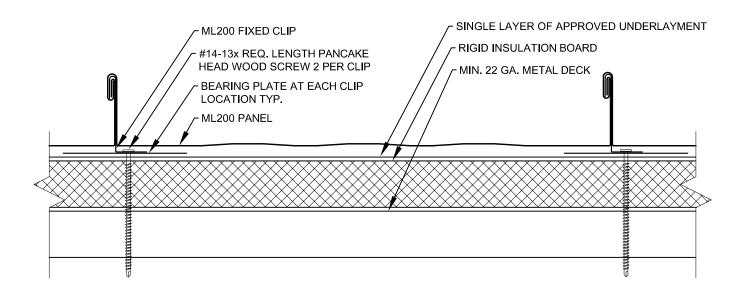


ML200 Standing Seam Rigid Insulation Over Metal Deck Master Details

Architectural / Solid Substrate / Steep Slope

The following details are commonly used over steep sloped applications including those over solid substrates such as plywood or steel decking with rigid insulation. Such details are largely based on hydrokinetic (water shedding) design principles and architectural detailing.



FAYETTEVILLE, NC 888-685-7663

OCALA, FL 800-331-3584 **SPENCER, NC** 800-526-8156

VICKSBURG, MS 888-661-0577 **ANDERSON, SC** 800-544-5169

TIPP CITY, OH 877-615-9812 **TIFTON, GA** 800-962-9131

OKLAHOMA CITY, OK 866-373-5286 ORANGE, VA 800-762-6785

SCRANTON, PA 866-695-6455



ML200 Standing Seam

Index

-Rigid Insulation Over Metal Deck-Fixed Clip and Expansion Clip

Panel Information	Detail No.		
Panel Application	.0.10 FX		
Panel Application	_		
System Overview - Panel Profiles			
System Overview - Clips			
Thermal Gap Installation Chart - Steel			
Thermal Gap Installation Chart - Glech			
Thormal dap installation offait. Thamhain	0.07		
Eave Details	Detail No.		
Extended Eave	1.10 FX		
Extended Eave			
Extended Eave - Steep Slope			
Extended Eave - Steep Slope			
Extended Eave with Gutter			
Extended Eave with Gutter			
Extended Eave with Gutter - Steep Slope			
Extended Eave with Gutter - Steep Slope			
Extended Eave with Soffit			
Extended Eave with Soffit			
Extended Eave with Soffit & Gutter			
Extended Eave with Soffit & Gutter			
Extended Eave with Vertical Flush Panel			
Extended Eave with Vertical Flush Panel			
Extended Eave with Vertical Flush Faher			
<u> </u>	_		
Extended Eave with Vertical Standing Seam Panel Extended Eave Lap Detail			
Gable Details	1.90 Detail No.		
- Capita Dotaino			
Gable - Extended Drip	2.10 FX		
Gable - Extended Drip			
Gable - Box	_		
Gable - Box	_		
Gable - Box with Zee Closure	_		
Box Gable Lap Detail	_		
Valley Details	Detail No.		
Valley - Integral Cleat	3.10		
Valley - Offset Cleat	3.20		
Valley Lap Detail	3.90		



ML200 Standing Seam

Index

-Rigid Insulation Over Metal Deck-Fixed Clip and Expansion Clip

Ridge & Hip Details	Detail No.
Standard Ridge & Hip Standard Ridge & Hip Ridge Termination at Valley Ridge & Hip Lap Detail Ridge Cap Expansion Detail	4.10_EX 4.40 4.90
Peak Details	Detail No.
Peak DetailPeak DetailPeak DetailPeak Detail with Vertical Flush PanelPeak Detail with Vertical Flush Panel	
High Wall & Low Wall Details	Detail No.
High Wall - Reglet	6.10_EX 6.12_FX 6.12_EX 6.14_FX 6.14_EX 6.20_FX 6.20_EX 6.30_FX 6.30_EX
Sidewall Details	Detail No.
Sidewall - Reglet with Subflashing Angle Sidewall - Reglet with Subflashing Angle Sidewall - Surface Mount with Subflashing Angle Sidewall - Surface Mount with Subflashing Angle Sidewall - Wood Framing & Siding with Subflashing Angle Sidewall - Wood Framing & Siding with Subflashing Angle Sidewall - Reglet with J-Channel Subflashing Sidewall - Reglet with J-Channel Subflashing Sidewall - Surface Mount with J-Channel Subflashing Sidewall - Surface Mount with J-Channel Subflashing Sidewall - Wood Framing & Siding with J-Channel Subflashing	7.11_FX 7.11_EX 7.12_FX 7.12_EX 7.13_FX 7.13_EX 7.21_FX 7.21_EX 7.22_FX 7.22_EX 7.23_FX 7.23_EX

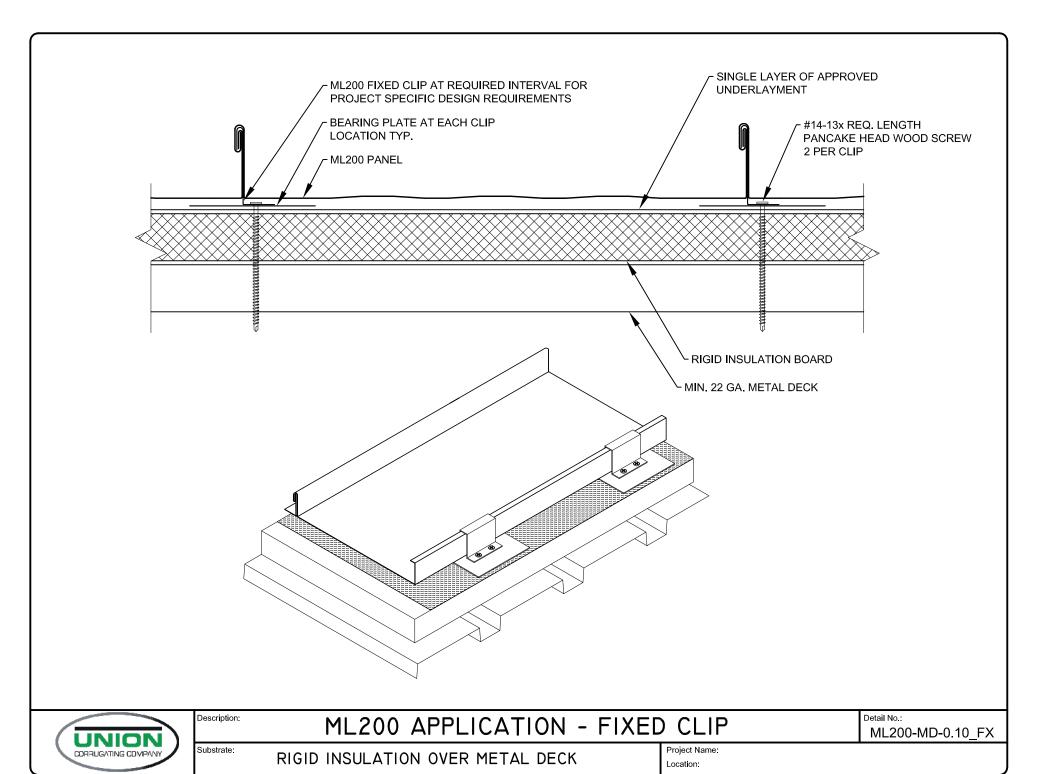


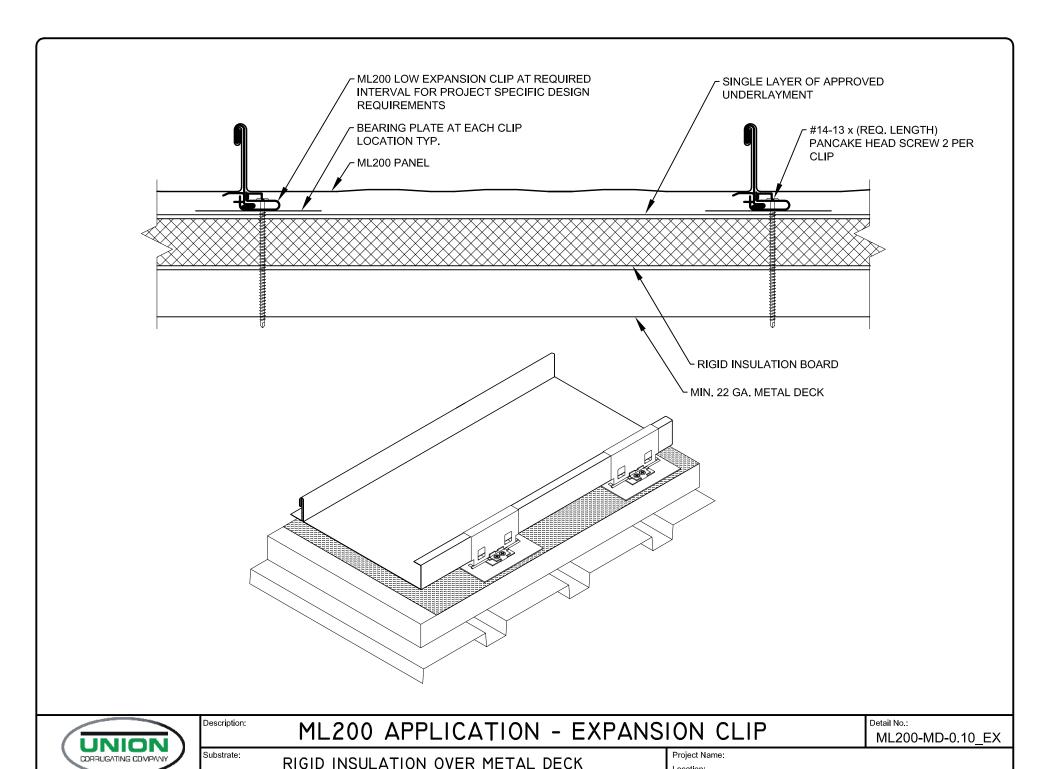
ML200 Standing Seam

Index

-Wood Substrate-Fixed Clip and Expansion Clip

Sidewall Details (continued)	Detail No.
Sidewall - Reglet with Zee Closure	7.31 FX
Sidewall - Surface Mount with Zee Closure	7.32 FX
Sidewall - Wood Framing & Siding with Zee Closure	7.33 FX
Sidewall Expansion Joint	7.40 FX
Sidewall Expansion Joint	7.40 EX
Expansion Joint Mid-Roof	7.50 FX
Expansion Joint Mid-Roof	7.50 EX
Sidewall Lap Detail	7.90
Oldowan Esp Bolan	
Slope Transition Details	Detail No.
Slope Transition	8.10_FX
Slope Transition	8.10_EX
Transition at Membrane Roofing	8.20
General Information Details	Detail No.
Panel Hemming	10.10
End Lap Detail - Low Slope	10.14
End Lap Detail - Steep Slope	
Zee Closure Installation	10.20
Pipe Penetration	10.30
Pipe Penetration Through Panel Rib	
Curb at High Wall & Low Wall	10.40_FX
Curb at High Wall & Low Wall	
Curb at Sidewall	
Curb at Sidewall	10.41 EX
Curb Installation Detail	CRB 1-6

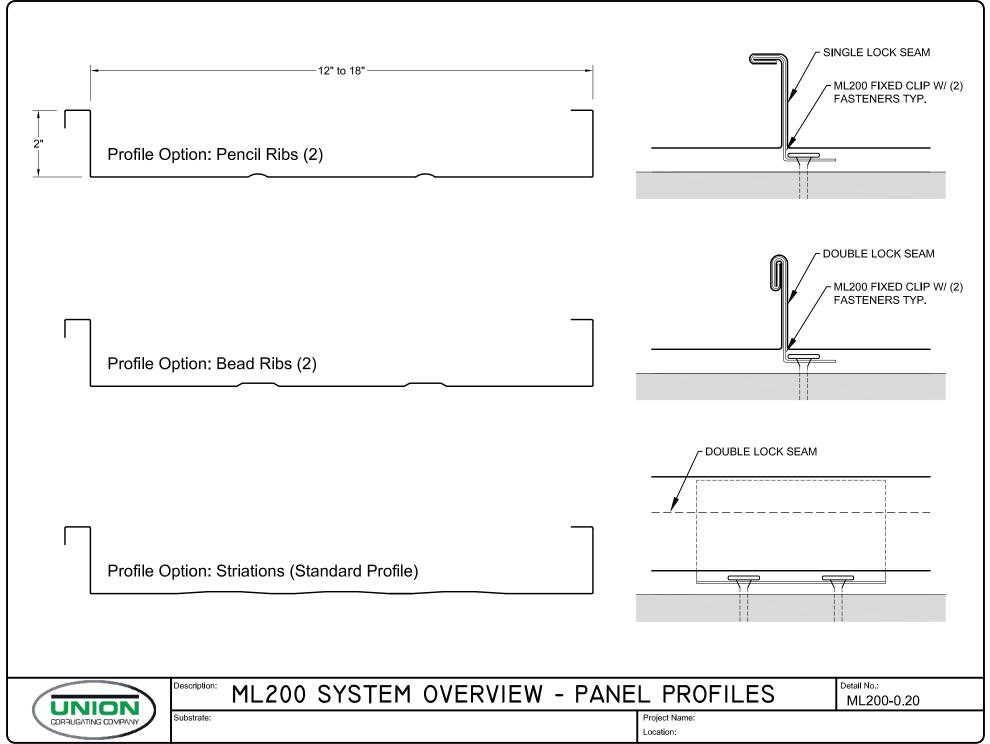


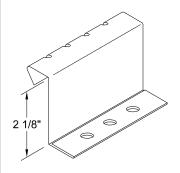


Location:

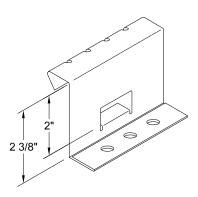
Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.

2016-0301

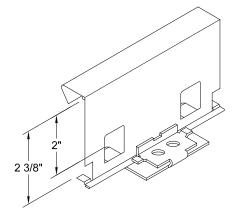




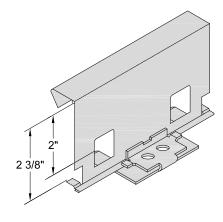
Clip 40 Fixed 22 Ga. Galvanized 2.125" x 3.25"



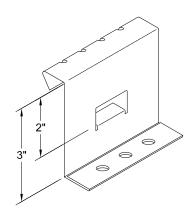
Clip 41 Fixed
22 Ga. Galvanized
2.375" x 3.25" (0.375" Substrate Standoff)



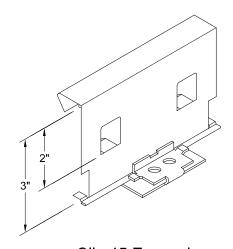
Clip 42 Expansion
22 Ga. Galvanized w/ 16 Ga. Base
2.375" x 4.25" (0.375" Substrate Standoff)
Use with up to 3" of blanket insulation



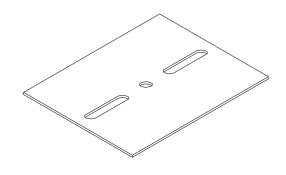
Clip 43 Expansion
22 Ga. Stainless Steel w/ 16 Ga. Base
2.375" x 4.25" (0.375" Substrate Standoff)
Recommended for use with aluminum panels
Use with up to 3" of blanket insulation



Clip 44 Fixed
22 Ga. Galvanized
3" x 3" (1" Substrate Standoff)
Use with up to 6" of blanket insulation



Clip 45 Expansion
22 Ga. Galvanized w/ 16 Ga. Base
3" x 3" (1" Substrate Standoff)
Use with up to 6" of blanket insulation



4" x 5" Bearing Plate
16 Ga. Galvanized
Required for use when clips are applied
directly over rigid board insulation

IMPORTANT INSTALLATION NOTE EXPANSION CLIPS ARE RECOMMENDED FOR PANEL LENGTHS GREATER THAN 30'-0".



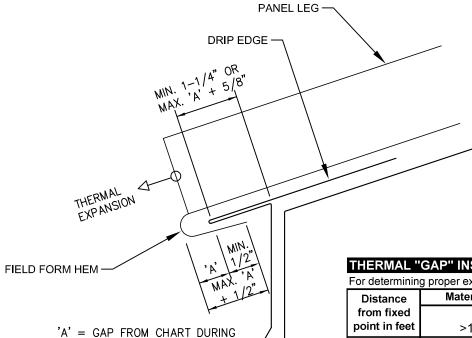
Description:

ML200 SYSTEM OVERVIEW - CLIPS

Detail No.:

ML200-0.21

Substrate:



THERMAL "GAP" INSTALLATION CHART (In inches) - STEEL

For determining proper expansion/contraction gap at panel ends during installation

Distance	Material Temperature (Surface Temperature) During Installation							
from fixed	Hot			Warm		Cold		
point in feet	>100° F		t >100° F 100° to 50° F		<50° F			
10	0.145		1/8	0.072	1/16	0.000	0	
20	0.289		5/16	0.145	1/8	0.000	0	
30	0.434		7/16	0.217	3/16	0.125		1/8
40	0.579		9/16	0.289	5/16	0.125		1/8
50	0.724		3/4	0.362	3/8	0.188		3/16
60	0.868		7/8	0.434	7/16	0.188		3/16
70	1.013	1		0.507	1/2	0.250		1/4
80	1.158	1	3/16	0.579	9/16	0.250		1/4
90	1.302	1	5/16	0.651	5/8	0.375		3/8
100	1.447	1	7/16	0.724	3/4	0.375		3/8

^{*} Chart based on temperature differential of:

180 degrees F



Description: THERMAL GAP INSTALLATION CHART - STEEL

Detail No.:

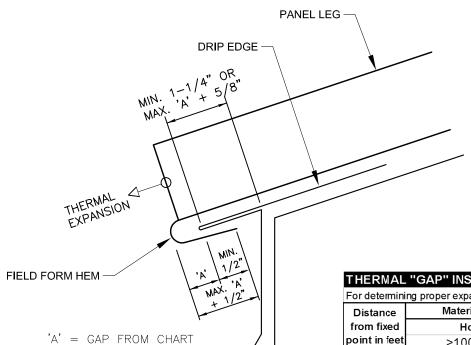
ML200-0.30

Substrate:

Project Name: Location:

TIME OF INSTALLATION

^{*} Coefficient of thermal expansion for steel: 0.0000067



THERMAL "GAP" INSTALLATION CHART (In inches) - ALUMINUM

For determining proper expansion/contraction gap at panel ends during installation

Distance	Material Temperature (Surface Temperature) During Installation						
from fixed	Hot		ed Hot Warm		arm	Cold	
point in feet	>10	0° F	100° to 50° F		<50)° F	
10	0.279	1/4	0.139	1/8	0.000	0	
20	0.557	9/16	0.279	1/4	0.000	0	
30	0.836	13/16	0.418	7/16	0.125	1/8	
40	1.115	1 1/8	0.557	9/16	0.125	1/8	
50	1.393	1 3/8	0.697	11/16	0.188	3/16	
60	1.672	1 11/16	0.836	13/16	0.188	3/16	
70	1.950	1 15/16	0.975	1	0.250	1/4	
80	2.229	2 1/4	1.115	1 1/8	0.250	1/4	
90	2.508	2 1/2	1.254	1 1/4	0.375	3/8	
100	2.786	2 13/16	1.393	1 3/8	0.375	3/8	

* Chart based on temperature differential of: 180 degrees F

* Coefficient of thermal expansion for alum.: 0.0000129

CORRUGATING COMPANY

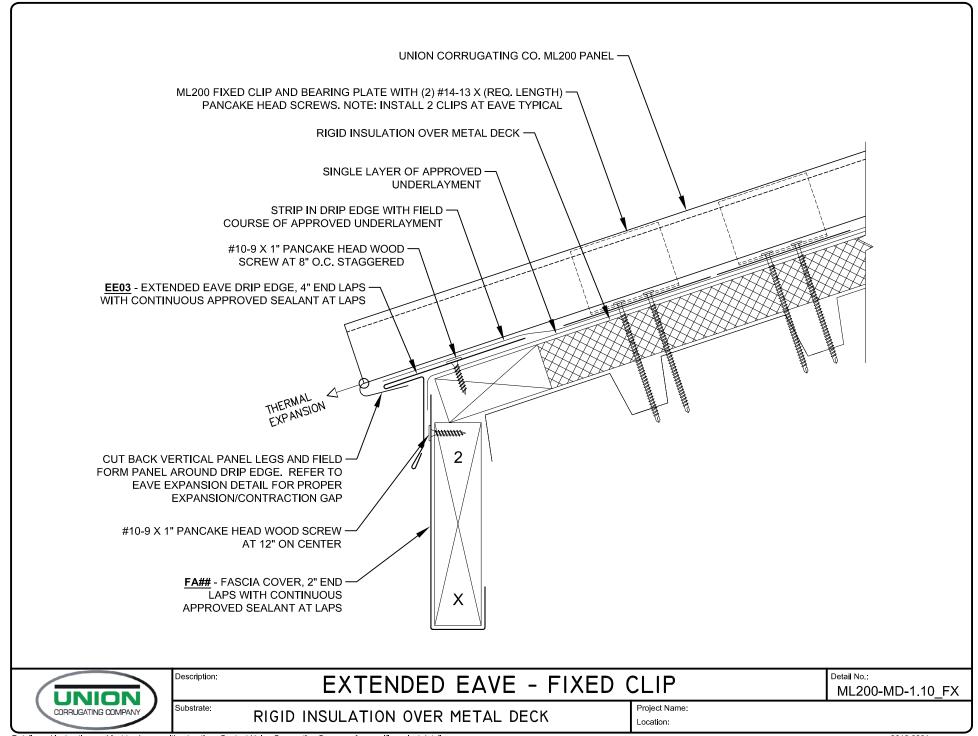
THERMAL GAP INSTALLATION CHART - ALUMINUM

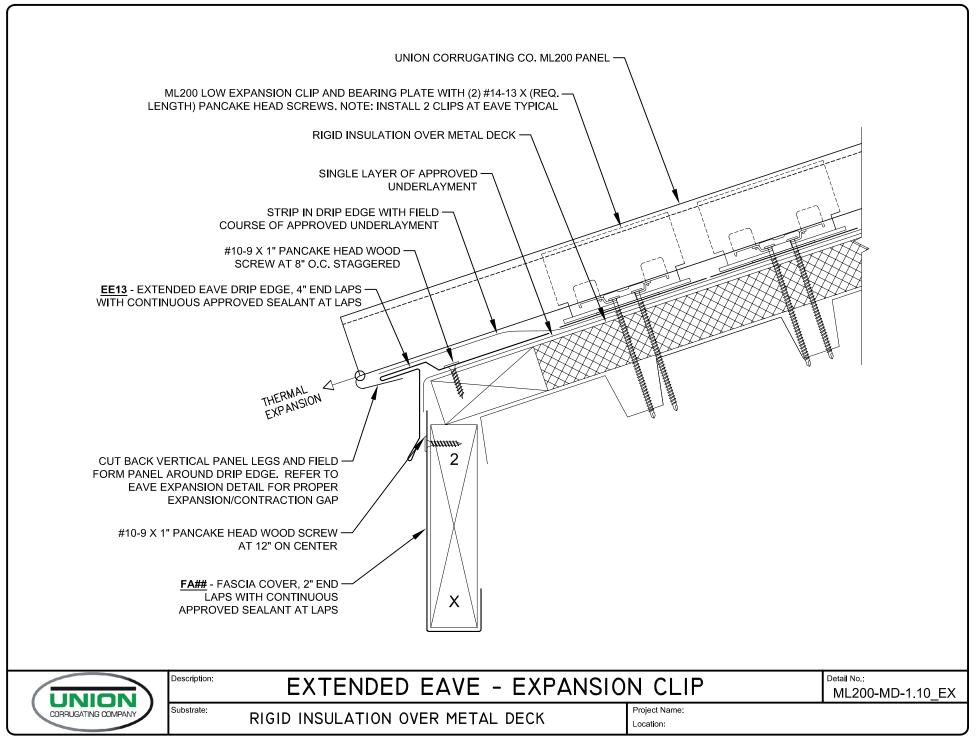
Detail No.: ML200-0.31

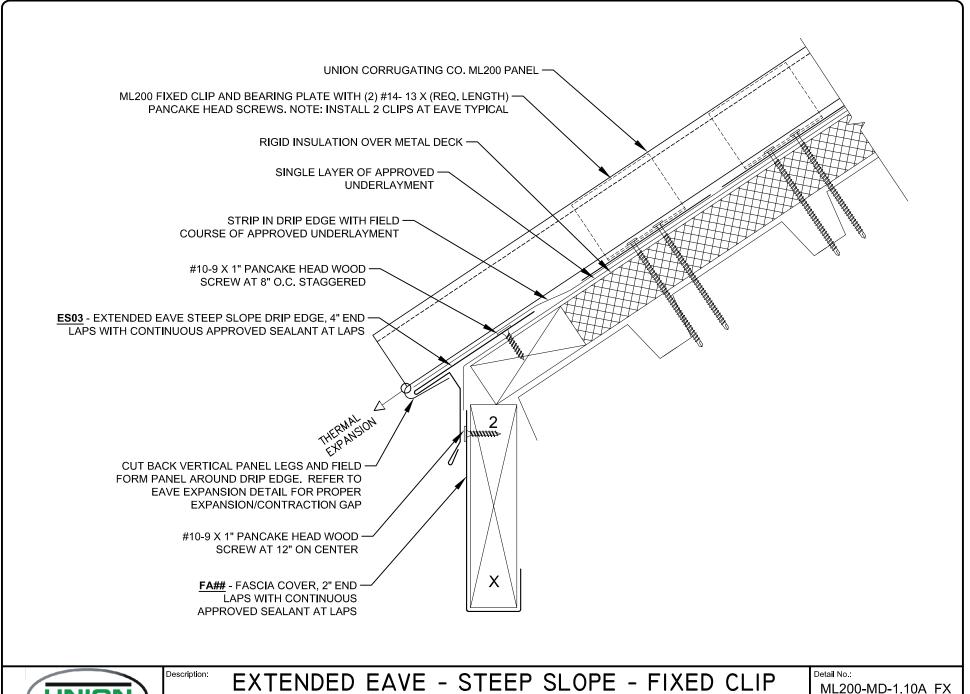
Substrate:

Project Name: Location:

DURING TIME OF INSTALLATION



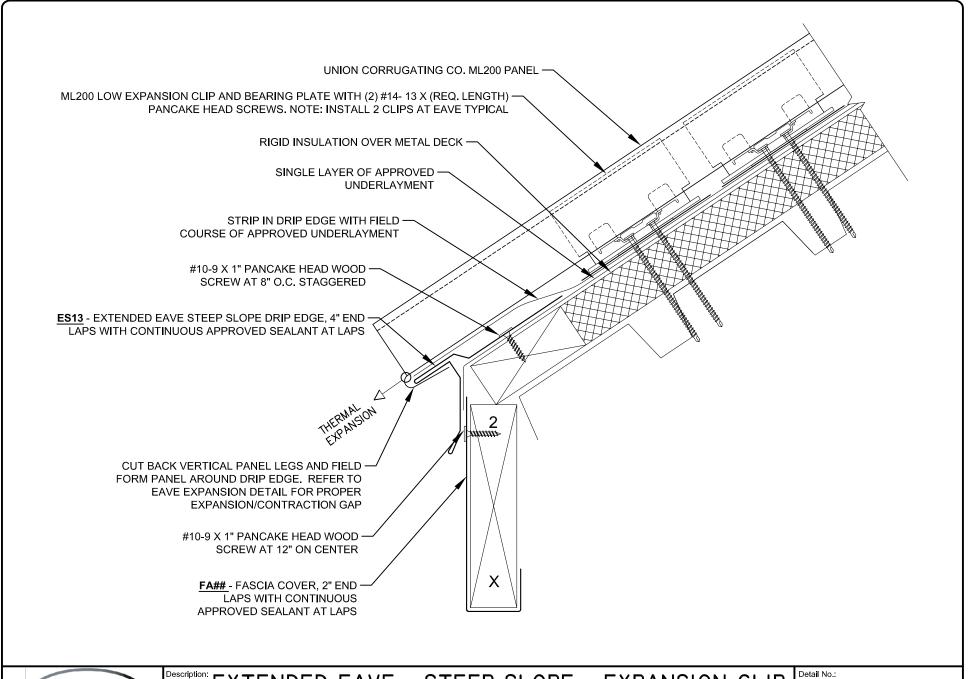




ML200-MD-1.10A FX

Substrate:

RIGID INSULATION OVER METAL DECK



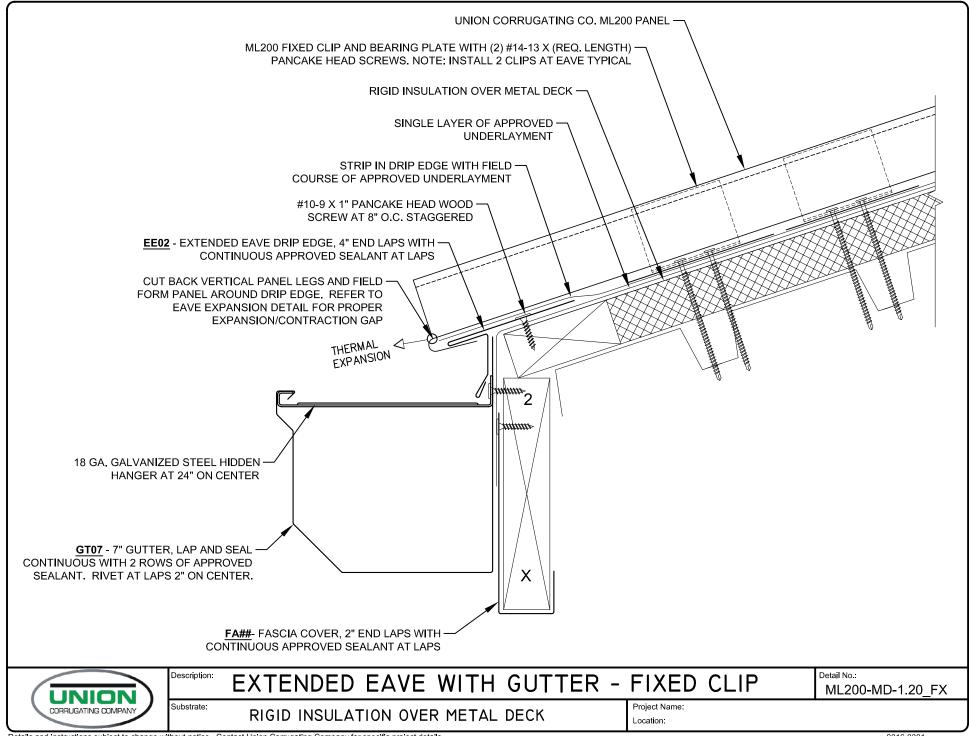


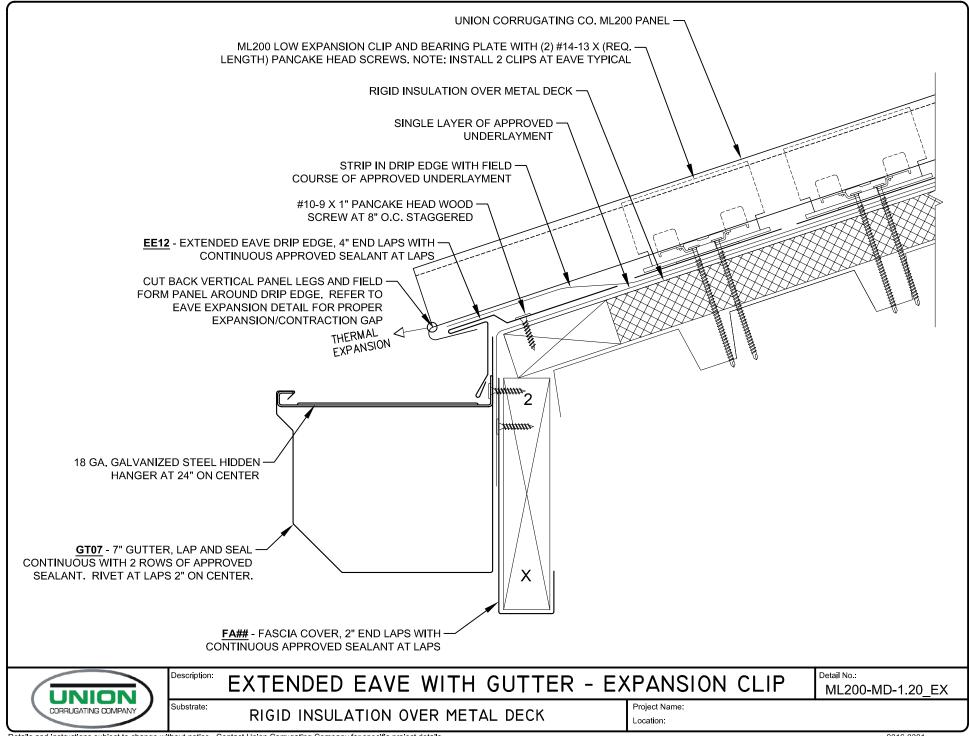
Description: EXTENDED EAVE - STEEP SLOPE - EXPANSION CLIP

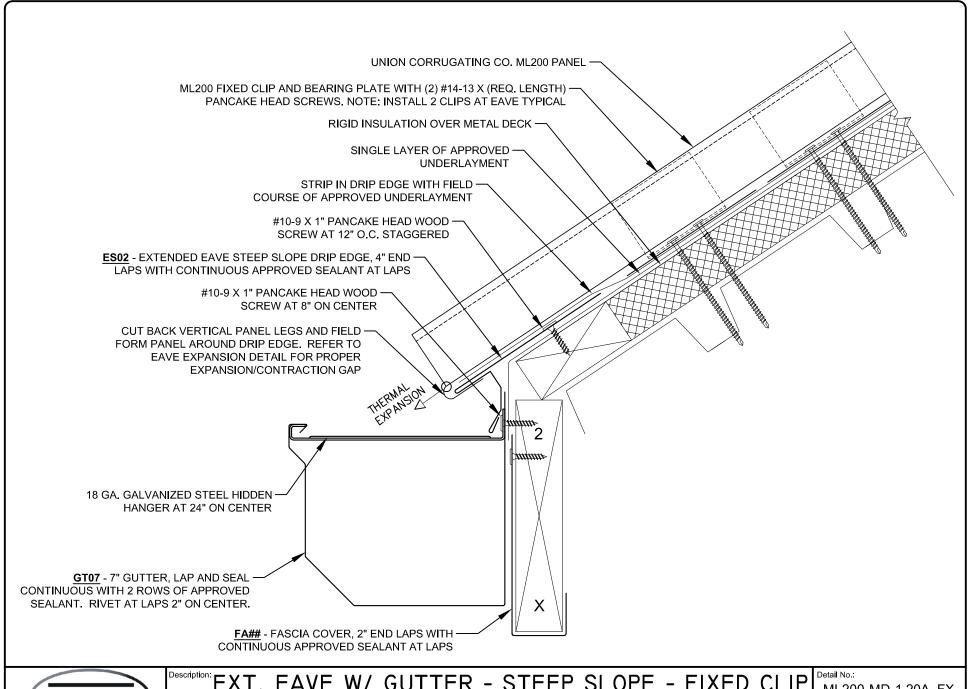
ML200-MD-1.10A_EX

Substrate:

RIGID INSULATION OVER METAL DECK







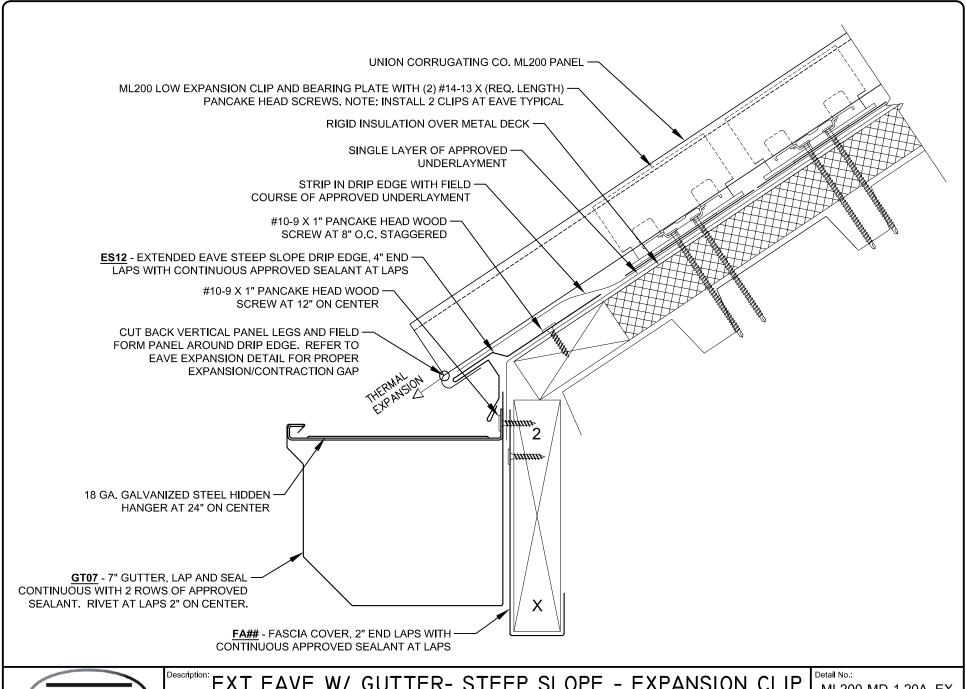


EXT. EAVE W/ GUTTER - STEEP SLOPE - FIXED CLIP

ML200-MD-1.20A FX

Substrate:

RIGID INSULATION OVER METAL DECK



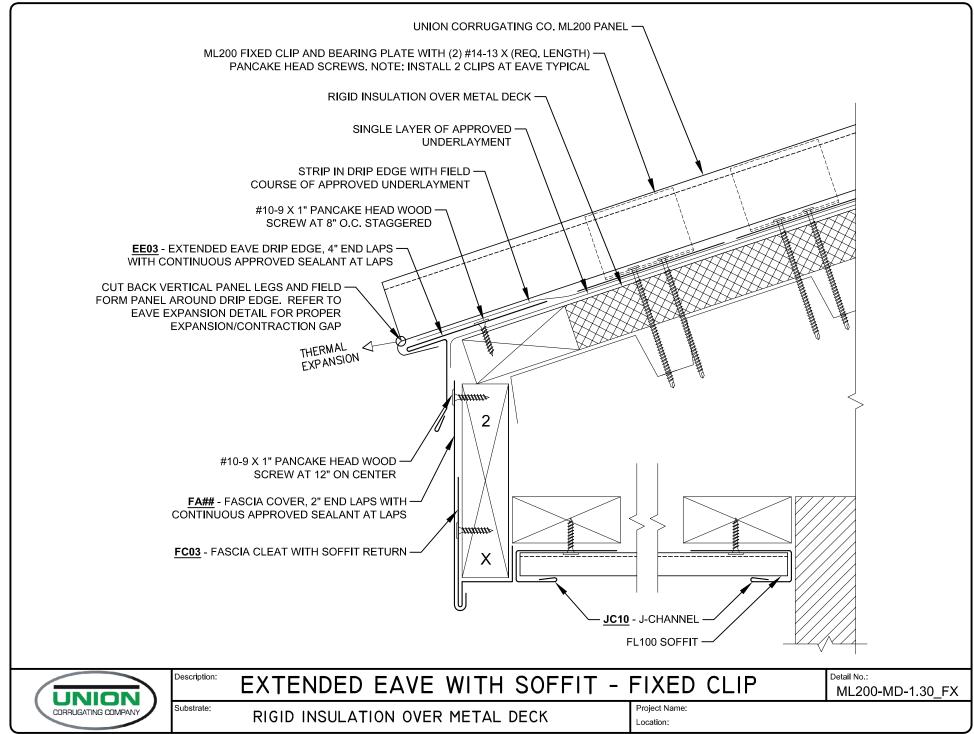


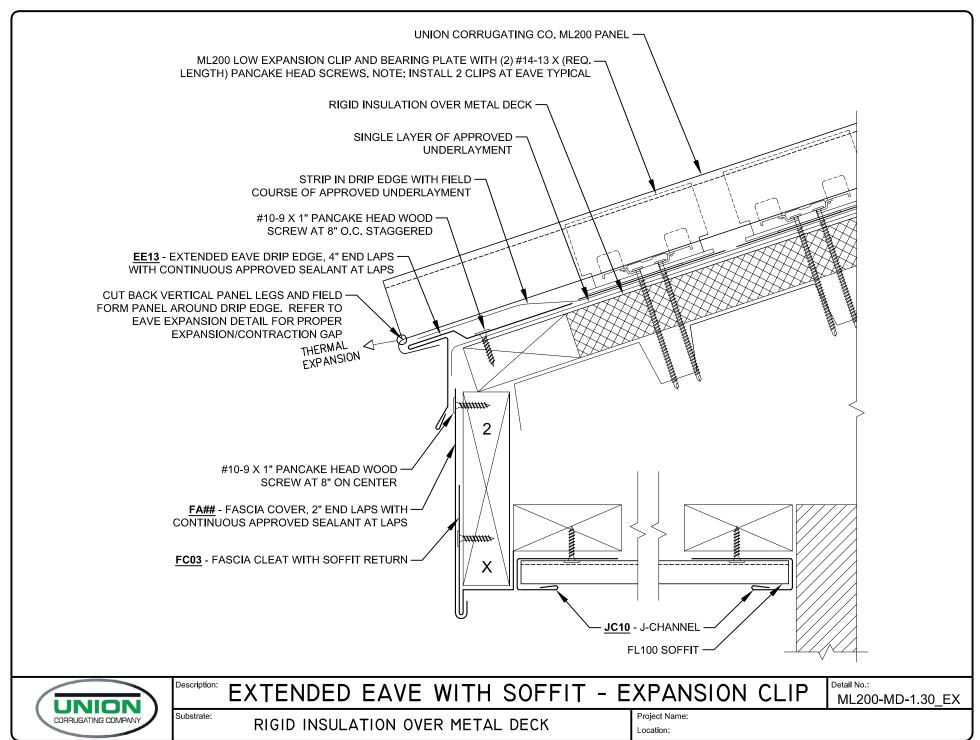
EXT.EAVE W/ GUTTER- STEEP SLOPE - EXPANSION CLIP

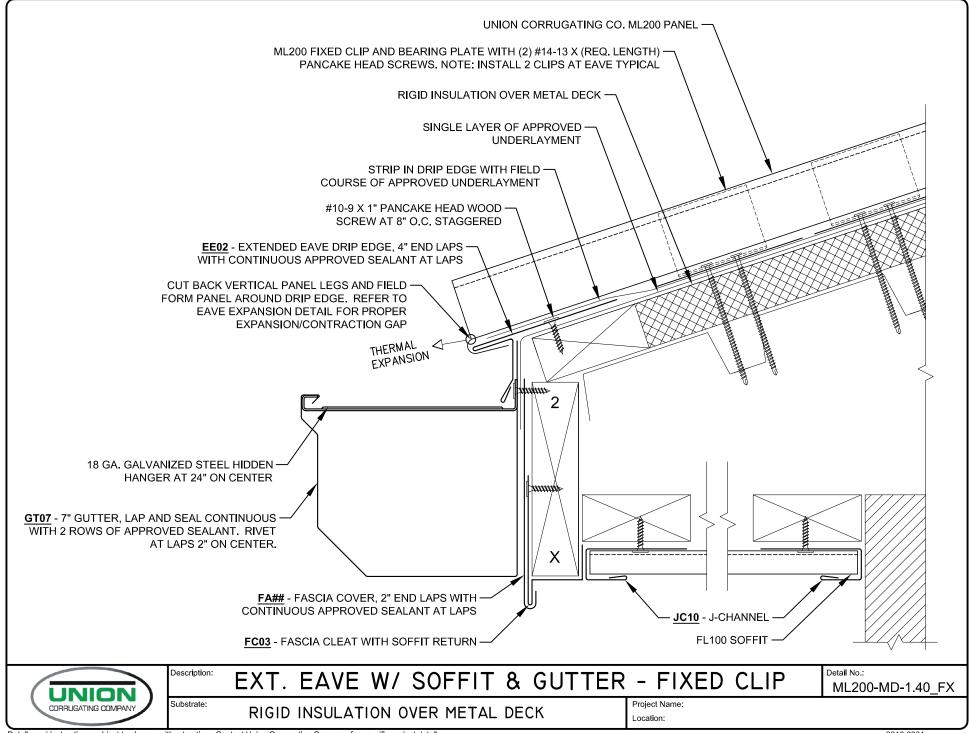
ML200-MD-1.20A EX

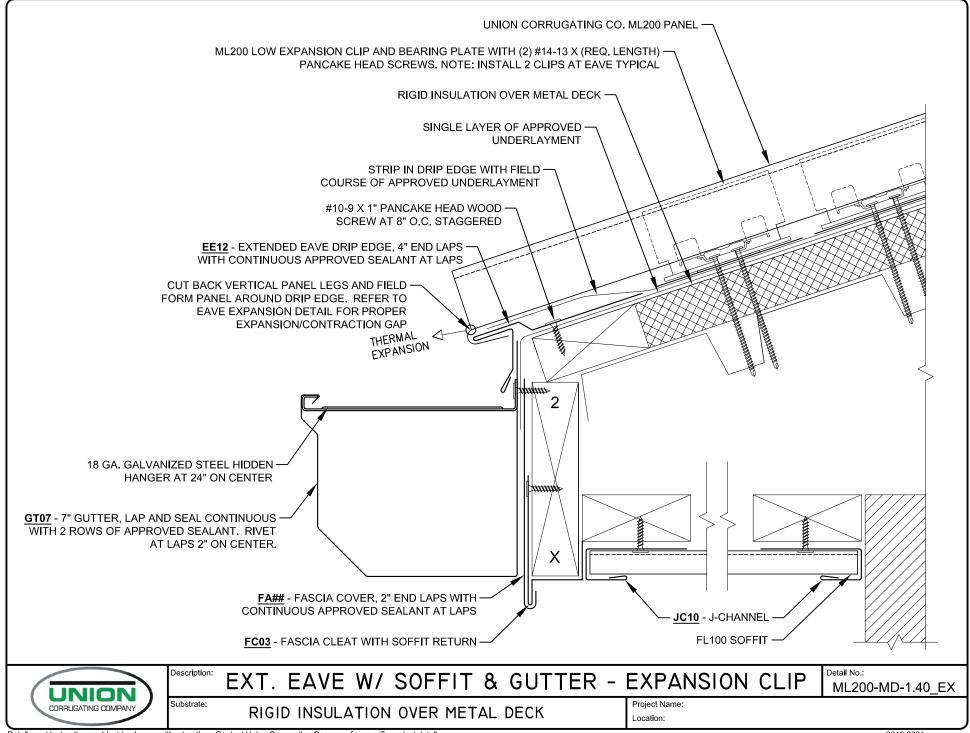
Substrate:

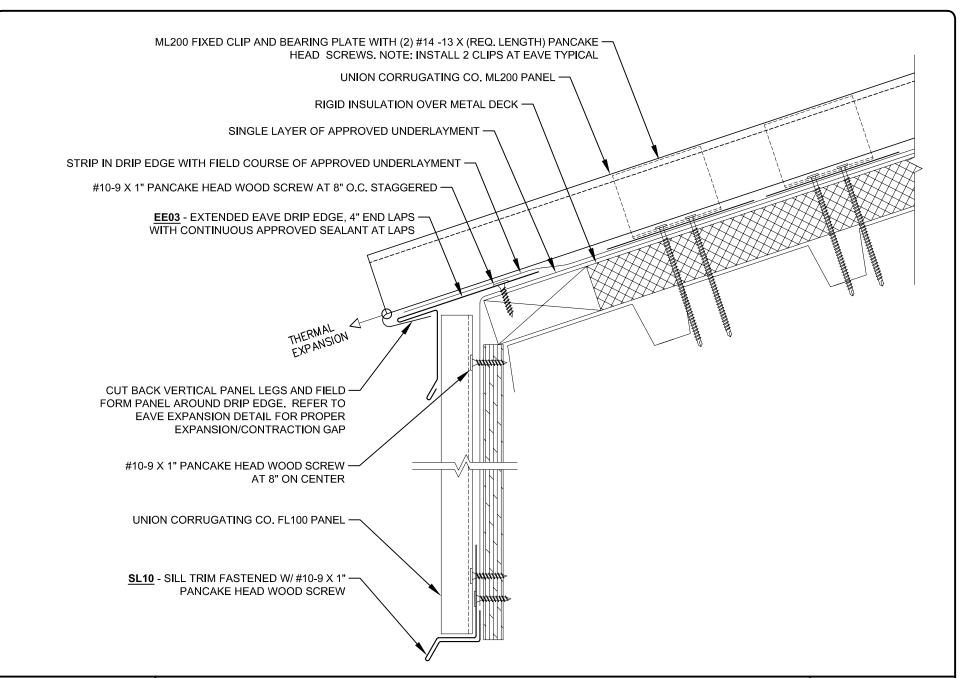
RIGID INSULATION OVER METAL DECK













Description:

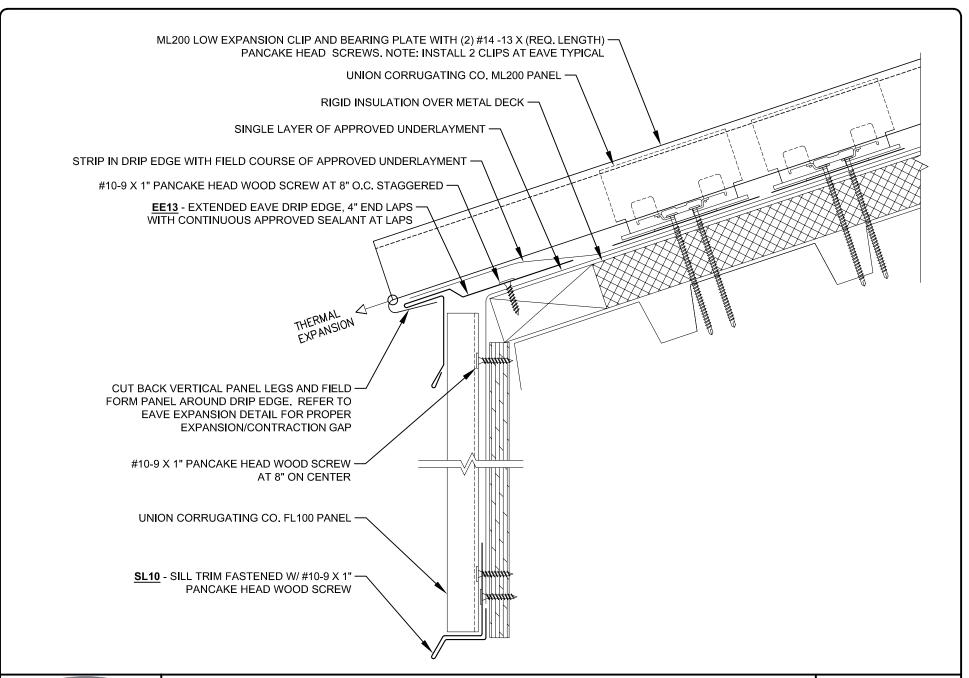
EXT. EAVE W/ FLUSH WALL PANEL - FIXED CLIP

Detail No.:

ML200-MD-1.50 FX

Substrate:

RIGID INSULATION OVER METAL DECK



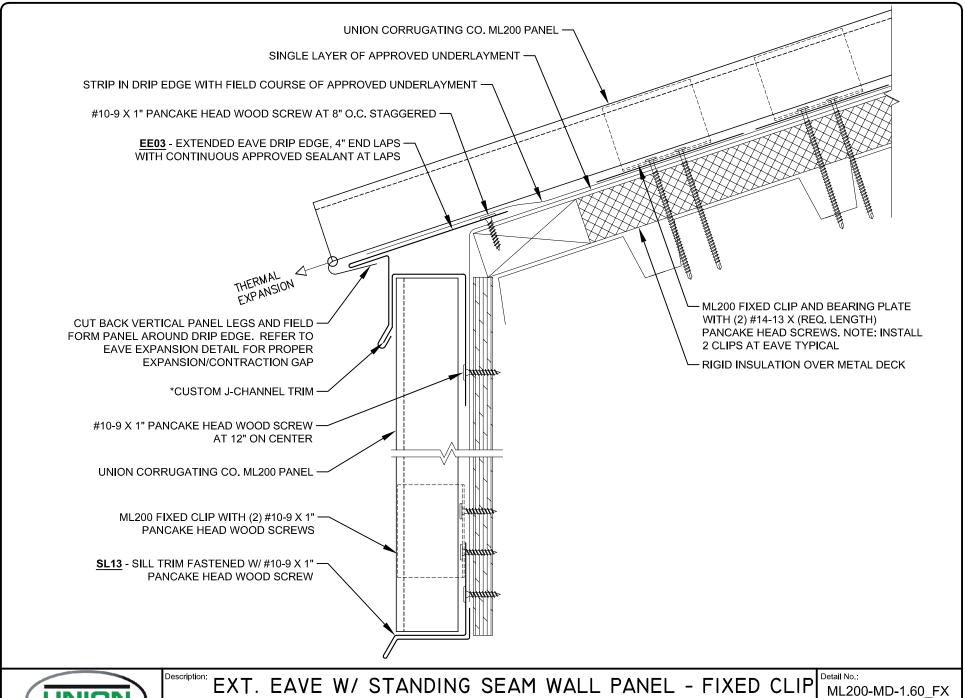


Description: EXT. EAVE W/ FLUSH WALL PANEL - EXPANSION CLIP

Detail No.:
ML200-MD-1.50 EX

Substrate:

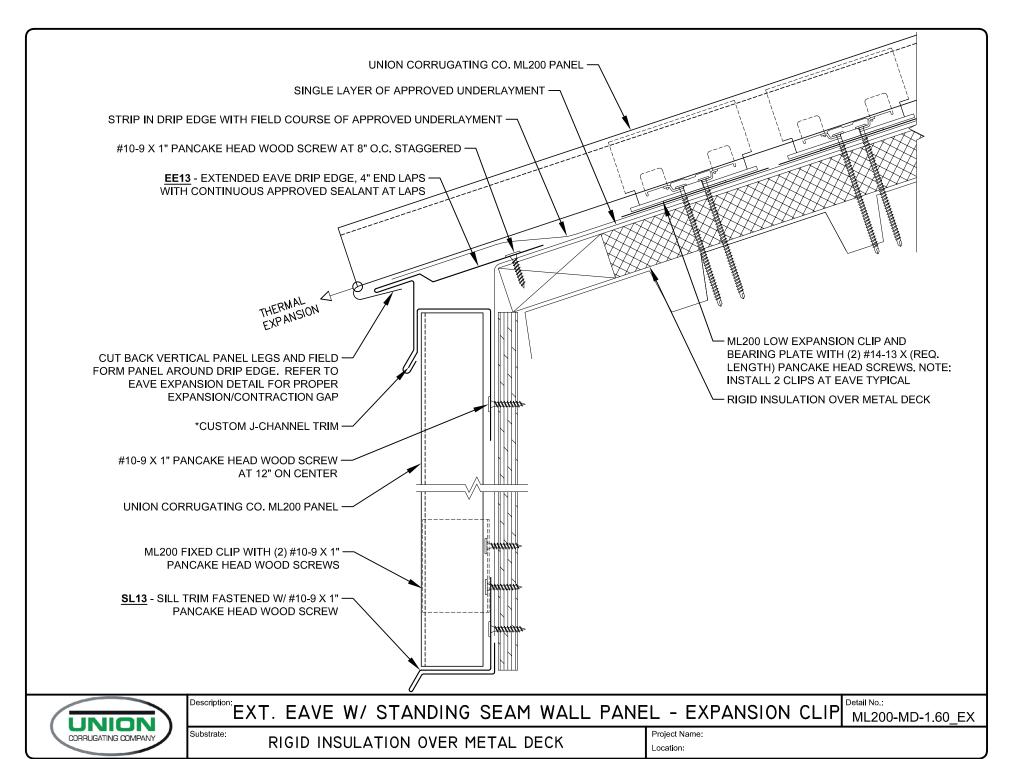
RIGID INSULATION OVER METAL DECK

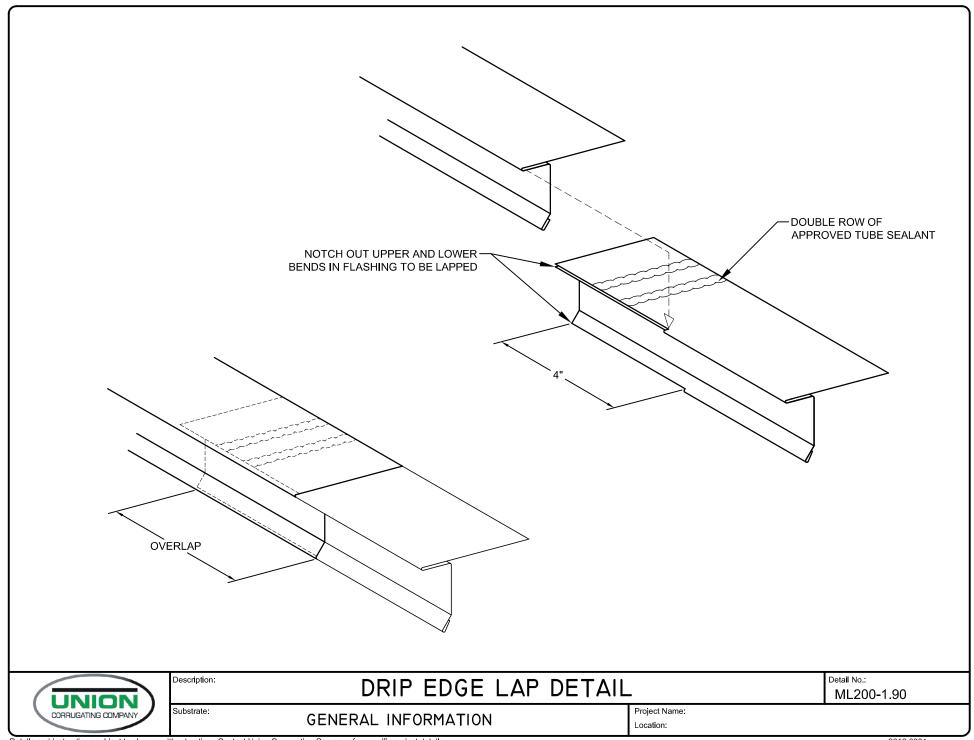


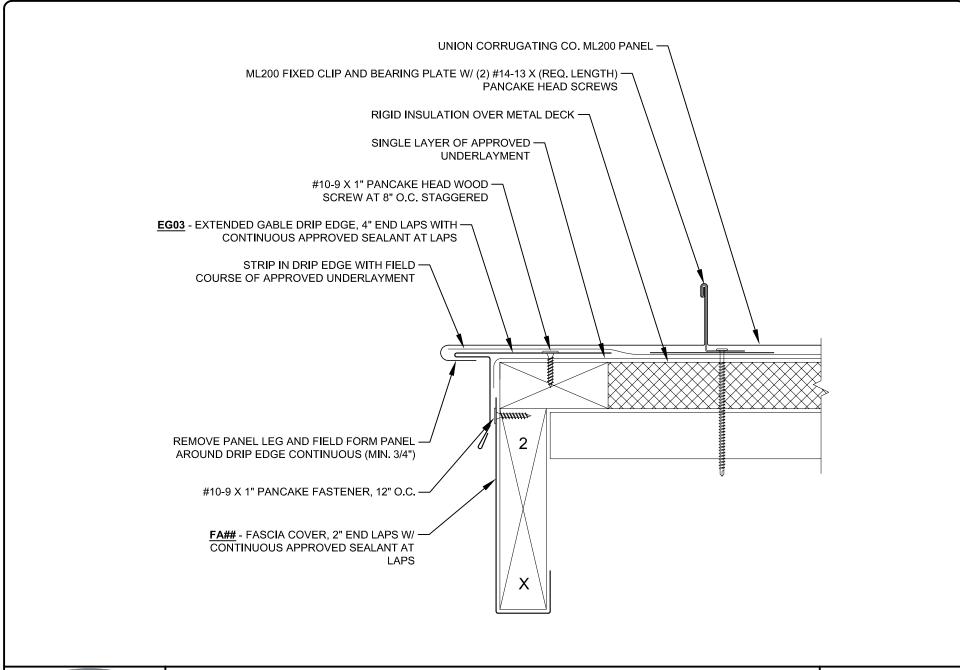
EXT. EAVE W/ STANDING SEAM WALL PANEL - FIXED CLIP

Substrate:

RIGID INSULATION OVER METAL DECK







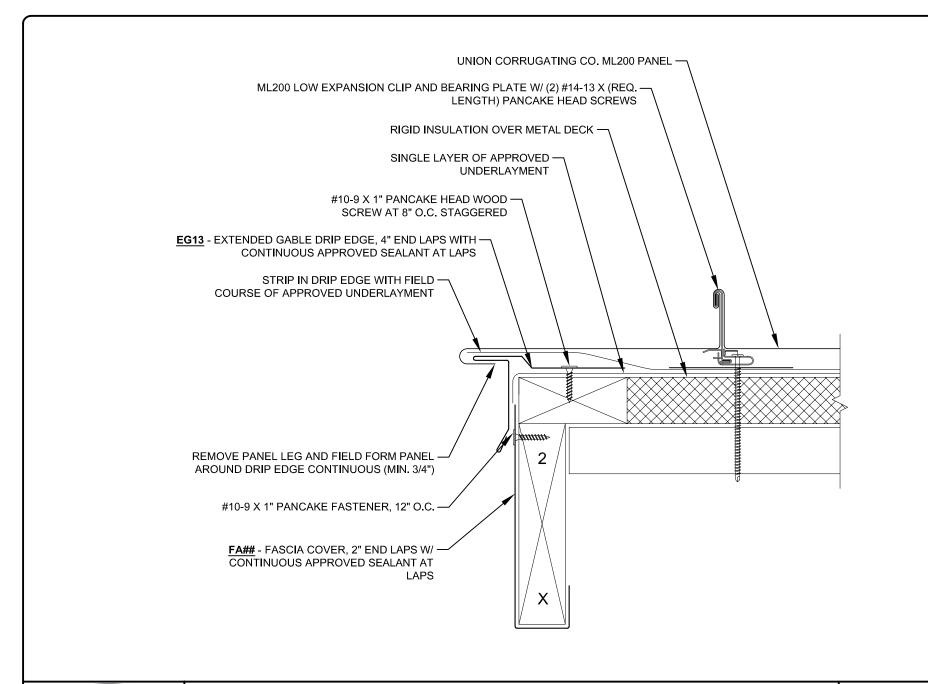


Description: GABLE DETAIL - EXTENDED DRIP - FIXED CLIP

Detail No.: ML200-MD-2.10 FX

Substrate:

RIGID INSULATION OVER METAL DECK



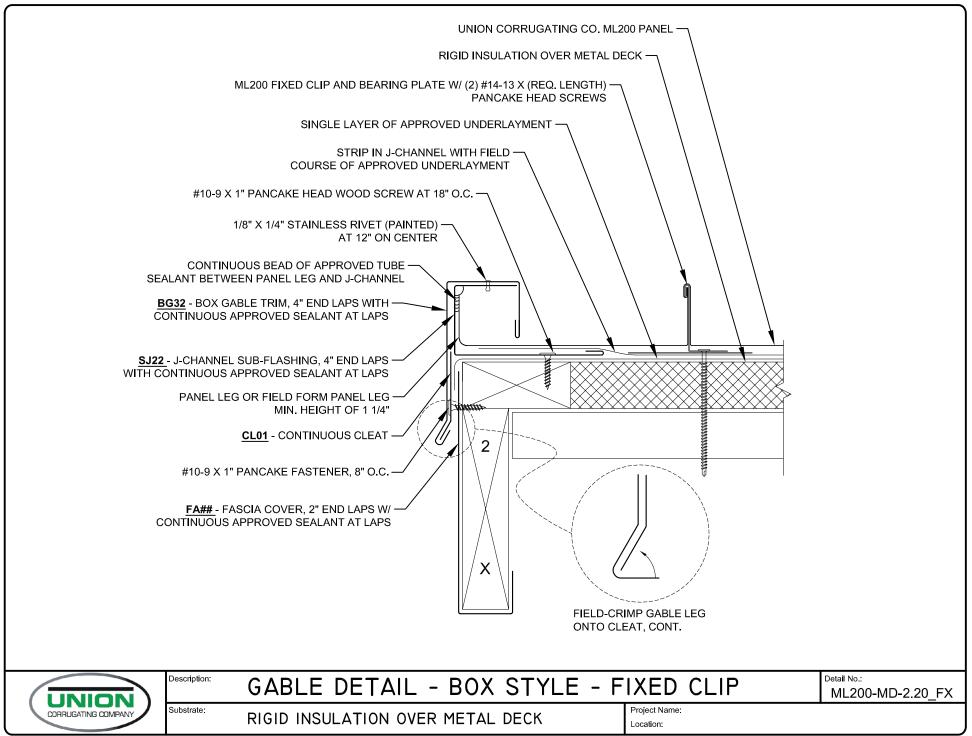


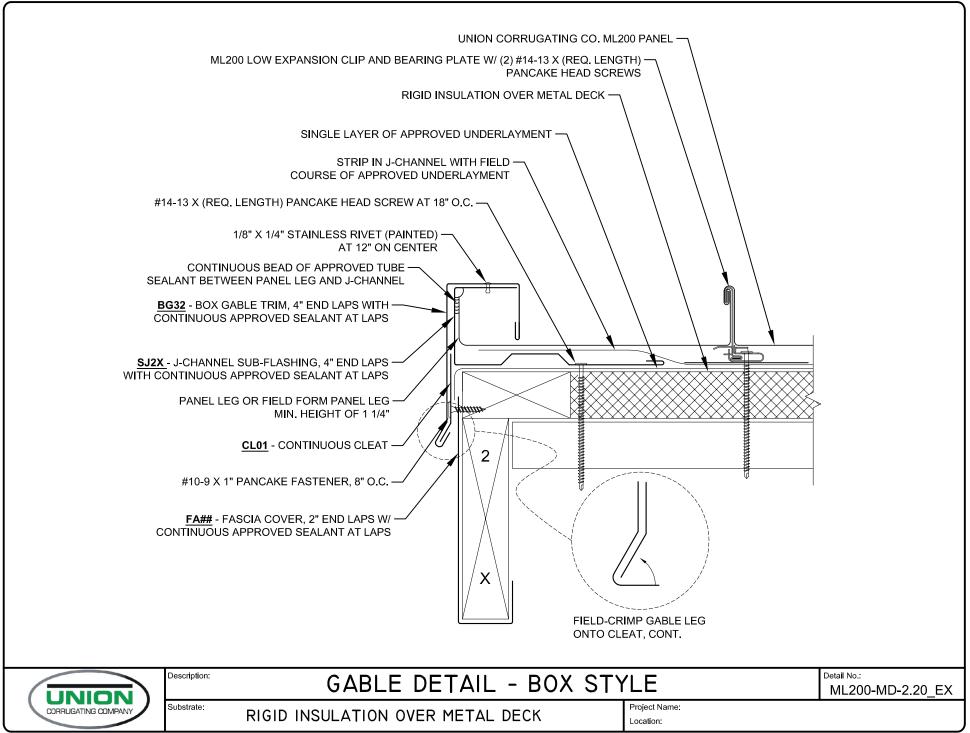
Description: GABLE DETAIL - EXTENDED DRIP - EXPANSION CLIP

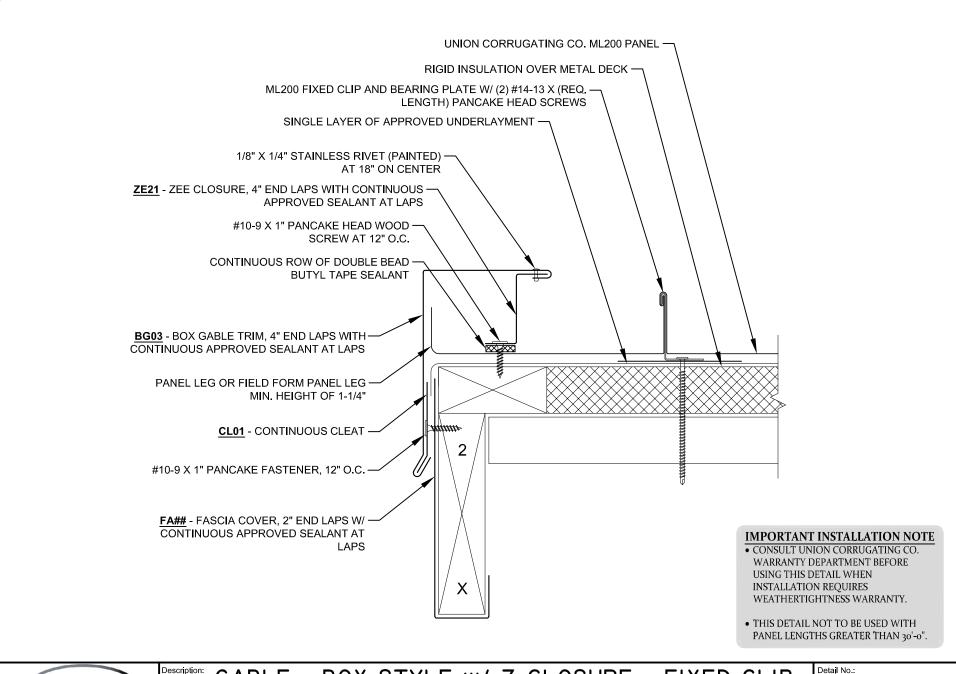
Detail No.:
ML200-MD-2.10_EX

Substrate:

RIGID INSULATION OVER METAL DECK







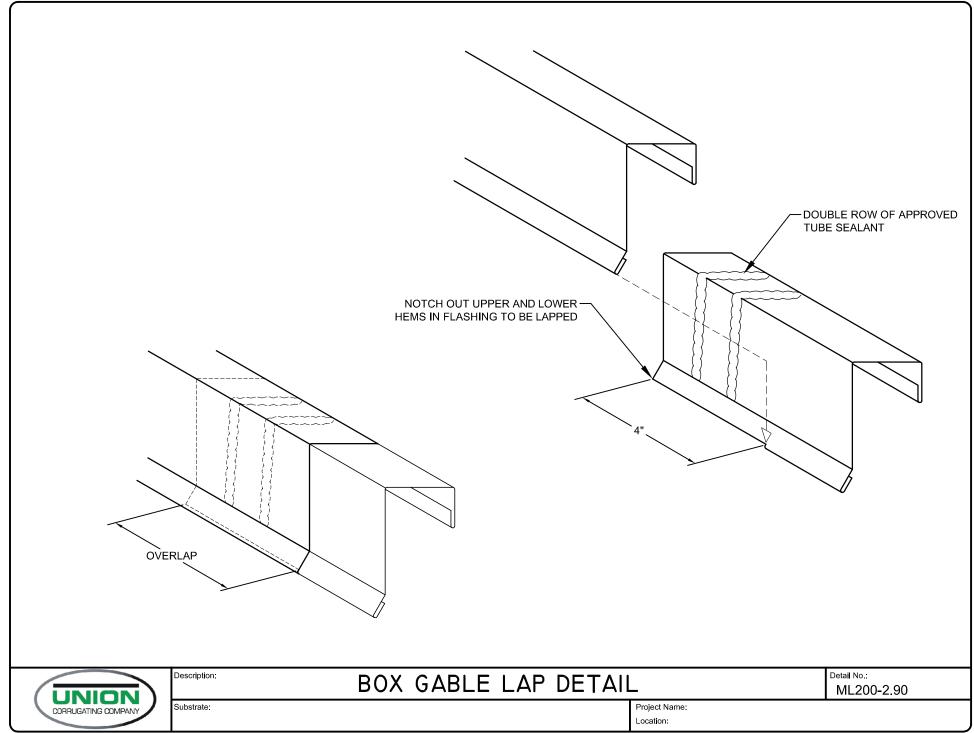


Description: GABLE - BOX STYLE w/ Z-CLOSURE - FIXED CLIP

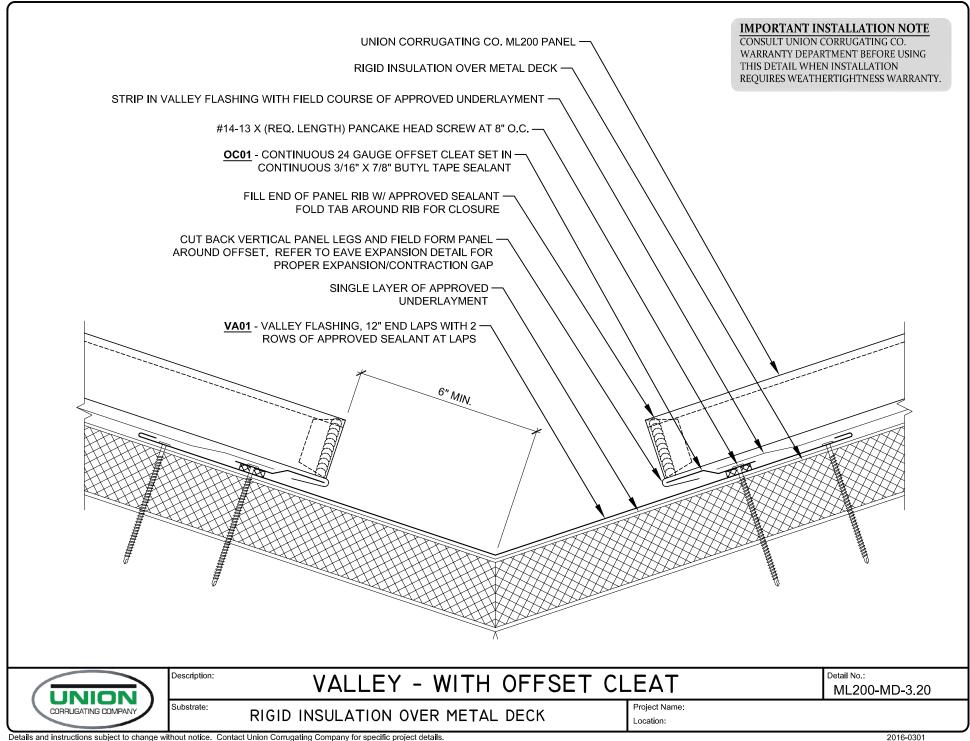
ML200-MD-2.30 FX

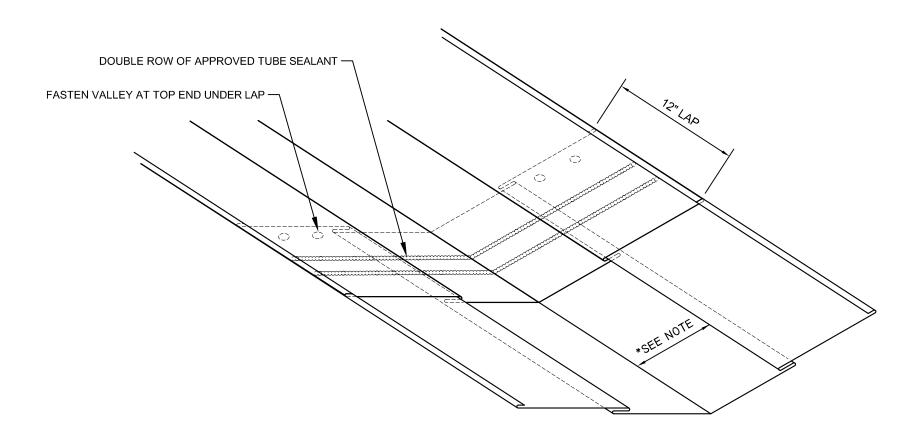
Substrate:

RIGID INSULATION OVER METAL DECK



IMPORTANT INSTALLATION NOTE EACH VALLEY SECTION IS MADE PROGRESSIVELY SMALLER TO ALLOW UPPER SECTION TO INSERT INTO LOWER SECTION. NO FIELD NOTCHING AT LAP. RIGID INSULATION OVER METAL DECK UNION CORRUGATING CO. ML200 PANEL -#14-13 X (REQ. LENGTH) PANCAKE HEAD SCREW AT 12" O.C.-STRIP IN VALLEY FLASHING -WITH FIELD COURSE OF APPROVED UNDERLAYMENT FILL END OF PANEL RIB W/ APPROVED SEALANT -FOLD TAB AROUND RIB FOR CLOSURE CUT BACK VERTICAL PANEL LEGS AND FIELD FORM PANEL -AROUND OFFSET. REFER TO EAVE EXPANSION DETAIL FOR PROPER EXPANSION/CONTRACTION GAP SINGLE LAYER OF APPROVED -UNDERLAYMENT VB1A - INTEGRAL VALLEY FLASHING, 12" END LAPS -WITH 2 ROWS OF APPROVED SEALANT AT LAPS Detail No.: VALLEY DETAIL - INTEGRAL CLEAT Description: ML200-MD-3.10 Substrate: Project Name: RIGID INSULATION OVER METAL DECK Location:





TELESCOPING VALLEY FLASHING LAP

IMPORTANT INSTALLATION NOTE

EACH VALLEY SECTION IS MADE PROGRESSIVELY SMALLER TO ALLOW UPPER SECTION TO INSERT INTO LOWER SECTION. NO FIELD NOTCHING AT LAP.



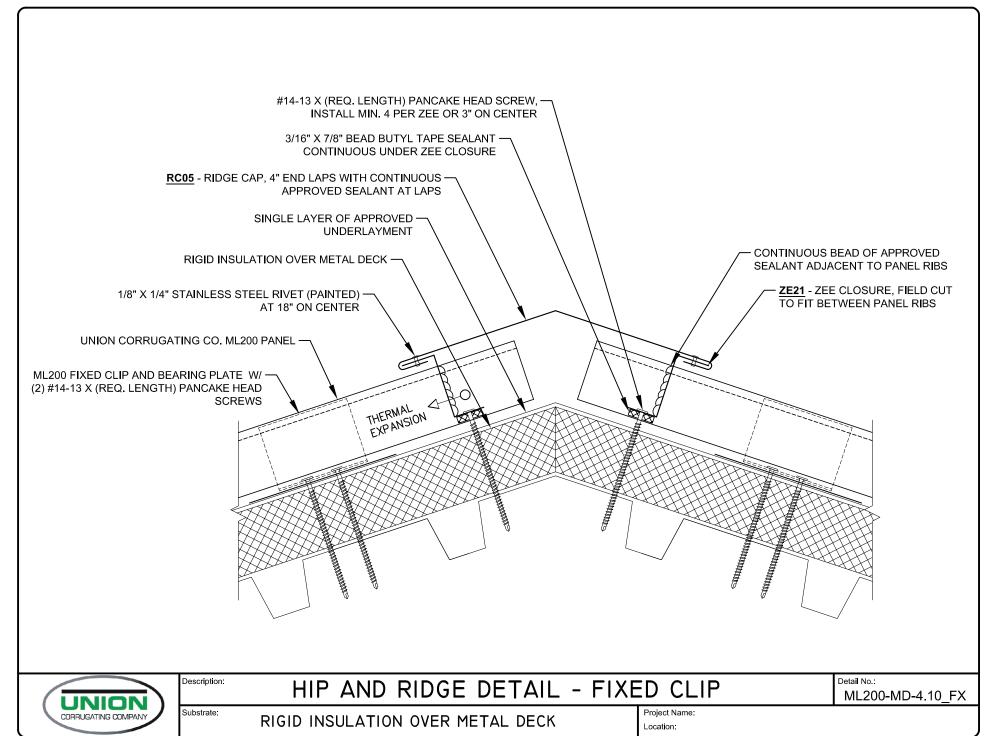
VALLEY LAP DETAIL

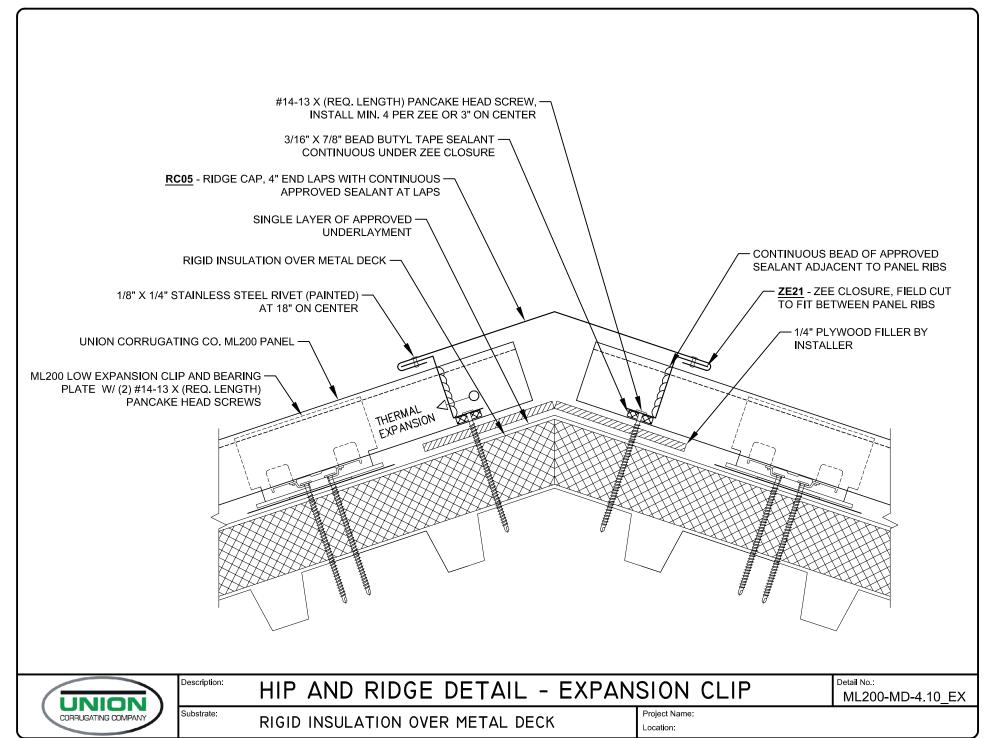
Detail No.:

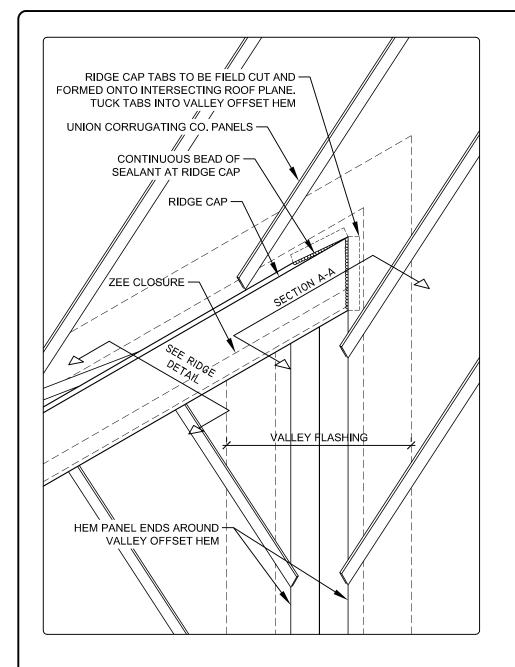
ML200-3.90

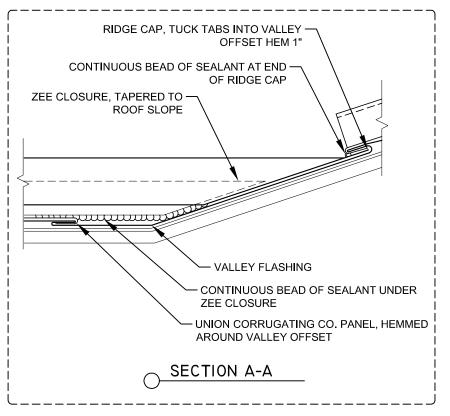
Substrate:

Description:











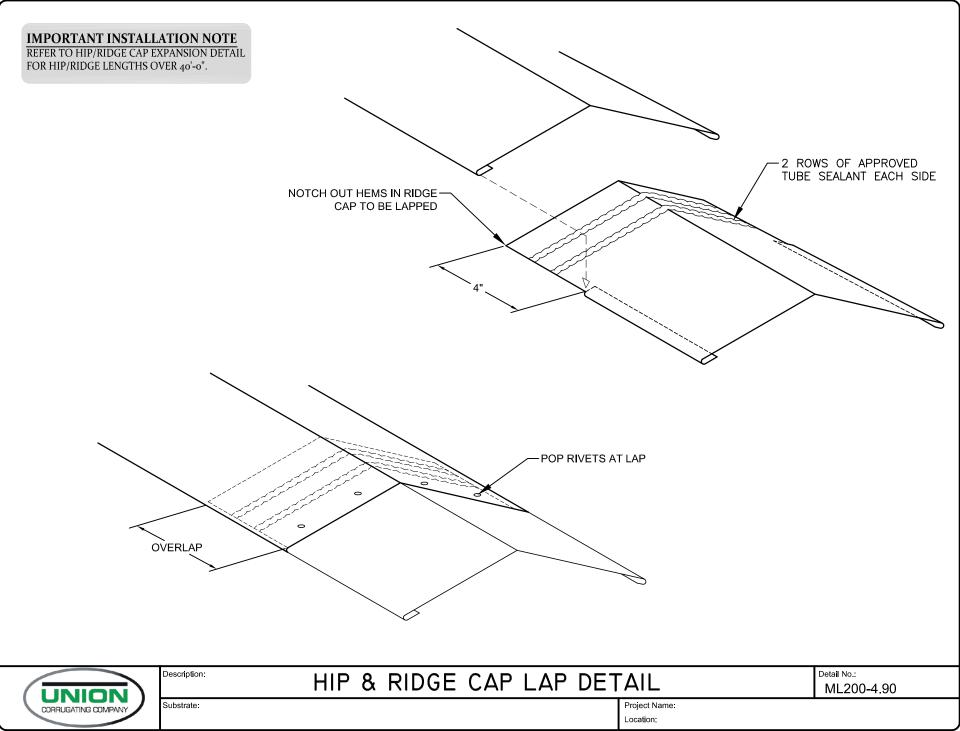
RIDGE TERMINATION @ VALLEY

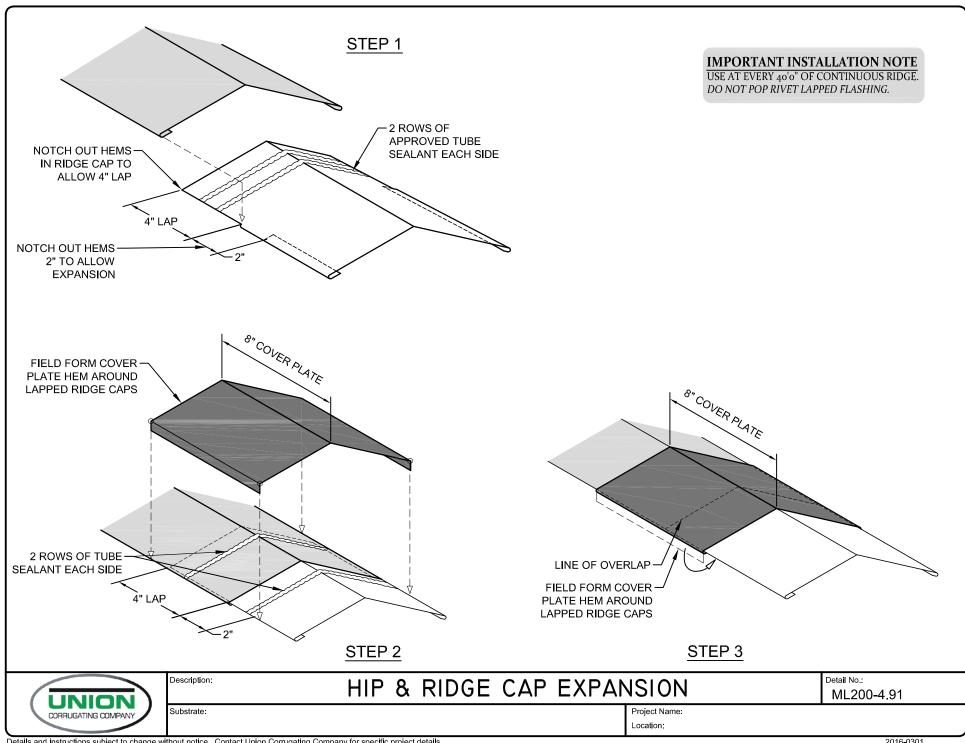
Detail No.:

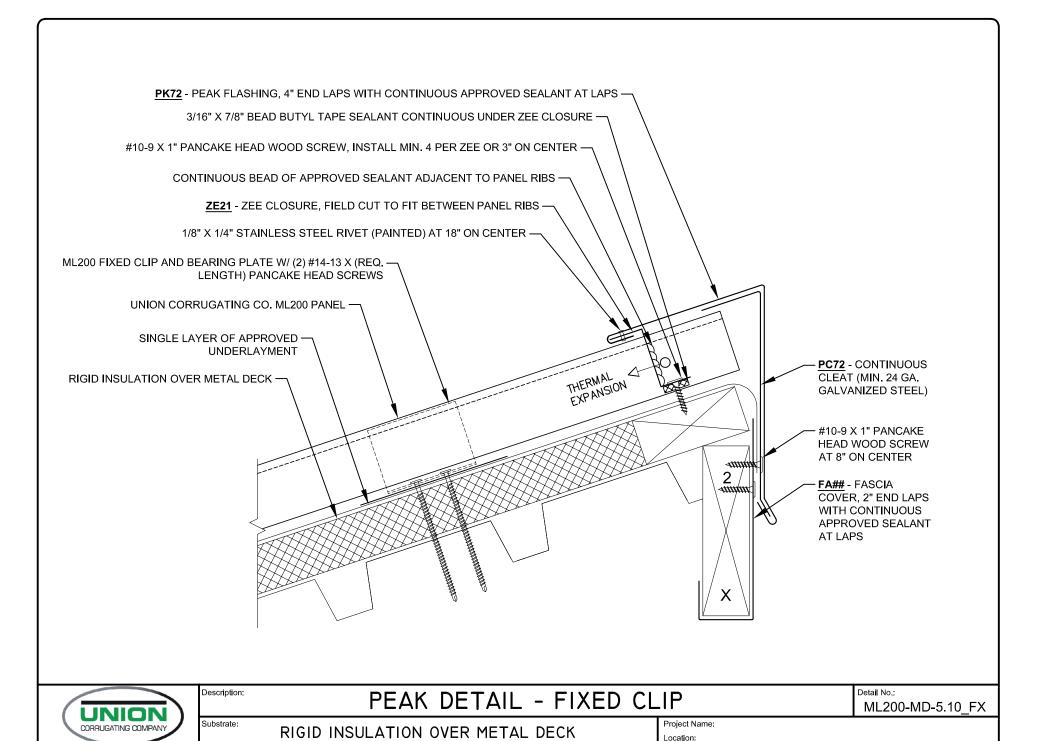
ML200-4.40

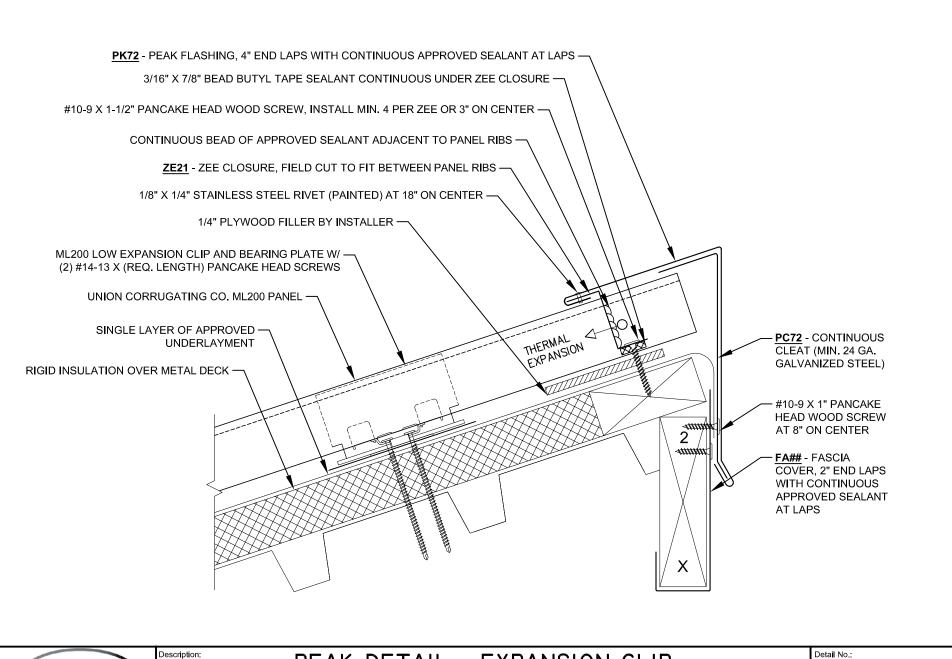
Substrate:

Description:







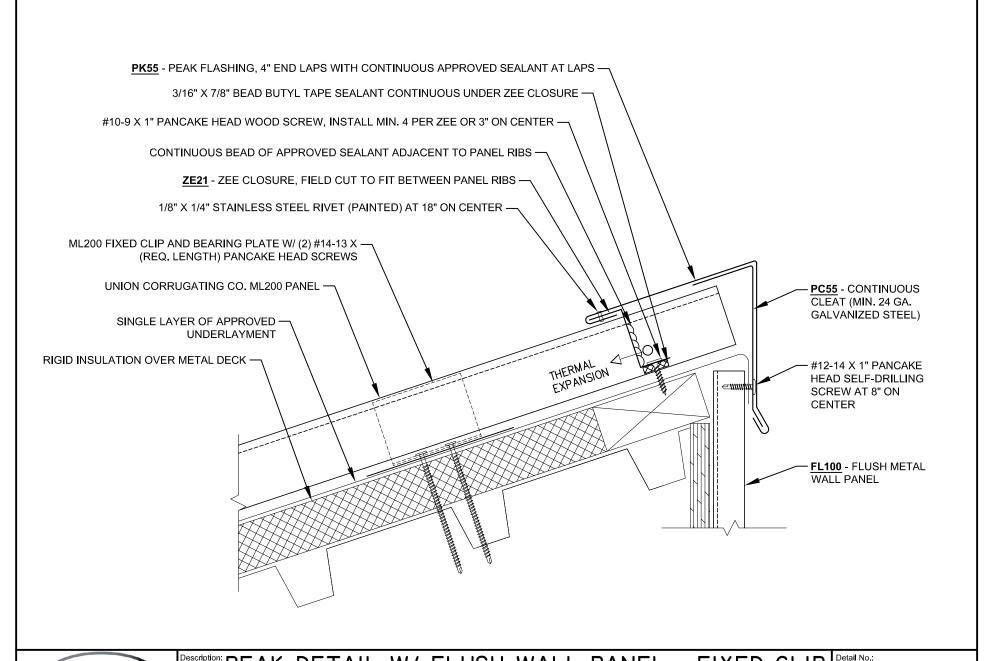


UNION CORRUGATING COMPANY

PEAK DETAIL - EXPANSION CLIP

Detail No.: ML200-MD-5.10 EX

Substrate: RIGID INSULATION OVER METAL DECK

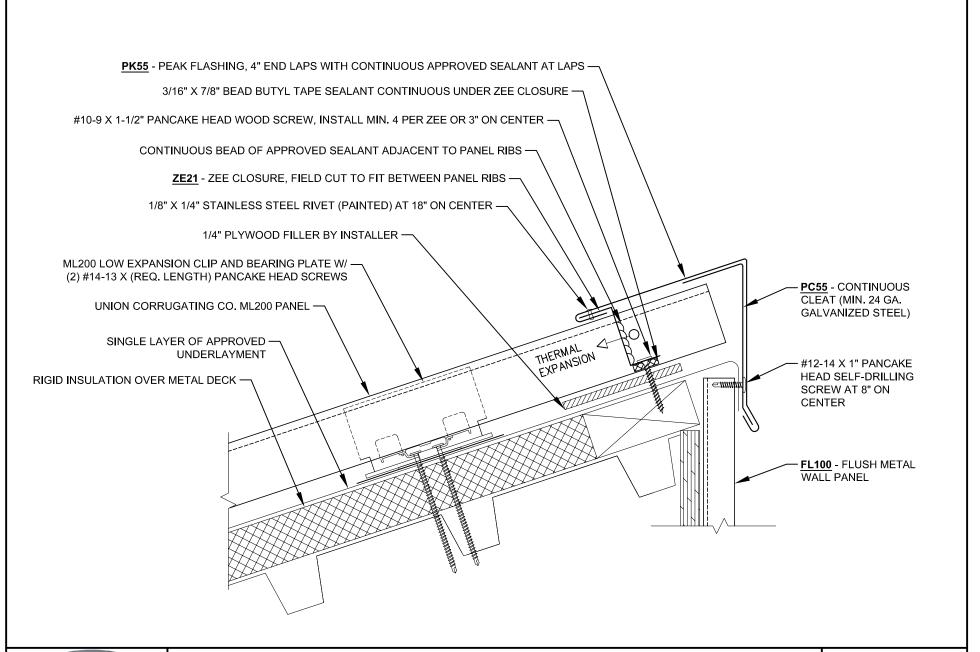


UNION CORRUGATING COMPANY Description: PEAK DETAIL W/ FLUSH WALL PANEL - FIXED CLIP

| NED CLIF | ML200-MD-5.40_FX

Substrate:

RIGID INSULATION OVER METAL DECK



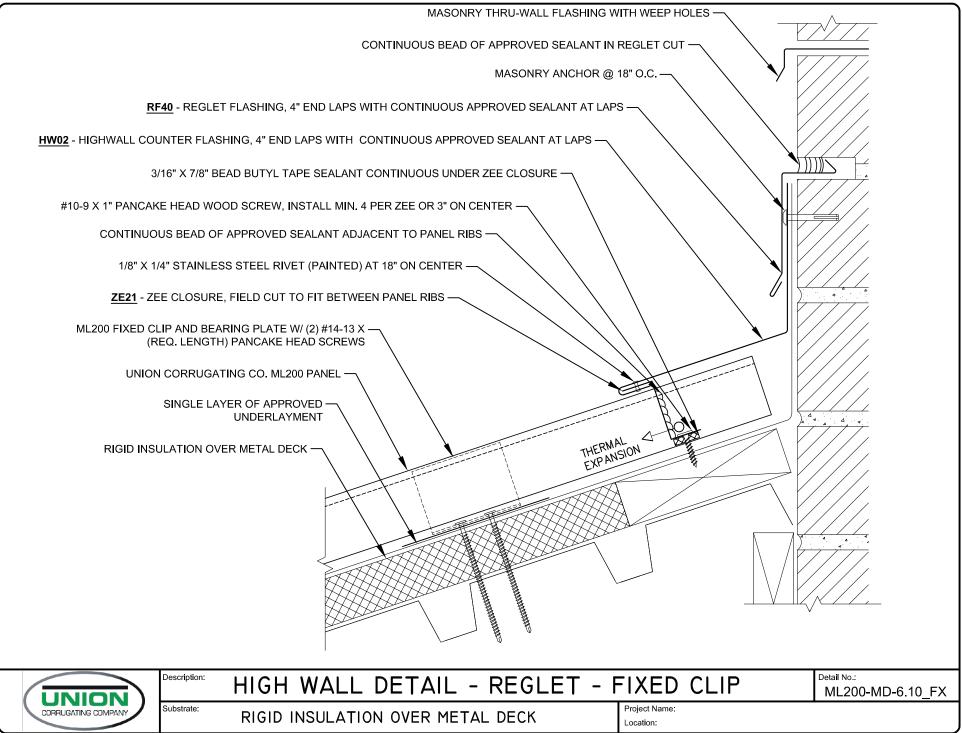


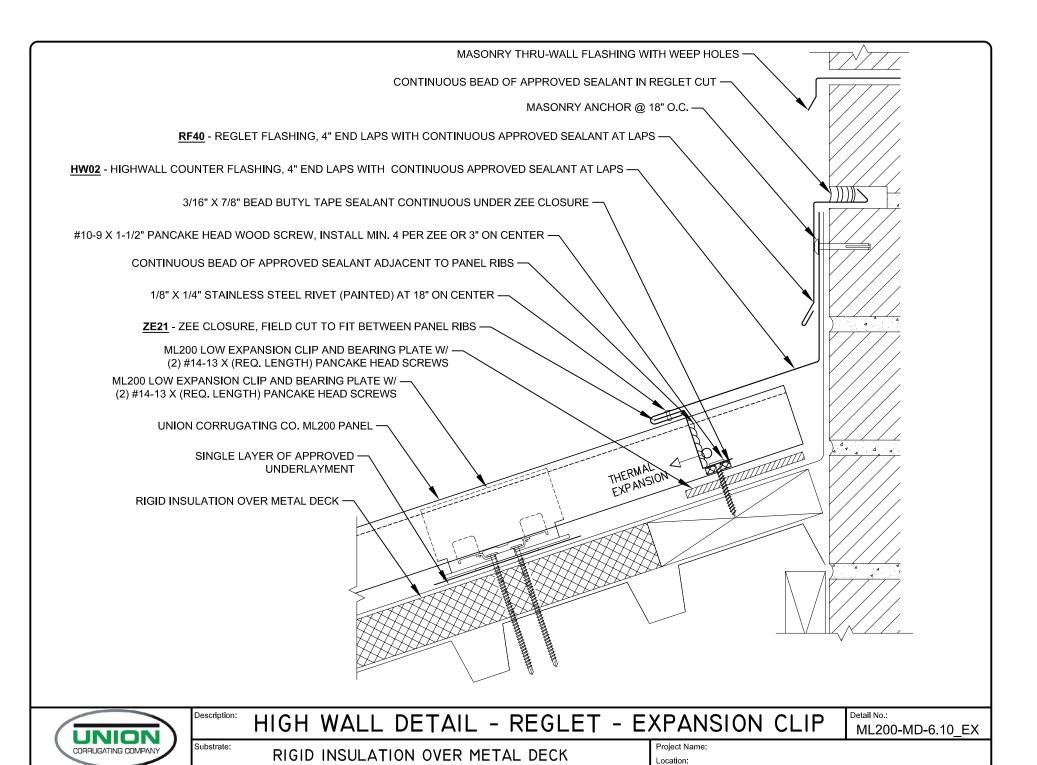
Description: PEAK DETAIL W/ FLUSH WALL PANEL - EXPANSION CLIP

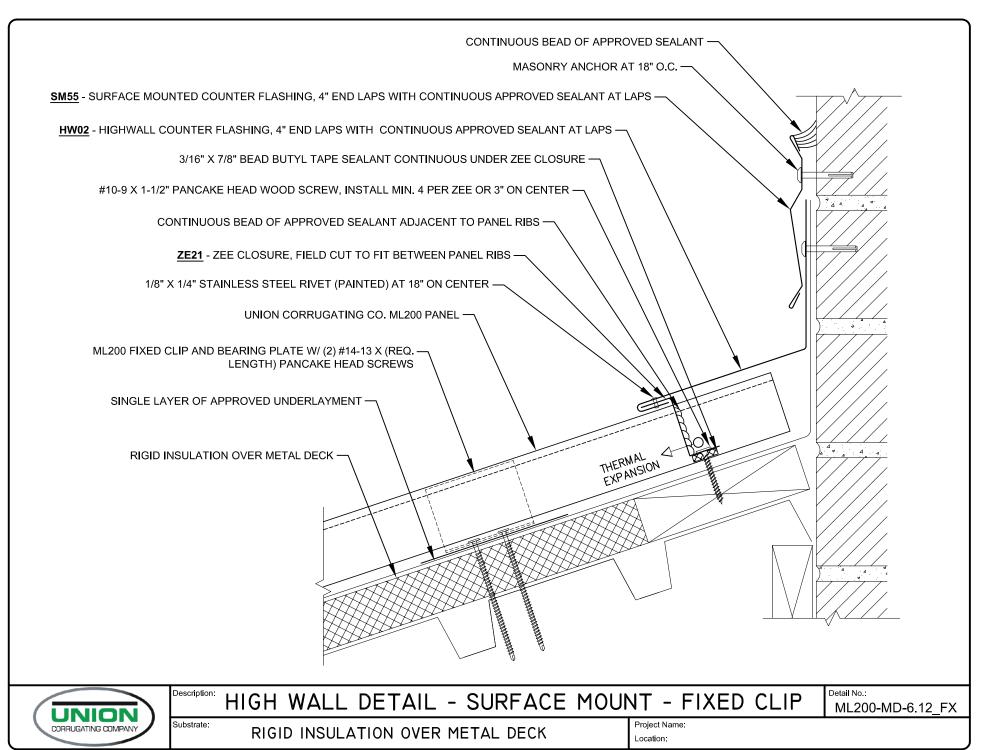
Detail No.: ML200-MD-5.40_EX

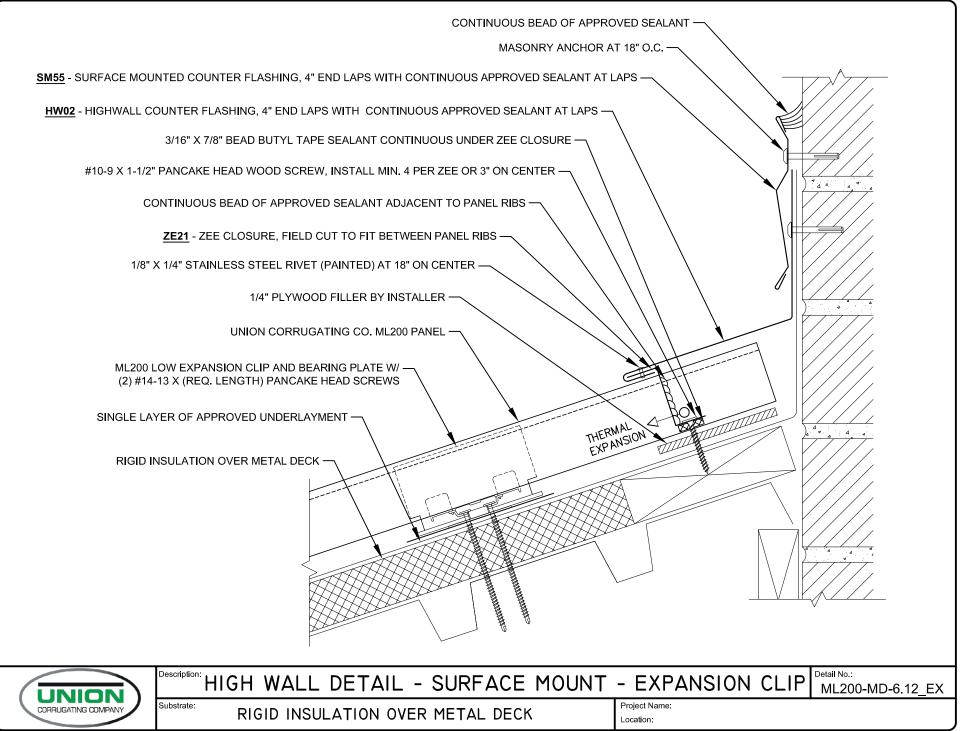
Substrate:

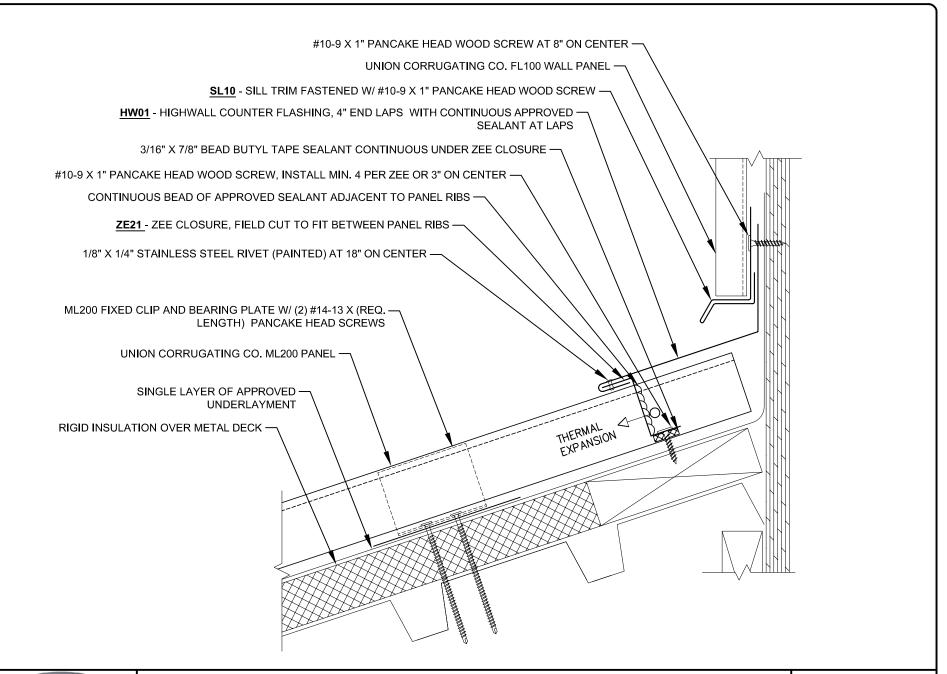
RIGID INSULATION OVER METAL DECK











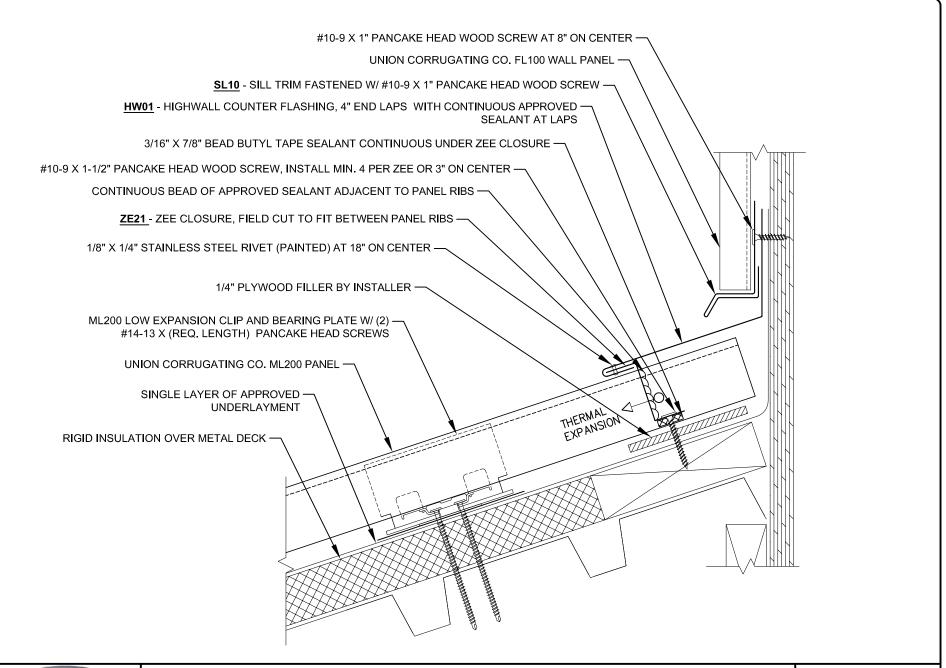


Pescription: HIGH WALL DETAIL - WALL PANEL W/ SILL - FIXED CLIP

Detail No.: ML200-MD-6.14 FX

Substrate

RIGID INSULATION OVER METAL DECK



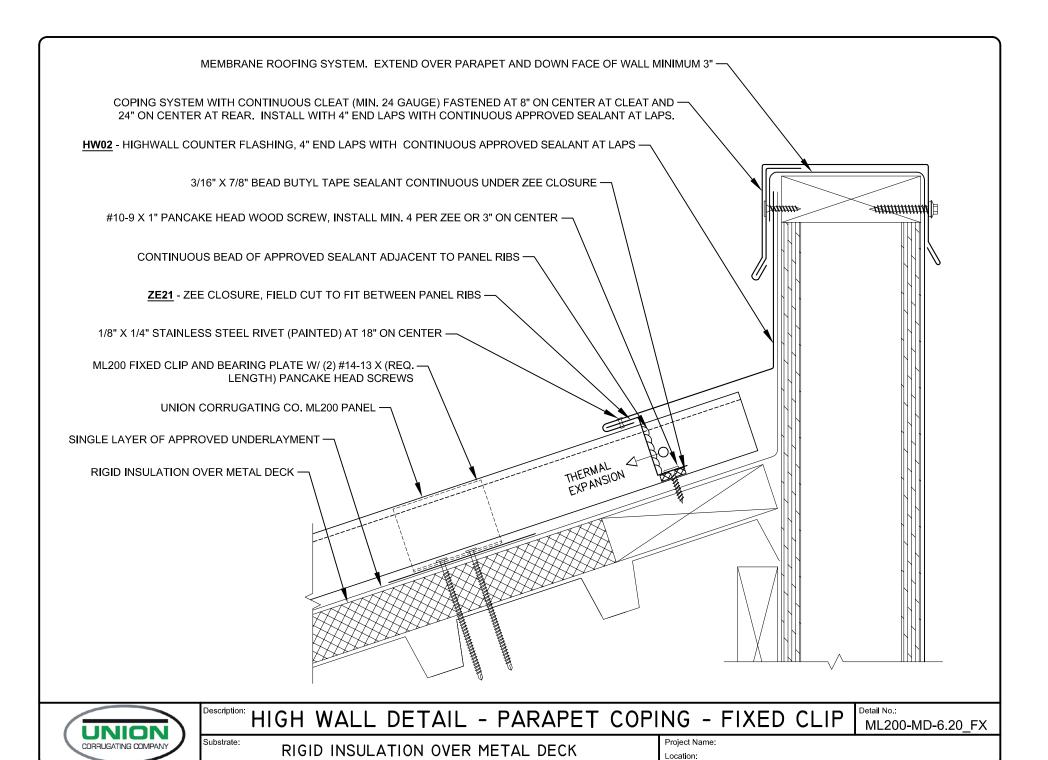


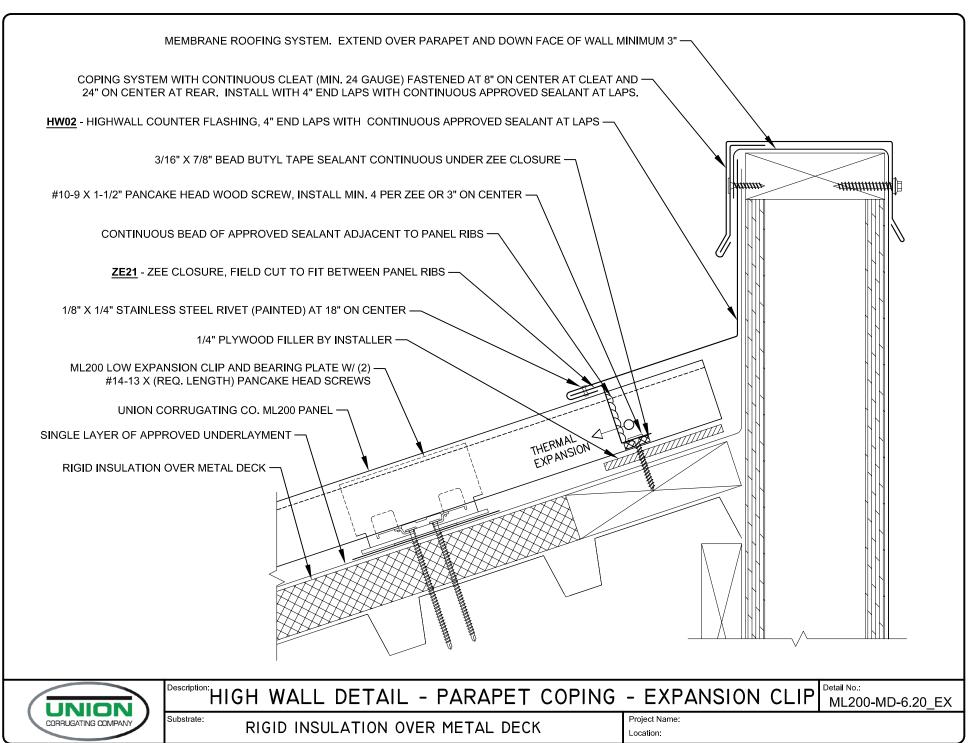
Description: HIGH WALL DETAIL - WALL PANEL W/ SILL - EXPANSION CLIP

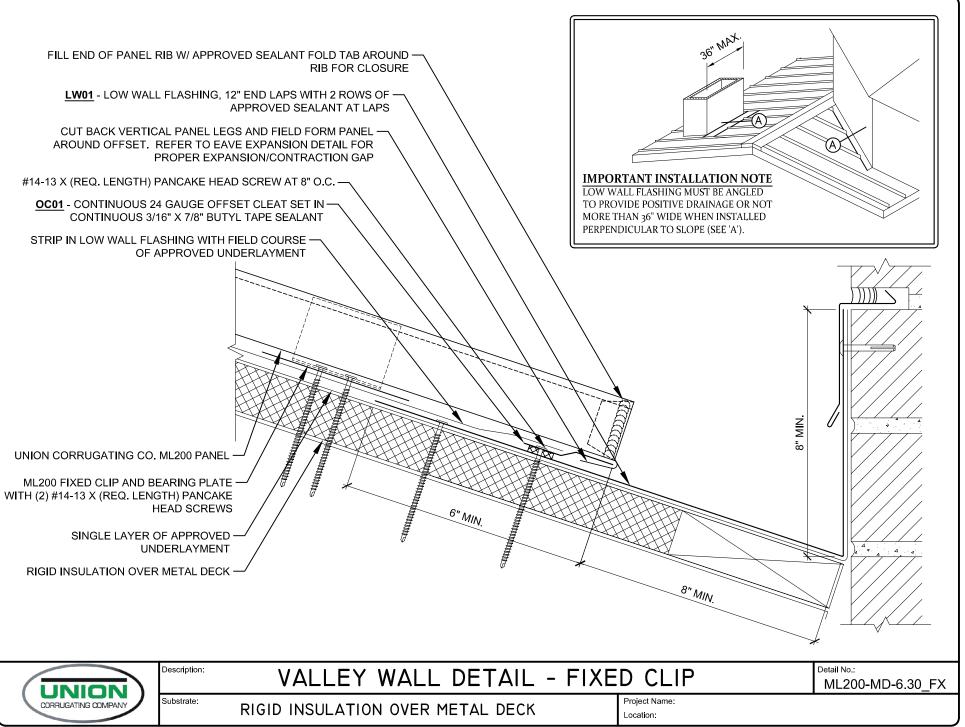
Detail No.: ML200-MD-6.14 EX

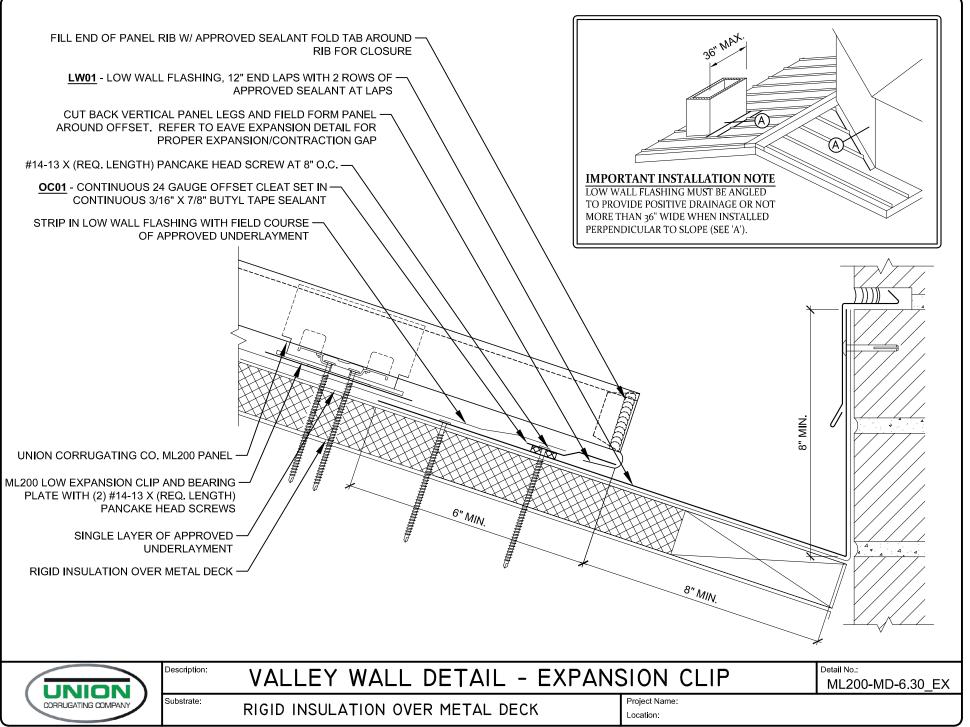
Substrate

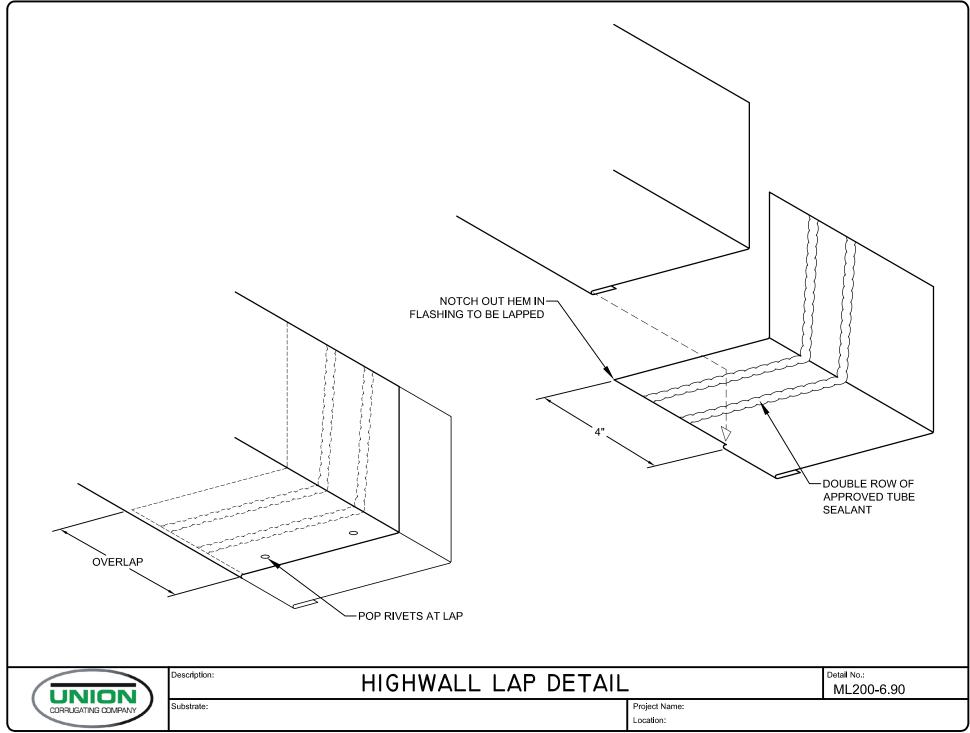
RIGID INSULATION OVER METAL DECK

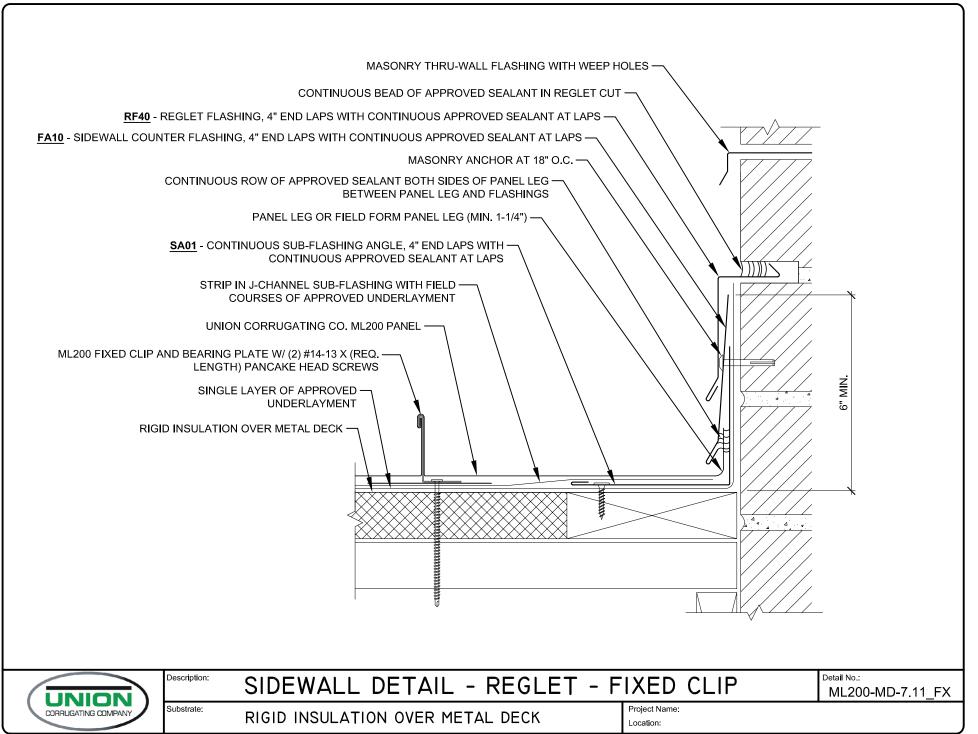


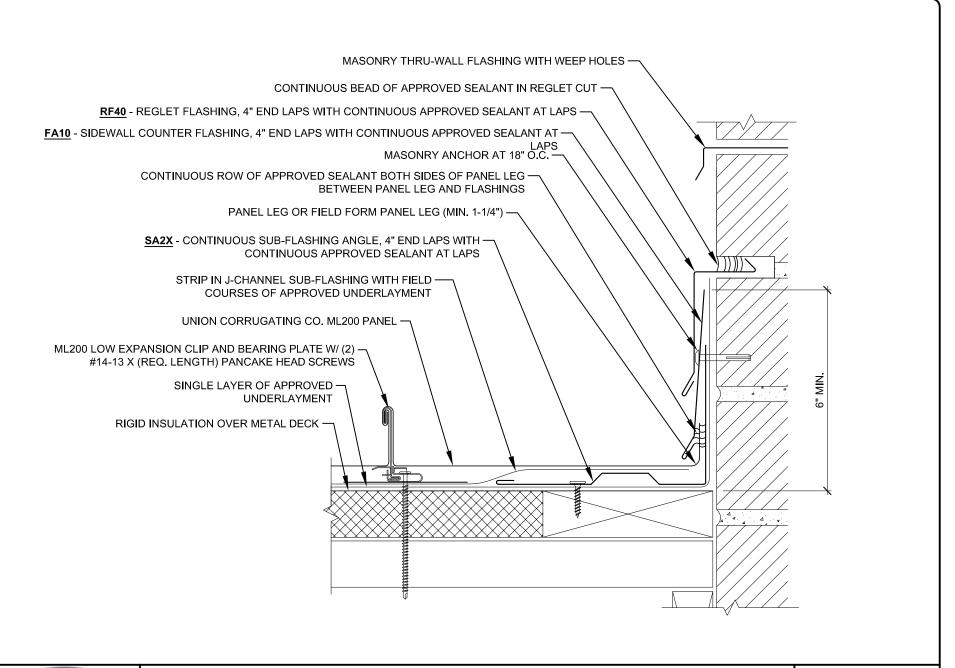














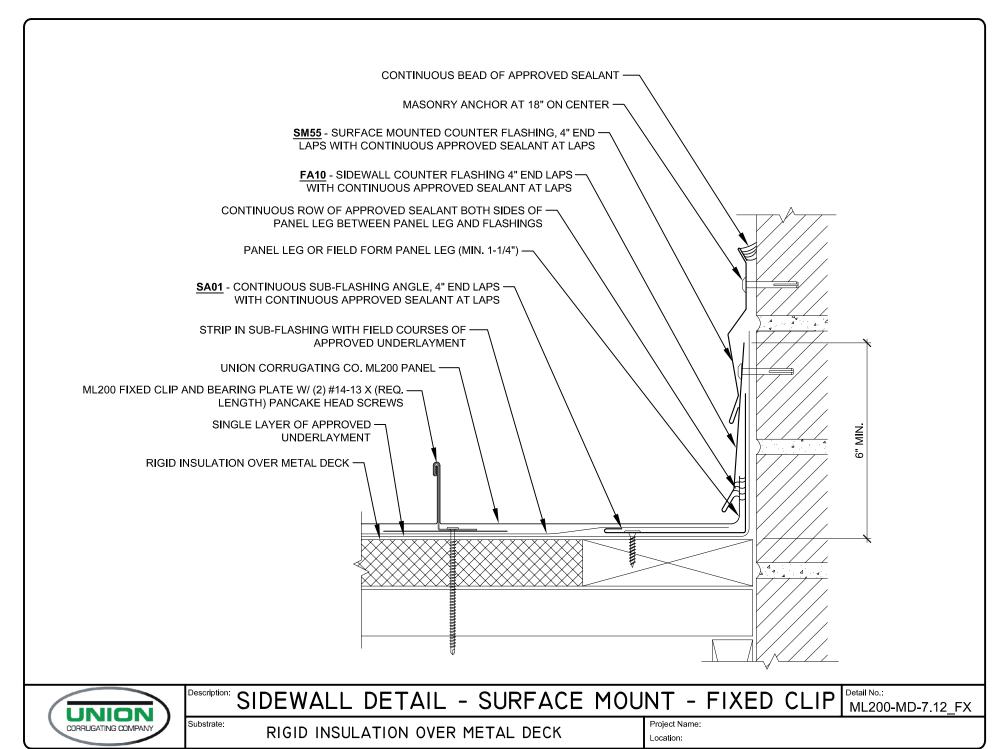
Description: SIDEWALL DETAIL - REGLET - EXPANSION CLIP

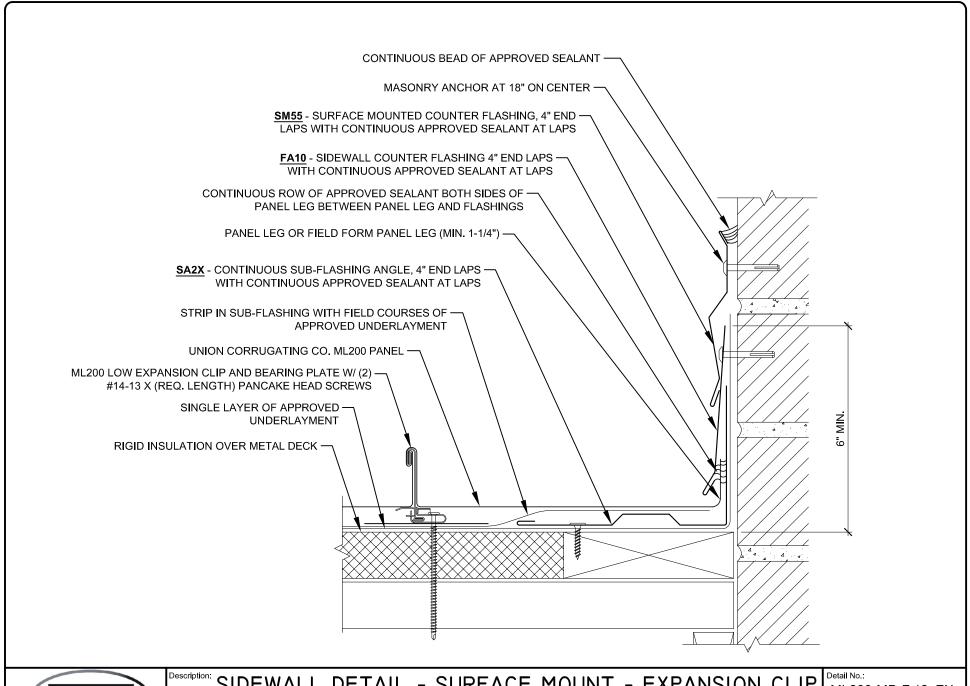
Detail No.:

Substrate

RIGID INSULATION OVER METAL DECK

Project Name: Location: ML200-MD-7.11 EX





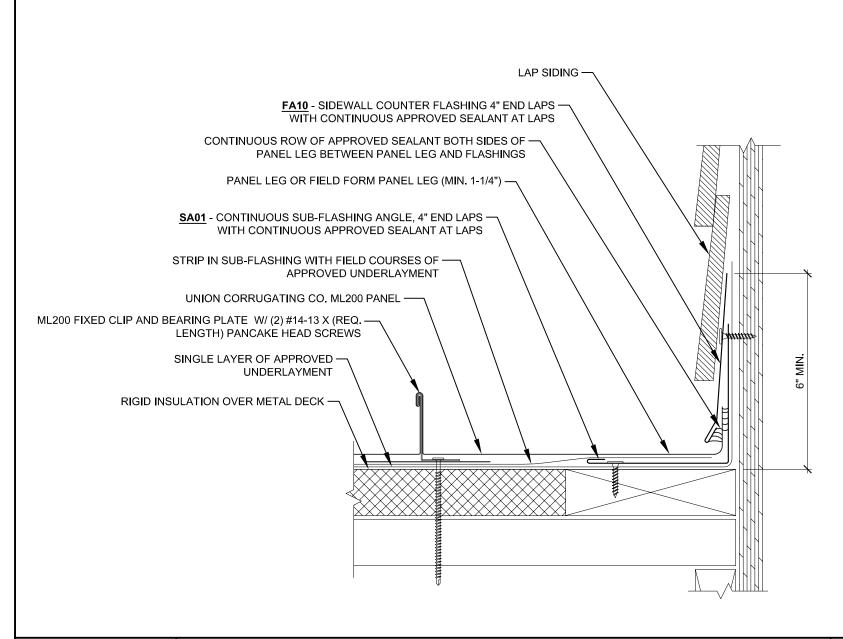


SIDEWALL DETAIL - SURFACE MOUNT - EXPANSION CLIP

ML200-MD-7.12 EX

Substrate:

RIGID INSULATION OVER METAL DECK



UNION CORRUGATING COMPANY Description: SIDEWALL DETAIL - W/ SIDING - FIXED CLIP

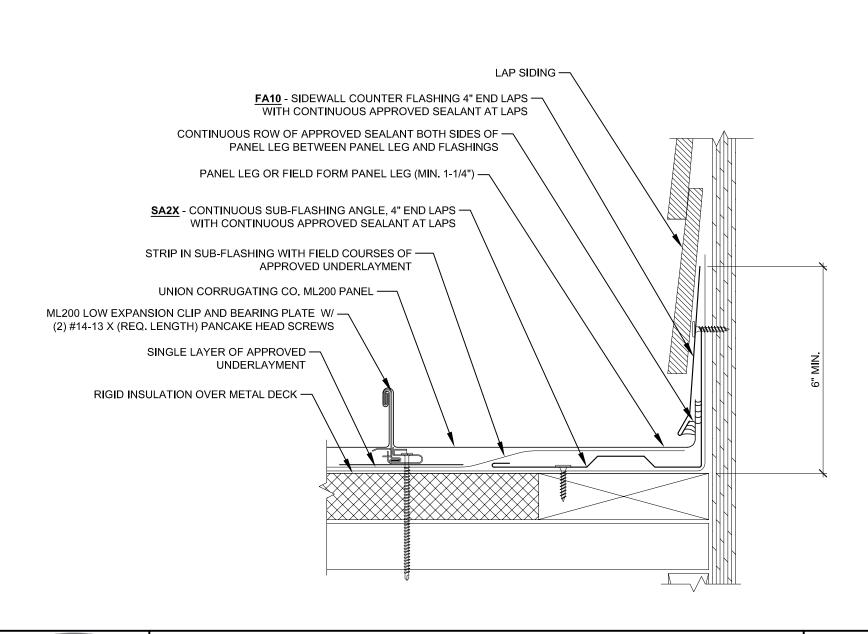
Detail No.:

CLIF ML200-MD-7.13_FX

RIGID INSULATION OVER METAL DECK

Project Name: Location:

Substrate:



UNION CORRUGATING COMPANY

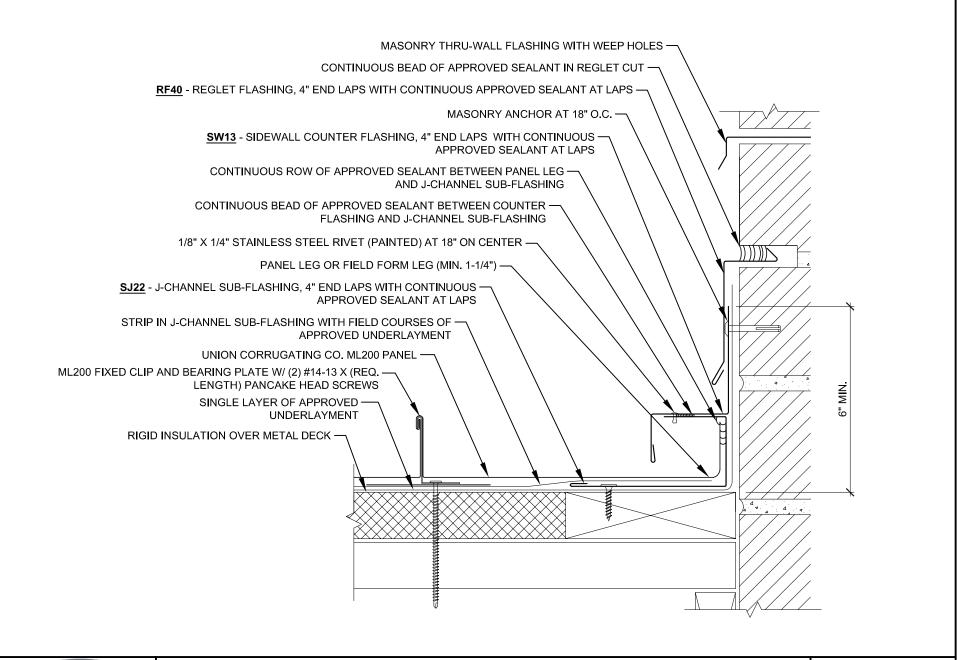
Description: SIDEWALL DETAIL - W/ SIDING - EXPANSION CLIP

Detail No.:

Substrate:

RIGID INSULATION OVER METAL DECK

Project Name: Location: ML200-MD-7.13 EX

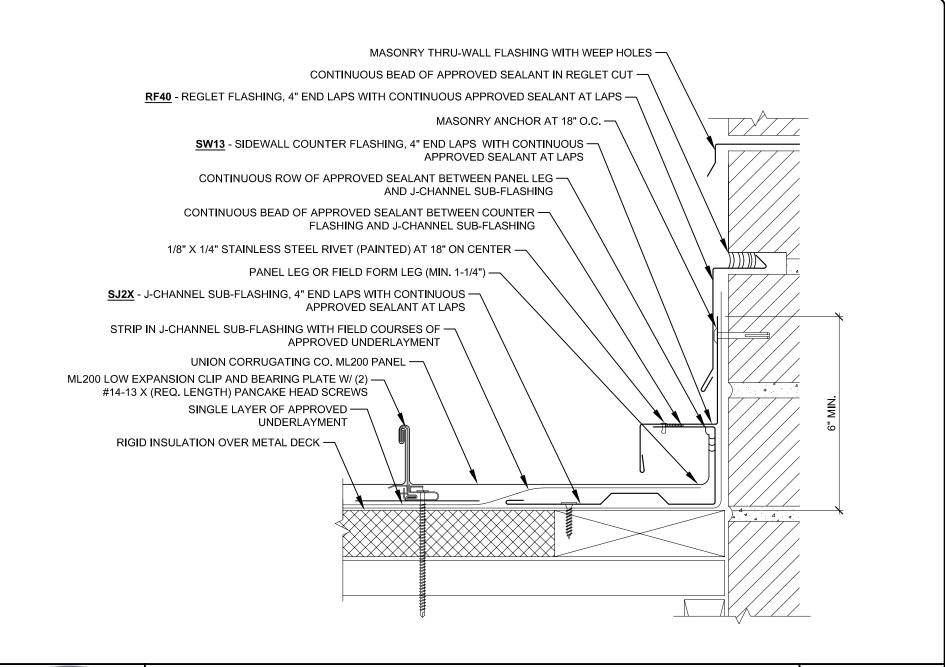


UNION CORRUGATING COMPANY Description: SIDEWALL DETAIL - REGLET - FIXED CLIP

Detail No.:
ML200-MD-7.21_FX

Substrate:

RIGID INSULATION OVER METAL DECK





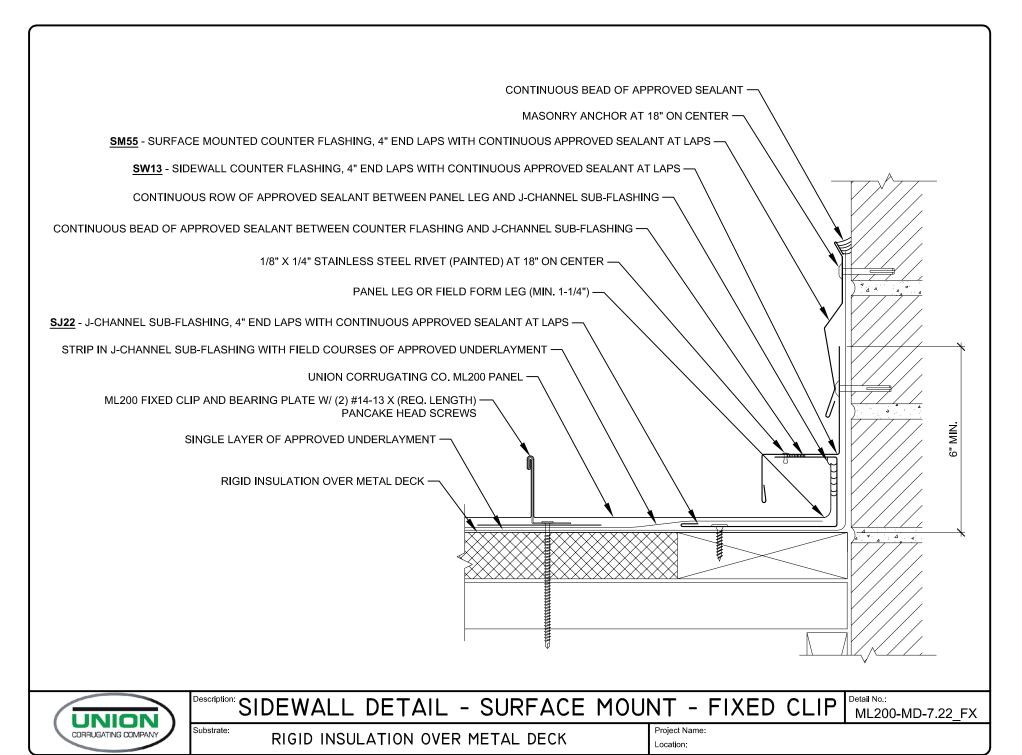
Description: SIDEWALL DETAIL - REGLET - EXPANSION CLIP

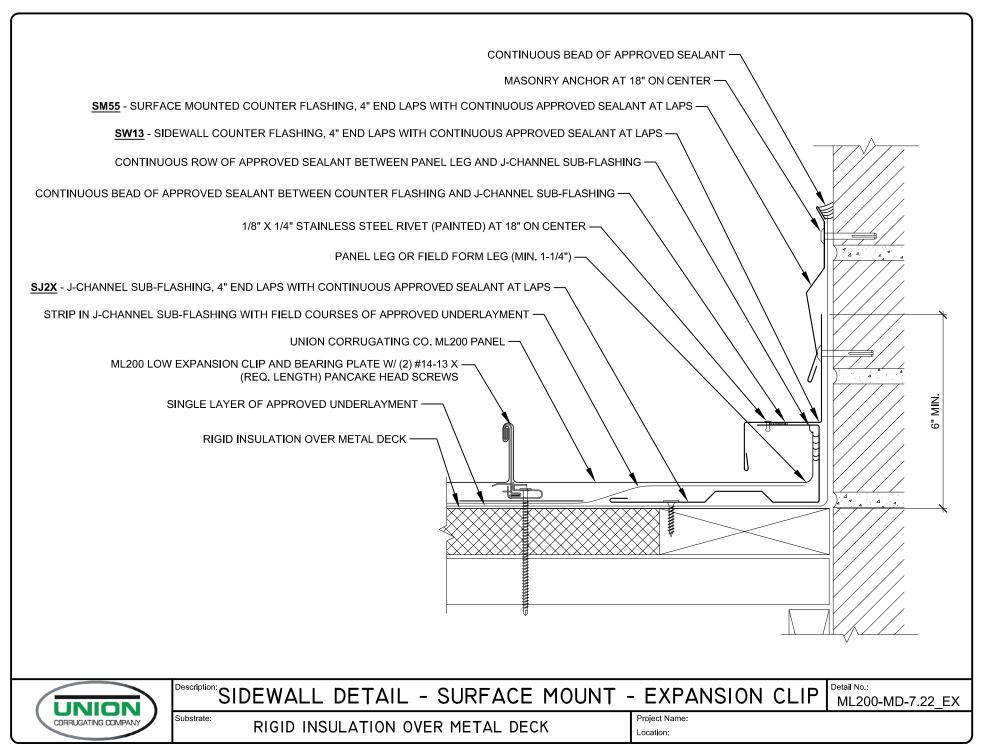
Detail No.:
ML200-MD-7.21_EX

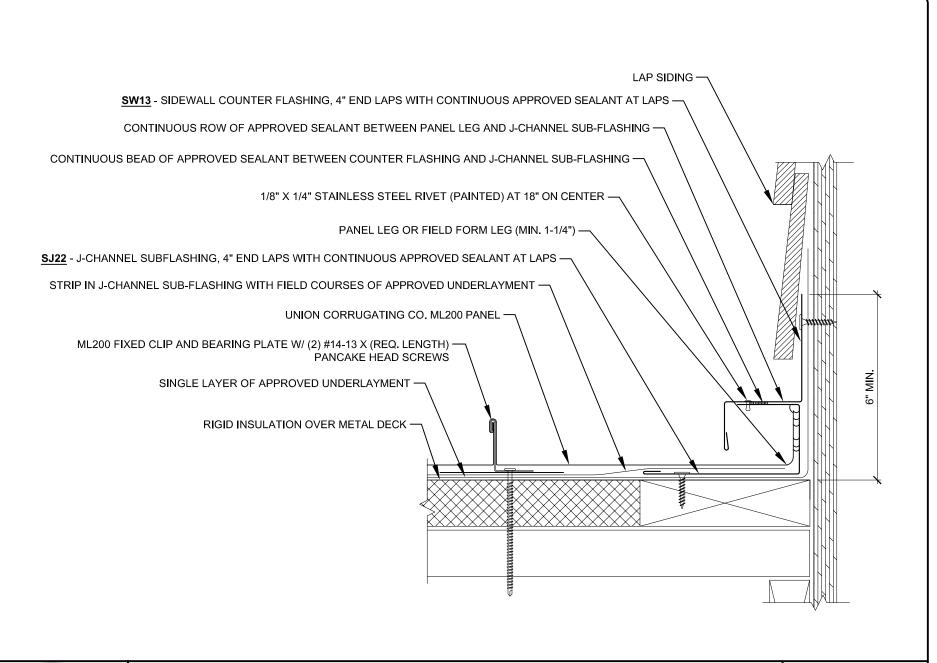
Substrate:

RIGID INSULATION OVER METAL DECK

Project Name:









Description:

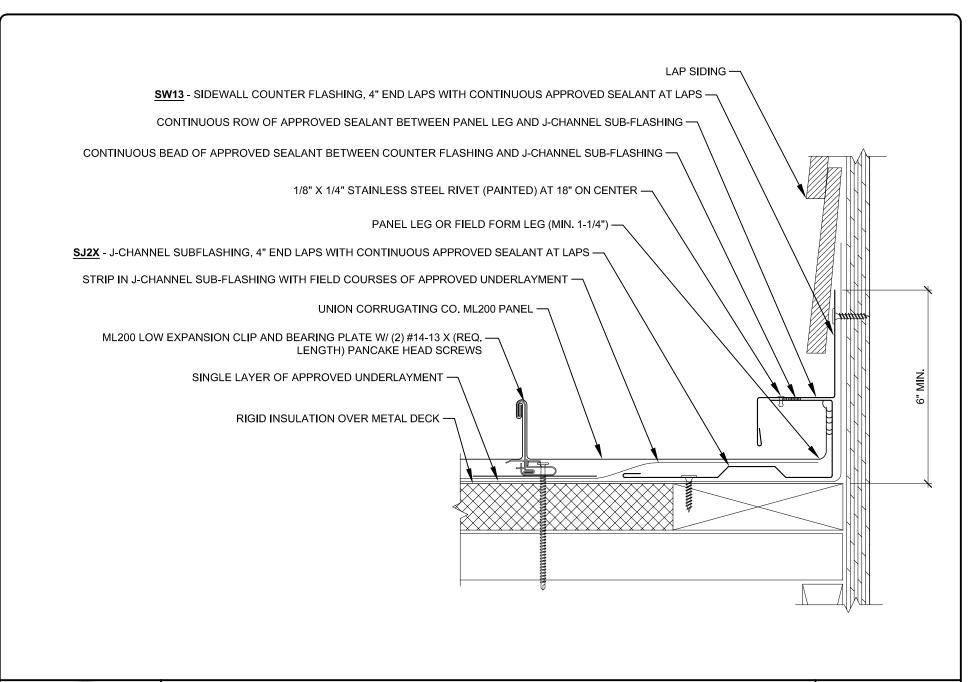
SIDEWALL DETAIL W/ SIDING - FIXED CLIP

Detail No.:

ML200-MD-7.23 FX

Substrate:

RIGID INSULATION OVER METAL DECK



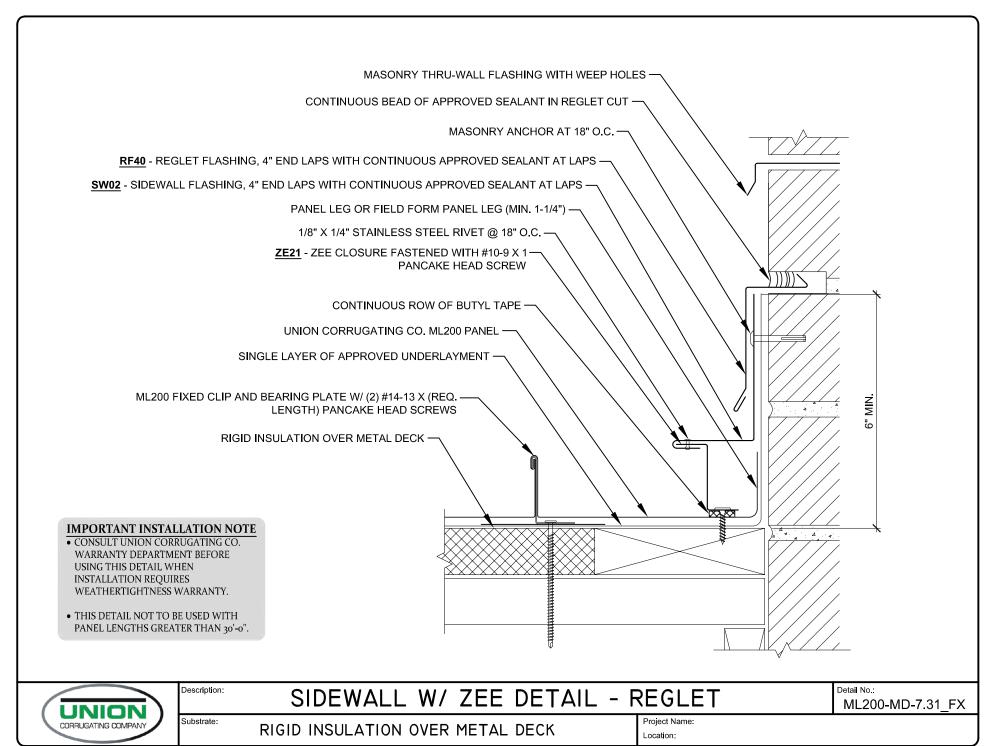


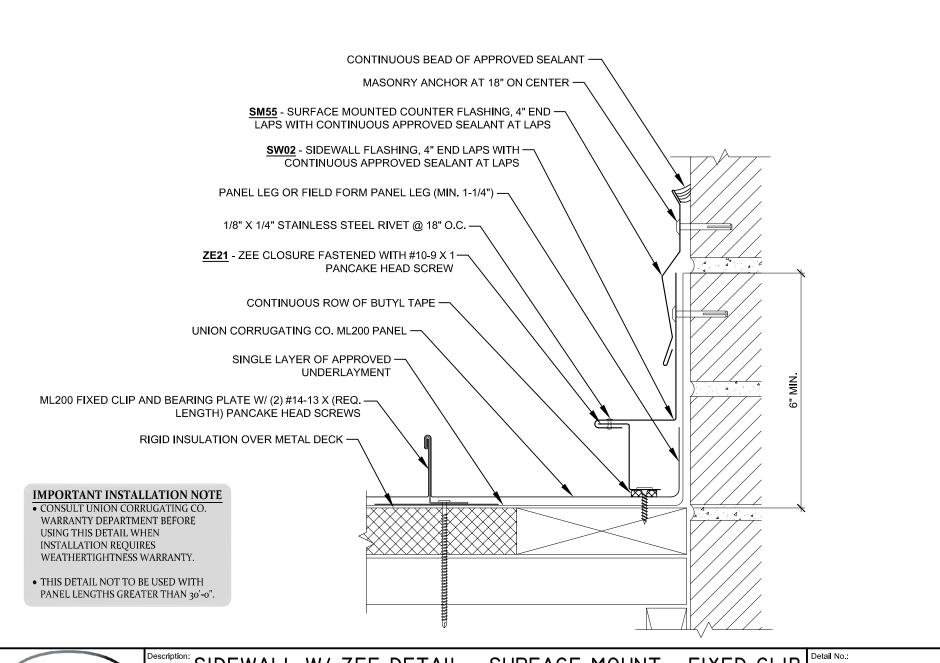
Description: SIDEWALL DETAIL - W/ SIDING - EXPANSION CLIP

Detail No.: ML200-MD-7.23 EX

Substrate:

RIGID INSULATION OVER METAL DECK





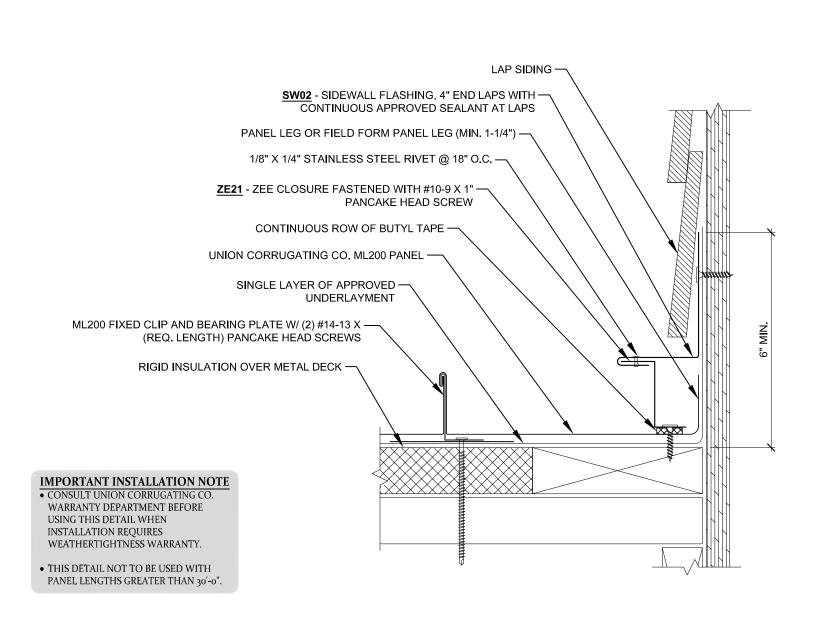


SIDEWALL W/ ZEE DETAIL - SURFACE MOUNT - FIXED CLIP

ML200-MD-7.32 FX

Substrate:

RIGID INSULATION OVER METAL DECK



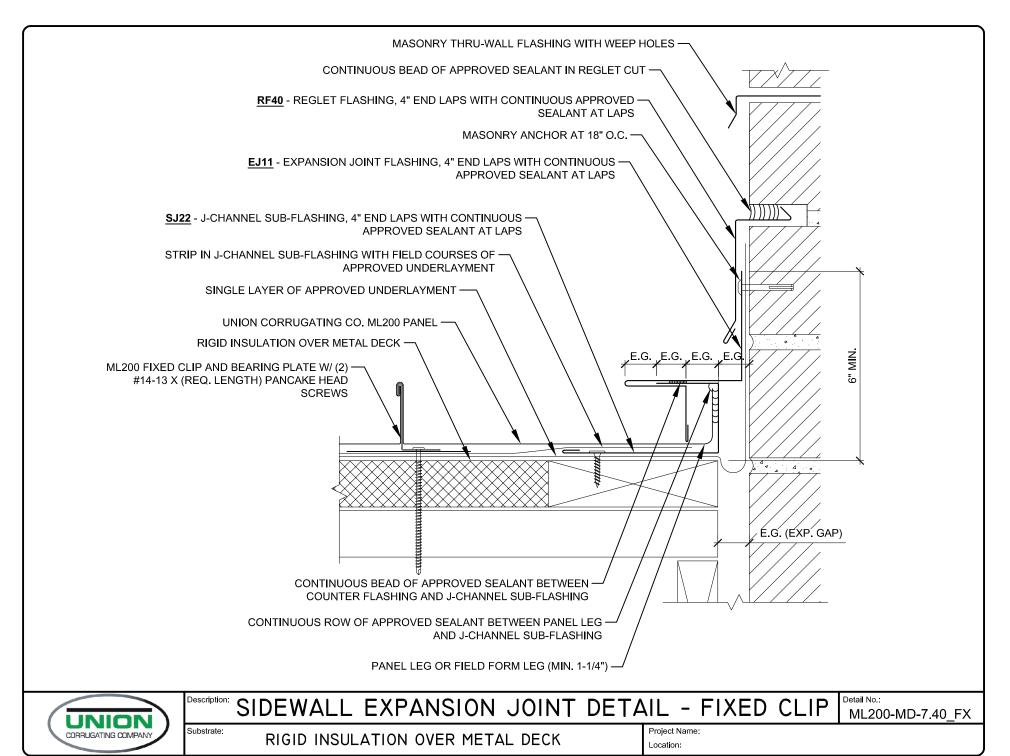


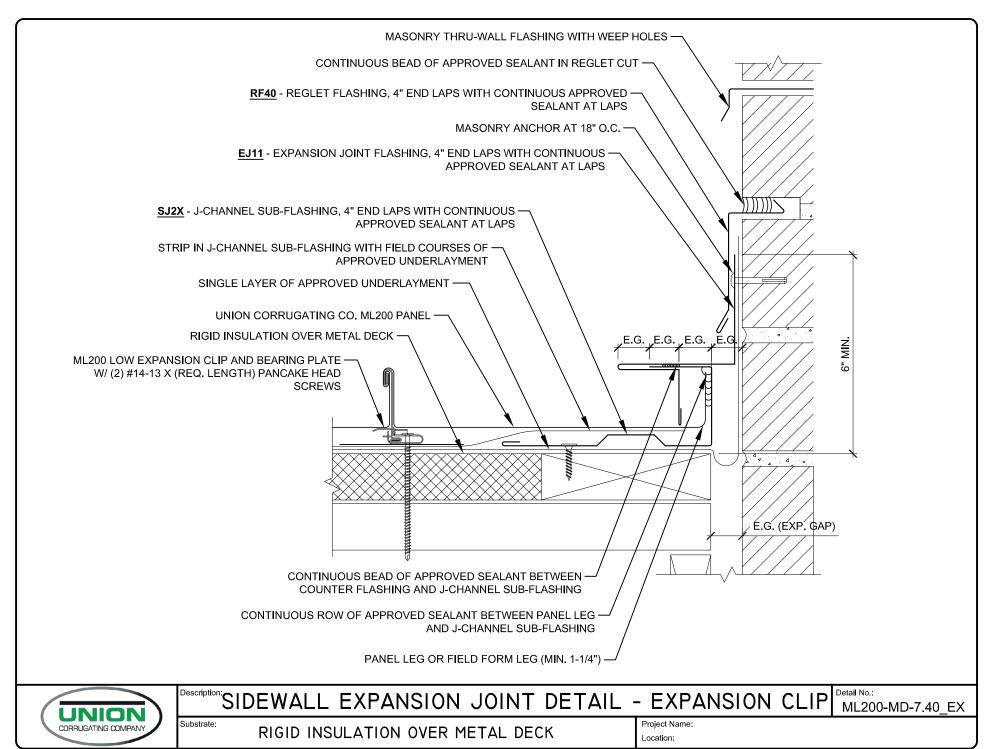
Description: SIDEWALL W/ ZEE - W/ SIDING - FIXED CLIP

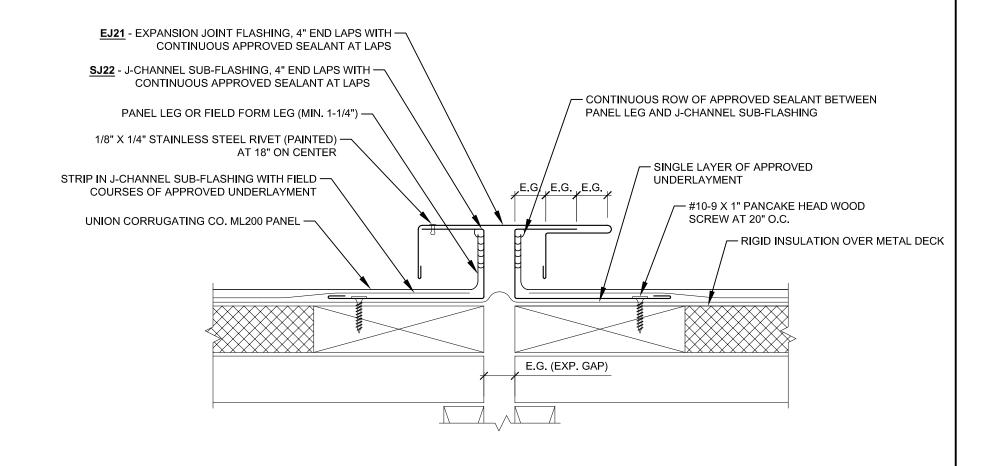
ML200-MD-7.33 FX

Substrate:

RIGID INSULATION OVER METAL DECK









EXPANSION JOINT (MID-ROOF) - FIXED CLIP

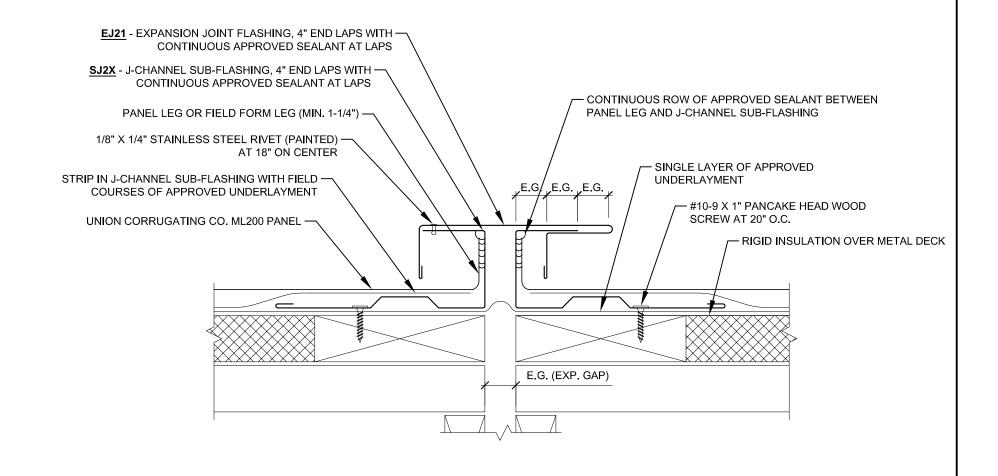
Detail No.:

Substrate: RIGID INSULATION OVER METAL DECK

Project Name: Location:

Description:

ML200-MD-7.50 FX





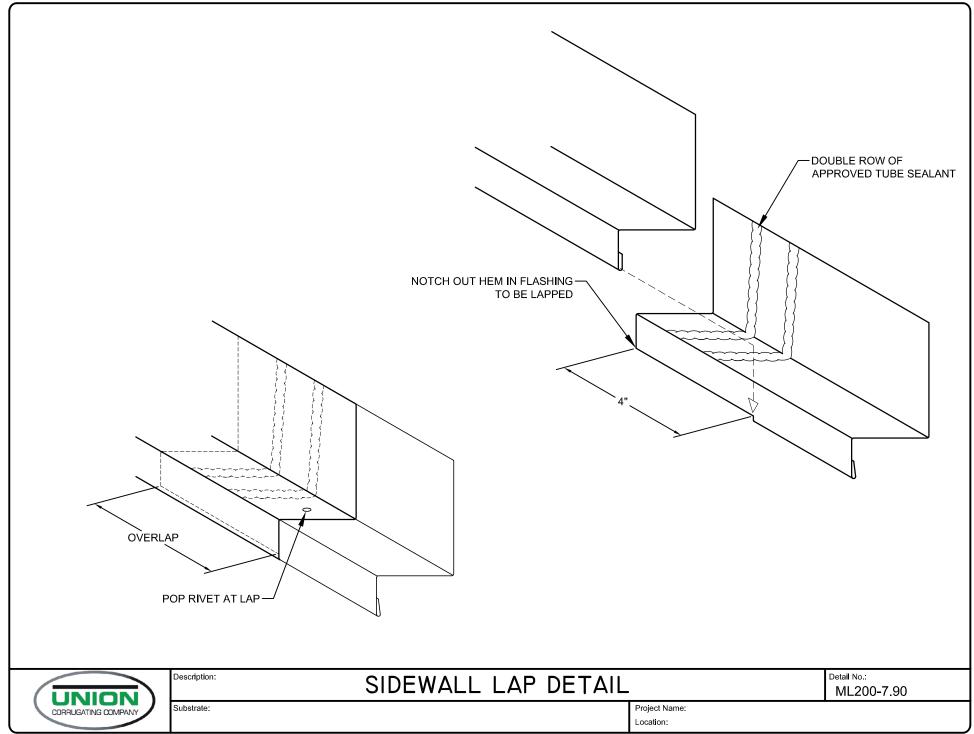
Description: EXPANSION JOINT (MID-ROOF) - EXPANSION CLIP

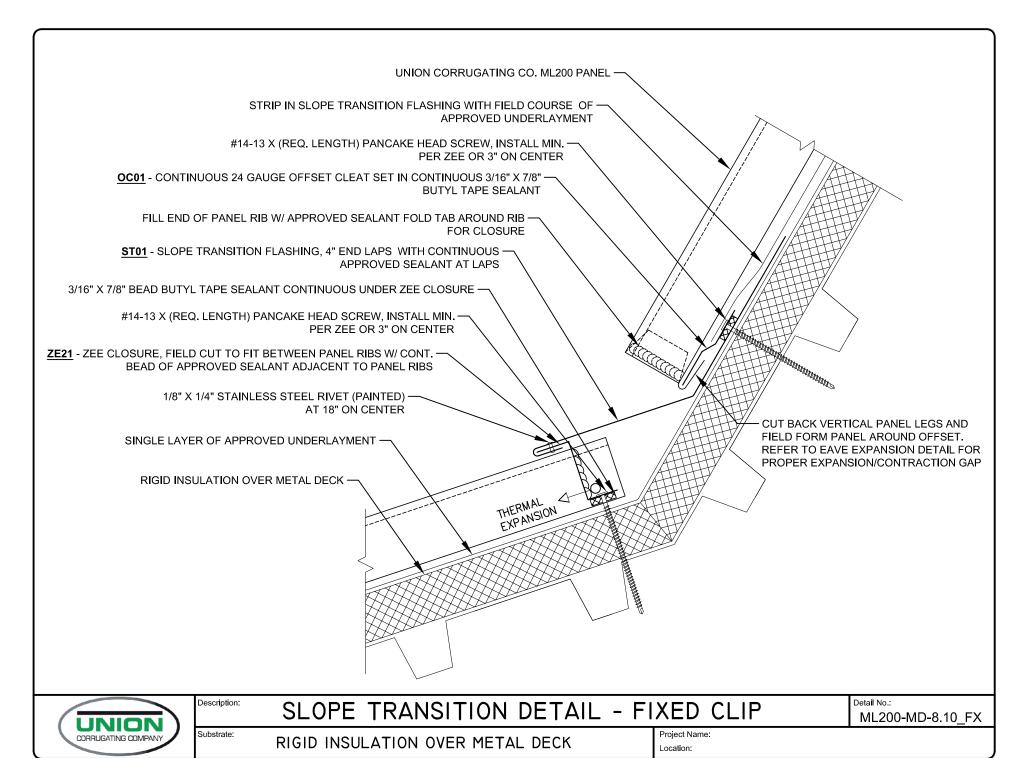
Detail No.:

ML200-MD-7.50 EX

Substrate: RIGID INSULATION OVER METAL DECK

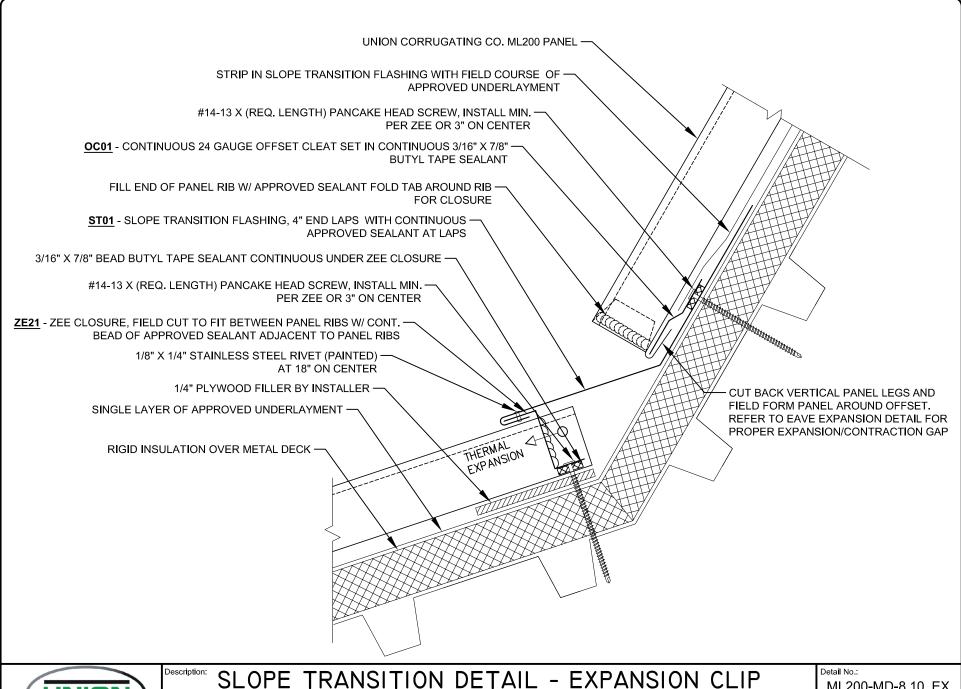
Project Name: Location:





Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.

2016-0301

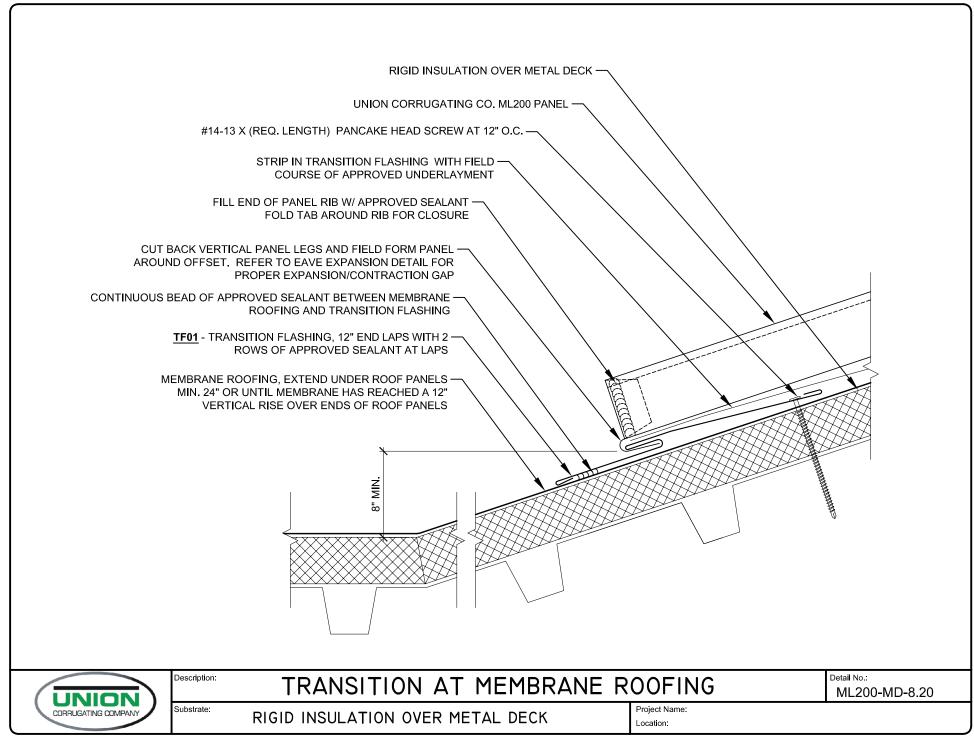


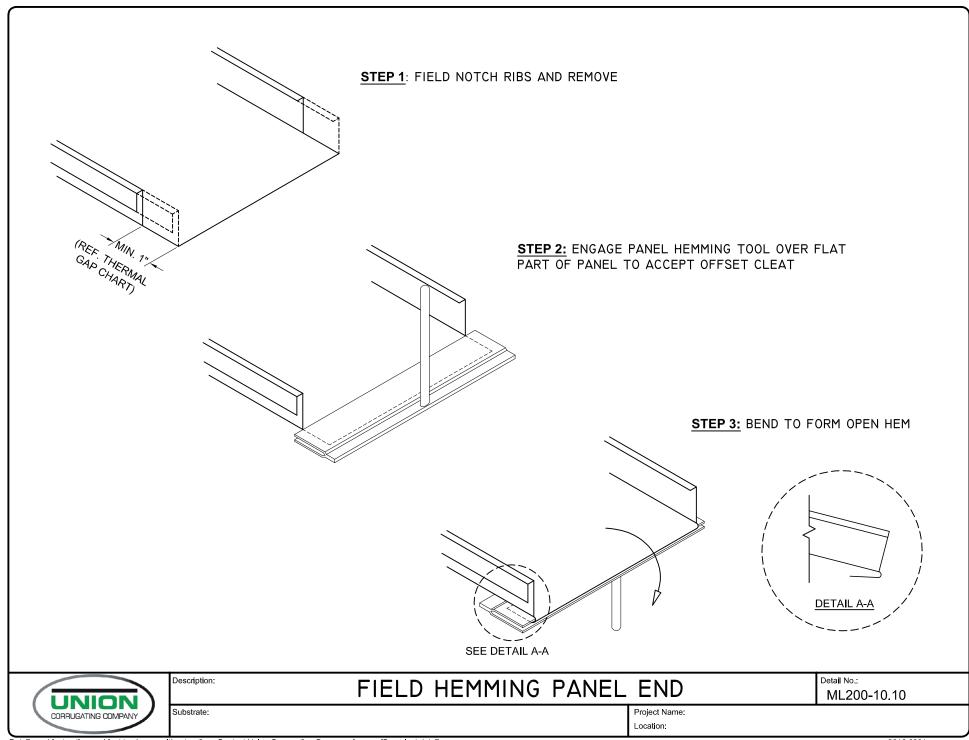
ML200-MD-8.10 EX

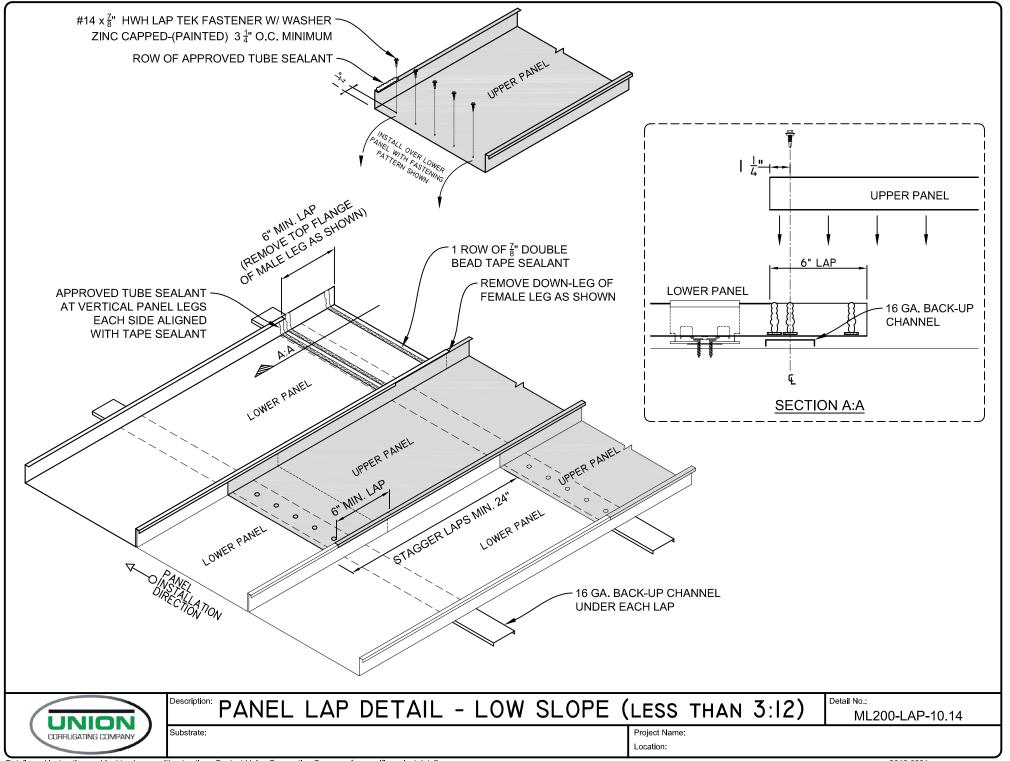
Substrate:

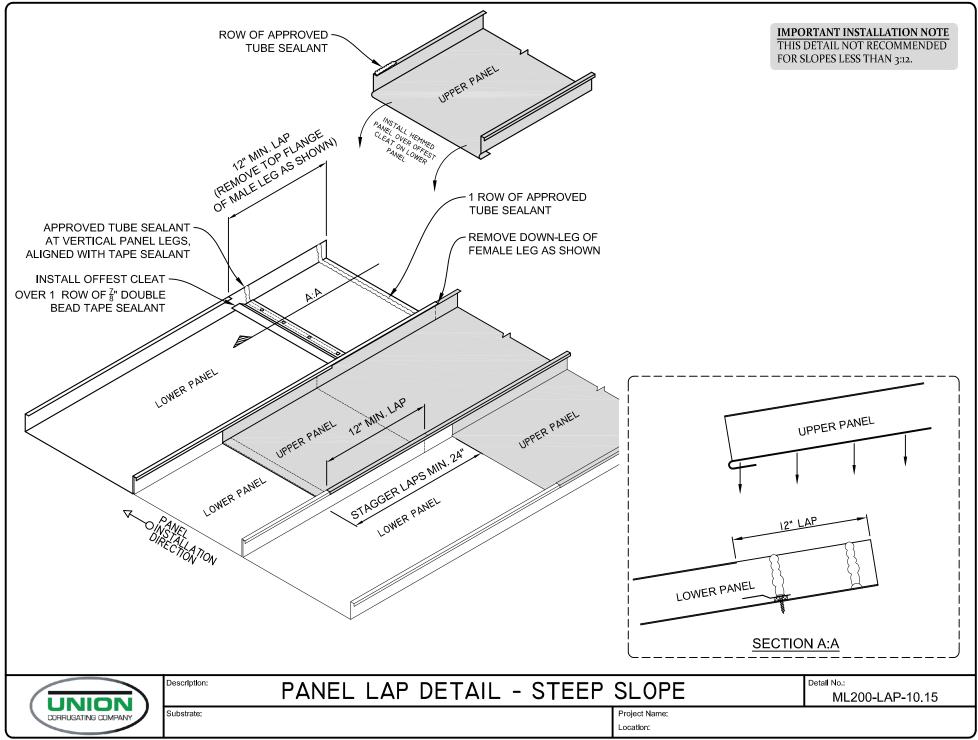
RIGID INSULATION OVER METAL DECK

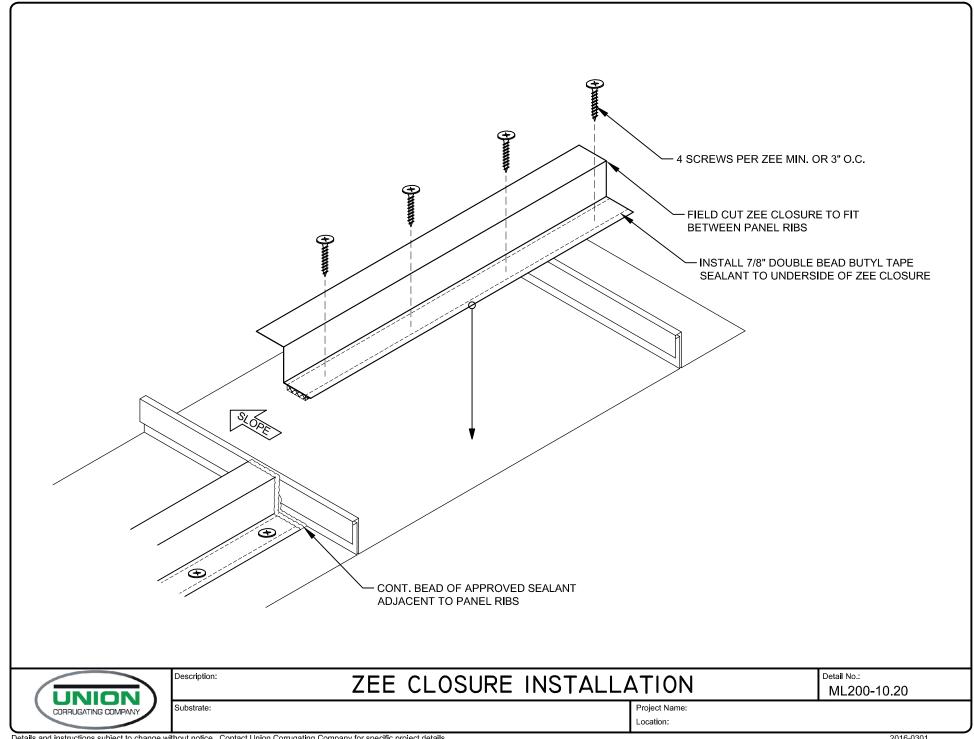
Project Name: Location:

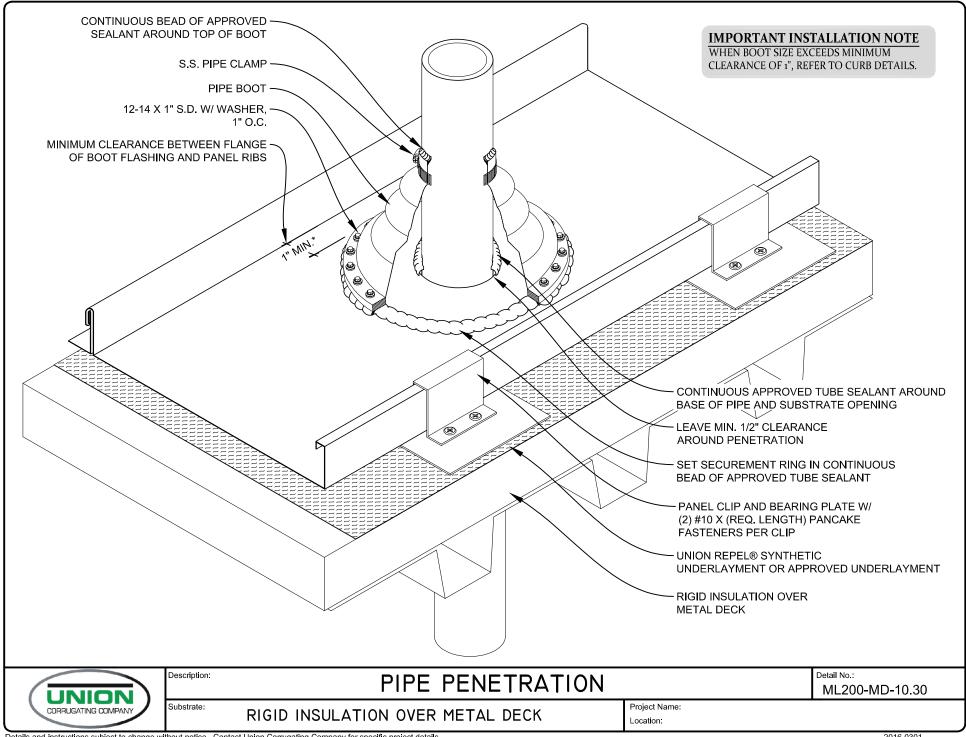


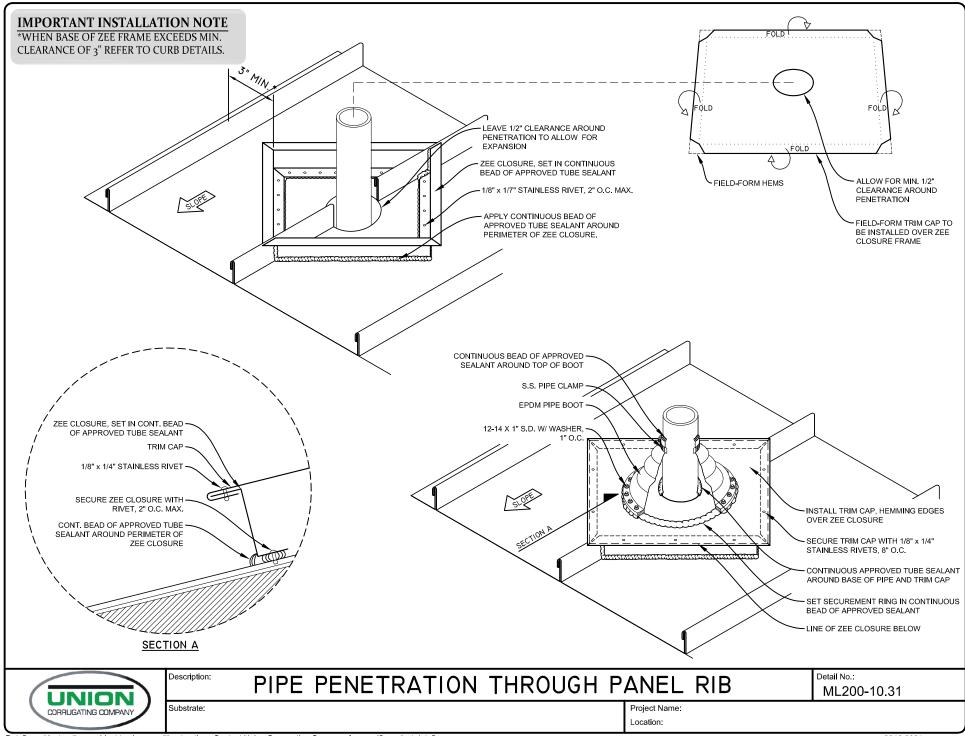


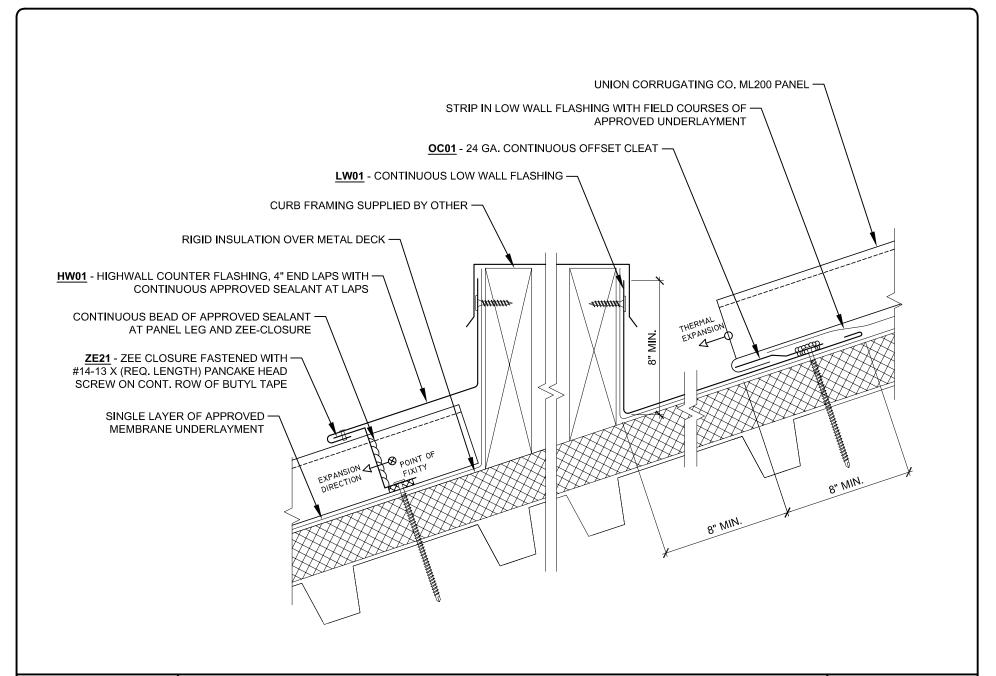














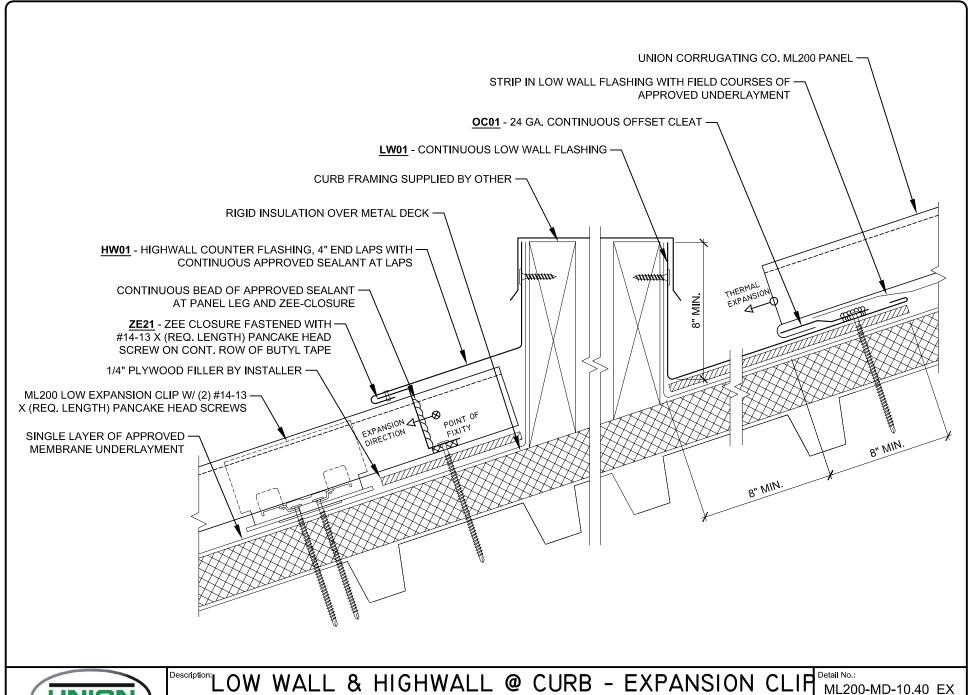
LOW WALL & HIGHWALL @ CURB - FIXED CLIP

etail No.:

Substrate:

RIGID INSULATION OVER METAL DECK

Project Name: Location: ML200-MD-10.40_FX





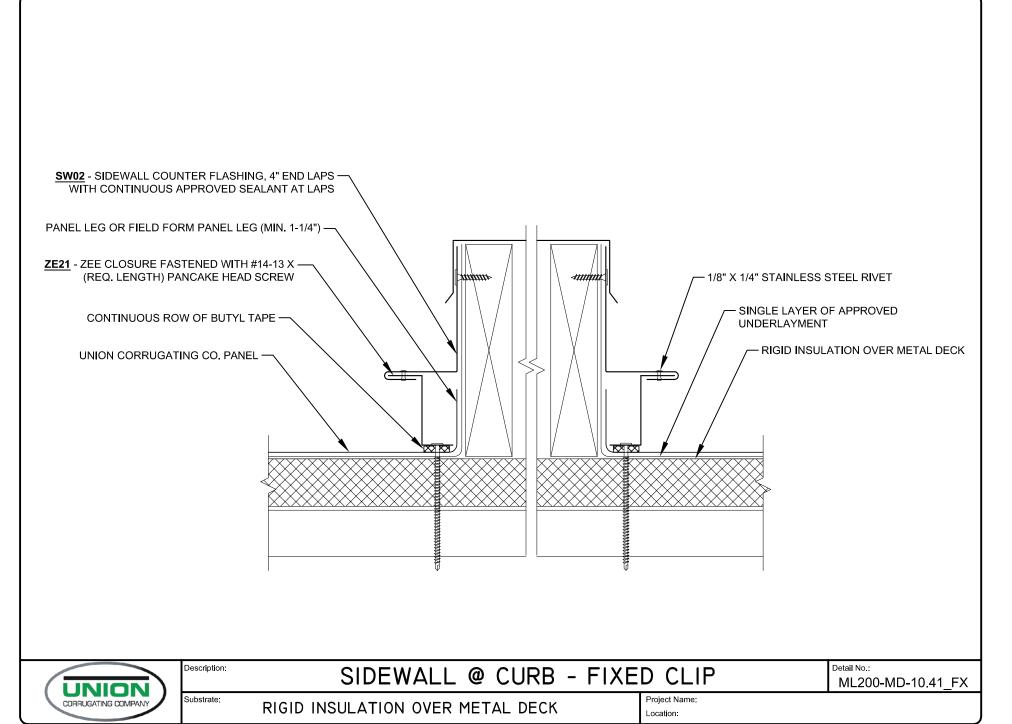
OW WALL & HIGHWALL @ CURB - EXPANSION CLIF.

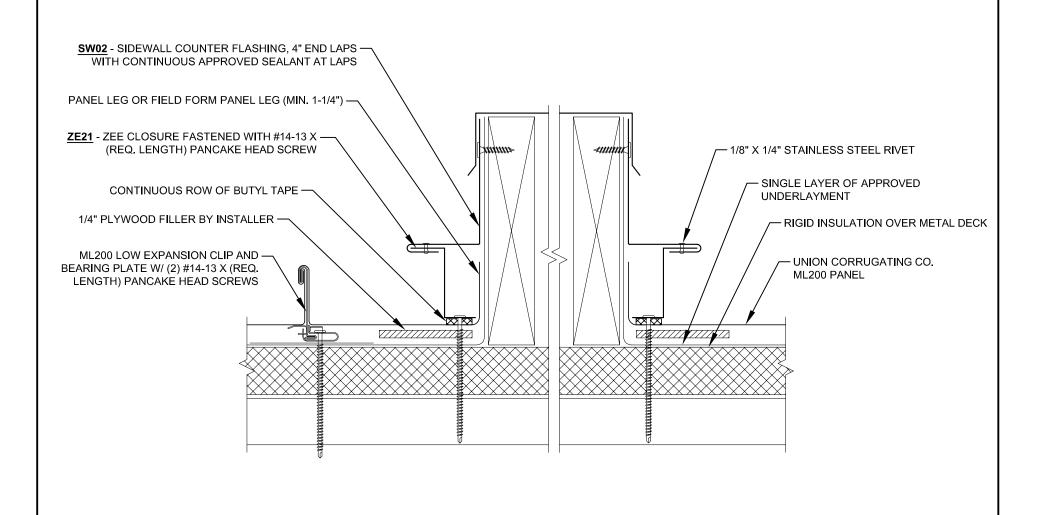
Substrate:

RIGID INSULATION OVER METAL DECK

Project Name: Location:

Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.





SIDEWALL @ CURB - EXPANSION CLIP

RIGID INSULATION OVER METAL DECK

Project Name:

Location:

Description:

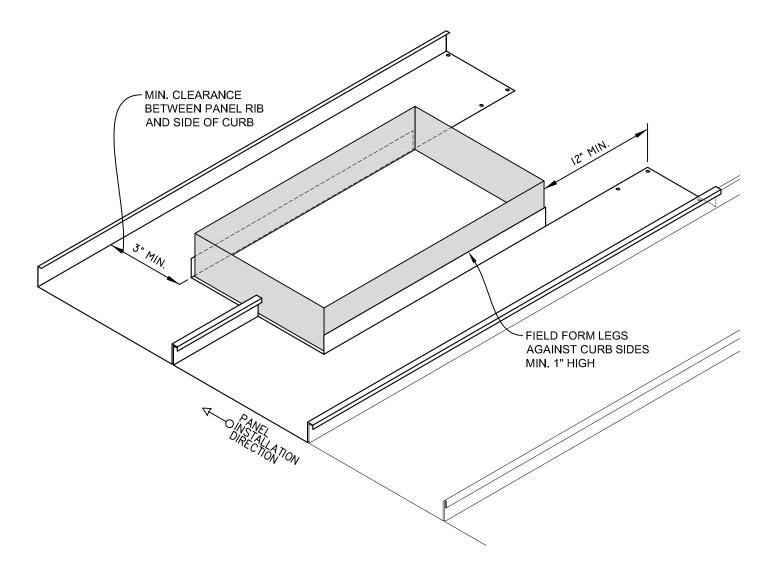
Substrate:

CORRUGATING COMPANY

ML200-MD-10.41 EX

STEP I

INSTALL PANELS AROUND CURB





ML200 CURB DETAILS - STEP I

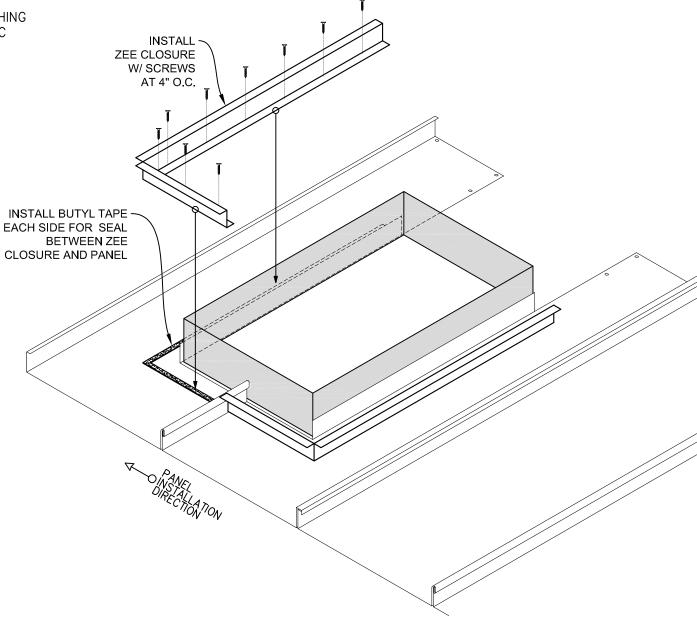
ML200-CRB: 1 of 6

Substrate:

Project Name:

STEP 2

APPLY ZEE CLOSURE FLASHING OVER DOUBLE BEAD MASTIC





ML200 CURB DETAILS - STEP 2

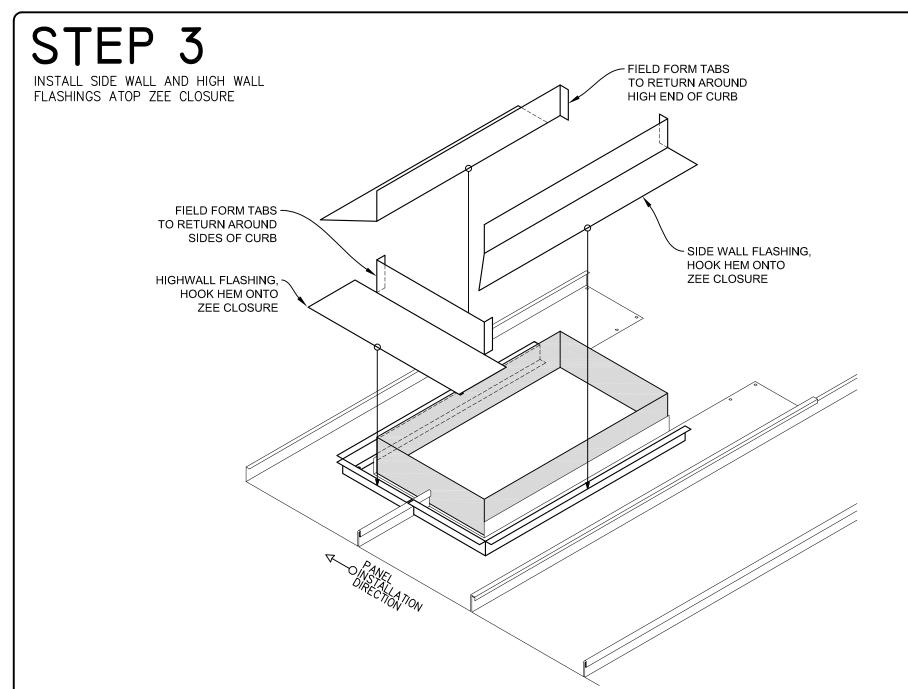
Detail No.:

ML200-CRB: 2 of 6

Substrate:

Project Name:

Location:



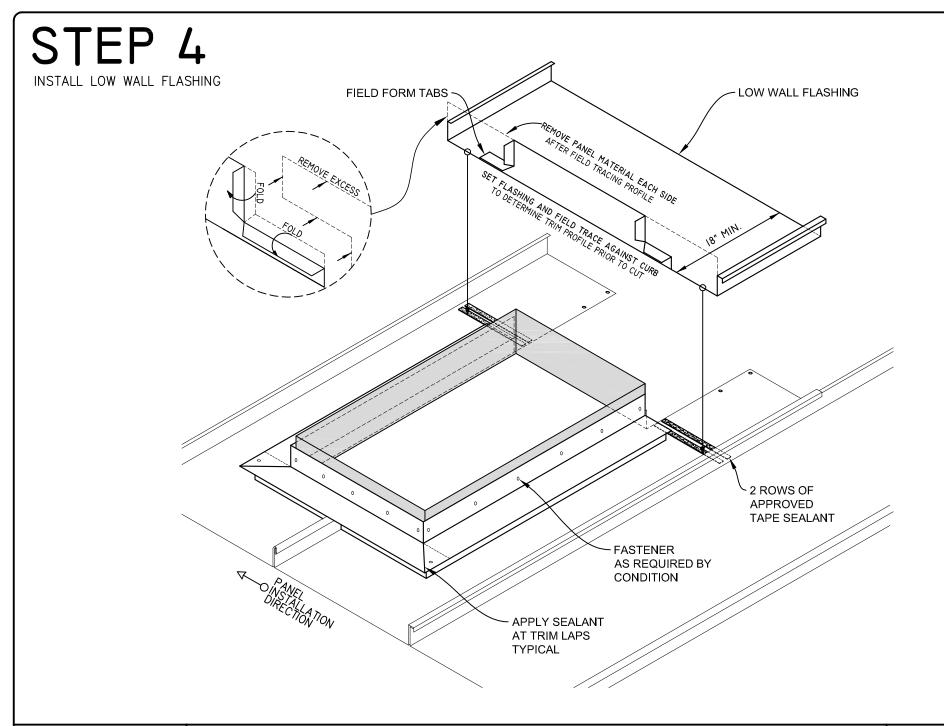


ML200 CURB DETAILS - STEP 3

Detail No.:

ML200-CRB: 3 of 6

e: Project Name: Location:





ML200 CURB DETAILS - STEP 4

etail No.:

ML200-CRB: 4 of 6

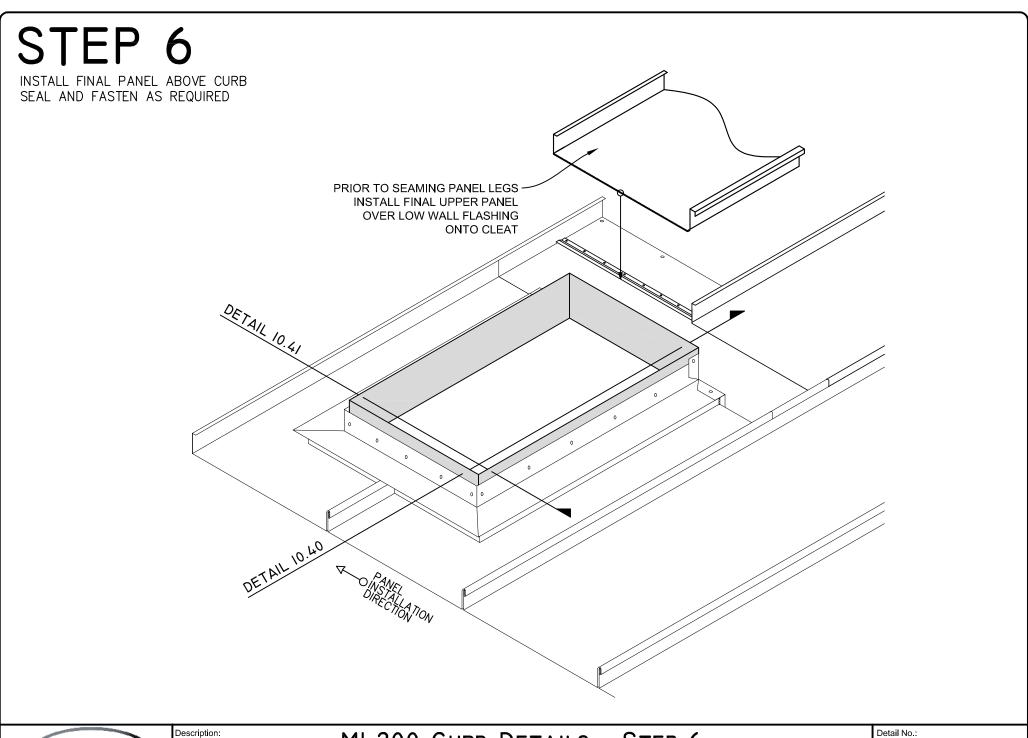
Substrate: P

Project Name: Location:

Description:

STEP 5 INSTALL CLEAT AND PREPARE FOR **NEST PANEL TABS PRIOR** UPPER PANEL INSTALLATION TO SEAMING AS SHOWN INSTALL FIELD HEMMED UPPER PANELS -OVER LOW WALL FLASHING AND ONTO CLEAT PRIOR TO MECHANICALLY SEAMING CONTINUOUS CLEAT SET IN SEALANT FASTEN AT 4" O.C. SEALANT AT ZEE & LOW WALL INTERSECTION **BOTH SIDES OF CURB** Detail No.: Description: ML200 CURB DETAILS - STEP 5 ML200-CRB: 5 of 6 Substrate: Project Name:

Location:





ML200 CURB DETAILS - STEP 6

ML200-CRB: 6 of 6

Substrate:

Project Name: Location: