

BXUV.W408 –

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 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. W408

August 05, 2019

Bearing Wall Rating — 2 Hr when EXPOSED TO FIRE ON INTERIOR FACE ONLY
(Maximum loading on the bearing wall to be based on un-braced stud height
of 93.75 inches in the weak axis of the studs)

Bearing Wall Rating — 1 Hr when EXPOSED TO FIRE ON EXTERIOR FACE
ONLY, see Item 4 and 6

(Maximum loading on the bearing wall to be based on un-braced stud height
of 93.75 inches in the weak axis of the studs)

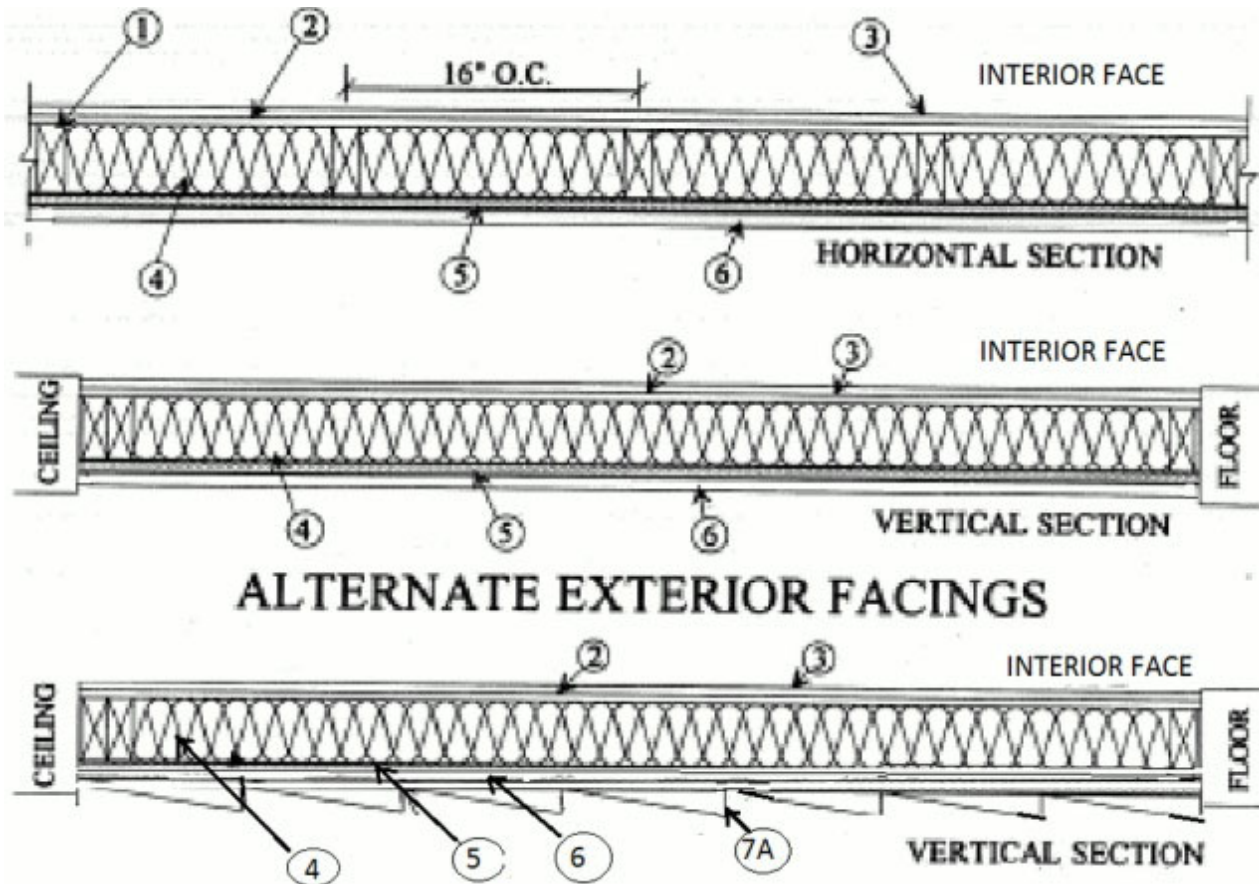
For Wood Studs, Finish Rating — 50 min when EXPOSED TO FIRE ON
INTERIOR FACE.

For Wood Studs, Finish Rating — 17 min when EXPOSED TO FIRE ON
EXTERIOR FACE.

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 with double 2 by 4 top and single 2 by 4 in. bottom plates, with 2 by 4 in. lateral bracing at 96 in. OC max. Studs effectively fire stopped. As an option, nom 2 by 6 in., spaced 24 in. OC with double 2 by 6 top and single 2 by 6 bottom plates, with 2 by 6 in. lateral bracing at 96 in. OC max may be used in lieu of 2 by 4 studs and plates. Studs effectively fire stopped.

1A. **Steel Studs and Floor and Ceiling Tracks** — As an option to Item 1 — (Not Shown) — 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 MSG (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 a floor, ceiling, and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. O.C. Steel studs min 3-1/2 in. wide, No. 20 MSG (0.0329 in., min bare metal thickness) corrosion protected cold formed steel studs 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 24 in. OC. 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.

2. **Gypsum Board*** — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305. Nom 5/8 in. thick, 4 ft. wide, two layers applied vertically. Base layer nailed to wood studs and bearing plates 6 in. OC. with 6d cup-head drywall nails, 1-7/8 in. long. The face layer, with joints staggered from base layer, nailed to the studs and bearing plates over the base layer, 8 in. OC. with 8d cup-head drywall nails, 2-3/8 in. long.

Type W screws of the same length, head diameter, as the nails and at the spacing described for nails may be used instead of nails. When steel framing is substituted for wood framing, 1 and 1-5/8 in. long Type S steel screws are used for base and face layers, respectively.

CABOT MANUFACTURING ULC (View Classification) — CKNX.R25370

AMERICAN GYPSUM CO (View Classification) — CKNX.R14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CKNX.R19374

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (View Classification) — CKNX.R3660

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (View Classification) — CKNX.R18482

CGC INC (View Classification) — CKNX.R19751

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX.R2717

LOADMASTER SYSTEMS INC (View Classification) — CKNX.R11809

NATIONAL GYPSUM CO (View Classification) — CKNX.R3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CKNX.R7094

PANEL REY S A (View Classification) — CKNX.R21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CKNX.R19262

THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX.R27517

UNITED STATES GYPSUM CO (View Classification) — CKNX.R1319

USG MEXICO S A DE C V (View Classification) — CKNX.R16089

3. **Joints and Fastener Heads** — Gypsum board joints covered with tape and joint compound. Fastener heads covered with joint compound.

4. **Batts and Blankets*** — Faced or unfaced mineral fiber insulation, 3-1/2 in. thick, nominal 2.5 pcf, friction fit in the wall cavity between stud, plates, and cross bracing.

See **Batts and Blankets*** (BZJZ) category for names of Classified manufacturers.

4A. **Batts and Blankets*** — As an option to Item 4, when the Fire Resistance Rating is for a fire on the Interior Face only and the Fire Resistance Rating for the Exterior face is not required. Faced or unfaced glass fiber insulation, 3-1/2 in. thick, nom 0.65 pcf, friction fit in the wall cavity between stud, plates, and cross bracing.

See **Batts and Blankets*** (BZJZ) category for names of Classified manufacturers.

5. **Building Units*** — Building units nailed to the wood framing with 1-7/8 in. long, 6d nails, spaced 6 in. OC. on the perimeter and 12 in. OC. in the field. Vertical joints centered on studs. Horizontal joints backed with nom. 2 by 4

wood blocking. When steel framing is substituted for wood framing, 1-1/4 in. long Type S steel screws are used in lieu of nails. Horizontal joints backed by steel framing.

LOUISIANA-PACIFIC CORP — Type Blazeguard 2-Side

LOUISIANA-PACIFIC CORP — Type LP FlameBlock 2-Side

6. Exterior Sidings — One of the Exterior Siding as specified in Item 6A to Item 6D are required for 1 hr Fire Resistance Rating for fire from the Exterior Face, optional for 2 hr Fire Resistance Rating for fire from Interior Face.

6A. Exterior Wood Siding — Min 11/32 in. thick, 4 ft wide wood plywood siding panels or 7/16 in. thick, 4 feet wide OSB siding panel. Installed with long dimension of sheet (strength axis) or face grain parallel with studs. Vertical joints centered on studs. Horizontal joints over nom. 2 by 4 in. wood blocking. Attached to studs through the Building Units, Item 5, on the exterior side of wall with 8d nails, 2-1/2 in. long spaced 6 in. OC at perimeter of panels and 12 in. OC in the field.

6B. Exterior OSB Lap Siding — Min 7/16 in. thick, OSB lap siding fastened to studs through the Building Units, Item 5, with nails or screws, at the locations specified by the manufacturer.

6C. Cementitious Stucco — Portland cement or synthetic stucco systems with self-furring metal lath. Thickness from 3/8 in. to 3/4 in. depending on system, fastened to studs through the Building Units, Item 5, with nails or screws, at the locations specified by the manufacturer.

6D. Fiber Cement Siding — Fiber Cement Lap or Vertical Siding. Minimum 5/16 in. thick, fastened to studs through the Building Units, Item 5, with nails or screws, at the locations specified by the manufacturer.

6E. Brick — Brick veneer, meeting the requirements of local code agencies. Brick veneer attached to the studs with corrugated metal wall ties attached to each stud with 8d cement coated nails, every sixth course of bricks.

7. Exterior Facings — Exterior Facing specified as Item 7A and 7B is not permitted for 1 hr Fire Resistance Rating for fire from the Exterior Face, optional for 2 hr Fire Resistance Rating for fire from Interior Face.

7A. Vinyl Siding — (Optional) - UL Classified exterior plastic siding (molded plastic), fastened to the building units or wood panel sheathing with nails or screws, at the locations specified by the manufacturer.

7B. Exterior Facings — (Optional - Not Shown) - Any exterior facing approved by the Authority Having Jurisdiction installed in accordance with the manufacturer's installation instructions.

*** 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 2019-08-05

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