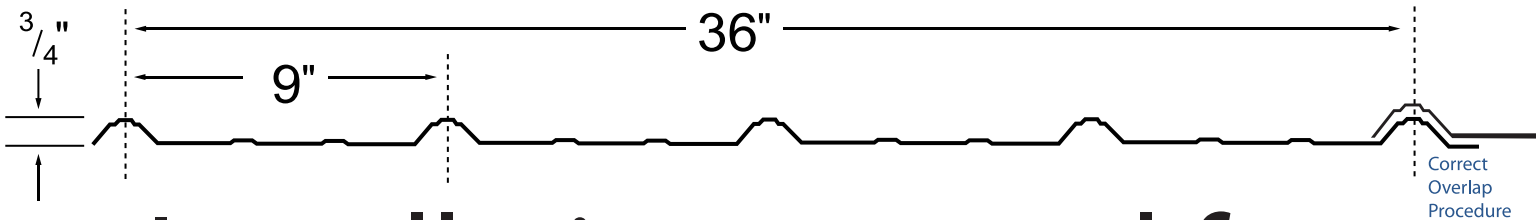
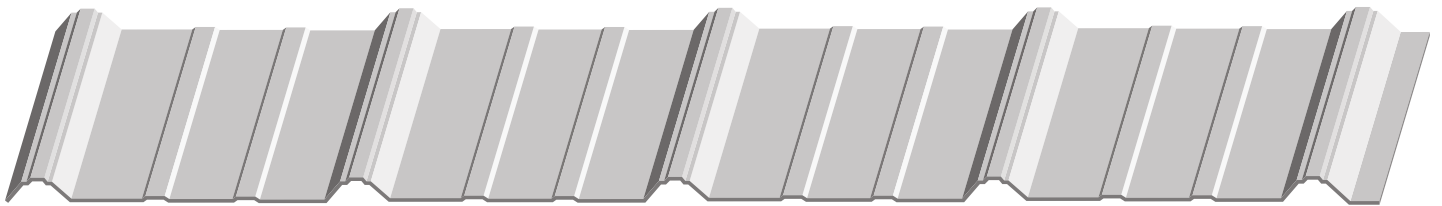


DC METAL SALES



Installation manual for DC Rib Metal

812.486.4299 (Phone)
812.486.4344 (Fax)
812.486.4345 (Wholesale Fax)

Daviess County Metal Sales, Inc.
9929 E US Highway 50,
PO Box 75,
Cannelburg, Indiana 47519



Table Of Contents

Page 2 Metal Information
Page 3 General Information / Delivery & Handling
Page 4 Storage
Page 5 Safety Information/ Fastening
Page 6 Fastening/ Decking Options
Page 7 Accessories Detail
Page 8 Accessories Detail
Page 9 Panel Measurements
Page 10 Installation Order
Page 11 Eave Trim Detail
Page 12 Residential Rake Trim Detail
Page 13 Outside Corner Detail
Page 14 Endwall Detail
Page 15 Sidewall Detail
Page 16 Transition Detail
Page 17 Valley Detail
Page 18 Ridge Detail
Page 19 SnowGuard Detail
Page 20 Eave Detail (Remodel over shingles)

::: Panel Information:::

D.C. Rib Metal is an economical and attractive, exposed fastener roofing panel. It is ideal for residential, agricultural, and some commercial applications.

:::Standard Description:::

Panel Height
Female Rib 3/4" - Male Rib 3/4"
Panel Coverage: 36"
Panel Width: 37 1/2"
Substrate: G-60
Gauge: 29 gauge & 26 gauge
Minimum Roof Slope: 3:12
Metal: 29 gauge 80,000 psi
26 gauge 50,000 psi

:::Panel Coating & Finish:::

Substrate: G-60
Ext Finish: Ceram-a-Star 1050

:::Recommended Decking:::

Solid decking - minimin of 5/8" OSB with 30lb. felt or a synthetic felt.
Open Framing - 2x4 purlins 24" on center maximum.

:::Panel Length:::

Minimum - 3'0"
Maximim - 40'
For lengths over 40' check with your local DC Sales rep.

General Information

The installer should familiarize himself with all installation instructions before starting the job. Before installing the panels, the installer should examine the substrate or framing to ensure all supporting members are straight, level, and plumb to avoid any panel distortion. All substructures should be designed to meet all necessary building code requirements.

The information contained in this manual is designed to serve as a guideline on how to install DC Rib metal panels. The installation detail shown are proven methods of construction, but is not intended to cover all instances, building requirements, designs or codes. It is the responsibility of the designer/installer to ensure that the details meet particular building requirements. The installer must be aware of, and allow for, expansion/contraction of roof panels. The details may require changes or revisions due to each project's conditions.

Delivery and Handling

Always check the shipment upon delivery, Check for damage and check materials against the shipping list. Always notify your D.C Metal sales rep within 24 hours about any damaged or missing pieces.

Each bundle should be handled carefully to avoid being damaged. Care should be taken to prevent bending of the panel or scratches on the finish. If the bundles must be opened, we recommend that you recrate them before moving of the bundles, always lift the bundle at it's center of gravity to avoid damaging the panels.

Note: Improper loading or unloading of bundles and crates may result in bodily harm and/or material damage. D.C. Metal Sales is not responsible for bodily injuries or material damages resulting from loading or unloading the material. When handling DC Rib Panel bundles less than 25 feet in length they may be unloaded with a fork lift. Forks should be at least five feet apart, and the package should be picked up at the center point. When handling DC Rib Panel bundles longer than 25 feet, you must use a spreader bar system or something similar.

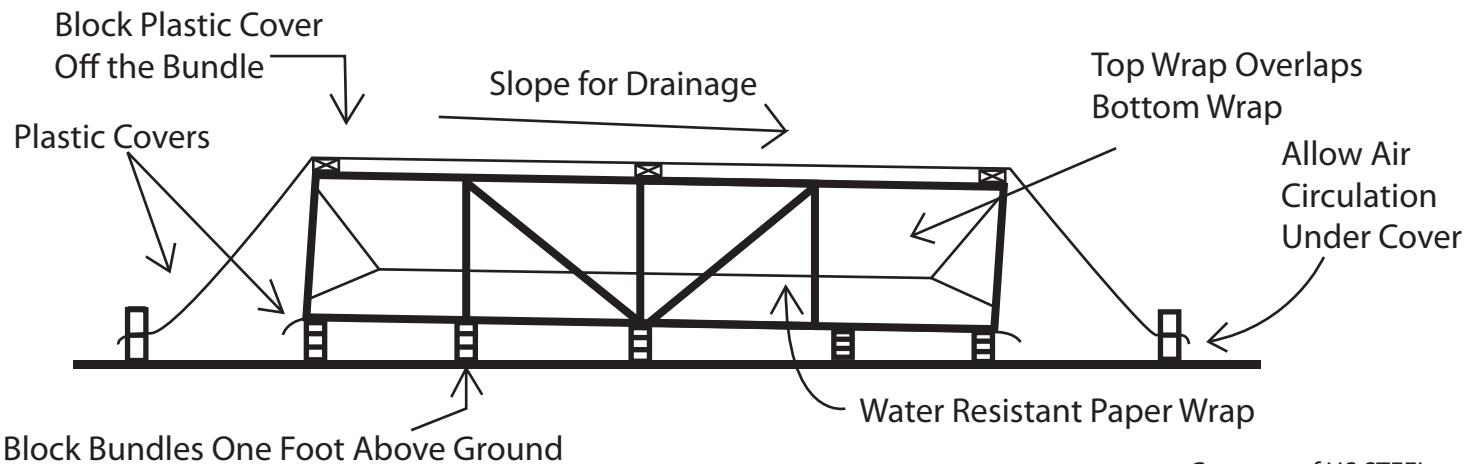
Oil canning (wrinkled appearance) in the flat area of the panels is common to the industry and shall not be a cause for panel rejection.

STORAGE AT THE JOB SITE

It is recommended that panel bundles be stored under a roof whenever possible.

If panel bundles are stored outside, the following list of requirements should be adhered to:

1. The storage area should be reasonably level, and should be located to minimize handling of bundles during the construction process.
2. When storing on bare ground, place a plastic ground cover under the bundles to minimize condensation on the panels.
3. Store bundles at least 12 inches above ground level to allow air circulation beneath the bundle, and to prevent rising water from entering the bundle.
4. Elevate one end of the bundle slightly to permit runoff of moisture from the top of the bundle or from between nested panels. Water-resistant paper will not provide long-term resistance to moisture penetration from puddled water on top of the bundle. A waterproof cover should be placed over the bundles, with allowance for air circulation under the cover (see Figure 4).
5. Inspect stored bundles daily and repair any tears or punctures in the water-resistant wrapping with a compatible waterproof tape.
6. Re-cover opened bundles at the end of each day to prevent entry of moisture.



Courtesy of US STEEL



Safety Considerations

The installation of D.C. Metal Rib Metal Panels can be a dangerous procedure. The installer of the D.C. Metal Panels is responsible for reading these instructions and determining the safest way to install the D.C. Metal Metal Panels. Always wear gloves when working with steel panels to avoid cuts from sharp edges. If you must walk on a metal roof, take great care. Metal panels can become slippery. Avoid working on metal roofs during wet conditions, in which metal panels can become extremely slippery. Walking or standing on a metal roof which does not have a solid decking is not recommended. However, if you must do so, always walk on the purlins, never step between the purlins, doing so can crinkle the metal panel. Also never walk on the ribs. Always walk in the flat areas of the panel. Never step on unsecured panels. Metal panels will become slippery when they are dusty. ALWAYS BE AWARE OF YOUR SURROUNDINGS!

General Installation Instructions

Insure that the structure is square and straight before beginning panel installation. If the structure is not square, the panels will not lap and seal properly. Start the first panel square to the eave by using the 3, 4, & 5 triangle method. Never use green or damp lumber, moisture released from damp lumber may damage the metal panels. Remove any loose metal shavings left on the roof surface to prevent corrosion. Never use a red or black chalk, or any other color that is resistant to moisture, to mark the metal panels, this will eventually damage the paint. After installing a roof, remove any debris such as leaves or dirt, and any markings on the metal panels to prevent moisture from getting trapped on the panels.

Fastening

We do not recommend predrilling.

Screws- For best results, use a 1-1/2" Metal to Wood #10 Woodtite double washered screw in the flat of the panel as shown in the illustration below. Fasteners should be applied at every purlin and each purlin should be at 24" on center maximum.

Drive the fastener so that the washer is compressed securely against the metal.

Do not over drive the fastener as this will form a dimple that can collect water and cause leakage.



Screw Fasteners- Normal areas.



Screw Fasteners- High wind areas and eave and overlaps.

Screws per 100 sq. ft. of roofing
75 pcs. per sq.



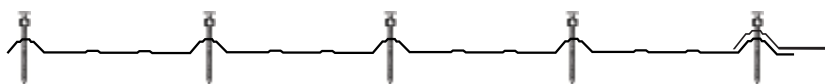
Fastening

(Continued)

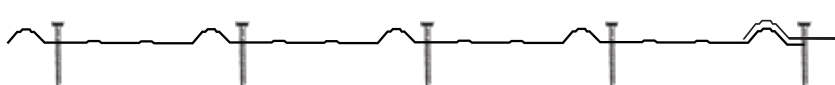
Nails - Roofing - For best results, use a 2" silicone washer painted or galvanized roofing nail on the center of the rib as shown in the illustration below. Fasteners should be applied at every purlin and each purlin should be at 24" on center maximum. Drive the fastener so that the washer is compressed securely against the metal. Do not over drive as this will form a dimple that can collect water and cause leakage.

Nails - Siding - For best results, use an 1- 1/2" neoprene washer painted or galvanized siding nail in the flat of the panel as shown in the illustration below. Fasteners should be applied at every purlin and each purlin should be at 24" on center maximum.

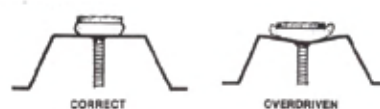
ROOFING NAIL PATTERN FOR D.C. RIB METAL PANEL



SIDING NAIL PATTERN FOR D.C. RIB METAL PANEL



Nails 1lb. per 100 sq. ft.



Nails per 100 sq. ft. of roofing
1 lb. per sq.

Roofing

DC Rib Metal Panels are not recommended slopes less than 3 inches per 12 inches. For slopes 3 inches per 12 inches and greater, end lap panels at least 6" or more. (Always use buytl tape or roofing sealant on endlaps). Side laps should face away from prevailing winds.

When installing metal always start on the down wind side of the roof, farthest from the direction of the prevailing winds.

Allow an overhang a minimum of 1" at the eave to provide for a drip edge. (see eave trim detail on page #11). An inside closure may be used at the eave, to prevent bird or insect infestation at the openings.

To protect against uplifting winds and to provide a finished appearance, apply rake trim or other standard gable trim on the gable.

Low Slope Roofing

For slopes less than 3 inches per 12 inches, apply a lap tape sealant along the top of all lap ribs. Do not block the siphon channel with the lap tape sealant.

Never use DC Rib metal panels on a slope 1.5 inches per 12 inches. For slopes less than 1.5 inches per 12 inches, other options such as rubber roofing is required.

Installation Options

Option #1- Install metal over open framing (trusses with 2x purlins)

*Use maximum 24" on center purlin spacing

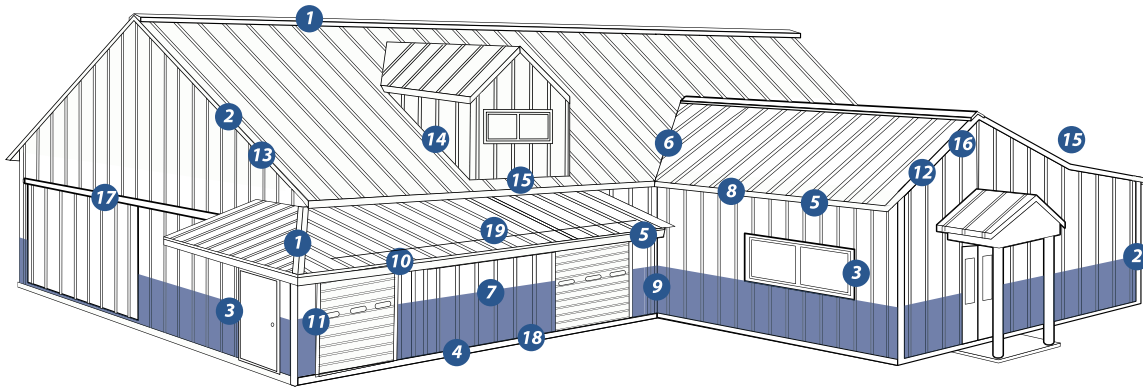
*Do not use this option for heated spaces unless insulation and a vapor barrier is used. (Bubble insulation, 1/4" Styrofoam, or 4x8 sheet insulation.

Option #2- Install metal over solid decking. (trusses with 5/8" osb or plywood decking)

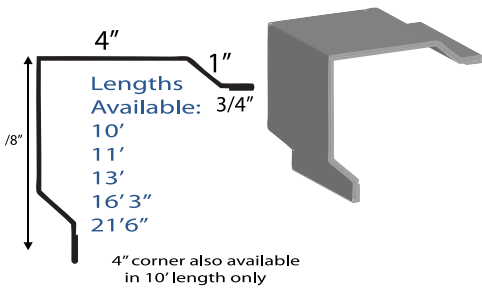
*Use synthetic felt, 30lb felt paper, 1/4" Styrofoam, or bubble insulation for a vapor barrier.

Option #3- Install metal over shingles. (Never use this option if more than 1 layer of shingles)

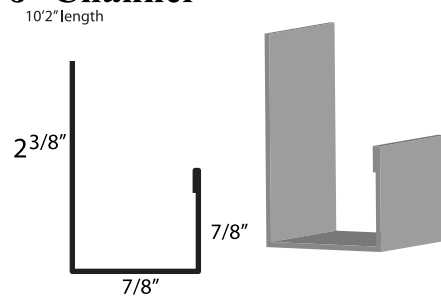
*Use 1/4" Styrofoam or bubble insulation for a vapor barrier and protection barrier.



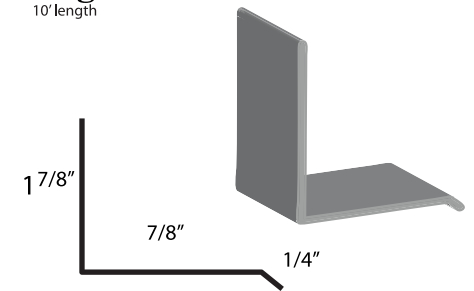
6" Corners ²



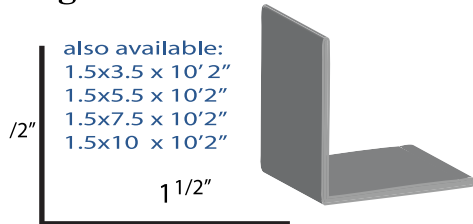
J-Channel ³



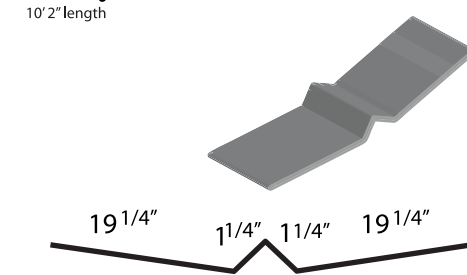
Ratguard ⁴



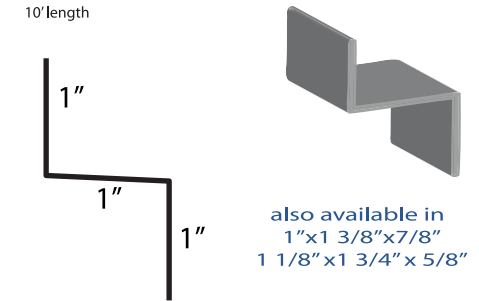
Angle Trim ⁵



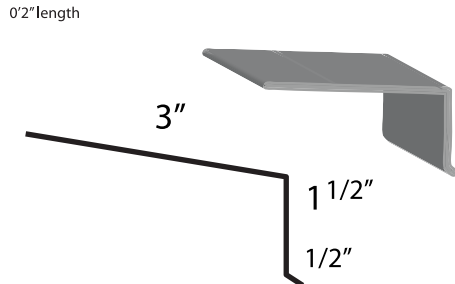
Valley Trim ⁶



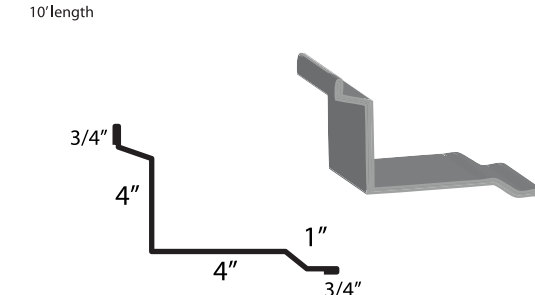
Z-Bar ⁷



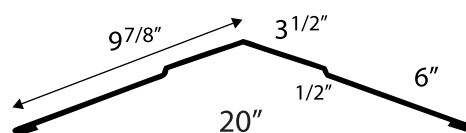
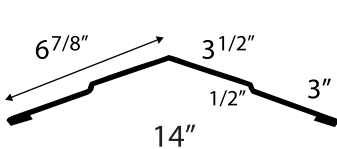
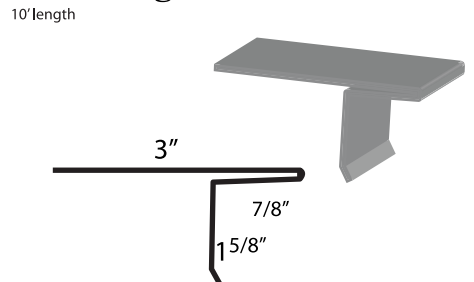
Eave Trim ⁸



Inside Corner ⁹



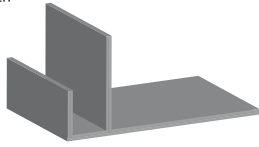
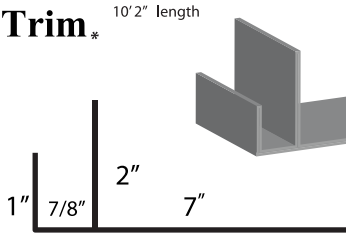
Roof Edge ¹⁰



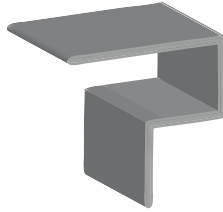
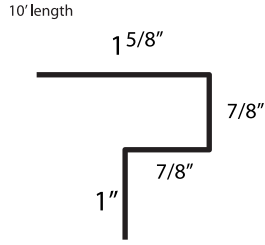
Ridge Cap ¹

10' 6" length

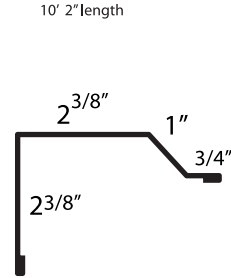
Overhead Door Trim* ¹¹



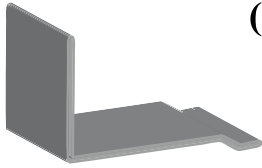
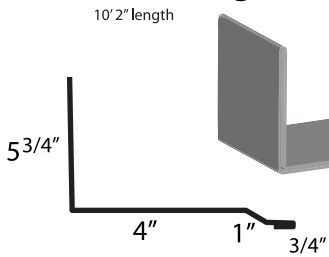
Soffit Channel ¹²



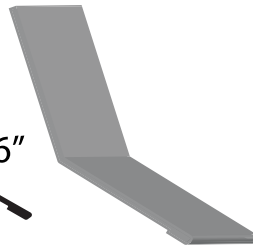
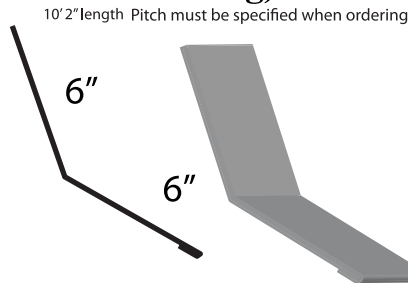
Residential Rake ¹³*



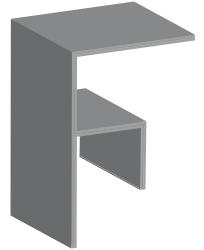
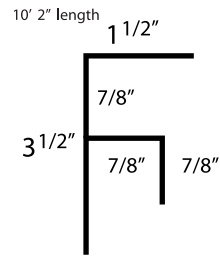
Endwall Flashing ¹⁴



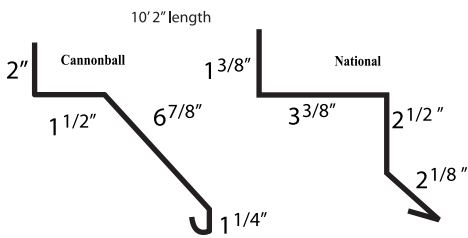
DC Sidewall Flashing (Transition Flashing) ¹⁵*



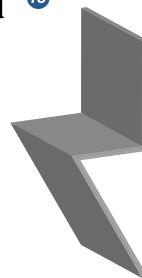
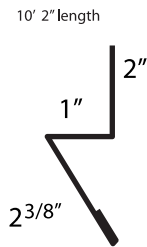
JF Channel ¹⁶*



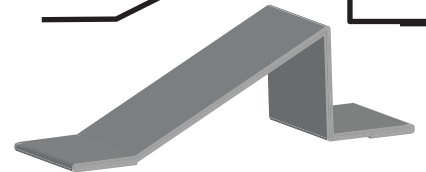
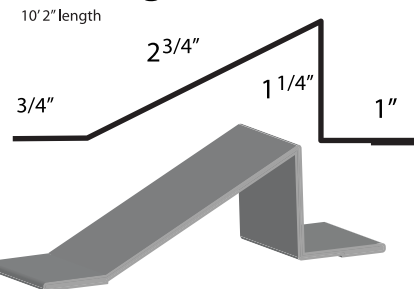
Door Track Cover ¹⁷



Special Ratguard ¹⁸*



DC Snowguard ¹⁹*



Accessories

Closure Strips

outside
inside



Ridge Vent Closure Strip 3' Sections

Screws

Available Lengths
1" • 1.5" • 2" • 2.5" • 3"
All Standard Stock Colors Available

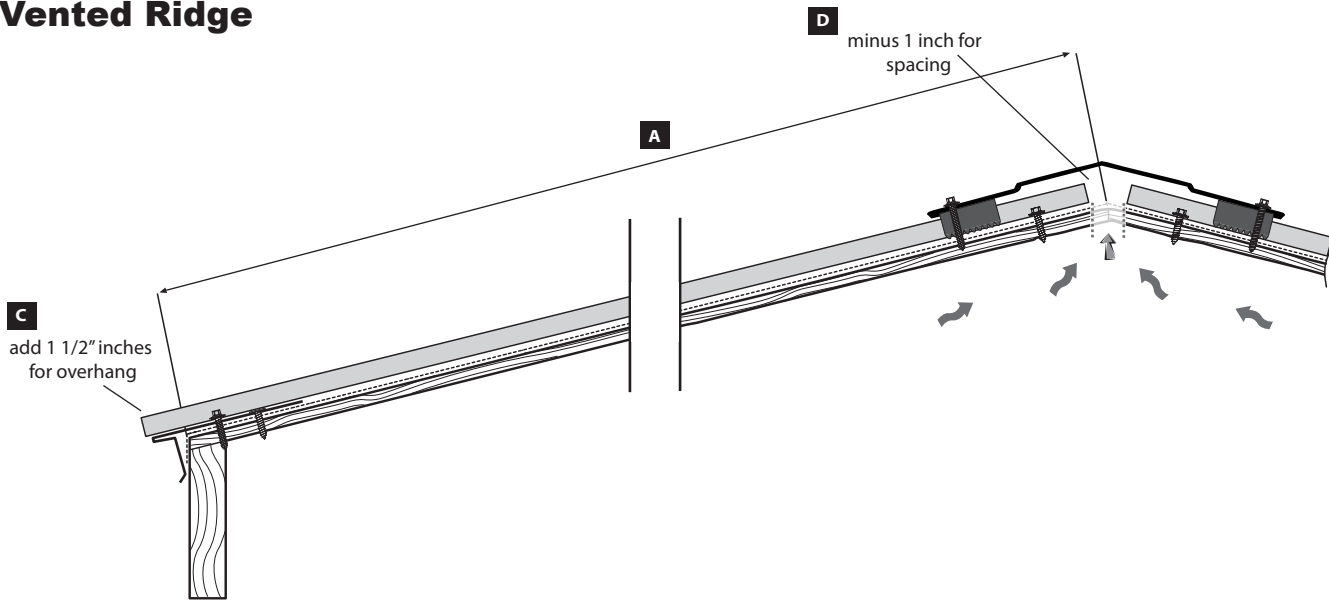


Roof Boot

- #3 1-1/4" - 4"
- #4 3" - 6"
- #5 4" - 7"
- #6 5" - 9"
- #7 6" - 11"
- #8 7" - 13"
- #9 9-1/2" - 20-1/2"

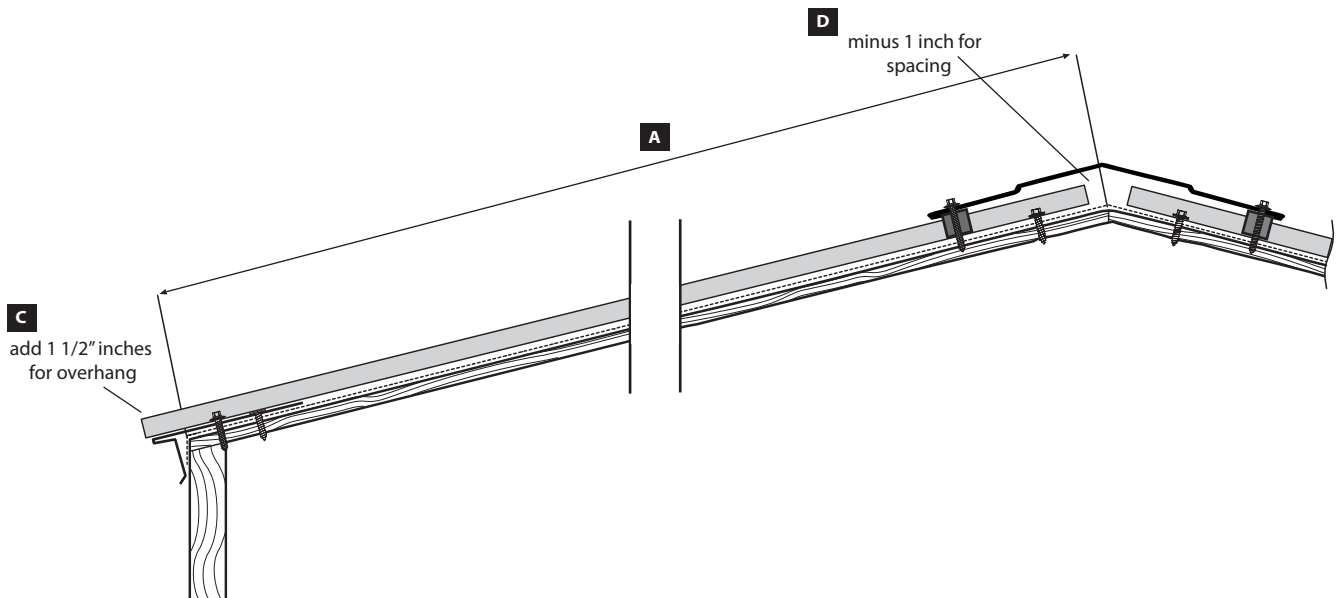


Vented Ridge

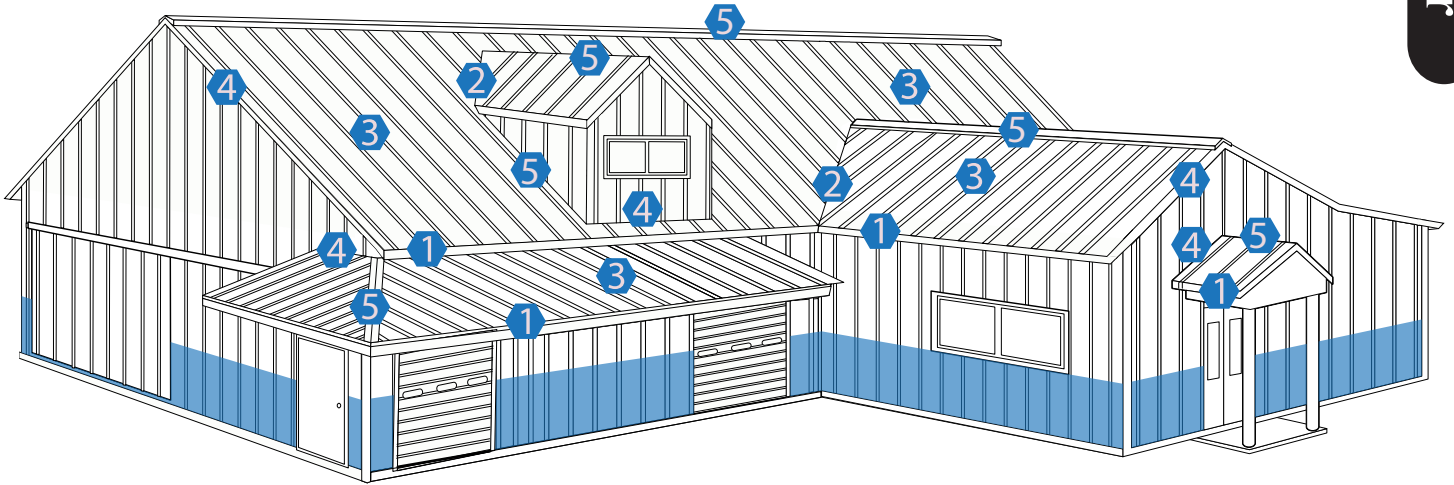


Length of A plus 1/2" (see figures C & D above) = panel length

Non Vented Ridge



Length of A plus 1/2" (see figures C & D above) = panel length

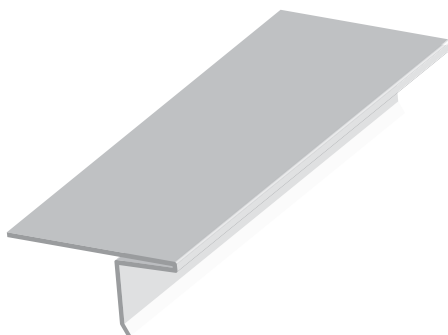


Exposed Fastener Installation order

Steps to installing DC Rib Exposed Fastener System

1. Install all roof edge trim.
2. Install all valley flashing trim.
3. Install all D.C Rib Metal Panels.
(for roof sections with 2 different pitches see page 16)
4. Install all rake trim & endwall trim.
5. Install all sidewall trim, ridge cap and remaining trims.

New Construction
Roof Edge
10' Length

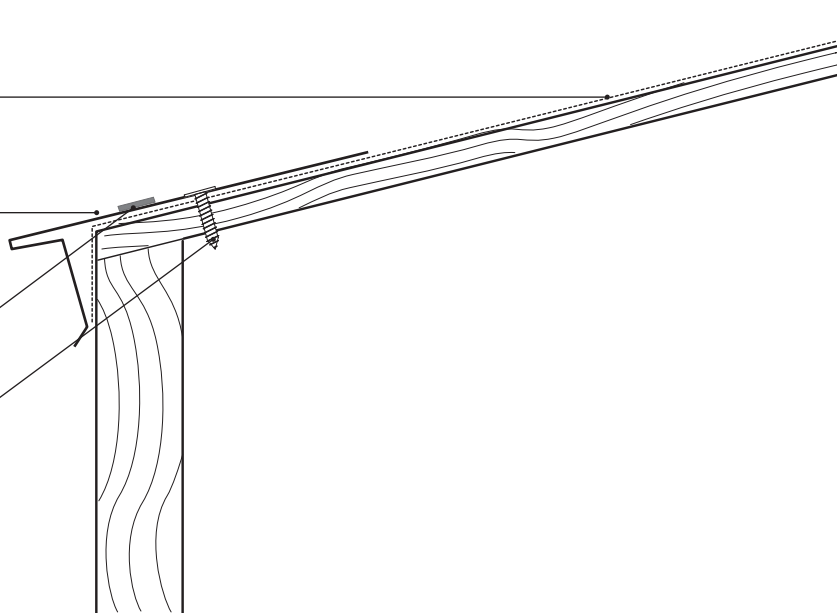


1. Moisture Barrier.
Install the moisture barrier in accordance to the manufacture's recommended procedure and in compliances with the local building code.

2. Eave Trim.
Snug the eave trim up against the gutter board.

3. (Optional) Butyl Tape Sealant.
When using inside closures, apply a continuous butyl tape sealant on the roof edge.

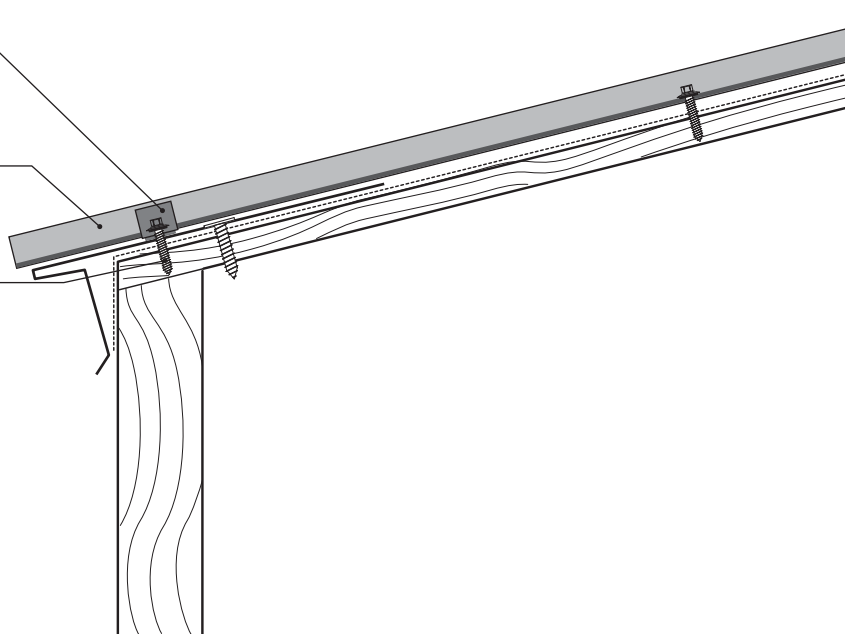
4. Screw Pancake Screw.
Fasten eave trim with a 1" pancake screw spaced 12 - 18" apart.



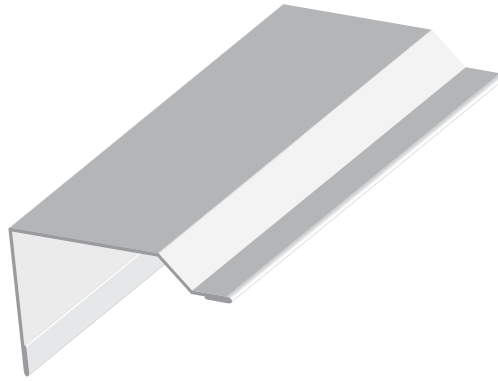
5. (Optional) Inside Closure.
When using inside closures, apply a continuous butyl tape sealant to roof edge, install the inside closure over the top of the sealant.

7. DC Rib Metal Panel.
Install the metal panel and extend the panel beyond the roof edge a min. of 1/2".

8. Panel screw.
Fasten metal panel with metal to wood screw according to the recommended fastening pattern and in compliance with the local building code. If inside closures are used, apply the first screw thru the inside closure.



New Construction
Residential Rake
10' Length



1. Moisture Barrier.

Install the moisture barrier in accordance to the manufacture's recommended procedure and in compliances with the local building code.

2. DC Rib Metal Panel.

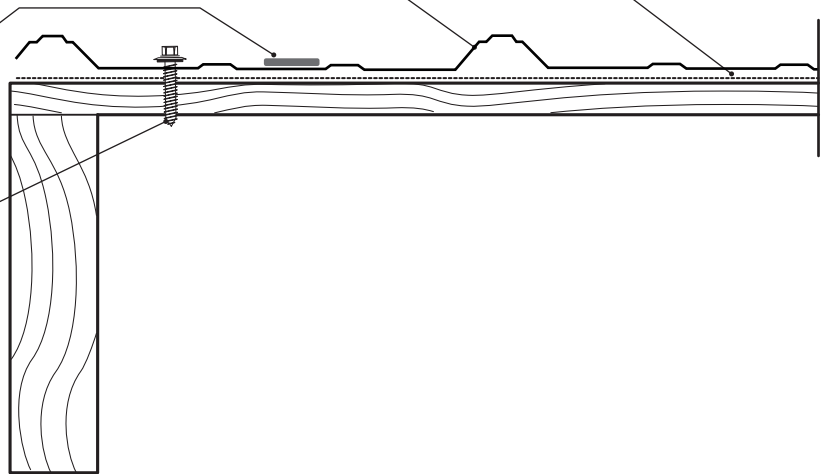
Install the metal panel and extend the panel beyond the roof edge a min. of 1/2".

4. Buytl Tape Sealant.

Apply buytl tape sealant the length of the panel.

3. Panel Screw.

Fasten metal panel with metal to wood screws spaced according to the recommended fastening pattern and in compliance with the local building code .



5. Residential Rake.

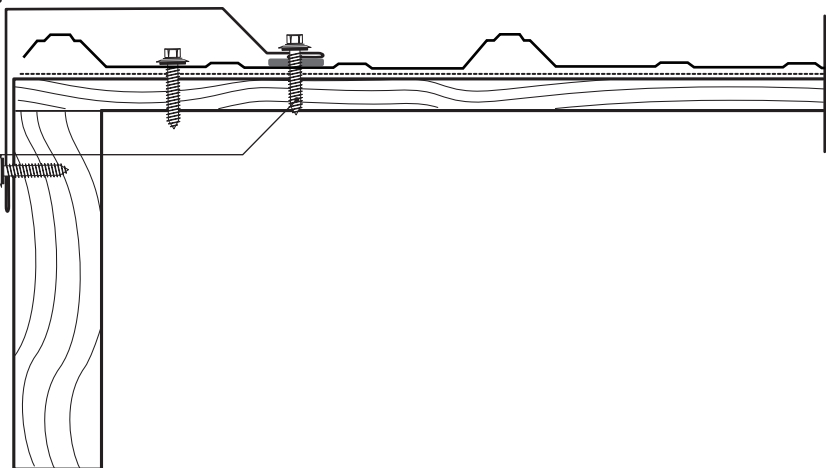
Install the Rake trim and overlap all splices a minimum of 6".

6. Trim Screws.

Install the Rake with metal to wood screws spaced at 18" - 24" along the length of the trim.

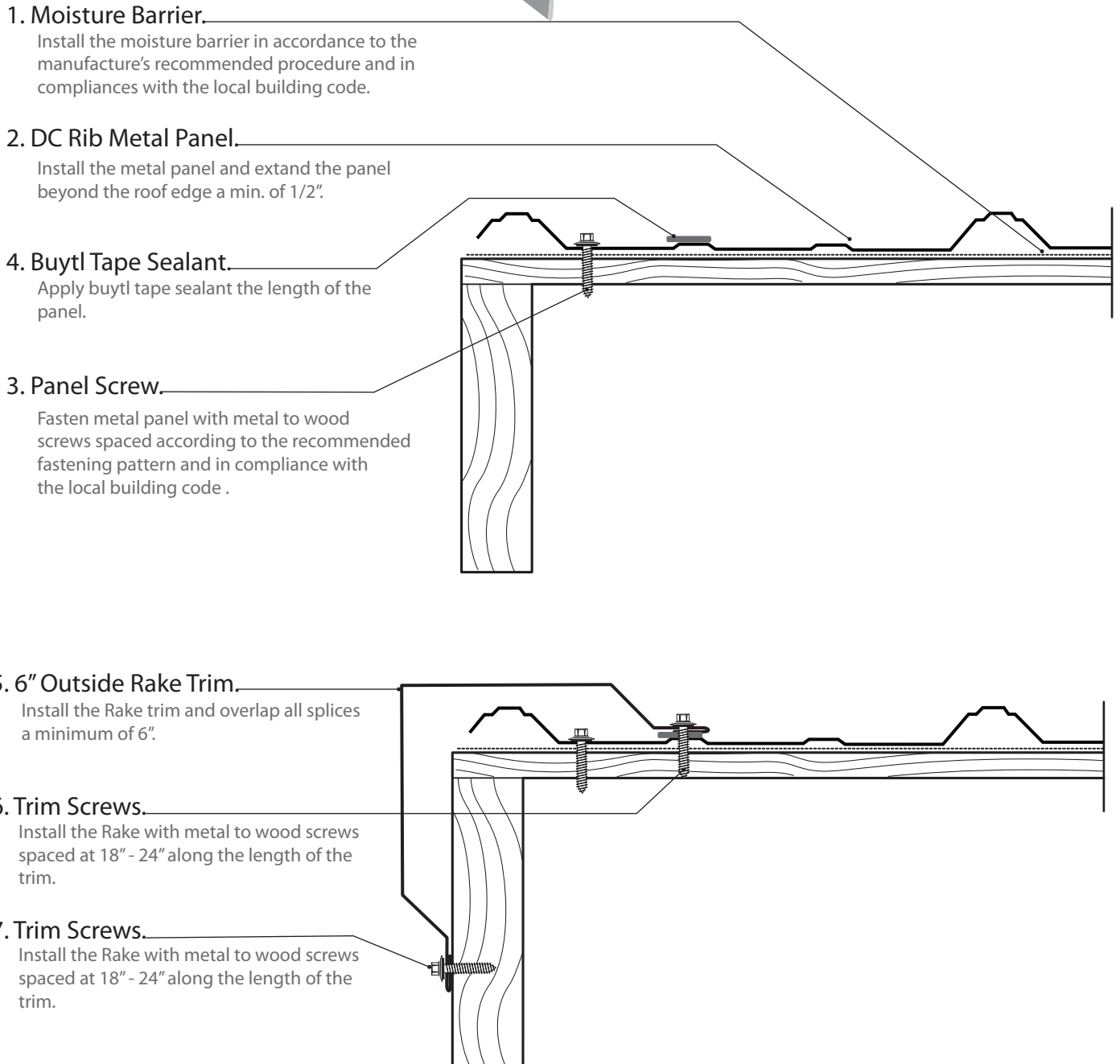
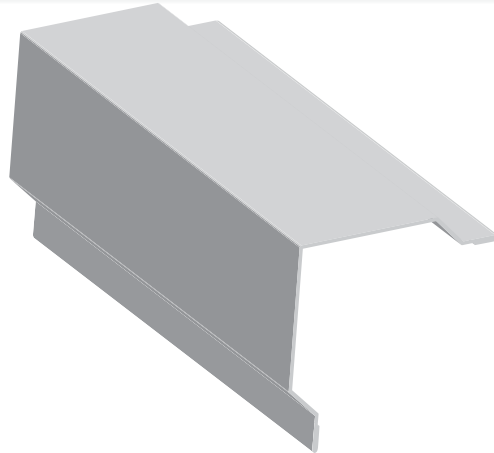
7. Trim Screws.

Install the Rake with metal to wood screws spaced at 18" - 24" along the length of the trim.



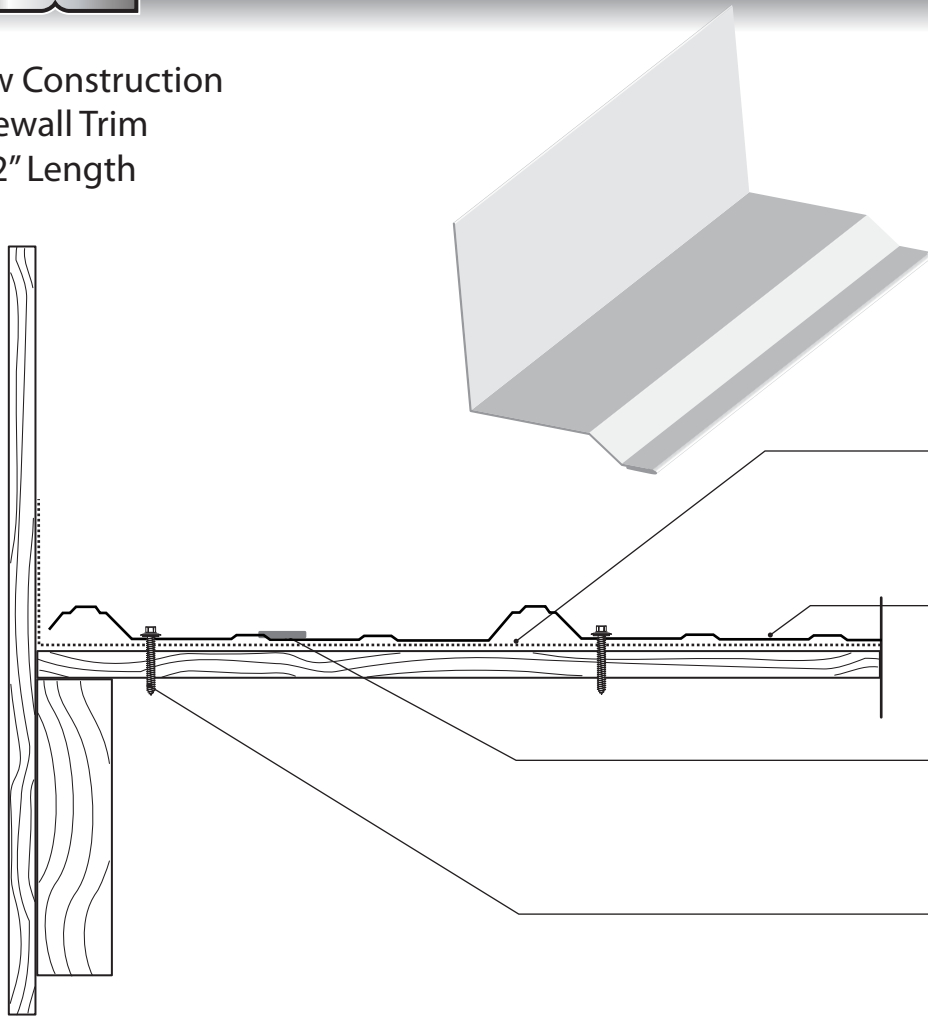
Note: The number indicate suggested trim assembly sequence.

New Construction
 Outside Rake Trim
 4" O/S 10' - 13' - 16' - 20'
 Available Lengths
 6" O/S 10' - 11'
 13' - 16'3" - 21'6"
 Available Lengths

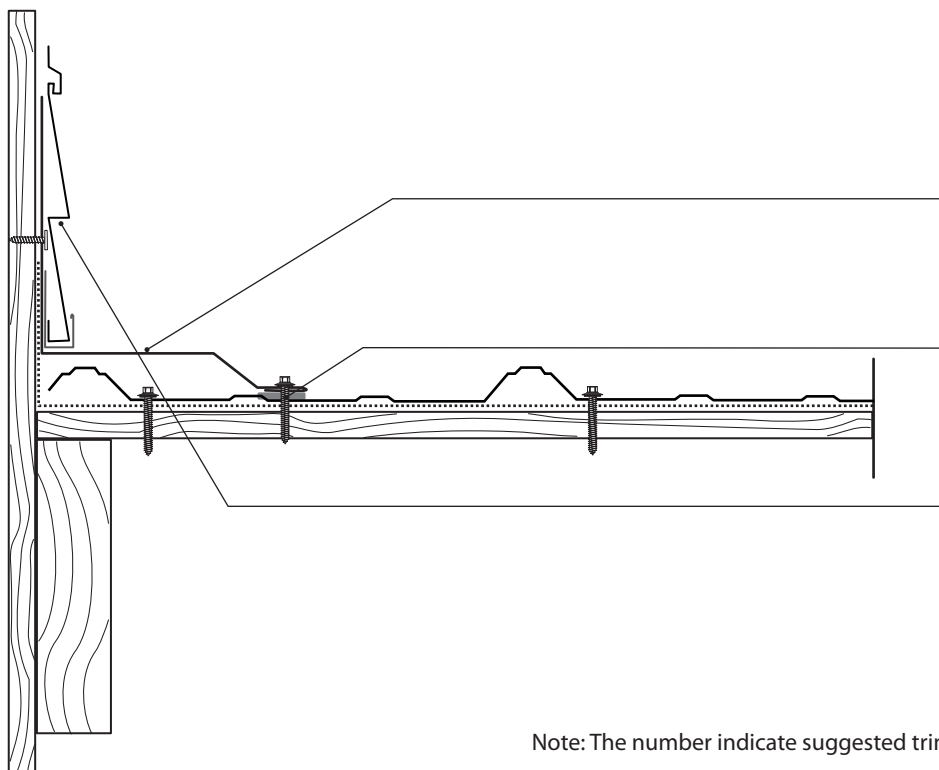


Note: The number indicate suggested trim assembly sequence.

New Construction
Sidewall Trim
10'2" Length



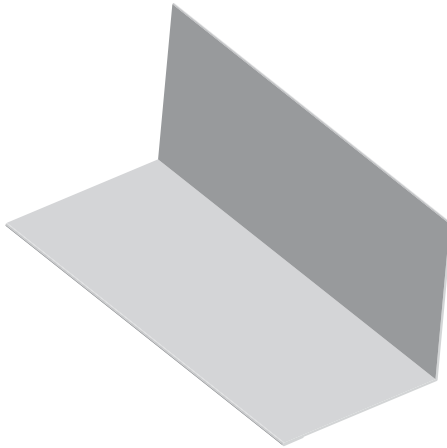
- 1. **Moisture Barrier.**
Install the moisture barrier in accordance to the manufacture's recommended procedure and in compliances with the local building code.
- 2. **DC Rib Metal Panel.**
Install the metal panel and extend the panel beyond the roof edge a min. of 1/2".
- 4. **Buyl Tape Sealant.**
Apply buytl tape sealant the length of the panel.
- 3. **Panel Screw.**
Fasten metal panel with metal to wood screws spaced according to the recommended fastening pattern and in compliance with the local building code .



- 5. **Side Wall Trim.**
Install the Sidewall trim and overlap the splices a minimum of 6". Apply a bead of TiteBond Metal roof Sealant on all trim splices.
- 6. **Trim Screws.**
Fasten the Sidewall trim with metal to wood screws spaced at 18" - 24" along the length of the trim.
- 7. **Building Exterior Covering .**
Install the exterior building covering over the sidewall trim.

Note: The number indicate suggested trim assembly sequence.

New Construction
Endwall Trim
10'2" Length



1. Moisture Barrier.

Install the moisture barrier in accordance to the manufacture's recommended procedure and in compliances with the local building code.

2. DC Rib Metal Panel:

Install the metal panel and extend the panel beyond the roof edge a min. of 1/2".

4. Outside Closure.

Apply the outside closure ,parallel to the top edge of the metal, down approxiatelly 5".

3. Panel Screw.

Fasten metal panel with metal to wood screws spaced according to the recommended fastening pattern and in compliance with the local building code .

7. Building Exterior Covering :

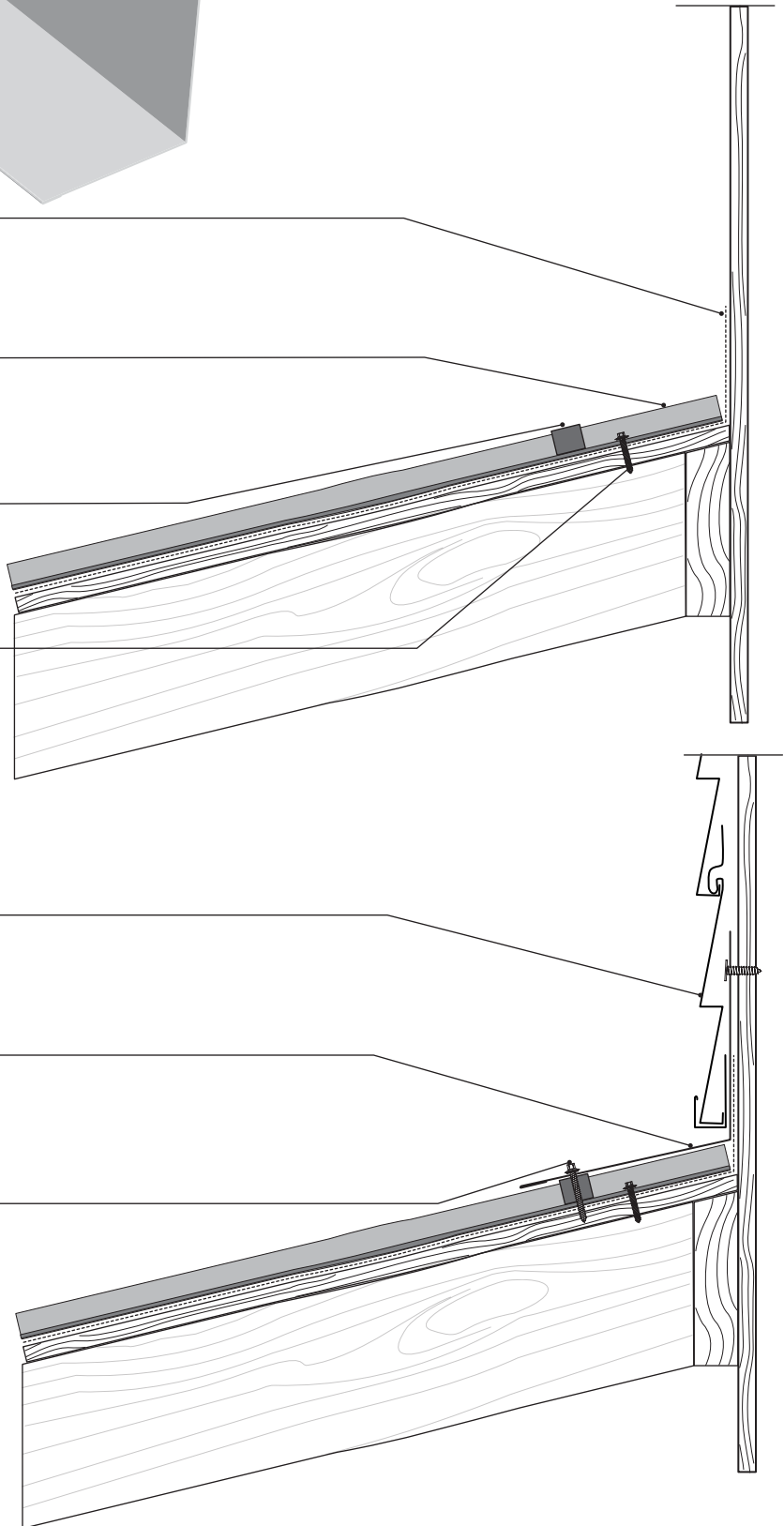
Install the exterior building covering over the sidewall trim.

5. Side Wall Trim.

Install the Sidewall trim and overlap all splices a minimum of 6". Apply a bead of TiteBond Metal Roof Sealant on all splices.

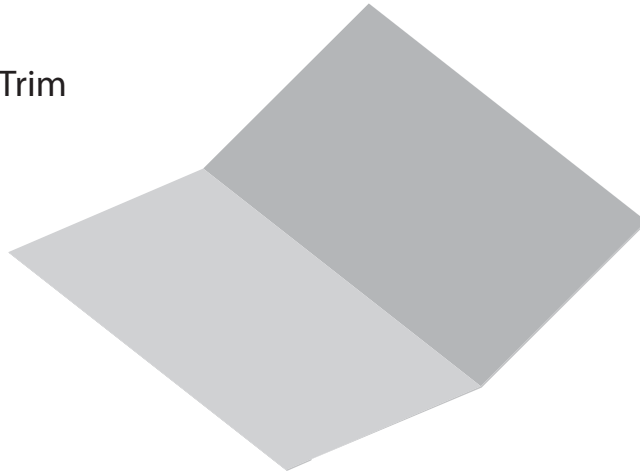
6. Trim Screws:

Fasten the Sidewall trim with metal to wood screws at the top of each rib along the length of the trim.

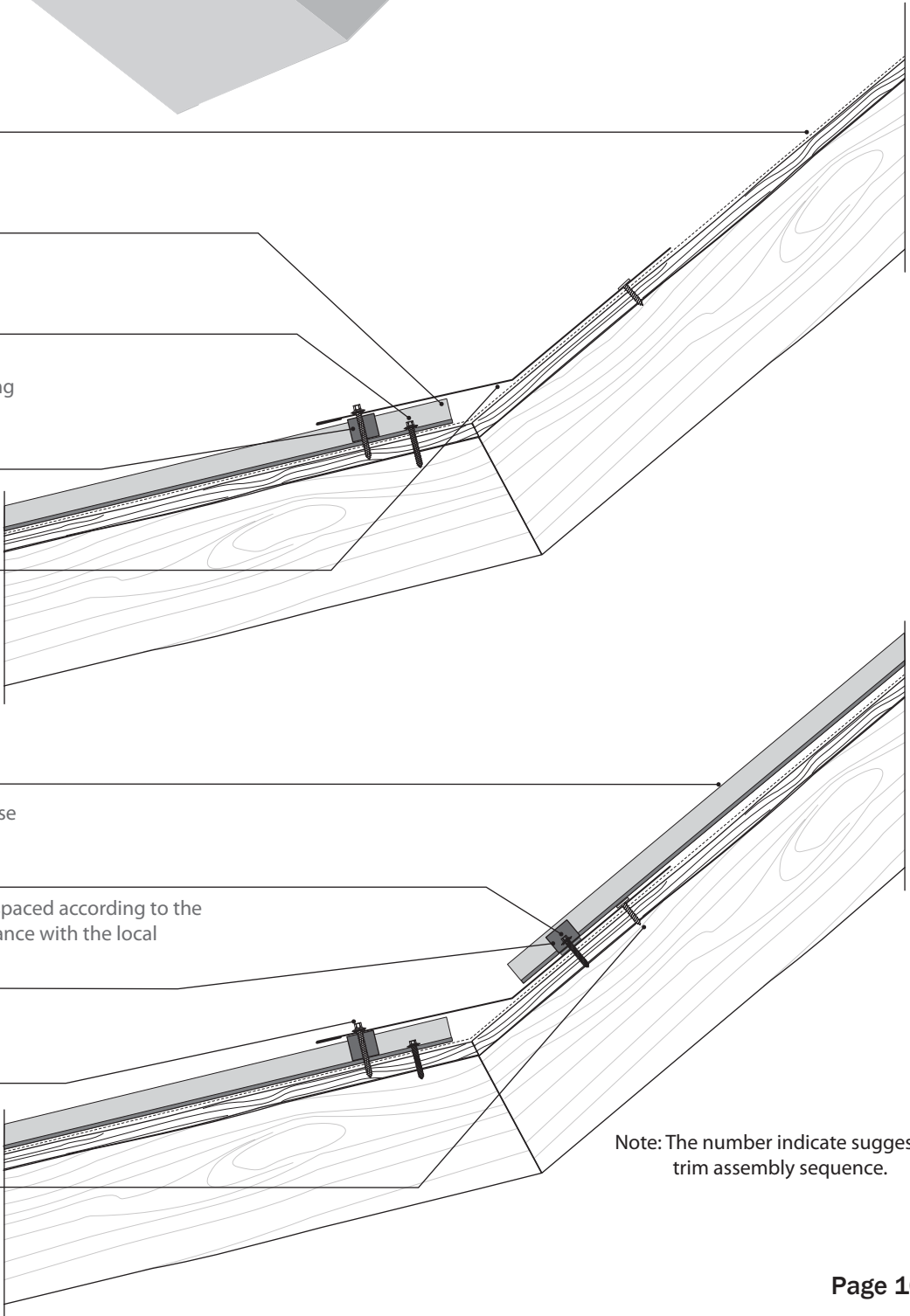


Note: The number indicate suggested trim assembly sequence.

New Construction
 Transition (pitch change) Trim
 10'2" Length

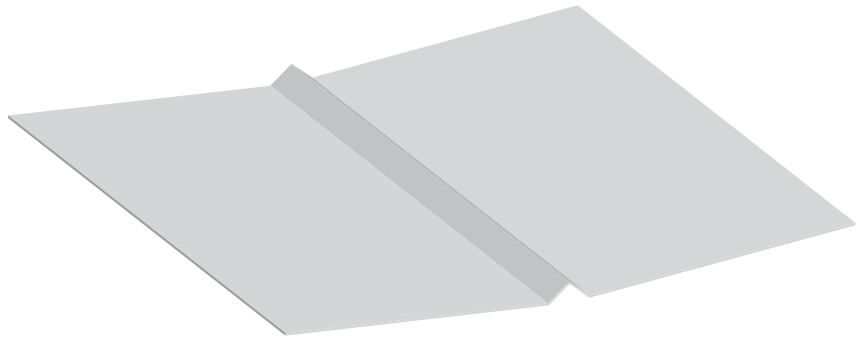


1. **Moisture Barrier.**
 Install the moisture barrier in accordance to the manufacture's recommended procedure and in compliances with the local building code.
2. **DC Rib Metal Panel.**
 Install the metal panel and extend the panel beyond the roof edge a min. of 1/2".
3. **Panel Screw.**
 Fasten metal panel with metal to wood screws spaced according to the recommended fastening pattern and in compliance with the local building code .
4. **Outside Closure.**
 Install the outside closure to metal panel.
5. **Transition Trim.**
 Install the transition trim over the outside closure, the top part should be snug with the roof, while the bottom follows the lower pitch, the crease should never be lower than the top edge of the lower metal. Overlap the ends a least 6" and apply a bead of TiteBond Metal Roof Sealant to all trim splices.
8. **DC Rib Metal Panel.**
 Install the metal panel edge 1" up from the crease of the transition trim.
9. **Panel Screw.**
 Fasten metal panel with metal to wood screws spaced according to the recommended fastening pattern and in compliance with the local building code .
7. **Inside Closure.**
 Install the Inside Foam Closure about 1" up from the edge of metal.
- 6b. **Trim Screw.**
 Fasten the Transition trim with metal to wood screws at the top of each rib along the length of the trim, fasten thru the closure strip.
- 6a. **Trim Screw.**
 Fasten the Transition trim with metal to wood screws spaced at 18" - 24" along the length of the trim.



Note: The number indicate suggested trim assembly sequence.

New Construction
Valley Trim
10'2" Length



1. Moisture Barrier:

Install the moisture barrier in accordance to the manufacture's recommended procedure and in compliances with the local building code.

4. Buytl Tape Sealant:

Apply buytl tape sealant the length of the panel.

2. Valley Trim:

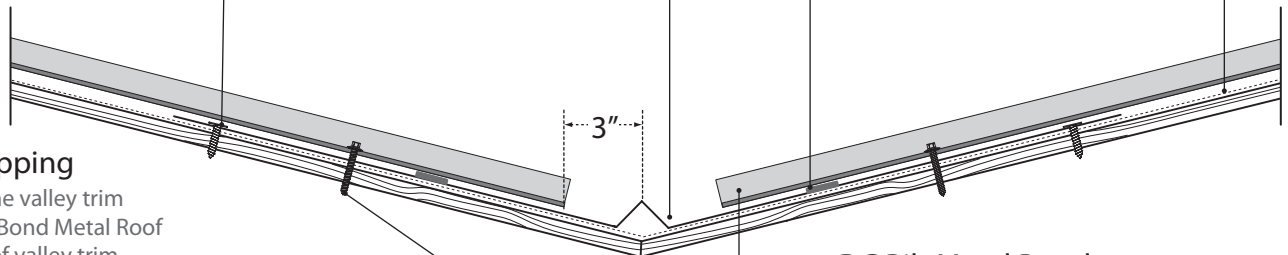
Install the valley trim. Extend the end past the gutterboard flush with the eave trim. When lapping the valley trim overlap at least 6" and apply 2 beads of TiteBond Metal Roof Sealant. (see illustration below)

3. Trim Screw

Install the valley trim with pancake screws spaced at 18" - 24" along the length of the trim.

2b. Valley Trim Lapping

When overlapping the valley trim apply 2 beads of TiteBond Metal Roof Sealant at the edge of valley trim.

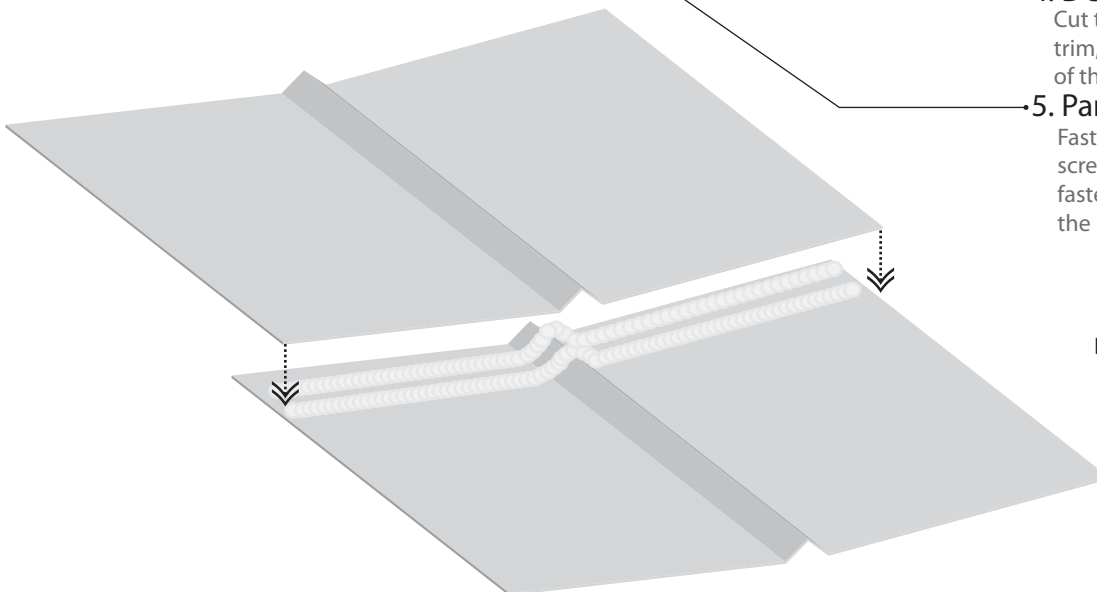


4. DC Rib Metal Panel.

Cut the metal panel to fit along the valley trim, allow a 3" space from the center of the of the trim to the panel edge.

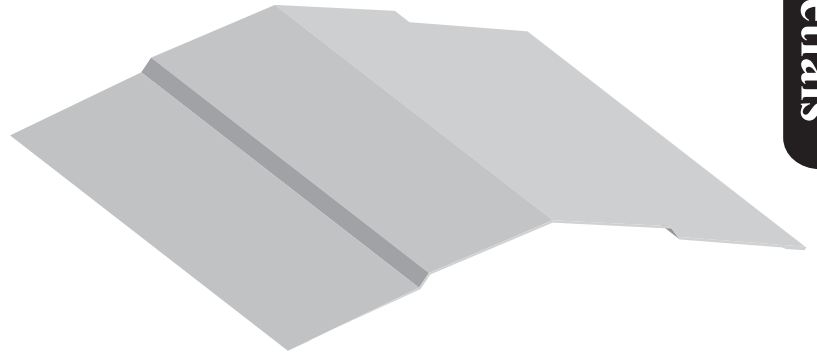
5. Panel Screw.

Fasten metal panel with metal to wood screws spaced according to the recommended fastening pattern and in compliance with the local building code .



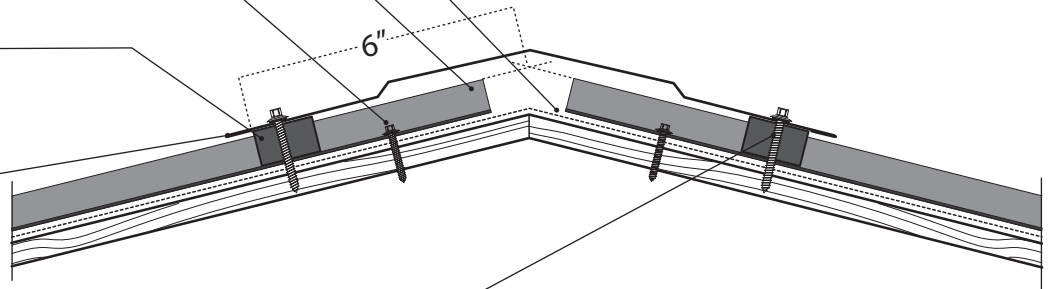
Note: The number indicate suggested trim assembly sequence.

New Construction
Ridge Trim
10'6" Length



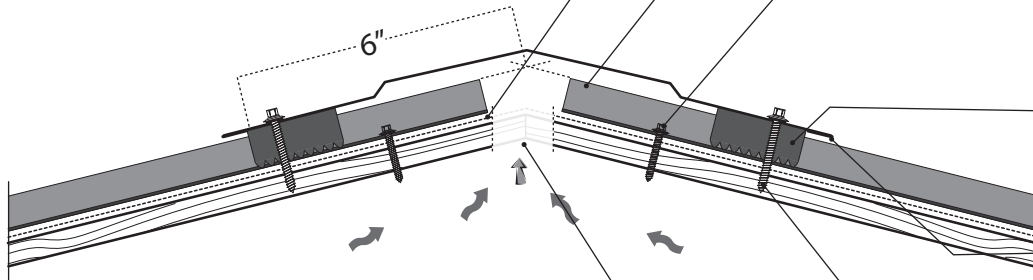
1. **Moisture Barrier.**
Install the moisture barrier in accordance to the manufacture's recommended procedure and in compliances with the local building code.
2. **DC Rib Metal Panel:**
Install the metal panel and extend the panel beyond the roof edge a min. of 1/2".
3. **Panel Screw.**
Fasten metal panel with metal to wood screws spaced according to the recommended fastening pattern and in compliance with the local building code.
4. **Outside Closure**
Install the outside foam closures approx. 6" from the peak.
5. **Ridge Trim.**
Install the ridge trim center to the peak. Overlap the trim at least 6" and apply 1 bead of TiteBond roof sealant at the splice.
6. **Trim Screw.**
Fasten trim with metal to wood screw at each rib, at 9" on center.

Non-Vented Ridge



Vented Ridge

1. **Moisture Barrier.**
Install the moisture barrier in accordance to the manufacture's recommended procedure and in compliances with the local building code.
2. **DC Rib Metal Panel.**
Install the metal panel and extend the panel beyond the roof edge a min. of 1/2".
3. **Panel Screw.**
Fasten metal panel with metal to wood screws spaced according to the recommended fastening pattern and in compliance with the local building code .
4. **Vented Closure**
Install the vented closures approx. 6" from the peak.
5. **Ridge Trim.**
Install the ridge trim center to the peak. Overlap the trim at least 6" and apply 1 bead of TiteBond roof sealant at the splice.
6. **Trim Screw.**
Fasten trim with metal to wood screw at each rib 9" on center.

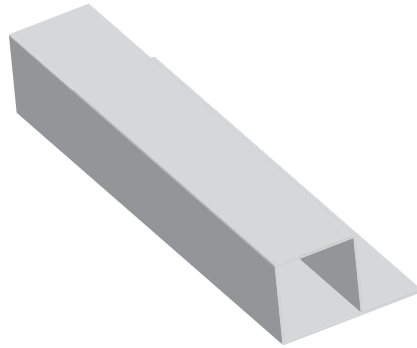
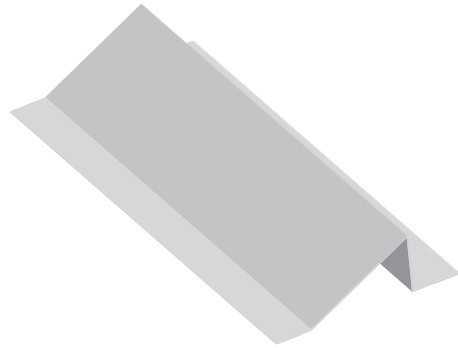


1. **Vent**
Cut a 2" air space at the peak for air circulation.

Note: The number indicate suggested trim assembly sequence.

SnowGuard Bar
 10'2" Length
 D.C. SnowGuard
 Square SnowGuard

Square SnowGuard



D.C. Snow Guard

Snow Guard Bar

Install the Snow Guard Bar parallel with the eave, 12" - 24" from the edge of the metal. On open framing, install on top of the 2x framing or install a line of blocking for the screws.

On solid decking 5/8" & above decking is advised, *if 7/16" or 1/2" is used, a run of 2x blocking needs to be installed for the screw to penetrate into. On high snow areas install 2x blocking to strengthen the snowguard. (see illustration below)

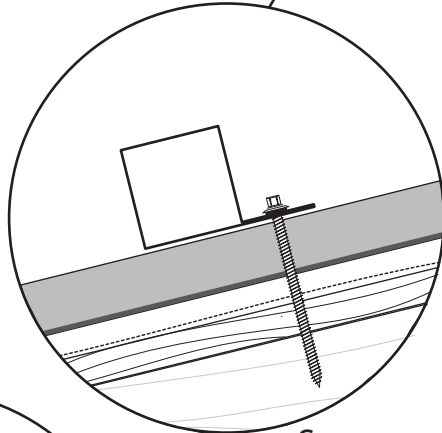
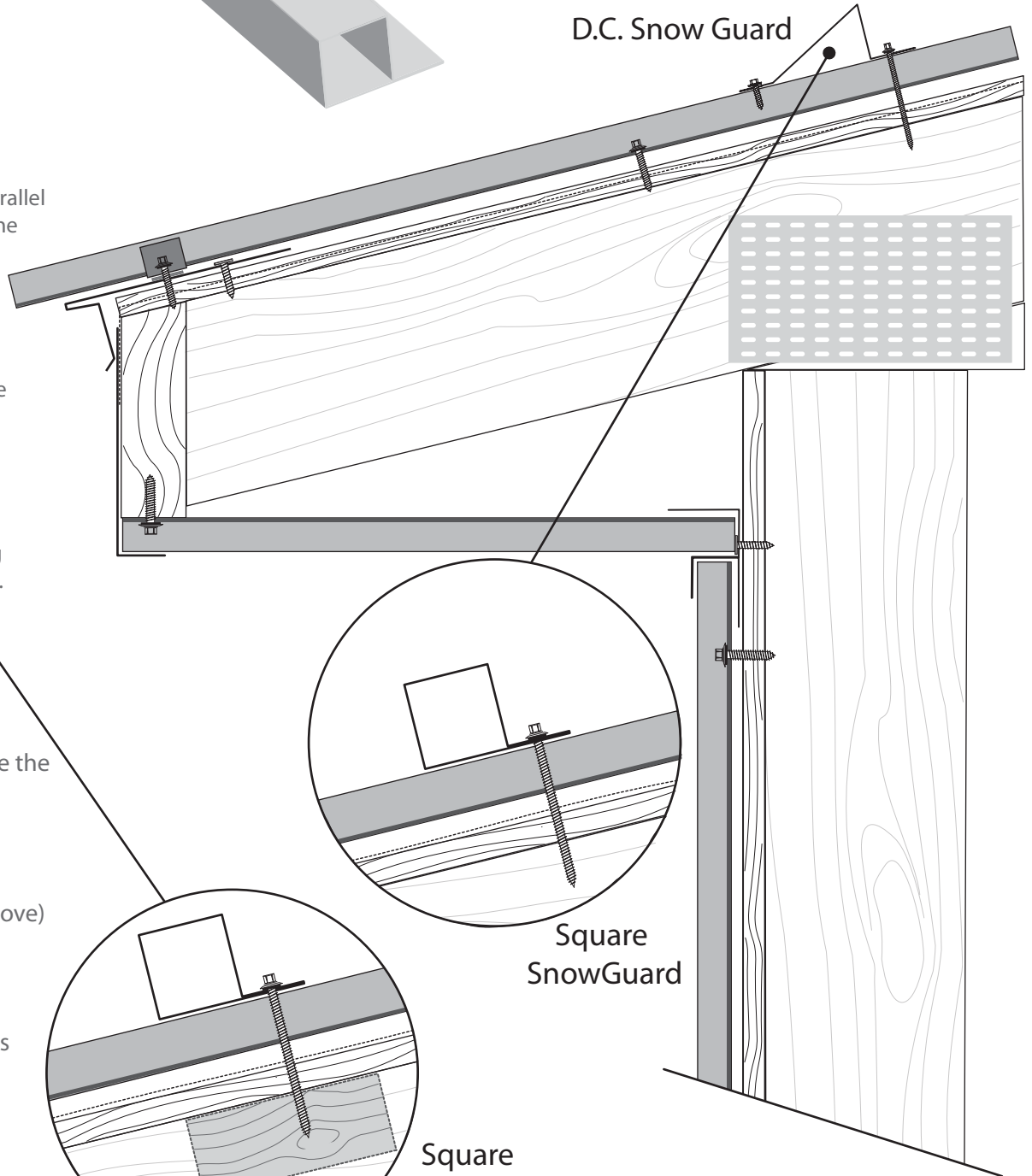
Screws

Fasten with metal to wood at the center of each rib. The screw should penetrate the decking by at least 1.5".

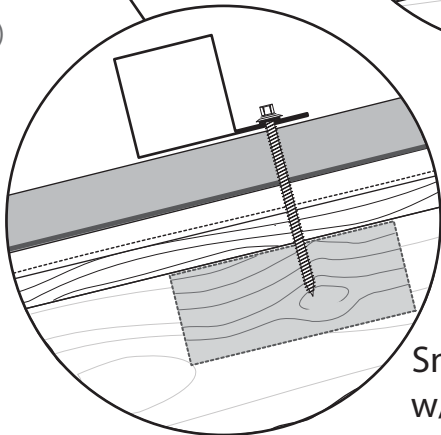
On the DC Snow Guard use a 3/4" Teck screw on each rib. (see illustration above)

Caulking

A bead of caulking may be used on top of the rib where the screw penetrates the metal to insure a leakproof application.



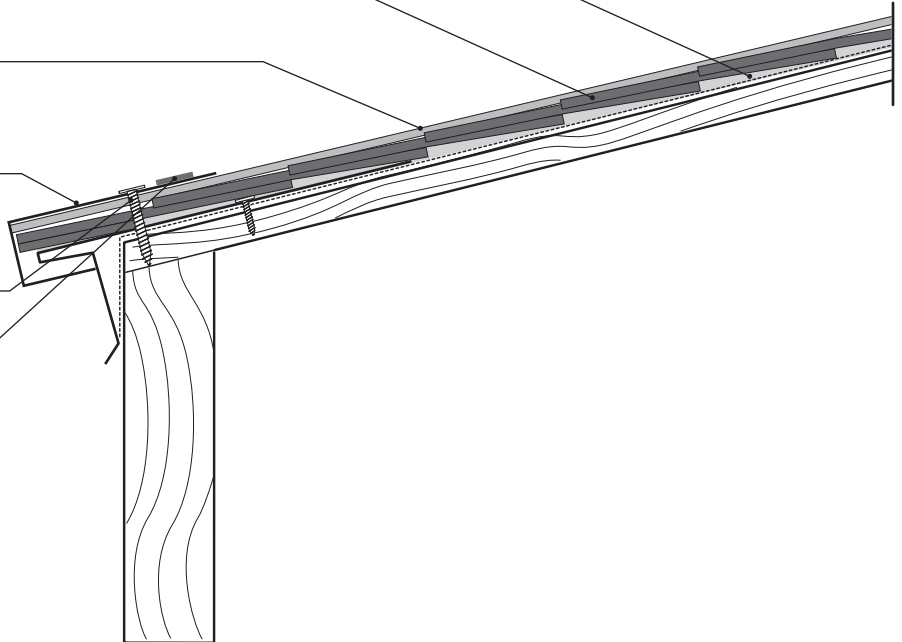
Square SnowGuard



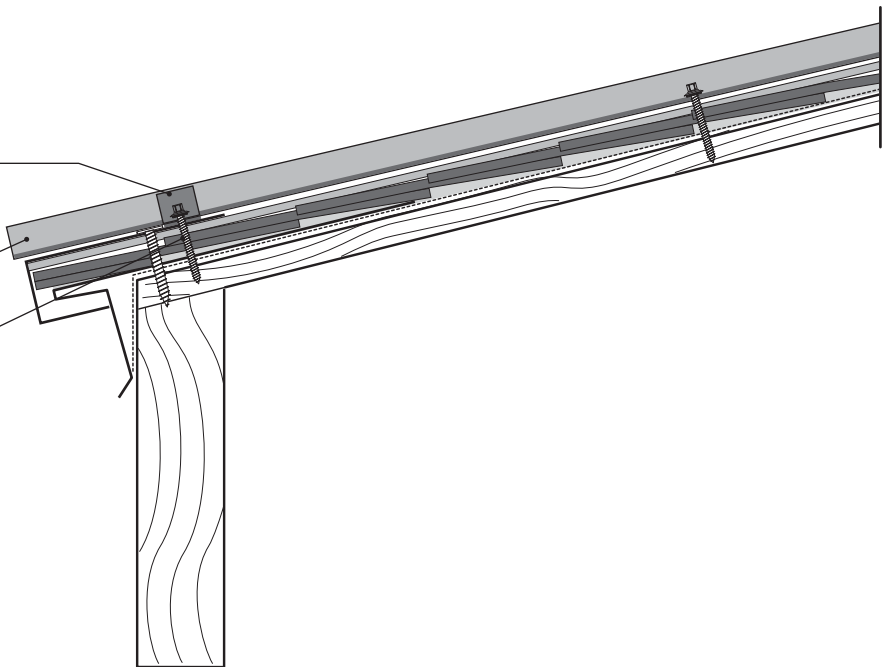
Square SnowGuard w/ blocking

Remodel
Metal Over Shingles

1. **Moisture Barrier:**
Existing moisture barrier.
2. **Existing Shingles:**
Existing asphalt shingles.
3. **1/4" Styrofoam Insulation:**
Install the moisture barrier in accordance to the manufacture's recommended procedure and in compliances with the local building code.
4. **J-Channel(for eave trim)**
Snug the J-Channel trim up against the existing eave trim and or existing shingles.
5. **Trim Screw**
Fasten J- Channel trim with a 2" pancake screw spaced 12 - 18" apart.
6. **(Optional) Butyl Tape Sealant:**
When using inside closures, apply a continuous buytl tape sealant on the roof edge.



7. **(Optional) Inside Closure:**
When using inside closures, apply a continuous buytl tape sealant to roof edge, install the inside closure over the top of the sealant.
8. **DC Rib Metal Panel:**
Install the metal panel and extend the panel beyond the roof edge a min. of 1/2".
9. **Panel screw:**
Fasten metal panel with metal to wood screw according to the recommended fastening pattern and in compliance with the local building code. If inside closures are used, apply the first screw thru the inside closure.



Note: The number indicate suggested trim assembly sequence.