CI-CFR-TR-03  TRANSITION CONTINUOUS WALL TO ROOF RAKE
CI-CFR-TR-03-A  TRANSITION CONTINUOUS WALL TO ROOF RAKE
CI-CFR-TR-04  TRANSITION WALL TO HIGH EAVE
CI-CFR-TR-04-A  TRANSITION WALL TO HIGH EAVE
CI-CFR-TR-05  TRANSITION STACK JOINT TO HIGH EAVE
CI-CFR-TR-05-A  TRANSITION STACK JOINT TO HIGH EAVE
CI-CFR-TR-06  TRANSITION CONTINUOUS WALL TO HIGH EAVE
CI-CFR-TR-06-A  TRANSITION CONTINUOUS WALL TO HIGH EAVE
CI-CFR-TR-07  TRANSITION MASONRY WALL TO HIGH EAVE
CI-CFR-TR-07-A  TRANSITION MASONRY WALL TO HIGH EAVE
CI-CFR-TR-08  TRANSITION MASONRY WALL TO RAKE
CI-CFR-TR-08-A  TRANSITION MASONRY WALL TO RAKE
CI-CFR-VL-01  VALLEY ASSEMBLY
CI-CFR-VL-02  VALLEY ROOF PLAN
CI-CFR-RC-01  ROOF CURB SECTIONS
CI-CFR-RC-02  ROOF CURB SUPPORT
CI-CFR-RC-03  ROOF CURB INSTALLATION (1 OF 5)
CI-CFR-RC-04  ROOF CURB INSTALLATION (2 OF 5)
CI-CFR-RC-05  ROOF CURB INSTALLATION (3 OF 5)
CI-CFR-RC-06  ROOF CURB INSTALLATION (4 OF 5)
CI-CFR-RC-07  ROOF CURB INSTALLATION (5 OF 5)
CI-CFR-RC-08  ROOF CURB INSTALLATION (1 OF 1)
CI-CFR-PB-01  PIPE BOOT (1 OF 2)
CI-CRR-PB-02  PIPE BOOT (2 OF 2)
DISCLAIMER:

THESE DETAILS ARE PROVIDED AS A GUIDELINE FOR PROPER PANEL AND ASSOCIATED COMPONENT INSTALLATION, AND ARE BASED ON INDUSTRY ACCEPTED PRACTICES.

LOCATION OF VAPOR BARRIERS AND ASSOCIATED SEALANTS IN THESE DETAILS ARE BASED ON TYPICAL DESIGN PRACTICES FOR MOST U.S. CLIMATIC ZONES. (THE PRIMARY VAPOR BARRIER IS PLACED ON THE "WARM" SIDE IN WINTER).

PROJECTS LOCATED IN AREAS SUBJECT TO EXTREME WIND AND/OR HIGH SNOW LOADS MAY REQUIRE MODIFICATIONS TO THESE DETAILS — CONTACT METL-SPAN TECHNICAL SERVICES FOR SPECIFIC RECOMMENDATIONS.

WE RECOMMEND THE USE OF METL-SPAN SUPPLIED SEALANTS AND BUTYL TAPES FOR OPTIMUM PANEL SYSTEM PERFORMANCE.
LEGEND:

LL    LONG LIFE

BN    BONDED NEOPRENE WASHER
1. Set panel in place
2. Install CFR clip w/butyl tape sealant
3. Secure to purlins w/ 1/4" hex head fasteners
4. Hand "crimp" the standing rib/clip assembly at each clip location
5. Install continuous butyl tape sealant on top of male standing seam
6. Tilt next panel to be installed at 45 degree angle, rotate into position.
7. Use clamps to ensure proper panel engagement
8. Hand crimp at ridge, endlap and eaves
9. Install ridge, rake and eave components then mechanically seam roof
1. ADD WALL PANEL THICKNESS (BOTH ENDS) PLUS OUT TO OUT DIMENSIONS OF RAKE STRUCTURAL SUPPORTS.

2. DIVIDE RESULT BY PANEL MODULE (30", 36" OR 42") TO DETERMINE NUMBER OF PANELS REQUIRED.

3. DIVIDE FRACTIONAL PANEL REMAINDER (IF ANY) BY 2 TO DETERMINE STARTING PANEL WIDTH. IF RESULT IS LESS THAN 12", THEN CUT STARTER PANEL TO REMOVE INTERIOR JOINT ONLY – LAST PANEL WILL NEED TO ACCOMMODATE THE REMAINDER (LAYOUT WILL BE ASYMMETRICAL).
APPLICABLE END TREATMENT

- **CB# COPED (CUT BACK) END (E END OF PANEL)**: Standard cut back is 3" at bottom of every panel. (2" and 4" cut back dimensions are available options) In certain conditions, the CB end may not be required due to field cutting of panel or other field conditions. In these cases, the customer would need to order the panels with an "S" end.

- **BP/NS BACKER PLATE/NOTCH & SWAGE (A END OF PANEL)**: When lapped, the top of the bottom panel is to be noticed 3" to allow for the lapping of the panel above. A backer plate is plate installed in the panel.

- **S SQUARE CUT (A OR B END PANEL)**: Panels are square (flush) cut. No end treatment required.

- **BP BACKER PLATE (A END OF PANEL)**: Normally attached at the top of every panel. If panels are field cut, this piece can be removed and then re-inserted in the panel after cutting. Can also be entered as a "ship loose" pieces and field installed.

---

**COMMERCIAL & INDUSTRIAL PANEL INSTALLATION SEQUENCE**

- **End Lap Support Structural** (Typ.)
- **Rake Structural**
- **Eave Structural**
- **Downslope Roof Panel (Typ.)**
- **Rake Structural**
- **Eave Structural**
- **Interior Ridge Flashing**
- **Ridge Roof Structural**
- **Direction of Installation**
- **SINGLE ROOF PANEL LAYOUT WITH NO ENDLAPS**

---

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APPLICABLE END TREATMENT

CB#   COPED (CUT BACK) END (B END OF PANEL)

STANDARD CUT BACK IS 3" AT BOTTOM OF EVERY PANEL
(2" AND 4" CUT BACK DIMENSIONS ARE AVAILABLE OPTIONS) IN CERTAIN CONDITIONS THE CB END MAY NOT
BE REQUIRED DUE TO FIELD CUTTING OF PANEL OR OTHER FIELD CONDITIONS. IN THESE CASES, THE CUSTOMER
WOULD NEED TO ORDER THE PANELS WITH AN "S" END.

BP/NS BACKER PLATE/NOTCH & SWAGE (A END OF PANEL)

WHEN LAPPED, THE TOP OF THE BOTTOM PANEL IS TO BE
NOTCHED 3" TO ALLOW FOR THE LAPPING OF THE PANEL
ABOVE. A BACKER PLATE IS PLATE INSTALLED IN THE PANEL.

S SQUARE CUT (A OR B END PANEL)

PANELS ARE SQUARE (FLUSH) CUT. NO END TREATMENT REQUIRED.

BP BACKER PLATE (A END OF PANEL)

NORMALLY ATTACHED AT THE TOP OF EVERY PANEL. IF PANELS ARE FIELD CUT, THIS PIECE CAN BE REMOVED
AND THEN RE-INSERTED IN THE PANEL AFTER CUTTING. CAN ALSO BE ENTERED AS A "SHIP LOOSE" PIECES AND
FIELD INSTALLED.
APPLICABLE END TREATMENT

CB# COPED (CUT BACK) END (B END OF PANEL)

STANDARD CUT BACK IS 3" AT BOTTOM OF EVERY PANEL (2" AND 4" CUT BACK DIMENSIONS ARE AVAILABLE OPTIONS) IN CERTAIN CONDITIONS THE CB END MAY NOT BE REQUIRED DUE TO FIELD CUTTING OF PANEL OR OTHER FIELD CONDITIONS. IN THESE CASES, THE CUSTOMER WOULD NEED TO ORDER THE PANELS WITH AN "S" END.

BP/NS BACKER PLATE / NOTCH & SAWGE (A END OF PANEL)

WHEN LAPPED, THE TOP OF THE BOTTOM PANEL IS TO BE NOTCHED 3" TO ALLOW FOR THE LAPPING OF THE PANEL ABOVE. A BACKER PLATE IS PLATE INSTALLED IN THE PANEL.

S SQUARE CUT (A OR B END PANEL)

PANELS ARE SQUARE (FLUSH) CUT. NO END TREATMENT REQUIRED.

BP BACKER PLATE (A END OF PANEL)

NORMALLY ATTACHED AT THE TOP OF EVERY PANEL IF PANELS ARE FIELD CUT, THIS PIECE CAN BE REMOVED AND THEN RE-INSERTED IN THE PANEL AFTER CUTTING. CAN ALSO BE ENTERED AS A "SHIP LOOSE" PIECES AND FIELD INSTALLED.

COMMERCIAL & INDUSTRIAL PANEL INSTALLATION SEQUENCE

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FASTENER NOTE:

THE NUMBER OF FASTENERS PER CLIP ARE BASED ON THE FOLLOWING CRITERIA

- SELF DRILLING, SELF-TAPPING SCREWS
  - 3 / CLIP IF PURLIN IS LESS THAN 12 GAUGE.
  - 2 / CLIP IF PURLIN IS GREATER OR EQUAL TO 12 GA.
- TYPE B SELF-TAPPING SCREWS = 2 / CLIP
### Table: Panel Clip Specifications

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**Notes:**
- **Butyl Sealant Tape:** 1/4" round x 40' 
- **Clip Sealant:** [7412BWH]
- **Triple Bead Butyl Tape:** 2 1/2" x 3/16" x 20' [HW502]
- **Factory Installed Back-up Plate:** @ Each High Mesa, 4" O.C.
- **Continuous Non-Skinning Butyl Tape Sealant:** W/Marriage Bead to Panel Joint Sealant [71060WH]
- **Fasteners:** (Not by panel manufacturer)
- **Endlap Support:** (Not by panel manufacturer)
- **Roof Purlins:** (Not by panel manufacturer)

**Commercial & Industrial Endlap Attachment:**

**Drawing:** CI-CFR-EL-01-A

**Date:** Aug '19
LL 1/4-14 x 1 1/4” HWH TYPE 2
SELF DRILLING SCREW
W/1.125” BONDED WASHER
© EACH BACKUP PLATE

FACTORY SWAGE OVERLAP PANEL END

BUTYL TAPE SEALANT

3" ENGLAP

JOINT TO BE CENTERED ON STRUCTURAL SUPPORT

MAX 1/8" ALLOWABLE "GAP" BETWEEN PANELS

CONTINUOUS BUTYL TAPE SEALANT

CONTINUOUS BUTYL SEALANT WITH MARRIAGE BEAD TO PANEL JOINT SEALANT

CFR PANEL CLIP © EACH PANEL SIDELAP

1/4” HWH FASTENERS

FASTENERS (NOT BY PANEL MANUFACTURER)

ENGLAP SUPPORT (NOT BY PANEL MANUFACTURER)

2 1/2"
LEADING EDGE SECTION

BUTYL TAPE SEALANT

PUSH SEALANT COMPLETELY INTO CORNERS

END OF BUTYL TAPE SEALANT (FOLD OVER PANEL EDGE)

TRAILING EDGE OF ROOF PANEL

NOTCH

ALIGNMENT MARK (TYP.)

LEADING EDGE OF ROOF PANEL

BUTYL TAPE SEALANT

(ALIGN ENDLAP SEALANT WITH MARKS AND PANEL NOTCHES)

NOTCH

TRAILING EDGE SECTION

ENDLAP BUTYL TAPE SEALANT

PUSH SEALANT COMPLETELY INTO THE CORNERS

COMMERCIAL & INDUSTRIAL
ENDLAP LOWER PANEL
BUTYL TAPE SEALANT (2 OF 2)
CI-CFR-EL-06
DATE: Aug '19
SINGLE ROOF PANEL LAYOUT WITH NO ENLAPS

TWO PANEL LAYOUT WITH ENLAPS

THREE PANEL LAYOUT WITH ENLAPS

(*) ADD WALL PANEL THICKNESS TO PANEL LENGTH
LOW EAVE WITH TRIM

1/4" HWH FASTENERS
CONTINUOUS BUTYL SEALANT WITH MARRIAGE BEAD TO PANEL JOINT SEALANT
1/4" HWH FASTENERS
14 GA. 4 HOLE CF CLIP

EAVE SUPPORT (NOT BY PANEL MANUFACTURER)

FLASHING SEALANT TAPE
FLUTE PLUG STRIP (1) PER PANEL (IF REQUIRED) SET IN URETHANE SEALANT

EXPANDABLE FOAM INSULATION (NOT BY PANEL MANUFACTURER)

BUTYL TAPE SEALANT @ SIDE JOINTS

BUTYL TAPE SEALANT

MATERIALS
1 1/4" - 14 x 7/8" HWH TYPE 1, SELF DRILLING LAP SCREW W/BN WASHER @ EACH HIGH MESA

CLIP SEALANT

3" PANEL CUT-BACK
2"

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COMMERICAL & INDUSTRIAL

CI-CFR-EV-01

DATE: Aug '19
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**COMMERCIAL & INDUSTRIAL**

**LOW EAVE WITH TRIM**

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1/4"-14 x 1-1/2" HWH TYPE 2
W/ WASH. @ EACH SIDE LAP

1/4"-14 x 7/8" HWH TYPE 1,
SELF DRILLING LAP SCREW
W/ BN WASH. (2) PER GUTTER HANGER

1/4"-14 x 7/8" HWH TYPE 1,
SELF DRILLING LAP SCREW
W/ BN WASH. (1) PER SUPPORT

1/4"-14 x 7/8" HWH TYPE 1,
SELF DRILLING LAP SCREW
@ 8" O.C.

1/4" HWH FASTENERS
CONTINUOUS BUTYL SEALANT
WITH MARRIAGE BEAD
TO PANEL JOINT SEALANT

1/4" HWH FASTENERS
14 GA. PANEL CLIP

EAVE SUPPORT
(NOT BY PANEL MANUFACTURER)

BUTYL TAPE SEALANT
@ SIDE JOINTS

GUTTER HANGER
@ EVERY PANEL SEAM

EXPANDABLE FOAM INSULATION
(NOT BY PANEL MANUFACTURER)

EAVE TRIM

NORTHERN GUTTER

1/4"-14 x 7/8" HWH TYPE 1,
SELF DRILLING LAP SCREW
@ 8" O.C.

BUTYL TAPE SEALANT

FLUTE PLUG STRIP
(1) PER PANEL
 IF REQUIRED
SET IN URETHANE SEALANT

* ADD ADDITIONAL GUTTER
SUPPORTS AT
MIDPOINT BETWEEN STANDING SEAMS
(CFR-42 ONLY)
GUTTER HANGER
@ EVERY PANEL SEAM

1/4-14 x 1-1/2" HWH TYPE 2,
W/WASHER
@ EACH SIDE LAP

LL 1/4-14 x 7/8" HWH TYPE 1,
SELF DRILLING LAP SCREW
W/3N WASHER
(2) PER GUTTER HANGER
@ GUTTER SUPPORT
1/4-14 × 7/8" HWH TYPE 1, SELF DRILLING LAP SCREW W/BN WASHER @ EACH HIGH MESA

GUTTER SUPPORT

3" PANEL CUT-BACK

2"

LL 1/4-14 × 7/8" HWH TYPE 1, SELF DRILLING LAP SCREW W/BN WASHER (3) PER SUPPORT

CLIP SEALANT

CFR PANEL CLIP @ EACH PANEL SIDELAP

1/4" HWH FASTENERS

CONTINUOUS BUTYL SEALANT WITH MARRIAGE BEAD TO PANEL JOINT SEALANT

1/4" HWH FASTENERS

14 GA. PANEL CLIP

EAVE SUPPORT (NOT BY PANEL MANUFACTURER)

BUTYL TAPE SEALANT @ SIDEJONTS

1/4-14 × 7/8" HWH TYPE 1, SELF DRILLING LAP SCREW W/BN WASHER @ EACH HIGH MESA

BUTYL TAPE SEALANT EXPANDABLE FOAM INSULATION (NOT BY PANEL MANUFACTURER)

EAVE TRIM STANDARD GUTTER

FLASHING SEALANT TAPE

FLUTE PLUG STRIP (1) PER PANEL (IF REQUIRED) SET IN URETHANE SEALANT
EXTERIOR RIDGE TRIM [F85829]
EXPANDABLE FOAM INSULATION
(NOT BY PANEL MANUFACTURER)

DOUBLE BEAD BUTYL TAPE
1" X 1/4" X 20'
[7405BWH]

30" CFR RIDGE CLOSURE
[7901GBC]

36" CFR RIDGE CLOSURE
[7902GBC]

42" CFR RIDGE CLOSURE
[7900GBC]

TRIPLE BEAD BUTYL TAPE
1 1/4" X 5/32" X 30'
[7403BWH]
(SEE INSTALLATION GUIDE)

1/4"-14 X 7/8" LL HWH TYPE 1
W/WASHER @ 6" O.C.
[4]

TRIPLE BEAD BUTYL TAPE
1 1/4" X 5/32" X 30'
[7403BWH]

BUTYL SEALANT TAPE
1/4" ROUND X 40'
CLIP SEALANT
[7412BWH]

CFR PANEL CLIP
@ EACH PANEL SIDELAP
(SEE CHART)

1/4"-14 X 2" HWH TYPE 3
W/O WASHER (3 PER CLIP)
[1616PNG]

CONTINUOUS NON-SKINNING
BUTYL TUBE SEALANT
W/MARRIAGE BEAD TO PANEL
JUNCTION SEALANT
[7100BWH]

INTERIOR RIDGE TRIM
[F3504]

1/4"-14 X 1-1/4" LL HWH TYPE 3
W/WASHER @ EACH BACK-UP PLATE 4" O.C.
[1E]

BACK-UP PLATE FACTORY
INSTALLED @ EACH HIGH
MESA, 4" O.C.

6" MINIMUM
18" MAXIMUM

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COMMERCIAL & INDUSTRIAL
1. SET IN CONTINUOUS BUTYL SEALANT W/MARRIAGE BEADS TO PANEL JOINT

2. SET PANELS AND CLIPS

3. BUTYL TAPE SEALANT

4. EXPANDABLE FOAM INSULATION

5. 1/4" HWH FASTENERS

5. OUTSIDE RIDGE TRIM

6. 1/4" HWH FASTENERS

RIDGE CLOSURE

2-1/4" HWH FASTENERS

2-BUTYL TAPE SEALANT

2-CFR CLIP

* NUMBERS REFER TO SEQUENCE OF INSTALLATION
START AND FINISH
RIDGE FLASHING AT FACE
OF RAKE CLOSURE

PIGTAIL SEALANT
(3" STRIP OF
BUTYL TAPE SEALANT)

RAKE CLOSURE

RIDGE FLASHING

LL 1/4" X 7/8" HWH TYPE 1,
SELF DRILLING LAP SCREW
W/BN WASHER
@ 6" O.C.

PITCH, PITCH

INTERIOR
FLASHING CLOSURE

ROOF PANEL
(TYP.)

BUTYL TAPE SEALANT

RIDGE CLOSURE
(TYP.)
1/4-14 x 7/8" HWH TYPE 1, SELF DRILLING LAP SCREW @ 8" O.C.

COUNTER FLASHING

TRANSITION TRIM

1/4-14 x 7/8" HWH TYPE 1, SELF DRILLING LAP SCREW W/BN WASHER @ 6" O.C.

BUTYL TAPE SEALANT

RIDGE CLOSURE

BUTYL TAPE SEALANT

ELASTOMERIC SEALANT

BUTYL TAPE SEALANT

CONTINUOUS BUTYL SEALANT

EXPANDABLE FOAM INSULATION (NOT BY PANEL MANUFACTURER)

BUTYL SEALANT

ROOF/RAKE SUPPORT (NOT BY PANEL MANUFACTURER)

1/4" HWH FASTENERS

COMMERCIAL & INDUSTRIAL

TRANSITION CONTINUOUS WALL TO ROOF RAKE

CI-CFR-TR-03

DATE: Aug '19
EDGE TRIM [F3389]
1/8" X 3/16" BLIND RIVET @ 12" O.C. [14]
TRANSITION TRIM [F5901]
4"-14 X 7/8" LL HWH TYPE 1 W/WASHER @ 6" O.C. [4]
DOUBLE BEAD BUTYL TAPE 1" X 1/4" X 20' [74059WH]
30" CFR RIDGE CLOSURE [79019BK]
36" CFR RIDGE CLOSURE [79029BK]
42" CFR RIDGE CLOSURE [79000BK]

BUTYL SEALANT TAPE 1/4" ROUND X 40' CLIP SEALANT [74123WH]
CFR PANEL CLIP @ EACH PANEL SIDELAP (SEE CHART)
1/4"-14 X 2" HWH TYPE 3 W/O WASHER (3 PER CLIP) [61619NC]

14 GA. 4 HOLE OF PANEL CLIP 4" X 3/4" [46336NC]
CONTINUOUS NON-SKINNING BUTYL TUBE SEALANT W/MARRIAGE BEAD TO PANEL JOINT SEALANT [71008WH]
NON-SKINNING BUTYL TUBE SEALANT [71006WH]
1/4"-14 HWH TYPE 3 W/O WASHER

SUPPORT REQUIRED (NOT BY PANEL MANUFACTURER)
TRIPLE BEAD BUTYL TAPE 1 1/4" X 5/32" X 30' [74033WH] (SEE INSTALLATION GUIDE)

CLOSETR Trim
EXPANDABLE FOAM INSULATION (NOT BY PANEL MANUFACTURER)
BACK-UP PLATE FACTORY INSTALLED @ EACH HIGH MESA, 4" O.C.
TRIPLE BEAD BUTYL TAPE 1 1/4" X 5/32" X 30' [74033WH]
CONTINUOUS NON-SKINNING BUTYL TUBE SEALANT W/MARRIAGE BEAD TO PANEL JOINT SEALANT [71008WH]
1/4"-14 X 1-1/4" LL HWH TYPE W/WASHER @ EACH BACK-UP PLATE 4" O.C. [11E]
SUPPORT (NOT BY PANEL MANUFACTURER)

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COMMERCIAL & INDUSTRIAL WALL TO HIGH EAVE

DATE: Aug '19
### Commercial & Industrial

#### Transition Stack Joint to High Eave

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**Notes:**
- **1/8" x 3/16" Blind Rivet** @ 12" o.c. [14]
- **Edge Trim** [F33569]
- **Custom Transition Trim**
- **Triple Bead Butyl Tape** 1 1/4" x 5/32" x 30' @ side joints [7403BWH]
- **4"-14 x 7/8" LH HWH Type 1** W/ WASHER @ 6" O.C. [4]
- **Double Bead Butyl Tape** 1" x 1/4" x 20' [7405BWH]
- **30" CFR Ridge Closure** [79010BK]
- **36" CFR Ridge Closure** [7902GBK]
- **42" CFR Ridge Closure** [7900GBK]
- **Butyl Sealant Tape** 1/4" Round x 40' [7412BWH]
- **Cliff Sealant** [7412BWH]
- **CFR Panel Clip** @ Each Panel Sidetrap (see chart)
- **1/4"-14 x 2" LH HWH Type 3** W/O WASHER (3 per clip) [4166GNC]
- **14 x 1-1/4" LH HWH Type 3** W/ WASHER
  - Each back-up plate 4" O.C. [4]
- **1/4"-14 x 7/8" LH HWH Type 1** W/ WASHER @ 8" O.C. [14A]
- **Interior Transition Trim**
- **Support** (not by panel manufacturer)
- **14 Ga. 1 HOLE OF PANEL CLIP** 4" x 3/4" [4633GNC]
- **Continuous Non-Skimming Butyl Tube Sealant** W/Marriage bead to panel joint sealant [7100BWH]
- **Non-Skimming Butyl Tube Sealant** [7100BWH]
- **1/4"-14 HWH Type 3** W/O WASHER

---

**Support Required (not by panel manufacturer):**
- **Continuous Non-Skimming Butyl Tube Sealant** W/Marriage bead to panel joint sealant [7100BWH]
- **Expandable Foam Insulation** (not by panel manufacturer)
- **Back-Up Plate Factory Installed @ Each High Mesa, 4" O.C.**
- **Continuous Non-Skimming Butyl Tube Sealant** W/Marriage bead to panel joint sealant [7100BWH]
- **Sealant Tape** [73003GR]
MASONRY FASTENER (NOT BY PANEL MANUFACTURER)

POURABLE CAULK (NOT BY PANEL MANUFACTURER)

FIELD CUT MASONRY, INSERT FLASHING, FILL VOID WITH SEALANT (NOT BY PANEL MANUFACTURER)

TRANSITION TRIM

LL 1/4-14 x 7/8" HWH TYPE 1, SELF DRILLING LAP SCREW W/BN WASHER © 6" O.C.

SEALANT TAPE

RIDGE CLOSURE

CLOSED CLOSURE

BACK-UP PLATE FACTORY INSTALLED © EACH HIGH MESA, 4" O.C.

EXPANDABLE FOAM INSULATION (NOT BY PANEL MANUFACTURER)

BUTYL TAPE SEALANT

CONTINUOUS BUTYL SEALANT WITH MARRIAGE BEAD TO PANEL JOINT SEALANT

1/4" HWH FASTENERS W/OUT WASHER © EACH BACK-UP PLATE, 4" O.C.

CLIP SEALANT

CFP PANEL CLIP © EACH PANEL SIDELAP

SUPPORT (NOT BY PANEL MANUFACTURER)
### Table: Panel Clip Conversion

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**CUSTOM TRANSITION TRIM**

**TRIPLE BEAD BUTYL TAPE**
- 1 1/4" X 5/32" X 30'
- SIDE JOINTS [7403BWH]

**1'-14 X 7/8" LL HHW TYPE 1 W/WASHER @ 6" O.C.** [4]

**DOUBLE BEAD BUTYL TAPE**
- 1" X 1/4" X 20' [7405BWH]
- 30" CFR RIDGE CLOSURE [7901GBK]
- 36" CFR RIDGE CLOSURE [7902GBK]
- 42" CFR RIDGE CLOSURE [7900GBK]

**BUTYL SEALANT TAPE**
- 1/4" ROUND X 40' CLIP SEALANT [7412BWH]
- CFR PANEL CLIP @ EACH PANEL SIDELAP (SEE CHART)
- 1'-14 X 2" HHW TYPE 3 W/O WASHER (3 PER CLIP) [1616PNC]

**POURABLE DAVULK**
- (NOT BY PANEL MANUFACTURER)

**CUSTOM CLOSURE TRIM**

**FIELD CUT MASONRY, INSERT FLASHING, FILL VOID WITH SEALANT**
- (NOT BY PANEL MANUFACTURER)

**BACK-UP PLATE FACTORY INSTALLED @ EACH HIGH MESA, 4" O.C.**

**EXPANDABLE FOAM INSULATION**
- (NOT BY PANEL MANUFACTURER)

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**TRIPLE BEAD BUTYL TAPE**
- 1 1/4" X 5/32" X 30' [7403BWH]

**CONTINUOUS NON-SKINNING BUTYL TUBE SEALANT W/MARRIAGE BEAD TO PANEL JOINT SEALANT** [7100BWH]

**1'-14 X 1-1/4" LL HHW TYPE 1 W/WASHER @ EACH BACK-UP PLATE 4" O.C.** [11E]

**SUPPORT**
- (NOT BY PANEL MANUFACTURER)

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**TRANSITION**

**COMMERCIAL & INDUSTRIAL MASONRY WALL TO HIGH EAVE**

**DATE:** Aug '19
TABLE OF THRU PANEL FASTENER OPTIONS

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</table>
LL 1/4-14 x 1 1/4” HWH TYPE 2
SELF DRILLING SCREW
W/1.125” BONDED WASHER
@ EVERY HIGH & LOW MESA

CLIP SEALANT
BUTYL TAPE SEALANT
@ SIDE JOINTS

LL 1/4-14 x 1 1/4” HWH TYPE 2
SELF DRILLING SCREW
W/1.125” BONDED WASHER
@ 4” O.C.

2 1/2” FIELD CUT BACK UNDER SKIN
BUTYL TAPE SEALANT

VALLEY TRIM

CONTINUOUS 16 GA GALV. CEE
SECURED TO VALLEY PLATE
WITH TYPE B FASTENERS
@ 12” O.C.

STRUCTURAL VALLEY SUPPORT PLATE
NOT BY PANEL MANUFACTURER

RIGID INSULATION
NOT BY PANEL MANUFACTURER

CONTINUOUS BUTYL SEALANT
WITH MARRIAGE BEAD TO
PANEL JOINT SEALANT

CFR PANEL CLIP
@ EACH PANEL SIDELAP

1/4” HWH FASTENERS
METL-SPAN CFR
INSULATED ROOF PANEL

SEQUENCE OF INSTALLATION:

1. STRUCTURAL VALLEY SUPPORT PLATE
2. CEE SHAPED SECURED TO VALLEY PLATE
3. FILL VOID W/RIGID INSULATION
4. INSTALL VALLEY TRIM
5. APPLY SEALANT TAPE
6. FIELD CUT ROOF PANELS, REMOVE CUT BACK
7. FASTEN ASSEMBLY

NOTE: NOT FOR DORMER CONDITIONS –
CONTACT METL-SPAN FOR MORE INFORMATION
(6) FASTENER #1B 1/4-14 X 1 1/4” SD W/O WASHER
FOR PURLIN OR CURB SUPPORT 14GA OR LESS.

(6) FASTENER #55 12-24 X 1 1/4” SD DP5 W/O WASHER
FOR PURLIN OR CURB SUPPORT 12GA OR GREATER.

L 4 X 4 X 14GA X 6” FIELD CUT FROM

SUB-FRAMING SUPPORT

L 4 X 4 X 14 GA. ANGLE FIELD CUT FROM

(4) FASTENER #1B
1/4-14 X 1 1/2” SD W/O WASHER AT EACH ANGLE LEG

ROOF CURB SUPPORT CHANNEL
FACTORY LOCATED CURBS WITH A SINGLE PANEL RUNNING EAVE TO RIDGE: PANELS ARE TO BE DETAILED WITH AN ENDLAP AT THE UPSLOPE CURB LOCATION ONLY.

FIELD LOCATED CURBS WITH A SINGLE PANEL RUNNING EAVE TO RIDGE: PANELS AT CURB LOCATION MUST BE A MINIMUM OF 3" LONGER TO PERMIT FIELD CUTTING AND NOTCHING / REMOVAL OF FOAM AT UPSLOPE SPLICE LOCATION OF CURB.

FACTORY LOCATED CURBS ON MULTIPLE PANELS RUNNING EAVE TO RIDGE: PANELS MUST BE DETAILED FOR AN ENDLAP AT THE UPSLOPE CURB LOCATION.

FIELD LOCATED CURBS ON MULTIPLE PANELS RUNNING EAVE TO RIDGE: PANELS UPSLOPE OF CURB LOCATION MUST BE A MINIMUM OF 3" LONGER TO PERMIT FIELD CUTTING AND NOTCHING / REMOVAL OF FOAM AT UPSLOPE SPLICE LOCATION OF CURB.

ROOF ERECTION SEQUENCE IS LEFT TO RIGHT ON EACH PLANE.

STEP 1

P SUPPORT ANGLE UNDER CURB AREA ONLY.
L 2 X 4 X 16GA FIELD CUT TO LENGTH.
LD FABRICATE AND FIELD LOCATE ENDLAP.
REFERENCE STANDARD ENDLAP

REMOVE PANEL RIB

PURLIN

PURLIN
ROOF CURBS MUST BE INSTALLED AS THE ROOF PANELS ARE INSTALLED

THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES ONLY. INDIVIDUAL DETAILS MAY VARY. REFERENCE SHOP DRAWINGS AND/OR DESIGN INSTALLATIONS MANUAL.

FIELD REMOVE PANEL RIBS TO ALLOW CURB TO SET FLAT.

PANCAKE HEAD FASTENER 8" O.C. SUB-FRAMING, LENGTH OF FASTENER PENDANT ON ROOF PANEL THICKNESS.

URETHANE SEALANT

TRIPLE-BEAD TAPE SEALANT (CONTINUOUS)

ENDLAP SUPPORT ANGLE UNDER CURB AREA ONLY.

ROOF CURB SUPPORT CHANNEL FIELD CUT AND NOTCH

TRIPLE-BEAD TAPE SEALANT (CONTINUOUS)

PURSLIN

STEP 2

HAND CRIMP (9" MIN.) AND TOOL SEAM PRIOR TO PLACING CURB. SEE STEP 3 FOR ADDITIONAL CRIMP REQUIREMENTS
ROOF CURB INSTALLATION PROCEDURES FOR STANDING SEAM ROOF PANEL

NOTE:

TAPE AND TUBE SEALANT
AS RECOMMENDED BY BUILDING MANUFACTURER

ROOF CURB INSTALLATION INSTRUCTIONS:

1. ON FULLY SHEETED ROOF, SET CURB IN PLACE. CURB BASE FLANGE WILL GO TO NEAREST HIGH AT A SEAM (MINIMUM 6" CLEARANCE).
2. MARK BASE FLANGE LOCATIONS AND THROAT AREA. DO NOT USE LEAD PENCIL.
3. LOCATE AND MARK ROOF OPENING CUT LINE. ALLOW FOR 3" PANEL LAP ON UPSLOPE. ALLOW FOR 4" RIB CLOSURE DOWNSLOPE (LENGTH OF CURB MINUS 7").
4. IF C-CHANNEL SUPPORT IS REQUIRED, SEE DETAIL OF C-CHANNEL ASSEMBLY. POSITION UNDER VERTICAL PART OF CURB, EDGE OF SUB-FRAME, AND C-CHANNEL.
5. LAYOUT THROAT OPENING CUT LINE AND CUT THROUGH EXTERIOR PANEL, INSULATION AND Interior PANEL AND ACCORDING TO BUILDING MANUFACTURER'S RECOMMENDATIONS.
6. LAYOUT ROOF PANEL CUT LINE AND CUT THROUGH EXTERIOR PANEL ONLY. REMOVE EXTERIOR PANEL LEAVING THE INSULATION FACE SHOWING.
7. REMOVE CUT PANELS FROM ROOF OPENING AND CLEAN UP ALL METAL SHAVINGS AND DEBRIS.
8. NO SCREWS REQUIRED IN THE C-CHANNEL. IT WILL BE SECURED WHEN CURB IS FASTENED DOWN.
9. APPLY A STRIP OF SEALANT TAPE ON UPPER SIDE OF UPHILL BASE FLANGE. ON DOWNHILL BASE FLANGE, APPLY SEALANT TAPE TO BOTTOM (UNDERNEATH) SIDE OF BASE FLANGE.
10. GENEROUSLY CAULK SEAL WHERE CURB BASE BUTTS TO ROOF PANEL.
Recommended screws per panel, uphill and downhill in curb base flange. Clean up installation debris before leaving area.
NOTE:

FOR ROOF PITCHES GREATER THAN 4:12
CONSIDER USING NEXT LARGER SIZE BOOT.
(DO NOT INSTALL OVER PANEL RIBS)

STEPS FOR INSTALLING PIPE BOOT FLASHING:

1.) CUT PIPE BOO TO PIPE DIAMETER MARKED ON THE CONE (INCHES AND MILLIMETERS). ALLOW 1/2" [13] STRAIGHT COLLAR AGAINST THE PIPE FOR MAXIMUM SEALING.
2.) CLEAN AREA FLASHING IS TO BE INSTALLED AGAINST THE PANEL THOROUGHLY.
3.) SLIDE BOOT OVER PIPE TO BE FLASHED.
4.) APPLY A 3/8"[10] BEAD OF POLYURETHANE TO THE UNDER SIDE OF THE RIBBED ALUMINUM BASE.
5.) PRESS FLASHING TO CONTOURS OF ROOF PANEL. A BLUNT TOOL MAY BE USED TO PRESS BOOT INTO PLACE IN SHARPLY ANGLED AREAS.
6.) FASTEN FLASHING AS DESCRIBED IN DETAIL. WHILE FASTENING INSPECT BASE FOR GAPS BETWEEN THE PIPE BOOT BASE AND ROOF PANEL. TOOL EXCESS POLYURETHANE SEALANT INTO THE EDGE OF THE ROOF BASE.