



5432 Scarlett Ridge Drive  
Arlington TN 38002

# Installing Standing Seam Roof Curbs

Presented by:  
Stephen J. Shearer, PE  
LMK Building Designs, Inc.

Phone: 901-277-7533 • Email: [lmkbldgdesigns@aol.com](mailto:lmkbldgdesigns@aol.com)



# Installing Standing Seam Roof Curbs

- ☐ Flat Flange Over/Under Installation
- ☐ Seam to Seam with Repair Cap

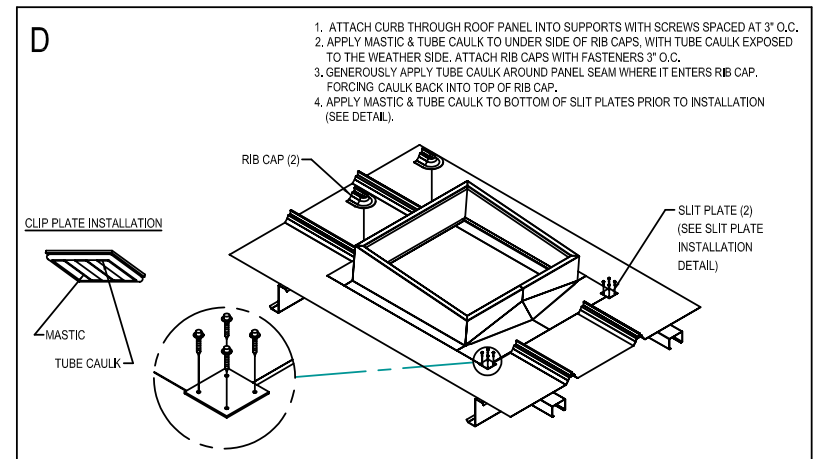
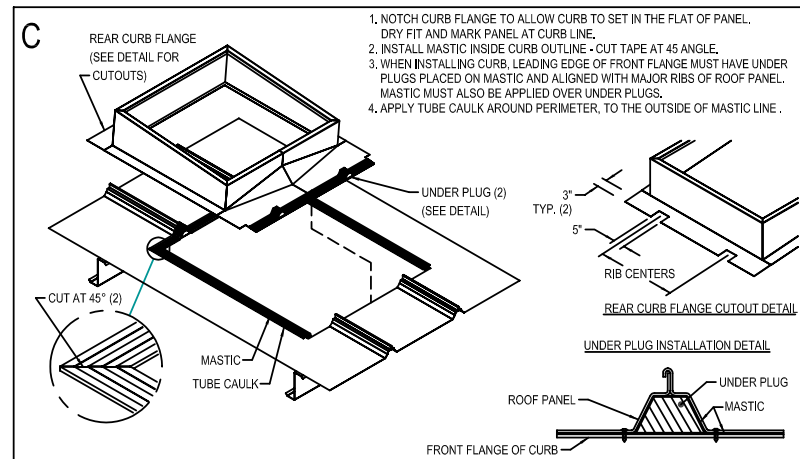
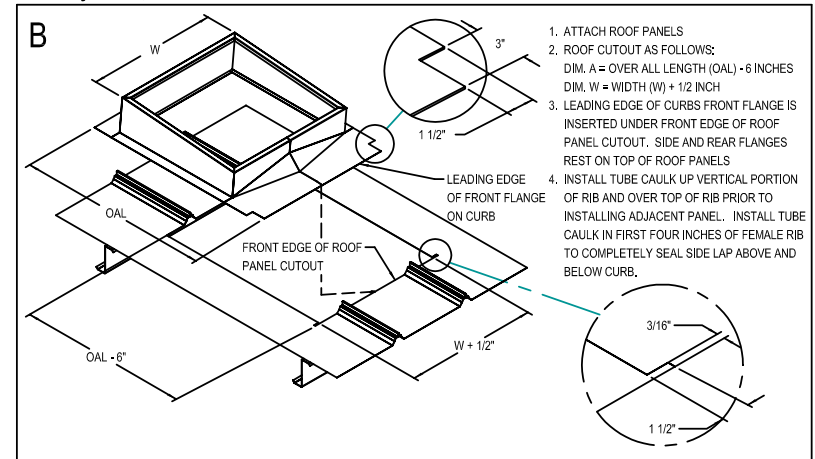
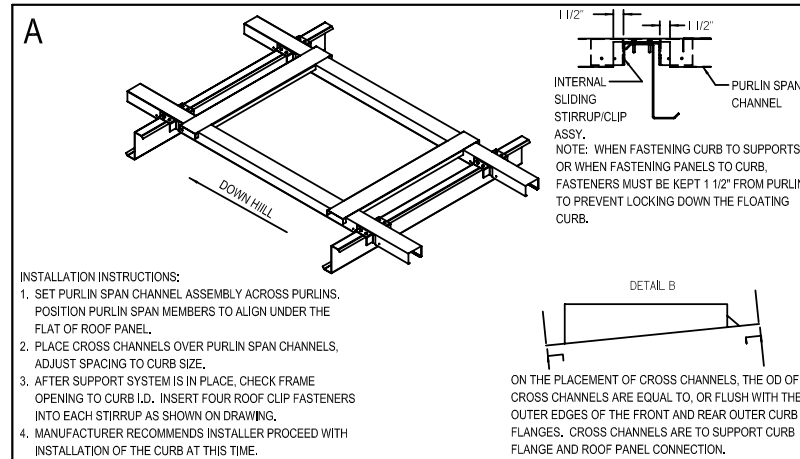
## Notes

1. 20-Year Weathertight Warranty Requires Aluminum Curb
2. Single wall curbs support up to 1,500 pounds.
3. Double wall curbs required with unit weights > 1,500 pounds

# Flat Flange Over/Under Installation

™TRAC RAIL Roof Penetration System 1-800-683-5848 • Fax 1-800-683-5849

Manufactured by: Roof Curb Systems, LLC



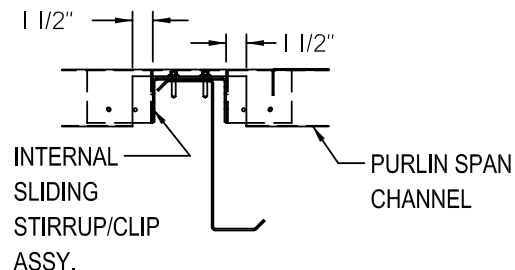
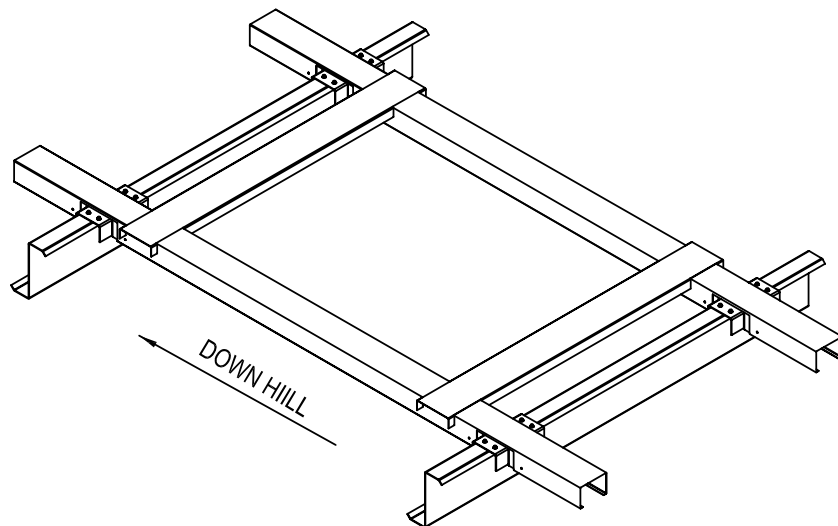
## CURB INSTALLATION INSTRUCTIONS

TRAPEZOIDAL STANDING SEAM PANEL - UNDER / OVER

	DATE: 10-16-2002	REVISIONS
	TRAC RAIL Curb Support	06-26-06
	US Patent No. 5,647,175 © Copy Right, 2002. All Rights Reserved	CD VRU 01

# Flat Flange Over/Under Installation

## A

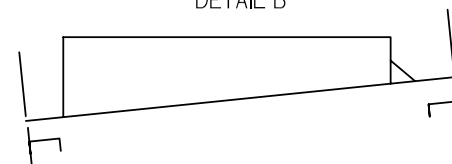


NOTE: WHEN FASTENING CURB TO SUPPORTS, OR WHEN FASTENING PANELS TO CURB, FASTENERS MUST BE KEPT 1 1/2" FROM PURLIN TO PREVENT LOCKING DOWN THE FLOATING CURB.

### INSTALLATION INSTRUCTIONS:

1. SET PURLIN SPAN CHANNEL ASSEMBLY ACROSS PURLINS. POSITION PURLIN SPAN MEMBERS TO ALIGN UNDER THE FLAT OF ROOF PANEL.
2. PLACE CROSS CHANNELS OVER PURLIN SPAN CHANNELS, ADJUST SPACING TO CURB SIZE.
3. AFTER SUPPORT SYSTEM IS IN PLACE, CHECK FRAME OPENING TO CURB I.D. INSERT FOUR ROOF CLIP FASTENERS INTO EACH STIRRUP AS SHOWN ON DRAWING.
4. MANUFACTURER RECOMMENDS INSTALLER PROCEED WITH INSTALLATION OF THE CURB AT THIS TIME.

DETAIL B



ON THE PLACEMENT OF CROSS CHANNELS, THE OD OF CROSS CHANNELS ARE EQUAL TO, OR FLUSH WITH THE OUTER EDGES OF THE FRONT AND REAR OUTER CURB FLANGES. CROSS CHANNELS ARE TO SUPPORT CURB FLANGE AND ROOF PANEL CONNECTION.

## CURB INSTALLATION INSTRUCTIONS



DATE: 10-16-2002

TRAC RAIL Curb Support  
US Patent No.5,647,175

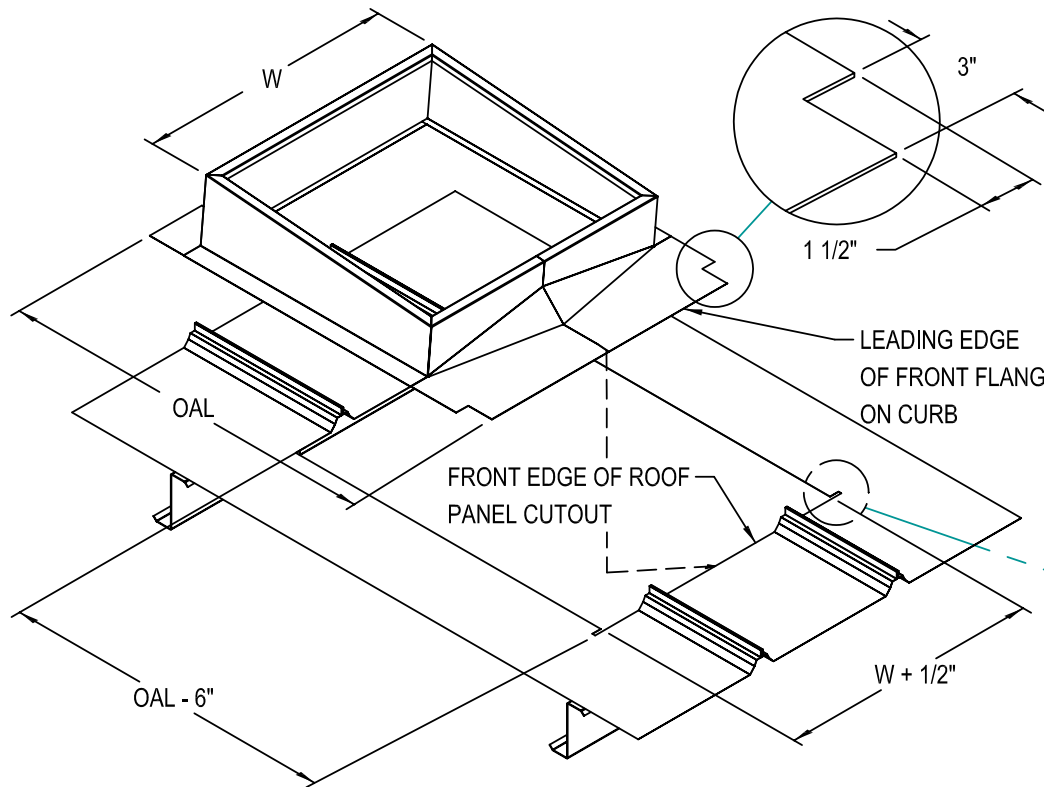
REVISIONS

06-26-06

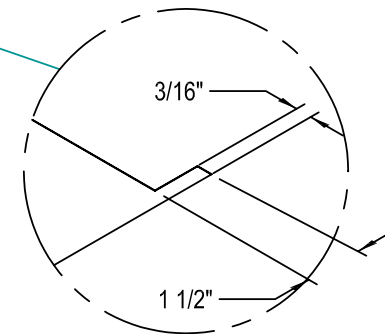
CS 1001.04

# Flat Flange Over/Under Installation

B



1. ATTACH ROOF PANELS
2. ROOF CUTOUT AS FOLLOWS:  
DIM. A = OVER ALL LENGTH (OAL) - 6 INCHES  
DIM. W = WIDTH (W) + 1/2 INCH
3. LEADING EDGE OF CURBS FRONT FLANGE IS INSERTED UNDER FRONT EDGE OF ROOF PANEL CUTOUT. SIDE AND REAR FLANGES REST ON TOP OF ROOF PANELS
4. INSTALL TUBE CAULK UP VERTICAL PORTION OF RIB AND OVER TOP OF RIB PRIOR TO INSTALLING ADJACENT PANEL. INSTALL TUBE CAULK IN FIRST FOUR INCHES OF FEMALE RIB TO COMPLETELY SEAL SIDE LAP ABOVE AND BELOW CURB.



## CURB INSTALLATION INSTRUCTIONS



DATE: 10-16-2002

TRAC RAIL Curb Support  
US Patent No.5,647,175

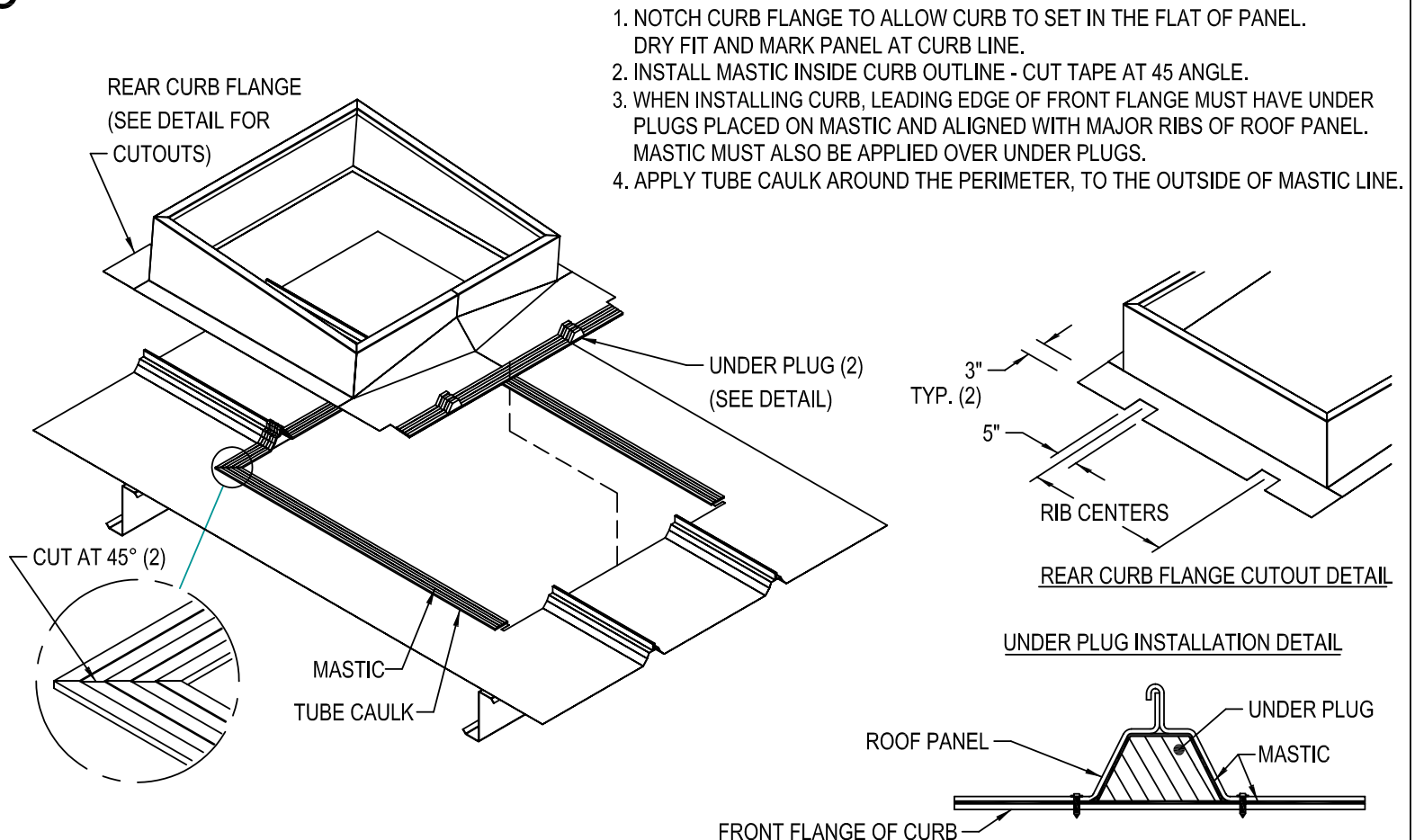
REVISIONS

06-26-06

CS 0011 04

# Flat Flange Over/Under Installation

## C



## CURB INSTALLATION INSTRUCTIONS



DATE: 10-16-2002

TRAC RAIL Curb Support  
US Patent No.5,647,175

REVISIONS

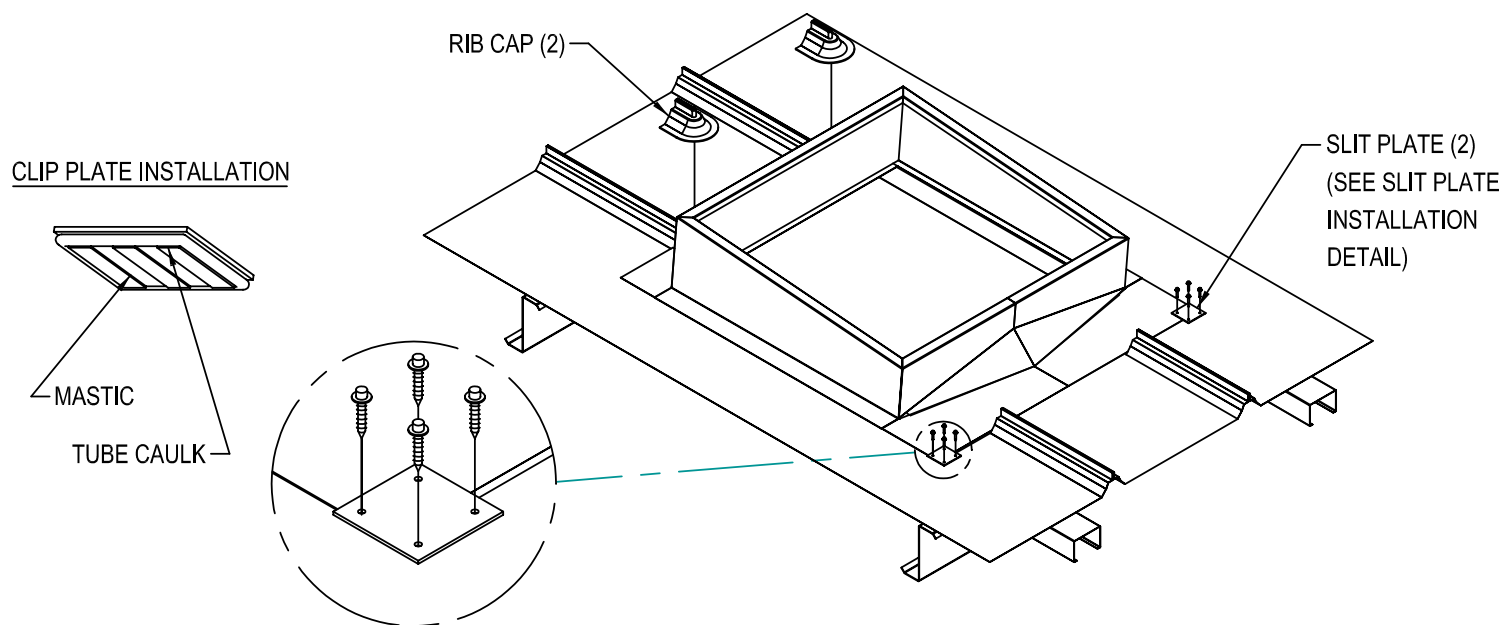
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# Flat Flange Over/Under Installation

## D

1. ATTACH CURB THROUGH ROOF PANEL INTO SUPPORTS WITH SCREWS SPACED AT 3" O.C.
2. APPLY MASTIC & TUBE CAULK TO UNDER SIDE OF RIB CAPS, WITH TUBE CAULK EXPOSED TO THE WEATHER SIDE. ATTACH RIB CAPS WITH FASTENERS 3" O.C.
3. GENEROUSLY APPLY TUBE CAULK AROUND PANEL SEAM WHERE IT ENTERS RIB CAP. FORCING CAULK BACK INTO TOP OF RIB CAP.
4. APPLY MASTIC & TUBE CAULK TO BOTTOM OF SLIT PLATES PRIOR TO INSTALLATION (SEE DETAIL).



## CURB INSTALLATION INSTRUCTIONS



DATE: 10-16-2002

TRAC RAIL Curb Support  
US Patent No. 5,647,175

REVISIONS

06-26-06

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# Flat Flange Over/Under Installation

## Sub Framing Installation Routine:

1. Check your parts with the BOM and the RTU / Fan requirements.
2. Loose assemble the parts on the ground to go over with the installation crew.
3. One member of the crew is in charge on leading the installation on every curb. He is responsible for making sure the final installation gives the RTU subcontractor the inside clearance required for the supply and return air ducts.
4. Lead member locates the curbs in the bays per the pre-engineered manufacturer's drawings. This should be confirmed with the job superintendent before beginning the installation. Purlins or additional structural members are specifically designed to carry the RTU loads.
5. The roof insulation is installed and the curb sub-framing supplied by the curb manufacturer is then installed by pulling a tape off of the leading rib of the last installed standing seam roof panel.
6. The roof curb supplier sends longitudinal channels that support the weight of the curb and RTU units and these channels must be installed in-line with the roof panels.
7. The cross channels are for support of the cut ends of the metal standing seam roof and with mastic provide the weather tight seal. They also support foot traffic around the curb and an additional channel on the high side gives the big flat flange strength for foot traffic.
8. Do a final check that the location is correct and clearances met and now install pan head fasteners in the inside corners of each cross channel to longitudinal channel
9. Fasten the span (longitudinal ) channels with the 4 fasteners into the clips. This secures the system to the structural. Again, they are in-line with the roof sheets.
10. Now before proceeding punch a hole (drill) in the insulation on the 4 inside corners of the cross & span channels. This will allow the crew to locate for field cutting of the roof panel from underneath.
11. Sheet over the curb framing and apply gun caulk or mastic at the top side of the roof sheets where the roof panel will be cut and the inside closure plug will be installed later.
12. When the standing seam roof is completed the installation of the roof curbs can begin with the crew.
13. Follow the manufacturer's installation instructions for cutting the hole in the roof and installing the shingled roof curb.



# Flat Flange Over/Under Installation



# Flat Flange Over/Under Installation

- ❑ Measure from the last standing seam rib to locate the framing.





# Flat Flange Over/Under Installation

- ❑ Set the support cap & cross channels in-line with the purlins.



# Flat Flange Over/Under Installation

- ❑ It's a good idea for a beginning crew to set the curb on the support channels so he gets a good visual of how the system works.





# Flat Flange Over/Under Installation

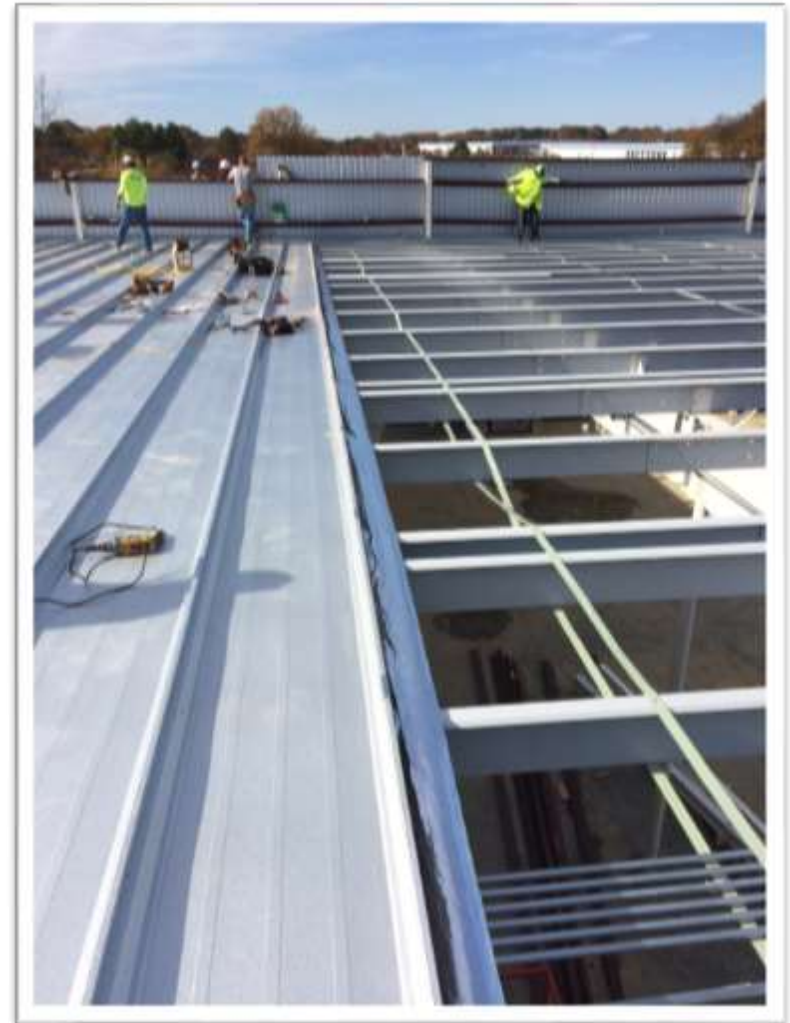
- ❑ Once the channels are set and in place install the clip fasteners and then install the pan heads in the inside corners of the cross channels. Use drill and make holes in the insulation on the inside corners top and bottom. Now the crew can simply sheet over the curb sub-frame.



Apply caulking or mastic while sheeting for plug at the top.

# Flat Flange Over/Under Installation

- ❑ The roof installation can now be completely installed and the crew can install the roof curbs afterwards saving the installer on labor costs.



# Flat Flange Over/Under Installation

- The installer can now take a drill from underneath and drill up through the holes in the insulation to locate and start cutting out the opening in the roof sheets. While sheeting over the curb sub-framing this would be the best time to apply caulk or tape mastic at the top seams where the closure plugs will be installed. The caulk in the picture is in the wrong location.





# Flat Flange Over/Under Installation

- ❑ Once the opening has been cut out the installation of the curb can proceed.





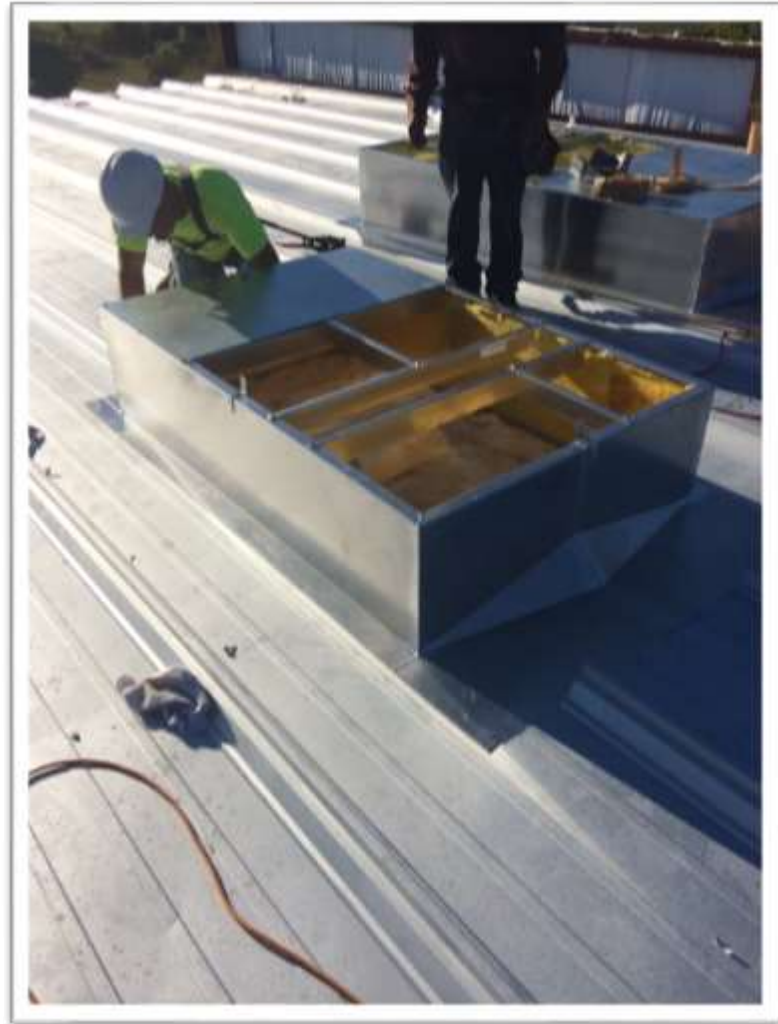
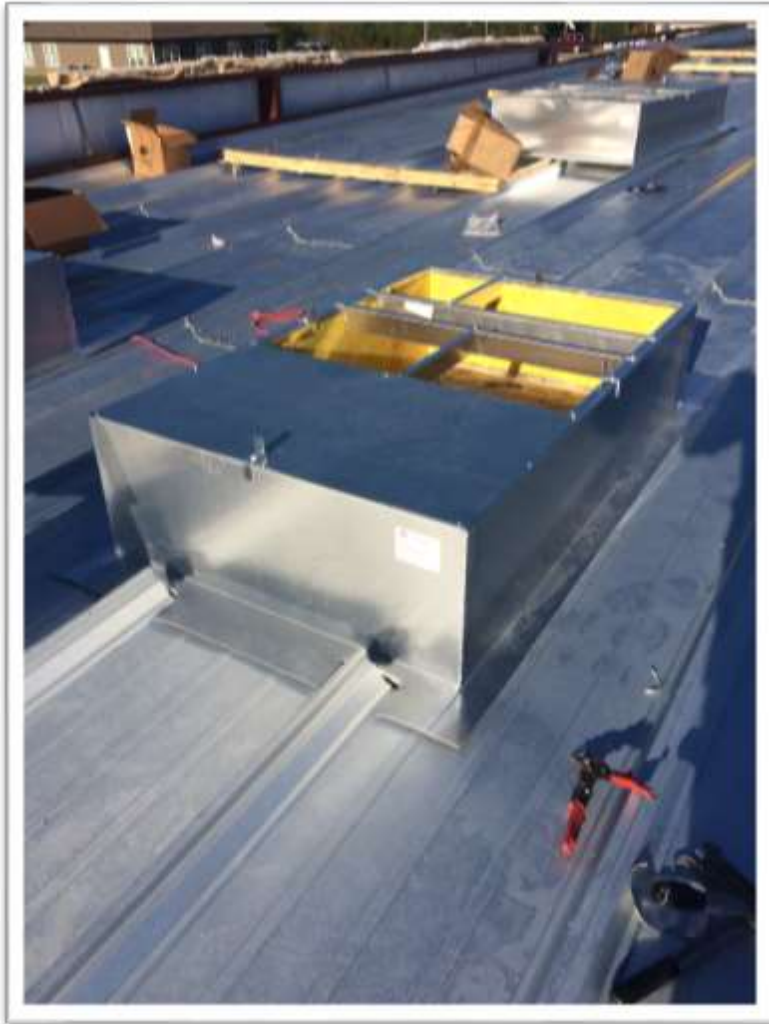
# Flat Flange Over/Under Installation

- ❑ Now that the opening is cut the next step is to do a dry run. Cut the slit at the top and mark the cut out for the rib caps at the bottom side and set the curb in place for a dry fit up.



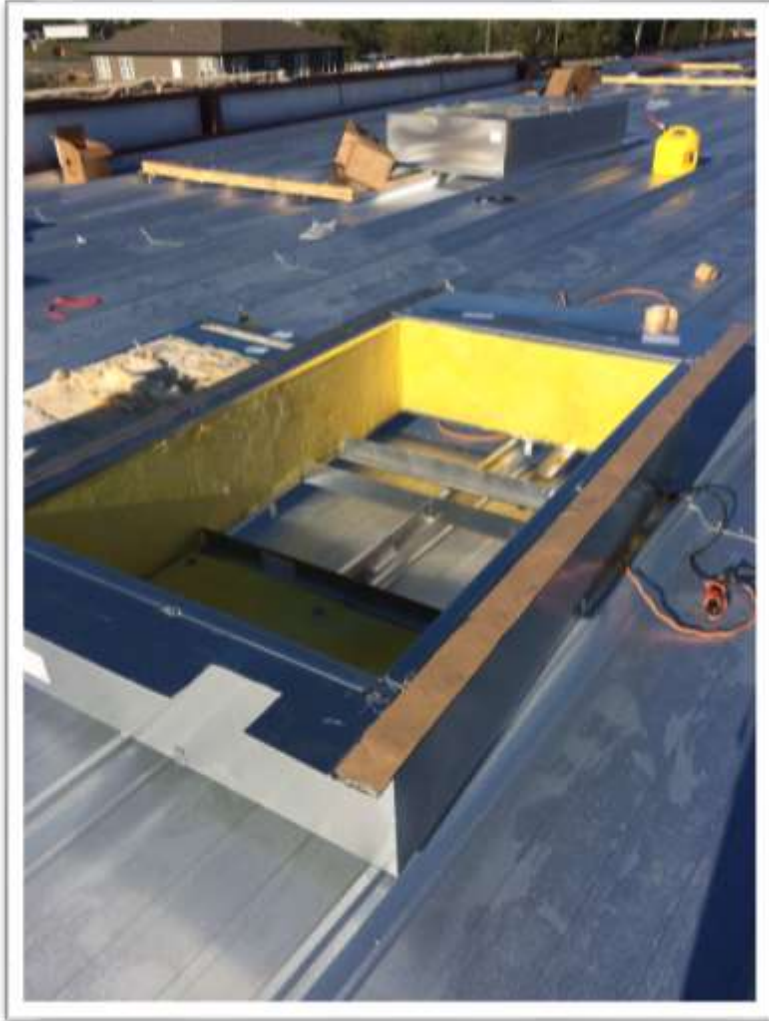
# Flat Flange Over/Under Installation

- ❑ Mark the location of the eave plugs and now apply mastic to the bottom on both sides and the low end. Apply the mastic on the top as well as the plugs. Do not remove the tape yet.



# Flat Flange Over/Under Installation

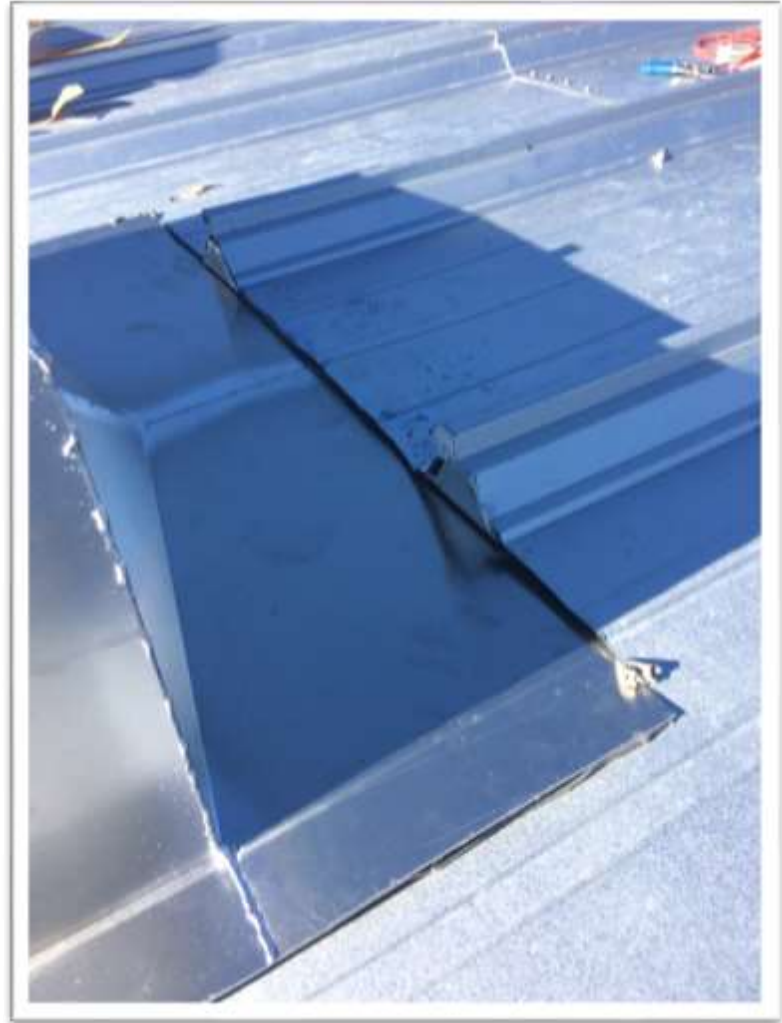
- ❑ Applying Mastic and locating and setting the top plugs.





# Flat Flange Over/Under Installation

- ❑ On large curbs using a board, rope and clamps and extra men will make the job easier of getting the front of the curb under the roof sheets.



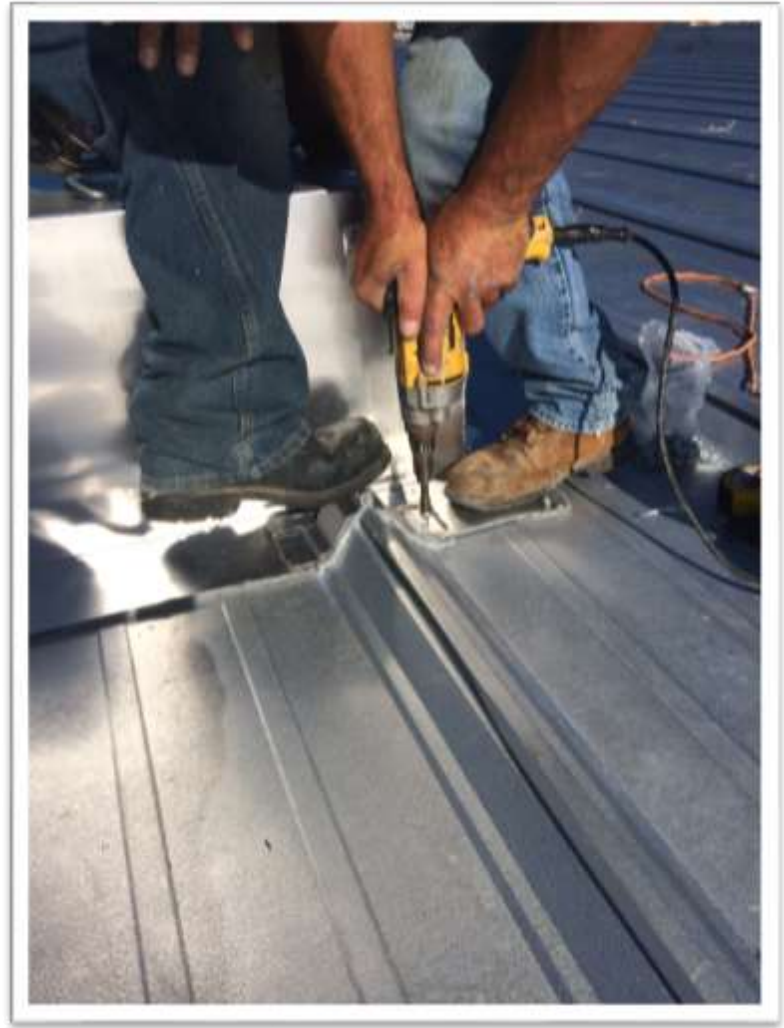
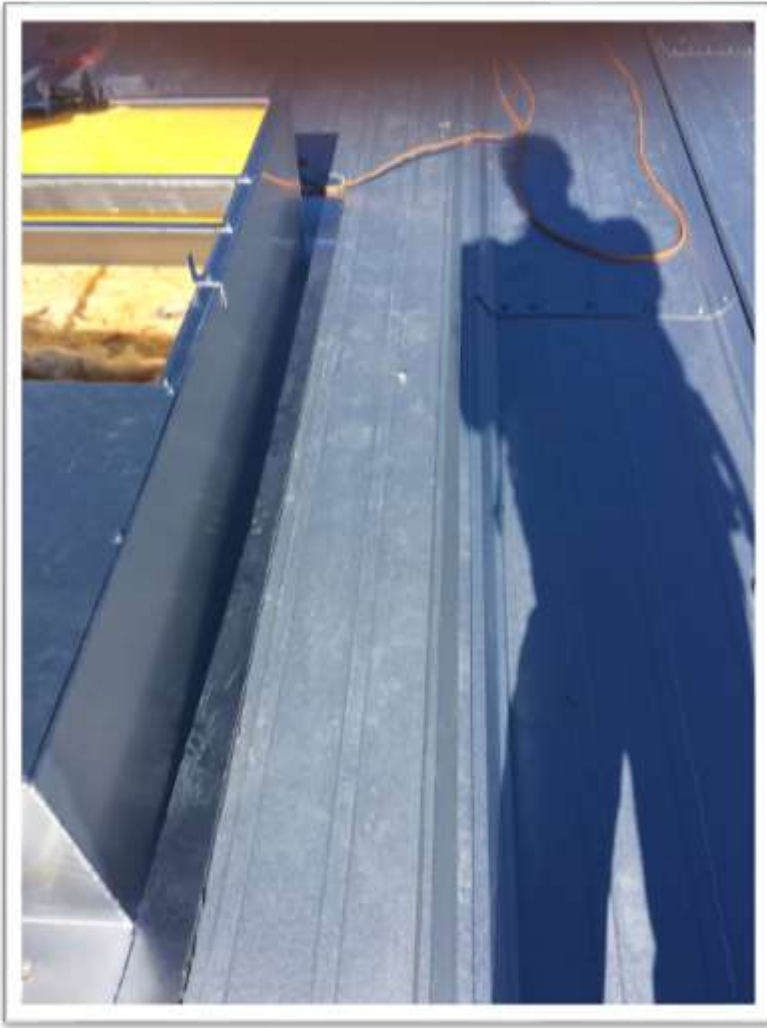
# Flat Flange Over/Under Installation

- ❑ The The curb is now set and fasteners can begin to be installed. The top side is done first. Mark the 3-inch fastener spacing with a dry erase felt pen.



# Flat Flange Over/Under Installation

- ❑ I recommend setting a fastener in the corners of the bottom to anchor before starting the sides and bottom fastener installation and then install the rib covers.





# Flat Flange Over/Under Installation

- ❑ The fasteners can now be installed at the bottom once the rib covers have been fastened off.



# Flat Flange Over/Under Installation

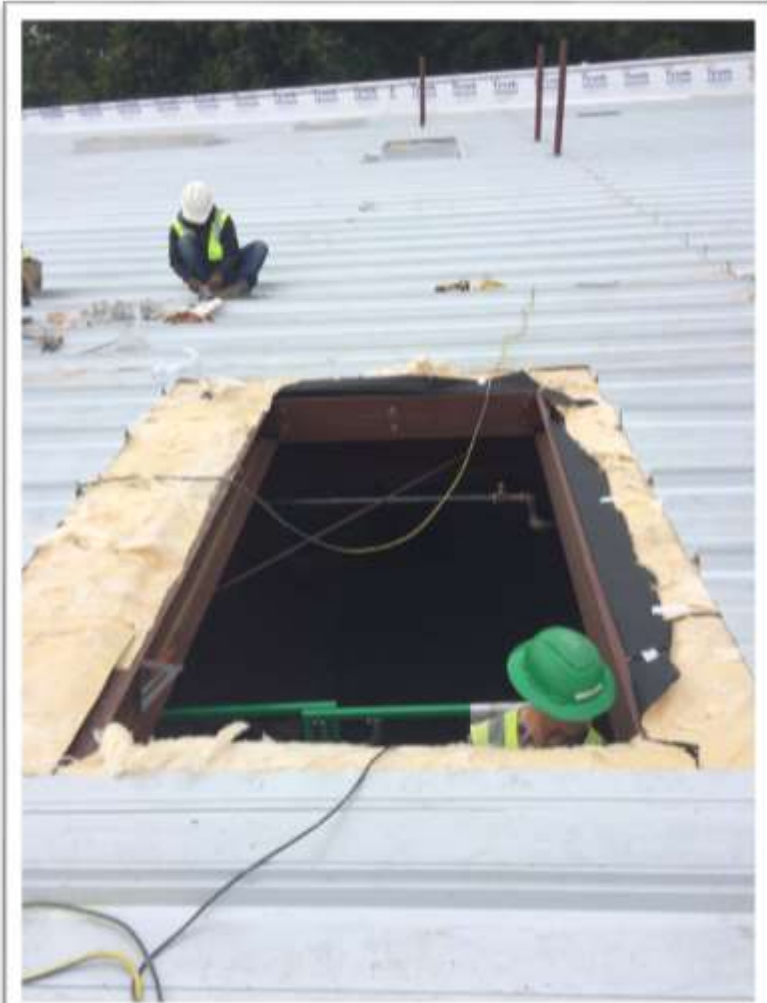
- ❑ Your roof curb installation is complete and you can move to the next one.





# Flat Flange Over/Under Installation

## ❑ Double Wall Curbs



# Flat Flange Over/Under Installation

☐ Double Wall Curbs



# Flat Flange Over/Under Installation

❑ Double Wall Curbs



# Seam To Seam Repair Cap Curbs

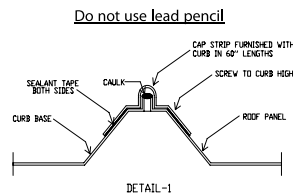
## ❏ Installation Manual



### ROOF CURB INSTALLATION INSTRUCTIONS

#### PROCEDURES FOR A TRAPAZOIDAL STANDING SEAM ROOF

1. Set roof curb in place on building steel prior to installation of roof panels where curb will be located.
2. Install roof panels. Roof panel(s) on up slope of curb base may have to be cut to allow installation of curb base under roof panel.
3. The curb base goes under the roof panel(s) on the up slope. Roof panel must lap to back of highs on curb base. The down slope of the curb base fits over the top of the roof panels.
4. Sides of curb base will form a part of the standing seam system. The female portion of the curb base will have to be hand seamed due to the thickness of the roof curb.
5. Caulk or seal the joint up and down slope with a sealant approved for this application by the metal building manufacturer.
6. The curb edge may now have the cap strips (furnished with curb) installed on the sides of the curb base where it forms an integral part of the standing seam. See Detail #1 below.
7. Install sub-frame under roof curb as required due to load or size of curb.



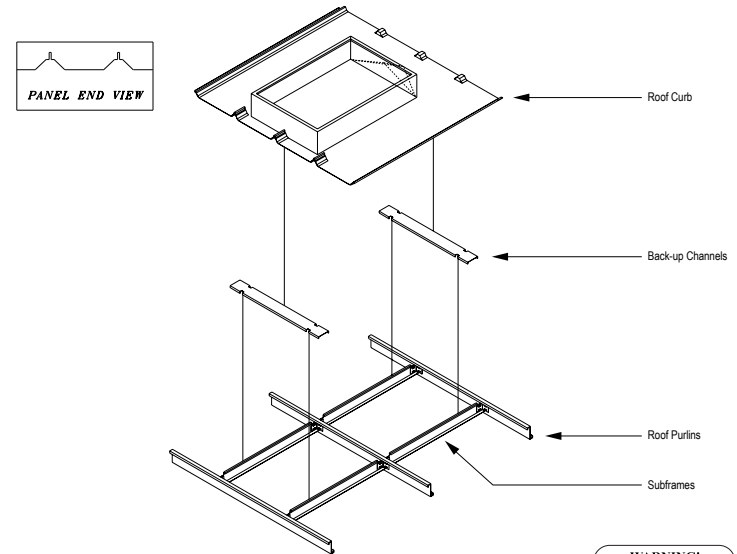
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### ROOF CURB INSTALLATION INSTRUCTIONS

#### PROCEDURES FOR A TRAPAZOIDAL STANDING SEAM ROOF

Drawing #SS200



**WARNING!**  
ALWAYS USE FALL PROTECTION WHILE  
WORKING ABOVE ROOF OPENINGS

1. On fully sheeted roof, set curb in place. Curb base fange will go to nearest high at a seam.
  2. Mark base fange locations and throat area. Do not use lead pencil.
  3. Locate and mark roof opening cut line. Uphill cut line will be 1/8" less than length of high (Usually high is 3" thus cut line will be 2 7/8" from front of high). Downhill cut line will be 1" less than length of high, or 1" from backside of curb.
  4. Install sub-frames as shown.
  5. Layout roof panel cut line and cut according to building manufactures recommendations.
  6. Installation continued on drawing #SS201.
- \*NOTE\* For uninsulated curb, throat is actual ID. of curb. For insulated curb, use actual ID. and add 1 1/2" each side

# Seam To Seam Repair Cap Curb s

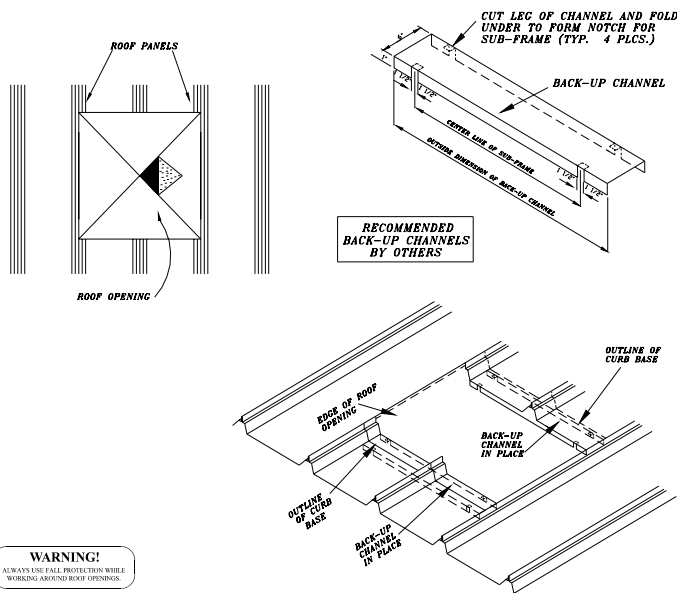
## Installation Manual

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ROOF CURB  
INSTALLATION INSTRUCTIONS

### PROCEDURES FOR A TRAPEZOIDAL STANDING SEAM ROOF

Drawing #SS201



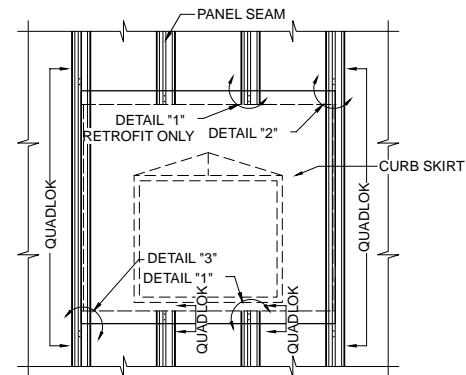
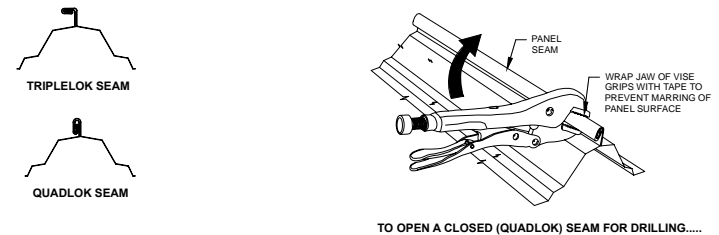
**WARNING!**  
ALWAYS USE FALL PROTECTION WHILE WORKING AROUND ROOF OPENINGS.

7. Remove cut panels from roof opening and clean up all metal shavings.
8. Remove insulation leaving insulation facing in place.
9. Cut insulation facing diagonally and tuck sections under roof panels to trim roof openings.
10. Install back-up channels. See detail of channel assembly. Tuck tabs over top of sub-frame. Edge of sub-frame is flush with curb opening.
11. No screws required in the channel. It will be secured when curb is fastened down.
12. Installation continued on drawing #SS202.

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ROOF CURB  
INSTALLATION INSTRUCTIONS

### SEAM PREP PROCEDURE



**WARNING!**  
ALWAYS USE FALL PROTECTION WHILE WORKING AROUND ROOF OPENINGS.

13. The seam style will more than likely be TripleLok at the roof panel end. If not then the seam must be opened in order to drill and seal. This can be accomplished using vice grips as shown.
14. The above detail locator shows the specific details to refer to, and the seam treatment, and special sealant treatment all around the opening.

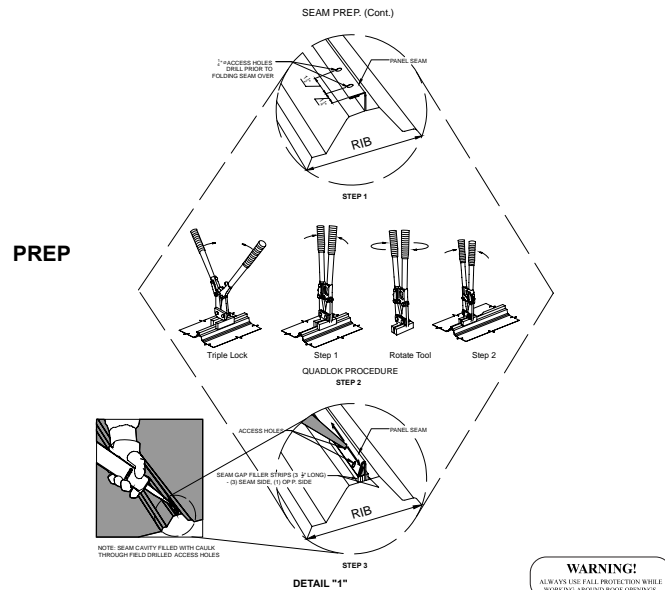
# Seam To Seam Repair Cap Curb s

## Installation Manual

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ROOF CURB  
INSTALLATION INSTRUCTIONS

### SEAM PREP (CONTINUED)



15. These next few steps are critical to the water tightness and integrity of the entire installation. Each is considered essential. If the following details are not adhered to then the system is void of all test values and warranties and cannot be warranted as a 20 weather tight system.

16. The panel seam is to be drilled with 1/4" holes. Drill all the way through the seam as shown on step 1 detail 1. Fold the seam to 180° (Quadlok) and then fill the seam gap with strips of 1/4" bead sealant. Finally, force fill the

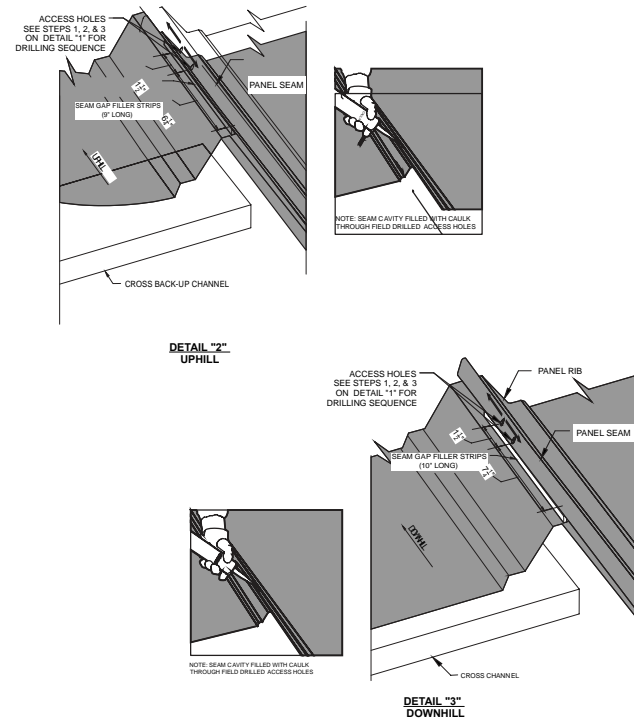
access holes with caulk and continue until you see signs of caulk protruding beyond the holes. Note, Detail 1 does not apply, in the "sheeted in" option, to the uphill end installation when the pigtail is in place.

17. In order for roof curb to fit properly the last 8" of the seam must be turned down to 180 degrees (Quadlok) above and below the opening. This will be accomplished with hand seamers and the operation of these seamers is as shown above.

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ROOF CURB  
INSTALLATION INSTRUCTIONS

### SEAM PREP (CONTINUED)



18. To prepare the side seams for the seam cap will happen at all four corners of the detail. The preparation is the same drill and fill but requires different set back dimensions. The set back at the uphill end is 6 1/4" while the downhill is 7 1/4". The finished QuadLok seam

should be a minimum of 1'-0" above and below the panel opening. Install (3) strips of seam gap fillers 9" & 10" long to fill void as shown on Detail 2 and 3.



# Seam To Seam Repair Cap Curb s

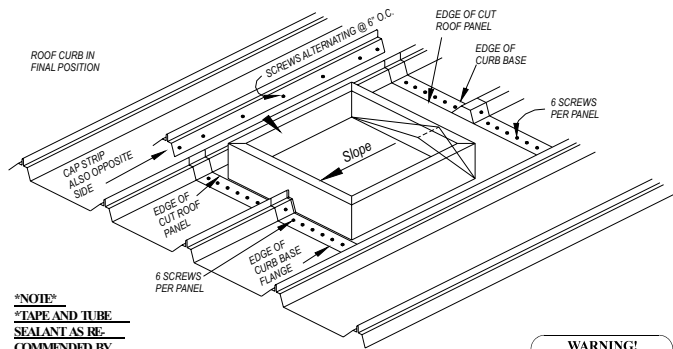
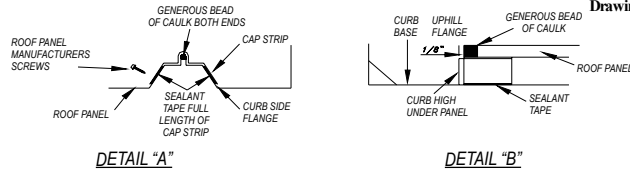
## Installation Manual

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ROOF CURB  
INSTALLATION INSTRUCTIONS

### PROCEDURES FOR A TRAPEZOIDAL STANDING SEAM ROOF

Drawing #SS202



**\*NOTE\***  
\*TAPE AND TUBE  
SEALANT AS RE-  
COMMENDED BY  
BUILDING  
MANUFACTURER

N.T.S.

**WARNING!**  
ALWAYS USE FALL PROTECTION WHILE  
WORKING AROUND ROOF OPENINGS.

19. Apply a strip of sealant tape on upper side of uphill base fange. See Detail "B" above. On downhill base fange, apply sealant tape to bottom (underneath) side of base fange.

20. Caulk seams where curb base butts to roof panel. See Detail "A".

21. Position roof curb over roof opening and lower into place, shift curb to align with sub-frames and roof panels.

22. Secure curb using 6 recommended screws per panel, uphill & downhill in curb base fange.

23. Turn the cap strips upside down and install sealant tape to both inside legs and along full length of cap strips. Install cap strips over the curb / roof panel sidelap and fasten with screws alternating on 6" centers staggered on both sides.

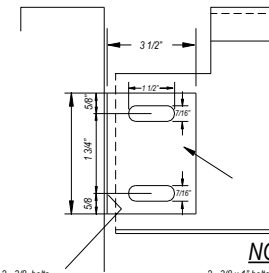
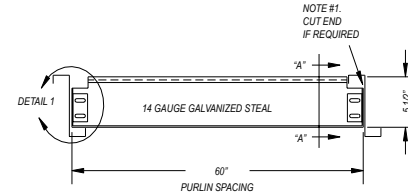
24. End of installation. Clean-up installation debris before leaving area.

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ROOF CURB  
INSTALLATION INSTRUCTIONS

### Floating Sub-Frame Details and Modification Instructions For Standing Seam Roof

Drawing #MR02

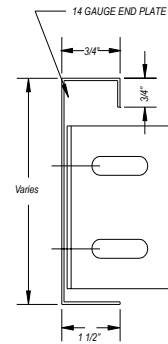


2 - 3/8" bolts  
with flat washers  
and nuts at  
each purlin.  
Tighten securely.

**NOTE**  
2 - 3/8" x 1" bolts with 2 flat washers  
and nuts at each end of sub-frame.  
Finger tighten, then setup threads to  
secure nuts.

#### DETAIL 1

**NOTE 2.**  
SUB-FRAME MAX.  
LOADING 500#.

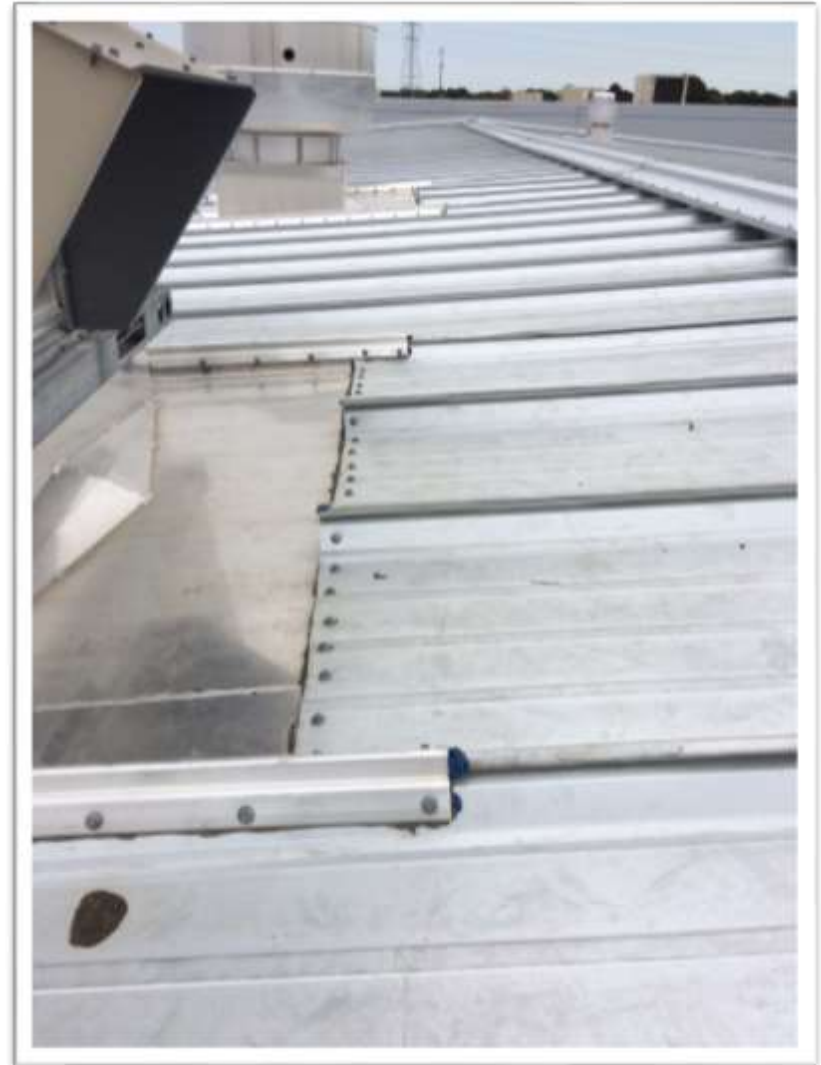
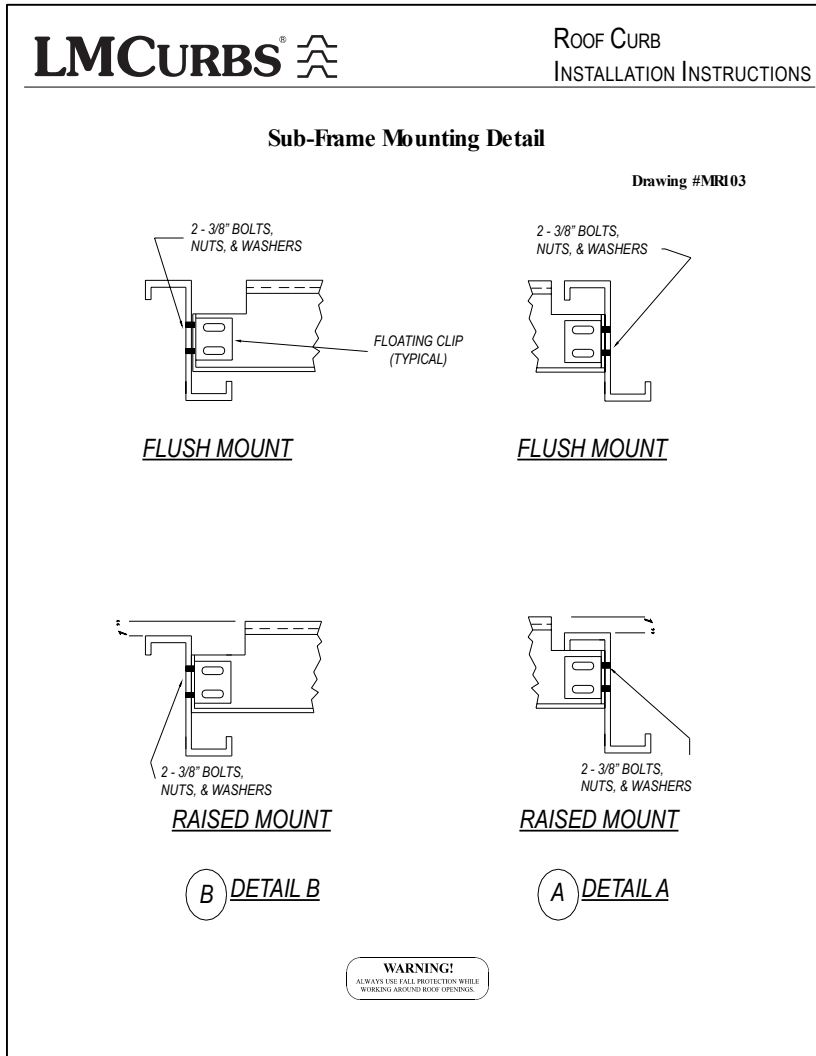


**NOTE 3.**  
INSTALLATION  
INSTRUCTIONS CONTINUED  
ON DRAWING MR103

**WARNING!**  
ALWAYS USE FALL PROTECTION WHILE  
WORKING AROUND ROOF OPENINGS.

# Seam To Seam Repair Cap Curbs

## ❑ Installation Manual





# S e a m   T o   S e a m   R e p a i r   C a p   C u r b s

❑ TAG Project 2017 in Memphis, TN – 92 Roof Curbs over 122,00 SF – No Leaks

