

Residential Standing Seam Installation & Details Manual



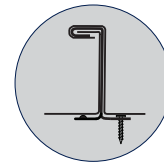
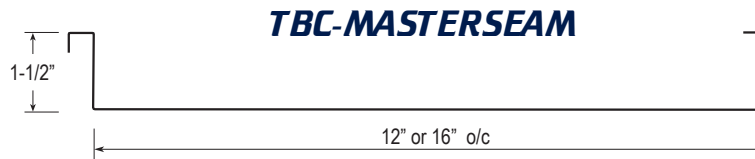
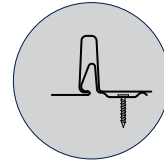
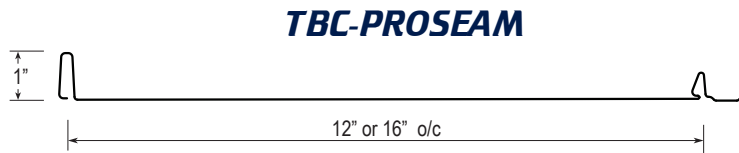
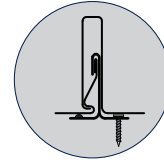
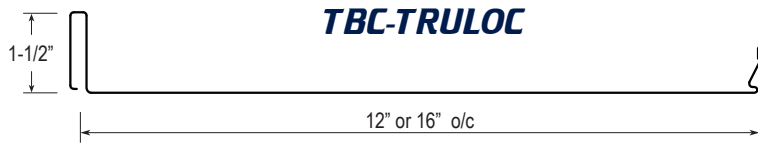
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Overview

Panel Profiles



Pan Conditions

Striations - 12"



Striations - 16"



Stiffener Ribs - 12"



Stiffener Ribs - 16"



Flat Pan - 12"



Flat Pan - 16"



Overview

GENERAL NOTES

Congratulations and thank you for choosing a Bryer standing seam metal roof for your project. This manual will serve as a guide to help with typical projects covering common details, flashings and installation techniques. The details contained in this manual are designed to be a reference for the designer and/or installer. They depict standard conditions but do not cover all situations. It is important to consider individual project conditions, climate, and local building codes before starting installation. Bryer's technical department can offer further information on conditions not covered. Please read this manual in its entirety prior to beginning installation.

DESIGNER RESPONSIBILITIES

The following is the sole responsibility of the designer, contractor or home owner:

Consider project specific building requirements including conformance to state and local building codes. Ensure all details and flashings are suitable for the project specific conditions and will provide for a weather tight installation. Verify that the construction details will adequately control condensation; including vapor retarders, insulation, and ventilation.

SAFETY

It is the responsibility of the installer to ensure all safety protocols are followed, including applicable OSHA requirements and regulations. Any person working on a roof should be outfitted with the appropriate fall protection equipment and have the knowledge of its proper use.

Metal panels can be extremely slippery when wet, dusty, oily or when frost is present. Avoid working or walking on the panels when any of these conditions are present.

All sheet metal products, including panels and flashing, have inherently sharp edges. Gloves and long sleeve shirts should be worn at all times when handling sheet metal.

When operating any power equipment or hand held tools make sure to follow the manufacturer's instruction and safety recommendations. Installing panels during windy weather may be hazardous. Take appropriate precautions or stop installation until winds subside.

Do not attempt to install roofing panels unless you are trained in the proper and safe use off all tools, techniques and safety gear.

OIL CANNING

All light gauge flat metal surfaces will display waviness, which is commonly referred to as oil-canning. This is a naturally inherent characteristic of all light gauge metals, not a defect. This phenomenon can be affected by steel mill variations, inconsistencies in the substrate, unevenness in the underlayment, and the width of the panel. Heavier gauges, narrower panel widths, stiffener ribs, and striations all can help minimize the effect of oil-canning. Oil-canning is not a cause for rejection.

DISCLAIMER

Application and design details contained herein are for illustration purposes only, and may not be appropriate for all environmental conditions or building designs. Projects should be designed and engineered to conform to all applicable building codes and regulations. If there are conflicts between the project specific architectural details and the details depicted in this manual, the project drawings will take precedence. The Bryer Company, Inc. assumes no responsibility for improperly installed products or for any injury or property damage resulting from the use of these products.

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THERE ARE NO UNDERSTANDINGS, AGREEMENTS, REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED (INCLUDING ANY REGARDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), NOT SPECIFIED HEREIN, RESPECTING ANY SALE OF PRODUCTS BY THE BRYER COMPANY (TO THE EXTENT PERMITTED BY LAW).

Delivery, Storage & Handling

DELIVERY

Upon receipt of material, check the shipment against the packing list to confirm the correct products, colors, lengths and quantities have been delivered. Any discrepancy should be noted on the packing slip and immediately communicated to your sales representative. The Bryer Company will not be responsible for shortages or damage unless they are noted on the packing list or bill of lading. Bundles should be lifted by a forklift or crane at the bundles center of gravity. A spreader bar and nylon straps should be used when lifting bundles with a crane. Bundles under 30' may be handled with a single forklift. Bundles longer than 30' should be lifted utilizing a crane with a spreader bar or 2 forklifts working in tandem.

When requesting jobsite delivery via Bryer's truck outfitted with a Moffett (trailer mounted forklift) consideration must be given to access, off-loading location and surroundings. The Moffett is equipped with large treaded tires that will significantly damage lawn or other landscaped areas, especially if saturated. Bryer will not be held responsible for any damage resulting from required operation of the Moffett equipment within the designated off-loading area.

Bryer's driver and/or equipment operator will be the sole judge of safe operations, off-loading and storage. Requests for unsafe off-loading or storage will be denied. If rescheduling delivery is required then re-delivery costs will be charged.

STORAGE

Bundles should be stored off the ground to allow air circulation with one end elevated to allow any moisture to drain. Prolonged storage of bundled panels is NOT recommended. If bundles are stored for extended periods of time extra care must be taken to protect sheets from water stains and white rust.

Panels and flashing that are produced with a protective strippable film should not be left exposed for prolonged periods. Long term exposure to high or low temperatures and/or

exposure to UV will result in the film sticking to the metal making removal very difficult.

Panels that are stacked or stored directly on the roof must be secured to the deck to avoid dislodged or air born panels during high winds.

HANDLING

Individual panels should be handled on their side by the seam or edge. DO NOT pick panels up from the ends laying flat, this will cause buckling or kinks. If the panels are longer than 10' use two or more people to lift and carry individual panels. There should be one person spaced every 15' at a minimum for handling longer length panels.

Proper attire, including gloves and safety glasses, should be worn at all times when handling metal products.

Clean, soft, rubber soled shoes are recommended when walking on roof panels. Rocks or other debris caught in the tread may damage the panel finish. Avoid stepping on or directly adjacent to the panel rib. Stepping next to the rib may cause dents or creases showing from the roofing clips or panel fasteners.

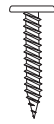
When cutting panels or flashing it is recommended to use sheet metal snips, shears or nibblers. A circular saw with a metal blade may also be used, however this typically results in a rough edge and significant amounts of metal shavings. Care must be taken to clean the panels thoroughly and remove all metal shavings and filing that result from any cutting or drilling. If left on the panel surface these metal shavings will rust and stain the paint, voiding the finish warranty. Do not use any sort of torch or flame to cut product.

Accessories & Tools



Wood Screw
#10 Type S - w/ Washer
1", 1-1/2", 2"

Exposed fastener used for attaching flashing or panels to wood substrates



Clip/Flange Screw
#10 Sharp - Pancake/Phillips
1", 1-1/2"

Concealed fastener used for panel flange or clip attachment into wood



Stitch Screw
#12 x 3/4" Type A - w/ Washer

Exposed fastener used for lapped panel or flashing joints



Clip/Flange Screw
#10 x 1" - #3 Point - Pancake/Phillips

Concealed fastener used for panel flange or clip attachment into steel



Self Driller Screw
#12 - #3 Point - w/ Washer
1", 1-1/2", 2"

Exposed fastener used for attaching flashing or panels to steel substrates



Modified Truss Screw
#8 Sharp - Phillips
3/4", 1", 1-5/8"

Concealed fastener used for sub-flashing attachment into wood



SD Stitch Screw
1/4 x 7/8" #1 Point - w/ Washer

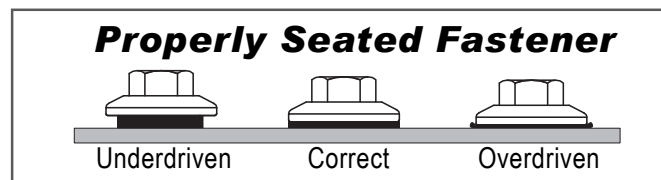
Exposed fastener used for lapped panel or flashing joints



Rivet
1/8" #43 Stainless

Exposed fastener for flashing laps (requires riveting tool)

Fig. 1



NOTES:

Images and descriptions depict standard parts and accessories. Multiple additional options are available to accommodate project specific requirements.

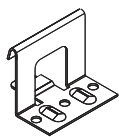
Wood screws must penetrate dimensional lumber by a minimum of 1". When fastening to plywood or OSB the fastener must completely penetrate with a minimum of 3 threads exposed.

Refer to the detail above for properly seated fasteners (figure 1). Avoid under or over driving parts, which may create a poor seal at the washer.

Rivets are not considered watertight and should only be used in non-critical applications or in conjunction with sealant.

Predrilling may be necessary to prevent fastener "walking".

Accessories & Tools

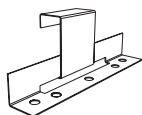


Panel Clip
TBC-TRULOC
1-1/2" Galvanized



Butyl Mastic Tape
5/32" x 1/4", 1/8" x 3/4",
3/32" x 3/8", 3/16" x 7/8"

100% solids sealing tape designed for critical panel and flashing laps.

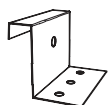


Panel Clip
TBC-MASTERSEAM
1-5/8" Galvanized - Floating



Caulk
Urethane or Acrylic

Various applications for sealing laps, joints, gaps and other flashing.



Panel Clip
TBC-MASTERSEAM
1-5/8" Galvanized - Fixed



Foam Closure
Die-cut closed cell foam available in all profiles - 32" or 36" length

Seal off open ends between panel ribs/seams - ridge, endwall, etc.



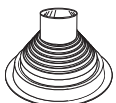
Hemming Tool
1-1/4" Depth - 11" or 15" Width
* inquire for additional sizes

Provides a 180 degree hem at panel ends and/or 90 degree turn up.



Vented Foam Closure
Die-cut closed cell foam
Mesh in-fill allows for air flow

Seal off open ends between panel ribs/seams while also allowing for air flow.



Pipe Flashing
Pipe Diameters of 1/4" to 24" O/D
EPDM or Silicone (high temp applications)



Paint Pen
Air Dried Touch-Up Paint

Repair of small dings and scratches. Not recommended for large scale use.

OTHER TOOLS & EQUIPMENT

Below is a list of other commonly used tools and equipment that will help in the installation of your Bryer standing seam metal roof. Additional items may be necessary depending on project specific requirements.

Tape Measure

Metal Snips

Cordless Screw Gun

Nutsetters/Bit Tips

Nibblers or Electric Shears

Caulk Gun

Chalk/String Line

Rivet Gun

Framing Square

Drill Gun

1/8" Drill Bit

Mallet

Utility Knife

Duckbill Pliers

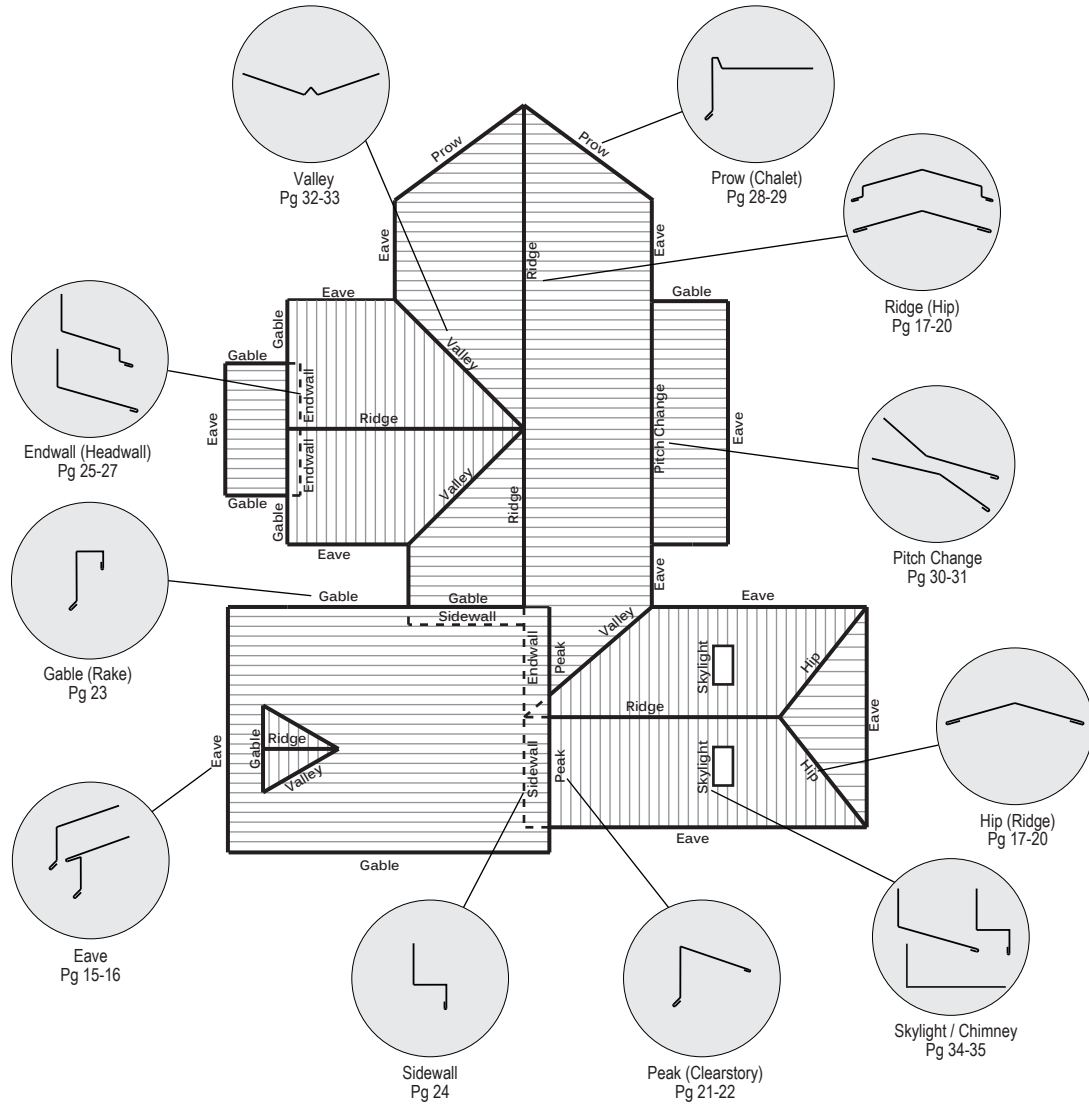
Grease Pencil

Circular Saw

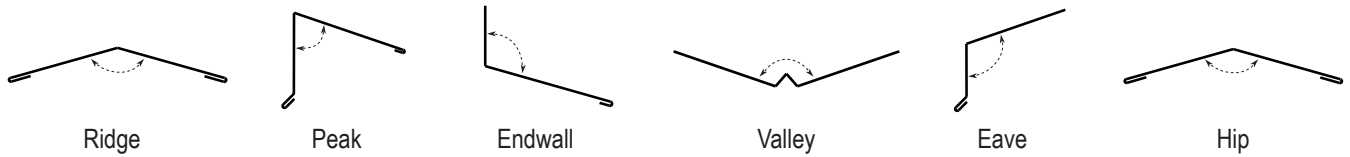
Hand Seamer (Masterseam only)

Mechanical Seamer (Masterseam only)

Getting Started



Roof Slope & Flashing Angles



Roof Slope	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 In Degrees	5°	10°	14°	18°	23°	27°	30°	34°	37°	40°	43°	45°
Valley or Hip	173°	166°	160°	154°	148°	143°	138°	133°	129°	126°	123°	120°
Eave or Transition	94°	99°	104°	108°	112°	116°	120°	123°	126°	129°	132°	135°
Ridge	170°	161°	152°	143°	135°	127°	120°	113°	106°	100°	95°	90°
Peak	85°	80°	76°	72°	67°	63°	60°	56°	53°	50°	47°	45°

Getting Started

Bryer's standing seam roof panels are a great choice for both new construction and reroof applications. While a solid wood deck is the most common substrate, some of Bryer's standing seam panels can be installed over open framing or skip sheathing. Contact your Bryer representative for additional information on spanning and load tables if installing over open framing. For the purpose of this manual a solid plywood or OSB substrate is assumed. For substrate selection meeting UL 580 Class 90 roof coverings refer to the table below (Figure 2).

ROOF PREP: New Construction

Ensure that all applicable state and local building codes are followed before starting. A properly installed and fastened plywood or OSB deck must be installed flat, level, plumb and in square. Carefully go over the entire deck to ensure that no nails or other protruding objects are found. A minimum 30-lb felt underlayment should be installed over the entire substrate per manufacturer's recommendations. Some applications or codes may call for self-adhered ice & water underlayment at the perimeter or over the entire substrate in lieu of felt paper. When selecting an ice & water underlayment a "high temperature" rated product should be used because of the increased temperatures found under metal roofing. Bryer does not recommend the use of synthetic underlayments that

are not self sealing. Contact your Bryer representative for product specific recommendations.

ROOF PREP: Reroof

It is recommended to remove all existing roofing material down to the wood decking. Inspect the decking carefully to ensure all areas are still sound and free of dry rot, excess moisture, bug infestation or other structural damage that may compromise the new roof covering or the longevity of the system. Repair as necessary before commencing the reroof. Carefully go over the entire deck and remove any remaining fasteners or other sharp protrusions that may interfere with the new system. Check for any unsecured or uneven areas and repair as necessary. From this point follow the instructions on underlayment shown under the New Construction section.

Some jurisdictions allow for re-roofing over an existing roof without tearing off. Note that this may lead to a more uneven substrate for the new panels that may promote oil-canning.

Fig. 2

UL 580 Class 90 Construction Requirements						
Panel Profile	Min Gauge	Max Width	Construction No.	Substrate	Clips	Screws
TBC-TRULOC	24	16	589	5/8 Plywood	36" o/c	2 per Clip
TBC-PROSEAM	26	16	529	5/8 Plywood	n/a	12" o/c
TBC-MASTERSEAM	24	16	588	19/32 Plywood	Fixed @ 36" o/c	2 per Clip
TBC-MASTERSEAM	24	16	554	15/32 Plywood	Floating @ 48" o/c	4 per Clip

Panel Installation

FLASHINGS

Prior to starting panel installation familiarize yourself with the flashing details contained in this manual. Many of the standard flashing and sub flashing components must be installed prior to the panel. Refer to those details contained herein.

FIRST PANEL

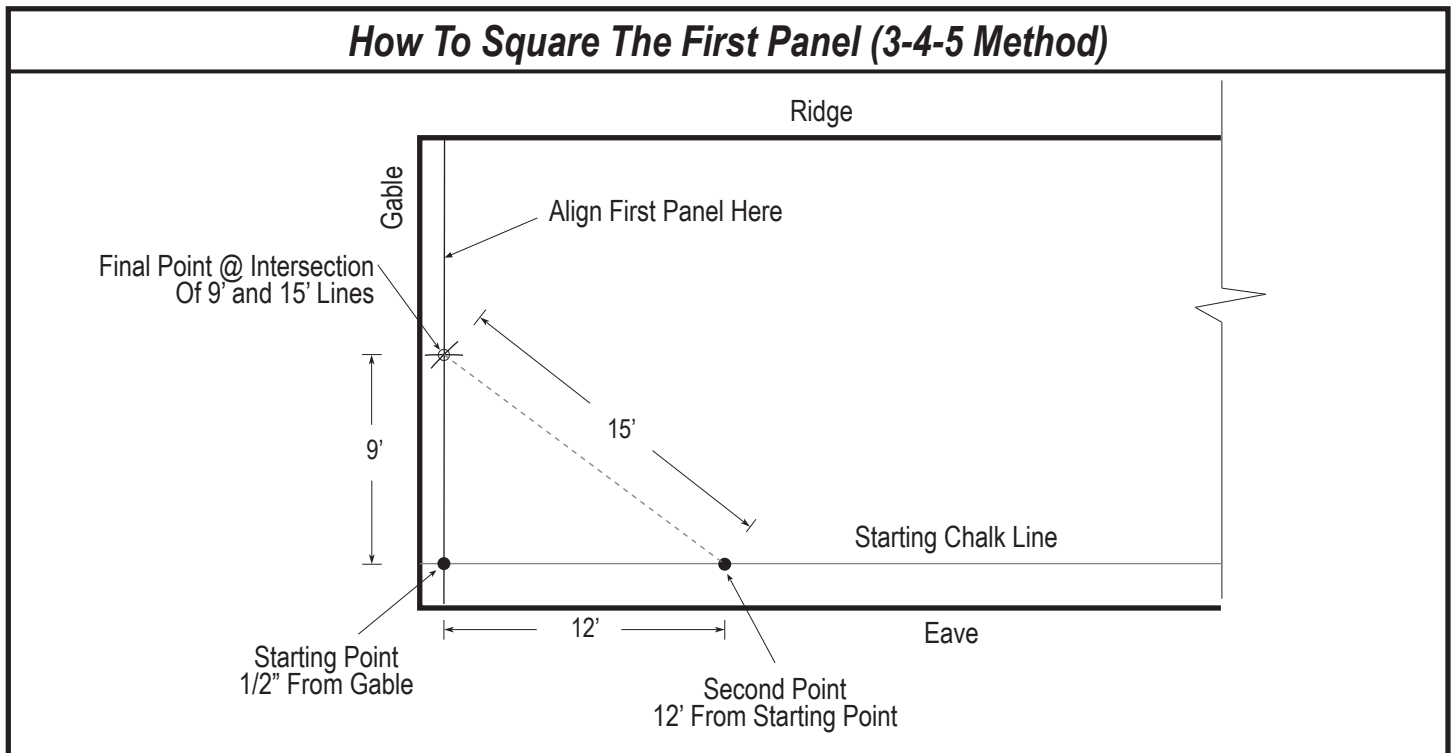
The first panel should be installed approximately 1/2" from the edge of the roof (gable, sidewall, etc). It is critical that the first panel be installed straight and square to the eave line. Do not assume the eave is square to the gable end of the roof structure.

The most trusted method is to use the 3-4-5 triangle method as shown below (Figure 3). For longer panels you will get a more accurate result by multiplying by a common factor, for instance 9-12-15. Start by snapping a chalk line 1 foot up from the eave making sure the line stays consistently even with the edge of the eave. Mark a point about 1/2" in from the

gable end along the chalk line. From this point measure 12 feet along the chalk line and mark another point. Then, from the original point, measure up the gable end 9 feet and mark an arched guide line. Finally you will go back to your point marked 12 feet out on the eave and measure 15 feet diagonally to your line on the gable. The point where your vertical gable line and diagonal line meet is your third point. Chalk a line from the eave to the ridge that runs through both the starting point and the third intersecting point. Your first panel should run along this line that should be 90 degrees square to your eave line. If the roof framing is significantly out of square an oversized compensating gable may be required to cover a larger gap at the top or bottom.

Alternatively you can lay your first panel by using a framing square running along the edge of the eave flashing and up the male side of the first panel.

Fig. 3

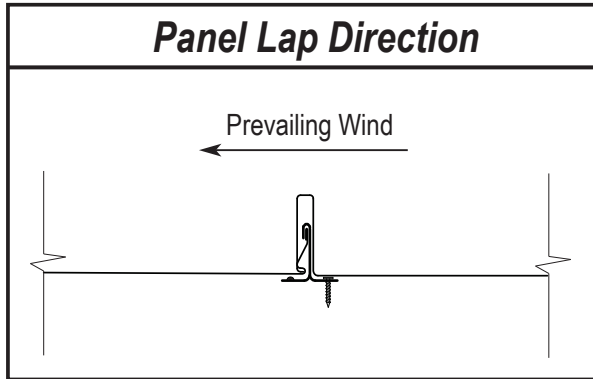


Panel Installation

FIRST PANEL - cont.

Prior to laying your first panel you will need to make a decision on which side of the building to start. If there is a strong prevailing wind start the panels on the side that will result in the seam facing away from the wind direction (Figure 4).

Fig. 4



If your installation details call for a modified (D-style) eave or offset cleat at the eave then you will be field hemming the panels prior to install. For these applications your panels should be ordered pre-notched from Bryer. Factory notching combined with the hemming tool makes for quick and easy work in the field preparing your panels. Both sides will be notched and you will want to field bend the eave end with a 180 degree hem. Simply slide the hemming tool over the exposed pan and fold it back so the entire pan is hemmed under the panel (Figure 5). The top end of the panel (ridge, endwall, etc) can either be left as is or folded up 90 degrees to form a dam at the end (see ridge, peak or endwall details for options and specific instructions). Note that only TRULOC and PROSEAM are available factory notched. TBC-MASTERSEAM must be notched in the field prior to hemming. For un-notched applications refer to the fixed eave detail.

With your panels prepared and your starting chalk line square to the eave you are ready to install your first panel. The female side of the panel will run adjacent to your starting line (Figure 6) with the outside edge of the rib aligned with the chalk line.

Fig. 5

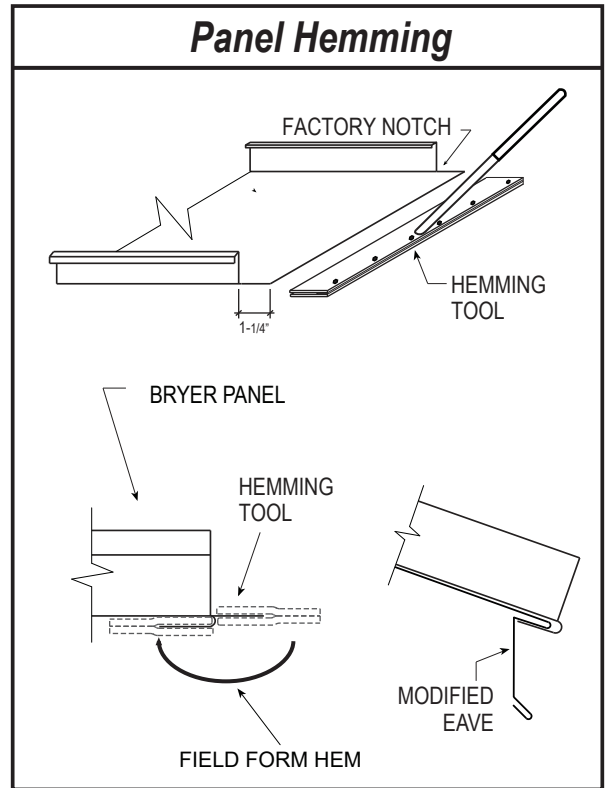
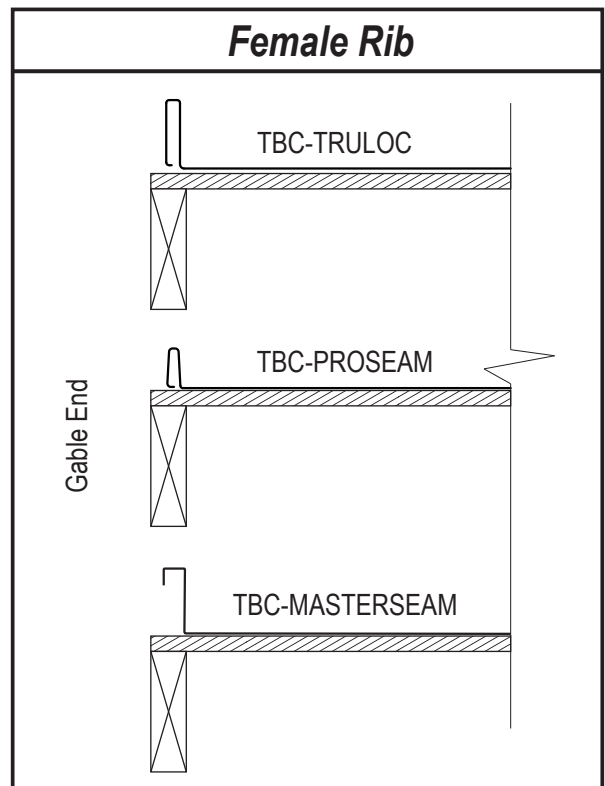


Fig. 6



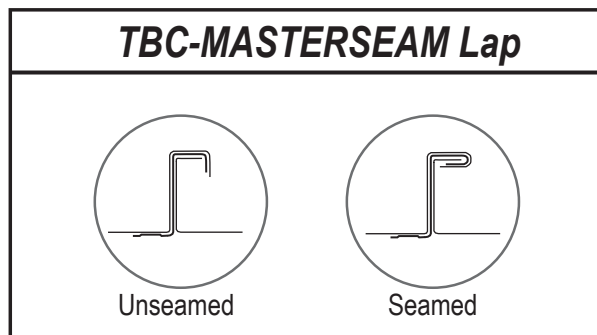
Panel Installation

PANEL INSTALL PROCEDURES

The hemmed panel must be slid up into and engage the modified eave flashing as shown in Figure 5. Once in place the panel/clip fasteners can be installed along the male side. Once fastened the next panel can be laid. Again, make sure to slide the panel hem into the modified eave before engaging the seams. Once the seams are engaged there will be too much friction to allow the panel to easily slide. For snap seam profiles (TRULOC & PROSEAM) lay the female rib over the male rib and make sure they are aligned along the full length. Simply walk up or down the seam and with light pressure use your foot with a clean, soft soled shoe to press the seam down until you hear it snap into place. Work from one end only, DO NOT work from both ends into the middle. For steep slopes and/or wall applications use a rubber mallet and 2x4 or just hand pressure to engage the ribs. Avoid any excess force that may dent, fold or otherwise damage the ribs.

TBC-MASTERSEAM is a mechanically seamed profile so as panels are laid during installation the seams will simply lay down over each other (Figure 7). An initial drag load screw should be installed to hold the panel in place at the top or bottom depending on the details being used. It is recommended to hand seam the panel at the clip locations to best prep the panel for mechanically seaming.

Fig. 7



Drag load screws that fix the panel to the substrate should be installed at this time. Standard installations call for a floating eave where the panel is able to thermally expand and contract. In these applications drag load fasteners will be installed at the top of the panel (ridge, endwall, hip or peak). This fixed point allows the panel to move down slope with temperature variation while still providing drag load resistance. These drag load fasteners are critical to ensure the panel will not migrate down slope under snow or other constant loads. Some installations call for a fixed eave where exposed fasteners are used across the eave line. In these applications the top of the panel should be left floating. See the various detail options as outlined herein.

Keep in mind that the longer the panel and the bigger the temperature variation the more the panel will expand/contract. Panels under 25 feet do not move enough for thermal expansion/contraction to cause problems even if fixed in multiple places. On longer panels it becomes more critical to avoid fixing the panels in more than one location. This can be an area of concern for other details like pipe flashing, skylights and valleys.

Consecutive panels should be installed in the same manner. At the end of the run your last panel may be too wide. In this scenario the last panel will need to be ripped lengthwise. Measure the last panel to within approx 1/2" of the edge and then add 1 inch. This extra inch must get turned up at a 90 degree in the field using duckbills or the hemming tool. Refer to gable or sidewall details for more specifics.

Ordering & Notching

ORDERING

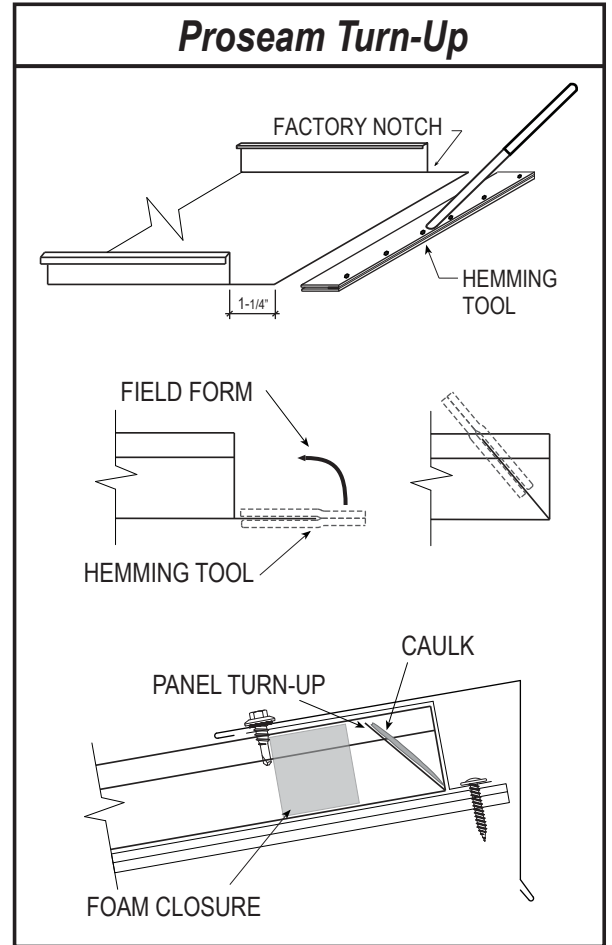
Prior to placing your order review this checklist to ensure you are prepared with all of the required information. In addition to pertinent panel information, decisions must be made about installation and details. For every detail condition on your project, review the detail options described herein and choose what best suits the job requirements. Make note of sub-flashings, sealant, fasteners, etc.

NOTCHING

If factory notching is selected Bryer will not add to the cut-list lengths to compensate for notching/hemming; this is the responsibility of the contractor. Note that the factory notch is a standard 1-1/4" long on both the head and tail of the panel. This provides a cooresponding 1-1/4" hem on the eave side and a 1-1/4" turn-up on the high side (ridge, peak, endwall).

TBC-PROSEAM has a 1" seam height so overbending the high side turn-up is required (Figure 8). Start by turning up the ends to approx 75 degrees prior to install. After panels have been engaged go back and continue bending to approx 130 degrees or until the top of the turn-up is below the seam height. It may be necessary to snip a small strip off the notched end to help clear the standing seam ribs. caulk can then be applied to the back side to improve weather tightness.

Fig. 8



Checklist

Profile: _____

Gauge: _____

Width: _____

Color: _____

Pan: _____
Striations, Stiffeners, Flat

Notching: _____

Roof Slope (see page 7): _____

Eave fascia at 90 degrees? _____

Panel Cut-List: _____
qty and cooresponding length in feet & inches

Flashing List: _____

Custom Flashings? _____
must provide drawing including dimensions

Accessories List: _____

Jobsite Address & Contact: _____

Jobsite Resitrictions? _____

Is Metal Roofing A DIY Project?

That depends. If you are working on a dog house or tool shed then most competent DIY'ers can use this manual and produce acceptable results. Bryer does not recommend someone attempt to re-roof an entire house with little or no previous metal roofing experience. This manual is a basic guide only and does not cover every situation, process, detail, technique or requirement.

How Far Should I Space My Screws/Clips?

The requirements in Figure 2 on page 8 show UL listed construction with corresponding spacing requirements. This covers a very limited range of substrates but can be used as a guide. Project specific engineering is available at an additional charge but requires complete architectural plans.

Which Panel Profile Should I Choose?

A lot of factors can come into play on profile selection. Aesthetically they are all very similar, especially once installed on a roof. TBC-PROSEAM is typically the easiest and most economical to install with a simple fastening flange, but is the shortest at 1 inch high and allows for only minimal expansion/contraction. TBC-TRULOC requires the use of an additional clip but is more weather resistant and offers unlimited expansion/contraction. TBC-MASTERSEAM is the best choice for low slope applications (2:12 and less) but requires the use of a special mechanical seamer making it more costly and time consuming.

How Heavy Are The Panels?

That depends on gauge, width and length.

26 Ga x 16" = 1.33 lbs/Linear Foot

26 Ga x 12" = 1.07 lbs/Linear Foot

24 Ga x 16" = 1.67 lbs/Linear Foot

24 Ga. x 12" = 1.33 lbs/Linear Foot

Take the lbs/LF number and multiply it by the length of the panel. This gives you the total weight.

Can I Order Custom Length Trim?

Standard trim length is 10'-0". Custom length trim can be ordered either shorter or longer (20' max). Keep in mind that custom trim comes at a cost premium and a longer lead time. If, for instance, you need 15' of gable trim it will be cheaper and faster to order two pieces at 10' rather than a custom 5' or 15' piece. Panels on the other hand are all produced per order/cut-list. Lengths from 4' to 50' feet are available at 1/8" increments.

How Do I Clean My Roof?

Kynar painted roofing and flashing require very little maintenance in most applications. If cleaning is needed Bryer recommends light scrubbing with a soft bristle nylon brush in conjunction with a mild, non-toxic detergent. Follow this with a thorough tap water rinse. For heavier duty cleaning of spot areas a cotton rag and mineral spirits can be used. This should be followed with a thorough tap water rinse. Using more aggressive cleaners or solvents may damage the paint system and void the finish warranty. Refer to Bryer's Cleaning & Maintenance data sheet for additional information.

How Do I Return Leftover Panels?

As outlined above, every panel is custom produced for each project specific order. As such, panels are not a stocked item and cannot be returned.

Is My New Bryer Roof Environmentally Friendly?

Absolutely! One of the biggest advantages of metal roofing is the industry leading life cycle costs. This equates to significantly less energy used over the lifespan because the roof does not need to be replaced nearly as often as other roofing materials. While most competing products like asphalt shingles and single-ply membranes are predominately made from fossil fuels (oil), Bryer panels are eco-friendly carbon steel. In addition, Bryer's roofing and flashing products are 100% recyclable whereas most other products end up in the landfill after removal.

FAQ

How Do I Maintain My Roof?

One of the major benefits of a metal roof is that it requires very little maintenance in most applications. It is critical that the installation does not allow for standing water. Positive drainage is always required. It is also important to avoid allowing debris, moss, leaves or pine needles to build up and sit on your roof for extended periods. Anything that traps moisture on your roof can result in damage to the paint system and voiding of the finish warranty.

I'm Adding On To A Previous Order, Will The Colors Match?

That depends on the amount of time that has passed. While the Kynar paint system is the very best at minimizing fade and paint chalk it does still happen and the amount will depend on time and UV exposure. If it's within a year your colors will most likely match almost perfectly. Keep in mind that some colors and finishes are batch sensitive and directional by nature. These include any metallic color, bonderized, bare Galvalume, A606 weathering steel and Vintage. The directionality typically is only visible when using products from two different batches within the same plane or run of panels. Using different batches on separate structures or in different areas will usually not be noticeable.

Will My Metal Roof Be Slippery?

It can be! Depending on slope and the weather the roof can be difficult to navigate. This is especially true on steeper roof slopes when wet or with early morning frost. If ordering A606 weathering steel, note that it comes from the factory with a protective oil on the surface. This will dissipate over time but initially the panels will be extremely slippery!

Can I Send In Plans For A Material Take-Off?

Bryer does not provide complete take-off services. However, some of our preferred distributors do offer these services. Please contact Bryer for additional info.

Will My Metal Roof Be Loud?

This is a common myth related to metal roofing and probably stems from people standing in a barn during a rain storm. Certainly metal roofing in an uninsulated structure, over open framing without an attic space will transmit a fair amount of noise in heavy rain, but that would be the case for most roofing materials. In a typical house with a solid substructure and good insulation metal will not be any louder than typical shakes or shingles.

Is Metal Roofing Too Heavy For Some Homes?

Metal is actually one of the lightest roofing products available. Metal will typically be about 50% lighter than asphalt shingles and upwards of 75% lighter than tile, cement shakes and slate.

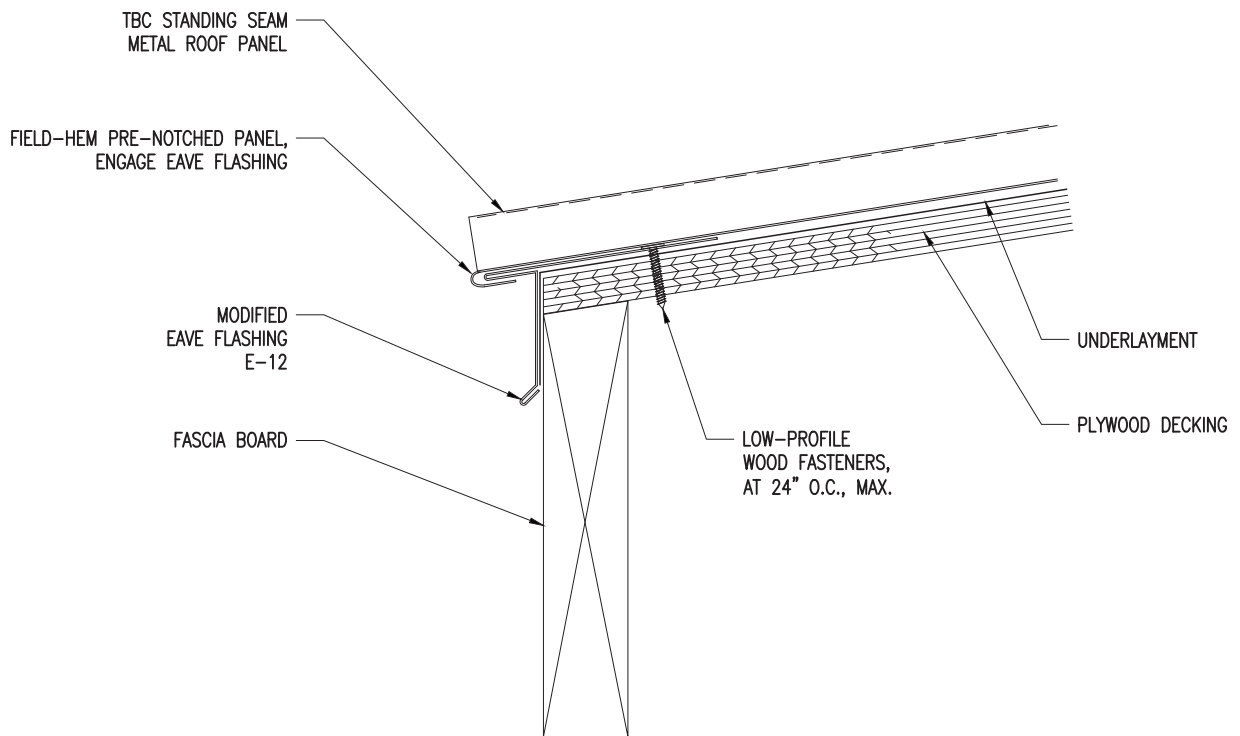
Can My Roof Withstand Harsh Weather?

Definitely! A Bryer metal roof offers excellent protection against mother nature's wrath! Most of Bryer's panels carry UL ratings for wind uplift, fire and impact resistance (hail). Traditionally metal roofs are one of the best choices for long term durability and weather resistance.

How Long Will My Roof Last?

Metal roofs traditionally offer one of the best life cycle costs available when compared to shingles, shakes and other standard options. Although metal typically has a higher upfront cost, there is long term savings based on the lifespan of metal versus traditional composition shingles and wood shakes. In normal climates a Bryer metal roof will typically have a service life in excess of 50 years. Bryer also offers a limited lifetime warranty on the paint finish.

Modified (Hook) Eave Detail

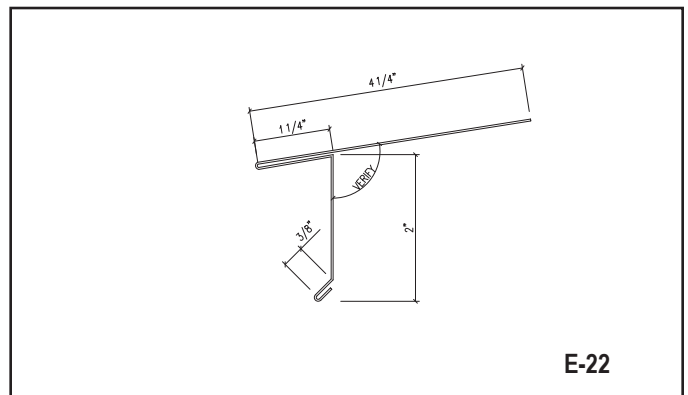


PROCEDURES

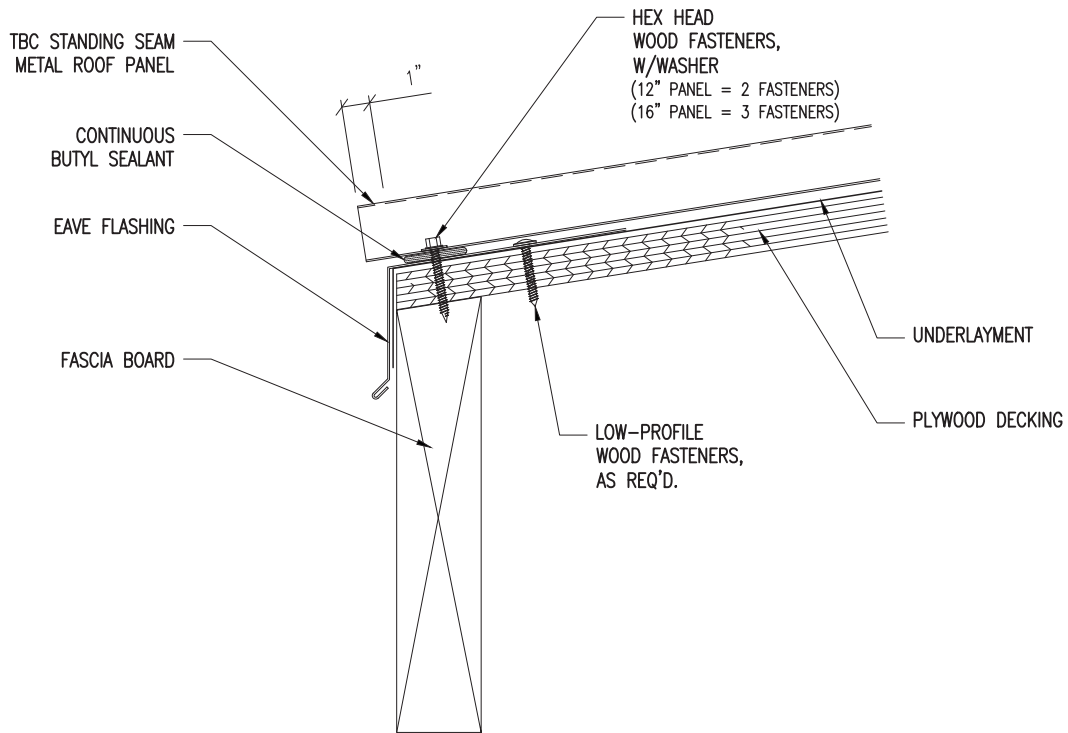
- Install Eave flashing prior to panels using a low profile fastener at 24" o/c.
- Lap flashing a minimum of 3", placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- The modified D-style eave (hook eave) requires a factory or field notched panel. Hem the pan back 180 degrees and slide the panel into place with the panel hem engaging the nose of the flashing (see page 10). Some contractors prefer to leave the hem slightly open during initial install, then go back and close it to a full 180 degrees with duckbill pliers.
- When installing panel lengths over 40 feet leave room between the end of the hem and the panel for thermal expansion/contraction.

NOTES:

- This detail must be used in conjunction with a fixed detail on the high side (ridge, endwall, peak or hip).
- In lieu of the Modified Eave a standard Eave (E-10) can be used in conjunction with an off-set cleat (OC-10).



Fixed Eave Detail

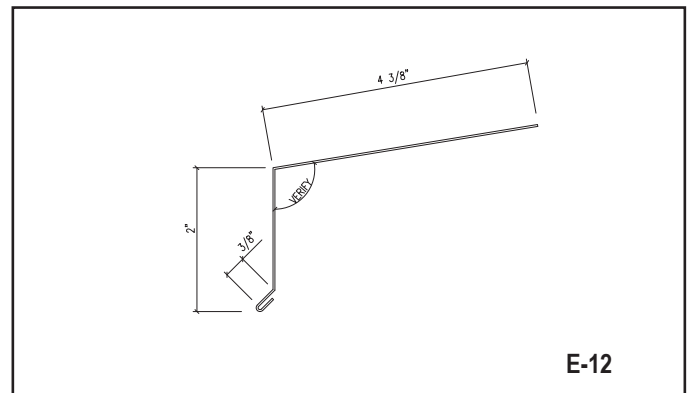


PROCEDURES

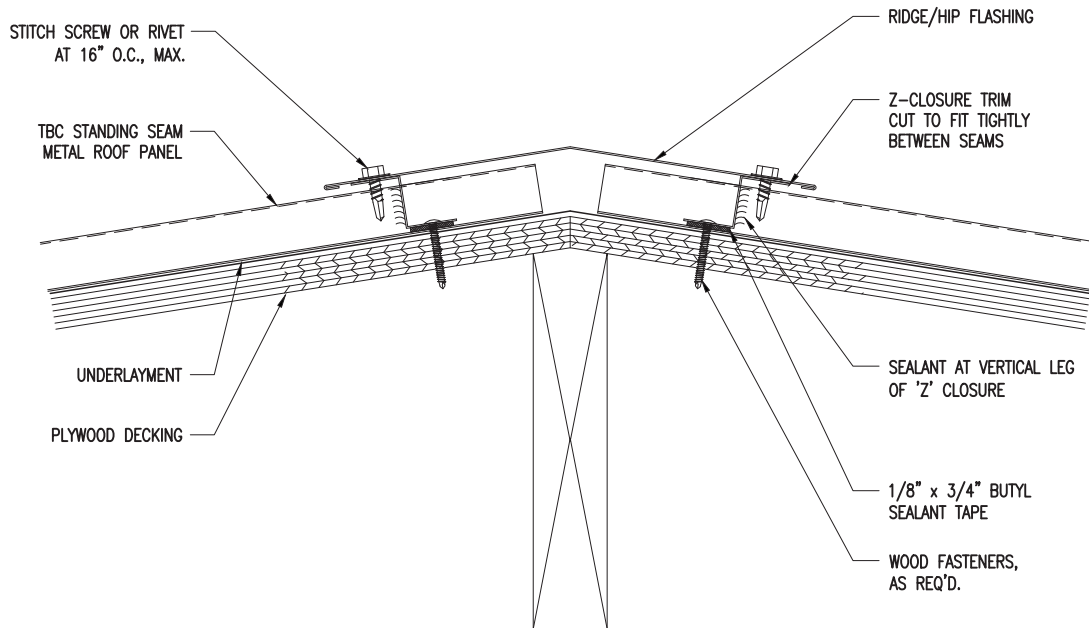
- Install Eave flashing prior to panels using modified truss or pancake head fasteners at 24" o/c.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems, either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Apply 1/8" x 3/4" butyl sealant tape approx 2" up from the eave. Lay panels on top of the butyl allowing for the ends to extend 1 inch out past the eave.
- Fasten the panel to the substrate using a washered #10 wood screw making sure fasteners penetrate through the middle of the butyl tape.

NOTES:

- When using a fixed Eave on panel lengths over 25 feet the high side of the panel should use a floating detail. Fixing the panel on both ends will impede thermal expansion/contraction that can cause problems on longer lengths.

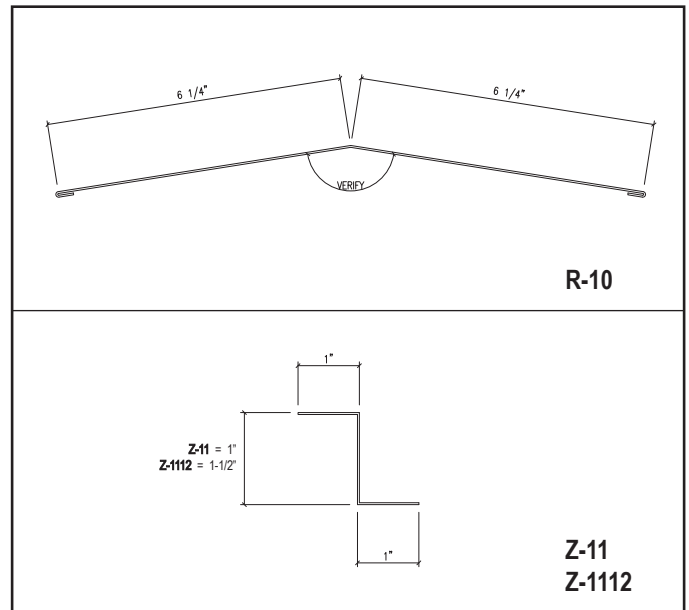


Ridge/Hip Detail - Fixed with Z Closure



PROCEDURES

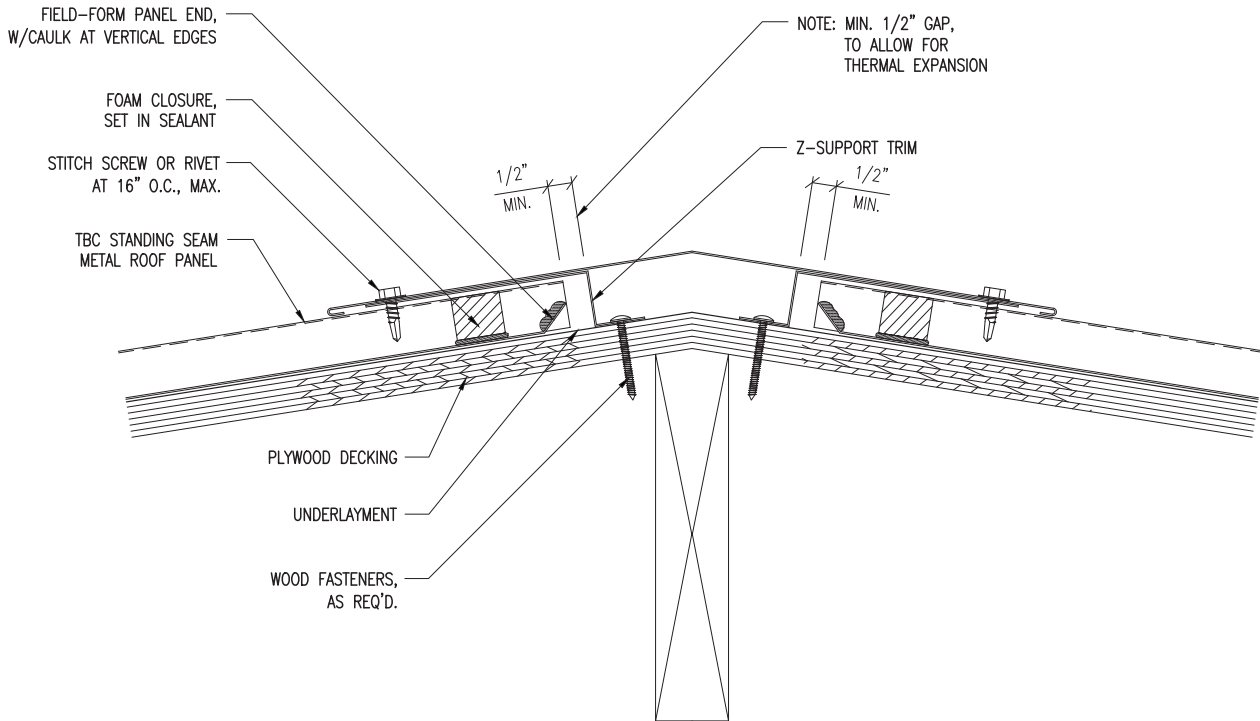
- Cut Z flashing to fit inside width of panels and apply butyl tape to bottom so the painted side faces down slope. Measure from the middle of ridge to make sure the Z is placed so that the top leg will still be covered by the Ridge flashing.
- For Hip applications the panel will need to be field cut to match the angle of the hip.
- Fasten the Z through the panel and into the substrate as required. For additional weather tightness tool a bead of caulk at the vertical edges between the Z and standing seam.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Fasten the Ridge to the Z adjacent to each seam. Do not fasten through the standing seam.



NOTES:

- With panel lengths in excess of 25 feet avoid using this detail if you are using a fixed eave. Fixing the panel on both ends will impede thermal expansion/contraction. See floating ridge option.
- When ordering make sure to specify "Ridge" or "Hip" as the bend angles are different.

Ridge/Hip Detail - Floating with Foam Closure

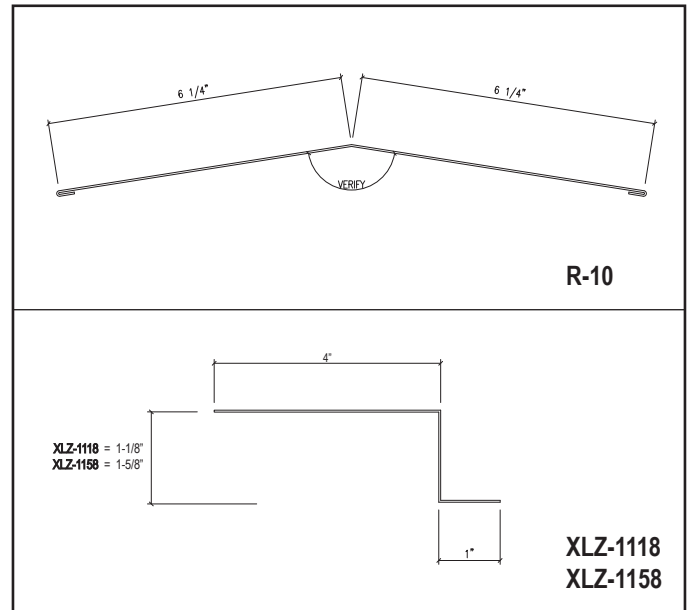


PROCEDURES

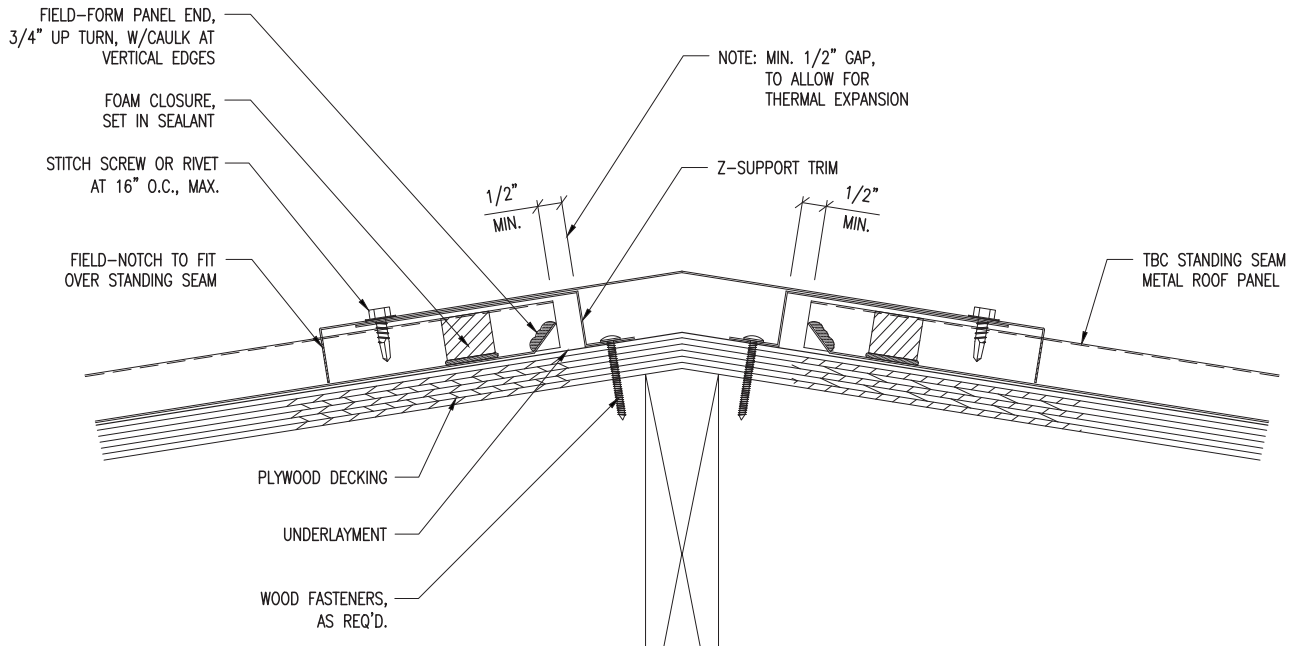
- Install formed foam closure using the preapplied adhesive to snugly fit around panel.
- For Hip applications the panel will need to be field cut to match the angle of the hip.
- Turn up panel ends and caulk vertical seams for additional weather tightness (see page 12).
- Install extended Z support behind the panel leaving room for thermal expansion/contraction.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Fasten the Ridge to the Z adjacent to each seam. Do not fasten through the standing seam.

NOTES:

- Only use this floating detail if your eave is fixed.
- This detail can also be used if you want to fix your Ridge by simply adding fasteners directly behind the closure through the panel and into the substrate.
- When ordering make sure to specify "Ridge" or "Hip" as the bend angles are different.



Ridge/Hip Detail - Turn Down

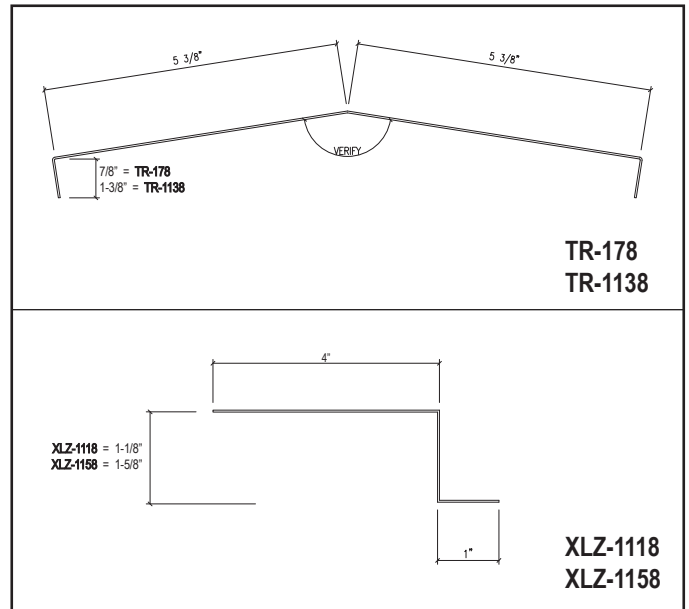


PROCEDURES

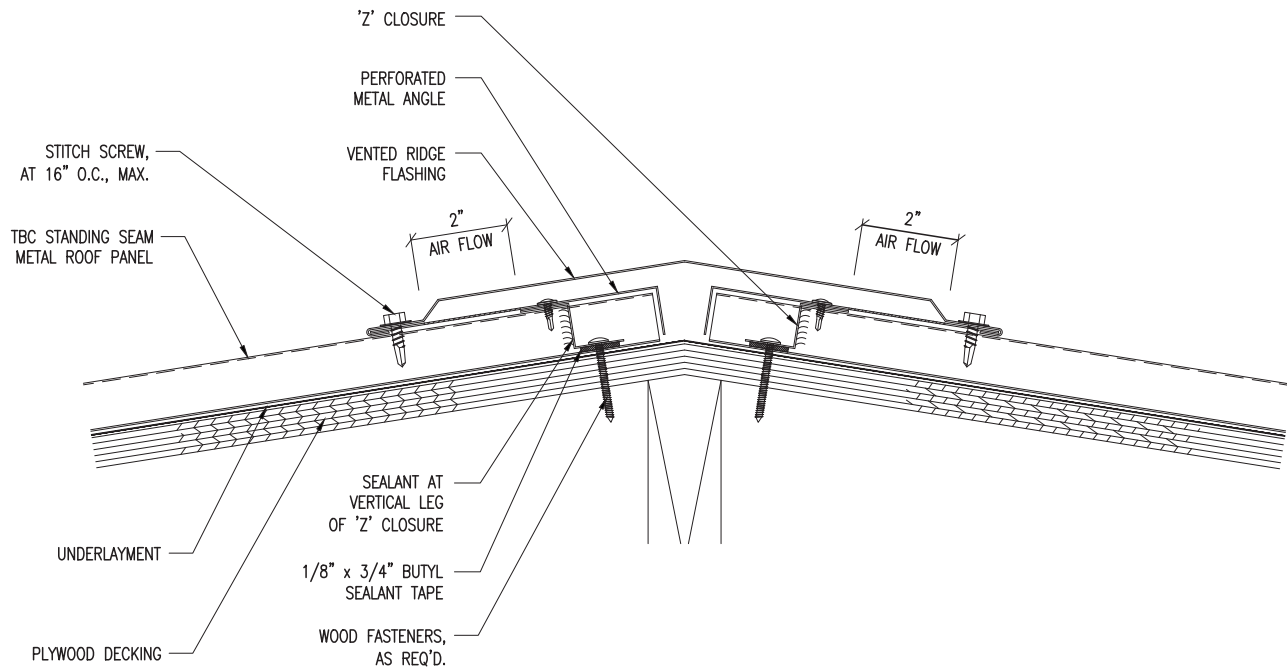
- Install formed foam closure using the preapplied adhesive to snugly fit around panel.
- For Hip applications the panel will need to be field cut to match the angle of the hip.
- Turn up panel ends and caulk vertical seams for additional weather tightness (see page 12).
- Install extended Z support behind the panel leaving room for thermal expansion/contraction.
- Line up Ridge and mark standing seam locations. Notch out Ridge down leg to fit around seam.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Fasten the Ridge to the Z adjacent to each seam. Do not fasten through the standing seam.

NOTES:

- Only use this floating detail if your eave is fixed.
- This detail can also be used if you want to fix your Ridge by simply adding fasteners directly behind the closure through the panel and into the substrate.
- When ordering make sure to specify "Ridge" or "Hip" as the bend angles are different.



Ridge/Hip Detail - Vented

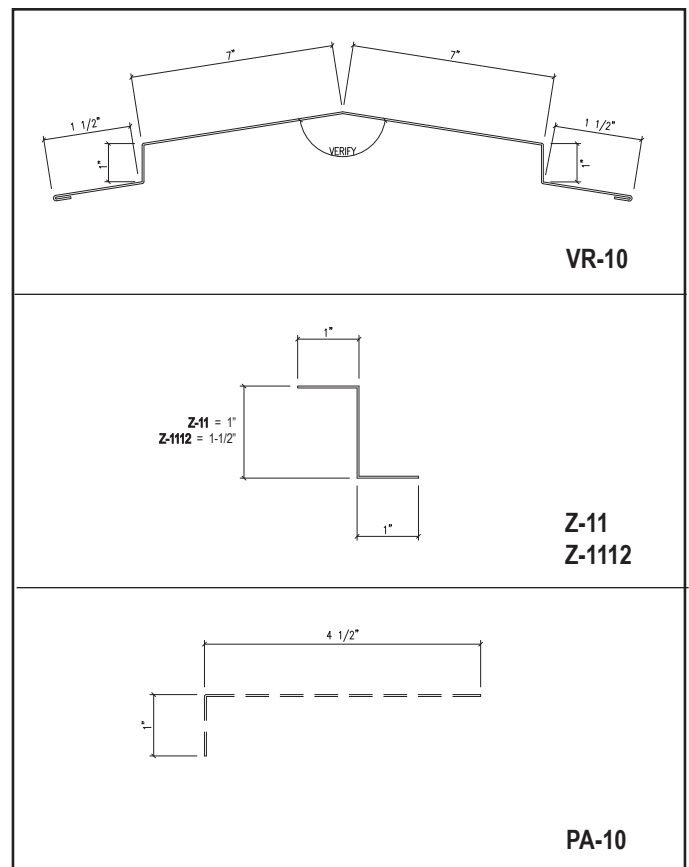


PROCEDURES

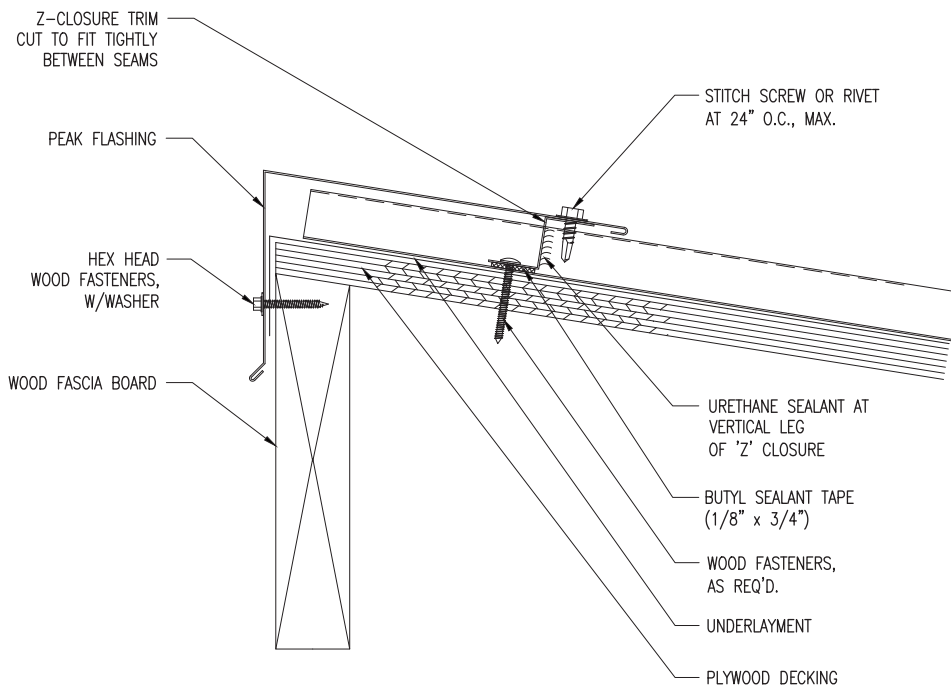
- Cut Z flashing to fit inside diameter of panels and apply butyl tape to bottom so the painted side faces down slope. Measure from the middle of ridge to make sure the Z is placed so that the desired perforated opening is achieved.
- For Hip applications the panel will need to be field cut to match the angle of the hip.
- Fasten the Z through the panel and into the substrate as required. For additional weather tightness tool a bead of caulk at the vertical edges between the Z and standing seam.
- Fasten perforated angle to the top of the Z.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Fasten the Ridge to the perf angle adjacent to each seam. Do not fasten through the standing seam.

NOTES:

- With panel lengths in excess of 25 feet avoid using this detail if you are using a fixed eave. Fixing the panel on both ends will impede thermal expansion/contraction. See floating ridge option.
- When ordering make sure to specify "Ridge" or "Hip" as the bend angles are different.



Peak Detail - Fixed with Z Closure

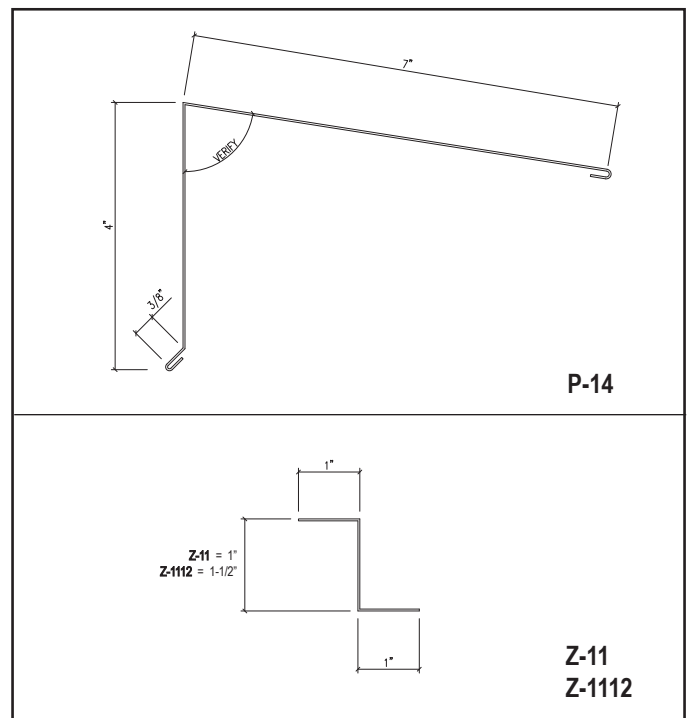


PROCEDURES

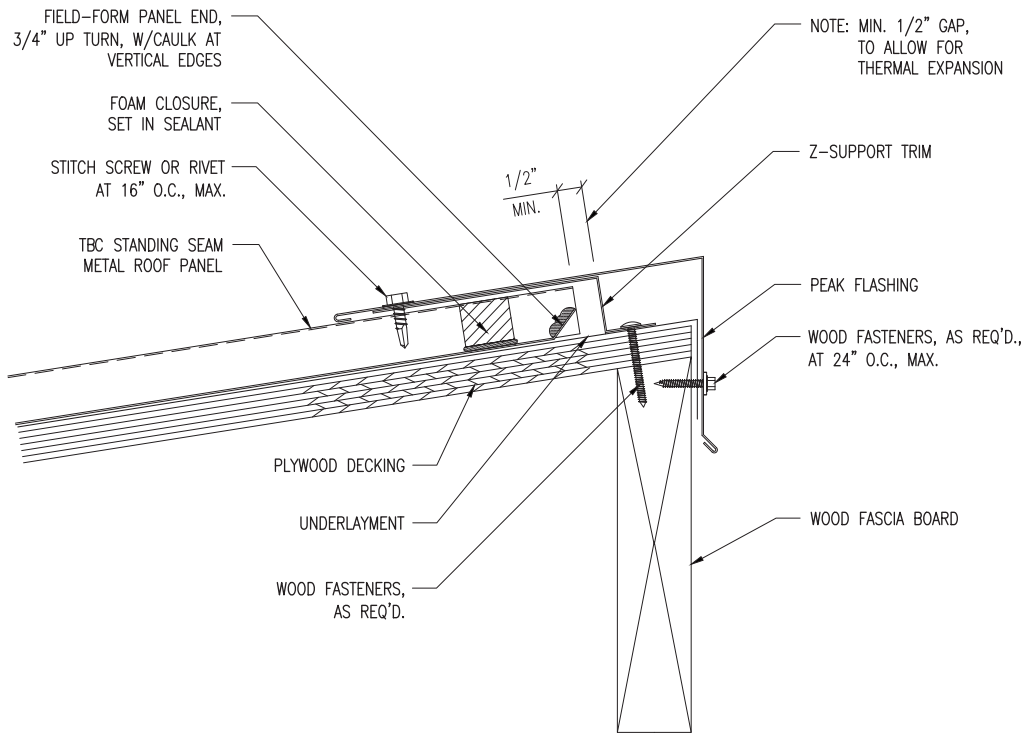
- Cut Z flashing to fit inside width of panels and apply butyl tape to bottom so the painted side faces down slope. Measure from the top to make sure the Z is placed so that the top leg will still be covered by the Peak flashing.
- Fasten the Z through the panel and into the substrate as required. For additional weather tightness tool a bead of caulk at the vertical edges between the Z and standing seam.
- Lap Peak flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Fasten the Peak to the Z adjacent to each seam. Do not fasten through the standing seam.
- The fascia side of the Peak can be directly fastened using a wood screw or use an optional concealed perimeter cleat (see page 41).

NOTES:

- With panel lengths in excess of 25 feet avoid using this detail if you are using a fixed eave. Fixing the panel on both ends will impede thermal expansion/contraction. See floating Peak option.



Peak Detail - Floating with Foam Closure

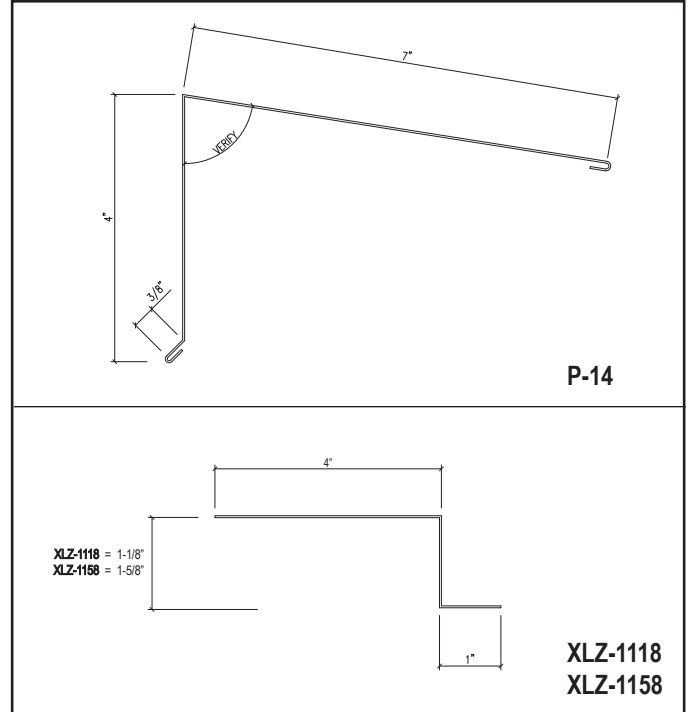


PROCEDURES

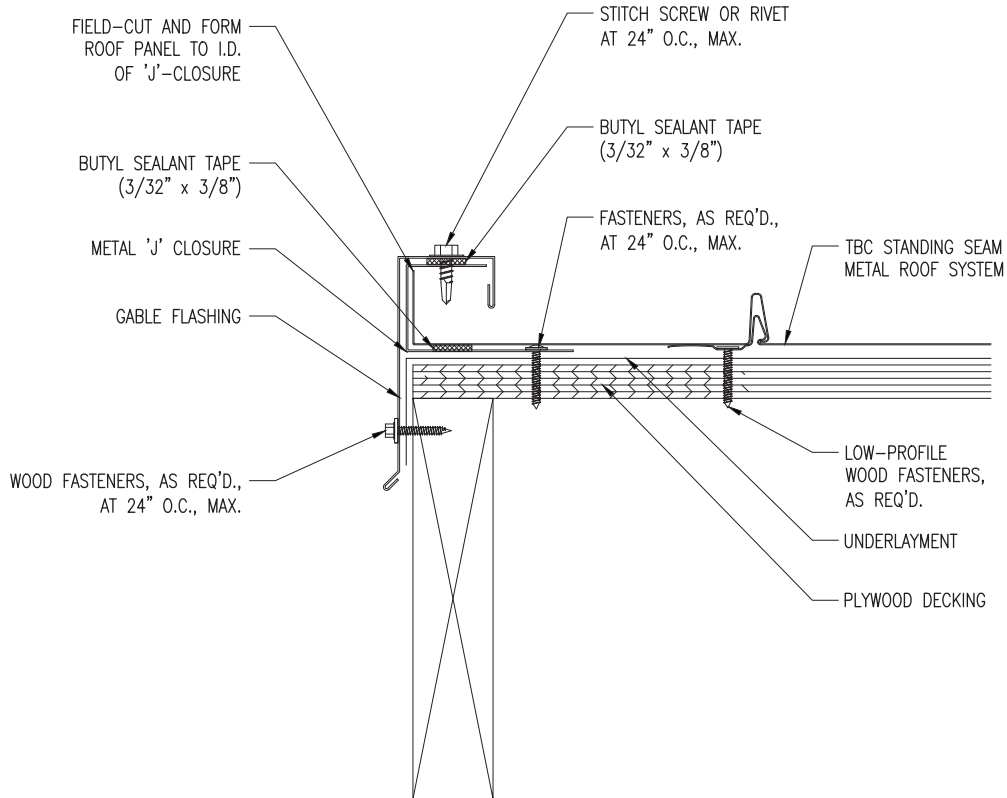
- Install formed foam closure using the preapplied adhesive to snugly fit around panel.
- Turn up panel ends and caulk vertical seams for additional weather tightness (see page 12).
- Install extended Z support behind the panel leaving room for thermal expansion/contraction.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Fasten the Peak to the Z adjacent to each seam. Do not fasten through the standing seam.
- The fascia side of the Peak can be directly fastened using a wood screw or use an optional concealed perimeter cleat (see page 41).

NOTES:

- Only use this floating detail if your eave is fixed.
- This detail can also be used if you want to fix your Peak by simply adding fasteners directly behind the closure through the panel and into the substrate.

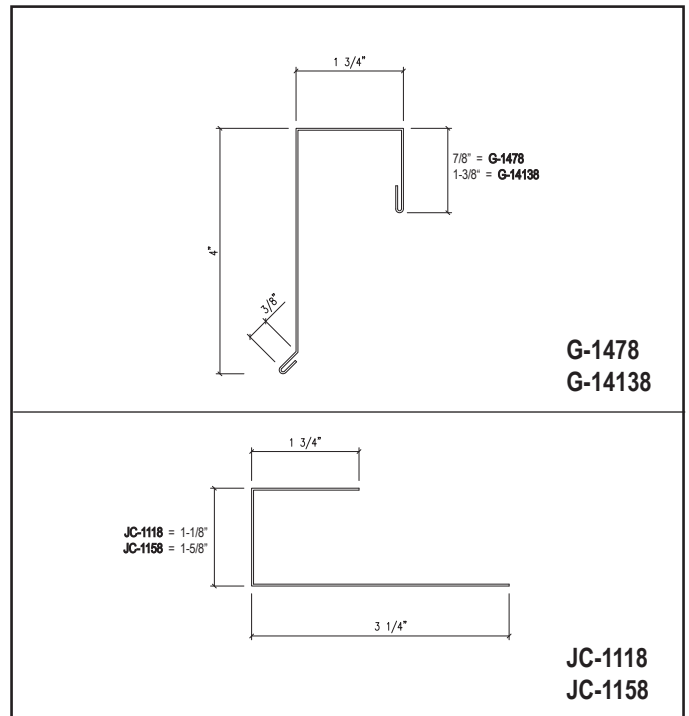


Gable Detail

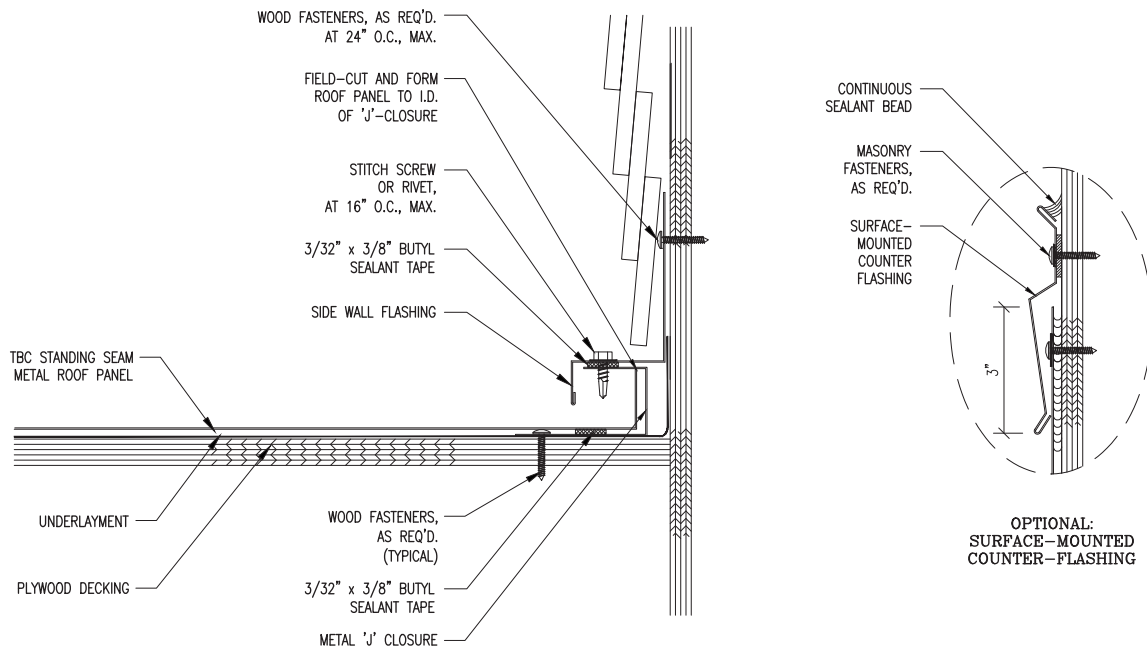


PROCEDURES

- Install metal J Closure prior to panels using modified truss or pancake head fasteners at 24" o/c.
- Optional 3/32" x 3/8" butyl tape can be applied on both top and bottom of the J as illustrated for a more weathertight installation.
- After installing your first panel install the Gable flashing using the fasteners as shown.
- The field cut and turn up of the roof panel as shown only needs to be done at the end of a run if needed. On the start of a run the female leg of the panel will counter under the flashing.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Mitre cut the gable flashing at the top to line up with the gable from the other side or the peak flashing.
- The fascia side of the Gable can be directly fastened using a wood screw or use an optional concealed perimeter cleat (see page 41).

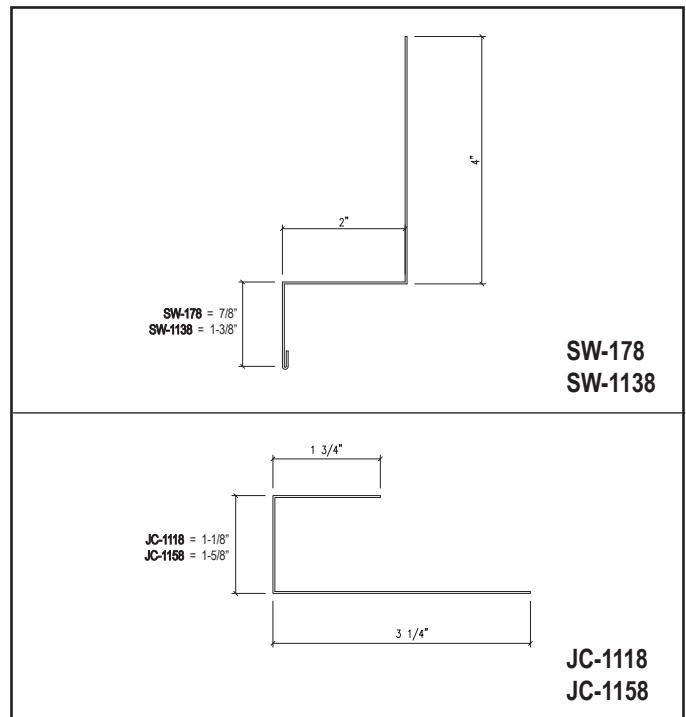


Sidewall Detail

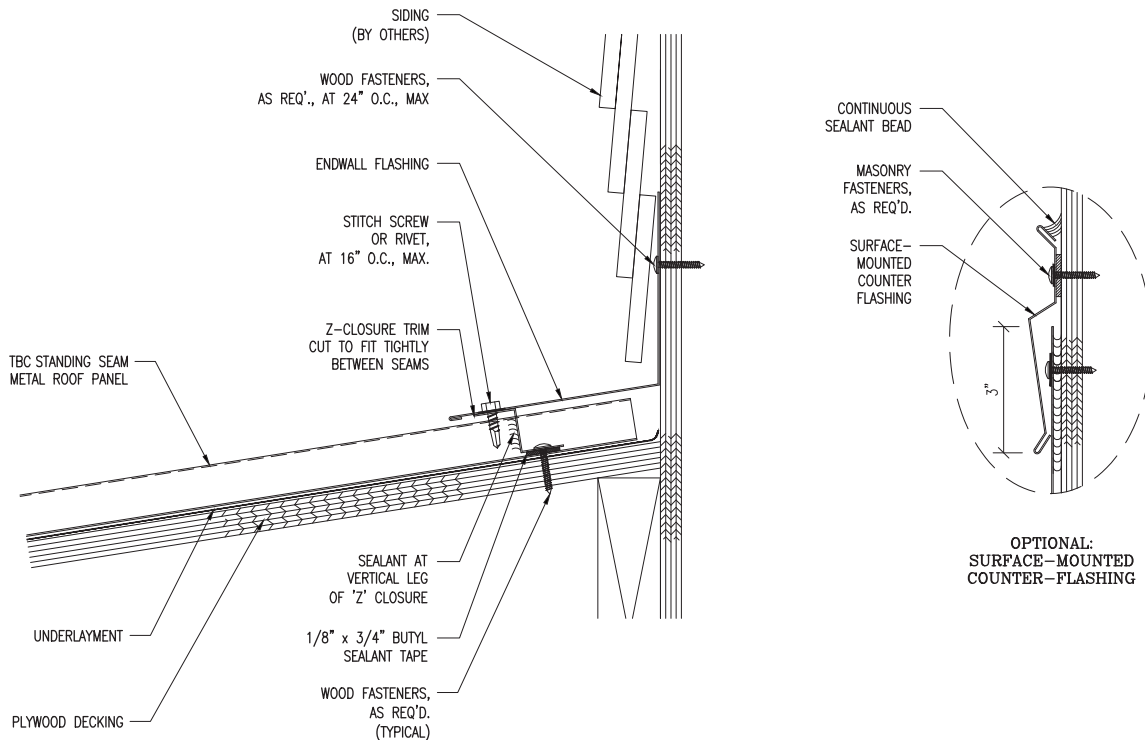


PROCEDURES

- Install metal J Closure prior to panels using modified truss or pancake head fasteners at 24" o/c.
- Optional 3/32" x 3/8" butyl tape can be applied on both top and bottom of the J as illustrated for a more weathertight installation.
- After installing your first panel the sidewall flashing can be installed using the fasteners as shown.
- The field cut and turn up of the roof panel as shown only needs to be done at the end of a run if needed. On the start of a run the female leg of the panel will counter under the flashing.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- On new construction the Sidewall flashing should be installed prior to the siding. See the optional surface mounted counter flashing for retrofit applications. A modified Sidewall flashing can be provided to accommodate a saw-cut into existing siding.



Endwall Detail - Fixed with Z Closure

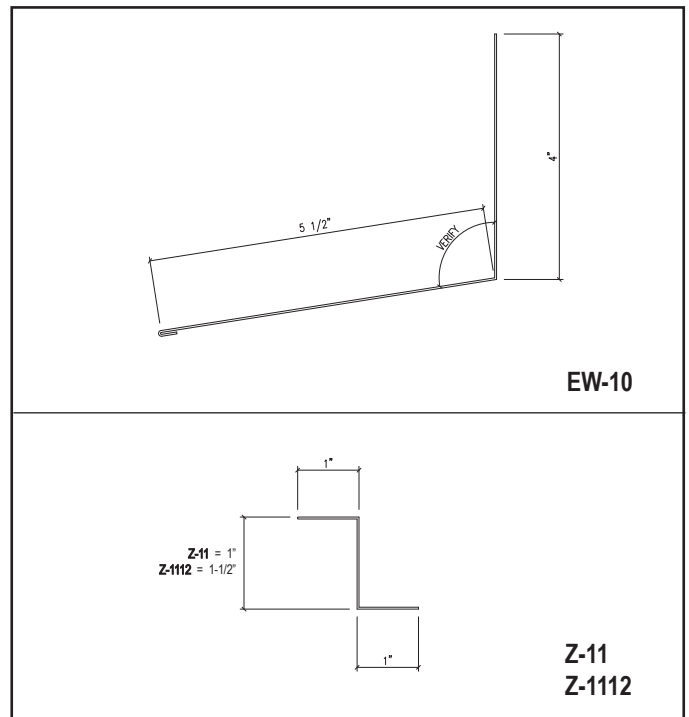


PROCEDURES

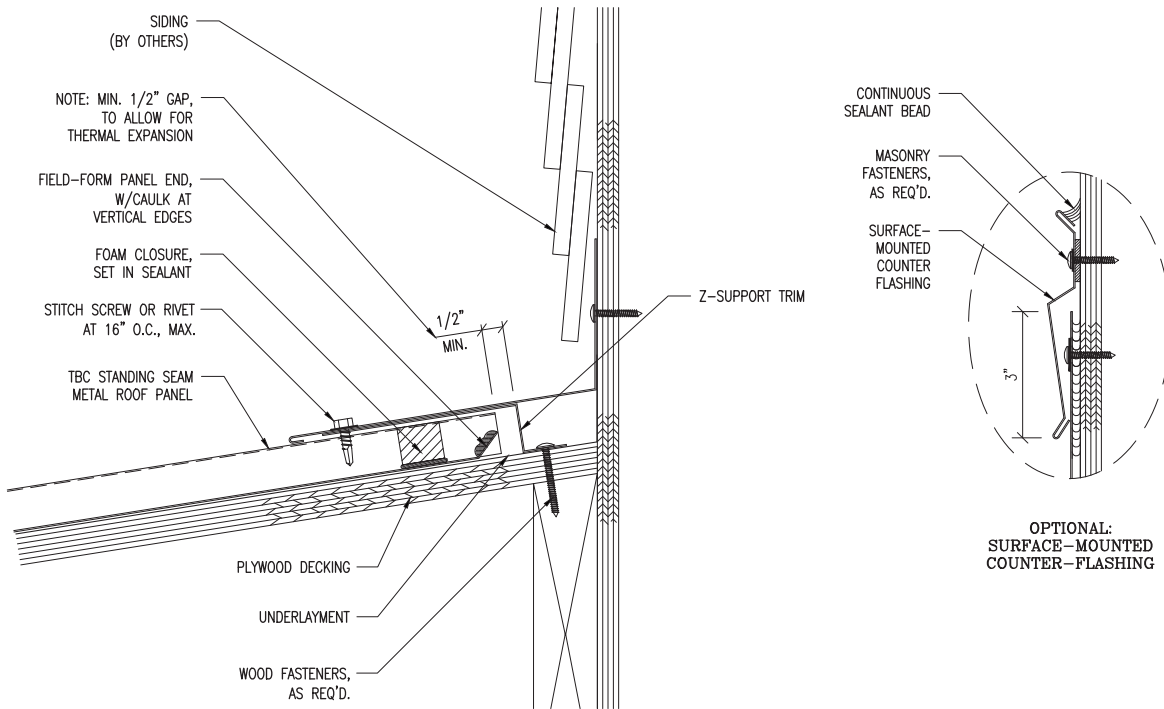
- Cut Z flashing to fit inside diameter of panels and apply butyl tape to bottom so the painted side faces down slope. Measure from the top to make sure the Z is placed so that the top leg will still be covered by the Endwall flashing.
- Fasten the Z through the panel and into the substrate as required. For additional weather tightness tool a bead of caulk at the vertical edges between the Z and standing seam.
- Lap Endwall flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Fasten the Endwall to the Z adjacent to each seam. Do not fasten through the standing seam.
- On new construction the Endwall flashing should be installed prior to the siding. See the optional surface mounted counter flashing for retrofit applications. A modified Endwall flashing can be provided to accommodate a saw-cut into existing siding.

NOTES:

- With panel lengths in excess of 25 feet avoid using this detail if you are using a fixed eave. Fixing the panel on both ends will impede thermal expansion/contraction. See floating Endwall option.



Endwall Detail - Floating with Foam Closure

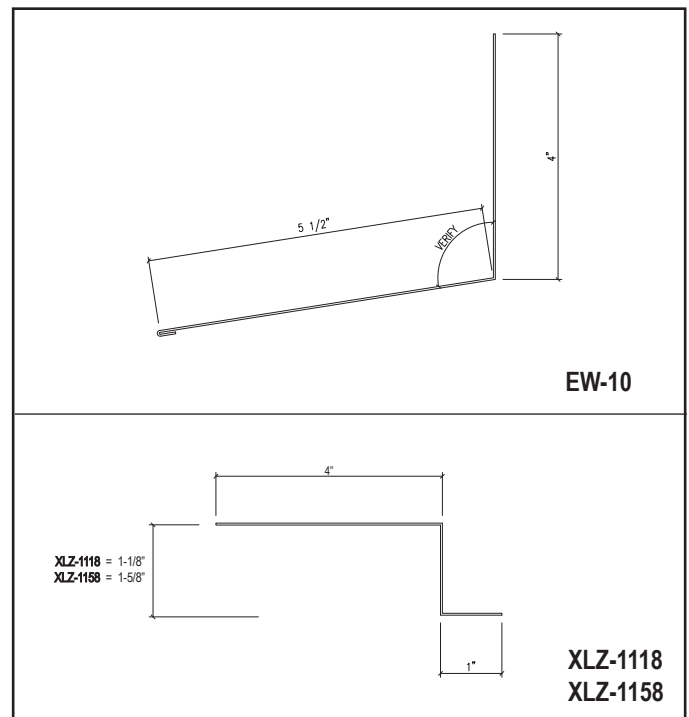


PROCEDURES

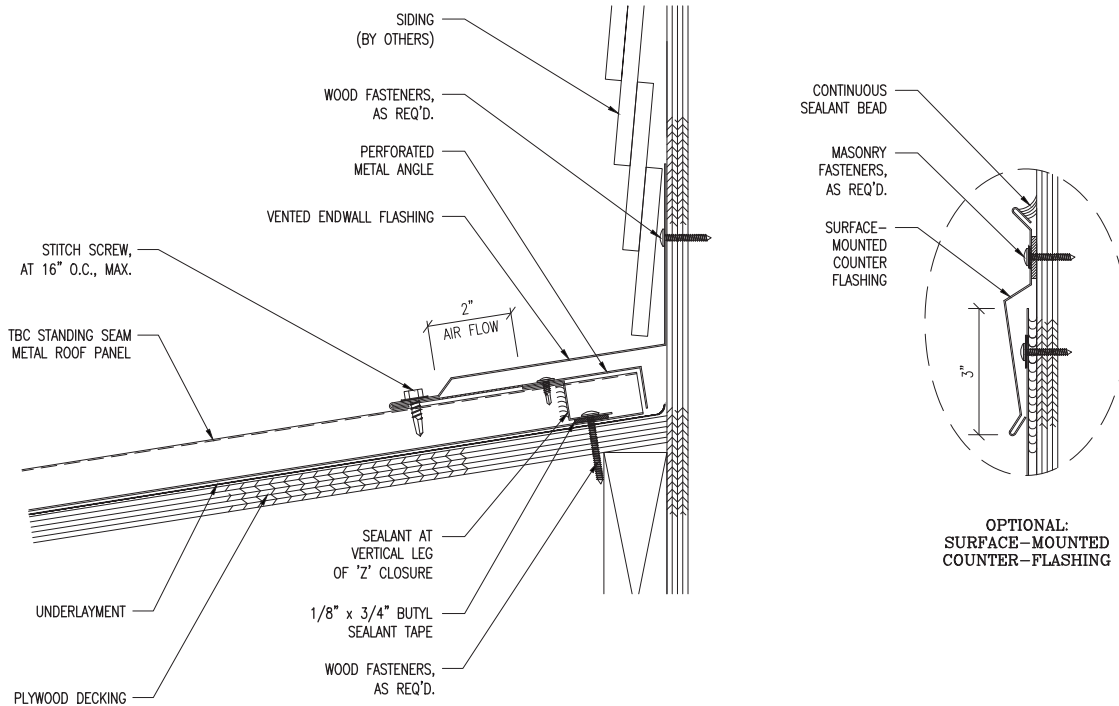
- Install formed foam closure using the preapplied adhesive to snugly fit around panel.
- Turn up panel ends and caulk vertical seams for additional weather tightness (see page 12).
- Install extended Z support behind the panel leaving room for thermal expansion/contraction.
- Lap Endwall flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Fasten the Endwall to the Z adjacent to each seam. Do not fasten through the standing seam.
- On new construction the Endwall flashing should be installed prior to the siding. See the optional surface mounted counter flashing for retrofit applications. A modified Endwall flashing can be provided to accommodate a saw-cut into existing siding.

NOTES:

- Only use this floating detail if your eave is fixed.
- This detail can also be used if you want to fix your Peak by simply adding fasteners directly behind the closure through the panel and into the substrate.



Endwall Detail - Vented

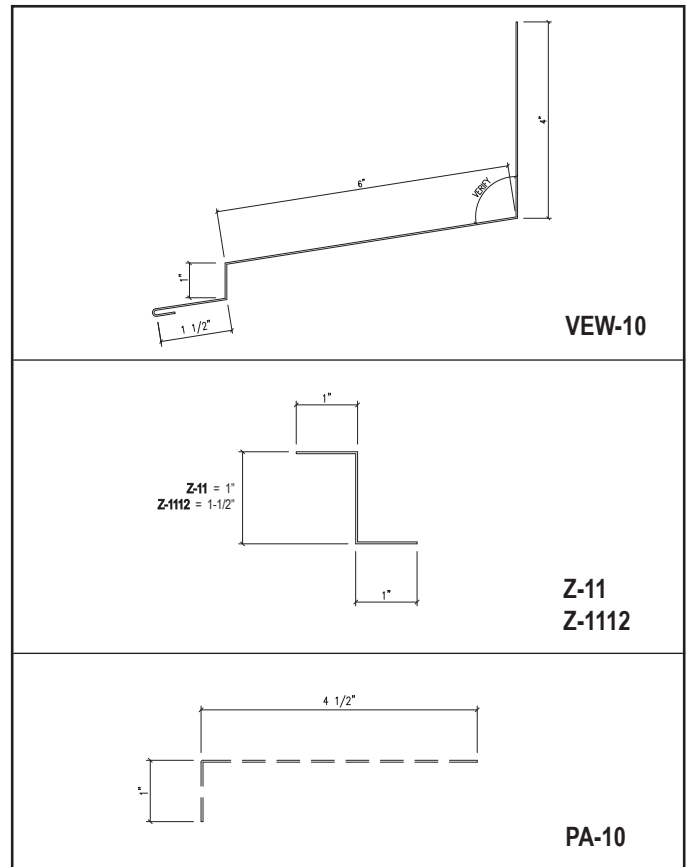


PROCEDURES

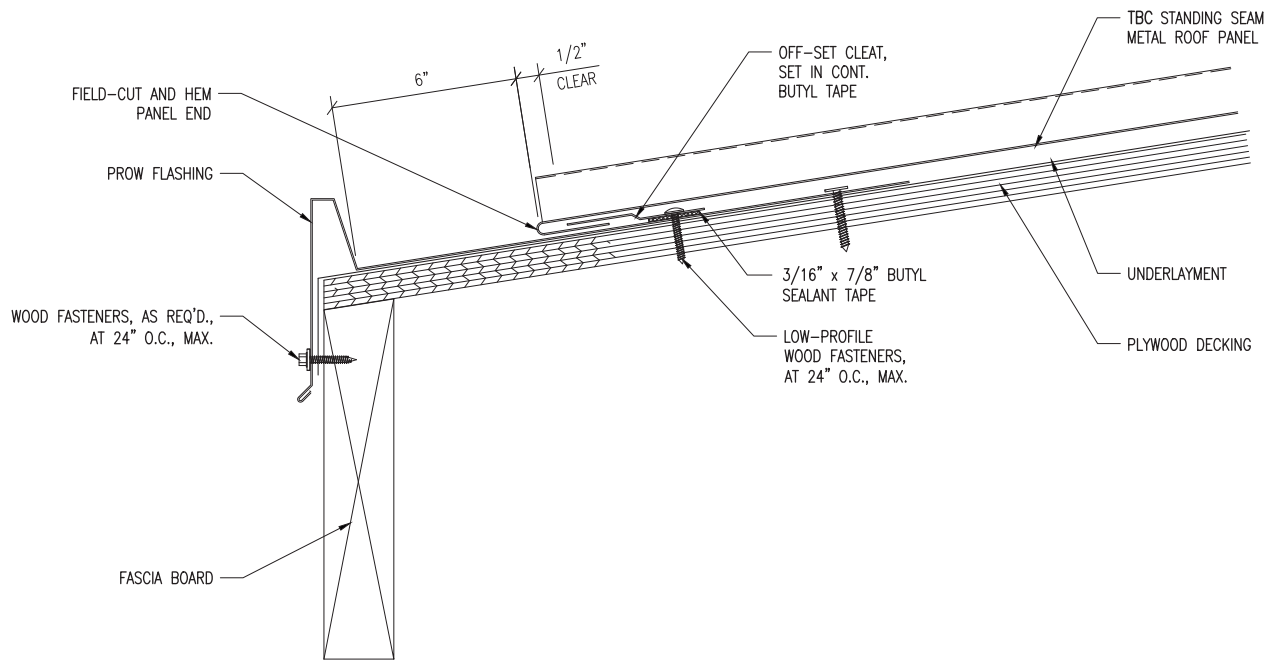
- Cut Z flashing to fit inside diameter of panels and apply butyl tape to bottom so the painted side faces down slope. Measure to allow for 2" opening between perf angle and Endwall flashing.
- Fasten the Z through the panel and into the substrate as required. For additional weather tightness tool a bead of caulk at the vertical edges between the Z and standing seam.
- Place perforated angle around end of panel and fasten to the top of the Z closure.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Fasten the Ridge to the Z adjacent to each seam. Do not fasten through the standing seam.
- On new construction the Endwall flashing should be installed prior to the siding. See the optional surface mounted counter flashing for retrofit applications. A modified Endwall flashing can be provided to accommodate a saw-cut into existing siding.

NOTES:

- With panel lengths in excess of 25 feet avoid using this detail if you are using a fixed eave. Fixing the panel on both ends will impede thermal expansion/contraction. See floating Endwall option.



Prow Detail - Floating

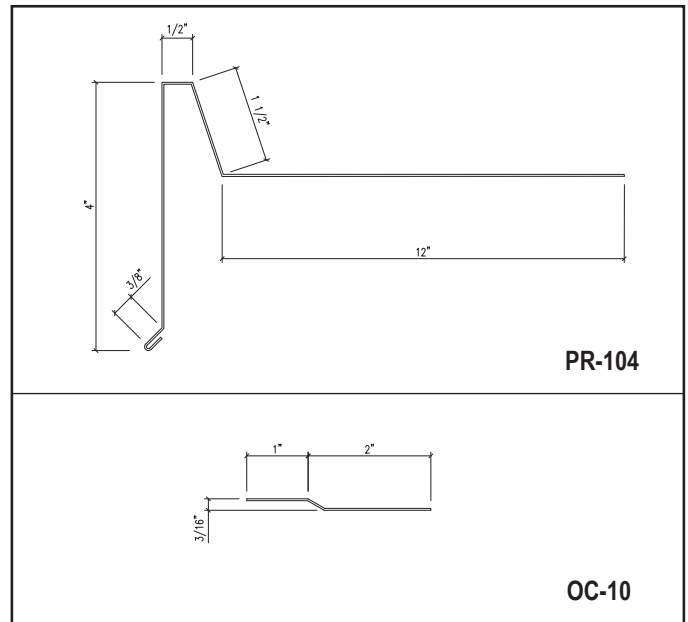


PROCEDURES

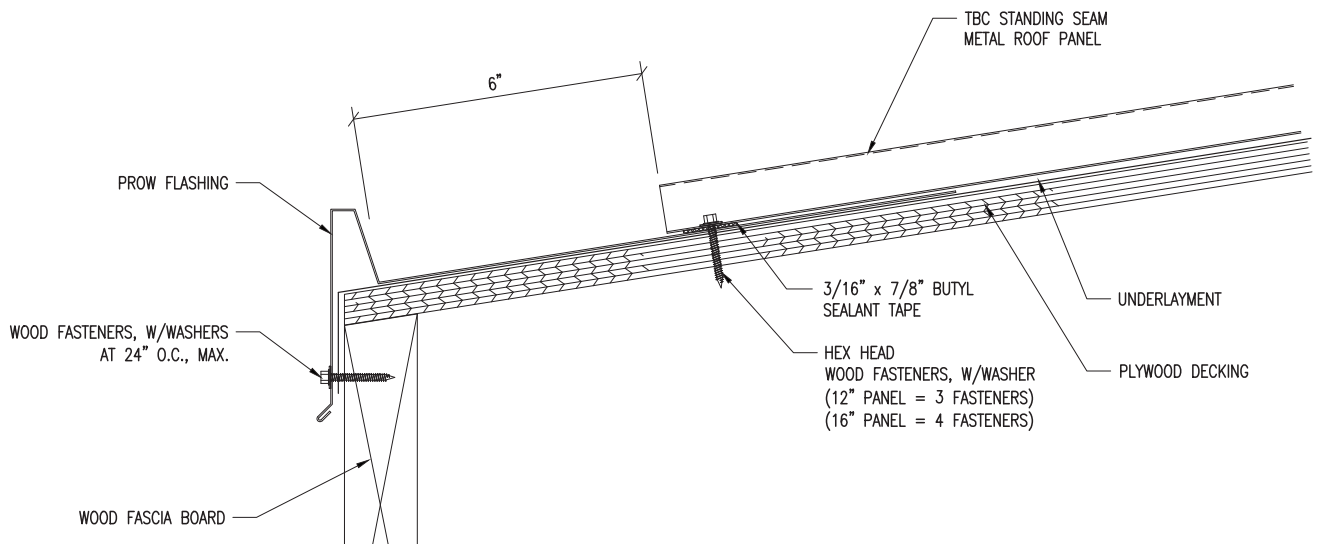
- Install Prow flashing prior to panels using a low profile fastener at 24" o/c.
- Lap the Prow flashing a minimum of 12" placing two rows of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Measure to allow a minimum 6" space between the end of the panels and the vertical leg of the Prow. Install the off-set cleat set in a continuous row of 3/16" x 7/8" butyl tape.
- The panels will need to be field notched and hemmed to match the angle of the prow. Factory notching at an angle is not available.
- Before closing the hem fill with non-skinning butyl caulk. Engage the hem into the off-set cleat allowing for future expansion/contraction.

NOTES

- In high snow areas, snow retention may be required to keep large masses of snow from ripping off the Prow flashing.
- Prows can also be treated like eaves with the same type of flashing used if water runoff is not a concern. Modified (D-style) is recommended.

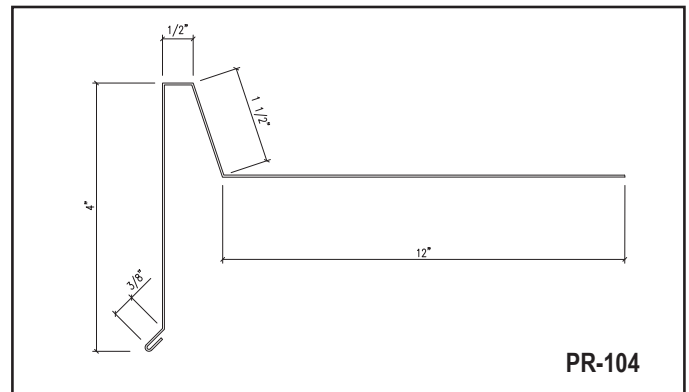


Prow Detail - Fixed



PROCEDURES

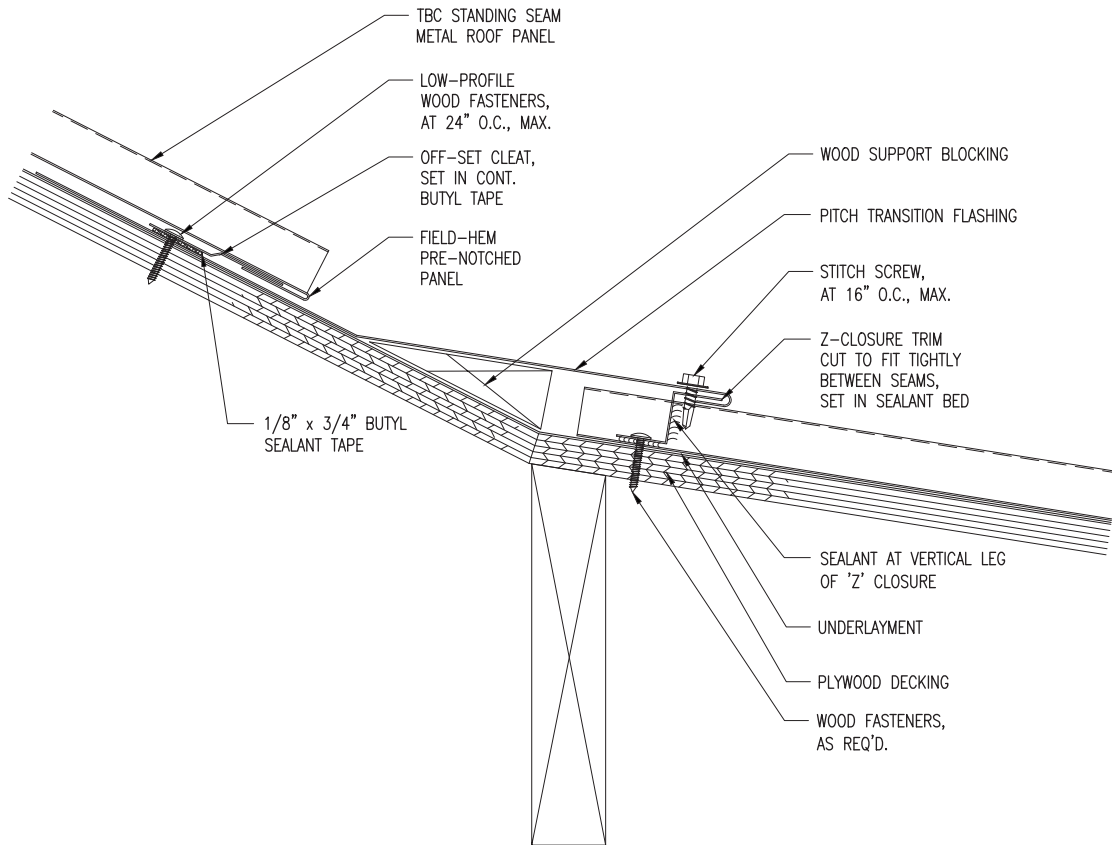
- Install Prow flashing prior to panels using a low profile fastener at 24" o/c.
- Lap the Prow flashing a minimum of 12" placing two rows of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Apply 1/8" x 3/4" butyl sealant tape approx 2" up from the eave. Field cut panels to match the angle of the prow and lay them on top of the butyl allowing for the ends to extend 1 inch out past the eave.
- Fasten the panel to the substrate using a washered #10 wood screw making sure fasteners penetrate through the middle of the butyl tape.
- The fascia side of the Prow can be directly fastened using a wood screw or use an optional concealed perimeter cleat (see page 41).



NOTES

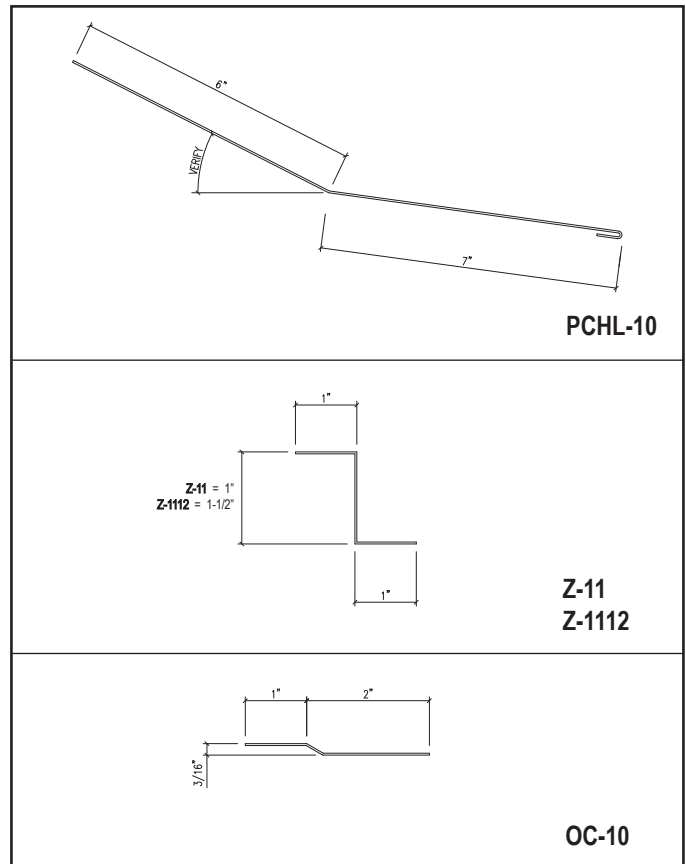
- When using a fixed Prow on panel lengths over 25 feet the high side of the panel should use a floating detail. Fixing the panel on both ends will impede thermal expansion/contraction that can cause problems on longer lengths.
- In high snow areas, snow retention may be required to keep large masses of snow from ripping off the Prow flashing.
- Prows can also be treated like eaves with the same type of flashing used if water runoff is not a concern. Modified (D-style) is recommended.

Pitch Change - High/Low Detail

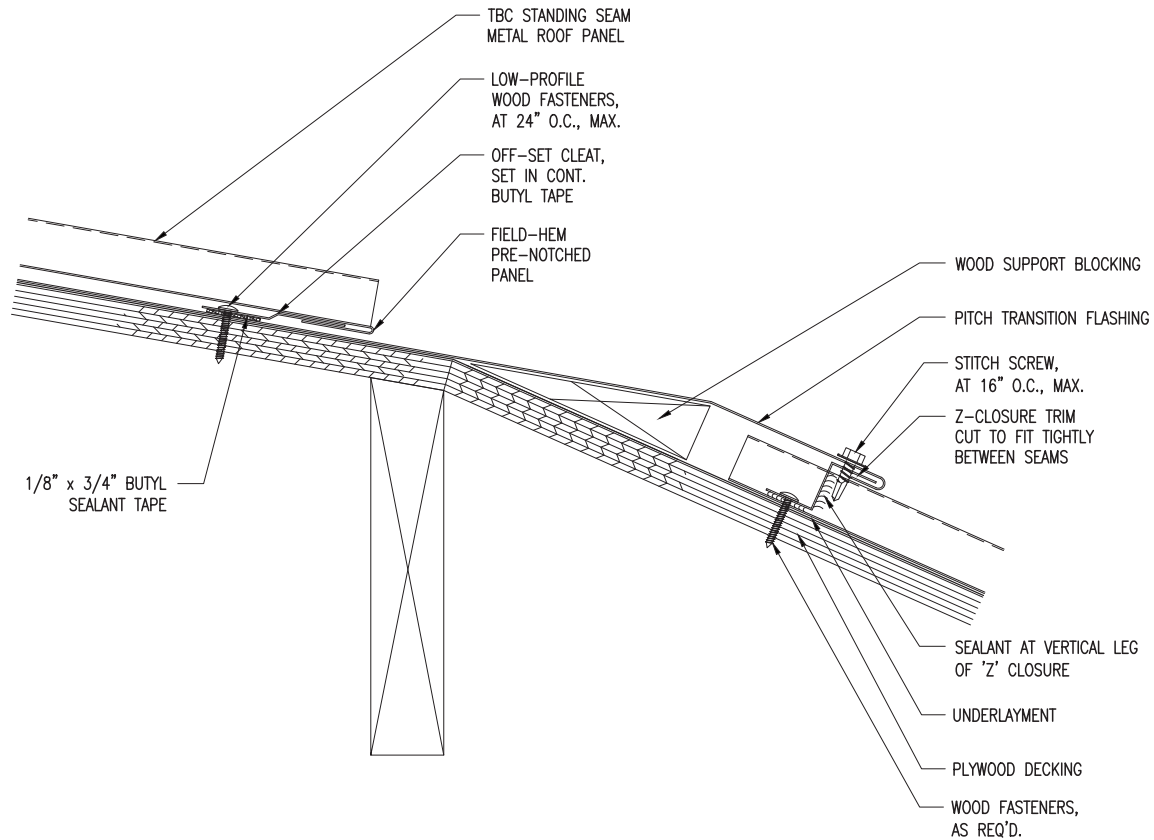


PROCEDURES

- To sequence this detail properly start by installing the lower panels, then the flashing and then the upper panels.
- For the lower panels refer to the Endwall detail options. For the upper panels refer to the Eave detail options. Note that a modified D-style eave cannot be used so choose between a joggle cleat and fixed option.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Wood blocking can be added to help support the flashing at the gap between the upper and lower roofs.

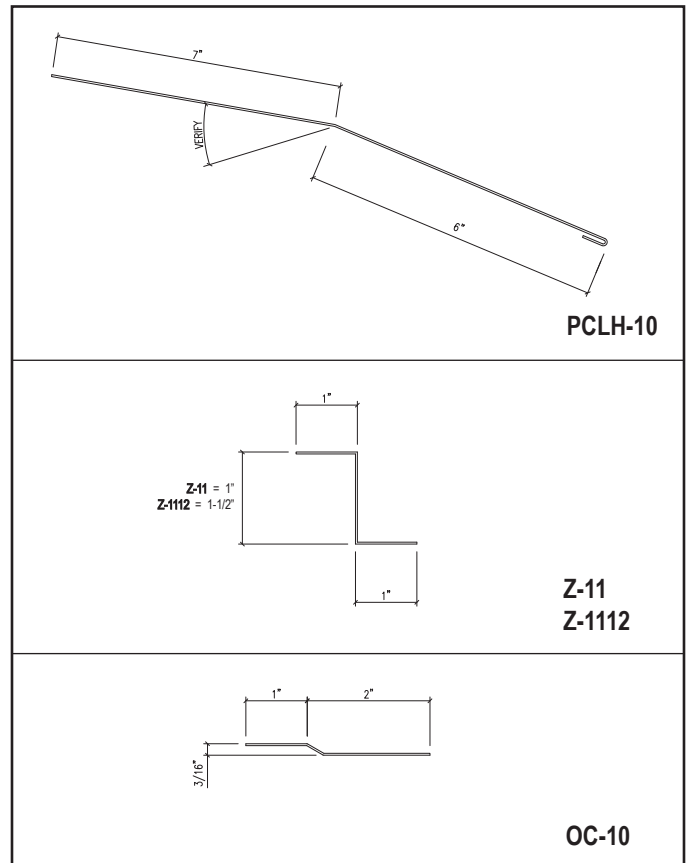


Pitch Change - Low/High Detail

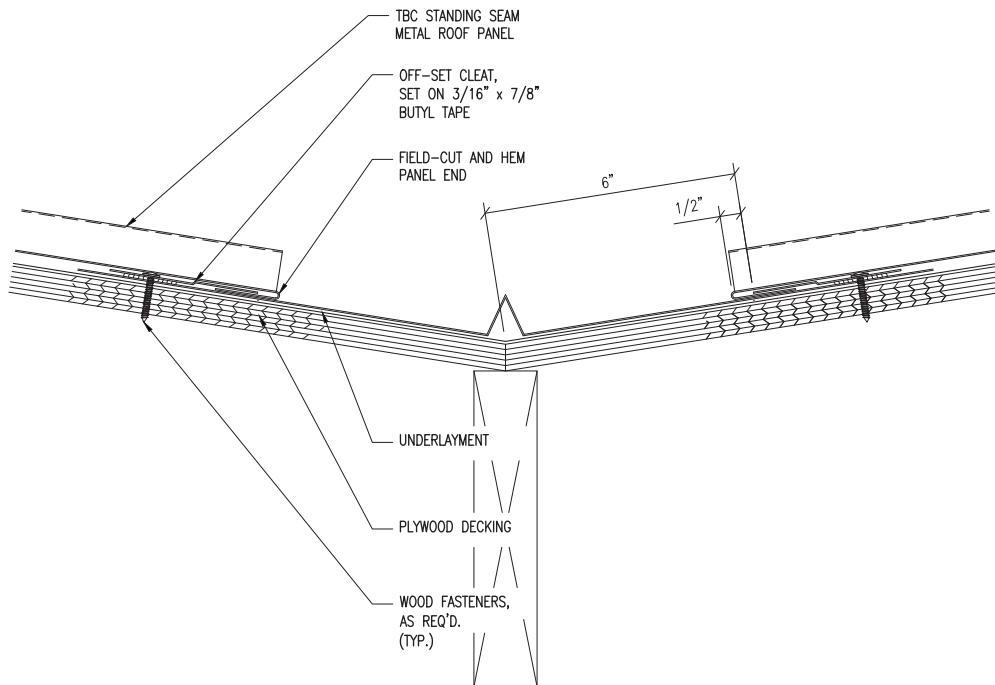


PROCEDURES

- To sequence this detail properly start by installing the lower panels, then the flashing and then the upper panels.
- For the lower panels refer to the Endwall detail options. For the upper panels refer to the Eave detail options. Note that a modified D-style eave cannot be used so choose between a joggle cleat and fixed option.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).
- Wood blocking can be added to help support the flashing at the gap between the upper and lower roofs.



Valley Detail - Floating

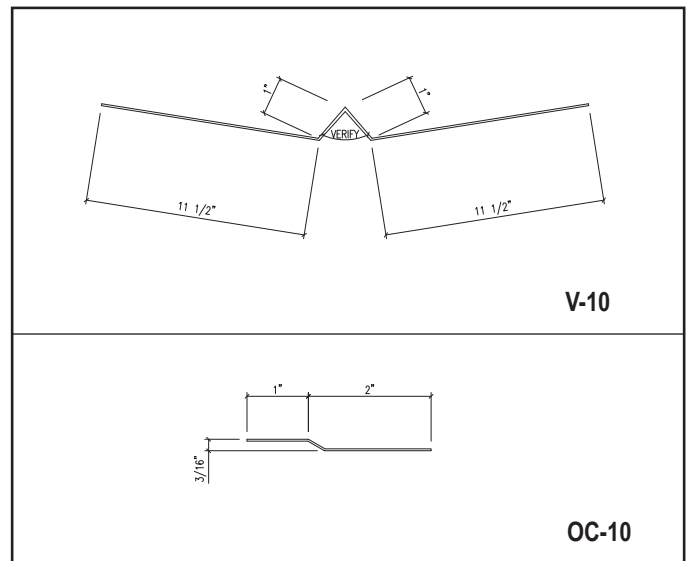


PROCEDURES

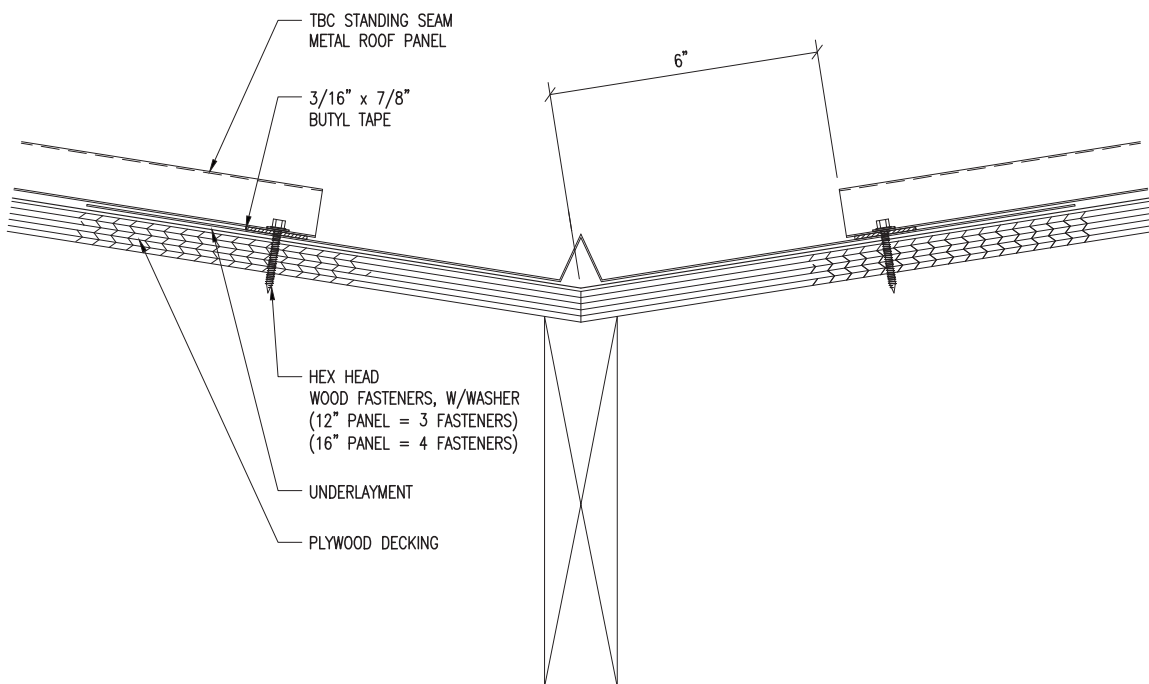
- Install Valley flashing using a low profile fastener on the uphill side of the flange that will run underneath the panel.
- Lap the Valley flashing a minimum of 12" placing two rows of caulk in between the lapped joint.
- Measure to allow a minimum 6" space between the end of the panels and the center of the Valley. Install the off-set cleat set in a continuous row of 3/16" x 7/8" butyl tape.
- The panels will need to be field notched, hemmed and cut to match the angle of the valley and engage the off-set cleat.
- Before closing the hem fill with non-skinning butyl caulk. Engage the hem into the off-set cleat allowing for future expansion/contraction.

NOTES:

- This detail must be used in conjunction with a fixed detail on the high side (ridge, endwall or peak).

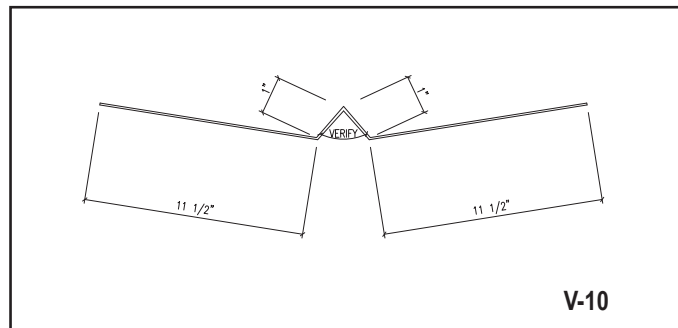


Valley Detail - Fixed



PROCEDURES

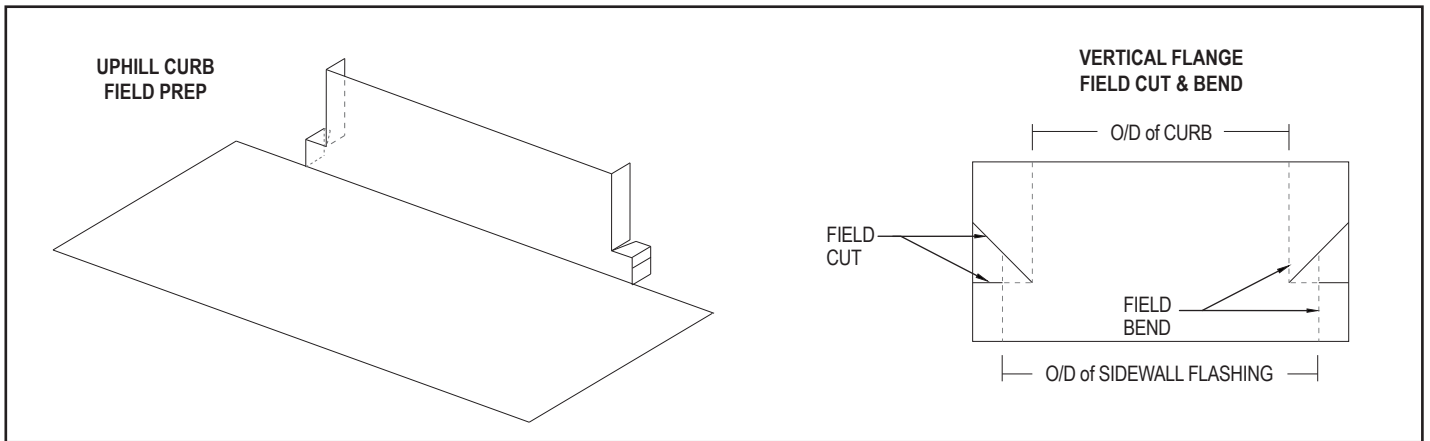
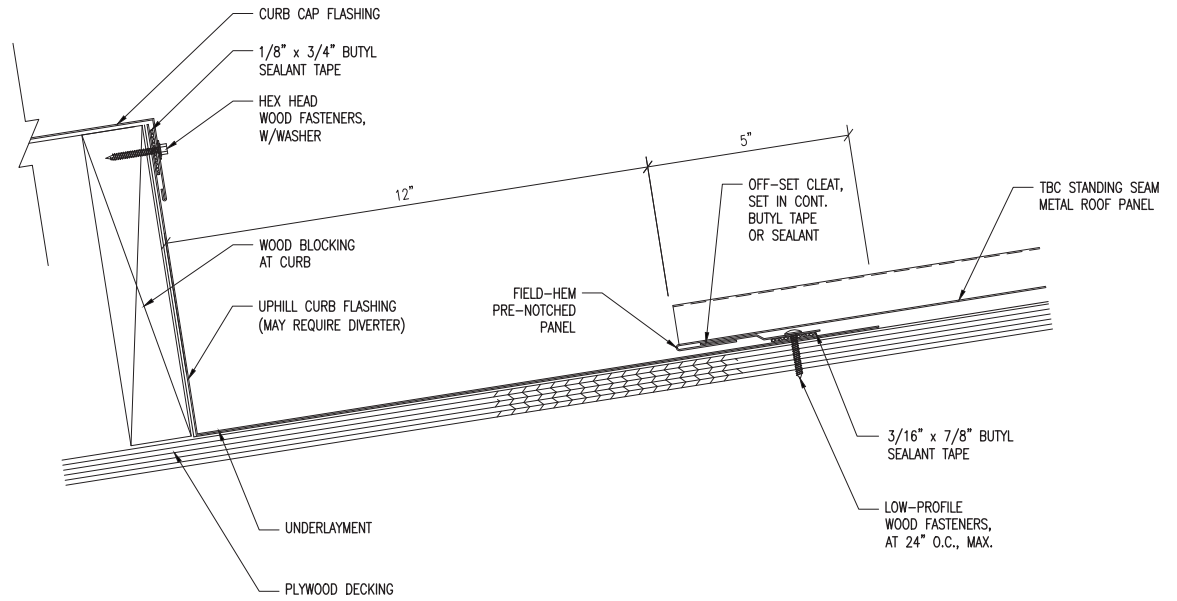
- Install Valley flashing using a low profile fastener on the uphill side of the flange that will run underneath the panel.
- Lap the Valley flashing a minimum of 12" placing two rows of caulk in between the lapped joint.
- Panels will need to be field cut to match the angle of the valley and to lay 6" short of the center of the valley.
- Install 3/16" x 7/8" butyl tape approx 7" up from the center of the valley. Lay panels on top of the butyl allowing for the ends to extend 1 inch out past the butyl.
- Fasten the panel to the substrate using a washered #10 wood screw making sure fasteners penetrate through the middle of the butyl tape.



NOTES:

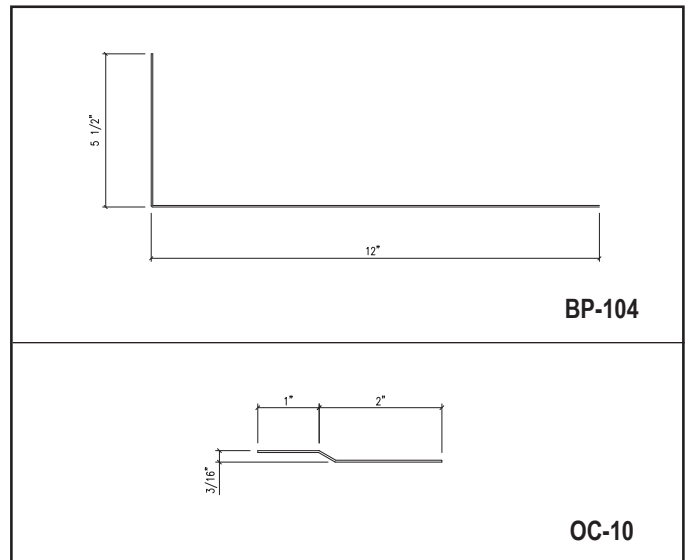
- With panel lengths in excess of 25 feet avoid using this detail if you are using a fixed detail on the high side (ridge, endwall or peak). Fixing the panel on both ends will impede thermal expansion/contraction. See floating Valley option.

Skylight/Chimney Detail - Uphill

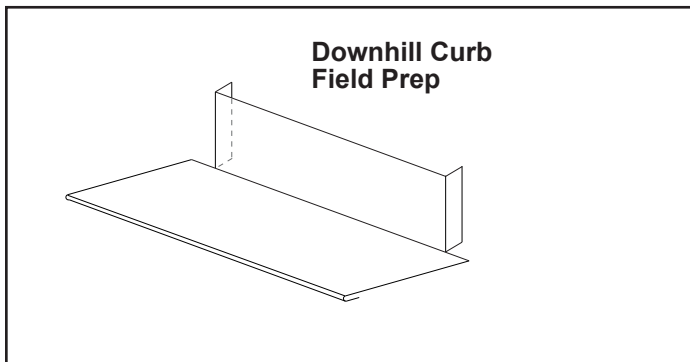
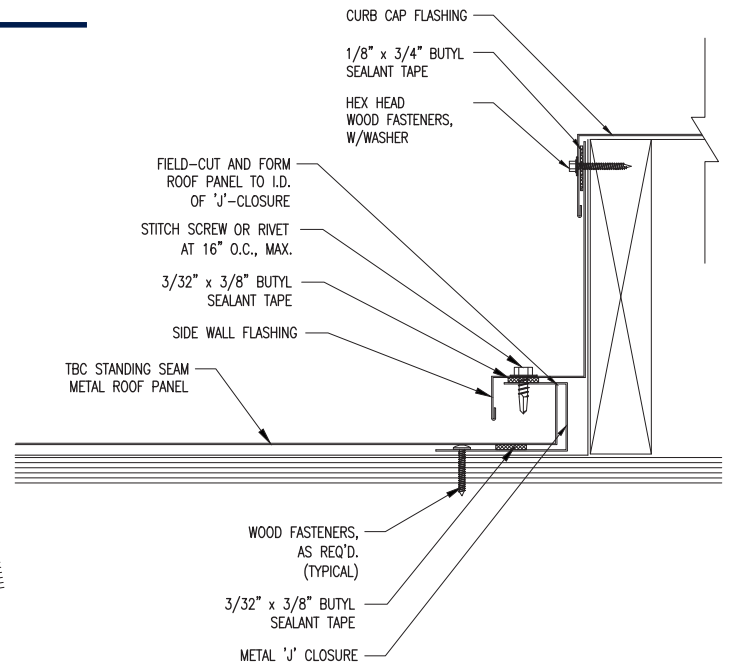
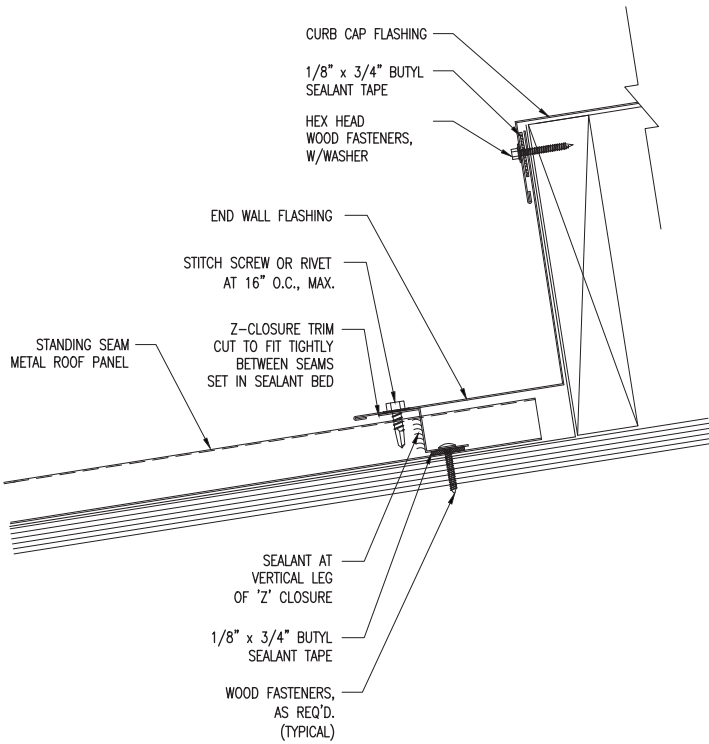


PROCEDURES

- The Back Pan of a skylight/chimney should be treated like a valley, either as fixed or floating using an off-set cleat.
- It is critical that the Back Pan be field notched and folded to divert water out and around the sides without uphill facing seams that would buck water and be a potential leak point. The folded sides should then counter over the top of the sidewall flashings.
- The uphill pan should extend out past the next closest standing seam on each side of the skylight.
- The skylight frame should fit down over the top of the vertical flashing lengths and be sealed with caulk. For chimney or other curbs use the optional surface mounted counter flashing.

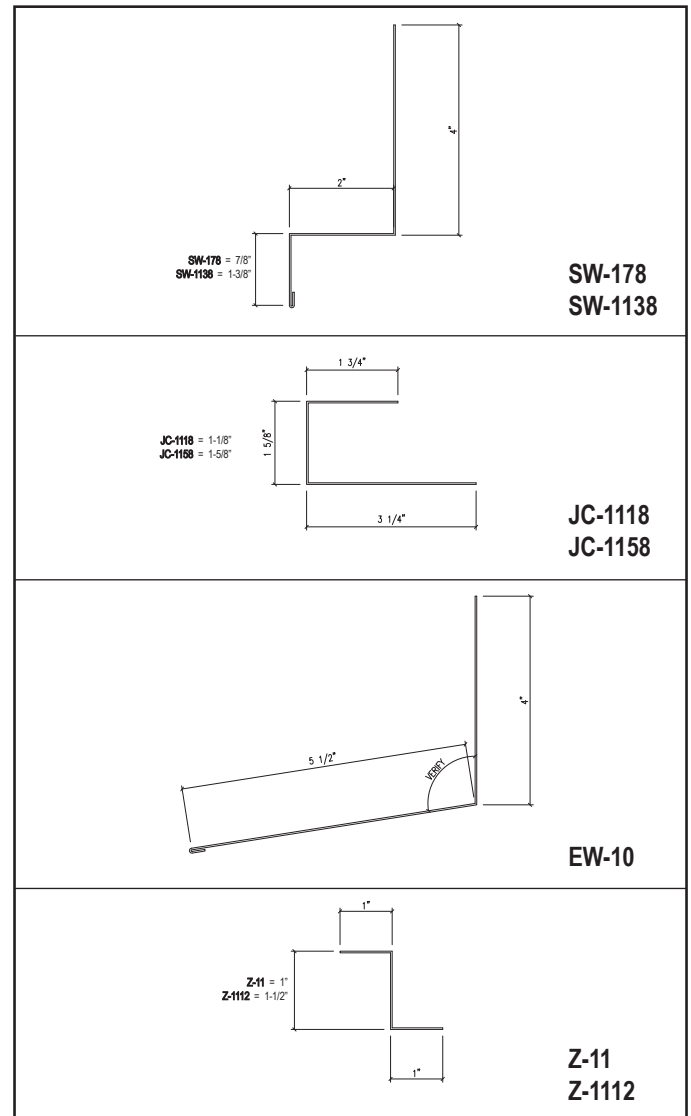


Skylight/Chimney Detail - Downhill & Sides

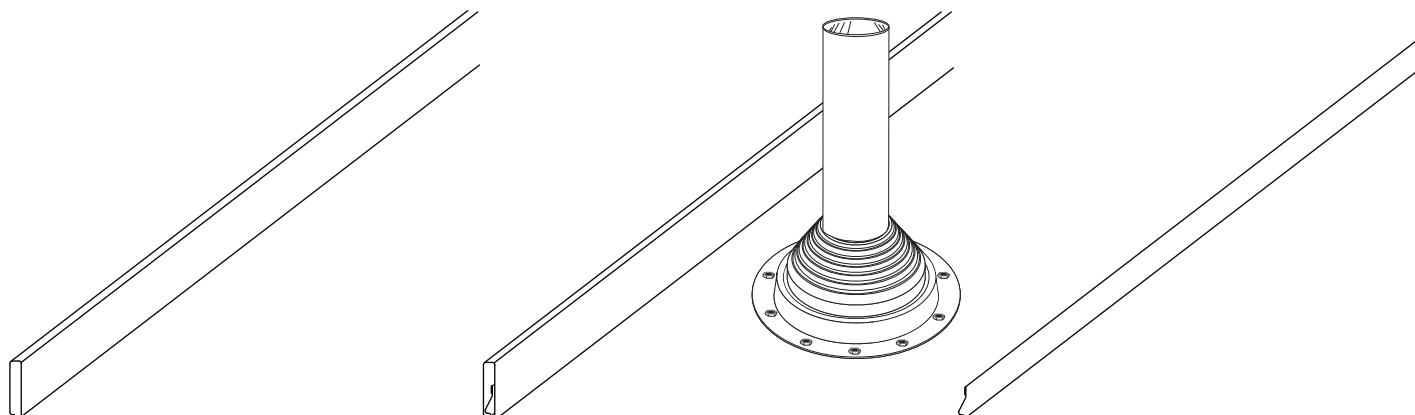


PROCEDURES

- The sides of a chimney should be installed the same as a sidewall flashing. The downhill flashing should be installed the same as an endwall flashing.
- The Sidewall flashing should run underneath the uphill back pan and over the top of the downhill endwall.
- The downhill flashing has similar options as an endwall, either fixed or floating using metal Z closure or foam closure.
- Notch and fold the downhill flashing as shown and install prior to the Sidewall flashing.



Pipe Flashing Detail



STANDARD PIPE FLASHING SIZES

Size	Pipe O/D	Base Dia
#1	1/4" - 2-1/2"	4-3/4"
#2	1-3/4" - 3"	6-1/4"
#3	1/4" - 5"	7-3/4"
#4	3" - 6-1/4"	9-1/4"
#5	4-1/4" - 7-3/4"	10-1/2"
#6	5" - 9"	13"
#7	6" - 11"	14-1/2"
#8	7" - 13"	16-1/2"
#9	9" - 19"	25-1/4"

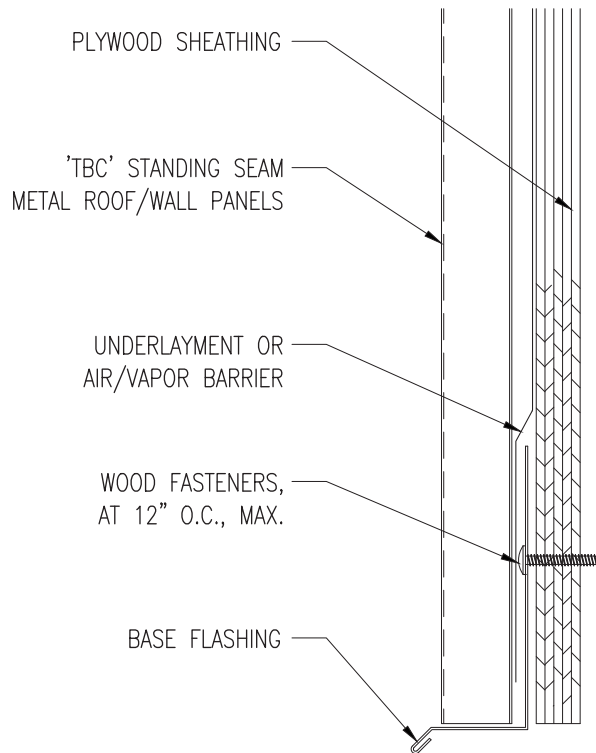
PROCEDURES

- Locate pipe penetrations in the center of the panel to avoid intersecting a standing seam rib.
- Use a prefabricated EPDM pipe flashing and cut the opening to fit snugly around the outside diameter of the pipe.
- Silicone pipe flashing are available for hot pipes and retrofit pipe flashing are available when the flashing can not be slid down over the top (ie. electrical masts).
- Apply urethane caulk to the underneath side of the flange and slide down over the top of the pipe.
- Fasten to the wood substrate using #10 fasteners.
- An additional bead of sealant can be tooled around the perimeter of the base. An optional hose clamp can also be fastened around the top of the pipe flashing to secure it.

NOTES:

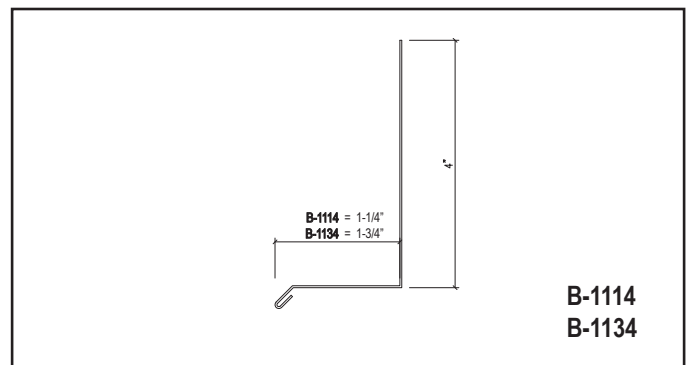
- With panel lengths in excess of 25 feet avoid fixing the pipe flashing to the substrate. Cut out the plywood substrate and use 1/4 x 7/8" stitch screws to fasten the flashing to the panel.

Base Detail (wall application)

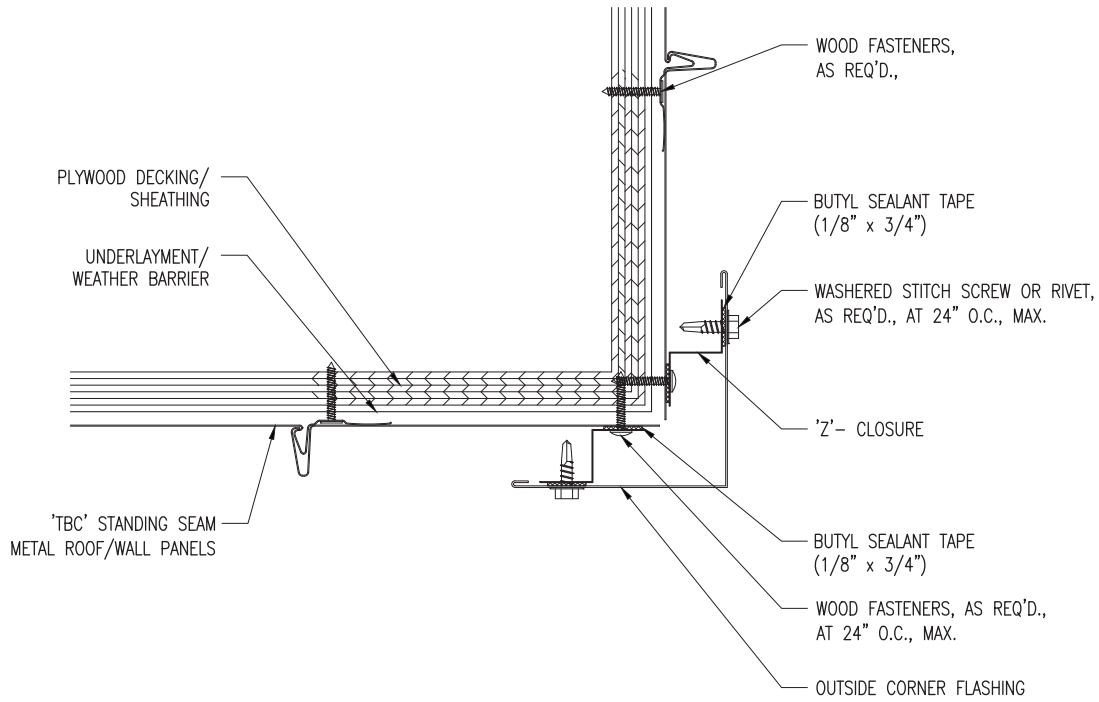


PROCEDURES

- Install Base flashing using a low profile fastener leaving a 1/4" gap between the flashing and the end of the panel.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).

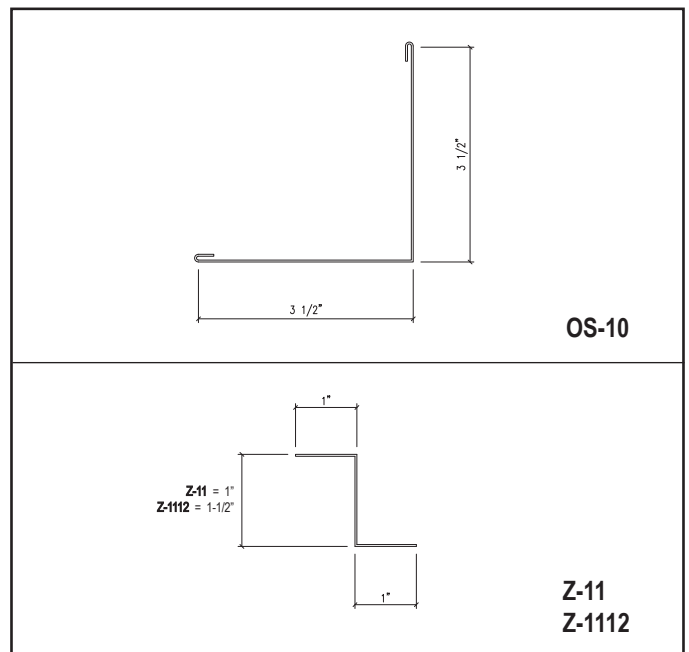


Outside Corner Detail

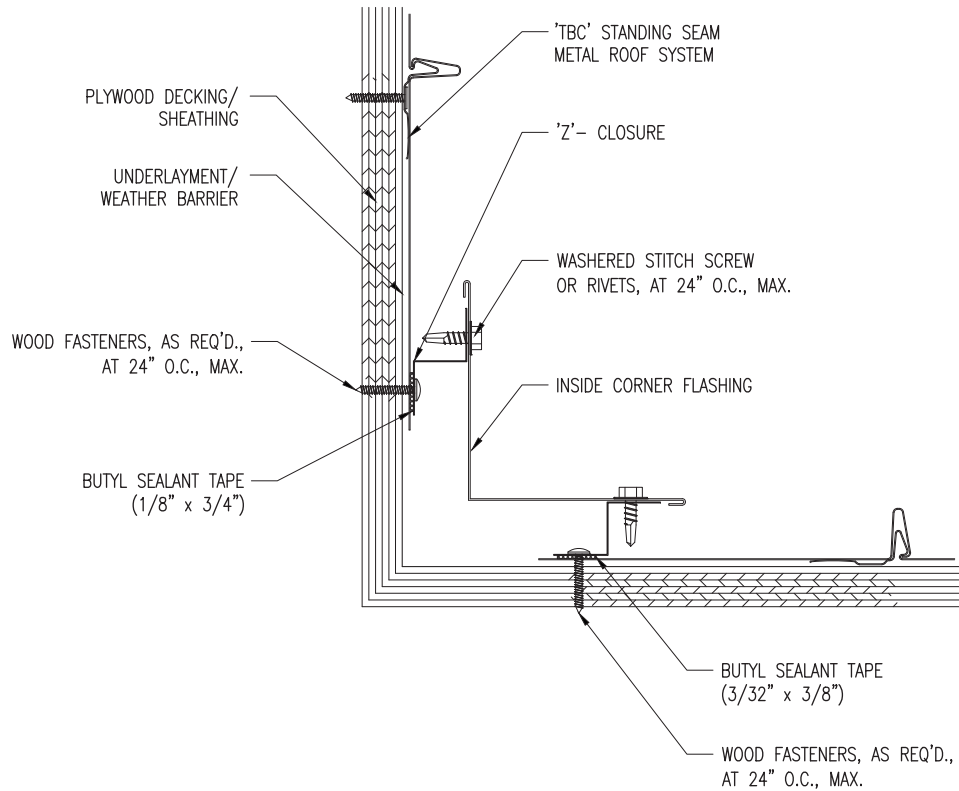


PROCEDURES

- Install Z flashing set in 1/8" x 3/4" butyl tape on either side of the corner.
- Install the O/S Corner flashing by fastening to the Z with rivets or stitch screws.
- Make sure to work from the bottom up so flashing laps are faced down.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).

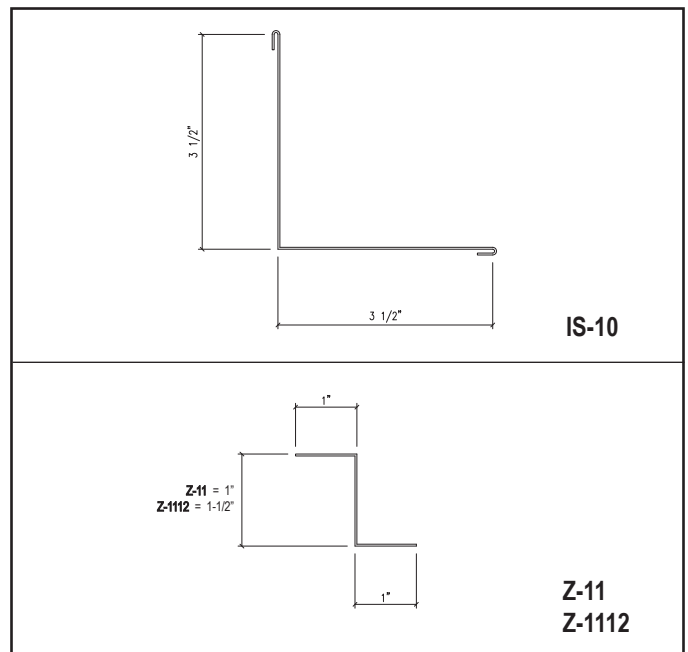


Inside Corner Detail

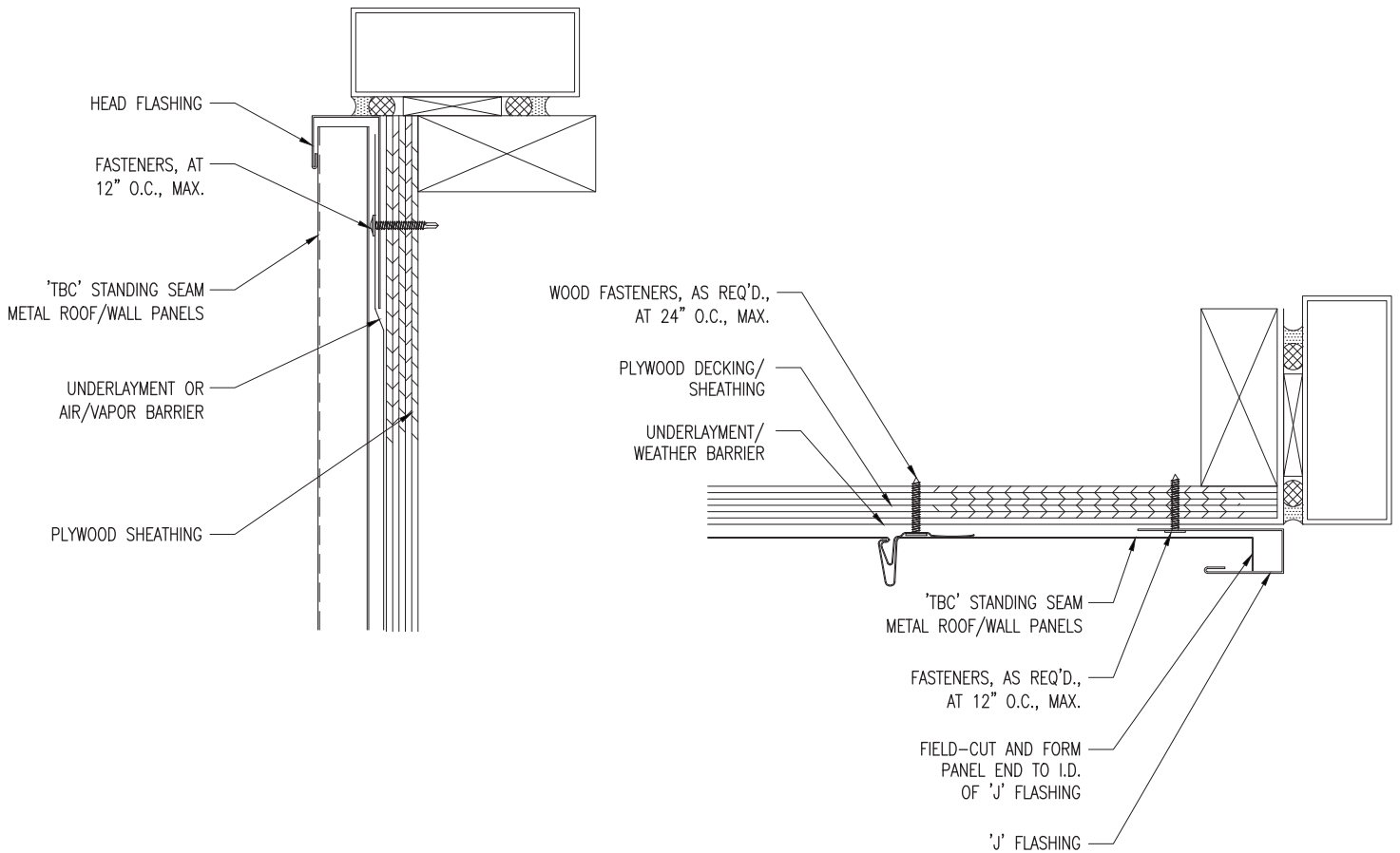


PROCEDURES

- Install Z flashing set in 1/8" x 3/4" butyl tape on either side of the corner.
- Install the I/S Corner flashing by fastening to the Z with rivets or stitch screws.
- Make sure to work from the bottom up so flashing laps are faced down.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).

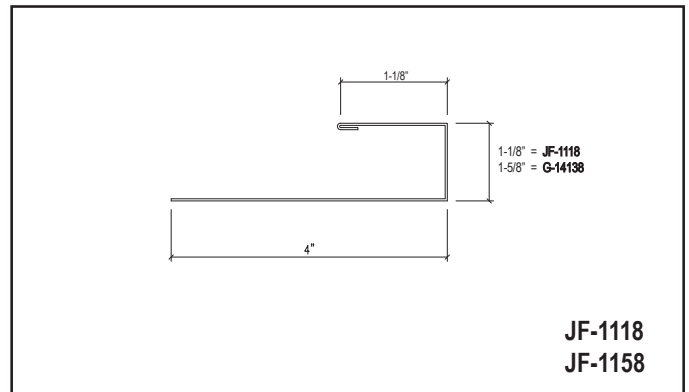


Jamb / Sill Detail

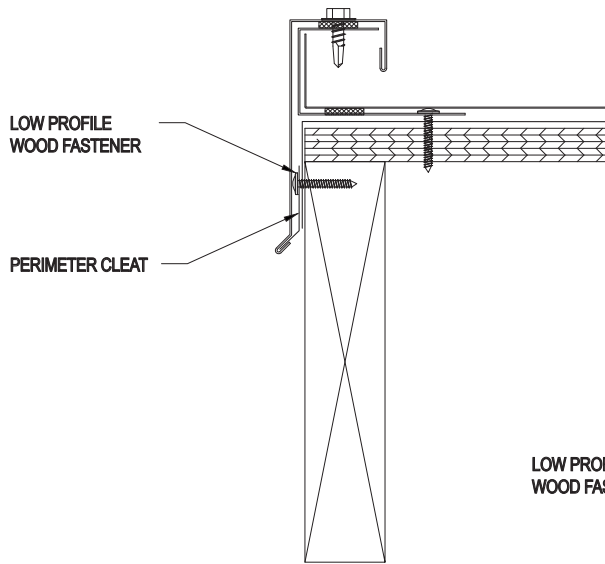


PROCEDURES

- Install J flashing using a low profile fastener.
- The field cut and turn up of the panel as shown only needs to be done at the end of a run if needed. On the start of a run the female leg of the panel will counter under the flashing.
- Lap flashing a minimum of 3" placing a bead of caulk in between the lapped joint.
- To lap hems either field notch the underneath hem by 3" or use a screw driver to open hem of the subsequent flashing and slide into the previous (see page 42).

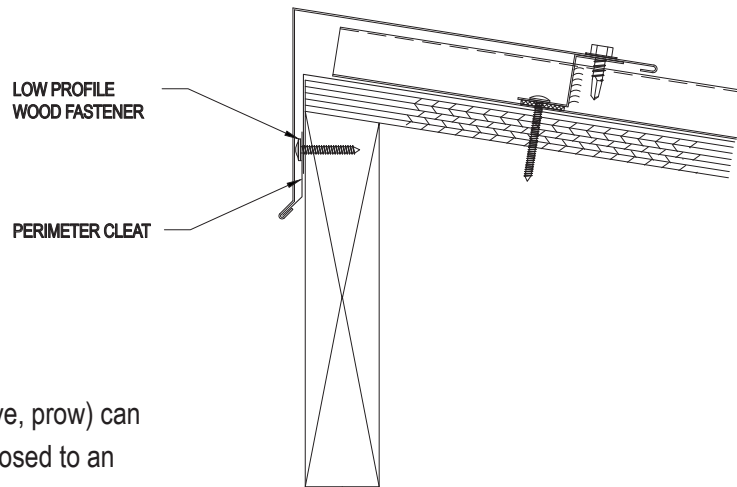


Perimeter Cleat



LOW PROFILE
WOOD FASTENER

PERIMETER CLEAT



LOW PROFILE
WOOD FASTENER

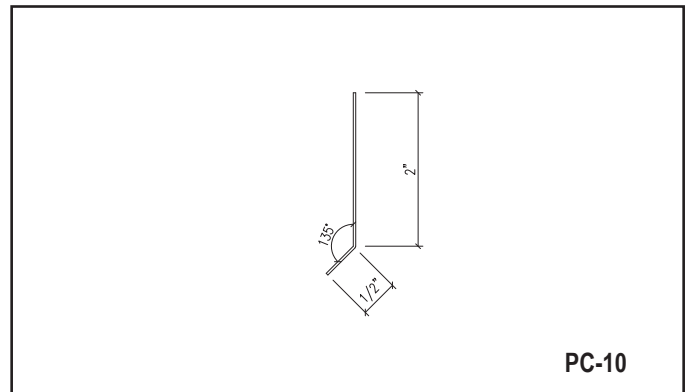
PERIMETER CLEAT

NOTES

- Most flashings with a fascia leg (gable, peak, eave, prow) can be installed using a concealed perimeter cleat opposed to an exposed washered fastener.
- This technique offers a cleaner installation by removing many of the exposed fasteners, however it is more expensive and time consuming.
- Perimeter cleats can be supplied in a standard configuration as shown or as a custom roof mounted option. The roof mounted option is quicker and easier but requires custom cleats be fabricated for each flashing detail.

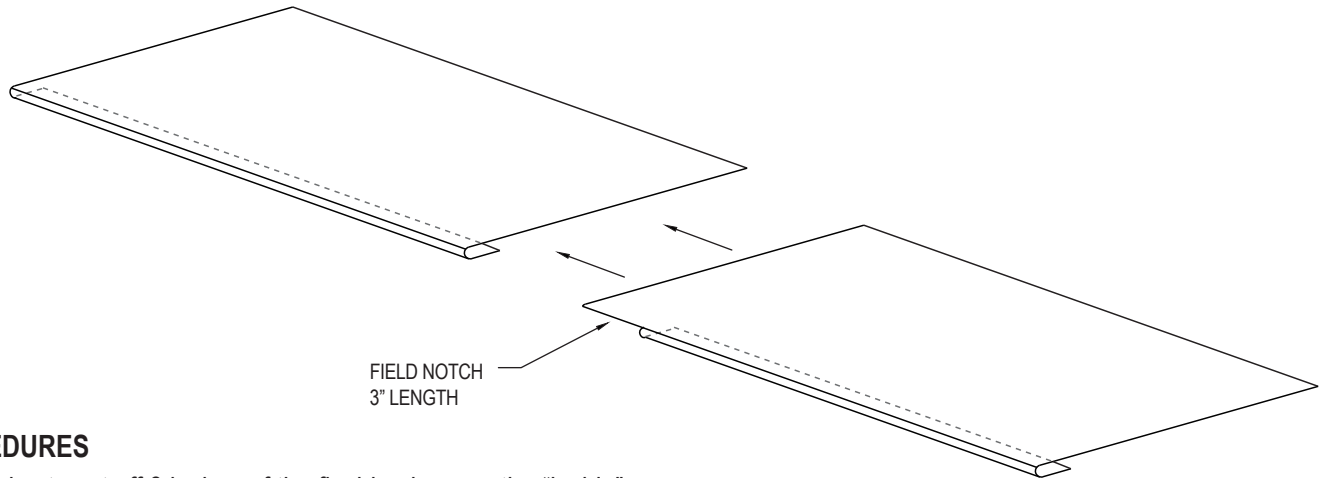
PROCEDURES

- Measure along the wood fascia board to line up the “kick” of the perimeter cleat with the drip edge of the flashing.
- Install the perimeter cleat using a low-profile fastener spaced at 24” o/c.
- The perimeter cleat should fully engage the drip/hem of the flashing.
- Depending on the configuration, the flashing may need to be slid into place along the cleat.



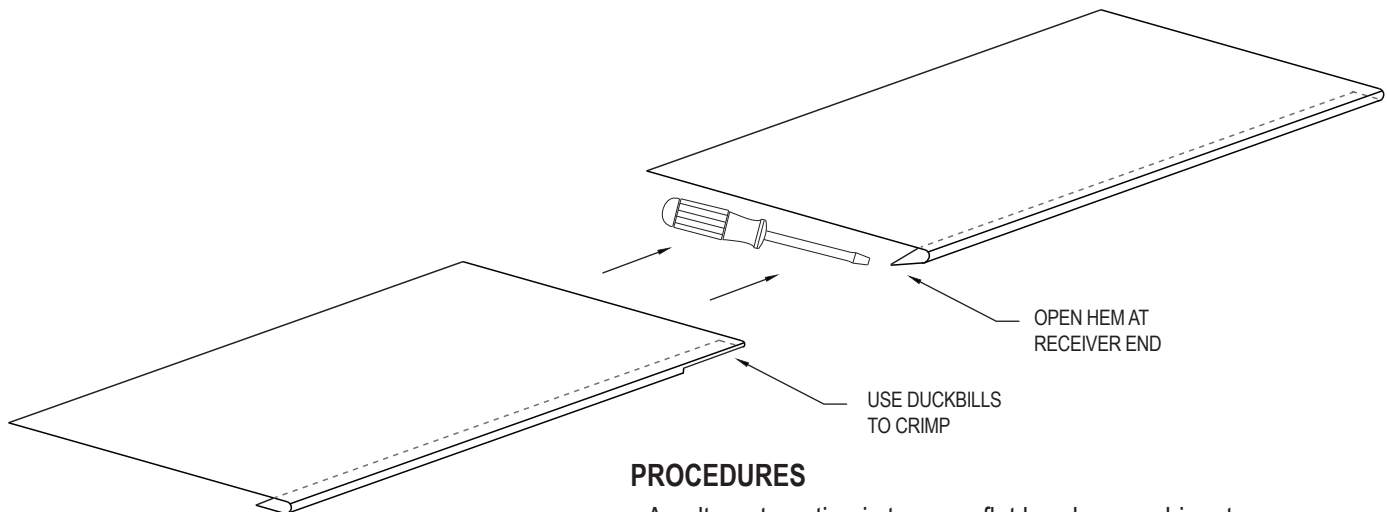
PC-10

Flashing Laps



PROCEDURES

- Use snips to cut off 3 inches of the flashing hem on the “inside” portion of the flashing lap. This technique is more labor intensive but provides the cleanest and smoothest lap results.
- Prior to sliding the notched end in, apply a bead of caulk to help seal the joint.
- The lap can be secured with pop rivets to improve strength and help seal the joint.



PROCEDURES

- An alternate option is to use a flat head screw driver to open the receiving end of the flashing hem. Then use duckbill pliers to crimp 3 inches of hem on the “inside” portion of the flashing lap. This technique is quicker and easier but the lap will not lay quite as smooth.
- Prior to sliding the notched end in, apply a bead of caulk to help seal the joint.
- The lap can be secured with pop rivets to improve strength and help seal the joint.

Snow Retention & Solar

MOUNTING OPTIONS

Two of the most common ancillary products that home owners want to attach to their standing seam metal roof are snow retention and solar panels. When attaching these products Bryer recommends the use of S-5!, the industry leader in attachment solutions. All of Bryer's panels have been lab tested to verify compatibility and also offer project specific engineering if required.

SNOW RETENTION

Multiple different styles are available to choose from depending on snow load requirements and aesthetic preferences.

Colorgard is the most popular and is detailed below (Figure 9). Contact a Bryer representative for product specific questions and inquires.

SOLAR

Metal roofing is an excellent choice if roof mounted solar panels will be installed. S-5! offers a direct mounting solution with the PVKIT (Figure 10) or S-5 clamps can be used in conjunction with a rack and rail system. Mounting with S-5! helps avoid putting any unnecessary penetrations in the roof while maintaining the finish warranty.

Fig. 9

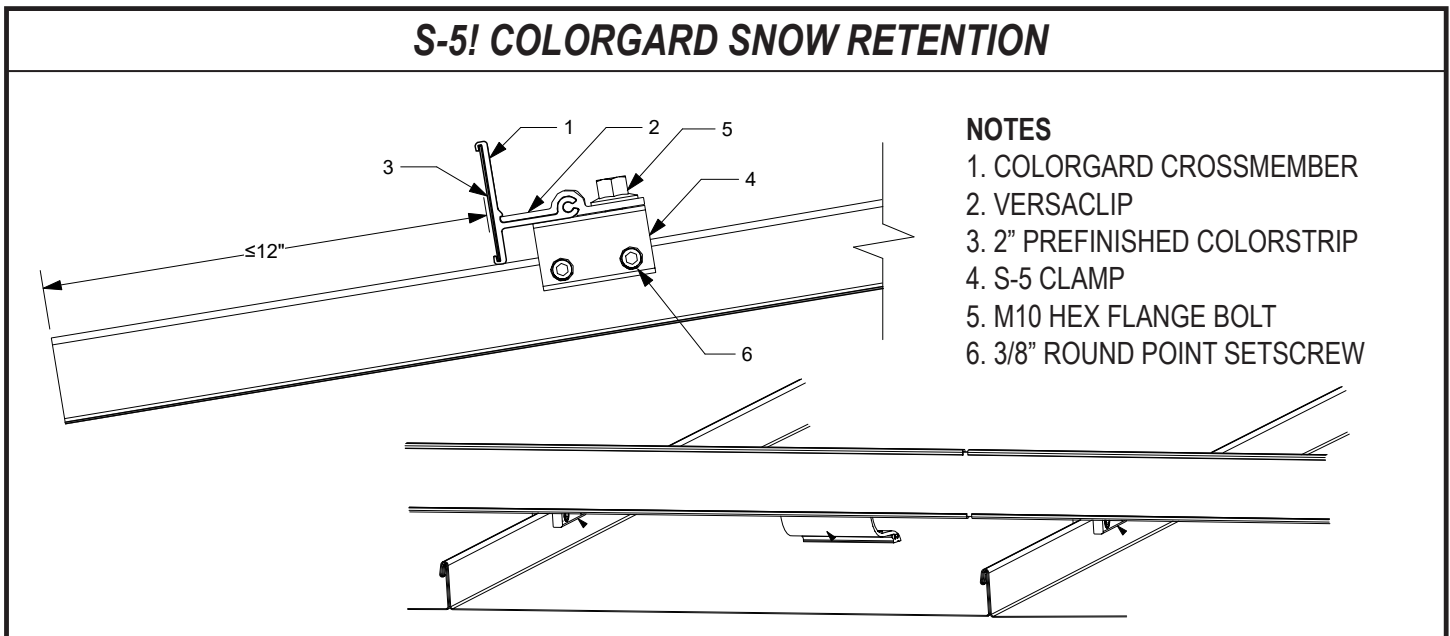
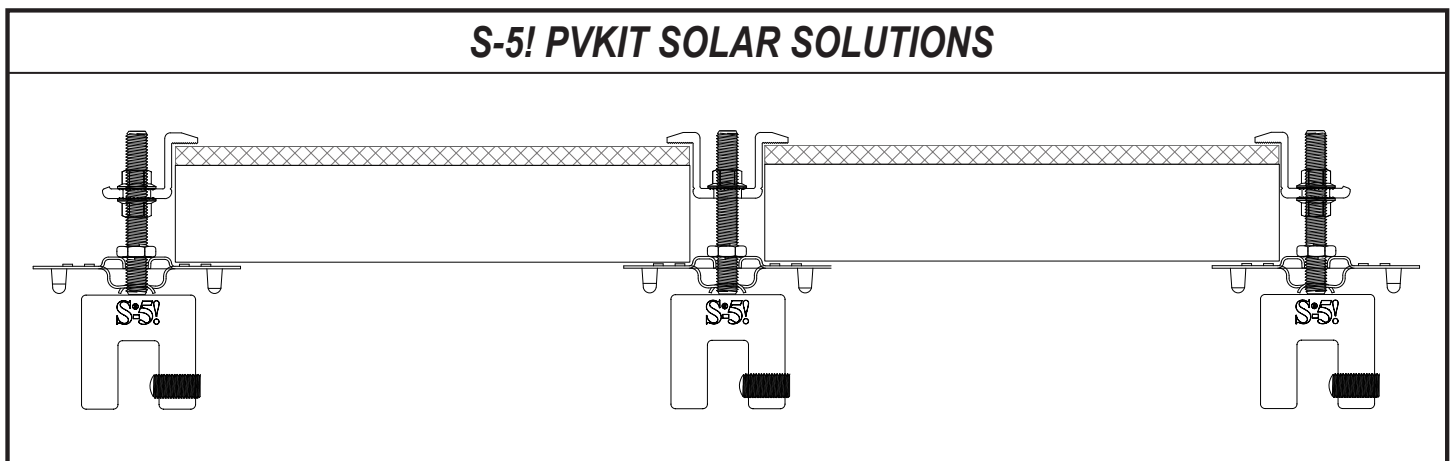


Fig. 10



Custom Roof Vents

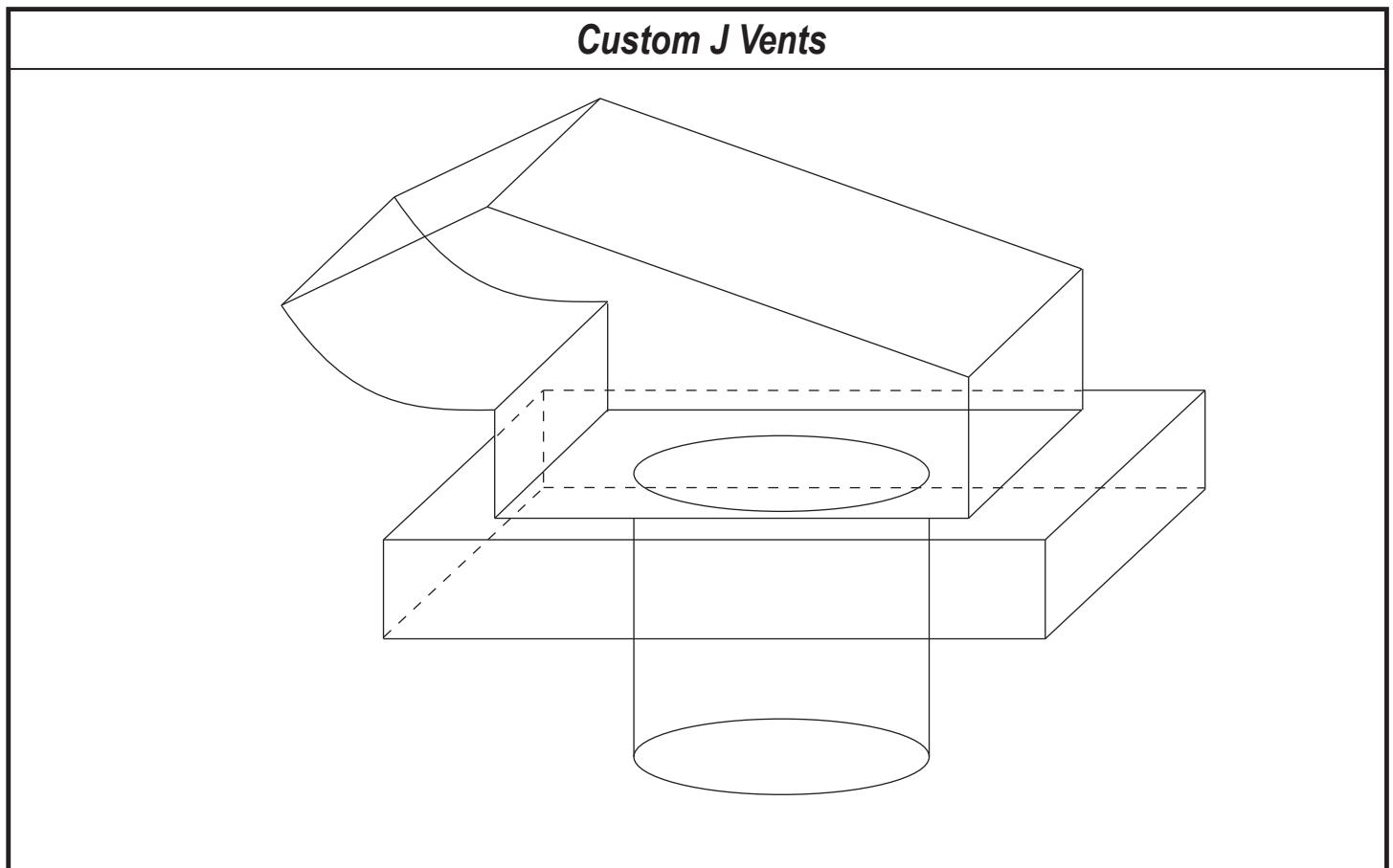
CAPABILITIES

Bryer supplies custom roof vents, often called J or Gravity vents (Figure 11). These vents are similar to the standard mass produced vents available in the marketplace except they are fabricated out of matching Kynar painted material to seamlessly blend in with your roof panels. All dimensions are customizable to fit project specific requirements. They can be configured for general attic ventilation or pipe for exhaust, including a damper to prevent back draft. Optional bug screens can also be incorporated.

INSTALLATION

Vents can be constructed with a basic fastening flange at the base, however Bryer recommends a curb type mount. This requires a basic 2x6 curb construction with the vent flashed similar to a skylight. See page 34 & 35 for specific details and installation instructions.

Fig. 11



Custom Flashing

CAPABILITIES

Bryer has extensive capabilities for custom fabricated flashing and components. Project specific fascia wraps, chimney caps, louvers and gutters are all possible. In addition, we can provide custom fabricated saddles, diverters and curbs from soldered stainless or welded aluminum.

Submit your drawing with quantities, dimensions and materials and a Bryer distributor will quote your custom flashing package within a day or two. Please note that additional lead times are required when producing custom materials. In addition, no returns can be made on any custom produced item.

Customer:		Job Name:	
LF/Pcs:		LF/Pcs:	
Gauge:		Gauge:	
Color:		Color:	
Stretch Out:		Stretch Out:	
Roof Pitch:		Roof Pitch:	
Description:		Description:	
LF/Pcs:		LF/Pcs:	
Gauge:		Gauge:	
Color:		Color:	
Stretch Out:		Stretch Out:	
Roof Pitch:		Roof Pitch:	
Description:		Description:	





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