Listing

A Duly Authenticated Report from an Approved Agency

Report No: 2411-108

Issue Date: January 7, 2025

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Subject to Renewal: April 1, 2027

OX-IS™ High Shear Assembly Performance

Trade Secret Report Holder:

Amrize Building Envelope, LLC

Phone: 800-345-8881 Website: www.oxengineeredproducts.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

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 $^1/_2$" OX-IS Structural Insulated Sheathing

2 Product Description and Materials

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

Figure 1. OX-IS Structural Insulated Sheathing Panel

2.2 OX-IS is an insulated structural sheathing panel consisting of a proprietary fibrous sheathing board laminated to one side of a proprietary rigid Foam Plastic Insulating Sheathing (FPIS) panel.

2.2.1 The proprietary fibrous sheathing is made of specially treated plies that are pressure-laminated with a water resistant adhesive.

2.2.2 A protective polymer layer is applied on both sides. The surface finish consists of a foil facer on one or both sides.

2.2.3 The rigid foam plastic insulating sheathing component is a proprietary polyisocyanurate (polyiso) insulation sheathing, which may have facings on one or both sides and conforms to ASTM C1289, Type 1, Class 1.

2.3 *Material Availability*

2.3.1 *Foam Thickness:*

2.3.1.1 1/2" (12.7 mm) to 1" (25.4 mm)

2.3.2 *Standard Product Width:*

2.3.2.1 48" (1,219 mm)

2.3.3 *Standard Product 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 The OX-IS assemblies that are evaluated in this report are wood-framed wall assemblies sheathed with 1/2" thick OX-IS structural insulating sheathing panel on the exterior side, and with or without a 1/2" lightweight Gypsum Wallboard (GWB) on the interior side.

2.4.1 The framing evaluated in this report is shown in **Figure 2** through **Figure 5**.

2.4.1.1 *Framing Configuration 1 (**Figure 2**):*

2.4.1.1.1 Nominal 2x dimensional lumber

2.4.1.1.2 Unblocked

2.4.1.1.3 Single top plate

2.4.1.1.4 Single bottom plate

2.4.1.1.5 Single end studs

2.4.1.2 *Framing Configuration 2 (**Figure 3**):*

2.4.1.2.1 Nominal 2x dimensional lumber

2.4.1.2.2 Blocking directly below top plate and directly above bottom plate

2.4.1.2.3 Single top plate

2.4.1.2.4 Single bottom plate

2.4.1.2.5 Double end studs

2.4.1.3 *Framing Configuration 3 (**Figure 4**):*

2.4.1.3.1 Nominal 2x dimensional lumber

2.4.1.3.2 Blocking directly below top plate, above bottom plate, and mid-height

2.4.1.3.3 Single top plate

2.4.1.3.4 Single bottom plate

2.4.1.4 *Framing Configuration 4 (**Figure 5**):*

2.4.1.4.1 Nominal 2x dimensional lumber

2.4.1.4.2 Blocking directly below top plate, above bottom plate, mid-height, and quarter-heights

2.4.1.4.3 Single top plate

2.4.1.4.4 Single bottom plate

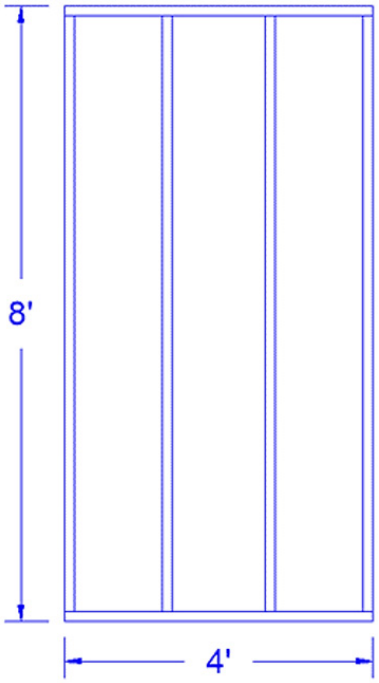

Figure 2. Framing Configuration 1

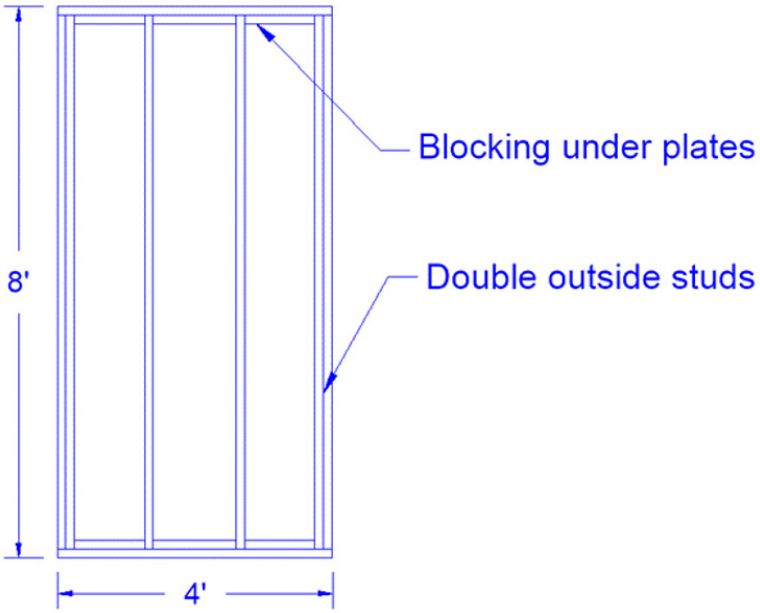

Figure 3. Framing Configuration 2

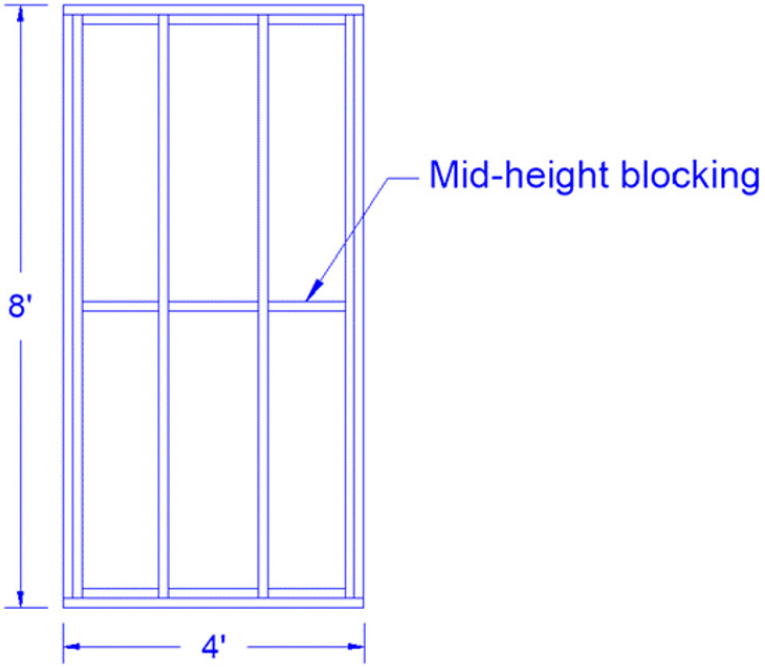

Figure 4. Framing Configuration 3

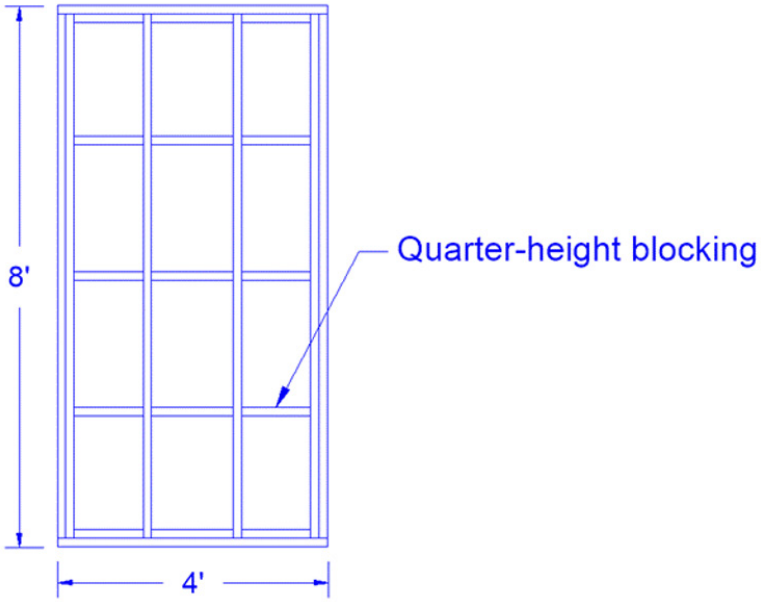

Figure 5. Framing Configuration 4

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

3 Definitions[2]

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

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

3.2.1 This report utilizes intellectual property and/or trade secrets to create public domain material properties for commercial end-use.

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

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

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

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

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

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

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

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

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

4 Applicable Standards for the Listing[20]

4.1 *Local, State, and Federal*

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

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

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

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

4.2 *Standards*

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

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

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*

5 Listed[25]

5.1 Equipment, materials, products, or services included in a List published by a nationally recognized testing laboratory (e.g., CBI), an approved agency (e.g., CBI and DrJ), and/or and approved source (e.g., DrJ), or other organization(s) concerned with product evaluation (e.g., DrJ), that maintains periodic inspection (e.g., 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 *Structural Applications*

6.1.1 *General Provisions:*

6.1.1.1 Except as otherwise described in this report, OX-IS shall be installed in accordance with the applicable building codes using the provisions set forth herein for the design and installation of WSP.

6.1.1.2 OX-IS shall be permitted to be designed in accordance with SDPWS for the design of shear walls using the methods set forth therein, and subject to the SDPWS boundary conditions, except as specifically allowed in this report.

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

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

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

6.1.1.4 Maximum aspect ratio for OX-IS shall be 2:1 when designed and installed in accordance with this report.

6.1.1.4.1 A maximum aspect ratio for OX-IS of 4:1 is permitted when OX-IS is designed and installed in accordance with Report Number 0804-01.

6.1.1.5 All panel edges shall be blocked with a minimum 2" nominal lumber.

6.1.1.6 Fasteners may be countersunk beneath the outer surface of the foam plastic sheathing layer.

6.1.1.7 Installation is permitted for single top plate (advanced framing method) or double top plate applications.

6.1.2 *Performance Based Wood-Framed Construction:*

6.1.2.1 OX-IS 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 1**.

Table 1. Wind Allowable Unit Shear Capacity for Light-Frame Wood Walls Sheathed with OX-IS

Structural Sheathing Product	Structural Sheathing Thickness (in)	Maximum Fastener Spacing[1,2,3] (edge:field), (in)	Framing Configuration[8]	GWB Thickness (in)	GWB Fastener[4] Spacing (edge:field), (in)	Allowable Unit Shear Capacity (plf)
OX-IS Structural Insulated Sheathing	1/2"	3:3 o.c.[5]	**Figure 3**	1/2"	8:8 o.c.	475
	1/2"	3:3 o.c.[5]	**Figure 3**	1/2"	4:16 o.c.[6]	555
	1/2"	3:3 o.c.[5]	**Figure 3**	1/2"	4:16 o.c.[7]	680
	1/2"	3:3 o.c.[5]	**Figure 4**	1/2"	8:8 o.c	505
	1/2"	3:3 o.c.[5]	**Figure 5**	1/2"	8:8 o.c	530

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

1. Unless otherwise stated, OX-IS attached to wood framing with minimum 16-gauge, 7/16" crown galvanized staples, shall penetrate a minimum of 1.0" into the wood framing members.
2. Fasteners are to be installed with the crown parallel to the framing.
3. Fastener edge distance shall be a minimum of 3/8". Fastener head shall be in contact with the panel surface. Alternately, fastener heads are permitted to be overdriven into foam portion of the panel with no reduction in shear capacities.
4. Where applicable, GWB shall be attached with minimum #6 type W or S screws, 1 1/4" long with a minimum edge distance of 3/8".
5. OX-IS were fastened as follows:
   a. Two rows of fasteners – one row of fasteners into each end stud (wall framing contains two end studs at the panel edges)
   b. One row of fasteners in the intermediate studs
   c. One row of fasteners into the plates
   d. One of fasteners into the blocking members
6. GWB was fastened with one row into the outermost framing members, and one row into the mid-height blocking members. OX-IS were not fastened at the interior end studs and blocking members adjacent to the plates.
7. GWB were fastened as follows:
   a. Two rows of fasteners – one row of fasteners into each end stud (wall framing contains two end studs at the panel edges)
   b. One row of fasteners in the intermediate studs
   c. One row of fasteners into the plates
   d. One of fasteners into the all blocking members
8. Maximum stud spacing shall be 16" o.c.

6.1.2.2 OX-IS wall assemblies designed as shear walls are permitted to resist seismic load forces using the seismic allowable unit shear capacities set forth in **Table 2** when seismic design is required in accordance with the applicable building code.

Table 2. Seismic Allowable Unit Shear Capacity for Light-Frame Wood Walls Sheathed with OX-IS

Product	Product Thickness (in)	Maximum Fastener Spacing[1,2,3] (edge:field), (in)	Framing Configuration[8]	GWB Thickness (in)	GWB Fastening Spacing[4] (edge:field), (in)	Seismic Allowable Unit Shear Capacity (plf)	Apparent Shear Stiffness, G_a (kips/in)
OX-IS Structural Insulated Sheathing	1/2"	3:3 o.c.[5]	**Figure 3**	1/2"	8:8 o.c.	380	13.0
	1/2"	3:3 o.c.[5]	**Figure 3**	1/2"	4:16 o.c.[6]	445	19.3
	1/2"	3:3 o.c.[5]	**Figure 3**	1/2"	4:16 o.c.[7]	545	29.3
	1/2"	3:3 o.c.[5]	**Figure 4**	1/2"	8:8 o.c.	405	14.0
	1/2"	3:3 o.c.[5]	**Figure 5**	1/2"	8:8 o.c.	420	14.7

SI: 1 in = 25.4 mm, 1 lb/ft = 0.0146 kN/m, 1 kips/in = 175.1 kN/m

1. Unless otherwise stated, OX-IS attached to wood framing with minimum 16-gauge 7/16" crown galvanized staples, shall penetrate a minimum of 1.0" into the wood framing members.
2. Fasteners are to be installed with the crown parallel to the framing.
3. Fastener edge distance shall be a minimum of 3/8". Fastener head shall be in contact with the panel surface. Alternately, fastener heads are permitted to be overdriven into foam portion of the panel with no reduction in shear capacities.
4. Where applicable, GWB shall be attached with minimum #6 type W or S screws, 1 1/4" long with a minimum edge distance of 3/8".
5. OX-IS were fastened as follows:
   a. Two rows of fasteners – one row of fasteners into each end stud (wall framing contains two end studs at the panel edges)
   b. One row of fasteners in the intermediate studs
   c. One row of fasteners into the plates
   d. One of fasteners into the blocking members
6. GWB was fastened with one row into the outermost framing members, and one row into the mid-height blocking members. OX-IS were not fastened at the interior end studs and blocking members adjacent to the plates.
7. GWB were fastened as follows:
   a. Two rows of fasteners – one row of fasteners into each end stud (wall framing contains two end studs at the panel edges)
   b. One row of fasteners in the intermediate studs
   c. One row of fasteners into the plates
   d. One of fasteners into the blocking members.
8. Maximum stud spacing shall be 16" o.c.

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

7 Certified Performance[26]

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

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

8 Installation

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

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

8.3 OX-IS 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 16" (406 mm) o.c.

8.4 Sheathing joints shall be butted at framing members, and all panel edges shall be blocked.

8.4.1 A single row of fasteners must be applied to each panel edge into the stud or blocking below.

8.4.2 Do not tack product to framing, but fasten each panel completely after fastening begins.

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

8.6 *OX-IS Fastening Details*

8.6.1 Where used, always fasten staples parallel to the framing member.

8.6.2 Minimum $^{7}/_{16}$" crown by $1^{1}/_{2}$" leg, 16-gauge, galvanized staples with a 1.0" minimum embedment into the stud, unless otherwise stated in **Section 6**.

8.6.3 Fastener spacing shall be a maximum of 3" o.c. (76.2 mm) along the edge and 3" o.c. in the field, unless otherwise permitted in **Section 6**.

8.7 *GWB Fastening Details*

8.7.1 Fasteners shall be installed with a nominal edge distance of $^{3}/_{8}$" (9.5 mm) for GWB.

8.7.2 Where required, GWB shall be a minimum $^{1}/_{2}$" thickness and shall be attached with one of the following:

8.7.2.1 #6 x $1^{1}/_{4}$" Type W or S screws

8.7.3 Fastener spacing shall be as shown in **Section 6**.

8.8 *Treatment of Joints*

8.8.1 OX-IS sheathing joints must be butted at framing members and a single row of fasteners must be applied to each panel edge into the stud below. Install staples parallel to framing.

8.9 *Window Treatments*

8.9.1 OX-IS 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 Substantiating Data

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

9.1.1 Lateral wall testing performed in accordance with ASTM E564

9.2 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.

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

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

9.5 *Testing and Engineering Analysis*

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

9.6 Where additional condition of use and/or regulatory compliance information is required, please search for OX-IS on the DrJ Certification website.

10 Findings

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

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

10.2.1 Use to resist wind loading and seismic loading in accordance with the applicable building codes for light frame wood wall assemblies.

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

10.4 Any application specific issues not addressed herein can be engineered by an RDP. Assistance with engineering is available from Amrize Building Envelope, LLC.

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

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

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

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

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

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

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

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

11 Conditions of Use

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

11.2 As listed herein, OX-IS shall not be used:

11.2.1 As a nailing base for claddings, trim, windows, or doors.

11.2.1.1 Fastening through the OX-IS into the framing may be acceptable.

11.2.2 To resist horizontal loads from concrete and masonry walls.

11.2.2.1 When used behind masonry, devices such as masonry ties shall be used to transfer the load to the main force resisting system.

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

11.4 Allowable shear loads shall not exceed the values in **Table 1** for wind loads or **Table 2** for seismic loads.

11.5 All panel edges shall be supported by nominal 2x wall framing or solid blocking.

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

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

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

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

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

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

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

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

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

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

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

12 Identification

12.1 $^{1}/_{2}$" OX-IS Structural Insulated Sheathing, as listed in **Section 1.1**, is identified by a label on the board or packaging material bearing the manufacturer name, product name, this report number, and other information to confirm code compliance.

12.2 Additional technical information can be found at www.oxengineeredproducts.com.

13 Review Schedule

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

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

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

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

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

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

[30] 2021 IBC Section 104.11

[31] 2021 IRC Section R104.11

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

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

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

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