SHX

3C. **Gypsum Board*** — (As an alternate to Items 3, 3A and 3B) — 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. 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

3D. **Gypsum Board*** — (As an alternate to Items 3, 3A, 3B and 3C) — 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field 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

UNITED STATES GYPSUM CO — Type USGX

USG BORAL DRYWALL SFZ LLC — Type USGX

USG MEXICO S A DE C V — Type USGX

3E. **Gypsum Board*** — (As an alternate to Items 3 through 3D) — 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC.
NATIONAL GYPSUM CO — Type SBWB

3F. **Gypsum Board*** — (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 — Types QuietRock ES

3G. **Gypsum Board*** — (As an alternate to Items 3 through 3F) — 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically or horizontally and fastened to the studs and plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.
CERTAINTEED GYPSUM INC — Type SilentFX

3H. **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.
CERTAINTEED GYPSUM INC — 5/8" Easi-Lite Type X (finish rating 24 min)

3I. **Wall and Partition Facings and Accessories*** — (As an alternate to Items 3 through 3H) — 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.

3J. **Gypsum Board*** — (As an alternate to 5/8 in. Type FSW in Item 3) — 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 3, spaced 24 in. OC. Outer layer attached per Item 3.
NATIONAL GYPSUM CO — Type FSW.

3K. **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.
CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

3L. **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 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, M-Glass, Type AG-C, LightRoc.

NATIONAL GYPSUM CO — Type FSK, Type FSK-G, Type FSW, Type FSW-3, Type FSW-5, Type FSW-G, Type FSK-C, Type FSW-C, Type FSMR-C, Type FSW-6, Type FSL

4. **Steel Corners Fasteners** — (Optional) — (Not Shown) — For use at wall corners. 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 No. 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the wallboard, no greater than 2 in. from corner of wallboard, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement-coated nail per fastener. Corners of wallboard shall be nailed to top and bottom plate using No. 6d cement-coated nails.

5. **Joints and Fastener Heads** — Wallboard joints covered with tape and joint compound. Fastener heads covered with joint compound. When square-edge gypsum board is used, treatment of joints is optional.

6. **Sheathing — Foamed Plastic*** — 7/16 in. thick min, 4 ft wide sheathing, with square edges. Sheathing is applied vertically. Sheathing fastened with 1 in. long E. G. roofing nails spaced 8 in. OC along the edges and 12 in. OC in the field.
ATLAS ROOFING CORP — EnergyShield Pro Wall Insulation, EnergyShield Pro 2 Wall Insulation, EnergyShield CGF Pro, EnergyShield Ply Pro, EnergyShield® CGF, EnergyShield® PanelCast, EnergyShield® and "EnergyShield® XR

DUPONT DE NEMOURS, INC. — Type Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP), Thermax Butler Stylwall Insulation Board and Thermax Morton Heavy Duty Insulation Board

FIRESTONE BUILDING PRODUCTS CO L L C — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Type "Xci-Class A", "Xci 286", "Xci Foil (Class A)", "Xci CG", "Xci Foil", "Xci CG NH", "Xci Foil NH"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — Types "TSX-8500", "ECOMAXci FR", "TSX-8510", "ECOMAX xi FR White", "ECOMAXci", "ECOMAXci FR Air Barrier", "Thermasheath-XP", "Thermasheath", "Durasheath"

JOHNS MANVILLE — Type "AP Foil-Faced Foam Sheathing"

6A. **Building Units*** — As an alternate to Item 6, max. 1-1/2-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in., with a facer on one side and with oriented strand board or plywood on the other. Sheathing is applied vertically. Sheathing fastened with 3 in. long E. G. roofing nails spaced 8 in. OC along the edges and 12 in. OC in the field.

ATLAS ROOFING CORP — EnergyShield® Ply

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Type "Xci NB" and "Xci Ply"

LAMINATORS INC — Type "Omega ci"

6B. **Building Units*** — As an alternate to Items 6 and 6A, max. 1-1/2-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in., with a facer on one or both sides and bonded to fiberboard, oriented strand board or plywood on one side. Sheathing is applied vertically. Sheathing fastened attached to studs with 8d nails or 2-1/2 in. long Type W screws spaced 8 in. OC along the edges and 12 in. OC in the field.
RMAX, A BUSINESS UNIT OF SIKA CORPORATION — Types Thermasheath-SI, ECOBASEci, ThermaBase-CI, ECOMAXci FR Ply, "ECOMAXci Ply".

6C. **Building Units*** — As an alternate to Items 6, 6A and 6B, max. thickness 1-1/2-in thick polyisocyanurate composite foamed plastic insulation boards bonded to oriented strand board on one side. Sheathing may be installed vertically or horizontally with all horizontal joints backed by wood framing or blocking. Sheathing shall be fastened to studs with minimum 0.113-inch diameter nails spaced maximum 6 in. OC along the perimeter and 12 in. OC in the field. Nails must penetrate framing minimum 1.5 inches.

HUBER ENGINEERED WOODS LLC – Type ZIP System® R Sheathing

7. **Exterior Wall Coverings —** Installed in accordance with the manufacturer's Installation Instructions.

A. **Aluminum Siding —** 0.019 in. min thick painted aluminum meeting AAMA 1402. Fastened over foam plastic sheathing to wood studs using 1-1/2 in. long aluminum nails.

B. **Wood Siding —** 5/8 in. min thick lumber, plywood or OSB wood based siding. Fastened over foam plastic sheathing to wood studs using 10d galv box nails spaced 6 in. OC on perimeter and 12 in. OC in the field.

C. **Fiber-Cement Siding —** 0.250 in. min thick fiber-cement based siding. Fastened over foam plastic sheathing to wood studs using min 1-1/2 in. long galv nails.

* 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 2023-08-30