Listing

A Duly Authenticated Report from an Approved Agency

Report No: 2510-122

Issue Date: November 26, 2025

Revision Date: July 16, 2026

Subject to Renewal: July 1, 2027

Use of Chemical Technologies Holding Corporation's TechWood 4400 Lumber Products in Fire-Resistance-Rated Wall Assemblies

Trade Secret Report Holder:

Chemical Technologies Holding Corporation

Phone: 772-242-8939 Website: www.techwoodtreatments.com Email: info@chemtechholding.com

CSI Designations:

DIVISION: 06 00 00 - WOOD, PLASTICS AND COMPOSITES

Section: 06 05 73 - Fire Retardant Wood Treatment of Wood Products Section: 06 11 00 - Wood Framing Section: 06 17 00 - Shop-Fabricated Structural Wood

1 Innovative Product Evaluated[1]

1.1 TechWood 4400 (TW4400), Custom-Blended Wood Treatment

2 Product Description and Materials

2.1 The innovative product evaluated in this report is shown in **Figure 1** and **Figure 2**.



Figure 1. TechWood 4400 Product

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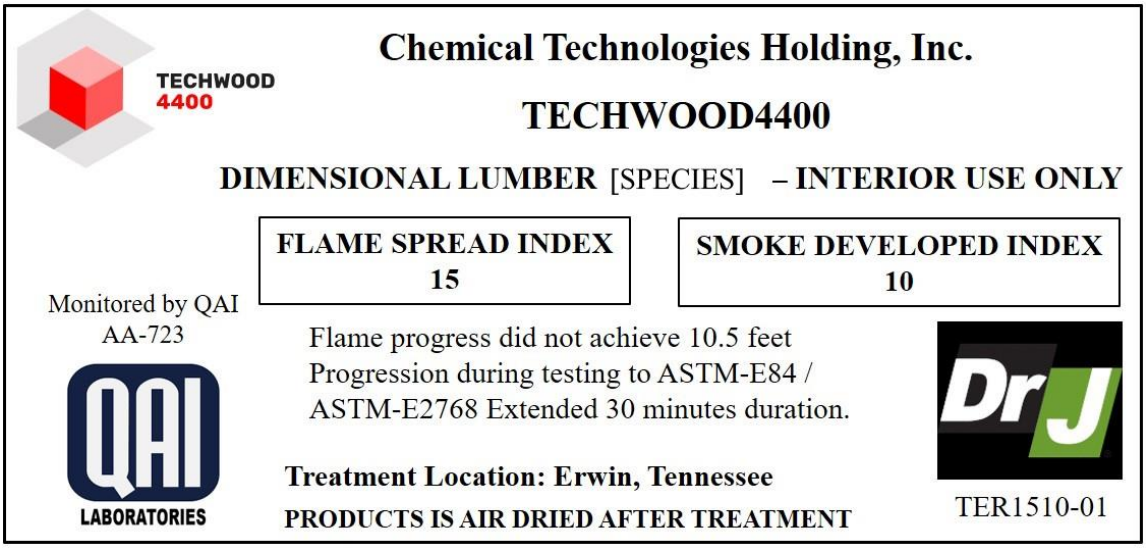


Figure 2. Example of Acceptable TechWood 4400 Product Stamp

2.2 TechWood 4400 is a custom-blended factory-treated wood protection that uses a proprietary formulation of Disodium Octaborate Tetrahydrate (DOT), biocides for mold abatement, and fire-retardant additives, to permanently impregnate various wood substrates.

2.2.1 For additional information, please consult DrJ Report Number 1510-01.

2.3 As needed, review material properties for design in **Section 6**.

3 Definitions[2]

3.1 New Materials[3] are defined as building materials, equipment, appliances, systems, or methods of construction, not provided for by prescriptive and/or legislatively adopted regulations, known as alternative materials.[4] The design strength and permissible stresses shall be established by tests[5] and/or engineering analysis.[6]

3.2 Duly authenticated reports[7] and research reports[8] are test reports and related engineering evaluations that are written by an approved agency[9] and/or an approved source.[10]

3.2.1 These reports utilize intellectual property and/or trade secrets to create public domain material properties for commercial end-use.

3.2.1.1 This report protects confidential Intellectual Property and trade secrets under the regulation, 18.US.Code.90, also known as Defend Trade Secrets Act of 2016 (DTSA).[11]

3.3 An approved agency is *"approved"* when it is ANAB ISO/IEC 17065 accredited. DrJ Engineering, LLC (DrJ) is accredited and listed in the ANAB directory.

3.4 An approved source is *"approved"* when a professional engineer (i.e., Registered Design Professional, hereinafter RDP) is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the state legislature via its professional engineering regulations.[12]

3.5 Testing and/or inspections conducted for this duly authenticated report were performed by an ISO/IEC 17025 accredited testing laboratory, an ISO/IEC 17020 accredited inspection body, and/or a licensed RDP.

3.5.1 The Center for Building Innovation (CBI) is ANAB[13] ISO/IEC 17025 and ISO/IEC 17020 accredited.

3.6 The regulatory authority shall enforce[14] the specific provisions of each legislatively adopted regulation. If there is a non-conformance, the specific regulatory section and language of the non-conformance shall be provided in writing[15] stating the nonconformance and the path to its cure.

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3.7 The regulatory authority shall accept duly authenticated reports from an approved agency and/or an approved source with respect to the quality and manner of use of new materials or assemblies as provided for in regulations regarding the use of alternative materials, designs, or methods of construction.[16]

3.8 ANAB is an International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA) signatory. Therefore, recognition of certificates and validation statements issued by conformity assessment bodies accredited by all other signatories of the IAF MLA with the appropriate scope shall be approved.[17] Thus, all ANAB ISO/IEC 17065 duly authenticated reports are approval equivalent,[18] and can be used in any country that is an MLA signatory found at this link: https://iaf.nu/en/recognised-abs/.

3.9 Approval equity is a fundamental commercial and legal principle.[19]

4 Applicable Standards for the Listing[20]

4.1 *Local, State, and Federal*

4.1.1 Approved in all local jurisdictions pursuant to ISO/IEC 17065 duly authenticated report use, which includes, but is not limited to, the following featured local jurisdictions: Austin, Baltimore, Broward County, Chicago, Clark County, Dade County, Dallas, Detroit, Denver, DuPage County, Fort Worth, Houston, Kansas City, King County, Knoxville, Las Vegas, Los Angeles City, Los Angeles County, Miami, Nashville, New York City, Omaha, Philadelphia, Phoenix, Portland, San Antonio, San Diego, San Jose, San Francisco, Seattle, Sioux Falls, South Holland, St. Louis County, Texas Department of Insurance, and Wichita.[21]

4.1.2 Approved in all state jurisdictions pursuant to ISO/IEC 17065 duly authenticated report use, which includes, but is not limited to, the following featured states: California, Florida, New Jersey, Oregon, New York, Texas, Washington, and Wisconsin.[22]

4.1.3 Approved by the Code of Federal Regulations Manufactured Home Construction: Pursuant to Title 24, Subtitle B, Chapter XX, Part 3282.14[23] and Part 3280[24] pursuant to the use of ISO/IEC 17065 duly authenticated reports.

4.1.4 Approved means complying with the requirements of local, state, or federal legislation.

4.2 *Standards*

4.2.1 *ASTM E119: Standard Test Methods for Fire Tests of Building Construction and Materials*

4.2.2 *ASTM E2032: Standard Guide for Extension of Data from Fire Resistance Test Conducted in Accordance with ASTM E119*

5 Listed[25]

5.1 Equipment, materials, products, or services included in a List published by a nationally recognized testing laboratory (i.e., CBI), an approved agency (i.e., CBI and DrJ), and/or an approved source (i.e., DrJ), or other organization(s) concerned with product evaluation (i.e., DrJ), that maintains periodic inspection (i.e., CBI) of production of listed equipment or materials, and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner.

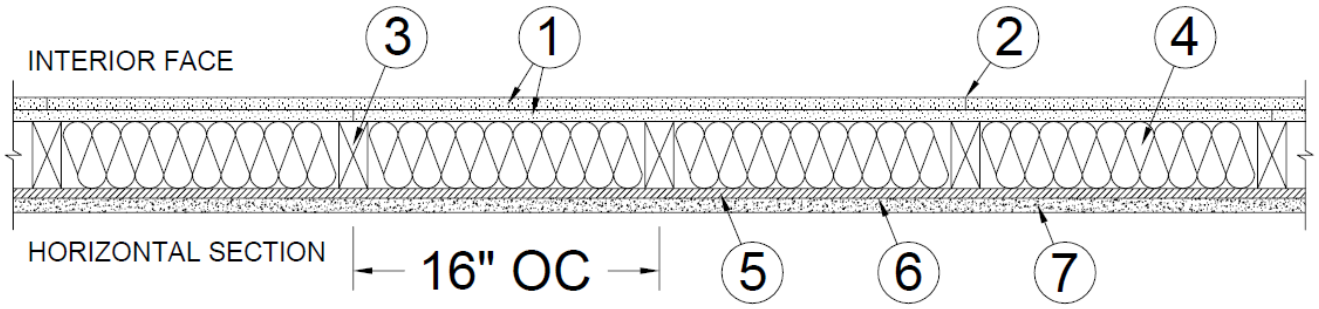
6 Tabulated Properties Generated from Nationally Recognized Standards

6.1 *General*

6.1.1 The following assemblies are modified UL and GA designs allowing for the use of the listed custom blend treated wood product. The extension of the listings is based on ASTM E119 fire testing of the products, ASTM E2032, and generally accepted engineering.

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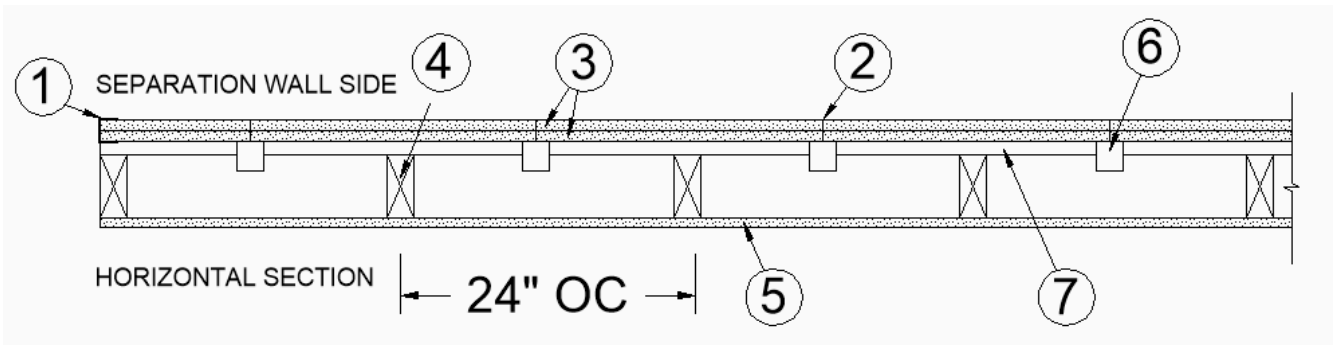
Table 1. Two-Hour Rating, Interior Exposure– Modified UL Design No. V314



1. Gypsum Board (Interior):
   a. Type: Two layers of type X Gypsum Wall Board (GWB), 5/8" (15.9 mm) thick
   b. Oriented: Base and face layers applied vertically (centered on studs). Joints between layers shall be staggered 16" (406 mm)
   c. Fastener: Base GWB to studs using 1 7/8" (48 mm) long 6d nails. Fasten GWB Base GWB to studs using 2 3/8" (60 mm) long 8d nails
   d. Fastener Spacing: 8" (203 mm) o.c. at perimeter edges and field
2. GWB Joints/Nailheads: Centered over studs and joint compound shall be applied in two coats to all GWB joints and screw heads as a level 2 finish on the face layer
3. TW4400 treated wood studs – nominal 2 x 4 (minimum), maximum spacing 16" o.c. (406 mm), double top and single bottom plates with bracing 2' (610 mm) from the top of the assembly and 2' (610 mm) from the bottom for an unbraced length of 6' (1.83 m)
4. Cavity Insulation:
   a. Type: Glass fiber or mineral wool (nominal 3.0 pcf [48 kg/m^3]). Glass fiber shall be stapled to studs and mineral wool shall be friction fit
   b. R-value: R-13 [2.29 RSI] (minimum)
   c. Minimum Thickness: 3 1/2" (89 mm)
5. Exterior Sheathing – Nominal 1/2" (12.7 mm) TW4400 treated plywood
   a. Fastener: Plywood to framing using 1 7/8" (48 mm) long 6d nails
   b. Fastener Spacing: 6" (152 mm) o.c. at perimeter and 12" (305 mm) o.c. in the field
   c. Joints: All vertical joints shall be located over the framing studs and all horizontal joints shall be backed by full-depth blocking
6. Any Weather Resistive Barrier (WRB)
7. Exterior Facings (One of the following):
   a. Brick veneer (minimum 2.3" [58 mm]) meeting requirements of local code. Shall be attached to studs with corrugated metal wall ties attached to each stud with 8d cement-coated nails for every sixth course of bricks
   b. Cementitious Stucco (minimum 3/4" [19 mm] thick) – Portland cement with self-furring metal lath. Mix ratios shall be 1:4 cement to sand by volume for scratch coat and 1:5 for brown coat
   c. Any exterior finish listed in IBC Table 722.6.2(3)

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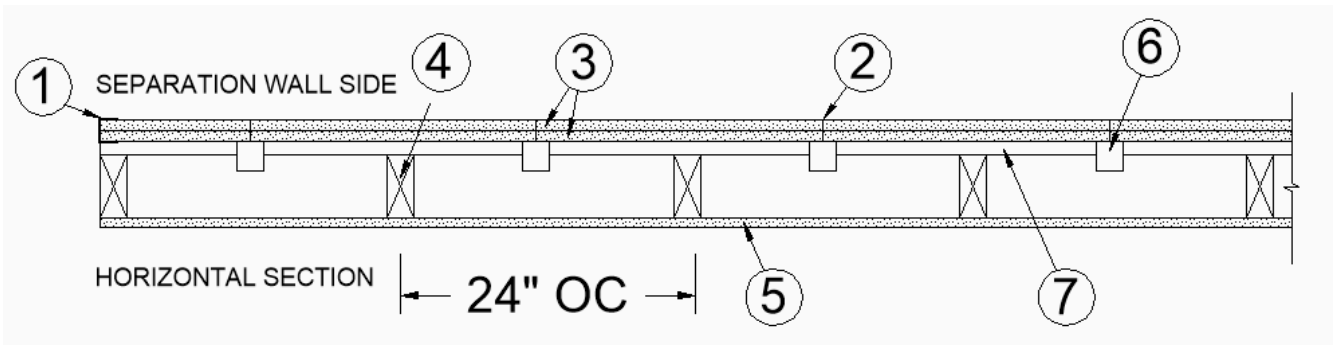
Table 2. Two-Hour Rating, Separation Wall Side Exposure– Modified UL Design No. U336



1. Steel Track- Floor, Intermediate or Top Wall:
    a. 2" wide channel shaped with 1" long legs formed from No. 25 MSG galvanized steel
    b. Secured with suitable fasteners spaced 24" o.c.
2. "H" Shaped Metal Studs: No. 25 MSG galv. steel spaced 24" o.c. (max.) with an overall depth of 2" and a flange width of 1 3/8"
3. Gypsum Board (Separation Side):
    a. Type: Two layers of type X Gypsum Wall Board (GWB), 1" (25.4 mm) thick
    b. Fastening: vertical edges of panels friction fitted into "H" shaped studs
4. TW4400 treated wood studs: Nominal 2 x 4 with 24" o.c. (max.) spacing cross braced at mid-height where necessary for clip attachment
5. Gypsum Board (Non-Separation Side):
    a. Type: ½" thick (min.) 4ft. wide applied either horizontally or vertically with vertical joints located over studs
    b. Fastening: Attached to studs (Item 4) with 1¼" long steel drywall nail spaced 8" o.c.
6. Attachment Clips:
    a. Type: Aluminum angle, 0.063" thick, 2" wide with 2" and 2¼" legs.
    b. Fastening: Clips secured with 3/8" long Type S screws to "H" studs (Item 2) and with 1¼" long Type W screws to wood framing through provide holes in clip
7. Air Gap: ¾" air space (min.)

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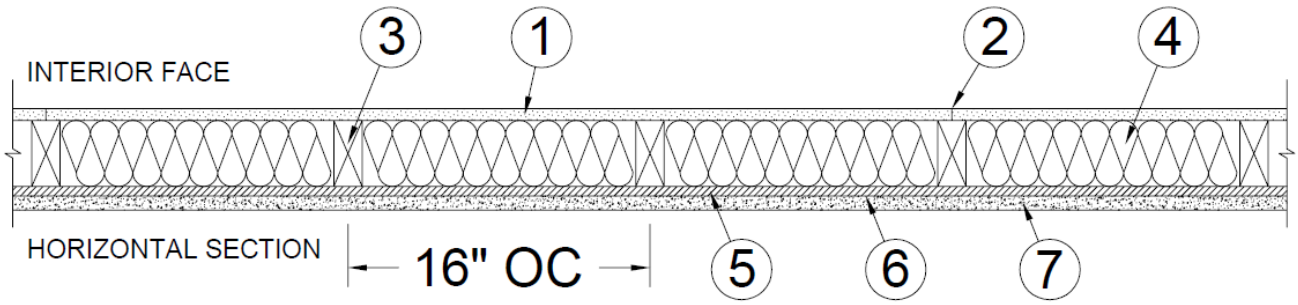
Table 3. Two-Hour Rating, Separation Wall Side Exposure– Modified UL Design No. U347



1. Steel Track- Floor, Intermediate or Top Wall:
    a. 2" wide channel shaped with 1" long legs formed from No. 25 MSG galvanized steel
    b. Secured with suitable fasteners spaced 24" o.c.
2. "H" Shaped Metal Studs: No. 25 MSG galv. steel spaced 24" o.c. (max.) with an overall depth of 2" and a flange width of 1 3/8"
3. Gypsum Board (Separation Side):
    a. Type: Two layers of type X Gypsum Wall Board (GWB), 1" (25.4 mm) thick
    b. Fastening: vertical edges of panels friction fitted into "H" shaped studs
4. TW4400 treated wood studs: Nominal 2 x 4 with 24" o.c. (max.) spacing cross braced at mid-height where necessary for clip attachment
5. Gypsum Board (Non-Separation Side):
    a. Type: ½" thick (min.) 4ft. wide applied either horizontally or vertically with vertical joints located over studs. Horizontal joints shall be butted tight to form a closed joint
    b. Fastening: Attached to studs (Item 4) with 1¼" long steel drywall nail spaced 12" o.c.
6. Attachment Clips:
    a. Type: Aluminum angle, 0.049" thick, 2" wide with 2" and 2½" legs.
    b. Fastening: Clips secured with 3/8" long Type S screws to "H" studs (Item 2) and with 1¼" long Type W screws to wood framing through provide holes in clip
7. Air Gap: ¾" air space (min.)

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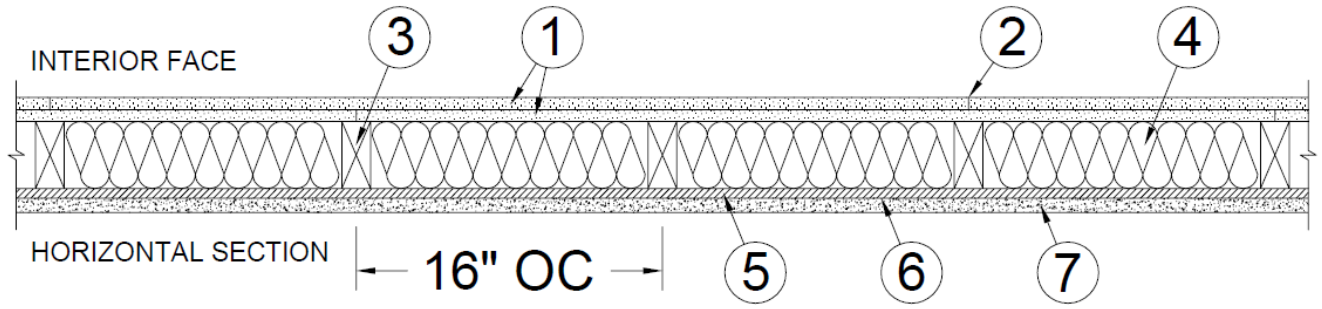
Table 4. One-Hour Rating, Interior Exposure– Modified UL Design No. V314



1. Gypsum Board (Interior):
    a. Type: One layer of type X Gypsum Wall Board (GWB), 5/8" (15.9 mm) thick
    b. Oriented: Applied vertically (centered on studs)
    c. Fastener: GWB to studs using 1 7/8" (48 mm) long 6d nails
    d. Fastener Spacing: 8" (203 mm) o.c. at perimeter edges and field
2. GWB Joints/Nailheads: Centered over studs and joint compound shall be applied in two coats to all GWB joints and screw heads
3. TW4400 treated wood studs – nominal 2 x 4 (minimum), maximum spacing 16" (406 mm) o.c., double top and single bottom plates with bracing 2' (610 mm) from the top of the assembly and 2' (610 mm) from the bottom for an unbraced length of 6' (1.83 m)
4. Cavity Insulation:
    a. Type: Glass fiber or mineral wool (nominal 3.0 pcf [48 kg/m^3]). Glass fiber shall be stapled to studs and mineral wool shall be friction fit
    b. R-value: R-13 [2.29 RSI] (minimum)
    c. Minimum Thickness: 3 1/2" (89 mm)
5. Exterior Sheathing – Nominal 1/2" (12.7 mm) TW4400 treated plywood
    a. Fastener: Plywood to framing using 1 7/8" (48 mm) long 6d nails
    b. Fastener Spacing: 6" (152 mm) o.c. at perimeter and 12" (305 mm) o.c. in the field
    c. Joints: All vertical joints shall be located over the framing studs and all horizontal joints shall be backed by full-depth blocking
6. Any Weather Resistive Barrier
7. Exterior Facings (One of the following):
    a. Brick veneer (minimum 2.3" [58 mm]) meeting requirements of local code. Shall be attached to studs with corrugated metal wall ties attached to each stud with 8d cement-coated nails for every sixth course of bricks
    b. Cementitious Stucco (minimum 3/4" [19 mm] thick) – Portland cement with self-furring metal lath. Mix ratios shall be 1:4 cement to sand by volume for scratch coat and 1:5 for brown coat
    c. Any exterior finish listed in IBC Table 722.6.2(3)

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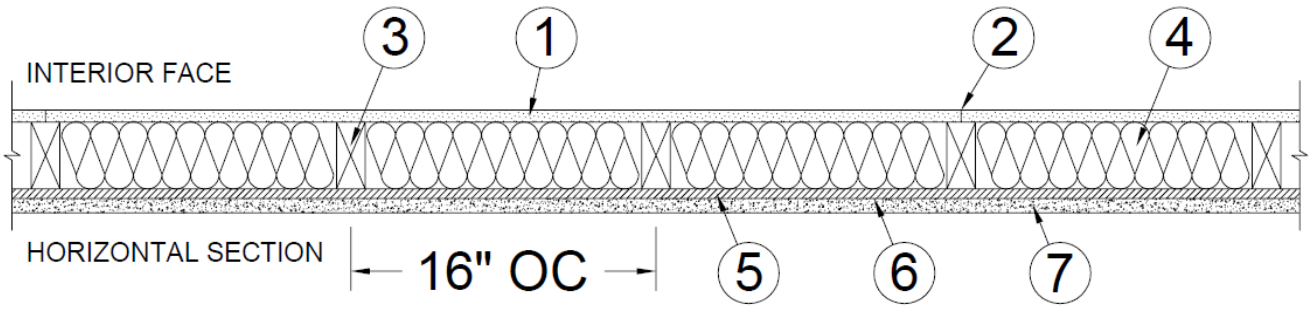
Table 5. One-Hour Rating, Exterior Exposure with Two-Hour Rating, Interior Exposure – Modified UL Design No. V314



1. Gypsum Board (Interior):
   a. Type: Two layers of type X Gypsum Wall Board (GWB), 5/8" (15.9 mm) thick
   b. Oriented: Base and face layers applied vertically (centered on studs). Joints between layers shall be staggered 16" (406 mm)
   c. Fastener: Base GWB to studs using 1 7/8" (48 mm) long 6d nails. Face GWB Base GWB to studs using 2 3/8" (60 mm) long 8d nails
   d. Fastener Spacing: 8" (203 mm) o.c. at perimeter edges and field
2. GWB Joints/Nailheads: Centered over studs and joint compound shall be applied in two coats to all GWB joints and screw heads as a level 2 finish on the face layer
3. TW4400 treated wood studs – nominal 2 x 4 (minimum), maximum spacing 16" (406 mm) o.c., double top and single bottom plates with bracing 2' (610 mm) from the top of the assembly and 2' (610 mm) from the bottom for an unbraced length of 6' (1.83 m)
4. Cavity Insulation:
   a. Type: Glass fiber or mineral wool (nominal 3.0 pcf [48 kg/m^3]). Glass fiber shall be stapled to studs and mineral wool shall be friction fit
   b. R-value: R-13 [2.29 RSI] (minimum)
   c. Minimum Thickness: 3 1/2" (89 mm)
5. Exterior Sheathing – Nominal 1/2" (12.7 mm) TW4400 treated plywood
   a. Fastener: Plywood to framing using 1 7/8" (48 mm) long 6d nails
   b. Fastener Spacing: 6" (152 mm) o.c. at perimeter and 12" (305 mm) o.c. in the field
   c. Joints: All vertical joints shall be located over the framing studs and all horizontal joints shall be backed by full-depth blocking
6. Any Weather Resistive Barrier
7. Exterior Facings (One of the following):
   a. Brick veneer (minimum 2.3" [58 mm]) meeting requirements of local code. Shall be attached to studs with corrugated metal wall ties attached to each stud with 8d cement-coated nails for every sixth course of bricks
   b. Cementitious Stucco (minimum 3/4" [19 mm] thick) – Portland cement with self-furring metal lath. Mix ratios shall be 1:4 cement to sand by volume for scratch coat and 1:5 for brown coat

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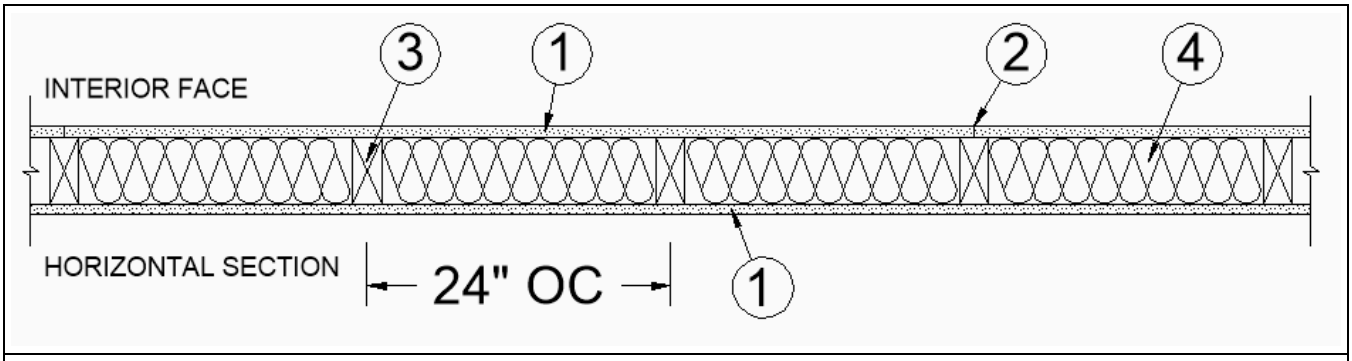
Table 6. One-Hour Fire Rating (Exterior and Interior Exposures) – Modified UL Design No. V314



1. Gypsum Board (Interior):
    a. Type: One layer of type X Gypsum Wall Board (GWB), 5/8" (15.9 mm) thick
    b. Oriented: Applied vertically (centered on studs)
    c. Fastener: GWB to studs using 1 7/8" (48 mm) long 6d nails
    d. Fastener Spacing: 8" (203 mm) o.c. at perimeter edges and field
2. GWB Joints/Nailheads: Centered over studs and joint compound shall be applied in two coats to all GWB joints and screw heads
3. TW4400 treated wood studs – nominal 2 x 4 (minimum), minimum spacing 16" (406 mm) o.c., maximum spacing 24" (610 mm) o.c.
4. Cavity Insulation:
    a. Type: Glass fiber or mineral wool (nominal 3.0 pcf [48 kg/m^3]). Glass fiber shall be stapled to studs and mineral wool shall be friction fit
    b. R-value: R-13 [2.29 RSI] (minimum)
    c. Minimum Thickness: 3 1/2" (89 mm)
5. Exterior Sheathing – Nominal 1/2" (12.7 mm) TW4400 treated plywood
    a. Fastener: Plywood to framing using 1 7/8" (48 mm) long 6d nails.
    b. Fastener Spacing: 6" (152 mm) o.c. at perimeter and 12" (305 mm) o.c. in the field
    c. Joints: All vertical joints shall be located over the framing studs and all horizontal joints shall be backed by full-depth blocking
6. Any Weather Resistive Barrier
7. Exterior Facings (One of the following):
    a. Brick veneer (minimum 2.3" [58 mm]) meeting requirements of local code. Shall be attached to studs with corrugated metal wall ties attached to each stud with 8d cement-coated nails for every sixth course of bricks
    b. Cementitious Stucco (minimum 3/4" [19 mm] thick) – Portland cement with self-furring metal lath. Mix ratios shall be 1:4 cement to sand by volume for scratch coat and 1:5 for brown coat

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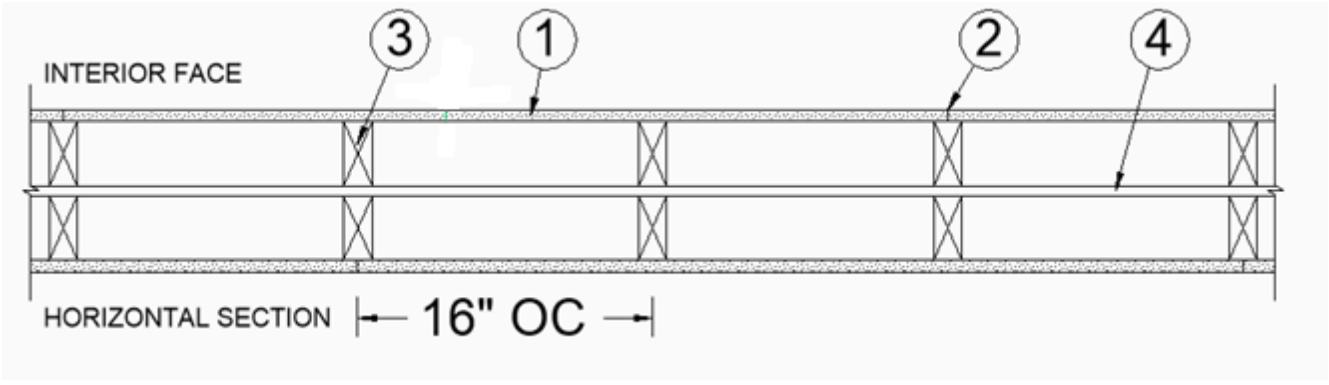
Table 7. One-Hour Rating Bearing Wall (Exterior and Interior Exposures)– Modified UL Design No. U314



1. Gypsum Board (Interior and Exterior):
    a. Type: One layer of type X Gypsum Wall Board (GWB), $^{5}/_{8}$" (15.9 mm) thick
    b. Oriented: Applied horizontally (centered on studs)
    c. Fastener: GWB to studs using $1^{7}/_{8}$" (48 mm) long 6d nails
    d. Fastener Spacing: 7" (178 mm) o.c. at perimeter edges and field
2. GWB Joints/Nailheads: Centered over studs and joint compound shall be applied in two coats to all GWB joints and screw heads.
3. TW4400 treated wood studs – nominal 2 x 4 (minimum), spaced 24" (610 mm) o.c. maximum, effectively firestopped
4. Cavity Insulation (Optional):
    a. Type: Mineral wool (Minimum 1.69 pcf [27 kg/m^3])
5. Non-Bearing Wall Partition Intersection (Optional, Not Shown)
    a. Two nominal 2 x 4 studs or nominal 2 x 6 studs nailed together and fastened to one side of the minimum 2 x 4 wall stud. The intersection between partition wood studs shall be flush with the 2 x 4 wall studs. The wall partition wood studs shall be framed with a second 2 x 4 wood stud. Maximum of 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 bearing wall.
    b. Fastener: 3" (76 mm) long 10d nails spaced max 16" (406 mm) o.c. vertically

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Table 8. One-Hour Rating Interior Wall (Exterior and Interior Exposures)– Modified GA Design No. 3370



1. Gypsum Board (Interior and Exterior):
    a. Type: One layer of type X Gypsum Wall Board (GWB), 5/8" (15.9 mm) thick
    b. Oriented: Applied vertically (centered on studs)
    c. Fastener: GWB to studs using 1 1/4" (32 mm) long type W screws
    d. Fastener Spacing: 12" (305 mm) o.c. at perimeter edges and field
2. GWB Joints/Nailheads: Centered over studs with staggered joints. Joint compound shall be applied in two coats to all GWB joints and screw heads
3. TW4400 treated wood studs – nominal 2 x 4 (minimum), maximum spacing 16" (406 mm) o.c., double top and single bottom plates with bracing 2' (610 mm) from the top of the assembly and 2' (610 mm) from the bottom for an unbraced length of 6' (1.83 m)
4. Air Space:
    a. 1 layer of 1" (25.4 mm) air space
5. Cavity Insulation (Optional, Not Shown):
    a. Type: Mineral Wool or Fiber Glass Insulation

6.2 Alternative techniques shall be permitted in accordance with accepted engineering practice and experience. These provisions for the use of alternative materials, designs, and methods of construction are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed herein. This includes, but is not limited to, the following areas of engineering: mechanics of materials, structures, building science, and fire science.

7 Certified Performance[26]

7.1 All construction methods shall conform to accepted engineering practices to ensure durable, livable, and safe construction and shall demonstrate acceptable workmanship reflecting journeyman quality of work of the various trades.[27]

7.2 The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load tests to simulate the actual loads and conditions of application that occur.[28]

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8 Installation

8.1 Installation shall comply with the approved construction documents, the manufacturer installation instructions, this report, and the applicable building code.

8.2 In the event of a conflict between the manufacturer installation instructions and this report, contact the manufacturer for counsel on the proper installation method.

8.3 *Installation Procedure*

8.3.1 *Fire Rated Wall Assembly:*

8.3.1.1 The rated wall assemblies shall be constructed as described in **Section 6.1**.

8.3.1.2 Specifications as defined in the UL Directory (e.g., UL assembly V314).

8.3.1.3 TechWood 4400 shall be installed per DrJ Report Number 1510-01.

9 Substantiating Data

9.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:

9.1.1 Fire rating performance testing in accordance with ASTM E119

9.1.2 Engineering evaluation of equivalent design for fire rated wall assemblies in accordance with ASTM E2032

9.2 Information contained herein may include the results of testing and/or data analysis by sources that are approved agencies, approved sources, and/or an RDP. Accuracy of external test data and resulting analysis is relied upon.

9.3 Where applicable, testing and/or engineering analysis are based upon provisions that have been codified into law through state or local adoption of regulations and standards. The developers of these regulations and standards are responsible for the reliability of published content. DrJ's engineering practice may use a regulation-adopted provision as the control. A regulation-endorsed control versus a simulation of the conditions of application to occur establishes a new material as being equivalent to the regulatory provision in terms of quality, strength, effectiveness, fire resistance, durability, and safety.

9.4 The accuracy of the provisions provided herein may be reliant upon the published properties of raw materials, which are defined by the grade mark, grade stamp, mill certificate, or duly authenticated reports from approved agencies and/or approved sources provided by the supplier. These are presumed to be minimum properties and relied upon to be accurate. The reliability of DrJ's engineering practice, as contained in this duly authenticated report, may be dependent upon published design properties by others.

9.5 *Testing and Engineering Analysis*

9.5.1 The strength, rigidity, and/or general performance of component parts and/or the integrated structure are determined by suitable tests that simulate the actual conditions of application that occur and/or by accepted engineering practice and experience.[29]

9.6 Where additional conditions of use and/or regulatory compliance information is required, please search for TechWood 4400 on the DrJ Certification website.

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10 Findings

10.1 As outlined in **Section 6**, TechWood 4400 has performance characteristics that were tested and/or meet applicable regulations. In addition, they are suitable for use pursuant to its specified purpose.

10.2 When used and installed in accordance with this duly authenticated report and the manufacturer installation instructions, TechWood 4400 shall be approved for the following applications:

10.2.1 As a component element of fire rated wall assemblies as described in **Section 6**.

10.3 Unless exempt by state statute, when TechWood 4400 is to be used as a structural and/or building envelope component in the design of a specific building, the design shall be performed by an RDP.

10.4 Any application specific issues not addressed herein can be engineered by an RDP. Assistance with engineering is available from Chemical Technologies Holding Corporation.

10.5 IBC Section 104.2.3[30] (IRC Section R104.2.2[31] and IFC Section 104.2.3[32] are similar) in pertinent part state:

> **104.2.3 Alternative Materials, Design and Methods of Construction and Equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative is not specifically prohibited by this code and has been approved.

10.6 **Approved:**[33] Building regulations require that the building official shall accept duly authenticated reports.[34]

10.6.1 An approved agency is *"approved"* when it is ANAB ISO/IEC 17065 accredited.

10.6.2 An approved source is *"approved"* when an RDP is properly licensed to transact engineering commerce.

10.6.3 Federal law, Title 18 US Code Section 242, requires that, where the alternative product, material, service, design, assembly, and/or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved. Denial without written reason deprives a protected right to free and fair competition in the marketplace.

10.7 DrJ is a licensed engineering company, employs licensed RDPs and is an ANAB Accredited Product Certification Body – Accreditation #1131.

10.8 Through the IAF Multilateral Arrangement (MLA), this duly authenticated report can be used to obtain product approval in any jurisdiction or country because all ANAB ISO/IEC 17065 duly authenticated reports are equivalent.[35]

11 Conditions of Use

11.1 As defined in **Section 6**, where material and/or engineering mechanics properties are created for load resisting design purposes, the resistance to the applied load shall not exceed the ability of the defined properties to resist those loads using the principles of accepted engineering practice.

11.2 When required by adopted legislation and enforced by the building official, also known as the Authority Having Jurisdiction (AHJ) in which the project is to be constructed:

11.2.1 Any calculations incorporated into the construction documents shall conform to accepted engineering practice and, when prepared by an approved source, shall be approved when signed and sealed.

11.2.2 This report and the installation instructions shall be submitted at the time of permit application.

11.2.3 This innovative product has an internal quality control program and a third-party quality assurance program.

11.2.4 At a minimum, this innovative product shall be installed per **Section 8**.

11.2.5 The review of this report by the AHJ shall comply with IBC Section 104.2.3.2 and IBC Section 105.3.1.

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11.2.6 This innovative product has an internal quality control program and a third-party quality assurance program in accordance with IBC Section 104.7.2, IBC Section 110.4, IBC Section 1703, IRC Section R104.7.2, and IRC Section R109.2.

11.2.7 The application of this innovative product in the context of this report is dependent upon the accuracy of the construction documents, implementation of installation instructions, inspection as required by IBC Section 110.3, IRC Section R109.2, and any other regulatory requirements that may apply.

11.3 The approval of this report by the AHJ shall comply with IBC Section 1707.1, where legislation states in part, *"the building official shall make, or cause to be made, the necessary tests and investigations; or the building official shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in Section 104.2.3"*, all of IBC Section 104, and IBC Section 105.3.

11.4 Design loads shall be determined in accordance with the regulations adopted by the jurisdiction in which the project is to be constructed and/or by the building designer (i.e., owner or RDP).

11.5 The actual design, suitability, and use of this report for any particular building is the responsibility of the owner or the authorized agent of the owner.

12 Identification

12.1 TechWood 4400 (TW4400), as listed in **Section 1.1**, is identified by a label on the board or packaging material bearing the manufacturer name, product name, this report number, and other information to confirm code compliance.

12.2 Only the following are approved as production facilities for wood treated with TechWood 4400:

12.2.1 Location 201: Florida

12.2.2 Location 202: Virginia

12.2.3 Location 203: New Hampshire

12.2.4 Location 204: Indiana

12.2.5 Location 205: Illinois

12.2.6 Location 206: Montana

12.2.7 Location 207: Ohio

12.3 Additional technical information can be found at www.techwoodtreatments.com.

13 Review Schedule

13.1 This report is subject to periodic review and revision. For the latest version, visit www.drjcertification.org.

13.2 For information on the status of this report, please contact DrJ Certification.

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Notes

1 For more information, visit drjcertification.org or call us at 608-310-6748.

2 Capitalized terms and responsibilities are defined pursuant to the applicable building code, applicable reference standards, the latest edition of TPI 1, the NDS, AISI S202, US professional engineering law, Canadian building code, Canada professional engineering law, Qualtim External Appendix A: Definitions/Commentary, Qualtim External Appendix B: Project/Deliverables, Qualtim External Appendix C: Intellectual Property and Trade Secrets, definitions created within Design Drawings and/or definitions within Reference Sheets. Beyond this, terms not defined shall have ordinarily accepted meanings as the context implies. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

3 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1702

4 Alternative Materials, Design and Methods of Construction and Equipment: The provisions of any regulation code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by a regulation. Please review https://www.justice.gov/atr/mission and https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.2.3

5 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1706.2:~:text=the%20design%20strengths%20and%20permissible%20stresses%20shall%20be%20established%20by%20tests

6 The design strengths and permissible stresses of any structural material shall conform to the specifications and methods of design of accepted engineering practice. https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1706.1:~:text=Conformance%20to%20Standards-,The%20design%20strengths%20and%20permissible%20stresses,-of%20any%20structural

7 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1:~:text=the%20building%20official%20shall%20make%2C%20or%20cause%20to%20be%20made%2C%20the%20necessary%20tests%20and%20investigations%3B%20or%20the%20building%20official%20shall%20accept%20duly%20authenticated%20reports%20from%20approved%20agencies%20in%20respect%20to%20the%20quality%20and%20manner%20of%20use%20of%20new%20materials%20or%20assemblies%20as%20provided%20for%20in%20Section%20104.2.3.

8 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1703.4.2

9 https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#approved_agency

10 https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#approved_source

11 https://www.law.cornell.edu/uscode/text/18/1832 (b) Any organization that commits any offense described in subsection (a) shall be fined not more than the greater of $5,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided. The federal government and each state have a public records act. To follow DTSA and comply with state public records and trade secret legislation requires approval through ANAB ISO/IEC 17065 accredited certification bodies or approved sources. For more information, please review this website: Intellectual Property and Trade Secrets.

12 https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/regulation-professional AND https://apassociation.org/list-of-engineering-boards-in-each-state-archive/

13 https://www.cbitest.com/accreditation/

14 https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.1:~:text=directed%20to%20enforce%20the%20provisions%20of%20this%20code

15 https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.2.3 AND https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#105.3.1

16 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1

17 https://iaf.nu/en/about-iaf-mla/#:~:text=Once%20an%20accreditation%20body%20is%20a%20signatory%20of%20the%20IAF%20MLA%2C%20it%20is%20required%20to%20recognise%20certificates%20and%20validation%20and%20verification%20statements%20issued%20by%20conformity%20assessment%20bodies%20accredited%20by%20all%20other%20signatories%20of%20the%20IAF%20MLA%2C%20with%20the%20appropriate%20scope

18 True for all ANAB accredited product evaluation agencies and all International Trade Agreements.

19 https://www.justice.gov/crt/deprivation-rights-under-color-law AND https://www.justice.gov/atr/mission

20 Unless otherwise noted, the links referenced herein use un-amended versions of the 2024 International Code Council (ICC) 2024 International Code Council (ICC) model codes as foundation references. Mississippi versions of the IBC 2024 and the IRC 2024 are un-amended. This material, product, design, service and/or method of construction also complies with the 2000-2012 versions of the referenced codes and the standards referenced therein. As pertinent to this technical and code compliance evaluation, CBI and/or DrJ staff have reviewed any state or local regulatory amendments to assure this report is in compliance.

21 See Adoptions by Publisher for the latest adoption of a non-amended or amended model code by the local jurisdiction. https://up.codes/codes/general

22 See Adoptions by Publisher for the latest adoption of a non-amended or amended model code by state. https://up.codes/codes/general

23 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3282/subpart-A/section-3282.14

24 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280

25 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#p-3280.2(Listed%20or%20certified); https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#listed AND https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#labeled

26 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1703.4

27 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#:~:text=All%20construction%20methods%20shall%20be%20in%20conformance%20with%20accepted%20engineering%20practices%20to%20insure%20durable%2C%20livable%2C%20and%20safe%20housing%20and%20shall%20demonstrate%20acceptable%20workmanship%20reflecting%20journeyman%20quality%20of%20work%20of%20the%20various%20trades

28 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#:~:text=The%20strength%20and%20rigidity%20of%20the%20component%20parts%20and/or%20the%20integrated%20structure%20shall%20be%20determined%20by%20engineering%20analysis%20or%20by%20suitable%20load%20tests%20to%20simulate%20the%20actual%20loads%20and%20conditions%20of%20application%20that%20occur

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[29] See Code of Federal Regulations (CFR) Title 24 Subtitle B Chapter XX Part 3280 for definition: https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280

[30] 2021 IBC Section 104.11

[31] 2021 IRC Section R104.11

[32] 2018: https://up.codes/viewer/wyoming/ifc-2018/chapter/1/scope-and-administration#104.9 AND 2021: https://up.codes/viewer/wyoming/ibc-2021/chapter/1/scope-and-administration#104.11

[33] Approved is an adjective that modifies the noun after it. For example, Approved Agency means that the Agency is accepted officially as being suitable in a particular situation. This example conforms to IBC/IRC/IFC Section 201.4 (https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#201.4) where the building code authorizes sentences to have an ordinarily accepted meaning such as the context implies.

[34] https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1

[35] Multilateral approval is true for all ANAB accredited product evaluation agencies and all International Trade Agreements.

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