Listing and Technical Evaluation Report™

A Duly Authenticated Report from an Approved Agency

Report No: 2404-110

Issue Date: June 9, 2025

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Subject to Renewal: July 1, 2026

Performance Characteristics of Owens Corning® Structural Insulated Sheathing 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 Structural Insulated Sheathing Panel (OC SIS Panel)

2 Product Description and Materials

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

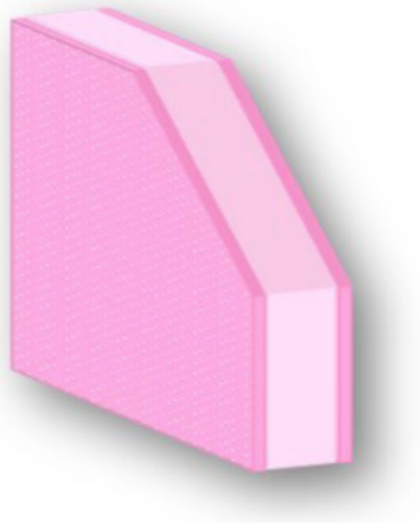


Figure 1. Owens Corning Structural Insulated Sheathing Panel (OC SIS Panel)

2.2 OC SIS Panel is a structural, rigid insulating sheathing product comprised of an extruded polystyrene (XPS) insulation board sandwiched between two proprietary polymer facers (see **Figure 2**).

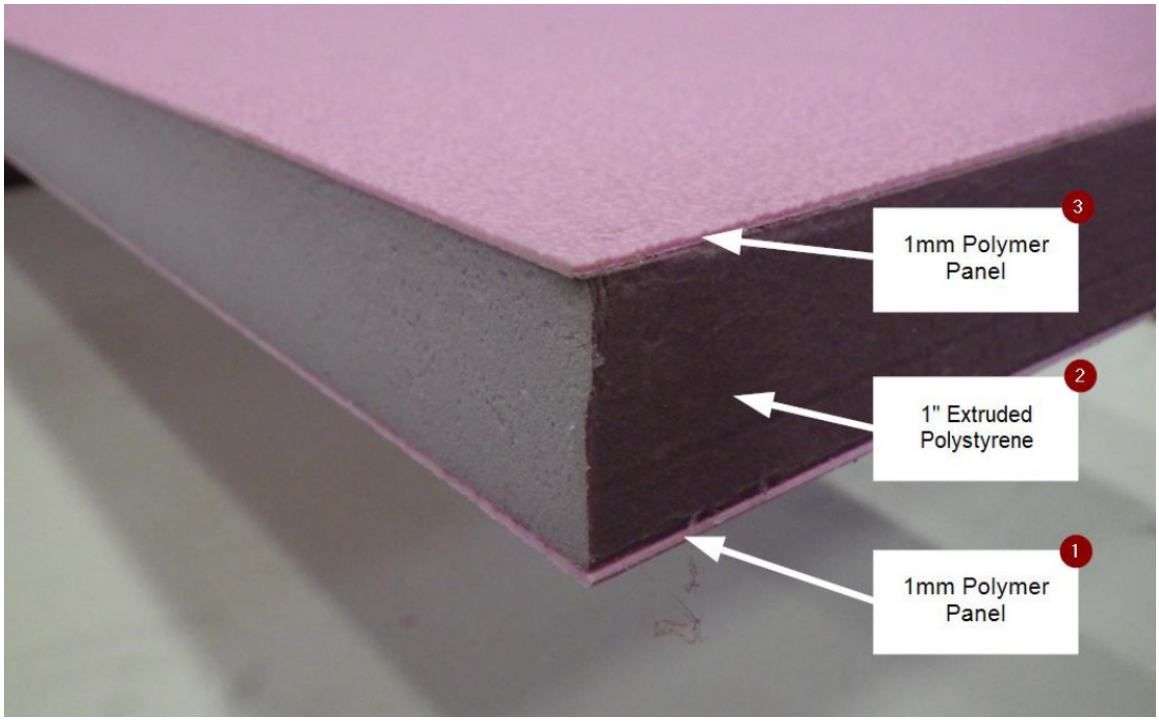


Figure 2. OC SIS Panel – Cross Section, Isometric View

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. OC SIS Panel 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 the following featured local jurisdictions and is not limited to: 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, 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 the following featured states, and is not limited to: California, Florida, New Jersey, Oregon, New York, Texas, Washington, and Wisconsin.[22]

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

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

4.2 *Standards*

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

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

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

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

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

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

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

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

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

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

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

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

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

4.3 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:

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

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

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

4.3.2.2 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.

4.3.2.3 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.

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

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

4.4 *Regulations*

4.4.1 *IBC – 15, 18, 21, 24: International Building Code®*

4.4.2 *IRC – 15, 18, 21, 24: International Residential Code®*

4.4.3 *IECC – 15, 18, 21, 24: International Energy Conservation Code®*

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

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

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 OC SIS 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 in-fill 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[26] and IRC Section R703.2 when installed with approved construction tape on all sheathing seams, see **Section 6.4.5.1**. 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 An approved air barrier assembly where required per IRC Section N1102.5,[27] IECC Section C402, and IECC Section R402, in accordance with IECC Section C402.6.2.3.2,[28] the manufacturer installation instructions, and this report.

6.1.2 OC SIS Panels contain foam plastics complying with IBC Section 2603 and IRC Section R303.[29]

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, OC SIS 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 OC SIS Panel 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 OC SIS Panel shall be 4:1.

6.2.1.5 The minimum OC SIS Panel width for full height panels shall be 24".

6.2.1.6 All OC SIS 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[30] and IRC Section R602.3.2.

6.2.2 *Simplified IRC Bracing Provisions:*

6.2.2.1 OC SIS Panel are permitted to be used in accordance with the simplified bracing method of IRC Section R602.12, as modified by **Table 1**.

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

Table 1. OC SIS Panel Simplified Bracing Table (Panel Thickness: ≤ 3.0")[1,2,3,4,5,6,7,8,9]

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 OC SIS Panel shall replace the sheathing material.
2. For the OC SIS Panels greater than 0.5" and up to 1" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.131" 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 the OC SIS Panels greater than 1" and up to 3" 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. Minimum 1/2" gypsum wallboard (lightweight minimum) shall be fastened to the interior side of the wall in accordance with IRC Section R702.3.5 and IRC Table R702.3.5.
5. Where Gypsum (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 OC SIS Panels may be used in the following applications:

6.2.3.1.1 On braced wall lines 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 OC SIS Panel shall be as shown in **Table 2**, 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 2. Required Bracing Lengths OC SIS Panels (Panel Thickness: ≤3.0") – Wind[1,2,3,4.5,6,8,9]

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 the OC SIS Panels greater than 0.5" and up to 1" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.131" 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 the OC SIS Panels greater than 1", and up to 3" 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.
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" gypsum wallboard (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. Minimum 1/2" gypsum wallboard must be installed as part of the wall assembly. 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 OC SIS Panels shall be as shown in **Table 3**, and shall be used in conjunction with IRC Table R602.10.3(4), which provides the required adjustments.

Table 3. Required Bracing Lengths for OC SIS Panel (Panel Thickness: ≤ 3.0") – Seismic[1,2,3,4,5,6]

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	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 the OC SIS Panels greater than 0.5" and up to 1" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.131" 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 the OC SIS Panels greater than 1" and up to 3" 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.
3. Demonstrates equivalency to IRC Table R602.10.3(3). All adjustment factors from IRC Table R602.10.3(4) shall be applied.
4. Minimum 1/2" gypsum wallboard shall be installed as part of the wall assembly. 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. 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'
6. Linear interpolation is permitted.
7. 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.

6.2.3.6 Required braced wall panel lengths shall be as determined by the equivalency factor as shown in **Table 4**, 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 4. Braced Wall Line Length Equivalency Factors[1,2,5]

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

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 Gypsum (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. OC SIS Panel 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 *OC SIS Panel Portal Frame:*

6.2.4.1 Portal frames sheathed with OC SIS Panels 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 D0, D1, and D2, the contributing length is the actual length.

6.2.4.2 The capacity of the OC SIS Panel PFH exceeds the capacity of the IRC Method WSP, and the capacity of the OC SIS Panel portal frames exceed the capacity of the IRC Method CS-WSP, with the appropriate corresponding contributing brace length.

6.2.4.2.1 OC SIS 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 OC SIS 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 OC SIS 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 OC SIS Panels may be used to brace exterior walls of buildings as an equivalent alternative to Method 3 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,[31] 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 OC SIS 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 5** for Allowable Stress Design (ASD). Walls sheathed with OC SIS Panels may be designed to resist wind loads resulting from winds up to 200 mph (V_{ult}).

6.3.2.1.1 OC SIS 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 5**.

6.3.2.2 OC SIS 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 6** 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 6** 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 5. Allowable Stress Design (ASD) Capacity for OC SIS Panels – Wind[1]

Structural Sheathing Product	Product Thickness (in)	Nail Diameter (in)	Minimum Nail Embedment (in)	Fastener Spacing (edge:field) (in)	Maximum Stud Spacing (in)	GWB Thickness (in)	GWB Fastener[3] Spacing (edge:field) (in)	Allowable Unit Shear Capacity (plf)
OC SIS Panel	0.50 – 1.0	0.131"	1 3/8	3:6	16 or 24 o.c.	-	-	350
	1.0" < t ≤ 2.5"	0.148"	1 1/2		16 o.c.	-	-	350
	2.5" < t ≤ 3.0"	0.148"	1 1/2		16 o.c.	-	-	420
	1.0	0.131"	1 3/8	3:6	16 o.c.	1/2	8:8	405

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

1. Tested in accordance with ASTM E564.
2. OC SIS Panels installed with butted joints on nominal 2x studs with a minimum published SG 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. Gypsum (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 6. Seismic Allowable Unit Shear Capacity (ASD) and Seismic Design Coefficients for Light-Frame (Wood) Walls Sheathed with OC SIS Panel[1,2]

Product	Product Thickness (in)	Maximum Stud Spacing (in)	GWB Fastening Spacing[3] (edge:field)	Seismic Allowable Unit Shear Capacity[4] (plf)	Apparent Shear Stiffness G_a (kips/in)	Response Modification Factor, R[5]	System Over-strength Factor Ω_0[6]	Deflection Amplifi-cation Coefficient C_d[7]	Structural System Limitations and Building Height Limit[8,9] (ft)				
									SDC[10]				
									B	C	D	E	F
OC SIS Panel	0.5 – 3.0	16 o.c.	8:8	335	13.0	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. For the OC SIS Panels greater than 0.5" and up to 1" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.131" 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 the OC SIS Panels greater than 1" and up to 3" 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.
3. GWB shall be fastened with minimum #6 type W or S screws 1 1/4" long. Fasteners shall maintain a minimum edge distance of 3/8".
4. All seismic design parameters follow the equivalency as defined in **Section 4.3** and **Section 8**.
5. Response modification coefficient, R, for use throughout ASCE 7. **Note:** R reduces forces to a strength level, not an allowable stress level.
6. 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.
7. Deflection amplification factor, C_d, for use with ASCE 7 Sections 12.8.6, 12.8.7, and 12.9.1.2
8. Heights are measured from the base of the structure as defined in ASCE 7 Section 11.2.
9. NL = Not Limited
10. SDC = Seismic Design Category

6.3.3 *Perforated Shear Walls:*

6.3.3.1 OC SIS Panels 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

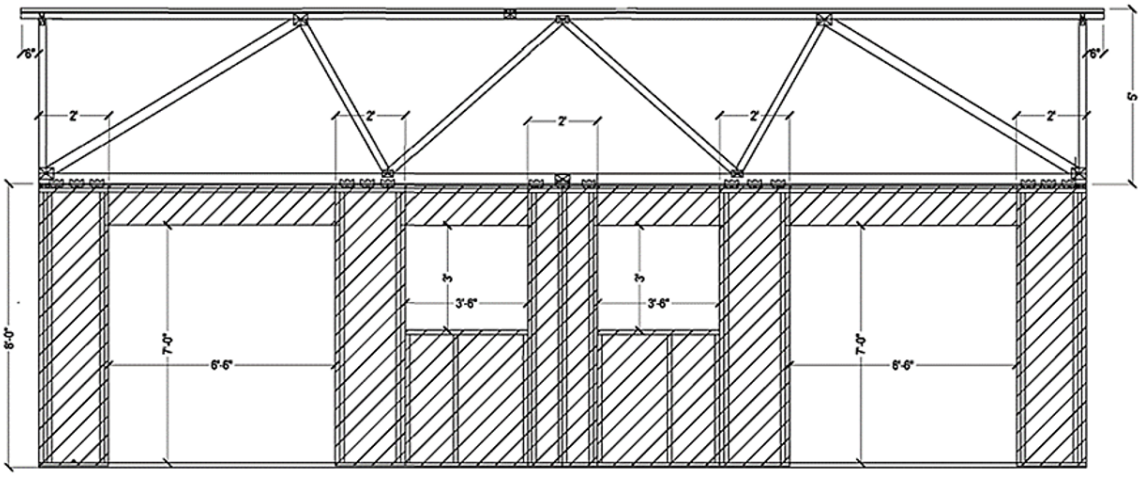
A_{wall} = total (gross) area of the perforated wall equal to the length of the wall times the height, [ft^2]

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 OC SIS Panel 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:

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

From

8. **Table 5**, the nominal shear strength per unit length (allowable unit shear capacity), v_n, is 350 plf for the assumed OC SIS Panel 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 OC SIS Panels are permitted to resist transverse wind load forces using the allowable transverse loads set forth in **Table 7**, and the basic wind speeds in **Table 8**.

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).[32]

Table 7. Transverse (Out-of-Plane) Wind Load Resistance (ASD)[1,3,4]

Structural Sheathing Product	Panel Thickness (in)	Maximum Stud Spacing (in)	Fastener Diameter[2] (in)	Minimum Fastener Embedment (in)	Direction	Allowable Design Value (psf)
OC SIS Panel	0.5	16	0.131"	1 3/8	Negative[5]	126.3
	1.0	16			Negative	94.2
					Positive	433.9
		24			Negative	83.0
					Positive	268.5
	1.0" < t ≤ 3.0"	16	0.148"	1 1/2	Negative	94.2
					Positive	433.9
		24			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.
5. Applicable to loading in the positive (windward) direction.

Table 8. 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
OC SIS Panel	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
   c. Ground Elevation Factor: K_e=1.0
   d. Internal Pressure Coefficient
   e. GC_{pi}=+/-0.18 for an enclosed building
   f. 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 OC SIS Panel wall assemblies were evaluated for uplift resistance in accordance with ASTM E72.

6.3.5.1.1 Walls sheathed with OC SIS Panels are permitted to resist uplift forces using the allowable uplift loads (in pounds per linear foot) set forth in **Table 9**.

Table 9. Uplift Performance[1,2,3]

Structural Sheathing Product	Panel Thickness (in)	Maximum Stud Spacing (in o.c.)	Fastener	Allowable Uplift Capacity (plf)
OC SIS Panel	0.50 – 3.0	16	See Footnote 4 and 5 of this table	280
		24		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
3. Fastener spacing shall be 3" o.c. at the panel edges and 6" o.c. in the field. Fastener edge distance spacing shall be a minimum of $^3/_8$".
4. For the OC SIS Panels greater than 0.5" and up to 1" thick, the panel shall be installed with butted joints on nominal 2x studs using 0.131" 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.
5. For the OC SIS Panels greater than 1" and up to 3" 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.

6.3.6 *Steel-Framed Construction:*

6.3.6.1 Per IBC Section 2206.1,[33] design and installation of structural walls or shear walls shall be in accordance with AISI S240 or AISI S400, where applicable.

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.[34]

6.3.6.1.2 OC SIS Panels is permitted be used as an alternative sheathing material to the ones prescribed in AISI S230, AISI S240, and AISI S400.

6.3.6.2 OC SIS 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 10**.

6.3.6.3 OC SIS Panels used in steel-framed construction resist lateral seismic forces using the allowable shear loads (in pounds per linear foot) set forth in **Table 11**.

Table 10. Allowable Shear Values for OC SIS Panel on 12-Gauge 50 ksi CFS Studs[1,2,3] - Wind

Structural Sheathing Product	Product Thickness (in)	Maximum Fastener Spacing (edge:field) (in)	Maximum Stud Spacing (in)	Allowable Unit Shear Capacity (plf)
OC SIS Panel	0.5	4:6	16 o.c.	455
	1.0			

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

1. Cold-formed steel (CFS) studs shall be minimum 12-gauge, 50 ksi steel studs.
2. OC SIS Panel attached to CFS studs with #8 x 1 1/2" self-drilling screws with a minimum edge distance of 3/8".
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.

Table 11. Seismic Allowable Unit Shear Capacity and Seismic Design Coefficients for Light-Frame (Steel) Walls Sheathed with OC SIS Panels[1,2]

Product	Product Thickness (in)	Maximum Stud Spacing (in)	Seismic Allowable Unit Shear Capacity (plf)	Apparent Shear Stiffness G_a (kips/in)	Response Modification Factor, R[3]	System Overstrength Factor, Ω_0[4]	Deflection Amplification Coefficient C_d[5]	Structural System Limitations and Building Height Limit,[6,7] (ft)				
								SDC[8]				
								B	C	D	E	F
OC SIS Panel	0.5	16 o.c.	365	2.2	2	2 1/2	2	NL	NL	35	NP	NP
	1.0											

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

1. OC SIS Panels attached to CFS studs shall be minimum 12-gauge, 50 ksi steel studs with #8 x 1 1/2" self-drilling screws with a minimum edge distance of 3/8".
2. All seismic design parameters follow the equivalency as defined in **Section 4.3** and **Section 8**.
3. Response modification coefficient, R, for use throughout ASCE 7. **Note:** R reduces forces to a strength level, not an allowable stress level.
4. 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.
5. Deflection amplification factor, C_d, for use with ASCE 7 Sections 12.8.6, 12.8.7, and 12.9.1.2
6. Heights are measured from the base of the structure as defined in ASCE 7 Section 11.2.
7. NL = Not Limited, NP = Not Permitted
8. SDC = Seismic Design Category

6.4 *Water-Resistive Barrier (WRB)*

6.4.1 OC SIS Panels were evaluated for water penetration performance in accordance with ASTM E331 as specified in IBC Section 1402.2 and IRC Section R703.1.1.

6.4.2 OC SIS Panels shall be installed with board joints placed directly over exterior framing spaced a maximum of 24" (406 mm) o.c.

6.4.2.1 Vertical joints shall be supported by framing members.

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

6.4.3 The fasteners used to attach the board shall be installed in accordance with **Table 1** through **Table 11**, and **Section 9**, as applicable.

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

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

6.4.5.1 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:

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

6.4.5.1.2 Tape for the head, sill, and jamb of the window and OC SIS Panels shall be minimum 4" (102 mm) wide JointSealR® Foam Joint Tape.

6.4.5.1.3 Tape for the seams of OC SIS Panels and penetrations as an approved assembly is specified as 3" wide HomeSealR® Foam Joint Tape.

6.5 *Thermal Resistance (R-Value)*

6.5.1 OC SIS Panels meet the continuous insulated sheathing requirements complying with the provisions of IECC Section C402 and IECC Section R402.

6.5.2 OC SIS Panels have the thermal resistance shown in **Table 12**.

Table 12. Thermal Resistance Properties

Structural Sheathing Product	Thickness (in)	R-Value (h·ft²-°F/Btu)	U-Value (Btu/h·ft²-°F)
OC SIS Panel	0.5	2.5	0.40
	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			

6.6 *Air Barrier*

6.6.1 OC SIS Panel assemblies were evaluated to assess air leakage performance in accordance with ASTM E2357 per IECC Section C402.6.2.3.2.[35]

6.6.1.1 Opaque assemblies and assemblies with penetrations (i.e. pipes, ducts, junction boxes, windows, etc.) sheathed with OC SIS Panels met the requirements for use as an air barrier assembly and air permeance is provided in **Table 13**.

6.6.2 When used as part of a continuous air barrier assembly, OC SIS Panels shall be installed in accordance with **Table 1** through **Table 11**, **Section 6.4**, and **Section 9**, as applicable.

6.6.3 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,[36] IECC Section R402.5.1.1,[37] and IECC Section C402.6.1.[38] 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 13. Air Barrier Properties[1,2,3]

Product	Wall Construction Type	Air Permeability [L/(s·m²)]
OC SIS Panel	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 OC SIS Panel shall be 1/2".

6.7 *Surface Burning Characteristics*

6.7.1 The surface burning characteristics of OC SIS Panels are shown in **Table 14**.

Table 14. Surface Burning Characteristics[1]

OC SIS Panel Component	Flame Spread Index	Smoke Developed Index	Classification
Foam Core	< 25	< 450	Class A

1. Tested in accordance with ASTM E84 Ceiling of Tunnel test results.

6.8 Where the application falls outside of the performance evaluation, conditions of use, and/or installation requirements set forth herein, alternative techniques shall be permitted in accordance with accepted engineering practice and experience. This includes but is not limited to the following areas of engineering: mechanics or materials, structural, 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 OC SIS Panels comply with the following legislatively adopted regulations and/or accepted engineering practice for the following reasons:

8.1.1 OC SIS 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 6** and **Table 11** 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 the IBC Section 1403.2[48] and IRC Section R703.2.

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[49] to practice product and regulatory compliance services within its scope of accreditation and engineering expertise,[50] 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.

8.4 Any regulation specific issues not addressed in this section are outside the scope of this report.

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, OC SIS 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 OC SIS Panels may be installed vertically or horizontally over studs with framing that has 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 OC SIS 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 or 5d cooler nails. The fastener spacing shall be a maximum of 8" o.c. (76 mm) along the edge and in the field.

9.5.2 *OC SIS Panel:*

9.5.2.1 Minimum 0.131" x $2^{1}/_{2}$" nails with a 1" minimum embedment into stud unless otherwise stated in **Section 6**.

9.5.2.2 Fastener spacing shall be a maximum of 3" o.c. (76.2 mm) along the edge and 6" o.c. in the field unless otherwise permitted 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 one of the following:

9.5.3.1.1 #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 OC SIS 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.

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

10.2 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.[51]

10.6 Where additional condition of use and/or regulatory compliance information is required, please search for OC SIS Panel on the DrJ Certification website.

11 Findings

11.1 As outlined in **Section 6**, OC SIS 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, OC SIS Panel 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 described 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 5** and **Table 6** for wood-framed walls, and **Table 10** and **Table 11** for CFS stud-framed walls.

11.2.6 Transverse load resistance due to components and cladding pressures on building surfaces as described in **Table 7**.

11.2.7 Axial load resistance due to uplift loads induced by wind as described in **Table 9**.

11.3 When installed in accordance with the manufacturer installation instructions and this report, OC SIS 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.[52]

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[53] and IRC Section R703.2.

11.3.4 Performance for use as an air barrier in accordance with IRC Section N1102.5[54] and IECC Section C402.

11.4 Unless exempt by state statute, when OC SIS 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[55] 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:**[56] Building regulations require that the building official shall accept duly authenticated reports.[57]

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.[58]

12 Conditions of Use

12.1 Material properties shall not fall outside the boundaries defined in **Section 6**.

12.2 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.

12.3 As listed herein, OC SIS Panel shall not be used:

12.3.1 To resist horizontal loads from concrete and masonry walls

12.3.2 As a nailing base

12.4 Use of OC SIS Panels shall be limited to one-story buildings or buildings less than 40 ft. in height.

12.5 OC SIS Panels shall be separated from the interior of the building by an approved thermal barrier or ignition barrier (e.g., $^1/_2$" thick gypsum wallboard) where required by the applicable code.

12.6 When OC SIS 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.

12.7 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.[59]

12.8 When used in accordance with the IBC in high wind areas, special inspections shall comply with IBC Section 1705.12.[60]

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

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

12.9.1.1 Allowable shear loads shall not exceed values in **Table 5** and **Table 10** for wind loads, and **Table 6** and **Table 11** for seismic loads.

12.9.1.2 Transverse design loads shall not exceed those described in **Table 7**.

12.9.1.3 Axial loads (uplift) shall not exceed values in **Table 9**.

12.10 OC SIS Panels shall not be used in regions where wind speeds exceed those described in **Table 8**.

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

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 OC SIS Panel boards 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,[61] 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 The innovative product 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 2015 IBC Section 1404.2

27 2021 IRC Section N1102.4

28 2021 IECC Section C402.5.1.4

29 2021 IRC Section R316

30 2021 IBC Section 2308.5.3.2

31 2021 IBC Section 2308.6

32 2018 IRC Table R301.2(3)

33 2021 IBC Section 2211.1

34 2021 IBC Section 2211.1.2

35 2021 IECC Section C402.5.1.4

36 2021 IRC Section N1102.4.1.1

37 2021 IECC Section R402.4.1.1

38 2021 IECC Section C402.5.1

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 2015 IBC Section 1404.2

49 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.

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

51 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

52 2021 IRC Section R316

53 2015 IBC Section 1404.2

54 2021 IRC Section N1102.4

55 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

56 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.

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

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

59 2018 IBC Section 1705.12

60 2018 IBC Section 1705.11

61 2021 IRC Section R318.4