



# Listing and Technical Evaluation Report™

A Duly Authenticated Report from an Approved Agency

## Report No: 2403-101



Issue Date: August 22, 2024

Revision Date: July 30, 2025

Subject to Renewal: October 1, 2026

# Strongwell<sup>®</sup> FRP RF Panel Enclosure System for Rooftop Communication Antenna Screening

**Trade Secret Report Holder:** 

### **Strongwell**®

Phone: 279-645-8000

#### **CSI Designations:**

DIVISION: 07 00 00 - THERMAL AND MOISTURE PROTECTION Section: 07 07 00 - Roof Accessories Website: www.strongwell.com

DIVISION: 10 00 00 - SPECIALTIES Section: 10 82 00 - Grilles and Screens

#### 1 Design Evaluated<sup>1</sup>

1.1 Strongwell Enclosure System

#### 2 Product Description and Materials

2.1 The design evaluated in this report is shown in **Figure 1** through **Figure 5**, and is described in **Table 1**.



Figure 1. Example of a Strongwell Enclosure System







Figure 2. EXTREN® Structural Shapes



Figure 3. DURASHIELD® Foam Core and Hollow Core Panels







Figure 4. SAFPLATE® Plates



Figure 5. SAFPLANK® Planks





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Components	Туре	Material	Dimensions			
EXTREN Structural Shapes and Plates	500 Series	Pultruded fiberglass polyester resin with a UV (Ultraviolet) inhibitor				
	525 Series	Pultruded fiberglass polyester resin with a UV inhibitor and flame retardant additives	EXTREN products are manufactured in many shapes and sizes.			
	600 Series	Pultruded fiberglass vinyl ester resin with a UV inhibitor	See <u>manufacturer product data</u> for specific details.			
	625 Series	Pultruded fiberglass vinyl ester resin with a UV inhibitor and flame retardant additives				
SAFPLANK	Urethane	Urethane coated SAFPLANK	12" and 24" wide panels.			
	Ероху	Epoxy coated SAFPLANK	for specific details.			
DURASHIELD	Foam Core/Hollow-core	Pultruded fiberglass skin available in polyester or vinyl ester resin with a rigid closed-cell urethane foam core or hollow core	1" thick x 12" wide or 3" thick x 24" wide See <u>manufacturer product data</u> for specific details.			
SI: 1 in = 25.4 mm						

#### 2.2 Structure

- 2.2.1 Frame:
  - 2.2.1.1 EXTREN Structural Shapes applied as beams, columns, bracing, and connections.
- 2.2.2 Cladding:
  - 2.2.2.1 EXTREN <sup>1</sup>/<sub>4</sub>" flat plates, DURASHIELD or SAFPLANK connected to the frame via <sup>1</sup>/<sub>2</sub>" Fiber Reinforced Plastic (FRP) threaded rods and FRP thermoplastic nuts.
- 2.3 As needed, review material properties for design in **Section 6** and the regulatory evaluation in **Section 8**.

#### 3 Definitions<sup>2</sup>

- 3.1 <u>New Materials<sup>3</sup></u> 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.<sup>4</sup> The <u>design strength</u> and permissible stresses shall be established by tests<sup>5</sup> and/or engineering analysis.<sup>6</sup>
- 3.2 <u>Duly authenticated reports</u><sup>7</sup> and <u>research reports</u><sup>8</sup> are test reports and related engineering evaluations that are written by an <u>approved agency</u><sup>9</sup> and/or an <u>approved source</u>.<sup>10</sup>
  - 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, <u>18.US.Code.90</u>, also known as <u>Defend Trade Secrets Act of 2016</u> (DTSA).<sup>11</sup>
- 3.3 An approved agency is *"approved"* when it is <u>ANAB ISO/IEC 17065 accredited</u>. DrJ Engineering, LLC (DrJ) is accredited and listed in the <u>ANAB directory</u>.
- 3.4 An <u>approved source</u> is *"approved"* when a professional engineer (i.e., <u>Registered Design Professional</u>, hereinafter <u>RDP</u>) is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the <u>state legislature</u> via its professional engineering regulations.<sup>12</sup>





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

3.5.1 The <u>Center for Building Innovation</u> (CBI) is <u>ANAB<sup>13</sup> ISO/IEC 17025</u> and <u>ISO/IEC 17020</u> accredited.

- 3.6 The regulatory authority shall <u>enforce</u><sup>14</sup> 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 <u>writing</u><sup>15</sup> stating the nonconformance and the path to its cure.
- 3.7 The regulatory authority shall accept <u>duly authenticated reports</u> from an <u>approved agency</u> and/or an <u>approved</u> <u>source</u> 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.<sup>16</sup>
- 3.8 ANAB is an <u>International Accreditation Forum</u> (IAF) <u>Multilateral Recognition Arrangement</u> (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.<sup>17</sup> Thus, all ANAB ISO/IEC 17065 <u>duly authenticated reports</u> are approval equivalent,<sup>18</sup> and can be used in any country that is an MLA signatory found at this link: <u>https://iaf.nu/en/recognised-abs/</u>
- 3.9 Approval equity is a fundamental commercial and legal principle.<sup>19</sup>

#### 4 Applicable Local, State, and Federal Approvals; Standards; Regulations<sup>20</sup>

- 4.1 Local, State, and Federal
  - 4.1.1 Approved in all local jurisdictions pursuant to ISO/IEC 17065 <u>duly authenticated report</u> 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, Texas Department of Insurance, and Wichita.<sup>21</sup>
  - 4.1.2 Approved in all state jurisdictions pursuant to ISO/IEC 17065 <u>duly authenticated report</u> use, which includes, but is not limited to, the following featured states: California, Florida, New Jersey, Oregon, New York, Texas, Washington, and Wisconsin.<sup>22</sup>
  - 4.1.3 Approved by the Code of Federal Regulations Manufactured Home Construction: Pursuant to Title 24, Subtitle B, Chapter XX, Part 3282.14<sup>23</sup> and Part 3280<sup>24</sup> pursuant to the use of ISO/IEC 17065 <u>duly</u> <u>authenticated reports</u>.
  - 4.1.4 Approved means complying with the requirements of local, state, or federal legislation.

#### 4.2 Standards

- 4.2.1 ASCE 74: Load and Resistance Factor Design (LRFD) for Pultruded Fiber Reinforced Polymer (FRP) Structures
- 4.2.2 ASTM D570: Standard Test Method for Water Absorption of Plastics
- 4.2.3 ASTM D638: Standard Test Method for Tensile Properties of Plastics
- 4.2.4 ASTM D696: Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30° C and 30° C with a Vitreous Silica Dilatometer
- 4.2.5 ASTM D790: Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- 4.2.6 ASTM D953: Standard Test Method for Pin-Bearing Strength of Plastics
- 4.2.7 ASTM D2344: Standard Test Method for Short-Beam Strength of Polymer Matrix Composite Materials and Their Laminates





- 4.2.8 ASTM D2583: Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor
- 4.2.9 ASTM D4065: Standard Practice for Plastics: Dynamic Mechanical Properties: Determination and Report of Procedures
- 4.3 Regulations
  - 4.3.1 IBC 18, 21, 24: International Building Code®
  - 4.3.2 IRC 18, 21, 24: International Residential Code®
  - 4.3.3 LABC 22: Los Angeles Building Code<sup>25</sup>

#### 5 Listed<sup>26</sup>

5.1 Equipment, materials, products, or services included in a List published by a <u>nationally recognized testing</u> <u>laboratory</u> (i.e., CBI), an <u>approved agency</u> (i.e., CBI and DrJ), and/or and <u>approved source</u> (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 Structural Applications
  - 6.1.1 EXTREN plates meet the material properties requirements of ASCE 74 for Pultruded FRP products seen in **Table 2**.
    - 6.1.1.1 For DURASHIELD and SAFPLANK products, refer to the manufacturer literature.
  - 6.1.2 EXTREN Structural Shapes meet the design value requirements of ASCE 74 for pultruded FRP shapes seen in **Table 3**.

Products	Property	Result		
	Barcol Hardness	> 40		
	Glass Transition Temperature	> 180ºF		
EXTREN	Coefficient of Thermal Expansion, Longitudinal	< 7.5 x 10 <sup>-6</sup> in/in/⁰F-		
	Moisture Equilibrium Content	< 2%		

#### Table 2. Material Properties of Strongwell Pultruded FRP1

Table 3. Reference Strength and Modulus Design Values of EXTREN Structural Shapes and Plates for LRFD<sup>1,3</sup>

Product	Tensile Strength (psi)		Tensile Modulus (ksi)		Flexural Strength (psi)		Flexural Modulus (ksi)		Bearing Strength (psi)		Interlaminar Shear
	Long. <sup>2</sup>	Trans. <sup>2</sup>	Long.	Trans.	Long.	Trans.	Long.	Trans.	Long.	Trans.	Strength (psi)
EXTREN	30,000	7,000	3,000	800	30,000	13,000	1,600	900	21,000	18,000	3,500

SI: 1 psi = 0.00689 MPa

 Reference values shall be multiplied by the appropriate resistance factor (φ), the appropriate time factor (λ), and all applicable end-use adjustment factors specified in ASCE 74.

2. "Long." refers to the longitudinal axis (parallel to direction of pultrusion). "Trans." refers to the transverse axis (perpendicular to direction of pultrusion).

3. This table provides the characteristic value for LRFD design. For Allowable Strength Design (ASD), the designer will need to apply the appropriate factor of safety.





- 6.1.3 Cladding shall be attached to the frame with 1/2" FRP threaded rods and fiberglass reinforced thermoplastic nuts. The bearing strength and required edge distance for these rods can be found in the Strongwell published literature.
- 6.1.3.1 When properly supported, the allowable load for a 6' x 8' framed panel is 40 psf.
- 6.1.4 The fire separation distance shall be not less than 20 feet for Type I, II, III, and IV buildings per <u>2022 LABC</u> <u>Section 1511.6.2</u>, item 2.
- 6.1.5 For Type V construction, the height of the mechanical equipment screen, as measured from the grade plane to the highest point on the mechanical equipment screen, shall be permitted to exceed the maximum building height allowed for the building by other provisions of the code, provided that the fire separation distance is greater than five (5) feet per <u>2022 LABC Section 1511.6.3</u>, item 3.
- 6.2 Complete design plans and structural calculations of any Strongwell Enclosure System must be prepared by a professional engineering company operated by an <u>RDP</u> and/or <u>approved sources</u>.
- 6.3 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<sup>27</sup>

- 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.<sup>28</sup>
- 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.<sup>29</sup>

#### 8 Regulatory Evaluation and Accepted Engineering Practice

- 8.1 Strongwell Enclosure System complies with the following legislatively adopted regulations and/or accepted engineering practice for the following reasons:
  - 8.1.1 Strongwell Enclosure System meets the material properties and design value requirements of ASCE 74.
- 8.2 Any building code, regulation and/or accepted engineering evaluations (i.e., <u>research reports</u>, <u>duly</u> <u>authenticated reports</u>, etc.) that are conducted for this Listing were performed by DrJ, which is an <u>ISO/IEC</u> <u>17065 accredited certification body</u> and a professional engineering company operated by <u>RDP</u> or <u>approved</u> <u>sources</u>. DrJ is qualified<sup>30</sup> to practice product and regulatory compliance services within its <u>scope of</u> <u>accreditation and engineering expertise</u>,<sup>31</sup> respectively.
- 8.3 Engineering evaluations are conducted with DrJ's ANAB <u>accredited ICS code scope</u> 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 Installation Procedure
  - 9.3.1 The EXTREN Structural Shape framing shall be built first, then EXTREN <sup>1</sup>/<sub>4</sub>" flat plats, DURASHIELD or SAFPLANK cladding shall be connected to the frame via <sup>1</sup>/<sub>2</sub>" Fiber Reinforced Plastic (FRP) threaded rods and FRP thermoplastic nuts.

#### **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 Barcol hardness testing in accordance with ASTM D2583
  - 10.1.2 Glass transition temperature testing in accordance with ASTM D4065
  - 10.1.3 Coefficient of thermal expansion testing in accordance with ASTM D696
  - 10.1.4 Moisture equilibrium content testing in accordance with ASTM D570
  - 10.1.5 Tensile strength and stiffness testing in accordance with ASTM D638
  - 10.1.6 Flexural strength and stiffness testing in accordance with ASTM D790
  - 10.1.7 Bearing strength testing in accordance with ASTM D953
  - 10.1.8 Interlaminar shear strength testing in accordance with ASTM D2344
- 10.2 Information contained herein may include the result of testing and/or data analysis by sources that are <u>approved agencies</u>, <u>approved sources</u>, and/or an <u>RDP</u>. 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 <u>being equivalent</u> to the regulatory provision in terms of quality, <u>strength</u>, effectiveness, <u>fire resistance</u>, 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 <u>duly authenticated reports</u> from <u>approved</u> <u>agencies</u> and/or <u>approved sources</u> 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 <u>duly</u> <u>authenticated report</u>, 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.<sup>32</sup>
- 10.6 Where additional condition of use and/or regulatory compliance information is required, please search for Strongwell Enclosure System on the <u>DrJ Certification website</u>.





#### **11 Findings**

- 11.1 As outlined in **Section 6**, Strongwell Enclosure System has 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 <u>duly authenticated report</u> and the manufacturer installation instructions, Strongwell Enclosure System shall be approved for the following applications:
  - 11.2.1 Rooftop mechanical equipment screening
- 11.3 Any application specific issues not addressed herein can be engineered by an <u>RDP</u>. Assistance with engineering is available from Strongwell.
- 11.4 IBC Section 104.2.3<sup>33</sup> (IRC Section R104.2.2<sup>34</sup> and IFC Section 104.2.3<sup>35</sup> 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.

- 11.5 Approved: <sup>36</sup> Building regulations require that the building official shall accept duly authenticated reports. <sup>37</sup>
  - 11.5.1 An approved agency is "approved" when it is ANAB ISO/IEC 17065 accredited.
  - 11.5.2 An <u>approved source</u> is *"approved"* when an <u>RDP</u> is properly licensed to transact engineering commerce.
  - 11.5.3 Federal law, <u>Title 18 US Code Section 242</u>, 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.
- 11.6 DrJ is a licensed engineering company, employs licensed <u>RDP</u>s and is an <u>ANAB Accredited Product</u> <u>Certification Body</u> – <u>Accreditation #1131</u>.
- 11.7 Through the <u>IAF Multilateral Arrangement</u> (MLA), this <u>duly authenticated report</u> can be used to obtain product approval in any <u>jurisdiction</u> or <u>country</u> because all ANAB ISO/IEC 17065 <u>duly authenticated reports</u> are equivalent.<sup>38</sup>

#### 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, Strongwell Enclosure System shall not exceed eighteen (18) feet in height above the roof deck, except where located on buildings of type IA construction in accordance with <u>LABC Section 1511.6.1</u>.
- 12.4 Complete plans and structural calculations prepared by a California licensed architect, civil or structural engineer and shall be submitted to the department for approval prior to permit issuance.
- 12.5 The Fire Department shall approve all plans for plastic screening on Title 19 buildings.
- 12.6 Antennas and screening must not obstruct access to the roof by the Fire Department as required by <u>Section</u> <u>57.316.4.4</u> of the Los Angeles Municipal Code which states:

No person shall obstruct required access passageways on the roof surface. An unobstructed passageway for use by the Fire Department shall be provided through or around any approved structures or equipment installations on the roof surface. One access passageway shall be provided for every 50 feet length, or fraction thereof, of roof surface. Passageways shall be at least 3 feet wide and have at least 7 feet of overhead clearance.





- 12.7 When required by adopted legislation and enforced by the <u>building official</u>, also known as the Authority Having Jurisdiction (AHJ) in which the project is to be constructed:
  - 12.7.1 Any calculations incorporated into the construction documents shall conform to accepted engineering practice and, when prepared by an <u>approved source</u>, shall be approved when signed and sealed.
  - 12.7.2 This report and the installation instructions shall be submitted at the time of <u>permit</u> application.
  - 12.7.3 This design has an internal quality control program and a third-party quality assurance program.
  - 12.7.4 At a minimum, this design shall be installed per Section 9.
  - 12.7.5 The review of this report by the AHJ shall comply with <u>IBC Section 104.2.3.2</u> and <u>IBC Section 105.3.1</u>.
  - 12.7.6 This design 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.
  - 12.7.7 The application of this design in the context of this report is dependent upon the accuracy of the construction documents, implementation of installation instructions, inspection as required by <u>IBC Section</u> <u>110.3</u>, <u>IRC Section R109.2</u>, and any other regulatory requirements that may apply.
- 12.8 The approval of this report by the AHJ shall comply with <u>IBC Section 1707.1</u>, where legislation states in part, *"the <u>building official</u> shall make, or cause to be made, the necessary tests and investigations; or the <u>building</u> <u>official</u> shall accept duly authenticated reports from <u>approved agencies</u> in respect to the quality and manner of use of new materials or assemblies as provided for in <u>Section 104.2.3</u>", all of <u>IBC Section 104</u>, and <u>IBC Section 105.3</u>.*
- 12.9 <u>Design loads</u> 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., <u>owner</u> or <u>RDP</u>).
- 12.10 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 <u>owner</u>.

#### 13 Identification

- 13.1 The design 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 <u>www.strongwell.com</u>.

#### 14 Review Schedule

- 14.1 This report is subject to periodic review and revision. For the latest version, visit <u>www.drjcertification.org</u>.
- 14.2 For information on the status of this report, please contact DrJ Certification.





Issue Date: April 4, 2025 Subject to Renewal: October 1, 2026

## LABC and LARC Supplement to Report Number 2403-101

#### **REPORT HOLDER:** Strongwell

#### 1 Evaluation Subject

1.1 Strongwell Enclosure System

#### 2 Purpose and Scope

- 2.1 Purpose
  - 2.1.1 The purpose of this Report Supplement is to show Strongwell Enclosure System, recognized in Report Number 2403-101 has also been evaluated for compliance with the codes listed below as adopted by the Los Angeles Department of Building and Safety (LADBS).
- 2.2 Applicable Code Editions
  - 2.2.1 LABC—20, 23: Los Angeles Building Code
  - 2.2.2 LARC—20, 23: Los Angeles Residential Code

#### 3 Conclusions

- 3.1 Strongwell Enclosure System, described in Report Number 2403-101, complies with the LABC and LARC and is subject to the conditions of use described in this supplement.
- 3.2 Where there are variations between the IBC and IRC and the LABC and LARC applicable to this report, they are listed here:
  - 3.2.1 LABC Section 104.2 replaces IBC Section 104.
  - 3.2.2 LABC Section 104.2.3 replaces IBC Section 104.4.
  - 3.2.3 LABC Section 104.2.6 replaces IBC Section 104.2.3 and Section 104.2.3.2.
  - 3.2.4 LABC Section 106.3.1 replaces IBC Section 105.3.
  - 3.2.5 LABC Section 108.1 replaces IBC Section 110.4.
  - 3.2.6 LABC Section 108.5 replaces IBC Section 110.3.
  - 3.2.7 LABC Section 1707.1 replaces IBC Section 1707.1.
  - 3.2.8 LABC Section 2306.3 replaces IBC Section 2306.3.
  - 3.2.9 LARC Section 104.2.6 replaces IRC Section R104.2.2.
  - 3.2.10 LARC Section 108.1 replaces IRC Section R109.2.





#### 4 Conditions of Use

- 4.1 Strongwell Enclosure System, described in Report Number 2403-101, must comply with all of the following conditions:
  - 4.1.1 All applicable sections in Report Number 2403-101.
  - 4.1.2 The design, installation, and inspections are in accordance with additional requirements of LABC Chapter 16 and Chapter 17, as applicable.





## Notes

- <sup>1</sup> For more information, visit <u>dricertification.org</u> or call us at 608-310-6748.
- <sup>2</sup> Capitalized terms and responsibilities are defined pursuant to the applicable building code, applicable reference standards, the latest edition of <u>TPI1</u>, the <u>NDS</u>, <u>AISI S202</u>, <u>US</u> professional engineering law, <u>Canadian building code</u>, <u>Canada professional engineering law</u>, <u>Qualtim External Appendix A: Definitions/Commentary</u>, <u>Qualtim External Appendix B:</u> <u>Project/Deliverables</u>, <u>Qualtim External Appendix C: Intellectual Property and Trade Secrets</u>, 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.
- <sup>3</sup> https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1702
- <sup>4</sup> 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 <u>https://www.justice.gov/atr/mission</u> and https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.2.3
- 5 <u>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</u>
- 7 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-andtests#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%2 0and%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
- <sup>10</sup> https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#approved\_source
- 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 <u>federal government</u> and each state have a <u>public records act</u>. To follow DTSA and comply state public records and trade secret legislation requires approval through <u>ANAB ISO/IEC 17065 accredited certification bodies</u> or <u>approved sources</u>. For more information, please review this website: <u>Intellectual Property and Trade Secrets</u>.
- 12 <u>https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/regulation-professional AND https://apassociation.org/list-of-engineeringboards-in-each-state-archive/</u>
- 13 https://www.cbitest.com/accreditation/
- 14 https://up.codes/viewer/mississippi/libc-2024/chapter/1/scope-and-administration#104.1:~:text=directed%20to%20enforce%20the%20provisions%20of%20this%20code
- <sup>15</sup> <u>https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.2.3</u> AND <u>https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#105.3.1</u>
- <sup>16</sup> <u>https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1</u>
- https://iaf.nu/en/about-iafmla/#:~:text=Once%20an%20accreditation%20body%20is%20a%20signatory%20of%20the%20IAF%20MLA%2C%20it%20is%20required%20to%20recognise%20certificates%20 and%20validation%20and%20verification%20statements%20issued%20by%20conformity%20assessment%20bodies%20accredited%20by%20all%20other%20signatories%20of %20the%20IAF%20MLA%2C%20with%20the%20appropriate%20scope
- <sup>18</sup> True for all ANAB accredited product evaluation agencies and all International Trade Agreements.
- <sup>19</sup> <u>https://www.justice.gov/crt/deprivation-rights-under-color-law</u> AND <u>https://www.justice.gov/atr/mission</u>
- <sup>20</sup> Unless otherwise noted, the links referenced herein use un-amended versions of the <u>2024 International Code Council (ICC)</u> 2024 International Code Council (ICC) model codes as foundation references. Mississippi versions of the <u>IBC 2024</u> and the <u>IRC 2024</u> 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.
- <sup>21</sup> See <u>Adoptions by Publisher</u> for the latest adoption of a non-amended or amended model code by the local jurisdiction. <u>https://up.codes/codes/general</u>
- <sup>22</sup> See <u>Adoptions by Publisher</u> for the latest adoption of a non-amended or amended model code by state. <u>https://up.codes/codes/general</u>
- <sup>23</sup> 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
- <sup>25</sup> All references to the LABC and LARC are the same as the 2023 IBC and 2023 IRC unless otherwise noted in the LABC and LARC Supplement at the end of this report.
- <sup>26</sup> <u>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 <u>https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#labeled</u></u>
- 27 <u>https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1703.4</u>
- 28 <u>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%20liv able%2C%20and%20safe%20housing%20and%20shall%20demonstrate%20acceptable%20workmanship%20reflecting%20journeyman%20quality%20of%20work%20of%20the% 20various%20trades</u>
- 29 <u>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%20 engineering%20analysis%20or%20by%20suitable%20load%20tests%20to%20simulate%20the%20actual%20loads%20and%20conditions%20of%20application%20that%20occur</u>





- <sup>30</sup> Qualification is performed by a legislatively defined <u>Accreditation Body</u>. <u>ANSI National Accreditation Board (ANAB)</u> is the largest independent accreditation body in North America and provides services in more than 75 countries. <u>DrJ</u> is an ANAB accredited <u>product certification body</u>.
- <sup>31</sup> <u>https://anabpd.ansi.org/Accreditation/product-certification/AllDirectoryDetails?prgID=1&orgID=2125&statusID=4#:~:text=Bill%20Payment%20Date-.Accredited%20Scopes.-13%20ENVIRONMENT.%20HEALTH</u>
- 32 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
- <sup>33</sup> 2021 IBC Section 104.11
- 34 2021 IRC Section R104.11
- 35 2018: <u>https://up.codes/viewer/wyoming/ifc-2018/chapter/1/scope-and-administration#104.9</u> AND 2021: <u>https://up.codes/viewer/wyoming/ibc-2021/chapter/1/scope-and-administration#104.11</u>
- <sup>36</sup> 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.
- <sup>37</sup> https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1
- <sup>38</sup> Multilateral approval is true for all ANAB accredited product evaluation agencies and all International Trade Agreements.