



Design No. U421

BXUV.U421

Fire Resistance Ratings - ANSI/UL 263

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- 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.
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- Only products which bear UL's Mark are considered Certified.

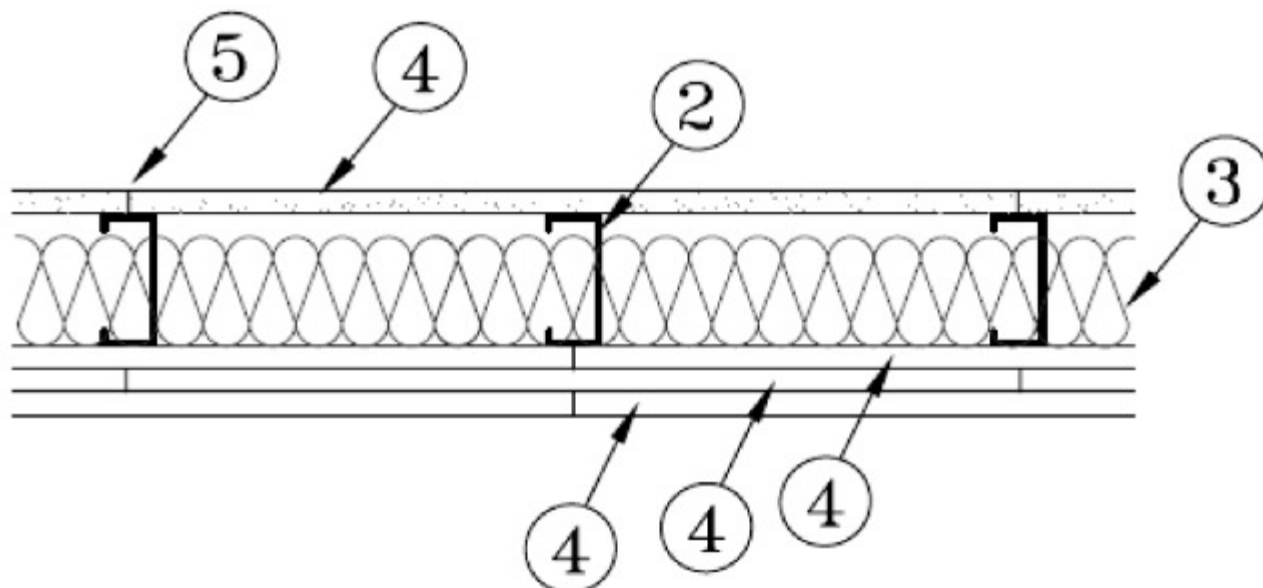
Fire-resistance Ratings - ANSI/UL 263

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Design No. U421

June 06, 2013

Nonbearing Wall Rating — 2 Hr



1. **Floor and Ceiling Runners** — (Not Shown) - Channel shaped, min 2-1/2 in. deep when Items 4, 4A or 4B are used or 3-5/8 in deep when Items 4C, 4D or 4E are used, with min 1-1/4 in. long legs, fabricated from min 25 MSG corrosion-protected steel, attached to floor and ceiling with fasteners 24 in. OC max.

1A. **Framing Members* - Floor and Ceiling Runner** — Not shown - As an alternate to Item 1, proprietary channel shaped runners, min 2-1/2 in. deep when Items 4, 4A or 4B are used or 3-5/8 in deep when Items 4C, 4D or 4E are used, with 1-1/4 in. long legs fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™

PHILLIPS MFG CO L L C — Viper20™

1B. Framing Members* — Floor and Ceiling Runners — Not shown — As an alternate to Item 1, proprietary channel shaped, min. 3-5/8 in. wide, fabricated from min. 0.0150 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max. Not to be used with Item 4E.

CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

DMFCWBS L L C — ProTRAK™

MBA BUILDING SUPPLIES — ProTRAK

RAM SALES L L C — Ram ProTRAK

SOUTHEASTERN STUD & COMPONENTS INC — ProTRAK

STEEL STRUCTURAL SYSTEMS L L C — Tri-S ProTRAK

1C. Framing Members* - Floor and Ceiling Runner — Not shown - As an alternate to Item 1, proprietary channel shaped runners, min 2-1/2 in. deep when Items 4, 4A or 4B are used or 3-5/8 in deep when Items 4C, 4D or 4E are used ,with 1-1/4 in. long legs fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

TELLING INDUSTRIES L L C — Viper20™

2. Steel Studs — Channel shaped, min 2-1/2 in. deep when Items 4, 4A or 4B are used or 3-5/8 in deep when Items 4C, 4D or 4E are used, 1-1/4 in. flanges and 3/16 in. returns, fabricated from min 25 MSG corrosion-protected steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height and friction-fit in place.

2A. Framing Members* - Steel Studs — Not shown - In lieu of Item 2 — For use with Item 1 A - proprietary channel shaped steel studs, 1-1/4 in. wide by min 2-1/2 in. deep when Items 4, 4A or 4B are used or 3-5/8 in deep when Items 4C, 4D or 4E are used, fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 to 3/4 in. less in length than assembly height.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™

PHILLIPS MFG CO L L C — Viper20™

2B. Framing Members* — Steel Studs — As an alternate to Item, for use with Item 1B, proprietary channel shaped studs, min. 3-5/8 in. wide, fabricated from min. 0.0150 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Not to be used with Item 4E.

CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD

DMFCWBS L L C — ProSTUD™

MBA BUILDING SUPPLIES — ProSTUD

RAM SALES L L C — Ram ProSTUD

SOUTHEASTERN STUD & COMPONENTS INC — ProSTUD

STEEL STRUCTURAL SYSTEMS L L C — Tri-S ProSTUD

2C. Framing Members* - Steel Studs — Not shown - In lieu of Item 2— For use with Item 1C - proprietary channel shaped steel studs, 1-1/4 in. wide by min 2-1/2 in. deep when Items 4, 4A or 4B are used or 3-5/8 in deep when Items 4C, 4D or 4E are used, fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 to 3/4 in. less in length than assembly height.

TELLING INDUSTRIES L L C — Viper20™

3. Batts and Blankets* — (Optional) Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4. Gypsum Board* — Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges. Base layer applied vertically or horizontally on both sides of the studs, with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Horizontal edge joints (when applied horizontally) and horizontal butt joints (when applied vertically) on opposite sides of studs need not be staggered or backed. Base layer panels attached to studs with 1 in. long Type S or Hi-Low screws spaced 8 in. OC when applied horizontally, or 8 in. OC along the vertical edges and 12 in. OC in the field when applied vertically. When Items 1C and 2C are used the base layer is required to be installed vertically. Remaining two layers applied vertically or horizontally on one side of the wall. Horizontal butt joints staggered a min of 6 in. on adjacent layers. First of these two layers attached to studs with 1-5/8 in. long Type S or Hi-Low screws spaced 12 in. OC. Face layer attached to studs with 2-3/8 in. Type S or Hi-Low screws spaced 8 in. OC when applied horizontally, or 8 in. OC along the vertical edges and 12 in. OC in the field when applied vertically. When used in widths other than 48 in., gypsum panels to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1, M-Glass and AG-C.

GEORGIA-PACIFIC GYPSUM L L C — Type 9, Type 5, Type 6, Type DAP, Type DS, Type DGG, Type DAPC, LS.

LAFARGE NORTH AMERICA INC — Type LGFC6A.

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

TEMPLE-INLAND — Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, GreenGlass Type X.

4A. Gypsum Board* — As an alternate to Item 4 - Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges. Base layer panels applied vertically attached to studs with 1 in. long Type S or Hi-Low screws 8 in. OC along the vertical edges and 12 in. OC in the field. Remaining two layers applied vertically on one side of the wall. First of these two layers attached to studs with 1-5/8 in. long Type S or Hi-Low screws spaced 12 in. OC. Face layer attached to studs with 2-3/8 in. Type S or Hi-Low screws spaced 8 in. OC along the vertical edges and 12 in. OC in the field. Not to be used with Item 6, resilient channels.

TEMPLE-INLAND — Type X ComfortGuard Sound Deadening Gypsum Board.

4B. Gypsum Board* — As an alternate to Item 4, for use as the base layer of boards on one or both sides of the steel studs. Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges secured as described in Item 4. When used in widths other than 48 in., gypsum panels to be installed horizontally.

CGC INC — 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC.

UNITED STATES GYPSUM CO — 5/8 in. thick Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, USGX, WRX, WRC.

USG MEXICO S A DE C V — 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC.

4C. Gypsum Board* — As an alternate to Item 4, for use as the base layer of boards on one or both sides of the steel studs. Nom. 5/8 in. thick gypsum board applied vertically to studs with #6 x 1-1/4 in. long bugle head screws spaced 8 in. OC at the perimeter and 12 in. OC in the field of the boards. Vertical joints are centered over studs and staggered from vertical joints on opposite sides of the wall.

NATIONAL GYPSUM CO — Types FSK, FSK-C, FSL, FSW, FSW-6, FSW-C

4D. Gypsum Board* — As an alternate to Item 4, for use as the base layer of boards on one or both sides of the steel studs. Nom. 5/8 in. thick gypsum board applied vertically or horizontally to studs. When applied vertically, boards attached with 1 in. long Type-S bugle head screws spaced 8 in. OC at the perimeter and 12 in. OC in the field with the 1st screw installed 4 in. from the board edges at the perimeter and 6 in. from the board edge in the field. Vertical joints are centered over studs and staggered from vertical joints on opposite sides of the wall. When applied horizontally, boards attached with 1 in. long Type-S bugle head screws spaced 8 in. OC at the perimeter and in the field with the 1st screw installed 4 in. from the board edge. Horizontal joints need not be staggered on opposite faces or backed by steel framing. When Items 1C and 2C are used the base layer is required to be installed vertically.

ACADIA DRYWALL SUPPLIES LTD — Type X

CERTAINTED GYPSUM INC — Type X, Type C

CERTAINTED GYPSUM CANADA INC — Type X, Type Abuse Resistant, Type C

THAI GYPSUM PRODUCTS PCL — Type X, Type C

4E. Gypsum Board* — As an alternate to Item 4, for use as the base layer of boards on one or both sides of the steel studs Nom. 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly.

CERTAINTED GYPSUM INC — Types 1, EGRG, GlasRoc, Type X, Type C, 5/8" Easi-Lite Type X.

CERTAINTED GYPSUM CANADA INC — Type C, Type X or Type Abuse-Resistant, 5/8" Easi-Lite Type X.

NATIONAL GYPSUM CO — Types FSK, FSK-C, FSK-G, FSL, FSW-C, FSW-G, FSW, FSW-3, FSW-5, FSW-6.

THAI GYPSUM PRODUCTS PCL — Type X, Type C

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

SERIOUS ENERGY INC — Type QuietRock ES, Type QuietRock QR-527.

4G. **Gypsum Board*** — (As an alternate to Item 4B, not for use with Items 1C and 2C) - Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 4B.

CGC INC — Type ULX

UNITED STATES GYPSUM CO — Type ULX

USG MEXICO S A DE C V — Type ULX

5. **Joint Tape and Compound** — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. When square-edge gypsum board is used, treatment of joints is optional.

6. **Furring Channels** — (Optional, not shown, for use on the single layer side only) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws.

6A. **Steel Framing Members*** — (Not Shown) -Optional on not shown, for single layer side — As an alternate to Item 76, 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 max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 6. Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members*** — Used to attach furring channels (Item 6Aa) to studs (Item 2, 2A or, 2B, or 2C). Clips spaced max. 48 in. OC. RSIC-1 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 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 INC — Types RSIC-1, RSIC-1 (2.75).

7. **Caulking and Sealants*** — (Optional, not shown) - A bead of acoustical sealant applied around the partition perimeter for sound control.

UNITED STATES GYPSUM CO — Type AS

*Bearing the UL Classification Mark

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