

MET-TILE

INSTALLATION

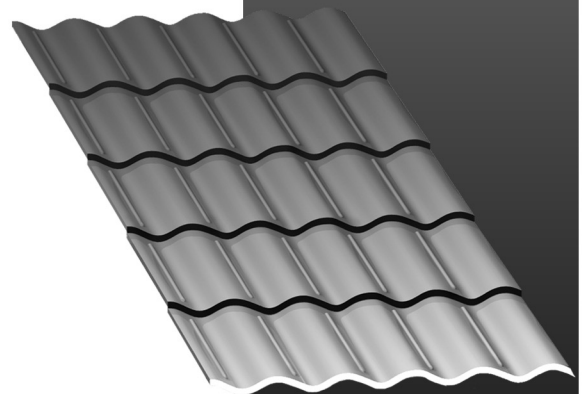


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GENERAL NOTES

The details shown on the following pages are suggestions or guidelines for installing the Met-Tile roof panel system. The installation details shown here are proven methods of construction, but they are not intended to cover all building requirements, designs or codes. The details may require changes or revisions due to individual project conditions.

Installation procedures shall be in accordance with the manufacturer's printed instructions, details or approved shop drawings. Installers should thoroughly familiarized themselves with all instructions prior to beginning the installation process.

The designer/installer is responsible to ensure the following:

That the details here meet the particular building requirements.

That adequate water tightness is maintained.

That a proper uniform substructure is used to avoid panel distortion and that the substructure meets necessary code requirements.

That all supporting members have been examined and are straight, level and plumb.

McElroy Metal can provide all flashings and accessories shown in the installation drawings unless noted otherwise. Panels, flashing and trim shall be installed true and in proper alignment with any exposed fasteners equally spaced for the best appearance. Sealant shall be field applied on a clean, dry surface.

Some field cutting and fitting of panels and flashings is to be expected and to be considered a part of normal installation work. Workmanship shall be of the best industry standards and with installation performed by experienced metal craftsmen.

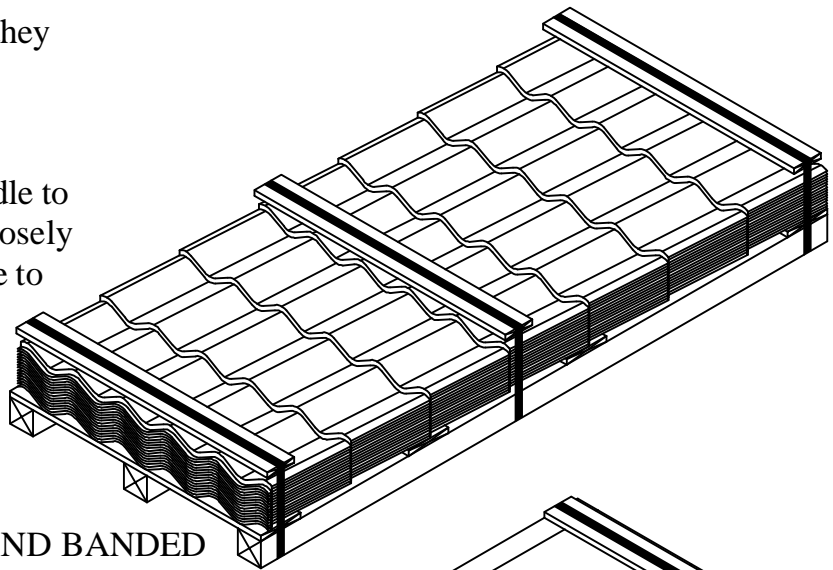
Contents of this manual are subject to change without notice. To confirm this book is the most current copy, please visit McElroy Metal's website at www.mcelroymetal.com.

Rubber-soled footwear should be worn for safety purposes and to avoid damage to the roofing surface. Constructed of 26 gauge steel, Met-Tile offers superior "walkability." However, it is still advisable to minimize roof traffic by walking on the panels only when necessary. Always walk in the valley or on top of the panel step; do not walk in the middle or "crown" of the tile portion. Trim metal, tools and foot traffic can easily scratch and damage the painted panels. The edges of the Met-Tile panel are extremely sharp. Extreme caution should be taken while handling and working with these panels. Wear all appropriate safety gear.

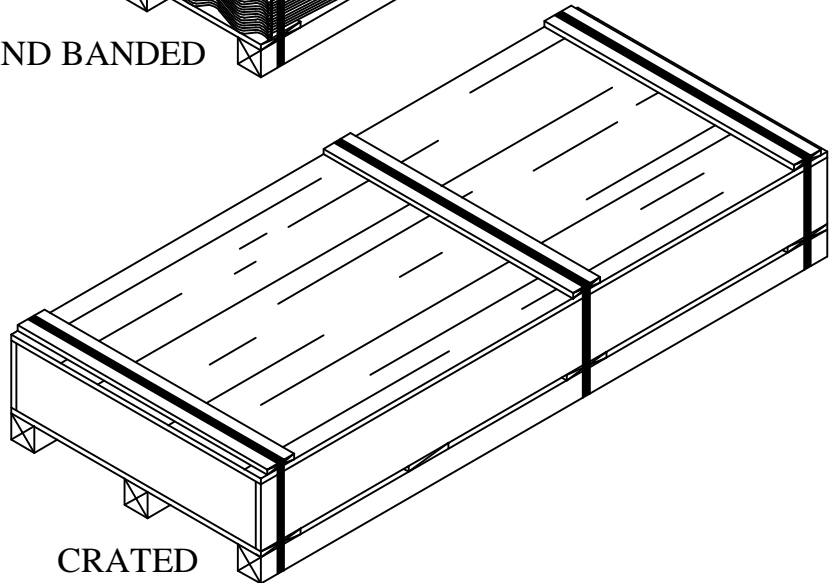
When panels arrive to your job site, they will be bundled one of two ways:

- 1.) Blocked and Banded
- 2.) Crated

Make sure to elevate one end of bundle to promote positive water drainage. Loosely tarp bundles so to allow any moisture to evaporate.

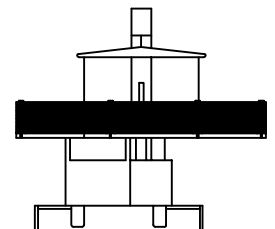
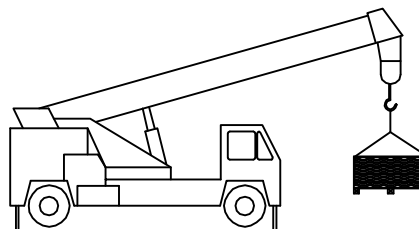
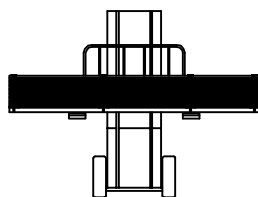
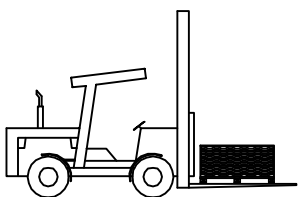


BLOCKED AND BANDED

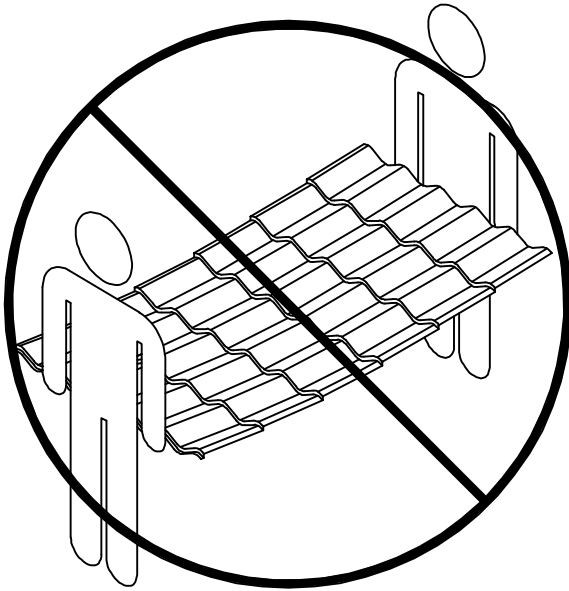


CRATED

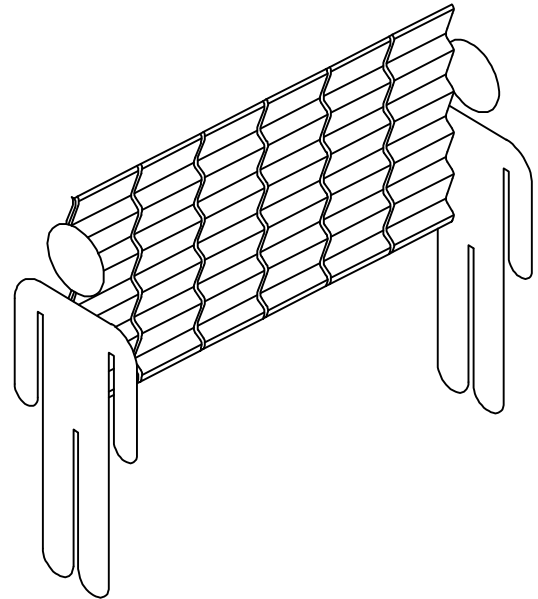
Care should be taken when unloading panels from trailer or while moving them about on the jobsite. Spreader-Bars are recommended on panels greater than 12ft. in length.



Care must be taken when picking up Met-Tile panels. As you can see in the illustrations, there is a correct and incorrect way to pick them up. If you pick them up incorrectly, the panel will stretch at the steps of the panel. You will need to have one person per every 10ft. of panel.



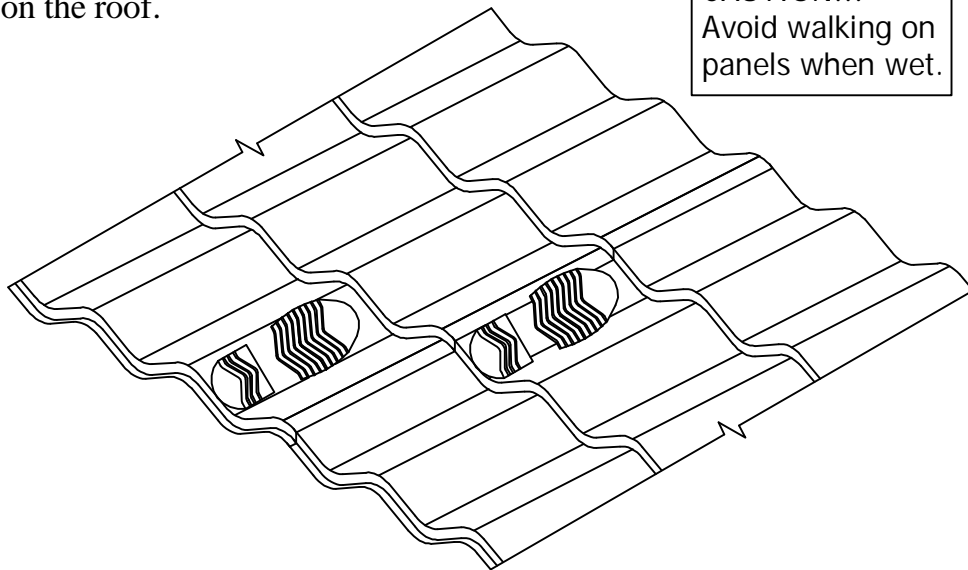
INCORRECT



CORRECT

Care of metal panels and flashings must be exercised at all times throughout erection. Foot traffic can cause distortion of the panel and damage to the finish. Traffic over the installed system must be kept to an absolute minimum. Installers should wear rubber sole shoes or other approved footwear to keep from scuffing material while working on the roof.

CAUTION!!!
Avoid walking on
panels when wet.

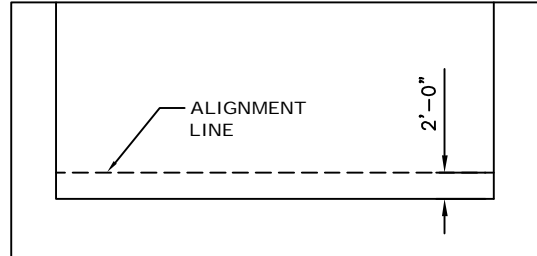


LAYING OUT THE PANELS:

After the underlayment has been applied, you must now grid out the roof. The grid lines will help you as you lay down the Met-Tile system. In this example, we have used the 3-4-5 method in increments of 9, 12 and 15 feet. Your application may vary.

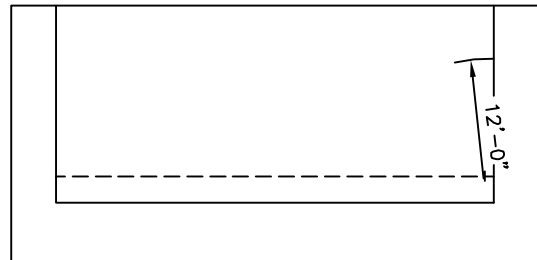
STEP 1.

Snap an alignment line approximately two (2) feet from the Eaves.



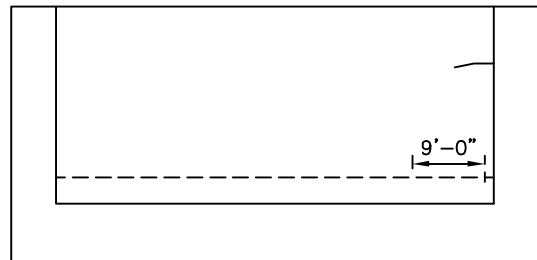
STEP 2.

Start from a point on the alignment line about 1/4 inch from the right Rake and a 12 foot arc toward the Ridge of the roof.



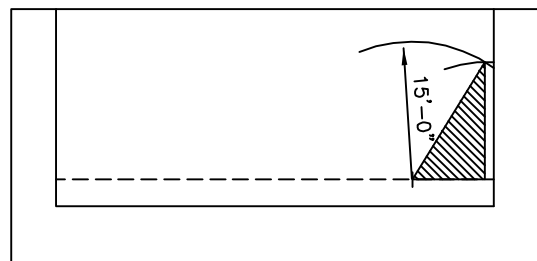
STEP 3.

Measure 9 feet from the datum point along the alignment line and establish a reference point there.



STEP 4.

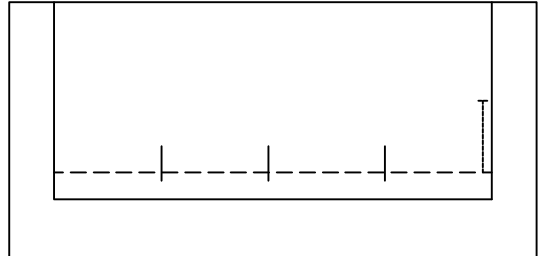
From the 9 foot reference point, make one more arc of 15 feet to the intersect of the 12 foot arc. This establishes your 3-4-5 triangle.



LAYING OUT THE PANELS CONTINUED:

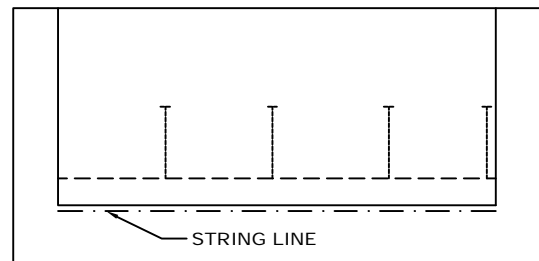
STEP 5.

Snap a line from your original datum point to the intersection point. Grid the remainder of the roof with vertical lines 42 to 48 inches apart for use in squaring the panels with the roof.



STEP 6.

Stretch a String Line one and one half (1 1/2) inches from the Eaves to set the amount of overhang. This will be used to align the ends of the panels.



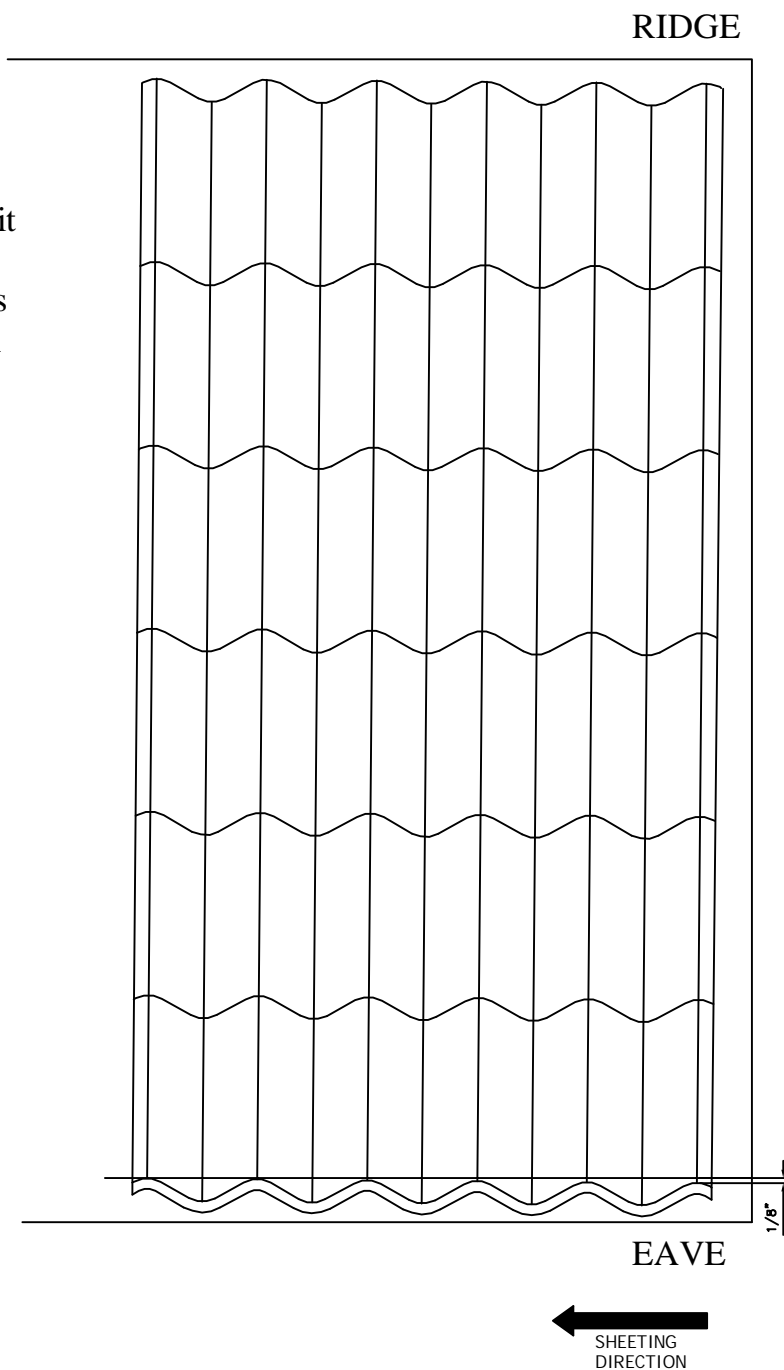
STEP 7.

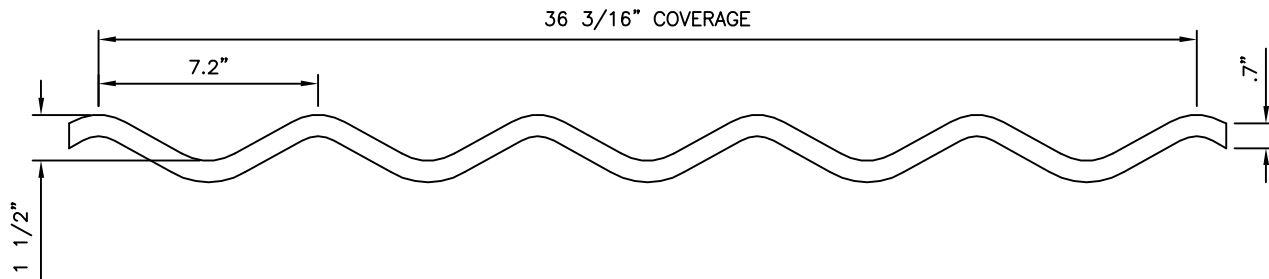
Since your underlayment will cover the true centerline of your valleys, snap lines at these areas for aligning your valley flashings.

LAYING OUT THE PANELS CONTINUED:

STEP 8.

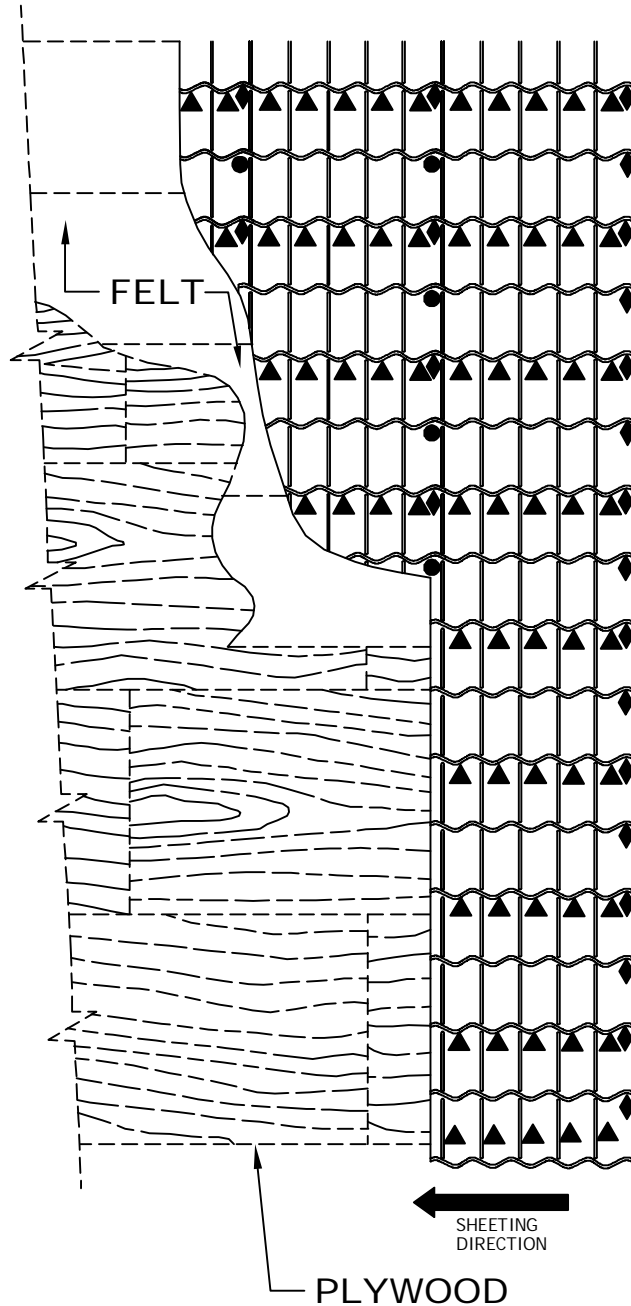
When installing the first Met-Tile panel, it is important to tilt the right side of the panel 1/8" lower than the left side. This is required to keep the panel thickness from accumulating at the Eave.

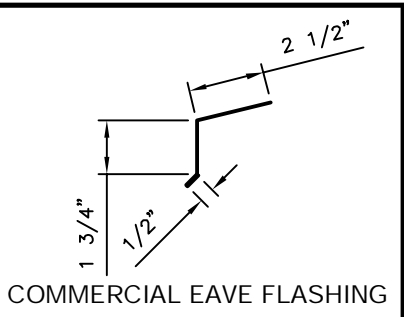
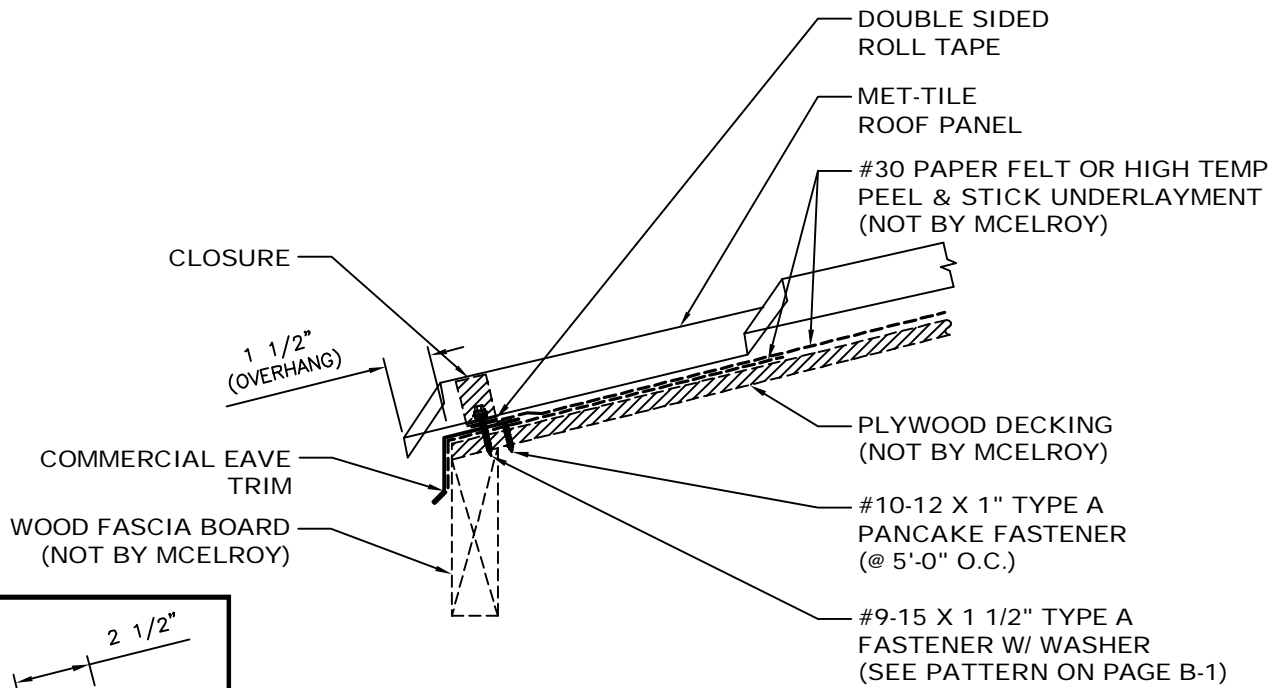




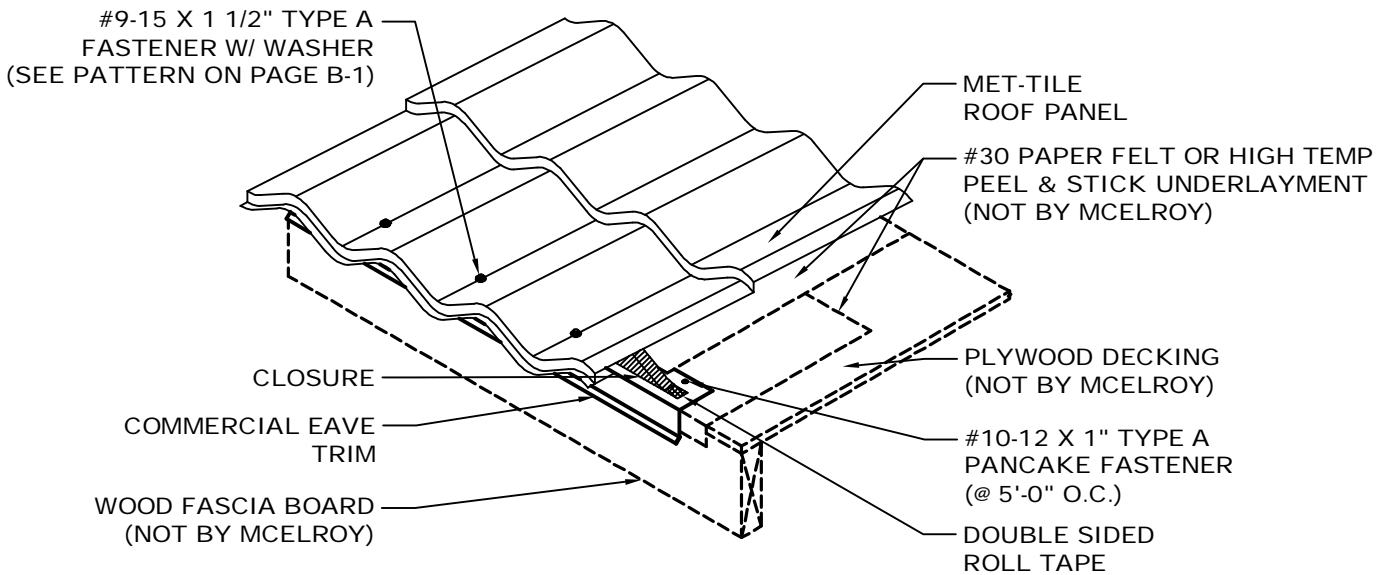
SOLID PLYWOOD DECKING

1. The Met-Tile roof is installed according to the following fastening pattern, over a minimum 1/2" plywood deck. The plywood deck is covered with a minimum #30 asphalt-impregnated organic roofing felt.
2. Roofs with a pitch of 1-1/2:12 up to 3:12 require 3/32" x 1" Butyl Tape Sealant or a 3/16" Dia. bead of Butyl Tube Sealant in the side lap. Roofs with a pitch of 3:12 or greater do not require sealant.
3. ▲ = Use #9-15 x 1 1/2" Type A Fasteners in every low flute @ 2'-0" O.C. and along the Eave and Ridge. Fasten in the dimple along the alignment ridge.
4. ◆ = Use #9-15 x 2 1/2" Type A Fasteners in the Side Laps @ 2'-0" O.C. and along the Rake @ 1'-0" O.C.
5. ● = Use 1/4-14 x 7/8" Lap Tek in Side Laps @ 2'-0" O.C. (in between #9 x 2 1/2" Fasteners)

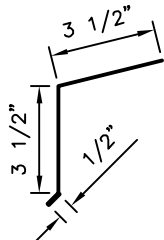
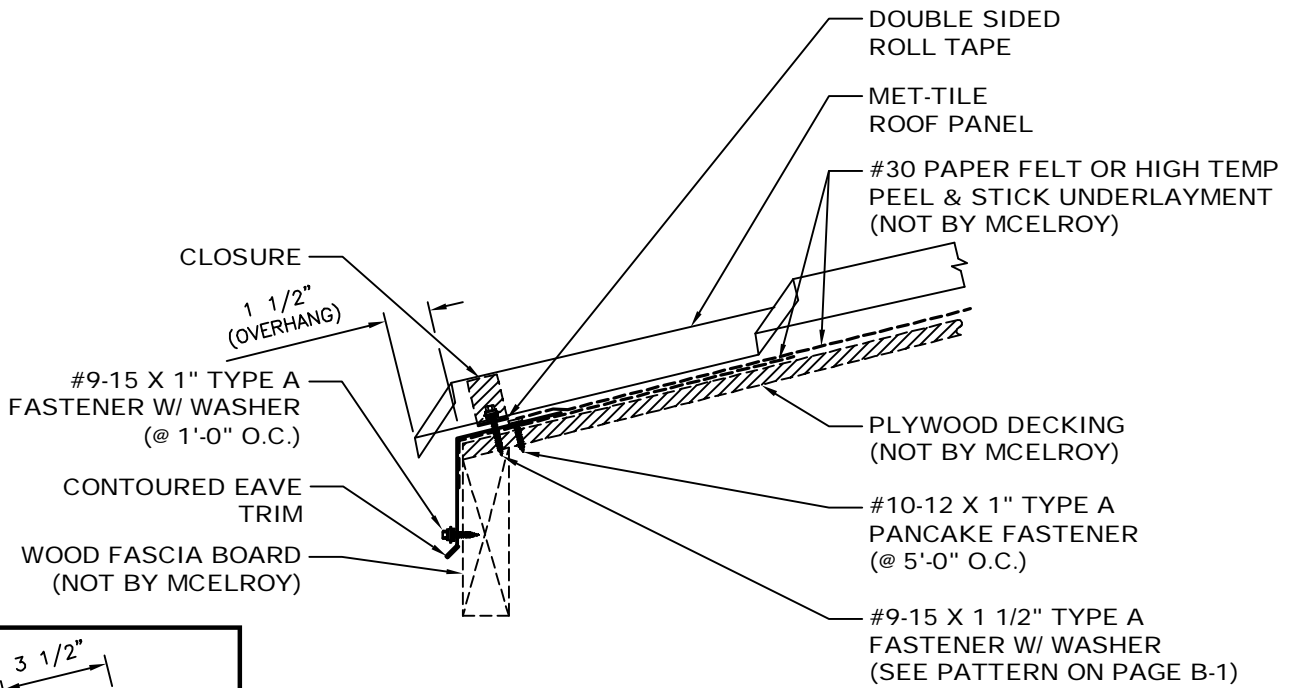




- NOTES: 1. Commercial Eave Flashing to run from Rake to Rake of roof. Fasten to fascia with #9-15 x 1" Type A Lap Tek Fasteners at 1'-0" O.C.
2. Apply Double Sided Tape on top of Eave Trim continuously along length of Eave.
3. Place Closures on top of Double Sided Roll Tape at Eave.
4. Place Met-Tile panels in place. Starting from the right side of building and sheeting to the left. Fasten panel with #9-15 x 1 1/2" Type A Fasteners with Washer. (See Fastener Pattern on page B-1 of manual.)

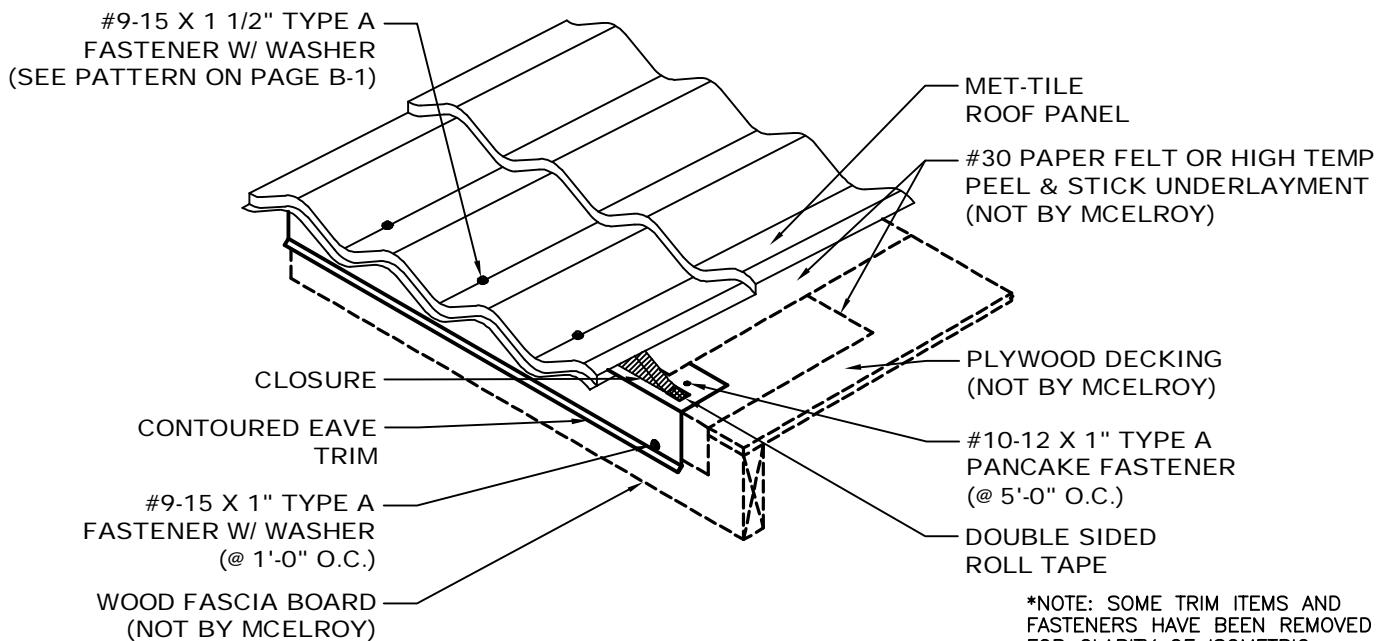


*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

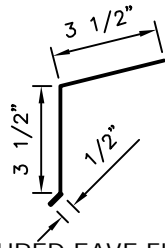
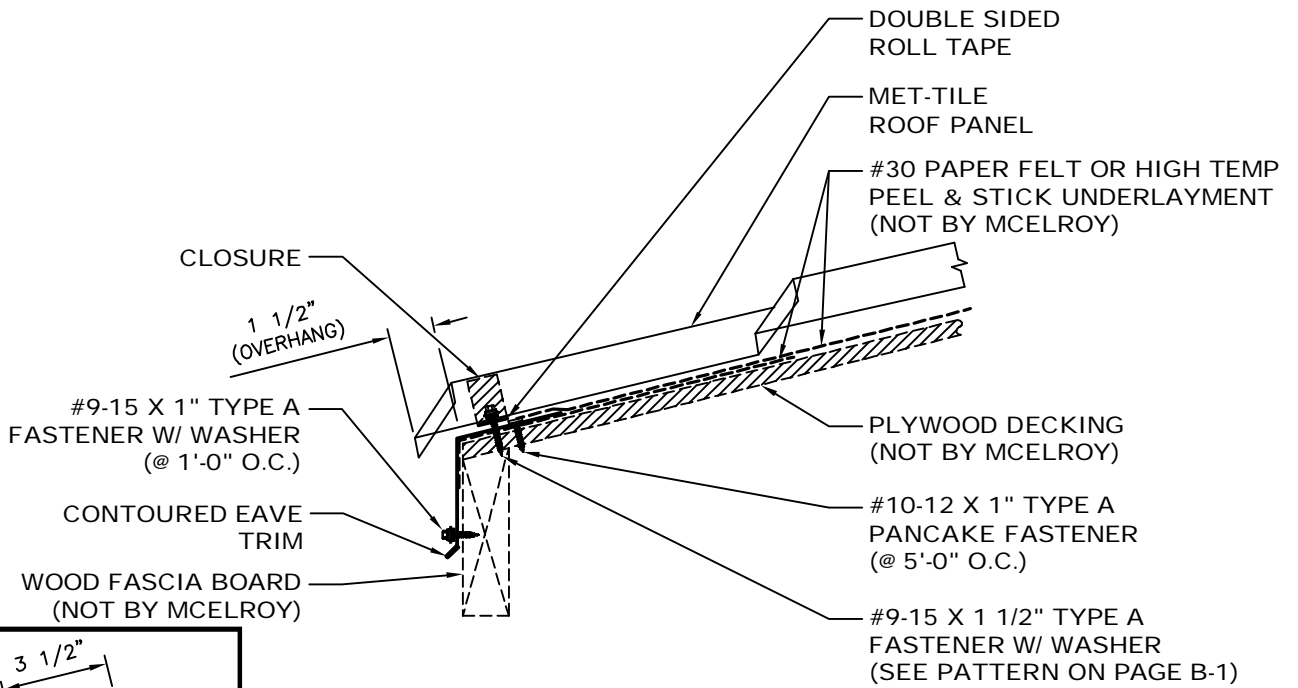


CONTOURED EAVE FLASHING

- NOTES: 1. Contoured Eave Flashing to run from Rake to Rake of roof. Fasten to fascia with #9-15 x 1" Type A Fasteners at 1'-0" O.C.
2. Apply Double Sided Tape on top of Eave Trim continuously along length of Eave.
3. Place Closures on top of Double Sided Roll Tape at Eave.
4. Place Met-Tile panels in place. Starting from the right side of building and sheeting to the left. Fasten panel with #9-15 x 1 1/2" Type A Fasteners with Washer. (See Fastener Pattern on page B-1 of manual.)

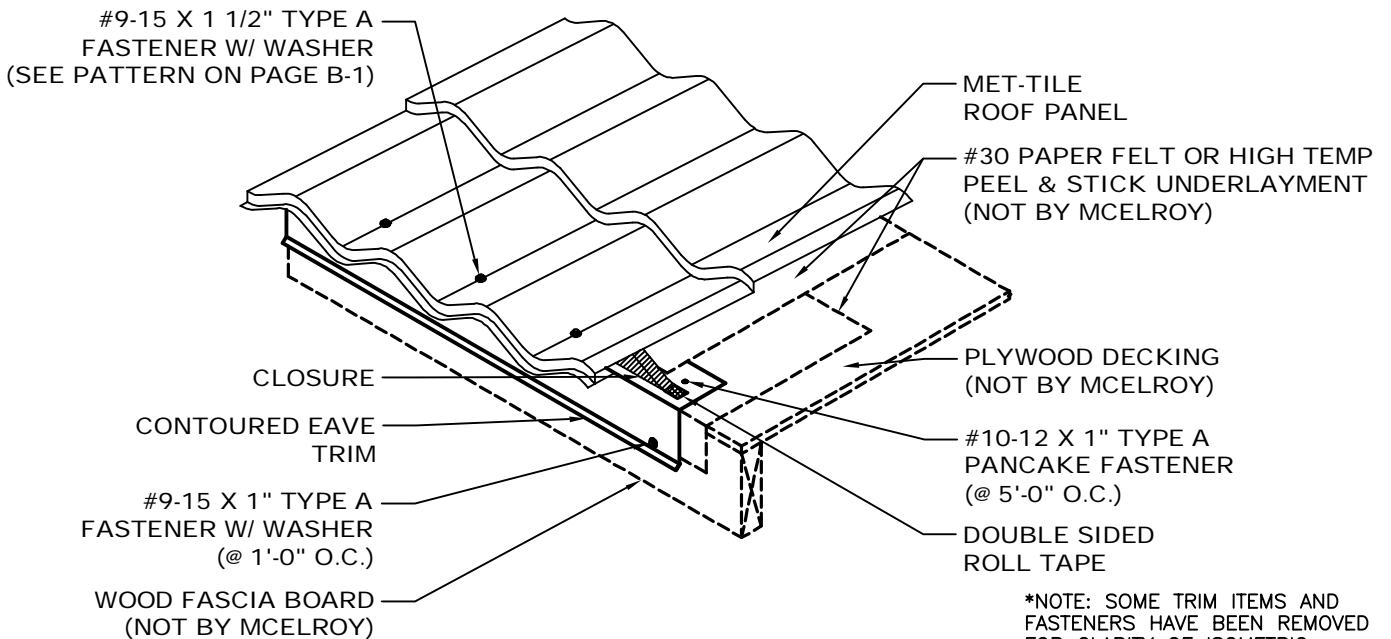


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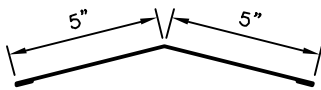
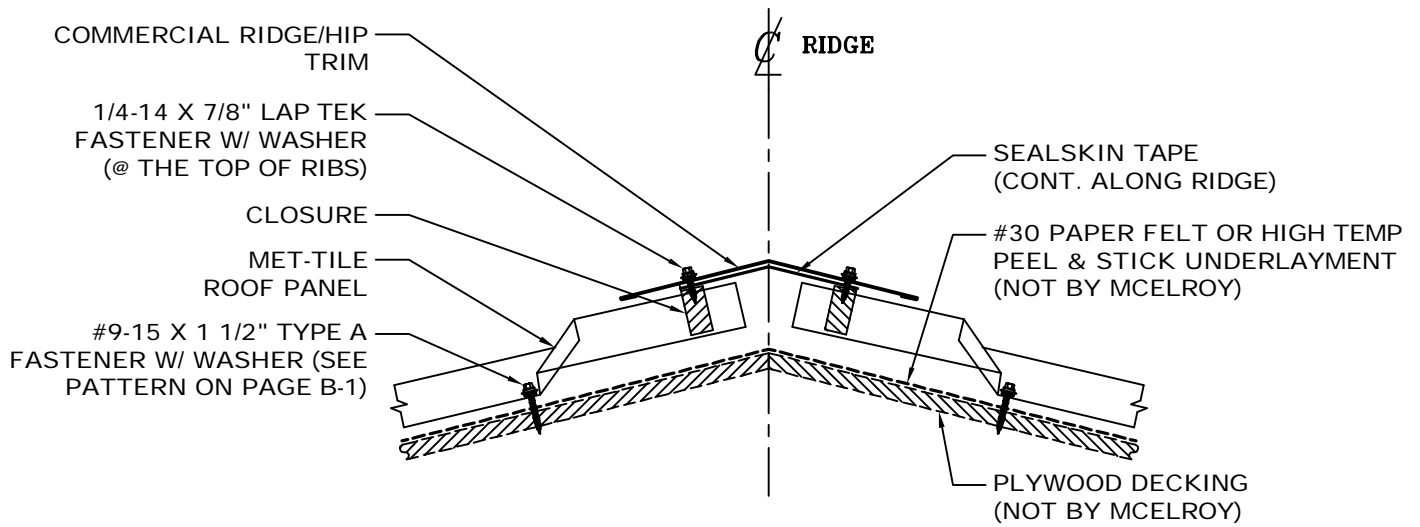


CONTOURED EAVE FLASHING

- NOTES: 1. Contoured Eave Flashing to run from Rake to Rake of roof. Fasten to fascia with #9-15 x 1" Type A Fasteners at 1'-0" O.C.
2. Apply Double Sided Tape on top of Eave Trim continuously along length of Eave.
3. Place Closures on top of Double Sided Roll Tape at Eave.
4. Place Met-Tile panels in place. Starting from the right side of building and sheeting to the left. Fasten panel with #9-15 x 1 1/2" Type A Fasteners with Washer. (See Fastener Pattern on page B-1 of manual.)

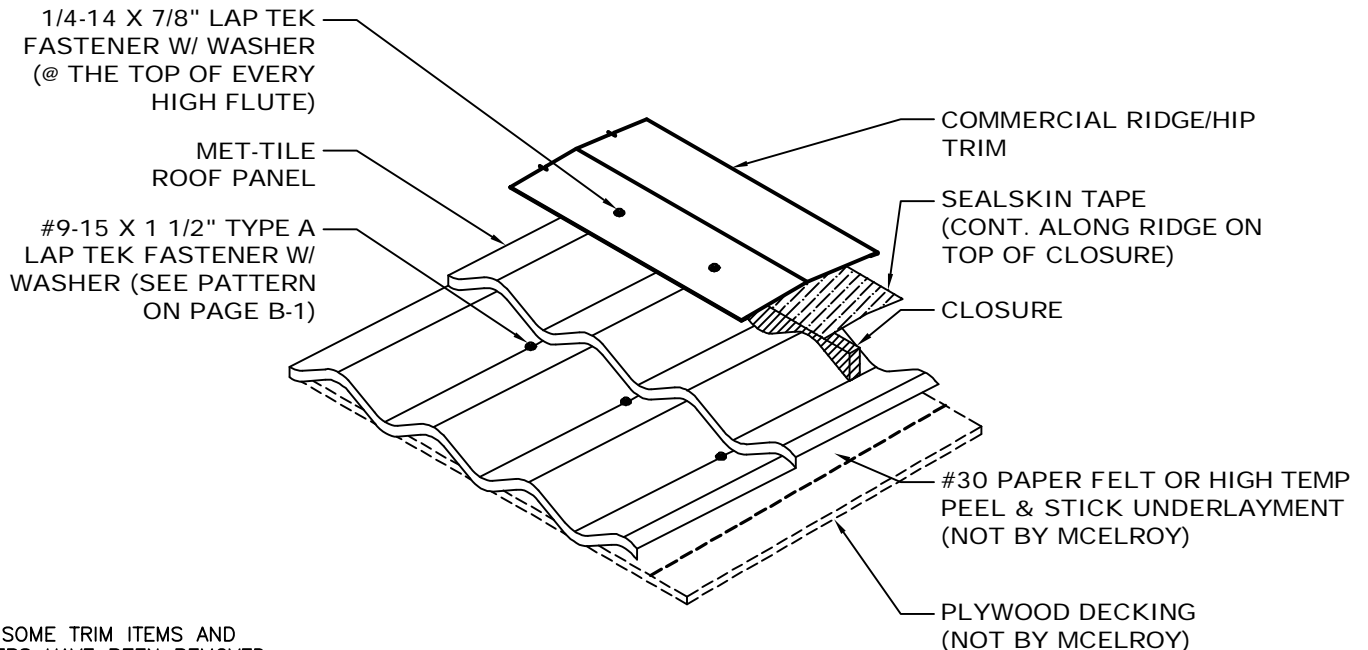


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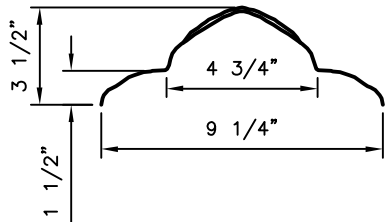
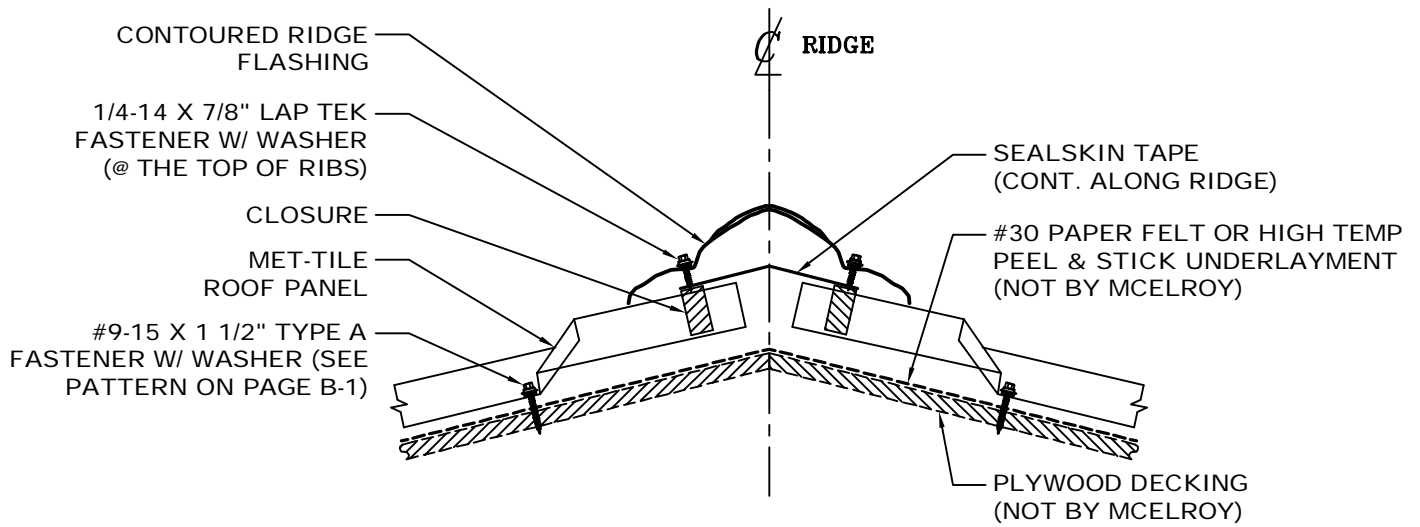


COMMERCIAL RIDGE/HIP TRIM

- NOTES: 1. Commercial Ridge/Hip Trim to extend 2" outside of fascia.
 2. Place SealSkin Protective Tape over Closures continuously along Ridge.
 3. Attach Commercial Ridge Flashing to tops of ribs of Met-Tile Roof Panel with 1/4-14 x 7/8" Lap Tek fasteners with Washers making sure to fasten through SealSkin tape and Closure.

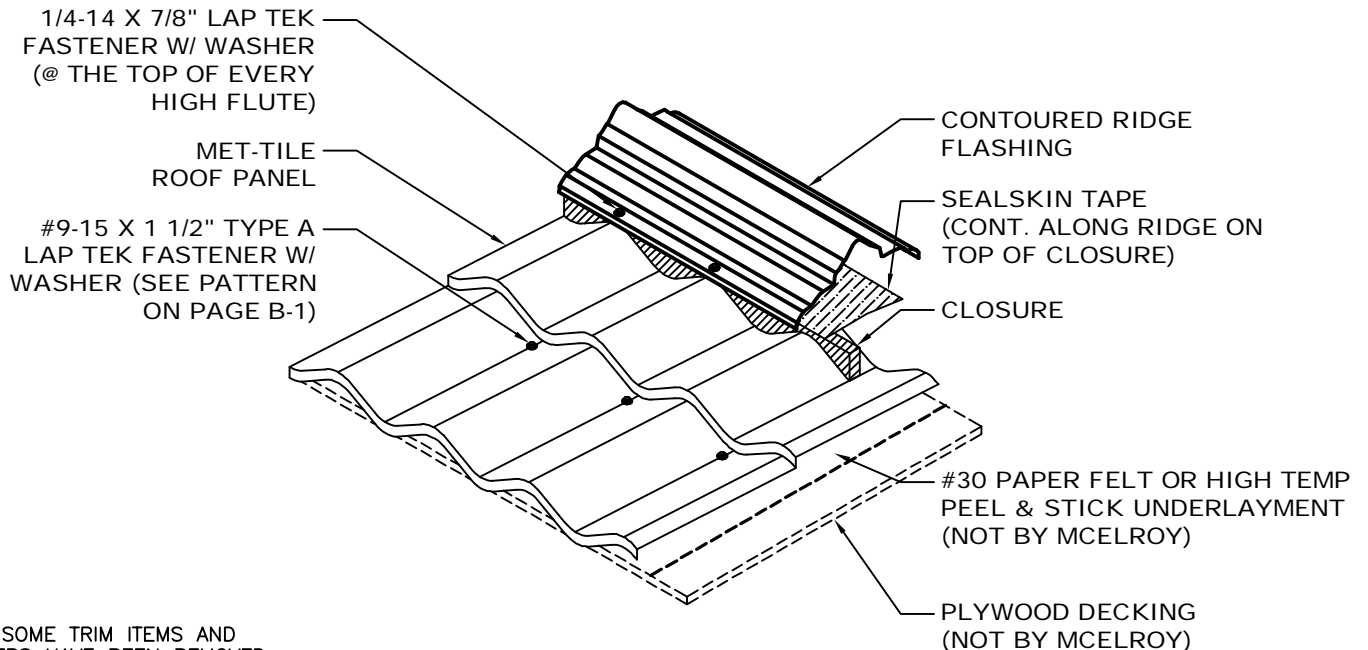


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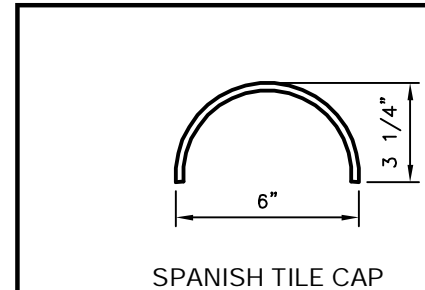
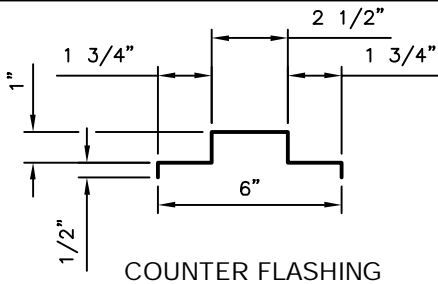
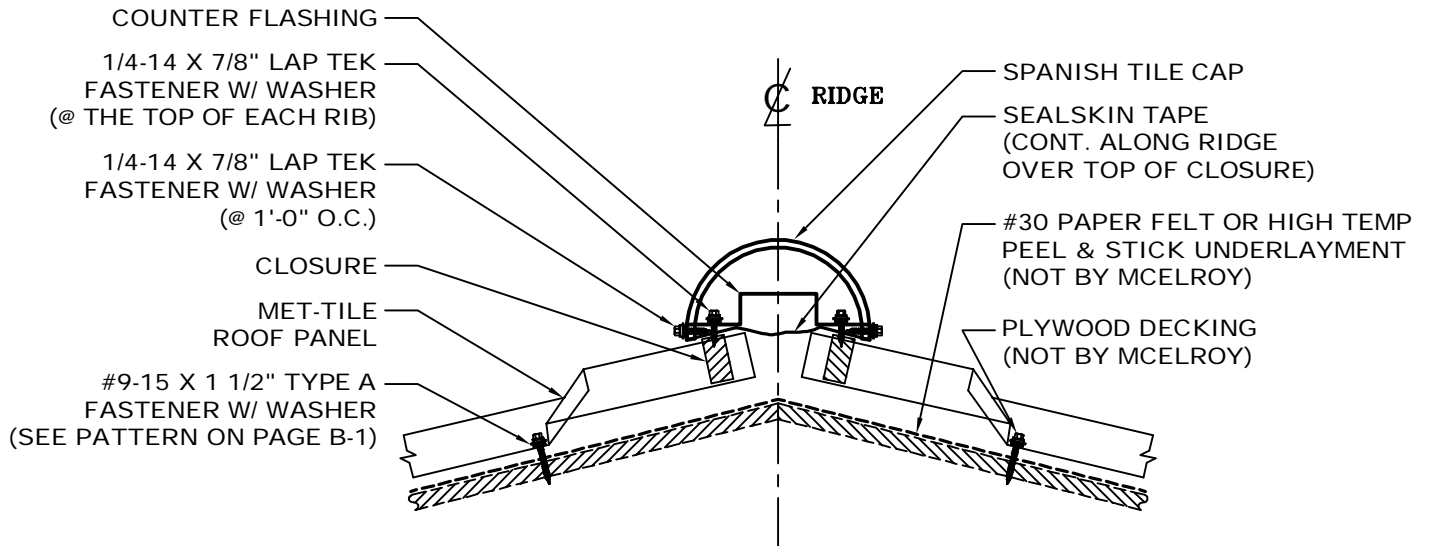


CONTOURED RIDGE FLASHING

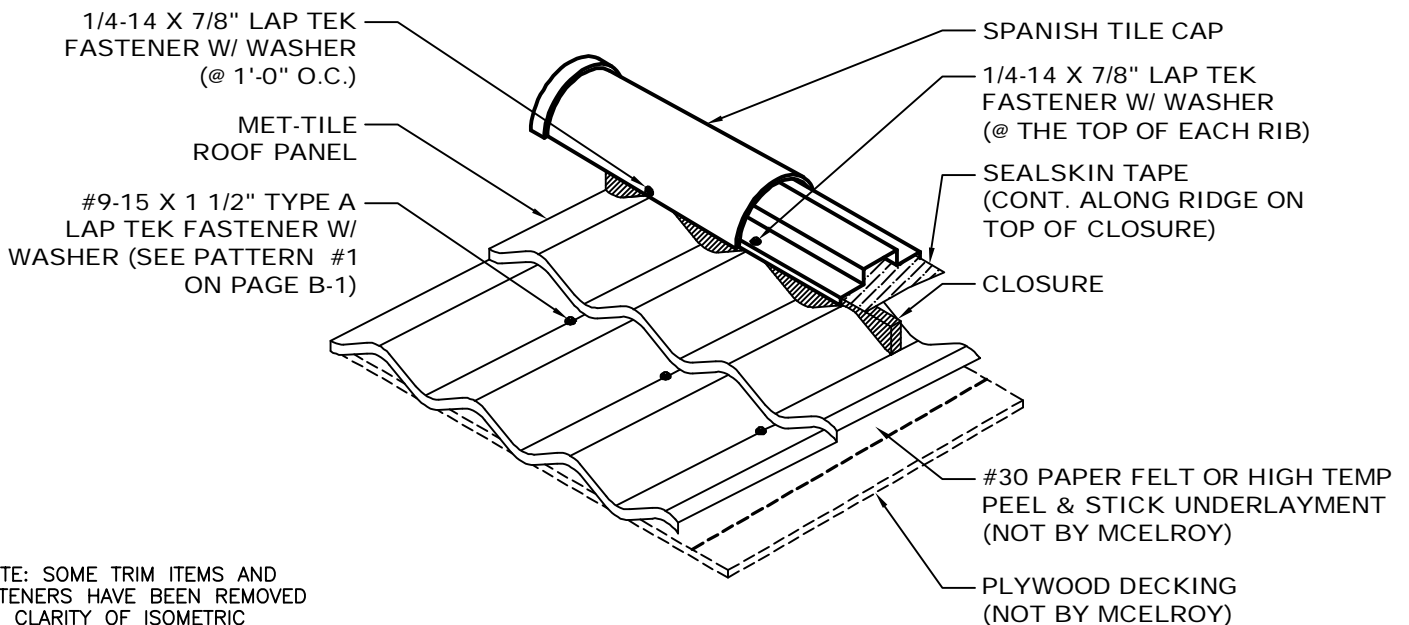
- NOTES:
1. Contoured Ridge Flashing to extend 2" outside of fascia.
 2. Place SealSkin Protective Tape over Closures continuously along Ridge.
 3. Attach Contoured Ridge Flashing to tops of ribs of Met-Tile Roof Panel with 1/4-14 x 7/8" Lap Tek fasteners with Washers making sure to fasten through SealSkin tape and Closure.



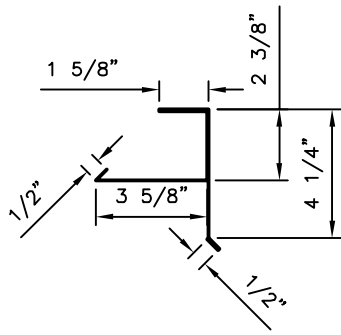
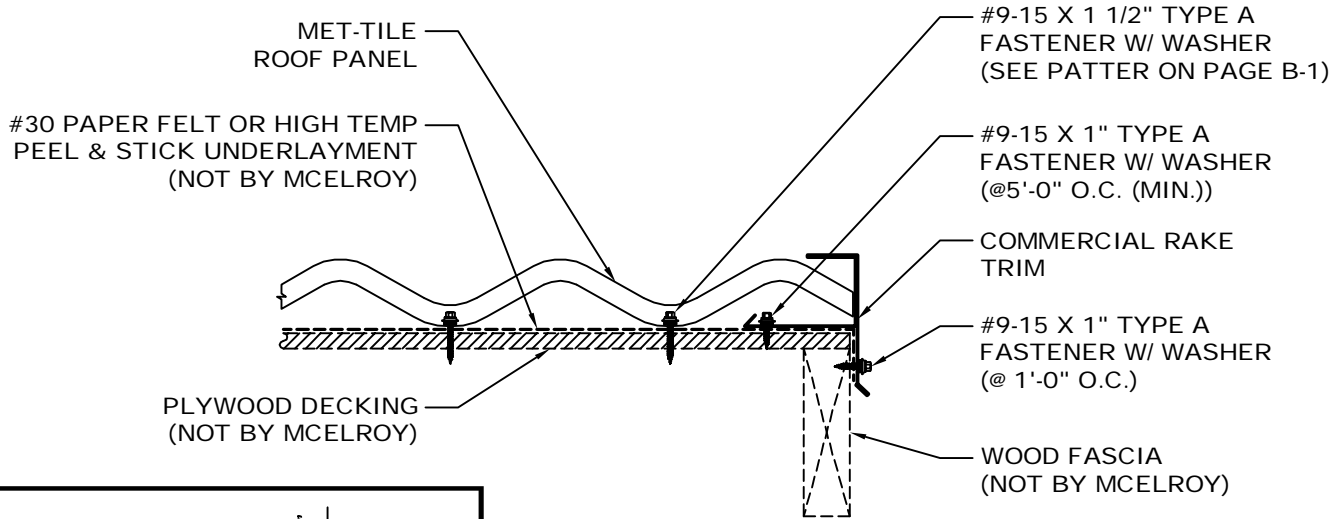
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



- NOTES:
1. Spanish Tile Caps and Counter Flashing to extend 2" outside of fascia.
 2. Place SealSkin Protective Tape over Closures continuously along Ridge on top of Closure.
 3. Attach Counter Flashing to major ribs of Met-Tile Roof Panel with 1/4-14 x 7/8" Lap Tek Fasteners with Washers making sure to fasten through SealSkin tape and Closure.
 4. Starting from Right to Left, install the Spanish Tile Caps by fastening it to the Counter Flashing with 1/4-14 x 7/8" Lap Tek Fastener at 1'-0" O.C.

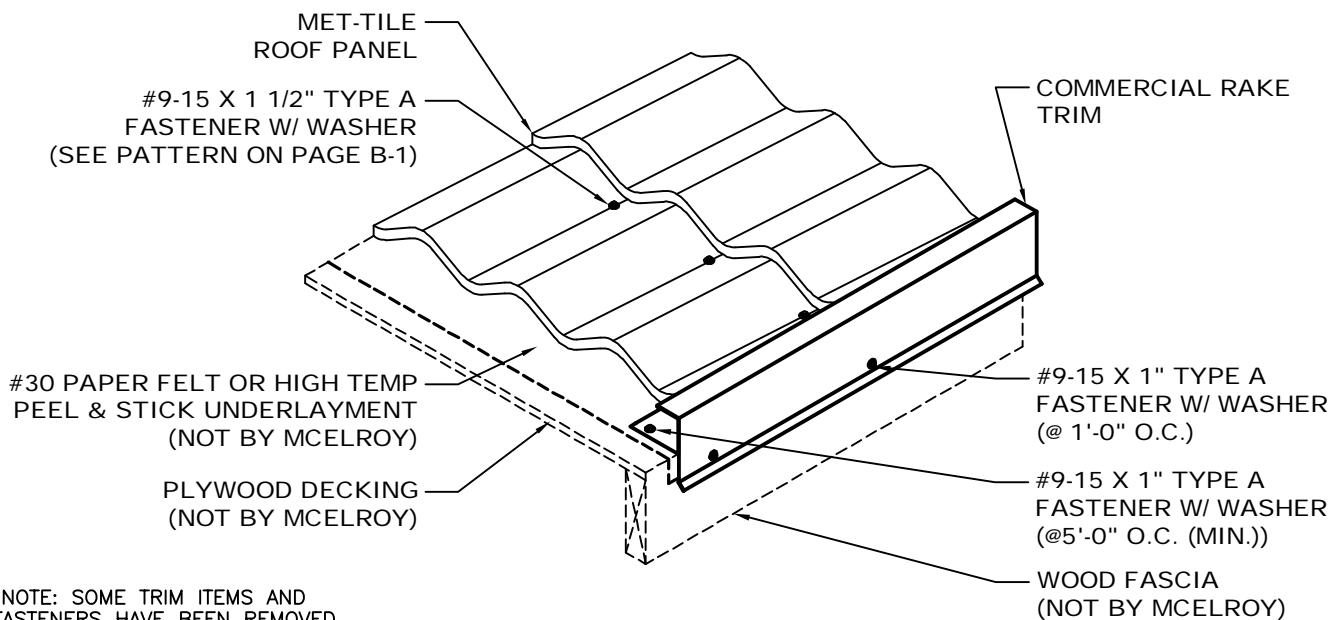


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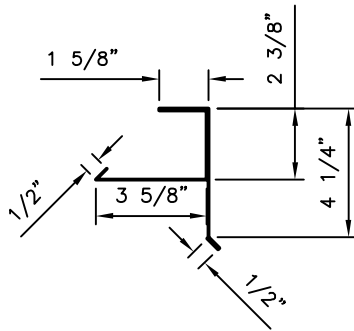
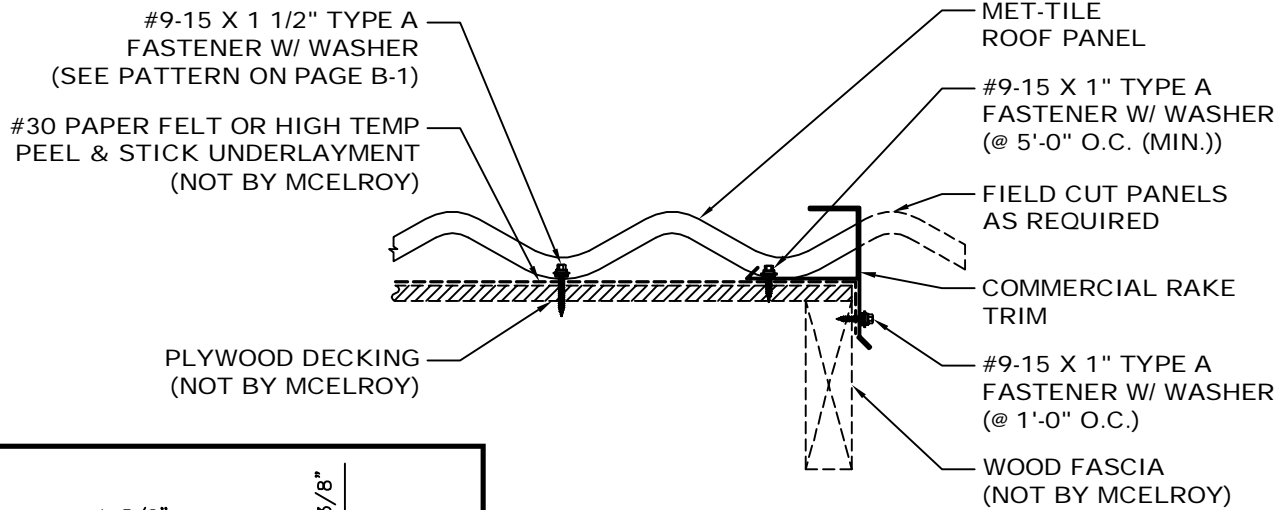
COMMERCIAL RAKE TRIM

- NOTES: 1. Commercial Rake Trim to run from Eave to Ridge.
 2. Attach Commercial Rake Flashing to decking with #9-15 x 1" Type A Fasteners with Washer at 5'-0" O.C. (min.). Fasten Flashing to fascia board with #9-15 x 1" Type A Fasteners with Washer at 1'-0" O.C.
 3. Attach Met-Tile Roof Panel per installation recommendations and fasten with #9-15 x 1 1/2" Type A Fasteners per Fastener Pattern on page B-1.)



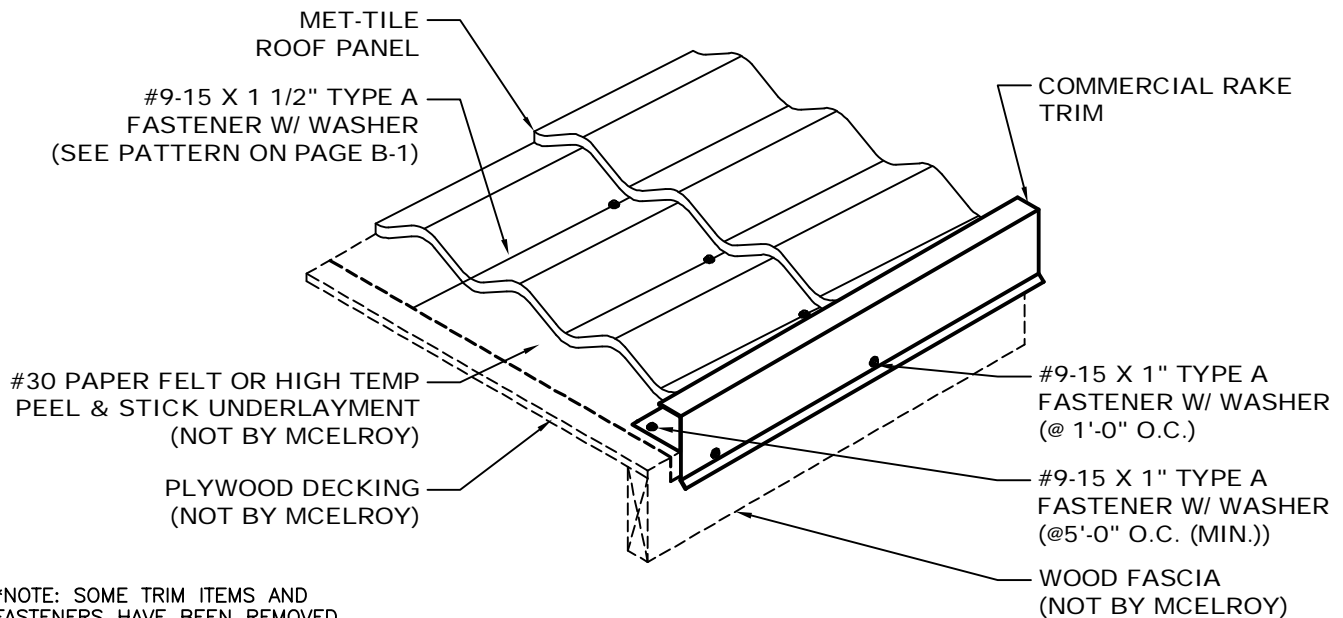
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

COMMERCIAL RAKE DETAIL (OFF MODULE)



COMMERCIAL RAKE TRIM

- NOTES: 1. Commercial Rake Trim to run from Eave to Ridge.
 2. Attach Commercial Rake Flashing to decking with #9-15 x 1" Type A Fasteners with Washer at 5'-0" O.C. (min.). Fasten Flashing to fascia board with #9-15 x 1" Type A Fasteners with Washer at 1'-0" O.C.
 3. Attach Met-Tile Roof Panel per installation recommendations and fasten with #9-15 x 1 1/2" Type A Fasteners per Fastener Pattern on page B-1. Field cut panel as required.



*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

#30 PAPER FELT OR HIGH TEMP PEEL & STICK UNDERLAYMENT (NOT BY MCELROY)

MET-TILE ROOF PANEL

PLYWOOD DECKING (NOT BY MCELROY)

#9-15 X 1 1/2" TYPE A FASTENER W/ WASHER (SEE PATTERN ON PAGE B-1)

1/4-14 X 7/8" LAP TEK FASTENER (@ 1'-0" O.C.)

STEPPED DOWN OUTSIDE CLOSURE (RECOMMENDED)

SEALSKIN TAPE (CONT. ALONG LENGTH OF RAKE)

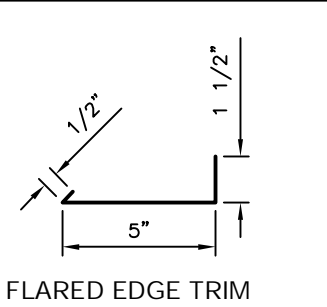
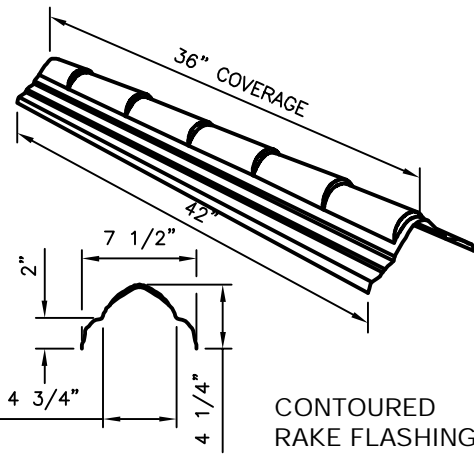
FLARED EDGE TRIM

CONTOURED RAKE TRIM

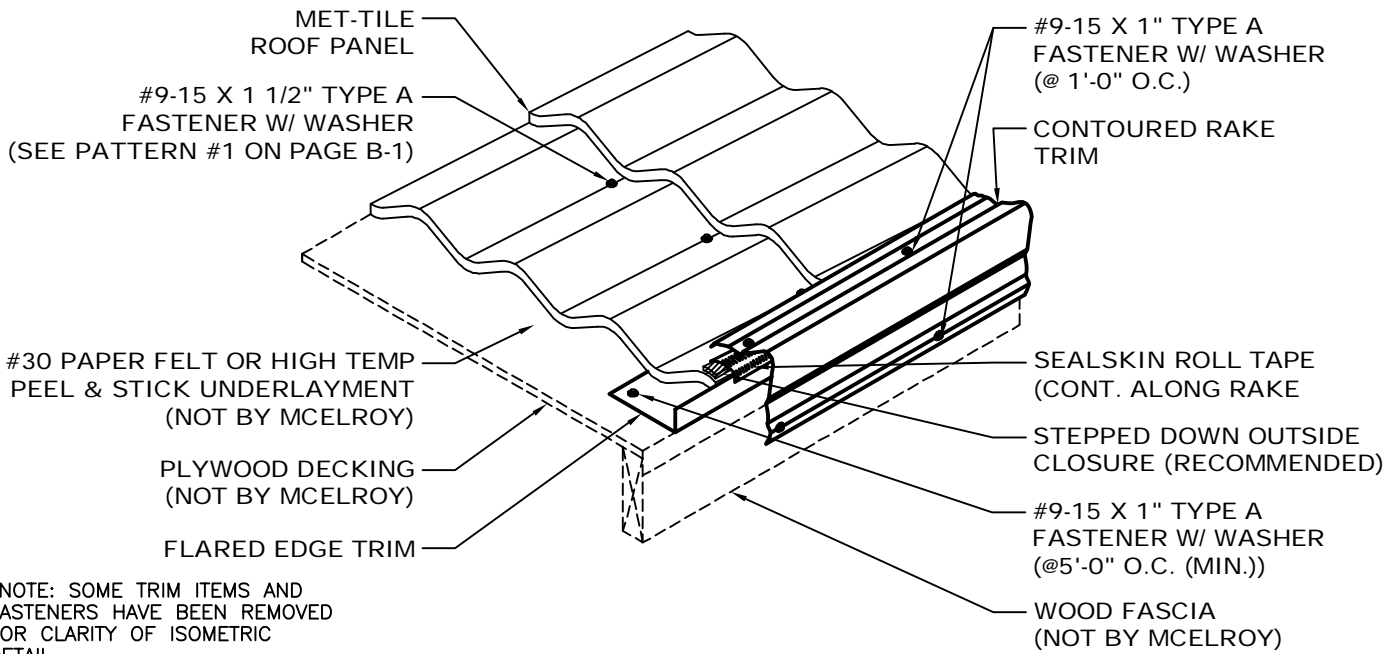
#9-15 X 1" TYPE A FASTENER W/ WASHER (@ 1'-0" O.C.)

WOOD FASCIA (NOT BY MCELROY)

#9-15 X 1" TYPE A FASTENER W/ WASHER (@ 5'-0" O.C. (MIN.))

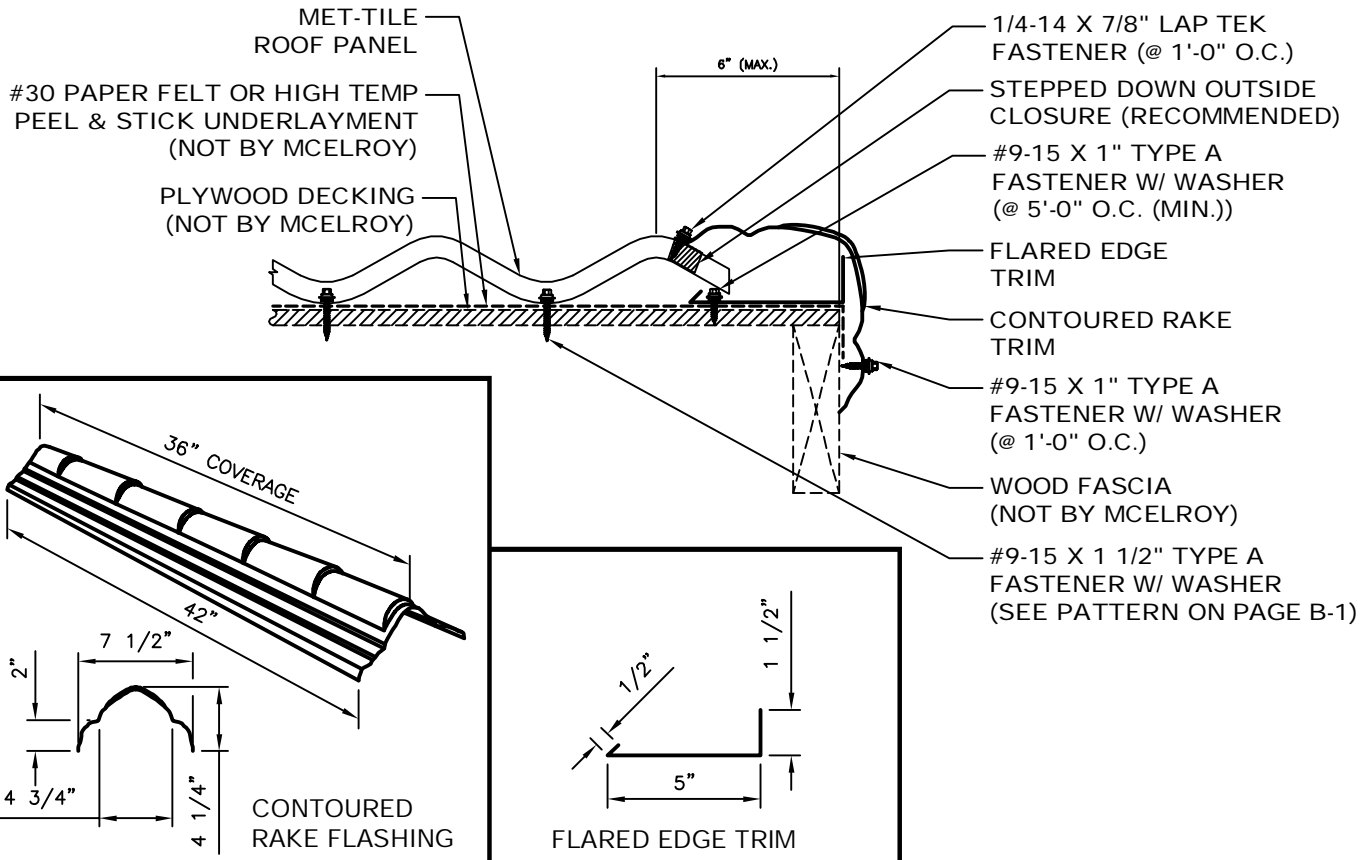


- NOTES: 1. Contoured Rake Flashing to run from Eave to Ridge.
 2. Attach Flared Edge Trim to decking with #9-15 x 1" Type A Fasteners with Washer at 5'-0" O.C. (min.).
 3. Attach Met-Tile Roof Panel per installation recommendations and fasten with #9-15 x 1 1/2" Type A Fasteners per Fastener Pattern on page B-1.
 4. Attach SealSkin Roll Tape to side of Flared Edge Trim and to top of Met-Tile roof panel.
 5. Attach Contoured Rake Trim to top of Met-Tile roof panel and into the fascia board with #9-15 x 1" Type A Fasteners with Washer at 1'-0" O.C.

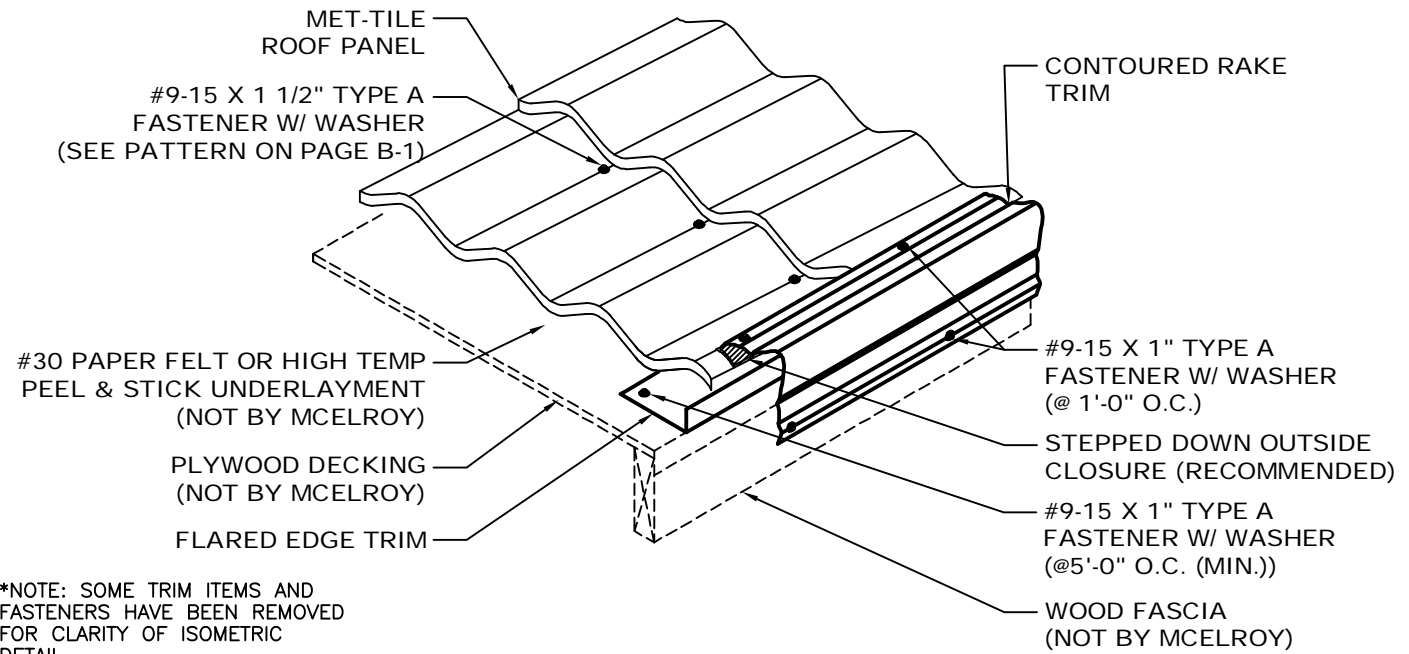


*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

CONTOURED RAKE DETAIL (OFF MODULE)

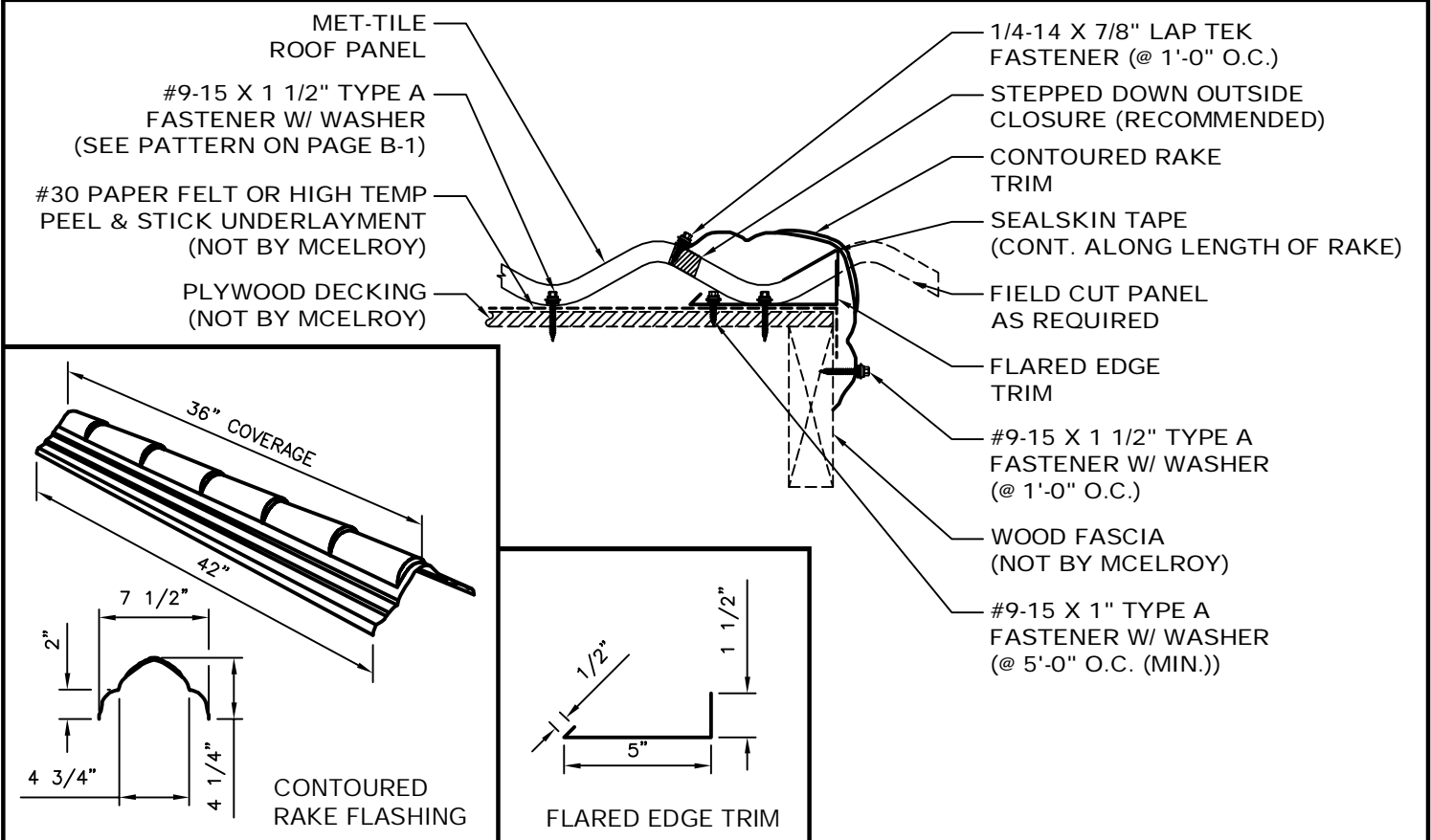


- NOTES:
1. Contoured Rake Flashing to run from Eave to Ridge.
 2. Attach Flared Edge Trim to decking with #9-15 x 1" Type A Fasteners with Washer at 5'-0" O.C. (min.).
 3. Attach Met-Tile Roof Panel per installation recommendations and fasten with #9-15 x 1 1/2" Type A Fasteners per Fastener Pattern on page B-1.
 4. Attach Contoured Rake Trim to top of Met-Tile roof panel and into the fascia board with #9-15 x 1" Type A Fasteners with Washer at 1'-0" O.C.

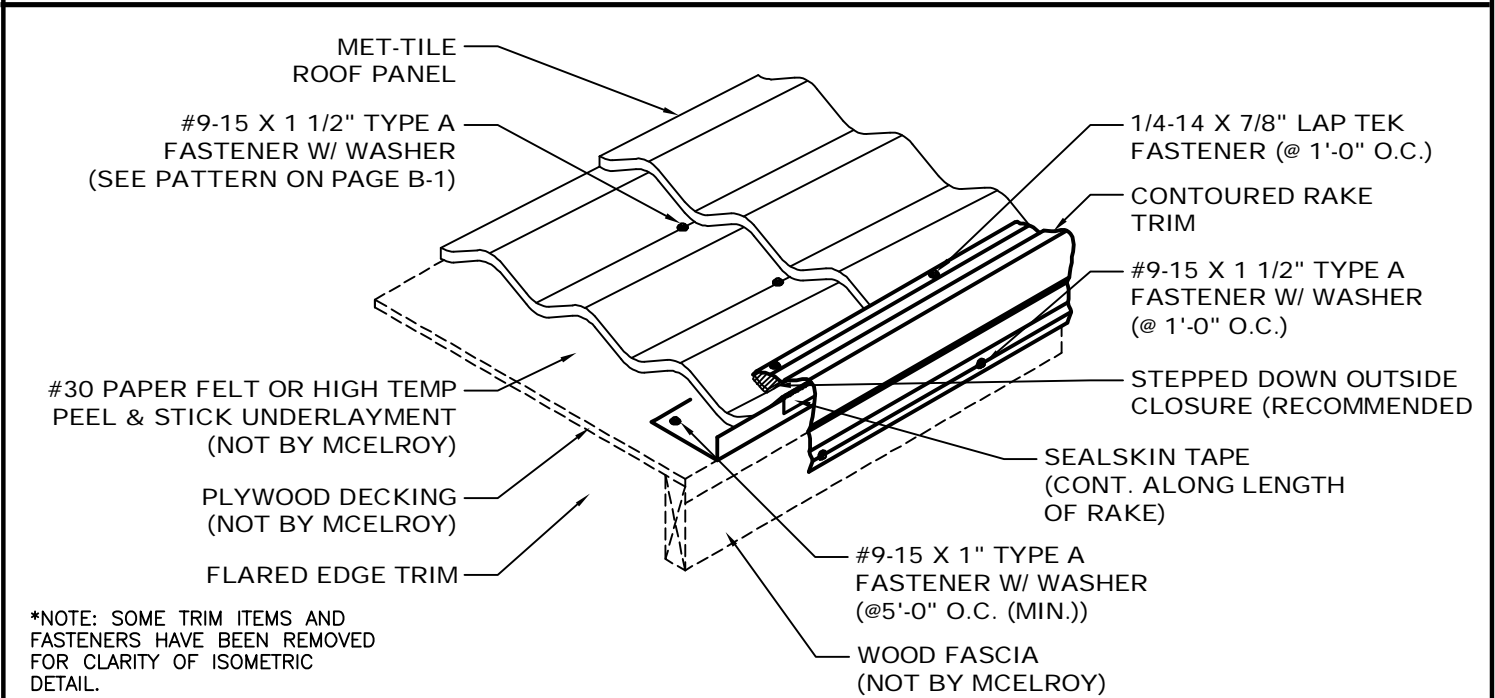


*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

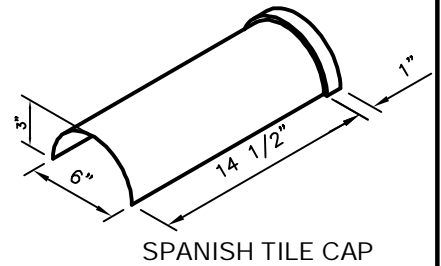
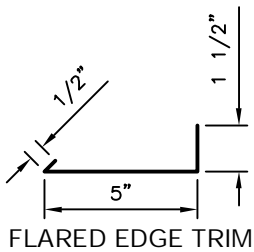
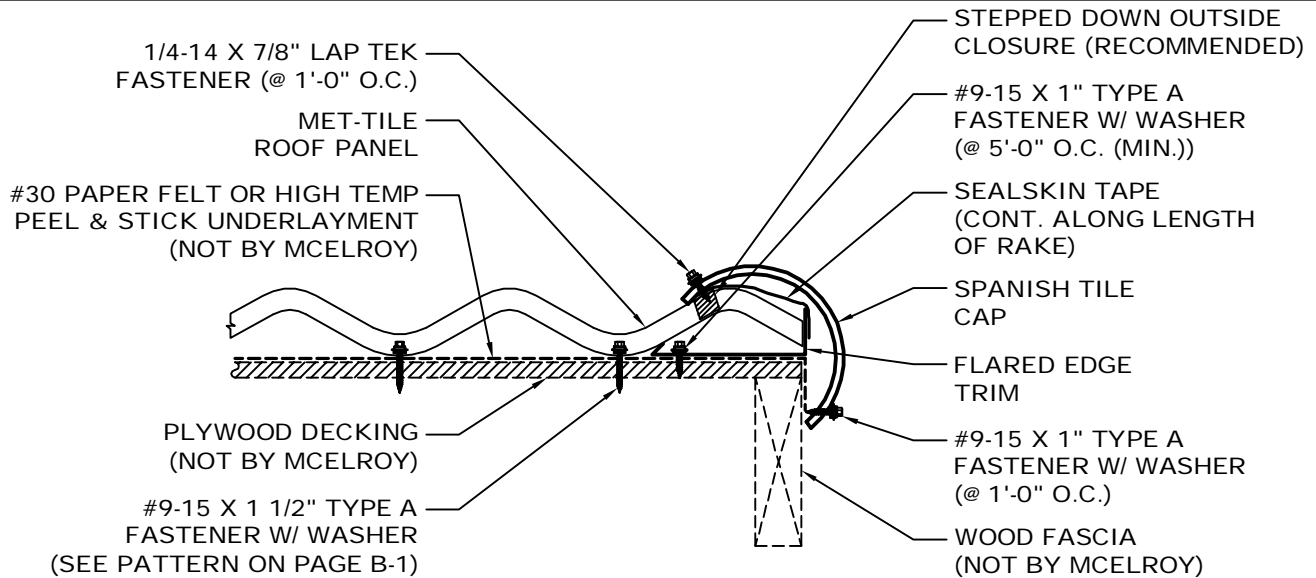
CONTOURED RAKE DETAIL (OFF MODULE)



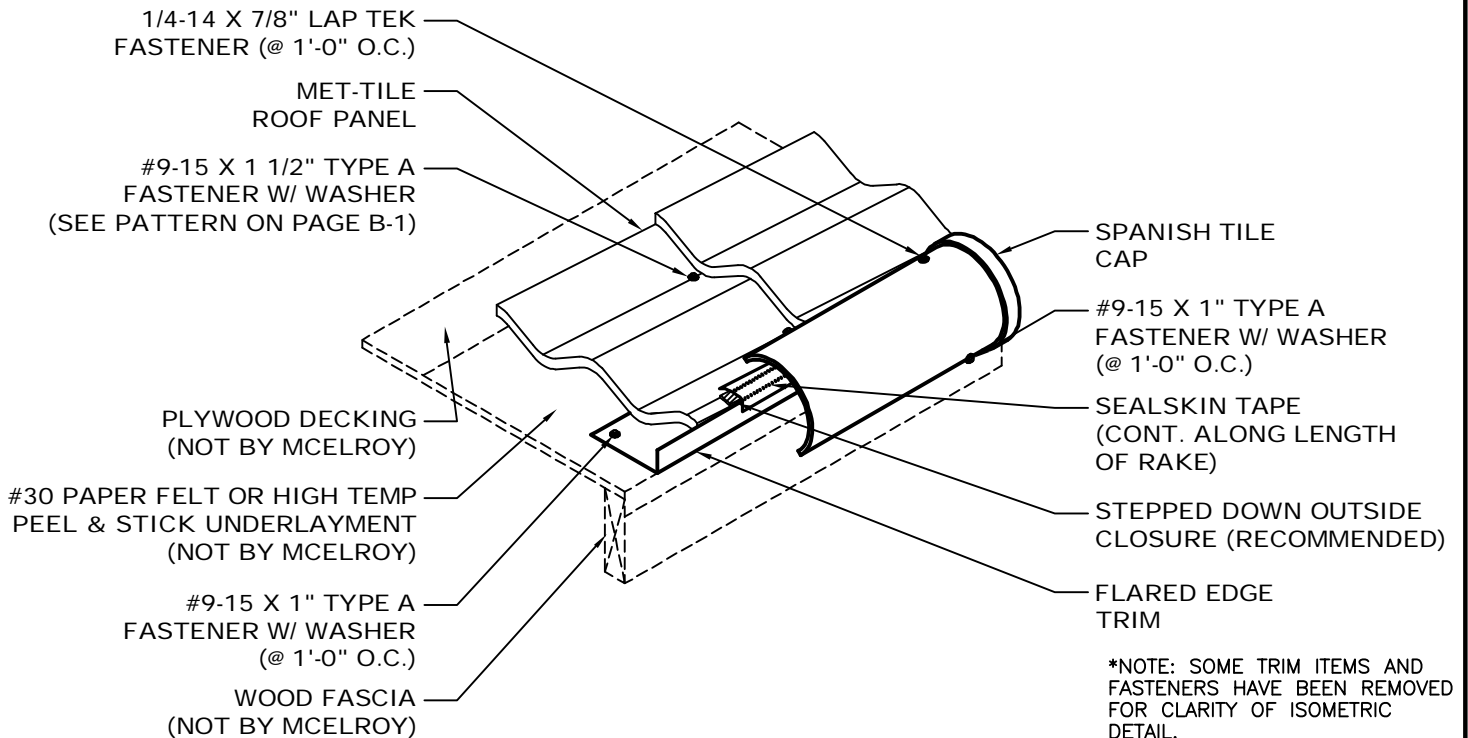
- NOTES: 1. Contoured Rake Flashing to run from Eave to Ridge.
 2. Attach Flared Edge Trim to decking with #9-15 x 1" Type A Fasteners with Washer at 5'-0" O.C. (min.).
 3. Attach Met-Tile Roof Panel per installation recommendations and fasten with #9-15 x 1 1/2" Type A Fasteners per Fastener Pattern on page B-1. Field cut panel as required.
 4. Apply SealSkin Tape to Flared Edge Flashing and to Met-Tile panel continuously along length of Rake.
 5. Attach Contoured Rake Trim to top of Met-Tile roof panel with 1/4-14 x 7/8" Lap Tek Fasteners at 1'-0" O.C. and #9-15 x 1 1/2" Type A Fasteners with Washer at 1'-0" O.C. into Fascia Board.

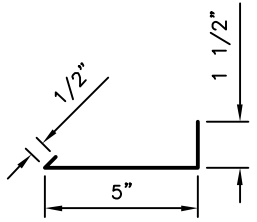
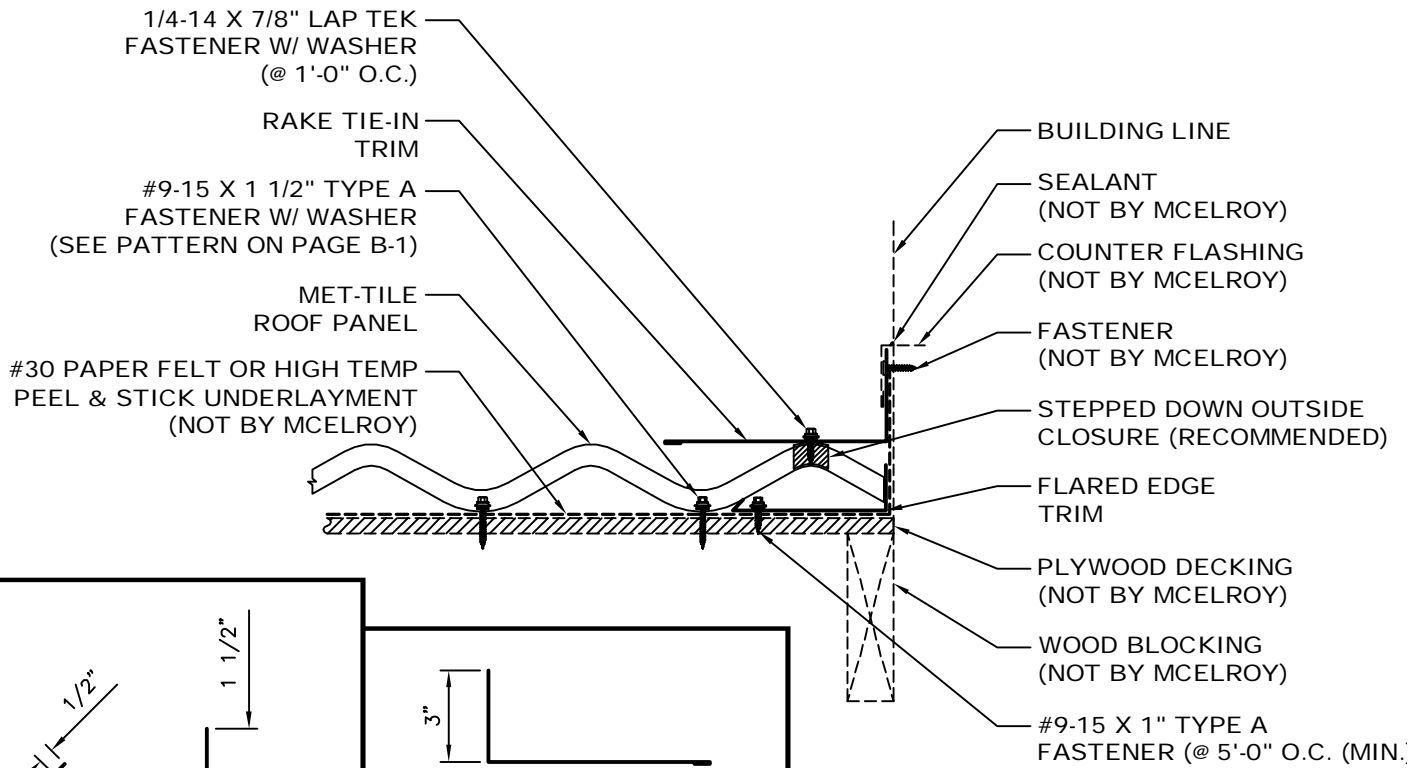


*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

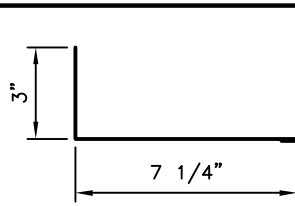


- NOTES:
1. Flared Edge Trim to run from Eave to Ridge.
 2. Attach Flared Edge Trim to decking with #9-15 x 1" Type A Fasteners at 5'-0" O.C. (min.).
 3. Attach Met-Tile Panels per recommended installation instructions with #9-15 x 1 1/2" Type A Fasteners with Washers per Fastener Pattern on page B-1.
 4. Apply SealSkin Tape to Flared Edge Trim and to Met-Tile panel continuously along length of Rake.
 5. Spanish Tile Caps to run from Eave to Ridge. Attach to Met-Tile Panels with 1/4-14 x 7/8" Lap Tek Fasteners at 1'-0" O.C.



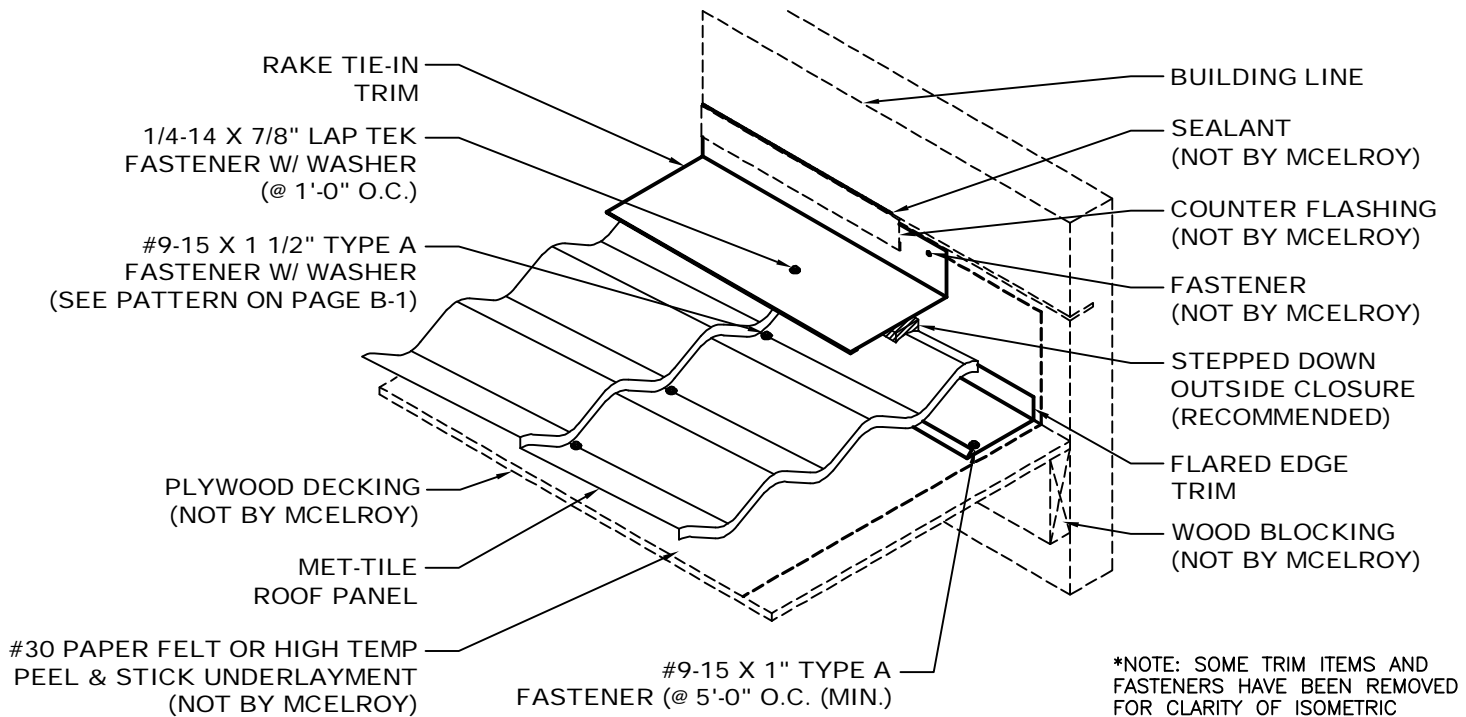


FLARED EDGE TRIM



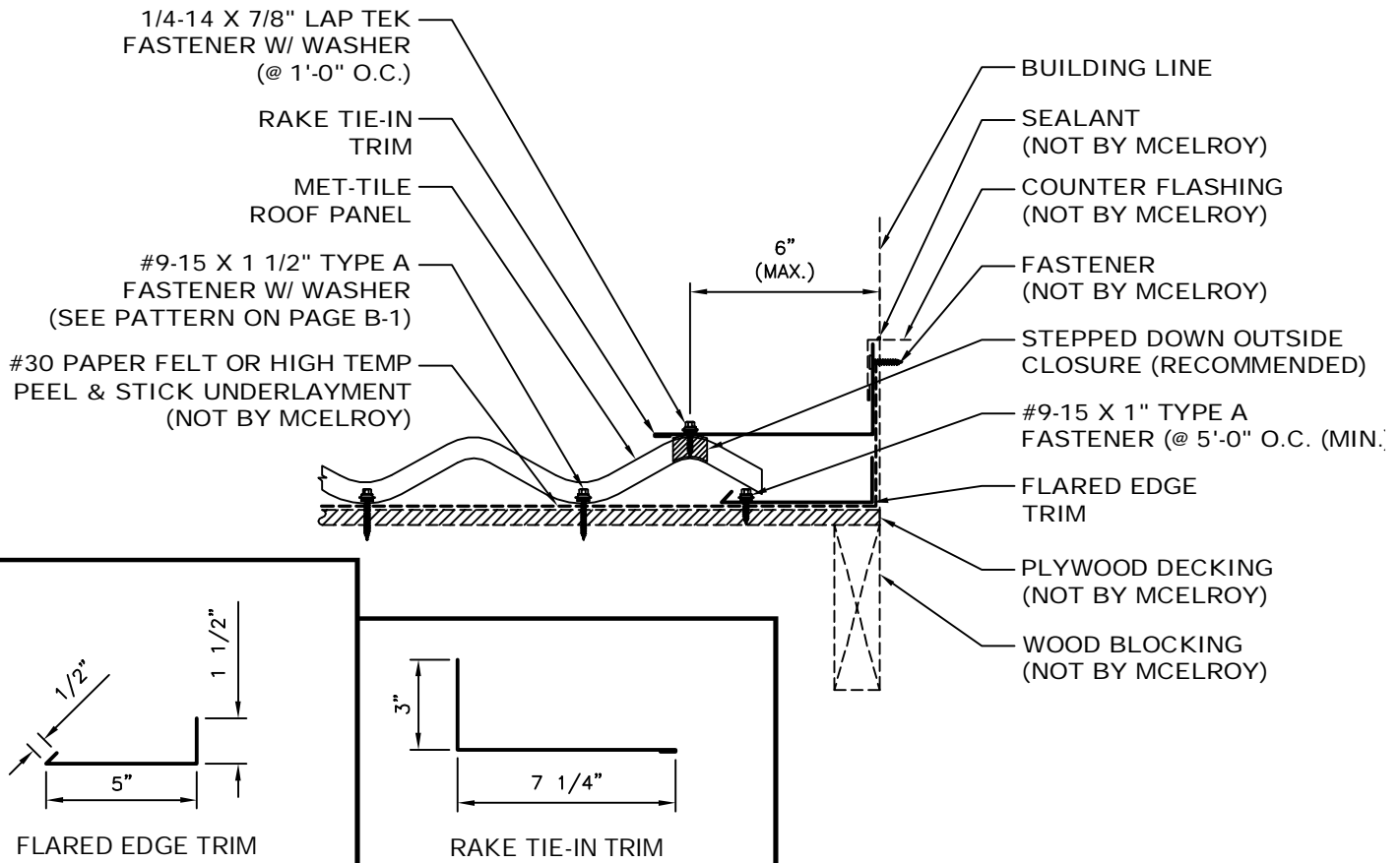
RAKE TIE-IN TRIM

- NOTES: 1. Flared Edge Trim to run from Eave to Ridge.
 2. Attach Flared Edge Trim to decking with #9-15 x 1" Type A Fasteners at 5'-0" O.C. (min.).
 3. Attach Met-Tile Panels per recommended installation instructions with #9-15 x 1 1/2" Type A Fasteners with Washers per Fastener Pattern on page B-1.
 4. Rake Tie-In Trim to run from Eave to Ridge. Attach to Met-Tile Panels with 1/4-14 X 7/8" Lap Tek Fasteners at 1'-0" O.C.

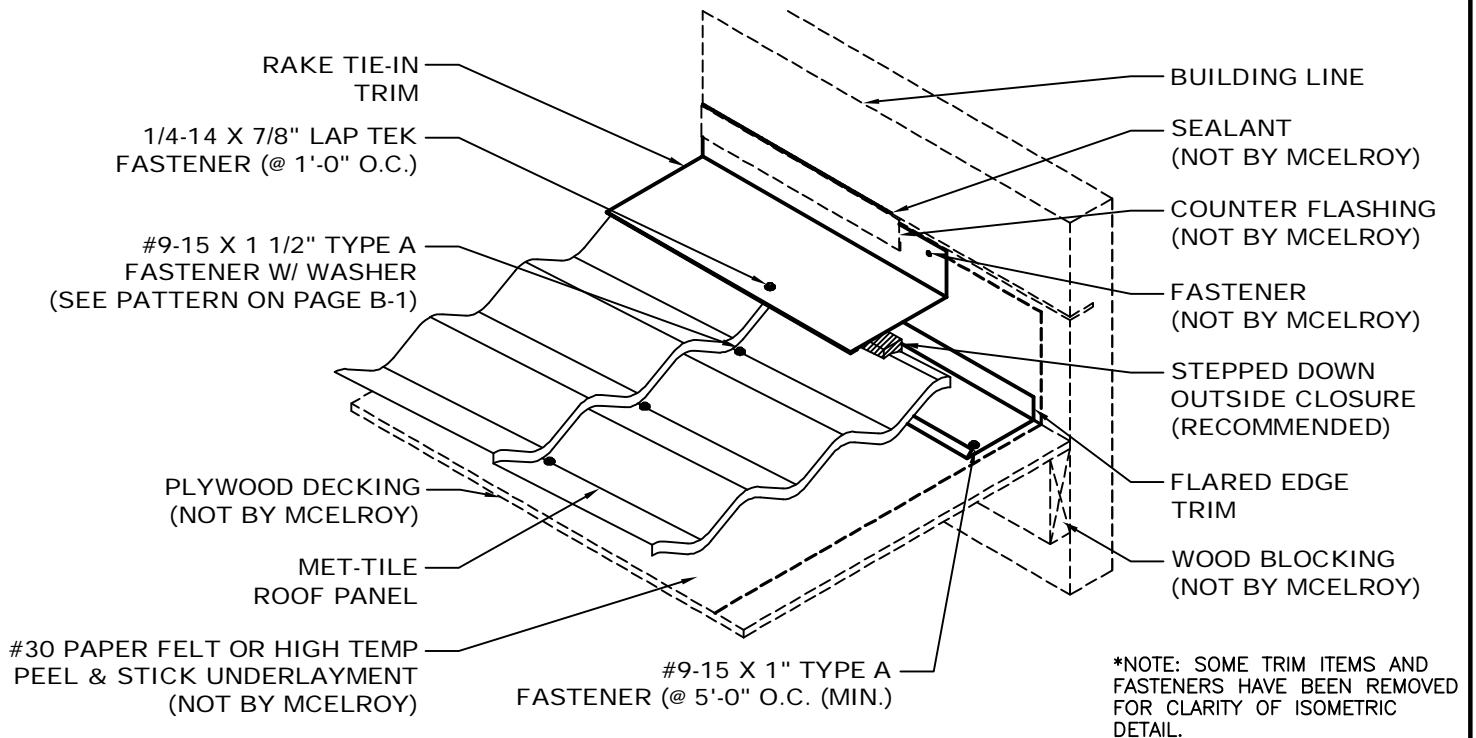


*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

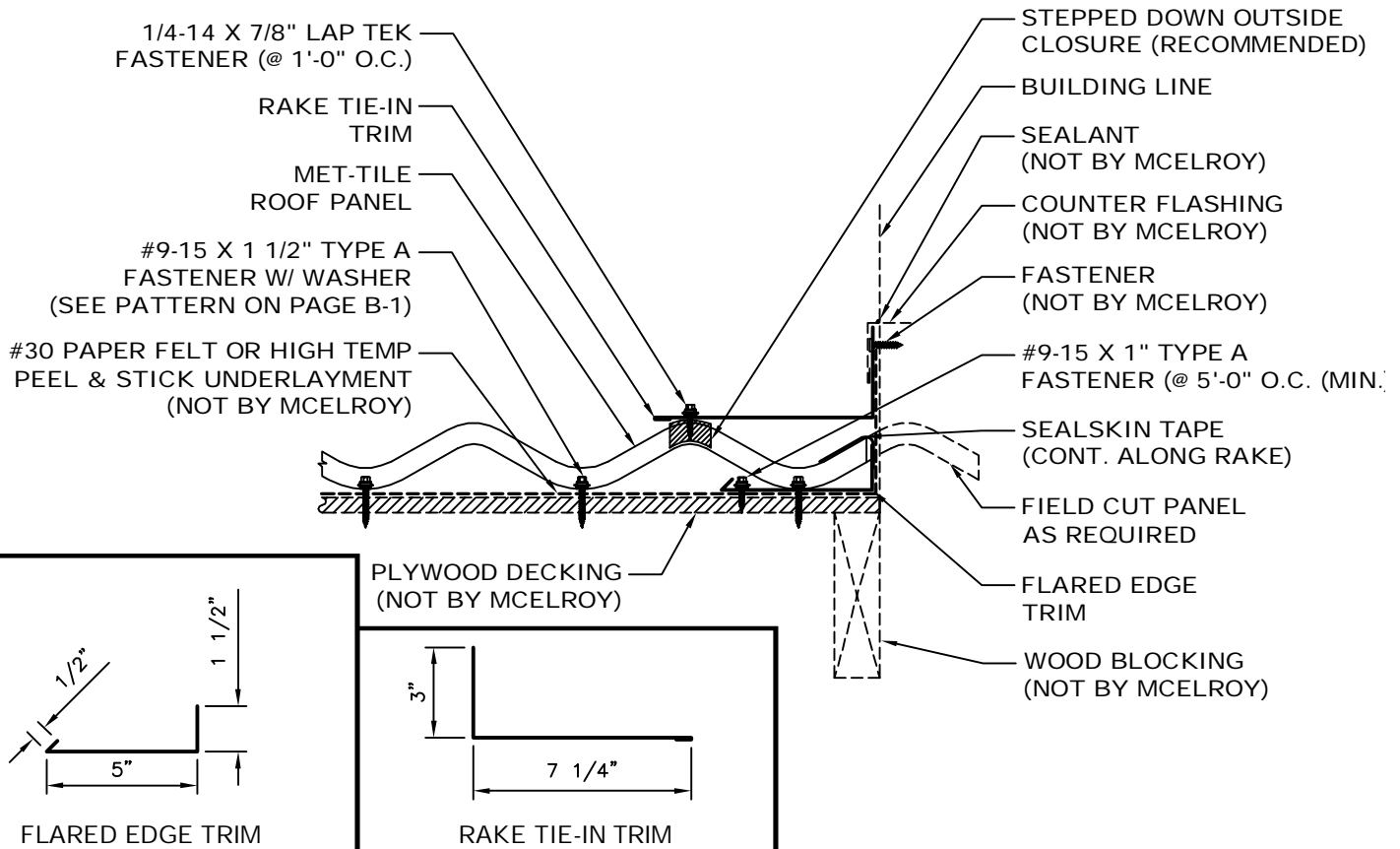
MET-TILE RAKE TIE-IN DETAIL (OFF MODULE)



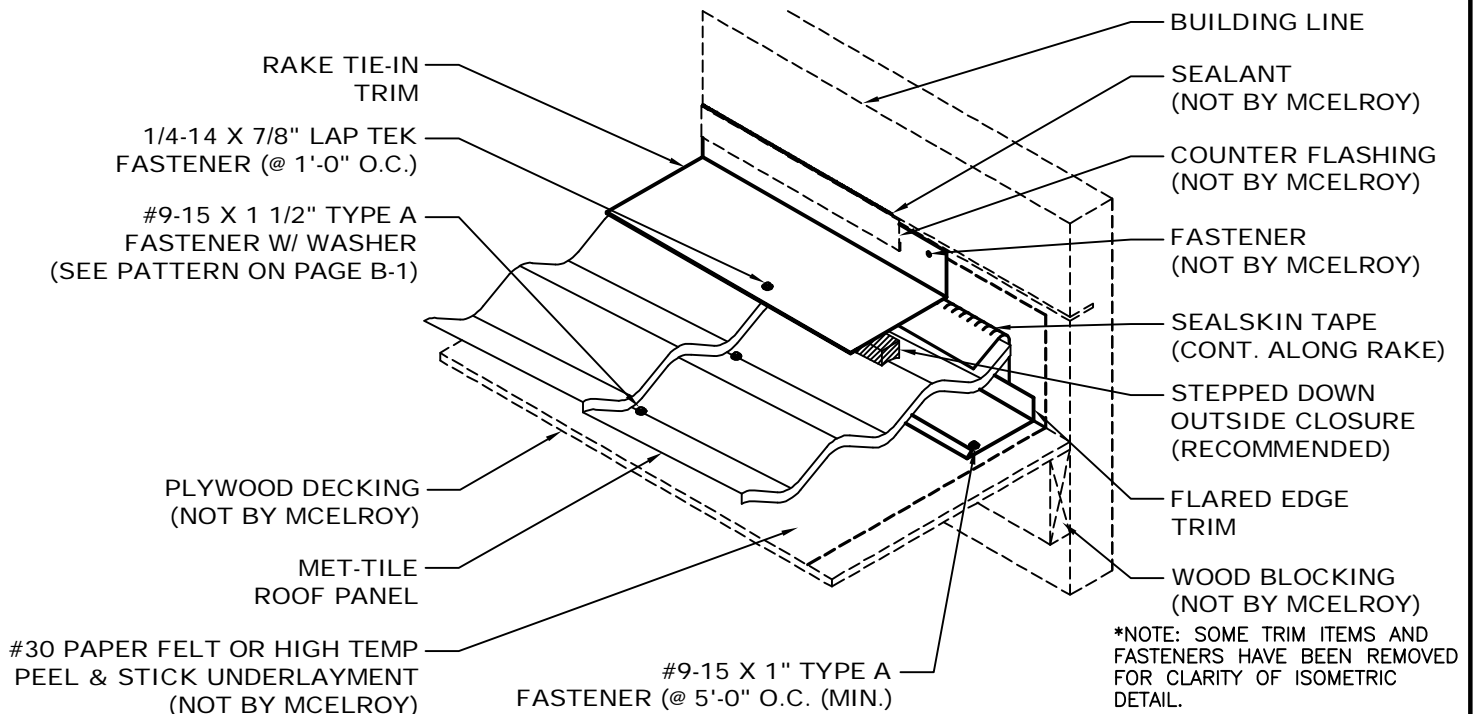
- NOTES: 1. Flared Edge Trim to run from Eave to Ridge.
 2. Attach Flared Edge Trim to decking with #9-15 x 1" Type A Fasteners at 5'-0" O.C. (min.).
 3. Attach Met-Tile Panels per recommended installation instructions with #9-15 x 1 1/2" Type A Fasteners with Washers per Fastener Pattern on page B-1.
 4. Rake Tie-In Trim to run from Eave to Ridge. Attach to Met-Tile Panels with 1/4-14 X 7/8" Lap Tek Fasteners with Washers at 1'-0" O.C.,

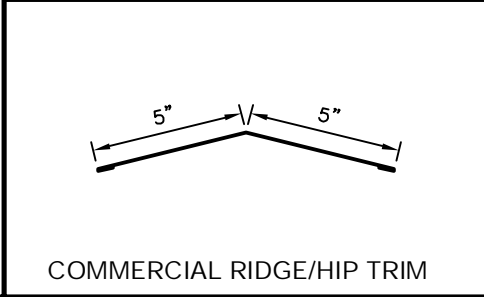
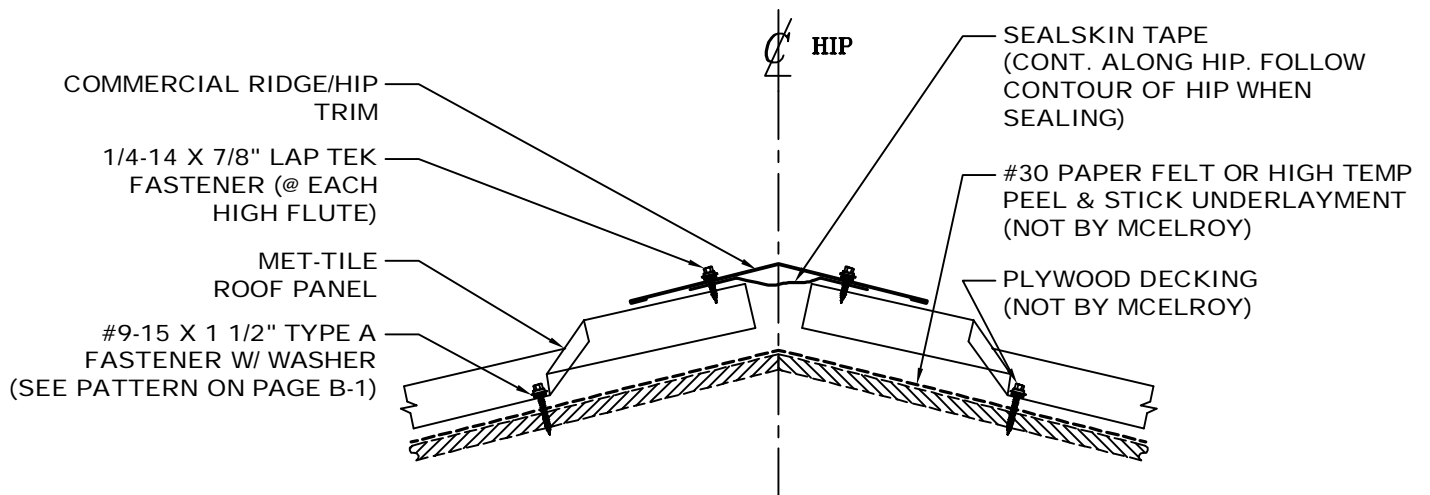


MET-TILE RAKE TIE-IN DETAIL (OFF MODULE)



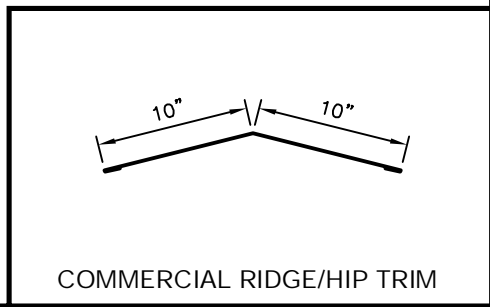
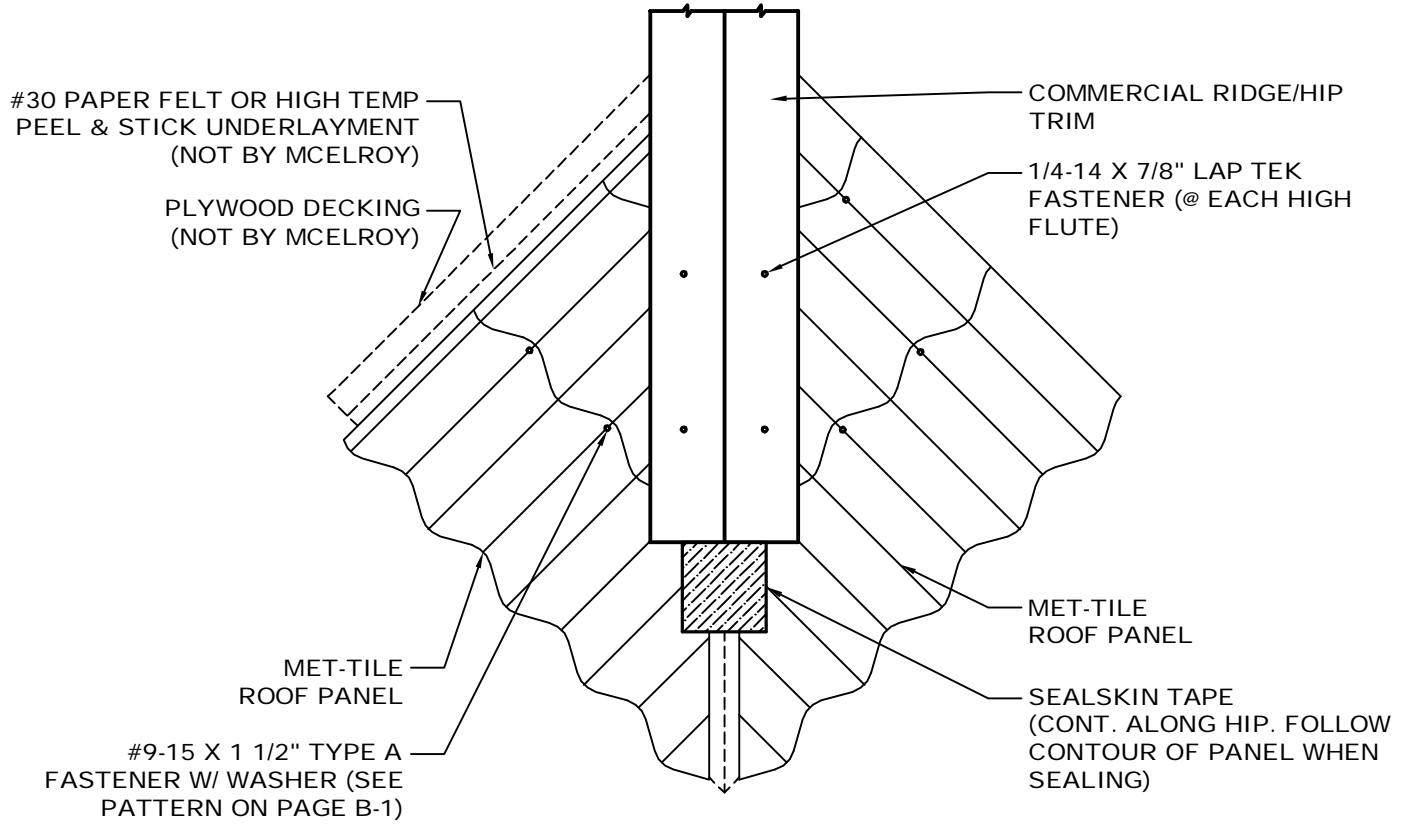
- NOTES:
1. Flared Edge Trim to run from Eave to Ridge.
 2. Attach Flared Edge Trim to decking with #9-15 x 1" Type A Fasteners at 5'-0" O.C. (min.).
 3. Attach Met-Tile Panels per recommended installation instructions with #9-15 x 1 1/2" Type A Fasteners with Washers per Fastener Pattern on page B-1.
 4. Apply SealSkin Tape to Flared Edge Trim and to Met-Tile panel continuously along length of Rake.
 5. Rake Tie-In Trim to run from Eave to Ridge. Attach to Met-Tile Panels with 1/4-14 X 7/8" Lap Tek Fasteners with Washers at 1'-0" O.C.





COMMERCIAL RIDGE/HIP TRIM

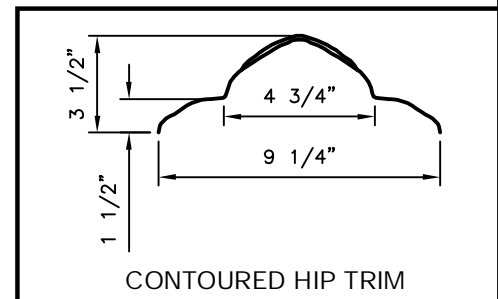
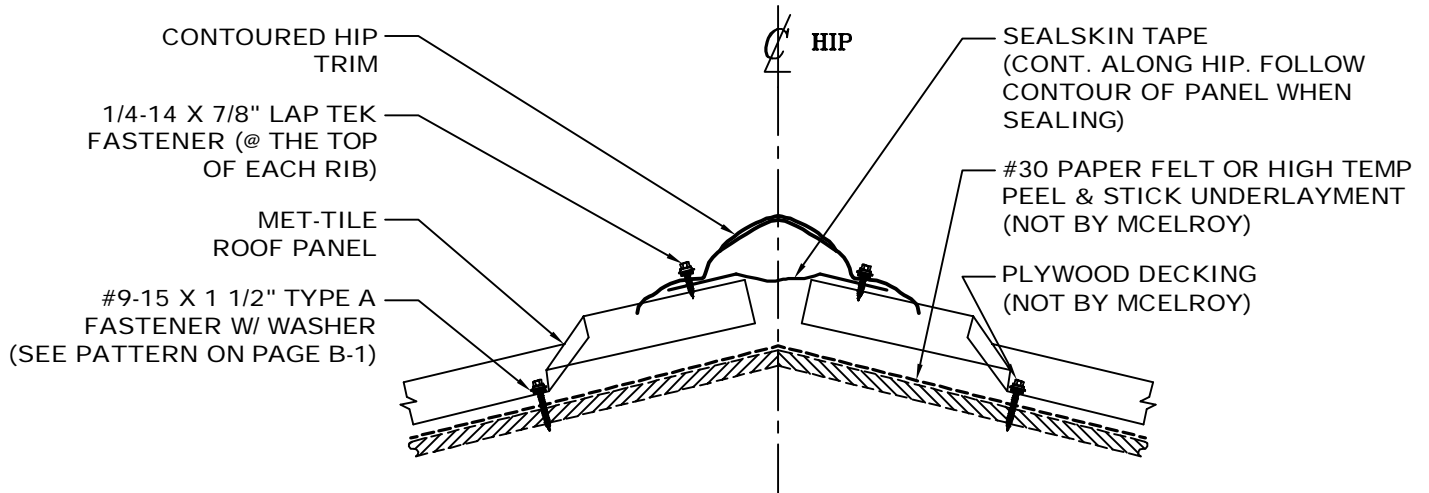
- NOTES: 1. Commercial Ridge/Hip Trim to extend 2" outside of fascia.
 2. Place SealSkin Protective Tape continuously along Hip following contour of the panel.
 3. Starting from Eave to Ridge, install the Commercial Ridge/Hip Trim. Attach to the roof panels with 1/4-14 x 7/8" Lap Tek Fastener at every High Flute.



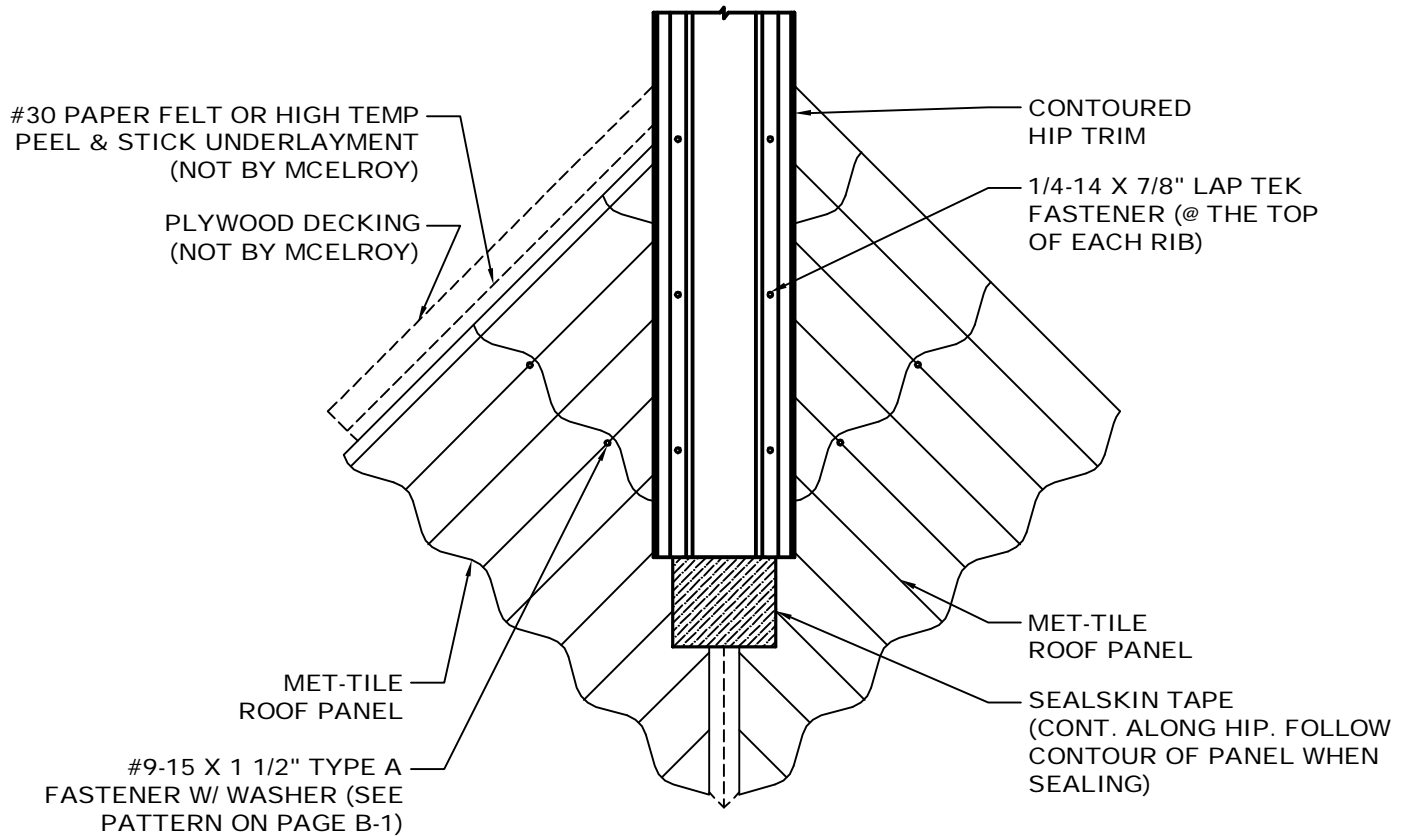
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

- NOTES: 1. Commercial Ridge/Hip Trim to extend 2" outside of fascia.
 2. Place SealSkin Protective Tape continuously along Hip following contour of panel.
 3. Starting from Eave to Ridge, install the Commercial Ridge/Hip Trim by attaching it with 1/4-14 x 7/8" Lap Tek Fasteners at every High Flute. Make sure fastener penetrates SealSkin tape.

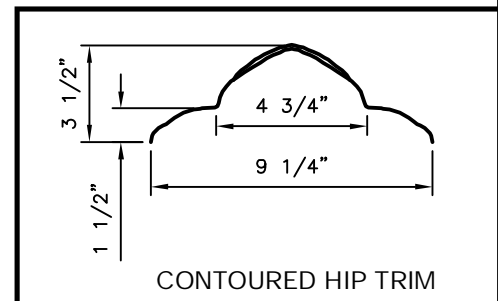




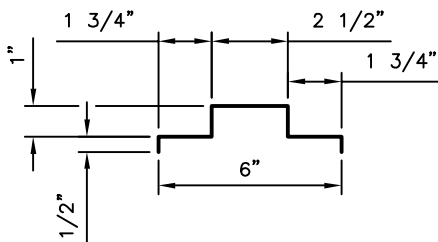
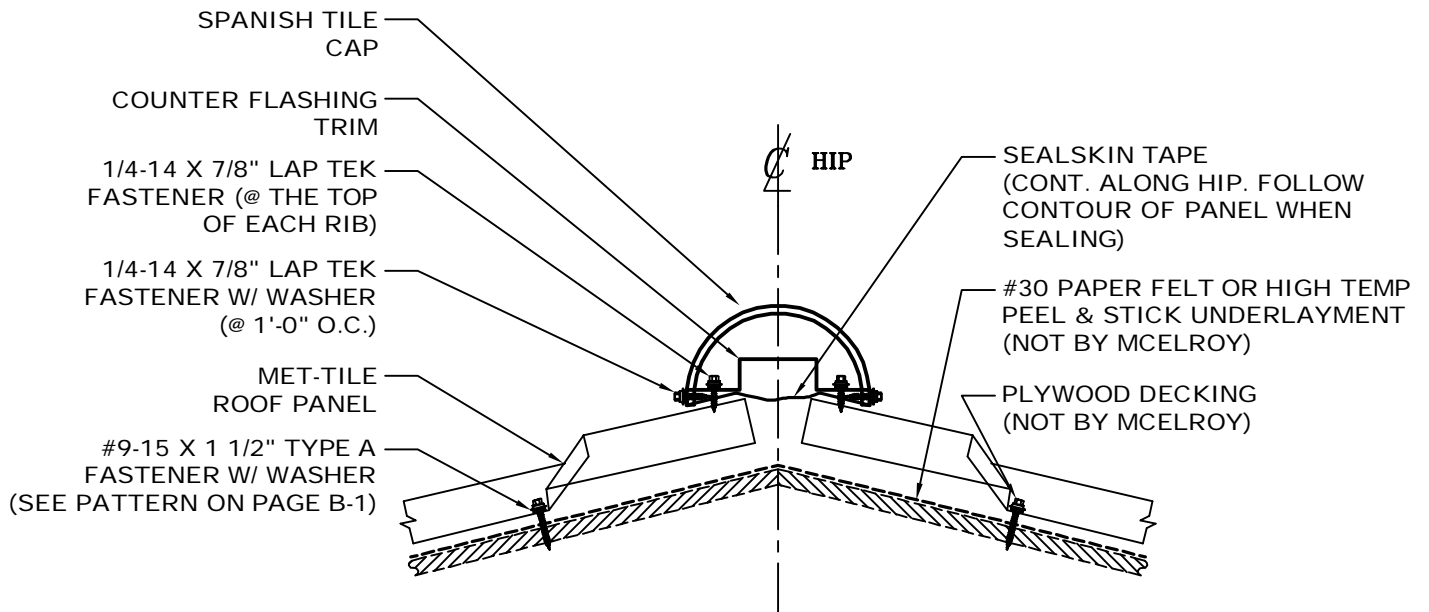
- NOTES: 1. Contoured Hip Trim to extend 2" outside of fascia.
 2. Place SealSkin Protective Tape continuously along Hip following contour of panel.
 3. Starting from Eave to Ridge, install the Contoured Hip Trim by fastening it to the Met-Tile panels with 1/4-14 x 7/8" Lap Tek Fastener at every high flute making sure to penetrate SealSkin Tape and Outside Closures.



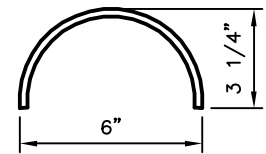
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



- NOTES:
1. Contoured Hip Trim to extend 2" outside of fascia.
 2. Place SealSkin Protective Tape continuously along Hip following contour of panel.
 3. Starting from Eave to Ridge, install the Contoured Hip Trim by fastening it to the Met-Tile panels with 1/4-14 x 7/8" Lap Tek Fastener at every high flute making sure to penetrate SealSkin Tape and Outside Closures.

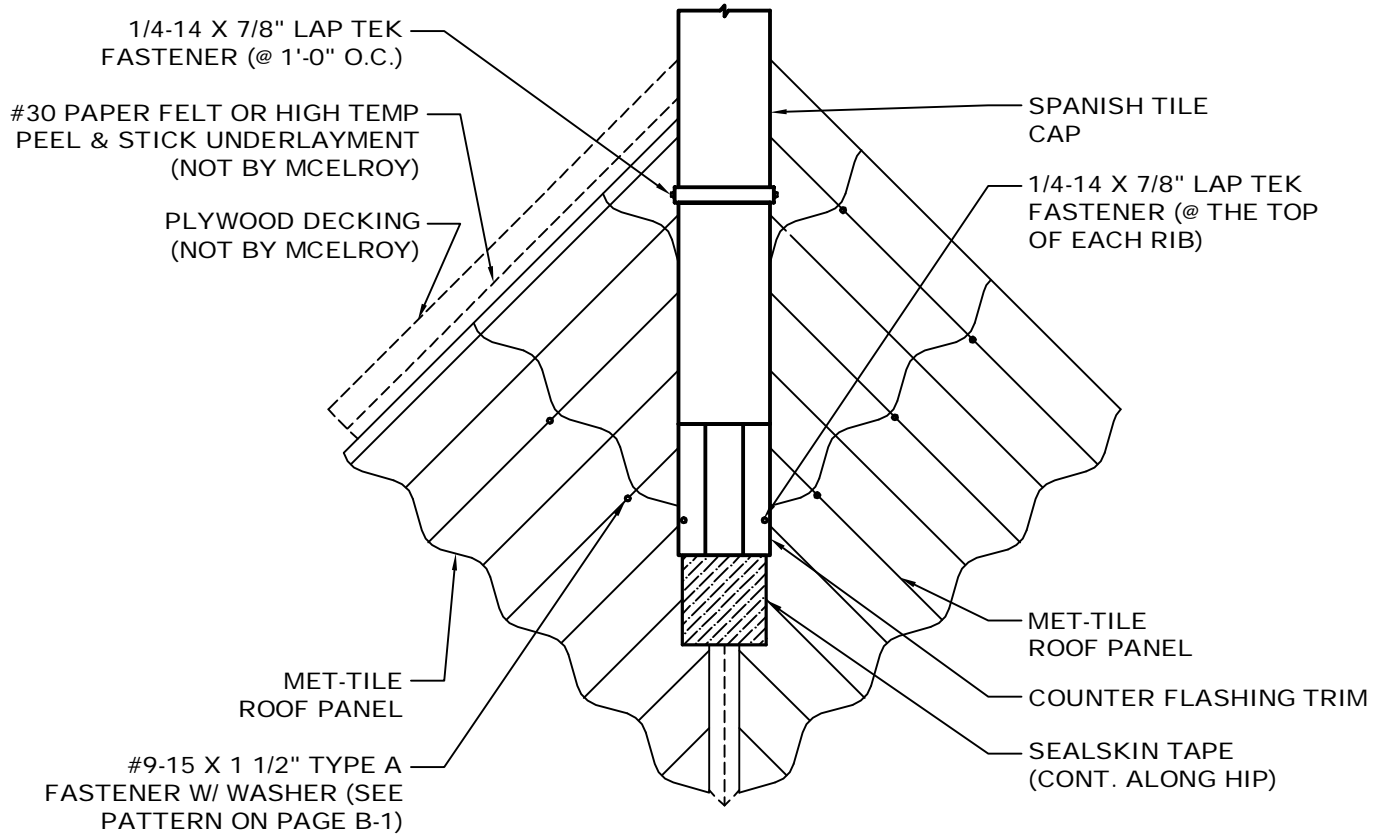


COUNTER FLASHING TRIM

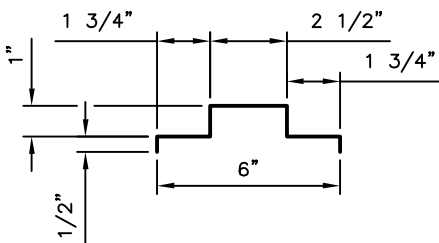


SPANISH TILE CAP

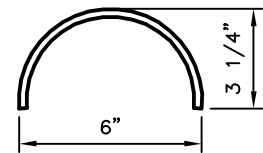
- NOTES:
1. Spanish Tile Caps and Counter Flashing Trim to extend 2" outside of fascia.
 2. Place SealSkin Protective Tape continuously along Hip following contour of panel.
 3. Attach Counter Flashing Trim to major ribs of Met-Tile Roof Panel with 1/4-14 x 7/8" Lap Tek Fasteners making sure to fasten through SealSkin tape and Beveled Outside Closure.
 4. Starting from Eave to Ridge, install the Spanish Tile Caps by fastening it to the Counter Flashing Trim with 1/4-14 x 7/8" Lap Tek Fastener at 1'-0" O.C.



*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

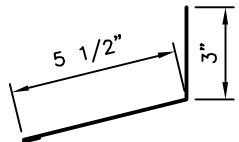
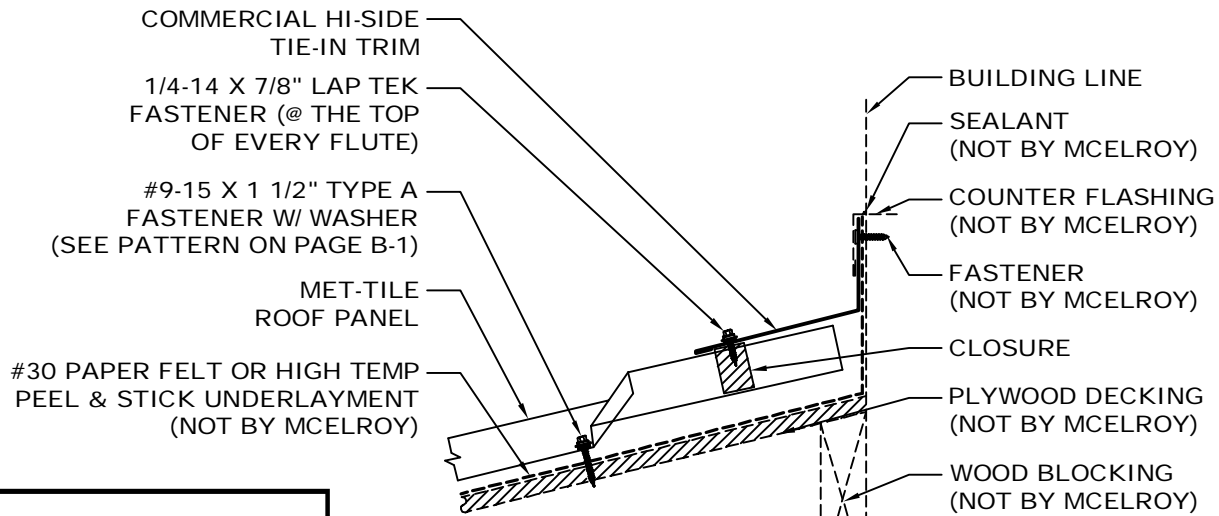


COUNTER FLASHING TRIM



SPANISH TILE CAP

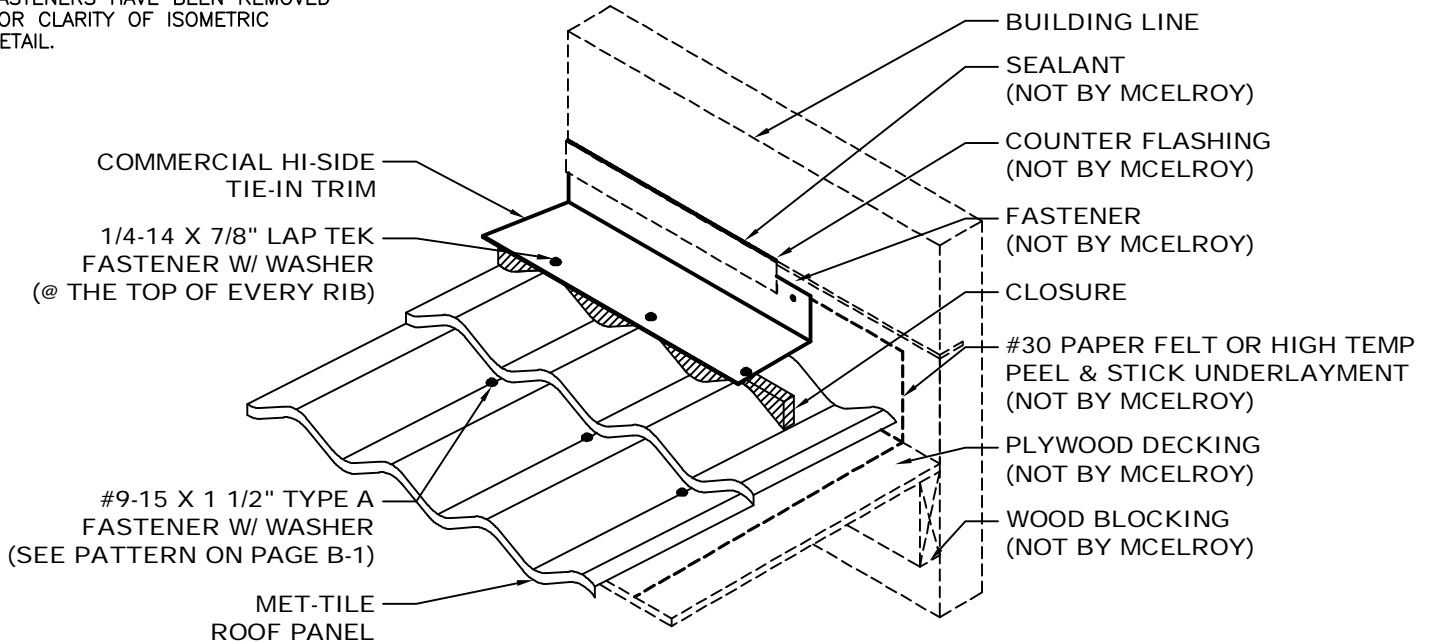
- NOTES:
1. Spanish Tile Caps and Counter Flashing Trim to extend 2" outside of fascia.
 2. Place SealSkin Protective Tape continuously along Hip following contour of panel.
 3. Attach Counter Flashing Trim to major ribs of Met-Tile Roof Panel with 1/4-14 x 7/8" Lap Tek Fasteners making sure to fasten through SealSkin Tape and Beveled Outside Closure.
 4. Starting from Eave to Ridge, install the Spanish Tile Caps by fastening it to the Counter Flashing Trim with 1/4-14 x 7/8" Lap Tek Fastener at 1'-0" O.C.

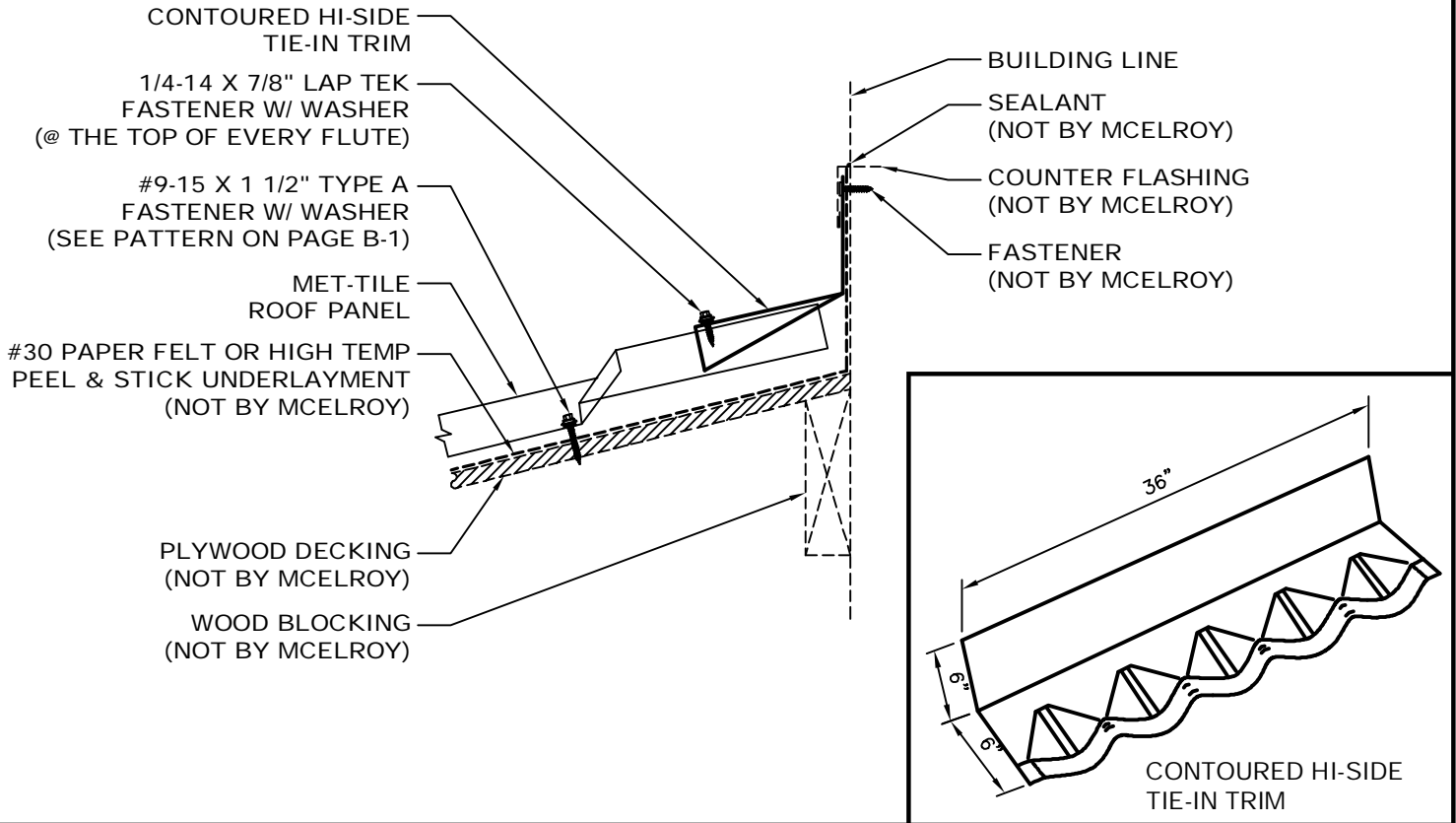


COMMERCIAL HI-SIDE TIE-IN TRIM

- NOTES: 1. Commercial Hi-Side Tie-In Trim to extend 2" outside of fascia.
 2. Attach Met-Tile Roof Panel per installation instructions and fasten with #9-15 x 1 1/2" Type A Fasteners with Washers per Fastener Pattern on page B-1.
 3. Attach Closure to Met-Tile roof panel.
 4. Attach Commercial Hi-Side Tie-In Trim to Closure and Met-Tile roof panels with 1/4-14 X 7/8" Lap Tek Fasteners with Washer in the top of each flute making sure to penetrate the Outside Closure.

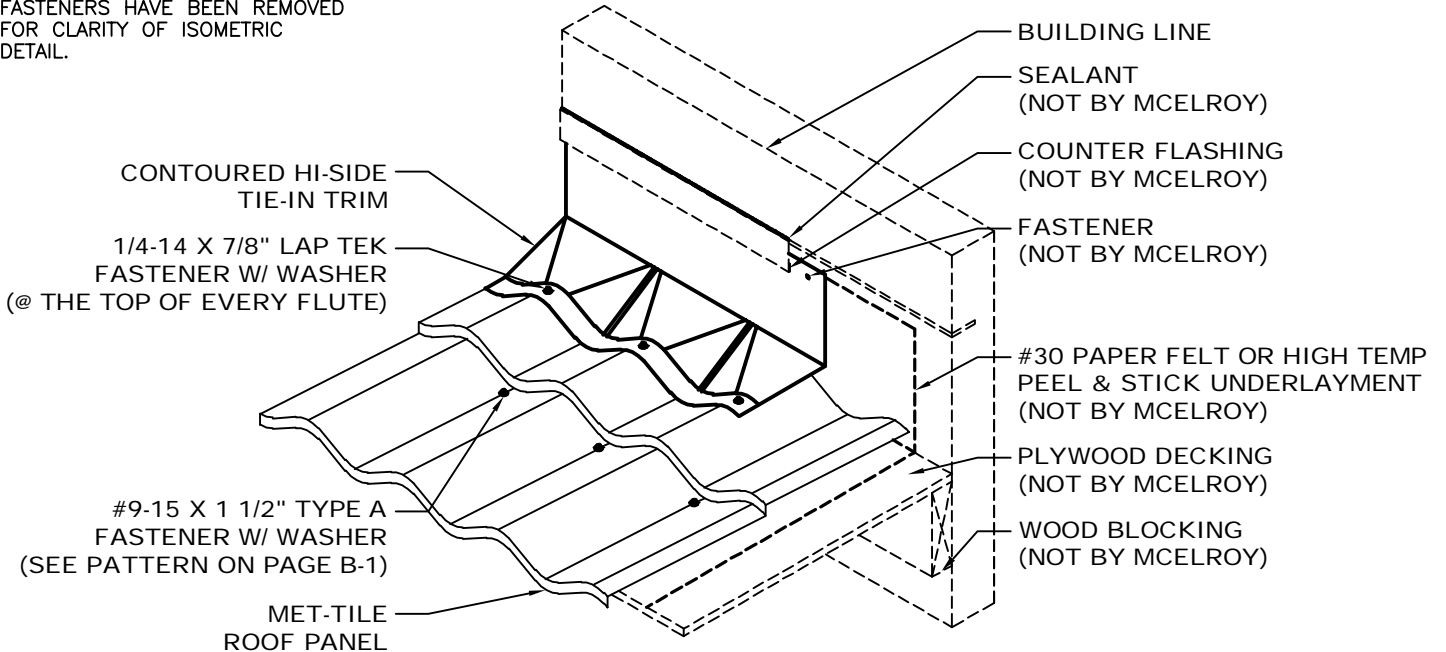
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

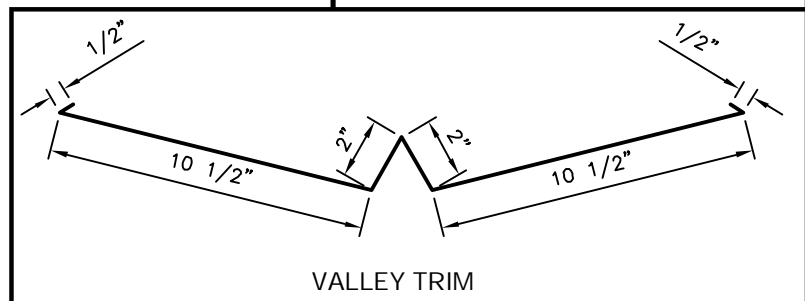
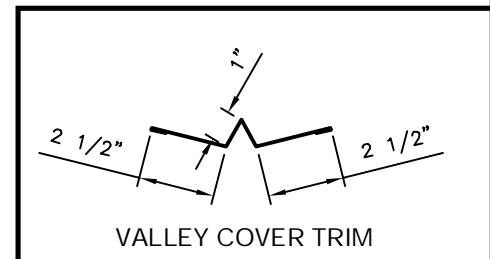
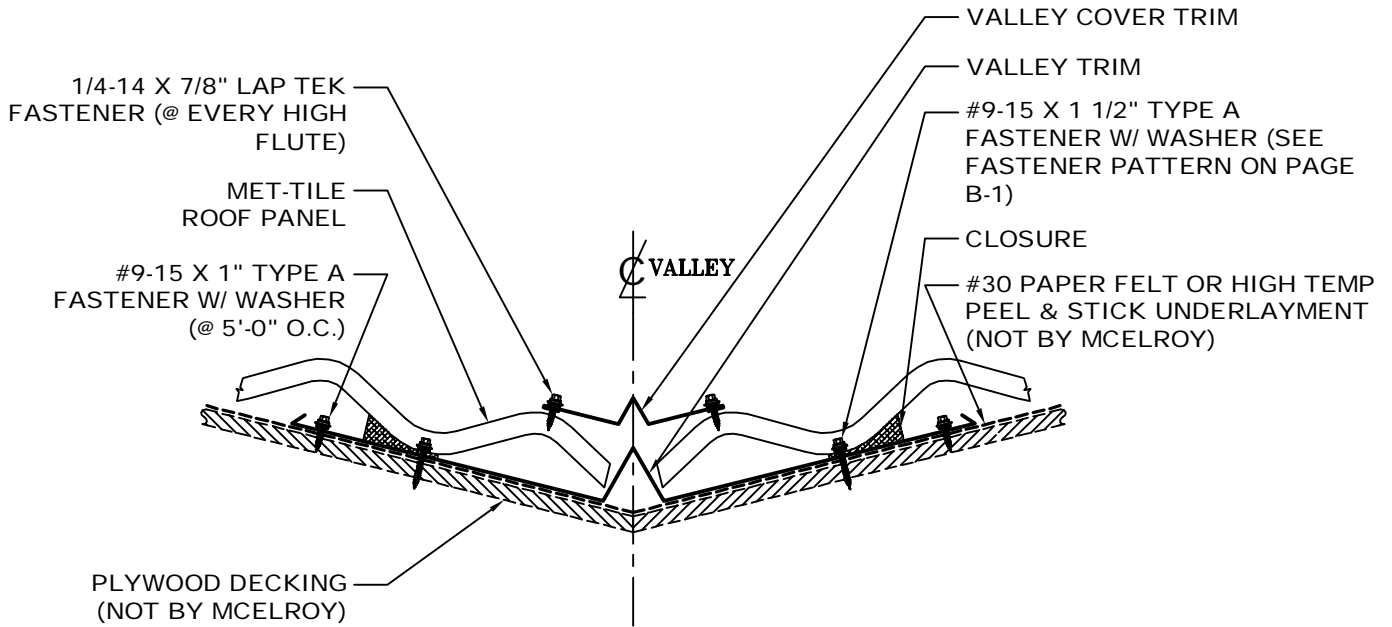




- NOTES: 1. Contoured Hi-Side Tie-In Trim to extend 2" outside of fascia.
 2. Attach Met-Tile Roof Panel per installation instructions and fasten with #9-15 x 1 1/2" Type A Fasteners with Washers per Fastener Pattern on page B-1.
 3. Attach Contoured Hi-Side Tie-In Trim to Met-Tile roof panels with 1/4-14 x 7/8" Lap Tek Fasteners with Washer in the top of each flute.

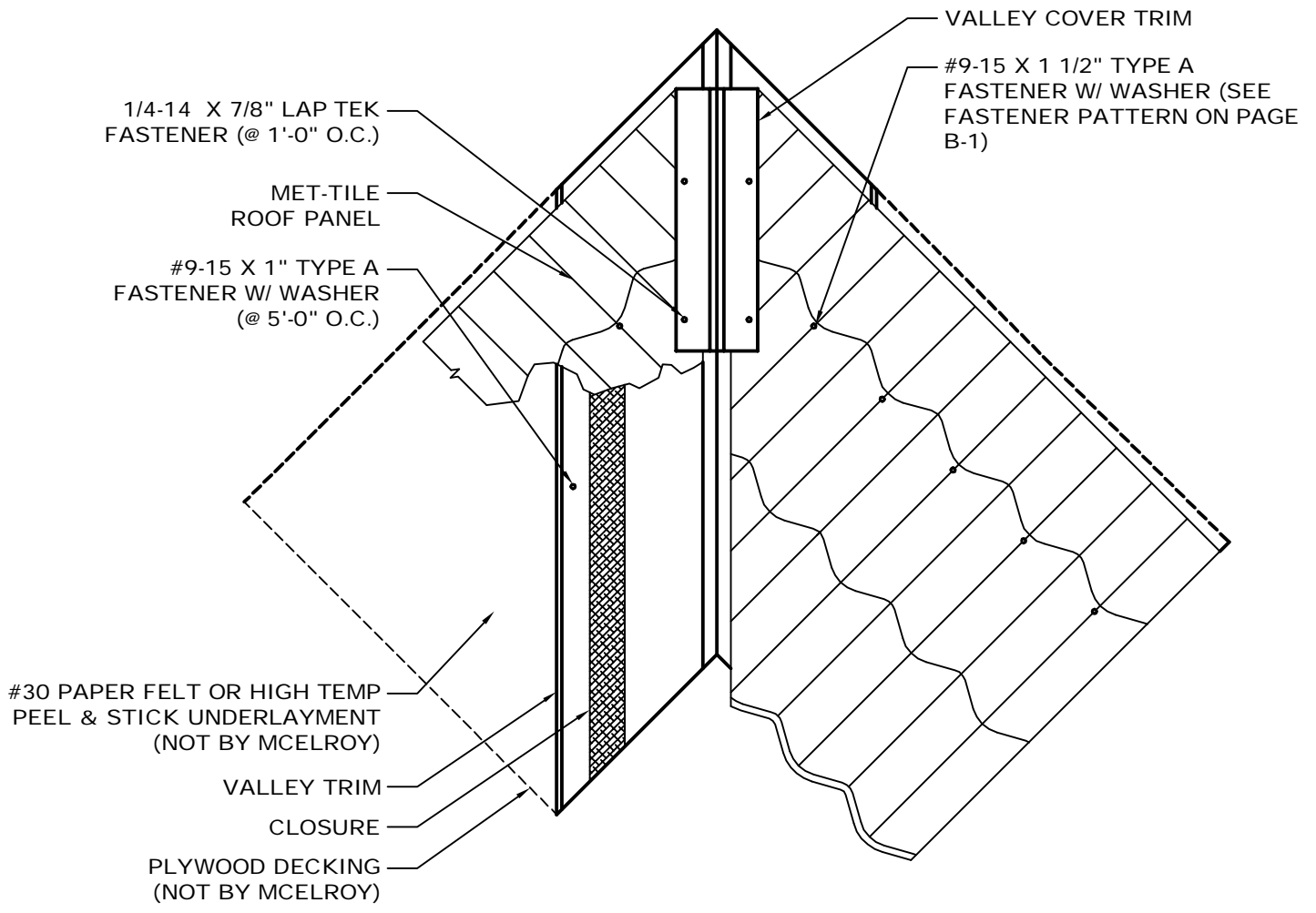
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



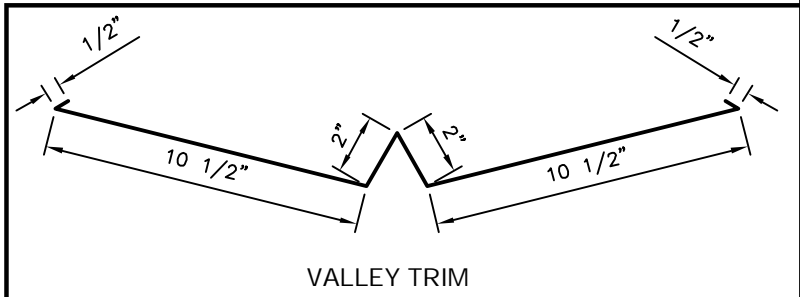
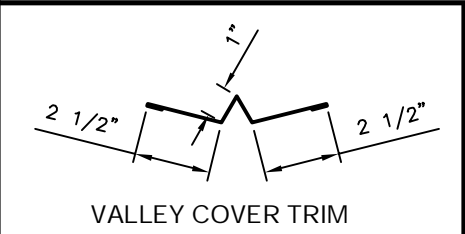


*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

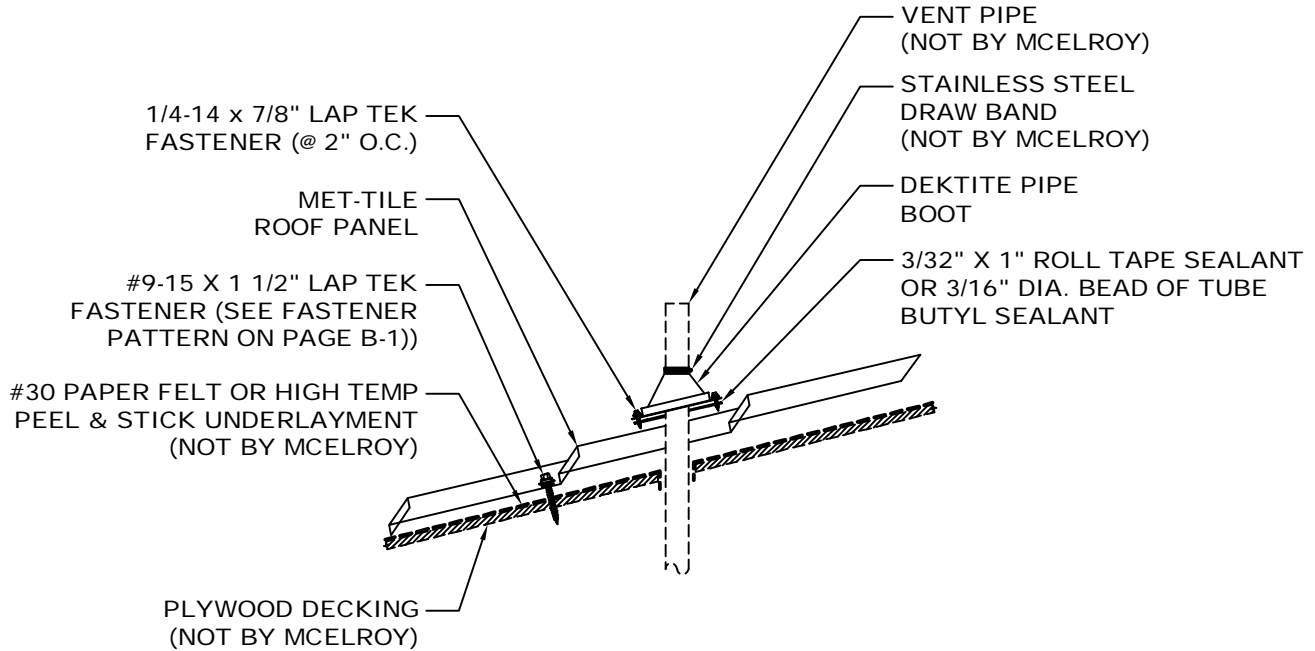
- NOTES: 1. Valley Trim and Valley Cover Trim to run from Eave to Ridge.
 2. Attach Valley Trim to Plywood Decking with #9-15 x 1" Type A Fasteners with Washer at 5'-0" O.C.
 3. Place Closure on Valley Trim.
 4. Attach Met-Tile roof panels per installation instructions. Attach with #9-15 x 1 1/2" Type A Fasteners with Washer per Fastener Pattern on page B-1. Make sure that when installing these fasteners that the ones that fall in the Valley Pan are on the uphill side of the Closure.
 5. Attach Valley Cover Trim to roof panels with 1/4-14 x 7/8" Lap Tek Fasteners at every high flute.



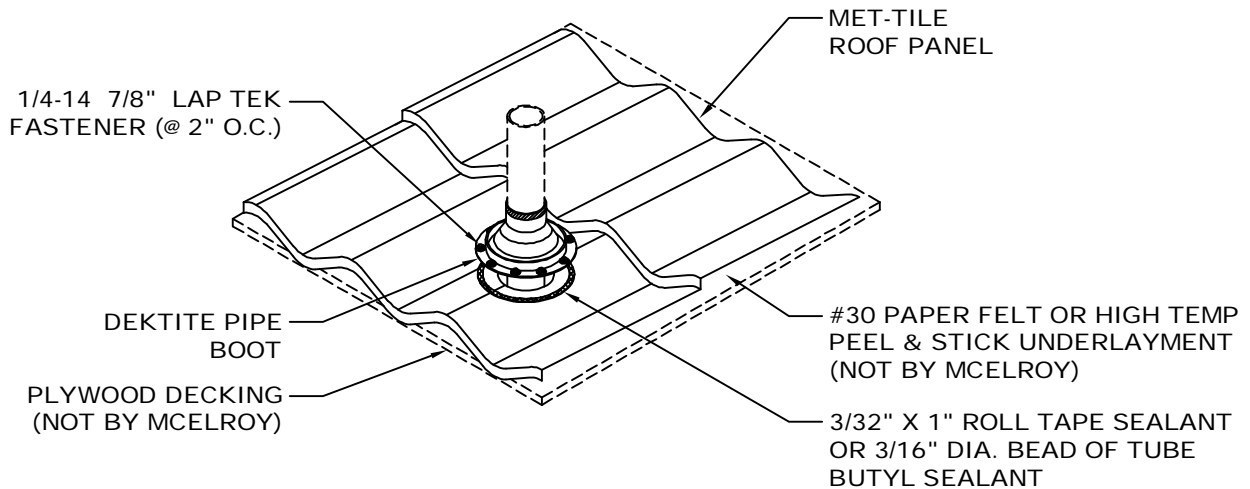
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



- NOTES: 1. Valley Trim and Valley Cover Trim to run from Eave to Ridge.
 2. Attach Valley Trim to Plywood Decking with #9-15 x 1" Type A Fasteners with Washer at 5'-0" O.C.
 3. Place Closure on Valley Trim.
 4. Attach Met-Tile roof panels per installation instructions. Attach with #9-15 x 1 1/2" Type A Fasteners with Washer per Fastener Pattern on page B-1. Make sure that when installing these fasteners that the ones that fall in the Valley Pan are on the uphill side of the Closure.
 5. Attach Valley Cover Trim roof panels with 1/4-14 x 7/8" Lap Tek Fasteners at every high flute.

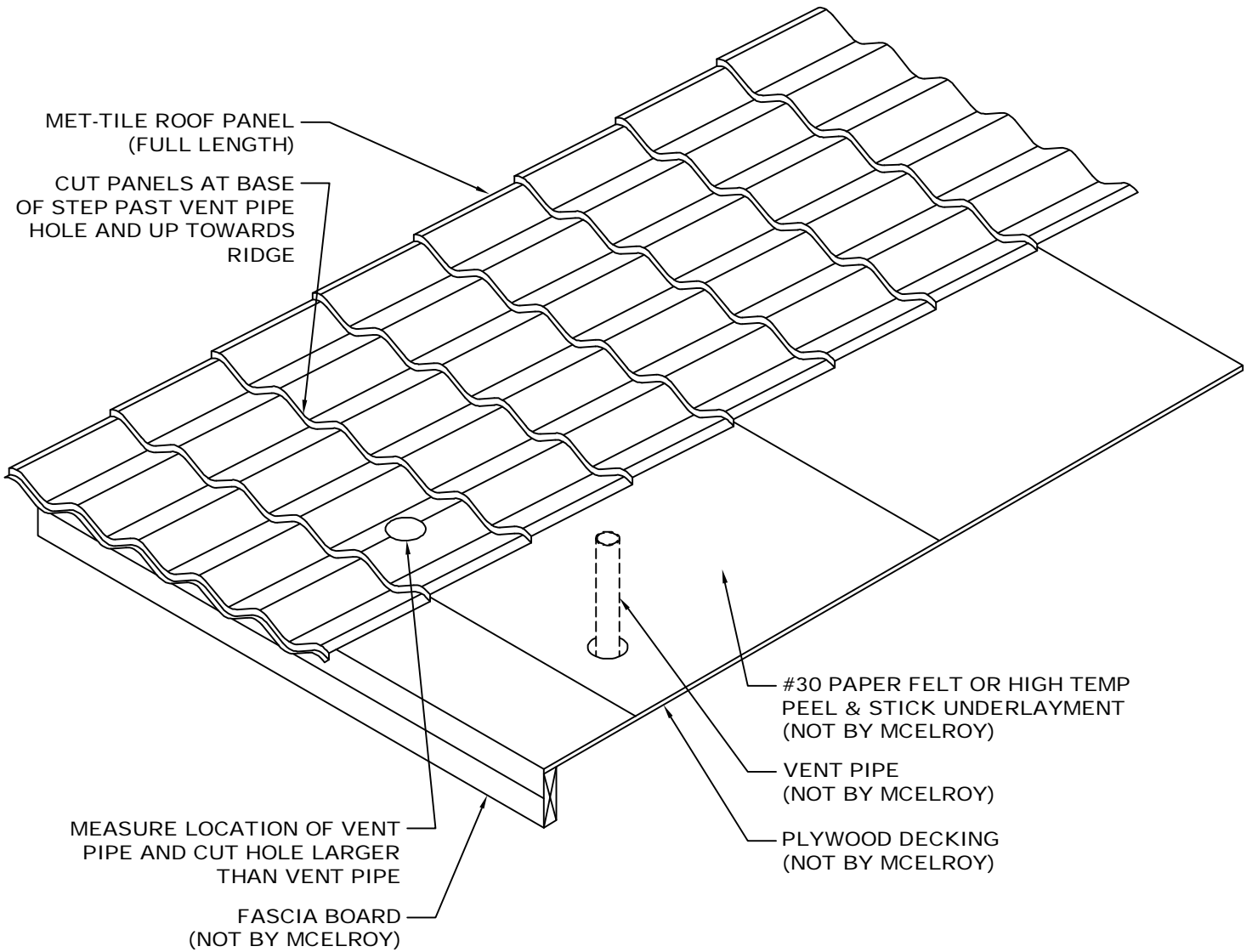


- NOTES:
1. Adjust panel layout so that pipe penetration falls in a high flute.
 2. Cut hole in panel 1/2" larger than diameter of pipe.
 3. Apply 3/32" x 1" Roll Tape Sealant or a 3/16" Dia. bead of Butyl Tube Sealant continuous around the base of the Dektite Boot.
 4. Attach the Dektite Boot to the Met-Tile Roof Panel with 1/4-14 x 7/8" Lap Tek Fasteners with Washer at 2" O.C. Make sure that when installing these fasteners that they penetrate the sealant.
 5. Secure top of Dektite Boot to Vent Pipe with Stainless Steel Drawband.



*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

PIPE PENETRATION w/ ROOF JACK DETAIL

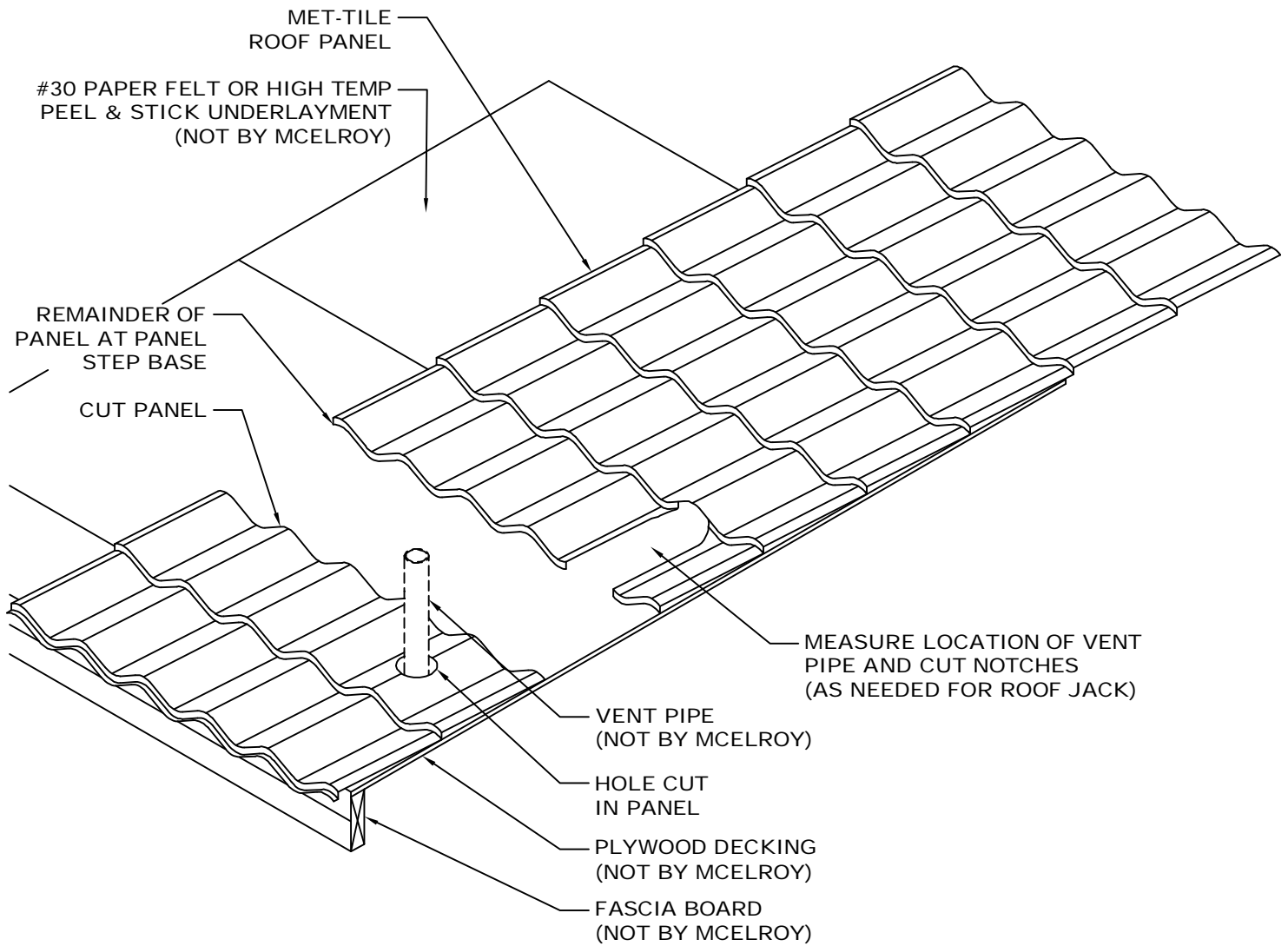


STEP #1

*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

- NOTES: 1. Adjust panel layout so that pipe penetration falls in a high flute.
2. Cut hole in panel 1/2" larger that diameter of pipe.
3. Once Pipe hole has been cut, cut panel at base of step past Vent Pipe hole on as indicated in above detail.

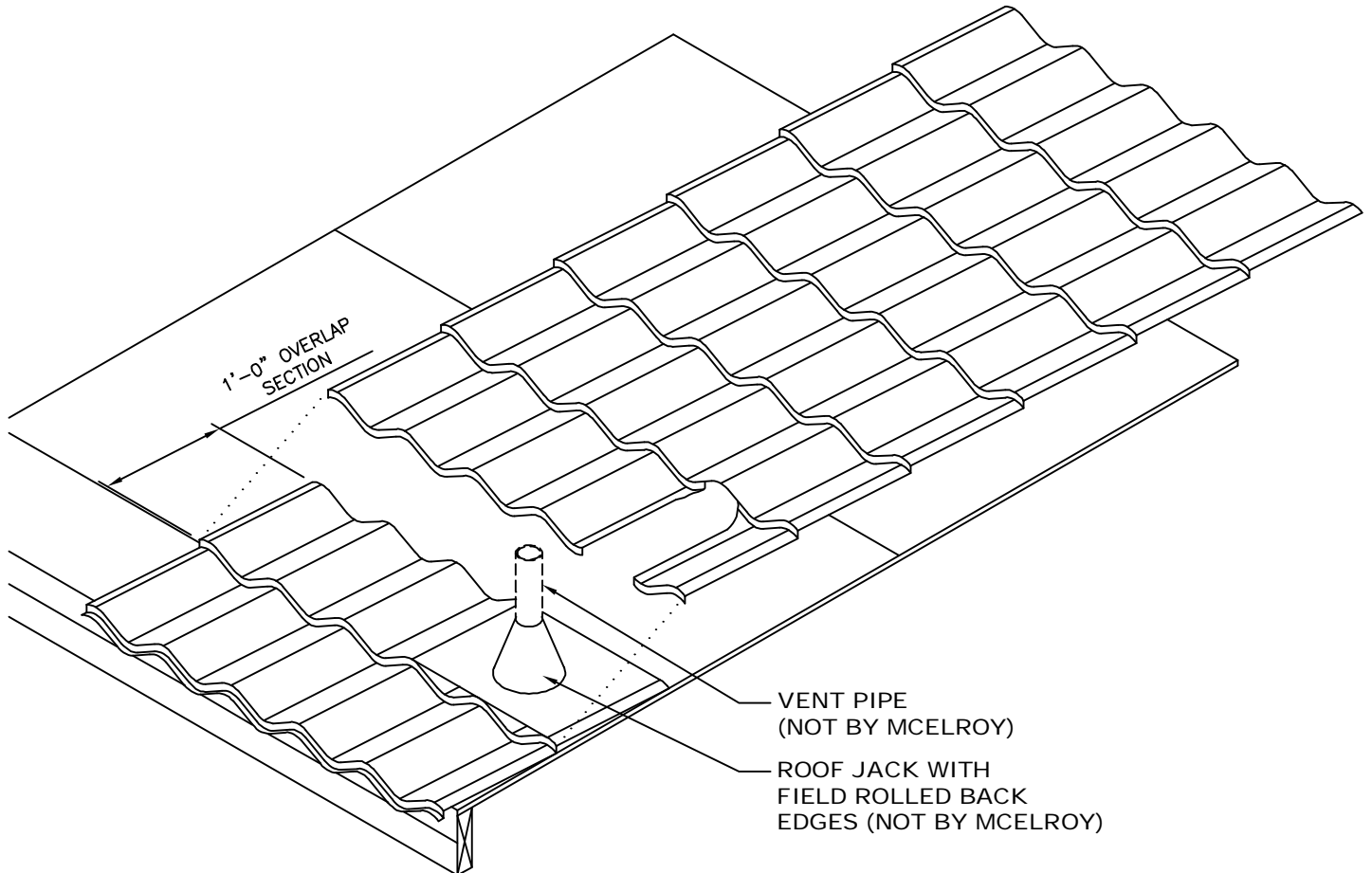
PIPE PENETRATION w/ ROOF JACK DETAIL



STEP #2

*NOTE: SOME TRIM ITEMS AND
FASTENERS HAVE BEEN REMOVED
FOR CLARITY OF ISOMETRIC
DETAIL.

- NOTES: 1. Place panel with Vent Pipe hole over Vent Pipe and attach to decking with #9-15 x 1 1/2" Type A Fasteners with Washer. Refer to Fastener Patterns on page B-1 for correct fastener pattern to use.
2. Measure location of Vent Pipe and cut notches in upper Met-Tile panel. Cut notches to fit around Roof Jack.

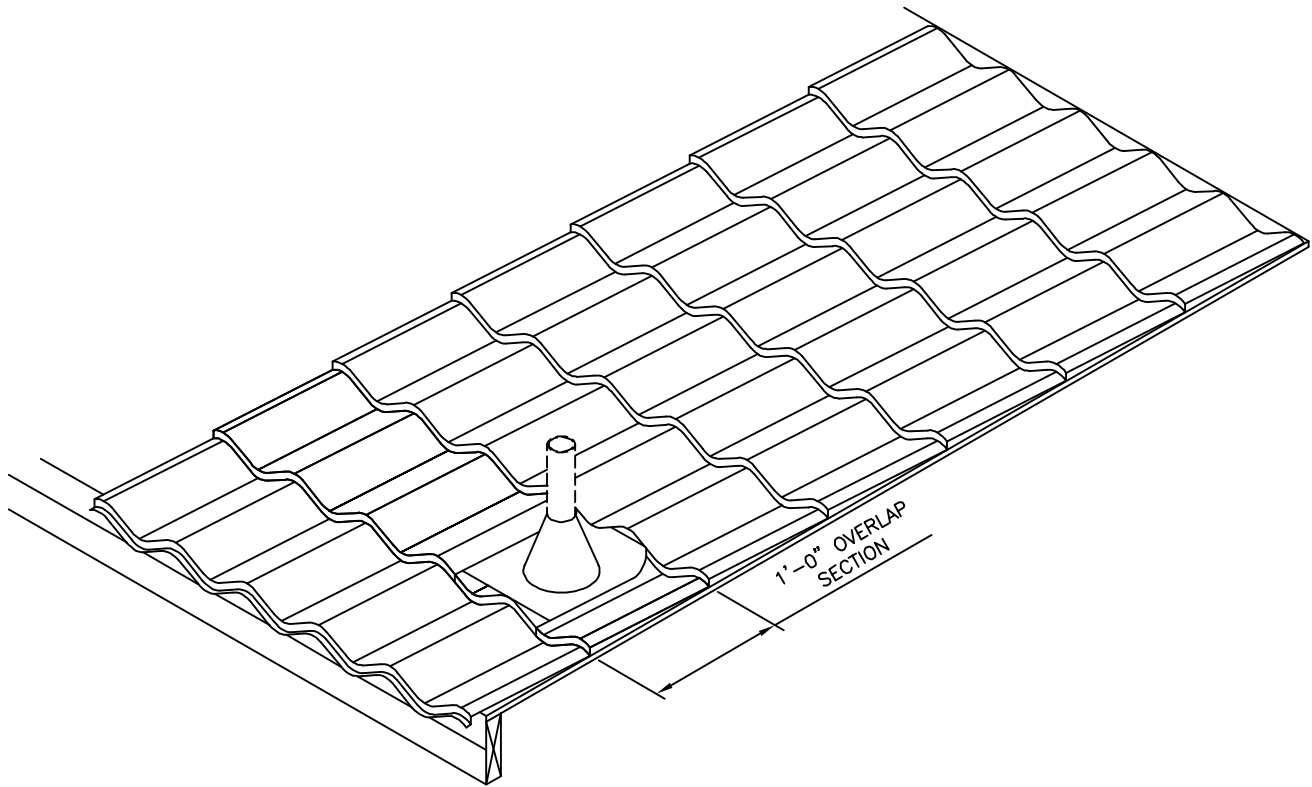


STEP #3

*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

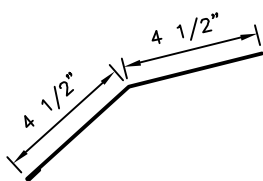
- NOTES: 1. Install Roof Jack per manufactures recommended instructions.
2. Install upper Met-Tile roof panel over top of Roof Jack and lower Met-Tile roof panel lapping 1'-0".
3. Attach to decking with 1/4-14 x 1 1/2" Type A Lap Tek Fastener with Washer. Refer to Fastener Patterns on page B-1 for correct fastener pattern to use.

PIPE PENETRATION w/ ROOF JACK DETAIL



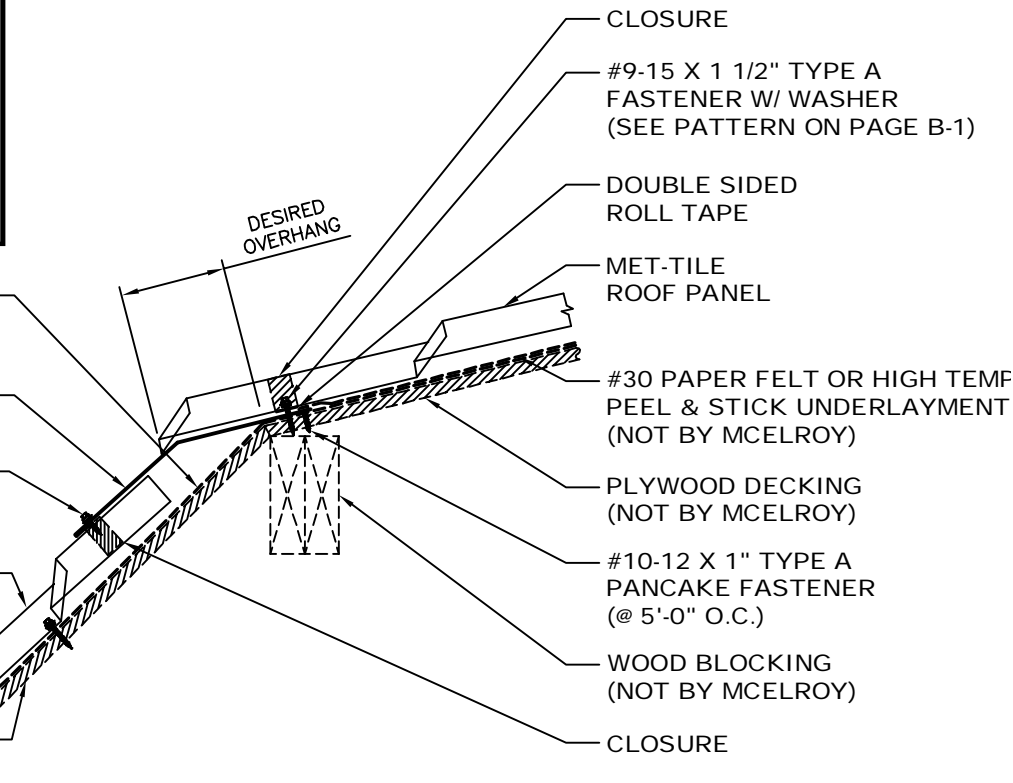
FINISHED LOOK

*NOTE: SOME TRIM ITEMS AND
FASTENERS HAVE BEEN REMOVED
FOR CLARITY OF ISOMETRIC
DETAIL.



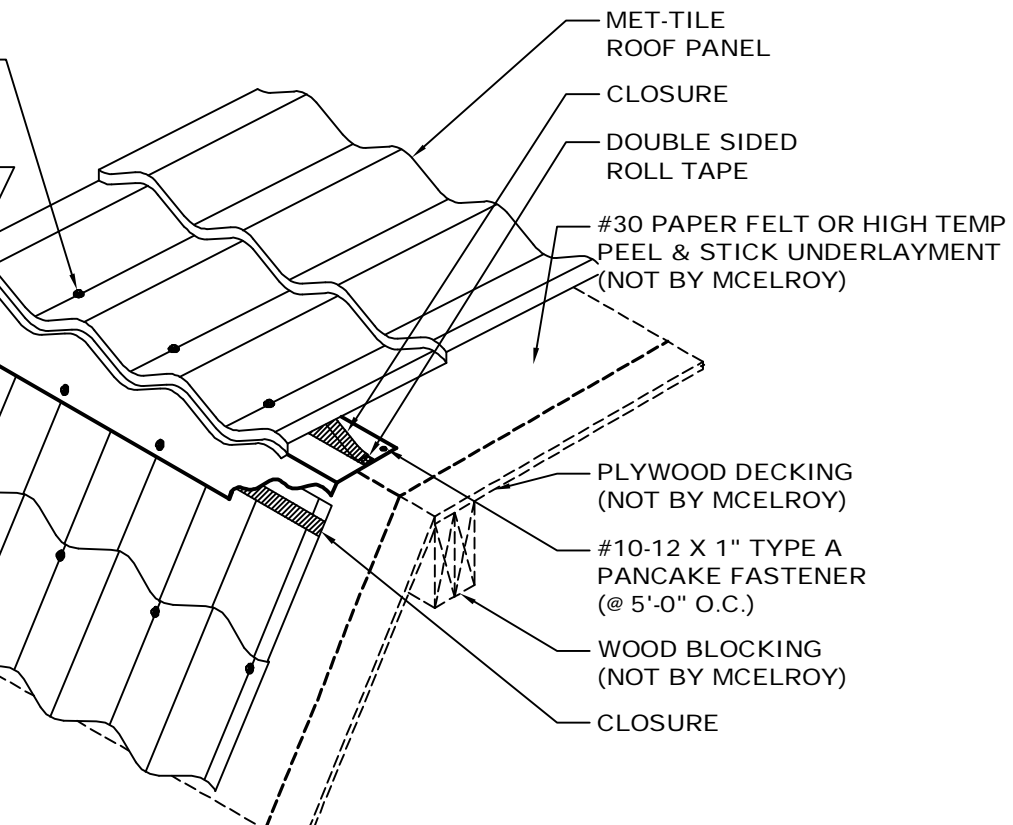
COMMERCIAL GAMBREL TRIM

- #30 PAPER FELT OR HIGH TEMP PEEL & STICK UNDERLAYMENT (NOT BY MCELROY)
- COMMERCIAL GAMBREL TRIM
- 1/4-14 X 7/8" LAP TEK FASTENER (@ EACH HIGH FLUTE)
- MET-TILE ROOF PANEL
- PLYWOOD DECKING (NOT BY MCELROY)



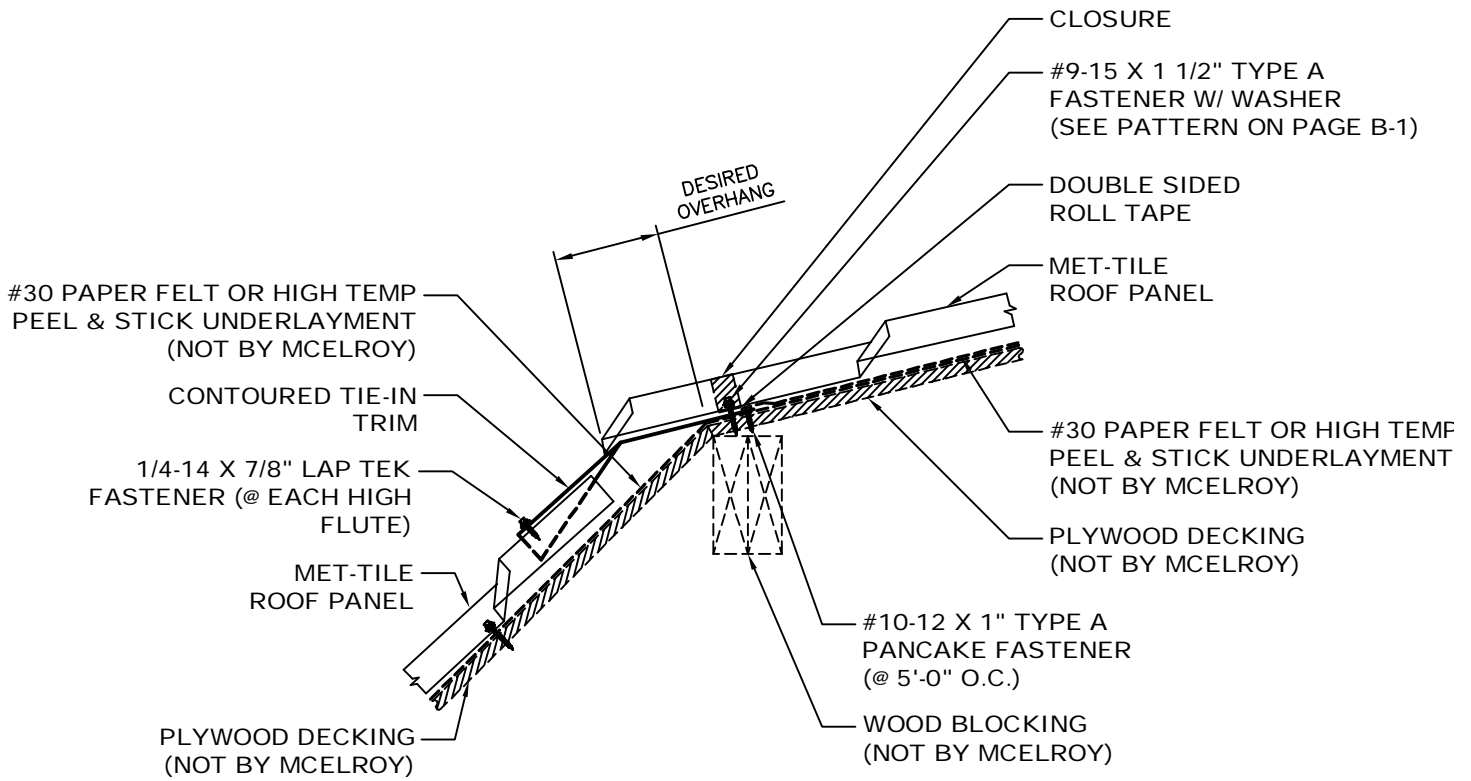
- NOTES:**
1. Commercial Gambrel Trim to run from Rake to Rake of roof. Fasten to decking with #10-12 x 1" Type A Pancake Head Fasteners at 5'-0" O.C.
 2. Apply Double Sided Tape continuously along length of Contoured Gambrel Trim.
 3. Place Closures on top of Double Sided Roll Tape at Gambrel.
 4. Place Met-Tile panels in place. Starting from the right side of building and sheeting to the left. The Fasten panel with #9-15 x 1 1/2" Type A Fasteners with Washer per Fastener Pattern on page B-1.

- 1/4-14 X 1 1/2" TYPE A LAP TEK FASTENER W/ WASHER (SEE PATTERN #1 ON PAGE B-1)
- CONTOURED TIE-IN TRIM
- 1/4-14 X 7/8" LAP TEK FASTENER (@ EACH HIGH FLUTE)
- MET-TILE ROOF PANEL

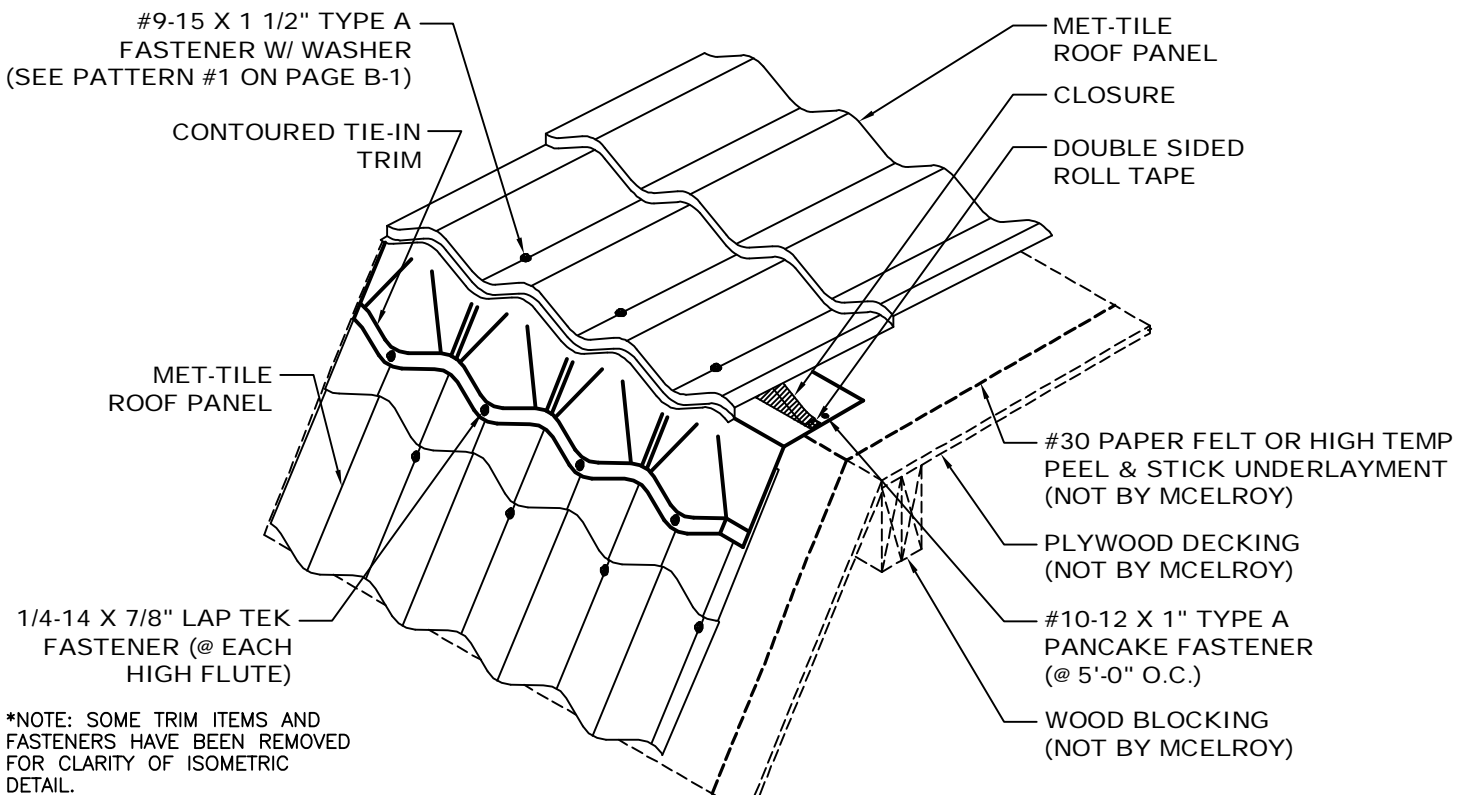


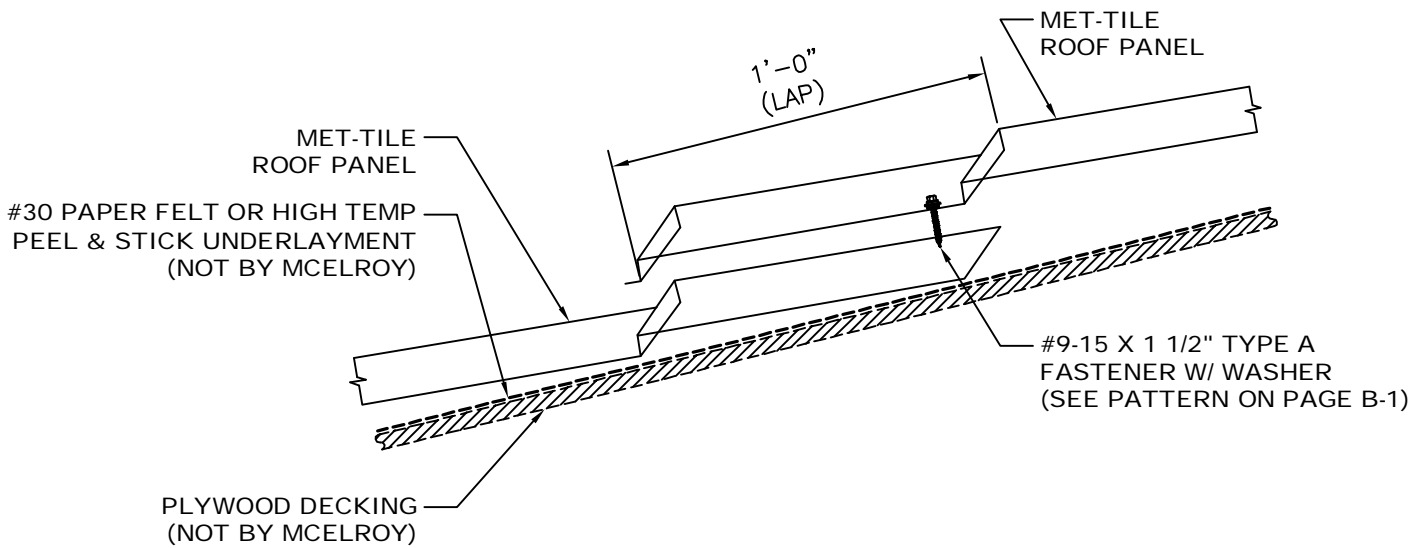
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.





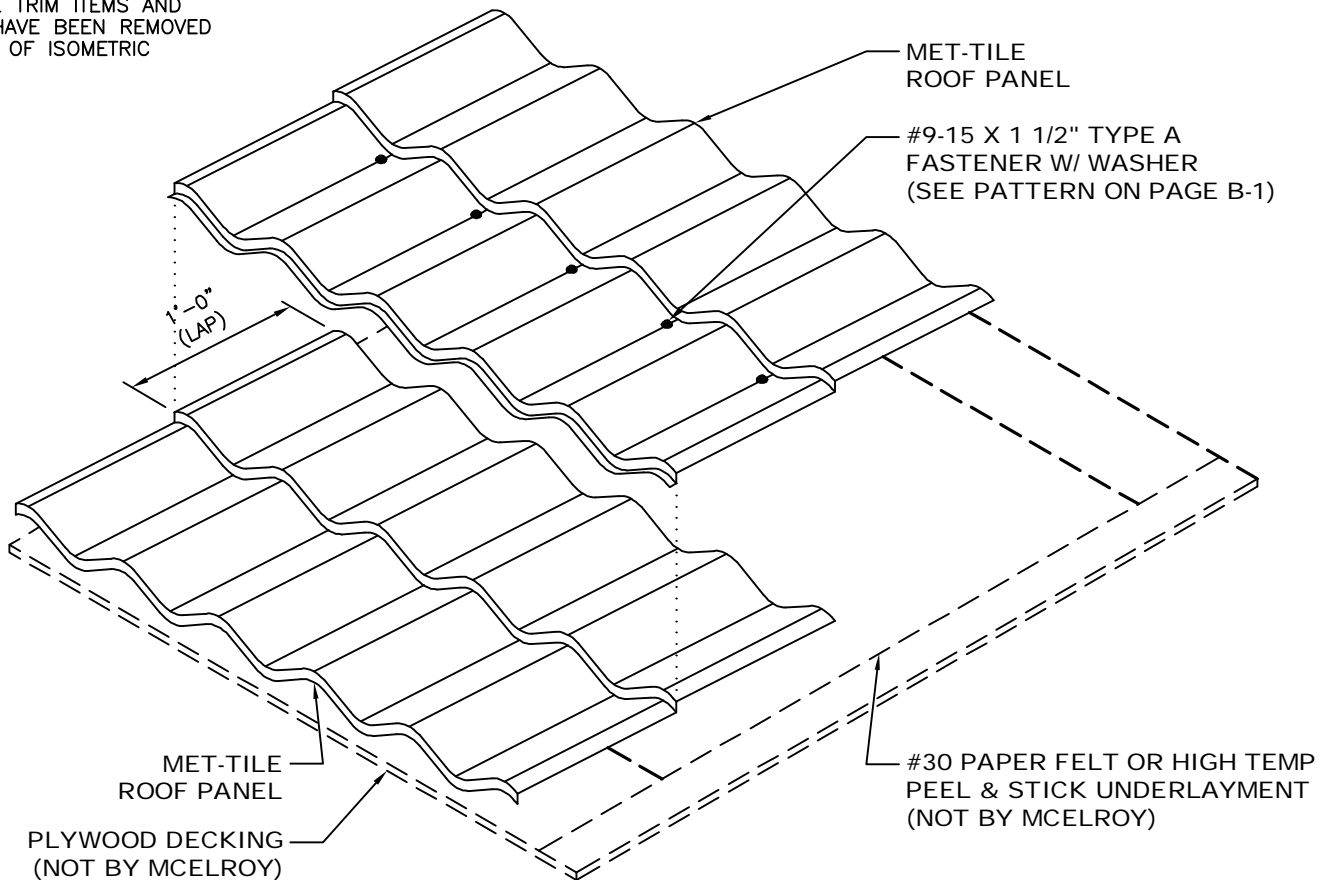
- NOTES: 1. Contoured Tie-In Trim to run from Rake to Rake of roof. Fasten to decking with #10-12 x 1" Type A Pancake Head Fasteners at 5'-0" O.C.
2. Apply Double Sided Tape continuously along length of Contoured Gambrel Trim.
3. Place Closures on top of Double Sided Roll Tape at Gambrel.
4. Place Met-Tile panels in place. Starting from the right side of building and sheeting to the left. The Fasten panel with #9-15 x 1 1/2" Type A Fasteners with Washer per Fastener Pattern on page B-1.



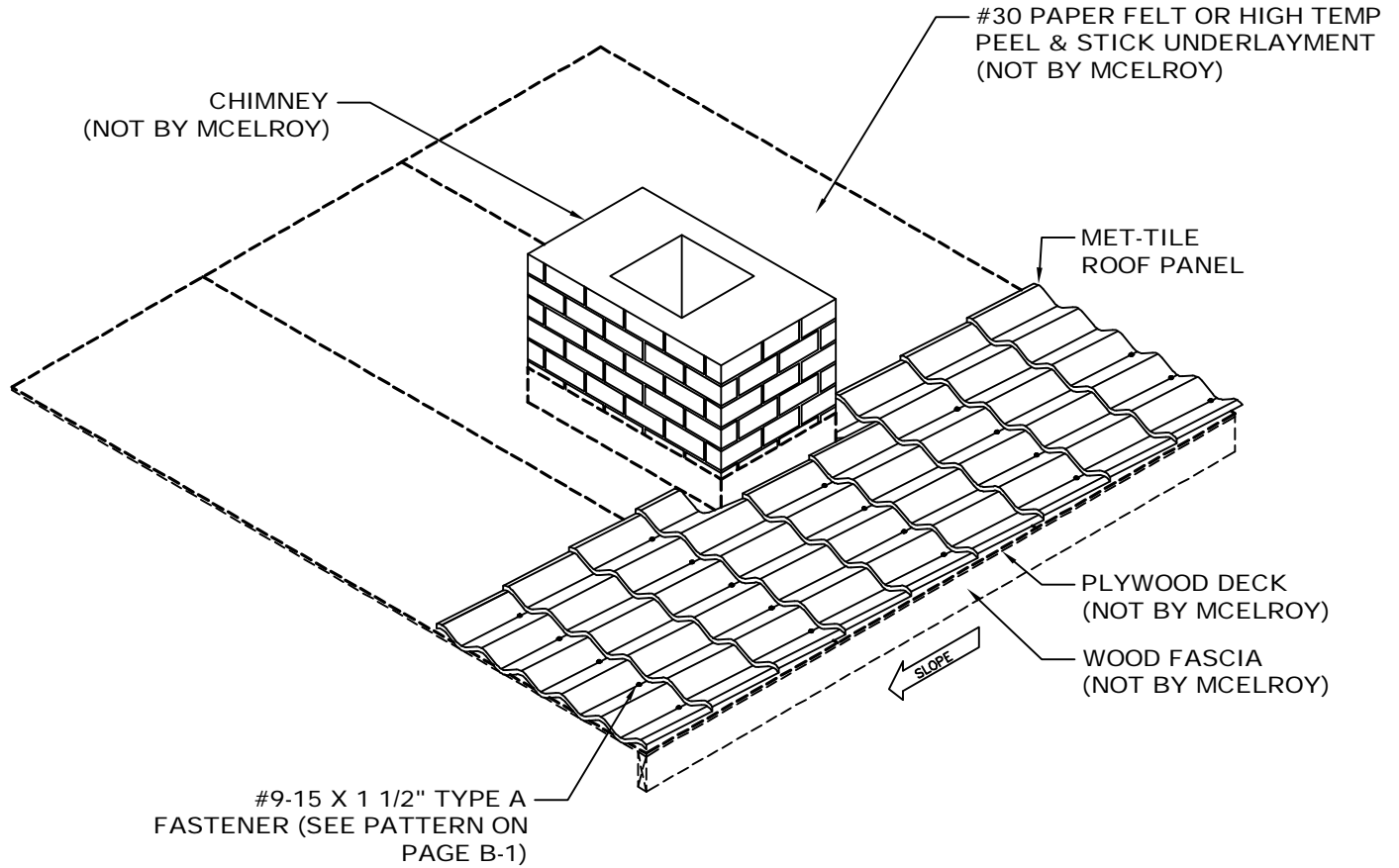


- NOTES: 1. Install lower Met-Tile roof panel per standard installation instructions.
2. Install upper Met-Tile roof panel per standard installation instructions. Lap upper panel 1'-0" over lower Met-Tile panel. Fasten panel per Fastener Pattern on page B-1.

*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



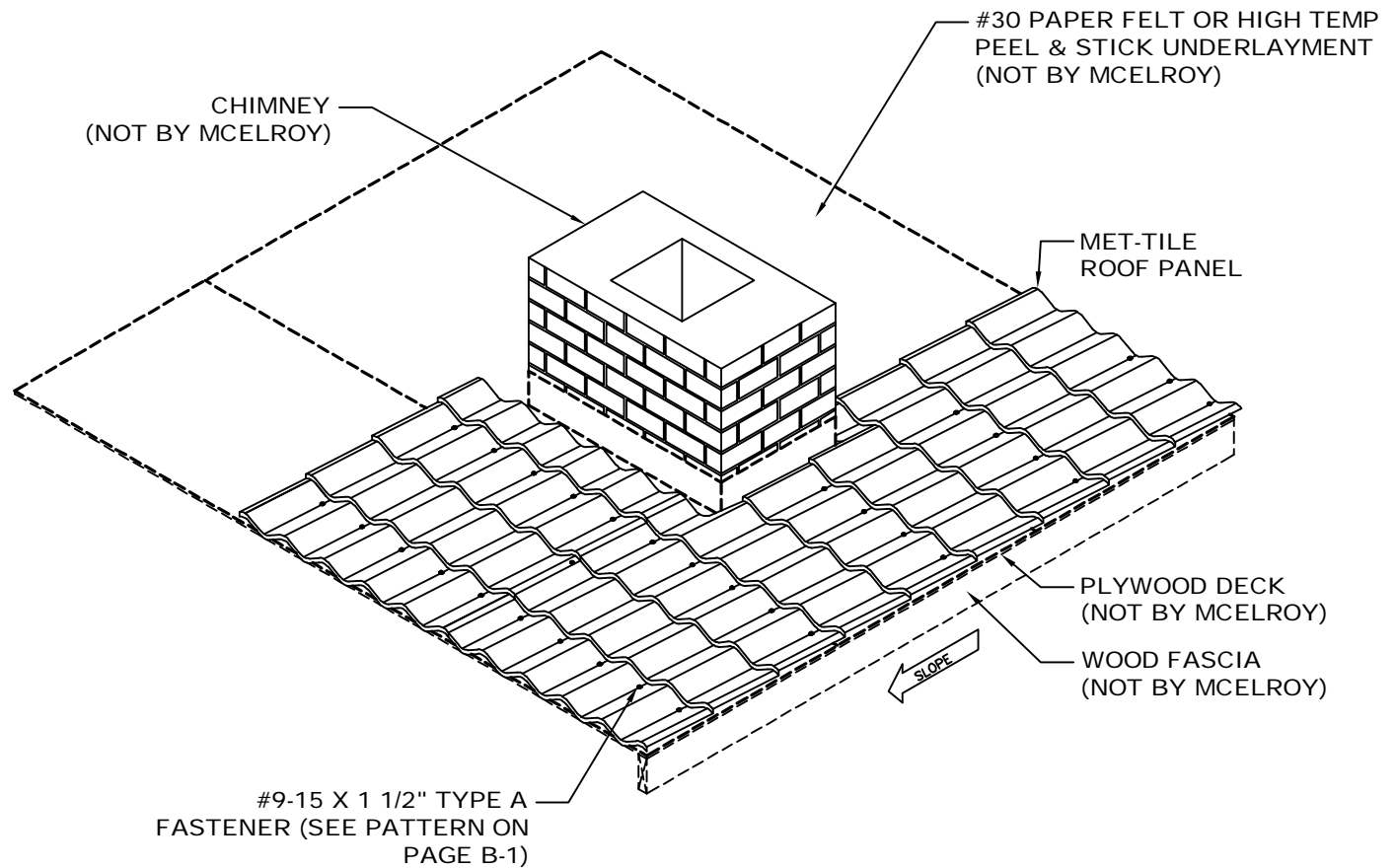
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



STEP #1

- NOTES: 1. Install Met-Tile roof panel per standard installation instructions.
2. Notch Met-Tile roof panel around chimney leaving a minimum of 1" of clearance between panel and chimney.

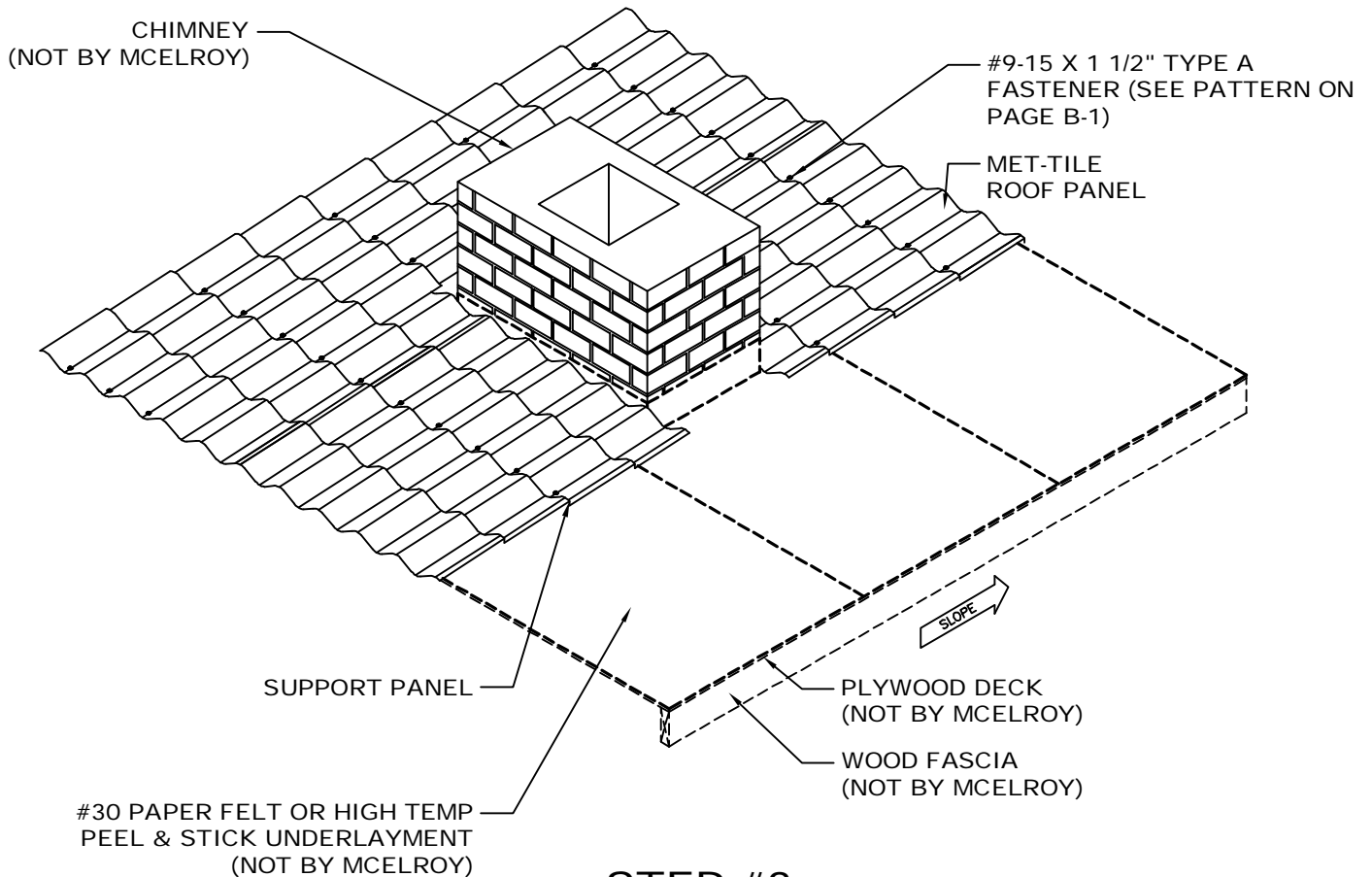
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



STEP #2

NOTES: 1. Continue installing Met-Tile roof panel per standard installation instructions. Field cut panels where needed.

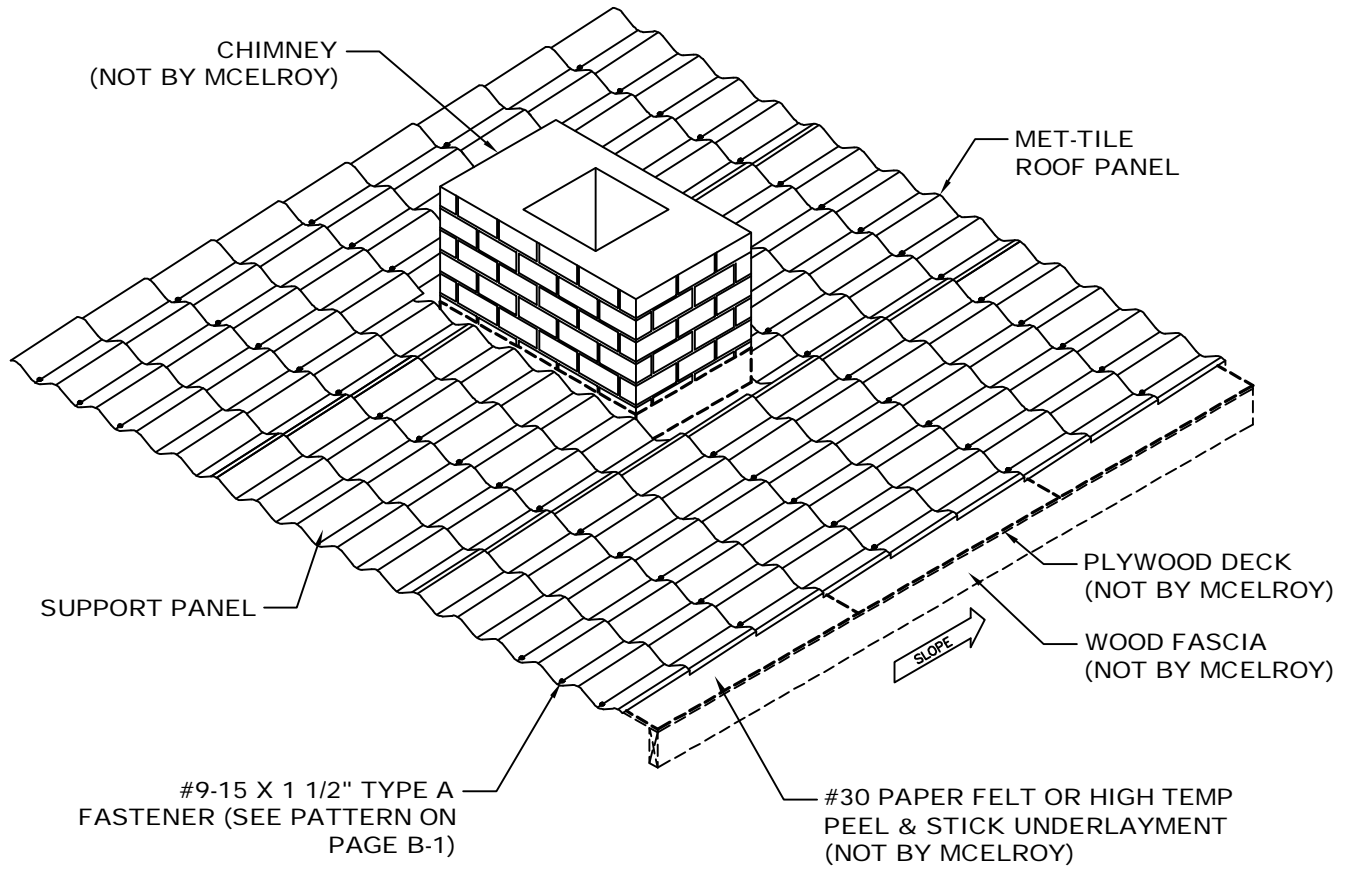
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



STEP #3

NOTES: 1. Install Support Panel per standard installation instructions. Field cut panel as needed.

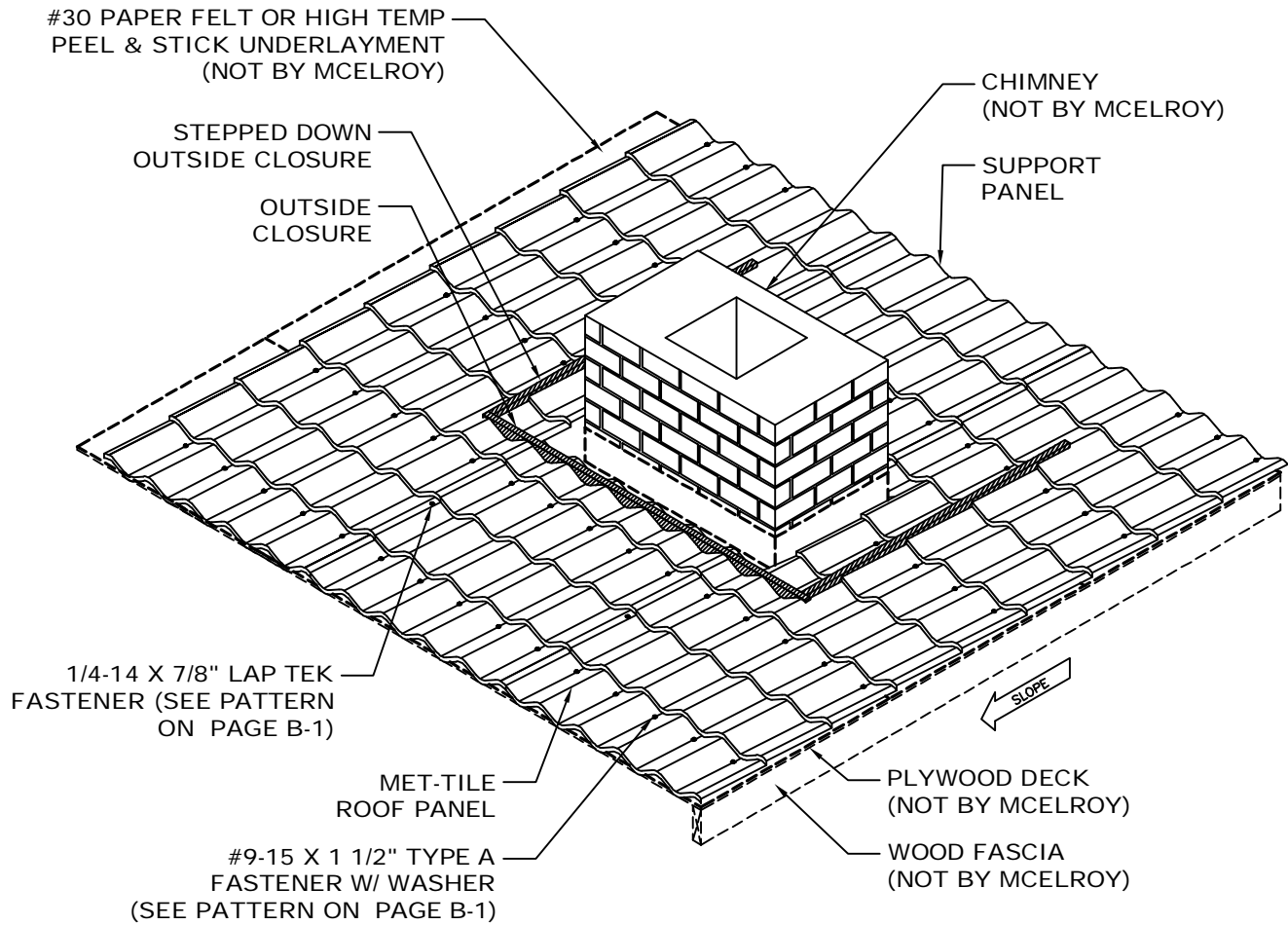
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



STEP #4

NOTES: 1. Install remaining Met-Tile roof panel around chimney per standard installation instructions.

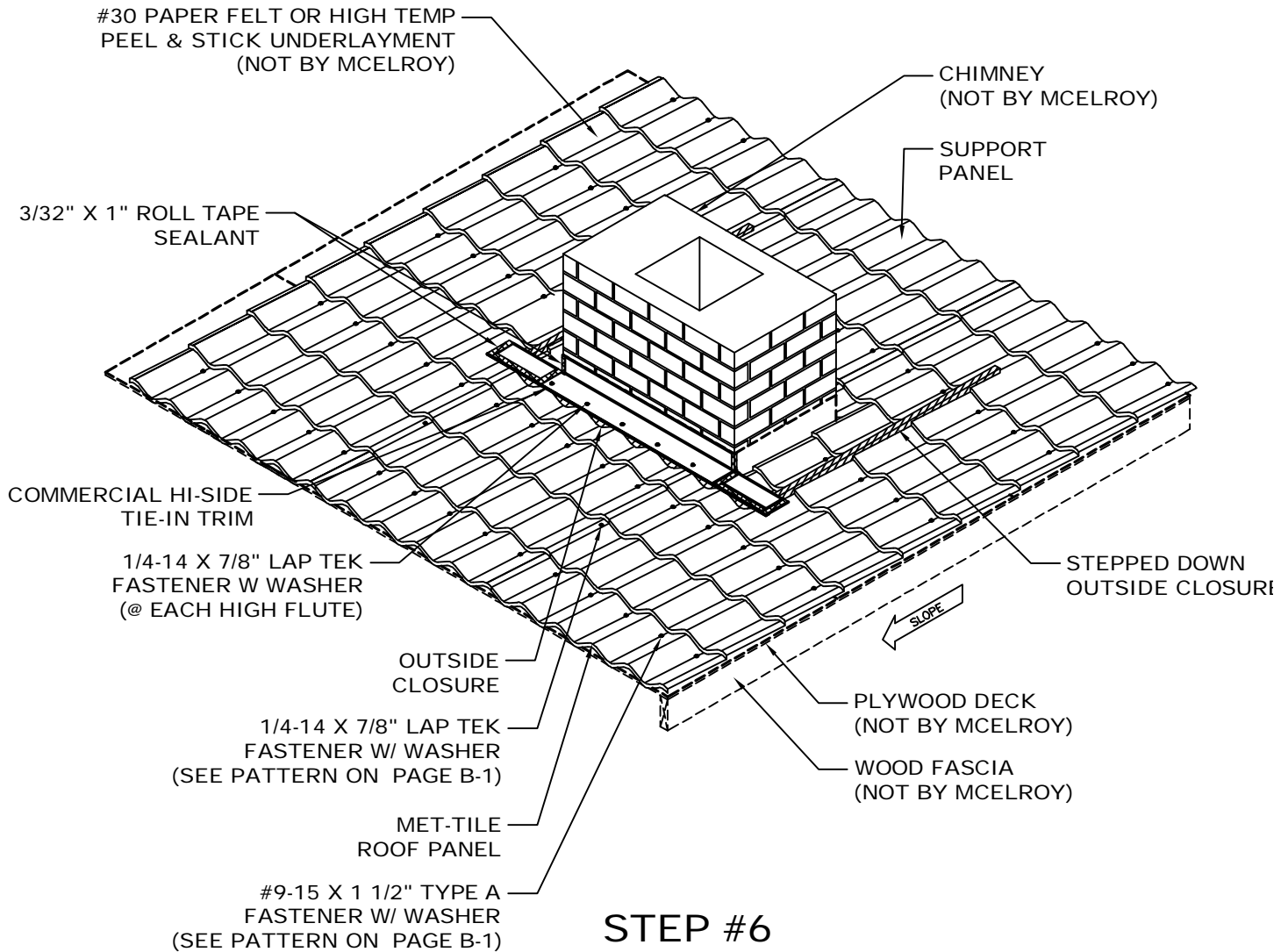
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



STEP #5

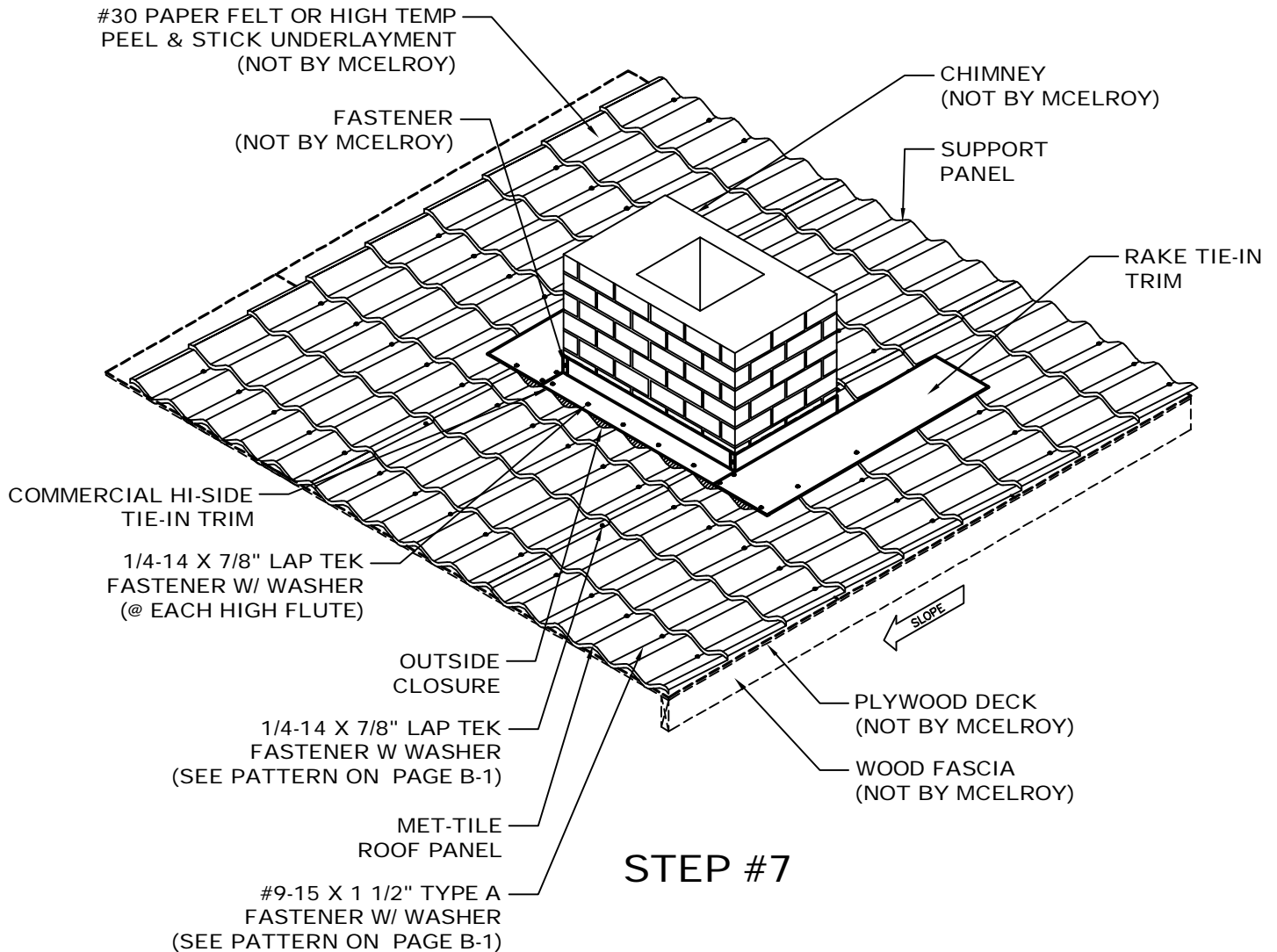
- NOTES: 1. Install Universal Closure on top of flute of Met-Tile roof panel.
2. Install Outside Closure 2" down from the face of chimney.

*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



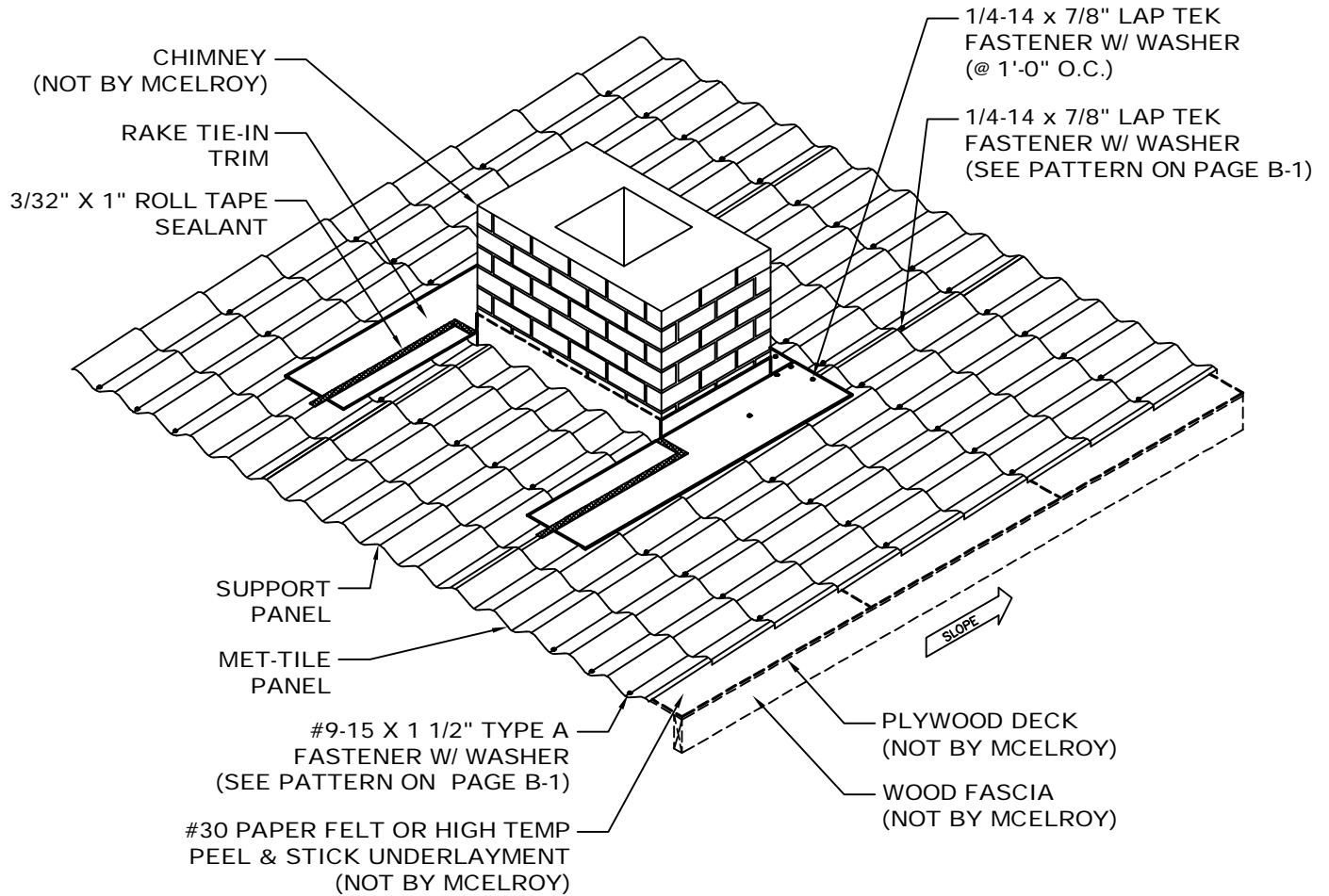
- NOTES: 1. Attach Commercial Hi-Side Tie-In Trim to panel with 1/4-14 x 7/8" Lap Tek Fasteners with Washers at each high flute of the Met-Tile panel.
 2. Install 3/32" x 1" Roll Tape Sealant as show in the detail to the High Side Tie-In Trim.

*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



NOTES: 1. Attach Rake Tie-In Trim to panel with 1/4-14 x 7/8" Lap Tek Fasteners with Washers at 1'-0" O.C. and fasten to the High Side Tie-In Trim making sure fastener penetrates Tape Sealant.

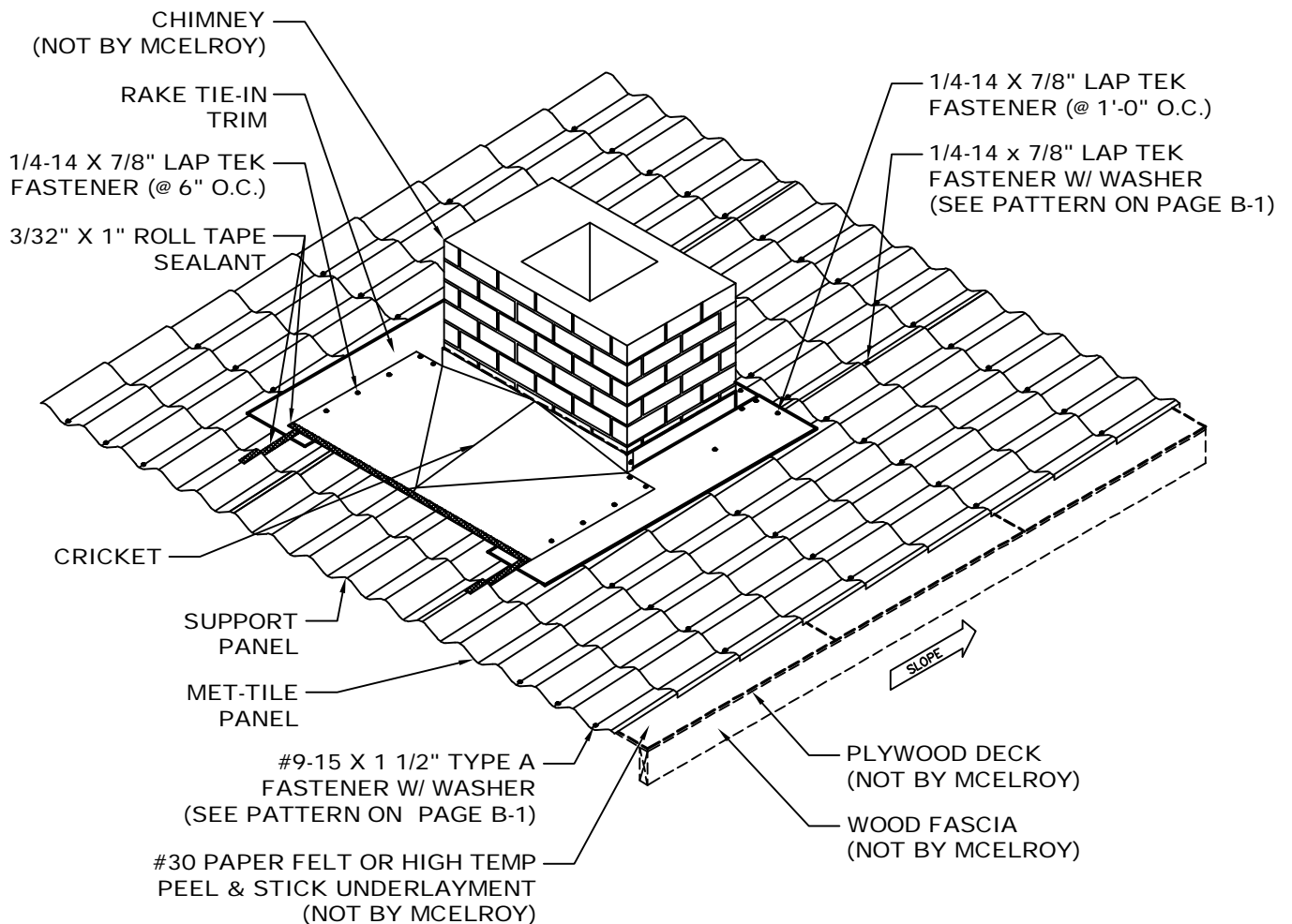
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



STEP #8

NOTES: 1. Apply 3/32" x 1" Roll Tape Sealant to the Rake Tie-In Trim as shown.

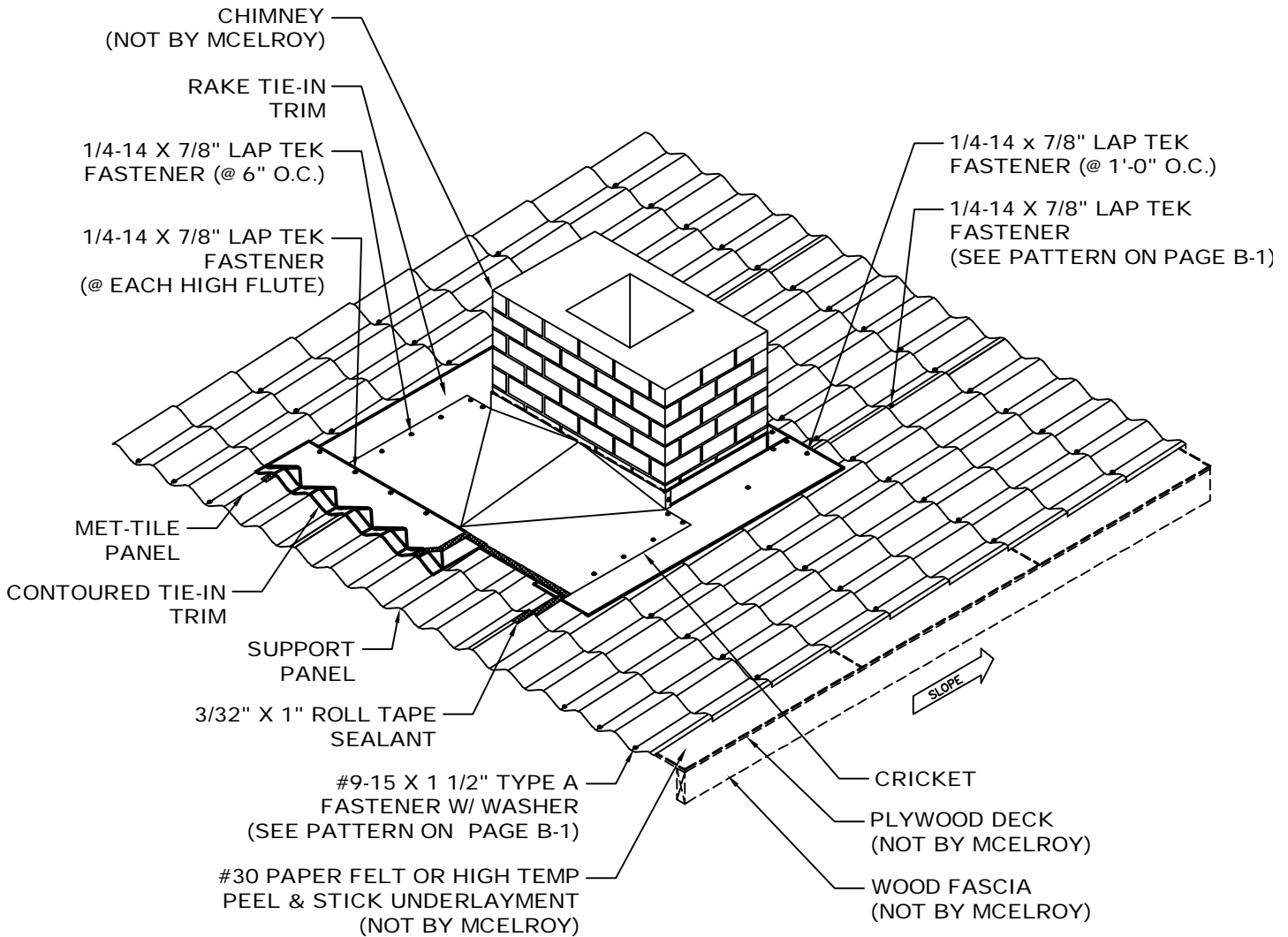
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



STEP #9

- NOTES: 1. Install Cricket on top of Rake Tie-In Trim and Roll Tape Sealant. Fasten Cricket to trim and roof panels.
 2. Apply 3/32" x 1" Roll Tape Sealant to the top of the Cricket, Rake Tie-In Trim and Met-Tile Panels as shown in the above detail.

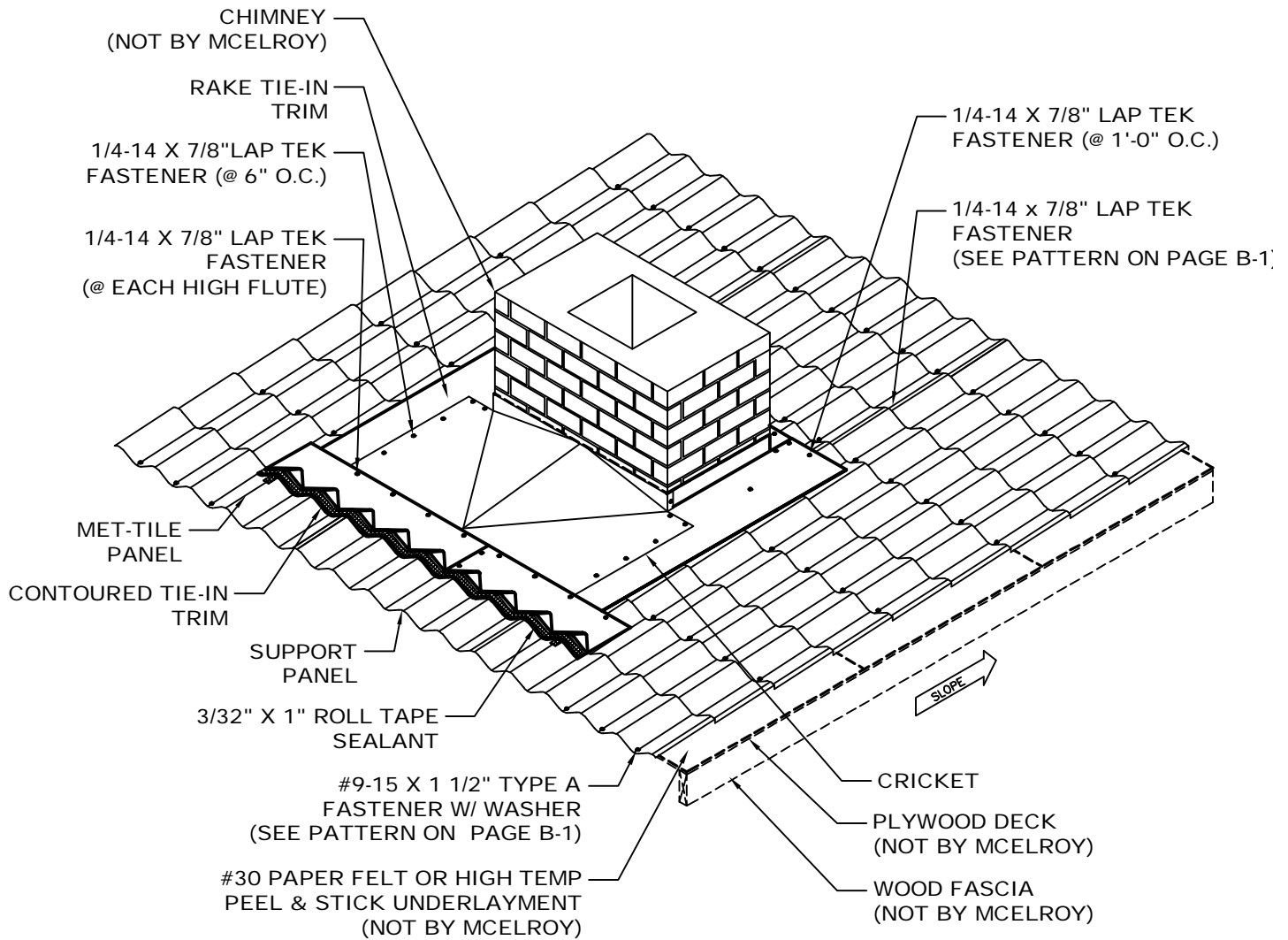
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



STEP #10

- NOTES: 1. Install Contoured Tie-In Trim on top of Cricket and Roll Tape Sealant. Fasten trim to Cricket with 1/4-14 x 7/8" Lap Tek Fasteners at each high flute of roof panel under Cricket.
2. Apply 3/32" x 1" Roll Tape Sealant where lap occurs in Contoured Tie-In Trim as shown in the above detail.

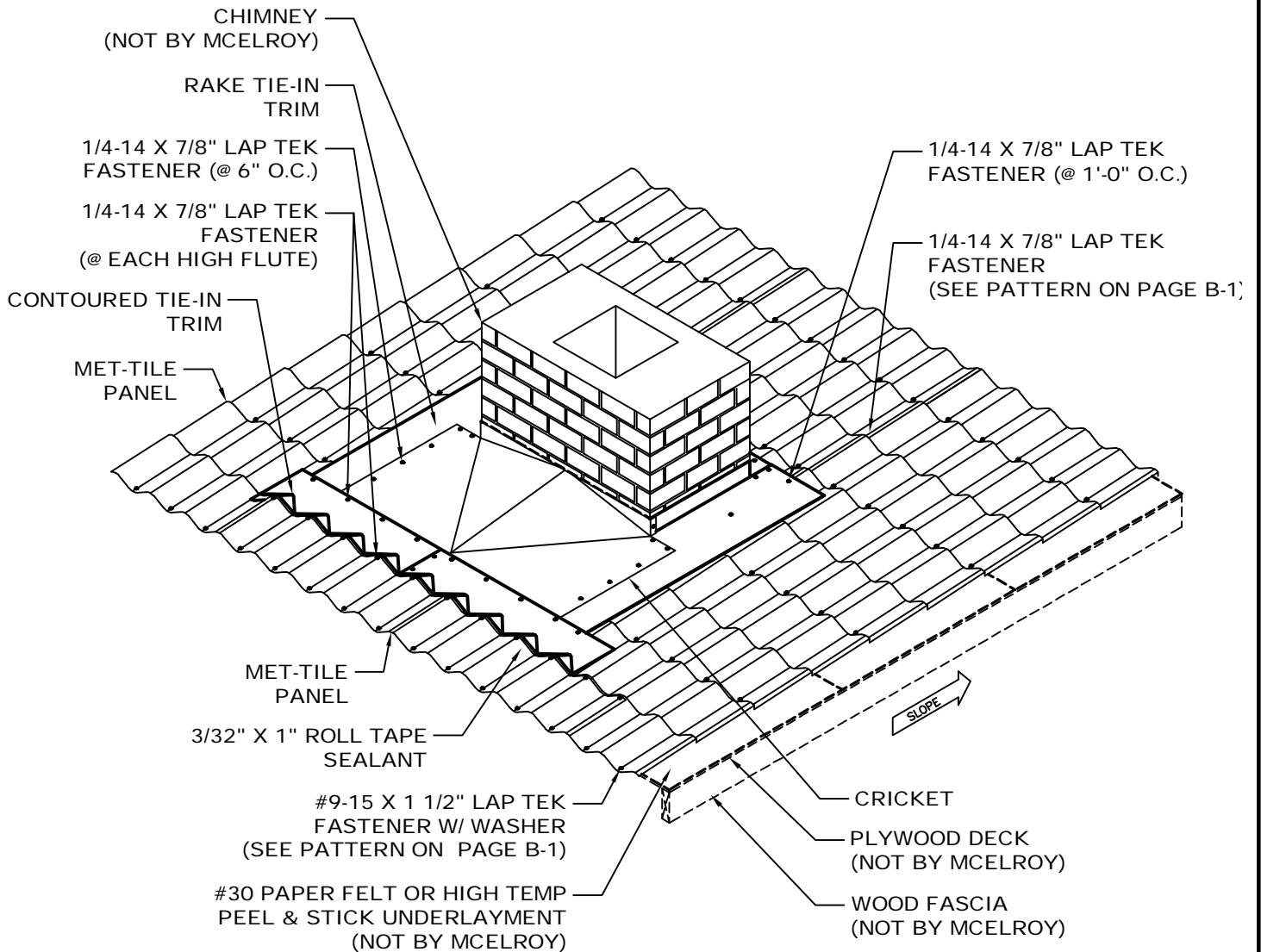
*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.



STEP #11

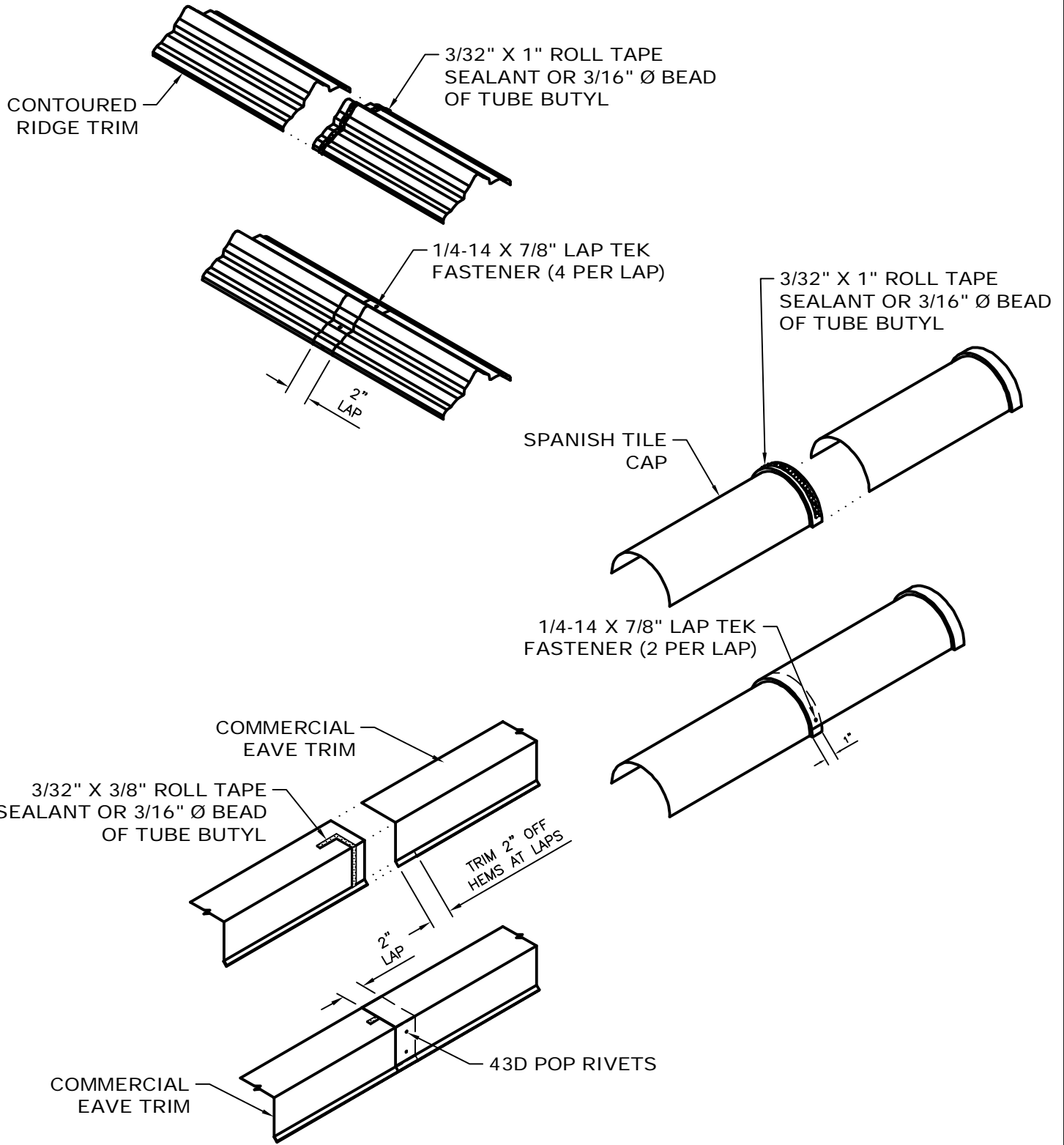
- NOTES: 1. Install remaining piece of Contoured Tie-In Trim on top of Cricket and Roll Tape Sealant. Fasten trim to Cricket with 1/4-14 x 7/8" Lap Tek Fasteners at each high flute of roof panel under Cricket.
 2. Apply 3/32" x 1" Roll Tape Sealant on top of Contoured Tie-In Trim as shown in the above detail.

*NOTE: SOME TRIM ITEMS AND FASTENERS HAVE BEEN REMOVED FOR CLARITY OF ISOMETRIC DETAIL.

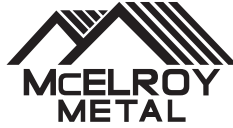


STEP #12

NOTES: 1. Install remaining Met-Tile Roof panels over the Contoured Tie-In Trim as shown in the detail above. Attach to Contoured Tie-In Trim with 1/4-14 x 7/8" Lap Tek Fasteners at each high flute of roof panel.



NOTE: 1. Apply $3/32"$ x $3/8"$ Roll Tape Sealant or a $3/16"$ \varnothing bead of Tube Butyl $1\ 1/2"$ back from the edge of the trim. Also, apply a piece of tape sealant or bead of Tube Butyl as a Pigtail to completely seal joint.
 2. Notch the hems on the upper trim piece 2" so that the trim will fit flat in the lap joint.
 3. Secure trim laps with Pop Rivets as shown above.



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