

Everseam® 20 Application Guide

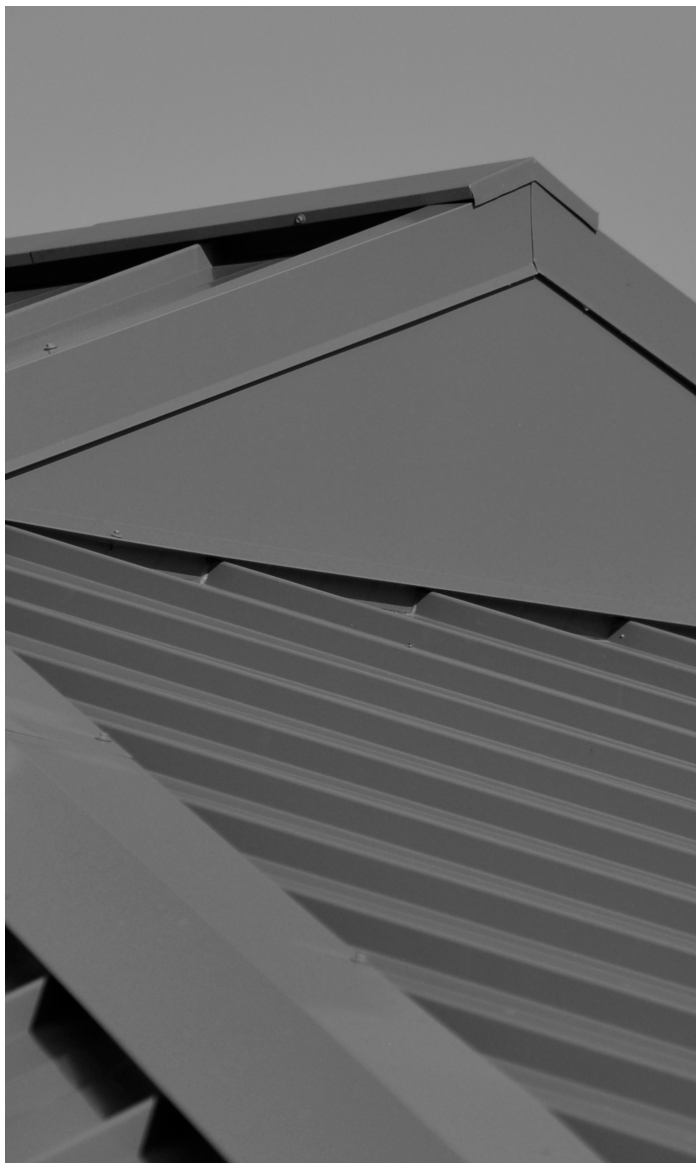
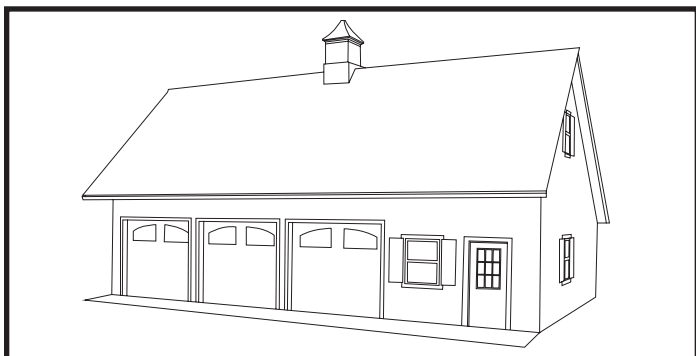


Table of Contents

Everseam® Trim	04
Application Guidelines	
Safety, Applications & Minimum Slope	05
Material Handling	06
Installation Recommendations	07
Coverage	08
Everseam® Details	
Eave Preparation & Panel Engagement	09
Architectural Residential Eave	10
Architectural Ridge / Hip	10
Architectural Vented Ridge	11
Architectural Endwall	11
Architectural Endwall Counter	12
Architectural Sidewall	12
Architectural Sidewall Counter	13
Architectural Rake Starter "J"	13
Architectural Rake Cut Panel Starter "J"	14
Architectural Gable	14
Architectural Gable Cut Panel	15
Architectural Formed Rake	15
Architectural Slim Line Rake	16
Architectural Formed Valley	16
Pipe Penetration	17-19
Skylights	20-21

Everseam® 20 Trim



- | | |
|----------------------------------|----------------------------------|
| Ⓐ Architectural Residential Eave | Ⓔ Architectural Rake Starter "J" |
| Ⓑ Architectural Ridge / Hip | Ⓕ Architectural Formed Valley |
| Ⓒ Architectural Endwall | |
| Ⓓ Architectural Sidewall | |

Purpose

This application guide is intended to assist in the application of Everlast Roofing products on structures. The details and illustrations in this manual may not be applicable to all building plans or field situations. It is the buyer's responsibility to verify all applicable code requirements, check all field measurements, and determine suitability of the material for the job.

Application Guidelines

Safety

Always work safely when installing metal products. Use extreme caution on a roof at all times, and wear gloves and safety glasses to avoid injury. Hearing protection should be used when power-cutting metal panels. Do not walk on panels until all fasteners are installed. Metal panels are slippery when wet, dusty, frosty, or oily. Do not attempt to walk on a metal roof under these conditions. Always use OSHA recommended safety harness or equipment when working on a roof. Wear soft-soled shoes to improve traction and to minimize damage to the paint finish. Always be aware of your position on the roof relative to any roof openings, roof edges, co-workers, and penetrations. Installing metal panels on a windy day can be dangerous and should be avoided. Consult OSHA guidelines for more comprehensive safety requirements.

Applications

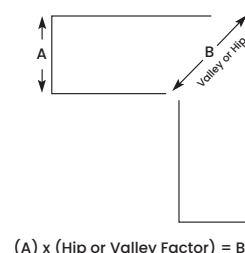
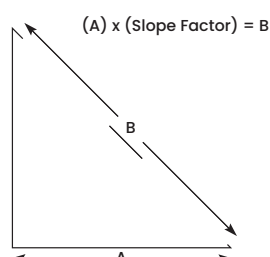
The Everseam® panel is an architectural panel that is ideal for residential and light commercial applications. It can be used for roofing, mansards, or fascias. Everseam® should be applied over a solid substrate; however, in certain applications can be applied over open framing 18" on center. There are certain minimum, live, snow, dead, collateral, and wind loads that a roof must generally be designed to support. Consult local building officials to determine the appropriate building design load requirements. A professional engineer should be consulted for all roof system designs. It is the buyer's responsibility to verify all applicable code requirements, check all measurements, and determine suitability of product for the job. To avoid panel distortion, use a properly aligned and uniform substructure.

Note: Oil canning in the flat area of the panels is common to the industry and does not affect the integrity of the panel. Therefore, oil canning is not a reason for rejection.

Minimum Slope

The minimum recommended slope for the Everseam® panel is 3:12. Everseam® is designed to be utilized over solid substrate. Plywood (5/8" min.), applied with a 30# felt moisture barrier (or an Ice and Water Shield when required by Local Building Codes) between the substrate and the Everseam® panel is ideal.

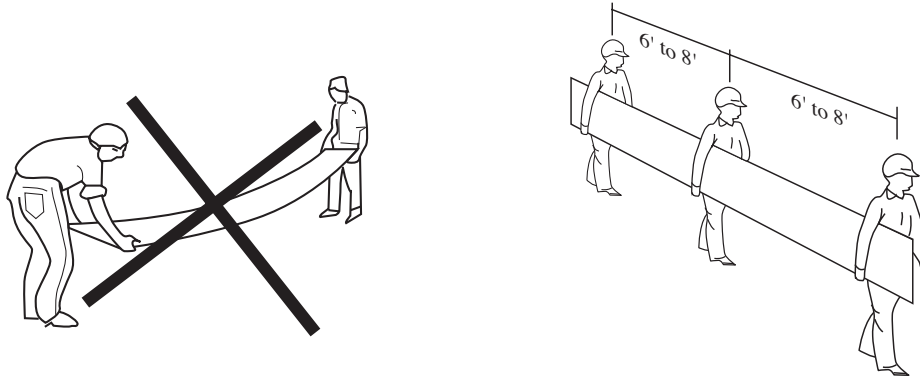
Pitch of Roof	1:12	2:12	3:12	4:12	5:12	6:12	7:12	8:12	9:12	10:12	11:12	12:12
Slope Factor	1.0035	1.0138	1.0308	1.0541	1.0833	1.1180	1.1577	1.2019	1.2500	1.3017	1.3566	1.4142
Valley & Hip Factor	1.4167	1.4240	1.4362	1.4530	1.4743	1.5000	1.5298	1.5635	1.6008	1.6415	1.6853	1.7320



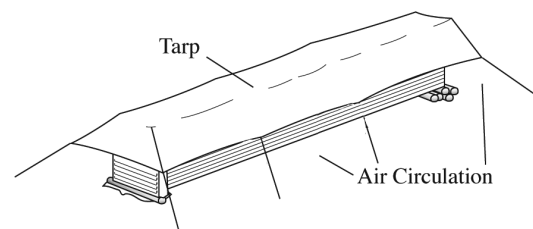
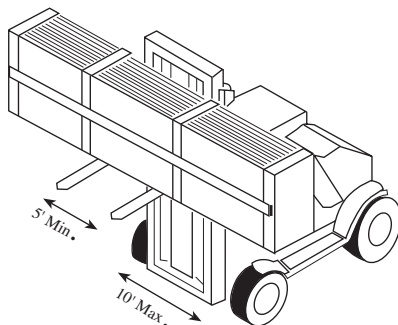
Material Handling

Handling

- A. Do not lift panels from ends while flat. Lift the panels on edge when moving individual panels or when moving panels onto the roof.



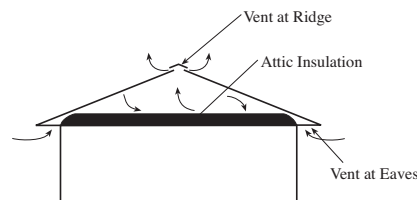
- B. If the material is not to be used immediately, it should be stored in a dry place. Moisture trapped between sheets may cause damage to the paint system. The paint system may become soft or water stains may appear which can detract from the appearance and affect the service life of the material. To avoid problems, store the materials in a well-ventilated dry area. Stack the materials in an incline position. **DO NOT USE PLASTIC TO COVER MATERIALS. THIS CAN CAUSE SWEATING OR CONDENSATION.**
- C. While unloading, all bundles must be lifted from the center. Do not unload in a jerking or bouncing fashion. Panels greater than 25'0" long should be unloaded using a spreader bar to prevent panels from bending.
- D. Although the paint coating is tough, dragging panels across the surface of one another will almost certainly mar the finish.



Installation Recommendations

Ventilation / Insulation

Proper design and installation of vapor barriers and ventilation systems are important to prevent condensation and the resulting problems of moisture damage and loss of insulation efficiency. Condensation occurs when moisture-laden air comes in contact with a surface temperature equal to or below the dew point of the air. This phenomenon creates problems that are not unique with metal buildings; these problems are common to all types of construction. In addition to providing resistance to heat transfer, insulation can also protect against condensation forming on cold surfaces, either inside the building or within the wall/roof system cavity. The arrangement of the buildings insulation system and vapor retarder is the responsibility of the building designer. These are some basic guidelines to help control condensation:



- A. The insulation should have a vapor retarder face on the “warm” side of the insulation. For most buildings, this means that the vapor retarder is on the inside surface (toward the buildings interior).
- B. The thickness of the insulation must be designed to maintain the temperature of the vapor retarder above the interior dew point, using the worst-case expected outside temperature.
- C. All perimeter conditions, seams, and penetrations of the vapor retarder must be adequately sealed in order to provide a continuous membrane to resist the passage of water vapor.
- D. Building ventilation, whether by gravity ridge vent, power operated fans, or other means, contributes significantly to reduced condensation. The movement of air to the outside of the building reduces the interior level of vapor pressure. On the buildings that have an attic space or are being retrofitted with a metal roofing system, vents should be placed at both the eave and peak of the roof in order to prevent a buildup of moisture (humidity) in the attic space. Contact your local building code officials or an engineer on proper ventilation practices for your area.

Cutting Steel Panels

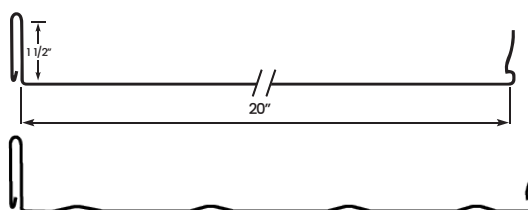
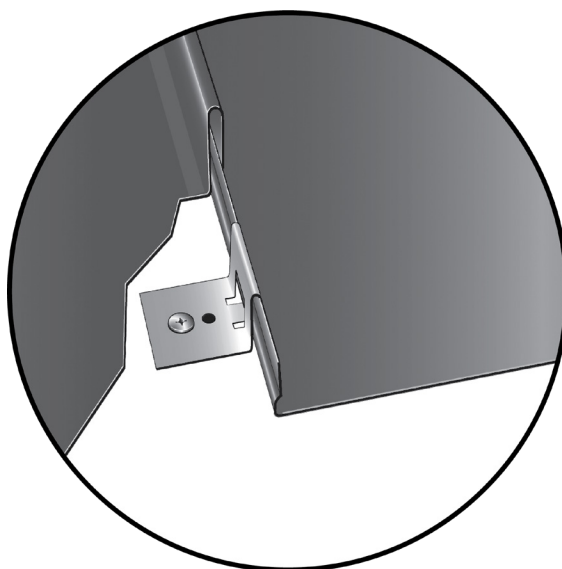
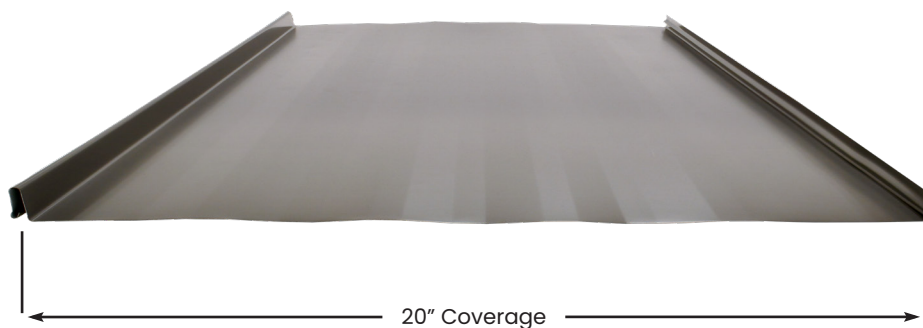
Steel panels may be cut with straight-cut snips, electric or pneumatic shears, a portable profile shear, or an electric nibbler. Some installers prefer using a circular saw with a metal cutting abrasive blade. This method may be faster, but it has some drawbacks:

- A. Saw cut edges are jagged and unsightly and tend to rust more quickly than sheared edges.
- B. Saw cutting produces hot metal filings that can embed in the paint and cause rust marks on the face of the panel.
- C. Panels to be saw cut must be turned face down and cut in a location down-wind and well away from the building and other panels to avoid embedment of metal filings on other panels.
- D. Saw cut panels must be thoroughly wiped to ensure the removal of all metal filings.
- E. Saw cutting burns the paint and galvanizing at the cut edge, leading to the onset of edge rust.

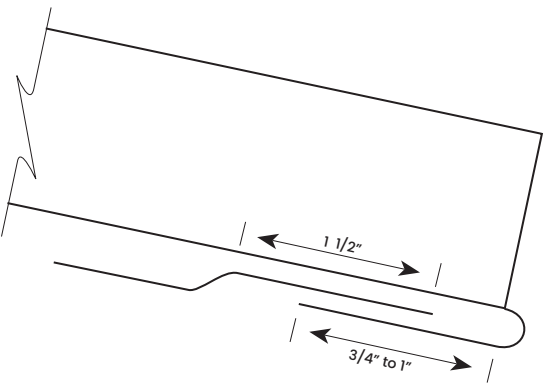
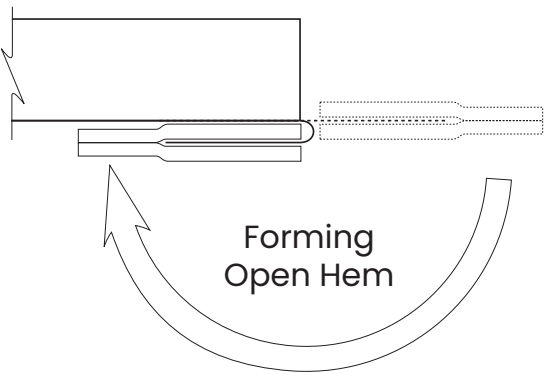
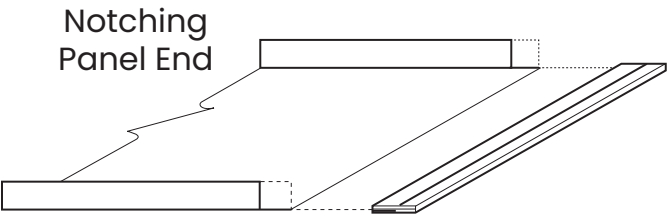
Touch Up Paint

Touch-up paint is used to cover and protect unexpected scratches on the paint finish that may occur during installation of the panel. Touch-up paint will not weather as well or at the same rate as the original coating or finish. When applying, use in small inconspicuous and separate areas. Test in an area that will not be noticeable.

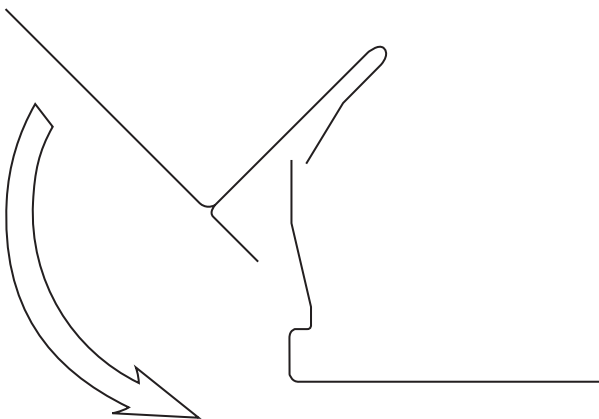
Everseam® 20 Coverage



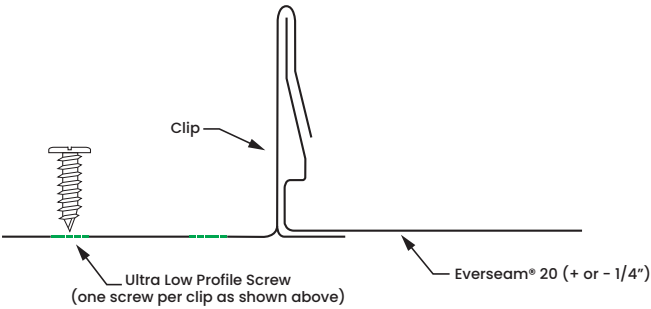
EAVE PREPARATION



PANEL ENGAGEMENT



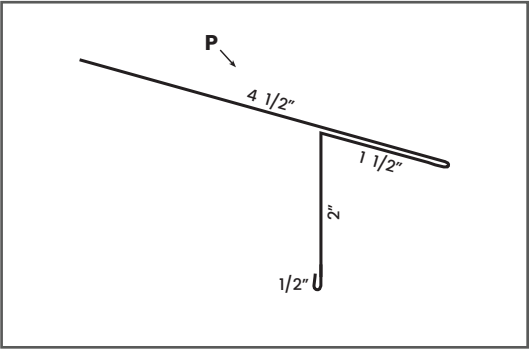
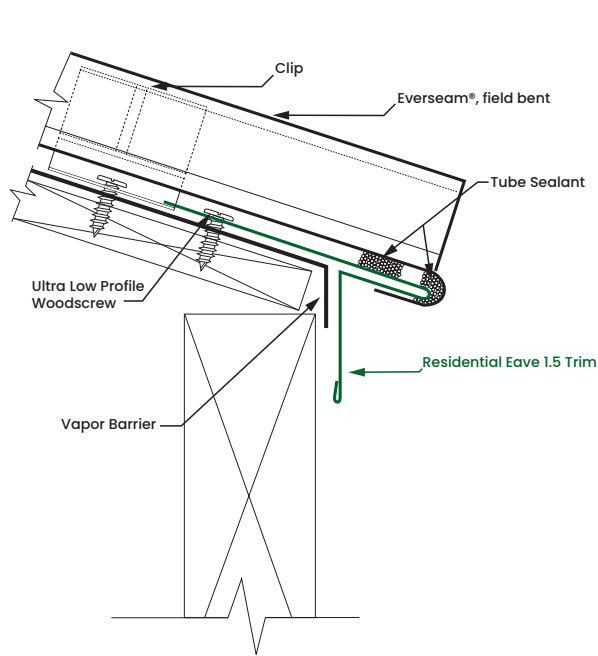
Panel Clip Installation
recommended every 24"



Installed Panel Cross Section

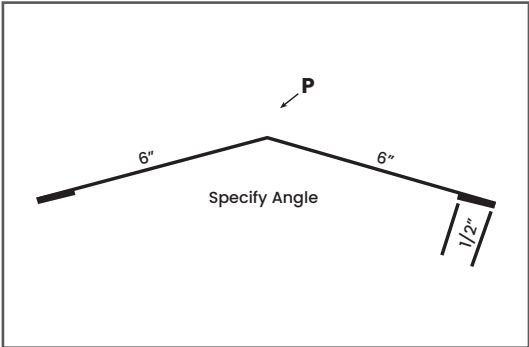
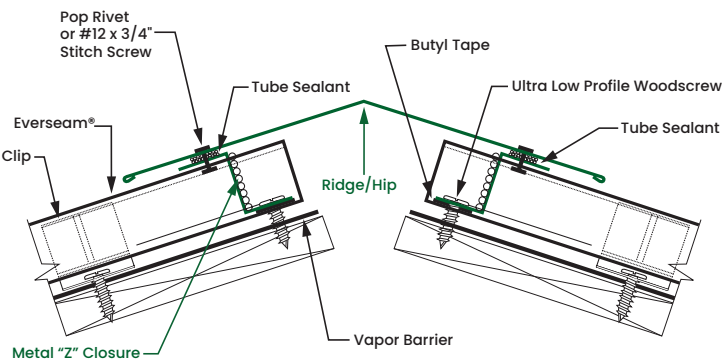
ARCHITECTURAL RESIDENTIAL EAVE

24LARES122 – #961 Arch. Residential Eave



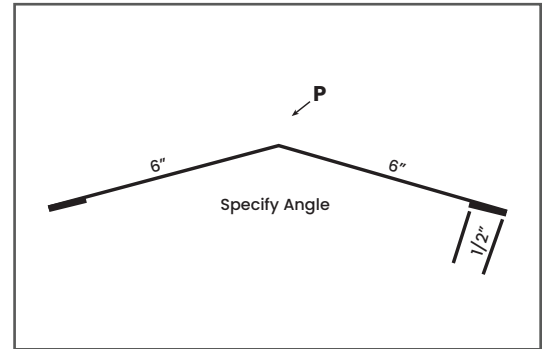
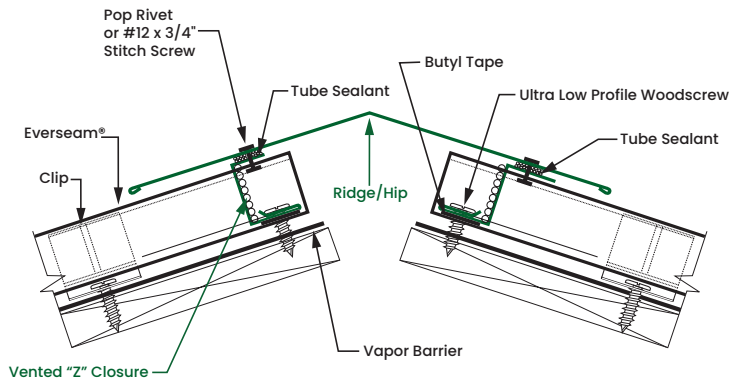
ARCHITECTURAL RIDGE / HIP

24LARH6S122 – #950 Arch. Ridge / Hip



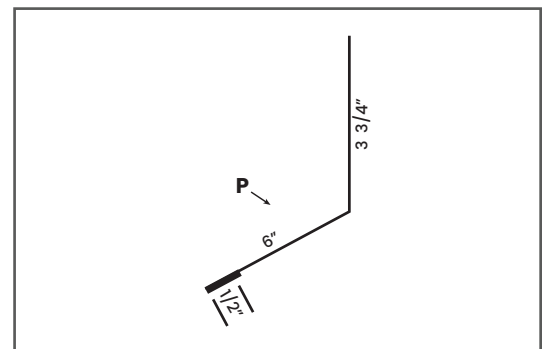
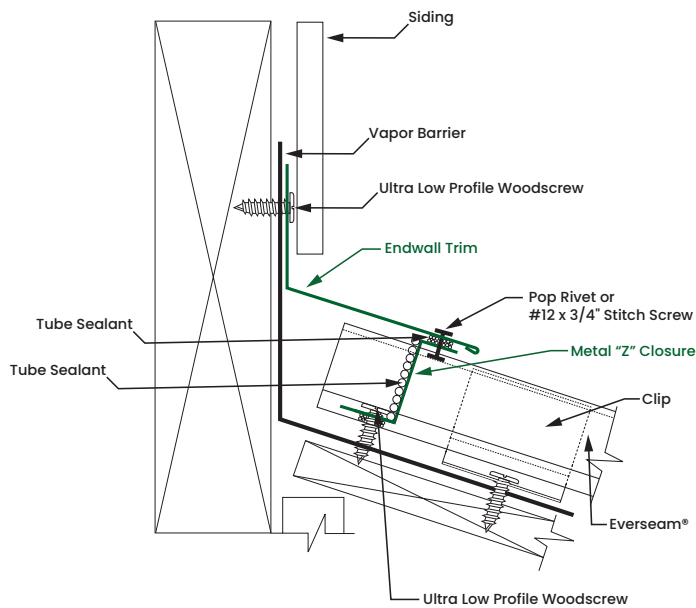
ARCHITECTURAL VENTED RIDGE

24LARH6S122 - #950 Arch. Ridge / Hip



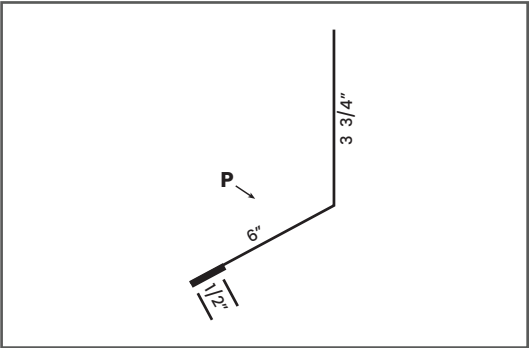
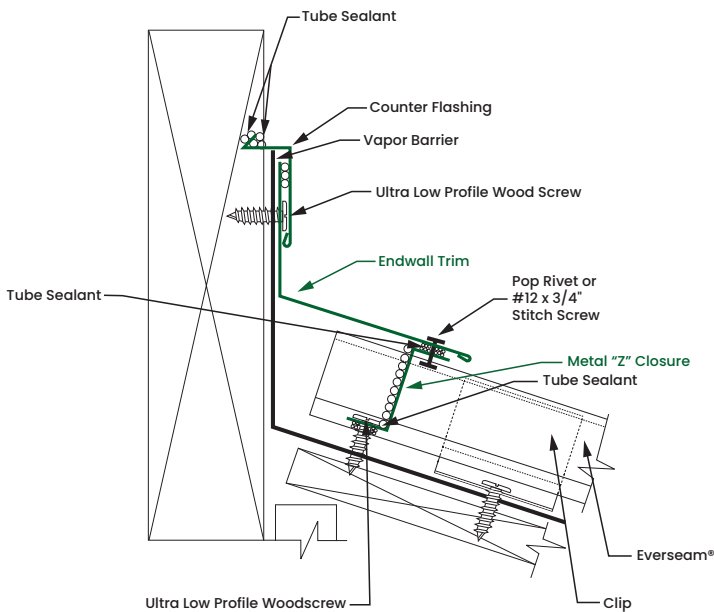
ARCHITECTURAL ENDWALL

24LAHWS122 - #963 Arch. Endwall / Headwall Flashing



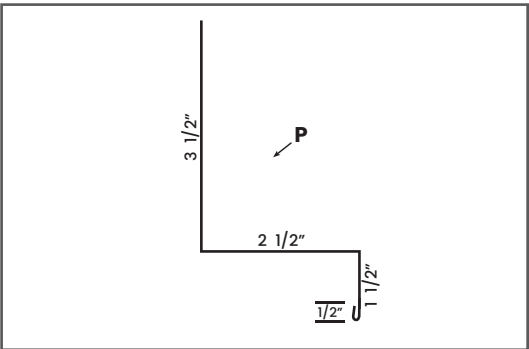
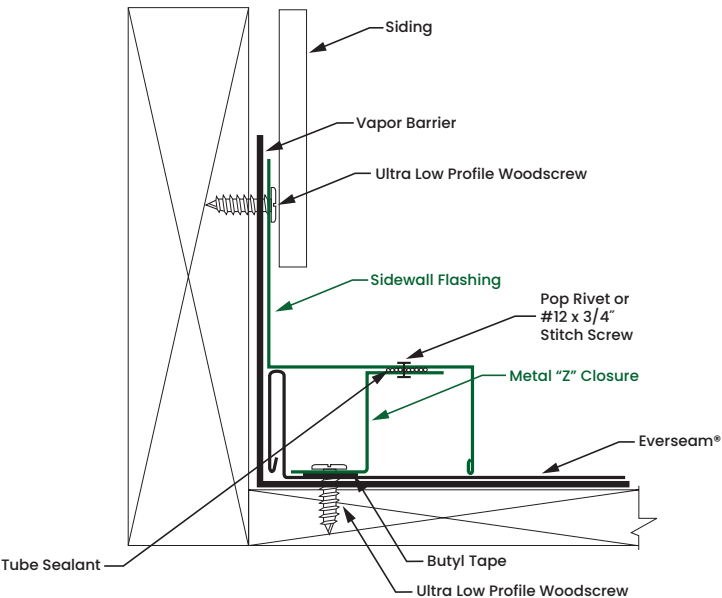
ARCHITECTURAL ENDWALL COUNTER

24LAHWS122 - #963 Arch. Endwall / Headwall Flashing



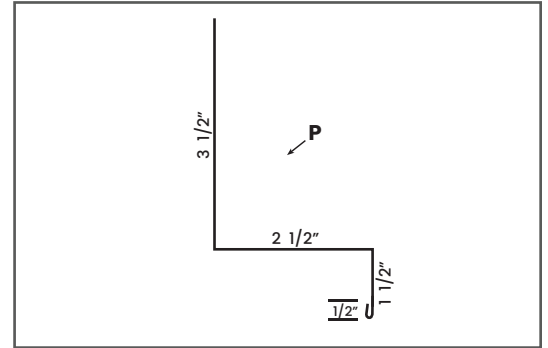
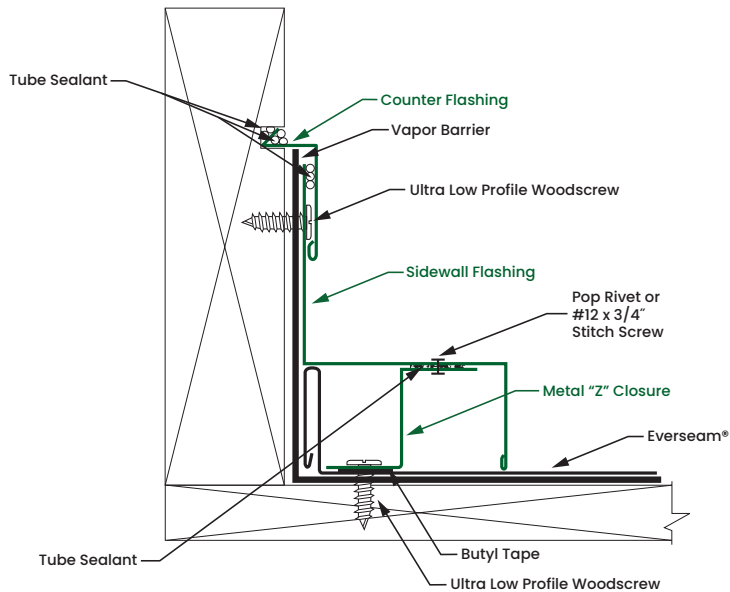
ARCHITECTURAL SIDEWALL

24LI50SWS122 - #926 Arch. Sidewall Flashing



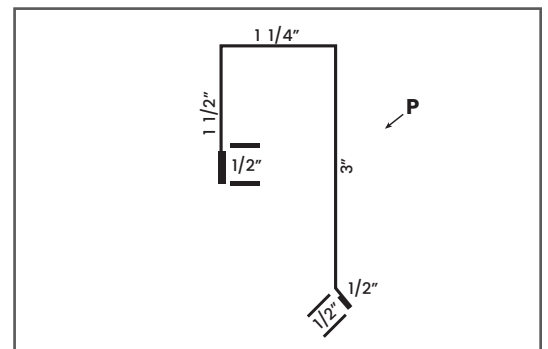
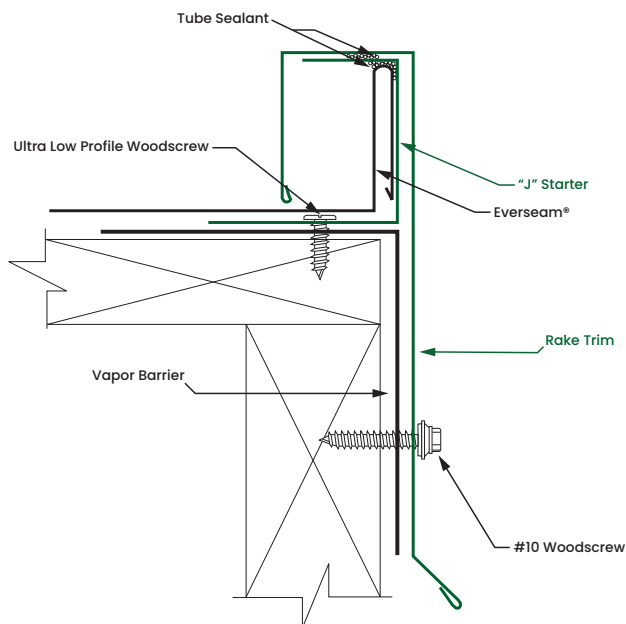
ARCHITECTURAL SIDEWALL COUNTER

24L150SWS122 - #926 Arch. Sidewall Flashing



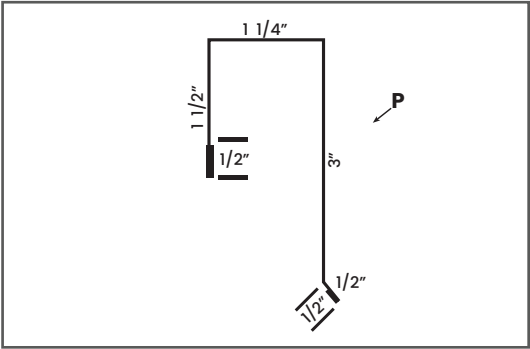
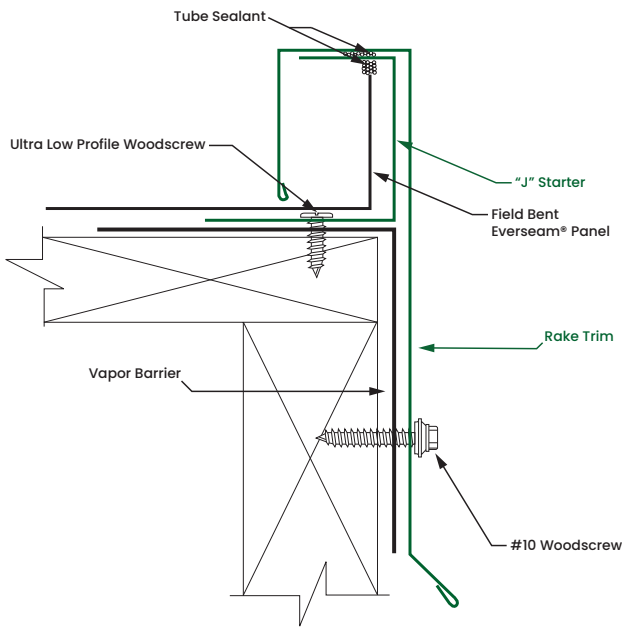
ARCHITECTURAL RAKE STARTER "J"

24L150RTS122 - #915 Arch. 1 1/2" Rake Trim



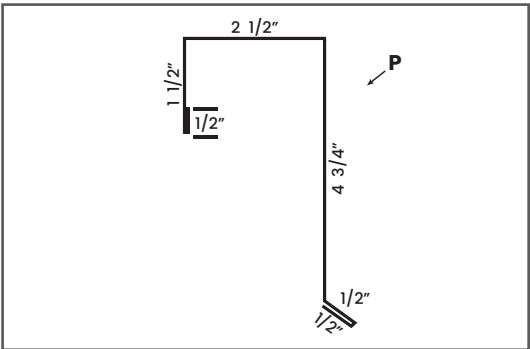
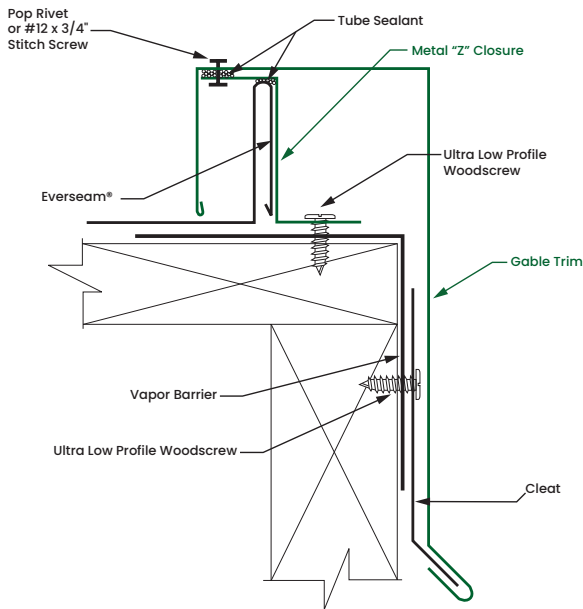
ARCHITECTURAL RAKE CUT PANEL STARTER “J”

24L150RTS122 – #915 Arch. 1 1/2” Rake Trim



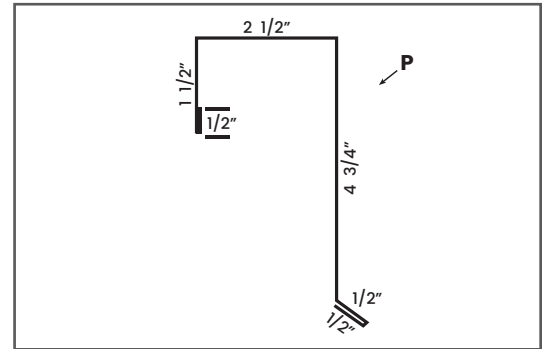
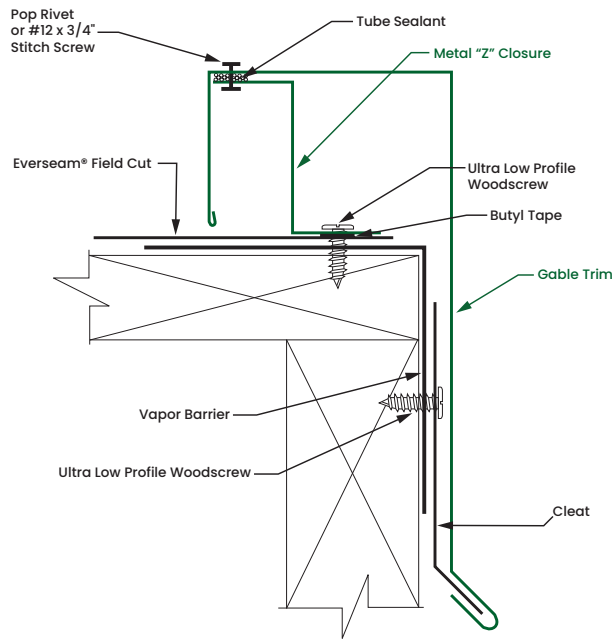
ARCHITECTURAL GABLE

24L150GFS122 – #913 1 1/2” Gable Flashing



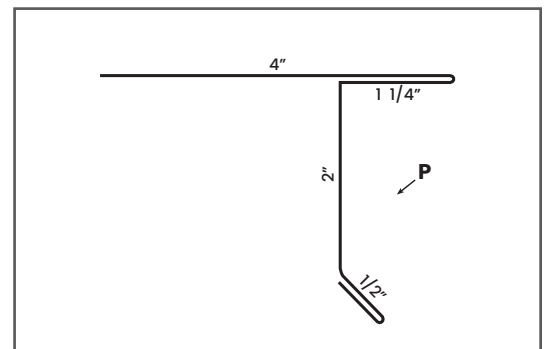
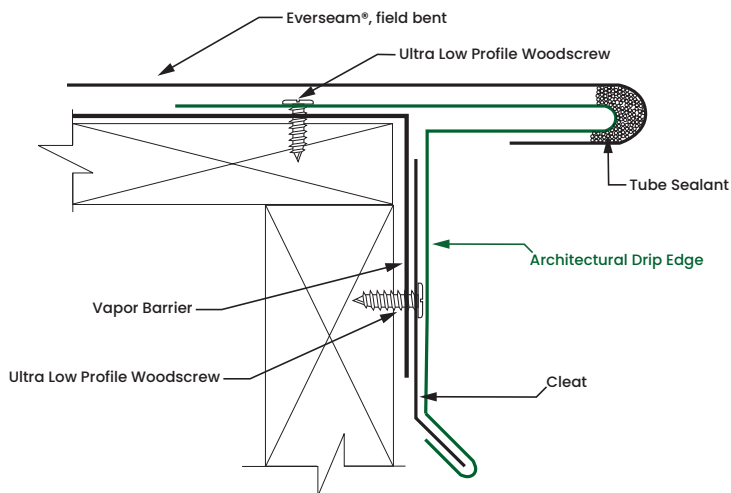
ARCHITECTURAL GABLE CUT PANEL

24L150GFS122 - #913 1 1/2" Gable Flashing



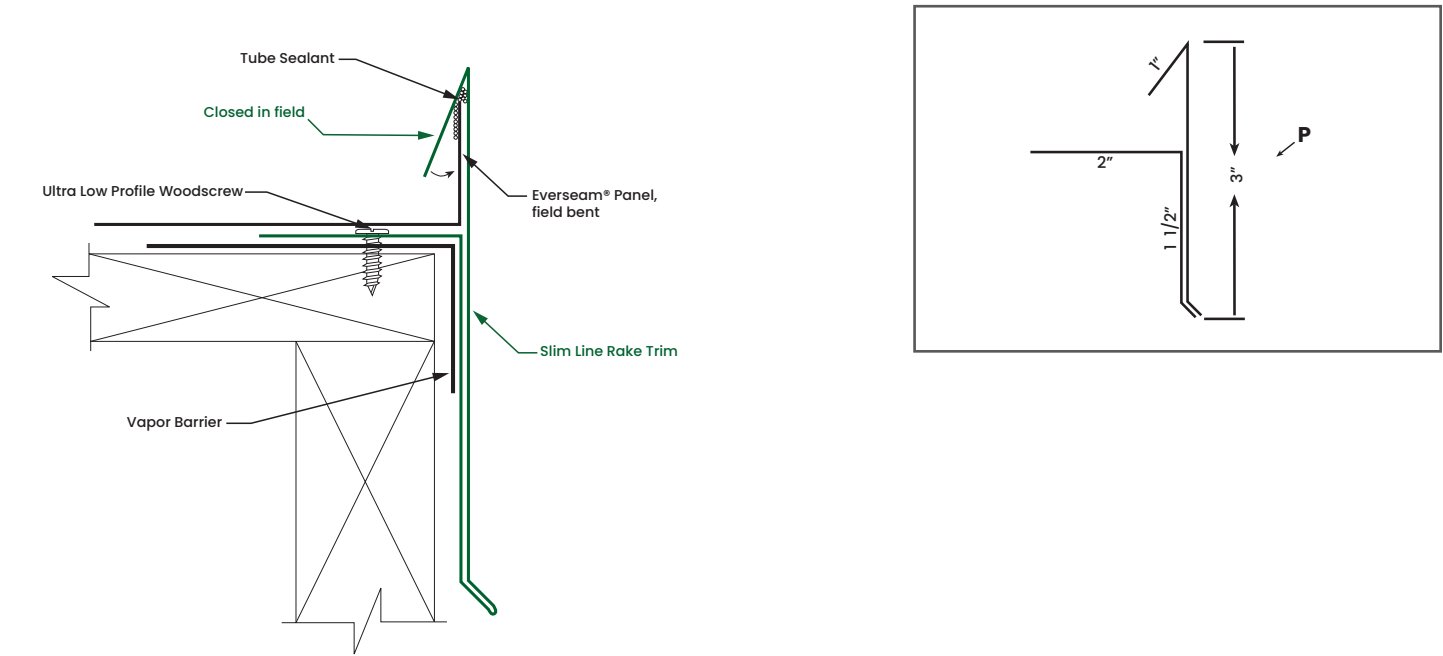
ARCHITECTURAL FORMED RAKE

24LAFRS122 - #918 Formed Rake Flashing



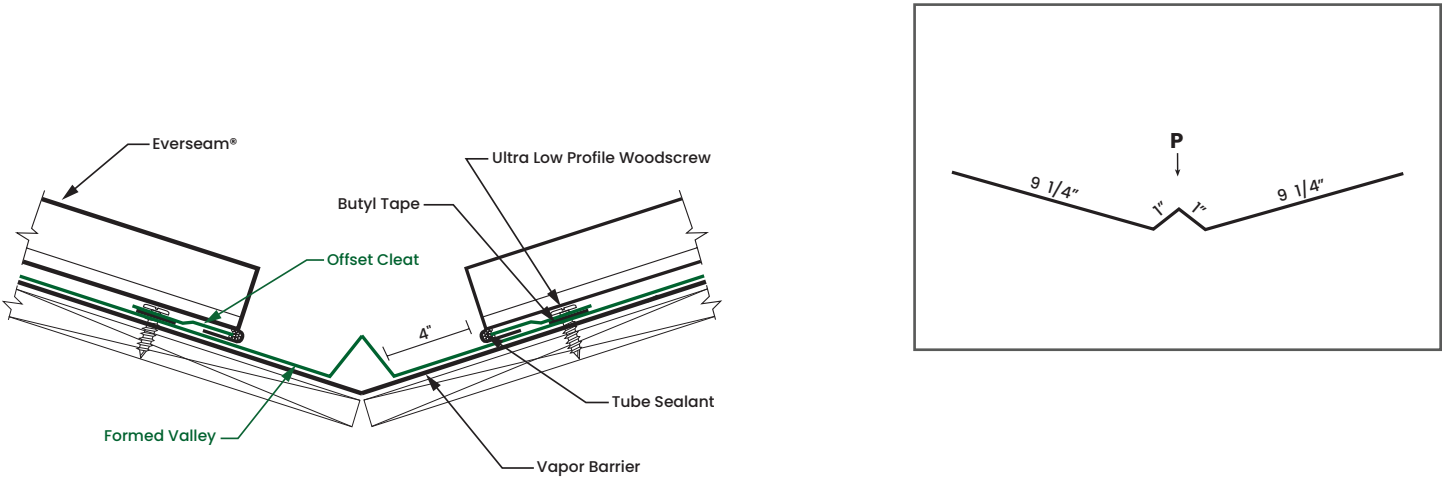
ARCHITECTURAL SLIM LINE RAKE

24L150SRS122 - #982 Arch. Slim Rake



ARCHITECTURAL FORMED VALLEY

24LAFVS122 - #964 Arch. Formed Valley



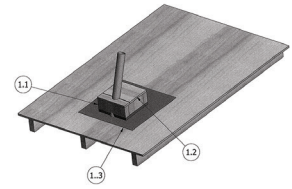
PIPE PENETRATION

STEP #1

Step 1.1 – Box out any pipes that will be on top of the Roof Panel Seam.

Step 1.2 – Install plywood on top of Penetration and around pipe.

Step 1.3 – Run Underlayment Membrane around and up the sides of Penetration.



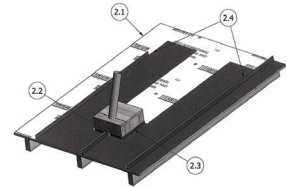
STEP #2

Step 2.1 – Install Underlayment.

Step 2.2 – Install panels up to and around Penetration as shown.

Step 2.3 – Field trim and fold panels up the sides of Penetration.

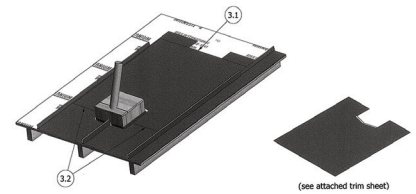
Step 2.4 – Notch both male and female portion of panels back.



STEP #3

Step 3.1 – Field cut and fabricate flashing pan.

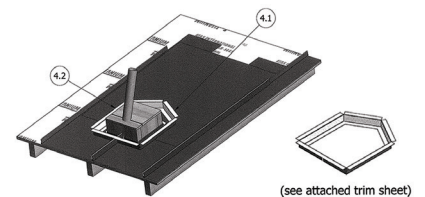
Step 3.2 – While installing flashing pan, apply two beads of appropriate sealant between pan and panels.



STEP #4

Step 4.1 – Field notch and bend "Z" closures around penetration as shown.

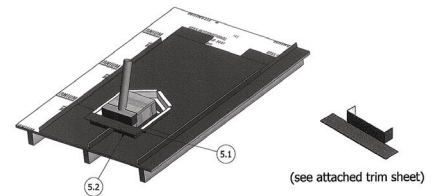
Step 4.2 – Install "Z" closures in continuous bead of butyl tape using appropriate fasteners.



STEP #5

Step 5.1 – Field trim and fabricate lower flashing trim.

Step 5.2 – Install on "Z" closure with appropriate fasteners.



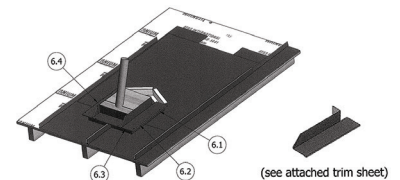
STEP #6

Step 6.1 – Field trim and fabricate side flashing trim.

Step 6.2 – Install on top of lower flashing trim and "Z" closure with appropriate fasteners.

Step 6.3 – Use sealant where appropriate.

Step 6.4 – Repeat for other side of penetration.



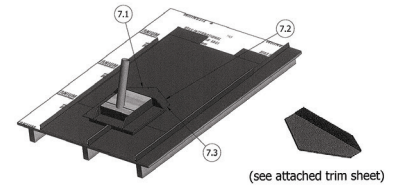
PIPE PENETRATION

STEP #7

Step 7.1 - Field trim and fabricate upper flashing trim.

Step 7.2 - Install on top of side flashing trim and "Z" closures with appropriate fasteners.

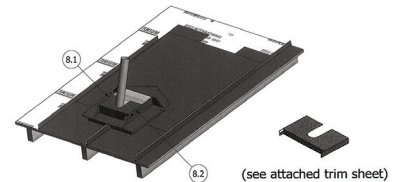
Step 7.3 - Use sealant where appropriate.



STEP #8

Step 8.1 - Field cut and fabricate bottom penetration pan.

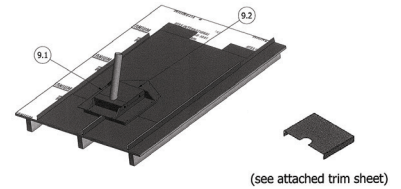
Step 8.2 - Install on lower and side trims with appropriate fasteners.
(as shown)



STEP #9

Step 9.1 - Field cut and fabricate top penetration pan.

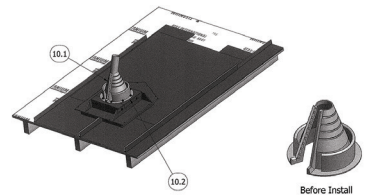
Step 9.2 - Install on upper and side trims with appropriate fasteners.
(as shown)



STEP #10

Step 10.1 - Install pipe boot around pipe and secure to top and bottom penetration pan with appropriate fasteners.

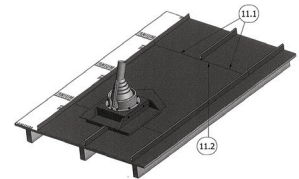
Step 10.2 - Use appropriate sealant to make watertight.



STEP #11

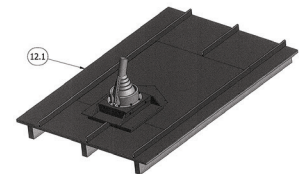
Step 11.1 - Field notch and bend end of panel to a 180° hem.

Step 11.2 - Install panels on top of joggle cleat with butyl tape sealant.
(These panels get installed on previous panels which had their locks cut off.)

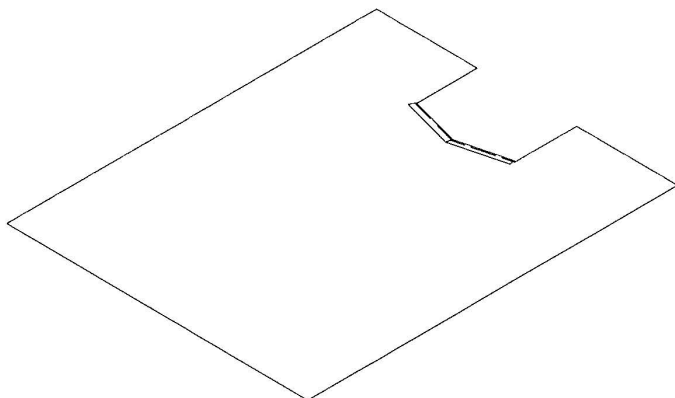


STEP #12

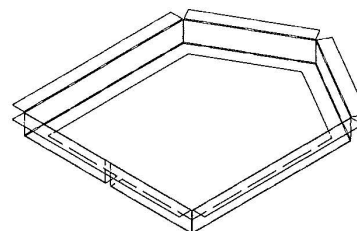
Step 12.1 - Install next roof panels and continue as normal.



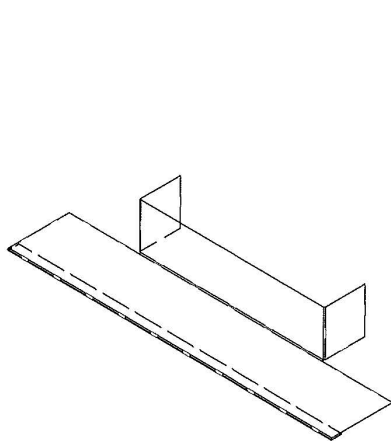
PIPE PENETRATION



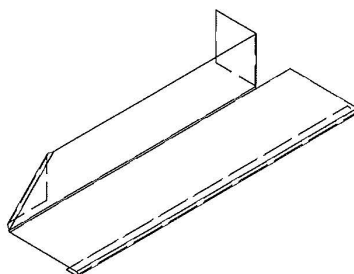
Flashing Pan



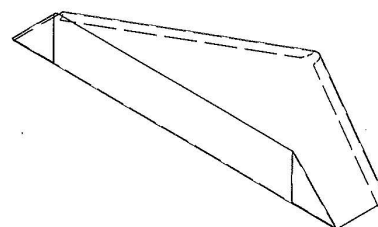
"Z" Closures



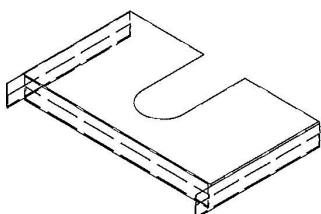
Lower Flashing Trim



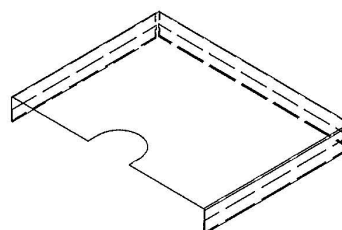
Side Flashing Trim



Upper Flashing Trim

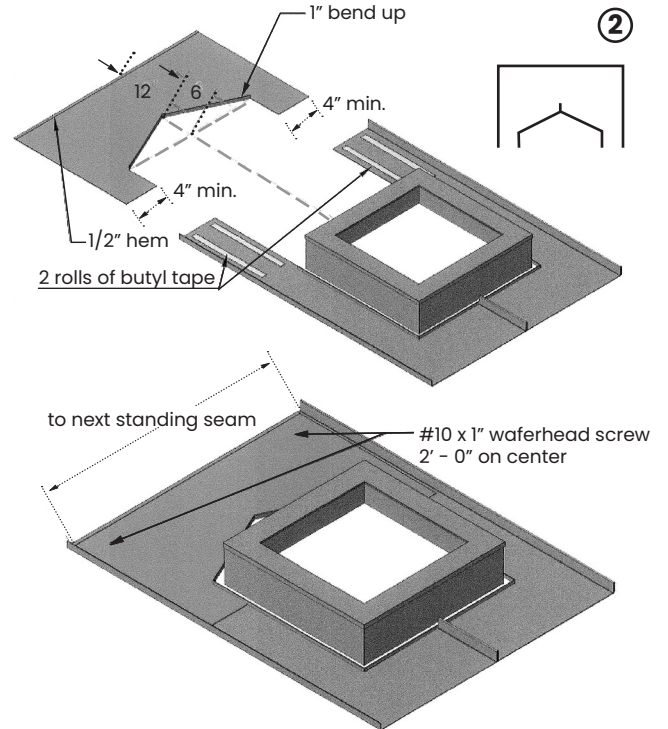
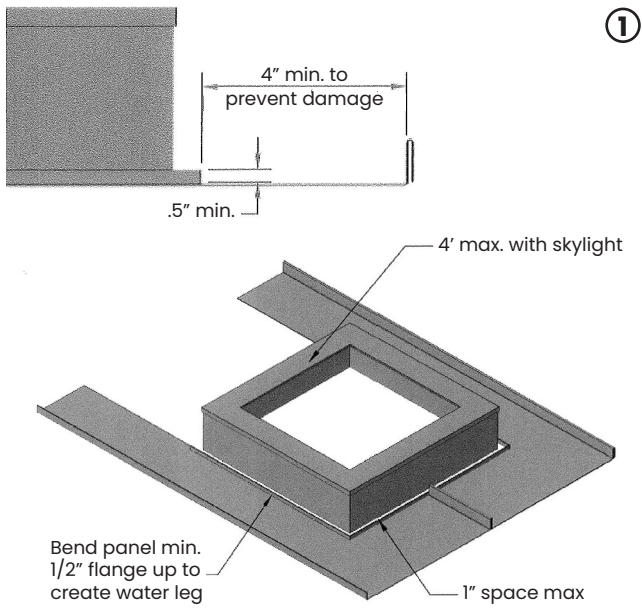


Bottom Penetration Pan

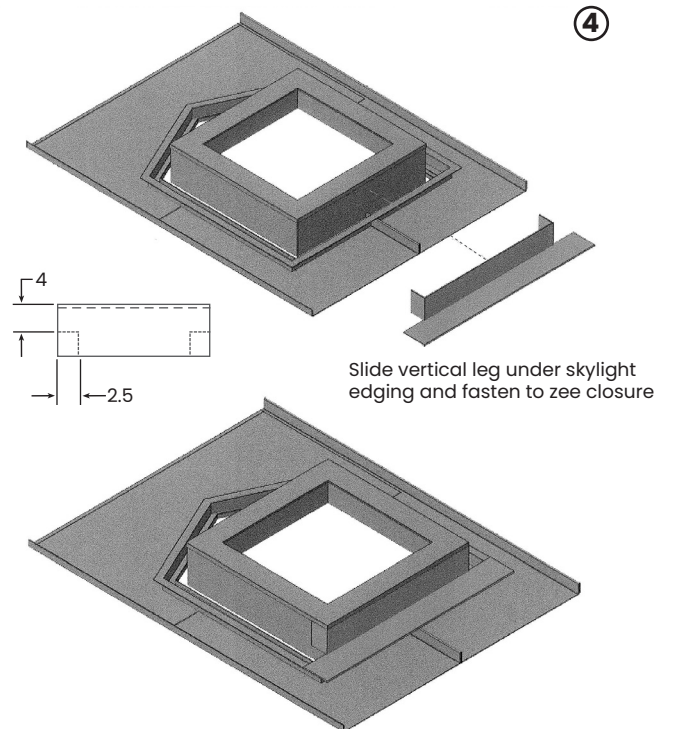
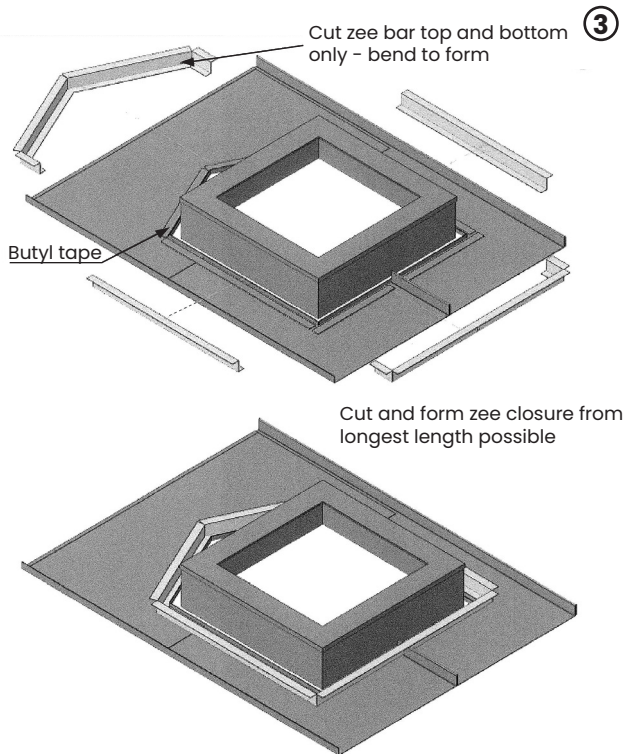


Top Penetration Pan

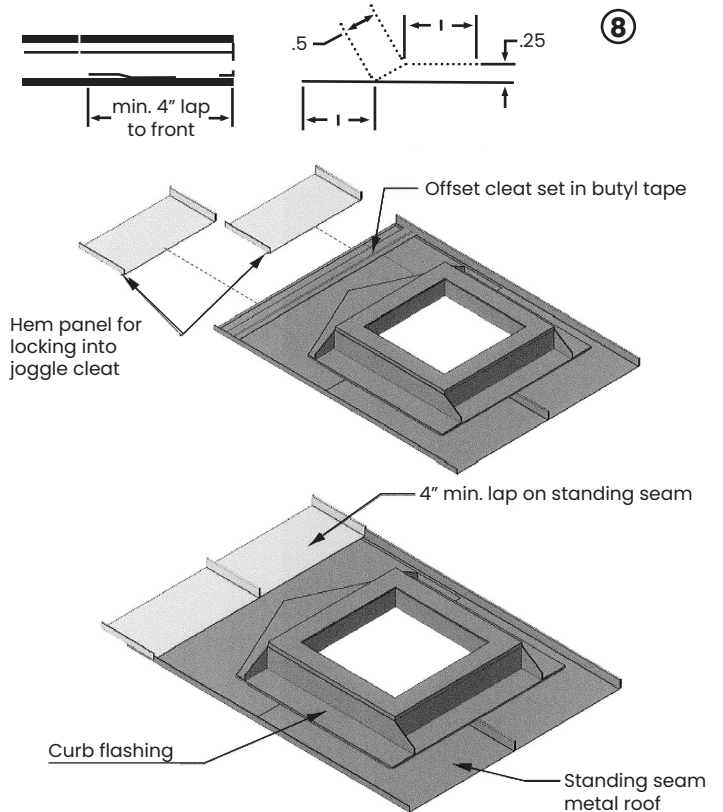
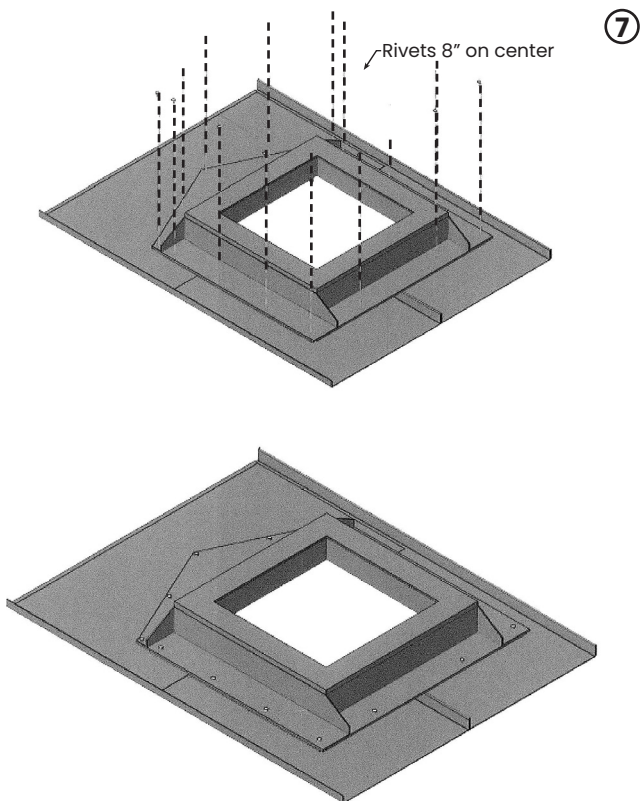
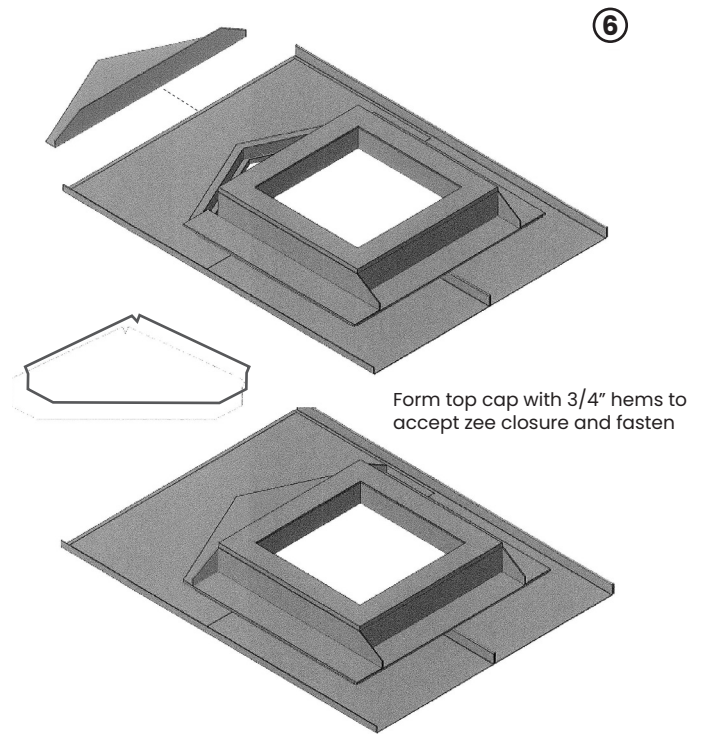
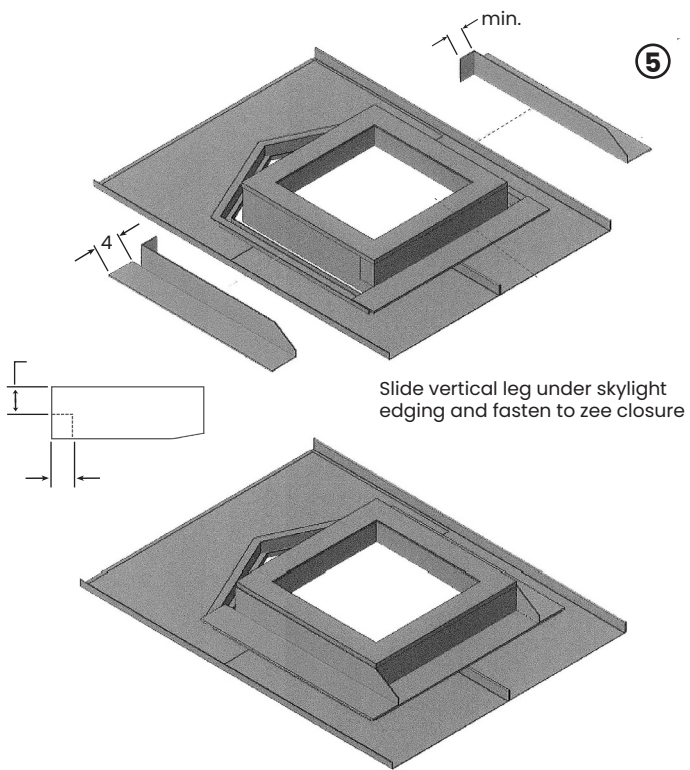
SKYLIGHTS



Note: 24" min. of ice and water on top and sides and continue to eave below.



SKYLIGHTS



NOTES

[illegible]