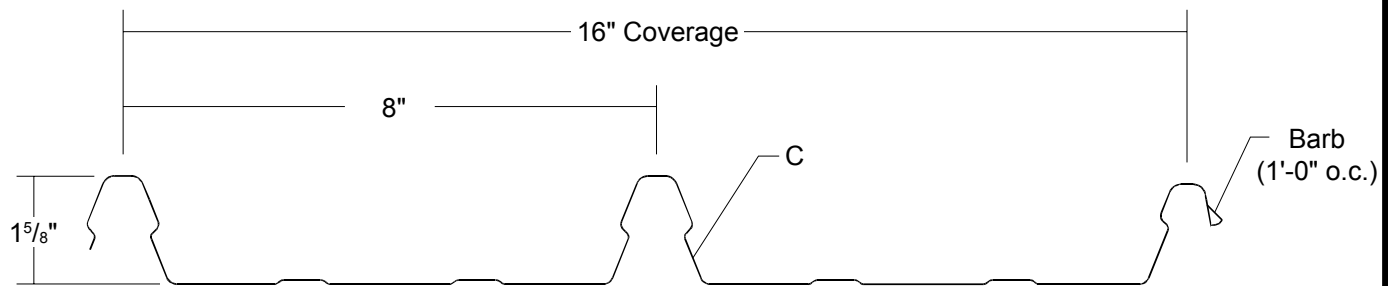


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## PANEL PROFILE



## SLOPE

The minimum recommended slope for Clip-Loc roof panel is 1:12. If slope is less than 3:12, apply a continuous bead of tube sealant on inside of clip leg and a row on top of the male leg.

## SUBSTRATE

Clip-Loc is designed to be utilized over open structural framing, but can easily be used with a solid substrate. The recommended substrate is 5/8" plywood with a 30 pound felt moisture barrier. To avoid panel distortion, use a properly aligned and uniform substructure.

## COVERAGE

Clip-Loc panels are available in 16" width with a 1 5/8" rib height.

## LENGTH

Lengths under 5'-0" on panels with striations and lengths under 7'-0" for flat panels are available with some cutting restrictions. Maximum recommended panel length is 45'-0". Longer panels require additional consideration in packaging, shipping, and erection. Please consult your Metal Sales branch for recommendations (see PGI-2 and PGI-3 for locations).

## AVAILABILITY

Clip-Loc panels are available in 26, 24 and 22 gauge (minimum quantity may apply).

## APPLICATION

Commercial and Industrial panel

## PERFORMANCE TEST

UL 580, ASTM E 1592, ASTM E 1646, ASTM E 1680, UL 2218, UL 790, UL 263 and ICC Evaluation Report

## FASTENING SYSTEM

Concealed Clip System

## FASTENERS

The fastener selection guide should be consulted for choosing proper fasteners for specific applications. Quantity and type of fastener must meet necessary loading and code requirements (see PGI-12 through PGI-14).

## MATERIALS

26, 24 and 22 gauge steel: Grade 50 per ASTM A 792

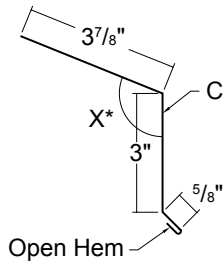
## FINISH

- ▶ \*Acrylic Coated Galvalume® (ACG), AZ55 per ASTM A 792
- ▶ Prepainted Galvalume®, AZ50 per ASTM A 792
- ▶ \*\*PVDF

\* Differential appearance of Acrylic Coated Galvalume® roofing materials is not a cause for rejection.

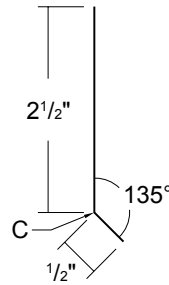
\*\* Meets both Kynar 500® and Hylar 5000® specifications.

**EAVE**



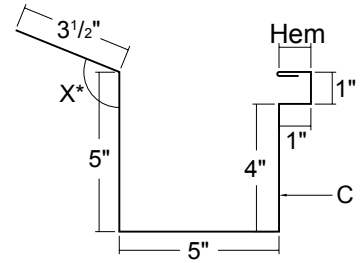
Length 10'-2" \*Specify Slope Angle

**CLEAT**



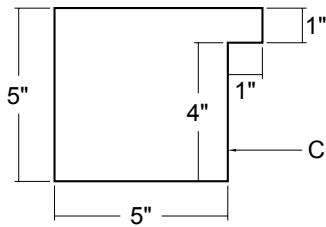
Length 10'-2"

**BOX GUTTER**

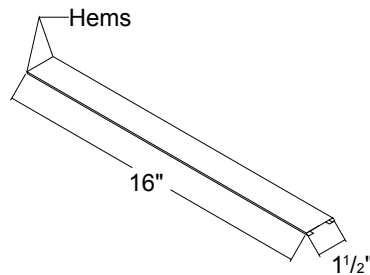


Lengths 10'-2" and 20'-3" \*Specify Slope Angle

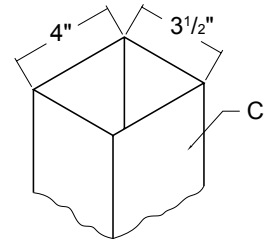
**BOX GUTTER END**



**UNIVERSAL GUTTER / DOWNSPOUT STRAP**

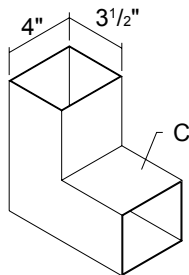


**4" x 3 1/2" DOWNSPOUT**



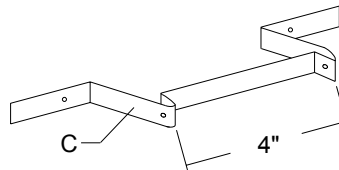
(6" x 4" is also available)

**4" x 3 1/2" 95° ELBOW**



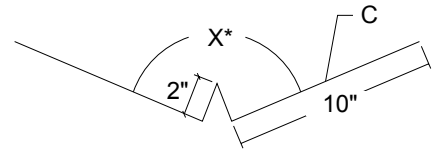
(6" x 4" is also available)

**DOWNSPOUT BRACKET**



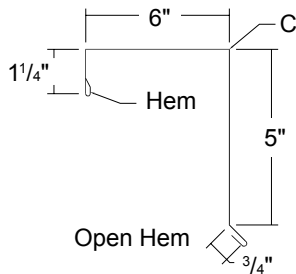
(6" is also available)

**VALLEY**



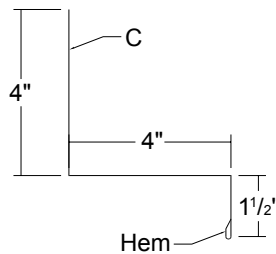
Lengths 10'-2" and 20'-3" \*Specify Slope Angle

**CLIP-LOC RAKE**



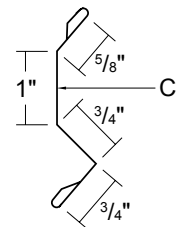
Lengths 10'-2" and 20'-3"

**CLIP-LOC RAKEWALL**



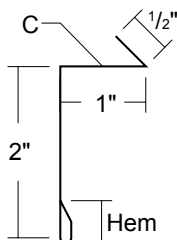
Lengths 10'-2" and 20'-3"

**COUNTER FLASHING**



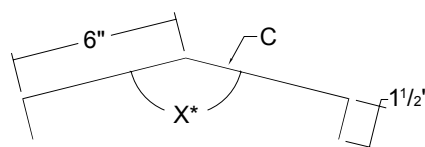
Length 10'-2"

**REGLET FLASHING**



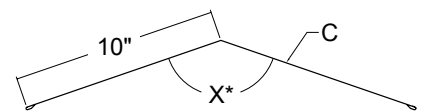
Length 10'-2"

**CLIP-LOC HIP**



Lengths 10'-2" and 20'-3" \*Specify Slope Angle

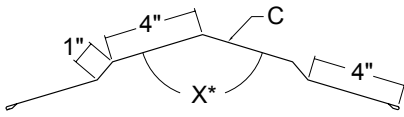
**20" RIDGE/HIP COVER**



Lengths 10'-2" and 20'-3" \*Specify Slope Angle

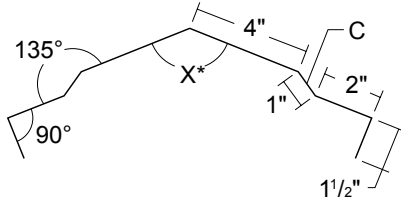
# CLIP-LOC FLASHING PROFILES (CONT.)

## SSR RIDGE



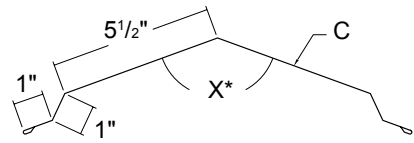
Lengths 10'-2" and 20'-3"  
\*Specify Slope Angle

## CLIP-LOC RIDGE



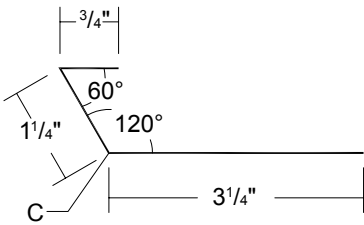
Lengths 10'-2" and 20'-3"  
\*Specify Slope Angle

## 13" STEP RIDGE



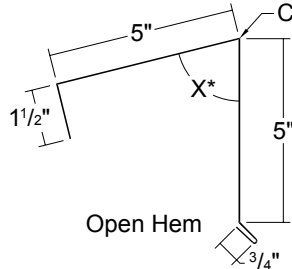
Lengths 10'-2" and 20'-3"  
\*Specify Slope Angle

## PERFORATED VENT DRIP



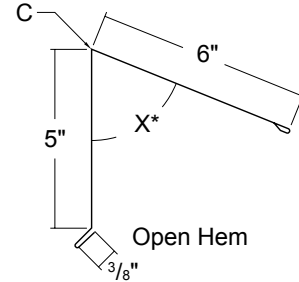
Length 10'-2"

## CLIP-LOC PEAK



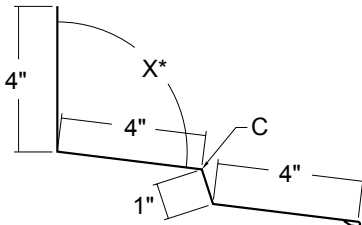
Lengths 10'-2" and 20'-3"  
\*Specify Slope Angle

## PEAK



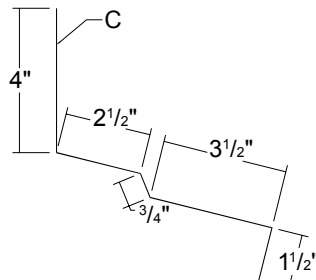
Lengths 10'-2" and 20'-3"  
\*Specify Slope Angle

## SSR PITCH BREAK



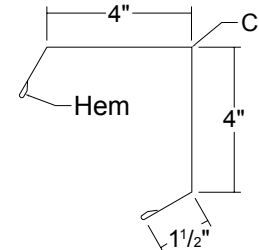
Lengths 10'-2" and 20'-3"  
\*Specify Slope Angle

## CLIP-LOC ENDWALL



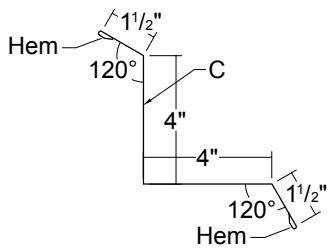
Lengths 10'-2" and 20'-3"  
\*Specify Slope Angle

## CLIP-LOC OUTSIDE CORNER



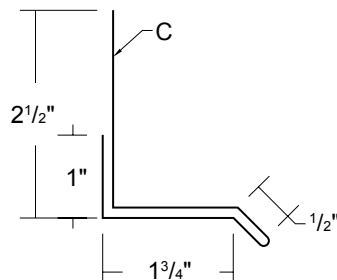
Lengths 10'-2" and 20'-3"

## CLIP-LOC INSIDE CORNER



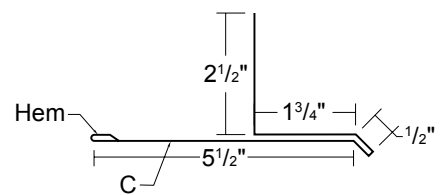
Lengths 10'-2" and 20'-3"

## CLIP-LOC SILL/HEAD



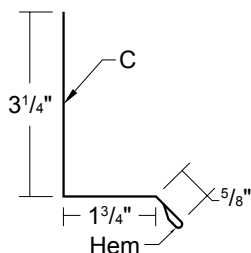
Length 10'-2"

## CLIP-LOC SILL TO SOFFIT



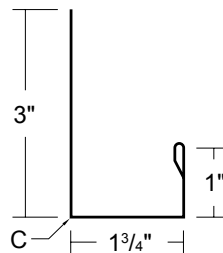
Length 10'-2"

## CLIP-LOC BASE



Length 10'-2"

## CLIP-LOC JAMB

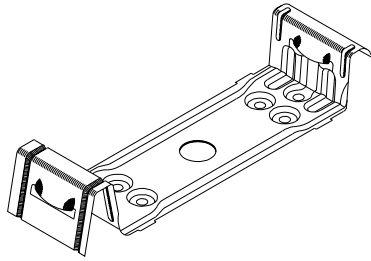


Length 10'-2"

C - Indicates color side of flashing.

# CLIP-LOC ACCESSORY PROFILES

## CLIP-LOC CLIP

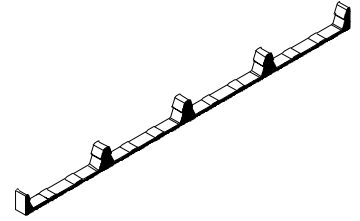


## CLIP-LOC FLOATING RAKE ZEE



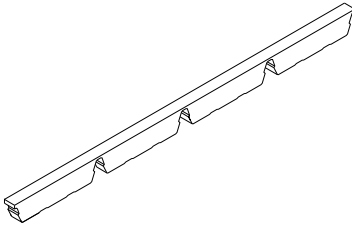
Length 10'-0"  
Height 1<sup>11</sup>/<sub>16</sub>"  
Galvanized

## CLIP-LOC INSIDE CLOSURE



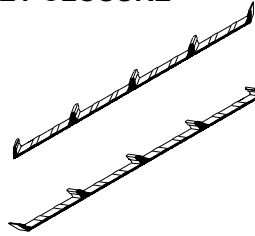
Synthetic Rubber  
Straight Cut

## CLIP-LOC OUTSIDE CLOSURE



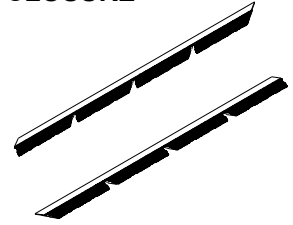
Synthetic Rubber  
Straight Cut

## CLIP-LOC INSIDE VALLEY CLOSURE



Synthetic Rubber  
Bevel Cut  
(Left / Right)

## CLIP-LOC OUTSIDE HIP CLOSURE



Synthetic Rubber  
Bevel Cut  
(Left / Right)

## TAPE SEALANT

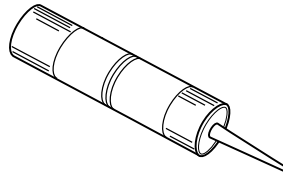


7/8" X 3/16" X 25'  
Double Bead Tape Sealant  
Butyl - Gray



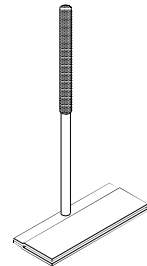
3/16" Bead X 40' Butyl  
Sidelap Sealant  
Butyl - Black

## TUBE SEALANT



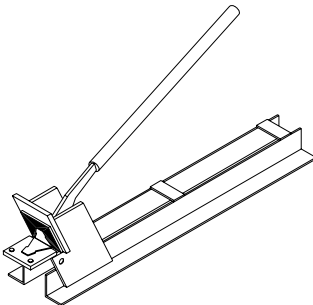
10.3 oz. Cartridge  
Urethane

## TURN-UP TOOL



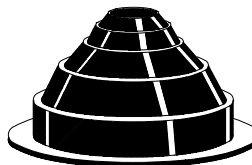
Zinc Plated - 6<sup>1</sup>/<sub>2</sub>"  
For Panel Turn-Up

## NOTCHING TOOL



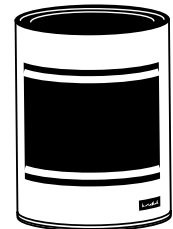
For Flashing Notch

## RUBBER ROOF JACK

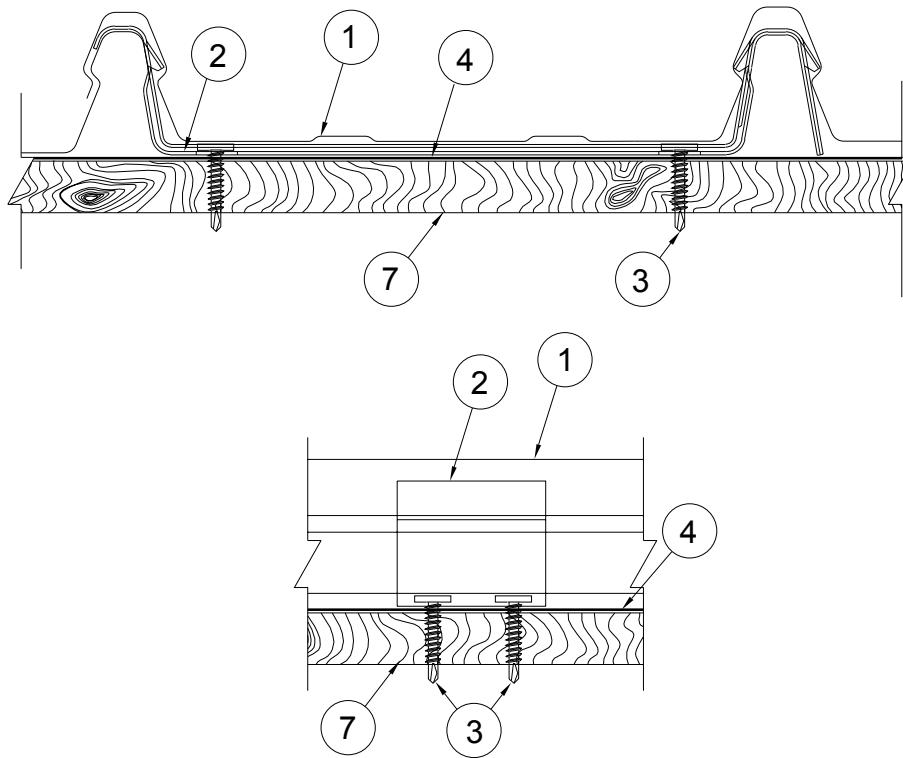


Mini (1/4" to 1<sup>1</sup>/<sub>8</sub>" O.D. Pipe)  
#2 (1<sup>3</sup>/<sub>4</sub>" to 3" O.D. Pipe)  
#4 (3" to 6" O.D. Pipe)  
#6 (6" to 9" O.D. Pipe)  
#8 (7" to 13" O.D. Pipe)

## TOUCH-UP PAINT



Available in 2 oz Bottles  
PVDF / MS Colorfast45®



## CLIP-LOC

**Construction No. 586**  
Uplift - Class 90  
Fire Not Investigated

**1. Metal Roof Deck Panels\*** No. 24 MSG minimum gauge coated steel, 16 in. wide, 1-5/8 in. high at ribs. Panels continuous over three or more clips with no end-laps. A full rib formed in the center of the panel with ribs at each side formed to engage adjacent panels. All ribs designed to snap over the Panel Clips (Item 2).

**METAL SALES MANUFACTURING CORPORATION** - "Clip-Loc"

**2. Roof Deck Fasteners\* (Panel Clips)** - One part assembly, 2-1/2 in. wide, 7 in. long at the base, with an area at each end formed to engage ribs of adjacent panels. Fabricated from No. 20 MSG coated steel. Guide holes, 1/4 in. diameter, located in base of clip with three located on each side. Two inner guide holes to be used. Clips spaced maximum 36 in. OC.

**METAL SALES MANUFACTURING CORPORATION** - "Clip-Loc"

**3. Fasteners (Screws)** - Fasteners used to attach the panel clips (Item 2) to the plywood decking to be No. 10-12 by 1 in. long, No. 2 Phillips drive, plated steel screws. Four screws used per clip with two located at each end.

**4. Sealant** - Sealant used to seal all plywood deck joints to be a one part urethane tube type.

**5. Joist Hangers** (optional) - Joist hangers to be seat type, No. 18 MSG thick coated steel.

**6. Supports** (Joists/Rafters) - Spaced a maximum of 24 in. OC. Any of the following types may be used:

- A. No. 16 MSG min. thickness steel (50,000 psi. min yield strength).
- B. Graded dimensional lumber, No. 2 or better.

**7. Plywood Decking** - Plywood decking graded per APA specifications, CDX, 19/32 in. thick (5/8 in. nominal), 40/20, exposure 1, square edge. Butt joints not blocked. All joints sealed with a one part urethane sealant (item 4) applied with caulking gun (or other) and feathered outward from joint.

Fasteners:

For wood Supports: No. 8 by 2-1/2 in. long No. 2 Phillips drive, coarse thread, bugle-head, plated steel wood screws.

For Steel Supports: No. 10-24 by 1-7/16 in. long, self-drilling, self-tapping, No. 2 Phillips drive, wafer head steel screws.

Refer to General Information, Roof Deck Constructions, for Items Not Evaluated.

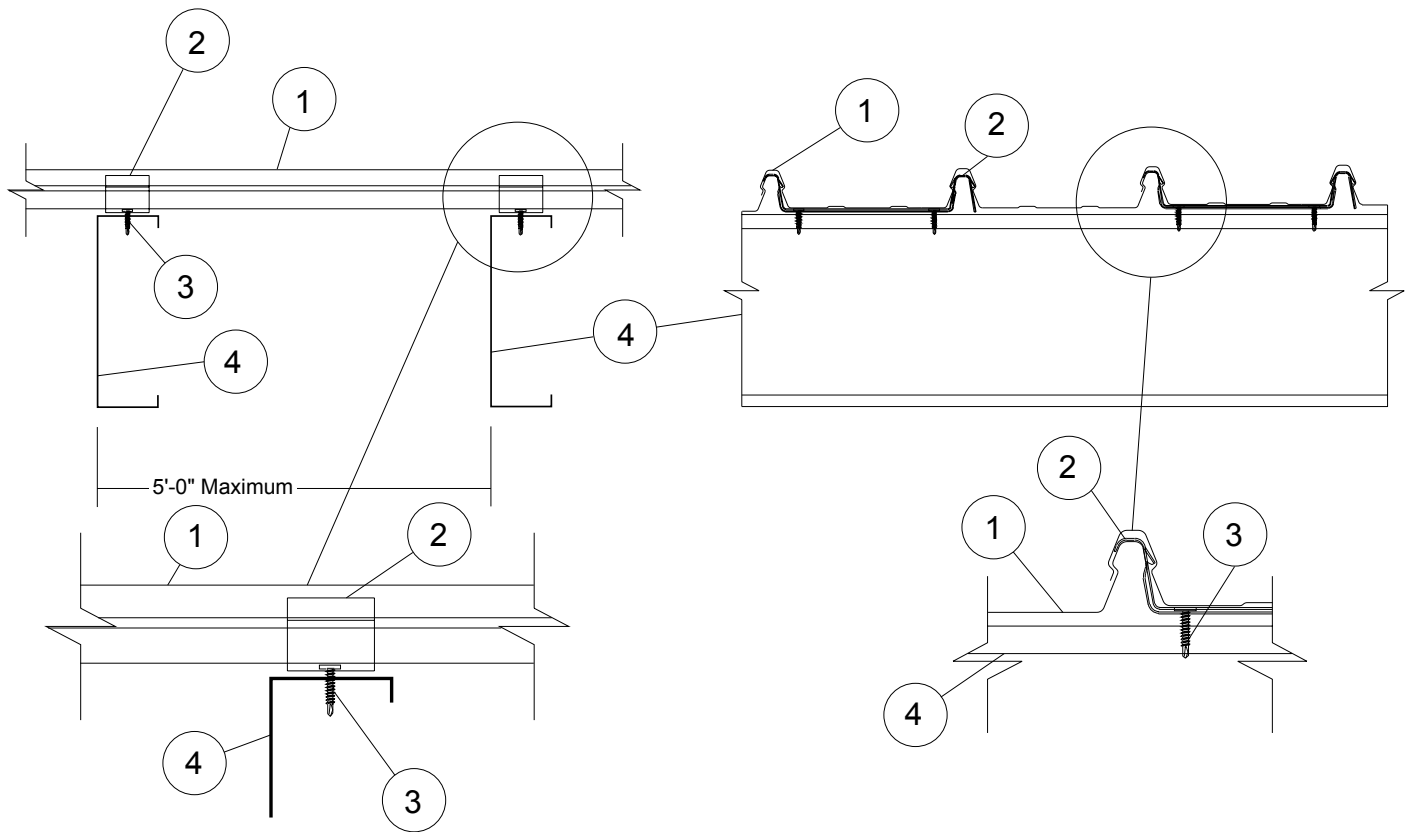
\*Bearing the UL Classification Marking



**Underwriters Laboratories Inc. ®**

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# CLIP-LOC UL 580 WIND UPLIFT INFORMATION (CONT.)



## CLIP-LOC

**Construction No. 586A**  
Uplift - Class 90  
Fire Not Investigated

**1. Metal Roof Deck Panels** - No. 24 MSG minimum gauge coated steel, 16 in. wide, 1-3/4 in. at female rib and 1-5/8" at male leg. Panels continuous over three or more spans with no end-laps. A bead of sealant may be used at ribs.

**METAL SALES MANUFACTURING CORPORATION - "Clip-Loc"**

**2. Roof Deck Fasteners (Panel Clips)** - One part assembly, 2-1/2 in. wide, 8 in. long with formed areas to engage panel side and center ribs. Fabricated from No. 20 MSG coated steel. Three guide holes located at clip ends. Clips spaced 5'-0" on center.

**METAL SALES MANUFACTURING CORPORATION - "Clip-Loc"**

**3. Fasteners (Screws)** - Fasteners used to attach the panel clips (Item 2) to purlins (Item 4) to be No. 10-16 by 1 in. long, self drilling, self tapping, No. 2 Phillips drive, wafer head coated steel, screws. Two screws used for each clip with one screw inserted into the outermost guide hole at each end.

**4. Purlins** - No. 16 MSG minimum gauge steel (Minimum yield strength 50,000 psi.). Spaced 5'-0" on center maximum.

Refer to General Information, Roof Deck Constructions, for items not evaluated

\*Bearing the UL Classification Marking



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**Metal Roof Deck Panels**

Metal Sales Manufacturing Corporation has obtained fire resistance ratings for various products conducted according to test criteria set forth by 'Underwriters Laboratories' "Standard Fire Tests of Building Construction and Material" (ANSI/UL 263). This test procedure is identical to ASTM E-119 and NFPA 251.

The fire resistance rating is for the total assembly and not just the external metal panel. Ratings are expressed in hours and vary depending upon the assemblies. In general, the test criteria is to evaluate the assembly's ability to continue to support the superimposed loads and resist the passage of flame, high temperatures, or hot gases which will ignite combustible materials. The test assemblies are identified by an alpha-numeric design number.

For detail information on specific assemblies and hourly ratings see **UL Fire Resistance Directory**.

**METAL SALES MANUFACTURING CORPORATION**

R9697

**Mechanically attached metal roof panels** - Type "Clip-Loc" secured by steel anchor clips. Anchor clips are attached to a hat shaped member\* (minimum depth 1 in.) or a bearing plate\*\*.

For use in Design Nos. P224 , P225 , P227 , P230 , P237 , P508 , P510 , P512 , P701 , P711 , P712 , P713 , P715 , P717 , P720 , P722 , P723 , P724 , P726 , P731 , P734 , P736 , P803 , P814 , P815 , P818 , P819 , P821 , P823 , P824 .

\*Hat shaped member to be a minimum of 16 gauge. The member will be fastened through the roof insulation to the steel roof deck with min. No. 14 self-drilling and/or self-tapping fasteners. Spacing to be determined by the structural loading requirements. In addition any compressible UL Classified glass fiber blanket insulation with or without a vapor retarder facing may be used between the specified roof insulation and the metal roof panels.

\*\*Bearing plate to be a minimum of 16 gauge. Member will be fastened through the roof insulation to the steel deck with min. No. 14 self-drilling and/or self-tapping fasteners.

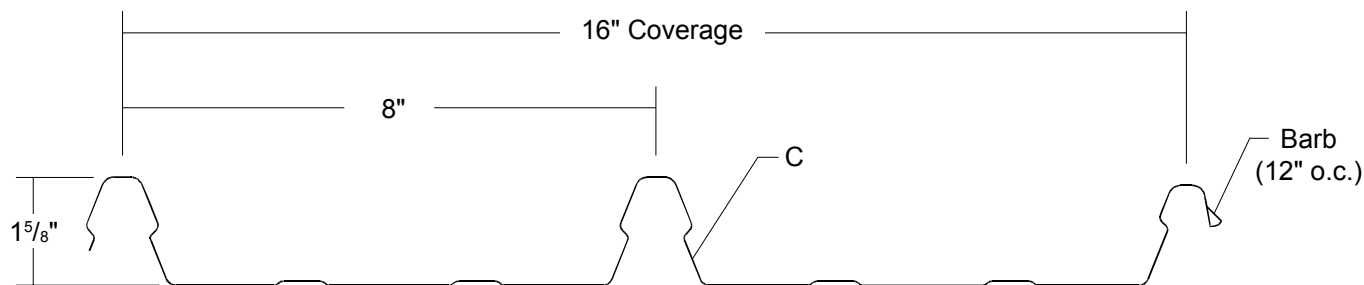
**See the UL Fire Resistance Directory for explanation of each design number listed above.**



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LISTED

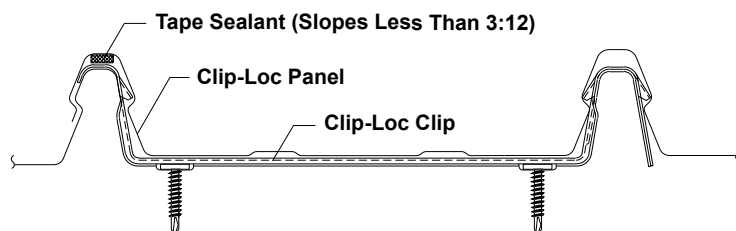




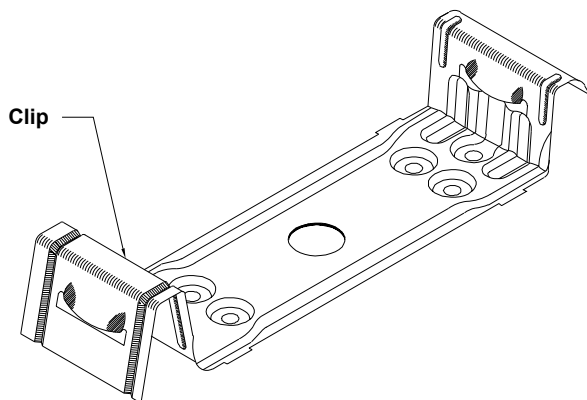
SECTION PROPERTIES								ALLOWABLE UNIFORM LOADS psf (3 or More Equal Spans)											
Ga	Width in	Yield ksi	Weight psf	Top in Compression		Bottom in Compression		Inward Load						Outward Load					
				Ixx in <sup>4</sup> /ft	Sxx in <sup>3</sup> /ft	Ixx in <sup>4</sup> /ft	Sxx in <sup>3</sup> /ft	2.5'	3'	3.5'	4'	4.5'	5'	2.5'	3'	3.5'	4'	4.5'	5'
26	16	50	1.00	0.0919	0.0760	0.0472	0.0573	208	148	108	83	65	53	45	42	40	37	35	32
24	16	50	1.30	0.1184	0.0983	0.0639	0.0756	274	192	142	109	86	70	66	59	51	44	37	29
22	16	50	1.69	0.1524	0.1272	0.0875	0.1005	363	255	188	145	115	93	109	107	105	103	101	99

- Theoretical section properties have been calculated per AISI 2012 "Specifications for the Design of Cold-formed Steel Structural Members." Ixx and Sxx are effective section properties for deflection and bending.
- Allowable load is calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear, deflection and uplift testing. Allowable load considers the 3 or more equal span condition. Allowable load does not address web crippling, fasteners/support connection or load testing. Panel weight is not considered.
- Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
- Allowable loads do not include a 1/3 stress increase in uplift.

**ATTACHMENT DETAIL**



**PANEL CLIP**




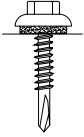
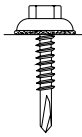
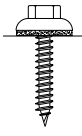
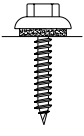
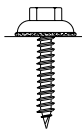
**GENERAL INFORMATION**

- ▶ **Slope**  
The minimum recommended slope for the Clip-Loc roof panel is 1:12.
- ▶ **Substructure**  
Clip-Loc is designed to be utilized over open structural framing or a solid substrate.
- ▶ **Clips**  
Clip spacing is based upon the spacing of structural framing members and loading requirements.
- ▶ **Coverage**  
Clip-Loc panels are available in a 1<sup>5</sup>/<sub>8</sub>" seam height with a 16" width coverage.
- ▶ **Length**  
Minimum factory cut length is 5'-0". Maximum recommended panel length is 45'-0". Longer panels require additional consideration in packaging, shipping and erection. Please consult Metal Sales for recommendations.
- ▶ **Fasteners**  
The fastener selection guide should be consulted for choosing the proper fastener for specific applications. Quantity and type of fastener must meet necessary loading and code requirements.  
*NOTE: All panels are subject to surface distortion due to improperly applied fasteners. Overdriven fasteners will cause stress and induce oil canning across the face of the panel at or near the point of attachment.*
- ▶ **Availability**  
Finishes: Acrylic Coated Galvalume® and PVDF (Kynar 500®)  
Gauges: 26ga, 24ga and 22ga

## FASTENER INSTALLATION TECHNIQUE

**Recommended Tool Type** - Use depth locating nose or adjustable clutch on screw gun to prevent overdrilling and strip out. **Do not use impact tools or runners.**

**Seating the washer** - Apply sufficient torque to seat the washer - do not overdrive the fastener.

	<b>CORRECT</b> Sealing material slightly visible at edge of metal washer. Assembly is watertight.	<b>TOO LOOSE</b> Sealing material is not visible; not enough compression to seal properly.	<b>TOO TIGHT</b> Metal washer deformed; sealing material pressed beyond washer edge.
SELF DRILLER			
WOODSCREW			

**To prevent wobbling** - Make sure fastener head is completely engaged in the socket. If the head does not go all the way in the socket - tap the magnet deeper into the socket to allow full head engagement. Metal chips will build up from drilling and should be removed from time to time.

**Protect drill point** - Push only hard enough on the screw gun to engage clutch. This prevents excess friction and burn out of the drill point. Correct pressure will allow screw to drill and tap without binding.

**Drilling through sheet and insulation** - Ease up on pressure when drilling through insulation to avoid striking the purlin or girt with the point - apply more pressure after drill point contacts purlin or girt.

**Drilling through purlin overlaps** - Drilling through lapped purlins requires extra care. Excessive voids between purlins sometimes damages drill points and two self-drillers might be necessary to complete the operation. It is sometimes advantageous to predrill.

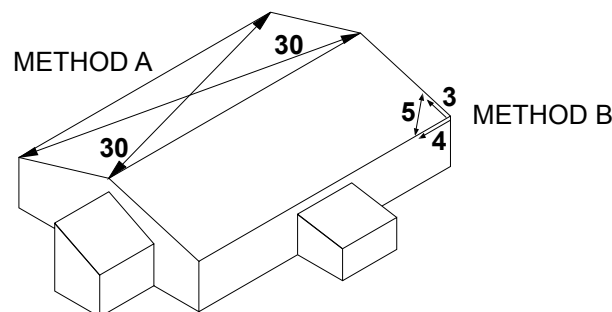
## CONDITION OF SUBSTRUCTURE

Whether over solid substrate or open structural framing, panel distortion may occur if not applied over properly aligned and uniform substructure.

The installer should check the roof deck for squareness before installing Clip-Loc panels. Several methods can be used to verify squareness of the structure for proper installation of the panels.

**METHOD "A"** - One method for checking the roof for squareness is to measure diagonally across one slope of the roof from similar points at the ridge and eave and obtain the same dimension.

**METHOD "B"** - The 3-4-5 triangle system may also be used. To use this system measure a point from the corner along the edge of the roof at a module of three (3). Measure a point from the same corner along another edge at a module of four (4). Then by measuring diagonally between the two points established, the dimension should be exactly a module of five (5) to have a square corner. Multiple uses of this system may be required to determine building squareness. If the endwall cannot be made square, the roof system cannot be installed as shown in these instructions.



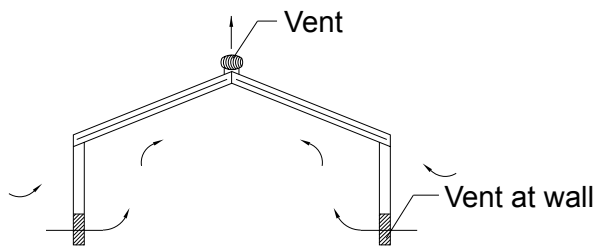
**VENTILATION**

Proper design and installation of vapor barriers and ventilation systems are important to prevent condensation and the resulting problems of moisture damage and loss of insulation efficiency.

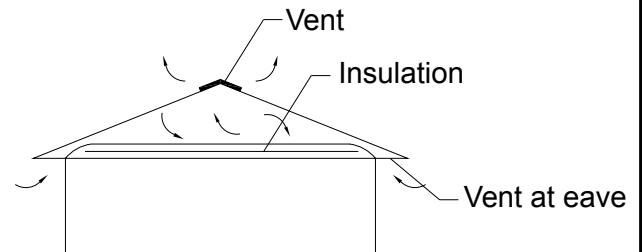
Condensation occurs when moisture laden air comes in contact with a surface temperature equal to or below the dew point of the air. This phenomenon creates problems that are not unique with metal buildings; these problems are common to all types of construction.

The underside of the metal roof on a typical metal building (no attic) should be protected from condensation by insulating with a faced insulation. This should reduce the potential of condensation forming on the underside of the panels.

On buildings that have an attic space or are being retrofitted with a metal roofing system, vents should be placed at both the eave and peak of the roof in order to prevent a buildup of moisture (humidity) in the attic space.



**Typical metal building (no attic)**

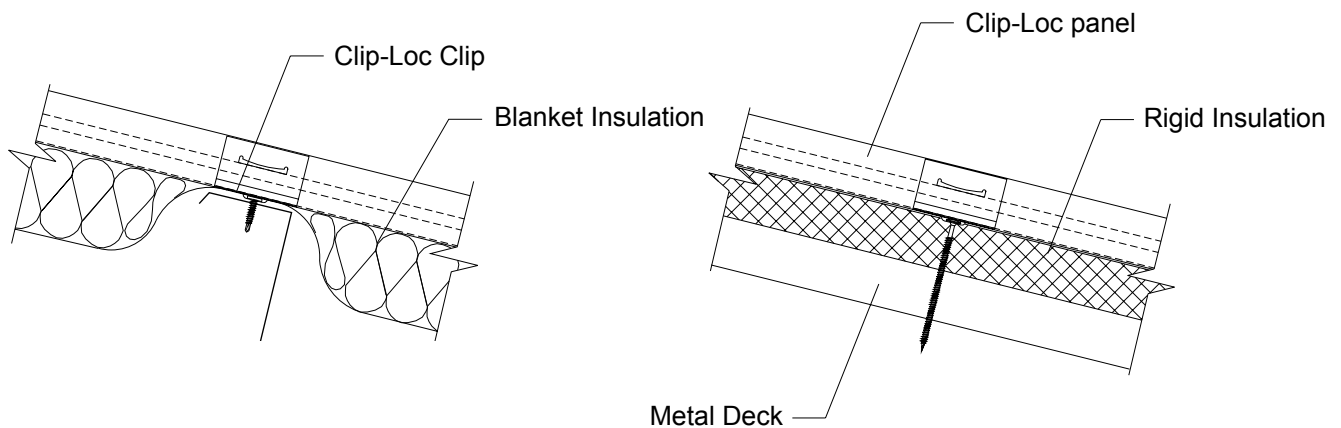


**Building with attic or retrofitted**

**INSULATION**

Insulation is recommended on all applications to act as a sound barrier, prevent condensation, and increase insulating value of the roof or ceiling system. Insulation can be effective at reducing roof noise.

Typically, panels are installed over solid substrate but can be installed over open framing or metal decking (shown below) with many different types of insulation. Blanket, rigid, and reflective insulation are just a few. Maximum thickness for blanket insulation is three inches. Please contact your insulation supplier for specific recommendations on type of insulation, vapor barriers, and installation procedures.



**CAUTION**

Use extreme care when working next to insulation. The insulation will provide a false sense of security by hiding the view of the ground below the insulation.

## SYSTEM EXPANSION / CONTRACTION

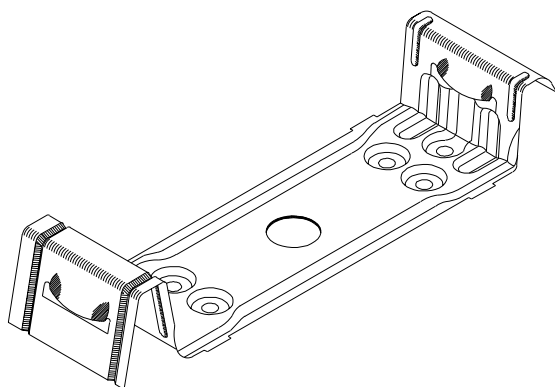
Steel roofing panels are subject to dimensional changes after installation due to exposure to varying temperatures. The greatest influence is solar energy. Steel roofing absorbs various amounts of heat depending upon color, finish, angle of exposure and time of exposure.

The relationship of ambient temperature to building structural temperature must be considered when designing a Clip-Loc roof system. The clips for the Clip-Loc panels are designed for expansion and contraction of the panels in the longitudinal direction. Lateral expansion and contraction is accommodated by the configuration of the panel cross section and causes negligible panel movement.

When the total length of panel run exceeds the capability of the clips to accommodate the thermal movement, expansion joints must be designed into the structure.

## SELECTION OF SYSTEM COMPONENTS

**Clip-Loc Clip** - Clips are placed along the male leg of each panel prior to installing adjacent panels. Design wind uplift must be considered for proper clip spacing.



Clip-Loc Clip

The following chart should be used to determine proper fasteners required for clip installation on the selected applications (see Fastener Selection Guide page PGI-12 through PGI-14 for other fasteners available).

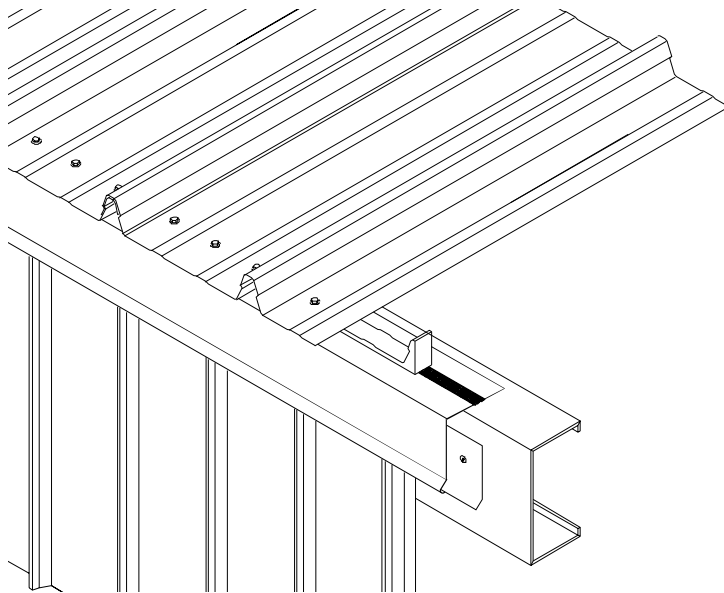
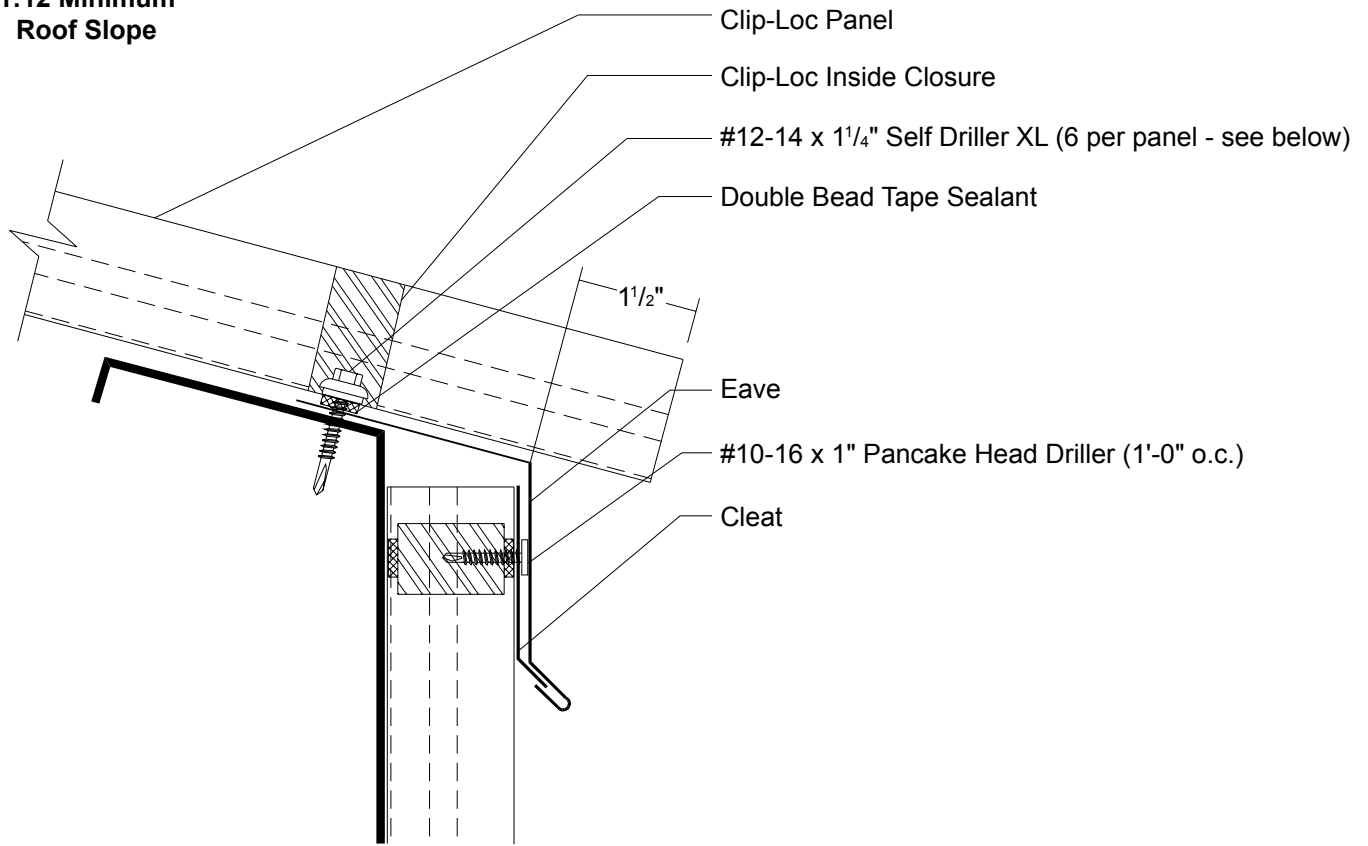
APPLICATION	INSTALLATION REQUIREMENTS		**CLIP SPACING	TYPE OF FASTENER	NUMBER REQUIRED
<b>CLIPS OVER PURLINS (16 GA. MIN)</b>	STANDARD	26 GAUGE	BY DESIGN	#10 X 1" PANCAKE HEAD DRILLER	2 FASTENERS
	STANDARD	24 GAUGE	**5'-0" O.C.	#10 X 1" PANCAKE HEAD DRILLER	2 FASTENERS
	STANDARD	22 GAUGE	**5'-0" O.C.	#10 X 1" PANCAKE HEAD DRILLER	2 FASTENERS
<b>CLIPS OVER 5/8" WOOD DECK</b>	STANDARD	26 GAUGE	BY DESIGN	#10 X 1" PANCAKE HEAD WOOD	4 FASTENERS
	STANDARD	24 GAUGE	**3'-0" O.C.	#10 X 1" PANCAKE HEAD WOOD	4 FASTENERS
	STANDARD	22 GAUGE	**3'-0" O.C.	#10 X 1" PANCAKE HEAD WOOD	4 FASTENERS
<b>CLIP OVER RIGID INSULATION / METAL DECK</b>	STANDARD	26 GAUGE	BY DESIGN	#14 DECK SCREW *	4 FASTENERS
	STANDARD	24 GAUGE	BY DESIGN	#14 DECK SCREW *	4 FASTENERS
	STANDARD	22 GAUGE	BY DESIGN	#14 DECK SCREW *	4 FASTENERS

\* Length of Deck Screw will vary depending on the total thickness of the rigid insulation and metal (see page PGI-12).

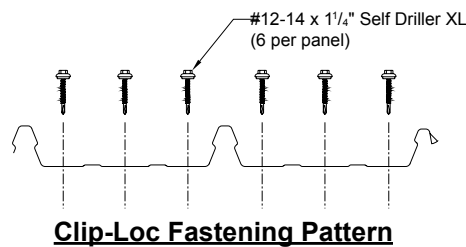
\*\* Based on UL 580. Subject to project loading requirements, closer clip spacing may be required. Contact your local Metal Sales branch representative for more information (see pages PGI-2 and PGI-3).

# CLIP-LOC EAVE DETAIL

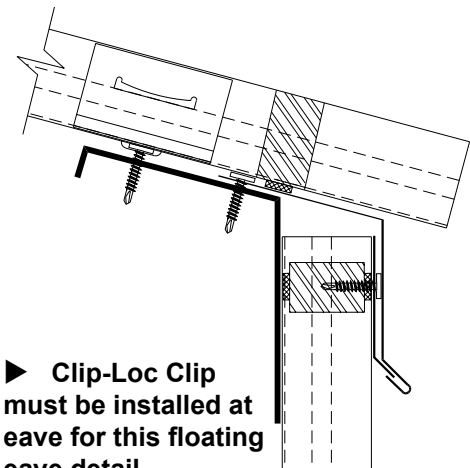
**1:12 Minimum Roof Slope**



**CAUTION**  
Additional screws may be required for high snow loading and steep slopes.



## EAVE (OPTIONAL FLOATING) DETAIL

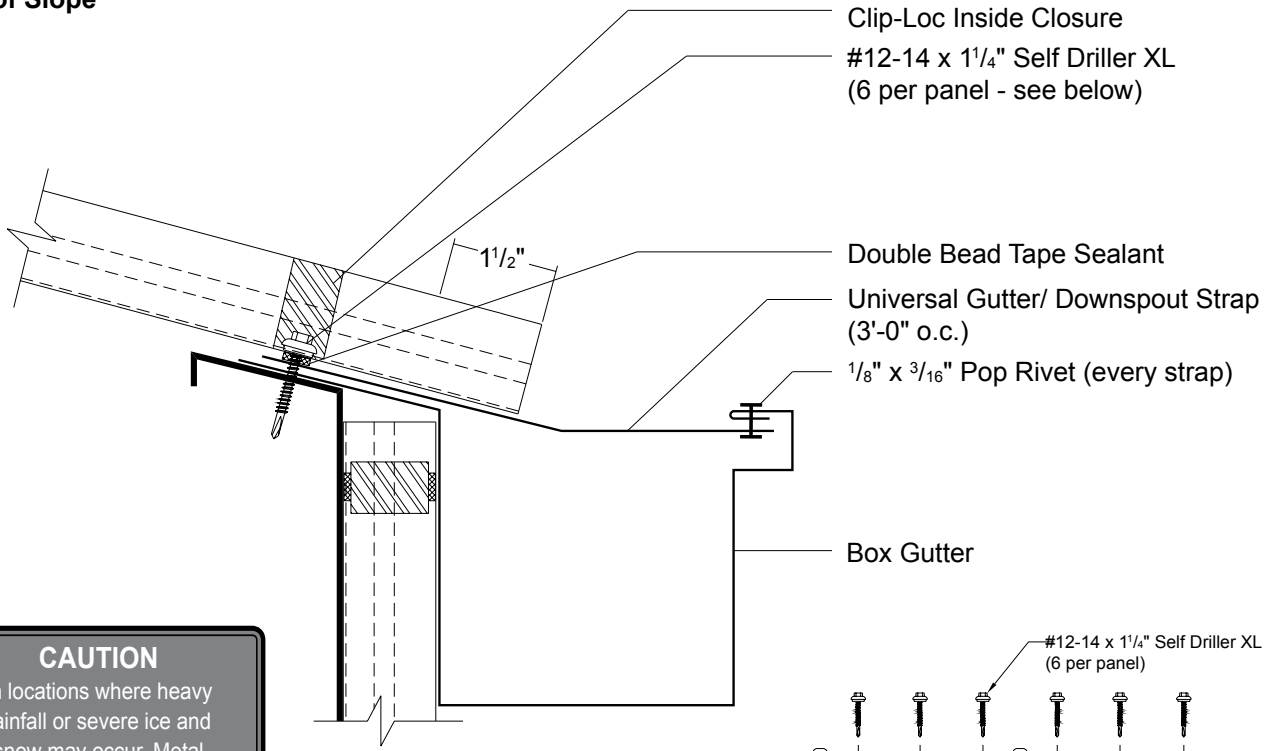


▶ **Clip-Loc Clip must be installed at eave for this floating eave detail.**

▶ **Clip-Loc panel must be anchored to open framing behind outside closure at all ridge, endwall, hip and peak conditions to fix the panel when using this floating eave detail.**

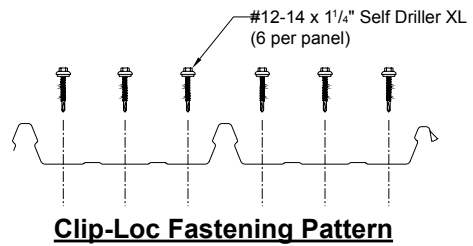
# CLIP-LOC BOX GUTTER DETAIL

1:12 Minimum  
Roof Slope



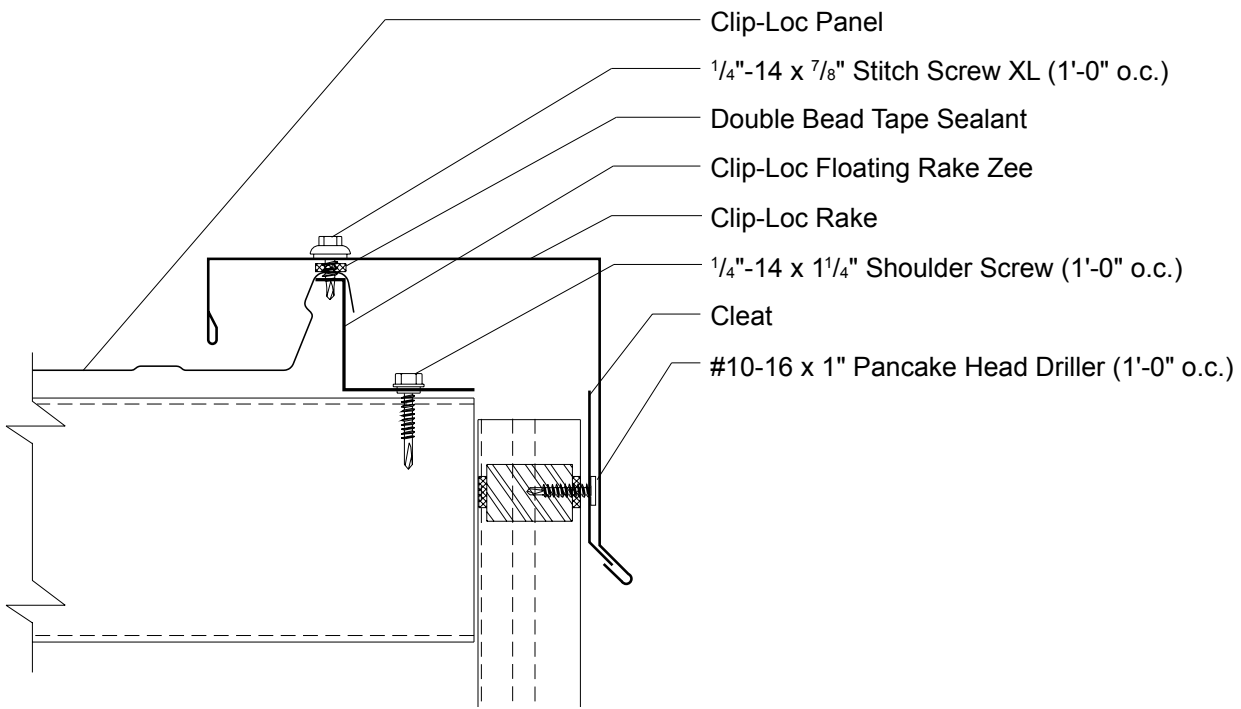
- Clip-Loc Inside Closure
- #12-14 x 1/4" Self Driller XL (6 per panel - see below)
- Double Bead Tape Sealant
- Universal Gutter/ Downspout Strap (3'-0" o.c.)
- 1/8" x 3/16" Pop Rivet (every strap)
- Box Gutter

**CAUTION**  
In locations where heavy rainfall or severe ice and snow may occur, Metal Sales' standard gutters may not be suitable for use.



# CLIP-LOC RAKE (ON MODULE) DETAIL

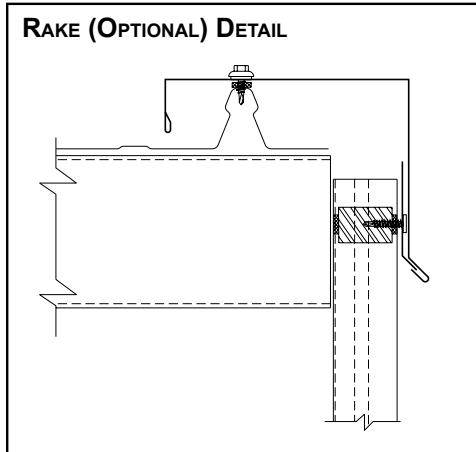
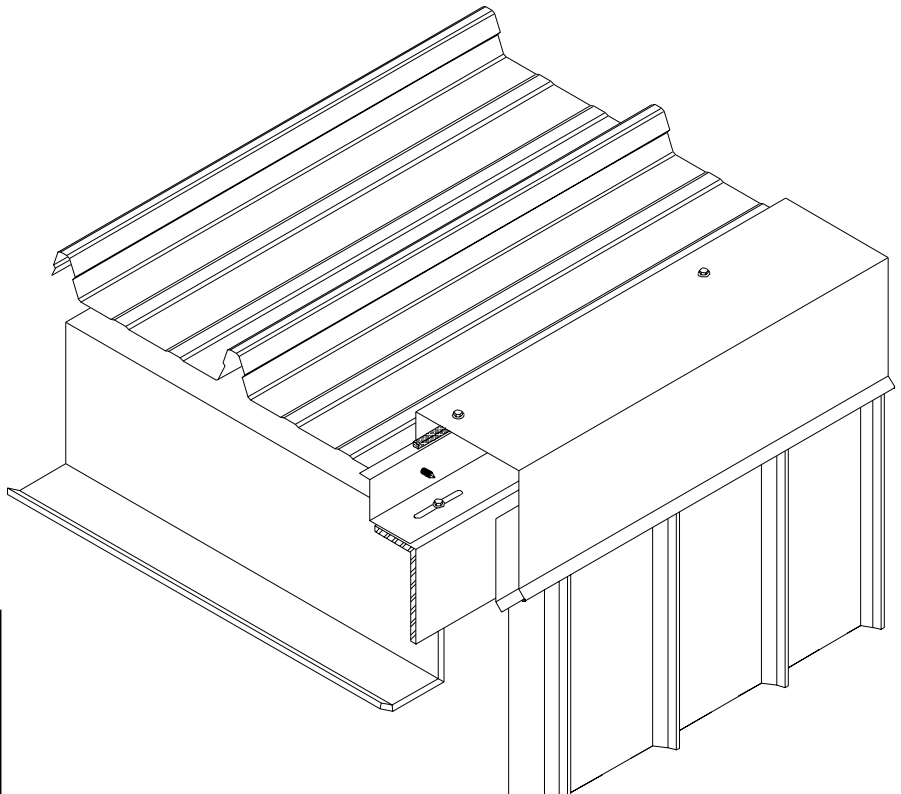
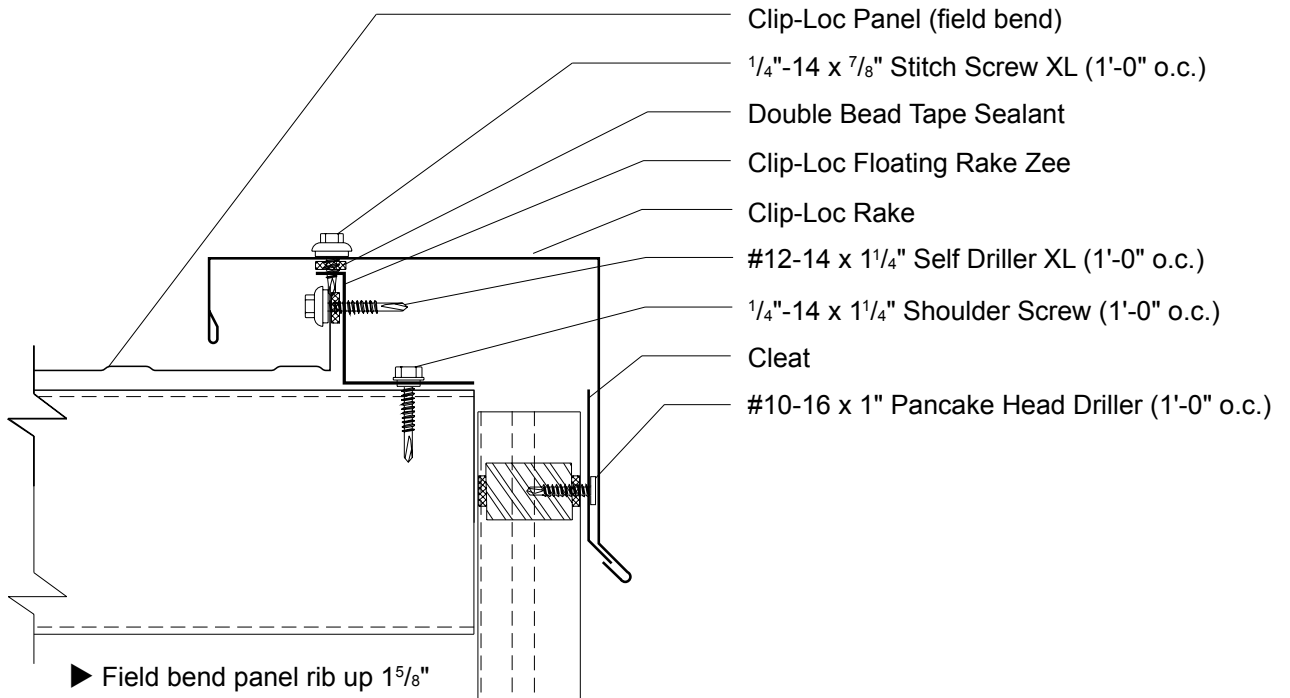
1:12 Minimum  
Roof Slope



- Clip-Loc Panel
- 1/4"-14 x 7/8" Stitch Screw XL (1'-0" o.c.)
- Double Bead Tape Sealant
- Clip-Loc Floating Rake Zee
- Clip-Loc Rake
- 1/4"-14 x 1/4" Shoulder Screw (1'-0" o.c.)
- Cleat
- #10-16 x 1" Pancake Head Driller (1'-0" o.c.)

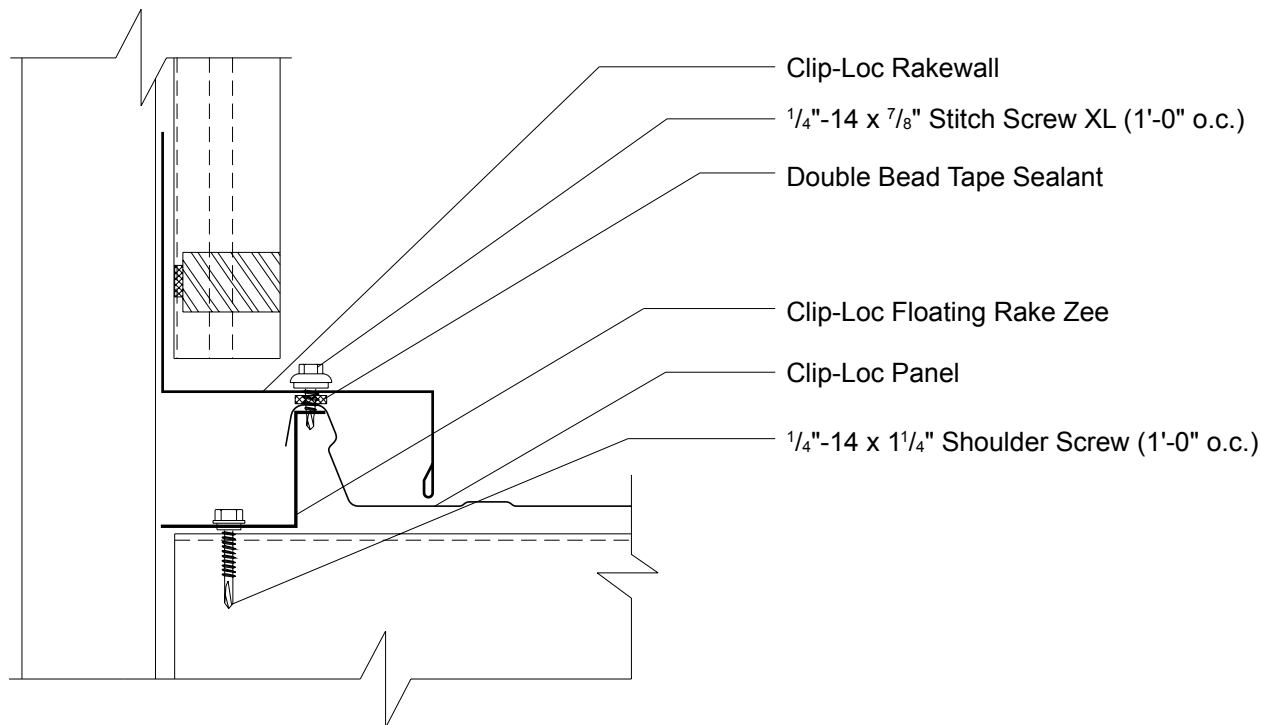
# CLIP-LOC RAKE (OFF MODULE) DETAIL

1:12 Minimum  
Roof Slope



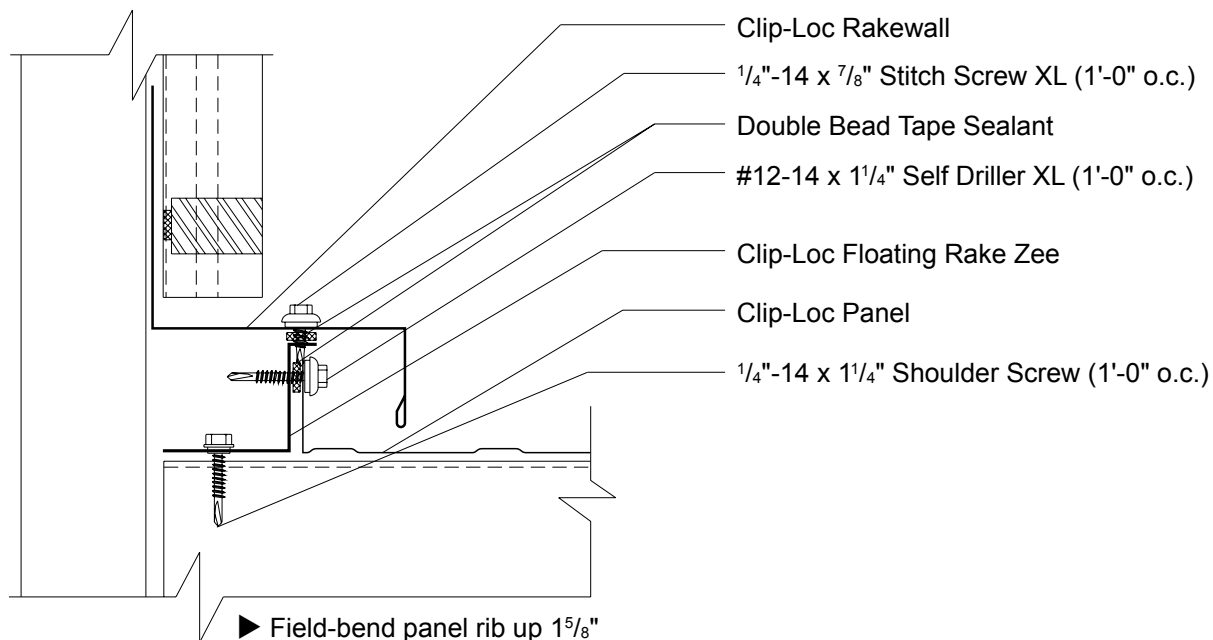
## CLIP-LOC RAKE PARAPET (ON MODULE) DETAIL

1:12 Minimum  
Roof Slope



## CLIP-LOC RAKE PARAPET (OFF MODULE) DETAIL

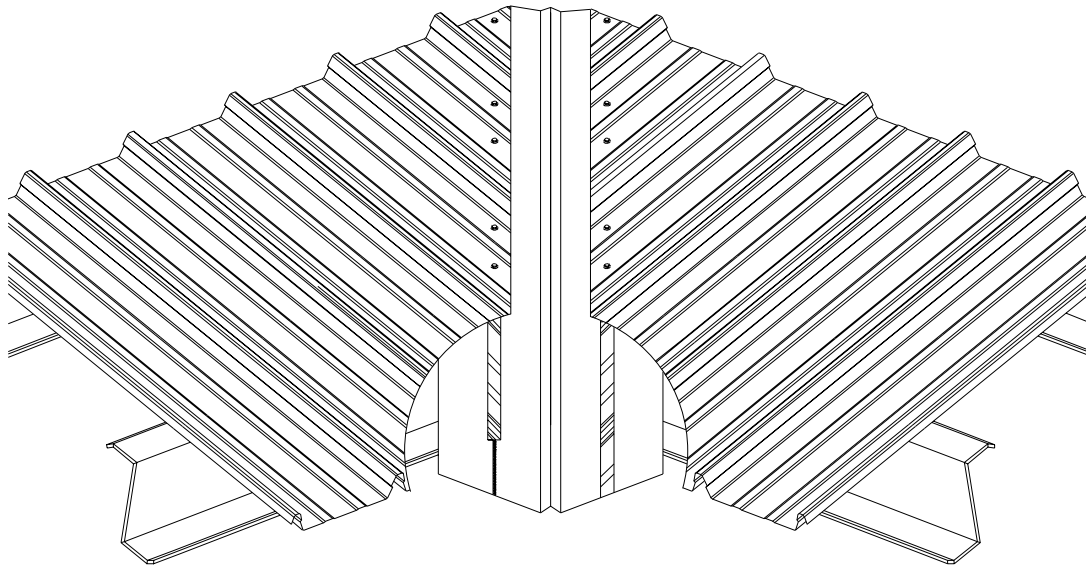
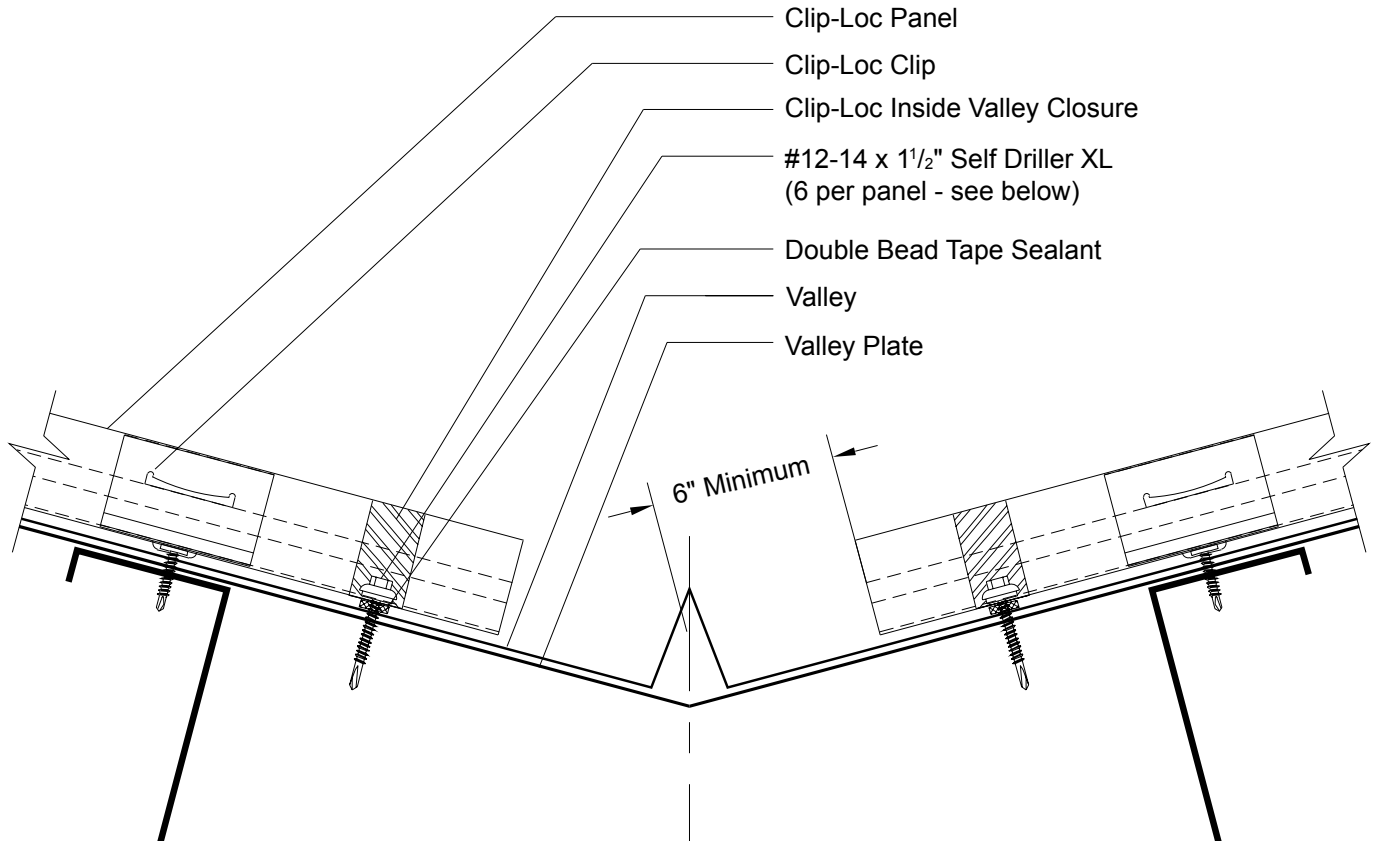
1:12 Minimum  
Roof Slope



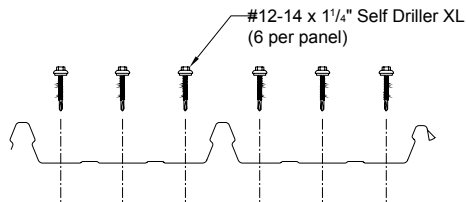


# CLIP-LOC VALLEY DETAIL

1:12 Minimum  
Roof Slope

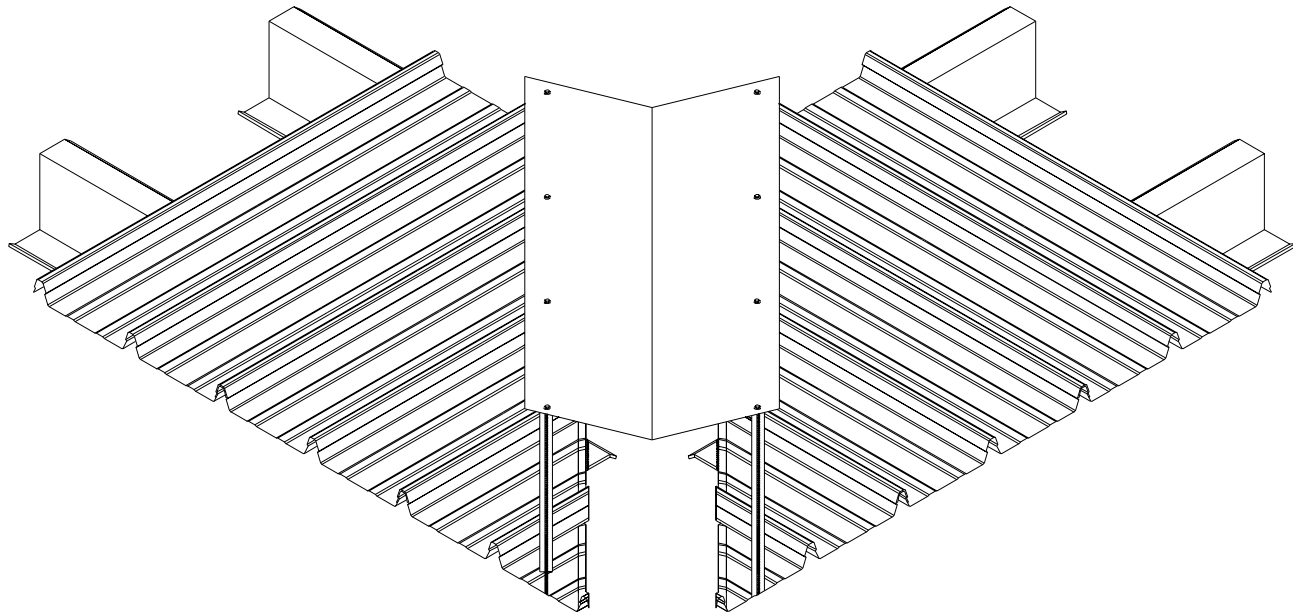
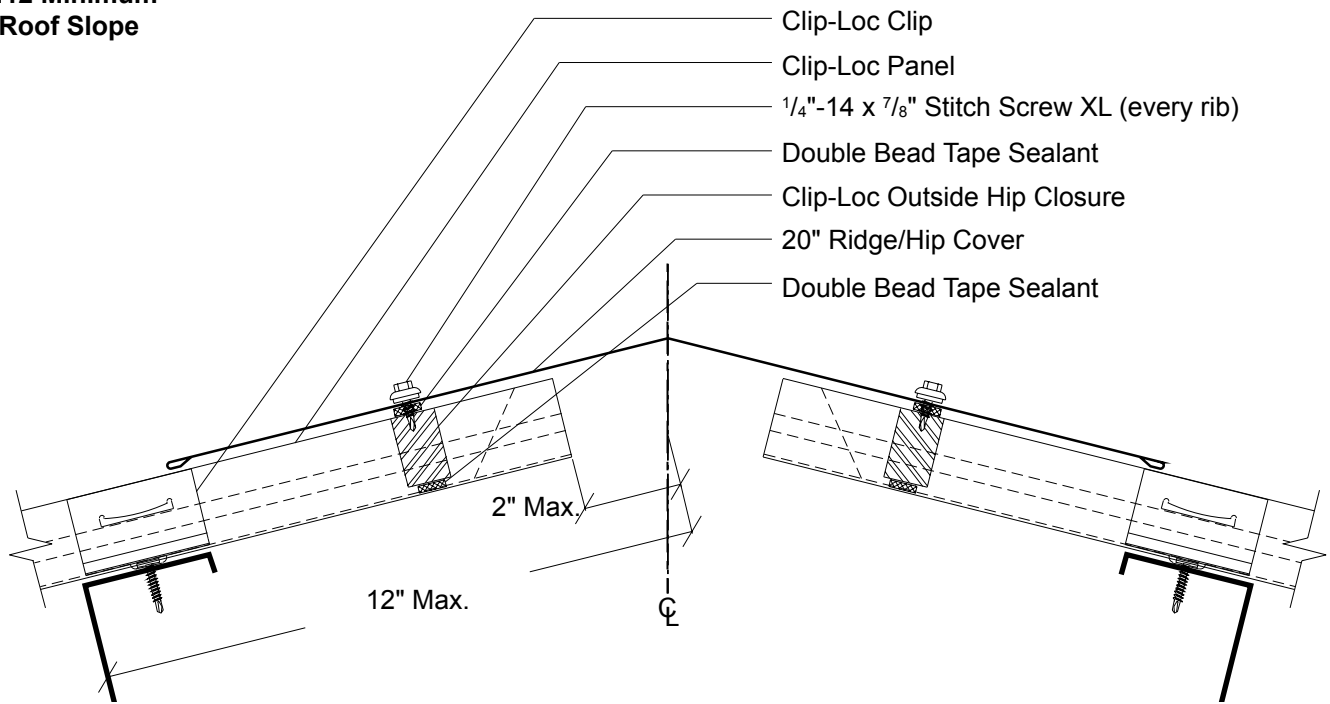


**CAUTION**  
Additional screws may be required for high snow loading and steep slopes.

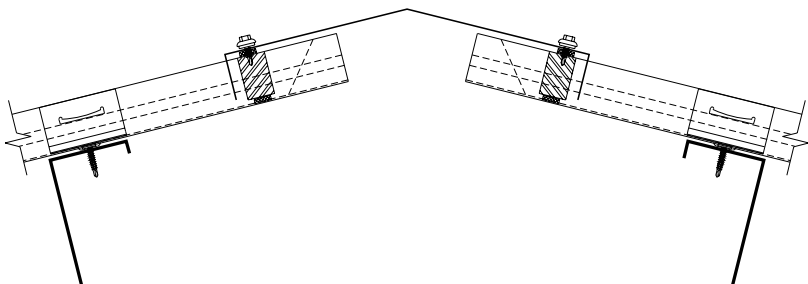


**Clip-Loc Fastening Pattern**

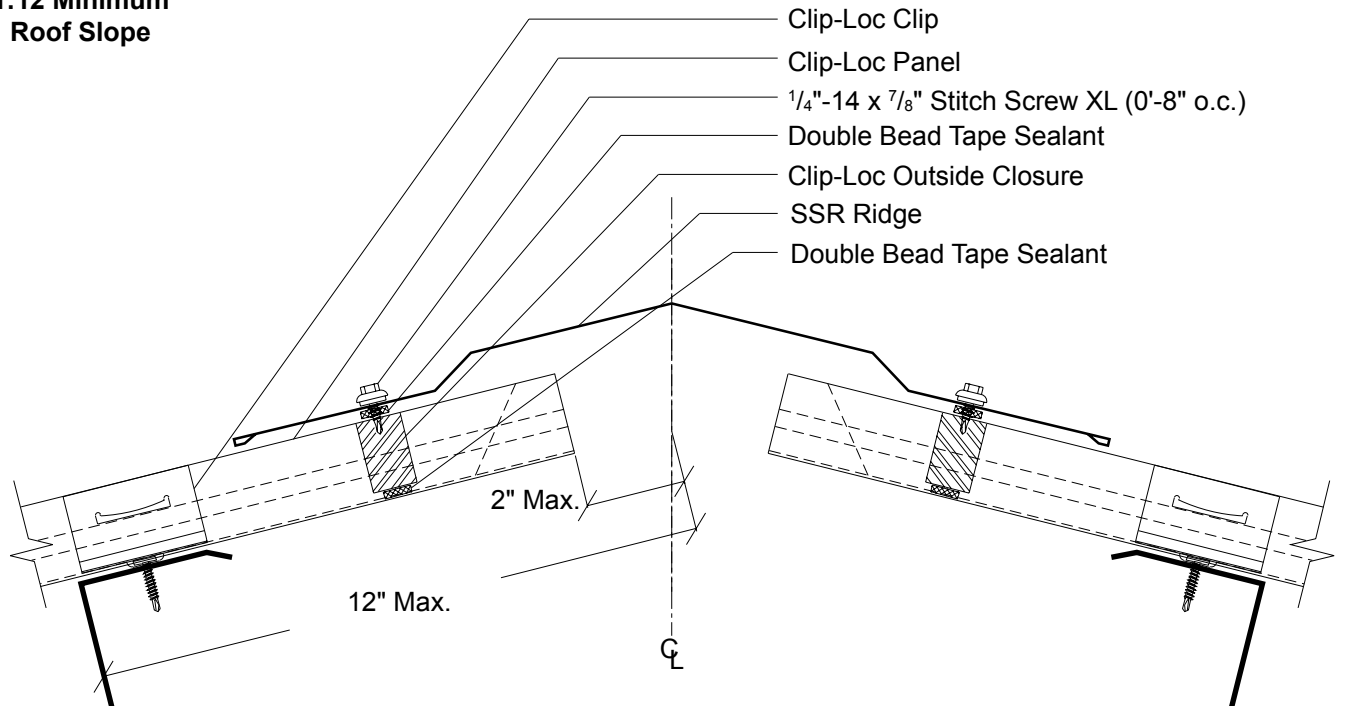
**1:12 Minimum  
Roof Slope**



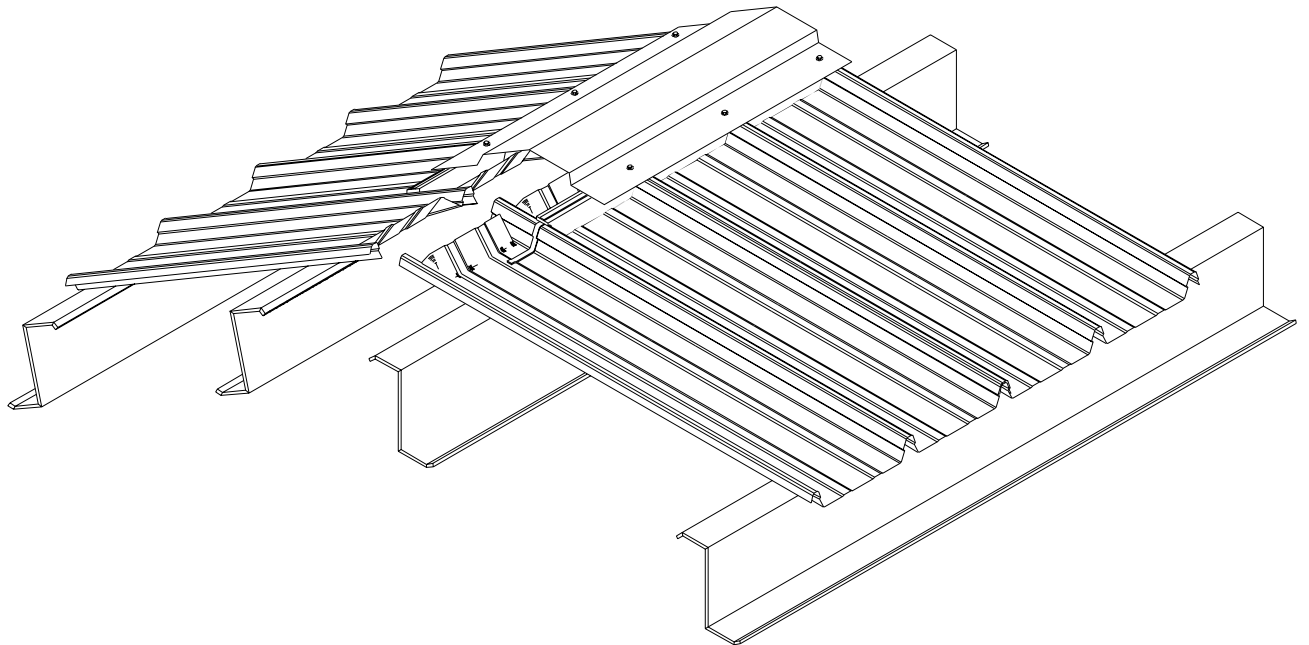
**HIP (OPTIONAL) DETAIL**



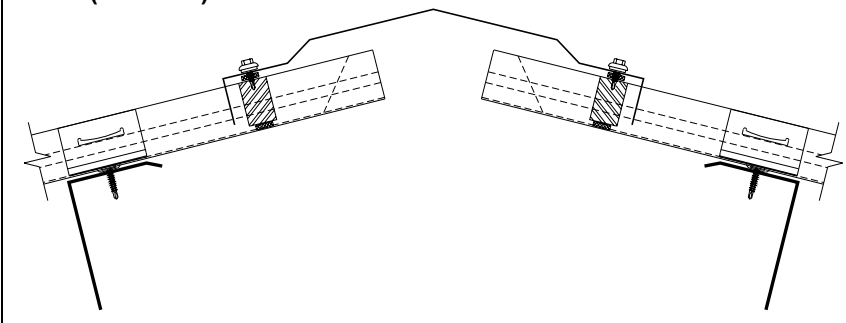
**1:12 Minimum  
Roof Slope**



- Clip-Loc Clip
- Clip-Loc Panel
- 1/4"-14 x 7/8" Stitch Screw XL (0'-8" o.c.)
- Double Bead Tape Sealant
- Clip-Loc Outside Closure
- SSR Ridge
- Double Bead Tape Sealant



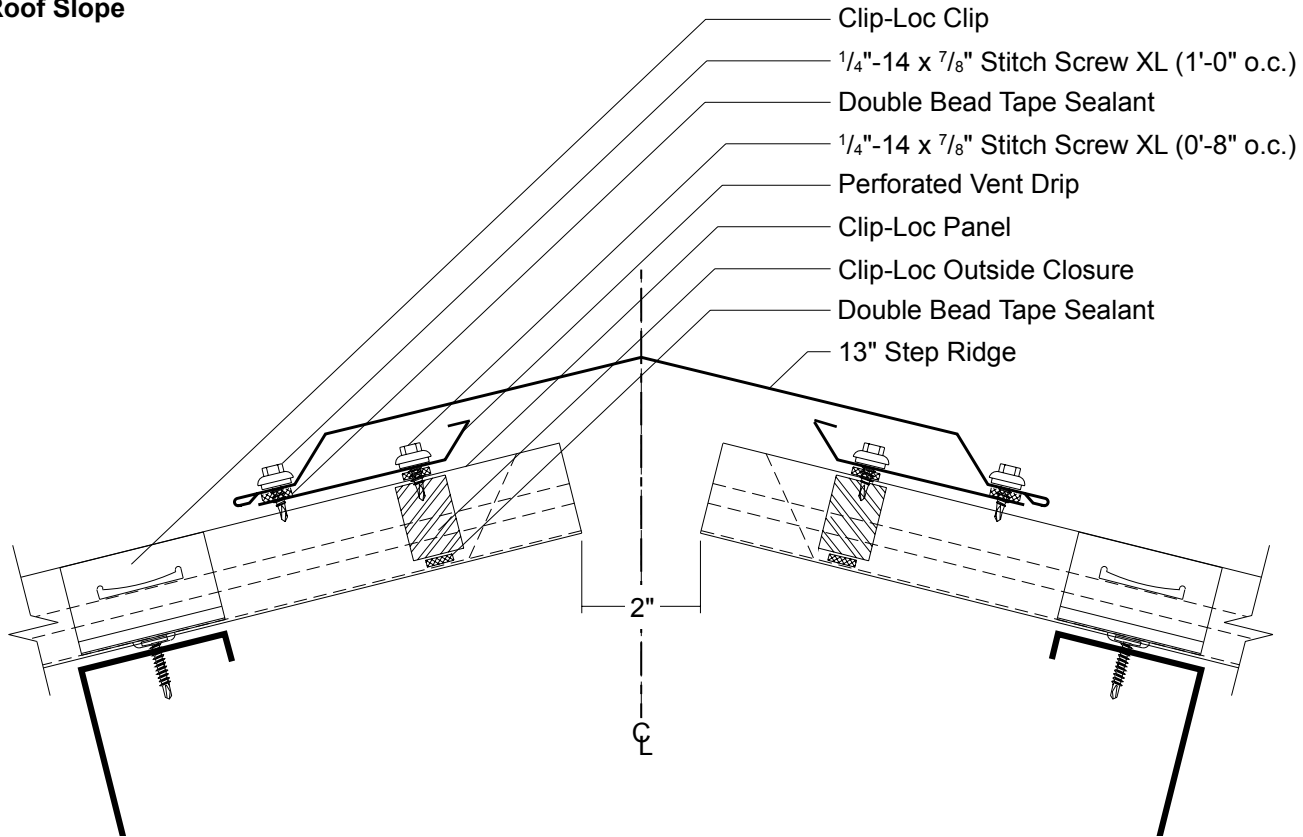
**RIDGE (OPTIONAL) DETAIL**



# CLIP-LOC

## VENTED RIDGE DETAIL

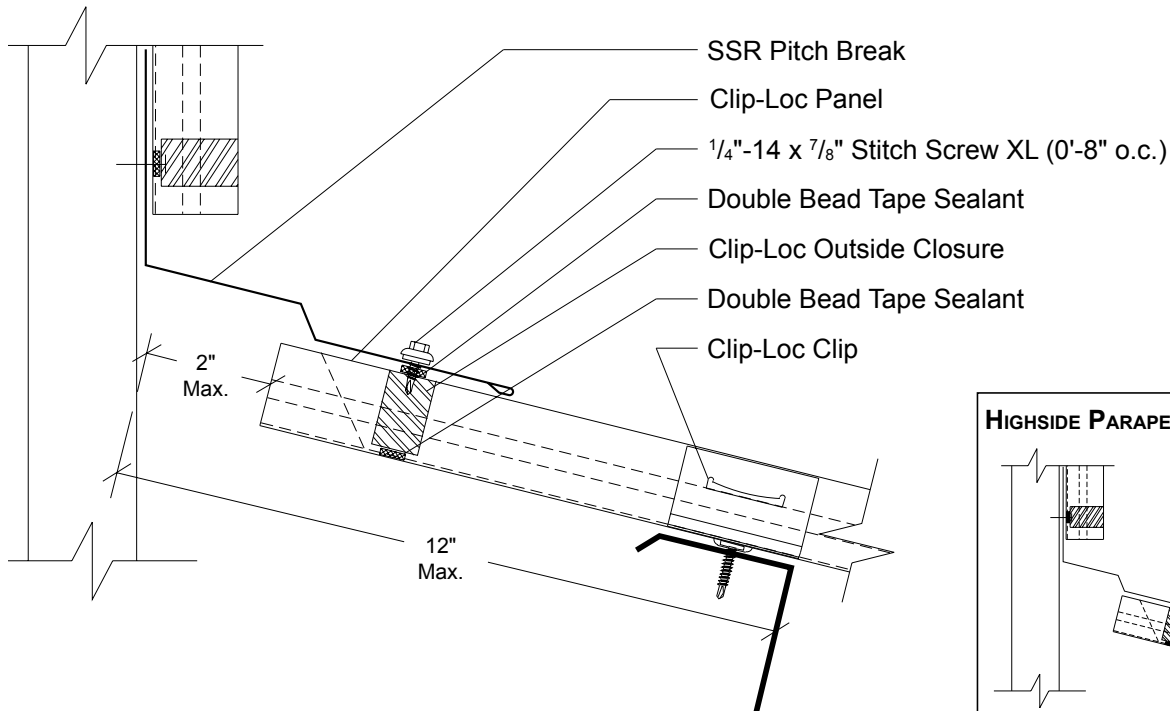
1:12 Minimum  
Roof Slope



# CLIP-LOC

## HIGHSIDE PARAPET DETAIL

1:12 Minimum  
Roof Slope



### HIGHSIDE PARAPET (OPTIONAL) DETAIL

