ICC-ES Evaluation Report

ESR-1902

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This report is subject to re-examination in two years.

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 41 13—Metal Roof Panels

REPORT HOLDER:

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EVALUATION SUBJECT:

ENGLERT SERIES 1300 STANDING SEAM ROOF PANELS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

Properties evaluated:

- Weather resistance
- Fire classification
- Wind uplift resistance

2.0 USES

Englert Series 1300 Standing Seam Roof Panels are used as a Class A roof covering material.

3.0 DESCRIPTION

3.1 General:

The Englert Series 1300 Standing Seam Roof Panel assembly consists of the Series 1300 roof panels installed over solid wood sheathing and secured with Englert Series 1300 panel clips. The roof system also includes underlayment, flashing, and fasteners as specified in Sections 3.4 through 3.7.

3.2 Series 1300 Roof Panel:

The Series 1300 roof panel is a standing seam panel roll-formed from No. 24 gage [base-metal thickness 0.0225 inch (0.5715 mm)] Grade 50 sheet steel with an aluminum-zinc coating conforming to ASTM A 792, AZ50. The panels are produced in nominal widths of 16 inches (406 mm) and 20 inches (508 mm) and with a seam height of $1^1/_2$ inches (38 mm). See Figure 1 for panel profile and dimensions [16-inch panel (508 mm) shown].

3.3 Sheathing:

Solid sheathing must be minimum $^{15}/_{32}$-inch-thick (11.9 mm) plywood or lumber sheathing. The sheathing must be structurally adequate and fastened to resist the wind loads specified by the applicable code.

3.4 Underlayment:

Underlayment must be a minimum of two layers of Type I (No. 15) asphalt felt or one layer of Type II (No. 30) asphalt felt, complying with ASTM D 226.

3.5 Flashing:

Flashing must be corrosion-resistant metal with a thickness of not less than No. 26 gage [0.019 inch (0.483 mm)]. Flashing must be either the same material or a material compatible with the Englert Series roof panel.

3.6 Series 1300 Panel Clips:

The Series 1300 panel clips are one-piece clips fabricated from No. 24 gage [base- metal thickness 0.0225 inch (0.5715 mm)] Grade 50 sheet steel with an aluminum-zinc coating conforming to ASTM A 792, AZ50. The clips are $6^1/_4$ inches long (159 mm) by $1^1/_2$ inches (38 mm) wide by $1^5/_8$ inches (42 mm) high. See Figure 2 for panel clip profile and dimensions.

3.7 Fasteners:

Fasteners for attaching the Series 1300 panel clip to the sheathing must be No. 10, corrosion-resistant, pan-head wood screws, of sufficient length to penetrate into or through the sheathing a minimum of $^3/_4$ inch (19 mm).

4.0 INSTALLATION

4.1 General:

Installation of the Series 1300 Standing Seam Roof Panels must be in accordance with this report, Section 1507.4 of the IBC, Section R905.10 of the IRC, and the manufacturer's published installation instructions. The installation instructions must be available at the jobsite at all times during installation.

4.2 Installation:

The roof panels must be installed on roof decks with sheathing, as specified in Section 3.3, at a minimum roof slope of 3:12 (25 percent slope). The sheathing must be covered with underlayment, as specified in Section 3.4. The Series 1300 Standing Seam Roof Panels are installed over the underlayment and secured to the sheathing with the Series 1300 panel clips. The clips are located at each panel rib side lap and spaced 3 inches (76 mm) from all ends and at a maximum of 4 feet 1.22 m) on center along

the length of the rib and fastened with a minimum of four fasteners as specified in Section 3.7. The panel ribs must be mechanically seamed a minimum of 90 degrees (single-lock). Refer to Figures 2, 3 and 4.

4.3 Fire Classification:

When installed in accordance with this report, the Series 1300 Standing Seam Roof Panels are considered a Class A roof covering in accordance with the exception to Section 1505.2 of the IBC and Section R902.1 of the IRC.

4.4 Wind Uplift Resistance:

The system described in Section 3.0 and installed in accordance with Sections 4.1 and 4.2 has an allowable uplift resistance of 52 pounds per square foot (2.5 kPa).

5.0 CONDITIONS OF USE

The Englert Series 1300 Standing Seam Roof Panel described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with this report, the applicable code, and the manufacturer's published installation instructions. If there is a conflict between this report and the manufacturer's installation instructions, this report governs.

5.2 The required design wind loads must be determined for each project. Design wind uplift pressure on any roof area must not exceed the allowable uplift resistance of 52 pounds per square foot (2.5 kPa).

6.0 EVIDENCE SUBMITTED

Data in accordance with ICC-ES Acceptance Criteria for Metal Roof Coverings (AC166), dated June 2010.

7.0 IDENTIFICATION

The panels and panel clips are identified with a label bearing the product name, the manufacturer's name (Englert, Inc.) and address, the production date code and the ICC-ES evaluation report number (ESR-1902).

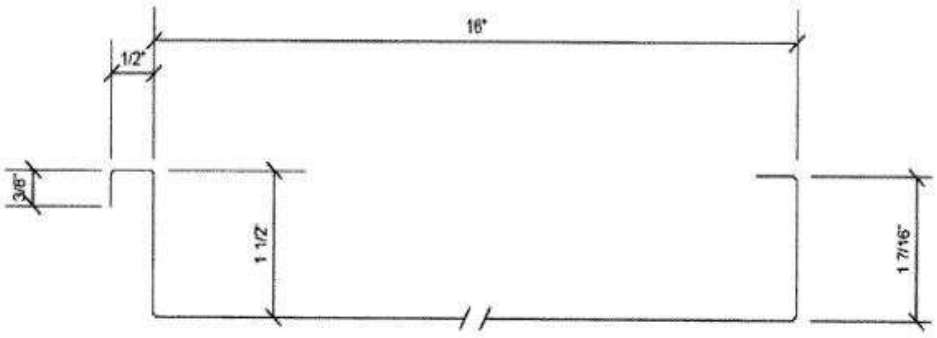

FIGURE 1—ENGLERT SERIES 1300 STANDING SEAM ROOF PANEL PROFILE

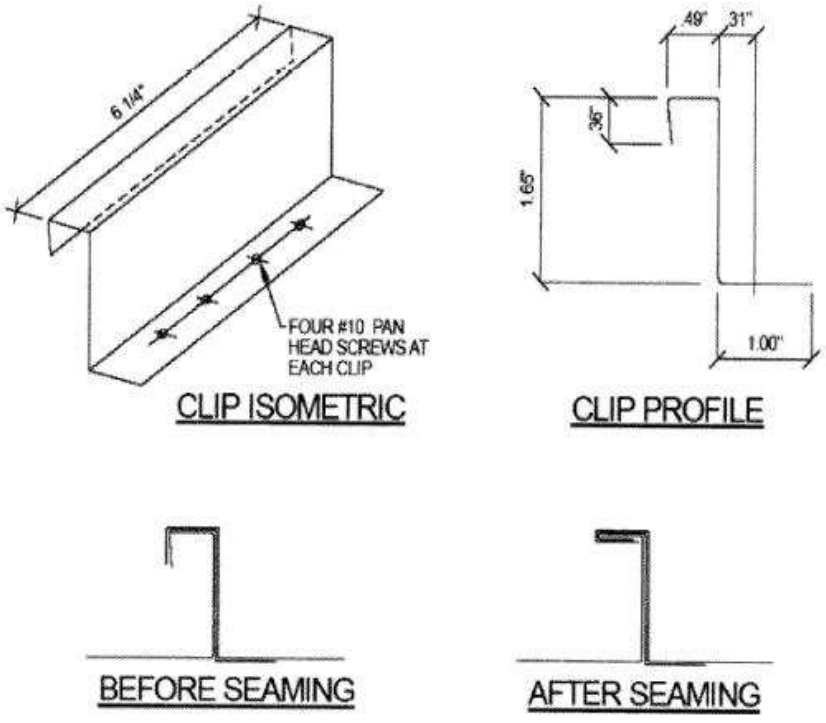

FIGURE 2—ROOF CLIP PROFILE

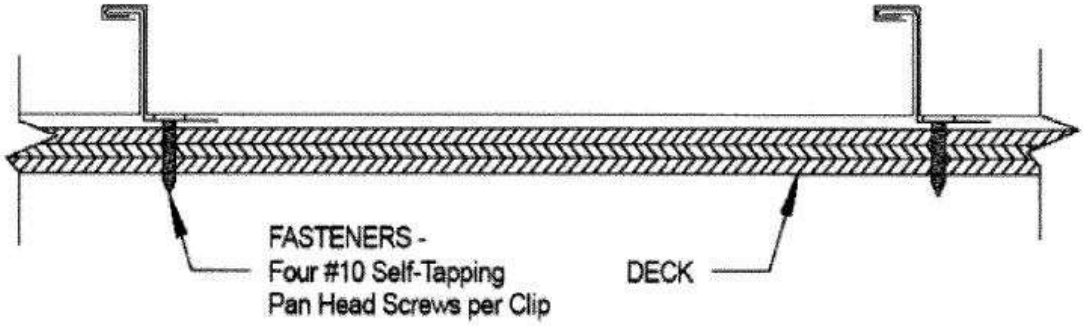

FIGURE 3—PANEL WITH CLIP AND FASTENERS

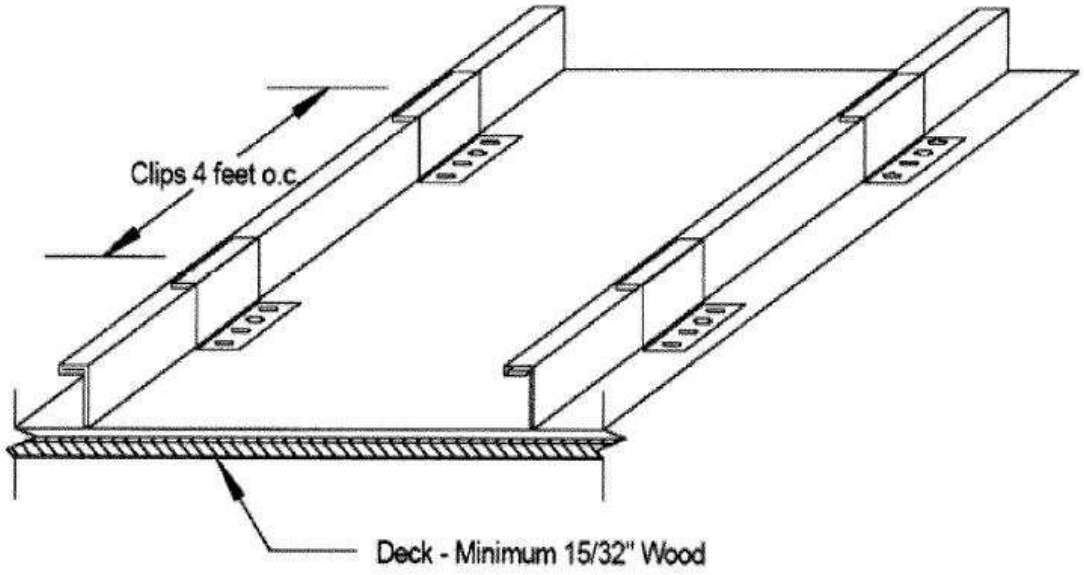

FIGURE 4—ASSEMBLY ISOMETRIC VIEW
(Typical for allowable uplift pressure)