



# Listing and Technical Evaluation Report™

A Duly Authenticated Report from an Approved Agency

Report No: 1801-02



Issue Date: March 12, 2018 Revision Date: June 26, 2025

Subject to Renewal: July 1, 2026

# Use of FastenMaster® FrameFAST<sup>™</sup> Structural Wood Screw Fasteners in Stud to Plate and Plate to Rim Board Applications

Trade Secret Report Holder:

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### **CSI Designations:**

DIVISION: 06 00 00 - WOOD, PLASTICS AND COMPOSITES

Section: 06 05 23 - Wood, Plastic, and Composite Fastenings

#### 1 Innovative Product Evaluated<sup>1</sup>

1.1 FastenMaster FrameFAST Structural Wood Screw (FrameFAST Fasteners)

#### 2 Product Description and Materials

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

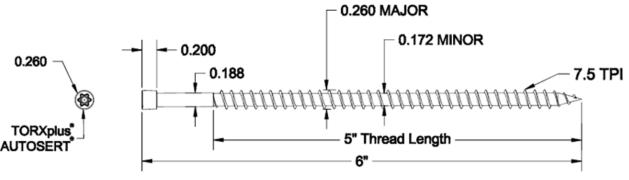


Figure 1. FrameFAST Fasteners Specification

- 2.2 FrameFAST Fasteners are manufactured with modified 10B21 carbon steel wire conforming to the manufacturer specifications and are coated with a proprietary finish.
- 2.3 FrameFAST Fasteners are manufactured using a standard cold-formed process followed by a heat-treating process.
- 2.4 FrameFAST Fasteners are approved for use in fire-retardant treated lumber, provided the conditions set forth by the fire-retardant treated lumber manufacturer be met, including appropriate strength reductions.
- 2.5 FrameFAST Fasteners are approved for use in interior and exterior conditions and in pressure-treated wood.

Report Number: 1801-02 Use of FastenMaster® FrameFAST™ Structural Wood Screw Fasteners in Stud to Plate and Plate to Rim Board Applications Information contained in this report was developed using report holder's confidential intellectual property (IP) and trade secrets (TS)





- In-plant quality control procedures, under which the FrameFAST Fasteners are manufactured, are audited 2.6 through an inspection process performed by an approved agency.
- 2.7 The FrameFAST Fasteners evaluated in this report are designated as shown in **Table 1**.

Fastener	Fastener Designation	Length <sup>1</sup> (in)		Head (in)		Diameter (in)			Bending Yield	Allowable Fastener	
		Fastener	Thread	Dia- meter	Height	Shank	Minor (Root)	Major (Thread)	Strength <sup>2</sup> F <sub>yb</sub> (psi)	Strength <sup>2</sup> (lb)	
										Tensile	Shear
FrameFAST Fasteners	FMFF006	6	5	0.260	0.200	0.188	0.172	0.260	166,600	1,205	930
SI: 1" = 25.4 mm, 1 psi = 0.00689 MPa 1. Fastener length is measured from the top of the head to the tip. Thread length includes tapered tip (see <b>Figure 1</b> ).											

#### Table 1. Fastener Specifications

2. Bending yield, tension and shear values determined at minor root diameter.

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

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

- 3.1 New Materials<sup>3</sup> 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 design strength and permissible stresses shall be established by tests<sup>5</sup> and/or engineering analysis.<sup>6</sup>
- Duly authenticated reports<sup>7</sup> and research reports<sup>8</sup> are test reports and related engineering evaluations that are 3.2 written by an approved agency<sup>9</sup> and/or an approved source.<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, 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.
- An approved source is "approved" when a professional engineer (i.e., Registered Design Professional, 3.4 hereinafter RDP) is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the state legislature via its professional engineering regulations.<sup>12</sup>
- 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.
  - The Center for Building Innovation (CBI) is ANAB<sup>13</sup> ISO/IEC 17025 and ISO/IEC 17020 accredited. 3.5.1
- The regulatory authority shall enforce<sup>14</sup> the specific provisions of each legislatively adopted regulation. If there 3.6 is a non-conformance, the specific regulatory section and language of the non-conformance shall be provided in writing<sup>15</sup> 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.<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 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.<sup>21</sup>
  - 4.1.2 Approved in all state jurisdictions pursuant to ISO/IEC 17065 <u>duly authenticated report</u> use, which includes the following featured states, and is not limited to: 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 ANSI/AWC NDS: National Design Specification (NDS) for Wood Construction
  - 4.2.2 ASTM A153: Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
  - 4.2.3 ASTM D1761: Standard Test Methods for Mechanical Fasteners in Wood
  - 4.2.4 ASTM D2395: Standard Test Methods for Density and Specific Gravity (Relative Density) of Wood and Wood-Based Materials
  - 4.2.5 ASTM D4442: Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials
  - 4.2.6 ASTM F606: Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets
  - 4.2.7 ASTM F1575: Standard Test Method for Determining Bending Yield Moment of Nails
  - 4.2.8 AWC TR 12: General Dowel Equations for Calculating Lateral Connection Values

#### 4.3 Regulations

- 4.3.1 IBC 15, 18, 21, 24: International Building Code®
- 4.3.2 IRC 15, 18, 21, 24: International Residential Code®
- 4.3.3 IECC 15, 18, 21, 24: International Energy Conservation Code®
- 4.3.4 FBC-B—20, 23: Florida Building Code Building<sup>25</sup> (FL21662)
- 4.3.5 FBC-R—20, 23: Florida Building Code Residential<sup>25</sup> (FL21662)





#### 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.

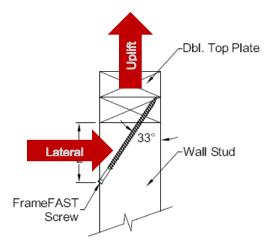
#### 6 Tabulated Properties Generated from Nationally Recognized Standards

- 6.1 FrameFAST Fasteners are used to attach minimum 1<sup>1</sup>/<sub>2</sub>" wide wood studs to wall top and bottom plates, and to attach wall top and bottom plates to rim board in the construction of walls that meet the requirements of <u>IBC</u> <u>Section 2308</u> and <u>IRC Section R602</u>. The fasteners provide resistance to uplift and/or lateral loads applied parallel and/or perpendicular to the wall or structural framing member.
  - 6.1.1 Walls shall consist of a single or double top plate designed in accordance <u>IBC Section 2308.9.3.2</u><sup>27</sup> and <u>IRC Section R602.3.2</u>.
  - 6.1.2 See **Table 2** and **Table 3** for the design requirements and the FrameFAST Fasteners allowable design values.
  - 6.1.3 See **Section 9** for installation requirements.
  - 6.1.4 FrameFAST Fasteners are used in buildings requiring design in accordance with <u>IBC Section 1609</u> or wind analysis in accordance with <u>IRC Section R301.2.1</u>.
  - 6.1.5 FrameFAST Fasteners are used in buildings requiring design in accordance with <u>IBC Section 1613</u> or seismic analysis in accordance with <u>IRC Section R301.2.2</u>.
  - 6.1.6 Where the application exceeds the limitations set forth herein, design shall be permitted in accordance with accepted engineering procedures, experience and technical judgment.
- 6.2 Design Concepts and Allowable Design Loads
  - 6.2.1 Allowable design loads are provided in **Table 2** and **Table 3** for FrameFAST Fasteners using a load duration factor, C<sub>D</sub>, of 1.6.
    - 6.2.1.1 Per <u>NDS Section 11.3.2</u>, connection design properties may be adjusted by a load duration factor listed in <u>NDS Table 2.3.2</u>.
      - 6.2.1.1.1 These loads are generally not combined with other loads (i.e. dead, live, etc.).
  - 6.2.2 Allowable design loads are applicable to fasteners installed in accordance with the procedures described in **Section 9**.





6.2.2.1 Loading orientation is depicted in **Figure 2**.



Side Elevation Stud to Dbl Top Plate



- 6.2.3 For stud to plate connections, allowable design loads are applicable for both single and double top plate applications as shown in **Figure 3**.
- 6.2.4 For plate to rim board connections, allowable design loads are applicable for both single bottom plate with OSB subfloor to rim board applications, and to single or double top plate to blocking/rim board applications as shown in **Figure 3**.

	Allowable Design Value (Ibf) <sup>1,2,3,4</sup>					
Lumber Species (Specific Gravity)	Load Orientation <sup>5</sup>					
	Uplift	Lateral				
SPF (0.42)	340	220				
DF-L (0.50)	560	360				
SP (0.55)	665	430				

**Table 2.** Allowable Design Values for FrameFAST Fasteners in Stud to Plate Configurations

SI: 1 lb = 4.45 N

1. For applications involving members with different specific gravities, use the allowable load corresponding to the lowest specific gravity.

2. Dimensional lumber members shall be minimum of 2" nominal thickness.

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- 3. Design values are based on a load duration factor, C<sub>D</sub>, of 1.6. No further duration of load increases permitted. Reduced design values for other load durations as applicable.
- 4. Use a reduction factor of 0.80 when connecting each ply of multi-ply stud columns to the top plate.
- 5. See Figure 2 for clarification of load orientations and Figure 3 for installation details.





		Allowable Design Value (lbf) <sup>1,2</sup>							
Load Direction	Configuration	Rim Board Species (Specific Gravity or Equivalent Specific Gravity)							
Direction		SPF (0.42)	DF-L (0.50)	SP (0.55)	1¹/8" OSB (0.50)⁵	1 <sup>1</sup> /4" LSL (0.46) <sup>3</sup>	1 <sup>1</sup> /4" LVL (0.47) <sup>3</sup>		
Uplift	Single Plate to Rim Board	210	245	325	195	165	110		
	Double Plate to Rim Board	475	590	595	360	610	570		
		SPF (0.42)	DF-L (0.50)	SP (0.55)	1 <sup>1/</sup> 8" OSB (0.50) <sup>6</sup>	1¹/₄" LSL (0.50)⁴	1¹/₄" LVL (0.50)⁴		
Lateral	Single Plate to Rim Board	340	265	395	340	210	320		
	Double Plate to Rim Board	495	595	650	230	485	440		
	Double Plate to Blocking <sup>7</sup>	495	595	650	230	485	440		

#### Table 3. Allowable Design Values of FrameFAST Fasteners in Plate to Rim Board Configurations

#### SI: 1 lb = 4.45 N

1. For applications involving members with different specific gravities, G, use the allowable load corresponding to the lowest specific gravity. For EWP rim boards (i.e., OSB, LSL, LVL), the top/bottom plates shall be minimum SPF dimensional lumber. Dimensional lumber members shall be minimum of 2" nominal thickness.

2. Design values are based on a load duration factor, C<sub>D</sub>, of 1.6. No further duration of load increases permitted. Reduced design values for other load durations as applicable.

3. Equivalent specific gravity values are for withdrawal of nails or screws installed in edge.

4. Equivalent specific gravity values are dowel bearing of nails or screws installed in edge.

5. Equivalent specific gravity values are for withdrawal of nails installed in face.

6. Equivalent specific gravity values are dowel bearing of nails or screws installed in face.

7. See Figure 4 for blocking requirements.

- 6.2.5 Where it is anticipated that loads will be applied to a single fastener simultaneously in more than one direction, additional evaluation is required to account for the combined effect of these loads using accepted engineering practice.
  - 6.2.5.1 When needed, consult a professional engineer for complex design conditions.
- 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>28</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>29</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>30</sup>



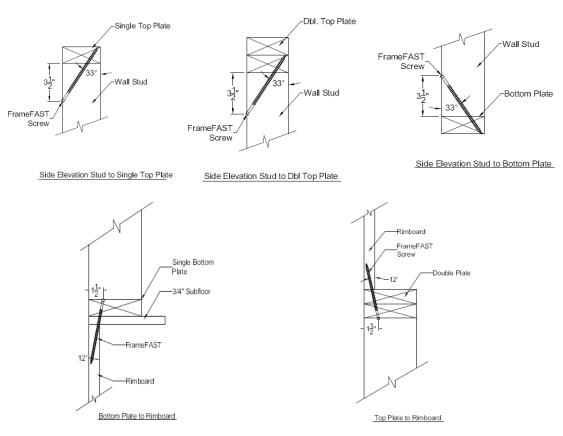


#### 8 Regulatory Evaluation and Accepted Engineering Practice

- 8.1 FrameFAST Fasteners comply with the following legislatively adopted regulations and/or accepted engineering practice for the following reasons:
  - 8.1.1 Uplift and lateral resistance in stud to plate connections in accordance with ASTM D1761
  - 8.1.2 Uplift and lateral resistance in plate to rim board connections in accordance with ASTM D1761
- 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>31</sup> to practice product and regulatory compliance services within its <u>scope of</u> <u>accreditation and engineering expertise</u>,<sup>32</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



#### Figure 3. Installation of FrameFAST Fasteners for Specific Applications

Report Number: 1801-02 Use of FastenMaster® FrameFAST™ Structural Wood Screw Fasteners in Stud to Plate and Plate to Rim Board Applications

Subject to Renewal: 07/01/26 Page 7 of 13

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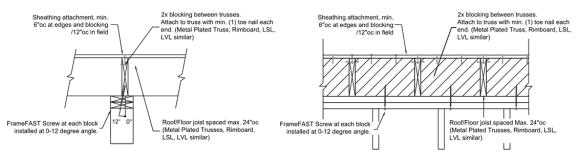


Figure 4. Section Views of FrameFAST Fasteners with Blocking

- 9.3.1 Select one of the 6" FrameFAST Fasteners to fully embed the fastener into the top plate, blocking and rim board as shown in **Figure 3** and **Figure 4**.
  - 9.3.1.1 Stud to Plate Connection:
    - 9.3.1.1.1 Install one (1) of the FrameFAST Fasteners upward (or downward) through the center of the stud and into the plate. Install at a  $25^{\circ} 35^{\circ}$  angle (optimal angle =  $33^{\circ}$ ) and penetrate the wood stud  $3^{1}/_{2}$ " down from top of stud and within  $1/_{4}$ " of the centerline (see **Figure 3**).
  - 9.3.1.2 Plate to Rim Connection:
    - 9.3.1.2.1 Install one (1) of the FrameFAST Fasteners upward (or downward) at a  $0^{\circ}$  12° angle (optimal angle = 12°), 1<sup>1</sup>/<sub>2</sub>" from outside face of wall, through the plates, and into the rim (see **Figure 3** and **Figure 4**).
  - 9.3.1.3 Plate to Blocking Connection:
    - 9.3.1.3.1 Install one (1) of the FrameFAST Fasteners upward (or downward) at a 0° 12° angle (optimal angle = 12°), 1<sup>1</sup>/<sub>2</sub>" from outside face of wall, through the plates and into the blocking (see Figure 3 and Figure 4).
  - 9.3.1.4 Plate to Rim/Blocking Connection:
    - 9.3.1.4.1 Minimum required spacing and end distance of FrameFAST Fasteners is 4" o.c (See **Figure 5**). Minimum edge and end distances are per **Figure 3**.





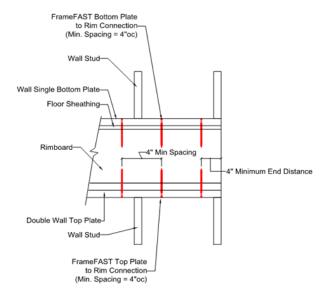


Figure 5. Minimum Spacing and End Distance of FrameFAST Fasteners Plate to Rim/Blocking Connection

9.3.2 Use a <sup>1</sup>/<sub>2</sub>" low-RPM/high-torque drill to drive the fastener head flush with the surface of the wall framing or wood structural framing member.

#### **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 Uplift and lateral resistance in stud to plate connections in accordance with ASTM D1761
  - 10.1.2 Uplift and lateral resistance in plate to rim board connections in accordance with ASTM D1761
- 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>33</sup>
- 10.6 Where additional condition of use and/or regulatory compliance information is required, please search for FrameFAST Fasteners on the <u>DrJ Certification website</u>.





#### 11 Findings

- 11.1 As outlined in **Section 6**, FrameFAST Fasteners 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 <u>duly authenticated report</u> and the manufacturer installation instructions, FrameFAST Fasteners shall be approved for the following applications:
  - 11.2.1 To provide resistance to lateral loads due to wind or seismic loads applied parallel or perpendicular to the wall in plate to rim board and plate to blocking applications per **Table 3**.
  - 11.2.2 Provide uplift resistance for all configurations considered per **Table 3**.
  - 11.2.3 Fasten wall studs to single or double plate per Table 2.
  - 11.2.4 Fasten double or single plate to blocking/rim board per Table 3.
- 11.3 Unless exempt by state statute, when FrameFAST Fasteners 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 <u>RDP</u>.
- 11.4 Any application specific issues not addressed herein can be engineered by an <u>RDP</u>. Assistance with engineering is available from FastenMaster.
- 11.5 IBC Section 104.2.3 (IRC Section R104.2.2 and IFC Section 104.2.3<sup>34</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.

- 11.6 Approved:<sup>35</sup> Building regulations require that the building official shall accept duly authenticated reports.<sup>36</sup>
  - 11.6.1 An approved agency is "approved" when it is ANAB ISO/IEC 17065 accredited.
  - 11.6.2 An <u>approved source</u> is *"approved"* when an <u>RDP</u> is properly licensed to transact engineering commerce.
  - 11.6.3 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.
- 11.7 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>.
- 11.8 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>37</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 Loads applied shall not exceed those recommended by the manufacturer or as defined in this report.
- 12.4 The FrameFAST Fasteners covered in this report shall be installed in accordance with this report and the manufacturer installation instructions.
  - 12.4.1 For conditions not covered in this report, connections shall be designed in accordance with accepted engineering practice.





- 12.5 Structural framing members connected with FrameFAST Fasteners shall be designed in accordance with the requirements of their specific design standards/specifications as referenced in the building code adopted by the authority having jurisdiction (AHJ) in which the project is to be constructed.
- 12.6 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:
  - 12.6.1 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.
  - 12.6.2 This report and the installation instructions shall be submitted at the time of permit application.
  - 12.6.3 This innovative product has an internal quality control program and a third-party quality assurance program.
  - 12.6.4 At a minimum, this innovative product shall be installed per **Section 9**.
  - 12.6.5 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>.
  - 12.6.6 This innovative product has an internal quality control program and a third party quality assurance program in accordance with 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.
  - 12.6.7 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 <u>IBC</u> <u>Section 110.3</u>, <u>IRC Section R109.2</u>, and any other regulatory requirements that may apply.
- 12.7 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>.
- 12.8 <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>).
- 12.9 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 <u>owner</u>.

#### **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 <u>www.fastenmaster.com</u>.

#### 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 <u>DrJ Certification</u>.





## 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 <u>https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.2.3</u>
- 5 <u>https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1706.2:~:tests#1706</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%20off%20use%20off%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.comell.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/ibc-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 Adoptions by Publisher for the latest adoption of a non-amended or amended model code by the local jurisdiction. https://up.codes/codes/general
- <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>
- 23 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3282/subpart-A/section-3282.14
- <sup>24</sup> <u>https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280</u>
- <sup>25</sup> All references to the FBC-B and FBC-R are the same as the 2021 IBC and 2021 IRC unless otherwise noted in the Florida 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>
- <sup>27</sup> 2021, 2018, 2015 IBC Section 2308.5.3.2
- <sup>28</sup> https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1703.4
- <sup>29</sup> <u>https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-</u>

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

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#### <sup>30</sup> <u>https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-</u>

- 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
- <sup>31</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>32</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>
- 33 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
- 34 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>35</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>36</sup> https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1
- <sup>37</sup> Multilateral approval is true for all ANAB accredited product evaluation agencies and all International Trade Agreements.