ICC-ES Evaluation Report

ESR-4163

Reissued May 2025

This report also contains:

- CA Supplement

Subject to renewal May 2026

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DIVISION: 05 00 00—METALS Section: 05 10 00—Structural Metal Framing Section: 05 12 00—Structural Steel Framing	REPORT HOLDER: BRISTLECONE VENTURES 2, D/B/A FALCON STRUCTURES	EVALUATION SUBJECT: FALCON STRUCTURES STRUCTURAL BUILDING MATERIALS	

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2024, 2021, 2018 and 2015 *International Building Code®* (IBC)
- 2024, 2021, 2018 and 2015 *International Residential Code®* (IRC)

Property evaluated:

- Structural – Materials

1.2 Evaluation to the following green code(s) and/or standards:

- 2022 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2020, 2015, 2012 and 2008 ICC 700 *National Green Building Standard™* (ICC 700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)

2.0 USES

Falcon Structures structural building materials are used in custom designed, factory built, building modules transported to the jobsite to construct site specific buildings.

3.0 DESCRIPTION

Falcon Structures Building Modules (modules) are site specific, custom designed, factory built, modules. The modules are transported to the jobsite and assembled to form a completed building. Shipping containers are used as the source of structural and non-structural building materials for constructing the building modules. The steel structural building materials from the shipping containers and the quality control process for selecting shipping containers is the subject of this report. All other aspects of the modules are outside the scope of this report. The steel components of the shipping containers selected for use as structural building materials have been correlated to the appropriate ASTM International steel specification and are suitable for use with the design provisions specified in the American Institute of Steel Construction Specification for Structural Steel Buildings (AISC 360) or the American Iron and Steel Institute North American Specification for the Design of Cold-Formed Steel Structural Members (AISI S100), as applicable. The various components used, detail drawings of the components, steel specification for the steel used to fabricate the components, cross-reference to the equivalent ASTM standard, yield strength, and tensile strength used for design are specified in Falcon Structures Internal Design Handbook, Version 20200108, dated January 8, 2020.

The attributes of the Falcon Structures structural building materials have been verified as conforming to the provisions of (i) CALGreen Section A4.404.3.3 and (ii) ICC 700-2020, ICC 700-2015 and ICC 700-2012 Sections 601.5 and 11.601.5; and (iii) and ICC 700-2008 Section 601.5 for prefabricated structural components. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

4.0 DESIGN AND INSTALLATION

The structural building materials used in the building modules must be designed in accordance with the AISC 360 or AISI S100, as applicable. The design of the building module must be in compliance with the IBC and installation of the building modules must be in accordance with the approved plans. The approved plans must be available at the jobsite at all times.

Single-unit, stand-alone intermodal shipping container corrugated siding shear walls for wind and seismic loading must comply with Table 3114.8.5.3 of the 2024 IBC (Table 3115.8.5.3 of the 2021 IBC).

5.0 CONDITIONS OF USE:

The structural building materials described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The scope of the report is limited to the evaluation (verification) of the steel structural building materials used in construction of the building modules in the Falcon Structures facility in Manor, Texas, for their suitability for use with AISC 360 and AISI S100. All other aspects of the building modules and the final structure, such as, but not limited to, structural design, plumbing and electrical are outside the scope of this report.

5.2 Where approved by the code official, the markings and existing data plates on the intermodal shipping containers are permitted to be removed before they are repurposed for use as buildings or structures or part of buildings or structures in accordance with Section 3114.3 of the 2024 IBC (Section 3115.3 of the 2021 IBC).

5.3 The design of building or structures with repurposed intermodal shipping containers conforming to ISO 1496-1 shall be in accordance with Section 3114.8 of the 2024 IBC (Section 3115.8 of the 2021 IBC).

5.4 Complete construction documents and calculations must be submitted to the code official for each specific project. The calculations and construction documents must be prepared and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.5 A copy of this report must be submitted in addition to all other required material when applying for a building permit.

5.6 The structural building materials are procured for use in the Falcon Structures facility in Manor, Texas, under quality control programs with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Structural Building Materials from Shipping Containers (AC462), dated October 2018 (editorially revised March 2024).

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-4163) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

7.2 In addition, each Falcon Structures Building Module manufactured from shipping container materials must be labeled with the Falcon Structures name and address, and the manufacturing location.

7.3 The report holder's contact information is the following:

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REPORT HOLDER:

BRISTLECONE VENTURES 2, D/B/A FALCON STRUCTURES

EVALUATION SUBJECT:

FALCON STRUCTURES STRUCTURAL BUILDING MATERIALS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Falcon Structures Structural Building Materials, described in ICC-ES evaluation report ESR-4163, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2022 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 *California Residential Code* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Falcon Structures Structural Building Materials, described in Sections 2.0 through 7.0 of the evaluation report ESR-4163, comply with CBC Chapters 16, 17 and 22, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16, 17 and 22, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Falcon Structures Structural Building Materials, described in Sections 2.0 through 7.0 of the evaluation report ESR-4163, comply with CRC Section R301.1.3, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Section R301.1.3.

This supplement expires concurrently with the evaluation report, reissued May 2025.