



Product Evaluation

RC423 | 0818

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RC-423

Effective Date: August 1, 2018

Re-evaluation Date: August 2022

Product Name: Horizon-Loc Steel Roof Panels Installed Over a Plywood or OSB Roof Deck

Manufacturer: Central States Manufacturing
302 Jane Place
Lowell, Arkansas 72745
(800) 356-2733

General Description:

The Horizon-Loc steel roof panel is a minimum 26 gauge, 50 ksi steel panel that has an effective width of 16". The panel has a yield strength of 66,000 psi.

Limitations:

Roof decking: Install the metal roof panels over a minimum of 7/16" thick OSB or 15/32" thick plywood wood structural panel decking as Table 1 specifies.

- **New Roof Deck Attachment:** The roof decking must meet or exceed the uplift requirements of the IRC and IBC. Install the decking in a manner to resist lateral loads.
- **Design Wind Pressure:** For installations to a minimum 7/16" thick OSB or 15/32" thick plywood wood structural panel roof decks, Table 1 specifies the design wind pressure limitations.
- **Installation over an Existing Roof Covering:** Installation over an existing roof covering is not permitted.
- **Roof Slope:** The metal roof panels may be installed on roofs with a roof slope as low as 1/2:12 if sealant is used on the panel laps. If sealant is not used on the panel laps, then the minimum roof slope is 3:12.

Table 1: Design Wind Pressures

System	Roof Deck	Design Pressure (psf)	Panel Fasteners
1	7/16" thick OSB	-56.0	One, No. 10 x 1" Wafer Head Sharp Point Type A in the male rib slots spaced at 4.75" on center.
2	7/16" thick OSB	-78.5	One, No. 10 x 1" Wafer Head Sharp Point Type A in the male rib slots spaced at 4.75" on center. Apply 3/8" diameter bead of Weathermaster metal roof sealant to the panel male rib.
3	15/32" thick plywood	-138.5	One, No. 10 x 1" Wafer Head Sharp Point Type A in the male rib slots spaced at 4.75" on center. Two, No. 10 x 1" Woodbinder Kwikseal II in the pan located 1.25 from each side of the ribs spaced 12" on center along the length of the panel. Apply 3/16" diameter bead of Novaflex silicone metal roof sealant to the panel male rib.

Installation:

General: Install the steel roofing panels in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Trims Roof Framing Members: Space the roof-framing members a maximum of 24" on center.

Underlayment: Use a minimum of one layer of No. 30 (Type II) asphalt felt. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. Install the underlayment with 6" side laps and 3" end laps. Apply the underlayment with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Apply fasteners along the overlaps not farther apart than 36" on center.

Alternative Underlayment: Use minimum of one layer of self-adhering underlayment that complies with ASTM D 1970. Install the underlayment per the manufacturer's installation instructions.

Anchorage to Roof Deck:

System 1: Fasten the metal roof panels to the roof deck with a No. 10 x 1" Wafer Head Sharp Point Type A in the male rib slots spaced at 6.5" on center as shown on System 1 drawing.

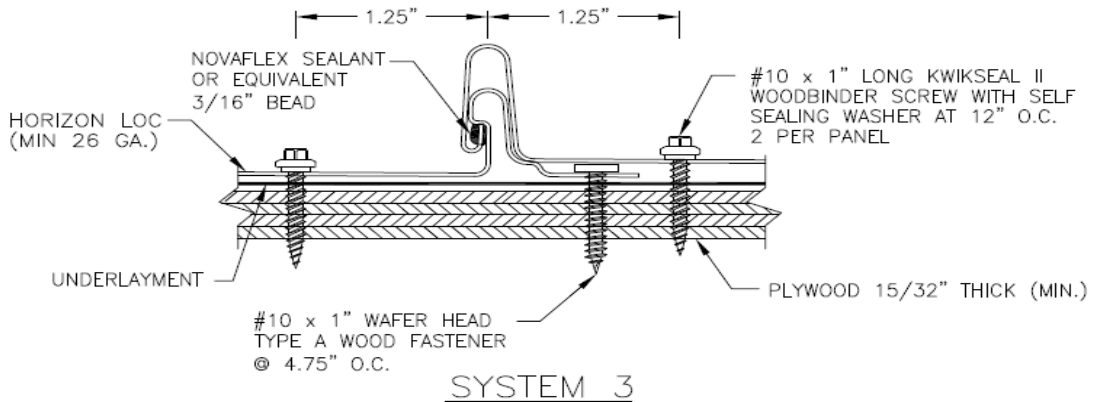
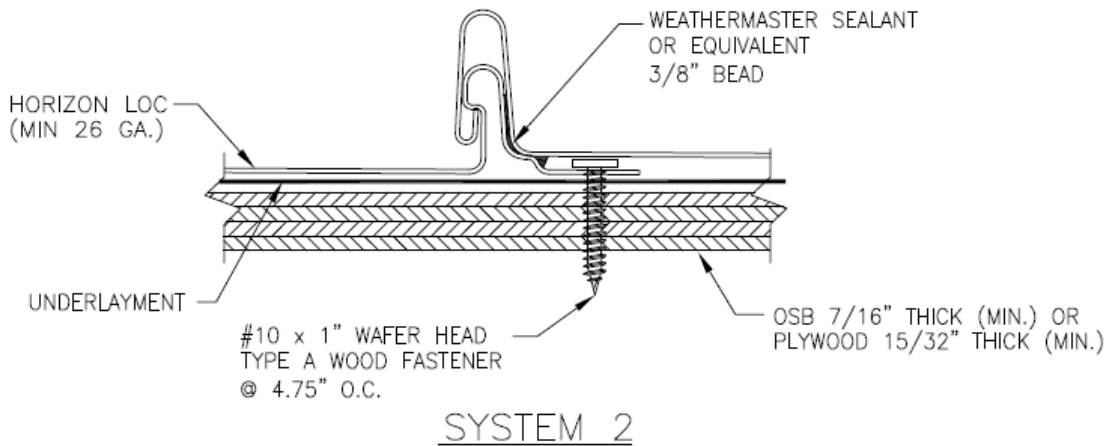
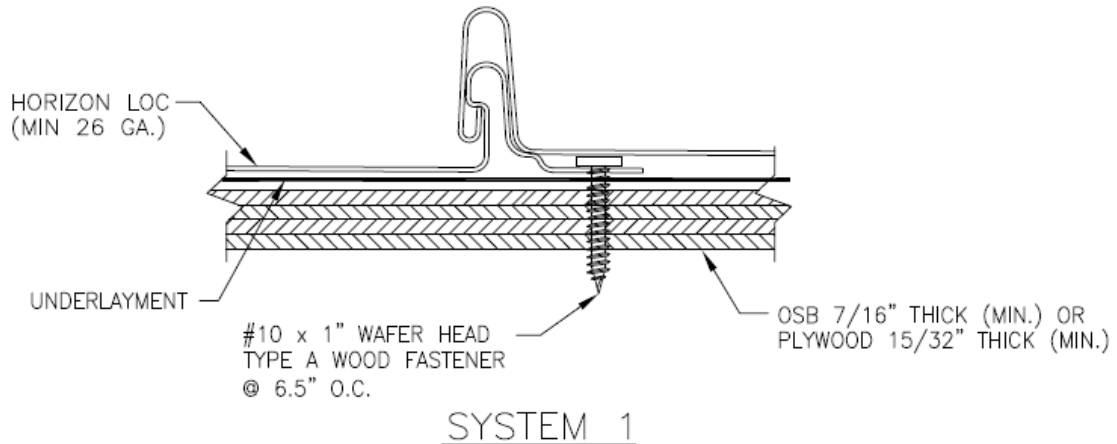
System 2: Fasten the metal roof panels to the roof deck with a No. 10 x 1" Wafer Head Sharp Point Type A in the male rib slots spaced at 4.75" on center. Apply a 3/8" diameter bead of Weathermaster metal roof sealant to the panel male rib as shown on System 2 drawing.

System 3: Fasten the metal roof panels to the roof deck with a No. 10 x 1" Wafer Head Sharp Point Type A in the male rib slots spaced at 4.75" on center. Additionally, a No. 10 x 1" Woodbinder Kwikseal II in the pan located 1.25 from each side of the ribs spaced 12" on center along the length of the panel. Apply a 3/16" diameter bead of Novaflex silicone metal roof sealant to the panel male rib as shown on System 3 drawing.

Trims, Closures, and Accessories: Install components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim as required by the manufacturer.

Panel Ends and End Laps: As required by the manufacturer.

Panel Edges: As required by the manufacturer.



Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.