

BXUV.V344 - Fire-resistance Ratings - ANSI/UL 263

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.

Fire-resistance Ratings - ANSI/UL 263

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. **V344**

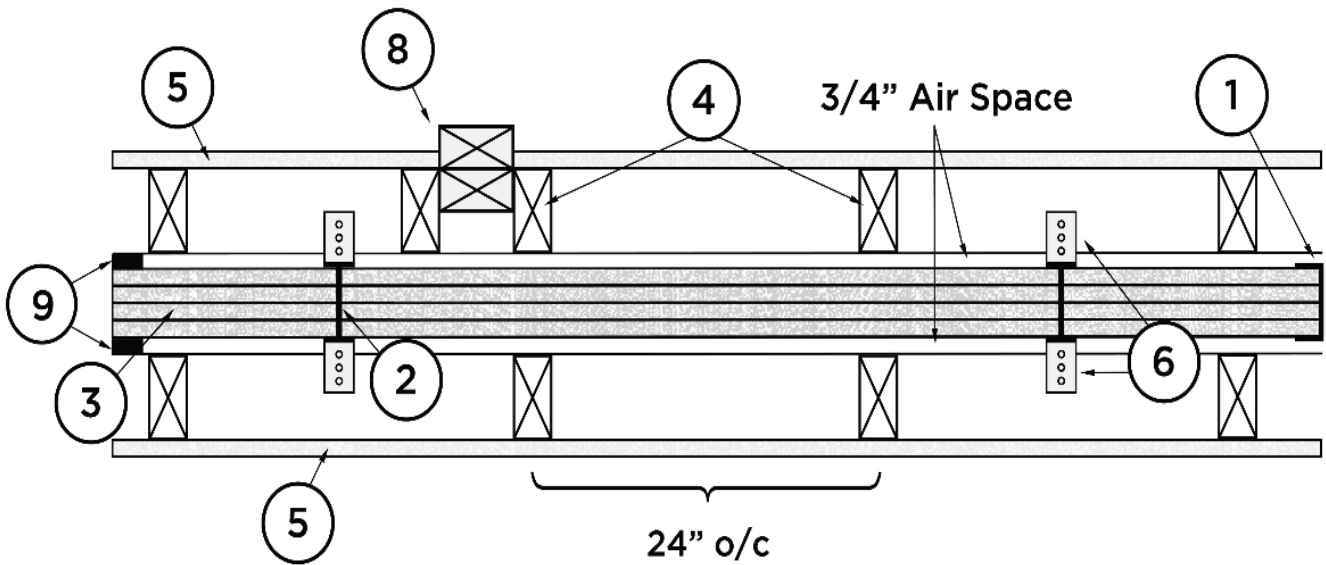
December 05, 2022

Nonbearing Wall Rating – 2-1/2 HR (Area Separation Firewall, See Items 1, 2 and 3)

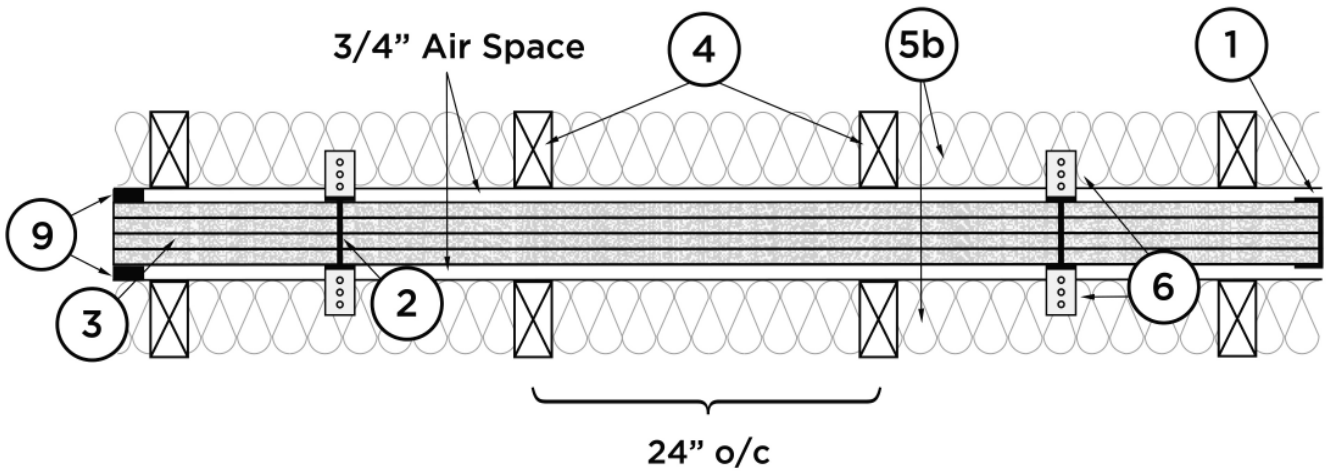
Bearing or Nonbearing Wall Rating 2-1/2 Hr (Protected Wall, See Items 4 and 5)

Finish Rating - (120 or 150 min, see Items 5, 5A and 5B)

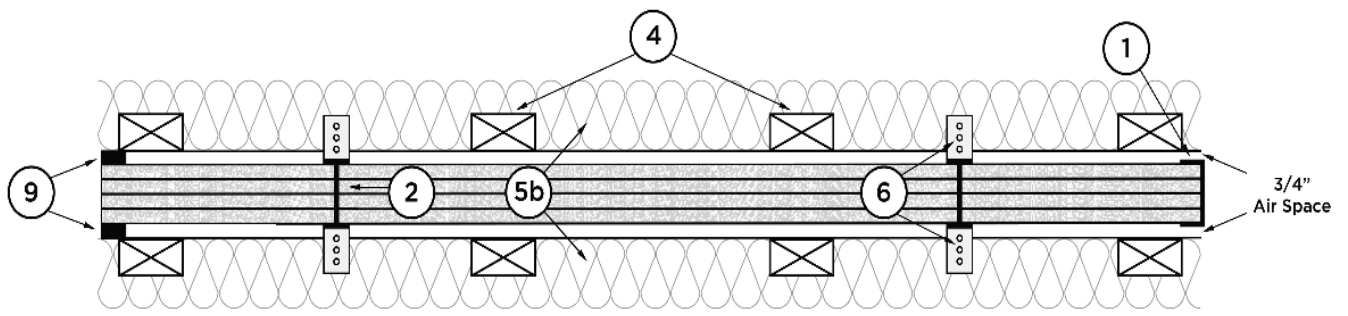
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



Exposed to Fire from Either Side



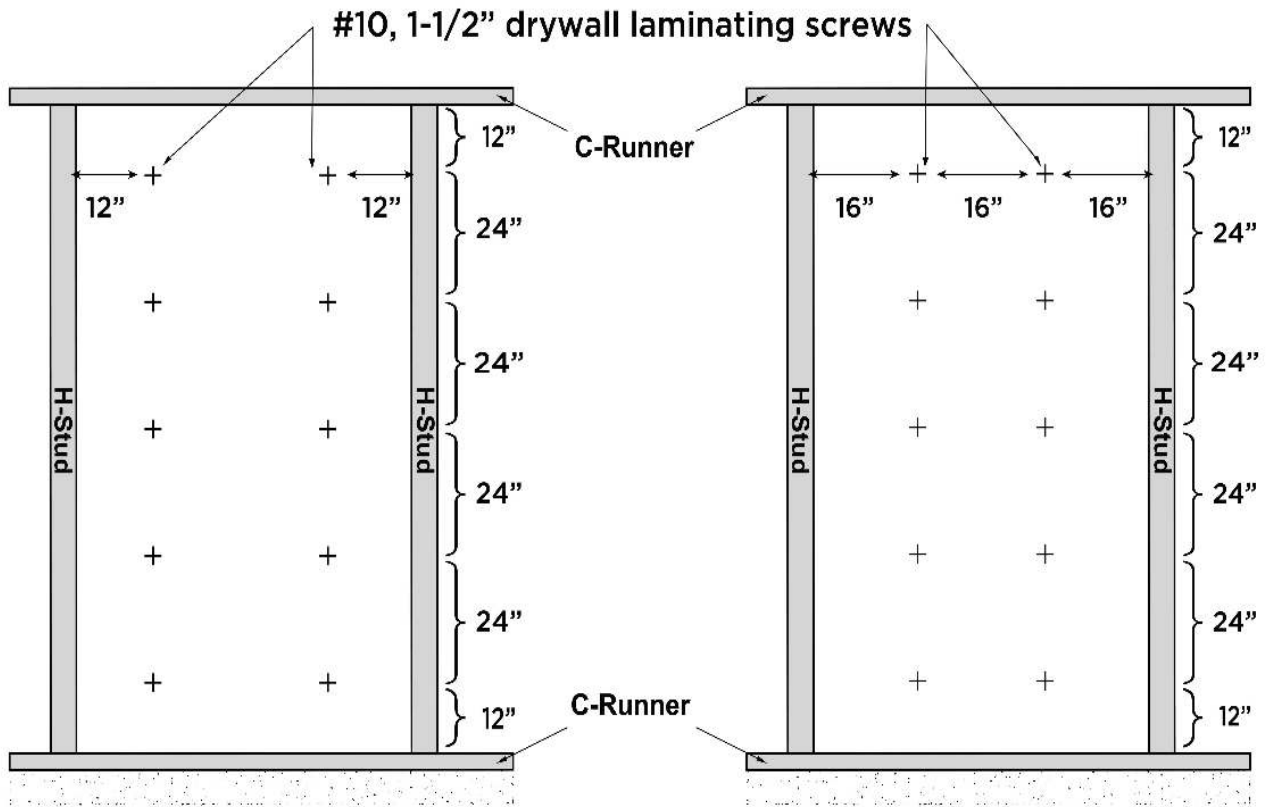
Exposed to Fire from Either Side

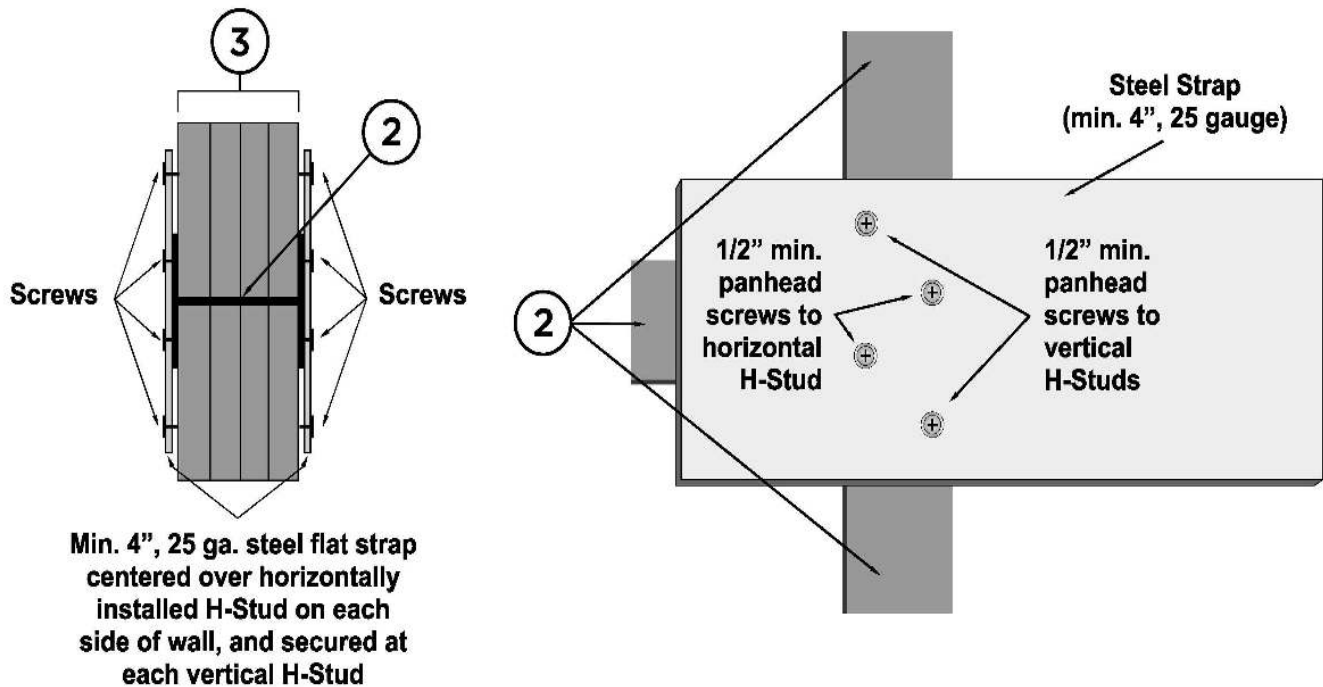


Exposed to Fire from Either Side

Side A

Side B





Alternate Installation

AREA SEPARATION FIREWALL — (Max Height – 66 ft.)

1. **Perimeter and Intermediate Channels** — 2 in. wide channel shaped with 1 in. long legs formed from No. 25 MSG galv steel, secured with suitable fasteners spaced 24 in. OC.
2. **Steel Studs** — Framing members formed from No. 25 MSG galv steel having "H" - shaped flanged spaced 48 in. . OC; overall depth 2 in. and flange width 1-3/8 in.
3. **Gypsum Board*** — Four pieces of 1/2 in. thick gypsum boards, supplied in nom 48 in. widths, full lengths. Vertical edges of panels friction fitted into "H" - shaped studs.

AMERICAN GYPSUM CO — Type EKCEL

PROTECTED WALL: (Bearing or Nonbearing Wall as indicated under Items 4 and 5. When Bearing, Load Restricted for Canadian Applications — See Guide [BXUV7](#).)

4. **Wood Studs** — Bearing or Nonbearing Wall. Nom 2 by 4 in. max spacing 24 in. OC. Studs oriented with 2 in. face parallel or perpendicular to gypsum board (Item No. 3). Studs cross-braced where necessary for clip attachment. Min 3/4 in. separation between wood framing and area separation firewall.

4A. **Steel Studs** — (As an alternate to Item 4, not shown) — For Bearing Wall - Corrosion protected steel studs, min No. 20 MSG (0.0329 in., min bare metal thickness) steel or 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 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. Top and bottom tracks 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 a floor, ceiling, and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. O.C. Studs cross-braced with stud. Min 3/4 in. separation between steel framing and area separation wall.

4B. Steel Studs — (As an alternate to Items 4 and 4A) - For Nonbearing Wall - Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min 3-1/2 in. wide, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. Top and bottom tracks shall be channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max. Studs cross-braced with stud framing at mid-height where necessary for clip attachment. Min 3/4 in. separation between steel framing and area separation wall.

4C. Framing Members* — Steel Studs — (As an alternate to Item 4, 4A, and 4B) - For Nonbearing Wall. Proprietary channel shaped studs, 3-5/8 in. wide spaced a max of 24 in. OC. Studs supplied with proprietary top and bottom tracks, min width to accommodate stud size, attached to floor and ceiling with fasteners 24 in. OC max. Studs to be cut 3/4 in less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. Studs cross-braced with stud framing at mid-height where necessary for clip attachment. Min 3/4 in. separation between steel framing and area separation wall.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™

CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

CRACO MFG INC — SmartStud25™

IMPERIAL MANUFACTURING GROUP - Viper25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™

STUDCO BUILDING SYSTEMS — CROCSTUD

5. Gypsum Board — Classified or Unclassified — Min 1/2 in thick, 4 ft wide, applied either horizontally or vertically. Gypsum board attached to wood studs with 1-1/4 in. long steel drywall nails spaced 8 in. OC or 1 in. long Type W coarse thread steel screws spaced 12 in. OC. Joints may or may not be covered with paper tape and joint compound. Nail or screw heads may or may not be covered with joint compound. When minimum board weight is less than 1.3 lbs/ft², Finish Rating is 120 min. When minimum board weight is 1.3 lbs/ft² or greater, Finish Rating is 150 min.

5A. Plywood Sheathing or OSB — (Not Shown) — As an alternate to Item 5, Min 1/2 in. thick plywood or OSB applied horizontally or vertically to wood or steel studs. Vertical joints located over studs. Horizontal joints shall be butted tight to form a closed joint. Fastened to studs with nails or screws of sufficient length, spaced 12 in. OC. Joints and fastener heads are not required to be treated. Finish Rating is 120 min. When used in addition to Item 5 Finish Rating is 150 minutes.

5B Batts and Blankets* — (Not Shown) - As an alternate to Item 5. Glass fiber or mineral wool insulation, min. 3-1/2 in. thick, placed to completely fill the wood or steel stud cavities. See Batts and Blankets (BKNV) category in the Building Materials Directory and Batts and Blankets (BZJZ) category in the Fire Resistance Directory for name of Classified Companies. Finish Rating is 120 min. When used in addition to Item 5 Finish Rating is 150 minutes.

5C. Loose Fill Material* — (Not Shown) - (Optional) — To be used in addition to Items 5, 5A or 5B. Any loose fill material bearing the UL Classification Marking for Surface Burning Characteristics, placed to completely or partially fill the enclosed stud cavity and air space in accordance with the application instructions supplied with the product.

5D. Fiber, Sprayed* — (Not Shown) - (Optional) —To be used in addition to Items 5, 5A or 5B. The spray applied cellulose fiber is applied with water to completely or partially fill the enclosed stud cavity and air space in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product.

Applegate Greenfiber Acquisition LLC — **SANCTUARY, FRM, INS735, NS745, INS750LD, and Insulmax for use with wet or dry application. INS515LD, INS541LD, INS510LD, INS765LD and INS773LD are to be used for dry application only.**

6. Attachment Clips — Aluminum angle, min. 0.063 in. thick, min 2 in. wide with min 2 in. and 2-1/4 in. legs or min. 0.050 in. thick, min. 2 in. wide with min 2 in. and 2-1/2 in. legs. Clips secured with min. No. 8, 3/4 in. long panhead sharp screws to "H" studs and wood framing through holes provided in clip.

23 ft. Height Limitation	Clip placement (Item 6) for separation firewalls up to 23 ft. high Start at roof line and space clips a max of 10 ft. OC vertically between wood or steel framing and "H" studs.
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44 ft. Height Limitation	Clip placement (Item 6) for separation firewalls up to 44 ft high. For the upper 24 ft. of the wall system, space the clips 10 ft. OC, and then 5 ft. OC for the remainder of the wall below.
66 ft. Height Limitation	Clip placement (Item 6) for separation firewalls up to 66 ft high: For the upper 24 ft. of the wall system, space the clips 10 ft. OC. On the next 20 ft. below space the clips 5 ft. OC, and then 40 in. OC for the remainder of the wall.

7. **Laminating Screws** — Gypsum boards (Item 3) are secured to each other with 1-1/2 in. long Type G laminating screws from both sides of wall in between the H studs. On both sides of the wall rows spaced 24 in. OC with a maximum dimension of 12 in. from the top and bottom C-channels of the assembly. On one side of the wall each row contains 2 screws located 12 in. from each face of the H-studs. On the other side of the wall each row contains 2 screws located 16 in. from each face of the H-studs. Refer to Illustration.

8. **Non-Bearing Wall Partition Intersection** — (Optional) — For wood framing — 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 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 wall.

9. **Caulking and Sealants*** — (Optional - Intended for use as an air barrier - Not evaluated as fire blocking) - A bead of sealant applied around the partition perimeter in the 3/4 in. air space between wood framing (Item 4) and gypsum board panels (Item 3) to create an air barrier.

DUPONT DE NEMOURS, INC. — Great Stuff Gaps & Cracks, Great Stuff Pro Gaps & Cracks, Great Stuff Pro Window & Door

ICP ADHESIVES & SEALANTS INC — Handi-Foam Fireblock, Handi-Foam Fireblock West, and Fast Foam Fireblock

10. **Additional Sheathing** — (Optional, not shown) — any thickness of plywood, OSB, or UL Classified Cementitious Backer Units* (CAGP, CAGP7) may be applied horizontally or vertically, directly to "H" Studs and perimeter/intermediate channels, with vertical joints located over studs. Fastened to "H" Studs and perimeter/intermediate channels with screws of sufficient length, spaced a maximum of 12 in. OC.

Alternate Installation

When "H" studs, Item 2 are installed horizontally to cap the Area Separation Firewall in lieu of Item 1, construct as follows. (A) As shown in the Alternate Installation detail, secure a min. 4 inch wide steel flat strap, fabricated from minimum 25 gauge galvanized steel, on each side of the horizontally installed "H" stud. (B) Ensure flat strap is centered over the horizontal "H" stud, and attached with four 1/2 in. min long panhead screws on each side of the Area Separation Firewall. (C) Two screws are used to secure flat strap to vertical "H" stud, above and below the horizontal "H" stud as shown in detail (D) Two screws are also inserted to secure flat strap to the horizontal "H" stud, in alternating pattern.

*** 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 2022-12-05

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