TDI | Texas Department of Insurance

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Product Evaluation

RC129 | 0322

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-129

Effective Date: March 1, 2022
Re-evaluation Date: March 2026

Product Name: 1" Aluminum Double Lock 18" Wide Standing Seam Steel Roofing Panels Installed Over a Plywood Deck

Manufacturer: T. H. Sellers Metal Roofing, Inc.
1720 Wegner Road
New Braunfels, TX 78132
(830) 609-0965

General Description:
T.H. Sellers Metal Roofing 1" aluminum double lock 18" wide standing seam panels are manufactured from 0.032" pre-painted aluminum conforming to ASTM B209, with a minimum yield strength of 23,500 psi. The panels have a Hylar 5000/Kynar 5000 1-mil thickness coating on one side and a wash coat of 0.3-0.4 mil thickness on the reversible side.

Limitations:
Roof Decking: The roofing panels must be installed over a minimum 15/32" plywood roof deck. A thicker roof deck may be used; however, the design pressure rating for the roofing panels will be as specified in this evaluation report.

New Roof Deck Attachment: The roof deck must meet or exceed the uplift requirements of the IRC or the IBC and must be installed as required for resistance to wind loads.

Roof Slope: The aluminum roofing panels must not be installed on roofs with a roof slope less than 1:12 or greater than 12:12.

Design Wind Pressures: The design pressure uplift load resistance must be as specified in Table 1.

Table 1. Attachment of 1" Aluminum Double Lock 18" Wide Roofing Panels to Minimum 15/32" Plywood Deck

Design Pressure	Fasteners per Panel Clip into Roof Deck	Panel Clip Spacing
-108.5 psf	Two No. 10-12 x 1" Pancake Type A screws	12"

Installation Over an Existing Roof Covering: Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles, wood shingles or shakes, built-up roofing, or roll roofing. The thickness of the plywood deck must comply with the requirements of this evaluation report. Note: Inspection of the existing roof deck must be made before installing the roofing panels. The condition of the existing roof deck must be acceptable to receive the roofing panels before the roofing panel installation can proceed.

Installation:

General: The aluminum roofing panels must be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Panels: The aluminum roofing panels must be secured to the roof covering as specified in Table 1 and in accordance with this section. Refer to Figures 1 thru 7 for illustrations of the attachment details.

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt or equivalent must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The felt must be installed with 6" side laps and 3" end laps. The underlayment must be applied with corrosion resistant fasteners in accordance with manufacturer's installation instructions and the IRC and IBC. Note: An optional radiant barrier may be installed beneath the panels in conjunction with the underlayment.

Attachment of Aluminum Roofing Panels to the Roof Deck: The panels must be fastened to the plywood deck using panel clips with minimum No. 10-12 x 1" Pancake Type A screws, manufactured by SFS Intec in accordance with Table 1. If the panels are laid directly over an existing roof covering, then No. 10-12 x 2" screws, manufactured by SFS Intec, are required. The fasteners must be long enough to penetrate completely through the wood structural panels with a minimum exposure of 1/4" below the underside of the plywood deck.

Panel Clips: The panel clips are 3" in length, with 1-1/2" wide folded tabs. The clips are 0.15" in thickness. The clips are manufactured of stainless steel.

Ridge Trim: The ridge trim must be attached to the panels with (1/4") No. 14 x 7/8" Longlife self-tapping screws at 12" on center as indicated in the attachment detail figures.

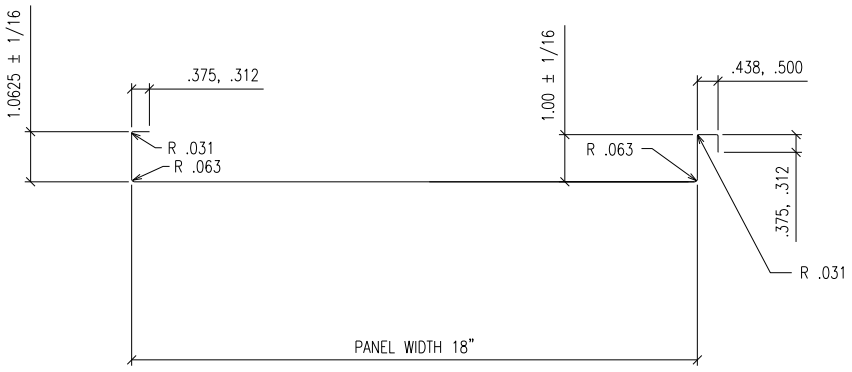
Hip Trim: The hip trim must be attached to the panels with 1/8" x 3/16" pop rivets at 6" on center as indicated in the attachment detail figures.

Eave Trim and Rake Trim: The eave trim and the rake trim must be anchored to the substrate with the panels using No. 9-15 x 1" Longlife self-tapping screws with a sealing washer at 16" on center as indicated in the attachment detail figures.

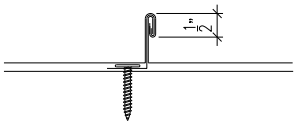
Valley Trim: The closed hem of the valley trim must slide into the open hem of the panels as indicated in the attachment detail figures.

Alternative Fasteners: Alternative fasteners of equal or greater strength may be substituted.

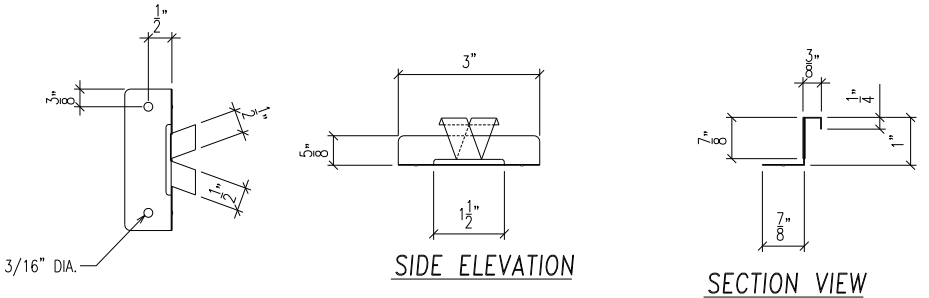
Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.



1" DOUBLE LOCK STANDING SEAM
PANEL DETAIL



MECHANICAL SEAM DETAIL [180° SEAM]



TOP VIEW

SIDE ELEVATION

SECTION VIEW

UC3 STAINLESS STEEL
EXPANSION CLIP
.015" THICK

Figure 1: 1" Standing Seam Panel Details

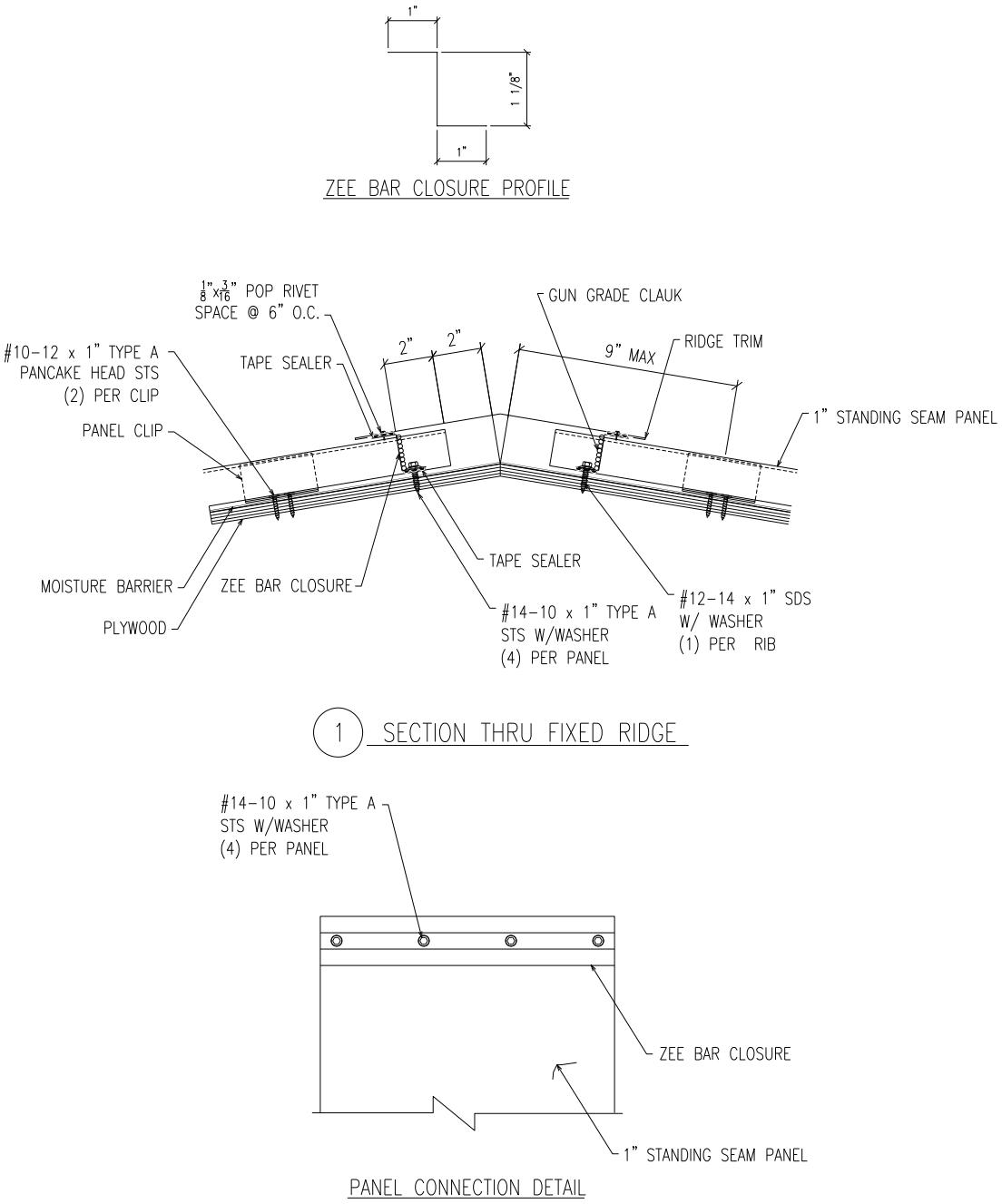
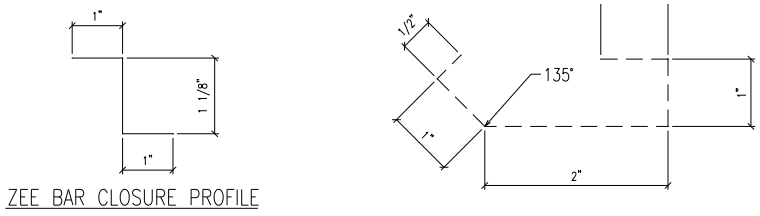
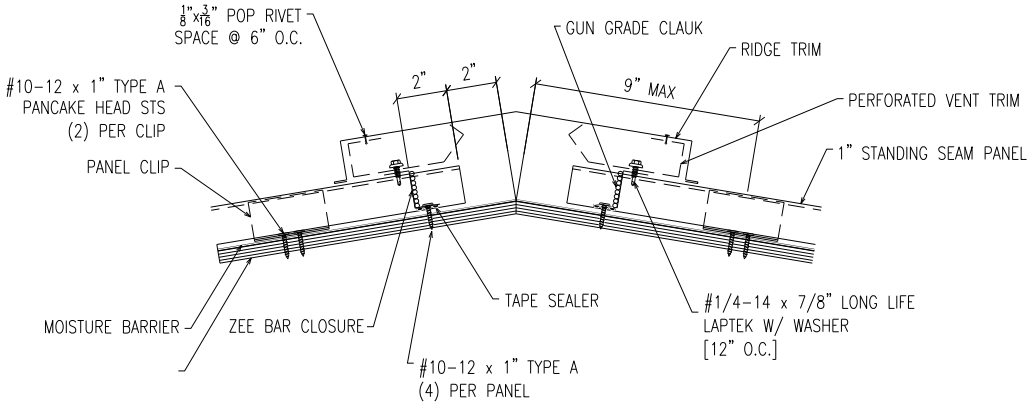


Figure 2: Non-Vented Ridge Trim Details

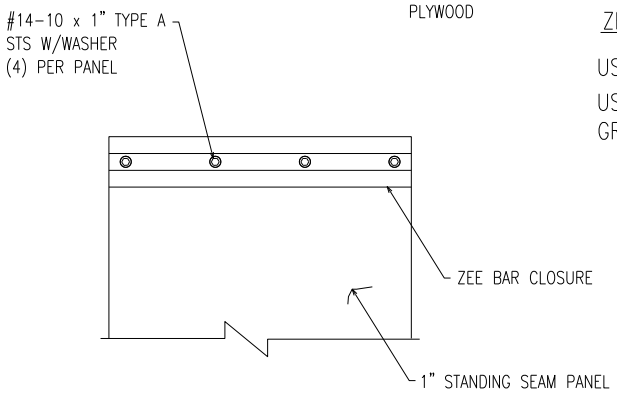


ZEE BAR CLOSURE PROFILE

PERFORATED VENT TRIM PROFILE



2 SECTION THRU FIXED VENTED RIDGE



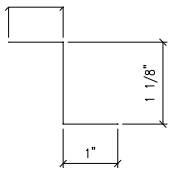
PANEL CONNECTION DETAIL

ZEE BAR FASTENER NOTES:

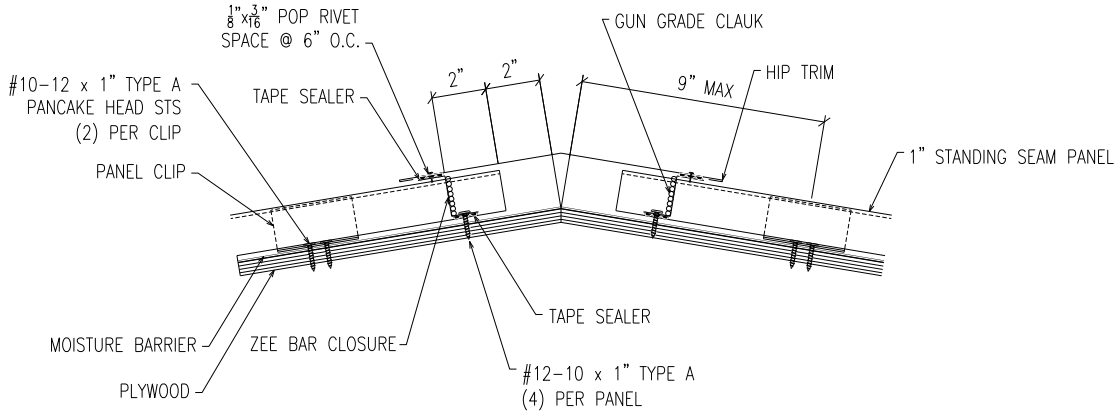
USE #10-12x1" TYPE A FOR $\frac{15}{32}$" CDX

USE #10-12x2" TYPE A FOR $\frac{19}{32}$" CDX OR GREATER

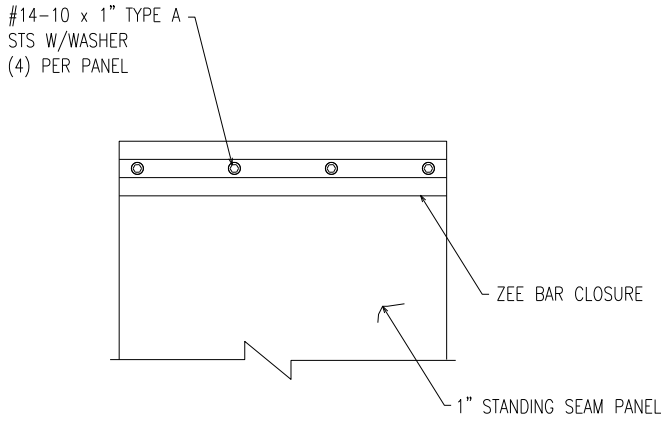
Figure 3: Vented Ridge Trim Details



ZEE BAR CLOSURE PROFILE



3 SECTION THRU FIXED HIP



PANEL CONNECTION DETAIL

ZEE BAR FASTENER NOTES:

USE #10-12x1" TYPE A FOR $\frac{15}{32}$" CDX
USE #10-12x2" TYPE A FOR $\frac{19}{32}$" CDX OR GREATER

Figure 4: Hip Trim Details

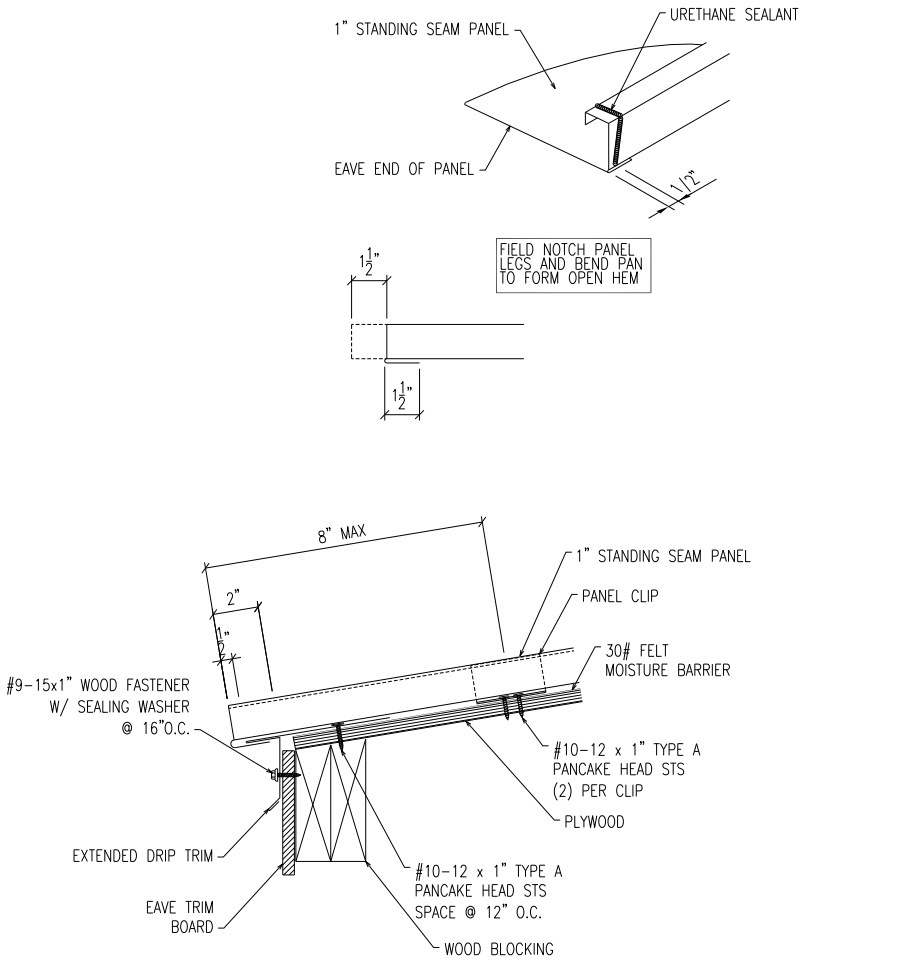
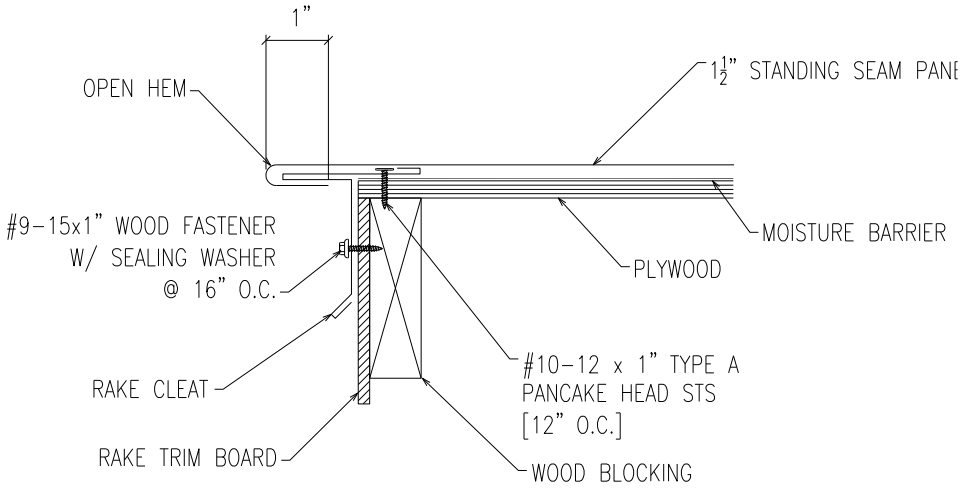
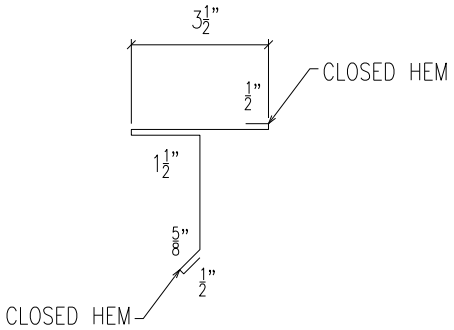


Figure 5: Eave Trim Details



5 SECTION THRU FLOATING RAKE

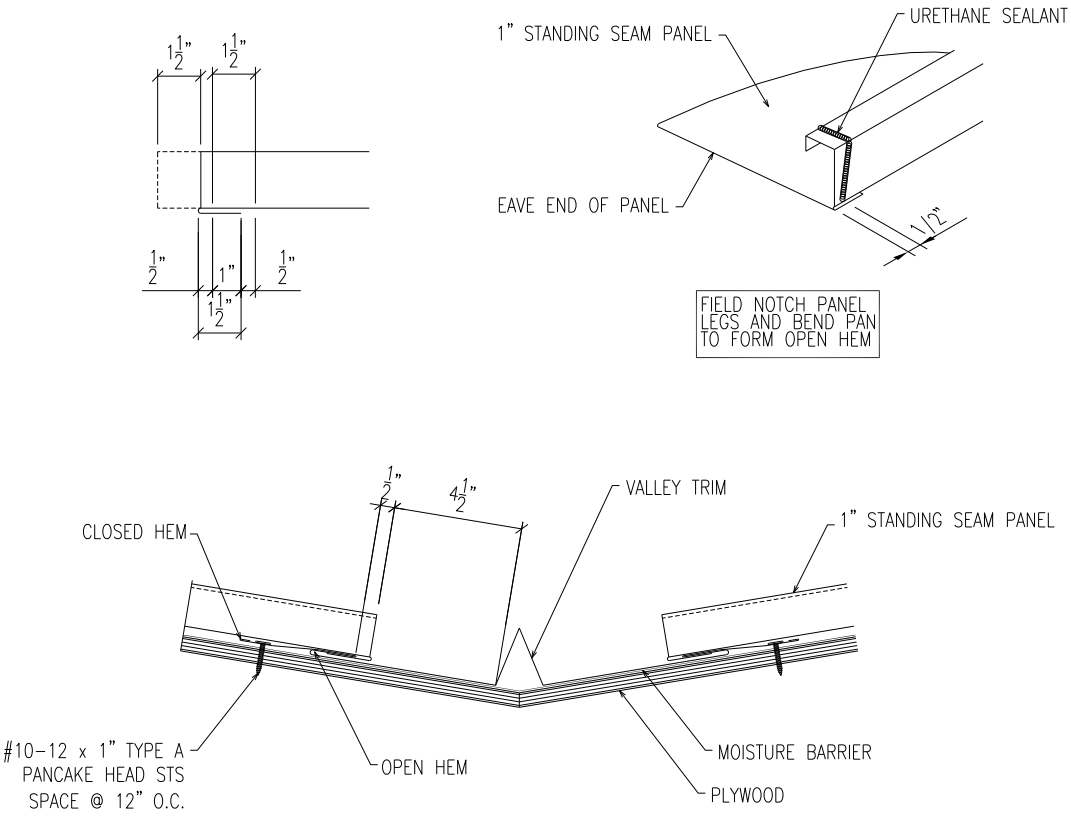


RAKE CLEAT PROFILE

RAKE CLEAT FASTENER NOTES:

USE #10-12x1" TYPE A FOR $\frac{15}{32}$" CDX
USE #10-12x2" TYPE A FOR $\frac{19}{32}$" CDX OR GREATER

Figure 6: Rake Trim Details



6 SECTION THRU FLOATING VALLEY

VALLEY TRIM FASTENER NOTES:

USE #10-12x1" TYPE A FOR $\frac{15}{32}$" CDX
USE #10-12x2" TYPE A FOR $\frac{19}{32}$" CDX OR GREATER

Figure 7: Valley Trim Details