

# ICC-ES Evaluation Report

**ESR-4133**



*Reissued July 2025*

*Revised May 2026*

*Subject to renewal July 2026*

*ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.*

Copyright © 2026 ICC Evaluation Service, LLC. All rights reserved.

|  |   |   |   |
|--|---|---|---|
| <p><b>DIVISION: 06 00 00—<br/>WOOD, PLASTICS AND<br/>COMPOSITES</b></p> <p><b>Section: 06 16 00—<br/>Sheathing</b></p> | <p><b>REPORT HOLDER:<br/>WEYERHAEUSER</b></p>  | <p><b>EVALUATION SUBJECT:</b></p> <p><b>DIAMOND™ FLOOR<br/>PANELS AND<br/>DIAMOND™ SHEATHING<br/>PANELS</b></p> |  |
|--|---|---|---|

## 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

- 2024, 2021 and 2018 [International Building Code® \(IBC\)](#)
- 2024, 2021 and 2018 [International Residential Code® \(IRC\)](#)

**Property evaluated:**

- Structural

## 2.0 USES

The Diamond™ Floor Panels and Diamond™ Sheathing Panels (Diamond™ Panels) described in this evaluation report are Exposure 1 oriented strand board (OSB) products designed and manufactured for prescriptive and engineered applications.

## 3.0 DESCRIPTION

The Diamond™ Panels are manufactured to comply with proprietary property requirements and with performance requirements specified in the U.S. Voluntary Product Standard PS-2 as outlined in the approved quality assurance manual.

The Diamond™ Panels are manufactured with wood strands blended with the exterior type of adhesive as specified in the approved quality assurance manual. The panels are typically produced in nominal 4-foot-wide-by-8-foot-long (1219mm by 2438mm) sheets. Diamond™ Floor Panels are produced with tongue and groove along the long-edge of the panels, while Diamond™ Sheathing Panels are produced without the tongue and groove along the long-edge of the panels. Diamond™ Panels have the span rating and thickness as shown in [Table 1](#) in this evaluation report.

## 4.0 DESIGN AND INSTALLATION

### 4.1 Design:

Design capacities provided in this evaluation report supplement the design capacities prescribed in Chapter 23 of the IBC for wood structural panels. [Table 2](#) provides product design capacities for Weyerhaeuser's

Diamond™ Panels. [Table 3](#) provides section properties for Weyerhaeuser's Diamond™ Panels. [Table 4](#) provides equivalent specific gravities for the Weyerhaeuser's Diamond™ Panels for use in design of nailed connections (withdrawal and lateral) under Chapter 12 of the 2024 ANSI/AWC *National Design Specification® for Wood Construction* (NDS) for compliance with the 2024 IBC and IRC (Chapter 12 of the 2018 NDS for the 2021 and 2018 IBC and IRC).

#### 4.2 Installation:

Diamond™ Panels must be installed in accordance with the applicable code and the manufacturer's published installation requirements.

### 5.0 CONDITIONS OF USE:

The DIAMOND™ Panels 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 Panels are installed in accordance with the applicable building code, this report and supplemented by the manufacturer's installation instructions.
- 5.2 Panels are manufactured in Elkin, North Carolina, under a quality control program with inspections conducted by ICC-ES.

### 6.0 EVIDENCE SUBMITTED

Data in accordance with the [ICC-ES Acceptance Criteria for Wood Structural Panels \(AC182\(24\)\)](#), published March 2026.

### 7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling or the evaluation report number (ICC-ES ESR-4133) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 In addition, Weyerhaeuser Diamond™ Panels are identified with a stamp that includes the product name, span rating, thickness category, exposure category, product standard, manufacturer name and address, mill number (537), date of manufacture, and evaluation report number (ESR-4133).
- 7.3 The report holder's contact information is the following:

**WEYERHAEUSER**  
**32901 WEYERHAEUSER WAY SOUTH**  
**SUITE 102**  
**FEDERAL WAY, WASHINGTON 98001**  
**(888) 453-8358**  
[www.woodbywy.com](http://www.woodbywy.com)  
[techsupport@wy.com](mailto:techsupport@wy.com)

**TABLE 1—SPAN RATING FOR DIAMOND FLOOR PANELS AND DIAMOND SHEATHING PANELS**

| SPAN RATING | PS-2 GRADE                       | PERFORMANCE CATEGORY |
|-------------|----------------------------------|----------------------|
| 24 o.c.     | Structural I Rated Sturd-I-Floor | 23/32 inch           |
| 48/24       | Structural I Rated Sheathing     | 23/32 inch           |

**TABLE 2—DESIGN CAPACITIES FOR DIAMOND FLOOR PANELS AND DIAMOND SHEATHING PANELS<sup>(1)</sup>**

| PERFORMANCE CATEGORY (in.) | STRENGTH AXIS <sup>(2)</sup> | BENDING STIFFNESS EI (lbf-in <sup>2</sup> /ft) | BENDING STRENGTH F <sub>b</sub> S (lbf-in/ft) | PLANAR SHEAR F <sub>s</sub> (lb/Q) (lbf/ft) | AXIAL STIFFNESS EA x10 <sup>6</sup> (lbf/ft) |
|----------------------------|------------------------------|--|---|---|--|
| 23/32                      | Parallel                     | 395,000  | 1,360   | 380   | 6.5  |
|                            | Perpendicular                | 170,000  | 790   | 380   | 4.6  |

<sup>(1)</sup> Design capacities are single values that represent the allowable capacities per 1-foot of width.

<sup>(2)</sup> Primary strength axis corresponds to the long panel dimension.

**TABLE 3—SECTION PROPERTIES DIAMOND FLOOR PANELS AND DIAMOND SHEATHING PANELS<sup>(1)</sup>**

| NOMINAL THICKNESS          |               | PANEL WEIGHT (psf) | AREA A (in <sup>2</sup> /ft) | MOMENT OF INERTIA I (in <sup>4</sup> /ft) | SECTION MODULUS S (in <sup>3</sup> /ft) | STATICAL MOMENT Q (in <sup>3</sup> /ft) | SHEAR CONSTANT lb/Q (in <sup>2</sup> /ft) |
|----------------------------|---------------|--------------------|------------------------------|---|---|---|---|
| Performance category (in.) | Average (in.) |                    |                              |   |   |   |   |
| 23/32                      | 0.730         | 2.6                | 8.760                        | 0.389                                     | 1.066                                   | 0.799                                   | 5.840                                     |

<sup>(1)</sup> Section properties represent 1-foot of width.

**TABLE 4—EQUIVALENT SPECIFIC GRAVITY VALUES FOR DIAMOND FLOOR PANELS AND DIAMOND SHEATHING PANELS<sup>(1)</sup>**

| PERFORMANCE CATEGORY (in.) | NAIL RESISTANCE             |            |
|----------------------------|-----------------------------|------------|
|                            | Lateral                     | Withdrawal |
|                            | Equivalent Specific Gravity |            |
| 23/32                      | 0.51                        | 0.45       |

<sup>(1)</sup> Equivalent specific gravity values are provided for use in design of nailed connections (lateral and withdrawal) in accordance with Chapter 12 of the 2024 *National Design Specification<sup>®</sup> for Wood Construction* (NDS) for compliance with the 2024 IBC and IRC (Chapter 12 of the 2018 NDS for compliance with the 2021 and 2018 IBC and IRC).