Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603, Fax: (281) 540-9966
Website: forceengineeringtesting.com

Product Evaluation Report

SENTRIGARD METAL ROOFING SYSTEMS ASSOCIATION, INC., an NB HANDY COMPANY

Sentrigard NS 100, 24 Ga. 16" Wide Roof Panel over 15/32" Plywood

Florida Product Approval # 9860.7 R6

Florida Building Code 2020
Per Rule 61G20-3
Method: 1 –D

Category: Roofing
Subcategory: Metal Roofing
Compliance Method: 61G20-3.005(1)(d)
NON HVHZ

Product Manufacturer:
Sentrigard Metal Roofing Systems Association, Inc.,
an NB Handy Company
65 10th Street
Lynchburg, Virginia 24502

Engineer Evaluator:
Johnathan Green, P.E. #88223
Florida Evaluation ANE ID: 12901

Validator:
Brian Jaks P.E. #70159

Contents:

OCT 01 2020

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Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2020, Sections 1504.3.2.

Product Description: Sentrigard NS 100, 1" Nailstrip Roof Panel, 24 Ga. Steel, 16" Wide, Roof Panel attaching to 15/32" APA Plywood decking. Non-structural Application.

Panel Material/Standards: Material: 24 Ga. Steel conforming to Florida Building Code 2020 Section 1507.4.3
Yield Strength: Min. 50.0 ksi
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2020, Section 1507.4.3

Panel Dimension(s):

Thickness:	0.024"
Width:	16" max coverage
Female Rib:	1" tall
Male Rib:	¾" tall rib w/ slotted strip.
Panel Seam:	Snap Lock

Panel Fastener: Through Panel Slot: (1) #10-13 x 1" GP Pancake Type A
In Pan of Panel: (2) #10-11 x 1" Eclipse Head Type A
¼" minimum penetration through plywood
Corrosion Resistance: Per Florida Building Code 2020, Section 1507.4.4.

Substrate Description: Min. 15/32" thick, APA Rated plywood over supports at maximum 24" O.C. Design of plywood and plywood supports are outside the scope of this evaluation. Substrate must be designed in accordance w/ Florida Building Code 2020.

Allowable Design Uplift Pressures:

Table "A"

Maximum Total Uplift Design Pressure:	59.75 psf	101.0 psf	153.5 psf
Panel Slot Fastener Spacing:	16" O.C.	6 ¾" O.C.	6 ¾" O.C.
Panel Pan Fastener Spacing:	NA	NA	12" O.C.

*Design Pressure includes a Safety Factor = 2.0.

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Code Compliance:

The product described herein has demonstrated compliance with The Florida Building Code 2020, Section 1504.3.2.

Evaluation Report Scope:

The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2020, as relates to Rule 61G20-3.

Performance Standards:

The product described herein has demonstrated compliance with:

- UL 580-06 - Test for Uplift Resistance of Roof Assemblies
- UL 1897-2012 - Uplift Test for Roof Covering Systems
- TAS 100-95 - Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems

Reference Data:

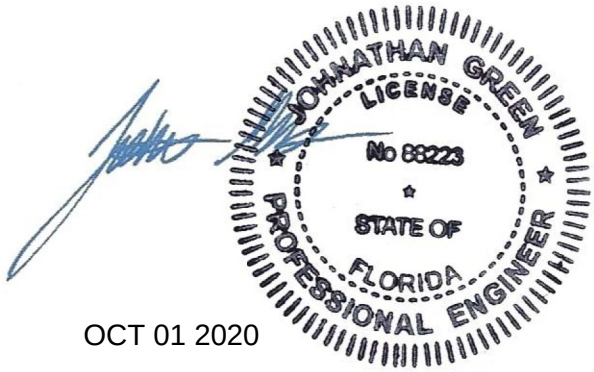
1. UL 580-94 / 1897-98 Uplift Test
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
   Report No. 72-0314T-06*
2. TAS 100-95
   Farabaugh Engineering & Testing, Inc. (FBC Organization # TST-1654)
   Report No. T158-07*
3. Certificate of Independence
   By Johnathan Green, P.E. #88223

Test Standard Equivalency:

1. The UL 580-94 test standard is equivalent to the UL 580-06 test standard.
2. The UL 1897-98 test standard is equivalent to the UL 1897-2012 test standard.

Quality Assurance Entity:

The Report Holder has demonstrated compliance with Florida Building Code and Rule 61G20-3.005 (3) for manufacturing locations audited by an approved quality assurance entity (Keystone Certifications, Inc – FBC Org ID QUA 1824). A listing of manufacturers authorized by the Report Holder to employ the Florida Product Approvals qualified by this report can be found at
http://www.keystonecerts.com/qa-assoc/sentrigard
or by scanning the following QR Code:



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Minimum Slope Range: Minimum Slope shall comply with Florida Building Code 2020, including Sections 1507.4.2 and in accordance with Manufacturers recommendations.

Installation: Install per manufacturer's recommended details.

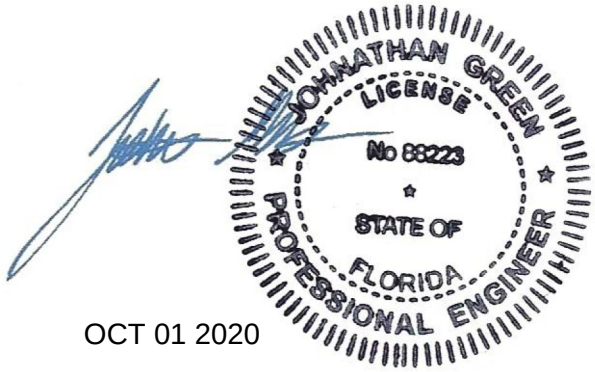
Underlayment: Self-adhered roofing underlayment minimum 40 mil thickness. Per Florida Building Code 2020 Section 1507.1 and manufacturer's installation guidelines per

Roof Panel Fire Classification: Fire classification is not part of this acceptance.

Shear Diaphragm: Shear diaphragm values are outside the scope of this report.

Design Procedure: Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2020 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2020 Chapter 22 for steel, Chapter 23 for wood and Chapter 16 for structural loading.

*The Test Reports are owned by Metalforming, Inc. Metalforming, Inc. gives the above manufacturer permission to use these test reports.



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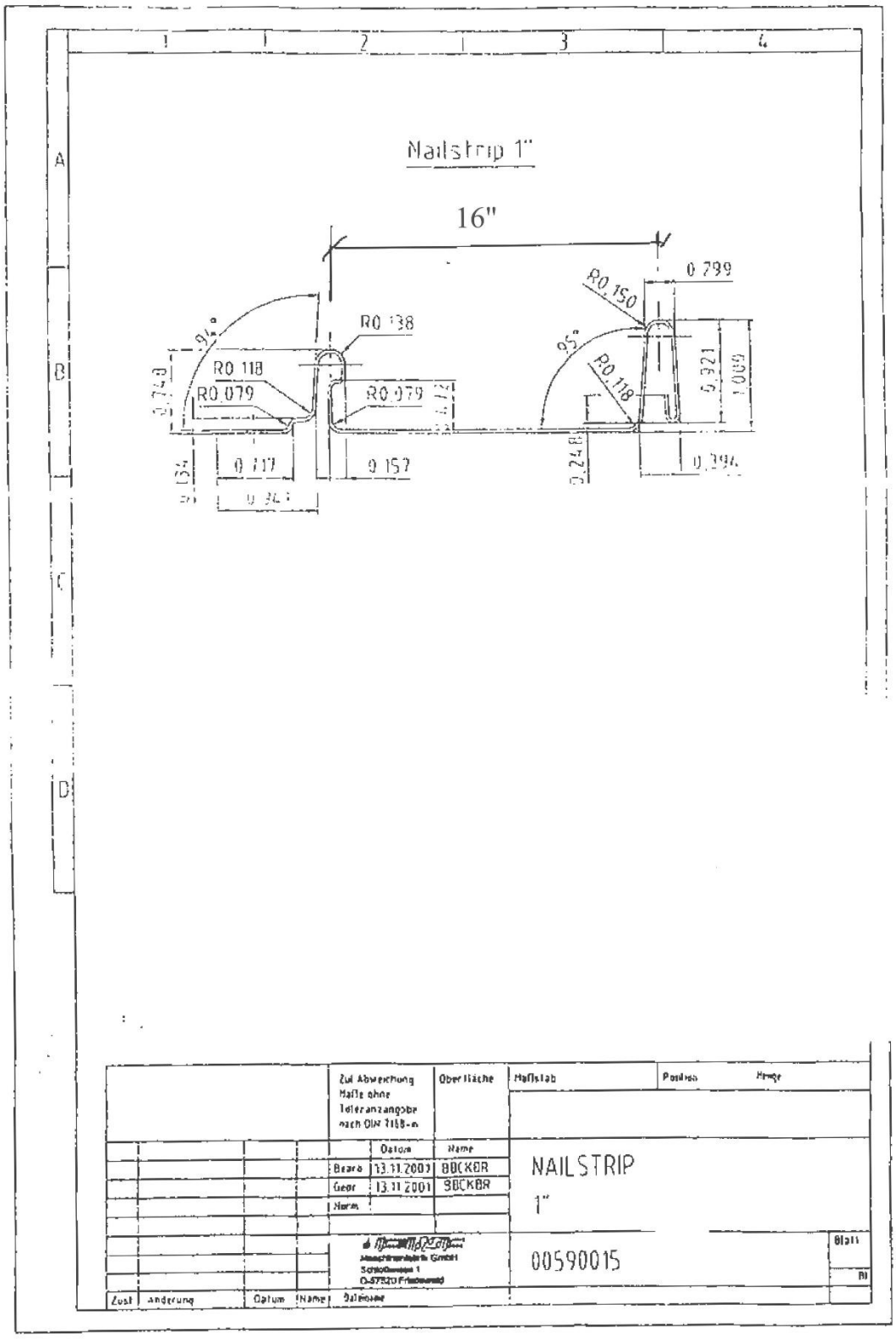

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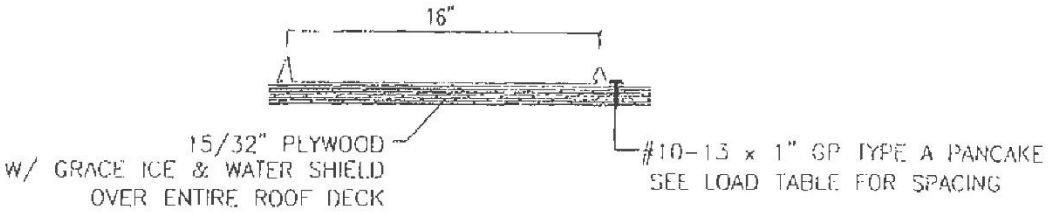
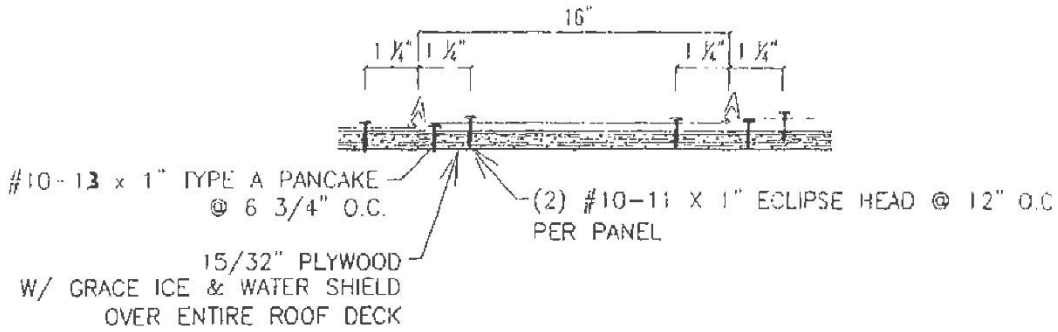
TYPE 1 FASTENER PATTERN (SEE LOAD TABLE)



TYPE 2 FASTENER PATTERN (SEE LOAD TABLE)



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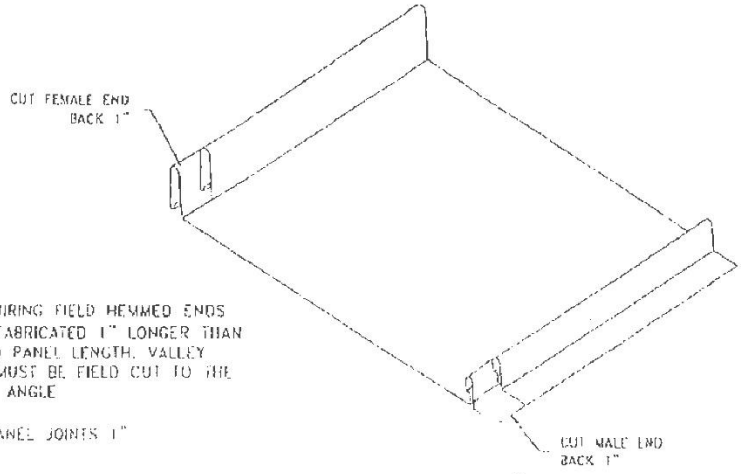
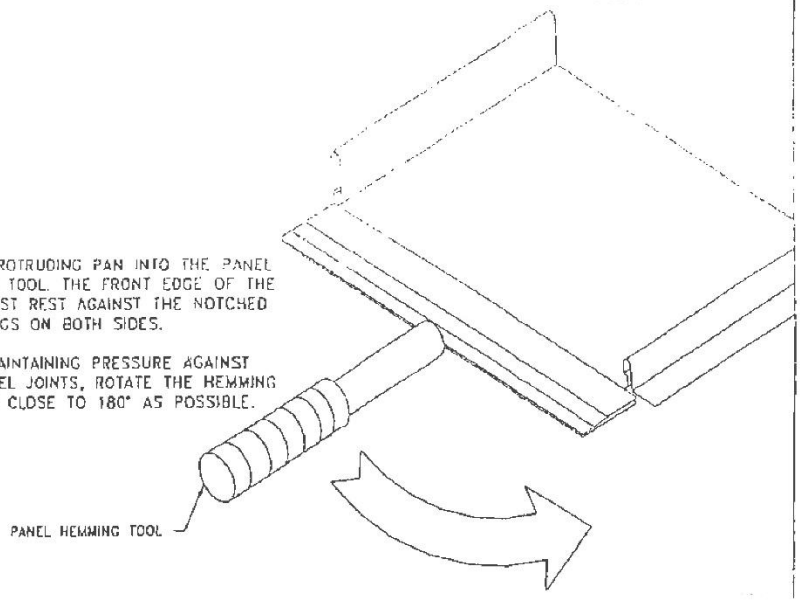
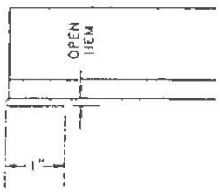
FIELD HEMMED PANEL END



1. PANELS REQUIRING FIELD HEMMED ENDS SHOULD BE FABRICATED 1" LONGER THAN THE FINISHED PANEL LENGTH. VALLEY CONDITIONS MUST BE FIELD CUT TO THE APPROPRIATE ANGLE
2. CUT BACK PANEL JOINTS 1"



3. PLACE PROTRUDING PAN INTO THE PANEL HEMMING TOOL. THE FRONT EDGE OF THE TOOL MUST REST AGAINST THE NOTCHED JOINT LEGS ON BOTH SIDES.
4. WHILE MAINTAINING PRESSURE AGAINST THE PANEL JOINTS, ROTATE THE HEMMING TOOL AS CLOSE TO 180° AS POSSIBLE.
5. INSPECT COMPLETED HEM TO INSURE THAT THE HEM IS OPENED AND CAPABLE OF RECEIVING THE CLEAT (SEE ERECTION DETAILS).



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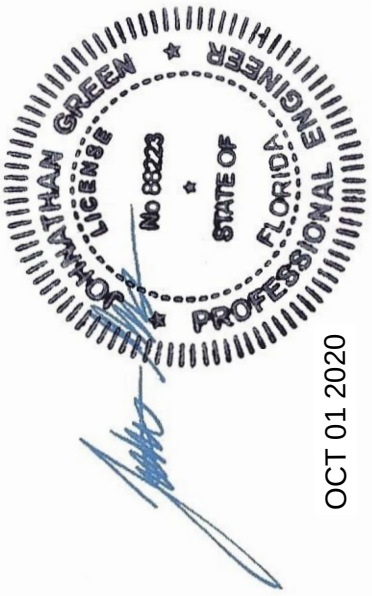

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HIGH PROFILE RAKE

1.) Turn cut edge of panel up 1".

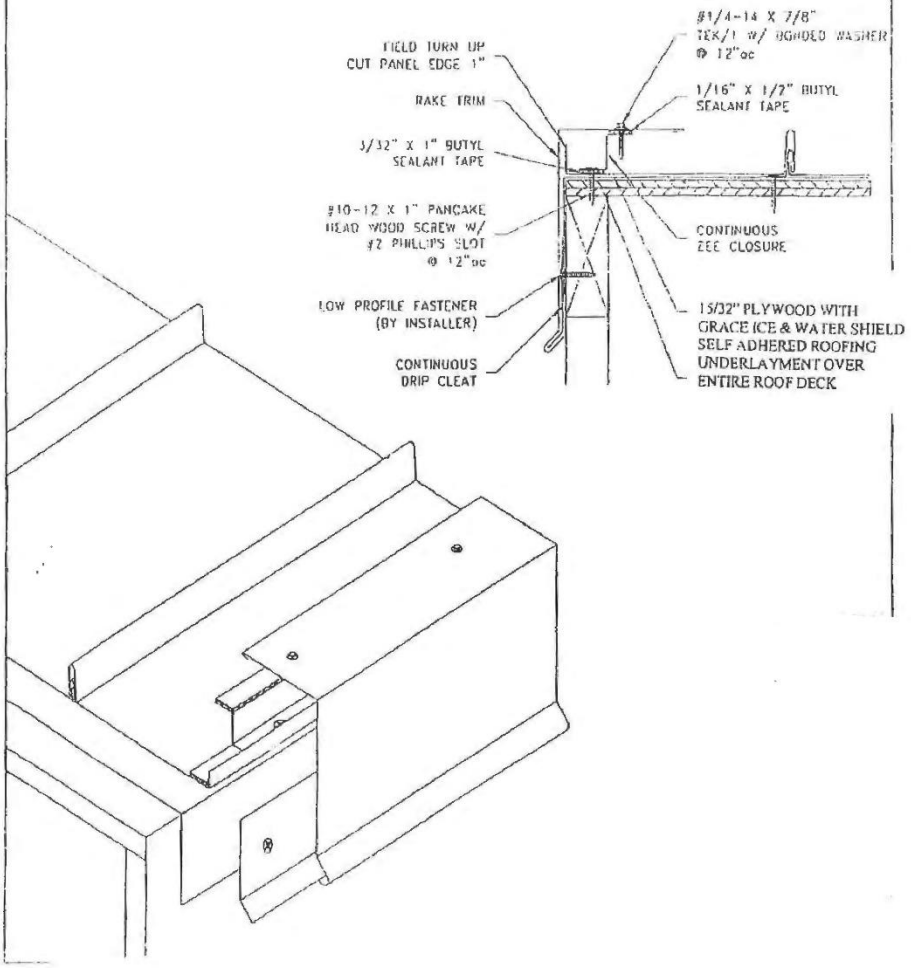
2.) Determine location off zee closure. Apply sealant tape to flat of panel.

3.) Place closure on top of sealant tape. Secure through tape and panel with #10-12 x 1" HWH wood screws @ 12"oc.

4.) Apply a continuous strip of sealant tape to the top of the zee closure. Seal between ends of tape with butyl sealant.

5.) Install panels so that the the field cut end is engaged into the open hem of the receiver trim, and fully embedded into the urethane sealant.

6.) Install the rake trim. Secure to closure zee with 1/4-14 x 7/8" HWH Tek/1 fasteners at 12"oc.



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VALLEY

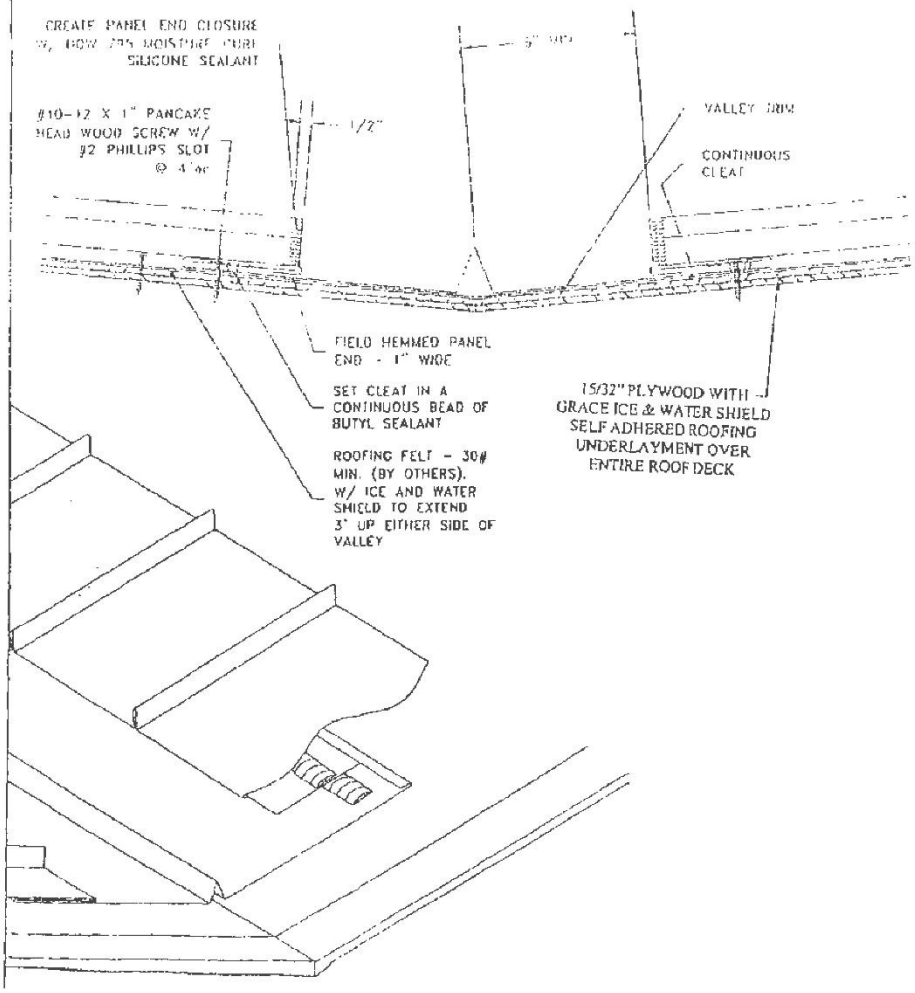
1.) Temporarily attach valley trim at ends w/ #10-12 x 1" pancake head wood screws.

2.) Apply butyl sealant across top of valley trim as shown.

3.) Attach cleat through sealant w/ #10-12 x 1" pancake head wood screws @ 4"oc.

4.) Apply a second bead of butyl sealant across the top of the cleat, and over the fastener heads.

5.) Install panels so that the cleat is engaged into the field applied hem



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LOW EAVE

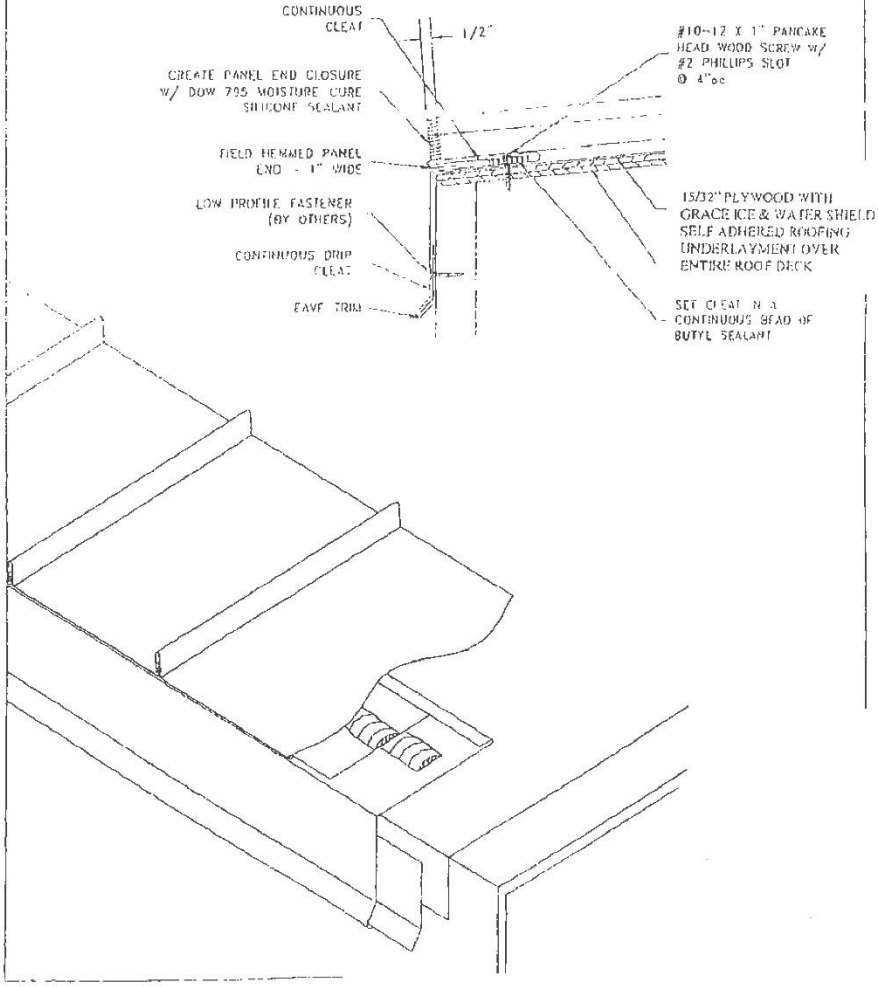
1.) Temporarily attach eave trim at ends w/ #10-12 x 1" pancake head wood screws

2.) Apply butyl sealant across top of eave trim as shown.

3.) Attach cleat through sealant w/ #10-12 x 1" pancake head wood screws @ 4"oc.

4.) Apply a second bead of butyl sealant across the top of the cleat, and over the fastener heads.

5.) Install panels so that the cleat is engaged into the field applied hem.



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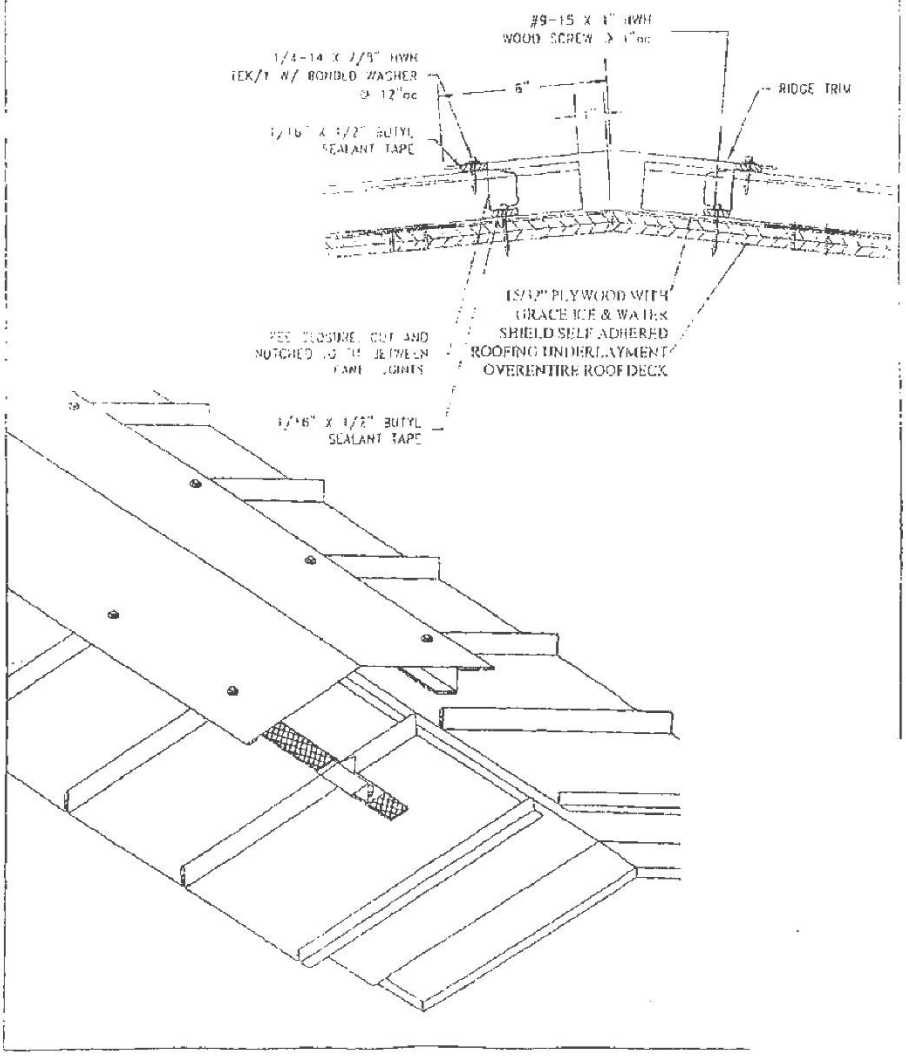
RIDGE / HIP

1.) Determine location of zee closure. Apply sealant tape to flat of panel.

2.) Place closure on top of sealant tape. Secure through tape and panel with #9-16 x 1" HWH wood screws @ 4"oc. Seal the tab of the closure to the side joints with butyl sealant.

3.) Apply a continuous strip of sealant tape to the top of the zee closure. Seal between ends of tape with butyl sealant.

4.) Install the ridge trim. Secure to closure zee with 1/4-14 x 7/8" HWH Tek/1 fasteners at 12"oc.



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