



Listing and Technical Evaluation Report™

Report No: 1010-01



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Subject to Renewal: July 1, 2025

DuPont™ Continuously Insulated Sheathing Series “Portal Frame with Hold-Down” Evaluation (DuPont™ 12.5" CI I-Joist PFH and DuPont™ 15" CI I-Joist PFH)

Trade Secret Report Holder:

DuPont™ Performance Building Solutions

Phone: 989-636-4366

Website: www.dupont.com/building

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 Products Evaluated¹

- 1.1 DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH

2 Product Description and Materials

- 2.1 DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH are constructed as shown in **Figure 1**, **Figure 2** and **Figure 3**.

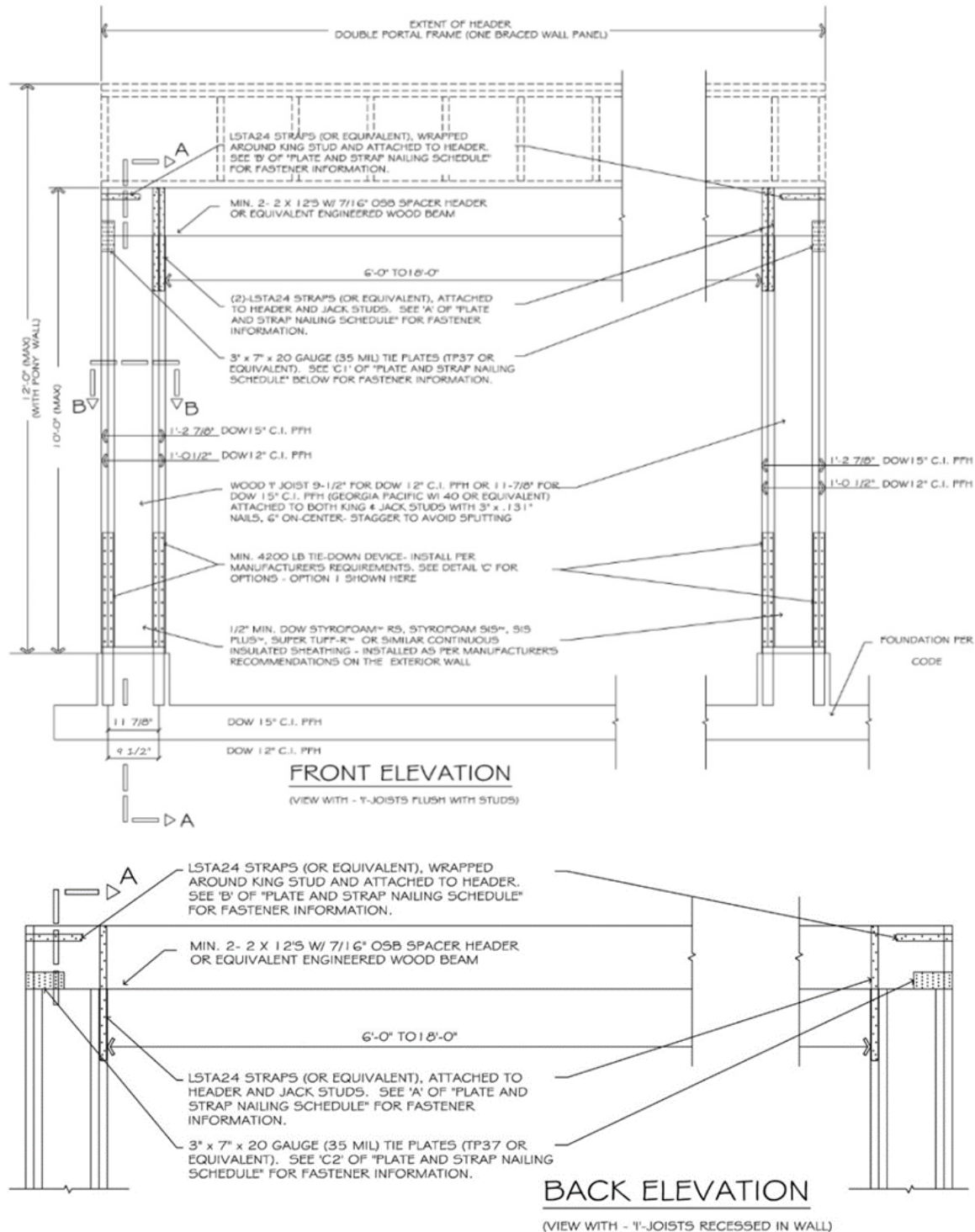


Figure 1. Construction Details of DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH

DOW 12.5" & 15" CI I-JOIST PFH

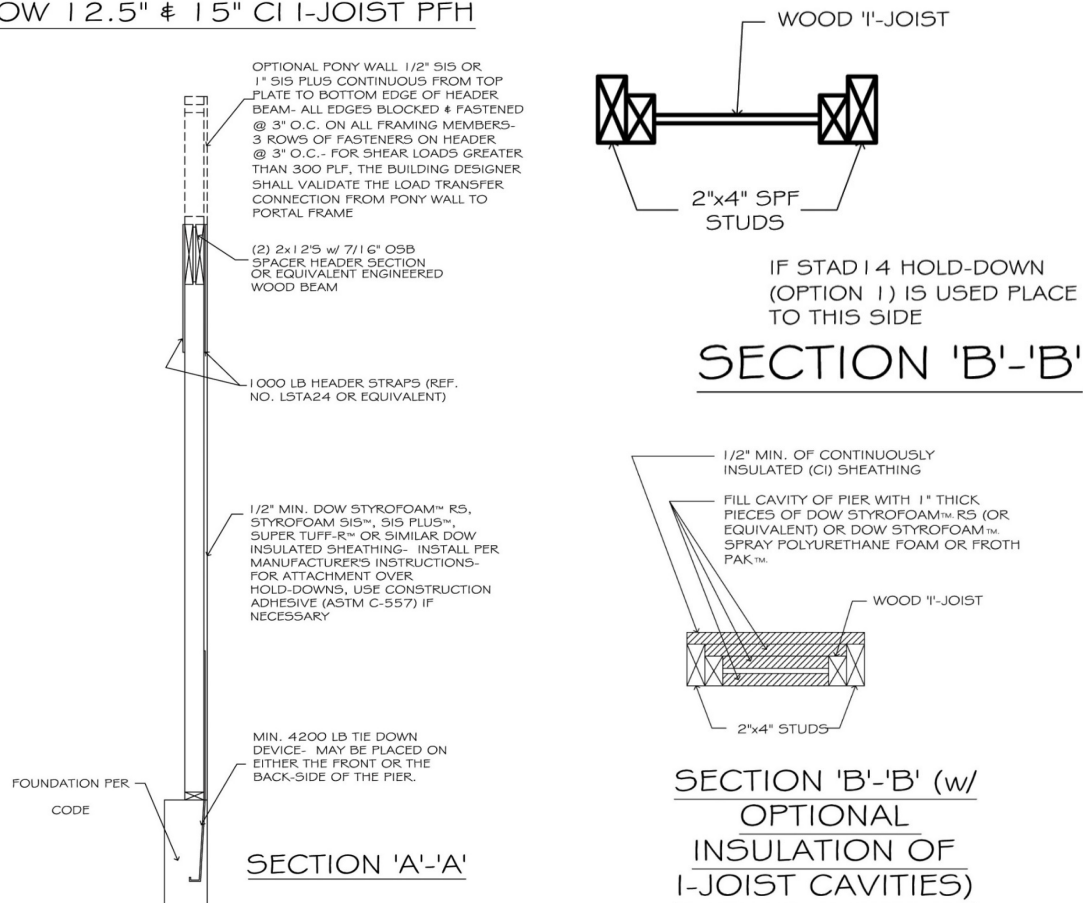


PLATE AND STRAP NAILING SCHEDULE

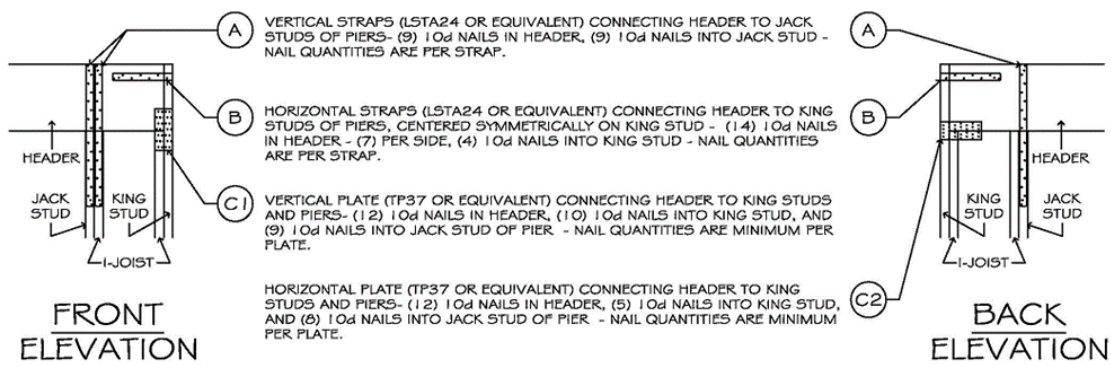


Figure 2. Construction Details of DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH

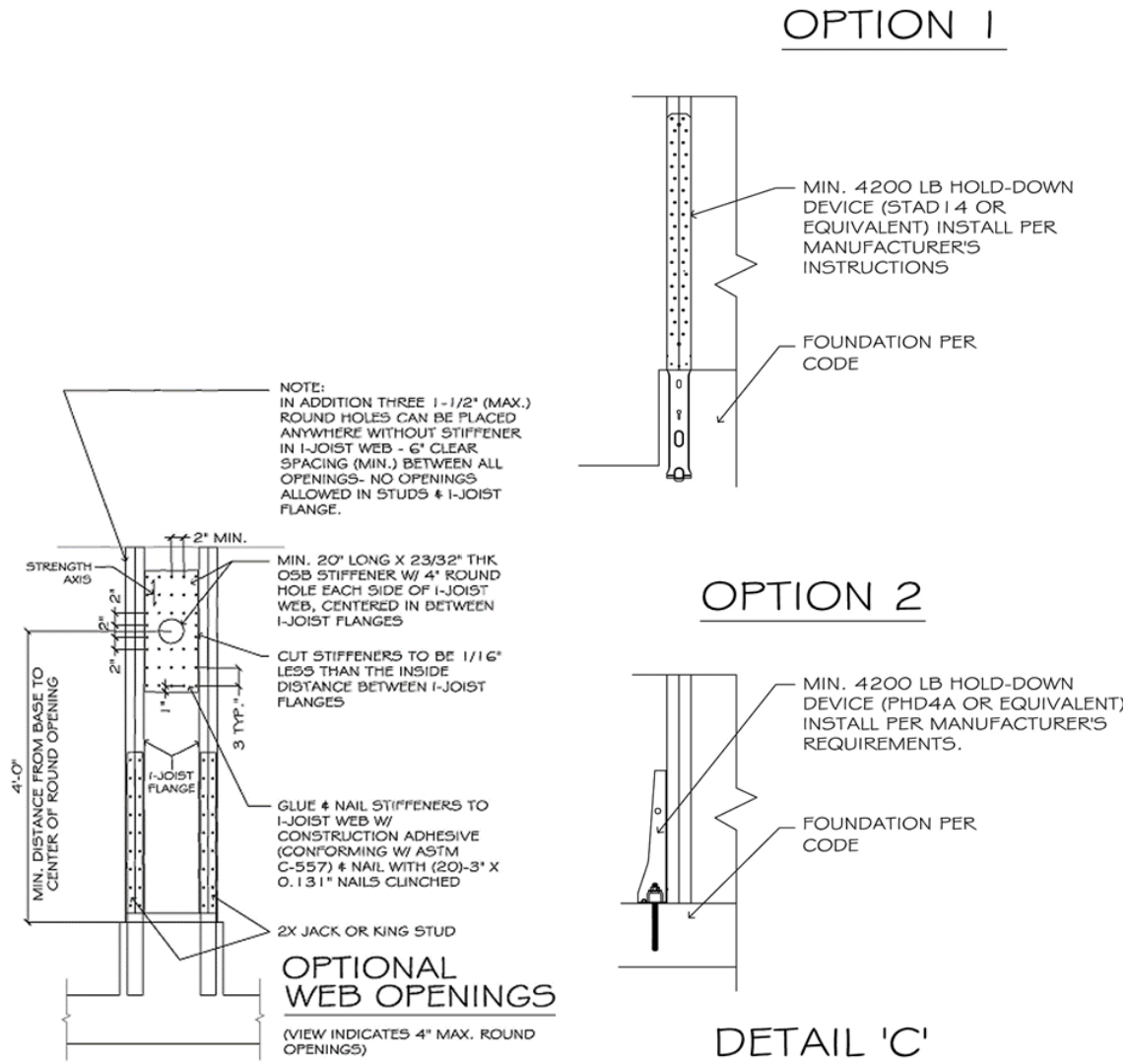


Figure 3. Construction Details of DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH

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

3 Definitions

- 3.1 New Materials² 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.³ The design strengths and permissible stresses shall be established by tests⁴ and/or engineering analysis.⁵
- 3.2 Duly Authenticated Reports⁶ and Research Reports⁷ are test reports and related engineering evaluations, which are written by an approved agency⁸ and/or an approved source.⁹
- 3.2.1 These reports contain intellectual property and/or trade secrets, which are protected by the Defend Trade Secrets Act (DTSA).¹⁰
- 3.3 An approved agency is "approved" when it is ANAB ISO/IEC 17065 accredited. DrJ Engineering, LLC (DrJ) is listed in the ANAB directory.



- 3.4 An approved source is “approved” when a professional engineer (i.e., Registered Design Professional) is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the state legislature via its professional engineering regulations.¹¹
- 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 Registered Design Professional (RDP).
- 3.5.1 The Center for Building Innovation (CBI) is ANAB¹² ISO/IEC 17025 and ISO/IEC 17020 accredited.
- 3.6 The regulatory authority shall enforce¹³ 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 writing¹⁴ 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.¹⁵
- 3.8 ANAB is an International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA) signatory where recognition of certificates, validation, and verification statements issued by conformity assessment bodies accredited by all other signatories of the IAF MLA with the appropriate scope, shall be approved.¹⁶ Therefore, all ANAB ISO/IEC 17065 Duly Authenticated Reports are approval equivalent.¹⁷
- 3.9 Approval equity is a fundamental commercial and legal principle.¹⁸

4 Applicable Standards for the Listing; Regulations for the Regulatory Evaluation¹⁹

4.1 Standards

- 4.1.1 *ANSI/AWC SDPWS: Special Design Provisions for Wind and Seismic*
- 4.1.2 *ASCE/SEI 7: Minimum Design Loads and Associated Criteria for Buildings and Other Structures*
- 4.1.3 *ASTM E564: Standard Practice for Static Load Test for Shear Resistance of Framed Walls for Building*
- 4.2 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:
- 4.2.1 *ASCE/SEI 7: Minimum Design Loads and Associated Criteria for Buildings and Other Structures*
- 4.2.2 *ASTM D7989: Standard Practice for Demonstrating Equivalent In-Plane Lateral Seismic Performance to Wood-Frame Shear Walls Sheathed with Wood Structural Panels*
- 4.2.3 *ASTM E72: Standard Test Methods of Conducting Strength Tests of Panels for Building Construction*
- 4.2.4 *ASTM E564: Standard Practice for Static Load Test for Shear Resistance of Framed Walls for Buildings*
- 4.2.5 *ASTM E2126: Standard Test Methods for Cyclic (Reversed) Load Test for Shear Resistance of Vertical Elements of the Lateral Force Resisting Systems for Buildings*
- 4.2.5.1 ASTM D7989 is accepted engineering practice used to establish Seismic Design Coefficients (SDCs). Test data generated by ISO/IEC 17025 approved agencies and/or professional engineers and all associated professional engineering evaluations that use ASTM D7989 as their basis, are defined as intellectual property and/or trade secrets and are also defined as an Independent Design Review (i.e., Listings, certified reports, Duly Authenticated Reports from approved agencies and/or research reports prepared by approved agencies and/or approved sources).

4.3 Regulations

- 4.3.1 *IBC – 15, 18, 21: International Building Code®*
- 4.3.2 *IRC – 15, 18, 21: International Residential Code®*



5 Listed²⁰

- 5.1 Equipment, materials, products or services included in a List published by a nationally recognized testing laboratory (i.e., CBI), approved agency (i.e., CBI and DrJ), and/or approved source (i.e., DrJ) or other organization 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 A DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH were built and tested to determine if equivalency could be achieved.
- 6.2 *³/₈" Braced Wall Panel*
- 6.2.1 To define braced wall panel equivalency in accordance with the IBC Section 104.11 and IRC Section R104.11, a 12'x30' single-story building was tested, framed and assembled precisely to the IRC prescriptive requirements. The building was constructed using the Wood Structural Panel (WSP) Braced Wall Panel (BWP) construction method where a BWP is defined by the IBC and IRC as follows:

IBC Section 202 Definitions. BRACED WALL PANEL. A full-height section of wall constructed to resist in-plane shear loads through interaction of framing members, sheathing material and anchors. The panel's length meets the requirements of its particular bracing method, and contributes toward the total amount of bracing required along its braced wall line.

IRC Section R202 Definitions. BRACED WALL PANEL. A full-height section of wall constructed to resist in-plane shear loads through interaction of framing members, sheathing material and anchors. The panel's length meets the requirements of its particular bracing method, and contributes toward the total amount of bracing required along its braced wall line in accordance with Section R602.10.1.

- 6.2.2 A shear wall is defined by the ANSI/AWC SDPWS: Special Design Provisions for Wind and Seismic standard with commentary as follows:

AWC SDPWS Section 4.3.7 Shear Wall Systems. 4.3.7.1 Wood Structural Panel Shear Walls: Shear walls sheathed with wood structural panel sheathing shall be permitted to be used to resist seismic and wind forces. The size and spacing of fasteners at shear wall boundaries and panel edges shall be as provided in Table 4.3A. The shear wall shall be constructed as follows: 1. Panels shall not be less than 4' x 8', except at boundaries and changes in framing. All edges of all panels shall be supported by and fastened to framing members or blocking.

6.2.3 The IBC, IRC, and SDPWS all provide the ability to use a $\frac{3}{8}$ " thick WSP, which is the minimum BWP specification in the conventional light-frame construction sections of the IBC and IRC as shown in **Figure 4**.

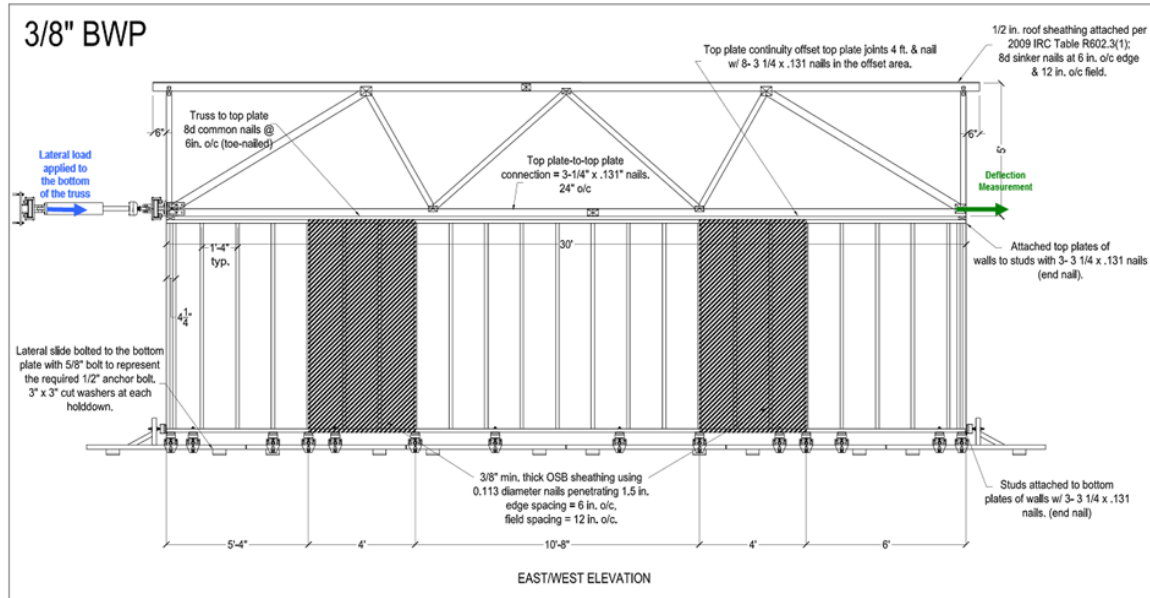


Figure 4. Test Assembly's 30' Braced Wall Line Illustrating Locations of Lateral Load Application and Deflection Measurements

6.2.3.1 To be typical and consistent in approach, braced wall lines were built in compliance with the maximum end distances defined in IRC Figure R602.10.1.1 and as allowed by IBC Section 2308.6 (**Figure 5**).

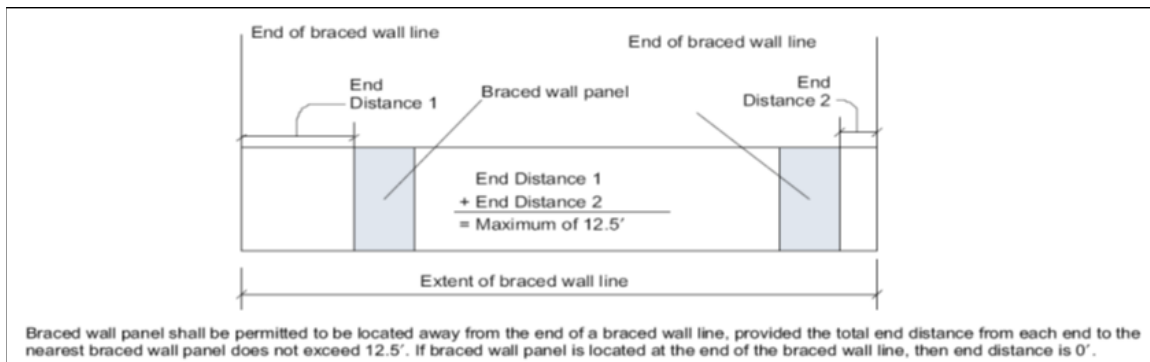


Figure 5. Braced Wall Panel End Distance Requirements per IRC Figure 602.10.1.1

6.3 IBC/IRC 16" PFH

6.3.1 This portal frame was constructed as shown in **Figure 9** and tested in accordance with ASTM E564 testing procedures. Testing determined its lateral resistance within an identical braced wall line so that a direct performance comparison could be made with respect to the tests performed on the DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH assemblies.

6.3.1.1 Two 30' braced wall lines were framed using standard code complying framing techniques with SPF top plate, sill plate and studs from stud grade lumber. The braced wall lines were then tested simultaneously.

6.3.1.2 The assembly was constructed with $\frac{3}{8}$ " thick OSB WSP sheathing as detailed in [IRC Section R602.10.6.2](#) and [IBC Section 2308.6.5.2](#) and fastened with 0.113 diameter nails²¹ penetrating $1\frac{1}{2}$ ", 3" o.c. spacing at the edges and to all framing members, per **Figure 6**.

6.3.1.3 Interior Gypsum Wallboard (GWB) was not applied.

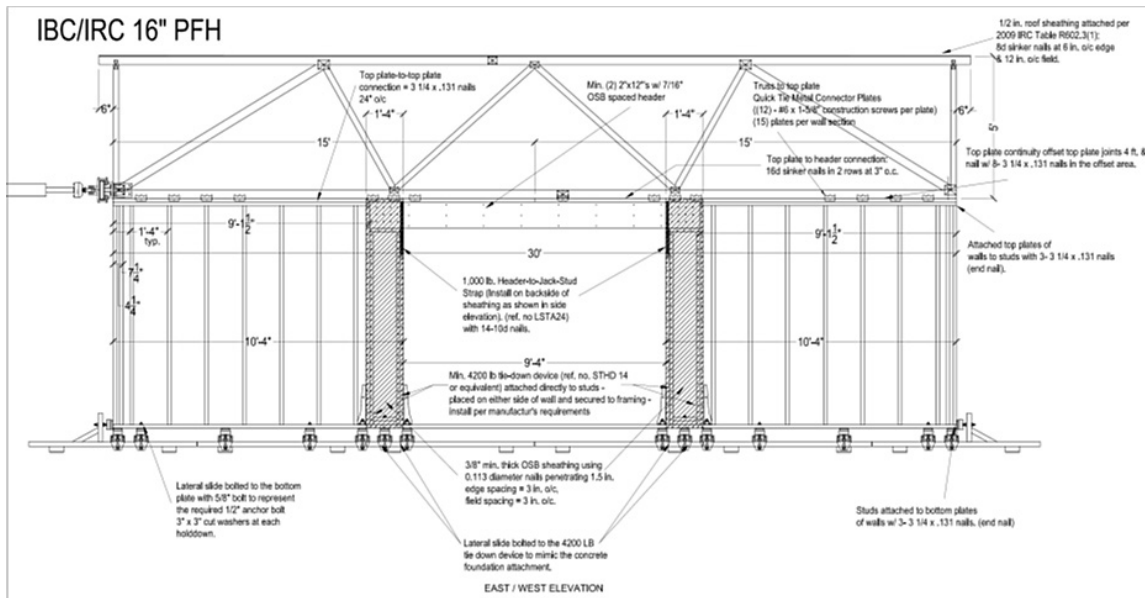


Figure 6. Test Assembly's 30' Braced Wall Line Illustrating Locations of Lateral Load Application & Deflection Measurements

6.3.2 *DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH:* These portal frames were constructed as shown in **Figure 1**, **Figure 2** and **Figure 3**, and were tested in accordance with ASTM E564 testing procedures. Testing determined their lateral resistance within an identical braced wall line so that a direct performance comparison could be made with respect to the tests performed on the $\frac{3}{8}$ " BWP and the IBC/IRC 16" PFH assemblies.

6.3.2.1 Two 30' braced wall lines were framed using standard code complying framing techniques with SPF top plate, sill plate and stud grade lumber. The braced wall lines were then tested simultaneously.

6.3.2.2 The assembly was constructed with either $9\frac{1}{2}$ " Wood I-Joist ($2\frac{1}{2}$ " wide and $1\frac{1}{2}$ " thick flange with $\frac{3}{8}$ " web²² or equivalent [DuPont 12.5" CI I-Joist PFH]) or $11\frac{7}{8}$ " Wood I-Joist ($2\frac{1}{2}$ " wide and $1\frac{1}{2}$ " thick flange with $\frac{3}{8}$ " web²³ or equivalent [DuPont 15" CI I-Joist PFH]) fastened between SPF studs as shown in **Figure 1** and **Figure 7**.

6.3.2.2.1 King stud and jack stud attachment is per **Figure 1**. If nailing from the 2x4 king or jack stud side into the I-Joist, nails shall be staggered to prevent splitting of the I-Joist flange. If nailing from the I-Joist side through the flange into the 2x4 king and jack studs, nails may be placed along the same side of I-Joist flange-web joint.

6.3.2.3 Interior GWB was not applied.

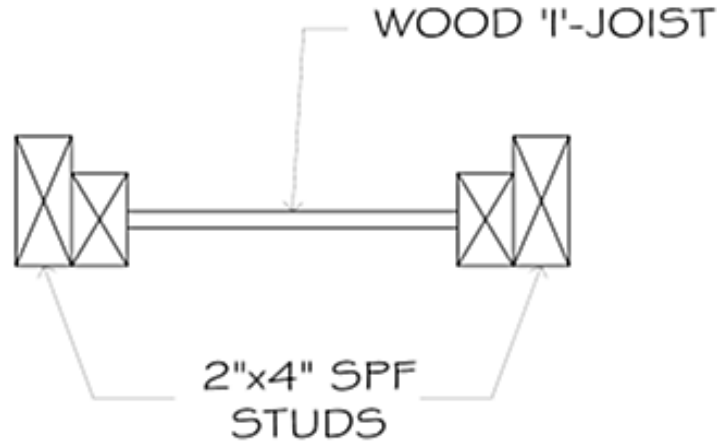


Figure 7. Cross-section View of the DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH

6.3.2.4 Providing for thermal insulation and the code required water-resistive barrier, $\frac{1}{2}$ " thick DuPont™ STYROFOAM™ RS was attached to the exterior of the PFH piers with staples (1" crown x $\frac{1}{4}$ " long 16-gauge staples, $\frac{3}{4}$ " embedment into stud) 12" o.c. spacing at the edges and 12" o.c. spacing in the field (see **Figure 8**).

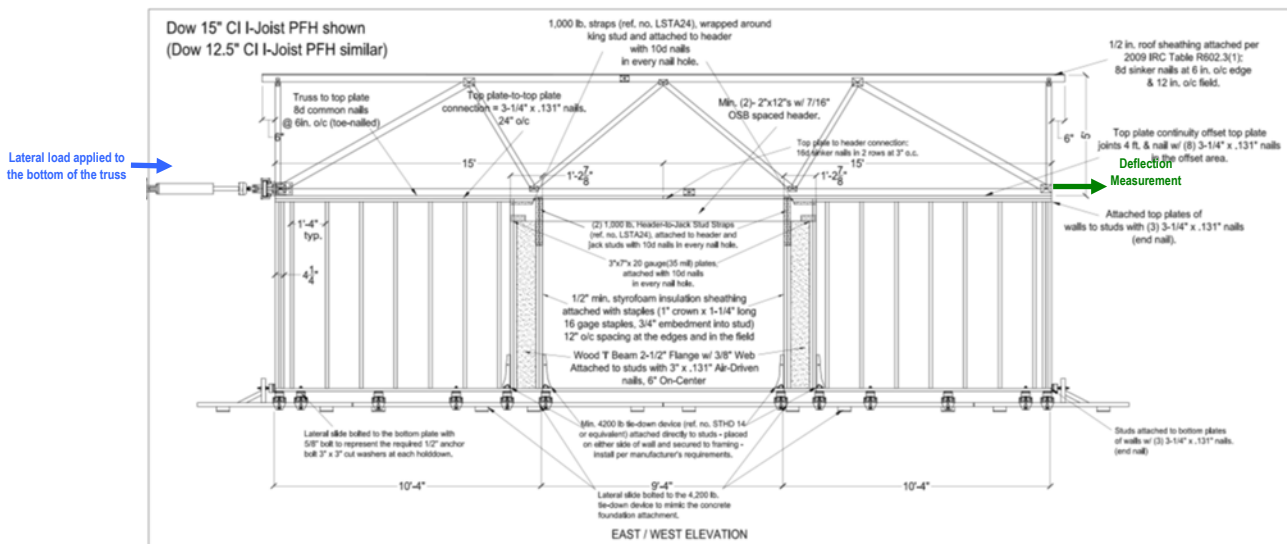


Figure 8. Test Assembly's 30' Braced Wall Line Illustrating Locations of Lateral Load Application & Deflection Measurements

6.3.3 The test data provides confirmation that the performance of the DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH provide comparable equivalence to the $\frac{3}{8}$ " BWP and the IBC/IRC 16" PFH.



- 6.4 Based on the test results using the equivalency principle as defined in [IBC Section 104.11](#) and [IRC Section R104.11](#), the DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH are assigned the recommended design values for designs controlled by wind or gravity loading conditions as provided in **Table 1**.

Table 1. Recommended Allowable Wind Design Values for DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH

Test Name	Maximum Wall Height ¹ (ft)	ASD Allowable Design Value per Pier ² (lb)
IBC/IRC 16" PFH (16" Wide Pier)	8	1,047
	10	785
DuPont 12.5" CI I-Joist PFH (12½" Wide Pier)	8	949
	10	712
DuPont 15" CI I-Joist PFH (14⅞" Wide Pier)	8	1,145
	10	858
SI: 1 in = 25.4 mm, 1 lb = 4.45 N 1. Interpolation between wall heights permitted. 2. In APA Technical Topics Form No. TT-100, the 10' high portals have 77-78% of the 8' high portal capacity. Since testing provides conservative equivalency to the APA TT-100 test data, 10' high wall design values are provided that use a 75% factor to reduce the 8' high wall design values generated by test data.		

- 6.5 The design values for the DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH assemblies are based on testing and the evaluation of the test data compared to the IBC/IRC 16" PFH test data. The evaluation considered the following two design conditions found in the IBC/IRC, and the ASD Allowable Design Value per Pier listed in **Table 1**, is based on the lower of these two limits:
- 6.5.1 The allowable seismic design story drift for typical residential and conventional light-frame construction as found in ASCE 7.
- 6.5.1.1 Although the ASCE 7 criterion is specifically for seismic design and does not apply to wind design, it does provide a reasonable deformation point of reference. The ASD allowable unit shear capacity is determined per SDPWS Section 4.3.3. SDPWS also references the allowable story drift limits according to ASCE 7 Section 12.12.1 and Table 12.12-1.
- 6.5.2 The tested capacity divided by a factor of safety.
- 6.6 As detailed in **Figure 1**, the maximum allowable compressive strength due to gravity of the DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH is 7,162 lbs. per pier. Additional compressive capacity may be engineered into each pier. Structurally attaching full height framing members within the pier cavity is one possible engineered option.
- 6.6.1 The test results provide assurance that both the DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH provide equivalent shear resistance and comparable stiffness performance to code compliant benchmarks (the ⅜" BWP and the IBC/IRC 16" PFH).
- 6.6.1.1 At this time, the testing performed on the DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH limits its use to replacing any bracing required by [IBC Section 2308.6](#) and [IRC Section R602.10.6](#) in Seismic Design Categories A, B, and detached dwellings in Category C.
- 6.7 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.

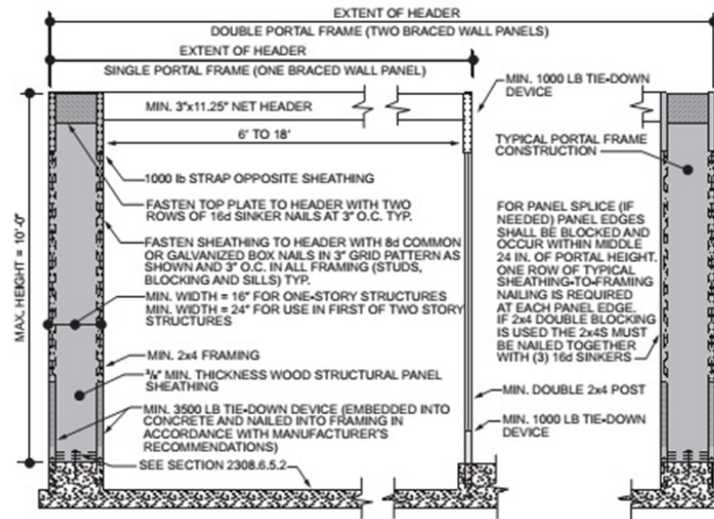


7 Certified Performance²⁴

- 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.²⁵
- 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.²⁶

8 Regulatory Evaluation and Accepted Engineering Practice

- 8.1 DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH comply with the following legislatively adopted regulations and/or accepted engineering practice for the following reasons:
 - 8.1.1 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:
 - 8.1.1.1 ASCE/SEI 7: Minimum Design Loads and Associated Criteria for Buildings and Other Structures,
 - 8.1.1.2 ASTM D7989: Standard Practice for Demonstrating Equivalent In-Plane Lateral Seismic Performance to Wood-Frame Shear Walls Sheathed with Wood Structural Panels,
 - 8.1.1.3 ASTM E72: Standard Test Methods of Conducting Strength Tests of Panels for Building Construction,
 - 8.1.1.4 ASTM E564: Standard Practice for Static Load Test for Shear Resistance of Framed Walls for Buildings, and
 - 8.1.1.5 ASTM E2126: Standard Test Methods for Cyclic (Reversed) Load Test for Shear Resistance of Vertical Elements of the Lateral Force Resisting Systems for Buildings.
 - 8.2 Lateral force resisting systems for use in both wind and seismic applications follow the performance-based provisions of [IBC Section 2306.1](#), [IBC Section 2306.3](#) and/or [Section 4.3 SDPWS](#) for light-frame wood wall assemblies.
 - 8.3 The DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH were tested and evaluated for equivalency to the following IBC requirement:
 - 8.3.1 Per [IBC Section 2308.6.5.2](#), any bracing required by [IBC Section 2308.6.5](#) (i.e., WSP sheathing with a thickness not less than $\frac{3}{8}$ inch [9.5 mm] for 16-inch [406 mm] or 24-inch [610 mm] stud spacing in accordance with [IBC Table 2308.6.3\(2\)](#) and [IBC Table 2308.6.3\(3\)](#)) is permitted to be replaced by the following (see **Figure 9**) when used adjacent to a door or window opening with a full-length header.



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 4.448 N.

Figure 9. IBC/IRC Detail of Method PFH

- 8.4 In addition to IBC Section 2308.6.5.2, the IRC defines the PFH detail in IRC Figure R602.10.6.2 as an equivalent replacement to the capacity of a 4x8 sheet of $\frac{3}{8}$ " WSP sheathing through the use of the following language:

IRC Section R602.10.6.2 Method PFH: Portal frame with hold-downs. Method PFH braced wall panels constructed in accordance with the following provisions (see Figure 9 above) are also permitted to replace each 4 feet (1,219 mm) of braced wall panel as required by Section R602.10.6 for use adjacent to a window or door opening with a full-length header.

- 8.4.1 The testing and the supporting data meets the intent of the IBC and IRC through the use of accepted engineering procedures, experience, and technical judgment, where the DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH assemblies have been found to be an alternative material, design or method of construction that is at least the equivalent of that prescribed in the code in quality, strength, effectiveness, durability and safety, and can be approved as such.^{27,28}
- 8.5 Any building code, regulation, and/or accepted engineering evaluations (i.e., research reports, Duly Authenticated Reports, etc.) that are conducted for this Listing were performed by DrJ Engineering, LLC (DrJ), an ISO/IEC 17065 accredited certification body and a professional engineering company operated by RDP/approved sources. DrJ is qualified²⁹ to practice product and regulatory compliance services within its scope of accreditation and engineering expertise, respectively.
- 8.6 Engineering evaluations are conducted with DrJ's ANAB accredited ICS code scope of expertise, which are also its areas of professional engineering competence.
- 8.7 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, the more restrictive shall govern.
- 9.3 *Installation Procedure*
 - 9.3.1 The DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH shall be constructed as shown in **Figure 1**, **Figure 2** and **Figure 3**.

10 Substantiating Data

- 10.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:
 - 10.1.1 Lateral resistance testing in accordance with ASTM E564
- 10.2 A Portal Frame with Hold Downs for Wall Bracing or Engineered Applications, APA Technical Topics, Form No. TT-100; APA – The Engineered Wood Association; Tacoma, WA.
- 10.3 Information contained herein may include the result of testing and/or data analysis by sources that are approved agencies, approved sources, and/or RDPs. Accuracy of external test data and resulting analysis is relied upon.
- 10.4 Where pertinent, testing and/or engineering analysis are based upon provisions that have been codified into law through state or local adoption of regulations and standards. The developers of these regulations and standards are responsible for the reliability of published content. DrJ's engineering practice may use a regulation-adopted provision as the control. A regulation-endorsed control versus a simulation of the conditions of application to occur establishes a new material as being equivalent to the regulatory provision in terms of quality, strength, effectiveness, fire resistance, durability, and safety.
- 10.5 The accuracy of the provisions provided herein may be reliant upon the published properties of raw materials, which are defined by the grade mark, grade stamp, mill certificate, or Duly Authenticated Reports from approved agencies and/or approved sources provided by the supplier. These are presumed to be minimum properties and relied upon to be accurate. The reliability of DrJ's engineering practice, as contained in this Duly Authenticated Report, may be dependent upon published design properties by others.
- 10.6 Testing and engineering analysis: 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.³⁰
- 10.7 Where additional condition of use and/or regulatory compliance information is required, please search for DuPont 12.5" CI I-Joist PFH or DuPont 15" CI I-Joist PFH on the DrJ Certification website.



11 Findings

- 11.1 As outlined in **Section 6**, DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH have performance characteristics that were tested and/or meet applicable regulations and are suitable for use pursuant to its specified purpose.
- 11.2 The testing and engineering analysis performed provides the basis for the use of either the DuPont 12.5" CI I-Joist PFH or DuPont 15" CI I-Joist PFH, as an equivalent alternative to and replacement for a 4' WSP located within a braced wall line in accordance with IBC Section 2308.6.5 and IRC Section R602.10.6.2.
- 11.3 The testing and engineering analysis performed provides the basis for the use of either DuPont 12.5" CI I-Joist PFH or DuPont 15" CI I-Joist PFH as a substitution for a IBC/IRC 16" PFH as defined in IBC Section 2308.6.5.2 and IRC Section R602.10.6.2, and have the relative performance as defined in **Table 1**.
- 11.4 Unless exempt by state statute, when DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH are to be used as a structural and/or building envelope component in the design of a specific building, the design shall be performed by an RDP.
- 11.5 Any application specific issues not addressed herein can be engineered by an RDP. Assistance with engineering is available from DuPont Performance Building Solutions.
- 11.6 IBC Section 104.11 (IRC Section R104.11 and IFC Section 104.10³¹ are similar) in pertinent part states:

104.11 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. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved.

- 11.7 **Approved:**³² Building regulations require that the building official shall accept Duly Authenticated Reports.³³
 - 11.7.1 An approved agency is "approved" when it is ANAB ISO/IEC 17065 accredited.
 - 11.7.2 An approved source is "approved" when an RDP is properly licensed to transact engineering commerce.
 - 11.7.3 Federal law, Title 18 US Code Section 242, requires that where the alternative product, material, service, design, assembly, and/or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved. Denial without written reason deprives a protected right to free and fair competition in the marketplace.
- 11.8 DrJ is a licensed engineering company, employs licensed RDPs and is an ANAB-Accredited Product Certification Body – Accreditation #1131.
- 11.9 Through the IAF Multilateral Agreements (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.³⁴

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 The DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH designs are limited to use in buildings constructed in accordance with the IBC and IRC where wind loading controls the design or where constructed in accordance with the IRC for Seismic Design Categories A, B and detached dwellings in C.



- 12.4 The DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH designs are also permitted in buildings constructed in accordance with the Conventional Light frame provisions of the IBC Section 2308.
- 12.5 When required by adopted legislation and enforced by the building official, also known as the authority having jurisdiction (AHJ) in which the project is to be constructed:
- 12.5.1 Any calculations incorporated into the construction documents shall conform to accepted engineering practice and, when prepared by an approved source, shall be approved when signed and sealed.
 - 12.5.2 This report and the installation instructions shall be submitted at the time of permit application.
 - 12.5.3 These innovative products have an internal quality control program and a third-party quality assurance program.
 - 12.5.4 At a minimum, these innovative products shall be installed per **Section 9** of this report.
 - 12.5.5 The review of this report by the AHJ shall comply with IBC Section 104 and IBC Section 105.4.
 - 12.5.6 These innovative products have an internal quality control program and a third party quality assurance program in accordance with IBC Section 104.4, IBC Section 110.4, IBC Section 1703, IRC Section R104.4, and IRC Section R109.2.
 - 12.5.7 The application of these innovative products in the context of this report is dependent upon the accuracy of the construction documents, implementation of installation instructions, inspection as required by IBC Section 110.3, IRC Section R109.2, and any other regulatory requirements that may apply.
- 12.6 The approval of this report by the AHJ shall comply with IBC Section 1707.1, where legislation states in part, "*the building official shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new material or assemblies as provided for in Section 104.11," all of IBC Section 104, and IBC Section 105.4.*
- 12.7 Design loads shall be determined in accordance with the regulations adopted by the jurisdiction in which the project is to be constructed and/or by the building designer (i.e., owner or RDP).
- 12.8 The actual design, suitability, and use of this report for any particular building, is the responsibility of the owner or the authorized agent of the owner.

13 Identification

- 13.1 The innovative products listed in **Section 1.1** are identified by a label on the board or packaging material bearing the manufacturer name, product name, this report number, and other information to confirm code compliance.
- 13.2 Additional technical information can be found at www.dupont.com/building.

14 Review Schedule

- 14.1 This report is subject to periodic review and revision. For the latest version, visit drjcertification.org.
- 14.2 For information on the status of this report, please contact [DrJ Certification](#).

15 Approved for Use Pursuant to U.S. and International Legislation Defined in Appendix A

- 15.1 DuPont 12.5" CI I-Joist PFH and DuPont 15" CI I-Joist PFH are included in this report published by an approved agency that is concerned with evaluation of products or services, maintains periodic inspection of the production of listed materials or periodic evaluation of services. This report states either that the material, product, or service meets recognized standards or has been tested and found suitable for a specified purpose. This report meets the legislative intent and definition of being acceptable to the AHJ.



Appendix A

1 Legislation that Authorizes AHJ Approval

- 1.1 **Fair Competition:** State legislatures have adopted Federal regulations for the examination and approval of building code referenced and alternative products, materials, designs, services, assemblies and/or methods of construction that:
 - 1.1.1 Advance innovation
 - 1.1.2 Promote competition so all businesses have the opportunity to compete on price and quality in an open market on a level playing field unhampered by anticompetitive constraints
 - 1.1.3 Benefit consumers through lower prices, better quality, and greater choice
- 1.2 **Adopted Legislation:** The following local, state, and federal regulations affirmatively authorize these innovative products to be approved by AHJs, delegates of building departments, and/or delegates of an agency of the federal government:
 - 1.2.1 Interstate commerce is governed by the Federal Department of Justice to encourage the use of innovative products, materials, designs, services, assemblies, and/or methods of construction. The goal is to “*protect economic freedom and opportunity by promoting free and fair competition in the marketplace.*”
 - 1.2.2 Title 18 US Code Section 242 affirms and regulates the right of individuals and businesses to freely and fairly have new products, materials, designs, services, assemblies, and/or methods of construction approved for use in commerce. Disapproval of alternatives shall be based upon non-conformance with respect to specific provisions of adopted legislation and shall be provided in writing stating the reasons why the alternative was not approved, with reference to the specific legislation violated.
 - 1.2.3 The federal government and each state have a public records act. In addition, each state also has legislation that mimics the federal Defend Trade Secrets Act 2016 (DTSA),³⁵ where providing test reports, engineering analysis and/or other related IP/TS is subject to prison of not more than ten years³⁶ and/or a \$5,000,000 fine or 3 times the value of³⁷ the Intellectual Property (IP) and Trade Secrets (TS).
 - 1.2.3.1 Compliance with public records and trade secret legislation requires approval through the use of Listings, certified reports, Technical Evaluation Reports, Duly Authenticated Reports, and/or research reports prepared by approved agencies and/or approved sources.
 - 1.2.4 For new materials³⁸ that are not specifically provided for in any regulation, the design strengths and permissible stresses shall be established by tests, where suitable load tests simulate the actual loads and conditions of application that occur.
 - 1.2.5 The design strengths and permissible stresses of any structural material shall conform to the specifications and methods of design using accepted engineering practice.³⁹
 - 1.2.6 The commerce of approved sources (i.e., registered PEs) is regulated by professional engineering legislation. Professional engineering commerce shall always be approved by AHJs, except where there is evidence provided in writing, that specific legislation have been violated by an individual registered PE.
 - 1.2.7 The AHJ 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 IBC Section 104.11.⁴⁰



- 1.3 **Approved⁴¹ by Los Angeles:** The Los Angeles Municipal Code (LAMC) states in pertinent part that the provisions of LAMC are not intended to prevent the use of any material, device, or method of construction not specifically prescribed by LAMC. The Department shall use Part III, Recognized Standards in addition to Part II, Uniform Building Code Standards of Division 35, Article 1, Chapter IX of the LAMC in evaluation of products for approval where such standard exists for the product or the material and may use other approved standards that apply. Whenever tests or certificates of any material or fabricated assembly are required by Chapter IX of the LAMC, such tests or certification shall be made by a testing agency approved by the Superintendent of Building to conduct such tests or provide such certifications. The testing agency shall publish the scope and limitation(s) of the listed material or fabricated assembly.⁴² The Superintendent of Building Approved Testing Agency Roster is provided by the Los Angeles Department of Building and Safety (LADBS). The Center for Building Innovation (CBI) Certificate of Approval License is TA24945. Tests and certifications found in a DrJ Listing are LAMC approved. In addition, the Superintendent of Building 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 the California Building Code (CBC) Section 1707.1.⁴³
- 1.4 **Approved by Chicago:** The Municipal Code of Chicago (MCC) states in pertinent part that an Approved Agency is a Nationally Recognized Testing Laboratory (NRTL) acting within its recognized scope and/or a certification body accredited by the American National Standards Institute (ANSI) acting within its accredited scope. Construction materials and test procedures shall conform to the applicable standards listed in the MCC. Sufficient technical data shall be submitted to the building official to substantiate the proposed use of any product, material, service, design, assembly, and/or method of construction not specifically provided for in the MCC. This technical data shall consist of research reports from approved sources (i.e., MCC defined Approved Agencies).
- 1.5 **Approved by New York City:** The 2022 NYC Building Code (NYCBC) states in part that an approved agency shall be deemed⁴⁴ an approved testing agency via ISO/IEC 17025 accreditation, an approved inspection agency via ISO/IEC 17020 accreditation, and an approved product evaluation agency via ISO/IEC 17065 accreditation. Accrediting agencies, other than federal agencies, must be members of an internationally recognized cooperation of laboratory and inspection accreditation bodies subject to a mutual recognition agreement⁴⁵ (i.e., ANAB, International Accreditation Forum [IAF], etc.).
- 1.6 **Approved by Florida:** Statewide approval of products, methods, or systems of construction shall be approved, without further evaluation by:
- 1.6.1 A certification mark or listing of an approved certification agency,
 - 1.6.2 A test report from an approved testing laboratory,
 - 1.6.3 A product evaluation report based upon testing or comparative or rational analysis, or a combination thereof, from an approved product evaluation entity, or
 - 1.6.4 A product evaluation report based upon testing, comparative or rational analysis, or a combination thereof, developed, signed and sealed by a professional engineer or architect, licensed in Florida.
 - 1.6.5 For local product approval, products or systems of construction shall demonstrate compliance with the structural wind load requirements of the Florida Building Code (FBC) through one of the following methods:
 - 1.6.5.1 A certification mark, listing or label from a commission-approved certification agency indicating that the product complies with the code,
 - 1.6.5.2 A test report from a commission-approved testing laboratory indicating that the product tested complies with the code,
 - 1.6.5.3 A product-evaluation report based upon testing, comparative or rational analysis, or a combination thereof, from a commission-approved product evaluation entity which indicates that the product evaluated complies with the code,



- 1.6.5.4 A product-evaluation report or certification based upon testing or comparative or rational analysis, or a combination thereof, developed and signed and sealed by a Florida professional engineer or Florida registered architect, which indicates that the product complies with the code, or
- 1.6.5.5 A statewide product approval issued by the Florida Building Commission.
- 1.6.6 The [Florida Department of Business and Professional Regulation \(DBPR\)](#) website provides a listing of companies certified as a [Product Evaluation Agency](#) (i.e., EVLMiami 13692), a [Product Certification Agency](#) (i.e., CER10642), and as a [Florida Registered Engineer](#) (i.e., ANE13741).
- 1.7 **Approved by Miami-Dade County (i.e., Notice of Acceptance [NOA]):** A Florida statewide approval is an NOA. An NOA is a Florida local product approval. By Florida law, Miami-Dade County shall accept the statewide and local Florida Product Approval as provided for in Florida legislation [553.842](#) and [553.8425](#).
- 1.8 **Approved by New Jersey:** Pursuant to the 2018 Building Code of New Jersey in [IBC Section 1707.1 General](#),⁴⁶ it states: “*In the absence of approved rules or other approved standards, 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 the administrative provisions of the Uniform Construction Code (N.J.A.C. 5:23)*.”⁴⁷ Furthermore N.J.A.C 5:23-3.7 states: “*Municipal approvals of alternative materials, equipment, or methods of construction.*”
 - 1.8.1 **Approvals:** Alternative materials, equipment, or methods of construction shall be approved by the appropriate subcode official provided the proposed design is satisfactory and that the materials, equipment, or methods of construction are suitable for the intended use and are at least the equivalent in quality, strength, effectiveness, fire resistance, durability, and safety of those conforming with the requirements of the regulations.
 - 1.8.1.1 A field evaluation label and report or letter issued by a nationally recognized testing laboratory verifying that the specific material, equipment, or method of construction meets the identified standards or has been tested and found to be suitable for the intended use, shall be accepted by the appropriate subcode official as meeting the requirements of the above.
 - 1.8.1.2 Reports of engineering findings issued by nationally recognized evaluation service programs such as but not limited to, the Building Officials and Code Administrators (BOCA), the International Conference of Building Officials (ICBO), the Southern Building Code Congress International (SBCCI), the International Code Council (ICC), and the National Evaluation Service, Inc., shall be accepted by the appropriate subcode official as meeting the requirements of the above.
 - 1.8.2 The [New Jersey Department of Community Affairs](#) has confirmed that technical evaluation reports, from any accredited entity listed by [ANAB](#), meets the requirements of item the previous paragraph, given that the listed entities are no longer in existence and/or do not provide “*reports of engineering findings.*”
- 1.9 **Approved by the Code of Federal Regulations Manufactured Home Construction and Safety Standards:** Pursuant to Title 24, Subtitle B, Chapter XX, [Part 3282.14](#)⁴⁸ and [Part 3280](#),⁴⁹ the Department encourages innovation and the use of new technology in manufactured homes. The design and construction of a manufactured home shall conform to the provisions of Part 3282 and Part 3280 where key approval provisions in mandatory language follow:
 - 1.9.1 “*All construction methods shall be in conformance with accepted engineering practices.*”
 - 1.9.2 “*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.*”
 - 1.9.3 “*The design stresses of all materials shall conform to accepted engineering practice.*”



- 1.10 Approval by US, Local and State Jurisdictions in General:** In all other local and state jurisdictions, the adopted building code legislation states in pertinent part that:
- 1.10.1 For new materials that are not specifically provided for in this code, the design strengths and permissible stresses shall be established by tests.⁵⁰
 - 1.10.2 For innovative alternatives and/or methods of construction, the building official shall accept Duly Authenticated Reports from approved agencies with respect to the quality and manner of use of new materials or assemblies.⁵¹
 - 1.10.2.1 An approved agency is “approved” when it is ANAB ISO/IEC 17065 accredited. DrJ Engineering, LLC (DrJ) is in the ANAB directory.
 - 1.10.2.2 An approved source is “approved” when an RDP is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the state legislature via its professional engineering regulations.⁵²
 - 1.10.3 The design strengths and permissible stresses of any structural material...shall conform to the specifications and methods of design of accepted engineering practice performed by an approved source.⁵³
- 1.11 Approval by International Jurisdictions:** The USMCA and GATT agreements provide for approval of innovative materials, designs, services, and/or methods of construction through the Agreement on Technical Barriers to Trade and the IAF Multilateral Recognition Arrangement (MLA), where these agreements:
- 1.11.1 State that conformity assessment procedures (i.e., ISO/IEC 17020, 17025, 17065, etc.) are prepared, adopted, and applied so as to grant access for suppliers of like products originating in the territories of other Members under conditions no less favourable than those accorded to suppliers of like products of national origin or originating in any other country, in a comparable situation.
 - 1.11.2 **Approved:** The purpose of the MLA is to ensure mutual recognition of accredited certification and validation/verification statements between signatories to the MLA and subsequently, acceptance of accredited certification and validation/verification statements in many markets based on one accreditation for the timely approval of innovative materials, designs, services, and/or methods of construction.
 - 1.11.3 ANAB is an IAF-MLA signatory where recognition of certificates, validation, and verification statements issued by conformity assessment bodies accredited by all other signatories of the IAF MLA, with the appropriate scope, shall be approved.⁵⁴
 - 1.11.4 Therefore, all ANAB ISO/IEC 17065 Duly Authenticated Reports are approval equivalent.⁵⁵
- 1.12** Approval equity is a fundamental commercial and legal principle.⁵⁶



Notes

- 1 For more information, visit djrcertification.org or call us at 608-310-6748.
- 2 <https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1702>
- 3 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/colorado/ibc-2021/chapter/1/scope-and-administration#104.11>
- 4 <https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1706>:-:text=the%20design%20strengths%20and%20permissible%20stresses%20shall%20be%20established%20by%20tests%20as
- 5 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/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1706>:-:text=shall%20conform%20to%20the%20specifications%20and%20methods%20of%20design%20of%20accepted%20engineering%20practice
- 6 <https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1707.1>:-:text=the%20building%20official%20shall%20accept%20duly%20authenticated%20reports%20from%20approved%20agencies
- 7 <https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1703.4.2>
- 8 https://up.codes/viewer/wyoming/ibc-2021/chapter/2/definitions#approved_agency
- 9 https://up.codes/viewer/wyoming/ibc-2021/chapter/2/definitions#approved_source
- 10 <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.
- 11 <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/>
- 12 <https://www.cbiteest.com/accreditation/>
- 13 <https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#104>:-:text=to%20enforce%20the%20provisions%20of%20this%20code
- 14 <https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#104.11>:-:text=Where%20the%20alternative%20material%2C%20design%20or%20method%20of%20construction%20is%20not%20approved%2C%20the%20building%20official%20shall%20respond%20in%20writing%2C%20stating%20the%20reasons%20why%20the%20alternative%20was%20not%20approved AND <https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#105.3.1>:-:text=If%20the%20application%20or%20the%20construction%20documents%20do%20not%20conform%20to%20the%20requirements%20of%20pertinent%20laws%2C%20the%20building%20official%20shall%20reject%20such%20application%20in%20writing%2C%20stating%20the%20reasons%20therefore
- 15 <https://up.codes/viewer/colorado/ibc-2021/chapter/17/special-inspections-and-tests#1707.1>:-:text=the%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%20104.11
- 16 <https://iaf.eu/en/about-iaf-mia/>:-:text=it%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
- 17 True for all ANAB accredited product evaluation agencies and all International Trade Agreements.
- 18 <https://www.justice.gov/crt/deprivation-rights-under-color-law> AND <https://www.justice.gov/atr/mission>
- 19 Unless otherwise noted, all references in this Listing are from the 2021 version of the codes and the standards referenced therein. This material, product, design, service and/or method of construction also complies with the 2000-2021 versions of the referenced codes and the standards referenced therein.
- 20 <https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#p-3280.2>(Listed%20or%20certified); <https://up.codes/viewer/colorado/ibc-2021/chapter/2/definitions#listed> AND <https://up.codes/viewer/colorado/ibc-2021/chapter/2/definitions#labeled>
- 21 Per IBC Table 2306.3 and SDPWS Table 4.3A.
- 22 Georgia Pacific WI 40 or equivalent.
- 23 Ibid.
- 24 <https://up.codes/viewer/colorado/ibc-2021/chapter/17/special-inspections-and-tests#1703.4>
- 25 <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
- 26 <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
- 27 IBC Section 104.11 (Alternative materials, design and methods of construction and equipment) and IRC Section R104.11 (Alternative materials, design and methods of construction and equipment): "An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code..."
- 28 Definition of approved in [IBC Section 202](#): "Acceptable to the building official."



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

See Code of Federal Regulations (CFR) Title 24 Subtitle B Chapter XX Part 3280 for definition.

2018 IFC Section 104.9

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 where the building code authorizes sentences to have an ordinarily accepted meaning such as the context implies.

<https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1707.1>

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

<http://www.drjengineering.org/AppendixC> AND <https://www.drjcertification.org/cornell-2016-protection-trade-secrets>

<https://www.law.cornell.edu/uscode/text/18/1832#:~:text=imprisoned%20not%20more%20than%2010%20years>

<https://www.law.cornell.edu/uscode/text/18/1832#:~:text=Any%20organization%20that,has%20thereby%20avoided>

<https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1706.2>

IBC 2021, Section 1706.1 Conformance to Standards

IBC 2021, Section 1707 Alternative Test Procedure, 1707.1 General

See Section 11 for the distilled building code definition of **Approved**

Los Angeles Municipal Code, SEC. 98.0503. TESTING AGENCIES

<https://up.codes/viewer/california/ca-building-code-2022/chapter/17/special-inspections-and-tests#1707.1>

New York City, The Rules of the City of New York, § 101-07 Approved Agencies

New York City, The Rules of the City of New York, § 101-07 Approved Agencies

<https://up.codes/viewer/new-jersey/ibc-2018/chapter/17/special-inspections-and-tests#1707.1>

<https://www.nj.gov/dca/divisions/codes/codreg/ucc.html>

<https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3282/subpart-A/section-3282.14>

<https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280>

IBC 2021, Section 1706 Design Strengths of Materials, 1706.2 New Materials. Adopted law pursuant to IBC model code language 1706.2.

IBC 2021, Section 1707 Alternative Test Procedure, 1707.1 General. Adopted law pursuant to IBC model code language 1707.1.

<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/>

IBC 2021, Section 1706 Design Strengths of Materials, Section 1706.1 Conformance to Standards Adopted law pursuant to IBC model code language 1706.1.

[https://iaf.nu/en/about-iaf-](https://iaf.nu/en/about-iaf-mla/#:~:text=it%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)

[mla/#:~:text=it%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](https://iaf.nu/en/about-iaf-mla/#:~:text=it%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)

True for all ANAB accredited product evaluation agencies and all International Trade Agreements.

<https://www.justice.gov/crt/deprivation-rights-under-color-law> AND <https://www.justice.gov/atr/mission>