Listing and Technical Evaluation Report™

A Duly Authenticated Report from an Approved Agency

Report No: 2404-110

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Subject to Renewal: July 1, 2026

Performance Characteristics of Owens Corning® EZSheath™ Panel

Trade Secret Report Holder:

Owens Corning® (OC™)

Phone: 1-800-GET-PINK

Website: www.owenscorning.com

CSI Designations:

DIVISION: 06 00 00 - WOOD, PLASTICS AND COMPOSITES

Section: 06 12 00 - Structural Panels

Section: 06 12 19 - Shear Wall Panels

Section: 06 16 00 - Sheathing

Section: 06 16 13 - Insulated Sheathing

DIVISION: 07 00 00 - THERMAL AND MOISTURE PROTECTION

Section: 07 21 00 - Thermal Insulation

Section: 07 25 00 - Water-Resistive Barriers/Weather Barriers

Section: 07 27 00 - Air Barriers

1 Innovative Product Evaluated[1]

1.1 Owens Corning® EZSheath™

2 Product Description and Materials

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

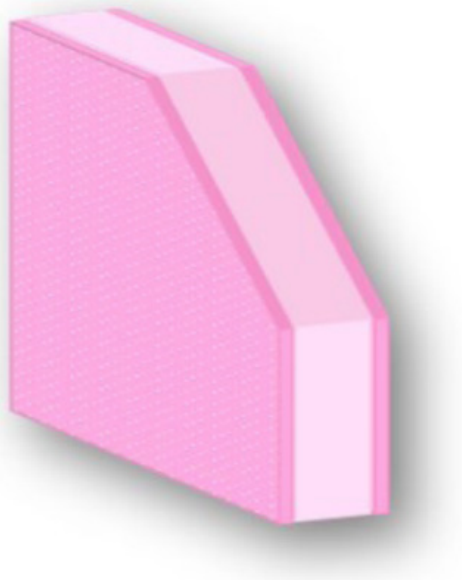


Figure 1. Owens Corning® EZSheath™

2.2 Owens Corning® EZSheath™ is a structural rigid insulating sheathing product comprised of an Extruded Polystyrene (XPS) insulation board sandwiched between two proprietary polymer facers (see **Figure 2**).

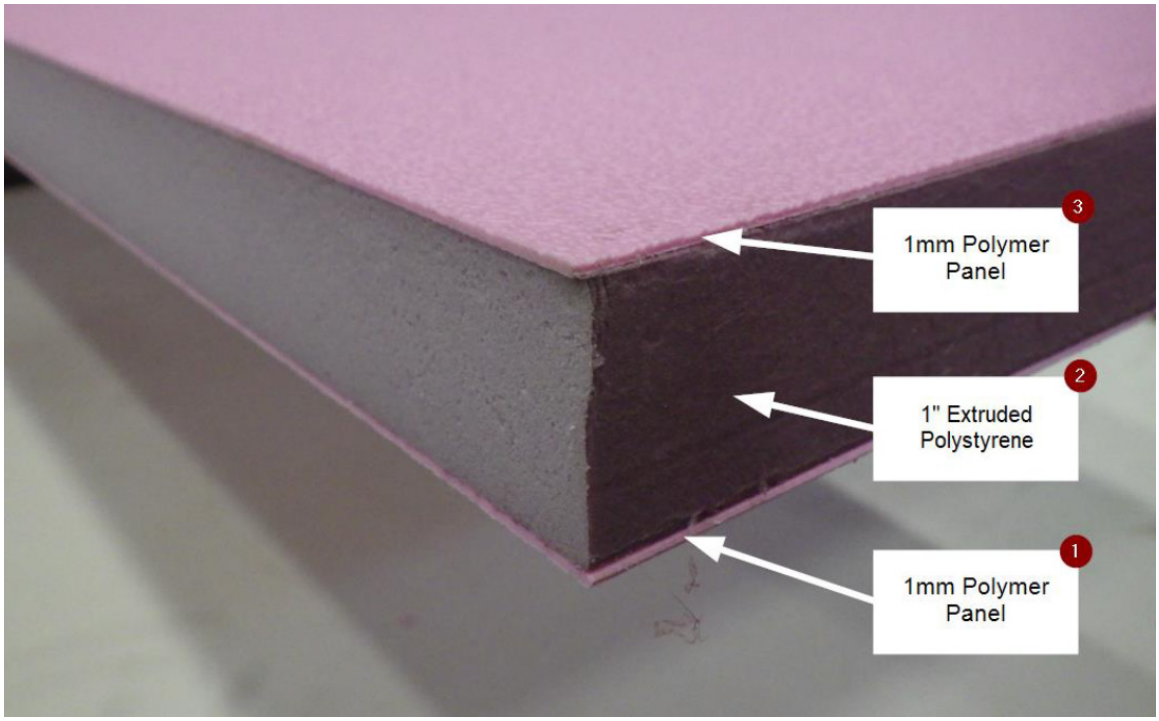


Figure 2. Owens Corning® EZSheath™ – Components (Foam Colored)

2.2.1 The proprietary polymer facers are nominally 0.04" (1 mm) thick and may have a haircell texture or medium matte finish (see **Figure 3**).

Figure 3. Owens Corning® EZSheath™ Facers – Haircell (Left) and Medium Matte (Right)

2.2.2 The rigid Foam Plastic Insulation Sheathing (FPIS) is a proprietary XPS insulation sheathing conforming to ASTM C578 Type IV.

2.3 *Material Availability*

2.3.1 *Thickness:*

2.3.1.1 0.50" (12.7 mm) to 3" (43 mm)

2.3.2 *Standard Product Width:*

2.3.2.1 48" (1,219 mm)

2.3.3 *Standard Lengths:*

2.3.3.1 96" (2,438 mm)

2.3.3.2 108" (2,743 mm)

2.3.3.3 120" (3,048 mm)

2.4 As needed, review material properties for design in **Section 6** and the regulatory evaluation in **Section 8**.

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 secretes 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.

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 Local, State, and Federal Approvals; Standards; Regulations[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 *Regulations*

4.2.1 *IBC – 18, 21, 24: International Building Code®*

4.2.2 *IRC – 18, 21, 24: International Residential Code®*

4.2.3 *IECC – 18, 21, 24: International Energy Conservation Code®*

4.2.4 *CBC—19, 22: California Building Code*

4.2.5 *CRC—19, 22: California Residential Code*

4.2.6 *FBC-B—20, 23: Florida Building Code – Building*

4.2.7 *FBC-R—20, 23: Florida Building Code – Residential*

4.3 *Standards*

4.3.1 *ANSI/AWC SDPWS: Special Design Provisions for Wind and Seismic*

4.3.2 *ASCE/SEI 7: Minimum Design Loads and Associated Criteria for Buildings and Other Structures*

4.3.3 *ASTM C518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus*

4.3.4 *ASTM C578: Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*

4.3.5 *ASTM D635: Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position*

4.3.6 *ASTM D1761: Standard Test Methods for Mechanical Fasteners in Wood and Wood-Based Materials*

4.3.7 *ASTM D1929: Standard Test Method for Determining Ignition Temperature of Plastics*

4.3.8 *ASTM D2843: Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics*

4.3.9 *ASTM D7989: Standard Practice for Demonstrating Equivalent In-Plane Lateral Seismic Performance to Wood-Frame Shear Walls Sheathed with Wood Structural Panels*

4.3.10 *ASTM E72: Standard Test Methods of Conducting Strength Tests of Panels for Building Construction*

4.3.11 *ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials*

4.3.12 *ASTM E283: Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors*

4.3.13 *ASTM E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

4.3.14 *ASTM E331: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*

4.3.15 *ASTM E564: Standard Practice for Static Load Test for Shear Resistance of Framed Walls for Buildings*

4.3.16 *ASTM E2126: Standard Test Methods for Cyclic (Reversed) Load Test for Shear Resistance of Vertical Elements of the Lateral Force Resisting Systems for Buildings*

4.3.17 *ASTM E2357: Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies*

4.3.18 *TAS 201: Impact Test Procedures*

4.3.19 *TAS 202: Criteria for Testing Impact and Nonimpact Resistant Building Envelope Components Using Uniform Static Air Pressure*

4.3.20 *TAS 203: Criteria for Testing Products Subject To Cyclic Wind Pressure Loading*

4.4 Structural performance for shear wall assemblies used as lateral force resisting systems in Seismic Design Categories A through F have been tested and evaluated in accordance with the following standards:

4.4.1 *ASCE/SEI 7: Minimum Design Loads and Associated Criteria for Buildings and Other Structures*

4.4.2 *ASTM D7989: Standard Practice for Demonstrating Equivalent In-Plane Lateral Seismic Performance to Wood-Frame Shear Walls Sheathed with Wood Structural Panels*

4.4.2.1 ASTM D7989 is accepted engineering practice used to establish Seismic Design Coefficients (SDC).

4.4.2.2 Tested data generated by ISO/IEC 17025 approved agencies and/or professional engineers, which use ASTM D7989 as their basis, are defined as intellectual property and/or trade secrets.

4.4.2.3 All professional engineering evaluations are defined as an independent design review (i.e., listings, certified reports, duly authenticated reports from approved agencies, and/or research reports, are prepared independently by approved agencies and/or approved sources, when signed and sealed by licensed professional engineer pursuant to registration law.

4.4.3 *ASTM E564: Standard Practice for Static Load Test for Shear Resistance of Framed Walls for Buildings*

4.4.4 *ASTM E2126: Standard Test Methods for Cyclic (Reversed) Load Test for Shear Resistance of Vertical Elements of the Lateral Force Resisting Systems for Buildings*

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 and 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 Owens Corning® EZSheath™ panels are structural insulated sheathing panels for use in the following applications as:

6.1.1.1 Wall sheathing in buildings constructed in accordance with the IBC and IRC for light-frame wood and steel construction.

6.1.1.2 Structural wall sheathing to provide lateral load resistance (wind and seismic) for braced wall panels used in light-frame construction.

6.1.1.3 Structural wall sheathing to provide resistance to transverse loads for wall assemblies used in wood construction.

6.1.1.4 Insulating sheathing applied as infill to portions of walls that are not designed as braced wall panels or shear walls.

6.1.1.5 Insulated sheathing in accordance with the IRC Section N1102, IECC Section R402, and IECC Section C402.

6.1.1.6 An approved Water-Resistive Barrier (WRB) in accordance with IBC Section 1403.2 and IRC Section R703.2, when installed with approved construction tape on all sheathing seams. See **Section 6.5.5.1**. See the manufacturer installation instructions for further details.

6.1.1.6.1 Where the joints are not taped, a separate WRB shall be installed in accordance with the WRB manufacturer installation instructions.

6.1.1.7 Where required, an approved air barrier assembly per IRC Section N1102.5,[26] IECC Section C402, and IECC Section R402, in accordance with IECC Section C402.6.2.3.2,[27] the manufacturer installation instructions, and this report.

6.1.2 Owens Corning® EZSheath™ panels contain foam plastics complying with IBC Section 2603 and IRC Section R303.[28]

6.2 *Prescriptive Wall Applications in Accordance with IRC*

6.2.1 *General Provisions:*

6.2.1.1 Except as otherwise described in this report, Owens Corning® EZSheath™ panels shall be installed in accordance with the applicable building codes listed in **Section 4**, using the provisions set forth herein for the design and installation of WSP.

6.2.1.2 Owens Corning® EZSheath™ shall be permitted to be designed in accordance with SDPWS for the design of shear walls using the methods set forth therein, including the perforated shear wall methodology, and subject to the SDPWS boundary conditions, except as specifically allowed in this report.

6.2.1.3 Anchorage for in-plane shear shall be provided to transfer the induced shear force into and out of each shear wall.

6.2.1.3.1 For wind design, anchor bolt spacing shall not exceed 6' o.c.

6.2.1.3.2 For seismic design, anchor bolt spacing shall not exceed 4' o.c.

6.2.1.4 The maximum aspect ratio for Owens Corning® EZSheath™ panels shall be 4:1.

6.2.1.5 The minimum Owens Corning® EZSheath™ panel width for full height panels shall be 24".

6.2.1.6 All Owens Corning® EZSheath™ panel edges shall be blocked with a minimum 2" nominal lumber.

6.2.1.7 Indentation of the outer polymer facer during installation of fasteners is permitted with no negative impact on allowable shear loads.

6.2.1.7.1 Indentation depth shall not exceed $^{3}/_{64}$".

6.2.1.7.2 Penetration of the fastener head through the outer surface of the foam plastic sheathing layer during installation is not permitted. In the event that this occurs, consult with manufacturer for potential solutions.

6.2.1.8 Installation is permitted for single top plate or double top plate applications.

6.2.1.8.1 Walls shall be constructed in accordance with IBC Section 2308.9.3.2[29] and IRC Section R602.3.2.

6.2.2 *Simplified IRC Bracing Provisions:*

6.2.2.1 Owens Corning® EZSheath™ panels are permitted to be used in accordance with the simplified bracing method of IRC Section R602.12, as modified by **Table 1** and **Table 2**.

6.2.2.2 All other provisions of the IRC simplified bracing method shall be met.

Table 1. Owens Corning® EZSheath™ Simplified Bracing Table (Nail Spacing 3:6; Panel Thickness: ≤ 3.0")[1-10]

Ultimate Design Wind Speed (mph)	Story Level	Eave to Ridge Height (ft)	Minimum Number of Bracing Units Required (Long Side)						Minimum Number of Bracing Units Required (Short Side)					
			Length of Short Side (ft)						Length of Long Side (ft)					
			10	20	30	40	50	60	10	20	30	40	50	60
115	One Story or Top of Two or Three Story	10	1	1	2	2	2	3	1	1	2	2	2	3
	First of Two Story or Second of Three Story		1	2	3	3	4	5	1	2	3	3	4	5
	First of Three Story		2	3	4	5	6	7	2	3	4	5	6	7
	One Story or Top of Two or Three Story	15	1	2	2	3	3	4	1	1	3	3	3	4
	First of Two Story or Second of Three Story		2	2	3	4	5	6	1	2	3	3	5	6
	First of Three Story		2	3	4	5	6	8	2	3	4	6	7	8
130	One Story or Top of Two or Three Story	10	1	2	2	2	3	3	1	2	2	2	3	3
	First of Two Story or Second of Three Story		2	3	3	4	5	6	2	3	3	4	5	6
	First of Three Story		2	3	5	6	7	9	2	3	5	6	7	9
	One Story or Top of Two or Three Story	15	1	2	3	3	4	4	1	3	3	3	4	4
	First of Two Story or Second of Three Story		2	3	4	5	6	7	2	3	3	5	6	7
	First of Three Story		2	4	5	7	8	10	2	3	6	7	8	10

SI: 1 in = 25.4 mm, 1 mph = 1.61 km/h

1. This simplified bracing table is based on the provisions of IRC Section R602.12. All provisions therein shall be observed, except that this table shall replace IRC Table R602.12.4, and Owens Corning® EZSheath™ panels shall replace the sheathing material.
2. For Owens Corning® EZSheath™ panels greater than 0.5" and up to 1.0" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.113" diameter nails spaced 3" o.c. along the edges and 6" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 3/8". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
3. For Owens Corning® EZSheath™ panels greater than 1.0" and up to 3.0" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.148" diameter nails spaced 3" o.c. along the edges and 6" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 1/2". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
4. A minimum of 1/2" gypsum wallboard, or GWB, (minimum lightweight) sheathing shall be applied to the interior side of the wall assembly and fastened with a #6 x 1 1/4" Type W or S screws spaced 8" o.c. at panel edges and 8" o.c. in the field of the panels.
5. Where GWB (minimum lightweight) is not applied to the interior side of the wall assembly, bracing lengths in IRC Table R602.10.3(1) and IRC Table R602.10.3(3), as modified by all applicable factors in IRC Table R602.10.3(2) and IRC Table R602.10.3(4), respectively, shall be used.
6. Maximum stud spacing of 16" o.c.
7. Interpolation shall not be permitted.
8. Cripple walls or wood-framed basement walls in a walk-out condition shall be designated as the first story and the stories above shall be redesignated as the second and third stories, respectively, and shall be prohibited in a three-story structure.
9. Actual lengths of the sides of the circumscribed rectangle shall be rounded to the next highest unit of 10 when using this table.
10. For Exposure Category C, multiply bracing units by a factor of 1.20 for a one-story building, 1.30 for a two-story building, and 1.40 for a three-story building.

Table 2. Owens Corning® EZSheath™ Simplified Bracing Table (Nail Spacing 6:12; Panel Thickness: ≤ 2.0")[1-10]

Ultimate Design Wind Speed (mph)	Story Level	Eave to Ridge Height (ft)	Minimum Number of Bracing Units Required (Long Side)						Minimum Number of Bracing Units Required (Short Side)					
			Length of Short Side (ft)						Length of Long Side (ft)					
			10	20	30	40	50	60	10	20	30	40	50	60
115	One Story or Top of Two or Three Story	10	1	2	3	4	5	5	1	2	3	4	5	5
	First of Two Story or Second of Three Story		2	4	5	7	8	10	2	4	5	7	8	10
	First of Three Story		3	5	8	10	12	14	3	5	8	10	12	14
	One Story or Top of Two or Three Story	15	1	3	4	5	7	7	1	3	4	5	7	7
	First of Two Story or Second of Three Story		2	5	6	8	9	12	2	5	6	8	9	12
	First of Three Story		3	6	9	11	13	15	3	6	9	11	13	15
130	One Story or Top of Two or Three Story	10	2	3	4	5	5	6	2	3	4	5	5	6
	First of Two Story or Second of Three Story		3	5	7	8	10	12	3	5	7	8	10	12
	First of Three Story		4	7	9	12	15	17	4	7	9	12	15	17
	One Story or Top of Two or Three Story	15	3	4	5	7	7	8	3	4	5	7	7	8
	First of Two Story or Second of Three Story		3	6	8	9	12	14	3	6	8	9	12	14
	First of Three Story		4	8	10	13	17	19	4	8	10	13	17	19

SI: 1 in = 25.4 mm, 1 mph = 1.61 km/h

1. This simplified bracing table is based on the provisions of IRC Section R602.12. All provisions therein shall be observed, except that this table shall replace IRC Table R602.12.4, and Owens Corning® EZSheath™ panels shall replace the sheathing material.
2. For Owens Corning® EZSheath™ panels greater than 0.5" and up to 1.0" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.113" diameter nails spaced 6" o.c. along the edges and 12" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 3/8". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
3. For Owens Corning® EZSheath™ panels greater than 1.0" and up to 2.0" thick, the panel shall be installed with butted joints on nominal 2x studs using minimum 0.131" diameter nails spaced 6" o.c. along the edges and 12" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 1/4". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
4. A minimum of 1/2" gypsum wallboard, or GWB, (minimum lightweight) sheathing shall be applied to the interior side of the wall assembly and fastened with a #6 x 1 1/4" Type W or S screws spaced 8" o.c. at panel edges and 8" o.c. in the field of the panels.
5. Where GWB (minimum lightweight) is not applied to the interior side of the wall assembly, bracing lengths in IRC Table R602.10.3(1) and IRC Table R602.10.3(3), as modified by all applicable factors in IRC Table R602.10.3(2) and IRC Table R602.10.3(4), respectively, shall be used.
6. Maximum stud spacing of 16" o.c.
7. Interpolation shall not be permitted.
8. Cripple walls or wood-framed basement walls in a walk-out condition shall be designated as the first story and the stories above shall be redesignated as the second and third stories, respectively, and shall be prohibited in a three-story structure.
9. Actual lengths of the sides of the circumscribed rectangle shall be rounded to the next highest unit of 10 when using this table.
10. For Exposure Category C, multiply bracing units by a factor of 1.20 for a one-story building, 1.30 for a two-story building, and 1.40 for a three-story building.

6.2.3 *Prescriptive IRC Bracing Applications:*

6.2.3.1 Owens Corning® EZSheath™ may be used in the following applications:

6.2.3.1.1 On braced wall lines as an equivalent alternative to the IRC Method Wood Structural Panel (WSP) when installed in accordance with IRC Section R602.10 and this report.

6.2.3.1.2 To brace walls of buildings as an equivalent alternative to the IRC Method Continuously Sheathed Wood Structural Panel (CS-WSP), when installed in accordance with IRC Section R602.10.4 and this report.

6.2.3.1.3 To brace walls of buildings as an alternative to the IRC Method Portal Frame with Hold-downs (PFH) braced wall panel provisions of IRC Section R602.10.4.

6.2.3.1.4 To brace walls of buildings as an alternative to the IRC Method Continuously Sheathed Portal Frame (CS-PF) braced wall panel provisions of IRC Section R602.10.4.

6.2.3.2 All other IRC prescriptive bracing minimums, spacing requirements, and rules must be met.

6.2.3.3 Where a building, or portion thereof, does not comply with one or more of the bracing requirements within the prescriptive section of the IRC, those portions shall be designed and constructed in accordance with IRC Section R301.1.

6.2.3.4 *Wind Bracing:*

6.2.3.4.1 For wind design, required braced wall panel lengths for the Owens Corning® EZSheath™ shall be as shown in **Table 3** and **Table 4**, and shall be used in conjunction with IRC Table R602.10.3(2), which provides the required adjustments.

6.2.3.4.2 These tables shall be used in place of IRC Table R602.10.3(1).

6.2.3.4.3 All adjustment factors from IRC Table R602.10.3(2) shall still be applied.

Table 3. Required Bracing Lengths Owens Corning® EZSheath™
(Nail Spacing 3:6; Panel Thickness: ≤ 3.0") – Wind[1,2,3,4.5,6,8,9,10]

Condition	Braced Wall Line Spacing (ft)	Length of Wall Line to be Braced (ft)											
		Intermittent Sheathing						Continuous Sheathing					
		Wind Speeds[7] (mph)											
		< 95	≤ 110	≤ 115	≤ 120	≤ 130	< 140	< 95	≤ 110	≤ 115	≤ 120	≤ 130	< 140
One Story or the Top of Two or Three Stories	10	1.3	1.8	1.8	2.2	2.2	2.6	1.3	1.3	1.8	1.8	2.2	2.2
	20	2.2	3.1	3.1	3.5	4.4	4.8	2.2	2.6	3.1	3.1	3.5	4.4
	30	3.5	4.4	4.8	5.3	6.2	7.0	3.1	4.0	4.0	4.4	5.3	6.2
	40	4.4	5.7	6.2	7.0	7.9	9.2	3.5	4.8	5.3	5.7	6.6	7.9
	50	5.3	7.0	7.9	8.4	9.7	11.4	4.4	6.2	6.6	7.0	8.4	9.7
	60	6.2	8.4	9.2	10.1	11.4	13.2	5.3	7.0	7.9	8.4	9.7	11.4
First Story of Two Stories or Second Story of Three Stories	10	2.6	3.1	3.5	4.0	4.4	5.3	2.2	2.6	3.1	3.1	4.0	4.4
	20	4.4	5.7	6.6	7.0	8.4	9.7	4.0	4.8	5.7	6.2	7.0	7.9
	30	6.2	8.4	9.2	10.1	11.9	13.6	5.3	7.0	7.9	8.4	10.1	11.4
	40	8.4	11.0	11.9	13.2	15.4	17.6	7.0	9.2	10.1	11.0	13.6	15.0
	50	10.1	13.6	14.5	15.8	18.9	21.6	8.8	11.4	12.3	13.6	15.8	18.5
	60	11.9	15.8	17.6	18.9	22.0	25.5	10.1	13.6	15.0	16.3	18.9	22.0
First Story of Three Stories	10	3.5	4.8	5.3	5.7	6.6	7.5	3.1	4.0	4.4	4.8	5.7	6.6
	20	6.6	8.8	9.7	10.1	11.9	14.1	5.7	7.5	7.9	8.8	10.1	11.9
	30	9.2	12.3	13.6	15.0	17.2	20.2	7.9	10.6	11.4	12.8	15.0	17.2
	40	11.9	16.3	17.6	19.4	22.4	26.0	10.1	13.6	15.0	16.3	19.4	22.0
	50	15.0	19.8	21.6	23.8	27.7	32.1	12.8	16.7	18.5	20.2	23.3	27.3
	60	17.6	23.3	25.5	28.2	33.0	37.8	15.0	20.2	22.0	23.8	27.7	32.1

SI: 1 in. = 25.4 mm, 1 mph = 1.61 km/h

1. For Owens Corning® EZSheath™ panels greater than 0.5" and up to 1.0" thick, the panel shall be installed with butted joints on nominal 2x studs using minimum 0.113" diameter nails spaced 3" o.c. along the edges and 6" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 3/8". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
2. For Owens Corning® EZSheath™ panels greater than 1.0" and up to 3.0" thick, the panel shall be installed with butted joints on nominal 2x studs using minimum 0.148" diameter nails spaced 3" o.c. along the edges and 6" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 1/2". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
3. Maximum stud spacing of 16" o.c.
4. Demonstrates equivalency to IRC Table R602.10.3(1). All adjustment factors from IRC Table R602.10.3(2) shall be applied.
5. All adjustment factors from IRC Table R602.10.3(2) shall be applied.
6. A minimum of 1/2" GWB (minimum lightweight) sheathing shall be applied to the interior side of the wall assembly and fastened with a #6 x 1 1/4" Type W or S screws spaced 8" o.c. at panel edges and 8" o.c. in the field of the panels.
7. Where gypsum wallboard is not applied to the interior side of the wall assembly, bracing lengths shall be multiplied by a factor of 1.4 per IRC Table R602.10.3(2).
8. Bracing lengths are the results of comparative equivalency testing and analysis using both tested and published design values as points of comparison. DrJ relies upon the design values published in the codes and standards listed in **Section 4** that are adopted into law and that the manufacturer of those products stand behind. DrJ performs all equivalency analysis based on legally defined design values, the responsibility for which is the manufacturer of those products or the members of the associations that publish those design values.
9. Wind speeds are V_{ult} in accordance with ASCE 7-22. Convert to equivalent V_{asd} wind speed per IBC Section 1609.3.1.
10. Linear interpolation is permitted.

Table 4. Required Bracing Lengths Owens Corning® EZSheath™
(Nail Spacing 6:12; Panel Thickness: ≤ 2.0") – Wind[1,2,3,4.5,6,8,9,10]

Condition	Braced Wall Line Spacing (ft)	Length of Wall Line to be Braced (ft)											
		Intermittent Sheathing						Continuous Sheathing					
		Wind Speeds[7] (mph)											
		< 95	≤ 110	≤ 115	≤ 120	≤ 130	< 140	< 95	≤ 110	≤ 115	≤ 120	≤ 130	< 140
One Story or the Top of Two or Three Stories	10	2.7	3.6	3.6	4.5	4.5	5.4	2.7	2.7	3.6	3.6	4.5	4.5
	20	4.5	6.3	6.3	7.2	9.1	10.0	4.5	5.4	6.3	6.3	7.2	9.1
	30	7.2	9.1	10.0	10.9	12.7	14.5	6.3	8.1	8.1	9.1	10.9	12.7
	40	9.1	11.8	12.7	14.5	16.3	19.0	7.2	10.0	10.9	11.8	13.6	16.3
	50	10.9	14.5	16.3	17.2	19.9	23.5	9.1	12.7	13.6	14.5	17.2	19.9
	60	12.7	17.2	19.0	20.8	23.5	27.2	10.9	14.5	16.3	17.2	19.9	23.5
First Story of Two Stories or Second Story of Three Stories	10	5.4	6.3	7.2	8.1	9.1	10.9	4.5	5.4	6.3	6.3	8.1	9.1
	20	9.1	11.8	13.6	14.5	17.2	19.9	8.1	10.0	11.8	12.7	14.5	16.3
	30	12.7	17.2	19.0	20.8	24.4	28.1	10.9	14.5	16.3	17.2	20.8	23.5
	40	17.2	22.6	24.4	27.2	31.7	36.2	14.5	19.0	20.8	22.6	28.1	30.8
	50	20.8	28.1	29.9	32.6	38.9	44.3	18.1	23.5	25.3	28.1	32.6	38.0
	60	24.4	32.6	36.2	38.9	45.3	52.5	20.8	28.1	30.8	33.5	38.9	45.3
First Story of Three Stories	10	7.2	10.0	10.9	11.8	13.6	15.4	6.3	8.1	9.1	10.0	11.8	13.6
	20	13.6	18.1	19.9	20.8	24.4	29.0	11.8	15.4	16.3	18.1	20.8	24.4
	30	19.0	25.3	28.1	30.8	35.3	41.6	16.3	21.7	23.5	26.2	30.8	35.3
	40	24.4	33.5	36.2	39.8	46.2	53.4	20.8	28.1	30.8	33.5	39.8	45.3
	50	30.8	40.7	44.3	48.9	57.0	66.1	26.2	34.4	38.0	41.6	48.0	56.1
	60	36.2	48.0	52.5	57.9	67.9	77.8	30.8	41.6	45.3	48.9	57.0	66.1

SI: 1 in. = 25.4 mm, 1 mph = 1.61 km/h

1. For Owens Corning® EZSheath™ panels greater than 0.5" and up to 1.0" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.113" diameter nails spaced 6" o.c. along the edges and 12" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 3/8". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
2. For Owens Corning® EZSheath™ panels greater than 1.0" and up to 2.0" thick, the panel shall be installed with butted joints on nominal 2x studs using minimum 0.131" diameter nails spaced 6" o.c. along the edges and 12" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 1/4". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
3. Maximum stud spacing of 16" o.c.
4. Demonstrates equivalency to IRC Table R602.10.3(1). All adjustment factors from IRC Table R602.10.3(2) shall be applied.
5. All adjustment factors from IRC Table R602.10.3(2) shall be applied.
6. A minimum of 1/2" GWB (minimum lightweight) sheathing shall be applied to the interior side of the wall assembly and fastened with a #6 x 1 1/4" Type W or S screws spaced 8" o.c. at panel edges and 8" o.c. in the field of the panels.
7. Where gypsum wallboard is not applied to the interior side of the wall assembly, bracing lengths shall be multiplied by a factor of 1.4 per IRC Table R602.10.3(2).
8. Bracing lengths are the results of comparative equivalency testing and analysis using both tested and published design values as points of comparison. DrJ relies upon the design values published in the codes and standards listed in **Section 4** that are adopted into law and that the manufacturer of those products stand behind. DrJ performs all equivalency analysis based on legally defined design values, the responsibility for which is the manufacturer of those products or the members of the associations that publish those design values.
9. Wind speeds are V_{ult} in accordance with ASCE 7-22. Convert to equivalent V_{asd} wind speed per IBC Section 1609.3.1.
10. Linear interpolation is permitted.

6.2.3.5 *Seismic Bracing:*

6.2.3.5.1 For seismic design, the required braced wall panel lengths for Owens Corning® EZSheath™ shall be as shown in **Table 5** and **Table 6**, and shall be used in conjunction with IRC Table R602.10.3(4), which provides the required adjustments.

Table 5. Required Bracing Lengths for Owens Corning® EZSheath™
(Nail Spacing 3:6; Panel Thickness: ≤ 3.0") – Seismic[1,2,3,4,5,6,7,8,9]

Condition	Braced Wall Line Length (ft)	Minimum Total Length (ft) of Braced Wall Panels Required Along Each Braced Wall Line							
		Intermittent Sheathing				Continuous Sheathing			
		Seismic Design Category (SDC)							
		C	D0	D1	D2	C	D0	D1	D2
One Story or the Top of Two or Three Stories	10	1.5	1.6	1.8	2.2	1.2	1.5	1.5	1.9
	20	2.8	3.2	3.5	4.4	2.4	2.7	3.0	3.8
	30	4.2	4.8	5.3	6.6	3.6	4.0	4.5	5.6
	40	5.6	6.3	7.0	8.8	4.8	5.4	6.0	7.5
	50	7.0	7.9	8.8	11.0	6.0	6.7	7.5	9.3
First Story of Two Stories or Second Story of Three Stories	10	2.6	3.3	3.9	4.9	2.3	2.8	3.3	4.1
	20	5.3	6.6	7.9	9.6	4.5	5.6	6.7	8.3
	30	7.9	10.0	11.9	14.5	6.7	8.4	10.1	12.3
	40	10.6	13.2	15.9	19.4	9.0	11.3	13.5	16.5
	50	13.2	16.5	19.8	24.2	11.3	14.1	16.8	20.6
First Story of Three Stories	10	3.9	4.7	5.3	NP[9]	3.3	3.9	4.5	NP
	20	7.9	9.2	10.6	NP	6.7	7.9	9.0	NP
	30	11.9	13.9	15.9	NP	10.1	11.8	13.5	NP
	40	15.9	18.4	21.1	NP	13.5	15.8	17.9	NP
	50	19.8	23.1	26.4	NP	16.8	19.6	22.4	NP

SI: 1 ft = 0.3048 m

1. For Owens Corning® EZSheath™ panels greater than 0.5" and up to 1.0" thick, the panel shall be installed with butted joints on nominal 2x studs using minimum 0.113" diameter nails spaced 3" o.c. along the edges and 6" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 3/8". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
2. For Owens Corning® EZSheath™ panels greater than 1.0" and up to 3.0" thick, the panel shall be installed with butted joints on nominal 2x studs using minimum 0.148" diameter nails spaced 3" o.c. along the edges and 6" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 1/2". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
3. Demonstrates equivalency to IRC Table R602.10.3(3). All adjustment factors from IRC Table R602.10.3(4) shall be applied.
4. A minimum of 1/2" GWB (minimum lightweight) sheathing shall be applied to the interior side of the wall assembly and fastened with a #6 x 1 1/4" Type W or S screws spaced 8" o.c. at panel edges and 8" o.c. in the field of the panels. Where gypsum wallboard is not applied to the interior side of the wall assembly, bracing lengths shall be multiplied by a factor of 1.5 per IRC Table R602.10.3(4).
5. Maximum stud spacing of 16" o.c.
6. Tabulated bracing lengths are based on the following:
   a. Soil Class D
   b. Wall height = 10'
   c. 10 psf floor dead load
   d. 15 psf roof/ceiling dead load
   e. Braced wall line spacing ≤ 25'
7. Linear interpolation is permitted.
8. Bracing lengths are the results of comparative equivalency testing and analysis using both tested and published design values as points of comparison. DrJ relies upon the design values published in the codes and standards listed in **Section 4** that are adopted into law and that the manufacturer of those products stand behind. DrJ performs all equivalency analysis based on legally defined design values, the responsibility for which is the manufacturer of those products or the members of the associations that publish those design values.
9. NP = Not Permitted

Table 6. Required Bracing Lengths for Owens Corning® EZSheath™
(Nail Spacing 6:12; Panel Thickness: ≤ 2.0") – Seismic[1,2,3,4,5,6,7,8,9]

Condition	Braced Wall Line Length (ft)	Minimum Total Length (ft) of Braced Wall Panels Required Along Each Braced Wall Line							
		Intermittent Sheathing				Continuous Sheathing			
		Seismic Design Category (SDC)							
		C	D_0	D_1	D_2	C	D_0	D_1	D_2
One Story or the Top of Two or Three Stories	10	3.0	3.2	3.6	4.5	2.6	3.0	3.1	3.8
	20	5.8	6.5	7.2	9.1	4.9	5.5	6.2	7.8
	30	8.7	9.8	10.9	13.6	7.5	8.3	9.2	11.5
	40	11.5	13.0	14.5	18.1	9.8	11.1	12.4	15.3
	50	14.5	16.2	18.1	22.6	12.4	13.9	15.3	19.2
First Story of Two Stories or Second Story of Three Stories	10	5.4	6.8	8.1	10.0	4.7	5.8	6.8	8.5
	20	10.9	13.6	16.2	19.8	9.2	11.5	13.9	17.1
	30	16.2	20.5	24.4	29.8	13.9	17.4	20.8	25.4
	40	21.7	27.1	32.6	39.8	18.5	23.2	27.7	33.8
	50	27.1	34.0	40.7	49.8	23.2	29.0	34.5	42.4
First Story of Three Stories	10	8.1	9.6	10.9	NP	6.8	8.1	9.2	NP
	20	16.2	19.0	21.7	NP	13.9	16.2	18.5	NP
	30	24.4	28.6	32.6	NP	20.8	24.3	27.7	NP
	40	32.6	37.9	43.4	NP	27.7	32.4	36.9	NP
	50	40.7	47.5	54.3	NP	34.5	40.3	46.2	NP

SI: 1 ft = 0.3048 m

1. For Owens Corning® EZSheath™ panels greater than 0.5" and up to 1.0" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.113" diameter nails spaced 6" o.c. along the edges and 12" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 3/8". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
2. For Owens Corning® EZSheath™ panels greater than 1.0" and up to 2.0" thick, the panel shall be installed with butted joints on nominal 2x studs using minimum 0.131" diameter nails spaced 6" o.c. along the edges and 12" in the field. Nail length shall be sufficient enough to achieve a minimum penetration of 1 1/4". Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
3. Demonstrates equivalency to IRC Table R602.10.3(3). All adjustment factors from IRC Table R602.10.3(4) shall be applied.
4. A minimum of 1/2" gypsum wallboard, or GWB, (minimum lightweight) sheathing shall be applied to the interior side of the wall assembly and fastened with a #6 x 1 1/4" Type W or S screws spaced 8" o.c. at panel edges and 8" o.c. in the field of the panels. Where gypsum wallboard is not applied to the interior side of the wall assembly, bracing lengths shall be multiplied by a factor of 1.5 per IRC Table R602.10.3(4).
5. Maximum stud spacing of 16" o.c
6. Tabulated bracing lengths are based on the following:
   a. Soil Class D
   b. Wall height = 10'
   c. 10 psf floor dead load
   d. 15 psf roof/ceiling dead load
   e. Braced wall line spacing ≤ 25'
7. Linear interpolation is permitted.
8. Bracing lengths are the results of comparative equivalency testing and analysis using both tested and published design values as points of comparison. DrJ relies upon the design values published in the codes and standards listed in **Section 4** that are adopted into law and that the manufacturer of those products stand behind. DrJ performs all equivalency analysis based on legally defined design values, the responsibility for which is the manufacturer of those products or the members of the associations that publish those design values.
9. NP = Not Permitted

6.2.3.6 Required braced wall panel lengths shall be as determined by the equivalency factor as shown in **Table 7**, IRC Table R602.10.3(1), and IRC Table R602.10.3(3), including all footnotes.

6.2.3.7 All other IRC prescriptive bracing minimums, spacing requirements, and rules must still be met.

Table 7. Braced Wall Line Length Equivalency Factors[1,2,5]

Structural Sheathing Product	Panel Thickness (in)	Maximum Stud Spacing (in)	Minimum Nail Diameter (in)[6]	Minimum Nail Embedment (in)	Maximum Fastener Spacing (edge:field) (in)	GWB Fastening Spacing[4] (edge:field) (in)	Equivalency Factors[3] to IRC WSP or CS-WSP
Owens Corning® EZSheath™	≤ 1.0"	16" o.c.	0.113"	1 3/8"	6:12	8:8	1.80
					3:6	8:8	0.88
	≤ 1.0"	16" o.c.	0.131"	1 3/8"	3:6	8:8	0.88
	1.0" < t ≤ 2.0"	16" o.c.	0.131"	1 1/4"	6:12	8:8	1.81
					3:6	8:8	0.99
	2.0" < t ≤ 3.0"	16" o.c.	0.148"	1 1/2"	3:6	8:8	0.88

SI: 1 in = 25.4 mm

1. Based on equivalency testing for use with the IRC.
2. Framing shall be SPF (specific gravity 0.42), at a minimum.
3. Equivalency factors allow the user to determine the length of bracing required, by multiplying the equivalency factor above by the length of bracing shown in the WSP or CS-WSP columns in IRC Table R602.10.3(1) and IRC Table R602.10.3(3), as modified by all applicable factors in IRC Table R602.10.3(2) and IRC Table R602.10.3(4), respectively.
4. Where GWB (minimum lightweight) is not applied to the interior side of the wall assembly, bracing lengths in IRC Table R602.10.3(1) and IRC Table R602.10.3(3), as modified by all applicable factors in IRC Table R602.10.3(2) and IRC Table R602.10.3(4), respectively, shall be used.
5. Valid for single top plate (advanced framing method) wall installations or double top plate wall installations
6. Owens Corning® EZSheath™ installed with butted joints on nominal 2x studs spaced as listed in this table, and fastener edge distance shall be a minimum of 3/8".

6.2.4 *Owens Corning® EZSheath™ Portal Frame:*

6.2.4.1 Portal frames sheathed with Owens Corning® EZSheath™ were tested and evaluated for equivalency to the IRC Method Portal Frame with Hold-downs (PFH) and IRC Method Continuously Sheathed Portal Frame (CS-PF) in accordance with IRC Section R602.10.6.2, IRC Section R602.10.6.4, and IRC Table R602.10.5.

6.2.4.1.1 IRC Table R602.10.5 establishes the contributing length of bracing of the PFH is equivalent to 48" length full-height wall sheathed with a minimum Wood Structural Panel (WSP) thickness of 3/8" fastened with 0.113" x 2" nails spaced 6" o.c. at panel edges and 12" o.c. in the field, and stud spacing of 16" o.c per IRC Table R602.10.4.

6.2.4.1.2 IRC Table R602.10.5 establishes the contributing length of bracing of the CS-PF is equivalent to a full-height wall sheathed with minimum 3/8" WSP and fastened with 0.113" x 2" nails spaced 6" o.c. at panel edges and 12" o.c. in the field, and stud spacing of 16" o.c per IRC Table R602.10.4.

6.2.4.1.2.1 For Seismic Design Category (SDC) A, B, and C, the contributing length is 150% of the actual length of the CS-PF.

6.2.4.1.2.2 For SDC D_0, D_1, and D_2, the contributing length is the actual length.

6.2.4.2 The capacity of the Owens Corning® EZSheath™ PFH exceeds the capacity of the IRC Method WSP, and the capacity of the Owens Corning® EZSheath™ portal frames exceed the capacity of the IRC Method CS-WSP, with the appropriate corresponding contributing brace length.

6.2.4.2.1 Owens Corning® EZSheath™ panels (1" thick only) are permitted to be substituted for the prescribed $^{3}/_{8}$" WSP in accordance with IRC Figure R602.10.6.2.

6.2.4.2.1.1 Owens Corning® EZSheath™ panels shall be fastened to framing members with 0.131 x $2^{1}/_{2}$" nails spaced 3" o.c.

6.2.4.2.1.2 Strap-tie hold-downs used for IRC Method PFH shall be Simpson Strong-Tie STDH14 or equivalent.

6.2.4.2.2 Owens Corning® EZSheath™ panels (1" thick only) are permitted to be substituted for the prescribed $^{7}/_{16}$" WSP in accordance with IRC Figure R602.10.6.4.

6.2.5 *Prescriptive IBC Conventional Light-Frame Wood Construction:*

6.2.5.1 Owens Corning® EZSheath™ panels may be used to brace exterior walls of buildings as an equivalent alternative to Method WSP of the IBC, when installed with blocked or unblocked $^{1}/_{2}$" GWB, fastened with a minimum 5d cooler nail or #6 Type W or S screw, spaced a maximum of 16" o.c. at panel edges and 16" o.c. in the field. Bracing shall be in accordance with the conventional light-frame construction method of IBC Section 2308.10[30] and this report.

6.3 *Structural Applications*

6.3.1 The following design values in this report are based on the Allowable Stress Design (ASD) method as permitted by the applicable IBC and IRC code sections, and referenced standards listed in **Section 4**.

6.3.2 *Performance-Based Wood Framed Construction:*

6.3.2.1 Owens Corning® EZSheath™ panels used in wall assemblies designed as shear walls are permitted to be designed in accordance with the methodology used in SDPWS for WSP using the unit shear capacities shown in **Table 8** for Allowable Stress Design (ASD). Walls sheathed with Owens Corning® EZSheath™ panels may be designed to resist wind loads resulting from winds up to 200 mph (V_{ult}).

6.3.2.1.1 Owens Corning® EZSheath™ panels used in wall assemblies designed as shear walls are permitted to resist lateral wind load forces using the allowable shear loads (in pounds per linear foot) set forth in **Table 8**.

6.3.2.2 Owens Corning® EZSheath™ panels used in wall assemblies designed as shear walls are permitted to resist seismic load forces using the seismic allowable unit shear capacities set forth in **Table 9** when seismic design is required in accordance with IBC Section 1613.

6.3.2.2.1 The response modification coefficient, R, system overstrength factor, Ω_0, and deflection amplification factor, C_d, indicated in **Table 9** shall be used to determine the base shear, element design forces, and design story drift in accordance with ASCE 7 Chapter 12 and Section 14.5.

Table 8. Allowable Stress Design (ASD) Capacity for Owens Corning® EZSheath™ – Wind[1,2]

Structural Sheathing Product	Product Thickness (in)	Minimum Nail Diameter (in)	Minimum Nail Embedment (in)	Fastener Spacing (edge:field) (in)	Stud Spacing (in)	GWB Thickness (in)	GWB Fastener Spacing[3] (edge:field) (in)	Allowable Unit Shear Capacity (plf)
Owens Corning® EZSheath™	0.50" – 1.0"	0.113"	1 3/8	6":12"	16" o.c.	-	-	175
					24" o.c.			160
				3":6"	16" o.c.			350
					24" o.c.			330
		0.131"	1 3/8	3":6"	16" o.c.	-	-	350
					24" o.c.			
	1.0"	0.131"	1 3/8	3":6"	16 o.c.	1/2	8:8	405
	1.0" < t ≤ 2.0"	0.131"	1 1/4	6":12"	16" o.c.	-	-	170
					24" o.c.			155
				3":6"	16" o.c.			315
					24" o.c.			305
	2.0" < t ≤ 3.0"	0.148"	1 1/2	3":6"	16 o.c.	-	-	420

SI: 1 in = 25.4 mm, 1 lb/ft = 0.0146 kN/m

1. Tested in accordance with ASTM E564.
2. Owens Corning® EZSheath™ panels installed with butted joints on nominal 2x studs with a minimum published specific gravity of 0.42 spaced as listed in this table, and fastened with the specified nails spaced 3" o.c. along the edges and 6" o.c. in the field. Fastener edge distance shall be a minimum of 3/8".
3. GWB (minimum lightweight) shall be attached with minimum #6 type W or S screws 1 1/4" long with a minimum edge distance of 3/8".

Table 9. Seismic Allowable Unit Shear Capacity (ASD) and Seismic Design Coefficients for Light-Frame (Wood) Walls Sheathed with Owens Corning® EZSheath™[1]

Product	Product Thickness (in)	Minimum Fastener Diameter	Minimum Penetration	Fastening Schedule	Seismic Allowable Unit Shear Capacity[3] (plf)	Apparent Shear Stiffness G_a (kips/in)	Response Modification Factor, R[4]	System Overstrength Factor Ω_0[5]	Deflection Amplification Coefficient C_d[6]	Structural System Limitations and Building Height Limit[7,8] (ft)				
										SDC[9]				
										B	C	D	E	F
Owens Corning® EZSheath™	0.5" - 1.0"	0.113"	1 3/8"	6":12"	135	4.1	6.5	3	4	NL	NL	65	65	65
				3":6"	205	4.4	6.5	3	4	NL	NL	65	65	65
	0.5" – 1.0"	0.131"	1 3/8"	3":6"	335[2]	13.0[2]	6.5	3	4	NL	NL	65	65	65
					280	5.9	6.5	3	4	NL	NL	65	65	65
	2.0"	0.131"	1 1/4"	6":12"	135	4.3	6.5	3	4	NL	NL	65	65	65
				3":6"	250	4.8	6.5	3	4	NL	NL	65	65	65
	2.0" - 3.0"	0.148"	1 1/2"	3":6"	335[2]	13.0[2]	6.5	3	4	NL	NL	65	65	65
					280	5.9	6.5	3	4	NL	NL	65	65	65

SI: 1 in = 25.4 mm, 1 lb/ft = 0.0146 kN/m, 1 psi = 0.00689 MPa

1. Owens Corning® EZSheath™ panels shall be installed with butted joints on nominal 2x studs spaced no greater than 16" o.c. Listed nail diameters and penetration are minimums. Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.
2. GWB shall be fastened with minimum #6 type W or S screws 1 1/4" long spaced 8" o.c. along the perimeter and in the field. Fasteners shall maintain a minimum edge distance of 3/8".
3. All seismic design parameters follow the equivalency as defined in **Section 4.4** and **Section 8**.
4. Response modification coefficient, R, for use throughout ASCE 7. *Note:* R reduces forces to a strength level, not an allowable stress level.
5. The tabulated value of the overstrength factor, Ω_0, is permitted to be reduced by subtracting one-half (0.5) for structures with flexible diaphragms.
6. Deflection amplification factor, C_d, for use with ASCE 7 Sections 12.8.6, 12.8.7, and 12.9.1.2
7. Heights are measured from the base of the structure as defined in ASCE 7 Section 11.2.
8. NL = Not Limited
9. SDC = Seismic Design Category

6.3.3 *Perforated Shear Walls:*

6.3.3.1 Owens Corning® EZSheath™ wood-framed wall assemblies are permitted to be designed in accordance with the methodology found in SDPWS with the following exceptions:

6.3.3.1.1 *2015 SDPWS:*

6.3.3.1.1.1 C_o from Equation 4.3-5 in 2015 SDPWS shall be replaced by the equation presented below:

$$C_O = \frac{r}{(1.4 - 0.4 \times r)} \times \frac{L_{tot}}{\sum L_i}$$

$$r = \frac{1}{1 + \frac{A_o}{h\Sigma L_i}}$$

Where:

C_o = shear resistance adjustment factor

r = sheathing area ratio

L_{tot} = total length of the perforated shear wall (including the lengths of perforated shear wall segments, and the lengths of segments containing openings), [ft]

A_o = total area of openings, [ft^2]

h = height of wall, [ft]

ΣL_i = sum of the length of full-height sections, [ft]

6.3.3.1.1.2 For wall diaphragm design, the maximum aspect ratio for full height braced wall segments shall be 4:1, instead of 3.5:1 as listed in SDPWS Section 4.3.4.3. The other requirements of SDPWS Section 4.3 shall be followed, including the adjustment factor for aspect ratio of perforated shear wall segments greater than 2:1 found in SDPWS Section 4.3.4.3.

6.3.3.1.2 *2021 SDPWS:*

6.3.3.1.2.1 C_o from Equation 4.3-5 in 2021 SDPWS shall be replaced by the equation presented below:

$$C_O = \frac{A_{wall}}{(1.4 \times A_o + A_{fhs})}$$

Where:

C_o = shear resistance adjustment factor

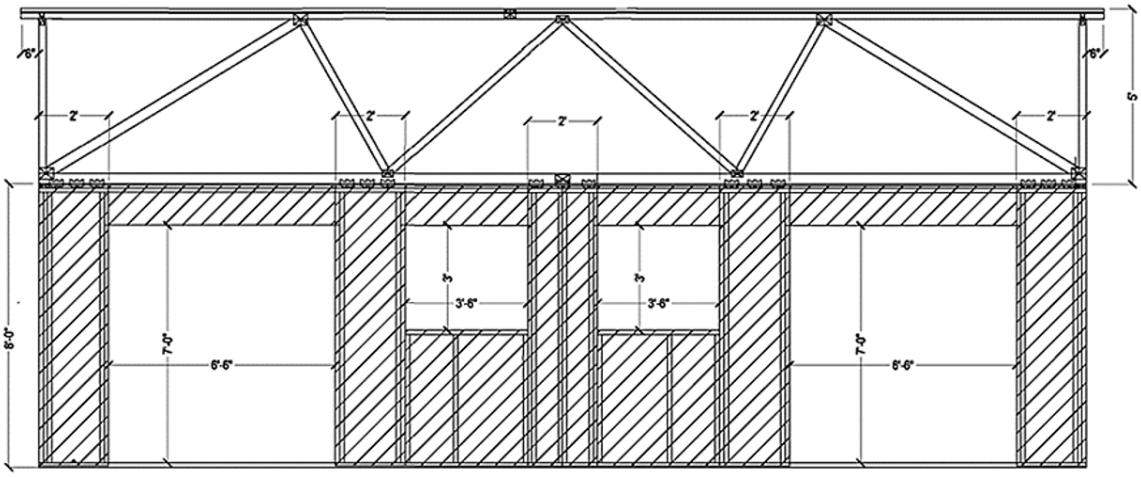
A_{wall} = total (gross) area of the perforated wall equal to the length of the wall times the height, [ft^2]

A_o = total area of openings in the perforated wall where the individual openings areas are calculated as the opening width times the clear height, [ft^2]

A_{fhs} = total area sheathed with full-height sheathing regardless of whether individual wall segments meet the aspect ratio limits in 2021 SDPWS Section 4.3.3.4, [ft^2]

6.3.3.1.2.2 For wall diaphragm design, the maximum aspect ratio for full height braced wall segments shall be 4:1, instead of 3.5:1 as listed in SDPWS Section 4.3.3.3. The other requirements of SDPWS Section 4.3 shall be followed, including the adjustment factor for aspect ratio of perforated shear wall segments greater than 2:1 found in SDPWS Section 4.3.3.4.

6.3.3.2 **Figure 4** shows how to calculate the capacity of a perforated Owens Corning® EZSheath™ shear wall using the equation in **Section 6.3.3.1.1.1**.



Calculation Steps (SDPWS 2016 Example)

1. The total length of the perforated shear wall (including the lengths of perforated shear wall segments, and the lengths of segments containing openings), L_{tot}, is 30'.
2. The height of the perforated shear wall, h, is 8'.
3. The sum of the perforated shear wall segment lengths (full-height sheathing), ΣL_i, is 10'.
4. The total area of the openings, A_o, is:
   4.1 Two (2) 7' x 6' 6" openings – 45.5 sq. ft. x 2 = 91 sq. ft.
   4.2 Two (2) 3' x 3' 6" openings – 10.5 sq. ft. x 2 = 21 sq. ft.
   4.3 Total opening area is: 91 + 21 = 112 sq. ft.
5. Since the aspect ratio of the wall segment is greater than 2:1, each segment is multiplied by $2b_s/h$ per SDPWS Section 4.3.4.3.

$$L_i = 2\left(\frac{2 \times 2}{8}\right) = 1$$

6. The sheathing area ratio, r, is:

$$r = \frac{1}{1 + \frac{A_o}{h\Sigma L_i}} = \frac{1}{1 + \frac{112}{8 \times 5}} = 0.263$$

7. The shear capacity adjustment factor, C_a, is:

$$C_O = \frac{r}{1.4 - 0.4 \times r} \times \frac{L_{tot}}{\Sigma L_i} = \frac{0.263}{1.4 - 0.4 \times 0.263} \times \frac{30}{5} = 1.22$$

8. From **Table 8**, the nominal shear strength per unit length (allowable unit shear capacity), v_n, is 350 plf for the assumed Owens Corning® EZSheath™ assembly (stud spacing of 16" o.c. with no GWB on the interior).
9. In accordance with Section 4.3.3.5 in SDPWS, the nominal (allowable) shear capacity of this perforated shear wall, V_n, is:

$$V_n = v_n \times \Sigma L_i \times C_O = 350\ plf \times 5\ ft. \times 1.22 = 2{,}135\ lbs.$$

Figure 4. Example of a Perforated Shear Wall

6.3.4 *Transverse Load Resistance:*

6.3.4.1 Owens Corning® EZSheath™ panels are permitted to resist transverse wind load forces using the allowable transverse loads set forth in **Table 10**, and the basic wind speeds in **Table 11**.

6.3.4.2 Required component and cladding loads to be resisted are found in IBC Section 1609.1.1, IRC Table R301.2.1(1), and IRC Table R301.2.1(2).[31]

Table 10. Transverse (Out-of-Plane) Wind Load Resistance (ASD)[1,3,4]

Structural Sheathing Product	Panel Thickness (in)	Minimum Fastener Diameter[2] (in)	Minimum Fastener Embedment (in)	Fastener Spacing (in. o.c)	Stud Spacing (in)	Direction	Allowable Design Value (psf)
Owens Corning® EZSheath™	0.5"	0.131"	1 3/8"	3":6"	16" o.c.	Positive or Negative	126.3
		0.113"	1 7/8"	6":12"	16" o.c.		50
					24" o.c.		45
				3":6"	16" o.c.		115
					24" o.c.		85
	1.0"	0.131"	1 3/8"	3":6"	16" o.c.	Negative	94.2
						Positive	433.9
					24" o.c.	Negative	83.0
						Positive	268.5
	1.0"	0.113"	1 3/8"	6":12"	16" o.c.	Positive or Negative	55
					24" o.c.		50
				3":6"	16" o.c.		95
					24" o.c.		80
	2.0"	0.131"	1 1/4"	6":12"	16" o.c.		55
					24" o.c.		40
				3":6"	16" o.c.		120
					24" o.c.		85
	1.0" < t ≤ 3.0"	0.148"	1 1/2"	3":6"	16" o.c.	Negative	94.2
						Positive	433.9
					24" o.c.	Negative	83.0
						Positive	268.5

SI: 1 in = 25.4 mm, 1 psf = 0.0479 kN/m²

1. Tested in accordance with ASTM E330.
2. Attachment to wood framing having a minimum specific gravity of 0.42.
3. Design wind load capacity shall be in accordance with IBC Section 1609.1.1.
4. Fasteners shall be installed with the head in contact with the face of the structural sheathing. Fastener edge distance shall be a minimum of 3/8" on all sides of the board.

Table 11. Basic Wind Speed for Use in Exterior Wall Covering Assemblies[1,4,5,6]

Structural Sheathing Product	Components and Cladding Wind Speed (mph)					
	Basic Design Wind Speed[2] (V_{ult})			Allowable Stress Design Wind Speed[3] (V_{asd})		
	Exposure B	Exposure C	Exposure D	Exposure B	Exposure C	Exposure D
Owens Corning® EZSheath™	200	200	186	155	155	144

SI: 1 mph = 1.61 km/h

1. Design wind load capacity shall be in accordance with ASCE 7-22 as specified in IBC Section 1609.1.1.
2. Allowable wind speeds are based on the following:
   a. A building height of 30-feet, GC_p= -1.4 for Zone 5 and an Effective Wind Area of 10 ft²
   b. Topographic Factor: K_{zt}=1.0 and Ground Elevation Factor: K_e=1.0
   c. Internal Pressure Coefficient, GC_{pi}=+/-0.18 for an enclosed building
   d. K_d = 0.85 for *"Component and Cladding"*
3. IBC Section 1609.3.1: $V_{asd} = V_{ult}\sqrt{0.6}$
4. Reported V_{asd} is capped at 155 mph. Reported V_{ult} is capped at 200 mph.
5. Attachment to wood framing having a minimum specific gravity of 0.42 and spaced a maximum of 24" o.c.
6. Applies to both negative and positive wind load.

6.3.5 *Uplift Resistance:*

6.3.5.1 Owens Corning® EZSheath™ wall assemblies were evaluated for uplift resistance in accordance with ASTM E72.

6.3.5.1.1 Walls sheathed with Owens Corning® EZSheath™ panels are permitted to resist uplift forces using the allowable uplift loads (in pounds per linear foot) set forth in **Table 12**.

Table 12. Uplift Performance[1,2,3]

Structural Sheathing Product	Panel Thickness (in)	Minimum Fastener Diameter[4] (in)	Minimum Fastener Embedment (in)	Fastener Spacing (in. o.c)	Stud Spacing (in. o.c.)	Allowable Uplift Capacity (plf)
Owens Corning® EZSheath™	0.5" – 1.0"	0.113"	1 3/8"	6":12"	16" o.c.	220
					24" o.c.	180
				3":6"	16" o.c.	250
					24" o.c.	245
	0.5" – 2.0"	0.131"	1 1/4"	6":12"	16" o.c.	220
					24" o.c.	185
				3":6"	16" o.c.	255
					24" o.c.	235
	0.5" < t ≤ 1.0"	0.131"	1 3/8"	3":6"	16" o.c.	280
					24" o.c.	270
	1.0" < t ≤ 3.0"	0.148"	1 1/2"	3":6"	16" o.c.	280
					24" o.c.	270

SI: 1 in = 25.4 mm, 1 lb/ft = 0.0146 kN/m

1. The capacities shown are for the purpose of providing information on the hold-down capacity of the sheathing to the bottom plate connection independent of lateral loading. Where combined shear and uplift loading is needed, consult a professional engineer.
2. Attachment to wood framing having a minimum specific gravity of 0.42. Fastener edge distance shall be a minimum of 3/8". Fastener head shall be flush with the panel surface.

6.3.6 *Steel-Framed Construction:*

6.3.6.1 Where applicable, per IBC Section 2206.1,[32] design and installation of structural walls or shear walls shall be in accordance with AISI S240 or AISI S400, as shown in IBC Section 2206.1.1.1.

6.3.6.1.1 For detached one and two-family dwellings and townhouses less than or equal to three stories above grade, structural walls or shear walls shall be permitted to be designed and installed in accordance with AISI S230 per IBC Section 2206.1.2.[33]

6.3.6.1.2 Owens Corning® EZSheath™ panels are permitted be used as an alternative sheathing material to the ones prescribed in AISI S230, AISI S240, and AISI S400.

6.3.6.2 Owens Corning® EZSheath™ panels used in steel-framed construction resist lateral wind load forces using the allowable shear loads (in pounds per linear foot) set forth in **Table 13**.

6.3.6.3 Owens Corning® EZSheath™ panels used in steel-framed construction resist lateral seismic forces using the allowable shear loads (in pounds per linear foot) set forth in **Table 14**.

Table 13. Allowable Shear Values for Owens Corning® EZSheath™ on 16-Gauge 50 ksi CFS Studs[1,3] - Wind

Structural Sheathing Product	Product Thickness (in)	Fastener Type[2,4]	Maximum Fastener Spacing (edge:field) (in)	Maximum Stud Spacing (in)	Allowable Unit Shear Capacity (plf)
Owens Corning® EZSheath™	0.5" – 1.0"	#8 x 1 1/2" Self-Drilling Screws	3:6	16 o.c.	455
		0.100" x 1 1/2" Aerosmith® VersaPin®	4:6	24 o.c.	330
		0.100" x 1 1/2" Aerosmith® VersaPin®	6:12	24 o.c.	195

SI: 1 in = 25.4 mm, 1 lb/ft = 0.0146 kN/m

1. Cold-Formed Steel (CFS) studs shall be minimum 16-gauge (54 mil), 50 ksi steel studs.
2. Owens Corning® EZSheath™ panels shall be attached to CFS studs with the specified fasteners with a minimum edge distance of 3/8". Fastener shall not penetrate through the exterior polymer facer.
3. Where GWB is not installed on the interior face of the wall, the wall shall be constructed with mid-height horizontal bracing installed every other cavity space.
4. The length of the fasteners listed are minimums for the 1.0" Owens Corning® EZSheath™ panels. For the 0.5" Owens Corning® EZSheath™ panels, fastener length is permitted to be reduced in accordance with **Section 9.5.2.2**.

Table 14. Seismic Allowable Unit Shear Capacity and Seismic Design Coefficients for Light-Frame (Steel) Walls Sheathed with Owens Corning® EZSheath™[5]

Product	Product Thickness (in)	Max. Stud[1] Spacing (in)	Seismic Allowable Unit Shear Capacity (plf)	Apparent Shear Stiffness G_a (kips/in)	Response Modification Factor, R[6]	System Overstrength Factor, Ω_0[7]	Deflection Amplification Coefficient C_d[8]	Structural System Limitations and Building Height Limit,[9,10] (ft)				
								SDC[1]				
								B	C	D	E	F
Owens Corning® EZSheath™	0.5" – 1.0"	16 o.c.	1702	3.9	6.5	3	4	NL	NL	65	65	65
		24 o.c.	1953	4.7	6.5	3	4	NL	NL	65	65	65
		24 o.c.	1554	5.5	6.5	3	4	NL	NL	65	65	65

SI: 1 in = 25.4 mm, 1 lb/ft = 0.0146 kN/m, 1 psi = 0.00689 MPa

1. CFS studs shall be minimum 16-gauge, 50 ksi steel studs
2. Owens Corning® EZSheath™ attached to studs with minimum #8 x 1 1/2" self-drilling screws spaced 3" o.c. along the perimeter and 6" in the field with a minimum edge distance of 3/8".
3. Owens Corning® EZSheath™ panels attached to studs with minimum 0.100" x 1 1/2" Aerosmith VersaPin spaced 3" o.c. along the perimeter and 6" in the field with a minimum edge distance of 3/8".
4. Owens Corning® EZSheath™ panels attached to studs with minimum 0.100" x 1 1/2" Aerosmith VersaPin spaced 6" o.c. along the perimeter and 12" in the field with a minimum edge distance of 3/8".
5. All seismic design parameters follow the equivalency as defined in **Section 4.4** and **Section 8**.
6. Response modification coefficient, R, for use throughout ASCE 7. *Note:* R reduces forces to a strength level, not an allowable stress level.
7. The tabulated value of the overstrength factor, Ω_0, is permitted to be reduced by subtracting one-half (0.5) for structures with flexible diaphragms.
8. Deflection amplification factor, C_d, for use with ASCE 7 Sections 12.8.6, 12.8.7, and 12.9.1.2
9. Heights are measured from the base of the structure as defined in ASCE 7 Section 11.2.
10. SDC = Seismic Design Category

6.4 *Fastener Connections*

6.4.1 Owens Corning® EZSheath™ panels were evaluated for fastener withdrawal resistance and lateral resistance.

6.4.2 Allowable withdrawal and lateral values are listed in **Table 15**.

Table 15. Fastener Connection Performance[1]

Structural Sheathing Product	Allowable Withdrawal Capacity (lb)	Allowable Lateral[2] Capacity (lb)
Owens Corning® EZSheath™	20	35

SI: 1 in = 25.4 mm, 1 lb = 4.45 N

1. Minimum fastener diameter shall be 0.099" and shall be of sufficient length to penetrate through the thickness of the panel and protrude 3/8" beyond the opposite side of the panel.
2. Evaluated with a 1/4" ASTM A36 steel plate side member.

6.5 *Water-Resistive Barrier (WRB)*

6.5.1 Owens Corning® EZSheath™ wall assemblies were evaluated for water penetration performance in accordance with ASTM E331 as specified in IBC Section 1402.2, IBC Section 1403.2, and IRC Section R703.1.1.

6.5.2 Owens Corning® EZSheath™ panels shall be installed with board joints placed directly over exterior framing spaced a maximum of 24" (406 mm) o.c.

6.5.2.1 Vertical joints shall be supported by framing members.

6.5.2.2 Horizontal joists shall be supported by framing members or blocking.

6.5.3 The fasteners used to attach the board shall be installed in accordance with **Table 1** through **Table 14**, and **Section 9**, as applicable.

6.5.4 A separate WRB may also be used. If a separate WRB method is used, sealing of the sheathing joints is not required.

6.5.5 Flashing must be installed at all sheathing penetrations and shall comply with all the applicable code sections.

6.5.5.1 All joints between sheathing panels shall be covered by minimum 3" (76 mm) wide tape (self-adhered membrane) that complies with AAMA 711 in accordance with IBC Section 1404.4 and IRC Section R703.4. See the following for examples:

6.5.5.1.1 Tape for window openings as an approved assembly is specified as minimum 6" (152 mm) wide FlashSealR® Foam Flashing Tape.

6.5.5.1.2 Tape for the head, sill, and jamb of the window and Owens Corning® EZSheath™ wall assemblies shall be minimum 4" (102 mm) wide JointSealR® Foam Joint Tape.

6.5.5.1.3 Tape for the seams between Owens Corning® EZSheath™ panels and penetrations as an approved assembly is specified as 3" wide HomeSealR® Foam Joint Tape.

6.6 *Thermal Resistance (R-Value)*

6.6.1 Owens Corning® EZSheath™ panels meet the continuous insulated sheathing requirements complying with the provisions of IECC Section C402 and IECC Section R402.

6.6.2 Owens Corning® EZSheath™ panels have the thermal resistance shown in **Table 16**.

Table 16. Thermal Resistance Properties

Structural Sheathing Product	Thickness (in)	R-Value (h·ft²-°F/Btu)	U-Value (Btu/h·ft²-°F)
Owens Corning® EZSheath™	0.5"	2.5	0.40
	0.58"	3.0	0.33
	1.0"	5.0	0.20
	1.5"	7.5	0.13
	2.0"	10.0	0.10
	2.5"	12.5	0.08
	3.0"	15.0	0.07
SI: 1 in = 25.4 mm, 1 °F-ft²-h/Btu = 0.1761 K-m²/W, 1 Btu/h·ft²-°F = 5.678 W/K-m²			

6.7 *Air Barrier*

6.7.1 Owens Corning® EZSheath™ wall assemblies were evaluated to assess air leakage performance in accordance with ASTM E2357 per IECC Section C402.6.2.3.2.[34]

6.7.1.1 Opaque assemblies and assemblies with penetrations (e.g., pipes, ducts, junction boxes, windows, etc.) sheathed with Owens Corning® EZSheath™ panels met the requirements for use as an air barrier assembly and air permeance is provided in **Table 17**.

6.7.2 When used as part of a continuous air barrier assembly, Owens Corning® EZSheath™ panels shall be installed in accordance with **Table 1** through **Table 14**, **Section 6.4**, and **Section 9**, as applicable.

6.7.3 All sheathing edges at the top and bottom of wall assemblies, and all joints between sheathing panels, shall be sealed in accordance with IRC Section N1102.5.1.1,[35] IECC Section R402.5.1.1,[36] and IECC Section C402.6.1.[37] All joints between sheathing panels shall be covered by minimum 3" (76 mm) wide tape (self-adhered membrane) that complies with IBC Section 1404.4 and IRC Section R703.4.

Table 17. Air Barrier Properties[1,2,3]

Product	Wall Construction Type	Air Permeability [L/(s·m²)]
Owens Corning® EZSheath™	Opaque	< 0.2
	Penetrated	< 0.2

Imperial Units: 1 L/(s·m²) = 0.2 cfm/ft²

1. Tested in accordance with ASTM E2357.
2. Air permeability reading taken at 75 Pa.
3. Minimum thickness of the Owens Corning® EZSheath™ panels shall be ½".

6.8 *Fire Performance*

6.8.1 Owens Corning® EZSheath™ panels were evaluated for performance under fire exposure are provided in **Table 18**.

6.8.1.1 Surface burning characteristics were evaluated in accordance with ASTM E84 per IBC Section 2603.3.

6.8.1.2 As specified in IBC Section 2606.4, per IBC Section 2605.2, the Owens Corning® EZSheath™ panels were assessed for the following:

6.8.1.2.1 Burning extent/burning rate in accordance with ASTM D635

6.8.1.2.2 Self-ignition temperature in accordance with ASTM D1929

6.8.1.2.3 Smoke density in accordance with ASTM D2843

Table 18. Fire Performance of Owens Corning® EZSheath™ Panels

Evaluated Property		Owens Corning® EZSheath™ Component	Reference Standard	Assessed Performance
Burning Rate		Panel Facer	ASTM D635	1.0 in./min.
Burning Extent				3 in.
Combustibility Classification				C-2
Self-Ignition Temperature			ASTM D1929	> 650°F
Smoke Density			ASTM D2843	≤ 75
Surface Burning Characteristics	Flame Spread Index	Panel Facer	ASTM E84	< 75
	Smoke Developed Index			≤ 450
	Flame Spread Index	Foam Core		< 25
	Smoke Developed Index			< 450

6.9 *High Velocity Hurricane Zone (HVHZ)*

6.9.1 The 1/2" Owens Corning® EZSheath™ panel was evaluated for use in HVHZ.

6.9.1.1 An Owens Corning® EZSheath™ wall assembly was evaluated in accordance with TAS 201, TAS 202, and TAS 203 as specified in FBC-B Section 1405.1 and FBC-B Section 1626.2 for use on buildings or structures constructed in HVHZ.

6.9.1.2 When installed in accordance with **Section 9**, Owens Corning® EZSheath™ sheathed wall assemblies achieved design wind pressures of +120 psf/-120 psf.

6.9.1.2.1 Owens Corning® EZSheath™ sheathed wall assemblies met the impact criteria (TAS 201), uniform static air pressure criteria (TAS 202) and cyclic wind pressure criteria (TAS 203) for use in HVHZ per FBC-B Section 1620, FBC-B Section 1625, and FBC-B Section 1626.2.

6.9.2 Owens Corning® EZSheath™ sheathed wall assemblies detailed in **Section 9** and this section are exempt from outdoor durability evaluation detailed in FBC-B Section 2615.2, because Owens Corning® EZSheath™ is not intended for outdoor exposure and will be covered by an exterior wall covering.[38]

6.10 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[39]

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.[40]

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.[41]

8 Regulatory Evaluation and Accepted Engineering Practice

8.1 Owens Corning® EZSheath™ panels comply with the following legislatively adopted regulations and/or accepted engineering practice for the following reasons:

8.1.1 Owens Corning® EZSheath™ panels were evaluated to determine:

8.1.1.1 Lateral force resisting systems for use in both wind and seismic applications follow the performance-based provisions of IBC Section 2306.1, IBC Section 2306.3, and/or SDPWS Section 4.3 for light-frame wood wall assemblies.

8.1.1.1.1 **Table 9** and **Table 14** provide SDC that conform to the requirements in ASCE 7 Section 12.2.1, 12.2.1.1, and Table 12.2-1 for design of wall assemblies in buildings that require seismic design.

8.1.1.1.2 The basis for equivalency testing is outlined in Section 12.2.1.1[42] of ASCE 7:

> **Alternative Structural Systems.** Use of seismic force-resisting systems not contained in Table 12.2-1 shall be permitted contingent on submittal to and approval by the Authority Having Jurisdiction and independent structural design review of an accompanying set of design criteria and substantiating analytical and test data. The design criteria shall specify any limitations on system use, including Seismic Design Category and height; required procedures for designing the system's components and connections; required detailing; and the values of the response medication coefficient, R; overstrength factor, Ω_0; and deflection amplification factor, C_d.

8.1.1.1.3 The basis of the seismic evaluation performed as part of this report is based on ASTM D7989 and testing per ASTM E2126 to establish SDC that conform to the requirements of ASCE 7 Section 12.2.1.1.

8.1.1.2 Structural performance under lateral load conditions for use as an alternative to SDPWS Section 4.3 Wood Frame Shear Walls.

8.1.1.3 Structural performance under lateral load conditions (wind and seismic) for use as an alternative to the IRC Intermittent Wall Bracing provisions specified in IRC Section R602.10 for Method WSP (Wood Structural Panel) and Method PFH (Portal Frame with Hold-downs).

8.1.1.4 Structural performance under lateral load conditions (wind and seismic) for use as an alternative to the IRC Continuous Sheathing Wall Bracing provisions specified in IRC Section R602.10 for Method CS-WSP (Continuously Sheathed Wood Structural Panel) and CS-PF (Continuously Sheathed Portal Frame).

8.1.1.5 Structural performance under lateral load conditions for use as an alternative to the Conventional Wall Bracing provisions specified in IBC Section 2308.10[43] Method WSP, for Type V construction.

8.1.1.6 Resistance to uplift loads for wall assemblies used for light-frame wood construction in accordance with IBC Section 1609 and IRC Section R301.2.1.

8.1.1.7 Resistance to transverse loads for wall assemblies used in light-frame wood construction in accordance with IBC Section 1609.1.1 and IRC Section R301.2.1.

8.1.1.8 Foam plastic insulation sheathing component conformance with IBC Section 2603 and IRC Section R303.[44]

8.1.1.9 Performance for use as insulated sheathing in accordance with IECC Section C402 and IECC Section R402.

8.1.1.10 Performance for use as an air barrier system in accordance with IRC Section N1102.5.1,[45] IECC Section R402.5.1.1,[46] and IECC Section C402.6.1.[47]

8.1.1.11 Performance for use as a WRB in accordance with IBC Section 1403.2 and IRC Section R703.2.

8.1.1.12 Performance for use in HVHZ in accordance with TAS 201, TAS 202, and TAS 203 as specified in FBC-B Section 1405.1 and FBC-B Section 1626.2.

8.2 Any building code, regulation and/or accepted engineering evaluations (i.e., research reports, duly authenticated reports, etc.) that are conducted for this Listing were performed by DrJ, which is an ISO/IEC 17065 accredited certification body and a professional engineering company operated by RDP or approved sources. DrJ is qualified[48] to practice product and regulatory compliance services within its scope of accreditation and engineering expertise,[49] respectively.

8.3 Engineering evaluations are conducted with DrJ's ANAB accredited ICS code scope of expertise, which is also its areas of professional engineering competence.

9 Installation

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

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

9.3 At a minimum, Owens Corning® EZSheath™ panels shall be fastened to structural framing members in accordance with the sections for wood structural panels in IBC Table 2304.10.2 and IRC Table R602.3(1).

9.4 *Orientation*

9.4.1 Owens Corning® EZSheath™ panels may be installed vertically or horizontally over studs with framing that have a nominal thickness of not less than 2" (50.8 mm) and spaced a maximum of 24" (610 mm) o.c.

9.4.2 Sheathing joints must be butted at framing members and all panel edges shall be blocked. A single row of fasteners must be applied to each panel edge into the stud or blocking below. Do not tack product to framing, but fasten each panel completely after fastening begins.

9.5 *Installation*

9.5.1 *General:*

9.5.1.1 Fasteners shall be installed with a nominal edge distance of $^3/_8$" (9.5 mm) for both Owens Corning® EZSheath™ panels and GWB.

9.5.1.2 Where hold-down straps are used, install structural sheathing first, remove foam at strap location, then install the strap over the face of the structural sheathing backer and attach per the manufacturer installation instructions.

9.5.1.3 Where required, gypsum wallboard shall be a minimum $^1/_2$" and installed with a minimum of #6 x $1^1/_4$" Type W or S screws. The fastener spacing shall be a maximum of 8" o.c. (76 mm) along the edge and in the field.

9.5.2 *Owens Corning® EZSheath™:*

9.5.2.1 For light-frame wood walls, Owens Corning® EZSheath™ panels shall be fastened with minimum 0.113" diameter nails with a $1^3/_8$" minimum embedment into stud unless otherwise specified in **Section 6**.

9.5.2.1.1 Fastener spacing shall be a maximum of 6" o.c. (76.2 mm) along the edge and 12" o.c. in the field unless otherwise permitted in **Section 6**.

9.5.2.2 For light-frame steel walls, Owens Corning® EZSheath™ panels shall be fastened with minimum #8 self-drilling screw or 0.100″ x 1 1/2″ Aerosmith VersaPin nails.

9.5.2.2.1 Unless otherwise stated in **Section 6**,

9.5.2.2.1.1 Screws shall be of sufficient length to fully penetrate through the cold-formed steel framing members with a minimum three threads beyond the thickness of the framing member.

9.5.2.2.1.2 Knurled nails shall be of sufficient length that the knurled portion of the shank must penetrate completely through the steel thickness.

9.5.2.2.2 Fastener spacing shall be a maximum of 6" o.c. (102 mm) along the edge and 12" o.c. in the field unless otherwise stated in **Section 6**.

9.5.3 *GWB:*

9.5.3.1 Where required, GWB shall be a minimum 1/2" thickness and shall be attached with #6 x 1 1/4" Type W or S screws.

9.5.3.2 Fastener spacing shall be as specified in **Section 6**.

9.6 *Penetrations and Window Treatments*

9.6.1 Owens Corning® EZSheath™ panels must be installed with appropriate flashing and counter flashing in conformance with accepted building standards and in compliance with local building codes and the flashing manufacturer installation instructions.

9.7 *HVHZ Installation Details*

9.7.1 Walls shall be sheathed with 1/2" thick Owens Corning® EZSheath™ panels using minimum 8d common nails spaced 3" o.c. (76.2 mm) along the edge and 6" o.c. in the field. See **Figure 5** and **Figure 6**.

9.7.1.1 Wall framing shall be applied to minimum 2 x 6, No. 2 Spruce-Pine-Fir per FBC Section 2317.1.2 and FBC Section 2318.1.1, and spaced not more than 16" (406 mm) on center per FBC Section 2318.1.2 unless design by an RDP.

9.7.1.2 At a minimum, wall sheathing shall be continuous over three or more supports.

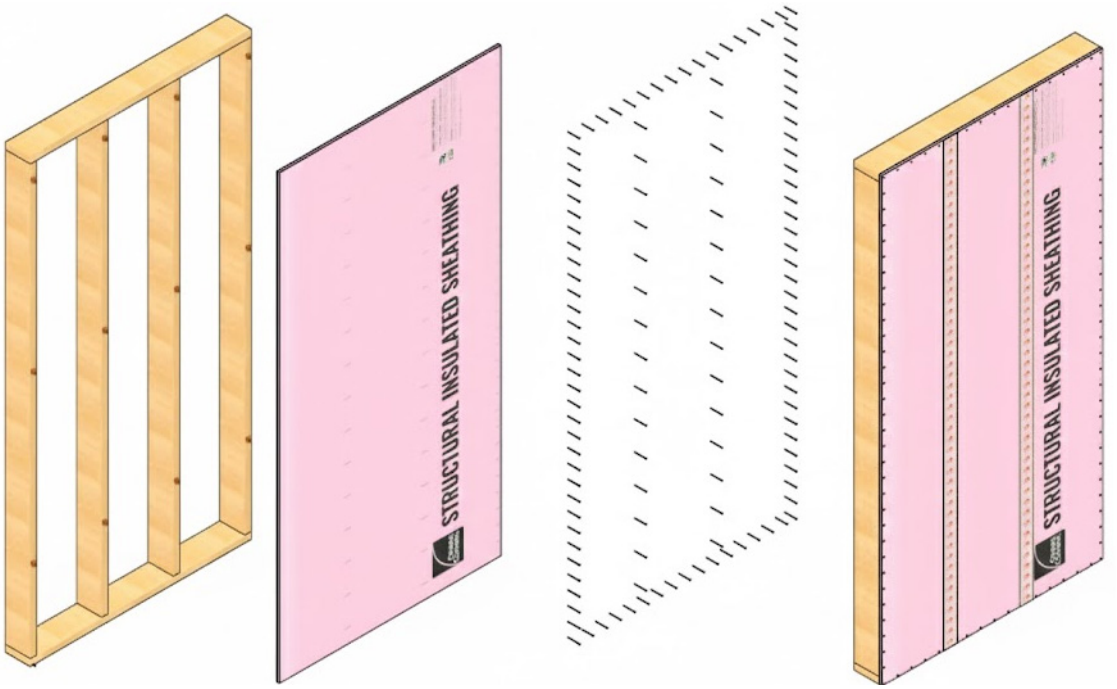


Figure 5. Owens Corning® EZSheath™ – Installation Overview

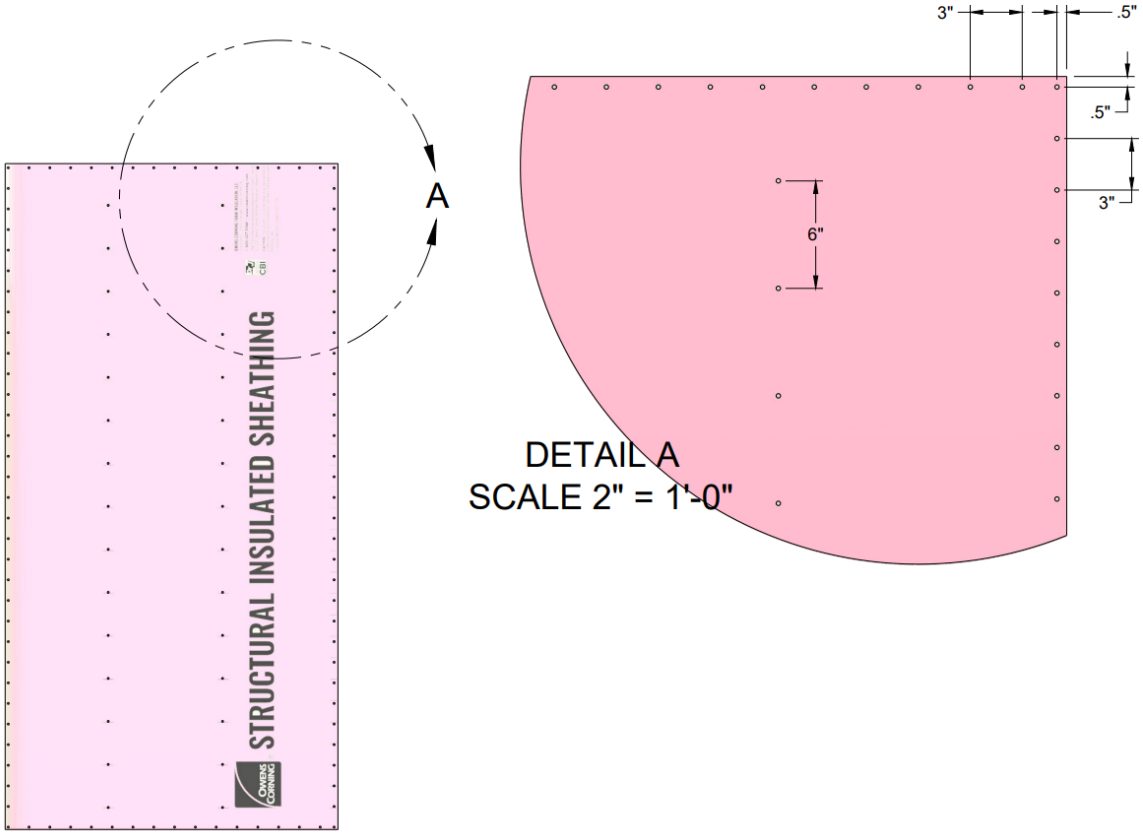


Figure 6. Owens Corning® EZSheath™ - Fastening Pattern

10 Substantiating Data

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

10.1.1 Lateral load testing for use as an alternative material for wind design in accordance with ASTM E72 and ASTM E564

10.1.2 Lateral load testing and data for determining comparative equivalency for use as an alternative material for seismic design in accordance with ASTM E2126 and analysis per ASTM D7989

10.1.3 Transverse load testing in accordance with ASTM E330

10.1.4 Uplift (axial tension) testing in accordance with ASTM E72

10.1.5 WRB material testing in accordance with ASTM E331

10.1.6 Thermal resistance testing in accordance with ASTM C518

10.1.7 Air barrier testing in accordance with ASTM E2178

10.1.8 Surface burning characteristics testing in accordance with ASTM E84

10.1.9 Smoke density testing in accordance with ASTM D2843

10.1.10 Burning rate testing in accordance with ASTM D635

10.1.11 Self-ignition temperature testing in accordance with ASTM D1929

10.1.12 Impact testing for use in HVHZ in accordance with TAS 201

10.1.13 Wind testing for use in HVHZ in accordance with TAS 202 and TAS 203

10.2 Information contained herein may include the result 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.

10.3 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.

10.4 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.

10.5 *Testing and Engineering Analysis*

10.5.1 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.[50]

10.6 Where additional condition of use and/or regulatory compliance information is required, please search for Owens Corning® EZSheath™ on the DrJ Certification website.

11 Findings

11.1 As outlined in **Section 6**, Owens Corning® EZSheath™ panels have performance characteristics that were tested and/or meet applicable regulations. In addition, they are suitable for use pursuant to its specified purpose.

11.2 When used and installed in accordance with this duly authenticated report and the manufacturer installation instructions, Owens Corning® EZSheath™ panels shall be approved for the following applications:

11.2.1 As structural sheathing on exterior walls of Type V construction in accordance with the IBC.

11.2.2 As structural sheathing on exterior walls constructed in accordance with IRC Section R602.

11.2.3 Use as an equivalent alternative to the PFH as prescribed in IRC Section R602.10.5 and IRC Section R602.10.6.2.

11.2.4 Use as an equivalent alternative to the CS-PF as described in IRC Section R602.10.5 and IRC Section R602.10.6.4.

11.2.5 Lateral load resistance due to wind and seismic loads carried by shear walls, as described in **Table 8** and **Table 9** for wood-framed walls, and **Table 13** and **Table 14** for CFS stud-framed walls.

11.2.6 Transverse load resistance due to components and cladding pressures on building surfaces as described in **Table 10**.

11.2.7 Axial load resistance due to uplift loads induced by wind as described in **Table 12**.

11.2.8 Use as a nailbase as permitted per the allowable withdrawal and lateral capacities provided in **Table 15**.

11.2.9 Use as structural sheathing on walls of buildings or structures located in HVHZ in accordance with FBC-B Section 1405.1 and FBC-B Section 1626.2.

11.3 When installed in accordance with the manufacturer installation instructions and this report, Owens Corning® EZSheath™ panels comply with or are a suitable alternative to, the applicable sections of the codes listed in **Section 4** for the following applications:

11.3.1 Applications where foam plastic insulation sheathing is permitted in accordance with IBC Section 2603 and IRC Section R303.[51]

11.3.2 Performance for use as insulating sheathing in accordance with IRC Section N1102.1, IRC Section N1102.2, IECC Section C402, and IECC Section R402.

11.3.3 Performance for use as a WRB in accordance with IBC Section 1403.2 and IRC Section R703.2.

11.3.4 Performance for use as an air barrier in accordance with IRC Section N1102.5[52] and IECC Section C402.

11.4 Unless exempt by state statute, when Owens Corning® EZSheath™ panels are 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.

11.5 Any application specific issues not addressed herein can be engineered by an RDP. Assistance with engineering is available from Owens Corning®.

11.6 IBC Section 104.2.3 (IRC Section R104.2.2 and IFC Section 104.2.3[53] 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.

11.7 **Approved:**[54] Building regulations require that the building official shall accept duly authenticated reports.[55]

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

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

11.7.3 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.

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

11.9 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.[56]

12 Conditions of Use

12.1 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.

12.2 As listed herein, Owens Corning® EZSheath™ shall not be used:

12.2.1 To resist horizontal loads from concrete and masonry walls.

12.3 Use of Owens Corning® EZSheath™ panels shall be limited to one-story buildings or buildings less than 40 ft. in height.

12.4 Owens Corning® EZSheath™ panels shall be separated from the interior of the building by an approved thermal barrier or ignition barrier (i.e., $^1/_2$" thick gypsum wallboard) where required by the applicable code.

12.5 When Owens Corning® EZSheath™ panels are not installed for use as wall bracing as described in this report, the walls shall be braced by other materials or methods, in accordance with the applicable code.

12.6 When used in accordance with the IBC in Seismic Design Categories C, D, E, or F, special inspections shall comply with IBC Section 1705.13.[57]

12.7 When used in accordance with the IBC in high wind areas, special inspections shall comply with IBC Section 1705.12.[58]

12.8 Design loads shall be determined in accordance with the building code adopted by the jurisdiction in which the project is to be constructed.

12.8.1 Loads applied shall not exceed those set forth in this report:

12.8.1.1 Allowable shear loads shall not exceed values in **Table 8** and **Table 13** for wind loads, and **Table 9** and **Table 14** for seismic loads.

12.8.1.2 Transverse design loads shall not exceed those described in **Table 10**.

12.8.1.3 Axial loads (uplift) shall not exceed values in **Table 12**.

12.9 Owens Corning® EZSheath™ panels shall not be used in regions where wind speeds exceed those described in **Table 11**.

12.10 All panel edges shall be supported by wall framing or solid blocking a minimum of 2" nominal (1.5" actual) thickness.

12.11 For use in HVHZ, wall configurations shall be described in **Section 9**.

12.11.1 In general, for wood-framed walls, lumber shall comply with FBC-B Section 2317, wall construction shall comply with FBC-B Section 2318, and anchorage shall be in accordance with FBC-B Section 2321.

12.12 The manufacturer installation instructions shall be shipped to the jobsite with the materials or otherwise be available on the jobsite for inspection.

12.13 In areas where the probability of a termite infestation is labeled *"very heavy"* for Owens Corning® EZSheath™ panels that are installed on buildings or structures of wood-framed construction, the installation shall follow the provisions of IBC Section 2603.8 and IRC Section R305.4,[59] where applicable.

12.14 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:

12.14.1 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.

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

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

12.14.4 At a minimum, this innovative product shall be installed per **Section 9**.

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

12.14.6 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.

12.14.7 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.

12.15 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.

12.16 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).

12.17 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.

13 Identification

13.1 Owens Corning® EZSheath™, 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.

13.2 Additional technical information can be found at www.owenscorning.com.

14 Review Schedule

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

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

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 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 2021 IRC Section N1102.4

27 2021 IECC Section C402.5.1.4

28 2021 IRC Section R316

29 2021 IBC Section 2308.5.3.2

30 2021 IBC Section 2308.6

31 2018 IRC Table R301.2(3)

32 2021 IBC Section 2211.1

33 2021 IBC Section 2211.1.2

[34] 2021 IECC Section C402.5.1.4

[35] 2021 IRC Section N1102.4.1.1

[36] 2021 IECC Section R402.4.1.1

[37] 2021 IECC Section C402.5.1

[38] EXTERIOR WALL COVERING. A material or assembly of materials applied on the exterior side of exterior walls for the purpose of providing a weather-resisting barrier, insulation or for aesthetics, including but not limited to, veneers, siding, exterior insulation and finish systems, architectural trim and embellishments such as cornices, soffits, fascias, gutters and leaders.

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

[40] 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

[41] 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

[42] ASCE 7-5 and 7-10 Section 12.2.1

[43] 2021 IBC Section 2308.6

[44] 2021 IRC Section R316

[45] 2021 IRC Section N1102.4.1

[46] 2021 IECC Section R402.4.1.1

[47] 2021 IECC Section C402.5.1.

[48] Qualification is performed by a legislatively defined Accreditation Body. ANSI National Accreditation Board (ANAB) is the largest independent accreditation body in North America and provides services in more than 75 countries. DrJ is an ANAB accredited product certification body.

[49] https://anabpd.ansi.org/Accreditation/product-certification/AllDirectoryDetails?prgID=1&orgID=2125&statusID=4#:~:text=Bill%20Payment%20Date-,Accredited%20Scopes,-13%20ENVIRONMENT.%20HEALTH

[50] 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

[51] 2021 IRC Section R316

[52] 2021 IRC Section N1102.4

[53] 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

[54] 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.

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

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

[57] 2018 IBC Section 1705.12

[58] 2018 IBC Section 1705.11

[59] 2021 IRC Section R318.4