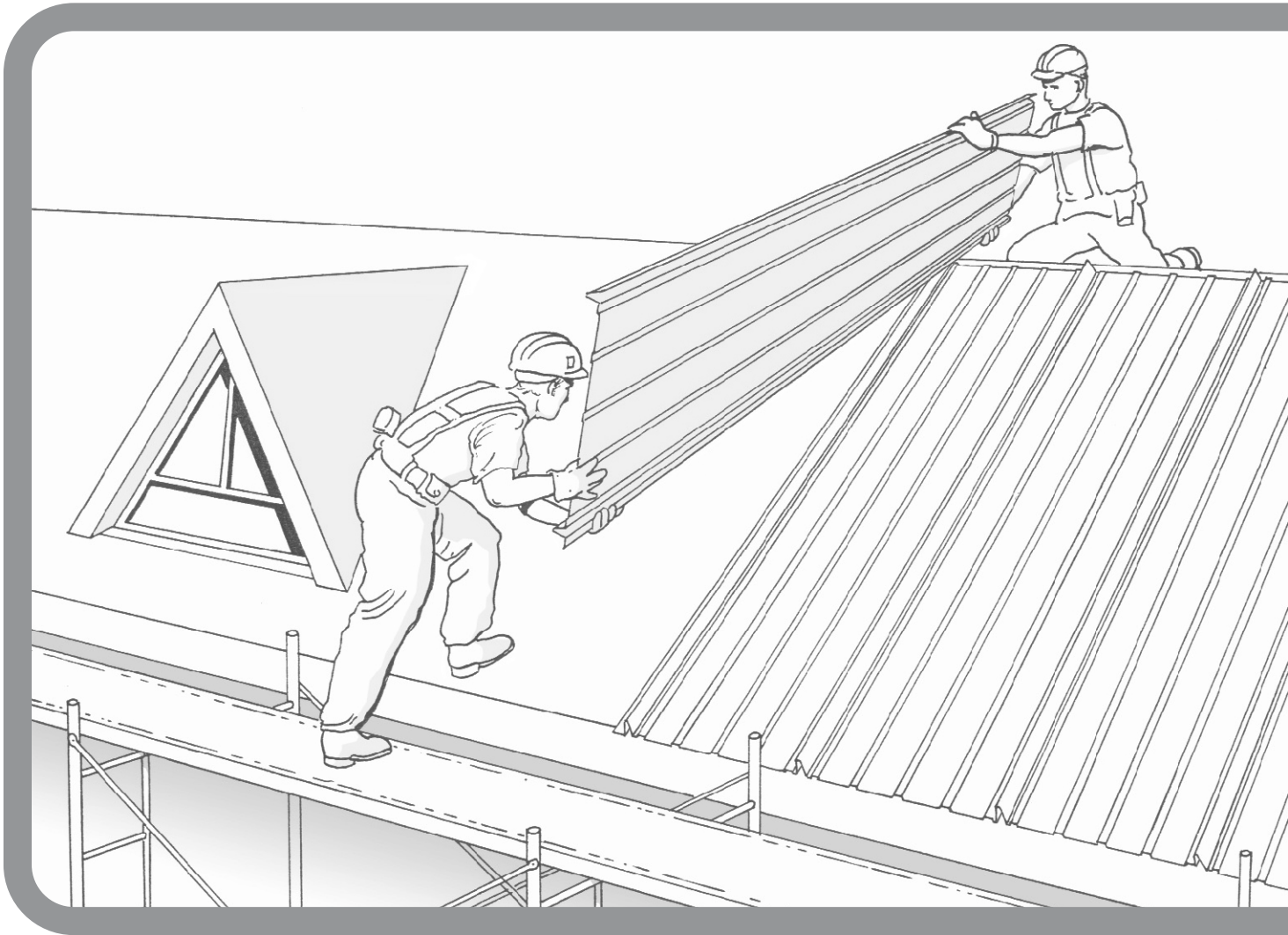
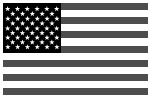


# INSTALLATION MANUAL

## The **HF-16** and **HF-20.25**

### STEEL ROOF PANELS



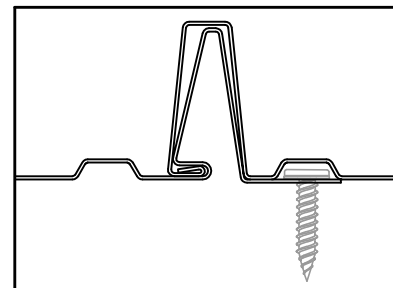
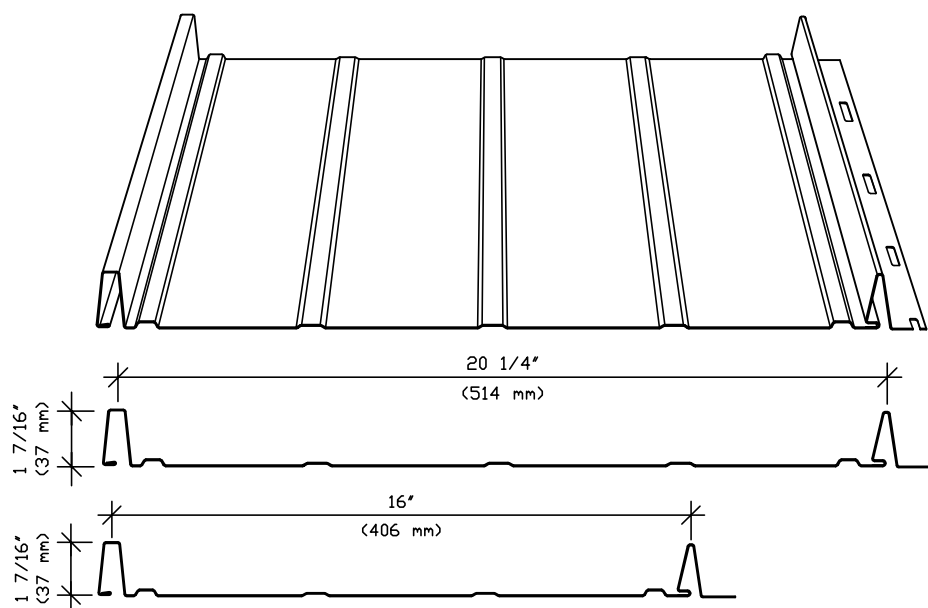
**USA**  
**MetalRoof.com**

USA Metal Roof LLC  
Tel. 201-293-9690, Fax 800-716-7639, E-mail: [office@usametalroof.com](mailto:office@usametalroof.com)  
[www.USAMetalRoof.com](http://www.USAMetalRoof.com)



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Canadian Patent # 1259466  
USA Patent # 4926608

## Hidden Fastener Steel Roof Panels

*Designed as a roofing panel for high end residential and commercial buildings, **Ideal Roofing's HF Series** steel roof panels brings back the rich traditional style and appearance of standing seam roofs without the need of clips and a seamer when installing.*

*The architecturally pleasing hidden fastener panel in 26 gauge (.021") and 24 gauge (.026") can be installed over a solid backing or over steel purlins (for the 28 gauge (.018") generally a solid backing is recommended), through slots with **Ideal Roofing's** specially designed fasteners, allowing the panel to move freely during expansion and contraction. (Consult our offices before installing over purlins).*

*This new product is fabricated with a state-of-the-art roll former and is offered in galvanized, galvalume or pre-painted steel. It is available in our proven top of the line 28, 26 and 24 gauge steel. Combined with the advanced **10,000 series** paint system with **Kynar 500** resin. This product is available in your choice of several attractive colors. The HF Series offers you the best steel panel product ever made to protect your roof while beautifying and adding true value to your residential and commercial buildings.*

## Storage

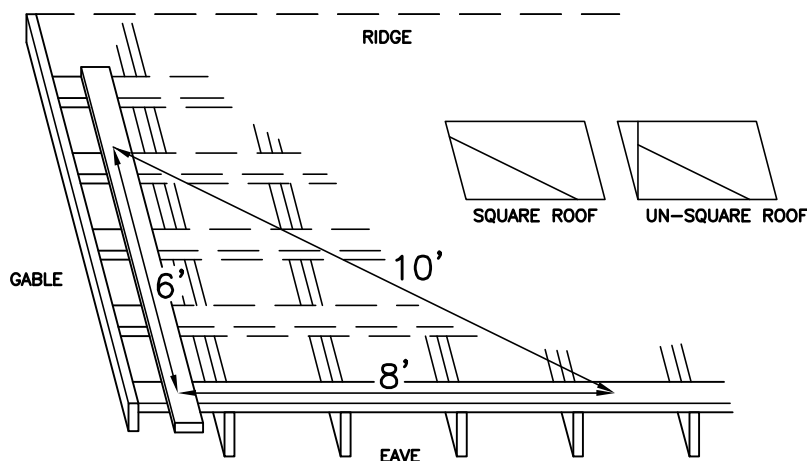
Moisture, condensation and wind driven rain can cause water stain, on stacked galvanized and pre-painted roofing and siding during storage.

- At reception of metal cladding, polyethylene wrapping must be taken off to avoid any condensation.
- Storage time could be minimized by installing the panels as soon as possible after delivery
- If cladding must be stored for an extended period, the ideal storage place is under a roof in a cool, dry well ventilated area.
- When outdoor storage is unavoidable, the following is recommended:
  1. Use good quality covers other than plastic, loosely shrouded over stacks and firmly anchored to prevent wind blow-off
  2. Tilt bundles for drainage
  3. Block bundles off the ground for effective ventilation and drainage
  4. Store away from chemically aggressive substances (e.g. salt, cement, fertilizer) and away from materials that could contaminate the surface (e.g. diesel, oil, paint, grease)

# Preparation

- Plan the installation and rearrange your site to receive the material in the appropriate locations.
- Check roof squareness. At the corner where an eave and gable meet, measure eight feet along the eave and mark. Then measure six feet up the gable edge from the eave and make another mark. Measure the distance between the two marks. If it is exactly ten feet, you have a square roof at that corner. Check all roof corners using this method.
- Each panel should cover 20 1/4" or 16" in width. Make sure that you check the total width of the installed panels as you go along. Do not stretch the panel side way to compensate for the lack of squareness of your roof.
- Check the **deflection** on your roof prior to installing the panels. Use a string between the top and the bottom of the truss and check for any **deflection**. Shim accordingly to receive the metal panels

**NOTE:** The following instructions assume that the roof is square. If the roof is not square, the sheet along the gable can be trimmed along its length to match. A gable flashing is used to reduce the visual impact of the trimmed sheet.



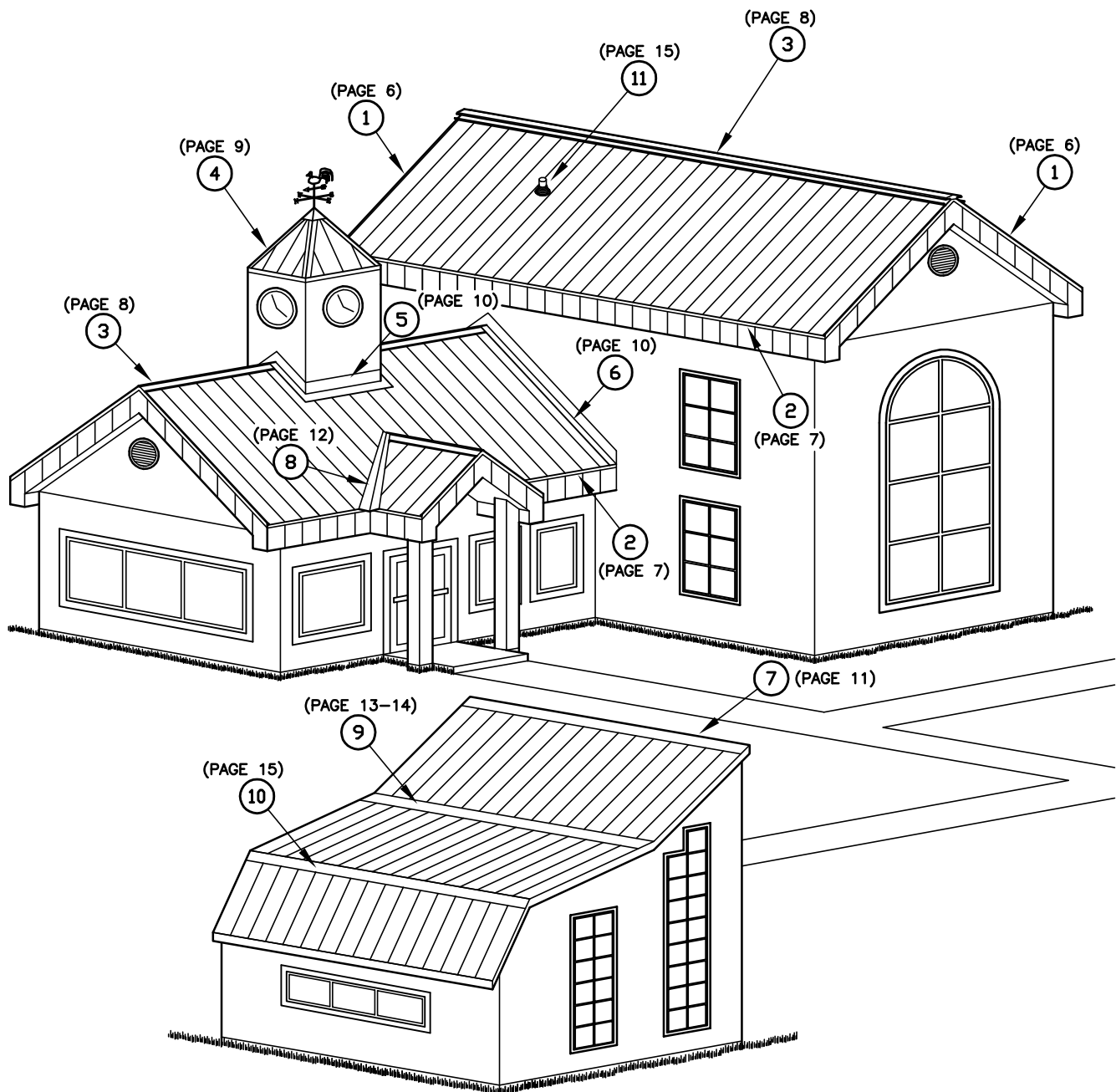
# Tools and Equipment

- *Electric screw gun with adjustable torque.*
- *Snips or nibblers .*
- *High speed disc cutter (hand power saw) is not recommended. If the tool must be used, cut only one sheet at a time, and make sure that the painted surface faces downward. Keep away from other sheets since the filings will damage the paint finish. Wipe off all metal filing from the surface of the sheets.*
- *Chalk line.*
- *Working gloves.*
- *Proper eye protection.*
- *Tape measure.*
- *String.*
- *Screw (nail) apron.*

# Important Notice

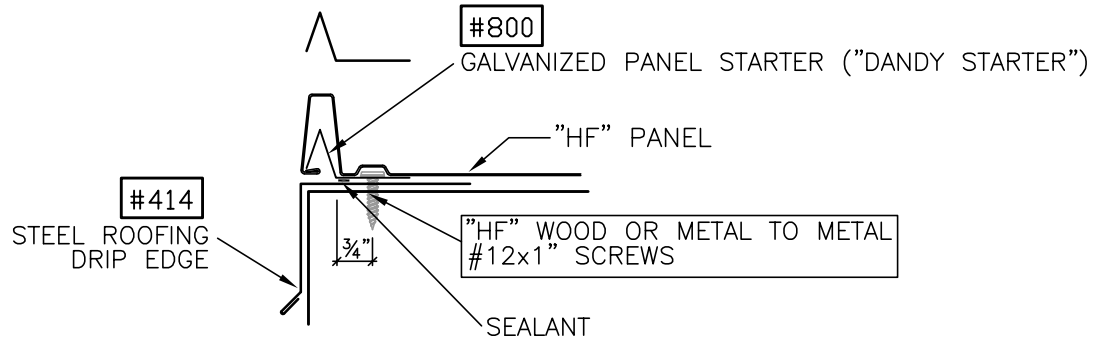
- *When installing the HF Panels, it is highly recommended not to over torque the flat head screws so the panel can expand and contract freely*
- *Due to the coating process, plain galvanized and galvalume steel panels may vary in their brightness and size of zinc spangles.*
- *When ordering pre-painted panels, it is always preferable to order all items of the same color at the same time to avoid slight color differences between batches.*
- *The material should be checked against the shipping list as soon as it is received. Any damage or shortage of material on the bill of lading should be noted and reported to the driver or to our offices immediately*
- ***Failing to apply any of the above instructions will result in total refusal for any claim to Ideal Roofing.***

# INSTALLATION DETAILS OVERVIEW

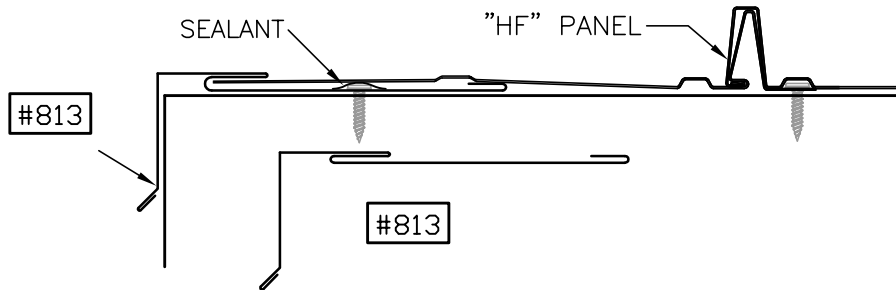


## 1.1 GABLE END DETAIL (first panel)

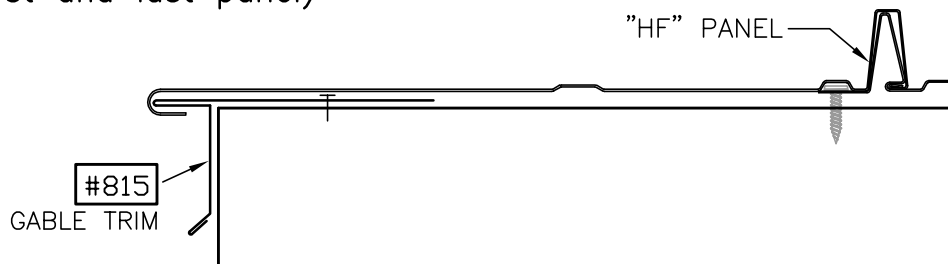
—INSTALL THE STEEL ROOFING DRIP EDGE #414. ALIGN GALVANIZED PANEL STARTER (W/SEALANT), ALSO KNOWN AS THE "DANDY STARTER", WITH THE EDGE OF THE ROOF AND FASTEN IN PLACE. THEN START WITH THE FIRST PANEL BY SNAPPING THE TWO TOGETHER.



## 1.2 GABLE END DETAIL (HIDDEN FASTENERS) (first and last panel)

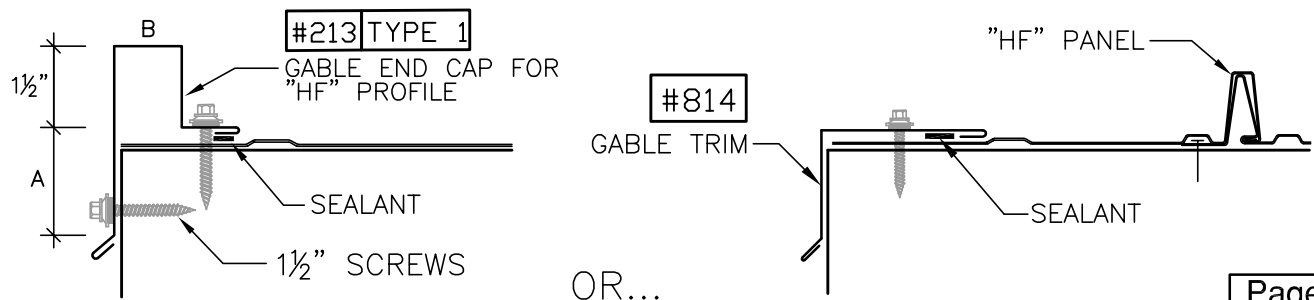


## 1.3 GABLE END DETAIL (HIDDEN FASTENERS) (first and last panel)



## 1.4 GABLE END DETAILS (EXPOSED FASTENERS) (first and last panel)

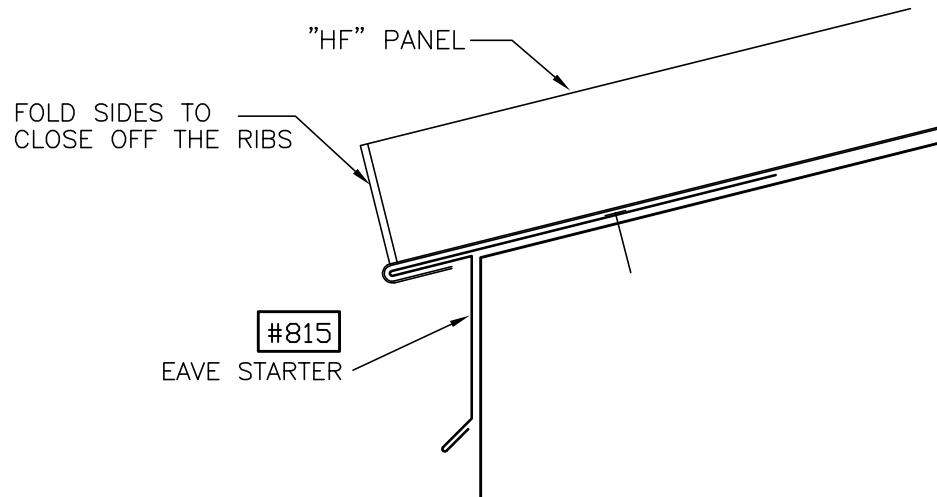
—INSTALL THE GABLE END TRIM #213 TYPE 1 OR GABLE TRIM #814 WITH A BEAD OF SEALANT OVER THE PANEL AND FASTEN TO SECURE. DIMENSIONS FOR THE GABLE END TRIM #213 TYPE1 SHOULD BE PROVIDED BY THE INSTALLER.



## 2.1 EAVE DETAIL (HIDDEN FASTENERS)

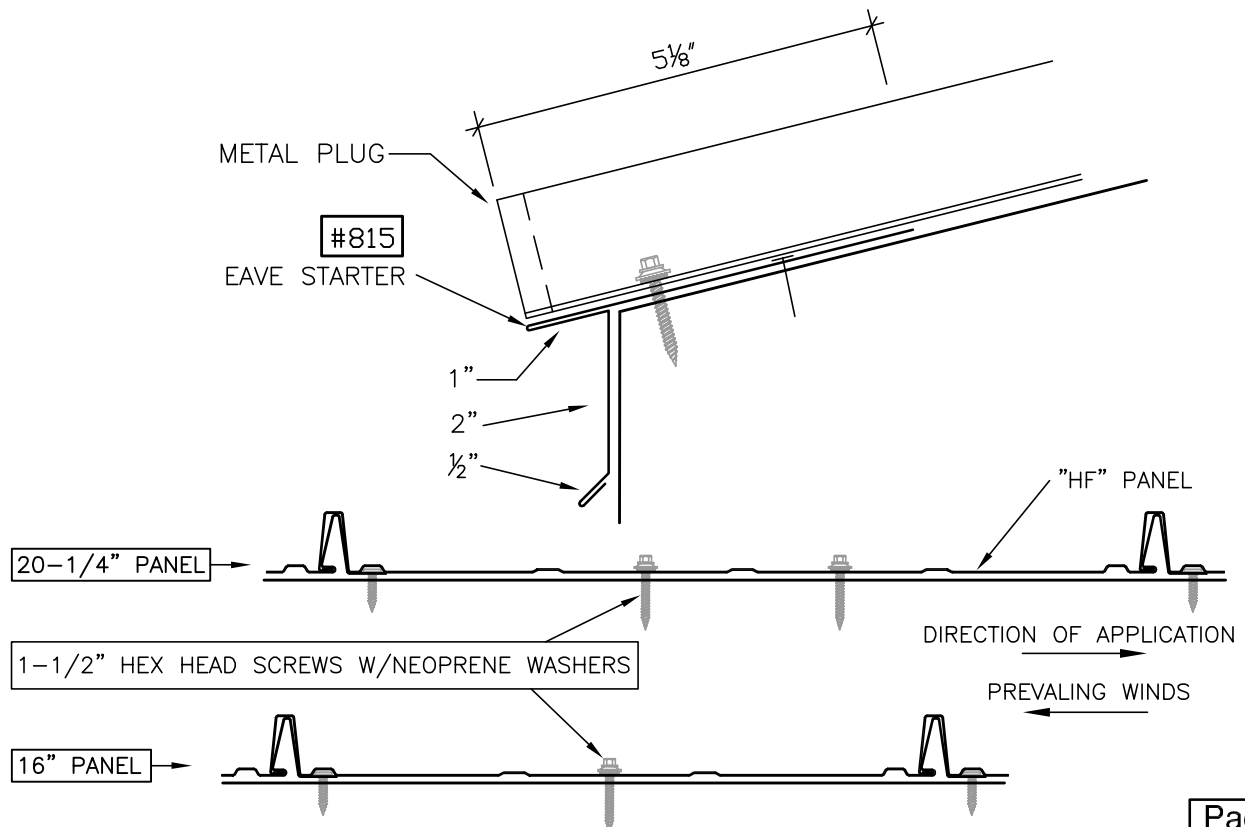
—ATTACH THE FOLDED EDGE\* OF THE PANEL TO THE STARTER.

\*(FOLDED EDGE OF THE PANEL SHOULD BE DONE ON SITE BY THE INSTALLER)



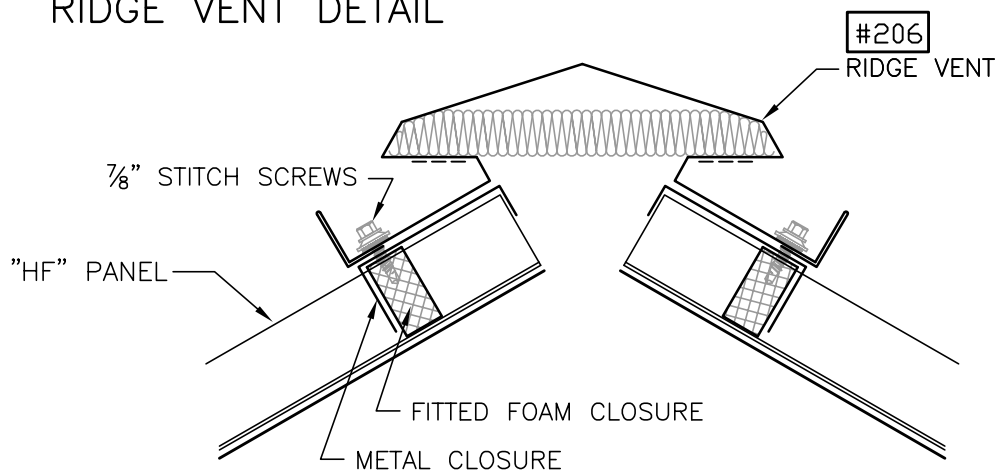
## 2.2 EAVE DETAIL (EXPOSED FASTENERS)

—INSTALL THE PANELS ON TOP OF THE EAVE STARTER #815. FASTEN THE "HF" PANELS ALONG THE EAVE. FOR THE 20 $\frac{1}{4}$ " PANEL, USE 2 SCREWS PER PANEL; FOR THE 16" PANEL, USE 1 SCREW. THE RIB OPENINGS CAN BE CLOSED BY METAL PLUGS.

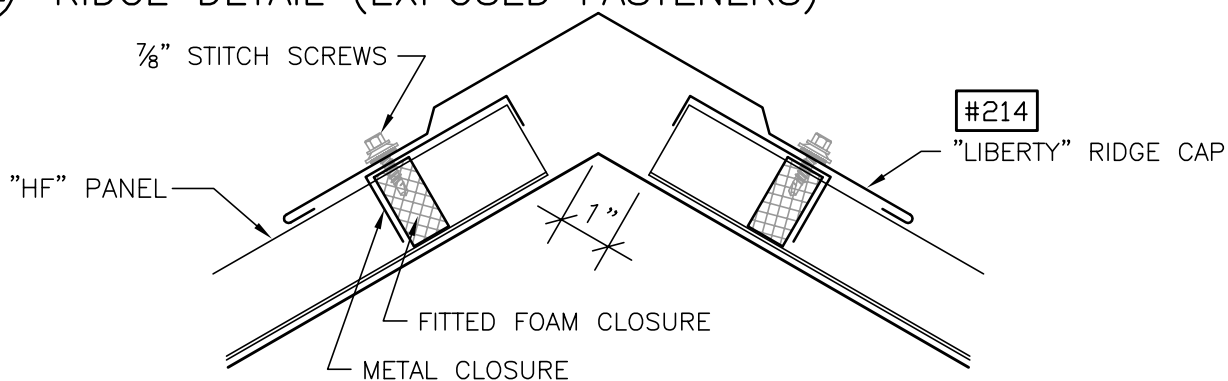




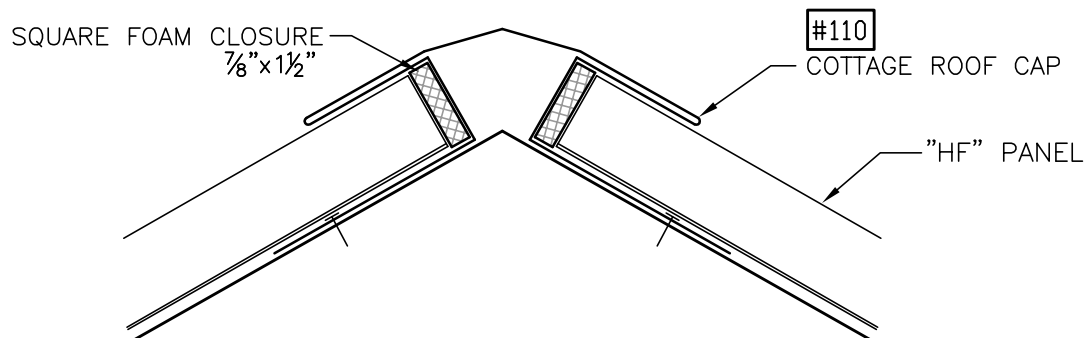
### 3.1 RIDGE VENT DETAIL



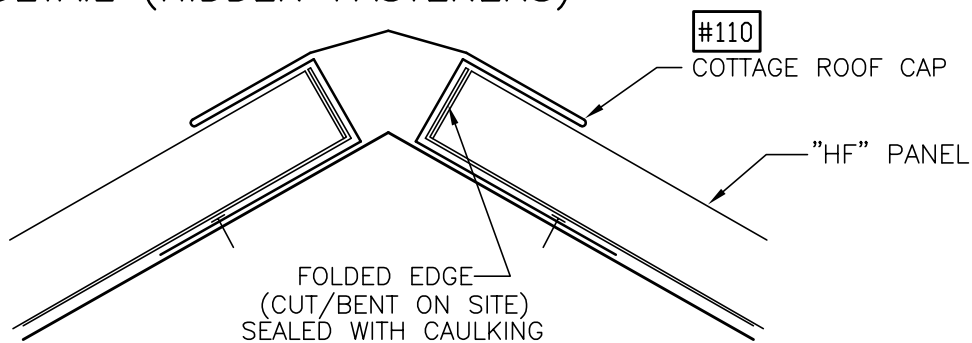
### 3.2 RIDGE DETAIL (EXPOSED FASTENERS)



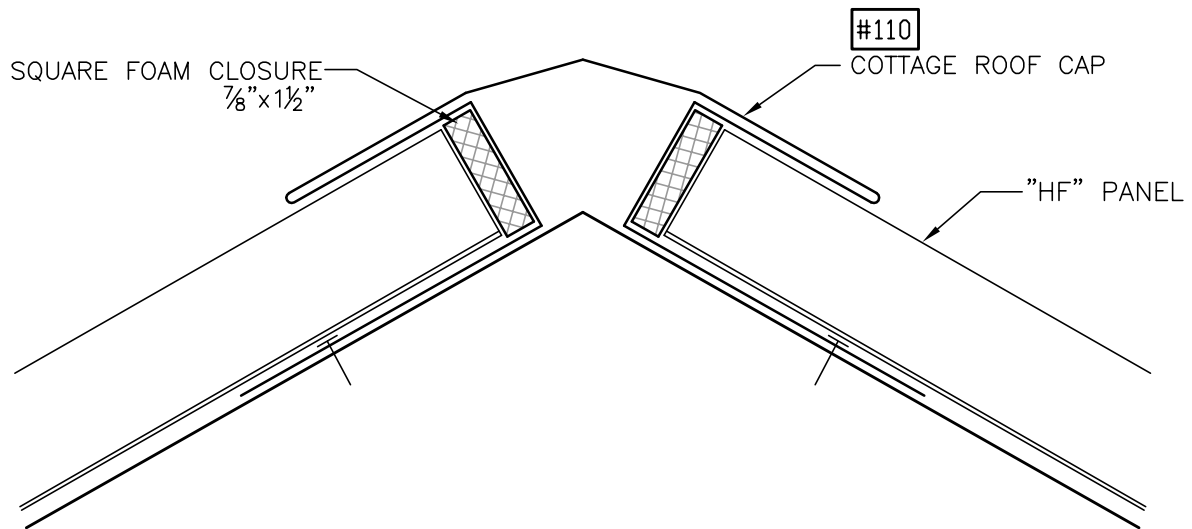
### 3.3 RIDGE DETAIL (HIDDEN FASTENERS)



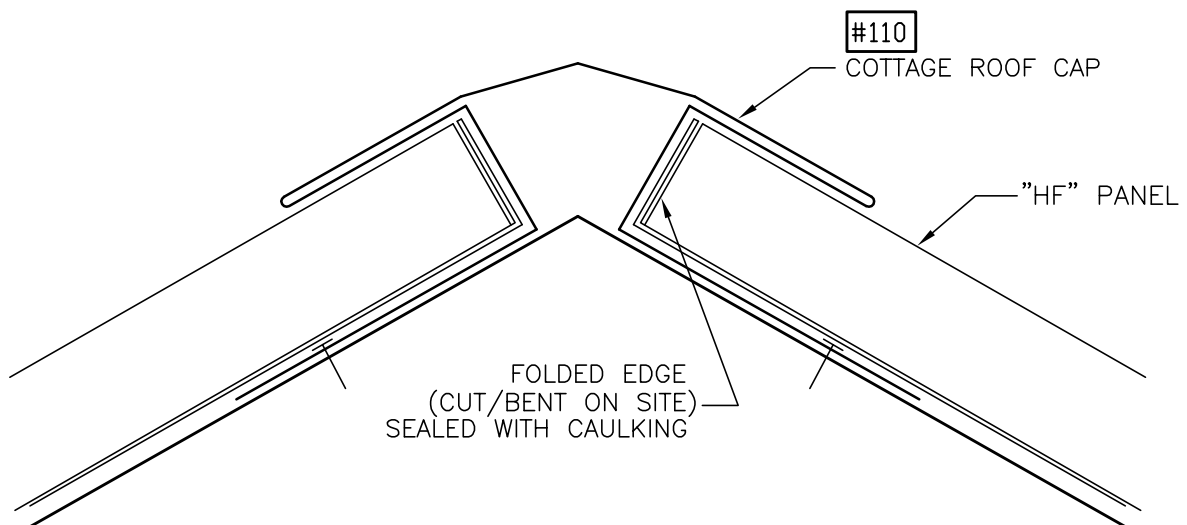
### 3.4 RIDGE DETAIL (HIDDEN FASTENERS)



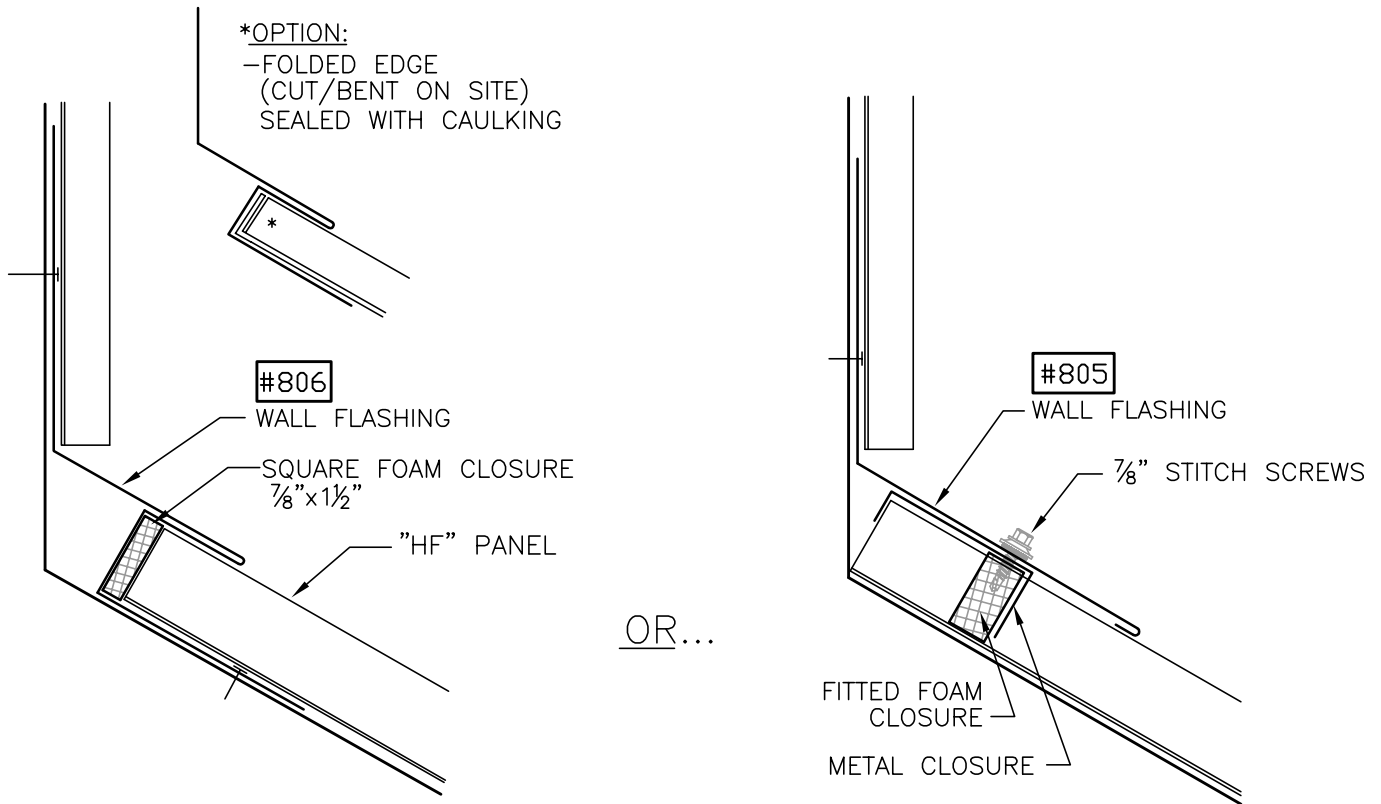
## 4.1 COTTAGE ROOF DETAIL



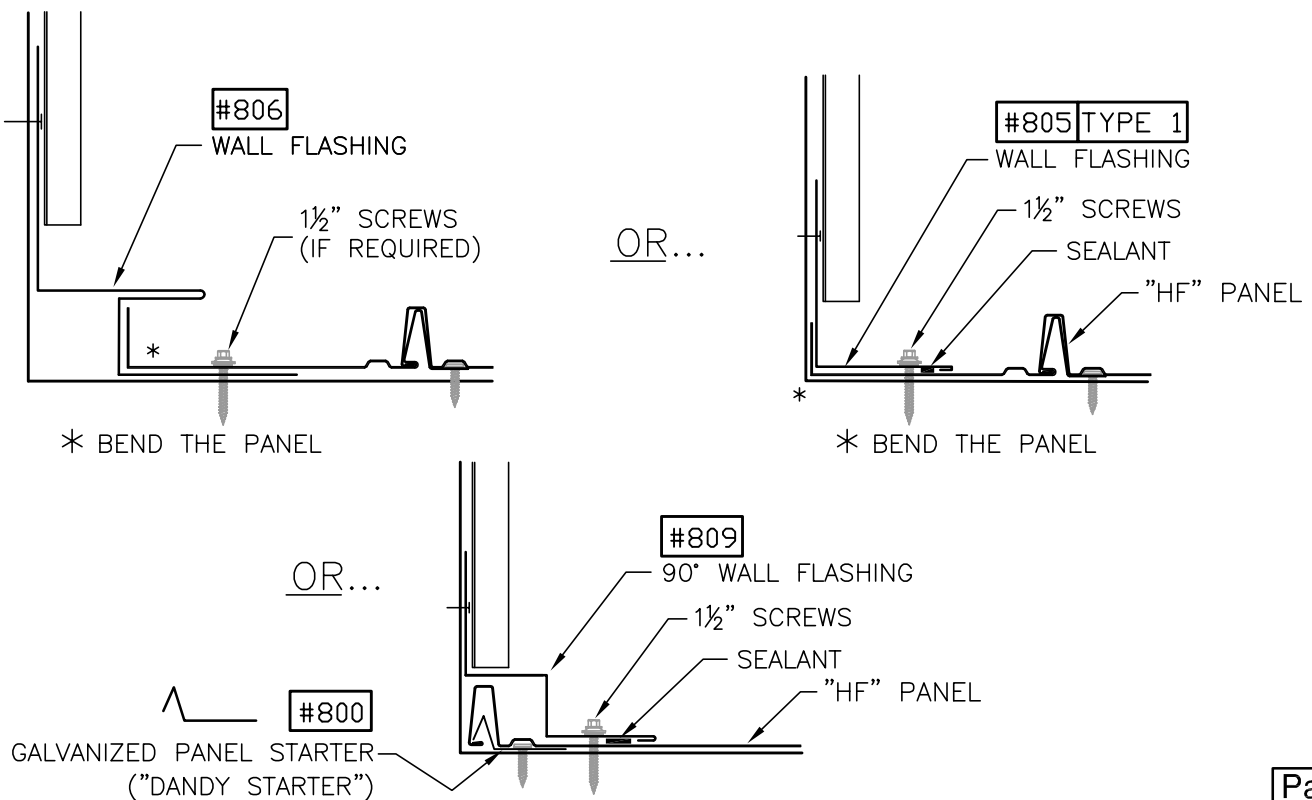
## 4.2 COTTAGE ROOF DETAIL



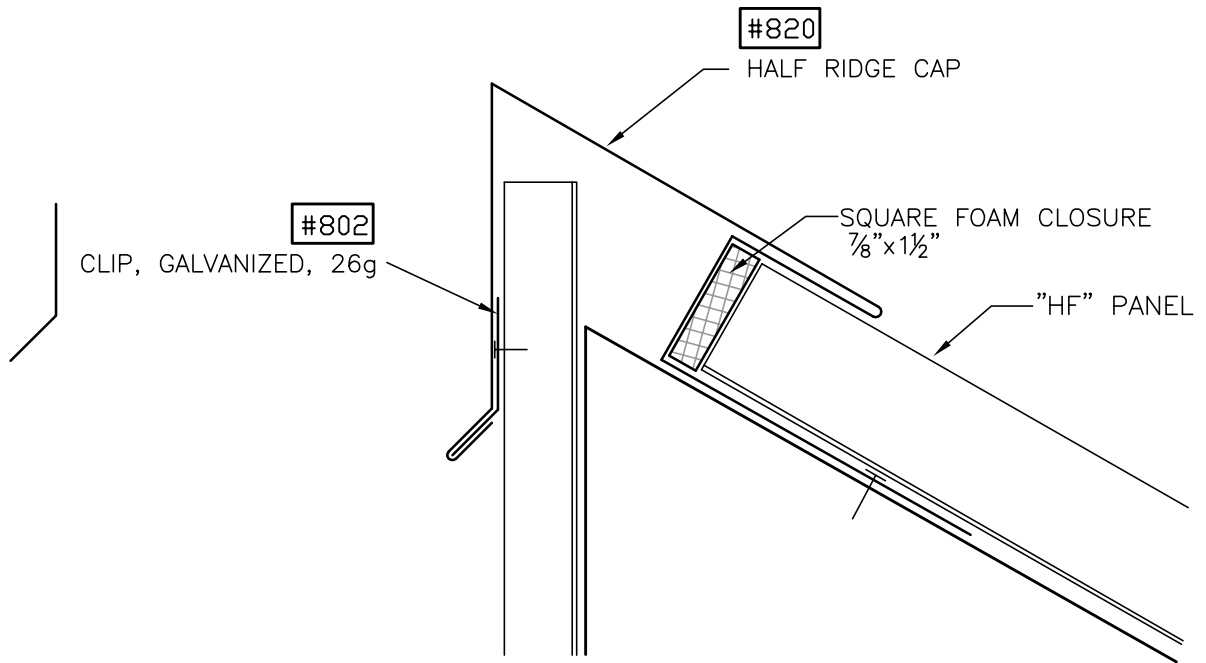
## 5 WALL & ROOF DETAIL (HIDDEN FASTENERS) (SLOPED)



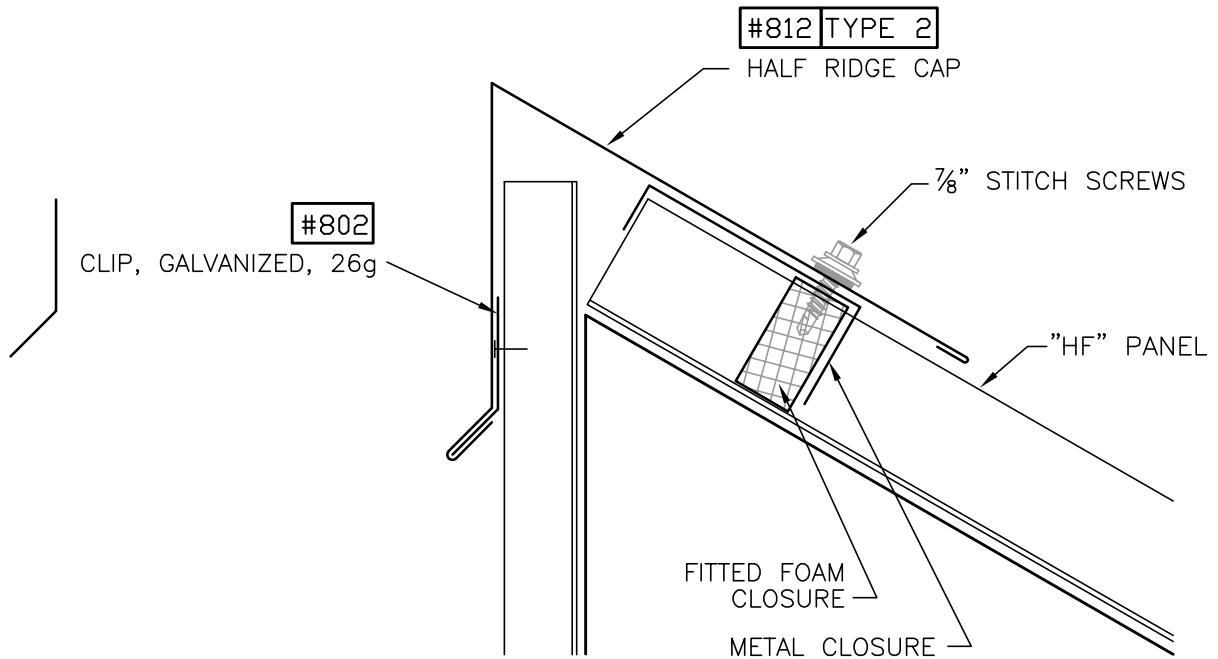
## 6 WALL & ROOF DETAIL (90°) (EXPOSED FASTENERS)



7.1 HALF RIDGE DETAIL (HIDDEN FASTENERS)  
(SHED ROOF)



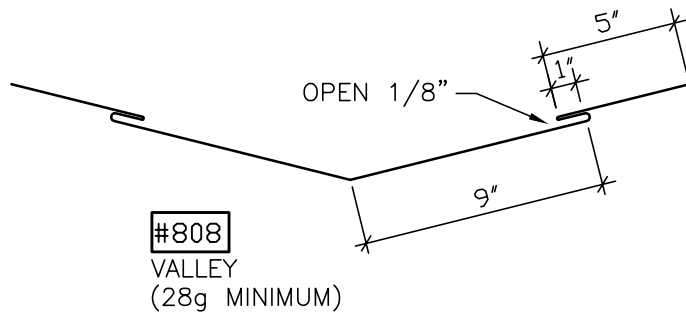
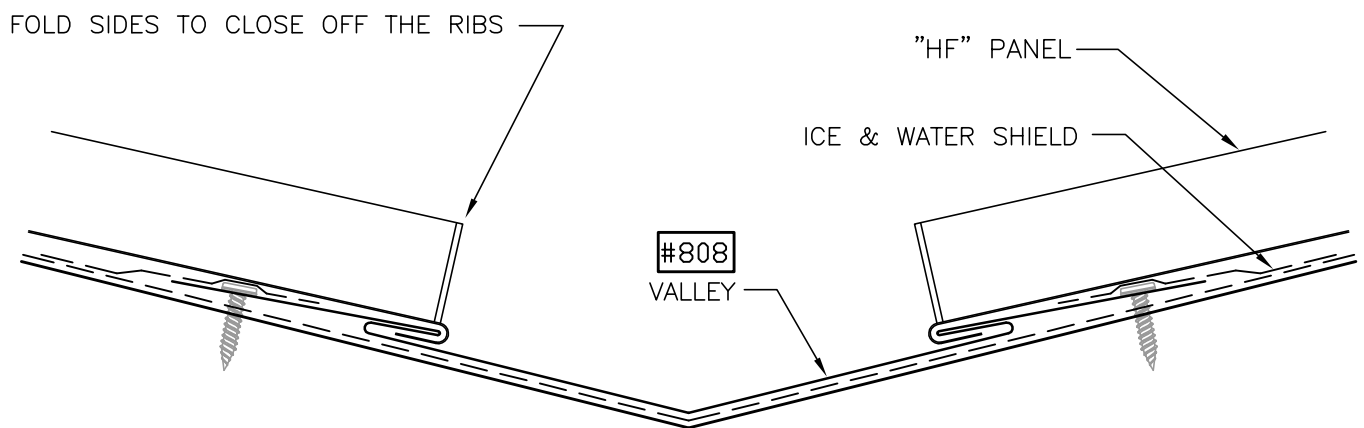
7.2 HALF RIDGE DETAIL (EXPOSED FASTENERS)  
(SHED ROOF)



## 8 VALLEY DETAIL

—ATTACH THE FOLDED EDGE\* OF THE PANEL TO THE VALLEY.

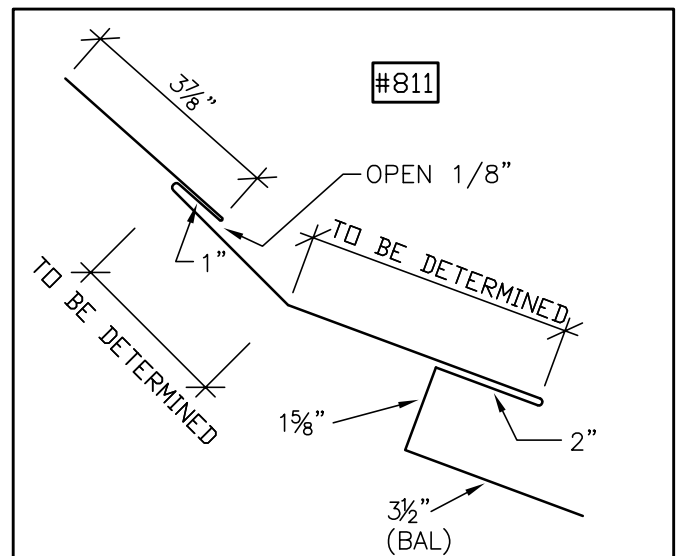
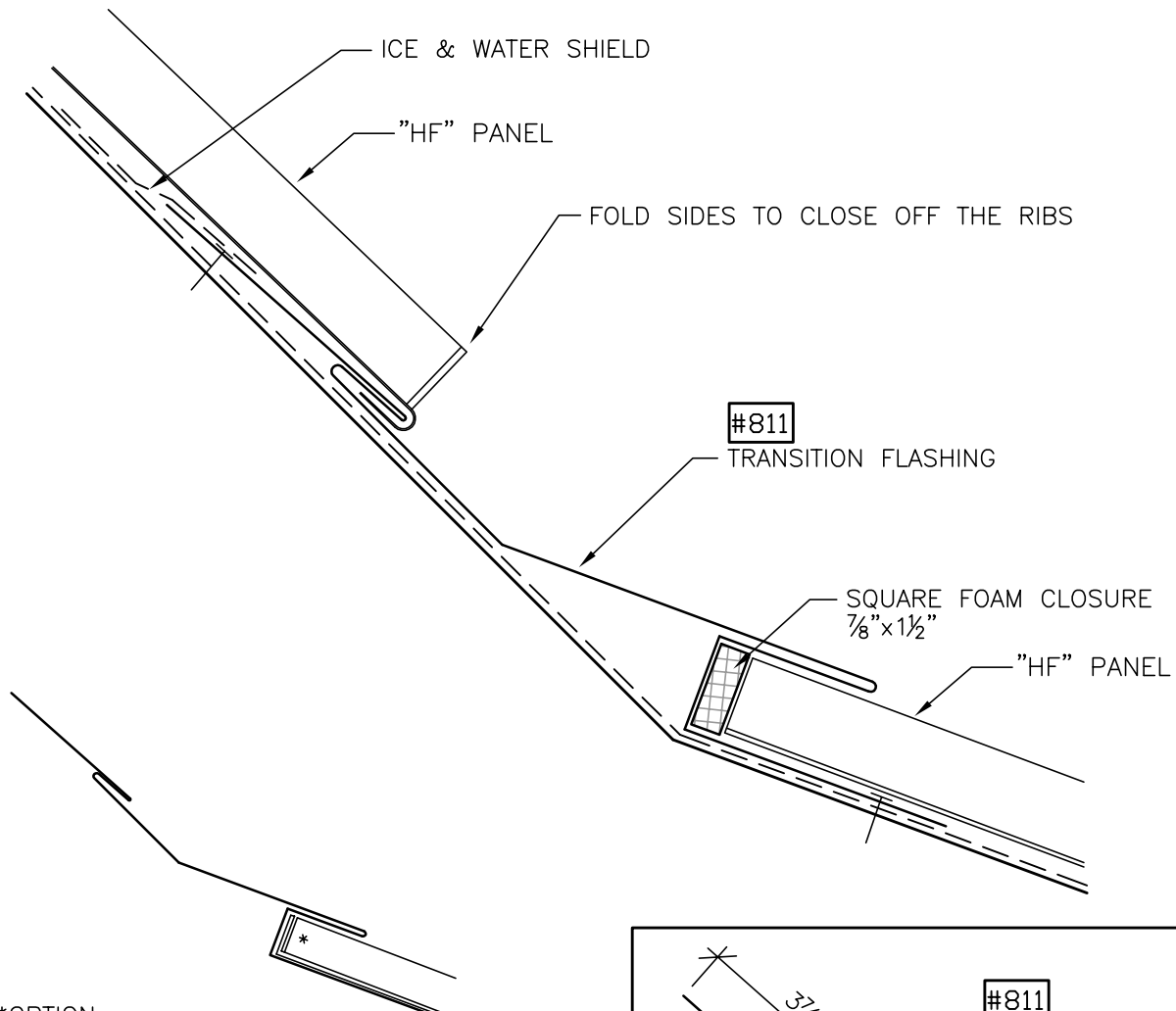
\*(FOLDED EDGE OF THE PANEL SHOULD BE DONE ON SITE BY THE INSTALLER)



## 9.1 TRANSITION DETAIL (HIDDEN FASTENERS) (high to low pitch)

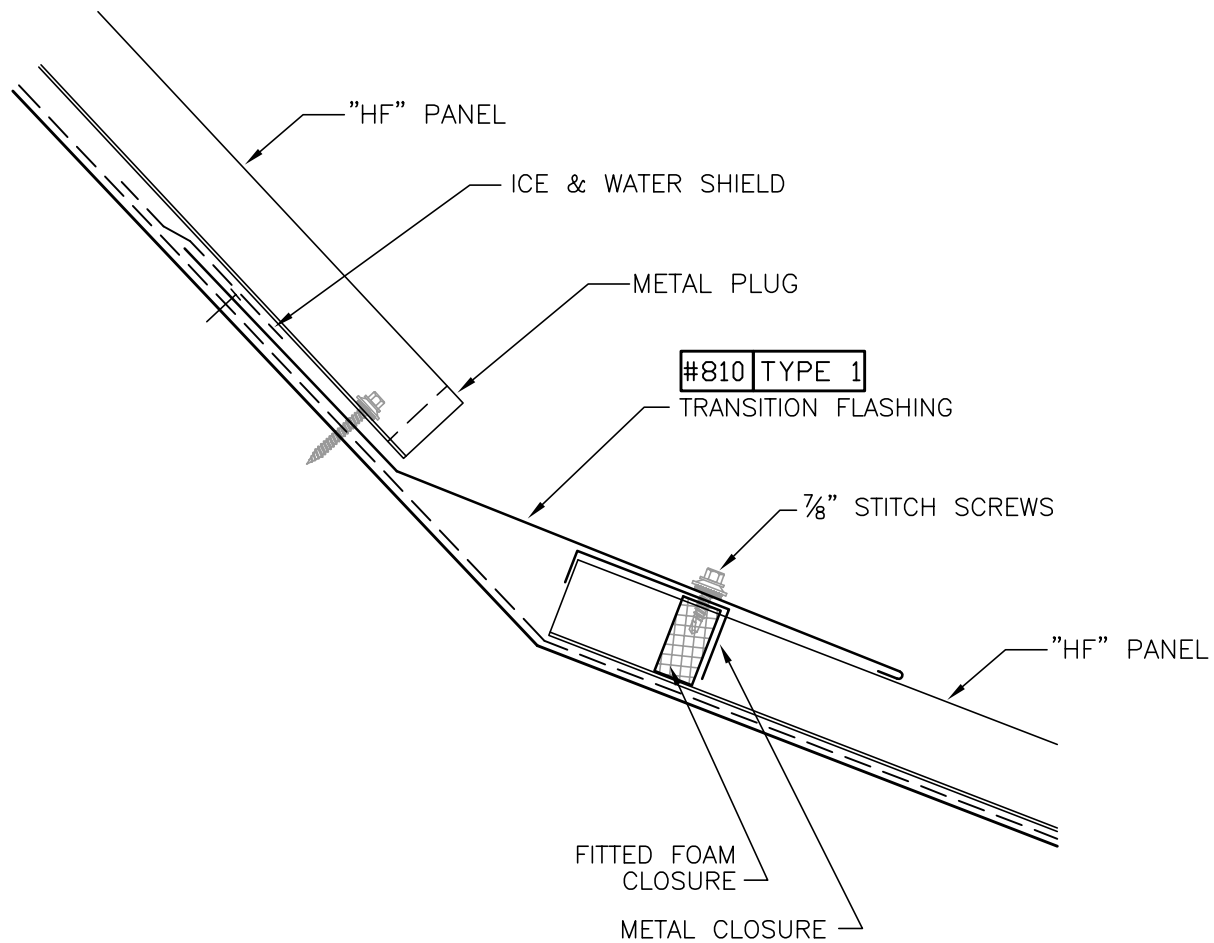
—ATTACH THE FOLDED EDGE\* OF THE PANEL TO THE TRANSITION FLASHING.

\*(FOLDED EDGE OF THE PANEL SHOULD BE DONE ON SITE BY THE INSTALLER)  
DIMENSIONS FOR THE TRANSITION FLASHING SHOULD BE PROVIDED BY THE INSTALLER.



## 9.2 TRANSITION DETAIL (HIDDEN FASTENERS) (high to low pitch)

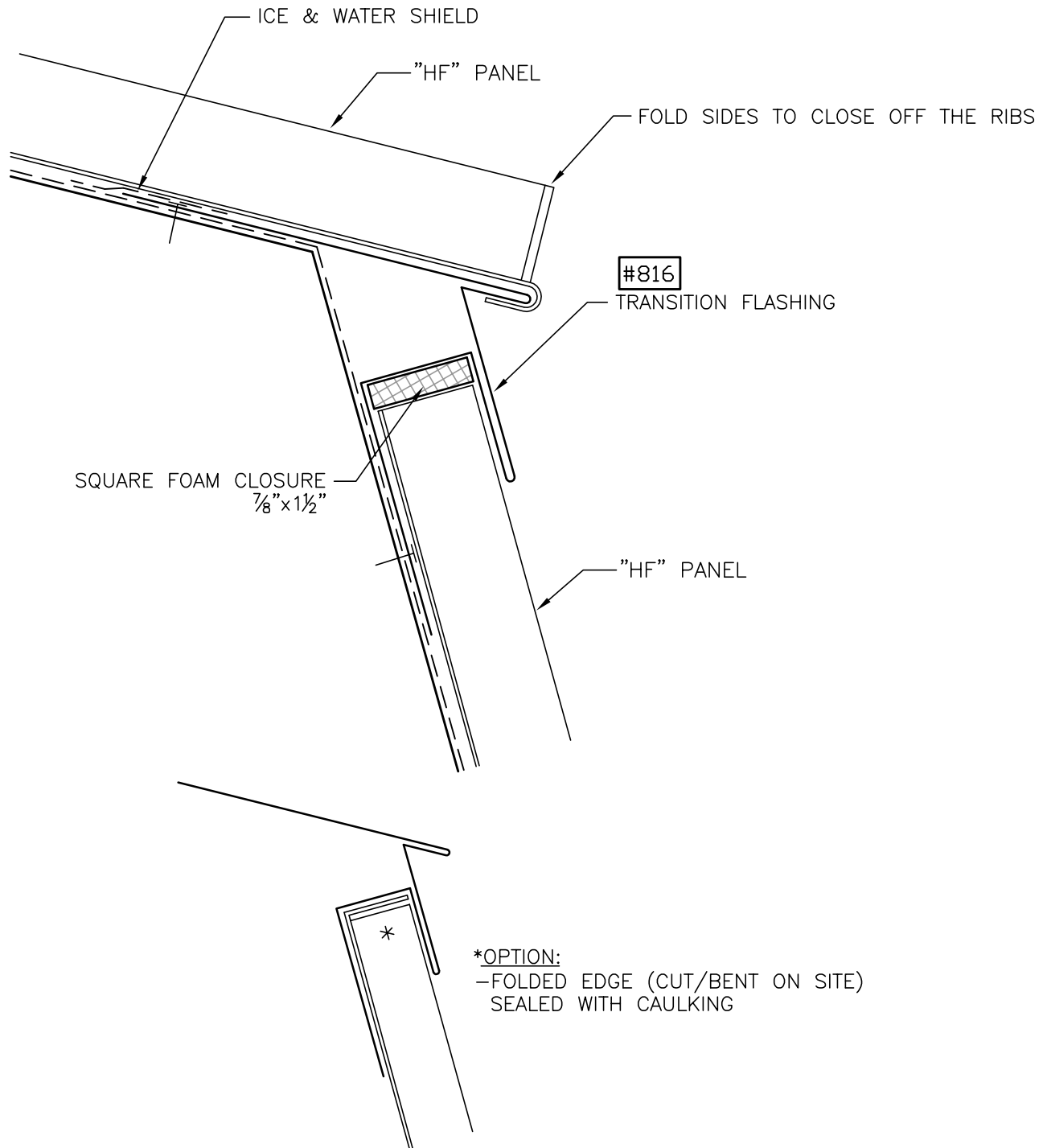
—INSTALL THE PANELS ON THE LOWER SECTION. LAY DOWN THE TRANSITION FLASHING TOP OF THE METAL CLOSURE / FOAM CLOSURE. INSTALL THE UPPER SECTION PANELS, ON THE TRANSITION FLASHING. THE RIB OPENINGS SHOULD BE CLOSED BY END PLUGS.



# 10 TRANSITION DETAIL (low to high pitch)

—ATTACH THE FOLDED EDGE\* OF THE PANEL TO THE TRANSITION FLASHING.

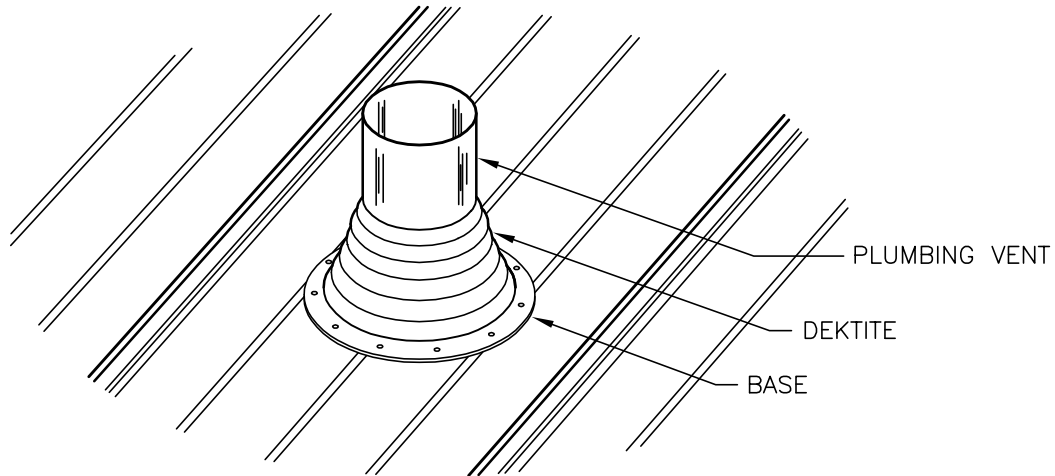
\*(FOLDED EDGE OF THE PANEL SHOULD BE DONE ON SITE BY THE INSTALLER)  
DIMENSIONS FOR THE TRANSITION FLASHING SHOULD BE PROVIDED BY THE INSTALLER.





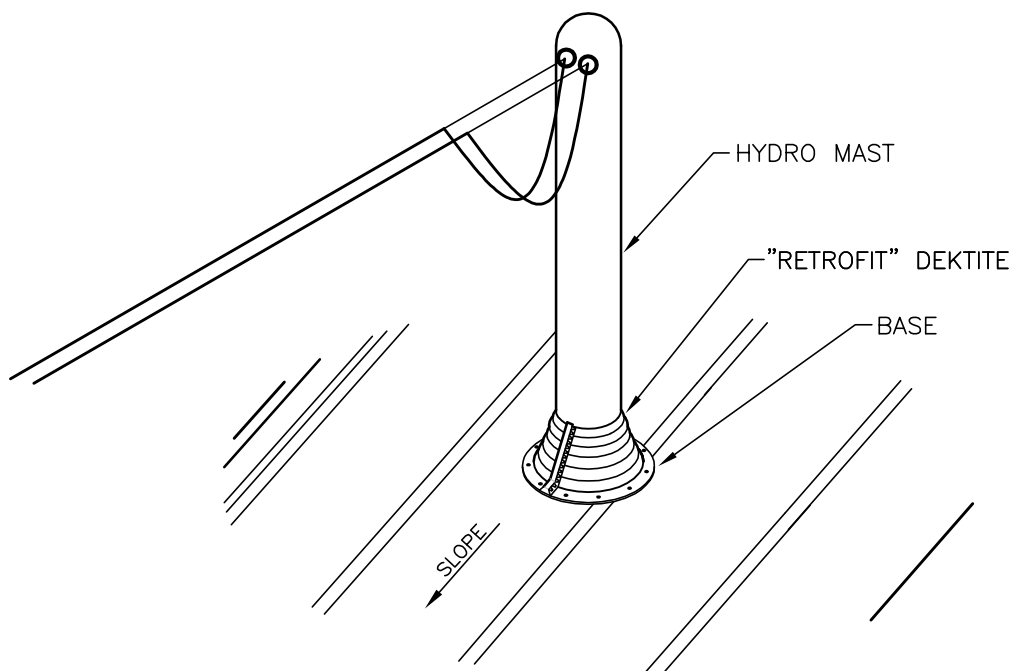
## 11.1 PLUMBING VENT DETAIL

—ONCE THE ROOFING PANELS ARE INSTALLED, CUT THE "DEKTITE" TO THE APPROPRIATE DIAMETER, AND SLIDE OVER PIPE. SECURE THE DEKTITE'S BASE WITH A SEALANT (BETWEEN THE BASE AND ROOFING) THEN FASTEN.



## 11.2 ELECTRICAL SERVICE MAST DETAIL

—ONCE THE ROOFING PANELS ARE INSTALLED, CUT THE "RETROFIT DEKTITE" TO THE APPROPRIATE DIAMETER AND INSTALL AROUND THE ELECTRICAL SERVICE MAST. CLAMP THE FLASHING TOGETHER AND SECURE THE BASE WITH A SEALANT (BETWEEN THE BASE AND ROOFING) THEN FASTEN.



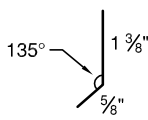
# FLASHINGS AND TRIMS FOR THE HF PANEL

#800



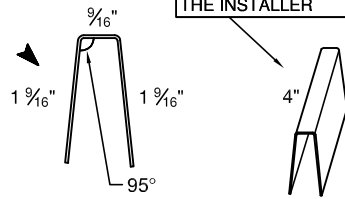
"DANDY" STARTER  
(4" GIRTH, 24G, GALVANIZED)

#802



CLIP  
(4" GIRTH, 26G, GALVANIZED)  
(TRIM TO 2")

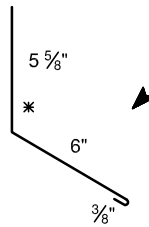
#803



"CAP"  
(FOR THE OVERLAPS, END TO END)  
(4" GIRTH) (TRIM TO 3-11/16")

#805

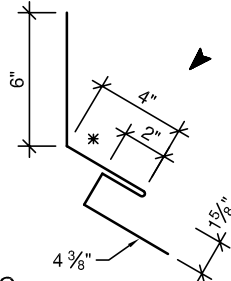
TYPE 1



WALL FLASHING  
(12" GIRTH)

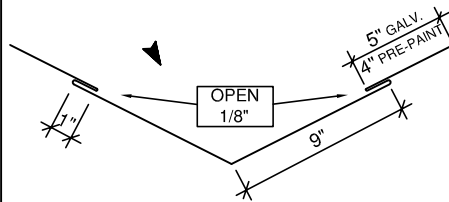
\* SPECIFY PITCH

#806



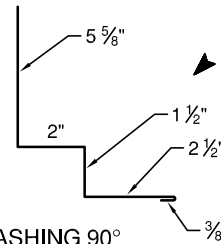
WALL FLASHING  
WITH "J" OPENING  
(18" GIRTH) \* SPECIFY PITCH

#808



VALLEY WITH 1/8" OPENINGS  
- GALVALUME (30" GIRTH)  
- PRE-PAINTED 10000 SERIES (28" GIRTH)

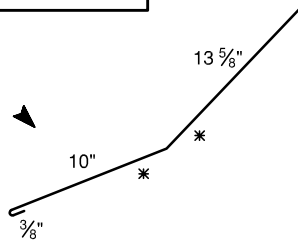
#809



WALL FLASHING 90°  
(12" GIRTH)

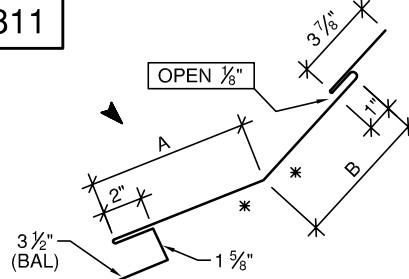
#810

TYPE 1



TRANSITION FLASHING  
(high to low pitch)  
(24" GIRTH) \* SPECIFY PITCHES

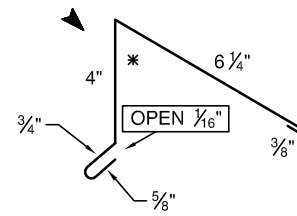
#811



TRANSITION FLASHING  
(high to low pitch)  
(A+B+12"=GIRTH) \* SPECIFY PITCHES

#812

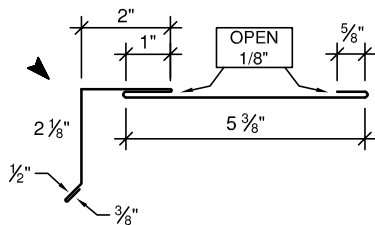
TYPE 2



HALF RIDGE CAP  
(12" GIRTH)

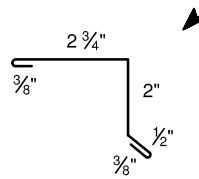
\* SPECIFY PITCH

#813



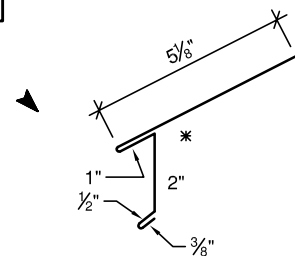
GABLE TRIM  
(12" GIRTH) MINIMUM 28g (.018")

#814



GABLE TRIM  
(6" GIRTH)

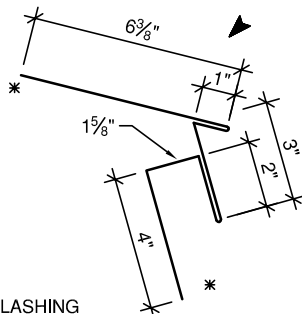
#815



EAVE STARTER  
(9" GIRTH)

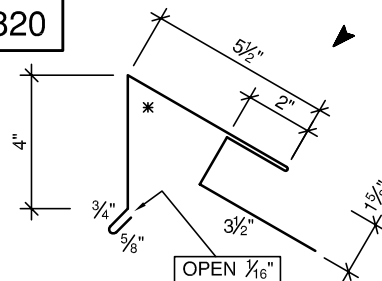
\* SPECIFY PITCH  
(MAX. PITCH 12/12)

#816



TRANSITION FLASHING  
(low to high pitch)  
(18" GIRTH) \* SPECIFY PITCHES

#820



HALF RIDGE CAP  
(18" GIRTH)

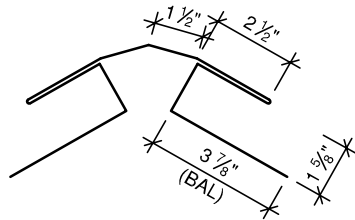
\* SPECIFY PITCH

METAL CLOSURES  
20-1/4" VERSION (101.25" LONG)  
16" VERSION (112" LONG)

Page 17

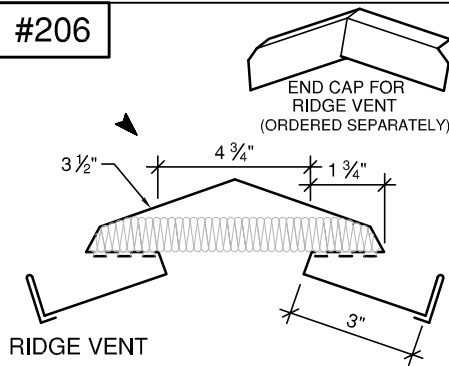
# FLASHINGS AND TRIMS FOR THE HF PANEL (continue)

#110



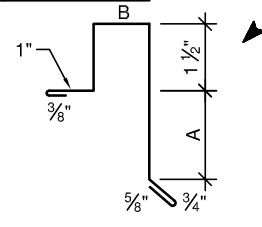
COTTAGE ROOF CAP  
FOR INDUSTRIAL PROFILE  
(24" GIRTH)

#206



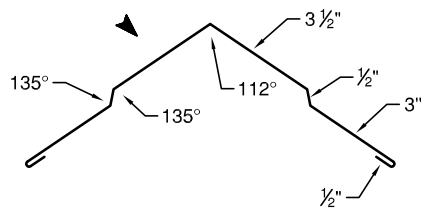
#213

TYPE 1



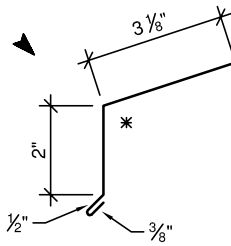
GABLE END CAP FOR THE  
"HF" PROFILE  
( $A+B+5\frac{3}{4}" = \text{GIRTH}$ )

#214

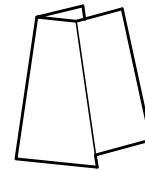


"LIBERTY" RIDGE CAP  
(15" GIRTH)

#414



STEEL ROOFING DRIP EDGE  
(6" GIRTH) \* SPECIFY PITCH



END PLUG