



# CHAMPION METAL

## *Of Washington, Inc.*

1-800-562-1014 [www.championmetal.com](http://www.championmetal.com)

## Exposed Fastener Installation Guide







## Exposed Fastener Panel and Trim Installation Guide

This manual is prepared to assist you in the application of your Champion Metal of WA roofing project. It cannot possibly answer the infinite situations every project may encounter, but it will provide you with the basics of applying metal roofing sheets and trim in the most common situations. The dealer from whom you purchased your material is very knowledgeable and well-trained to assist you with unique questions regarding your roofing.

### Step 1. RECEIVING MATERIAL

Review the roof layout and the material list, making sure you are familiar with the pieces that have arrived and how they should be stored.

**NOTE: Delivery, Handling and Storage**

- ☐ Handle bundles and individual panels with care to avoid damage.
- ☐ Store panels and other materials in a dry, well-ventilated area away from traffic.
- ☐ Storing panels in a wet condition can cause the deterioration of the panels.
- ☐ Wear clean, non-marking, soft-soled shoes when walking on the panels to avoid damage to the finish.

### Step 2. ASSEMBLE TOOLS

Before starting, have the following tools assembled and in good working condition:

**Required Tools:**

- ☐ Screw gun - 1/4" and/or 5/16" hex sockets are required, 2,000 rpm minimum.
- ☐ Snips - Three pair required for left edge, right edge, and centerline cuts.
- ☐ Chalk line - Used to assist alignment.
- ☐ Caulk and caulking gun - for **Prime Adhere** caulking application.
- ☐ Marking Tools - Indelible markers, pencils, or scratching tool.
- ☐ Utility Knife - for miscellaneous cutting.
- ☐ String Line - General alignment and measuring.
- ☐ Tape Measure - 25 foot (additional 50 ft. is handy)
- ☐ Locking Pliers, both standard and "duckbill" style.

**Optional Tools:**

- ☐ Electric Metal Shears - for metal cutting, such as for the hips and valleys.
- ☐ Electric Drill - Used to drill holes.

**NOTE: Cutting.** Steel roofing and trim should be cut with nibblers, tin snips or a profile shear. Although Champion Metal of WA. does not advocate the use of a saw, the reality is many people use a power saw in some manner. There are two concerns when using a saw. First, be sure that no burrs are left on the ends of the panel. The rough edges are not protected and will rust. Second, the filings coming off the blade are hot and will adhere to the surface of the panels and these will rust. Be sure all filings are removed from the surface as they will rust and pit the surface of the sheet.

### Step 3. ROOF PREPARATION

For your roof to provide years of service, prevent wood decay and simplify the task of application, the roof **must be properly prepared**. If your job is a re-roof with irregular surfaces or has any type of debris, it needs to be cleared off before you start the job. The underlayment should be checked at this time, and any decayed lumber must be replaced. The foundation of your roof should be sound.

When the metal panels are installed over purlins 24" or 30" o.c., installation of a condensation control blanket (CCB) is recommended prior to installing the metal panels. Both the CCB and the metal panels are installed perpendicular to the purlins and parallel with the rafters.

If the metal panels are installed over plywood or OSB board, a 30 lb. felt should be laid horizontal prior to installation of the metal panel, and a #14 Type "S" screw should be used.

Working on any roof can be dangerous.....

Note: **Safety Considerations**

- ☐ Never use unsecured or partially installed panels as a working platform.
- ☐ Metal roofing panels are slippery when wet, dusty, frosty, or oily.
- ☐ Do not walk on the panel seams.
- ☐ Always be aware of your position on the roof.
- ☐ Wear proper clothing in order to minimize the potential for cuts, abrasions, and other injuries.
- ☐ Use care when operating electrical and power equipment.
- ☐ Roof installation on windy or stormy days can be dangerous.

**Use Fall Protection Equipment.**

### Step 4. INSTALLING CURBS AND FLASHINGS

Installation of eave and valley flashings, roof to wall connections, splash plates, or curbing is required prior to panel installation. Make sure that caulking and sealing is properly completed.

### Step 5. INSTALLING ROOF AND SIDING PANELS

Both roofing and siding should be started vertically at the end of the building, opposite the direction of the prevailing winds. It is imperative, when installing Hi-Rib and Ultra-Panel, that the short leg of the panel be installed on top of the full load-bearing leg. When installing Wide-Rib, you must make sure that the side of the panel with the anti-siphon groove is the bottom lap. (See appendix 1)

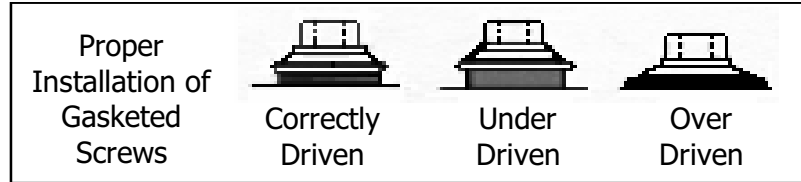
Girt spacing should be no more than 36" for normal siding applications. It is recommended that the purling spacing for roofing be no more than 24" for normal application with a slope of at least 2-1/2" per foot. The recommended slope is 4" per foot for larger buildings with long runs. End lapping, if required, should never be less than 12".

If your building is not insulated, we recommend that you install a condensation control blanket (CCB) prior to installing the panels. This will help prevent your building from sweating.

On all exposed fastener profiles, except Ultra-Panel, installers should use sidelap tape and stitch screws where the sides of the panels overlap. Although it is not required, these accessories will offer better leak protection as well as a better wind uplift protection. Because of the superior lap of the Ultra-Panel profile, these products are generally not needed.

For more complete weatherproofing, use closure tapes, regardless of pitch. When endlapping panels, **Prime Adhere** should be used at the end of both the top and bottom sheets where the sheets overlap.

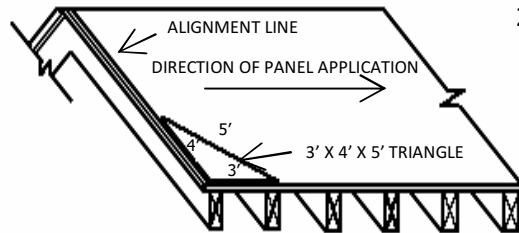
Your dealer has provided the proper length fastener, but only proper tightening and location will insure a leak-resistant roof. Check the fastening patterns recommended by your dealer.



Panel Placement:

- Place an alignment line along the gable end where the first roof panel will be installed. Check roof for squareness by making a 3' line across the eaves. (See illustration No. 1 below). Completing the 3' x 4' x 5' right angle triangle should place the 4' edge of the triangle parallel with the gable.

Illustration #1

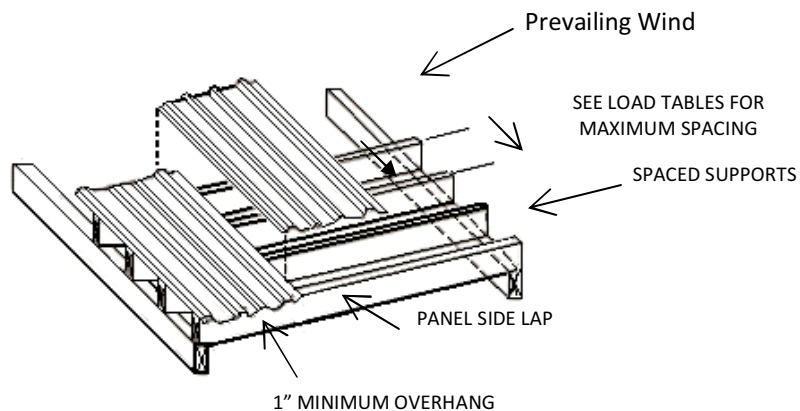


**Remember, on this application:**

1. Always use screws. Nails will back out.
2. Use the proper screw gun, not a drill with a socket.

- Align the edge of the first panel with the alignment line constructed along the starting gable. Allow the panel to overhang the eaves 1" minimum.
- Lay down the second and third panels, checking the alignment, and making sure they are square. This will ensure that a sawtooth effect at the eaves and ridge is avoided. (See illustration No. 2).

Illustration #2



## Step 6. INSTALLING TRIM See Trim Application Guide on last page.

Proper trim installation not only enhances the attractiveness of your roof, but is critical in the protection of your roof as well. **Prime Adhere** and closure strips should be applied to ensure against water penetration.

Apply gable trim matching the existing color or, to accent, use a different color. Use the proper flashing around vents. Flash all exposed edges with standard or custom flashings.

Install the ridge cap using the proper closures (matching outside closure is used for the Hi-Rib, Wide-Rib, and Ultra-Panel profiles and universal closure tape is used for the 2-1/2" Corrugated and 4-V profiles.) Apply ridge cap as shown, fastening through the ridge cap, through the closure and the roofing at every rib. Venting the ridge may be required depending on the building code.

## Step 7. PAINT

We do sell paint. The paint is usually used to paint existing flashings, pipe boots, and other items that can enhance the appearance of your building. No paint can match a baked-on silicone modified polyester (SMP) paint finish. It will fade at a different rate and be extremely visible at a later date. Steel building panels don't necessarily rust when they are scratched or cut. These panels are galvanized before they are painted. The zinc undercoating will protect the exposed areas with mild scratches.

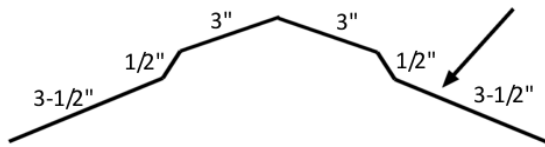
## Step 8. YOU ARE FINISHED!

Remove all tools and debris from the roof. (Remember, the smallest amount of metal shavings may cause rust-discoloration.)

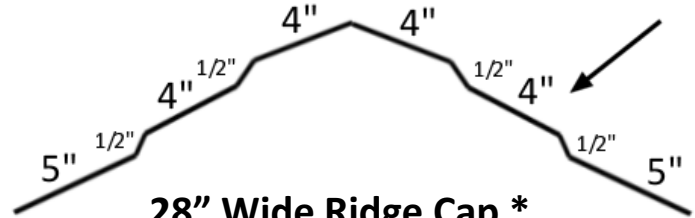
Be proud of a job well done!

Thank you for selecting Champion Metal of WA roofing and siding.

## Ridge Cap



**Ridge Cap—Standard \***  
**TRC\_\_**



**28" Wide Ridge Cap \***  
**TWR\_\_**

### **Ridge Cap Application**

Apply ridge cap as shown, fastening through cap and roofing at every rib.

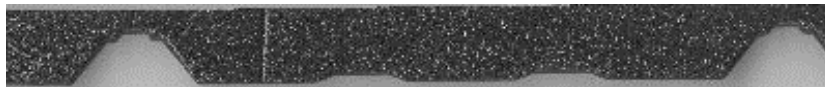
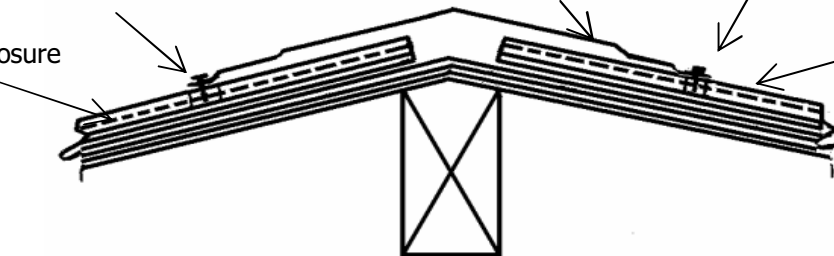
#9 x 1.5" or #14 x 1.5" screw

Universal Ridge Cap

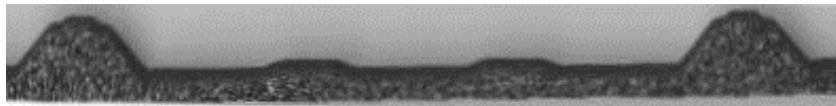
#9 x 1.5" or #14 x 1.5" screw

Outside Closure

Outside Closure

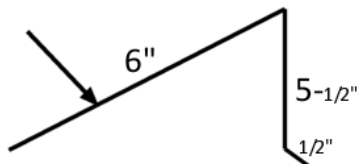


Ultra Panel Outside Closure



Ultra Panel Inside Closure

## **Shed Metal \*** **TSM\_\_**



Shed Metal (Clear Story) is simply a ridge cap for a single slope roof.

Install the roof panels. You may want to use matching outside closure strips to help seal under the shed metal.

Fasten the cap down from behind into the wall, using an exposed painted trim fastener. You may also wish to fasten the cap into the top of the panel ribs with the same exposed trim fastener.

← Denotes Colored Side

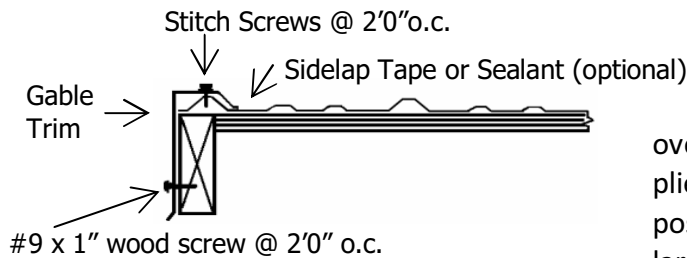
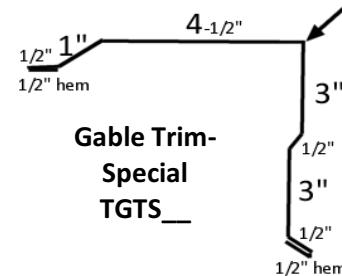
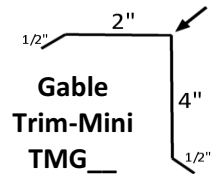
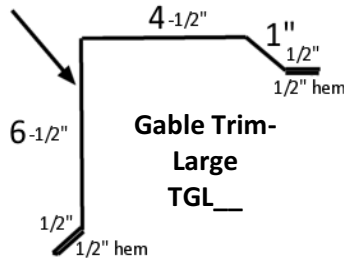
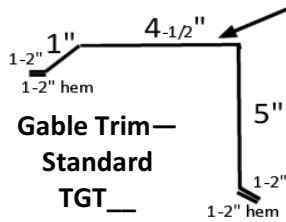
\* Pitch Needed \*\* Two Pitches Needed

All Items in 10 foot lengths only

Available in all colors or plain galvanized.

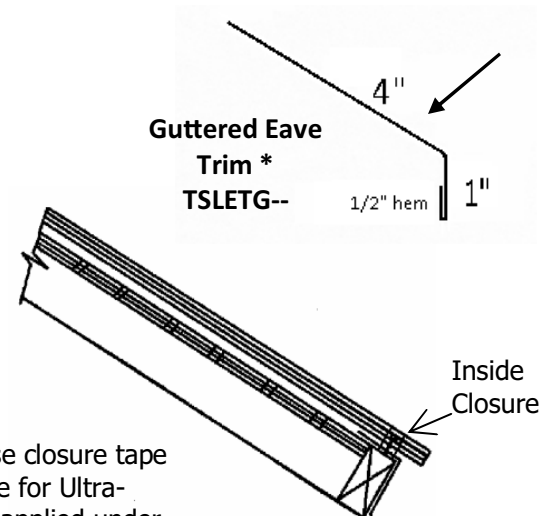
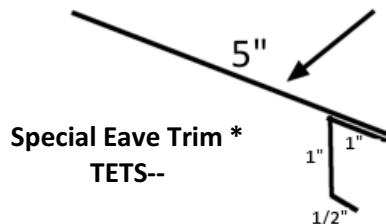
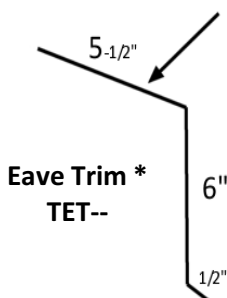
All Part Numbers end with Color Code.

## Gable Trim



Gable trim is applied on top of the panel over the outside rib before the ridge cap is applied. It is fastened to the fascia board with exposed painted trim fasteners. On the standard, large and special gable trim, you can also fasten through the hem on the upper hemmed edge but be sure to use sidelap tape under the hemmed edge to stop water from siphoning under the edge.

## Eave Trim



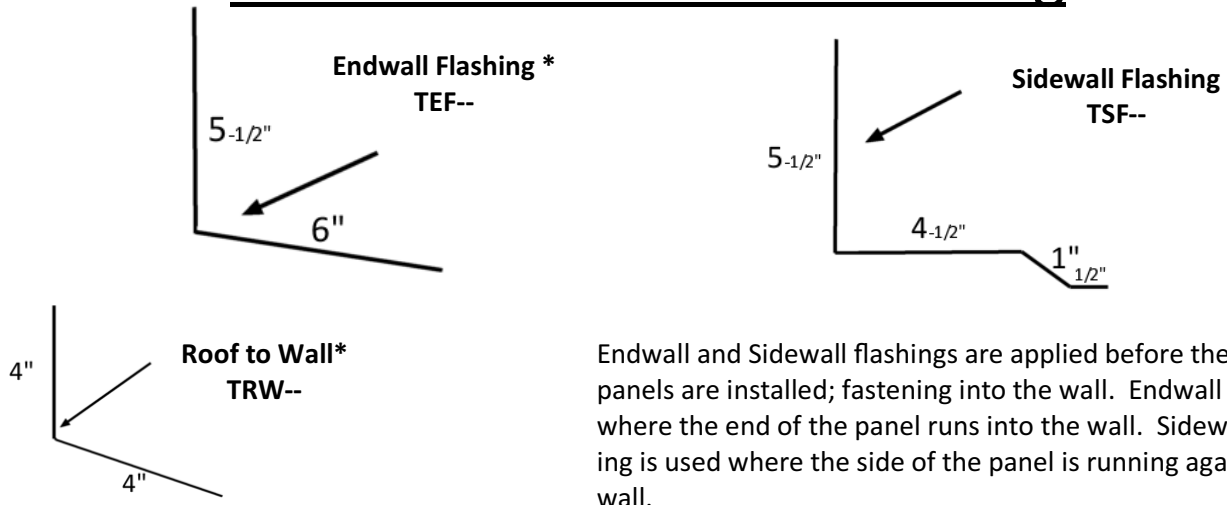
Eave trim is applied prior to applying the roofing panels. It is usually applied with bugle screws. Champion Metal recommends the application of a bead of **Prime Adhere** between the eave trim and the roofing panel to stop water from wicking back up under the panel.

For enclosed structures, use closure tape (or matching Inside Closure for Ultra-Panel, Wide-Rib or Hi-Rib) applied under the panel at the eave before fastening.

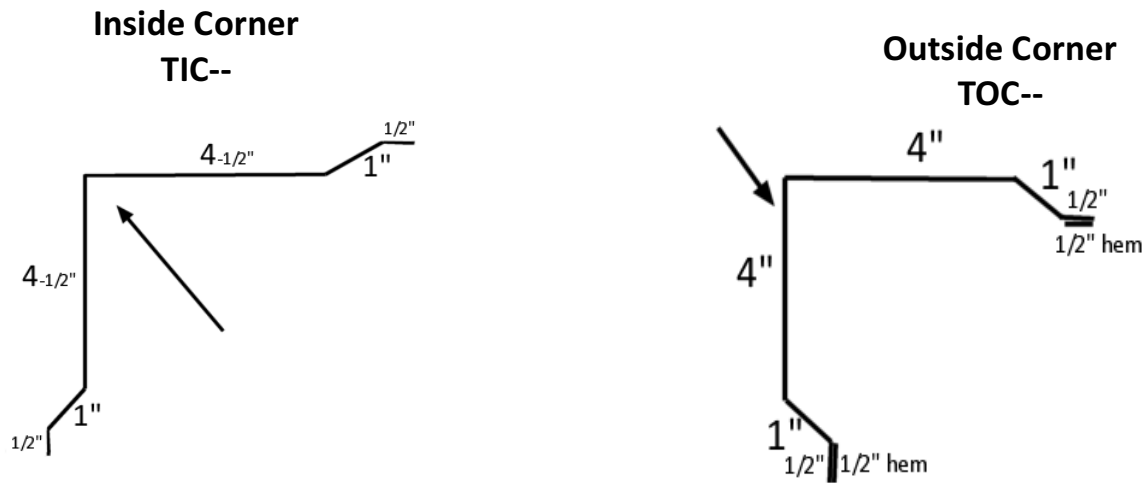
← Denotes Colored Side  
 \* Pitch Needed \*\* Two Pitches Needed  
 All Items in 10 foot lengths only  
 Available in all colors or plain galvanized.  
 All Part Numbers end with Color Code.



## Endwall and Sidewall Flashing



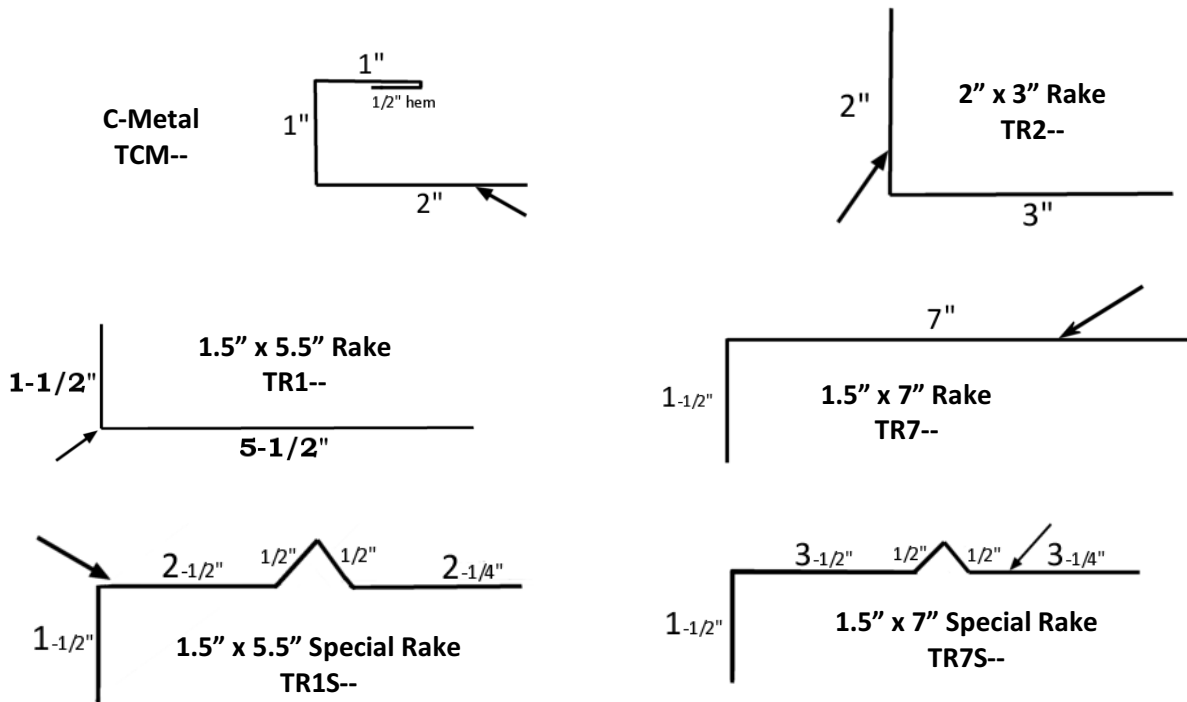
## Inside and Outside Corner



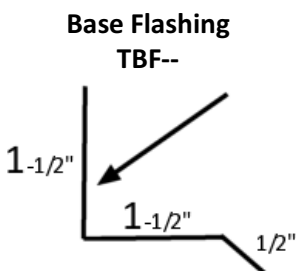
← Denotes Colored Side  
 \* Pitch Needed \*\* Two Pitches Needed  
 All Items in 10 foot lengths only  
 Available in all colors or plain galvanized.  
 All Part Numbers end with Color Code.

Custom Flashings Available  
 Please inquire  
 TCU\_\_

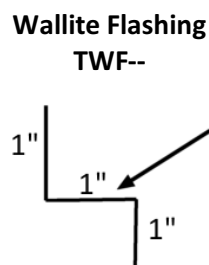
## Window and Door Trims



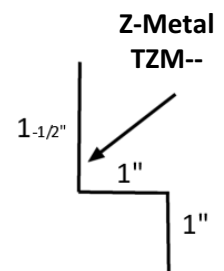
## Wall Flashings



Installed before siding panels for a clean base.



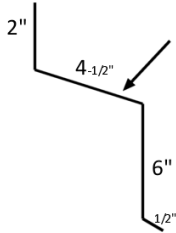
Installed between siding panels and light panels (Sunsky) on a wall application.



← Denotes Colored Side  
 \* Pitch Needed \*\* Two Pitches Needed  
 All Items in 10 foot lengths only  
 Available in all colors or plain galvanized.  
 All Part Numbers end with Color Code.

**Single Track Cover**

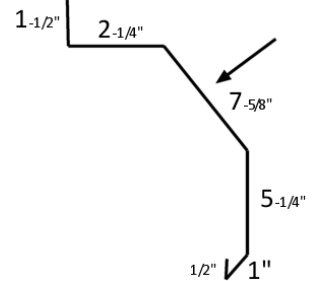
TST\_\_



**Track Covers**

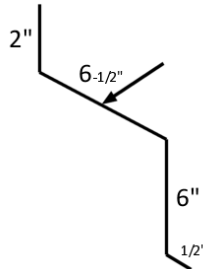
**Combo Double Track Cover**

TDT\_\_P



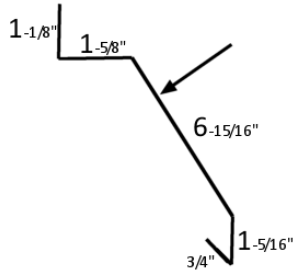
**Double Track Cover**

TDT\_\_



**Combo Single Track Cover**

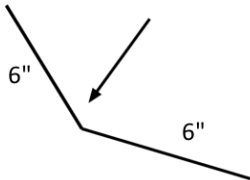
TST\_\_P



**Transition Flashings**

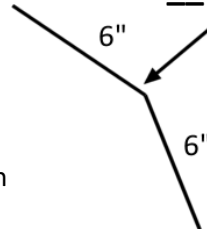
**6" x 6" Transition-Standard \*\***

TTF\_\_



**6" x 6" Transition—Gambrel \*\***

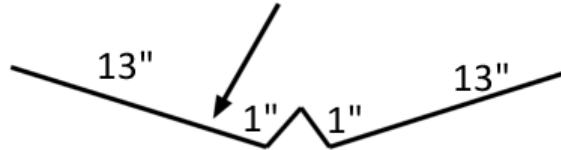
TTF\_\_



Please list upper pitch  
 first and lower pitch  
 second when ordering  
 these two trim items.

← Denotes Colored Side  
 \* Pitch Needed \*\* Two Pitches Needed  
 All Items in 10 foot lengths only  
 Available in all colors or plain galvanized.  
 All Part Numbers end with Color Code.

**W-Valley**  
**TWV--**



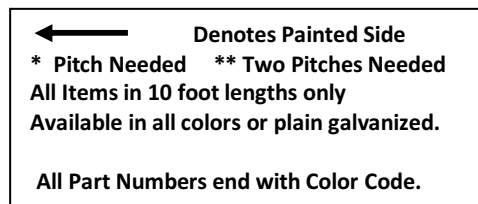
Cut across the panels at the angle of your valley.

Be sure to lay a bead (or two) of **Prime Adhere** under the panels as you install them. The sealant should be downhill of the fasteners.

It is important to leave 4 to 6 inches between the end of the panels and the middle "V" of the w-valley to allow water and debris to drain off properly.

Note: When a steep pitch is involved, the large distance between the ribs can present complications. Some installers cut the panels, eliminating the ribs and leaving an inch of flat pan extra. They then fold the inch of flat pan under. By creating a "back hem", you will find that the panel will lay flatter and you will not have a straight line up your w-valley to look at.

Please note: Black w-valley is only available 14" wide.



### Storage of Metal Roofing Materials

It is not a good idea to store metal roofing flat for an extended period of time. When the product is stored flat, water and condensation can siphon in between the panels. Over time, the combination of expansion and contraction, the weight of the panels, temperature change and dampness will soften the coatings. Once the coatings are compromised, the life expectancy of the steel is sacrificed.

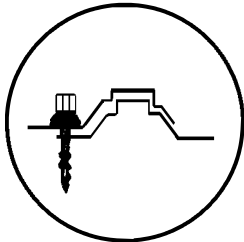
If you are planning on storing your metal roofing, the banding on the bundles should be cut; the panels should be separated and stood up vertically to ensure water does not get trapped between them.

It is our intent to provide you with the information to ensure you the longest lasting life expectancy for your metal roof. If you have any questions regarding this issue, please contact your local distributor or one of our sales representatives.

## APPENDIX 1—LAP AND FASTENING PATTERNS

### LAP

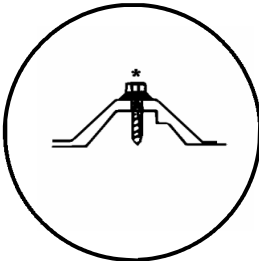
### FASTENING PATTERNS



#### ULTRA-PANEL \*

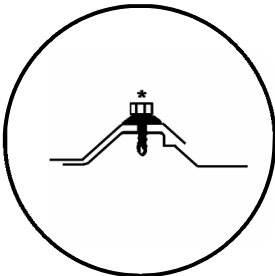
Wind Direction →

\* Note: Ultra-Panel does not require sidelap tape or stitch screws.



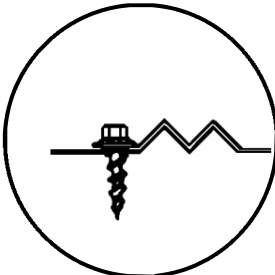
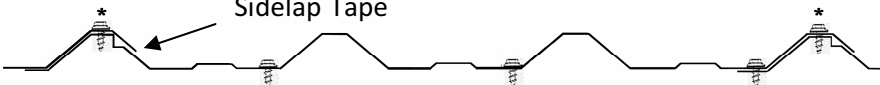
#### WIDE-RIB

Sidelap Tape



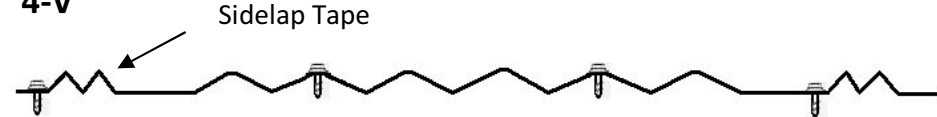
#### HI-RIB

Sidelap Tape



#### 4-V

Sidelap Tape



#### 2 1/2" CORRUGATED

Sidelap Tape



Note: This panel must be double-lapped on all roof applications. Therefore, you only get 21" net coverage on a roof for this panel.

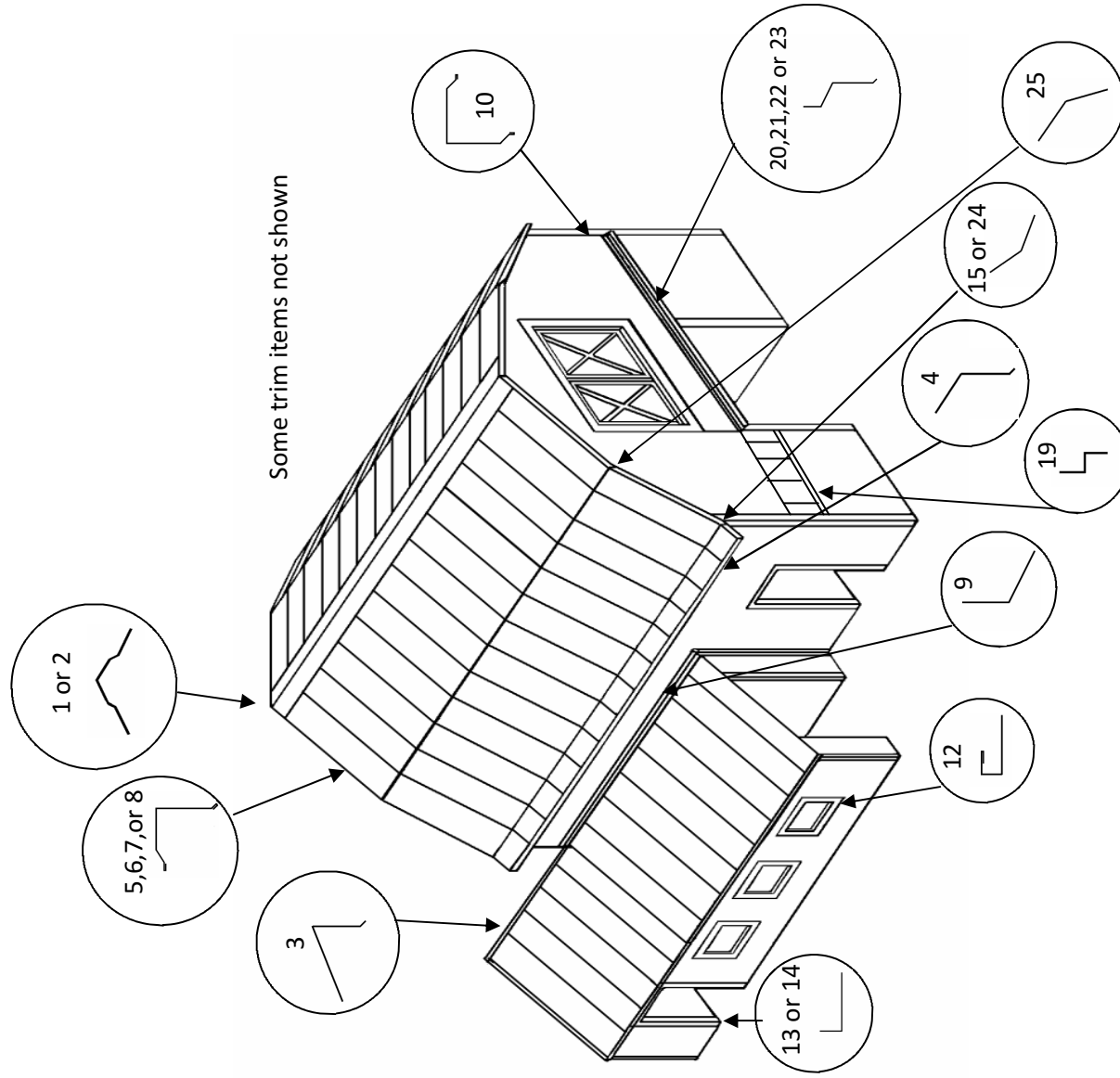
Only use screws / do not nail.

\* Note: "Stitch Screws" are optional and are used in high wind areas or severe weather conditions. 13



- |                               |        |
|-------------------------------|--------|
| 1. Ridge Cap *                | TRC__  |
| 2. 28" Wide Ridge Cap *       | TWR__  |
| 3. Shed Metal *               | TSM__  |
| 4. Eave Trim *                | TET__  |
| 5. Gable Trim                 | TGT__  |
| 6. Large Gable Trim           | TGL__  |
| 7. Special Gable Trim         | TGTS__ |
| 8. Mini Gable Trim            | TMG__  |
| 9. Endwall Flashing *         | TEF__  |
| 10. Outside Corner            | TOC__  |
| 11. Inside Corner             | TIC__  |
| 12. C-Metal                   | TCM__  |
| 13. 2" x 3" Rake              | TR2__  |
| 14. 1.5" x 5.5" Rake          | TR1__  |
| 15. 4" x 4" Roof to Wall *    | TRW__  |
| 16. Sidewall Flashing         | TSF__  |
| 17. Base Flashing             | TBF__  |
| 18. Z-Metal                   | TZM__  |
| 19. Wallite Flashing          | TWF__  |
| 20. Single Track Cover        | TST__  |
| 21. Combo Single Track        | TST__P |
| 22. Double Track Cover        | TDT__  |
| 23. Combo Double Track        | TDT__P |
| 24. 6 x 6 Standard Transition | TTF__  |
| 25. 6 x 6 Gambrel Transition  | TTF__  |
| 26. W-Valley                  | TWV__  |

Numbers listed above pertain to this drawing only.  
When ordering, please use the name of the trim piece  
or the part number.



# Trim Application Guide