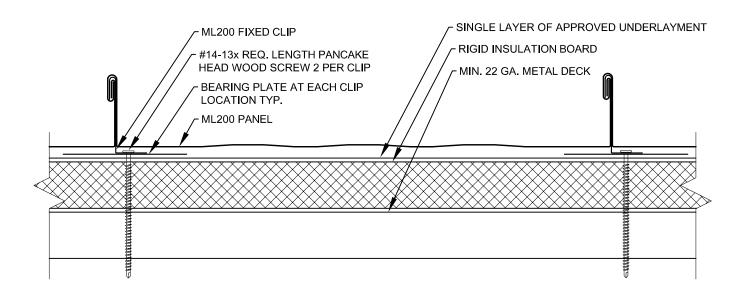


ML200 Standing Seam Rigid Insulation Over Metal Deck Master Details

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 Hash Panel	
Extended Eave with Vertical Standing Seam Panel	_
Extended Eave Lap Detail	_
Gable Details	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	
Valley - Offset Cleat	3.20
Valley Lap Detail	3.90



ML200 Standing Seam

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

Ridge & Hip Details	Detail No.
Standard Ridge & Hip	4.10 FX
Standard Ridge & Hip	
Ridge Termination at Valley	
Ridge & Hip Lap Detail	
Ridge Cap Expansion Detail	4.91
Peak Details	Detail No.
	-
Peak Detail	5.10_FX
Peak Detail	5.10_EX
Peak Detail with Vertical Flush Panel	
Peak Detail with Vertical Flush Panel	5.40_EX
High Wall & Low Wall Details	Detail No.
High Wall - Reglet	6.10_FX
High Wall - Reglet	
High Wall - Surface Mount	
High Wall - Surface Mount	
High Wall - Vertical Panel with Sill	6.14 FX
High Wall - Vertical Panel with Sill	6.14 EX
High Wall - Parapet	6.20 FX
High Wall - Parapet	
Valley Wall Detail	6.30_FX
Valley Wall Detail	6.30_EX
High Wall Lap Detail	6.90
Sidewall Details	Detail No.
oldewan Details	Detail No.
Sidewall - Reglet with Subflashing Angle	7.11_FX
Sidewall - Reglet with Subflashing Angle	7.11_EX
Sidewall - Surface Mount with Subflashing Angle	7.12_FX
Sidewall - Surface Mount with Subflashing Angle	7.12_EX
Sidewall - Wood Framing & Siding with Subflashing Angle	7.13_FX
Sidewall - Wood Framing & Siding with Subflashing Angle	7.13_EX
Sidewall - Reglet with J-Channel Subflashing	7.21_FX
Sidewall - Reglet with J-Channel Subflashing	7.21_EX
Sidewall - Surface Mount with J-Channel Subflashing	7.22_FX
Sidewall - Surface Mount with J-Channel Subflashing	7.22_ <i>EX</i>
Sidewall - Wood Framing & Siding with J-Channel Subflashing	7.23_ <i>FX</i>
Sidewall - Wood Framing & Siding with J-Channel Subflashing	7.23_ <i>EX</i>

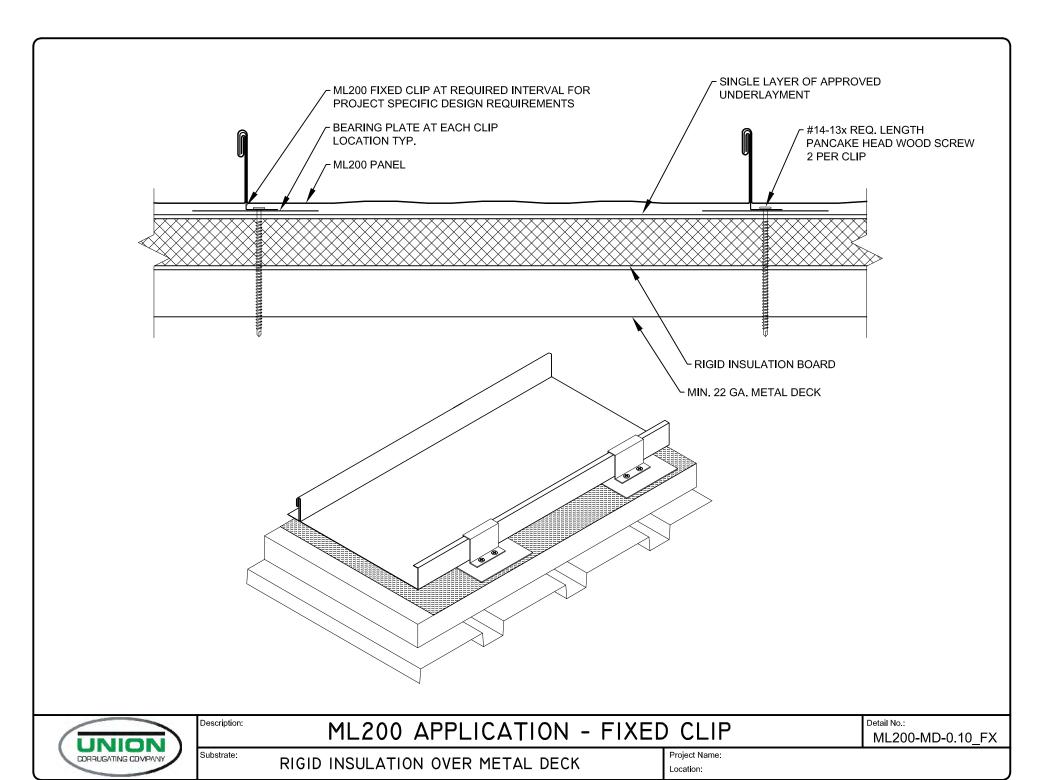


ML200 Standing Seam

Index

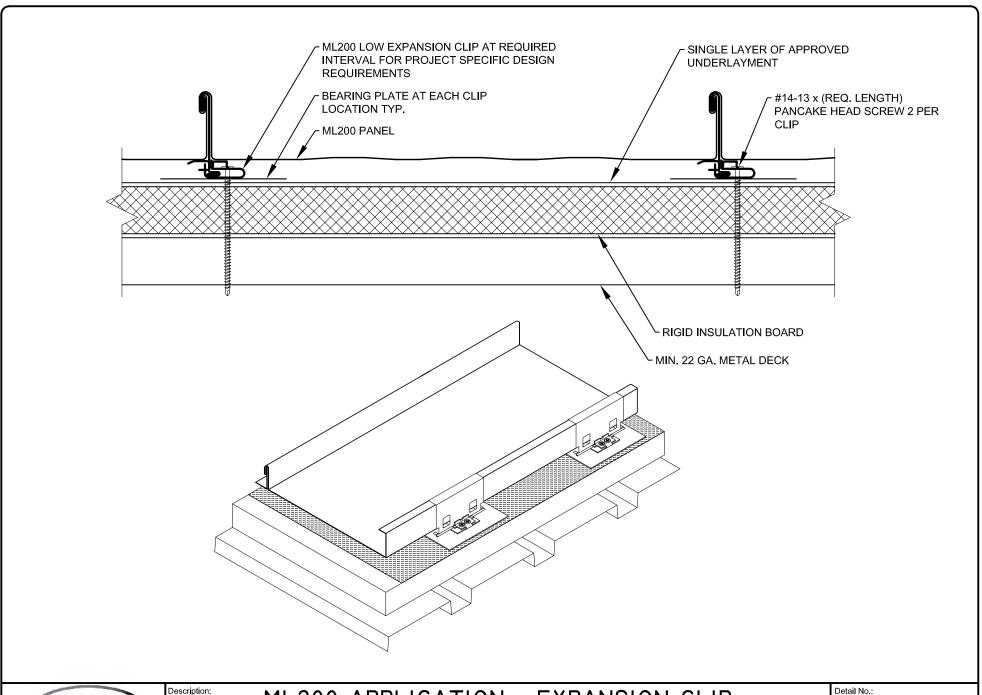
-Wood Substrate-Fixed Clip and Expansion Clip

Sidewall Details (continued)	Detail No.
0:1	7.04 514
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
OL T ''' D ' ''	5 (".)
Slope Transition Details	Detail No.
Clana Transition	0.40 57
Slope Transition	
Slope Transition	_
Transition at Membrane Roofing	8.20
General Information Details	Detail No.
Panel Hemming	10.10
End Lap Detail - Low Slope	10.14
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Zee Closure Installation	10.20
Pipe Penetration	10.30
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Curb at High Wall & Low Wall	10.40 FX
Curb at High Wall & Low Wall	
Curb at Sidewall	
Curb at Sidewall	
Curb Installation Detail	CRB 1-6



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

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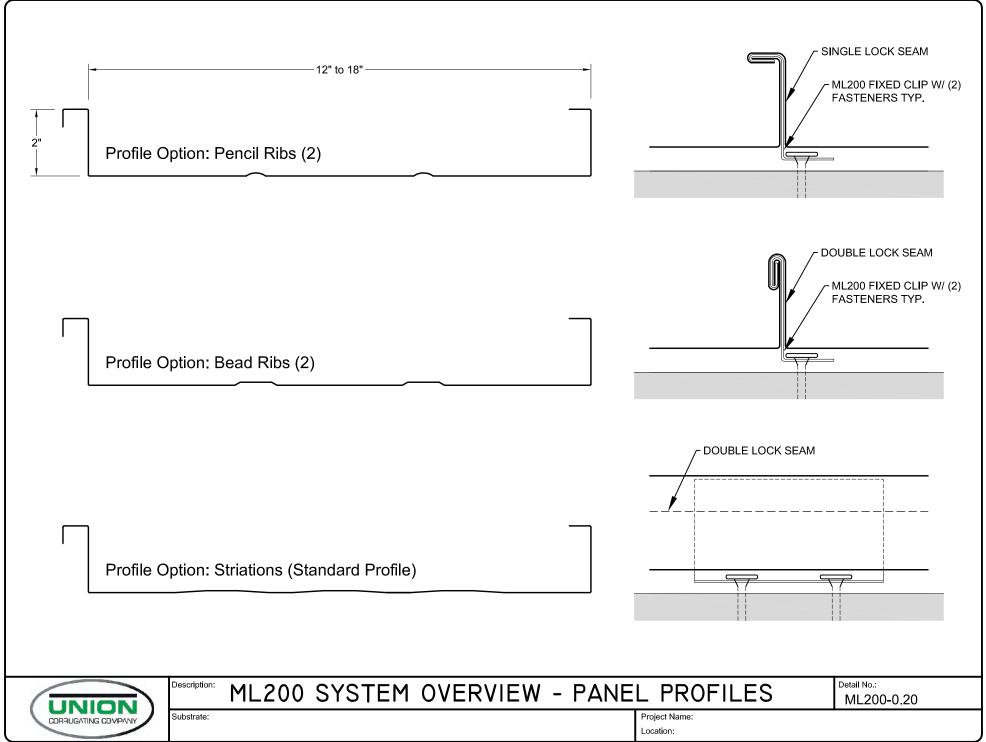


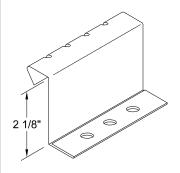
ML200 APPLICATION - EXPANSION CLIP Description:

ML200-MD-0.10 EX

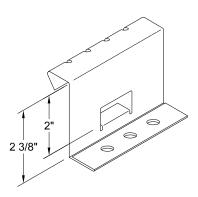
Substrate:

RIGID INSULATION OVER METAL DECK

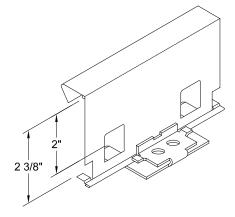




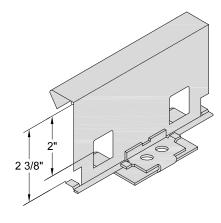
Clip 40 Fixed 22 Ga. Galvanized 2.125" x 3.25"



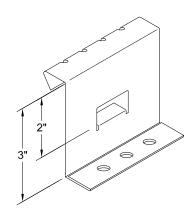
Clip 41 Fixed
22 Ga. Galvanized
2.375" x 3.25" (0.375" Substrate Standoff)



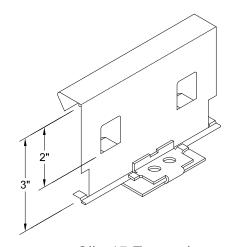
Clip 42 Expansion
22 Ga. Galvanized w/ 16 Ga. Base
2.375" x 4.25" (0.375" Substrate Standoff)
Use with up to 3" of blanket insulation



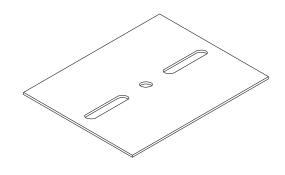
Clip 43 Expansion
22 Ga. Stainless Steel w/ 16 Ga. Base
2.375" x 4.25" (0.375" Substrate Standoff)
Recommended for use with aluminum panels
Use with up to 3" of blanket insulation



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".



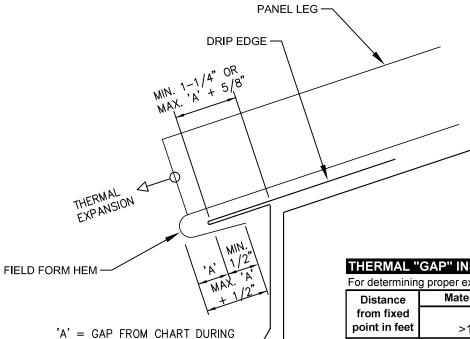
Description:

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		100° t	o 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

ION NG CDMPANY

Description: THERMAL GAP INSTALLATION CHART - STEEL

Detail No.:

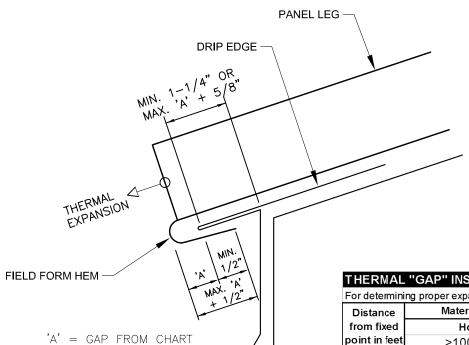
ML200-0.30

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	>100° F		100° to 50° F)° 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



THERMAL GAP INSTALLATION CHART - ALUMINUM

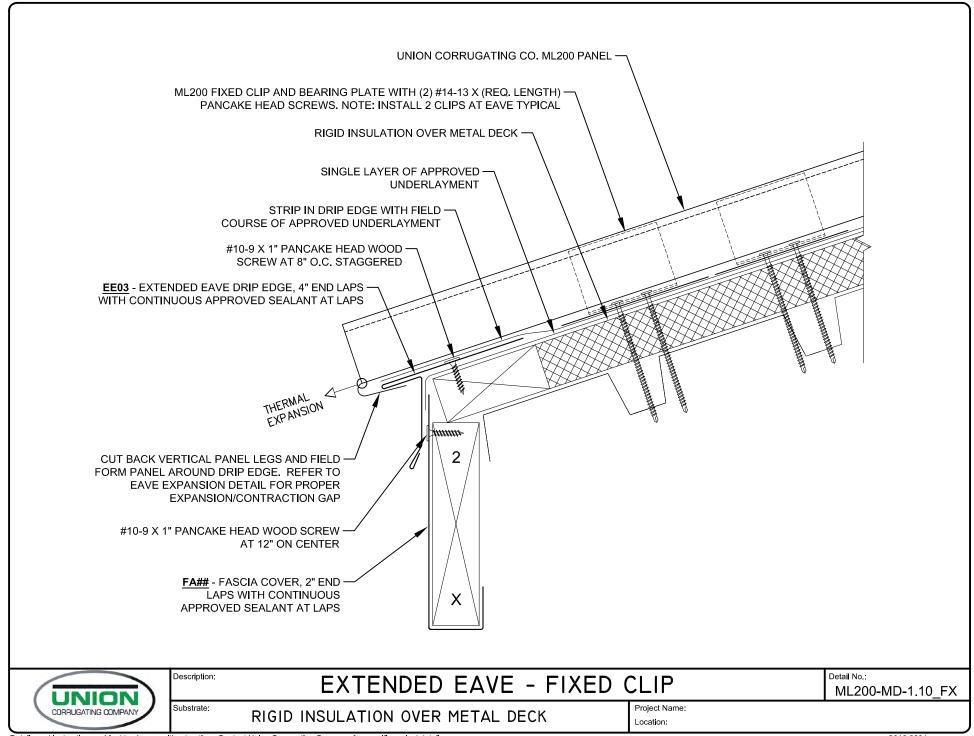
ML200-0.31

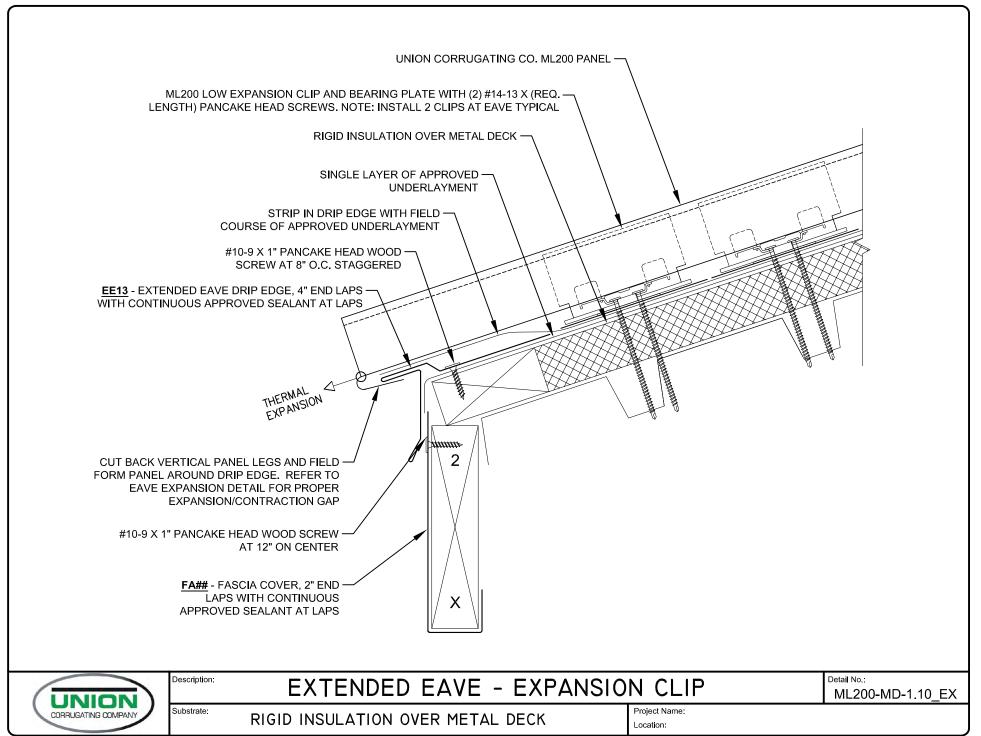
Detail No.:

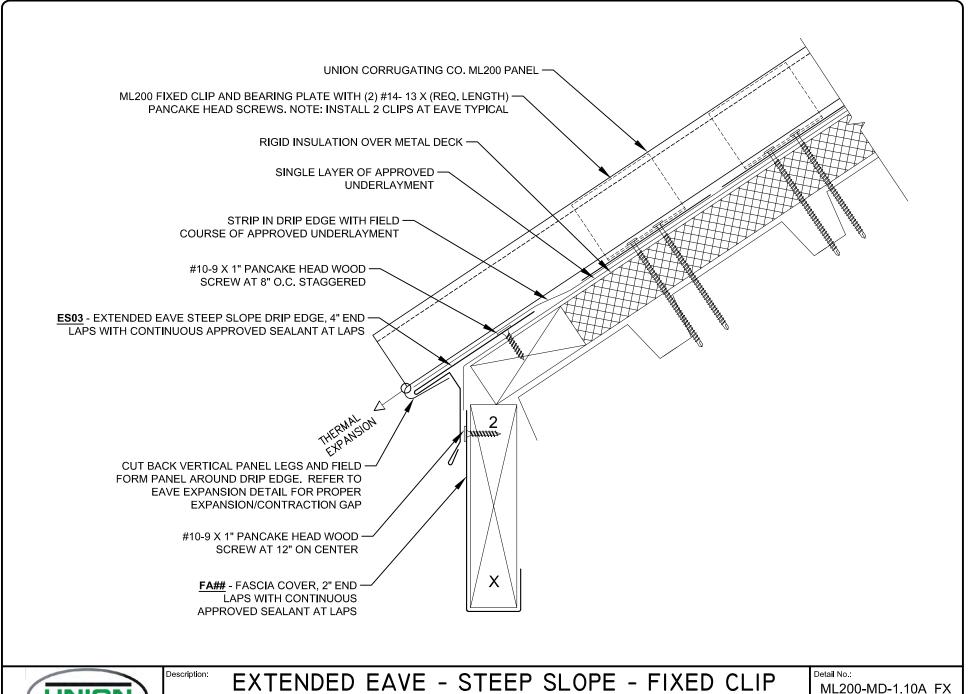
Substrate:

Project Name: Location:

DURING TIME OF INSTALLATION



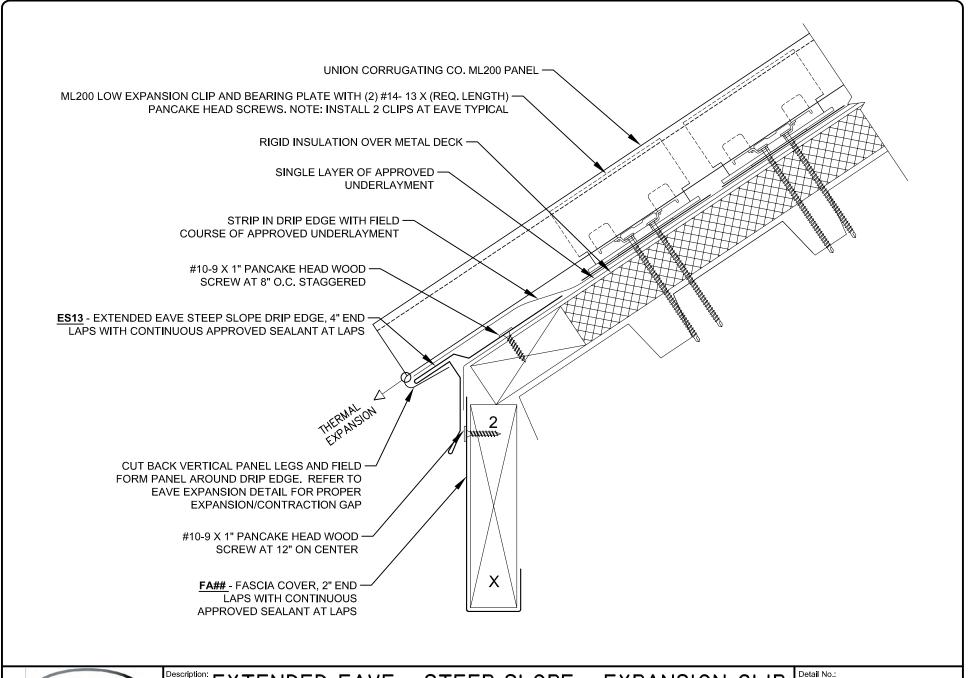




ML200-MD-1.10A FX

Substrate:

RIGID INSULATION OVER METAL DECK



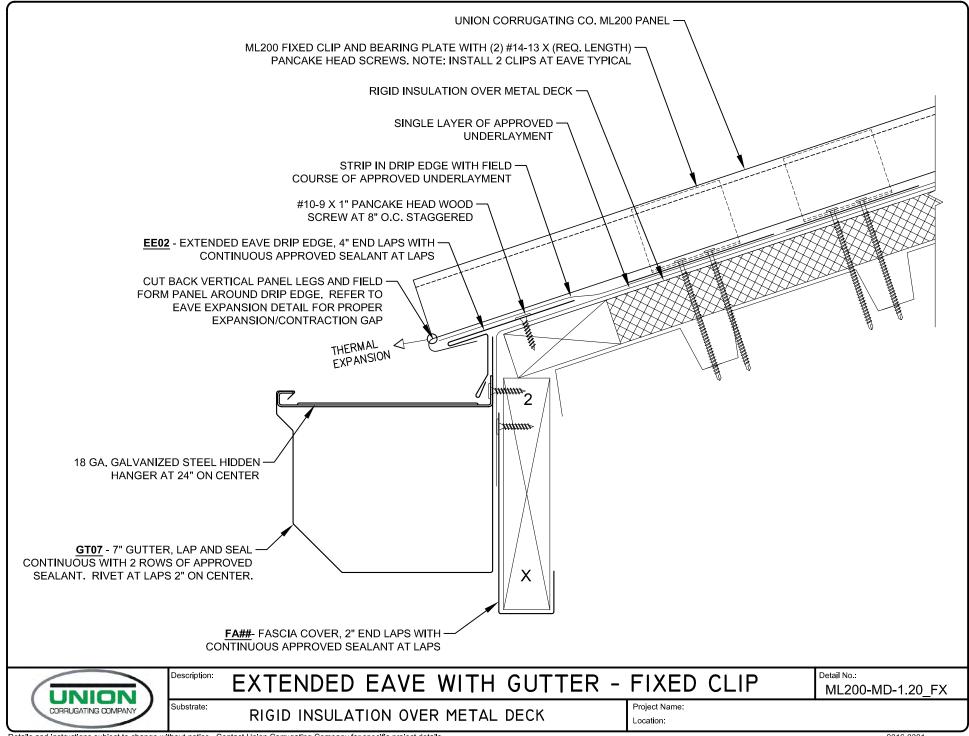


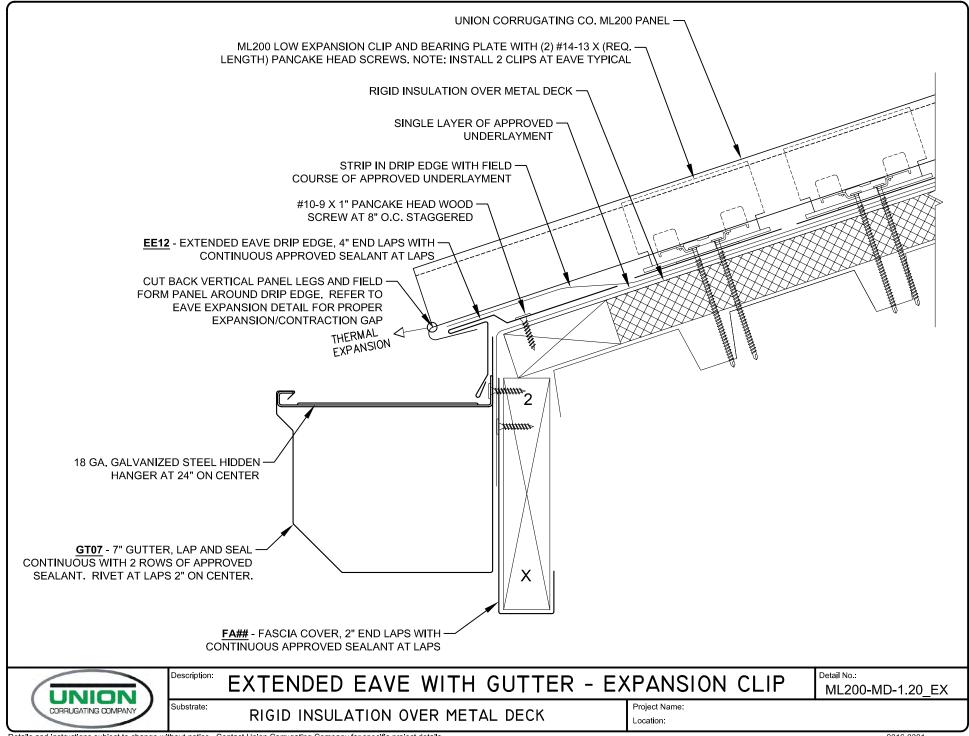
Description: EXTENDED EAVE - STEEP SLOPE - EXPANSION CLIP

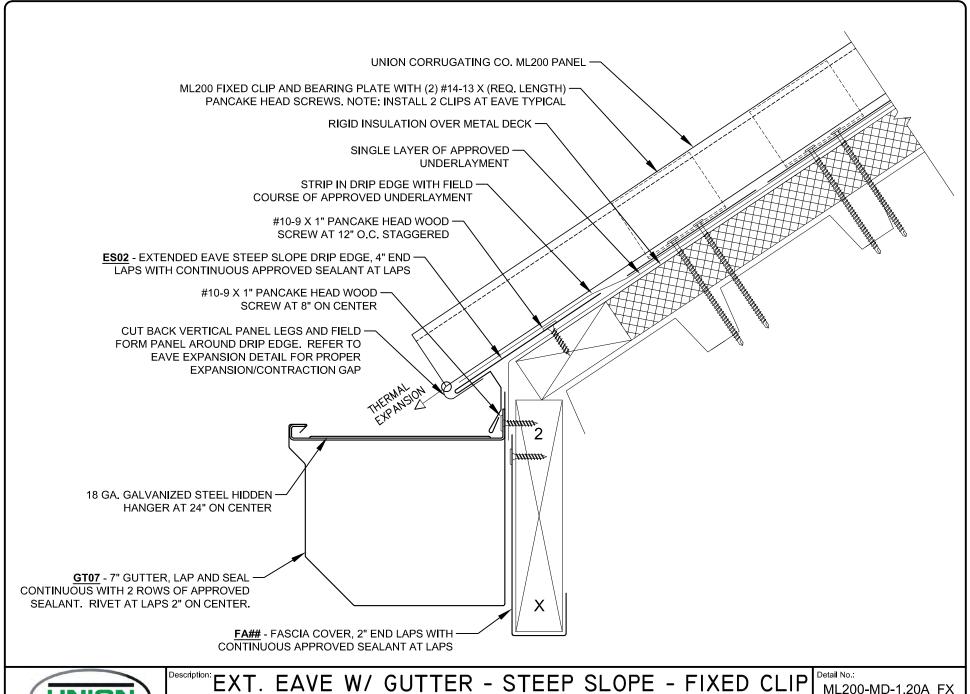
ML200-MD-1.10A_EX

Substrate:

RIGID INSULATION OVER METAL DECK







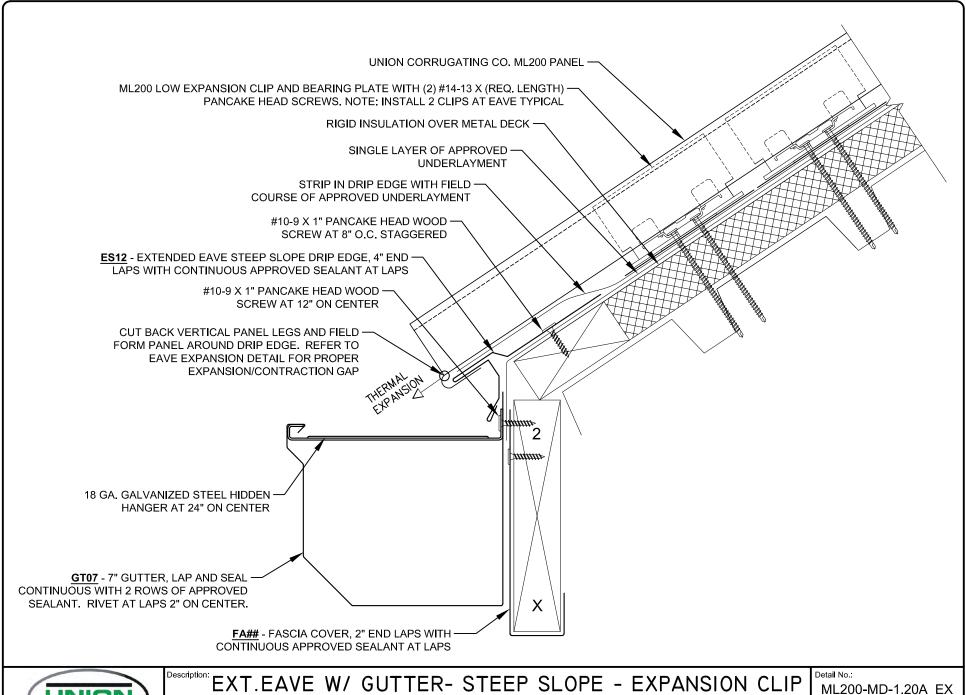


EXT. EAVE W/ GUTTER - STEEP SLOPE - FIXED CLIP

RIGID INSULATION OVER METAL DECK

Project Name: Location:

Substrate:

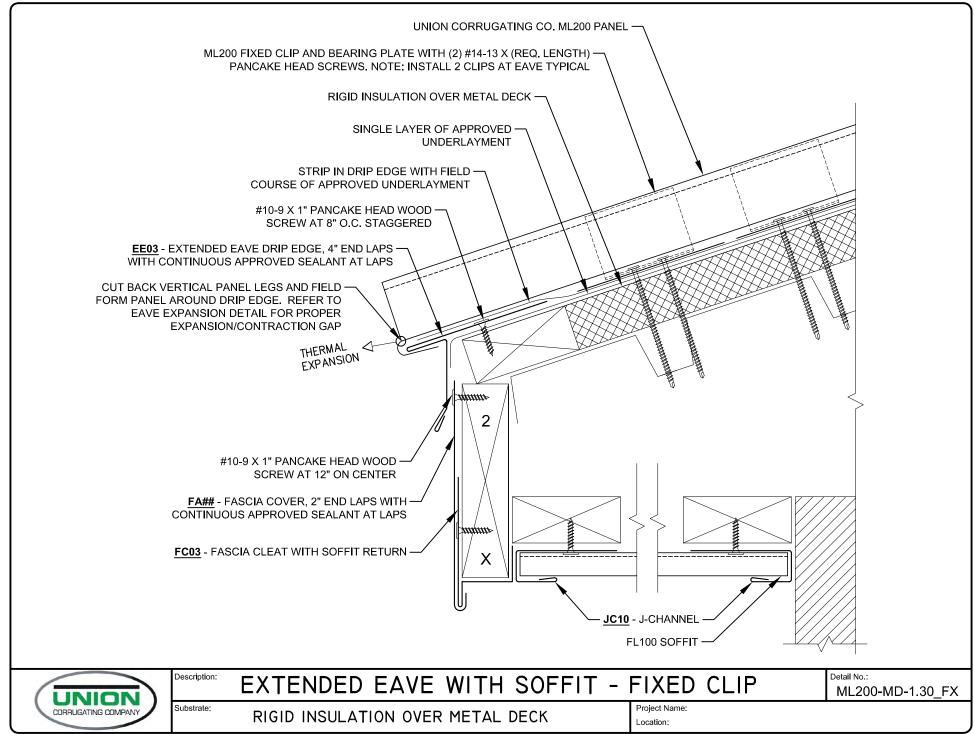


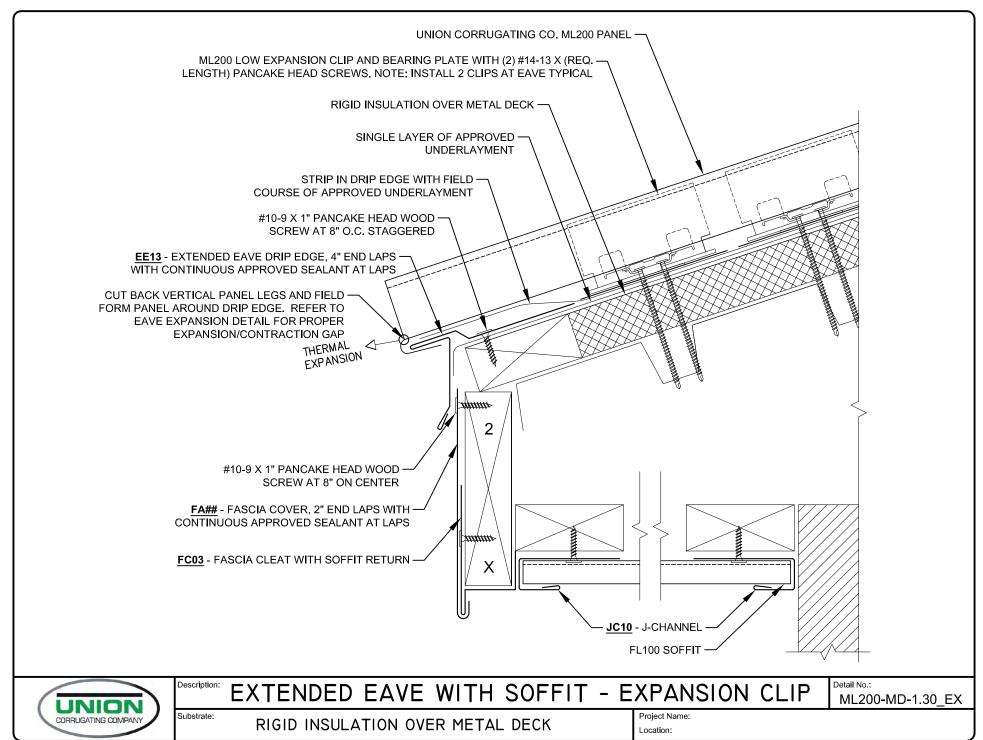


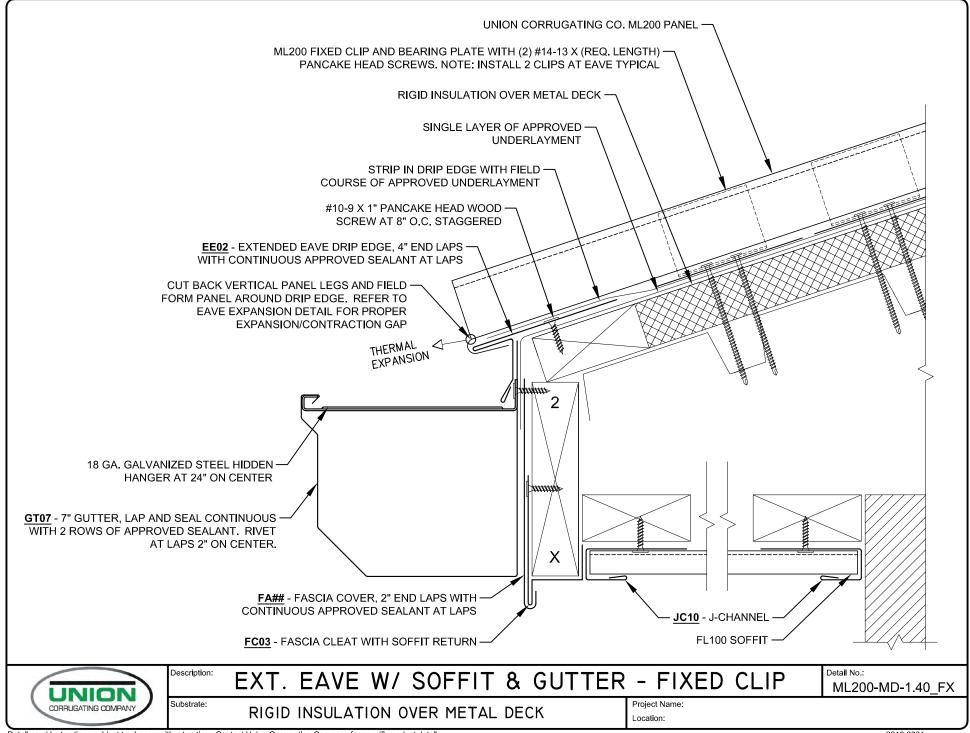
EXT.EAVE W/ GUTTER- STEEP SLOPE - EXPANSION CLIP

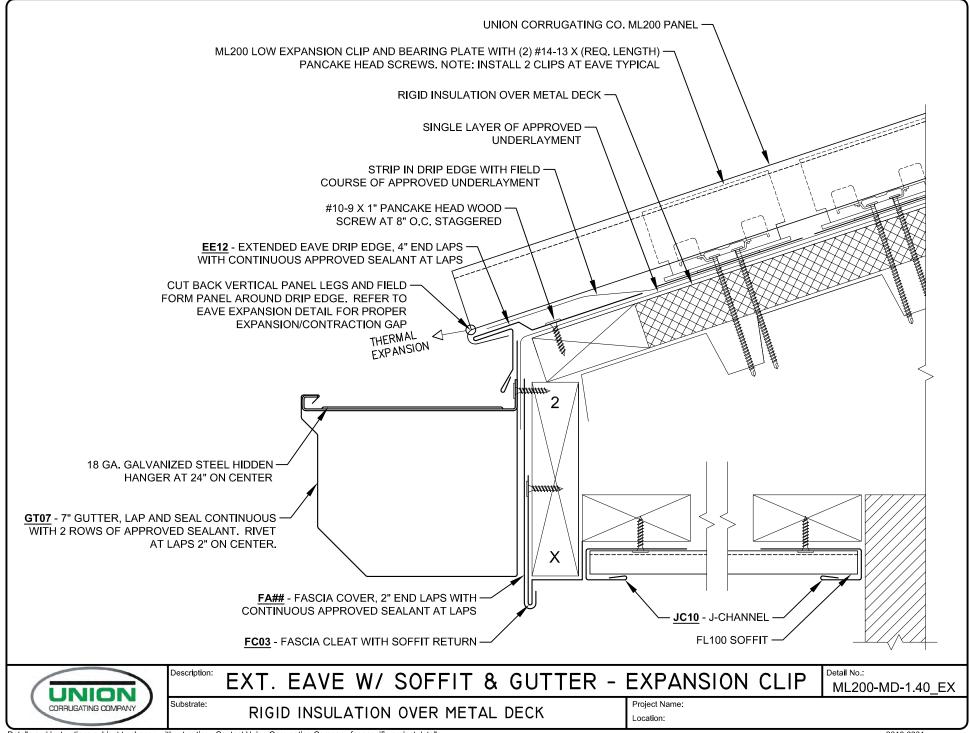
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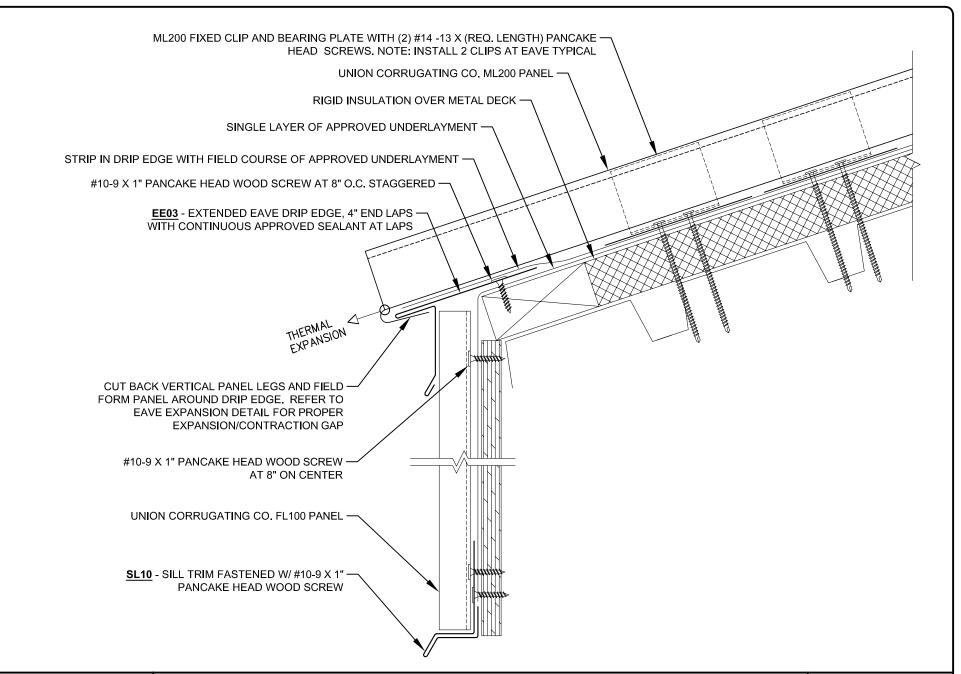
RIGID INSULATION OVER METAL DECK













Description:

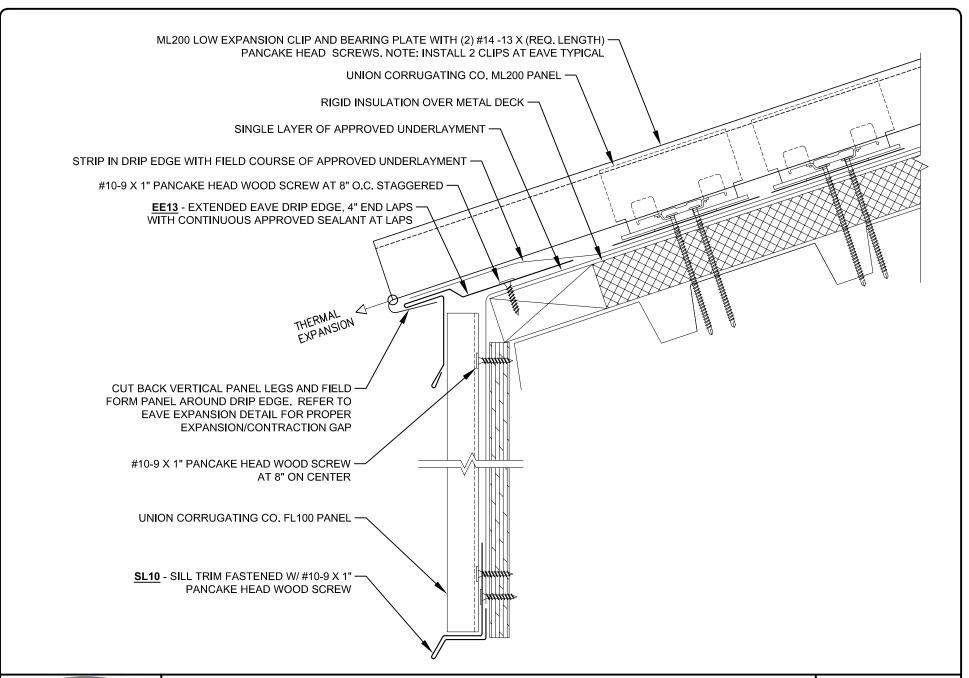
EXT. EAVE W/ FLUSH WALL PANEL - FIXED CLIP

Detail No.:

ML200-MD-1.50 FX

Substrate:

RIGID INSULATION OVER METAL DECK



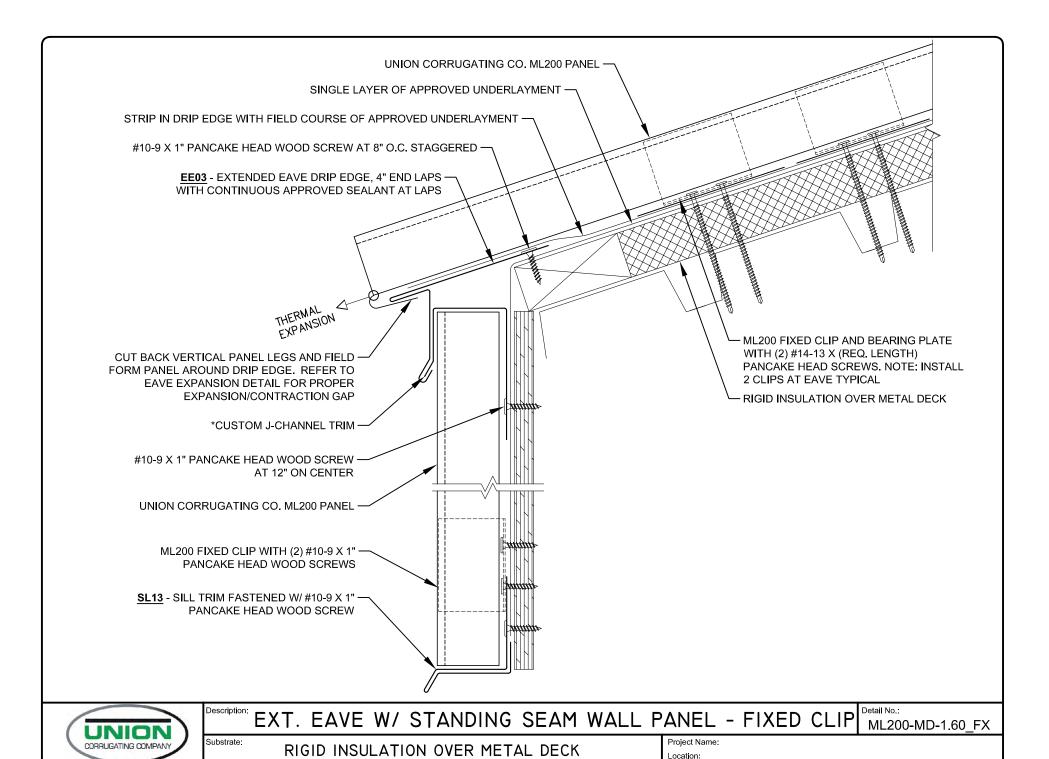


Description: EXT. EAVE W/ FLUSH WALL PANEL - EXPANSION CLIP

Detail No.:
ML200-MD-1.50 EX

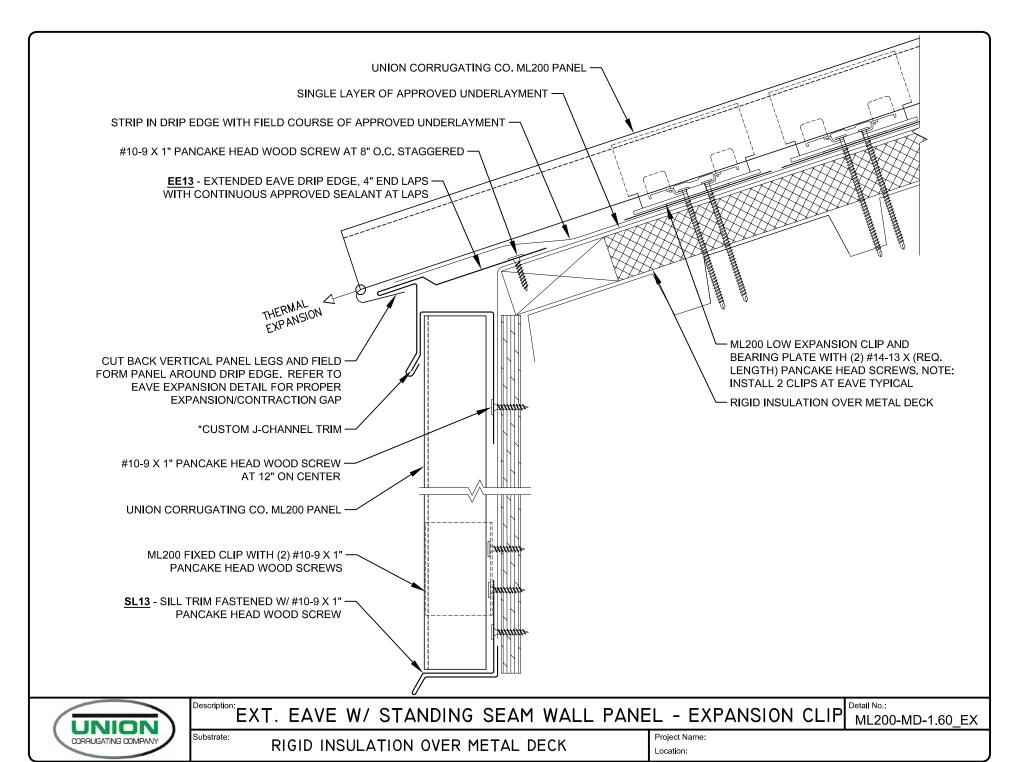
Substrate:

RIGID INSULATION OVER METAL DECK



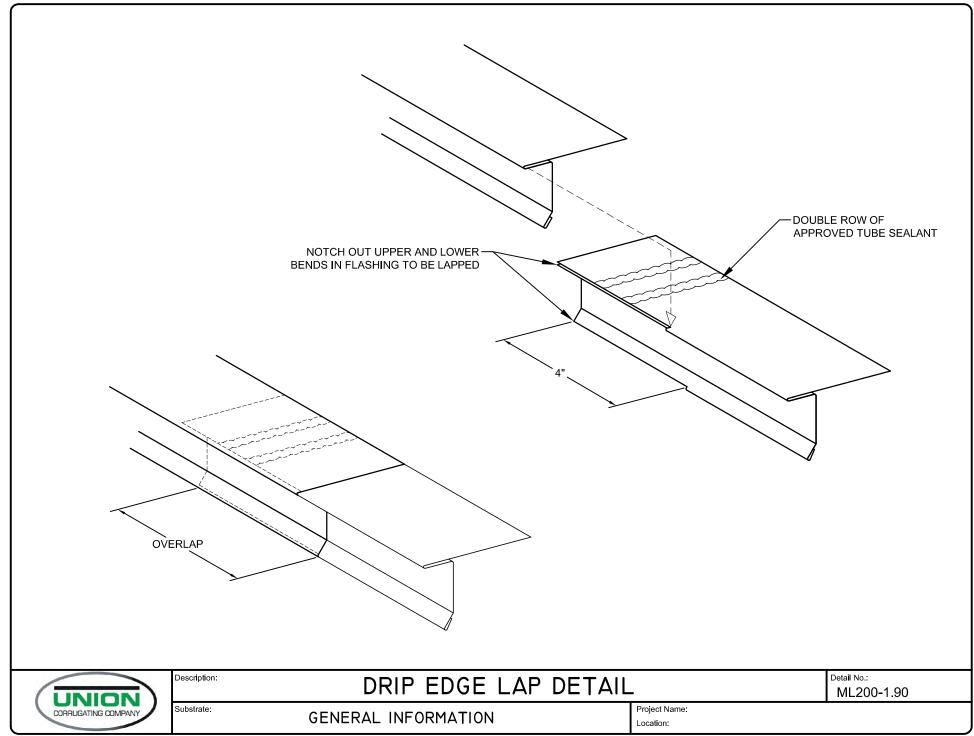
Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.

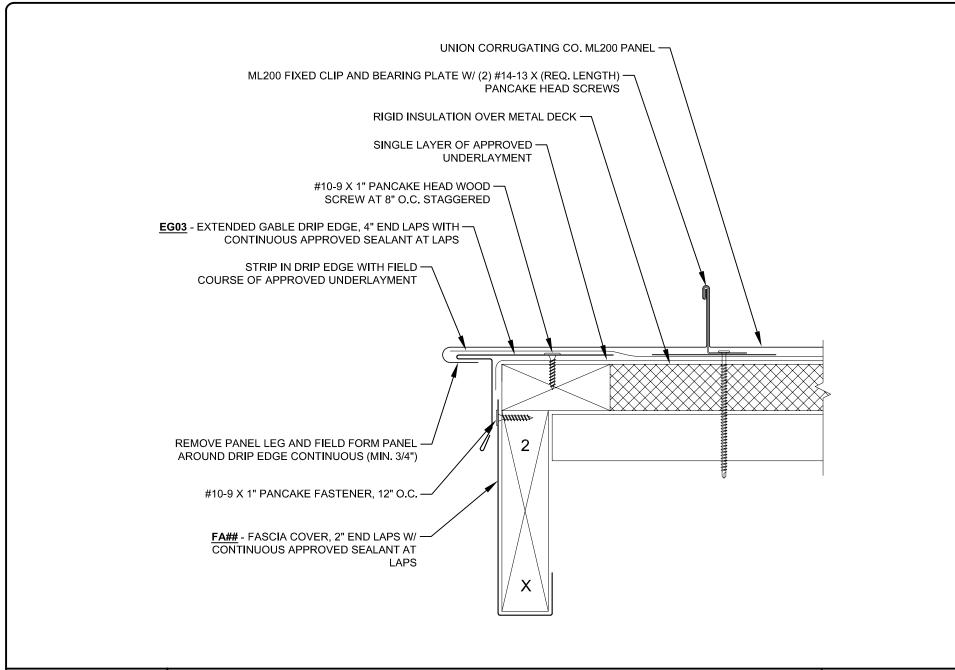
2016-0301



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2016-0301





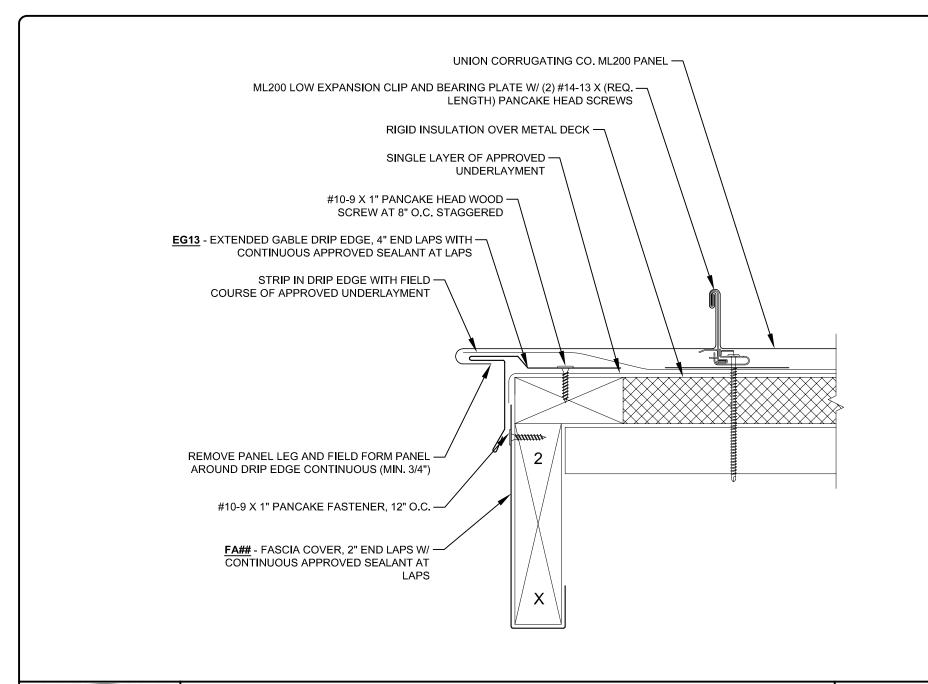


Description: GABLE DETAIL - EXTENDED DRIP - FIXED CLIP

Detail No.: ML200-MD-2.10 FX

Substrate:

RIGID INSULATION OVER METAL DECK



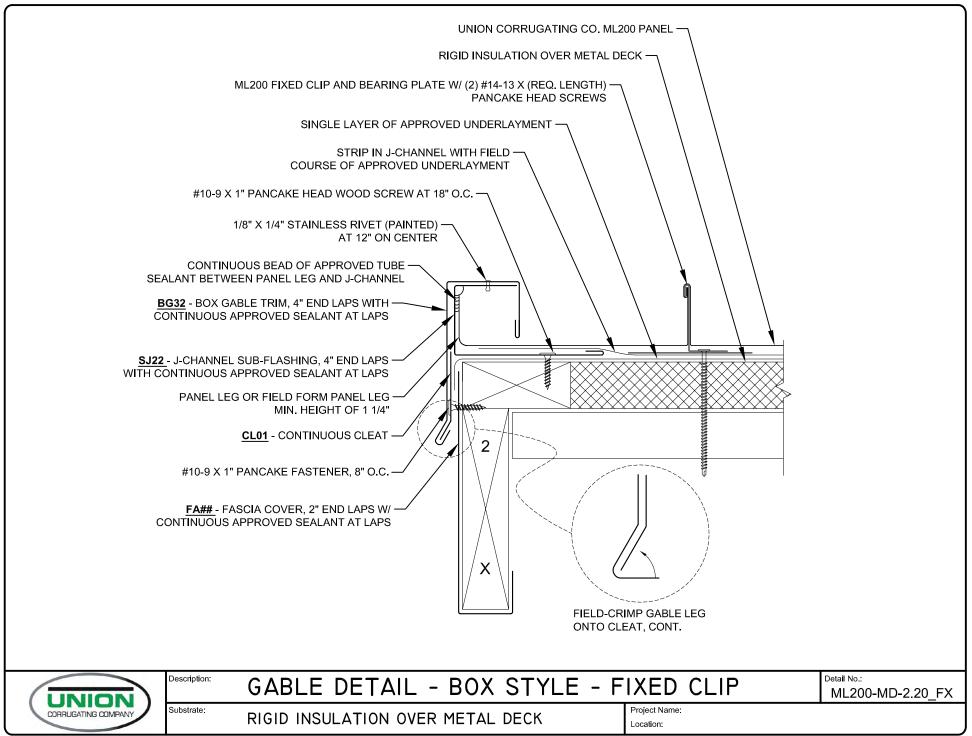


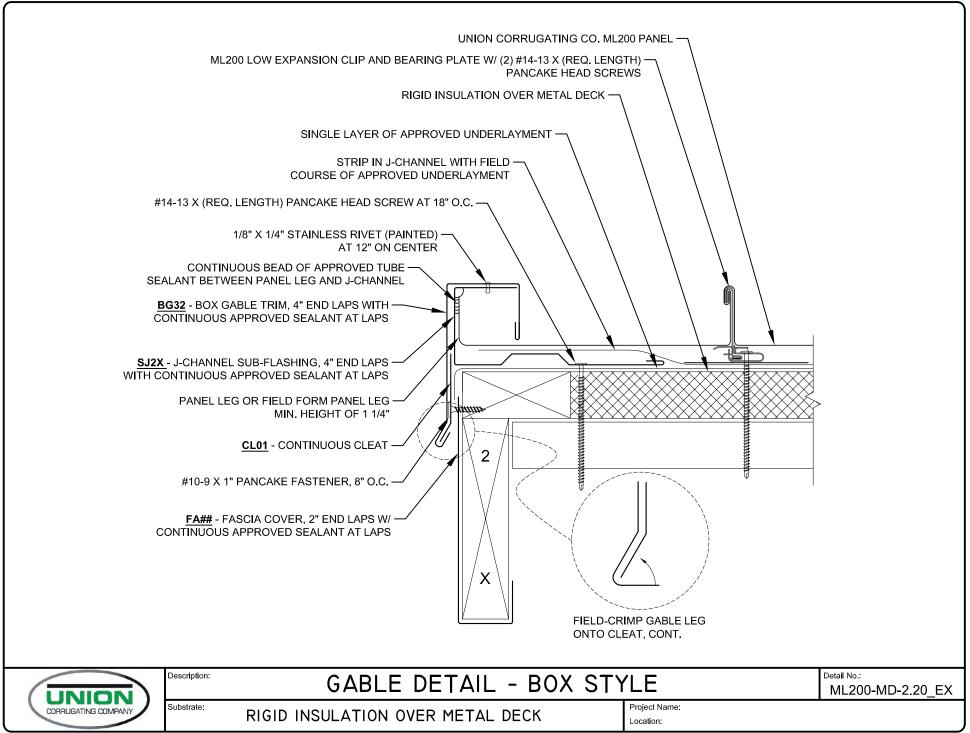
Description: GABLE DETAIL - EXTENDED DRIP - EXPANSION CLIP

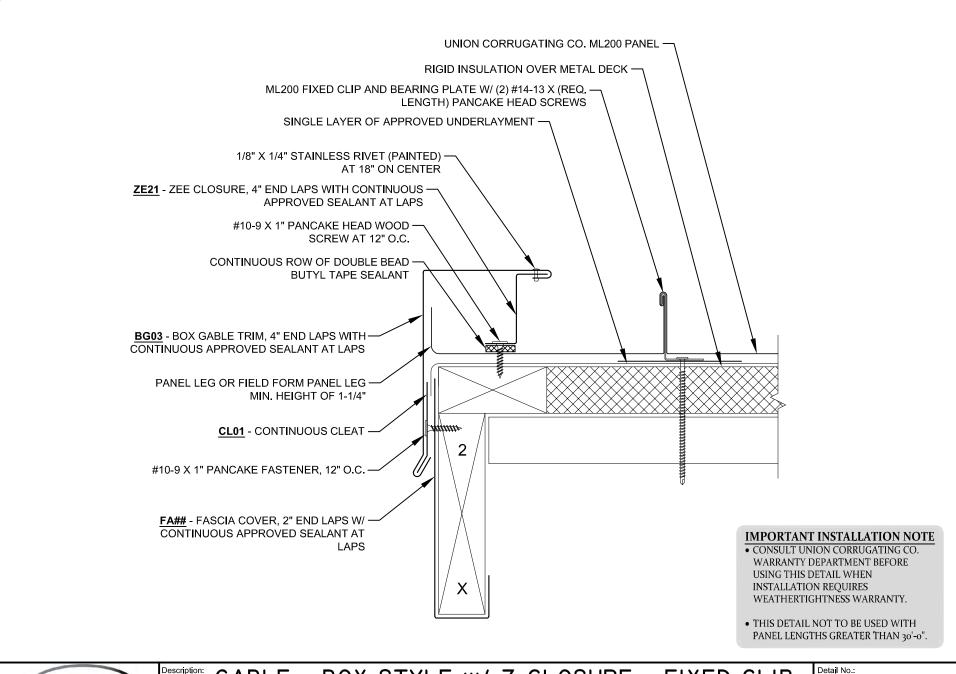
Detail No.:
ML200-MD-2.10_EX

Substrate:

RIGID INSULATION OVER METAL DECK









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

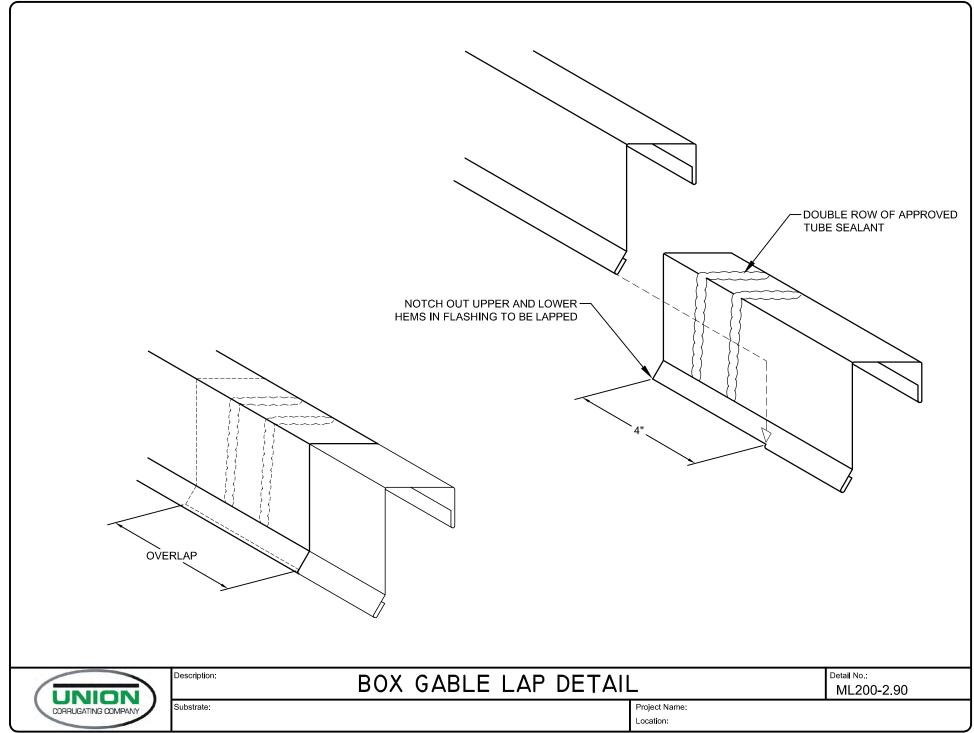
Substrate: DICID INCLU ATION OVED M

Project Name: Location:

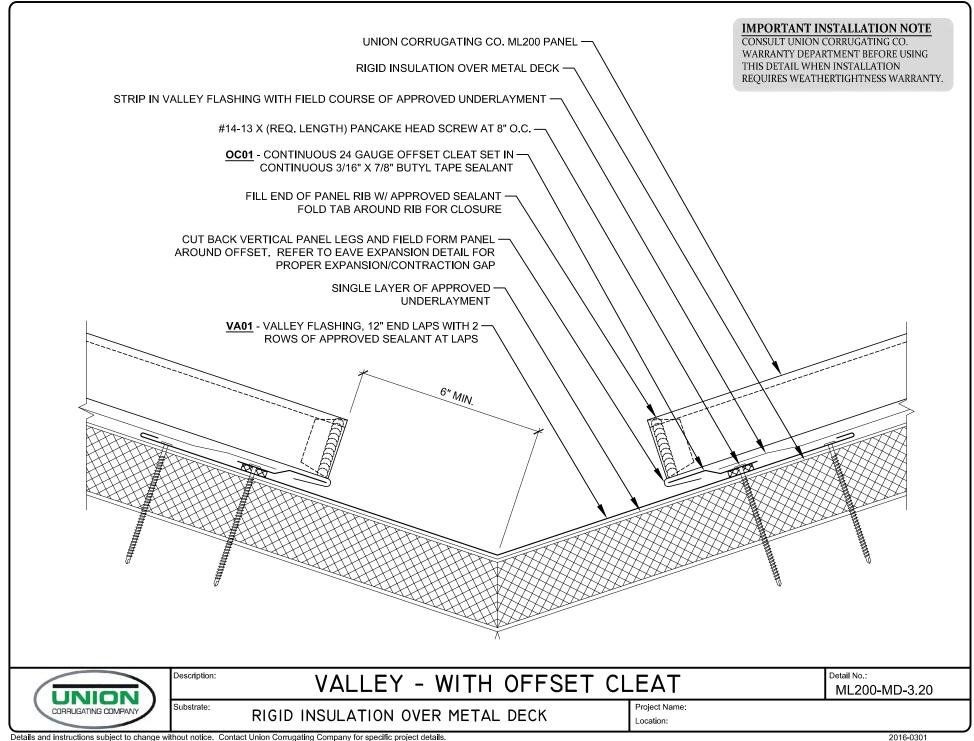
RIGID INSULATION OVER METAL DECK

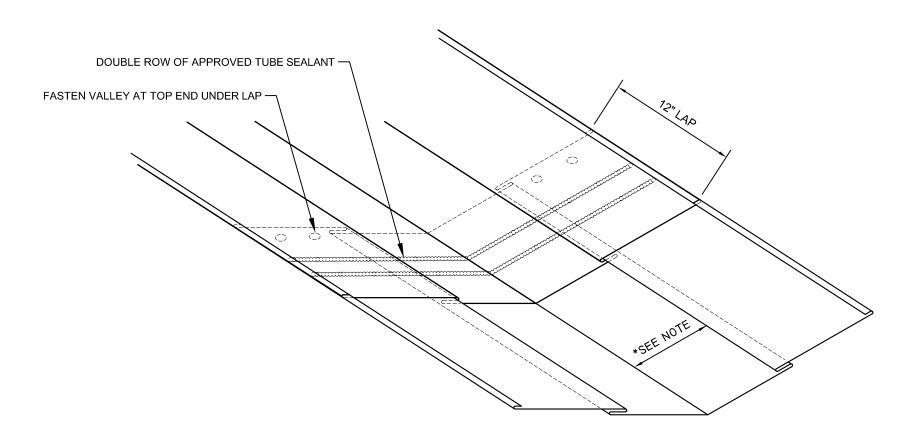
ML200-MD-2.30 FX

2016-0301



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.



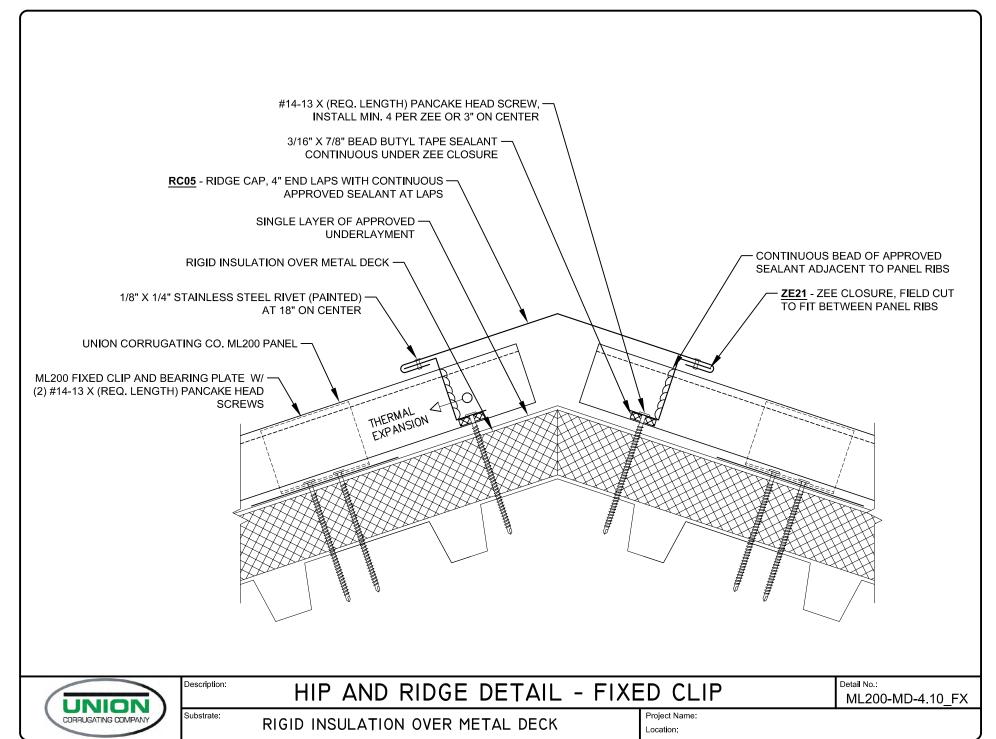
VALLEY LAP DETAIL

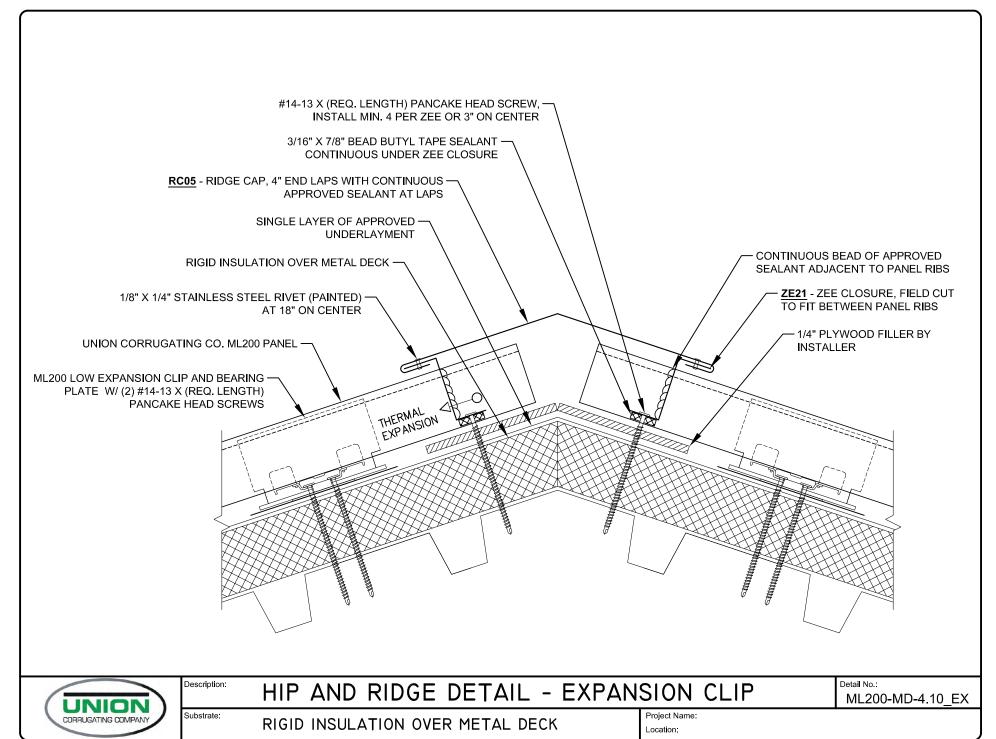
Detail No.:

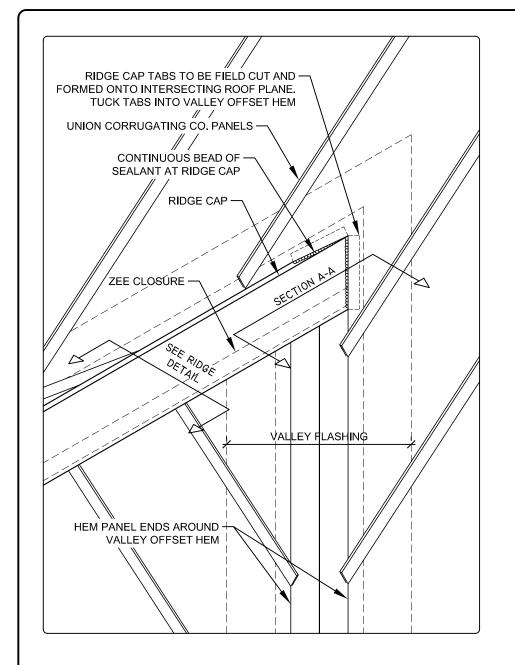
ML200-3.90

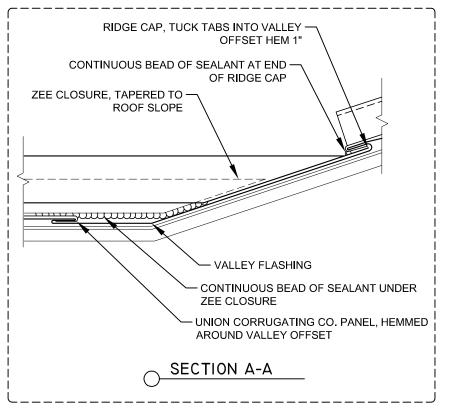
Substrate:

Description:











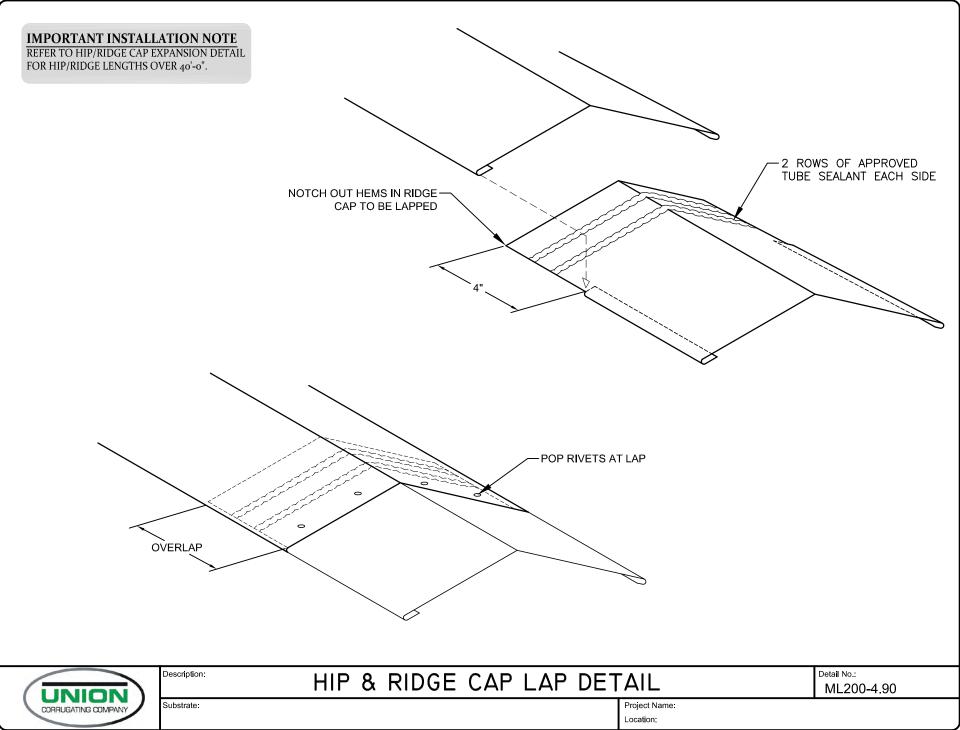
RIDGE TERMINATION @ VALLEY

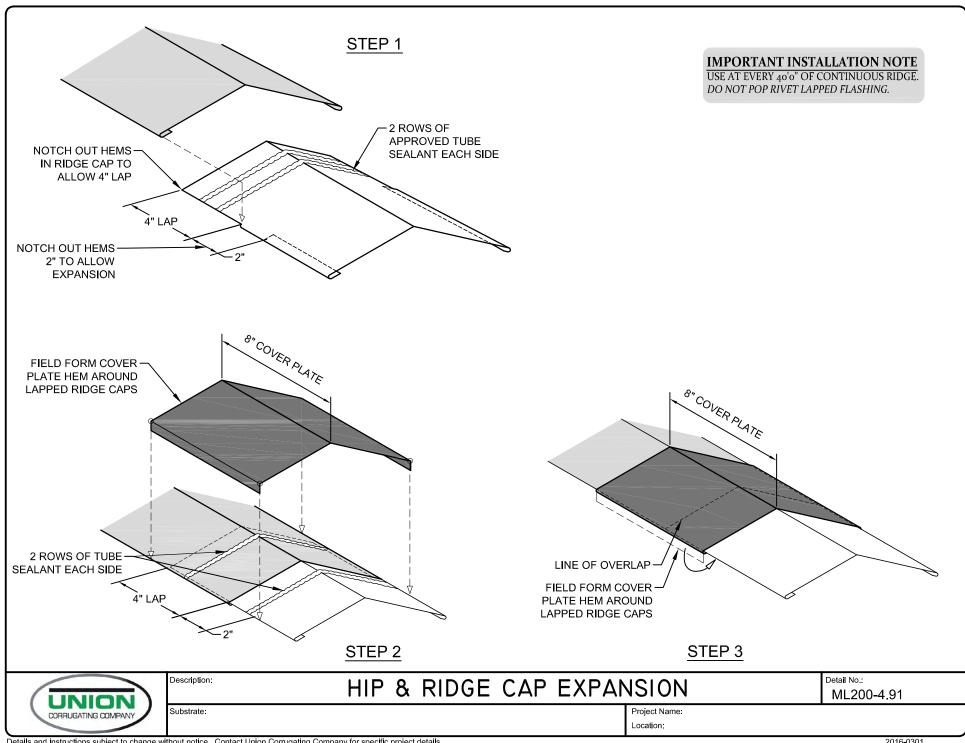
Detail No.: ML200-4,40

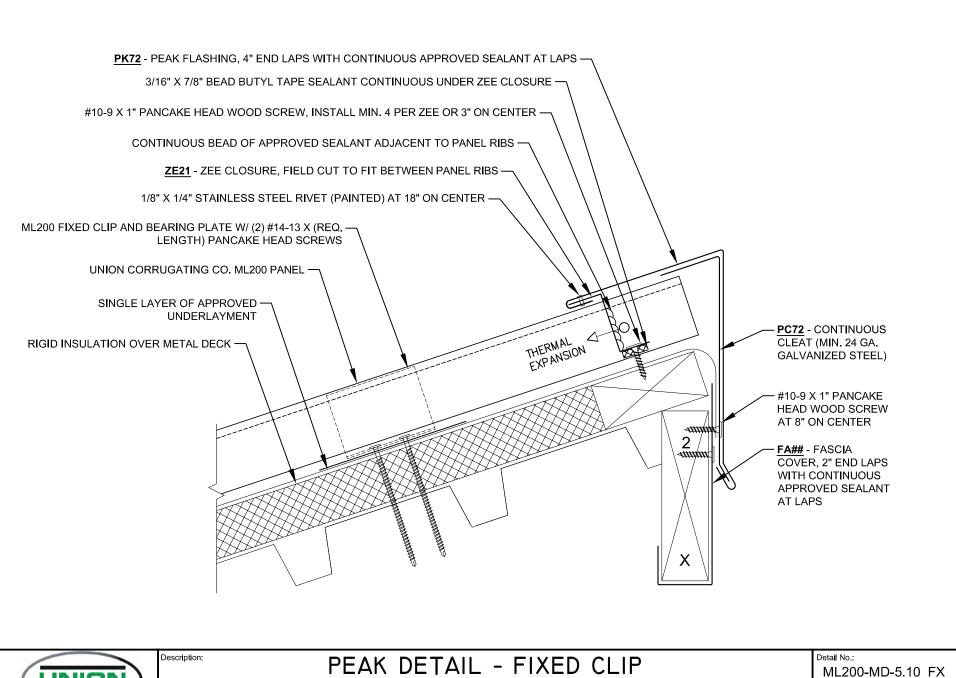
Substrate: Project Location

Project Name: Location:

Description:



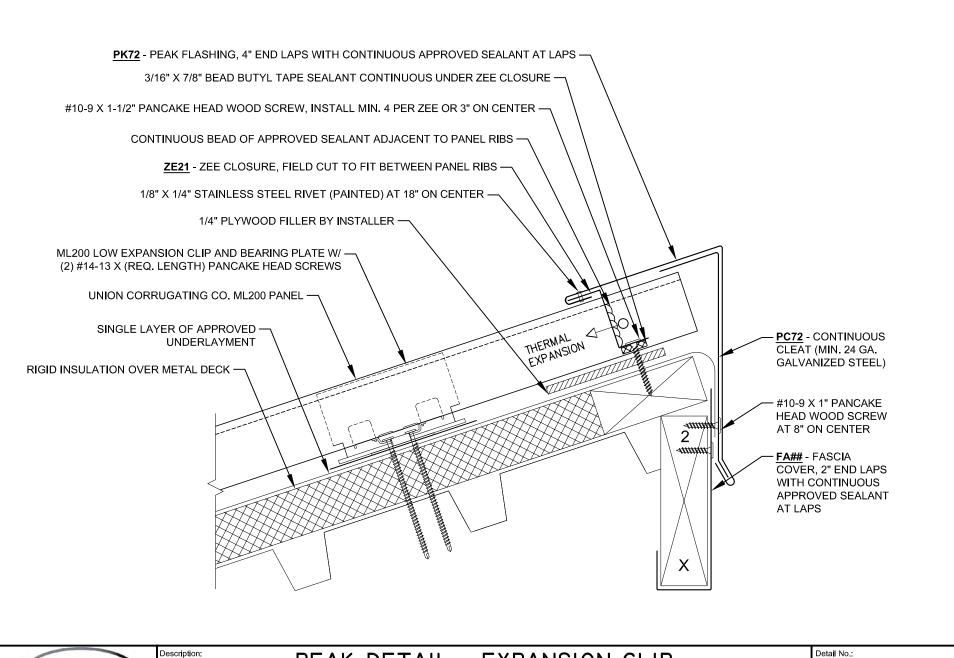




PEAK DETAIL - FIXED CLIP

Substrate:

RIGID INSULATION OVER METAL DECK





PEAK DETAIL - EXPANSION CLIP

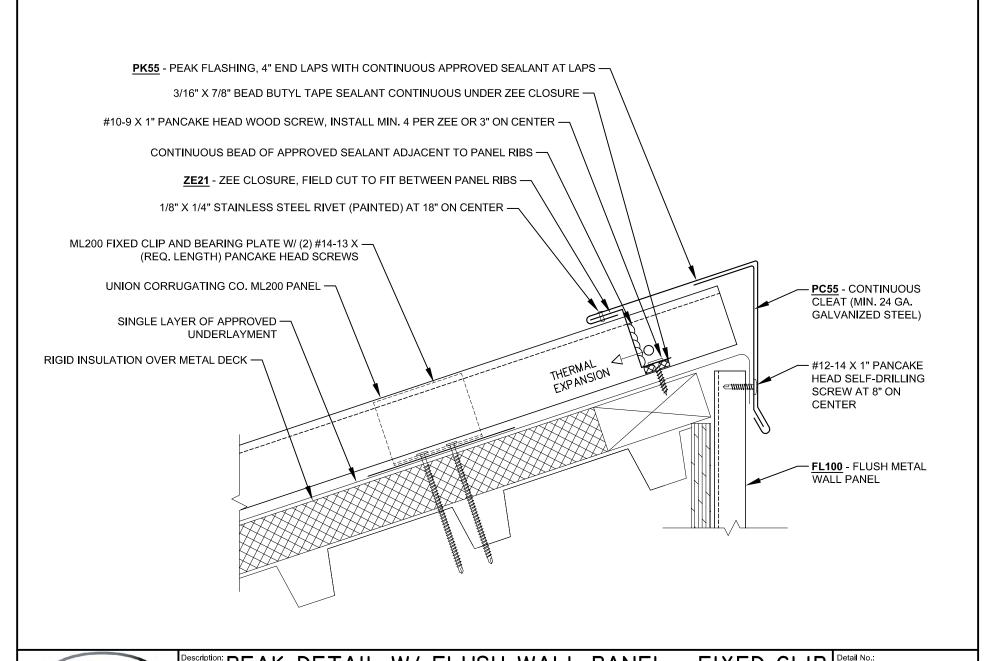
Detail No.:

Substrate:

RIGID INSULATION OVER METAL DECK

Project Name: Location:

ML200-MD-5.10 EX



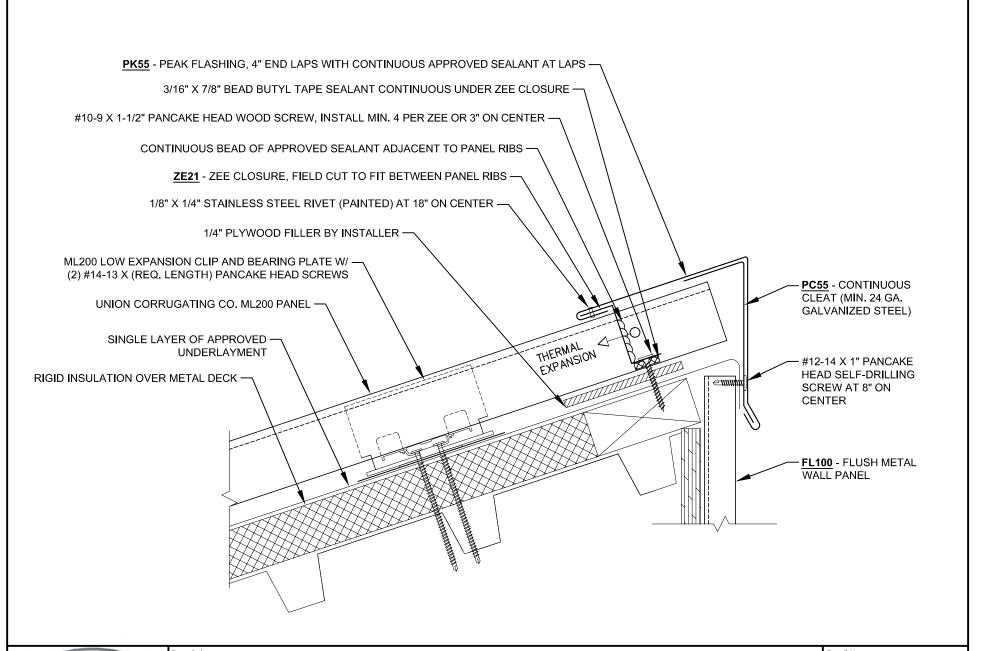


Description: PEAK DETAIL W/ FLUSH WALL PANEL - FIXED CLIP

ML200-MD-5.40_FX

Substrate:

RIGID INSULATION OVER METAL DECK



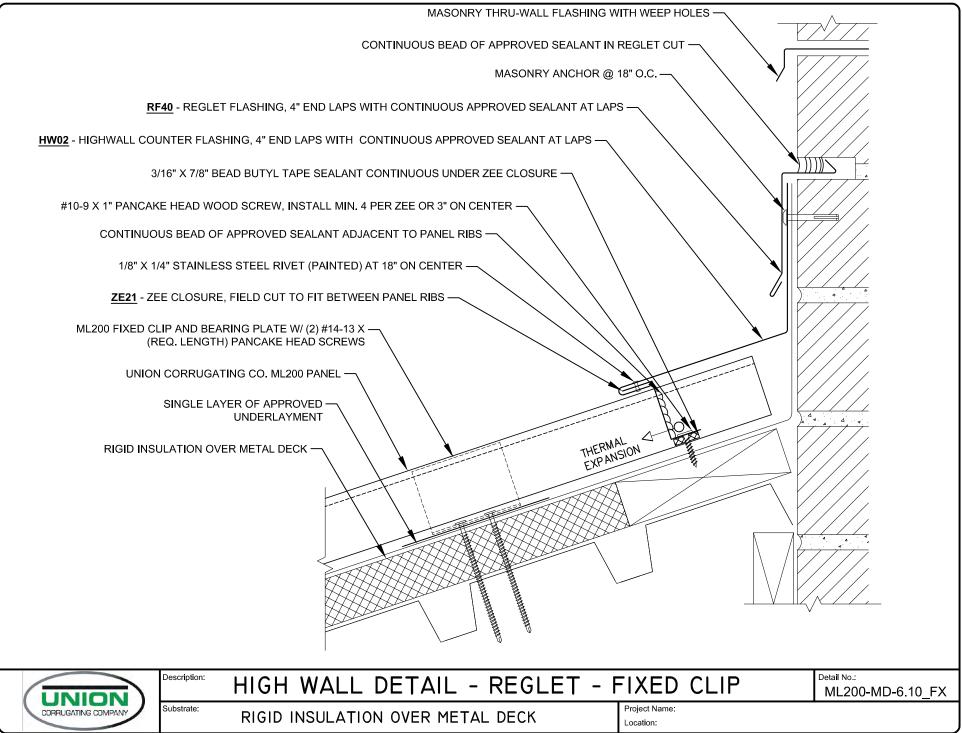
CORRUGATING COMPANY

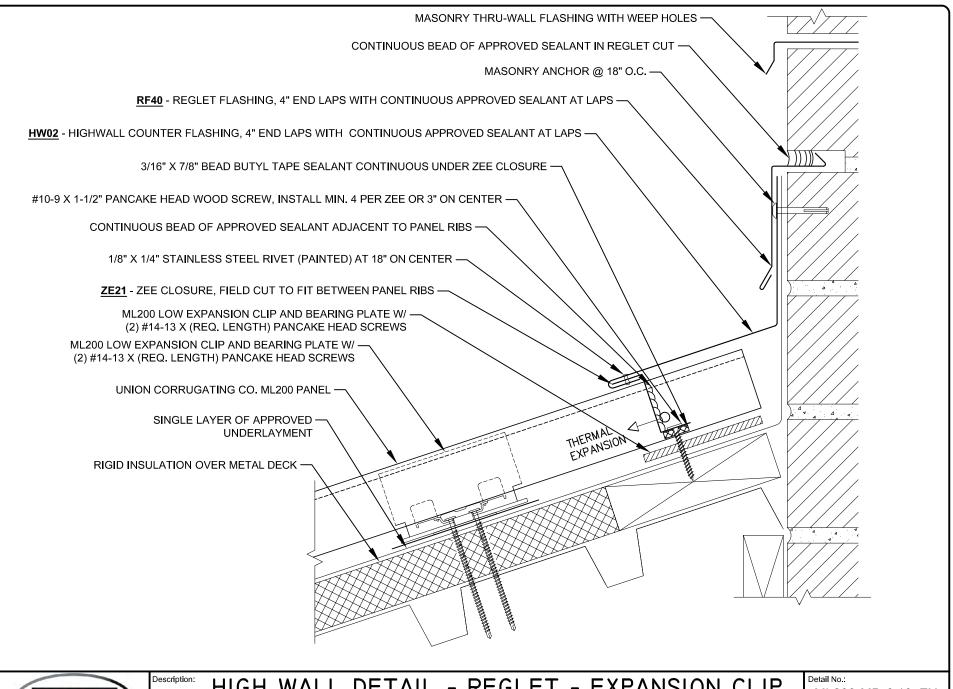
Description: PEAK DETAIL W/ FLUSH WALL PANEL - EXPANSION CLIP

Detail No.: ML200-MD-5.40_EX

Substrate:

RIGID INSULATION OVER METAL DECK



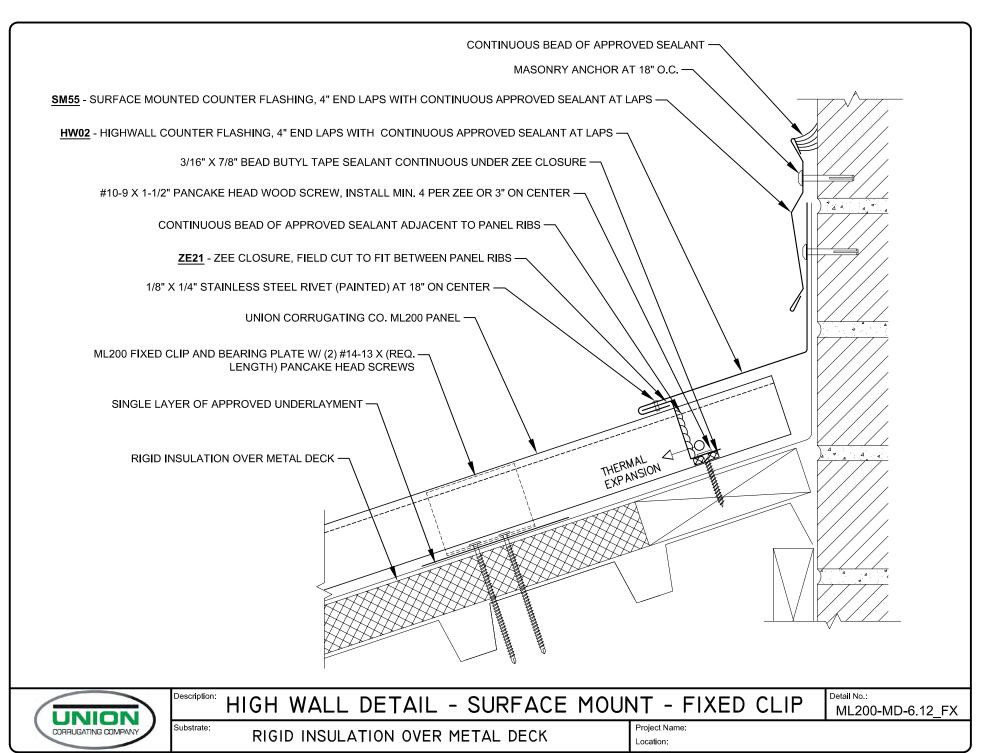


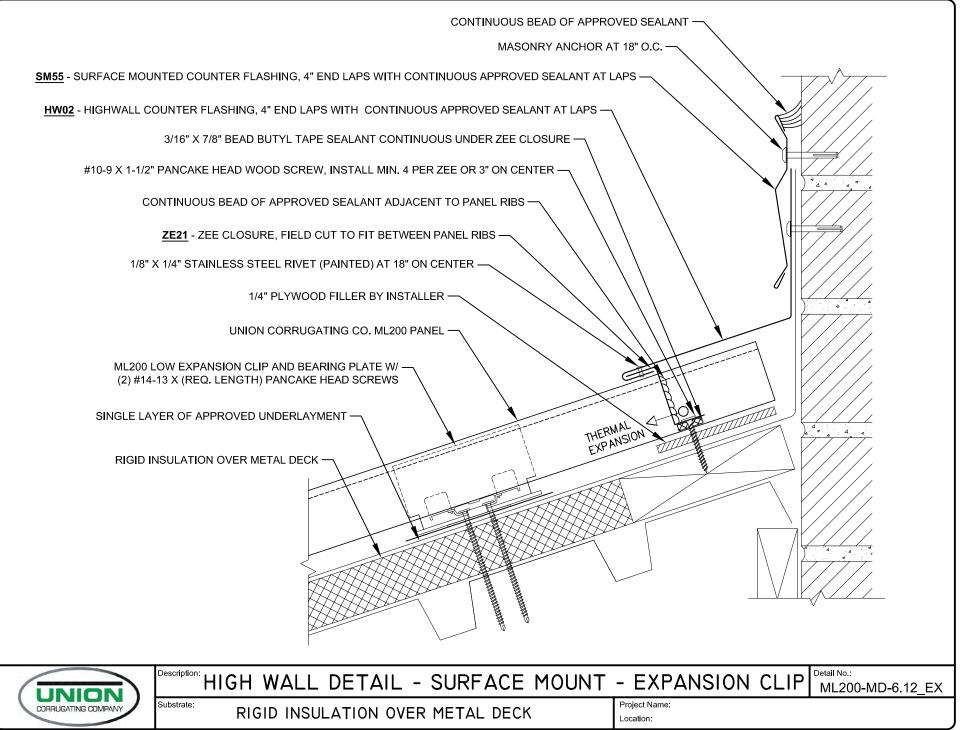
HIGH WALL DETAIL - REGLET - EXPANSION CLIP

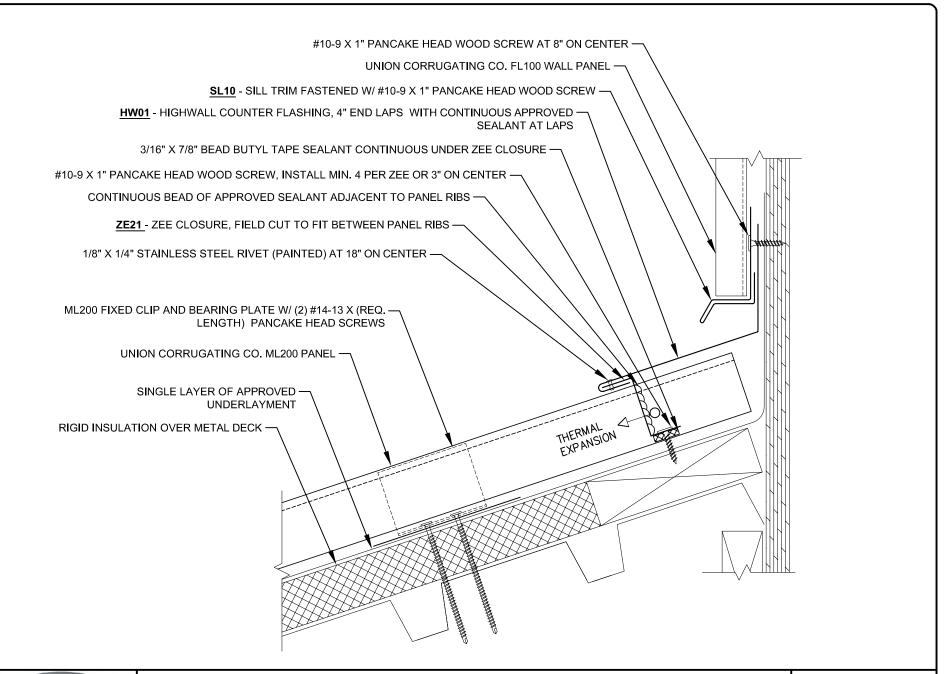
ML200-MD-6.10 EX

Substrate:

RIGID INSULATION OVER METAL DECK







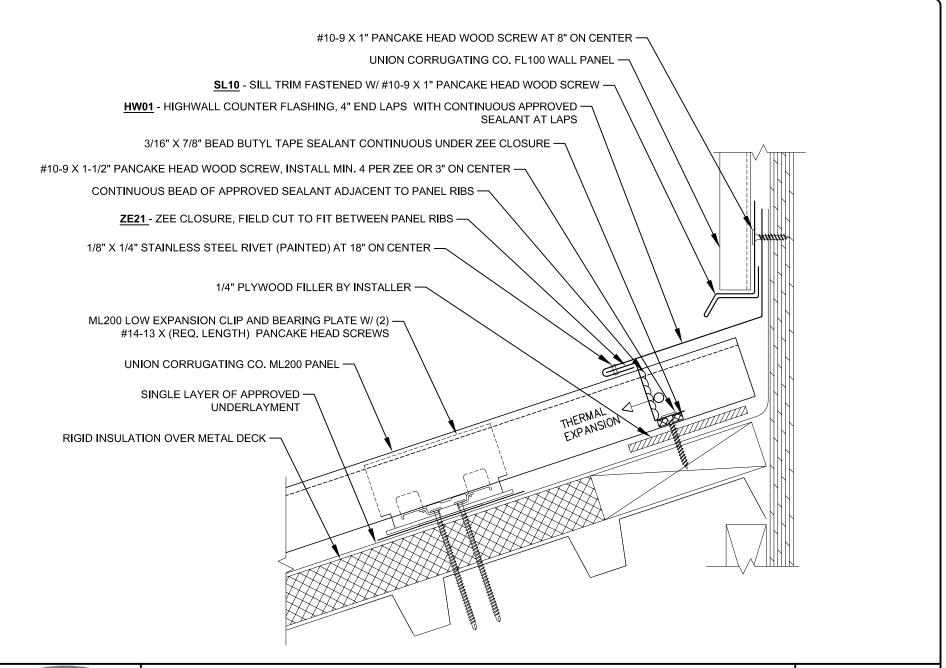


Pescription: HIGH WALL DETAIL - WALL PANEL W/ SILL - FIXED CLIP

Detail No.: ML200-MD-6.14 FX

Substrate

RIGID INSULATION OVER METAL DECK





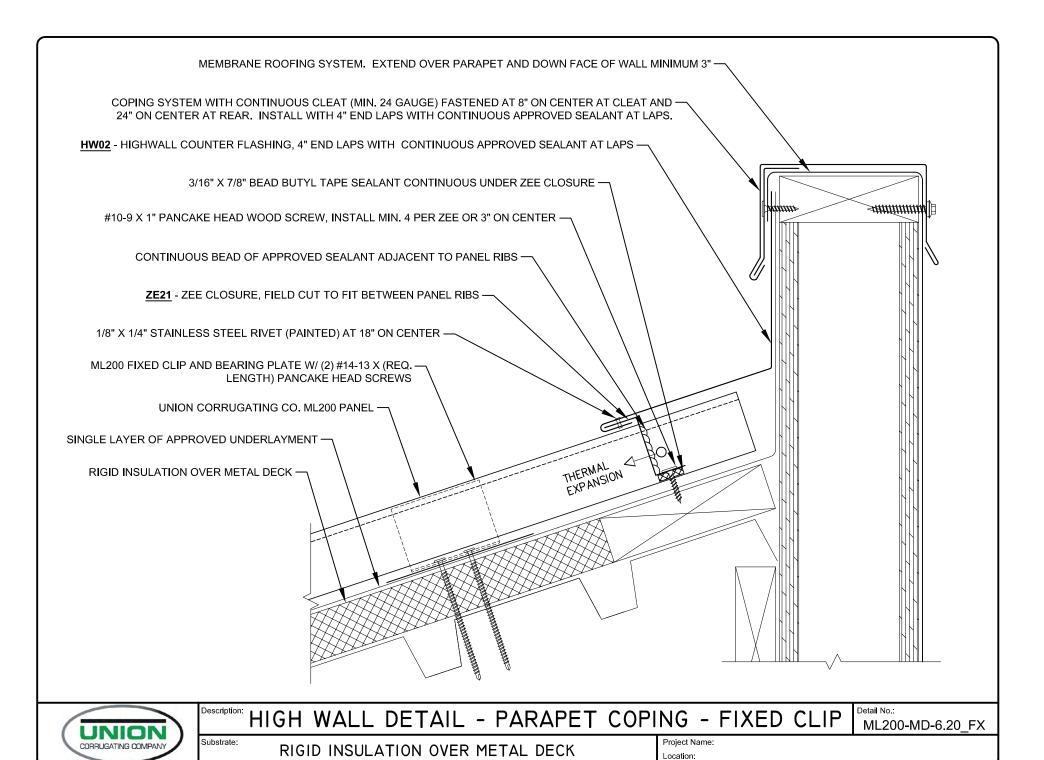
Description: HIGH WALL DETAIL - WALL PANEL W/ SILL - EXPANSION CLIP

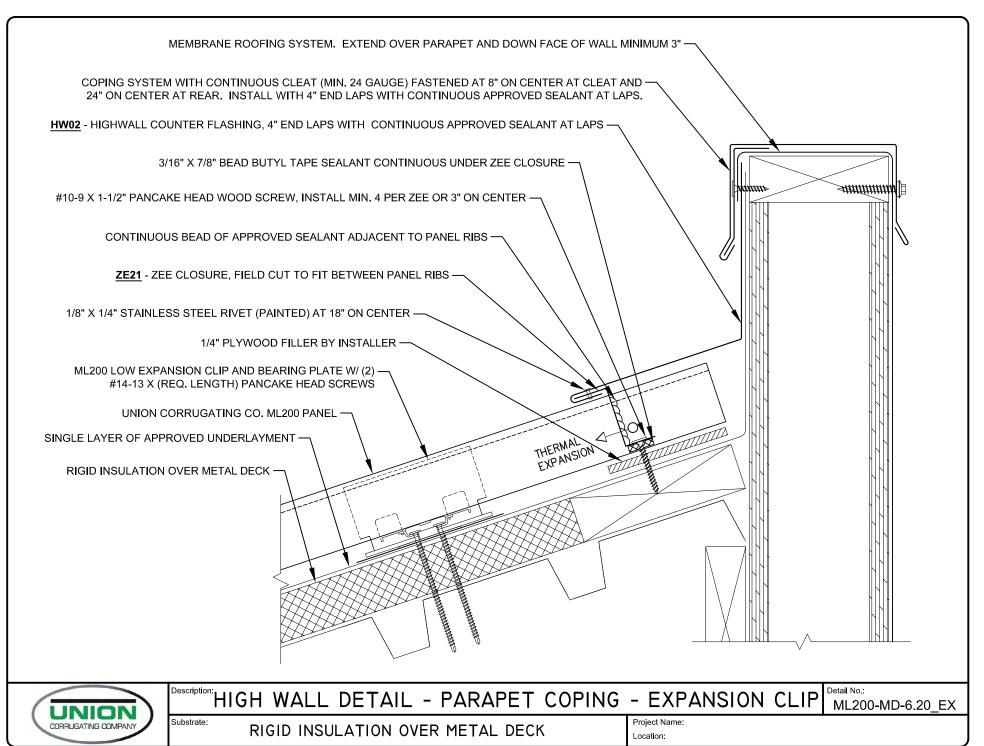
Detail No.: ML200-MD-6.14 EX

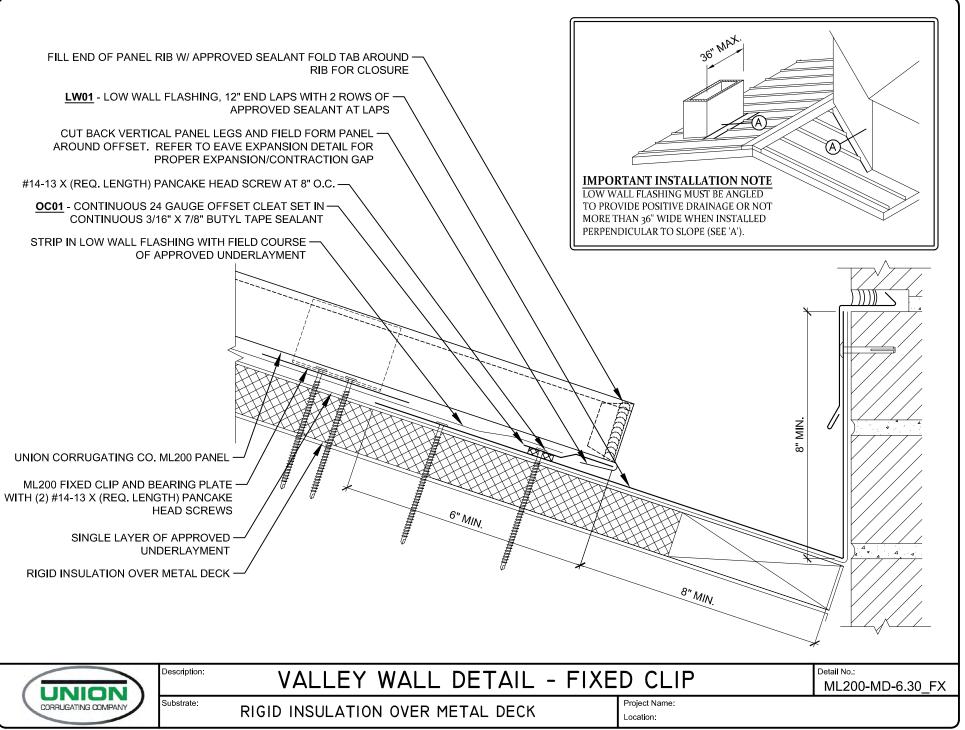
Project Name:

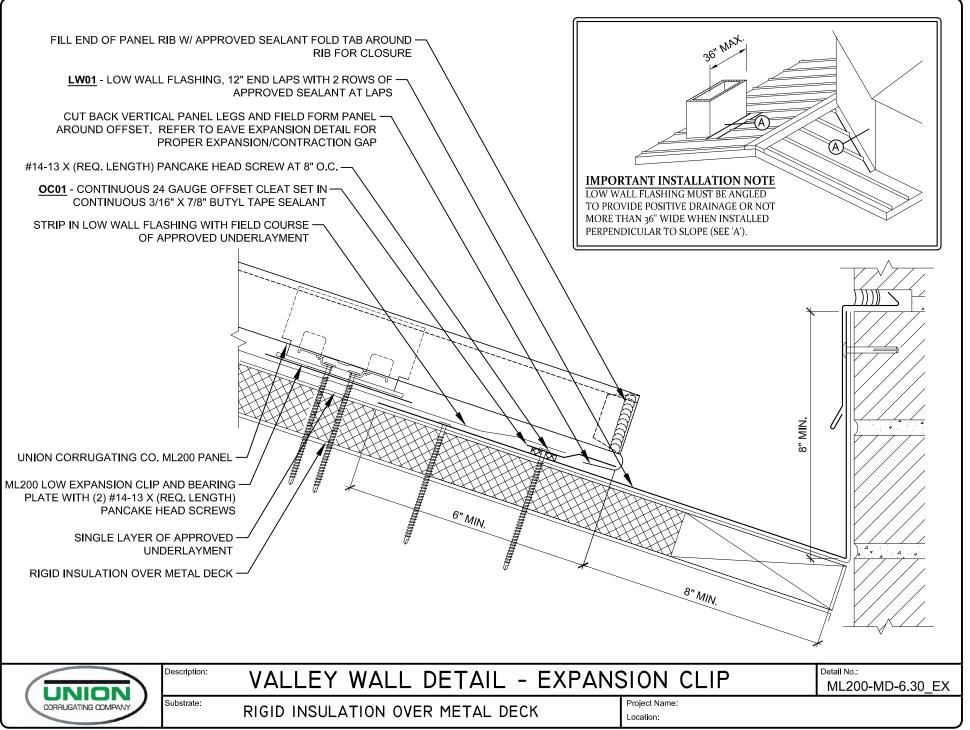
Location:

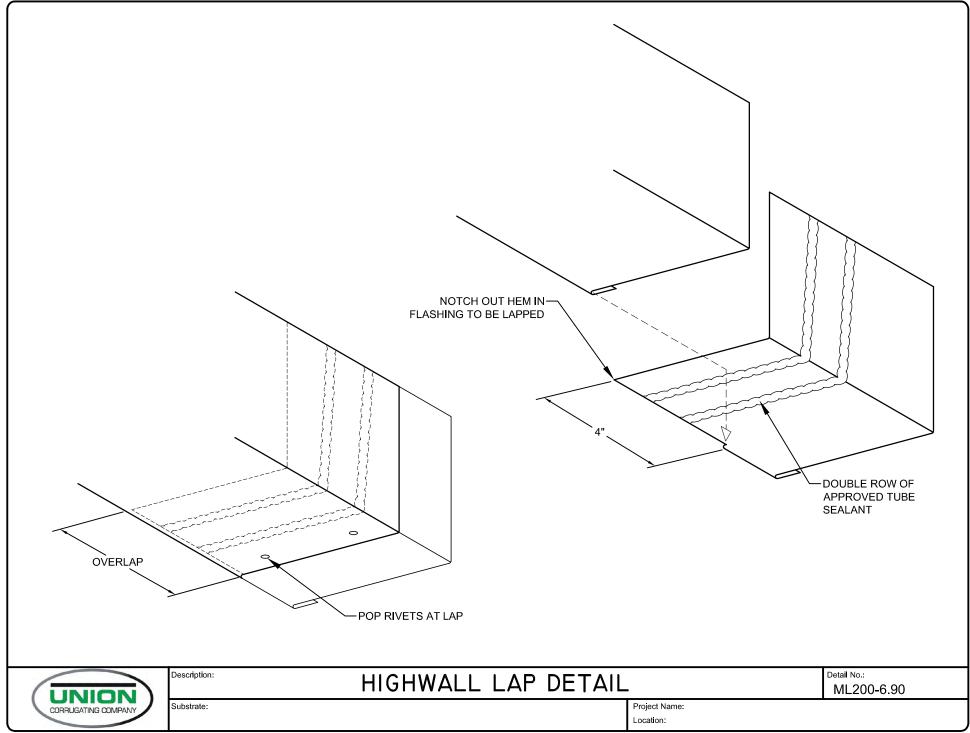
RIGID INSULATION OVER METAL DECK

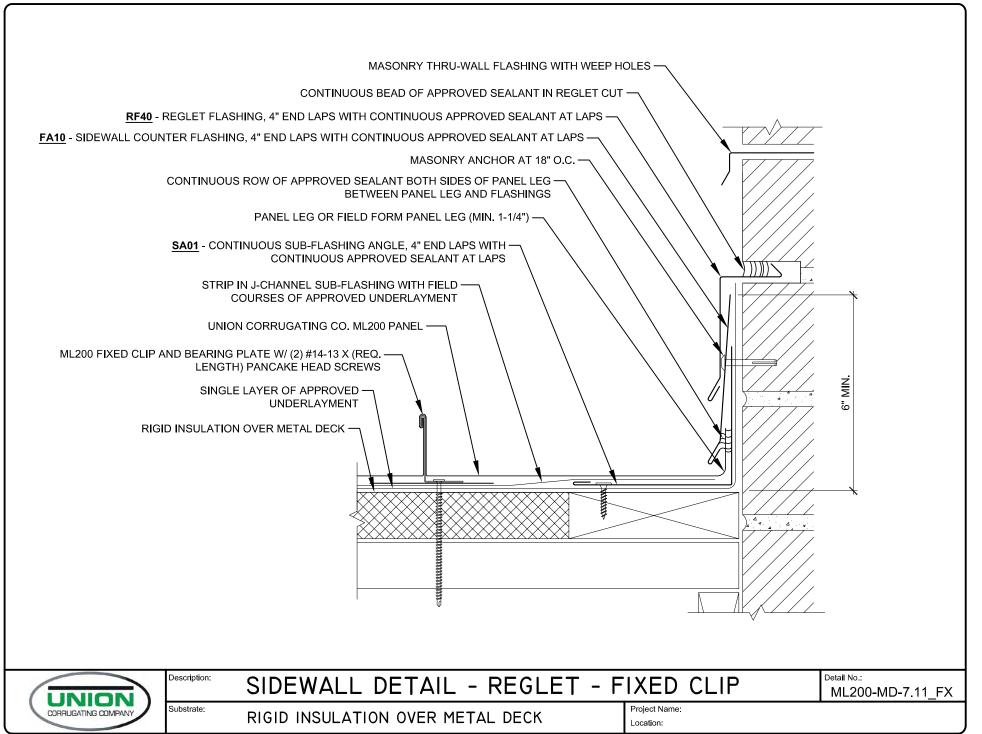


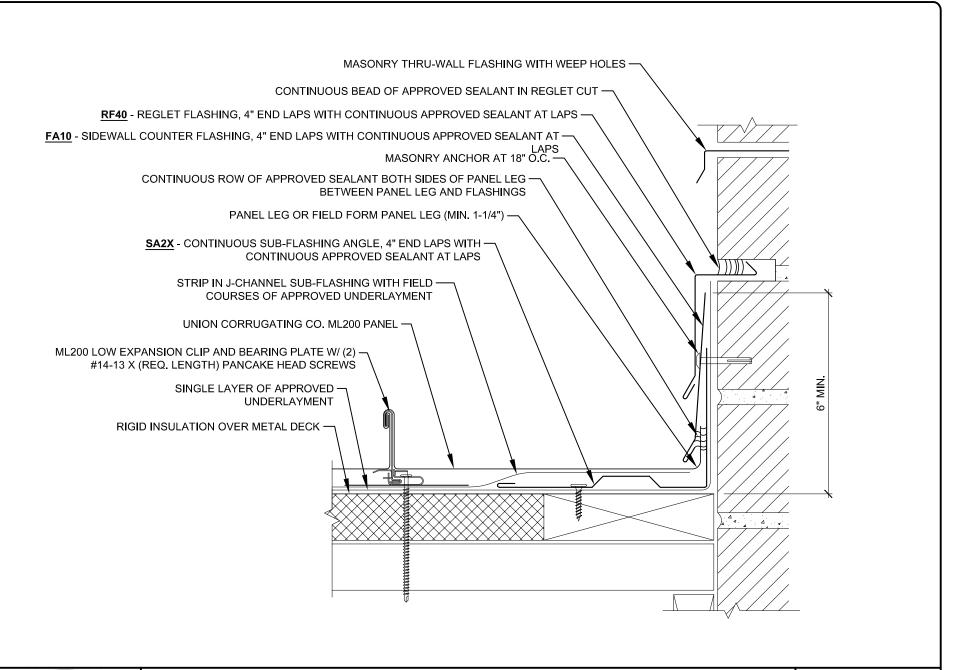














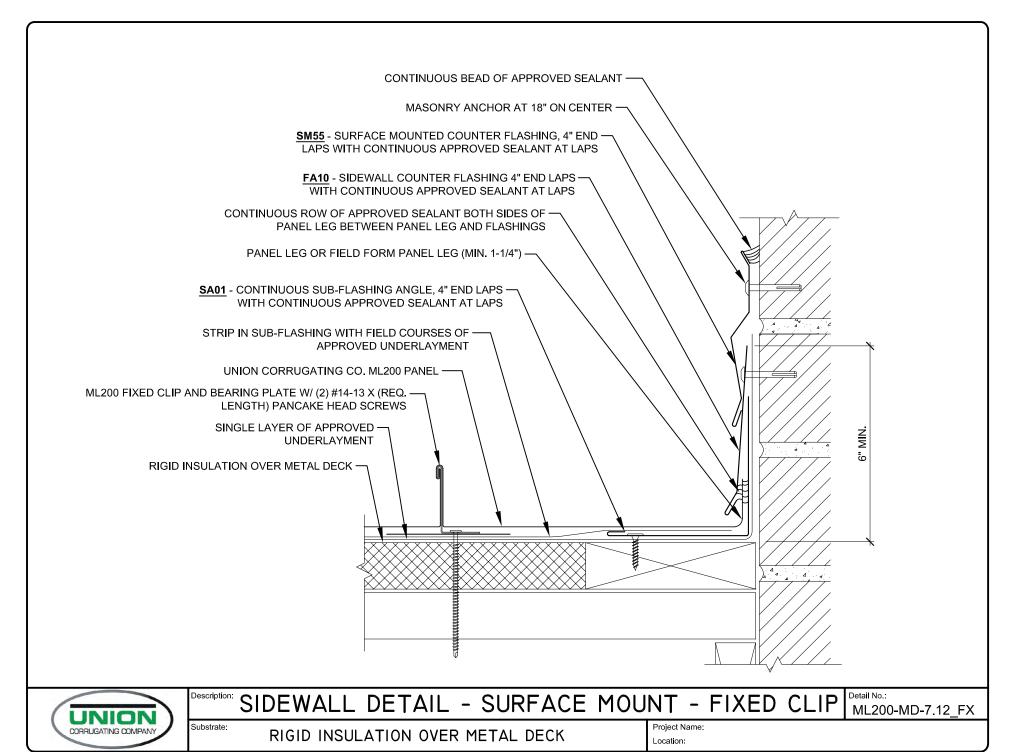
Description: SIDEWALL DETAIL - REGLET - EXPANSION CLIP

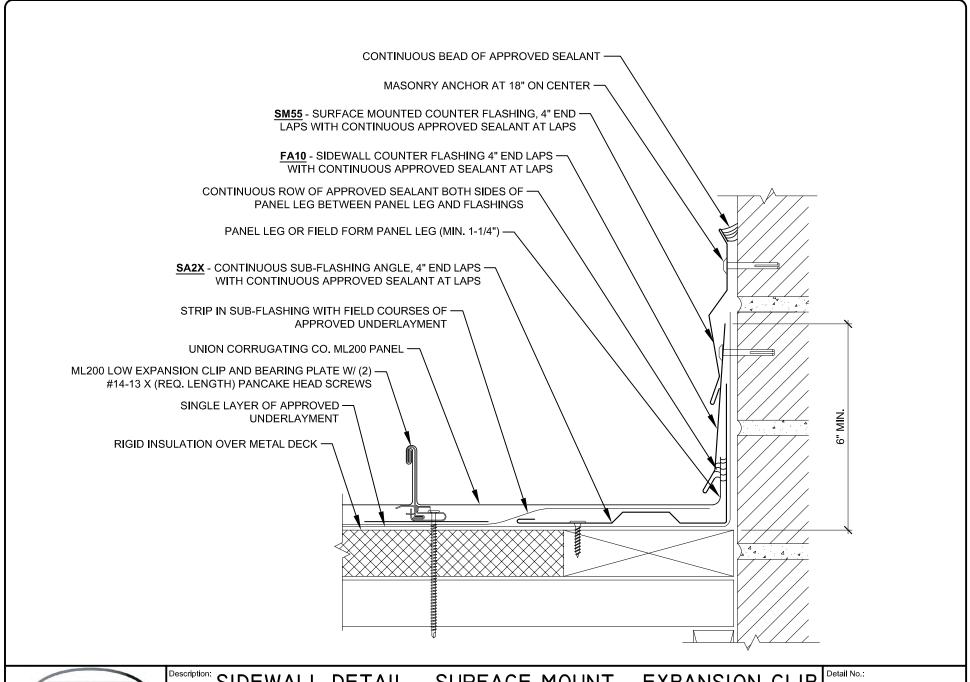
Detail No.:

Project Name: Location:

RIGID INSULATION OVER METAL DECK

ML200-MD-7.11 EX



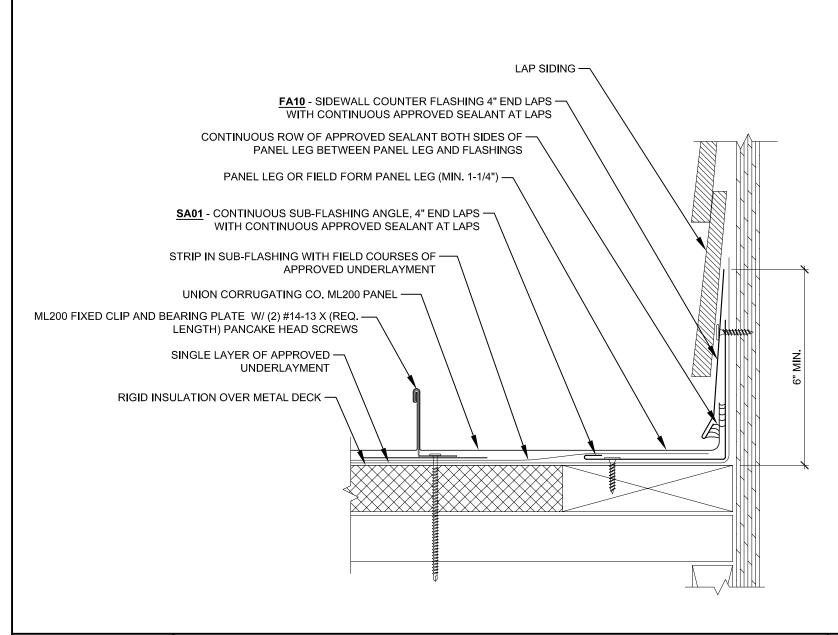




SIDEWALL DETAIL - SURFACE MOUNT - EXPANSION CLIP

ML200-MD-7.12 EX

Substrate: RIGID INSULATION OVER METAL DECK



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

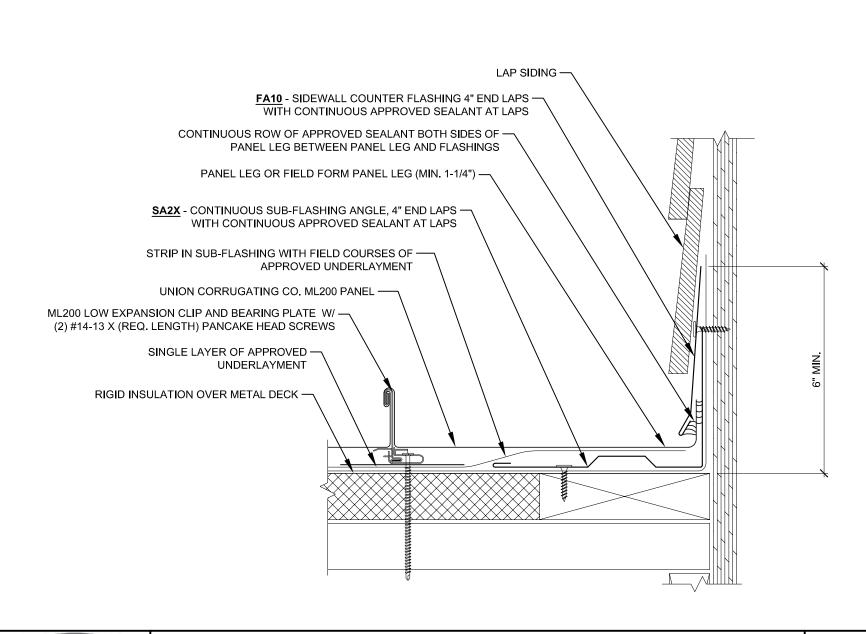
Detail No.:

Substrate:

Project Name: Location:

RIGID INSULATION OVER METAL DECK

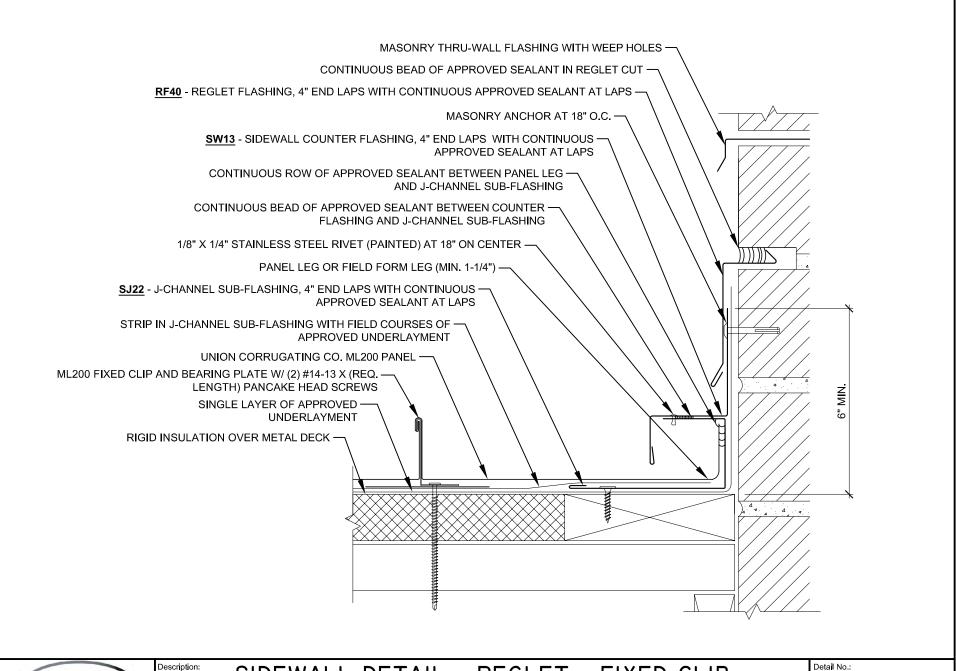
ML200-MD-7.13 FX



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

Detail No.: ML200-MD-7.13 EX

Substrate: RIGID INSULATION OVER METAL DECK





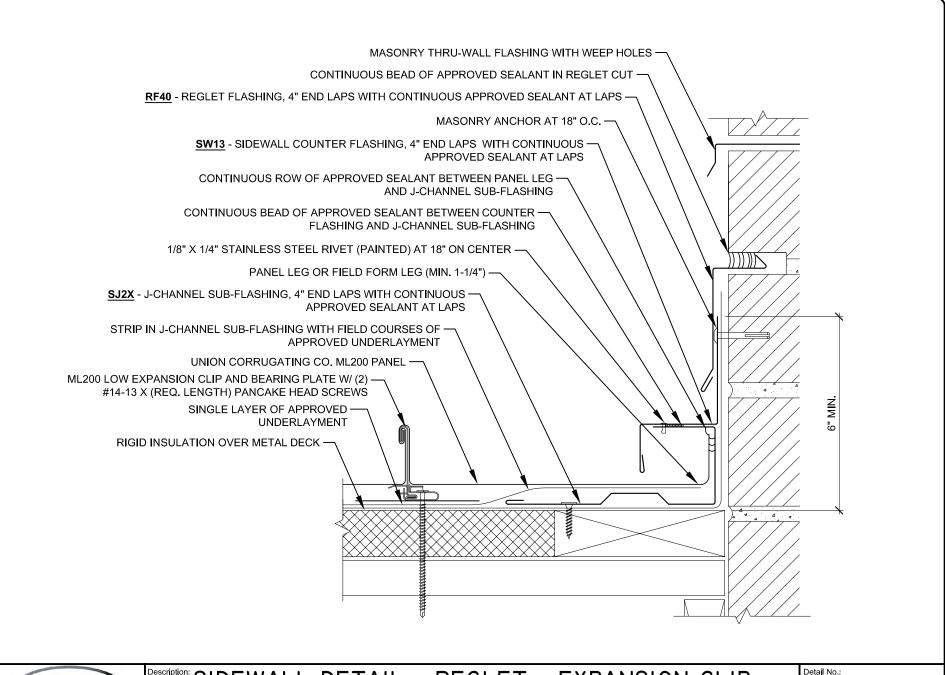
SIDEWALL DETAIL - REGLET - FIXED CLIP

Detail No.:
ML200-MD-7.21_FX

Substrate:

RIGID INSULATION OVER METAL DECK

Project Name:





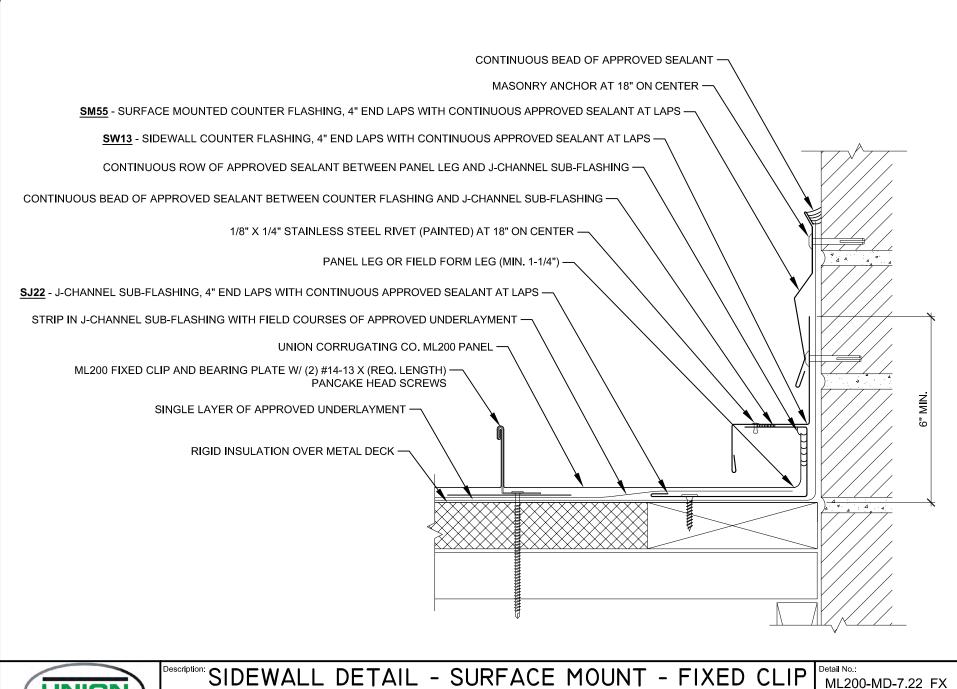
Description: SIDEWALL DETAIL - REGLET - EXPANSION CLIP

ML200-MD-7.21_EX

Substrate:

RIGID INSULATION OVER METAL DECK

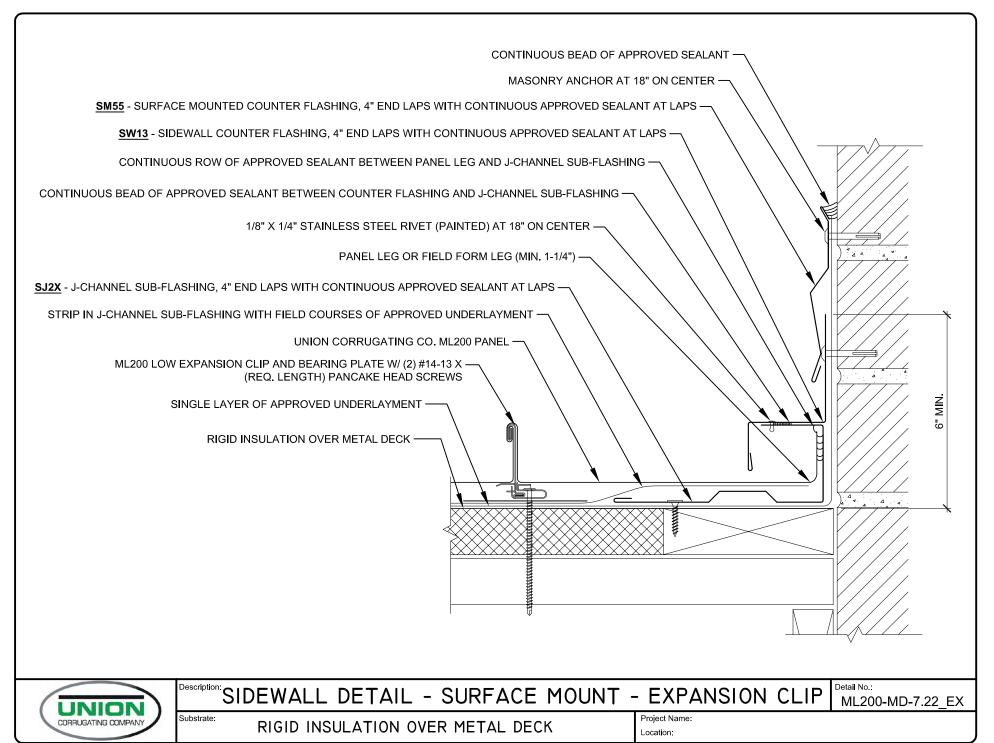
Project Name:

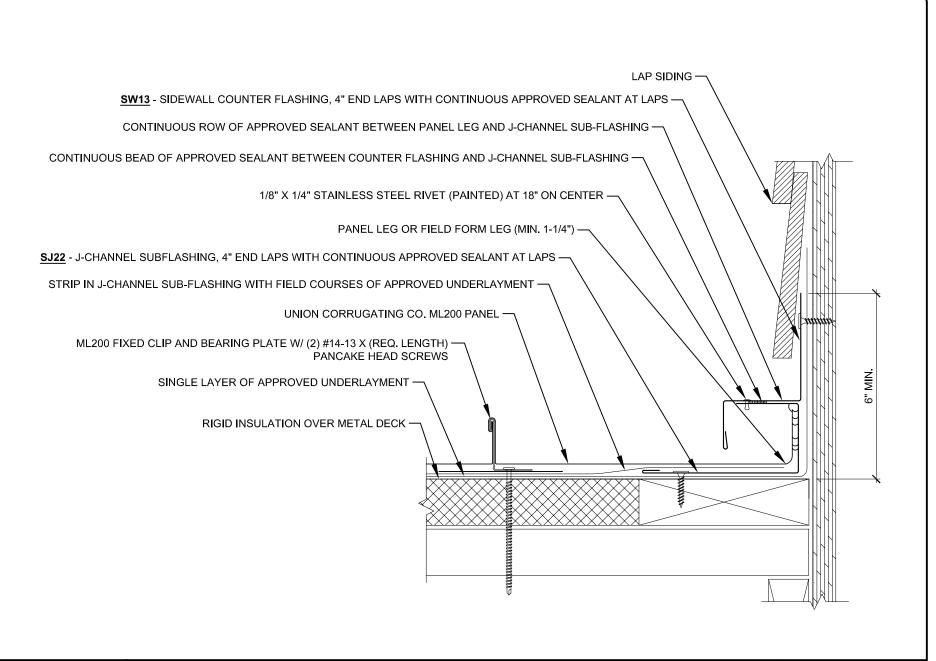


UNION CORRUGATING COMPANY

Substrate:

RIGID INSULATION OVER METAL DECK







Description:

SIDEWALL DETAIL W/ SIDING - FIXED CLIP

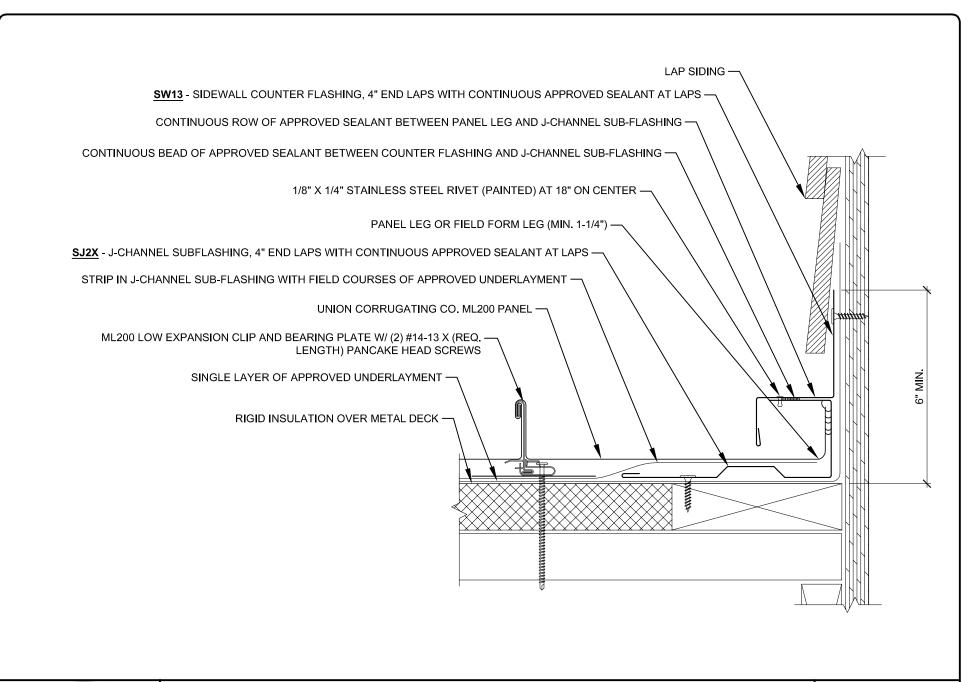
ML200-MD-7.23 FX Project Name:

Detail No.:

RIGID INSULATION OVER METAL DECK

Location:

Substrate:





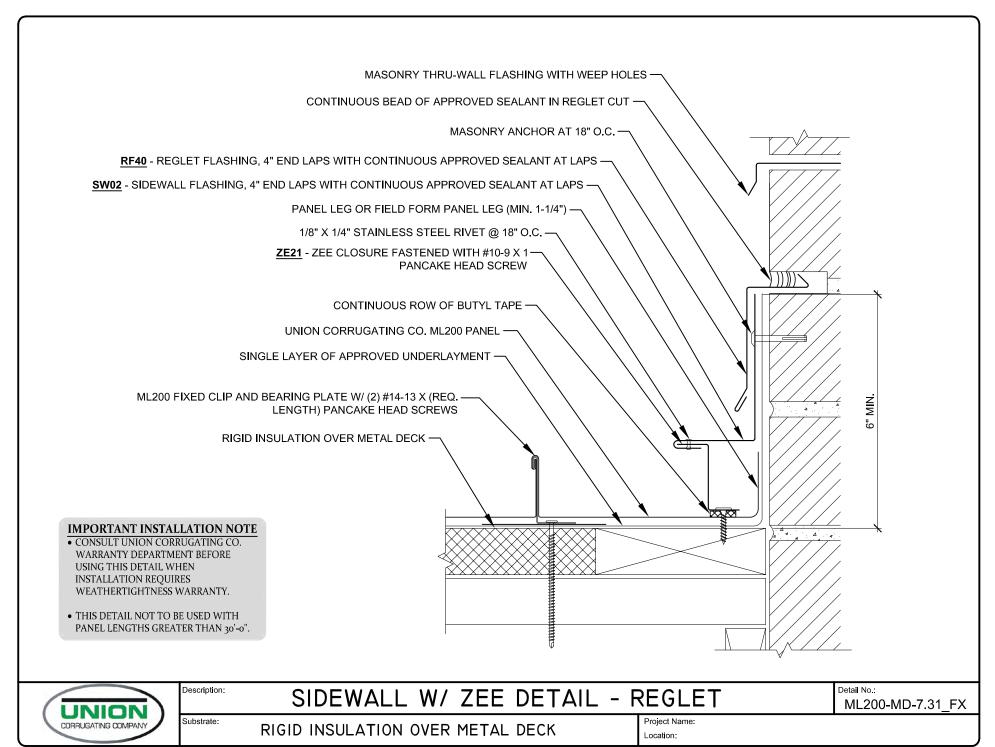
SIDEWALL DETAIL - W/ SIDING - EXPANSION CLIP

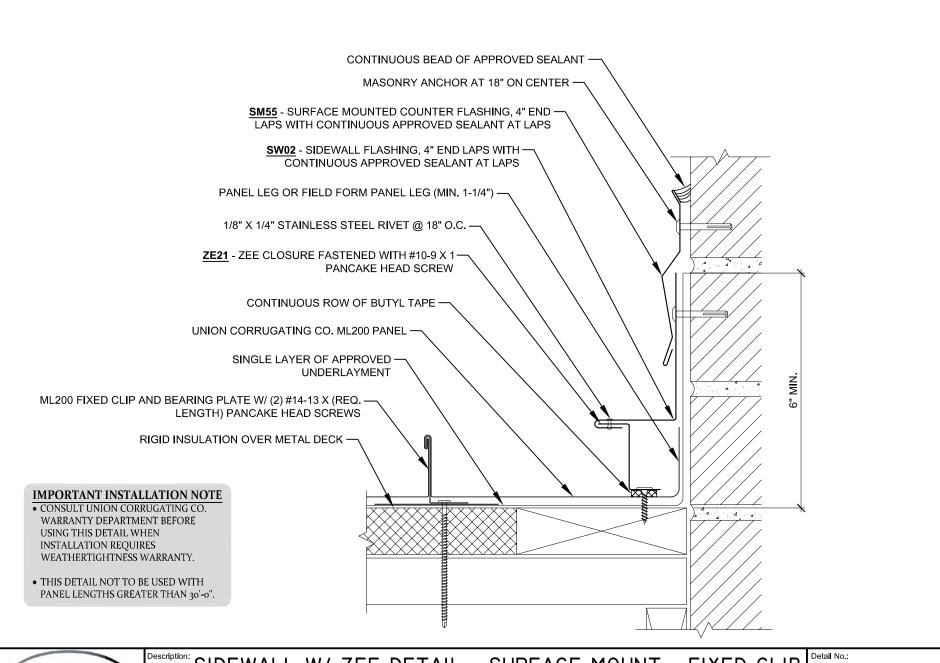
ML200-MD-7.23 EX

Detail No.:

Substrate:

RIGID INSULATION OVER METAL DECK





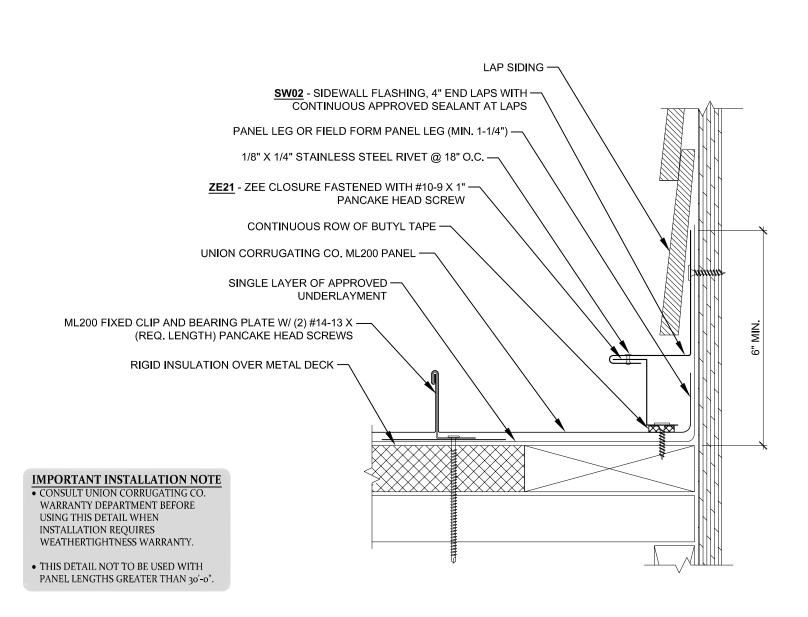


SIDEWALL W/ ZEE DETAIL - SURFACE MOUNT - FIXED CLIP

ML200-MD-7.32 FX

Substrate:

RIGID INSULATION OVER METAL DECK





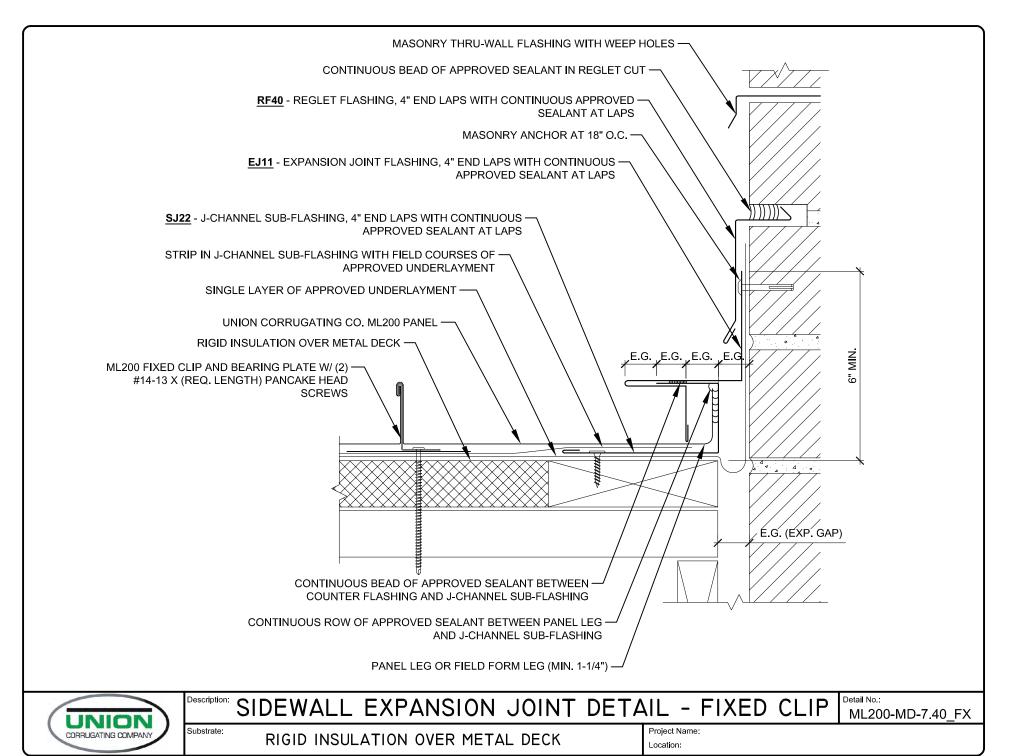
Description: SIDEWALL W/ ZEE - W/ SIDING - FIXED CLIP

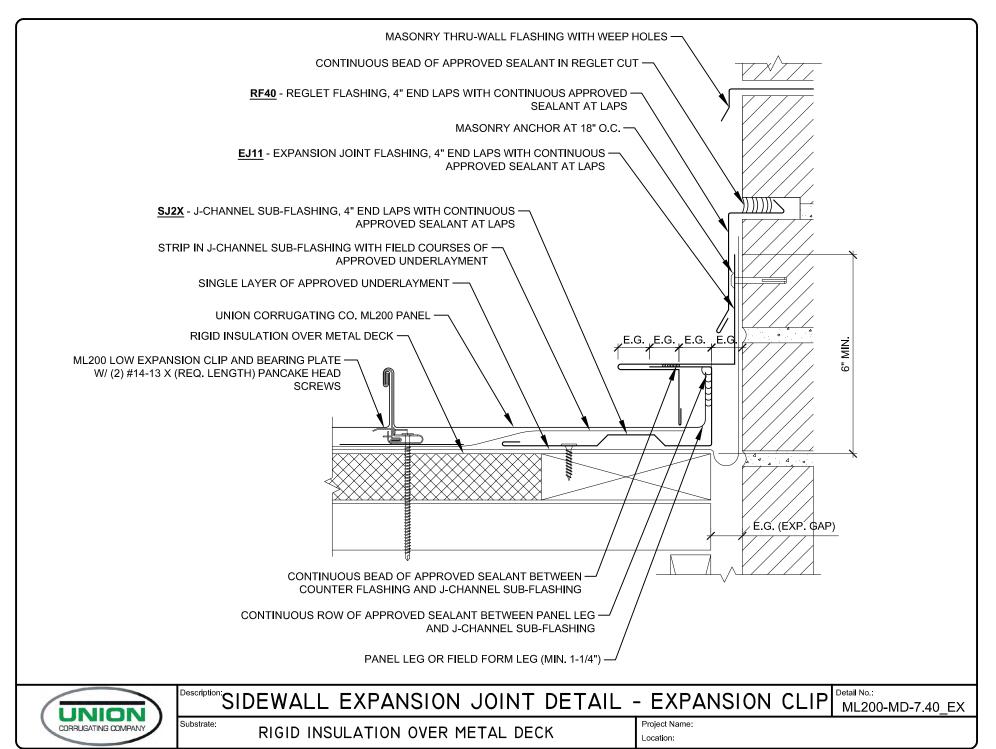
ML200-MD-7.33 FX

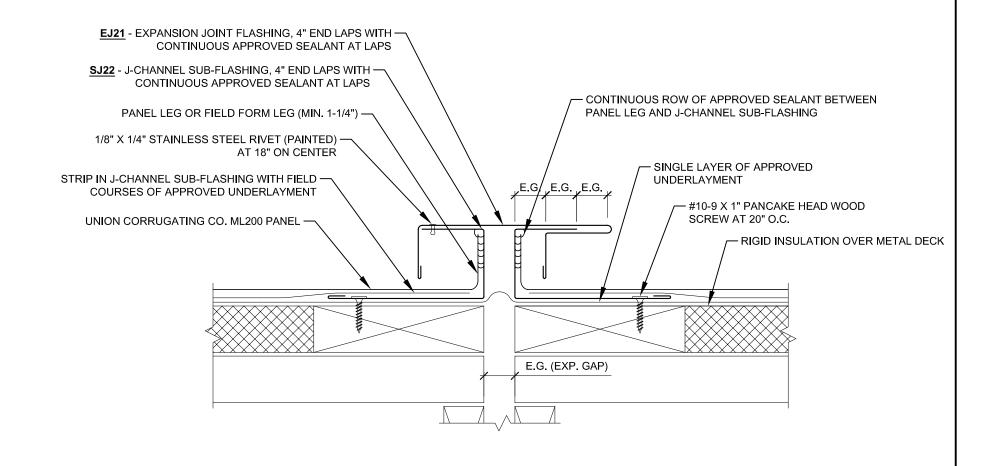
Substrate:

Project Name: Location:

RIGID INSULATION OVER METAL DECK









Description:

EXPANSION JOINT (MID-ROOF) - FIXED CLIP

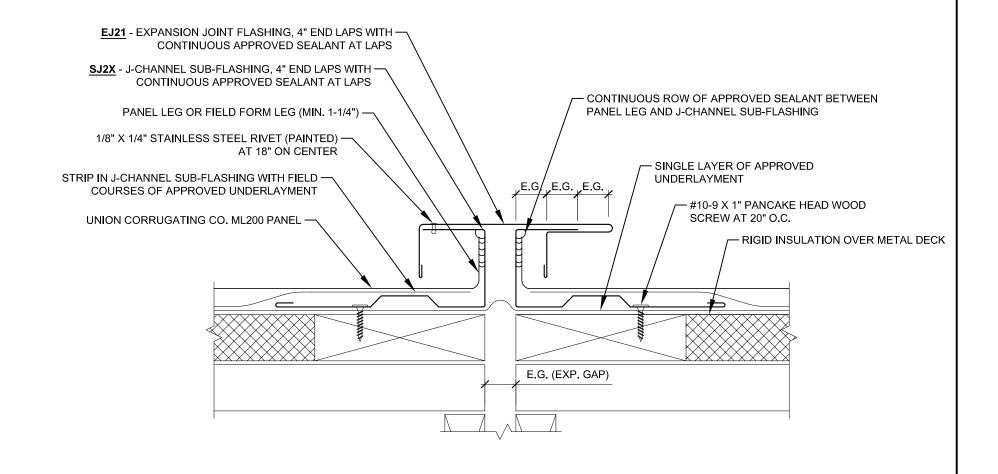
Detail No.:

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.

ML200-MD-7.50 FX



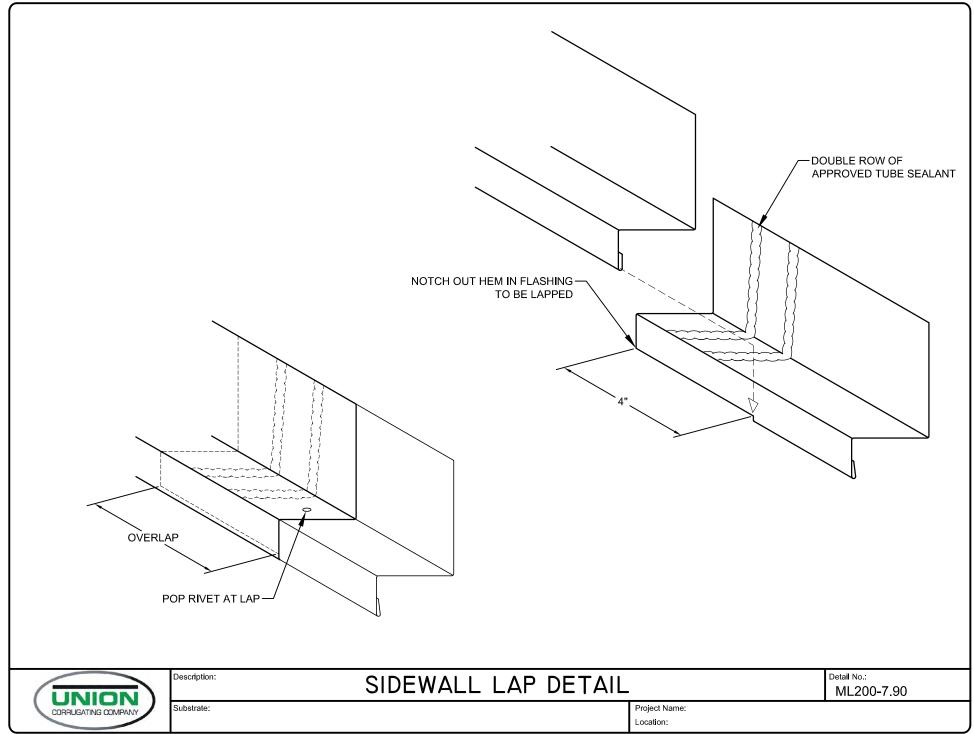


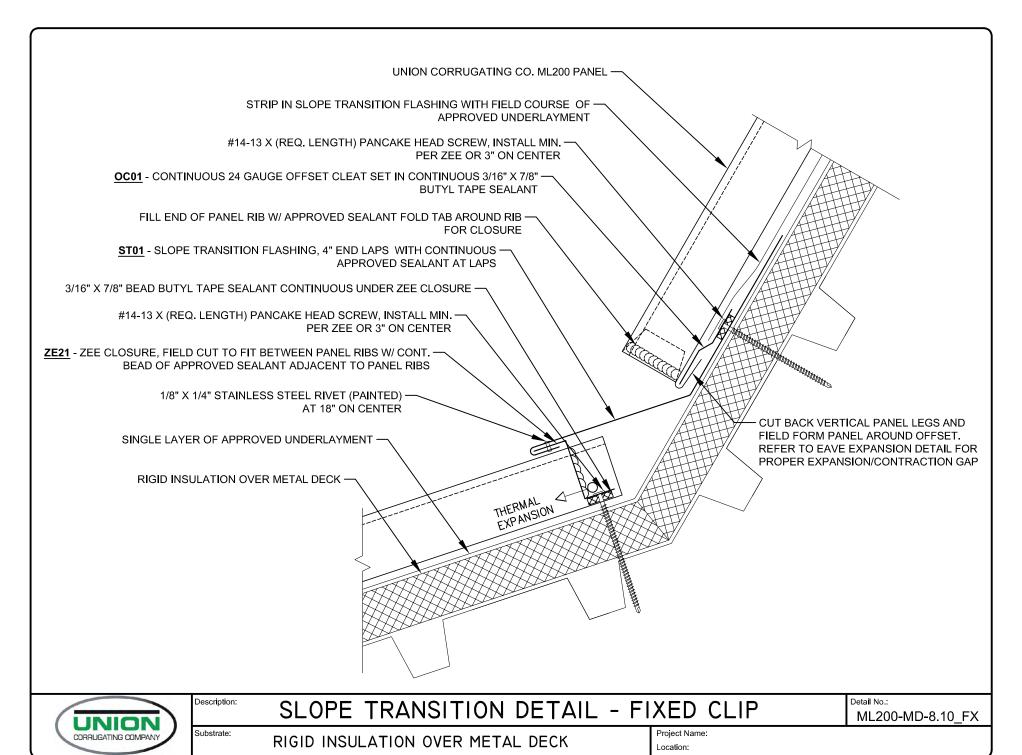
Description: EXPANSION JOINT (MID-ROOF) - EXPANSION CLIP

Detail No.:

ML200-MD-7.50_EX

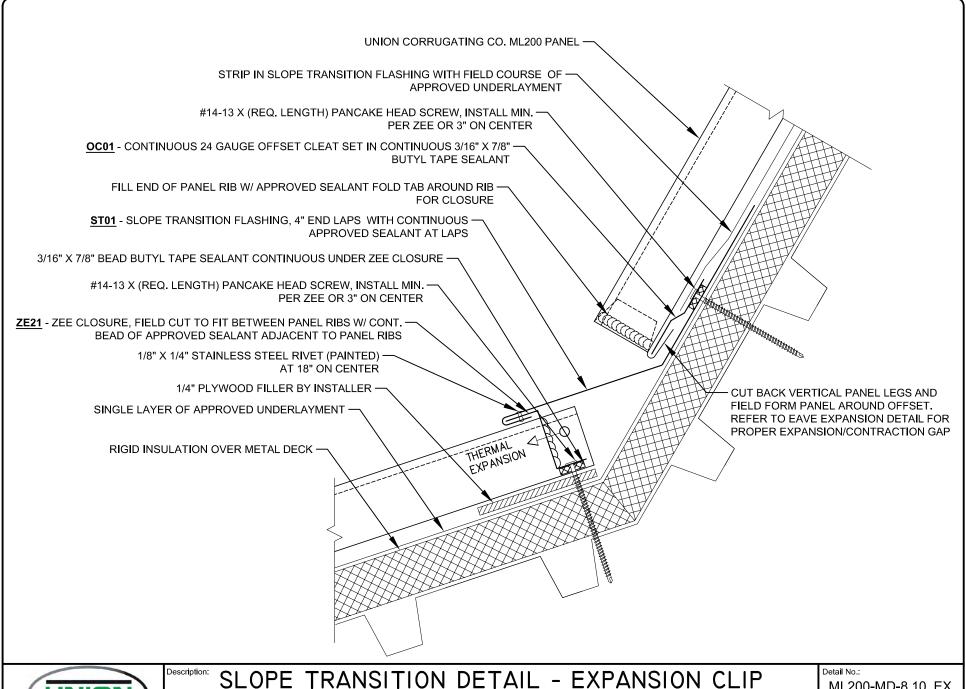
RIGID INSULATION OVER METAL DECK





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

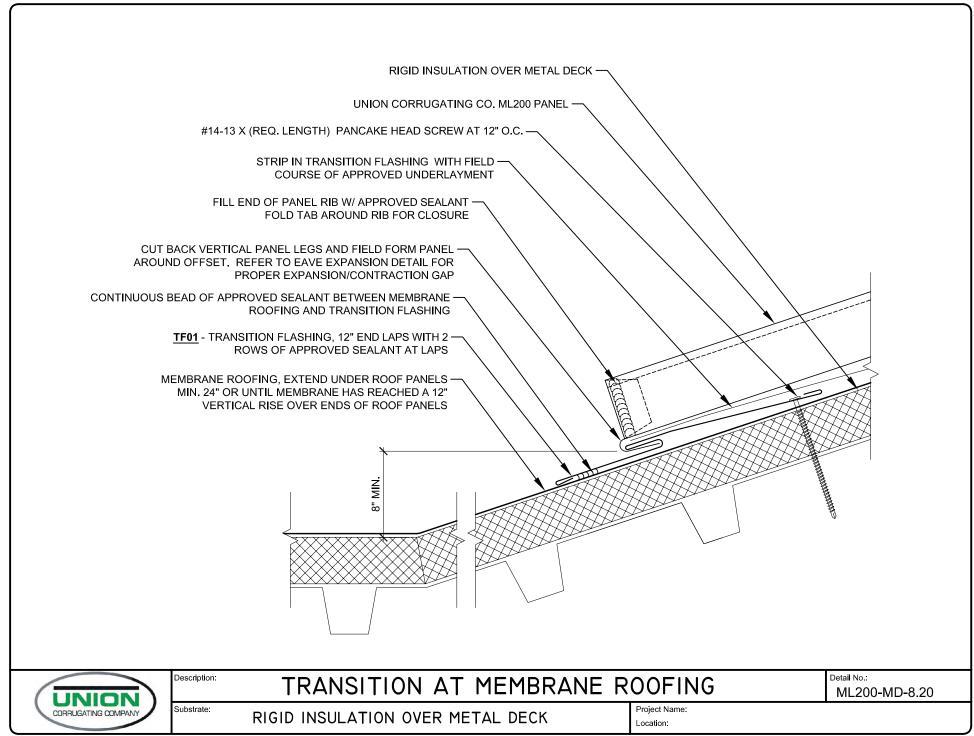
2016-0301

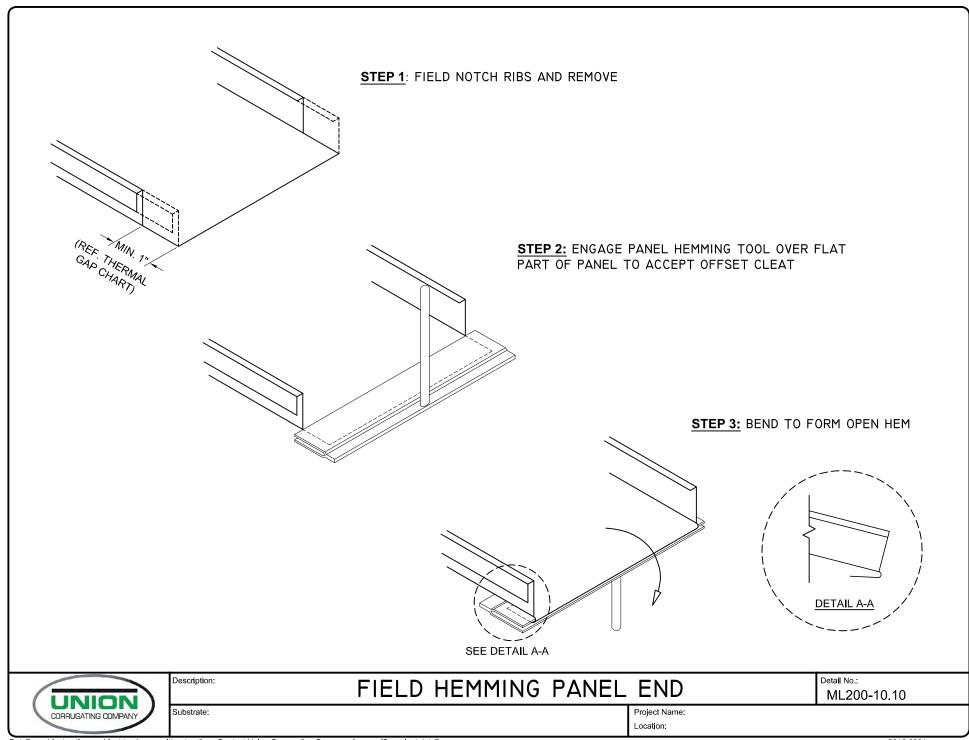


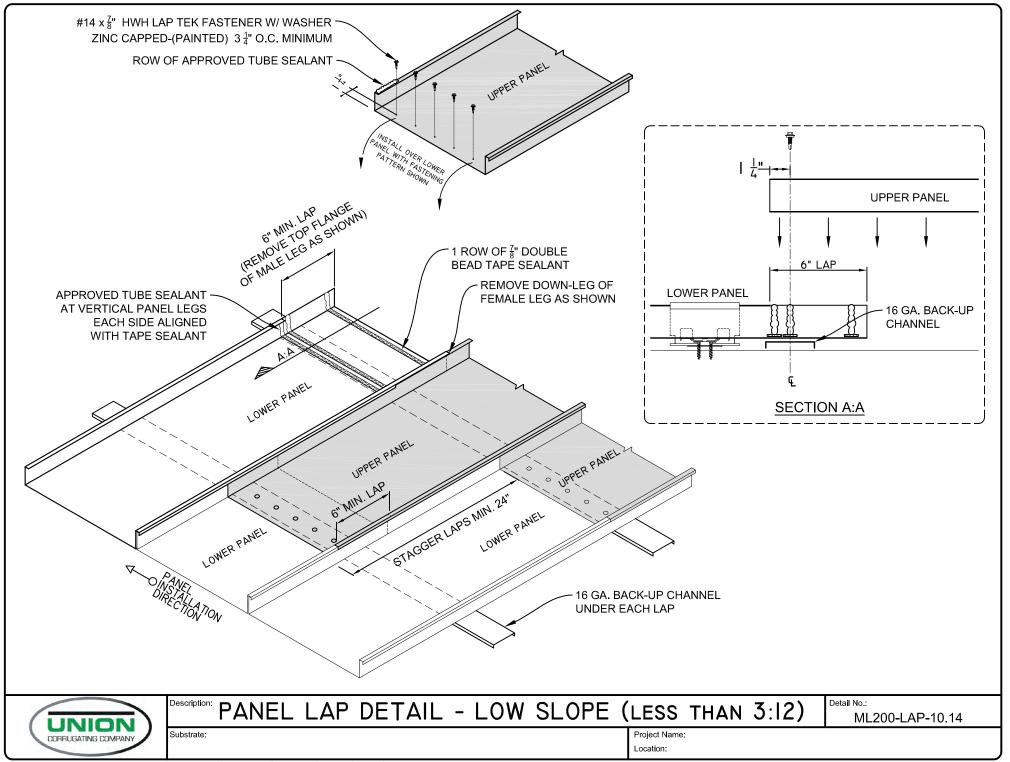
Substrate:

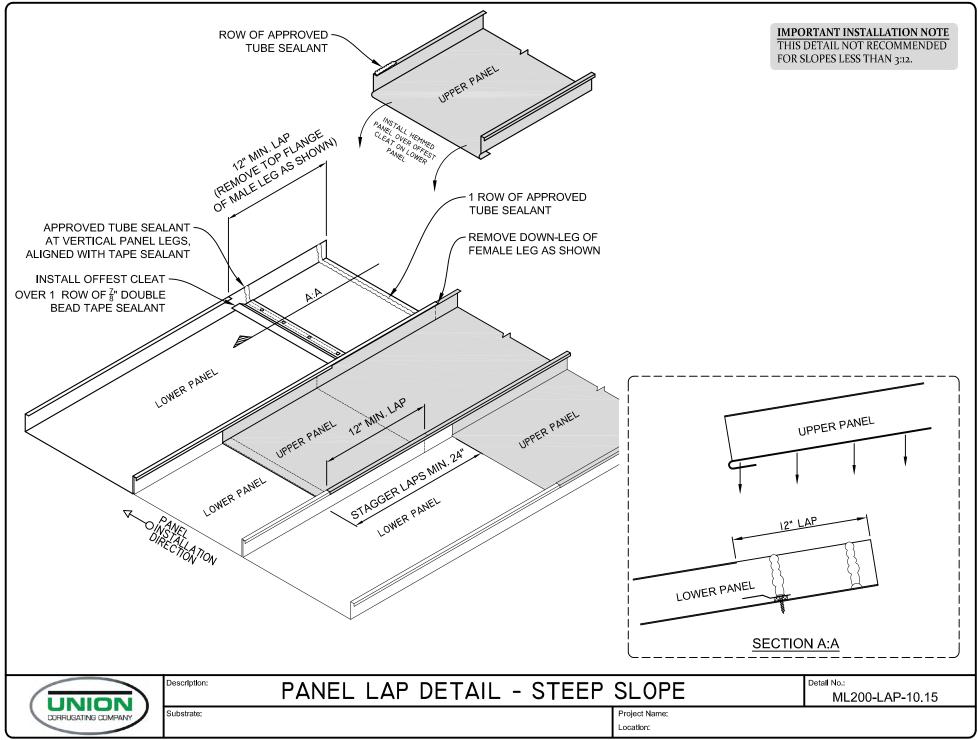
ML200-MD-8.10 EX

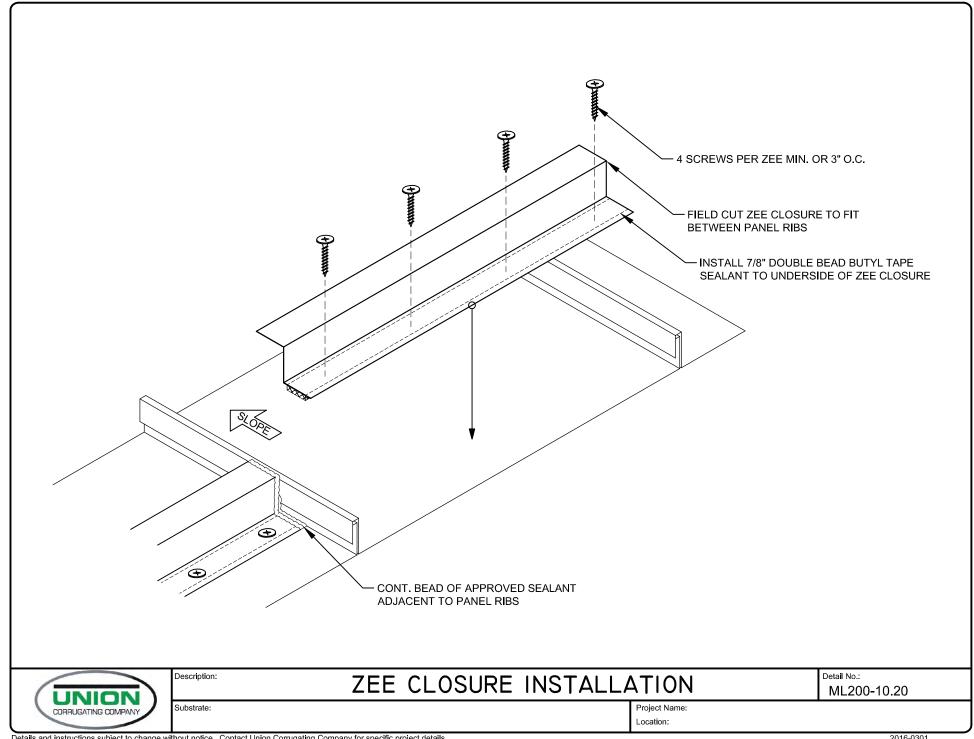
RIGID INSULATION OVER METAL DECK

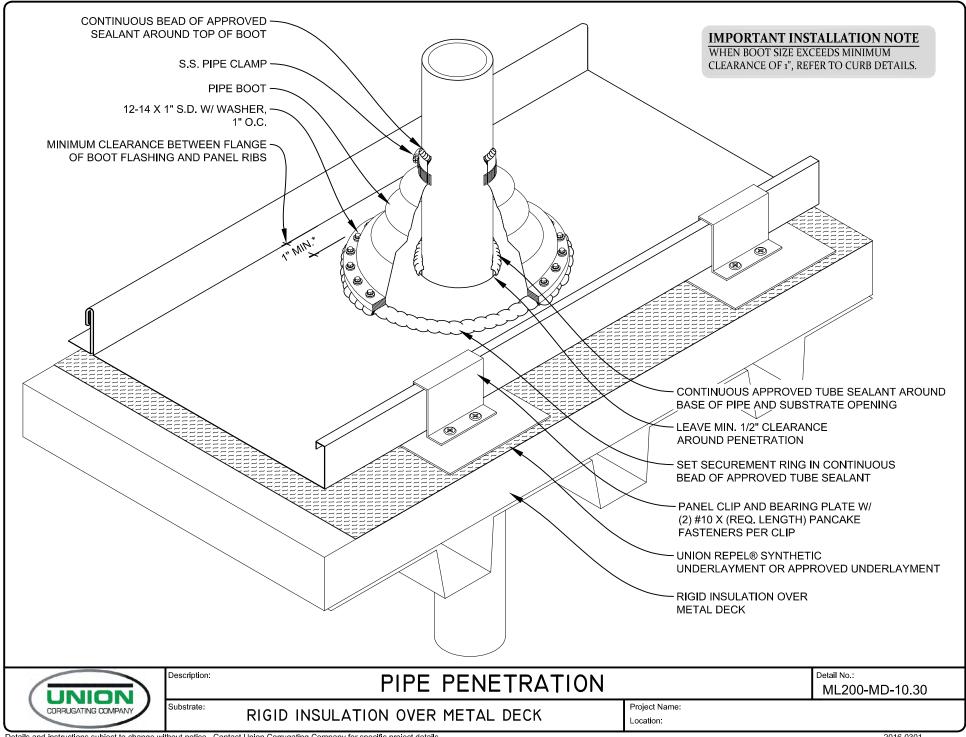


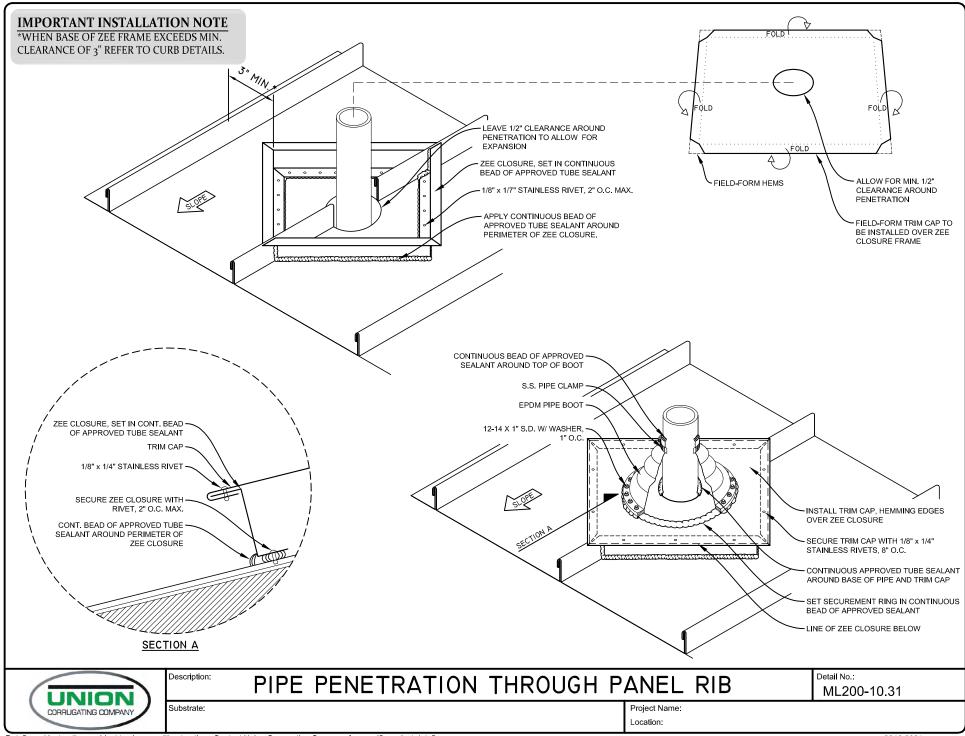


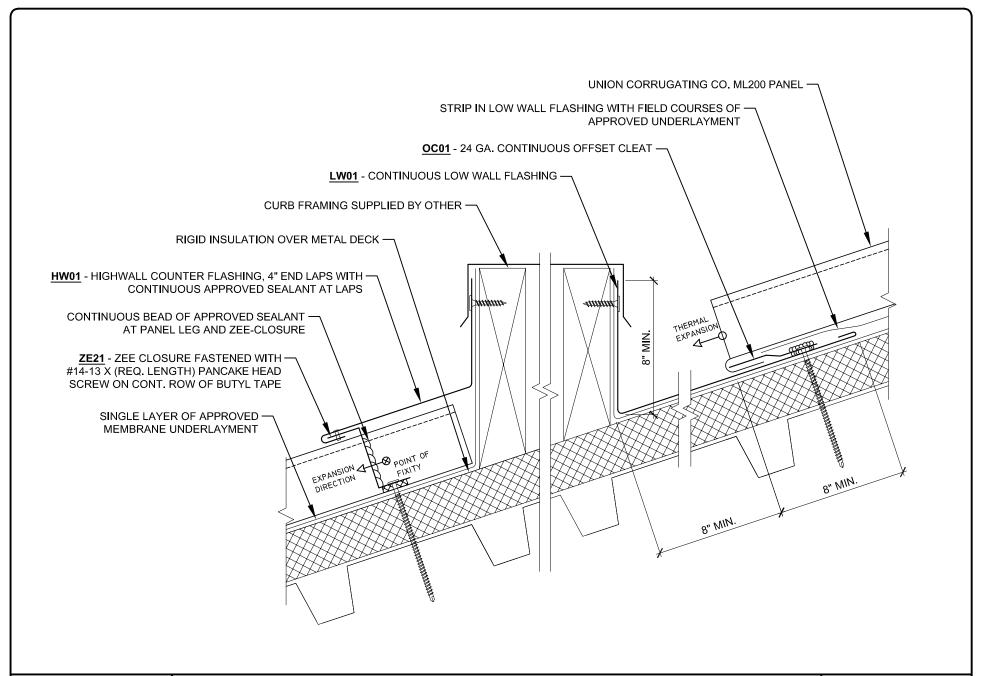














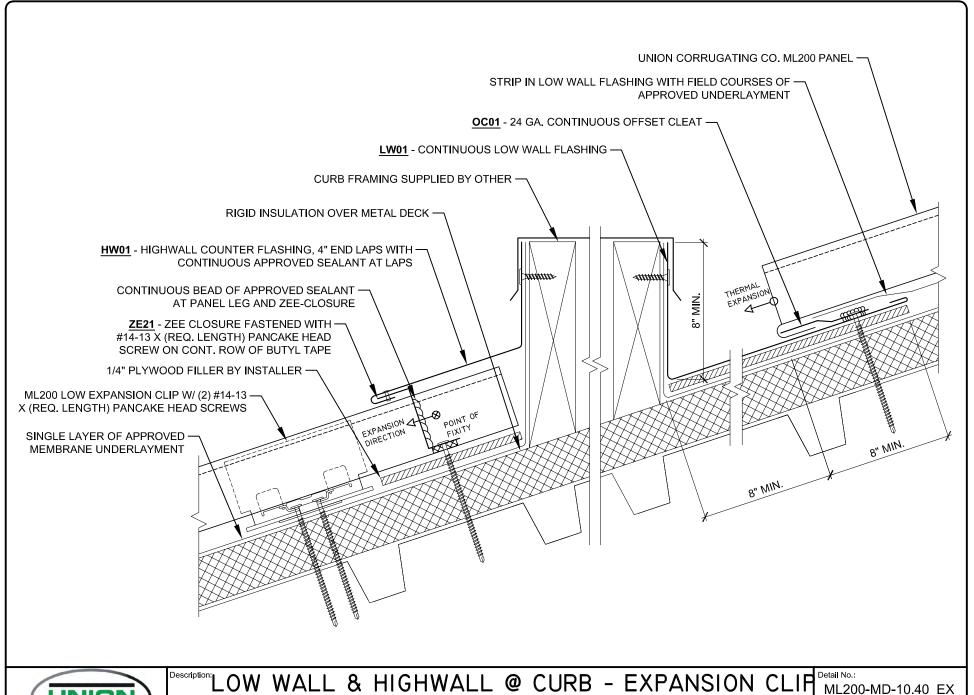
LOW WALL & HIGHWALL @ CURB - FIXED CLIP

etail No.:

Substrate:

RIGID INSULATION OVER METAL DECK

Project Name: Location: ML200-MD-10.40_FX



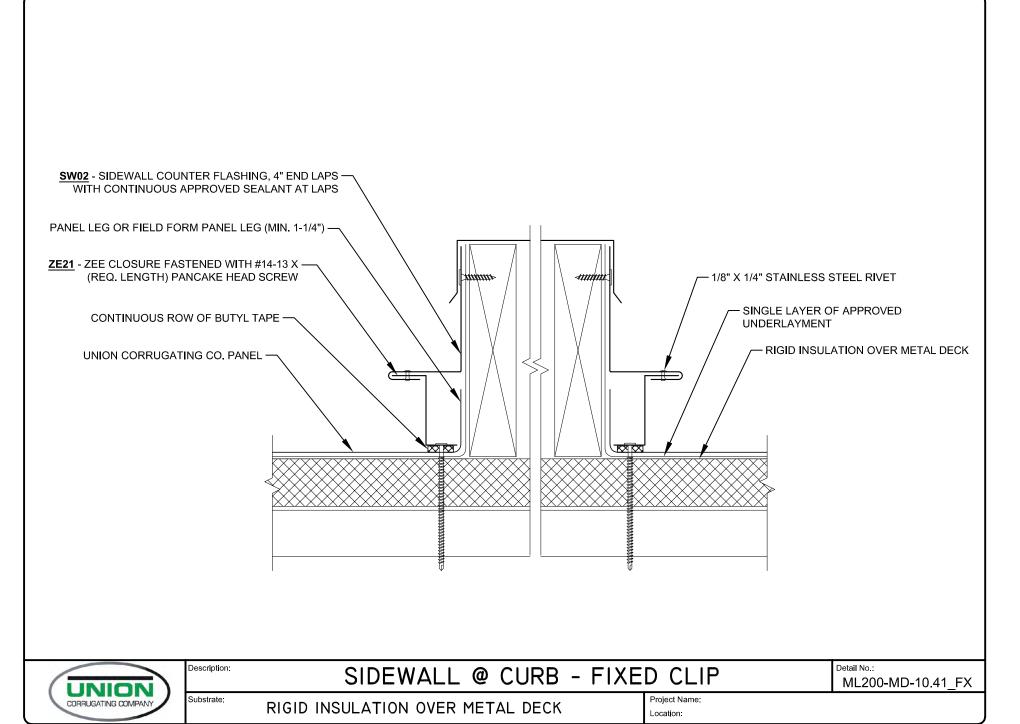


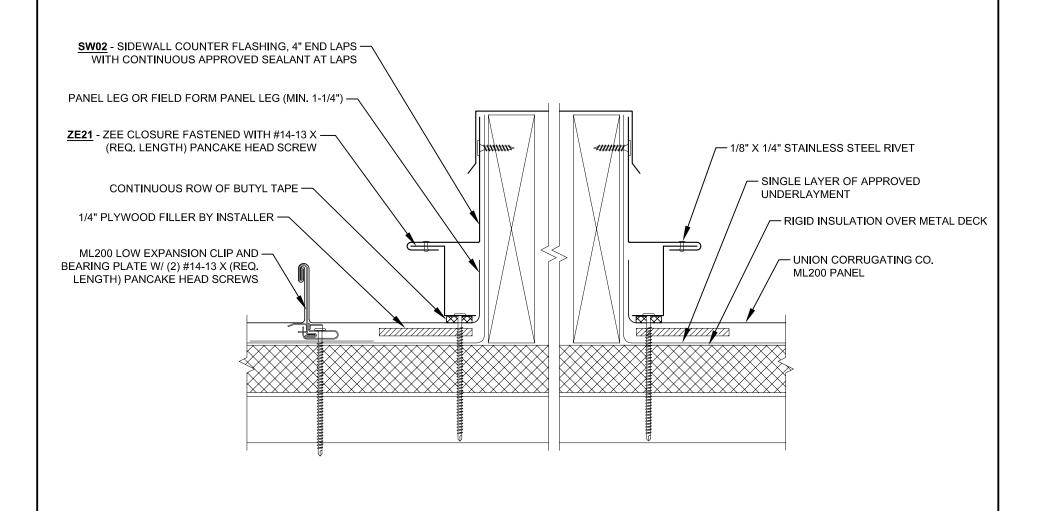
OW WALL & HIGHWALL @ CURB - EXPANSION CLIF.

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:

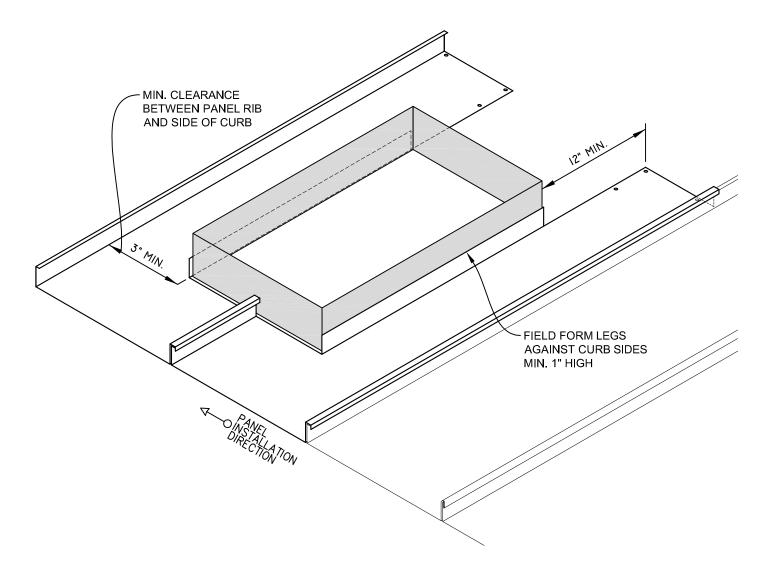
Substrate:

CORRUGATING COMPANY

ML200-MD-10.41 EX

STEP I

INSTALL PANELS AROUND CURB





ML200 CURB DETAILS - STEP I

ML200-CRB: 1 of 6

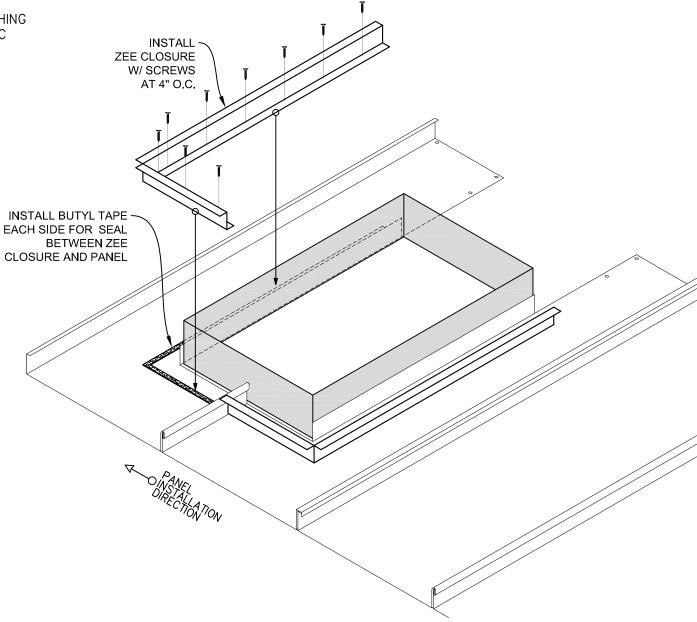
Substrate:

Project Name:

Location:

STEP 2

APPLY ZEE CLOSURE FLASHING OVER DOUBLE BEAD MASTIC



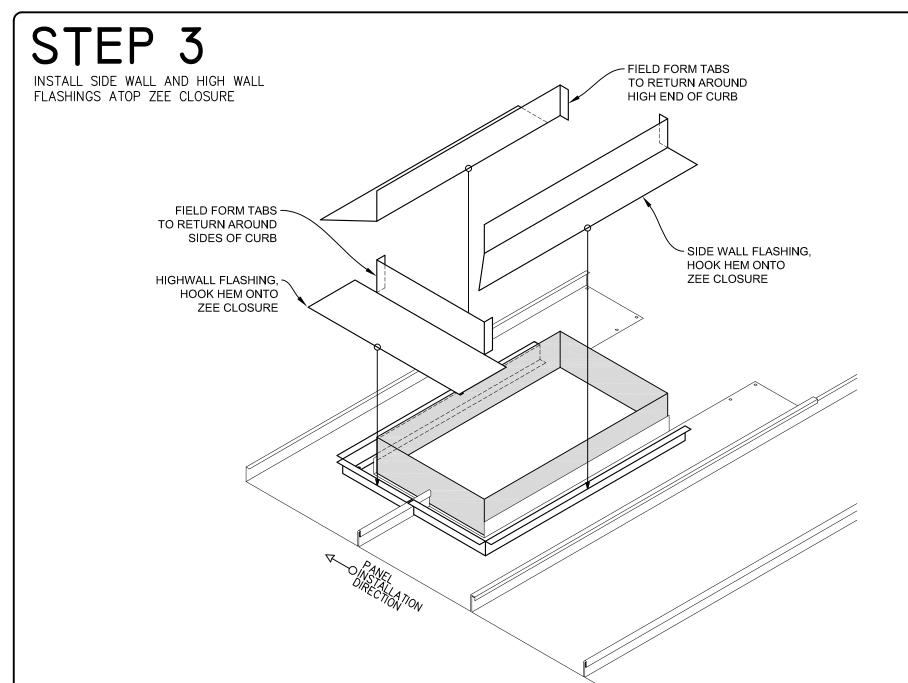


ML200 CURB DETAILS - STEP 2

Detail No.:

ML200-CRB: 2 of 6

Substrate:



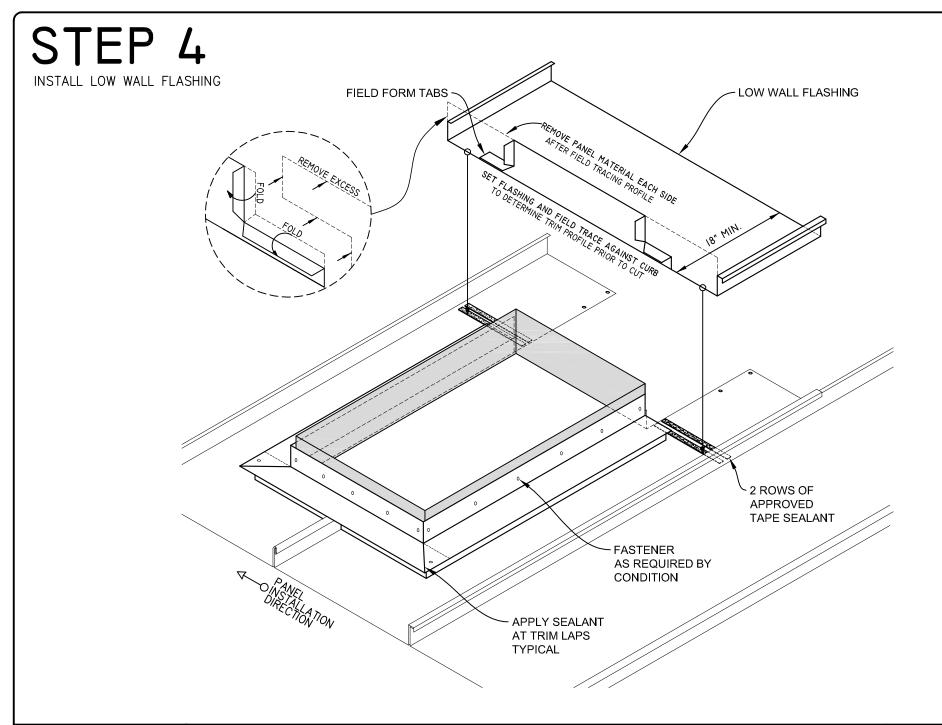


ML200 CURB DETAILS - STEP 3

Detail No.:

ML200-CRB: 3 of 6

:





ML200 CURB DETAILS - STEP 4

ML200-CRB: 4 of 6

Substrate:

Project Name:

Location:

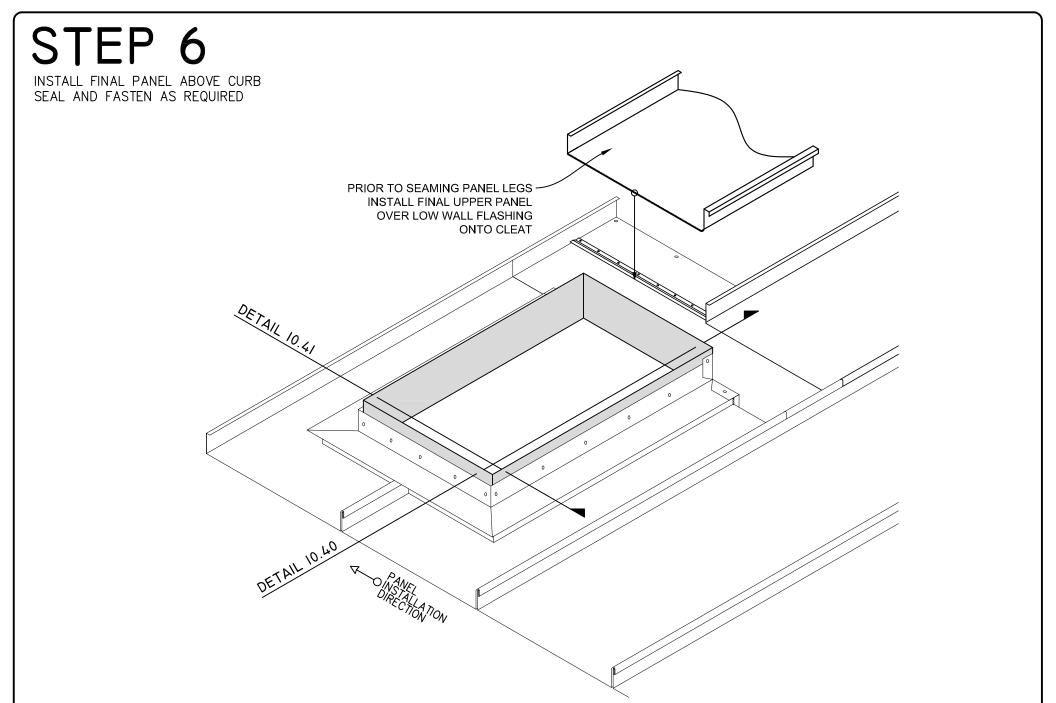
Description:

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:

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

20160-301





ML200 CURB DETAILS - STEP 6

Detail No.: ML200-CRB: 6 of 6

Substrate:

Project Name: Location:

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