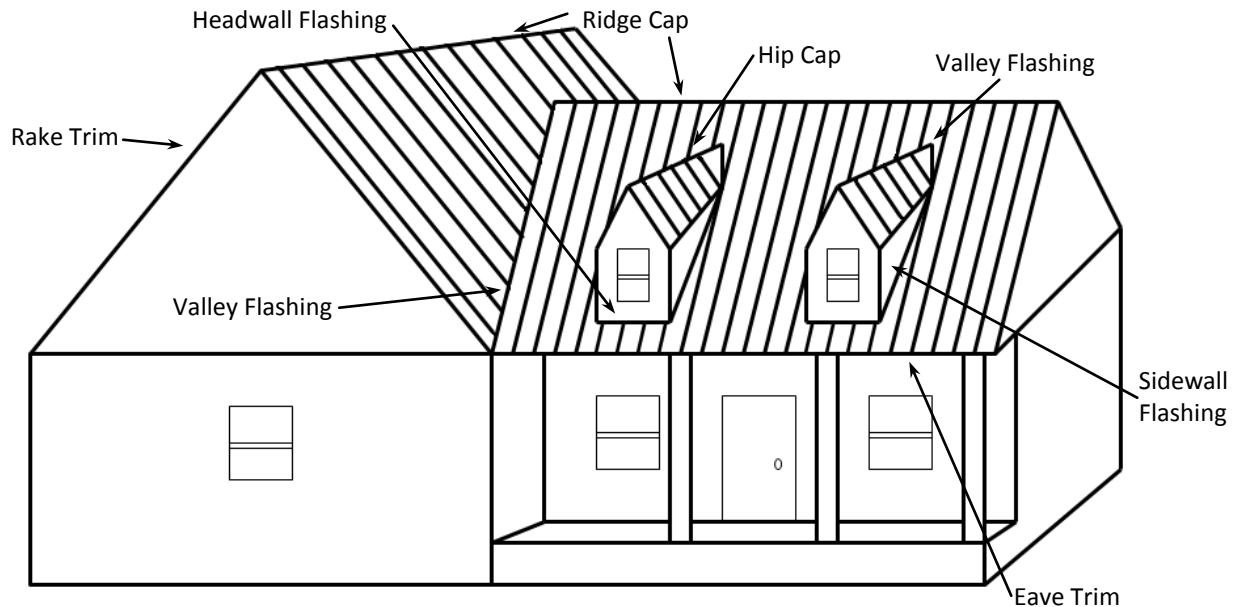


American Roofing Products - Standing Seam

Basic Home Roof Installation Guide and Information

Installation Notes

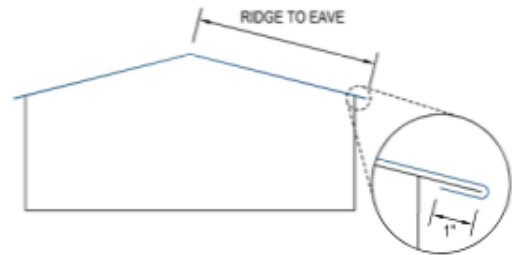


American Roofing Products' standing seam panels should be installed over a solid substrate. A 5/8" minimum plywood thickness is recommended. For effective water shedding, the roof slope should be 3:12 or greater. American Roofing recommends installing underlayment over the entire roof.

Ensure Correct Panel Lengths

Using extended eave trim adds to the required panel length. Order panels 1" longer than the distance from the ridge to the edge of the extended eave trim, as shown.

This adds a total of 2-1/2" to the panel length.

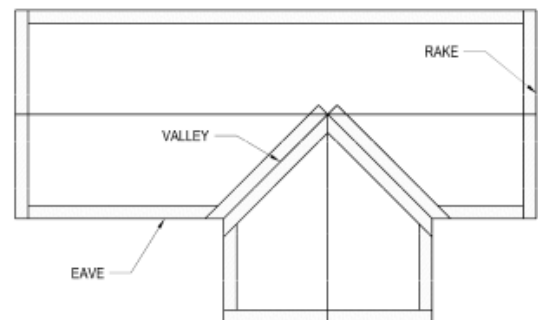


Install Underlayment

American Roofing Products recommends a synthetic felt underlayment.

Install Initial Trim Pieces

Prior to panel installation, carefully review the trim details. Eave, valley and cleat trims are typically installed before the panels.



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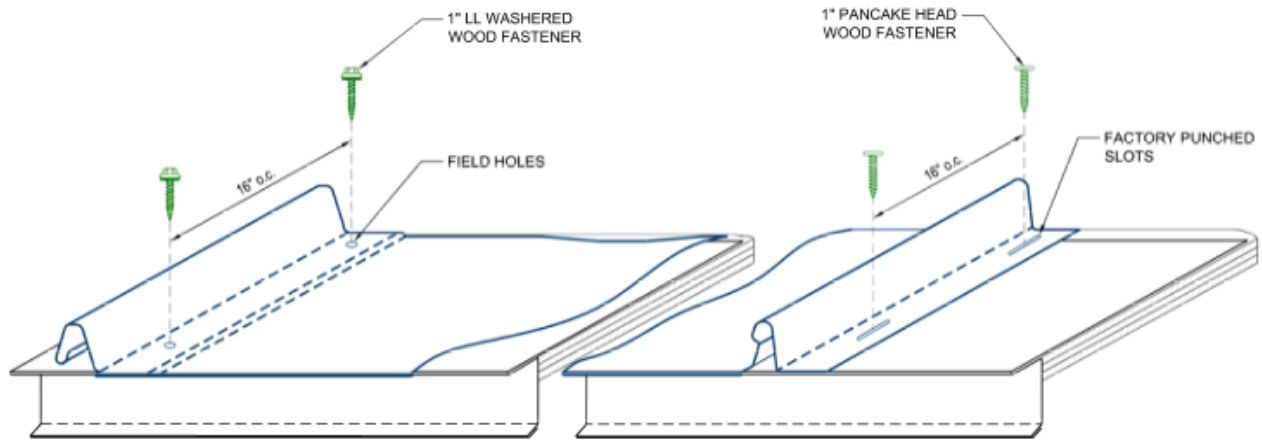


American Roofing Products - Standing Seam

Installation Notes - Nail Flange

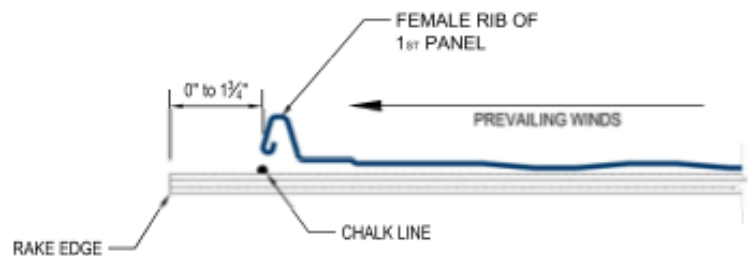
Attachment Patterns

The spacing of the flange slot fasteners will depend upon local code, wind and load conditions. In a typical installation, the fastener spacing is 16" o.c., as shown below.



Establish Starting Point

Create an alignment line (chalk line) on the side of the roof opposite the prevailing wind direction. This line should be perpendicular to the eave, and American Roofing Products recommends that this line be 1/4" from the rake edge of the roof.

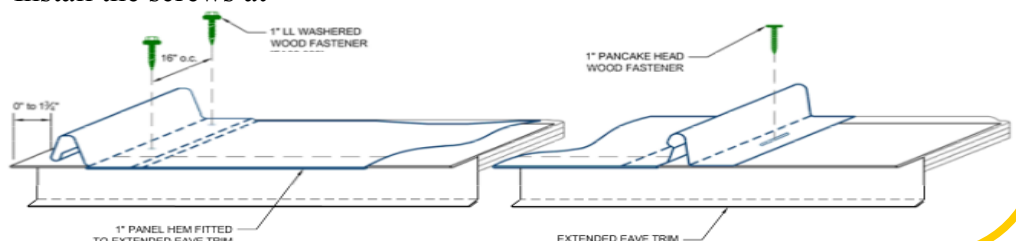
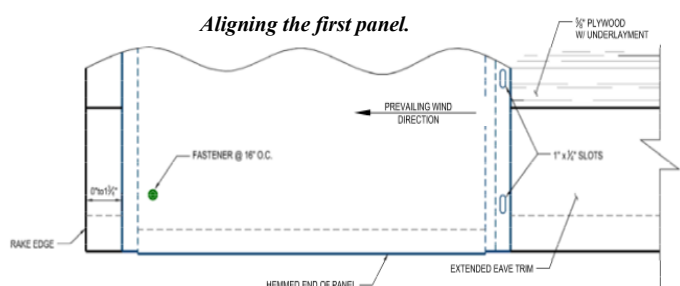


Install First Panel

Align the female edge of the first panel with the chalk line, as shown in the diagram.

Install the panel perpendicular to the eave, as shown. The panel should overhang the extended eave trim to allow for hemming.

Using 1" washed wood fasteners, attach the rake edge to the sheathing. Install the screws at 16" on center.



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American Roofing Products - Standing Seam

Installation Notes - Nail Flange Continued

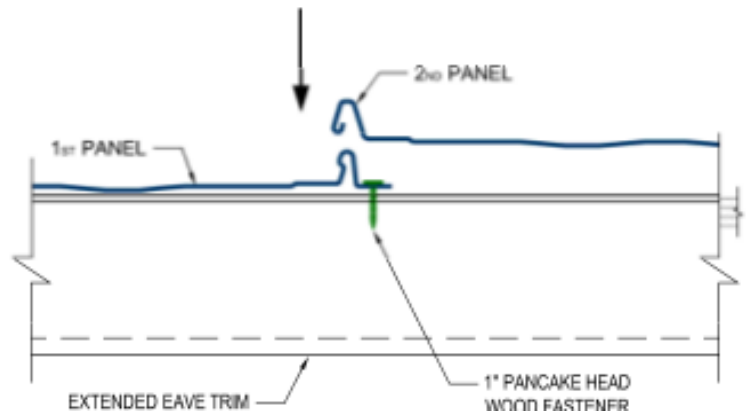
Install Additional Panels

Align additional panel's female edges with the male edge on the previous panel. The panels should be flush with each other and extend over the eave by 1".

Overtightening of the screws may restrict expansion and contraction and cause panel distortion.

Using gentle pressure, push down on the female edge, compress, and snap the panels together at the seam.

Continue to install panels in this fashion across the roof until you reach the opposite rake.



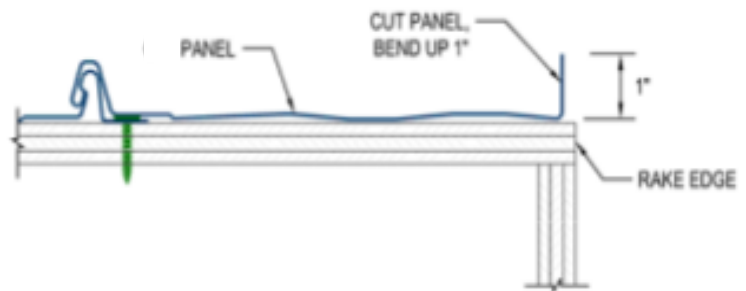
Install The Last Panel

The last panel should not extend past the rake edge of the roof deck. If it does, measure the remaining distance, add one inch and then cut the panel to that width.

American Roofing Products recommends shears only for cutting panel. Cutting panels or trim with electric saws has a tendency to produce extremely hot metal particles that can burn paint surfaces or leave rust marks on panels and trim.

The extra 1" width is then bent with a hand folder to form a rib.

Use washered screws to secure the panel along this fold, as was done on the opposite rake edge.



The drawings and information contained in this manual are strictly for illustrative purposes and are intended to be a general guide concerning the installation and use of the American Roofing Products (ARP) and its associated trims and accessories. All projects should conform to applicable building codes for a given geography or jurisdiction. ARP recommends following standard industry practices, building regulations, and the demands of the local authority having jurisdiction.

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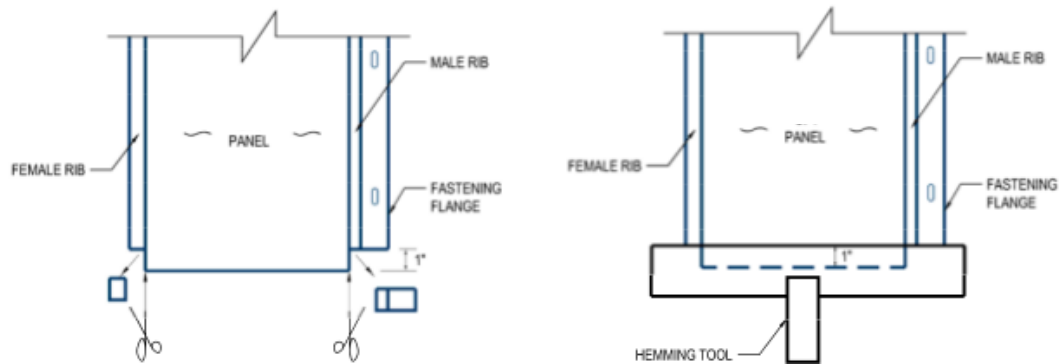
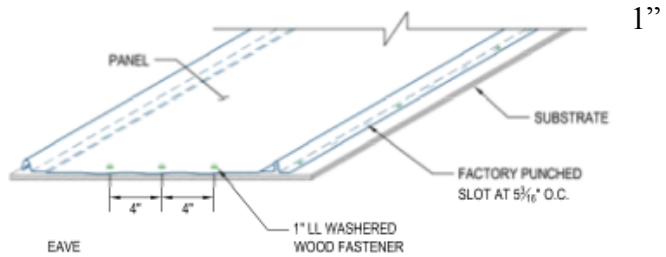
American Roofing Products - Standing Seam

Installation Notes - Nail Flange Continued

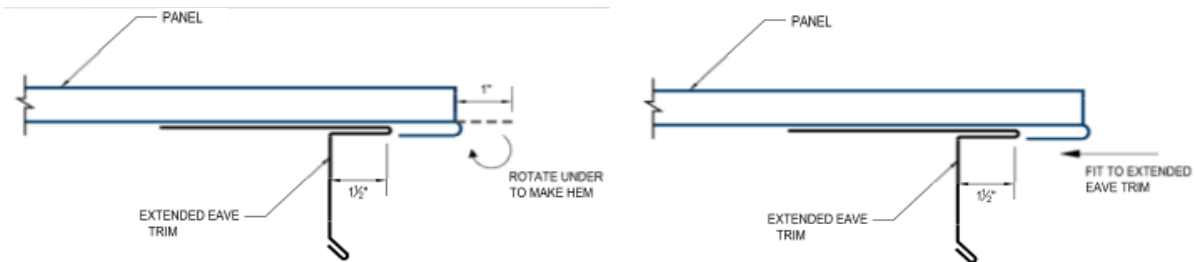
Terminating the Panel at the Eave

If using exposed fasteners at the eave, use washered screws along a line 3" up from the eave edge and 4" apart.

If using concealed fasteners, the panel will need to be hemmed to fit onto the extended eave trim.



Cut through the male and female ribs 1" up from the panel end. Place a hemming tool over the 1" panel horizontal tabs. Bend the panel down and under 180°. Use the overhang lip on the drip edge trim to secure the panel in place at the eave.

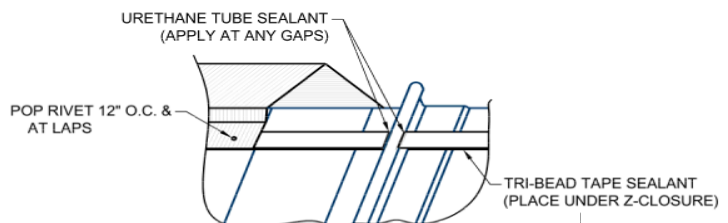


Ridge Caps (install ridge caps after rake trim and panels)

Select a ridge cap and a fastener method (exposed or concealed).

Install z-closures for non-vented ridges, or vent retainers for vented ridges.

Ridge caps should overlap at least 6". In high wind areas or to comply with local codes, pop rivets may need to be installed at a closer spacing.



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American Roofing Products - Standing Seam

Installation Notes - Nail Flange Continued

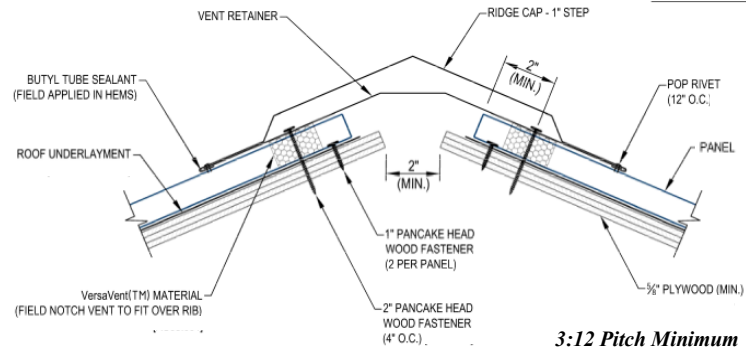
Ridge Cap - Vented Stepped Cap

Place vent material on the panel at the ridge. Place the vent retainer cleat over the vent material.

Along each side of the ridge, pre-drill and drive a #10x2" pancake head screw through the offset cleat, vent and into the deck below.

Fill the hem of the ridge cap with tube sealant and fit both sides of the open hem ridge cap onto the offset cleats.

Secure with color matching pop rivets.

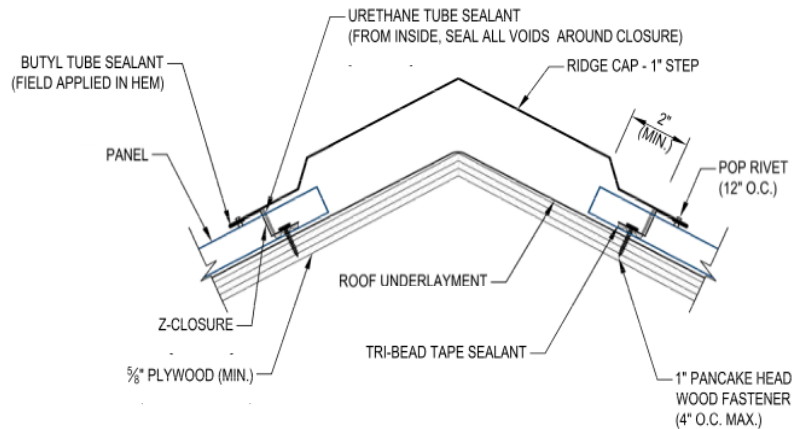


Ridge Cap - Stepped Cap (Non-Vented)

For a Concealed Fastener Ridge Cap, first install the z-closure so that the z-closure will engage the open hem of the ridge cap.

Position the z-closures so that they line up across the roof and fully engage the open hem of the of the ridge cap on both sides for the entire length of the ridge.

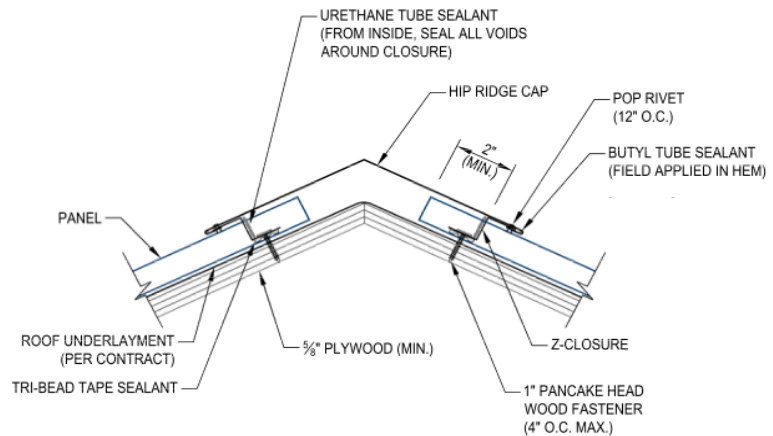
Fit the ridge cap to the z-closure and fasten with pop rivets 12" o.c.



Hip Cap

Hip caps being installed with concealed fasteners can be installed with the instructions as non-vented ridge caps

Overlap hip flashing a minimum of three inches.



American Roofing Products - Standing Seam

Installation Notes - Nail Flange Continued

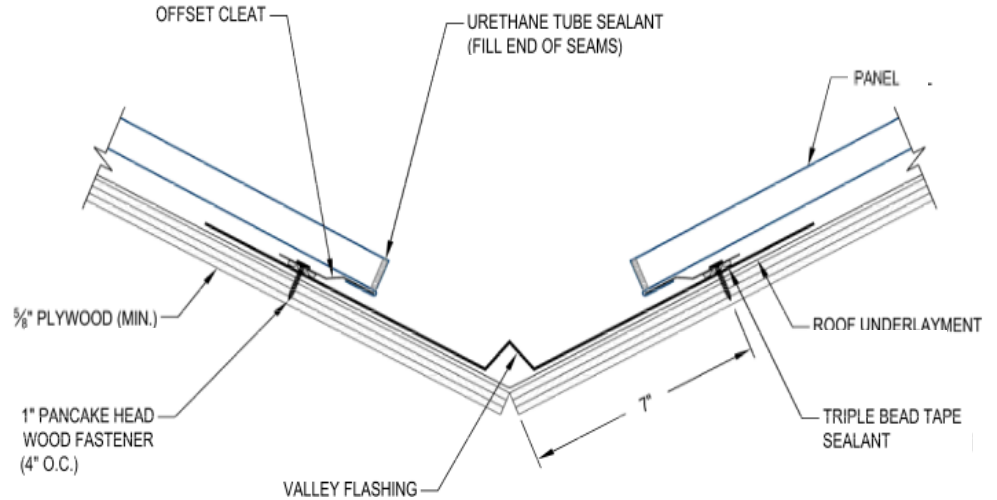
Valley (install Valley prior to installing panel)

American Roofing Products recommends installing additional 36" wide underlayment on the valley centerline, with 18" extending on each side of the center.

Place the valley trim at the eave with 1" overhang.

Lap valley trim pieces a minimum of 6", sealing each lap.

On each side of the valley, apply a continuous strip of butyl tape sealant parallel to the valley, 7" from the valley center.



Install the offset cleat with the 1½" leg centered over the tape sealant and the 1" leg towards the valley. Attach the cleat with 1" pancake screws at 4" o.c.

Cut the panels allowing extra length for hemming, typically 1". Refer to terminating the panel at the eave for instructions on folding the panel under the cleat trim.

Seal the panel end and ribs with urethane tube sealant.

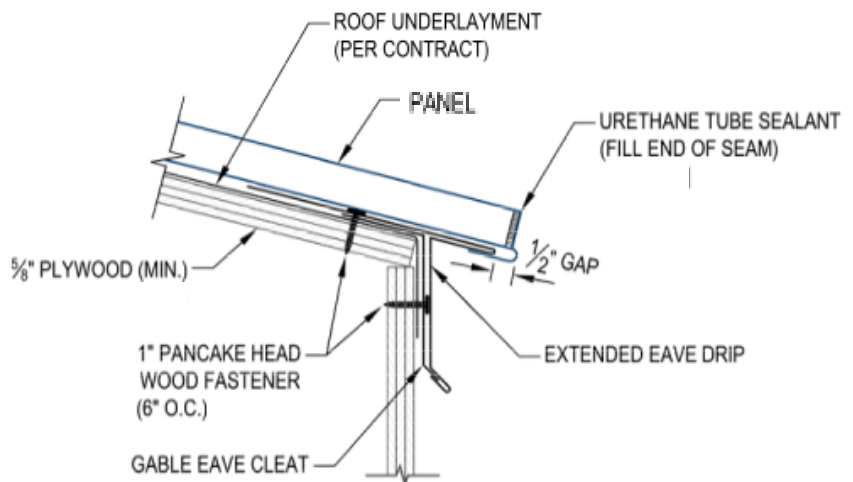
Eave - Floating Eave (install eave trim prior to installing panel)

Install the wall side cleat with pancake screws.

Install the eave trim over the cleat with the special open hem of the eave trim engaging the cleat.

Attach the eave trim to the roof substrate using pancake screws.

Use pop rivets as necessary.



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Installation Notes - Nail Flange Continued

High Eave

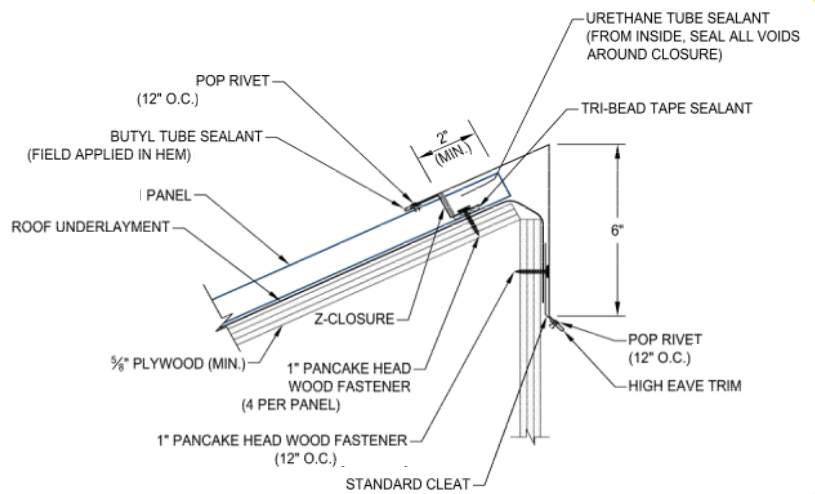
Install z-closures between panel ribs.

Install standard cleats at the vertical wall using pancake head wood fasteners.

Apply sealant to the top of the z-closure.

Fit high eave trim over the peak, engaging the cleat.

Attach high eave trim to the z-closure using pop rivets 12" o.c.



Fixed Rake Trim (install after panel, prior to ridge caps)

Place butyl tape along the rake trim's roof flange.

Install the z-closure on the top of the butyl tape using 1" pancake head fasteners.

Install the standard cleat using 1" pancake head fasteners.

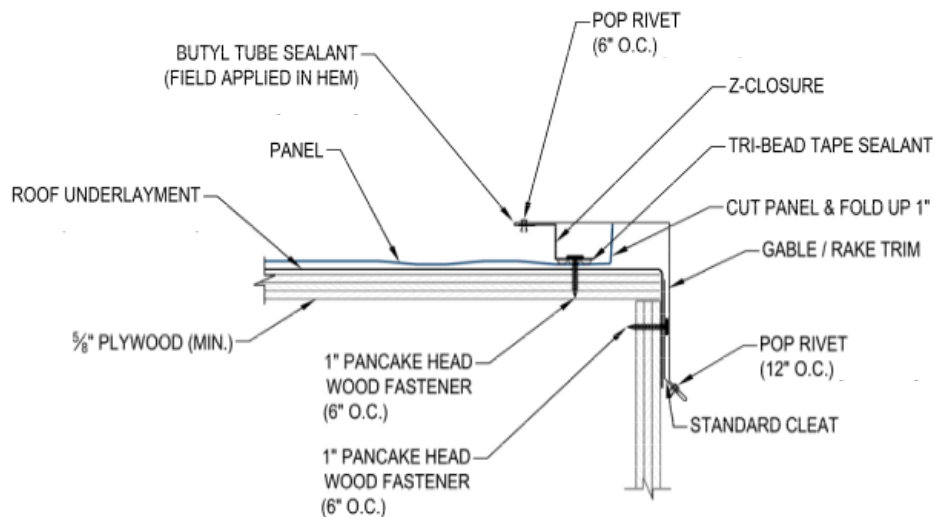
Beginning at the low end of the roof, install the rake trim by engaging the z-closure and cleat in the rake trim hems.

Secure the rake trim using pop rivets at 6" o.c. Work up towards the peak with each upper piece overlapping the piece below. Lap the rake trim at least 3", hooking the hem

Miter cut and seal the rake trim at the peak to join each side at the ridge.

Cut and fold the trim at the eave.

Seal between the eave and the rake and fasten using pop rivets.



American Roofing Products - Standing Seam

Installation Notes - Nail Flange Continued

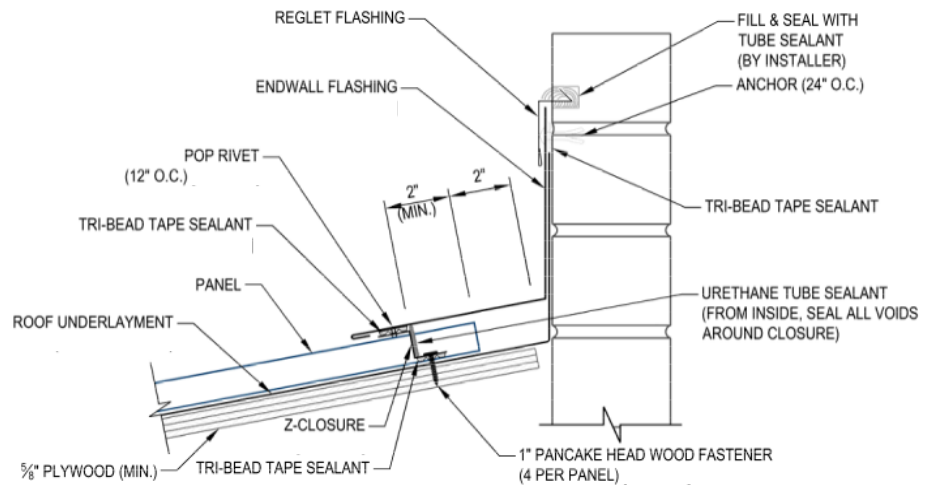
Fixed Headwall

Install z-closures between panel ribs. Apply sealant to the top of the z-closure.

Place endwall flashing at the roof-wall intersection.

Attach the endwall flashing to the vertical wall using masonry anchors at 24" o.c. Attach the endwall flashing to the z-closure using pop rivets.

Install reglet above endwall flashing.



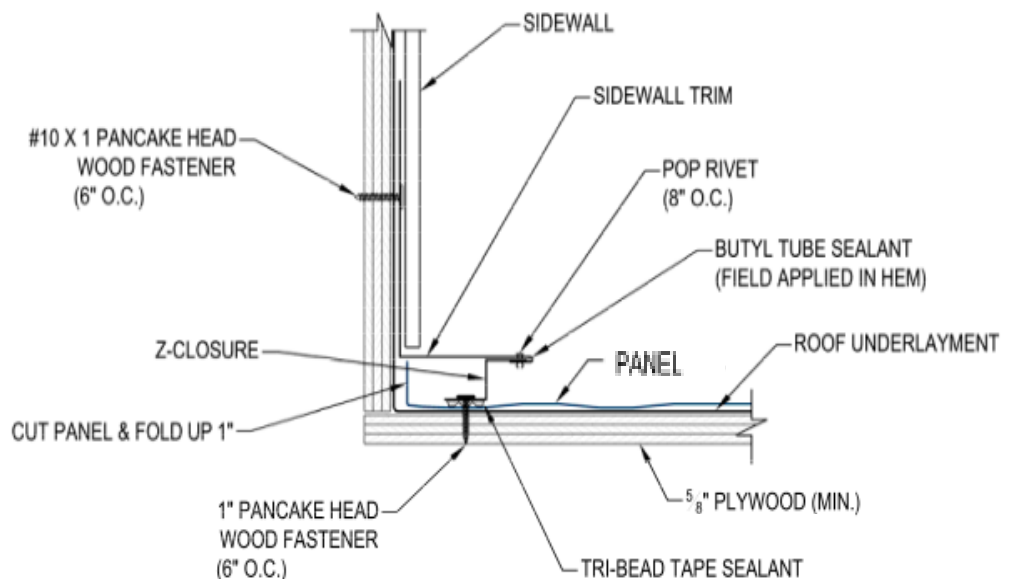
Fixed Sidewall

Lap underlayment up the sidewall at least 6".

If the panel ends off-module, cut the panel and fold up 1" as you would for a rake detail.

Place tape sealant and install z-closure with 1" pancake head fasteners at 6" o.c.

Apply butyl tube sealant in the open hem of the sidewall trim, and fit the trim onto the z-closure with the long let extending up the wall.



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Installation Notes - Nail Flange Continued

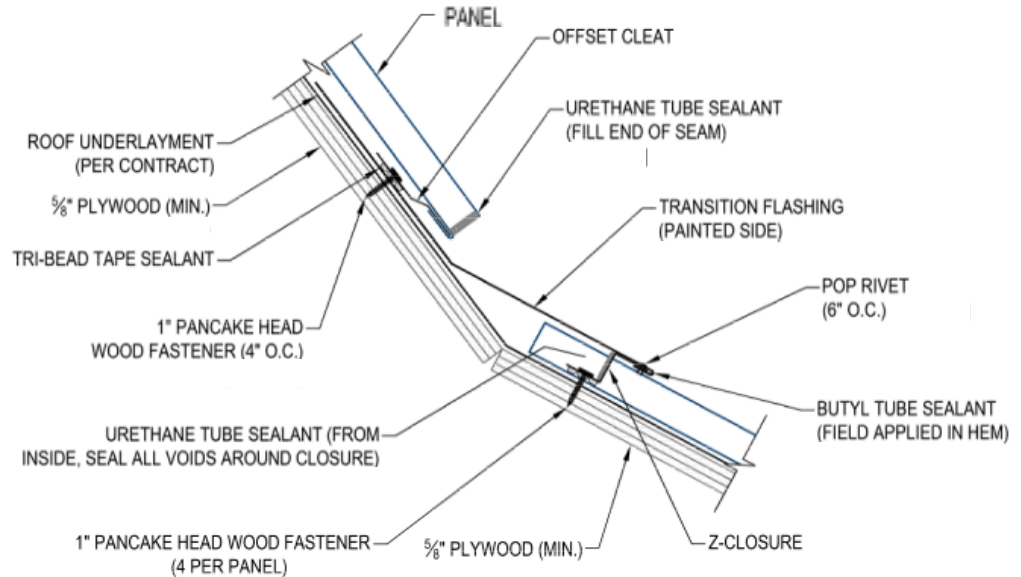
Transition - installs over lower roof panel.

Install additional underlayment at transition location.

Install z-closure on the lower roof panel.

Field apply butyl tube sealant to the open hem of the transition flashing and fit the open hem onto the z-closure.

Place butyl tape and install the offset cleat through the upper leg of the transition flashing with a pancake head screw.



Hem the low end of the upper panel to engage the offset cleat and fasten the upper panel in place. Seal the ends of the panel ribs.

Washed Self-Dri (flashing)

- 1/4" - 14 x 7/8"
- Integrated washer
- #1 Point
- 5/16" Hex drive
- Long life



Screws and rivets most commonly used on Standing Seam applications.

Pancake Head Wood Fastener (low profile attachment to wood deck)

- #10-12 x 1"
- A Point
- #2 Phillips Drive
- Corrosion resistant coating
- Not for use in exposed conditions



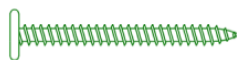
Washed Wood Fas (panel to wood)

- #10 x 1" wood
- Integrated washer
- A Point
- 5/16" Hex drive
- Long life



Pancake Head Wood Fastener (low profile attachment to wood deck)

- #10-12 x 2"
- A Point
- #2 Phillips Drive
- Corrosion resistant coating
- Not for use in exposed conditions



Pop Rivet (light gauge metal, blind rivet)

- 1/8" x 0.337"
- Stainless steel
- Painted head

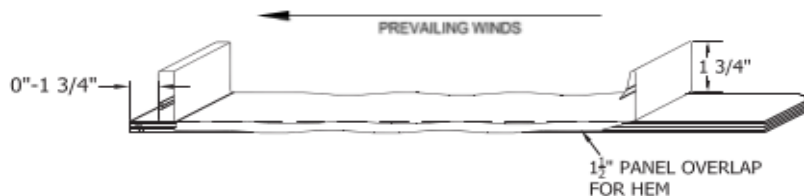


American Roofing Products - Standing Seam

Installation Notes - Clip Attached

Establish Starting Point

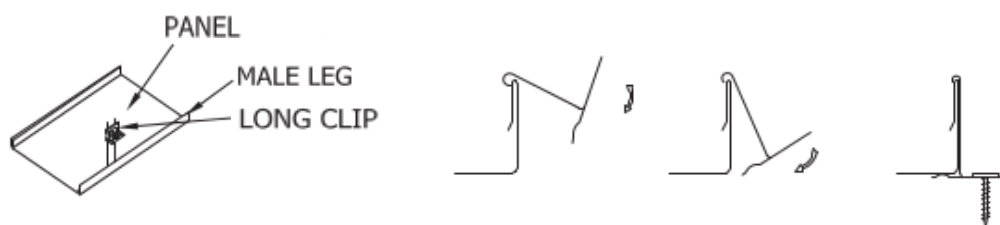
Create an alignment line (chalk line) on the side of the roof opposite the prevailing wind direction. This line should be perpendicular to the eave, and American Roofing Products recommends that this line be $1/4''$ from the rake edge of the roof.



Attachment Patterns of Clips

When it is determined that the panel is properly aligned, attach the rake edge to the roof with $1 1/2''$ painted washered woodgrip screws. Install clips on the underlap rib side of the panel with two 1" pancake head screws per clip 48" o.c.

Install clips at 24" o.c. at the ridge, rake, eave, hip and other higher wind load locations. Special care has to be taken to direct the expansion and contraction in the direction desired.



Ensure local codes are being followed.

Additional Panels

Align the second hemmed panel female edge with the male edge on the installed panel. The panels should be flush with each other and extend over the eave trim by $1 1/2''$.

Push down on the female edge, compress and snap the panels together at the seam. Snap the panels together from the eave towards the ridge.

Install clips on the second panel consistent with the clip positioning and spacing that was determined to be suitable for the first panel. Continue to apply panels across the roof.

When the panel installation process has reached the end of the roof, if it doesn't work out that there is a rib along the edge, then measure the remaining distance, add $1 3/4''$ and cut the panel to that length. The extra $1 3/4''$ is then bent up with a hand seamer to form a rib. Fasten the panel with washered screws as described above.



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American Roofing Products - Standing Seam

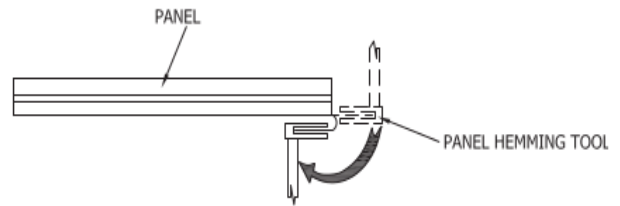
Installation Notes - Clip Attached

Eave Termination over Drip Edge Trim (Optional)

Clip attached standing seam may be terminated at the eave in either fashion previously described under the nail flange installation notes.

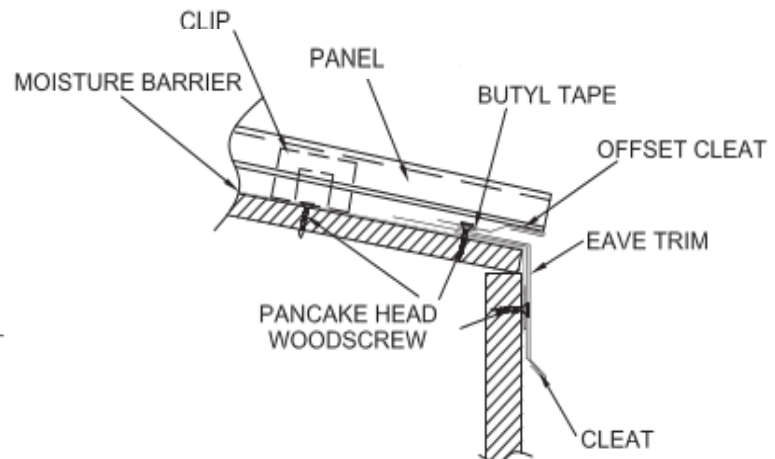
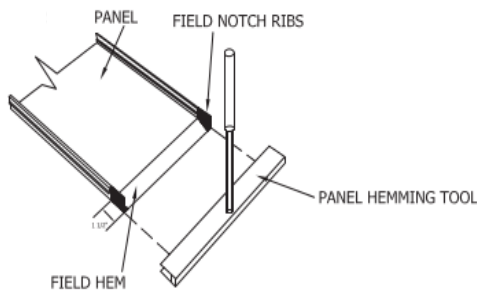
An alternative is hemming the panel to fold under offset cleats (installed prior to panels). When using drip edge and offset cleats to terminate the eave, the panels must be ordered 1½" longer to accommodate the extra length need to hem the panel for engagement into the offset cleat.

Cut through the male and female ribs 1½" up from the panel end as illustrated. Using a panel hemming tool, bend the panel down and under 180°.



Lift the panel onto the roof, slide the hem onto the cleat trim (previously installed).

Snap the panel down and begin installing the clips.



Eave Drip Edge - (install eave trim prior to installing panel)

This is an alternative to extended drip edge as described in the nail flange installation notes.

To accomplish this finish, install an offset cleat on the roof deck with a 1" pancake screw, hem the panel and place sealant inside the hem.

Fully engage the cleat into the hem and fully caulk the open ribs on the panel.

Duckbill pliers may be used to tighten the panel edge onto the drip edge.

The diagrams above illustrate this method.



American Roofing Products - Standing Seam

Installation Notes - Clip Attached

Gable Trim

Gable trim may be installed with exposed fasteners or concealed fasteners.

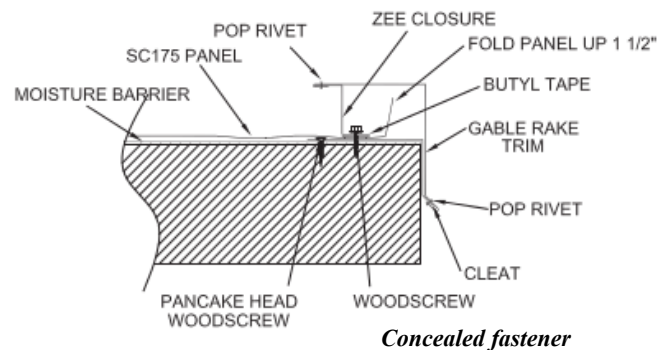
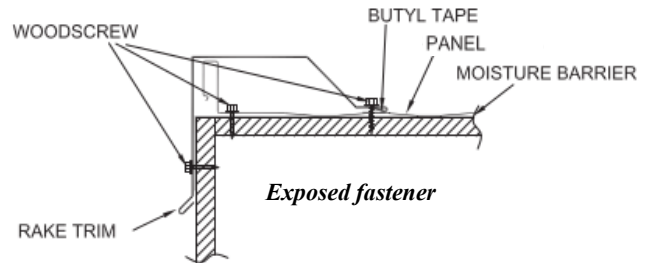
For exposed fastener step gable trim, place butyl tape along the gable trim roof flange. Install the trim over the rib. Fasten using 1½” painted washered woodgrip screws at a distance from each other of 12” o.c. for both roof and wall side.

Caulk and lap the trim with at least 3” hooking the hem. Cut and fold the trim at the eave to seal the end.

For concealed fastener gable installation, first install the gable eave cleat. The cleat is installed the full length of the rake.

Then install the butyl tape on the roof under the z-trim. The z-trim should fit into the gable roof side open hem.

Install the cleat with 1” pancake screws approximately 18” apart. Install the z-trim with 1” painted washered screws. Once the open hem has been fitted onto the cleat and the z-trim, finish the installation with painted pop rivets installed 4” o.c. through the hem/cleats and at joints.



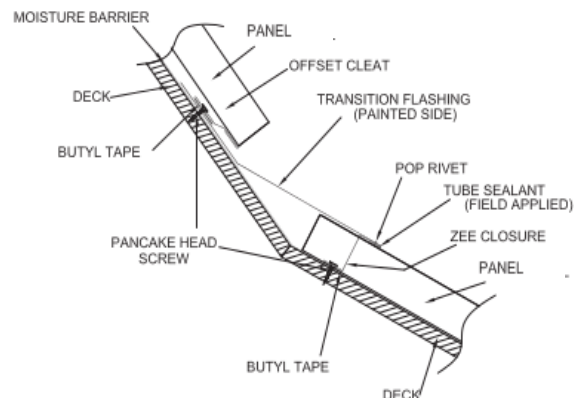
Transition Flashing (transitions are placed over lower

Local codes on ice and/or water shield vary. Follow all local code requirements.

Install lower roof panels. Apply butyl tape onto the lower roof panel between the ribs at 1” from the pitch change end.

Cut z-closure to fit between the panel ribs and install over the butyl tape with a wood screw. Caulk gaps between the z-closures and ribs. Apply sealant to the open hem of the transition flashing and fit the open hem onto the z-closure. Install the offset cleat onto the pitch change with a pancake head screw.

Hem the upper panel end. Apply sealant to the inside of the hem and engage the offset cleat and fasten and caulk the upper panel in place.



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Installation Notes - Clip Attached

Sidewall and Endwall

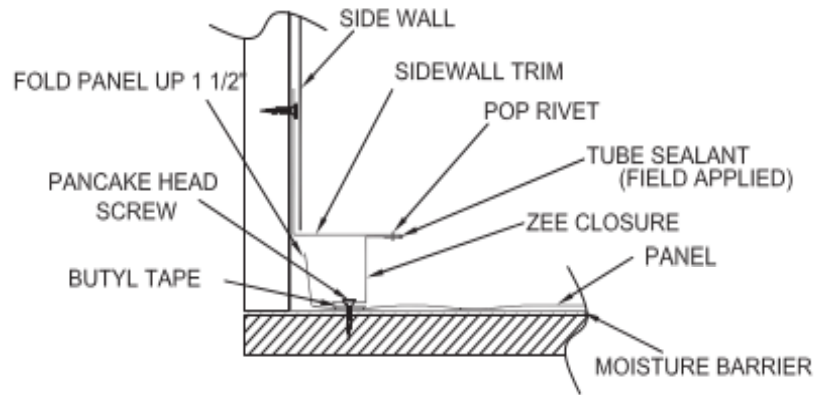
Install the z-closure on top of the panel, using butyl tape along the entire length. Be sure to caulk where any trim pieces lap. Position the z-closure so that the open hem of the horizontal leg of the sidewall will fully engage the z-closure.

Position the vertical leg of the sidewall trim under the sidewall so that the horizontal leg of the sidewall trim is resting on the z closure. Engage the open hem into the z-closure and pop rivet 4' o.c.

For endwall installation, the z-closures will need to be cut to fit snugly between the panel ribs. Install z-closures with butyl tape under them for their entire length. Caulk the sides of the z-closures where they meet the panel.

Apply butyl tape to the topside of the endwall for the full length of the endwall so that the underside of the upper panel is sealed.

Caulk the upper roof panel ribs that are on the endwall.



Washed Self-Dri (flashing)

- 1/4" - 14 x 7/8"
- Integrated washer
- #1 Point
- 5/16" Hex drive
- Long life



Screws and rivets most commonly used on Standing Seam applications.

Pancake Head Wood Fastener

- (low profile attachment to wood deck)
- #10-12 x 1"
 - A Point
 - #2 Phillips Drive
 - Corrosion resistant coating
 - Not for use in exposed conditions



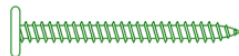
Washed Wood Fas (panel to wood)

- #10 x 1" wood
- Integrated washer
- A Point
- 5/16" Hex drive
- Long life



Pancake Head Wood Fastener

- (low profile attachment to wood deck)
- #10-12 x 2"
 - A Point
 - #2 Phillips Drive
 - Corrosion resistant coating
 - Not for use in exposed conditions



Pop Rivet (light gauge metal, blind rivet)

- 1/8" x 0.337"
- Stainless steel
- Painted head



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