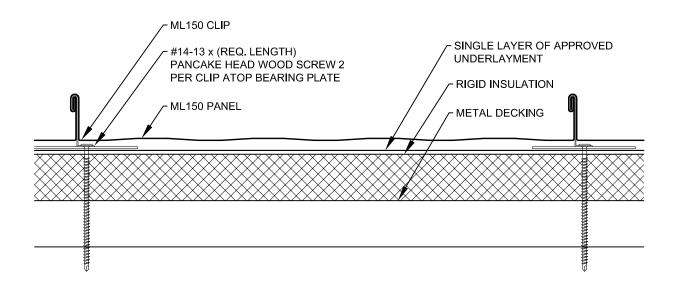


ML150 Standing Seam Rigid Insulation Over Metal Deck Master Details

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.



Index



ML150 Standing Seam -Rigid Insulation Over Metal Deck-

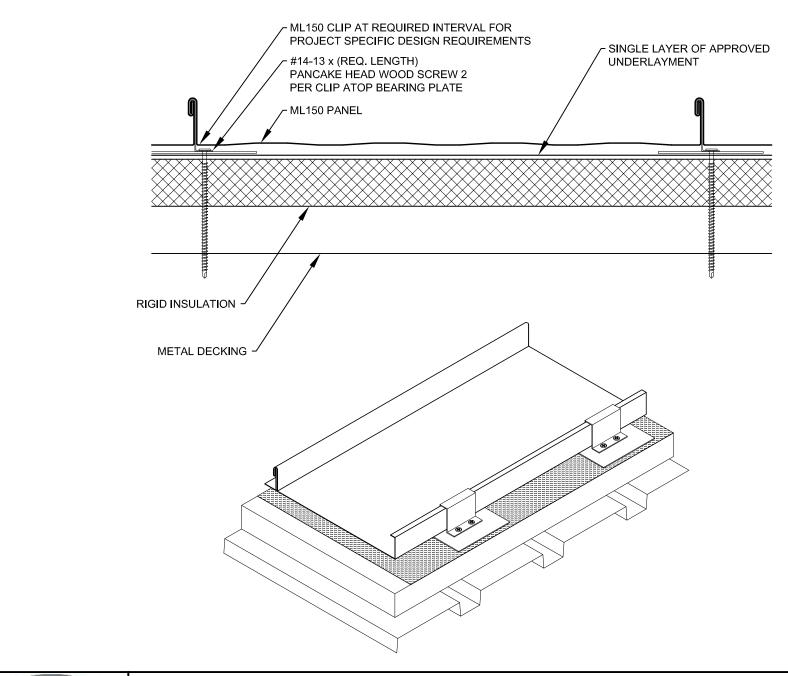
Panel Information	Detail No.
Panel Application	0.10
System Overview - Panel Profiles	
System Overview - Clips	
Thermal Gap Installation Chart - Steel	0.21
Thermal Gap Installation Chart - Aluminum	0.31
Eave Details	Detail No.
Extended Eave	1 10
Extended Eave - Steep Slope	
Extended Eave with Gutter	
Extended Eave with Gutter - Steep Slope	
Extended Eave with Soffit	
Extended Eave with Soffit & Gutter	
Extended Eave with Vertical Flush Panel	
Extended Eave with Vertical Standing Seam Panel	
Extended Eave Lap Detail	1.90
Gable Details	Detail No.
Gable - Extended Drip	
Gable - Box	
Gable - Box with Zee Closure	. 2.30
Box Gable Lap Detail	2.90
Valley Details	Detail No.
Valley - Integral Cleat	
Valley - Offset Cleat	3.20
Valley Lap Detail	3.90
Ridge & Hip Details	Detail No.
	-
Standard Ridge & Hip	4.10
Ridge Termination at Valley	4.40
Ridge & Hip Lap Detail	4.90
Ridge Cap Expansion Detail	
Peak Details	Detail No.
De ele Dete il	<i>-</i> 40
Peak Detail	
Peak Detail with Vertical Flush Panel	5.40





ML150 Standing Seam -Rigid Insulation Over Metal Deck-

High Wall & Low Wall Details	Detail No.
High Wall - Reglet	6 10
High Wall - Surface Mount	
High Wall - Vertical Panel with Sill	
High Wall - Parapet	
Valley Wall Detail	
High Wall Lap Detail	
Sidewall Details	Detail No.
	-
Sidewall - Reglet with Subflashing Angle	7.11
Sidewall - Surface Mount with Subflashing Angle	7.12
Sidewall - Wood Framing & Siding with Subflashing Angle	7.13
Sidewall - Reglet with J-Channel Subflashing	7.21
Sidewall - Surface Mount with J-Channel Subflashing	7.22
Sidewall - Wood Framing & Siding with J-Channel Subflashing	7.23
Sidewall - Reglet with Zee Closure	7.31
Sidewall - Surface Mount with Zee Closure	7.32
Sidewall - Wood Framing & Siding with Zee Closure	7.33
Sidewall Expansion Joint	7.40
Expansion Joint Mid-Roof	7.50
Sidewall Lap Detail	7.90
Slope Transition Details	Detail No.
Slope Transition	
Transition at Membrane Roofing	8.20
General Information Details	Detail No.
Danal Hamming	10 10
Panel Hemming	
End Lap Detail - Low Slope	
End Lap Detail - Steep Slope	
Zee Closure Installation	
Pipe Penetration	
Pipe Penetration Through Panel Rib	
Curb at High Wall & Low Wall	
Curb Installation Detail	10.41 CRB 1-6



UNION DORRUGATING COMPANY

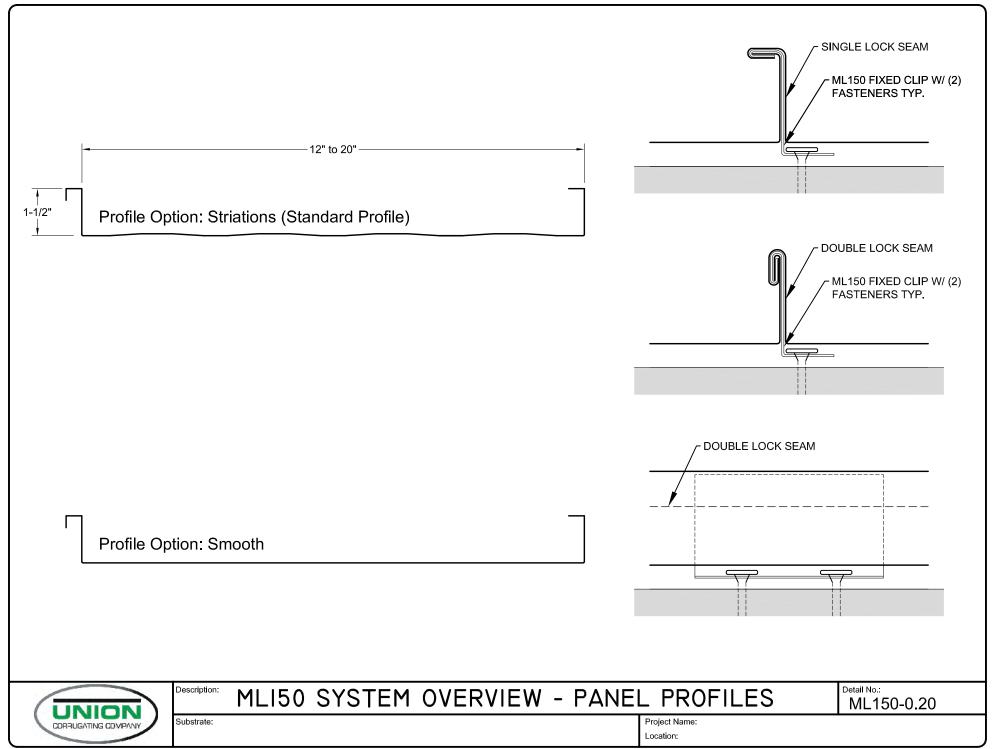
Description: MLI50 APPLICATION

Detail No.: ML150-MD-0.10

RIGID INSULATION OVER METAL DECK

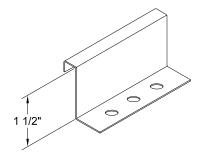
Project Name: Location:

Substrate:

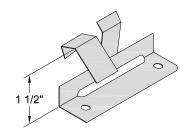


IMPORTANT INSTALLATION NOTE

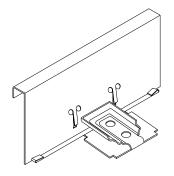
EXPANSION CLIPS ARE RECOMMENDED FOR PANEL LENGTHS GREATER THAN 30'-0".

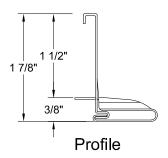


Clip 30 Fixed 26 Ga. Galvanized 1.5" x 3"

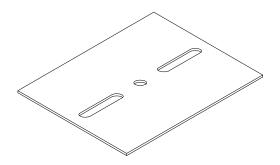


Clip 31 Butterfly Expansion 28 Ga. Stainless Steel 1.5" x 3" Recommended for use with aluminum panels





Clip 32 Expansion 22 Ga. Galvanized 1.875" x 4.25" (0.375" Standoff)



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



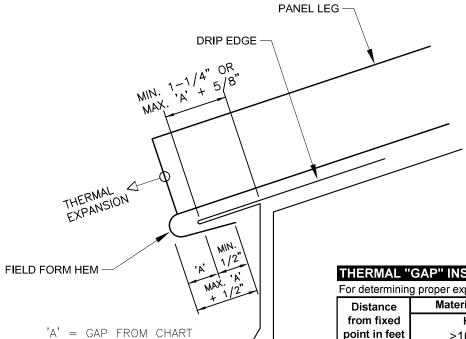
Description:

MLI50 SYSTEM OVERVIEW - CLIPS

Detail No.:

ML150-0.21

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	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

0.0000067



Description: THERMAL GAP INSTALLATION CHART - STEEL

Detail No.:

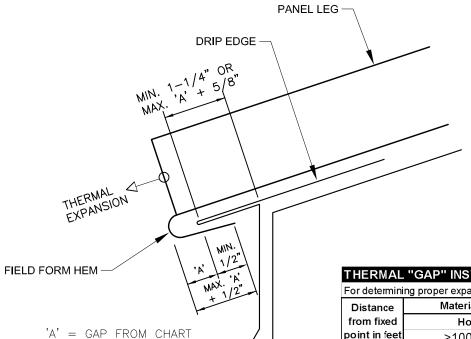
ML150-0.30

Substrate:

Project Name: Location:

DURING TIME OF INSTALLATION

^{*} Coefficient of thermal expansion for steel: 0.000



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	H	ot	Warm		Cold			
point in feet	t >100° F		>100° 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



Description: THERMAL GAP INSTALLATION CHART - ALUMINUM

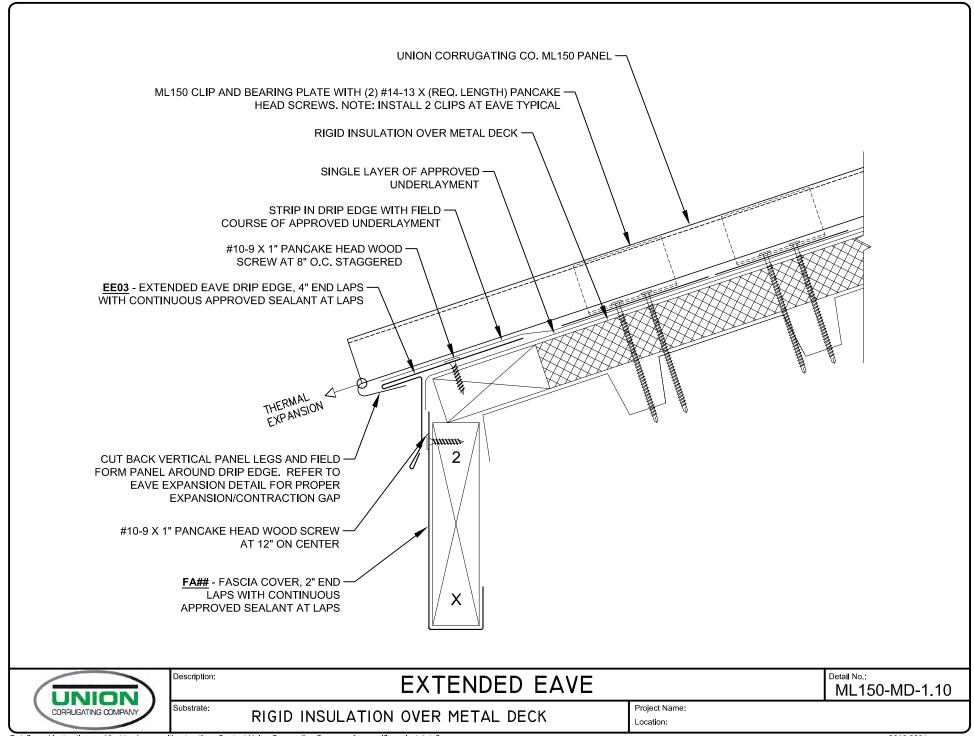
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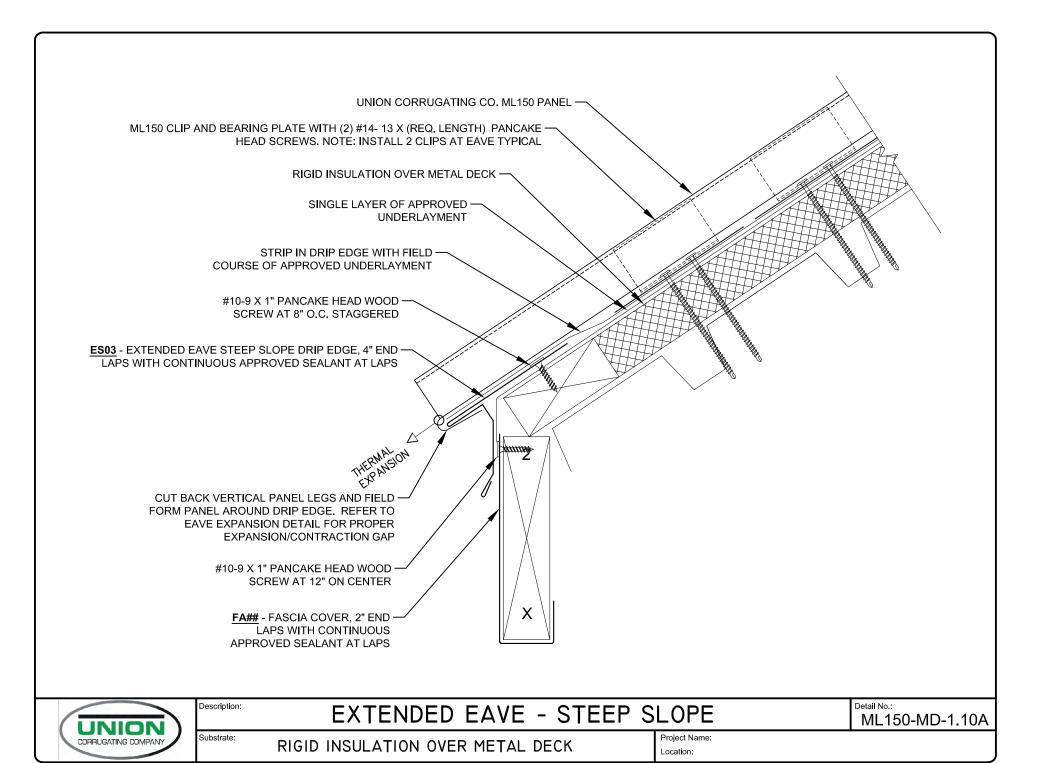
Project Name: Location:

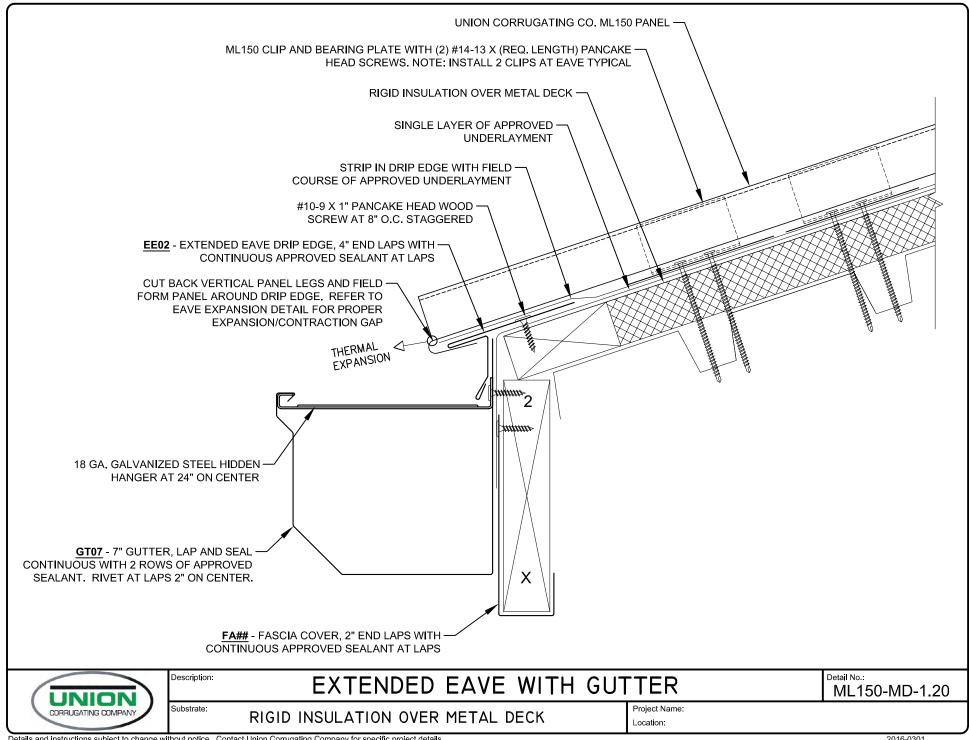
DURING TIME OF INSTALLATION

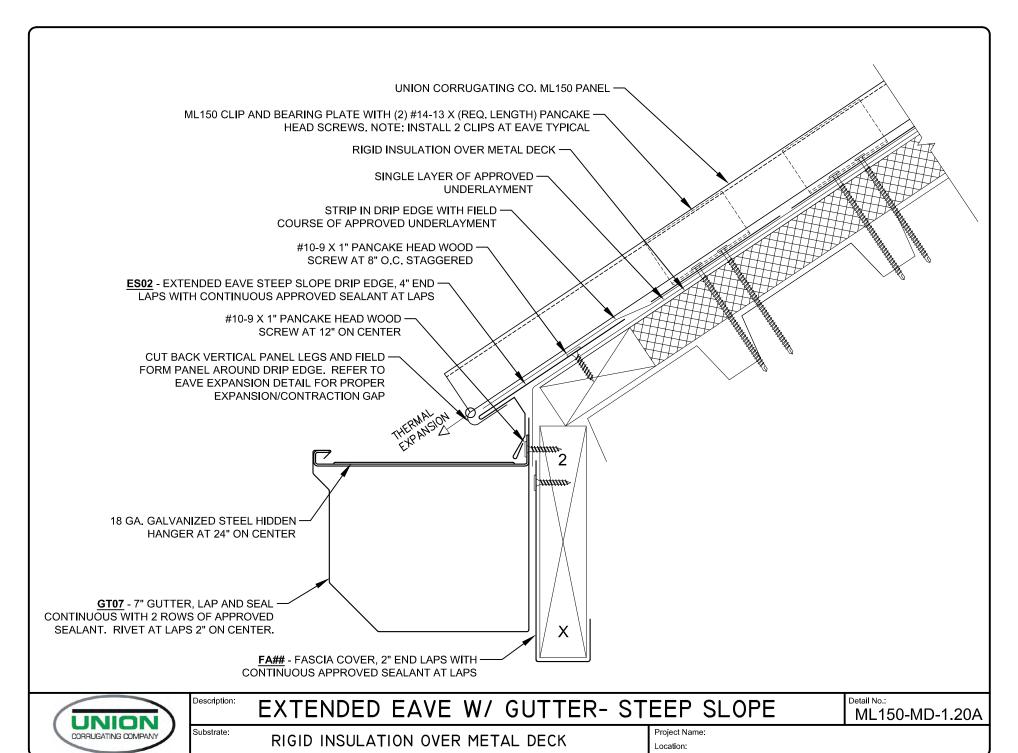
Detail No.:

ML150-0.31



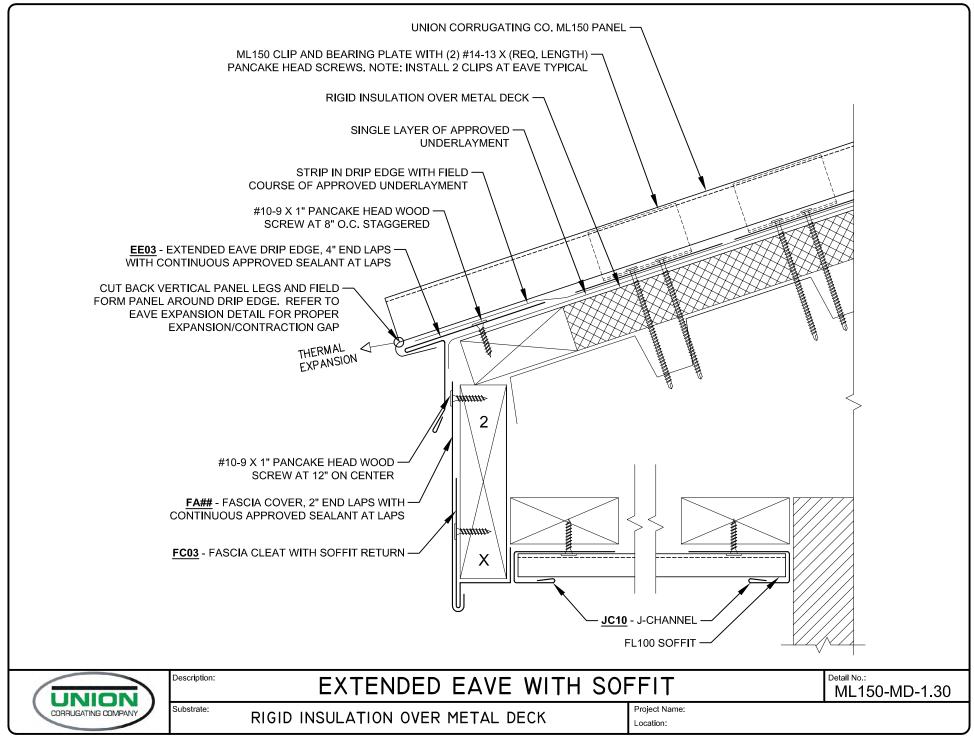


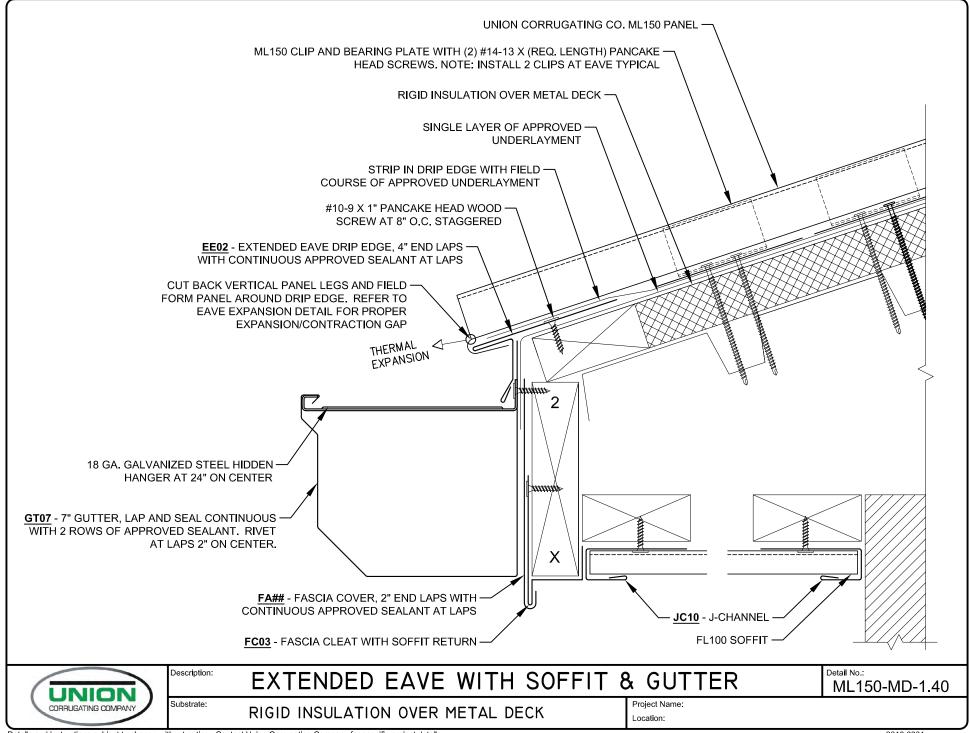


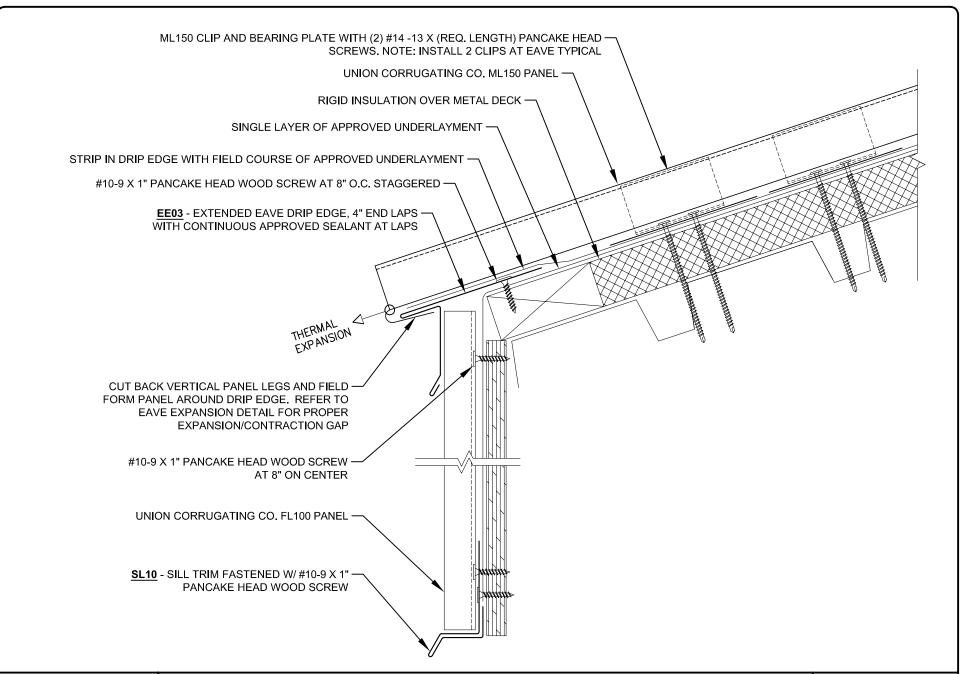


Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.

2016-0301









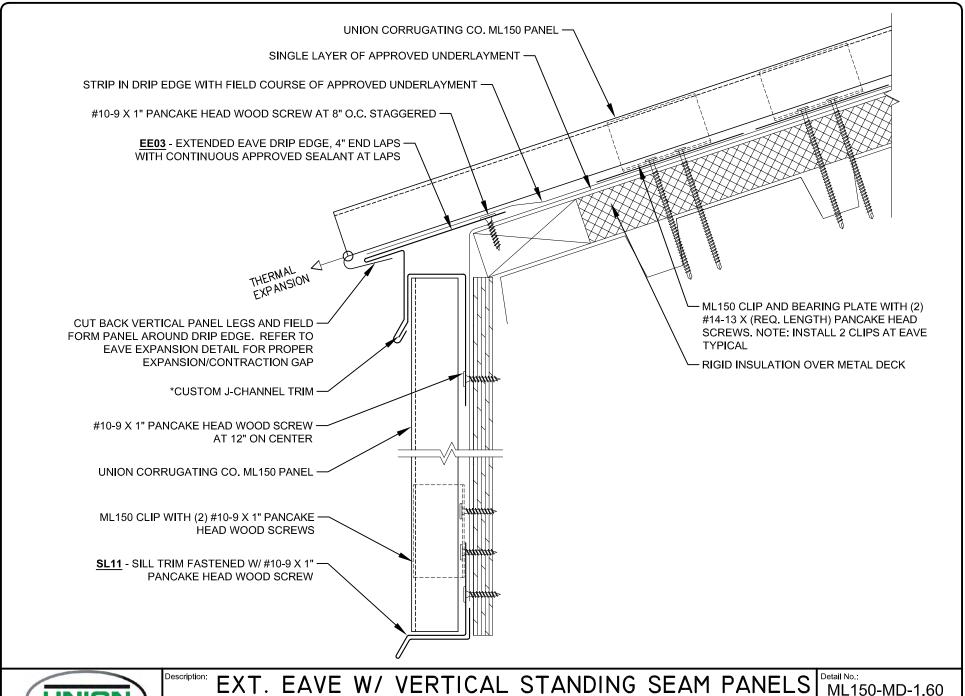
EXTENDED EAVE W/ VERTICAL FLUSH PANEL

Detail No.:

ML150-MD-1.50

Substrate:

RIGID INSULATION OVER METAL DECK

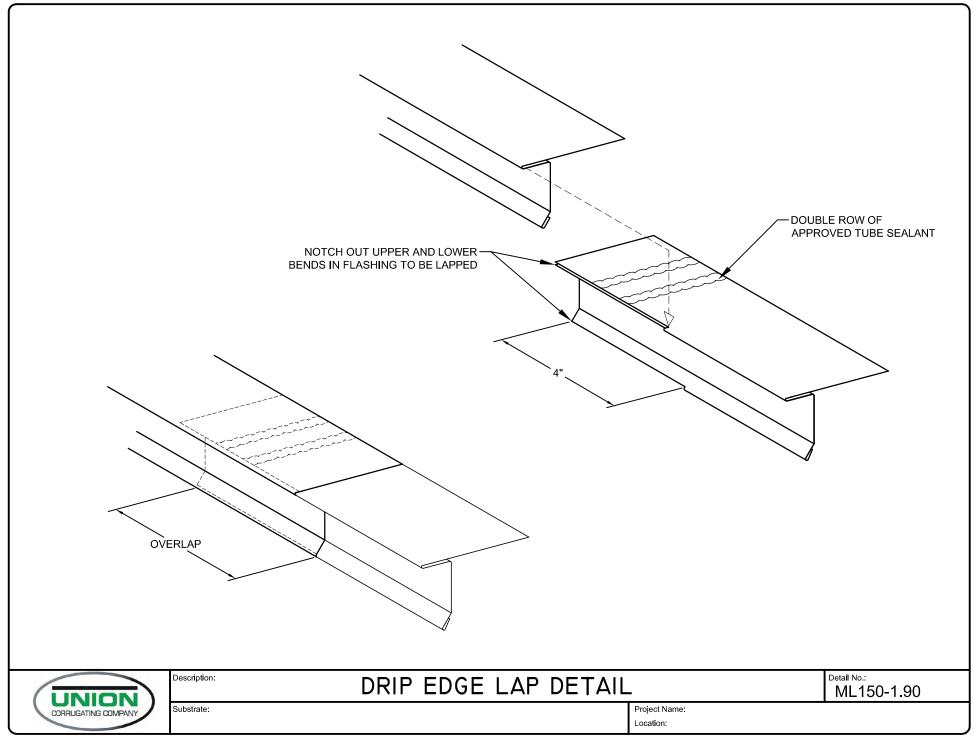


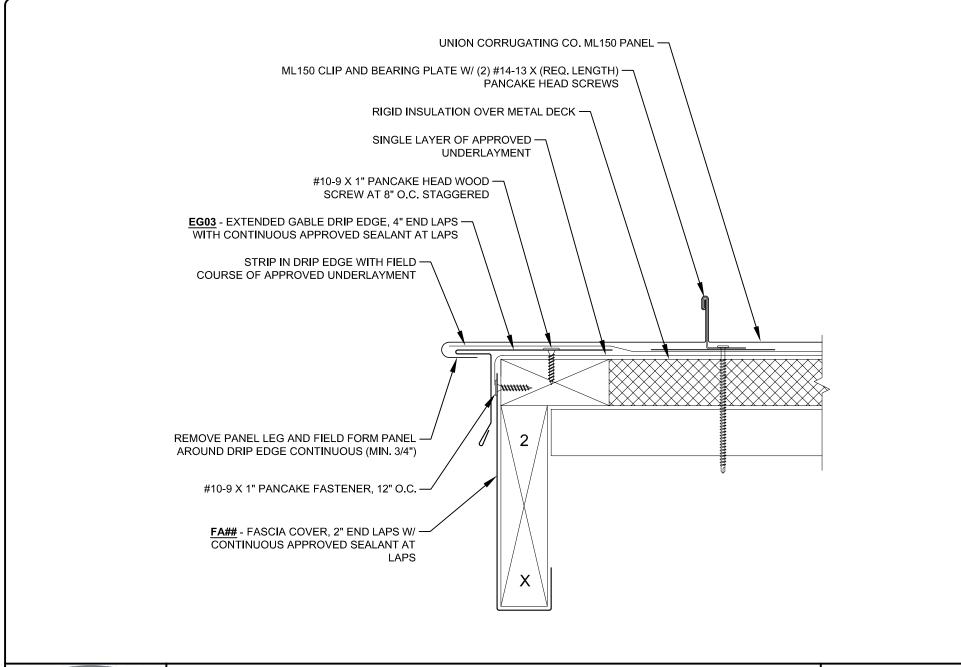
EXT. EAVE W/ VERTICAL STANDING SEAM PANELS

Substrate: Project Name:

RIGID INSULATION OVER METAL DECK

Location:







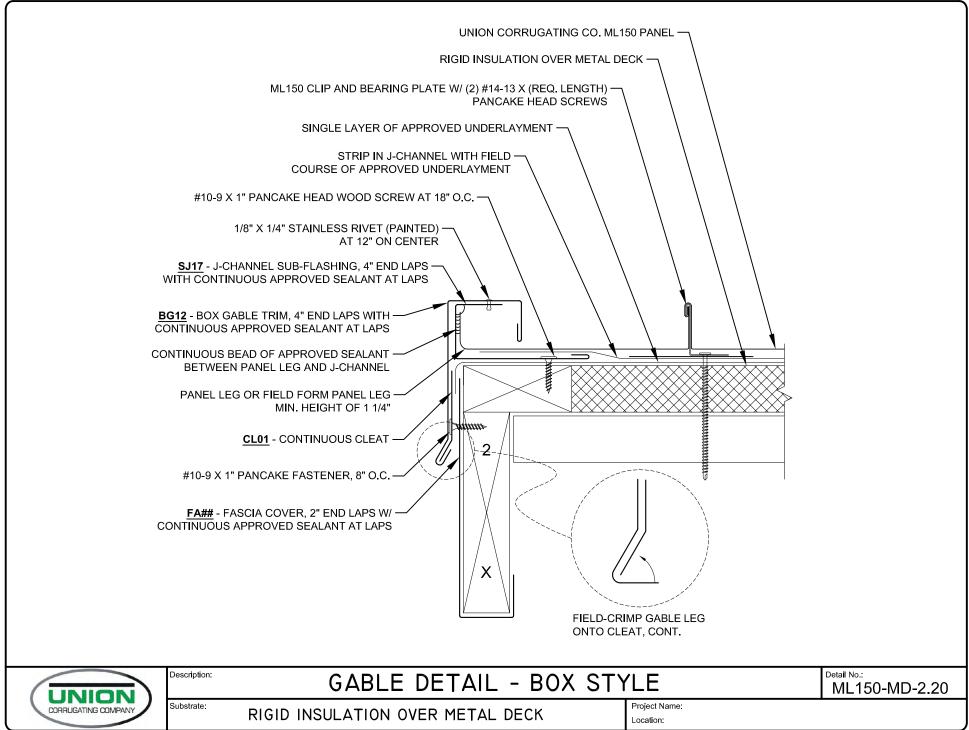
GABLE DETAIL - EXTENDED DRIP STYLE

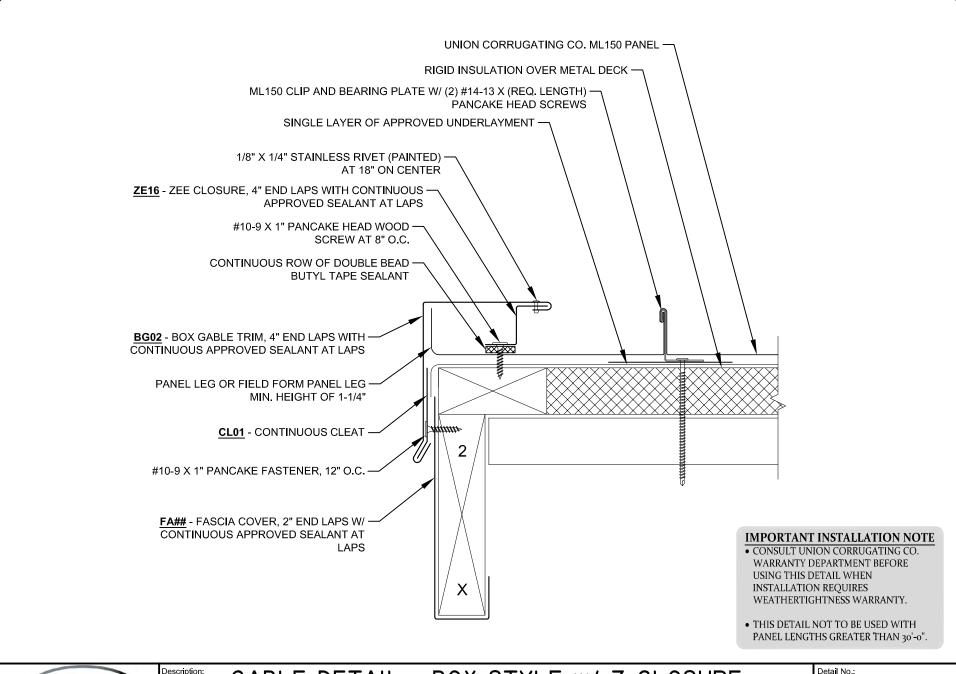
Detail No.:

ML150-MD-2.10

Substrate:

RIGID INSULATION OVER METAL DECK







GABLE DETAIL - BOX STYLE w/ Z-CLOSURE

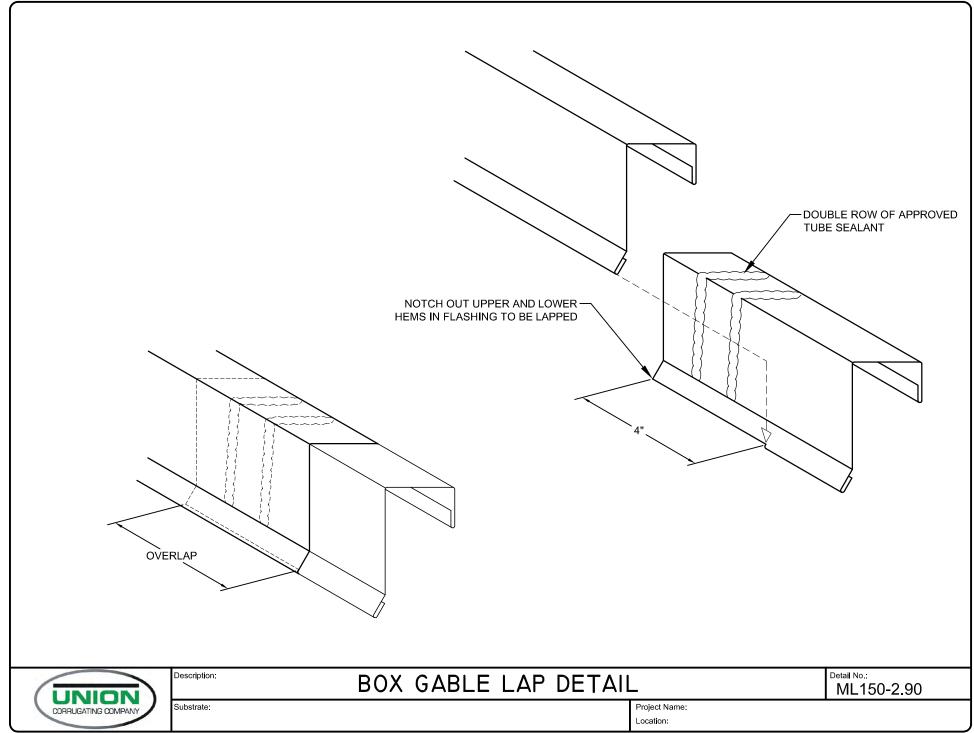
Project Name:

RIGID INSULATION OVER METAL DECK

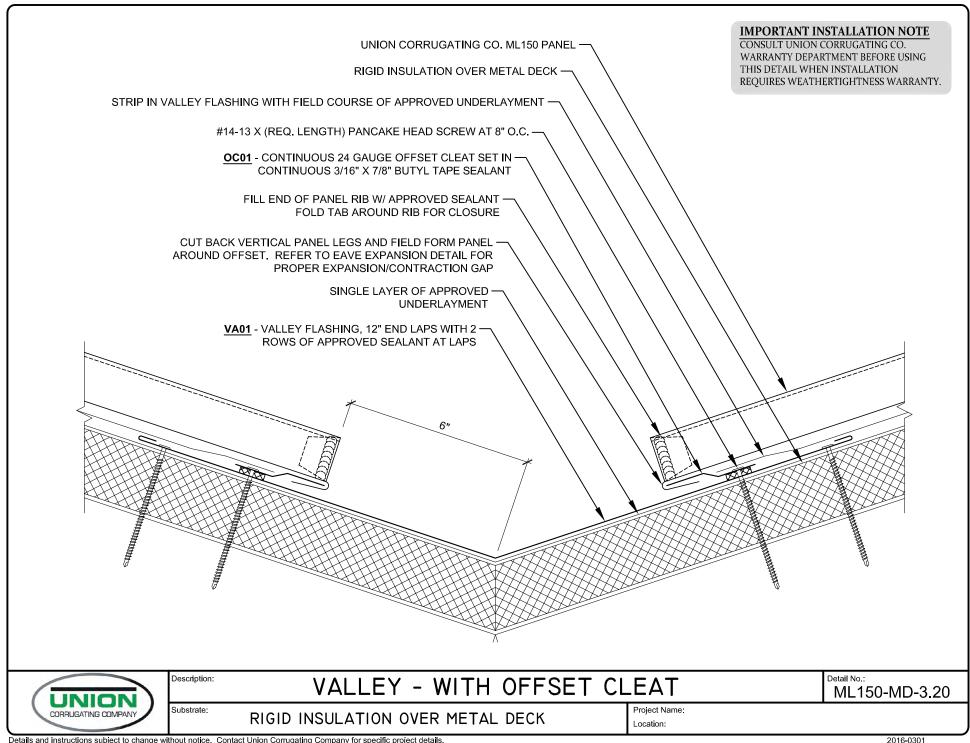
Location:

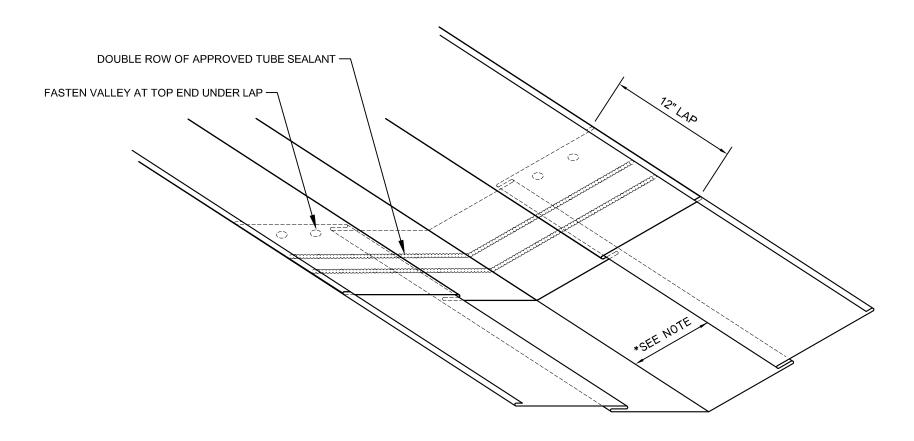
Substrate:

ML150-MD-2.30



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. ML150 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: ML150-MD-3.10 Substrate: Project Name: RIGID INSULATION OVER METAL DECK Location:





TELESCOPING VALLEY FLASHING LAP

IMPORTANT INSTALLATION NOTE

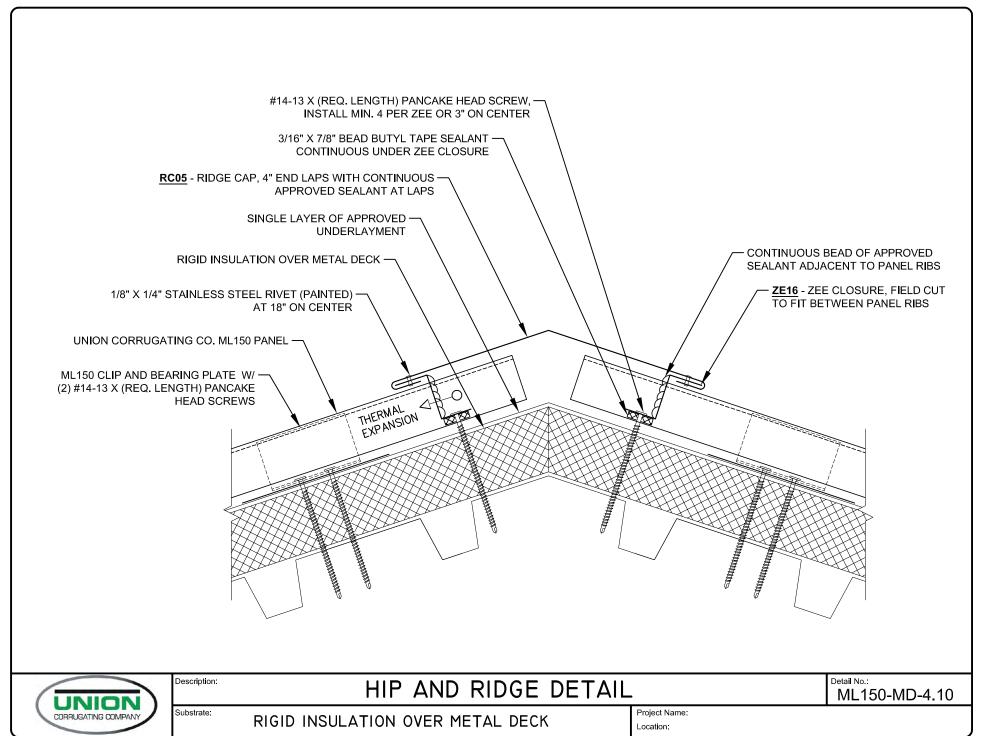
EACH VALLEY SECTION IS MADE PROGRESSIVELY SMALLER TO ALLOW UPPER SECTION TO INSERT INTO LOWER SECTION. NO FIELD NOTCHING AT LAP.

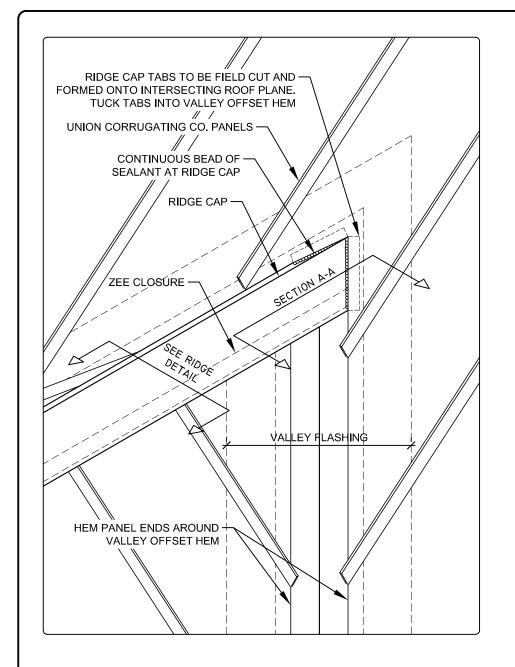


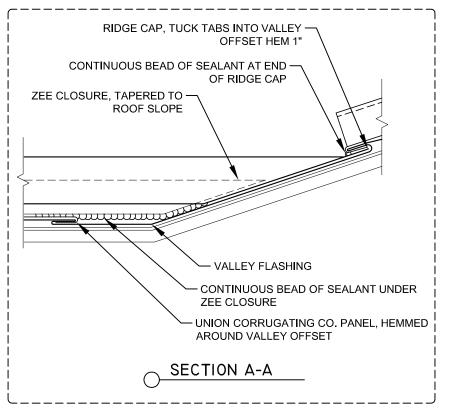
VALLEY LAP DETAIL

ML150-3.90

Substrate:









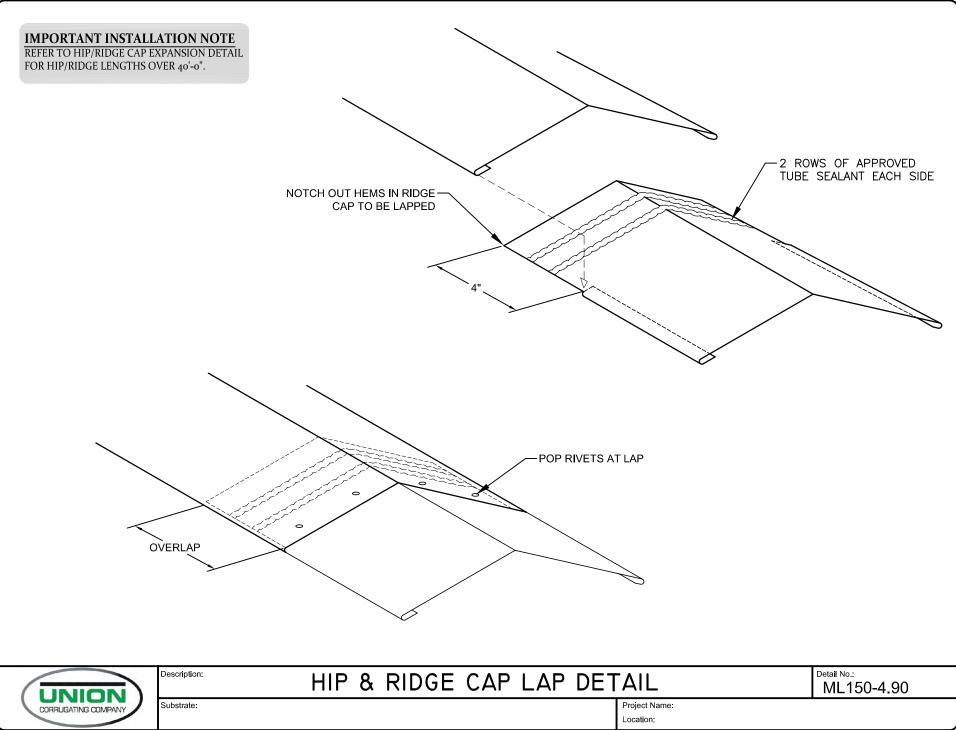
RIDGE TERMINATION @ VALLEY

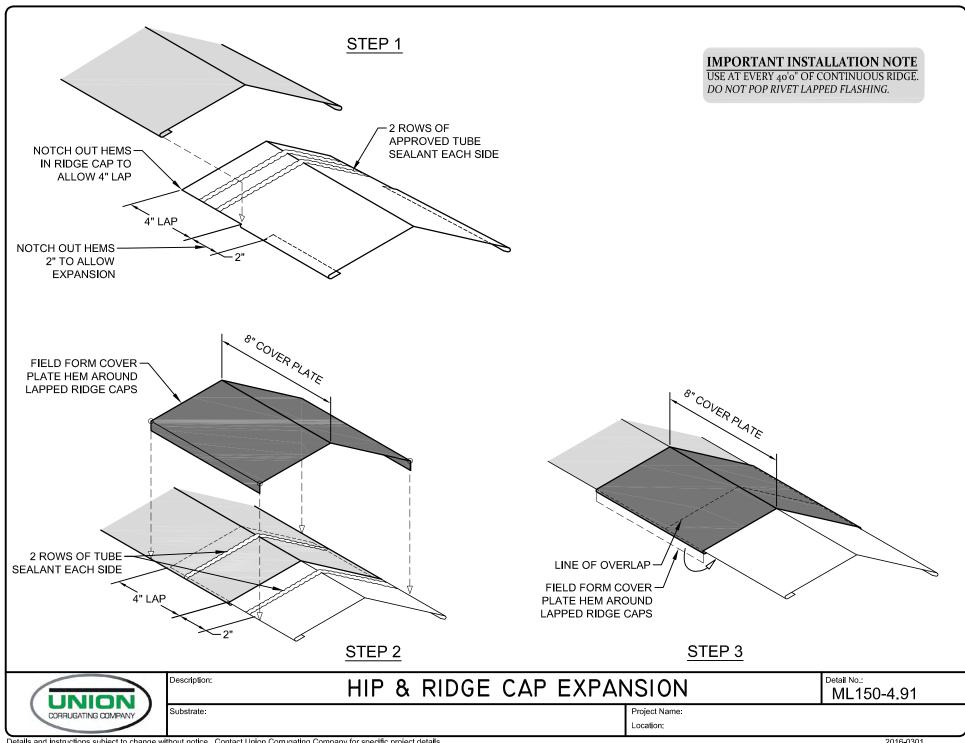
Detail No.:

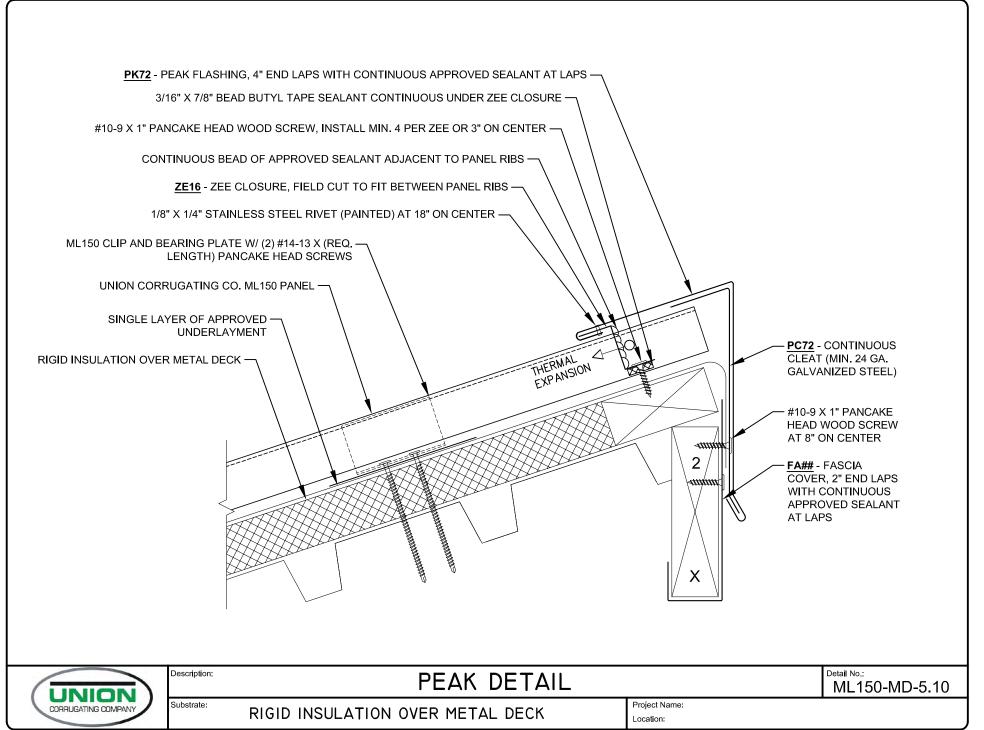
Substrate: Project Name: Location:

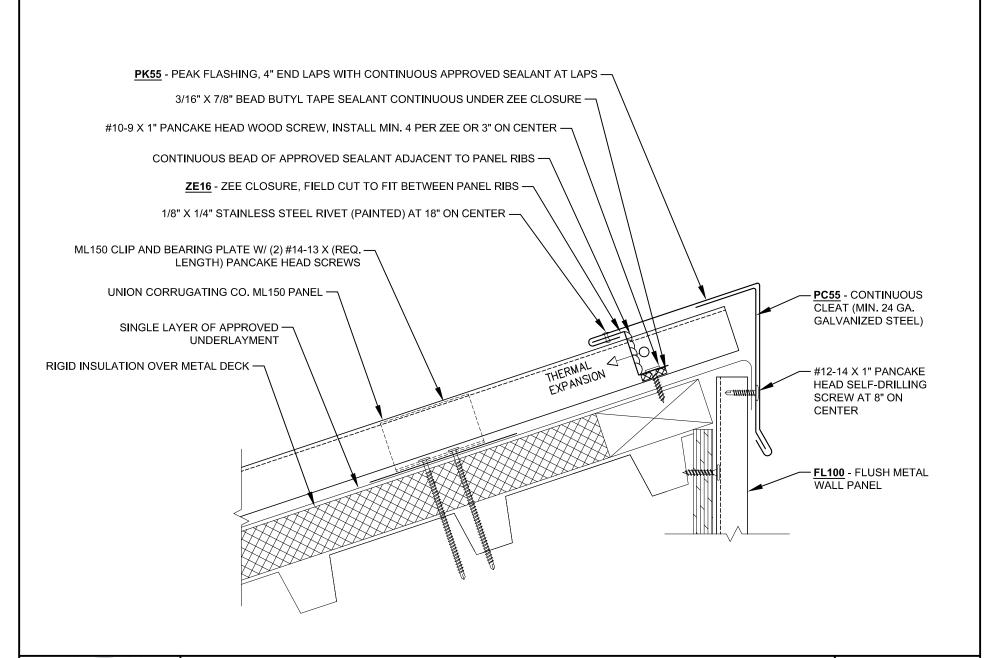
ML150-4.40

Description:







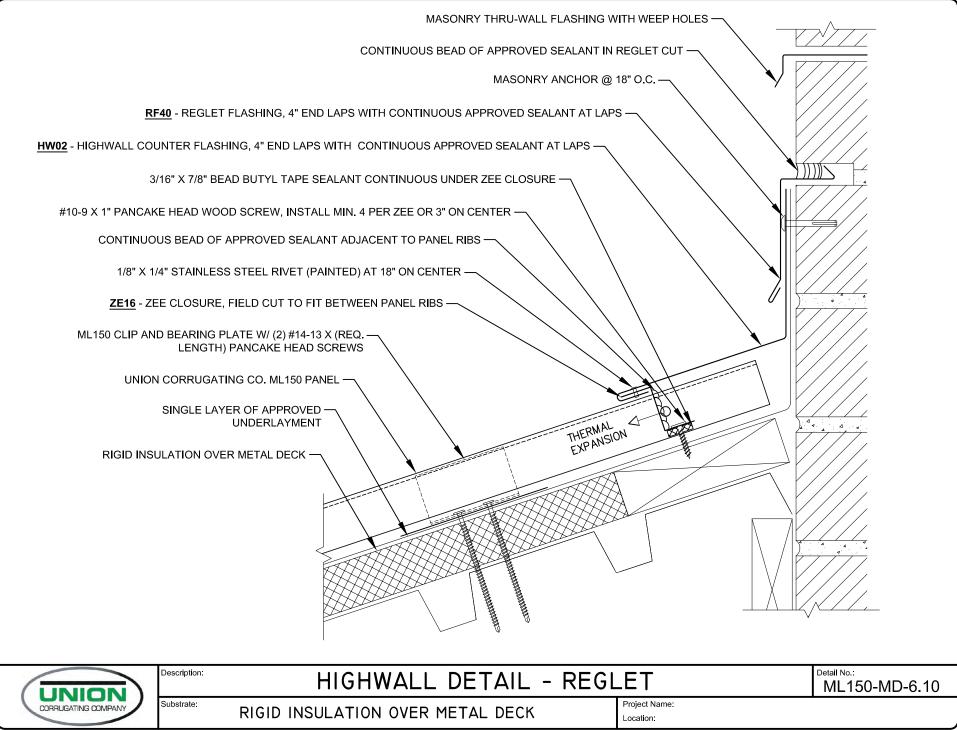


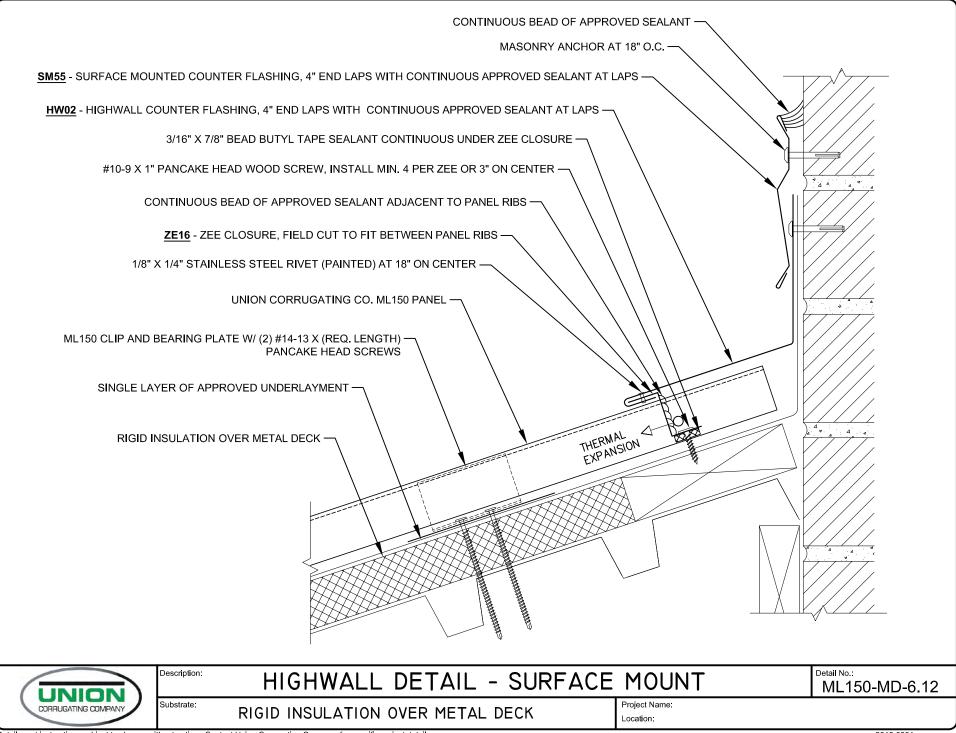


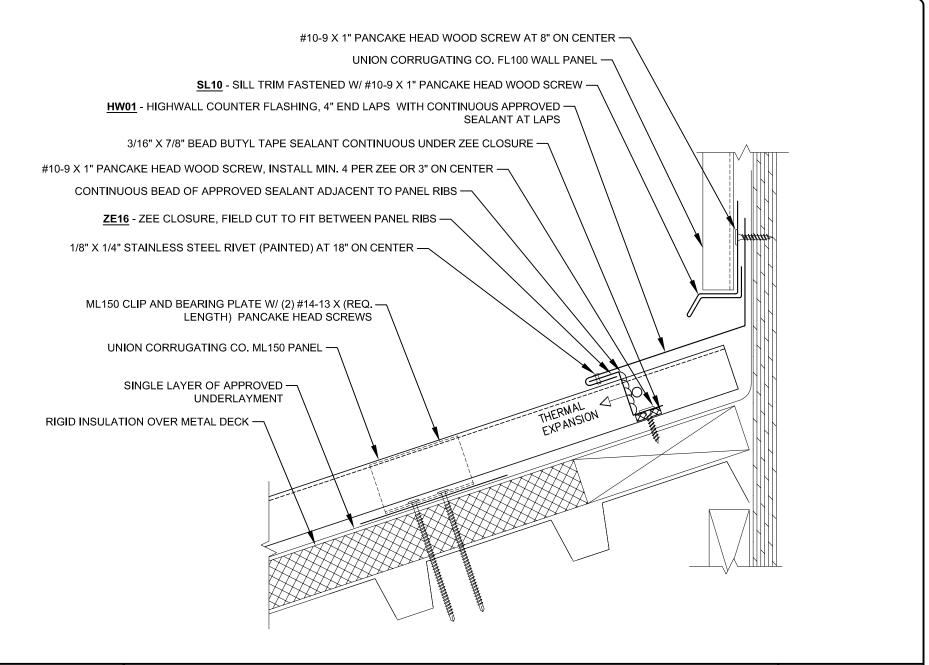
PEAK DETAIL - WITH WALL PANELS

Detail No.: ML150-MD-5.40

Substrate: RIGID INSULATION OVER METAL DECK









HIGHWALL DETAIL - WALL PANEL W/ SILL

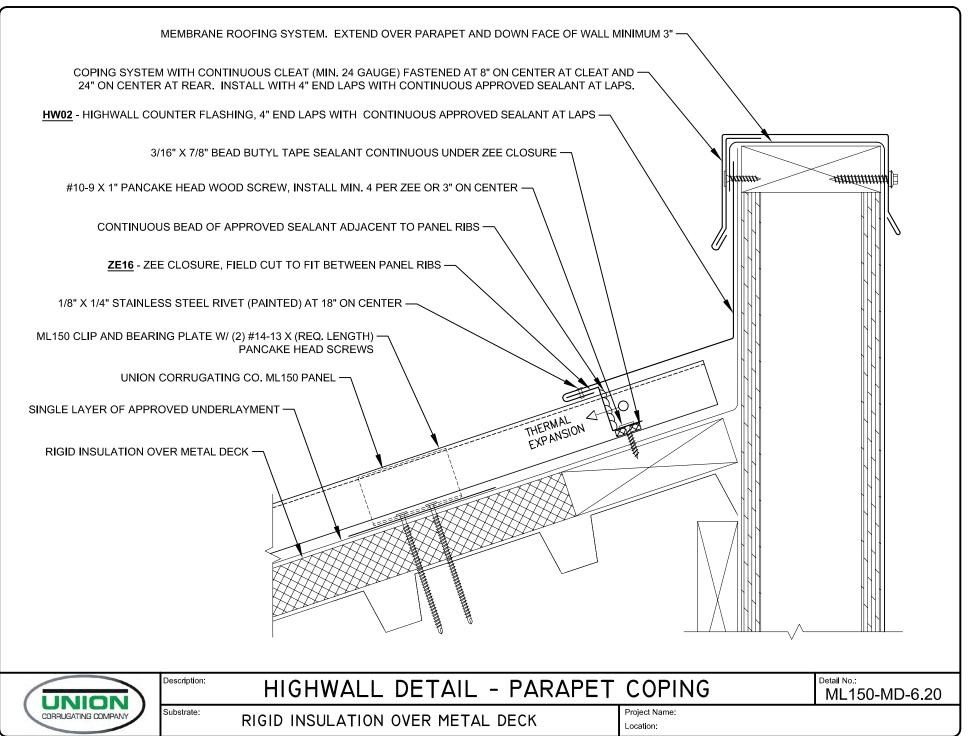
ML150-MD-6.14

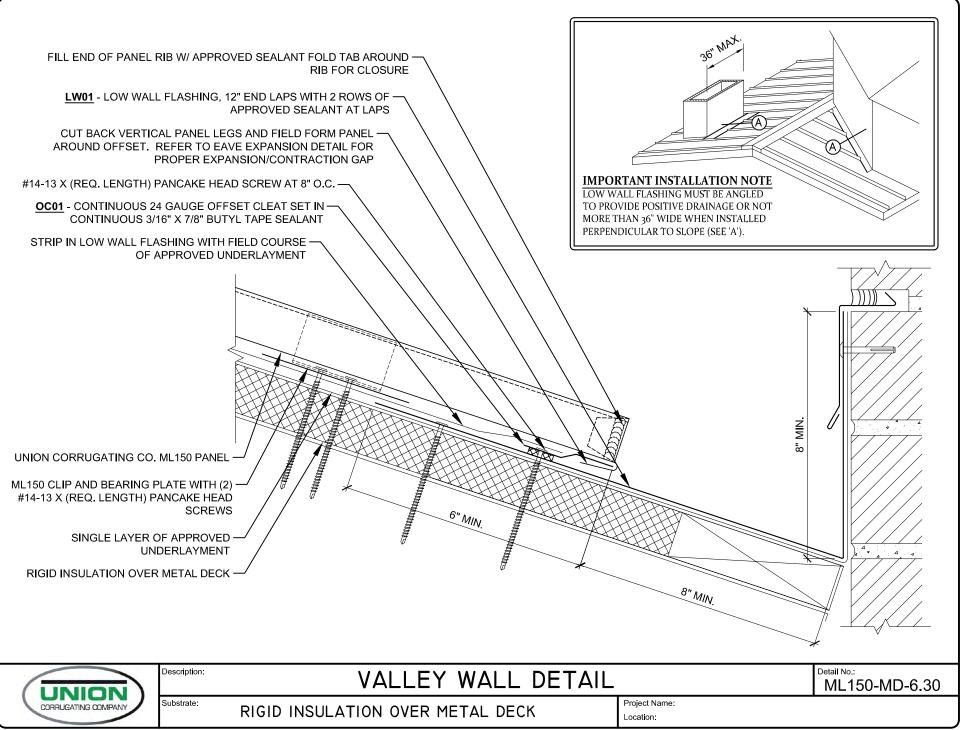
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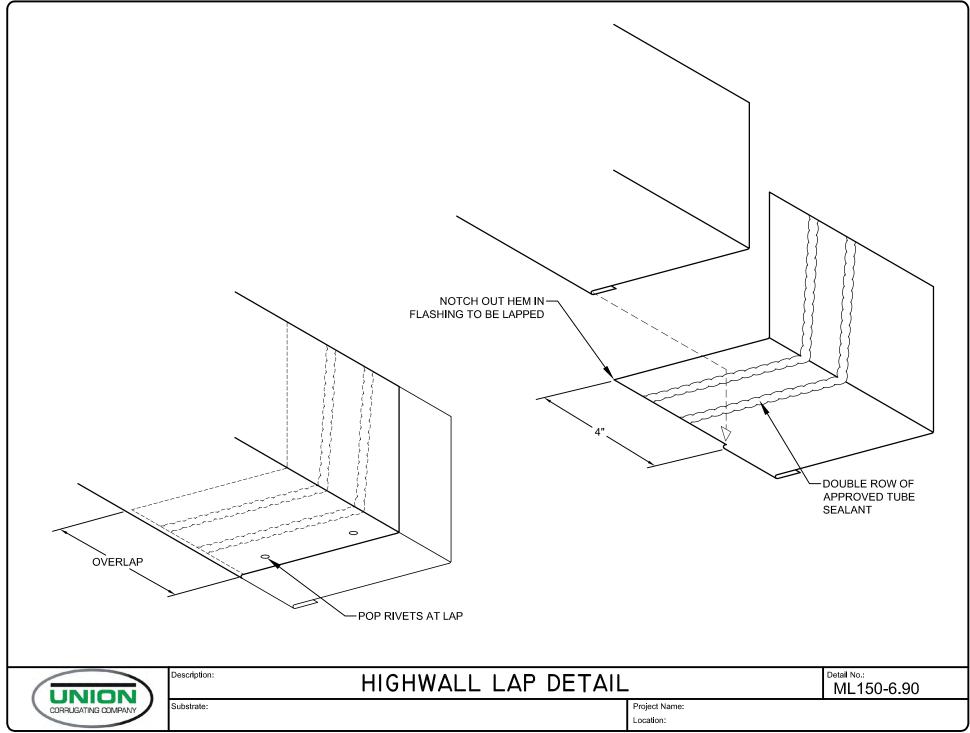
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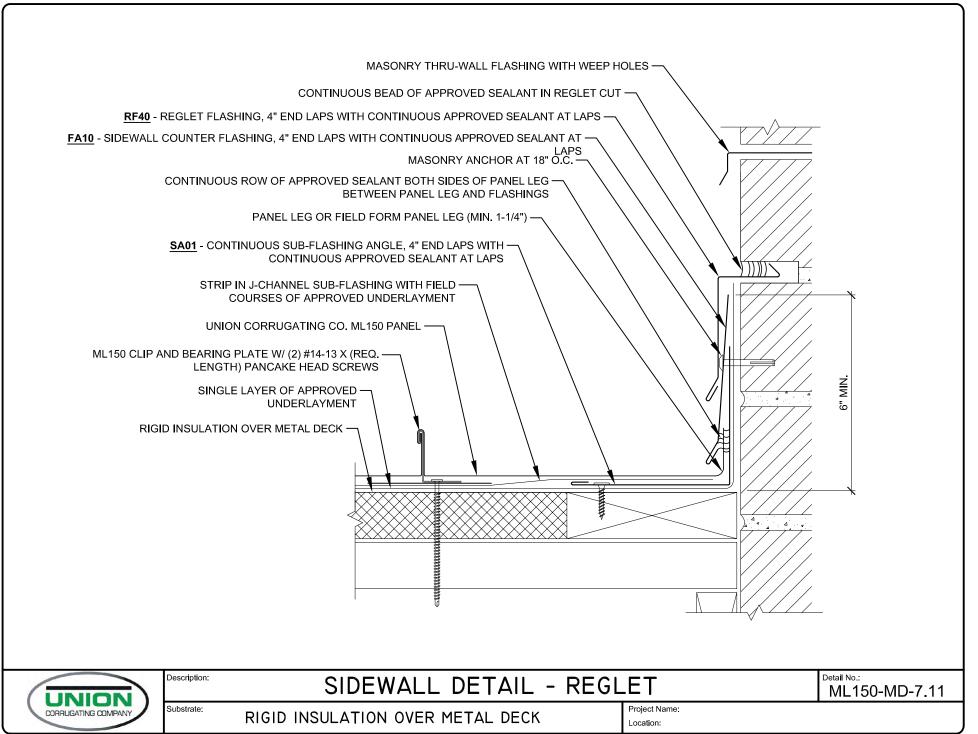
RIGID INSULATION OVER METAL DECK

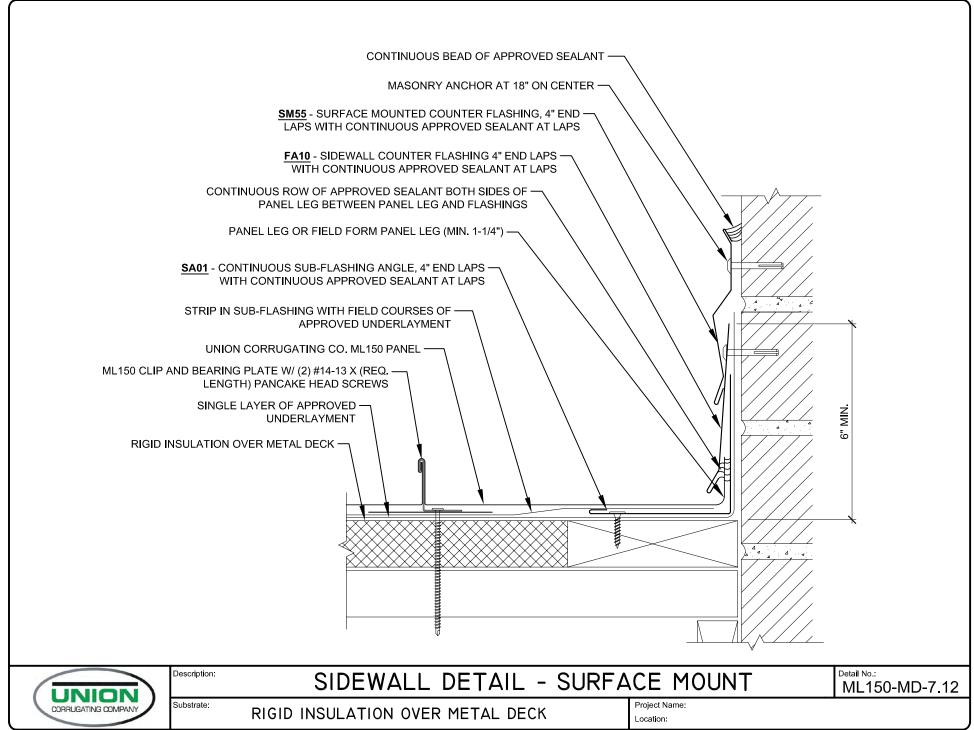
Location:

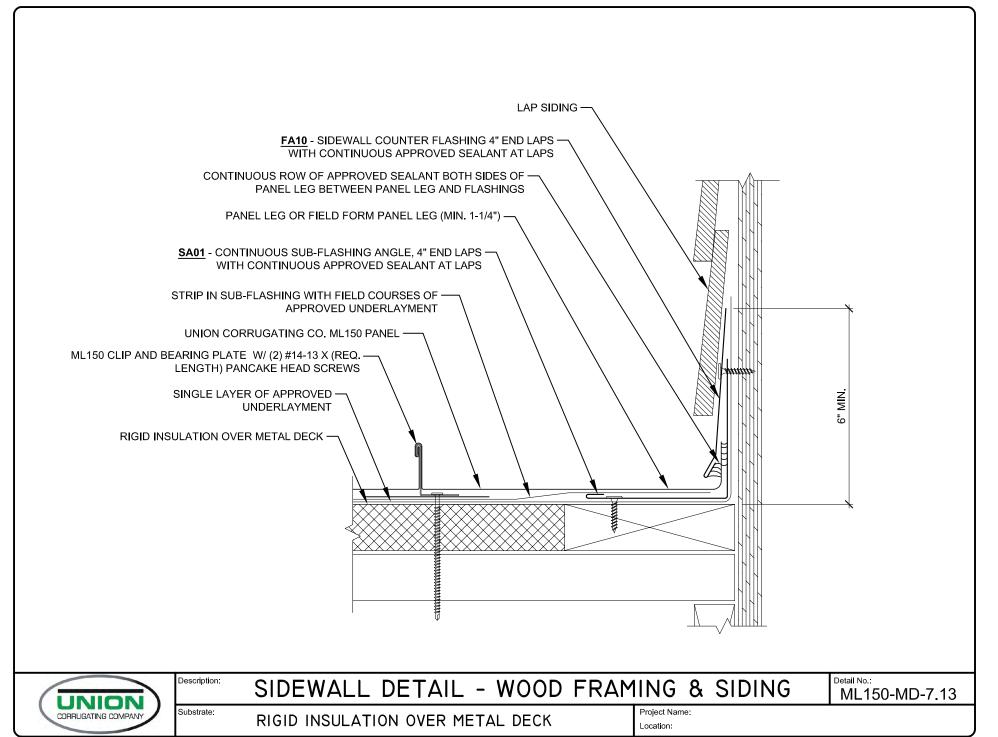


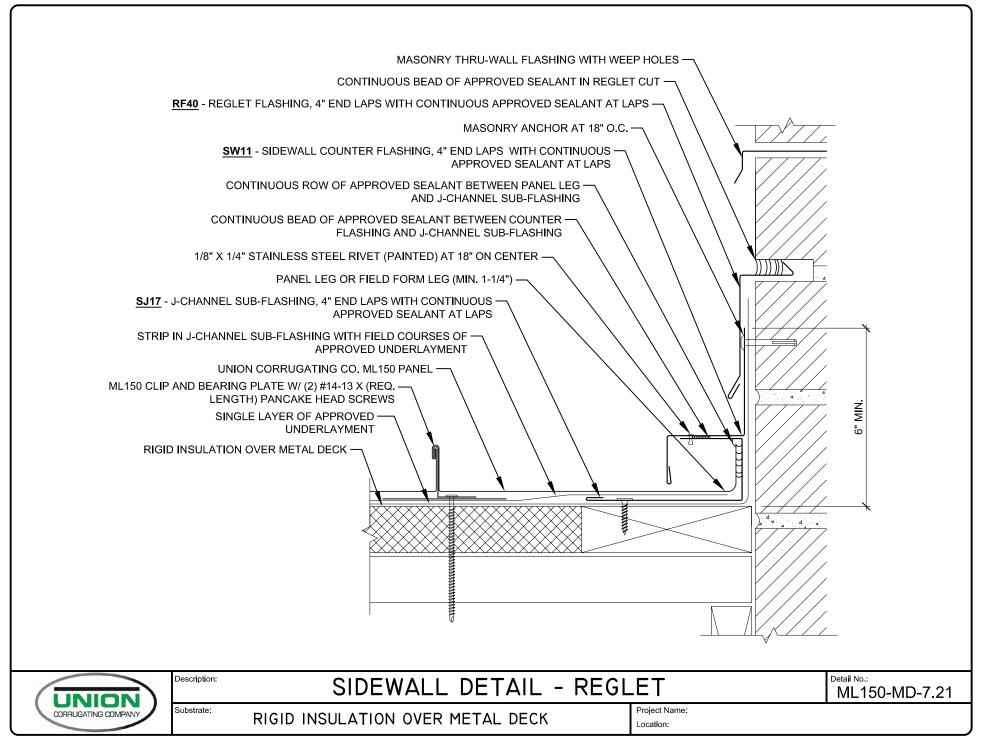


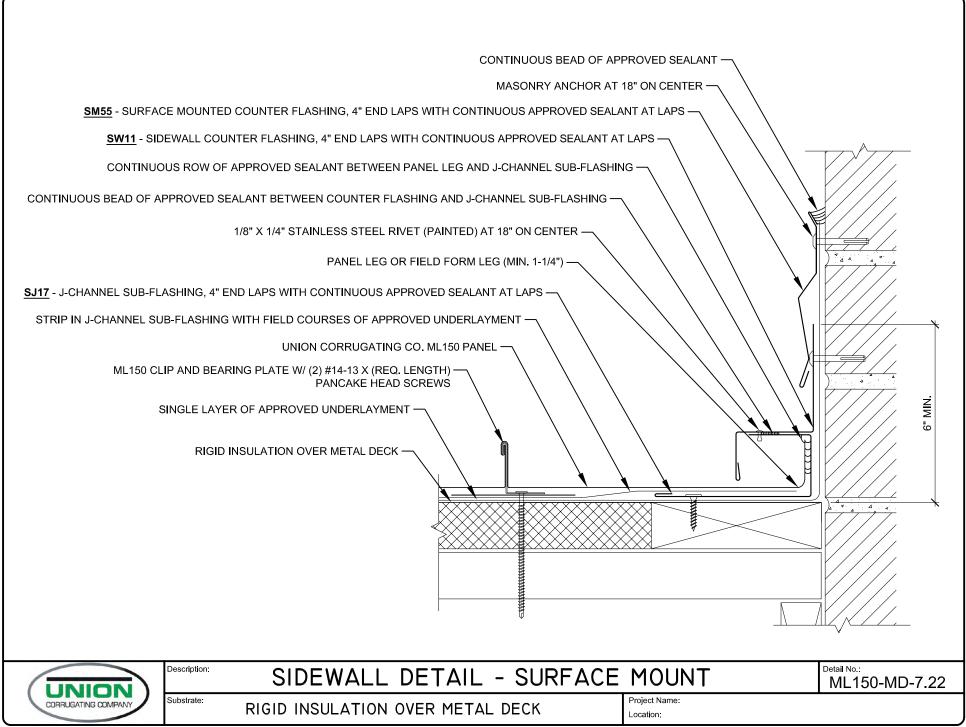


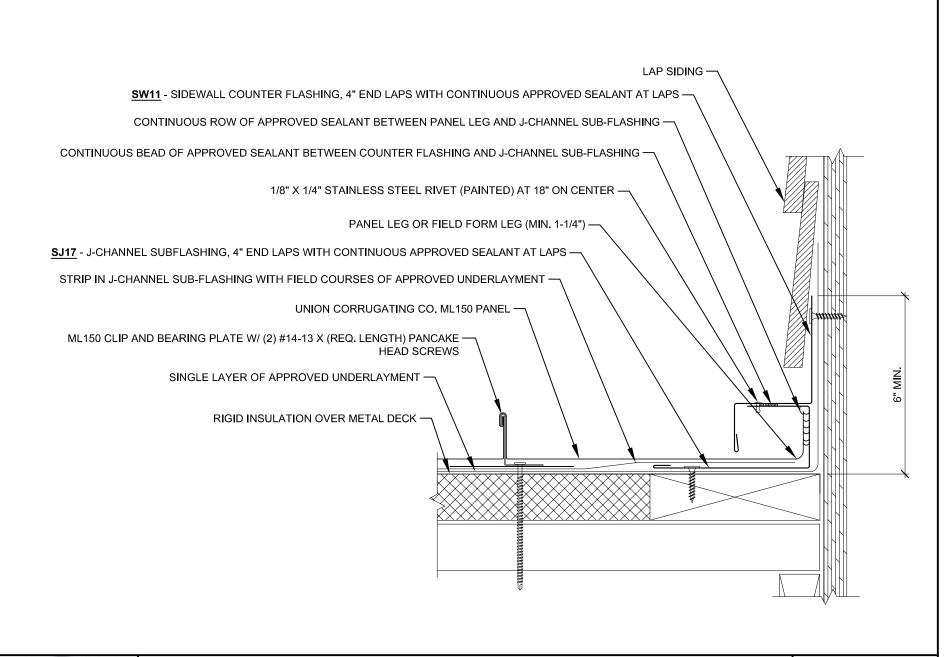












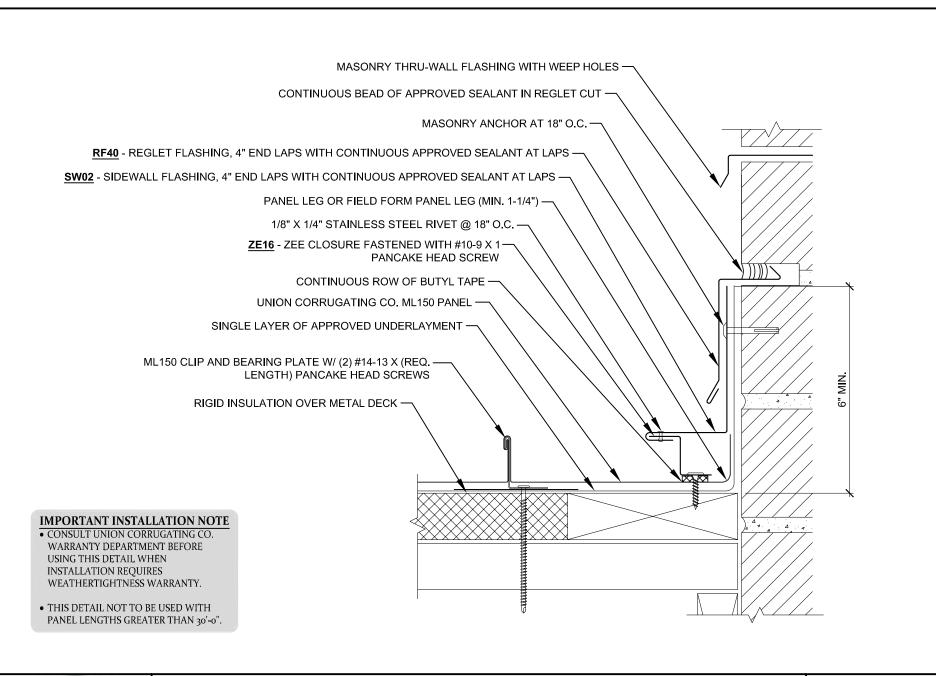


Description: SIDEWALL DETAIL - WOOD FRAMING & SIDING

Detail No.: ML150-MD-7.23

Substrate:

RIGID INSULATION OVER METAL DECK



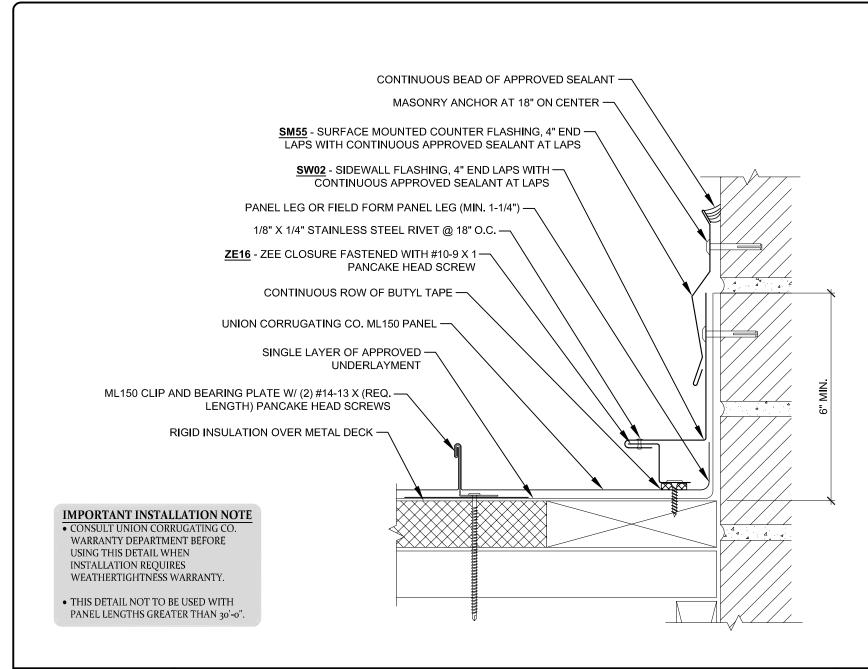


SIDEWALL W/ ZEE DETAIL - REGLET

Detail No.:

ML150-MD-7.31

Substrate: RIGID INSULATION OVER METAL DECK





SIDEWALL W/ ZEE DETAIL - SURFACE MOUNT

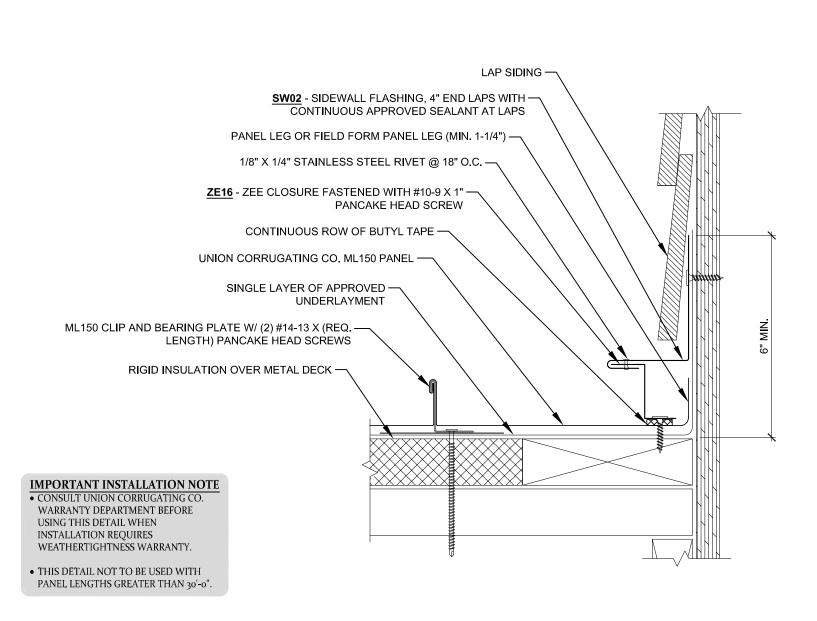
Detail No.: ML150-MD-7.32

Project Name:

Substrate: RIGID INSULATION OVER METAL DECK

Location:

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





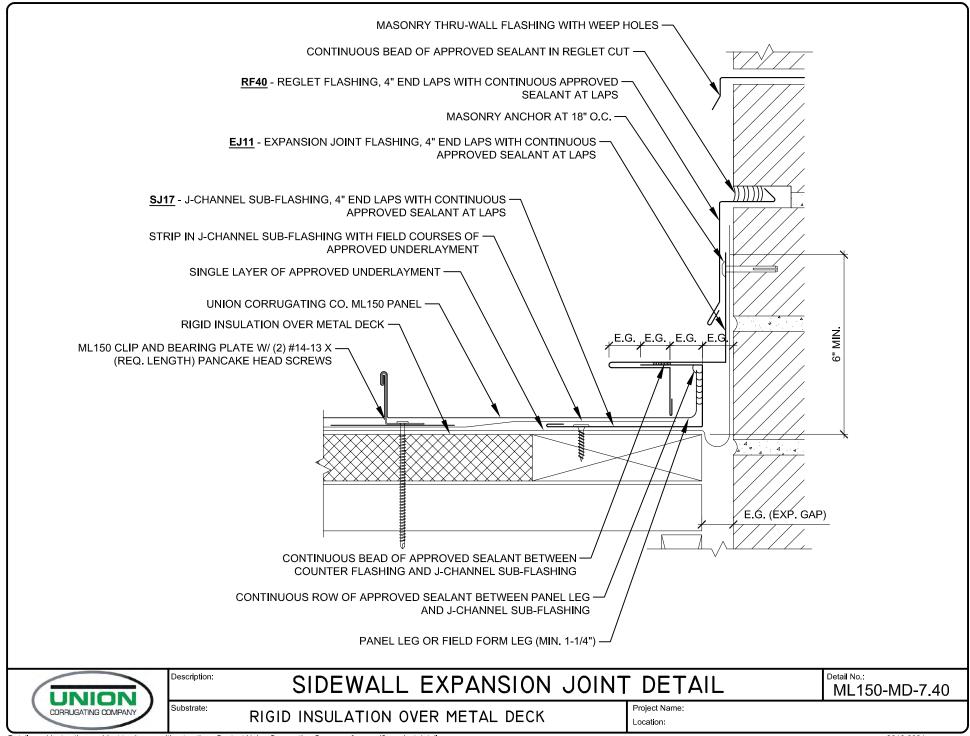
SIDEWALL W/ ZEE - WOOD FRAMING & SIDING

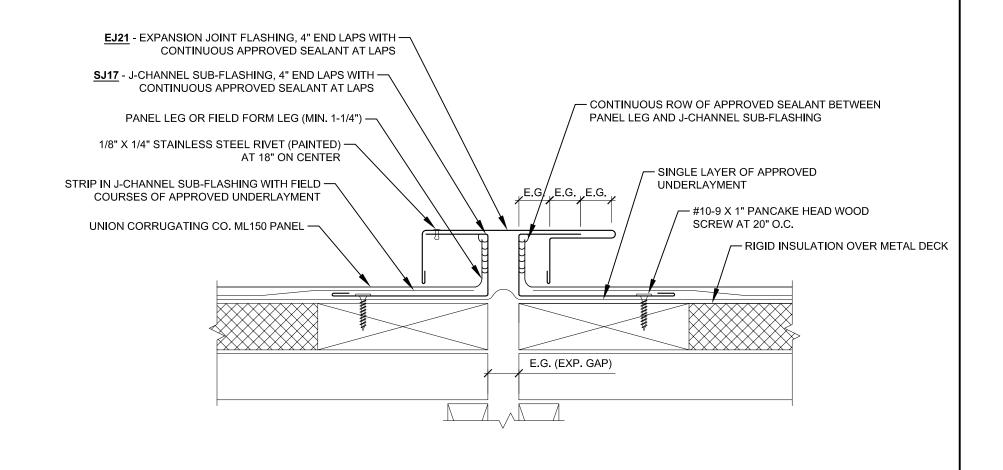
etail No.:

ML150-MD-7.33

Substrate:

RIGID INSULATION OVER METAL DECK







EXPANSION JOINT (MID-ROOF)

ML150-MD-7,50

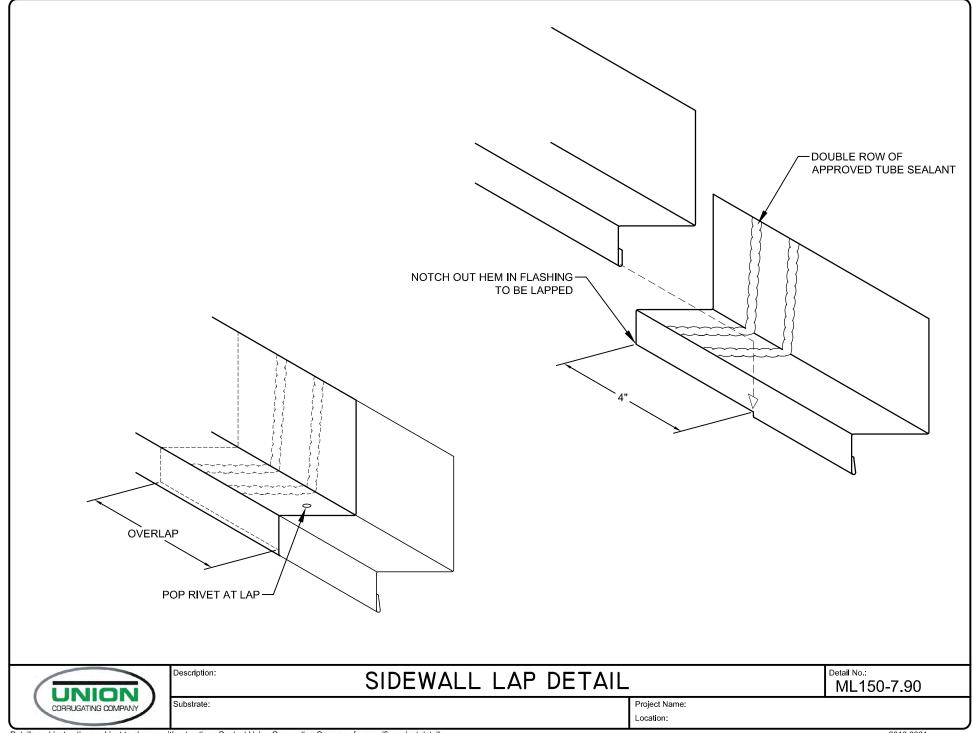
Project Name:

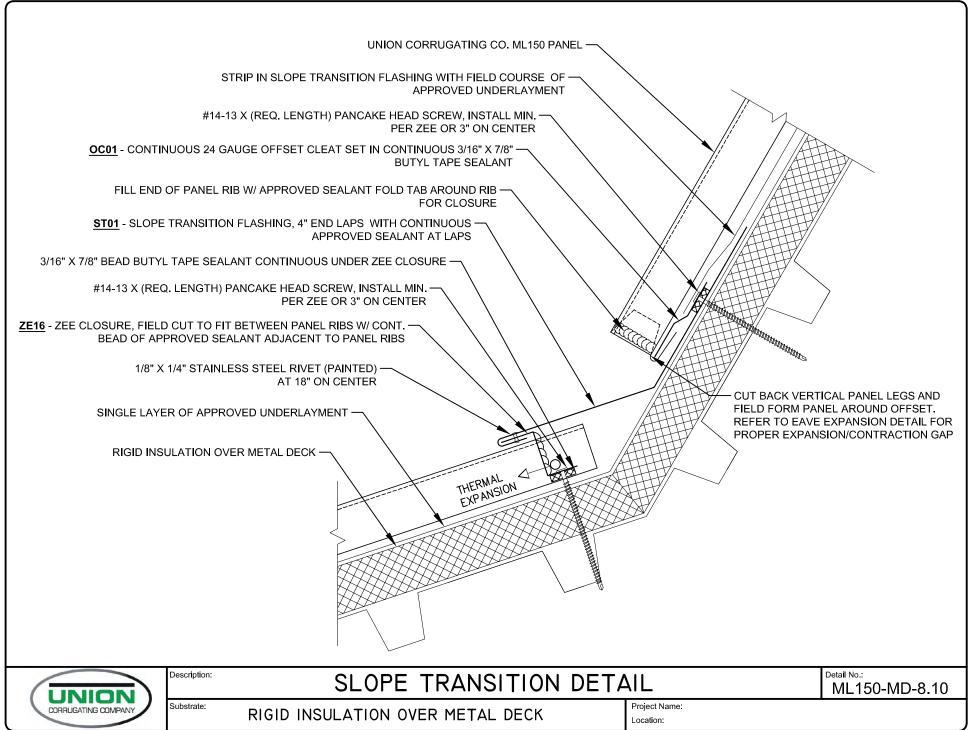
RIGID INSULATION OVER METAL DECK

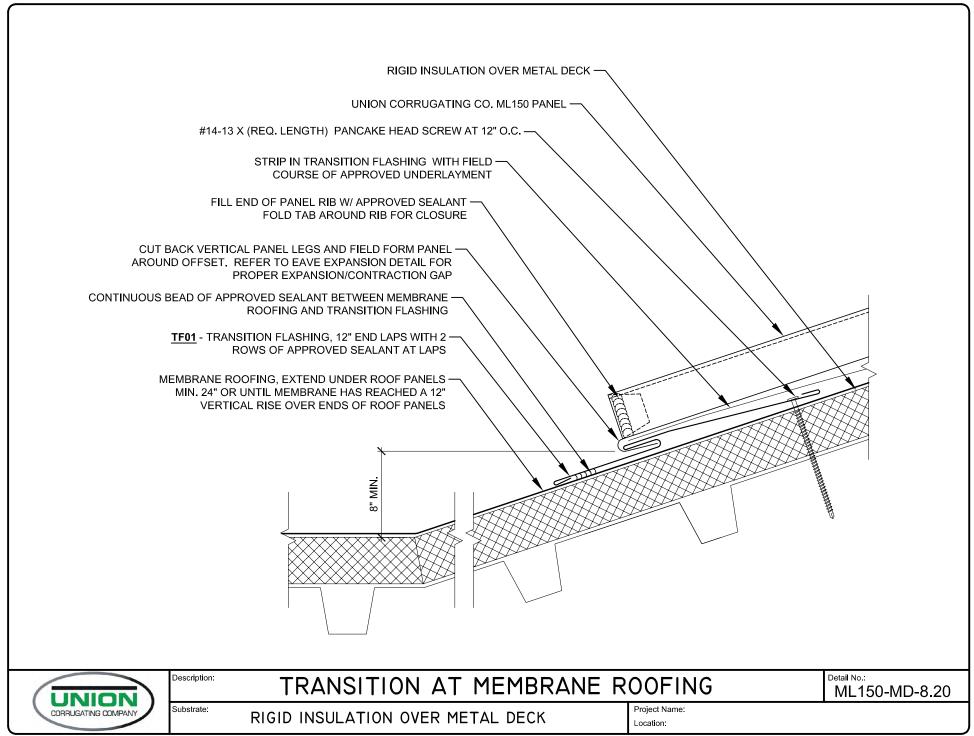
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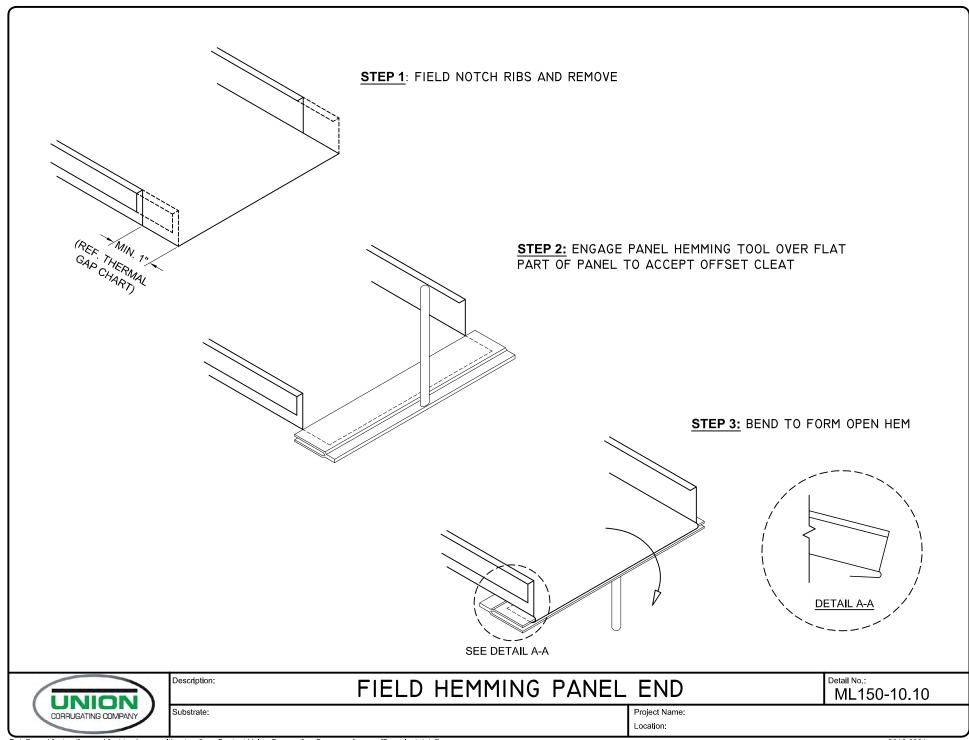
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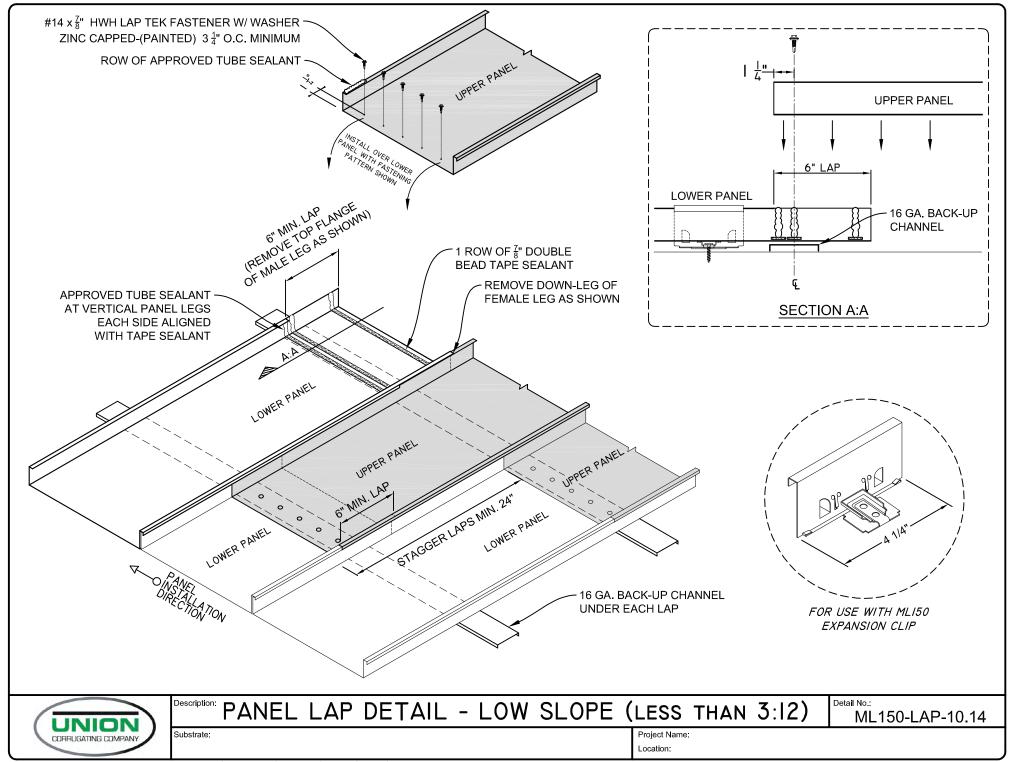
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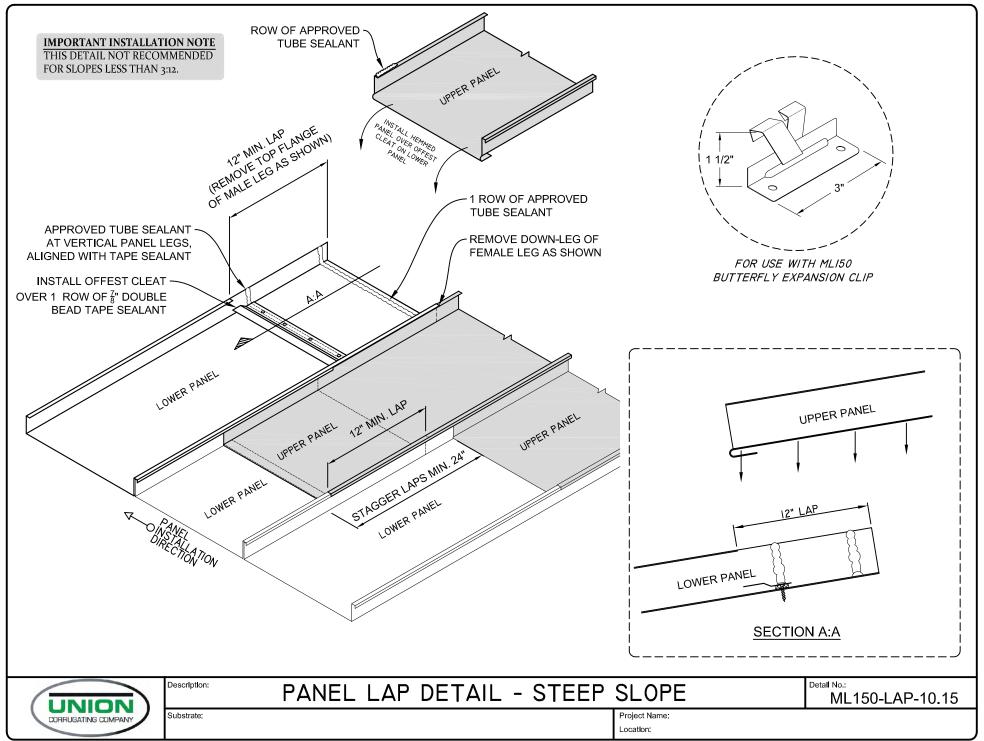


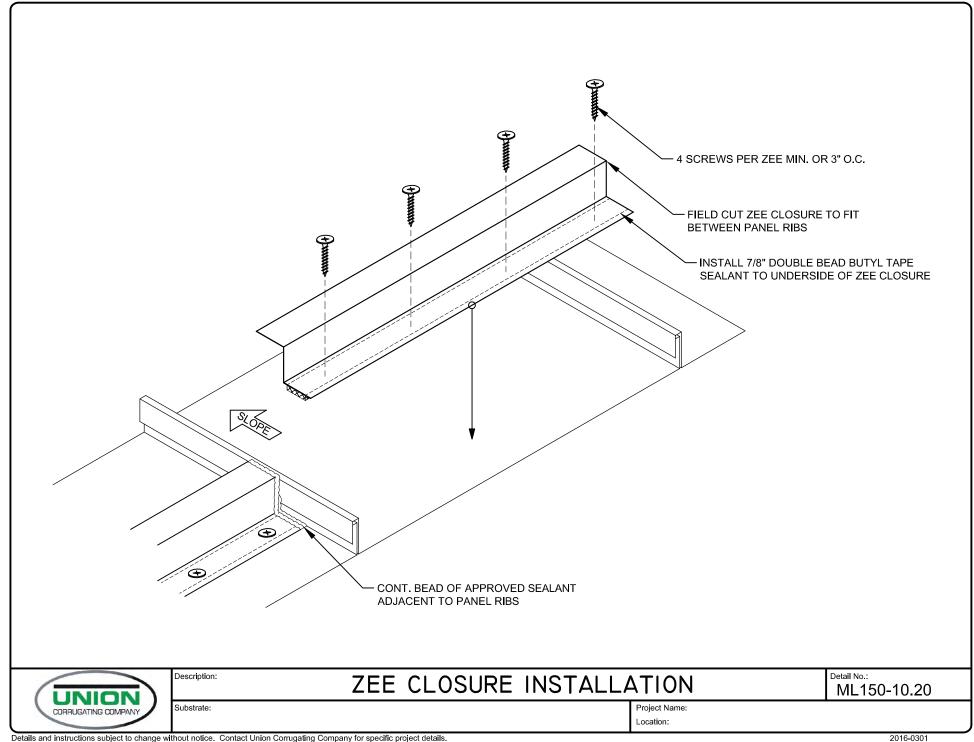


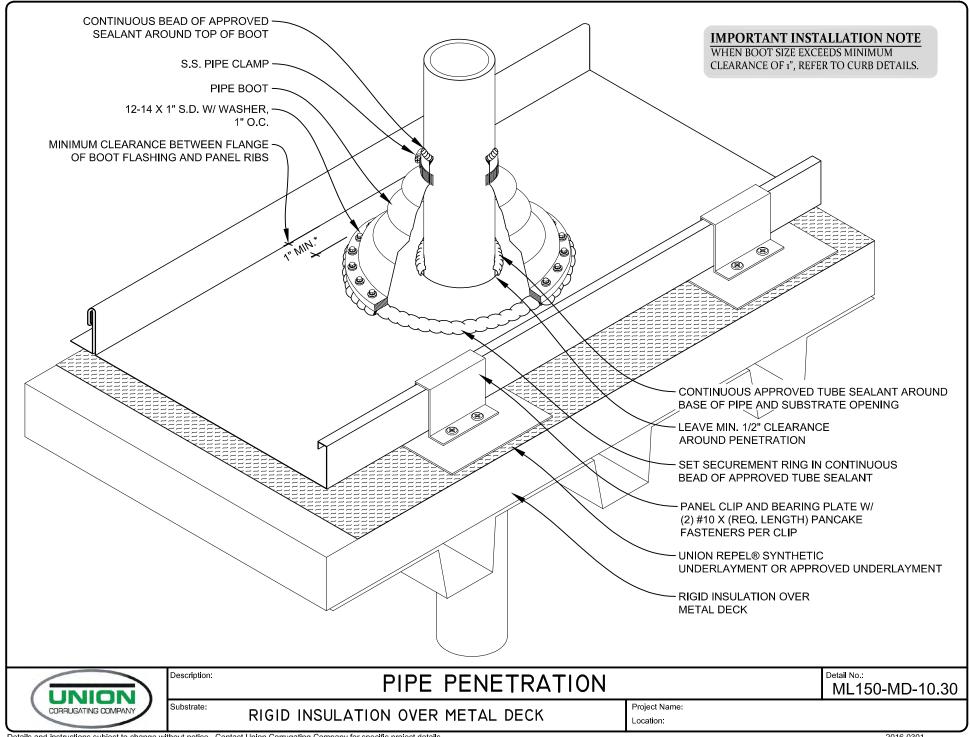


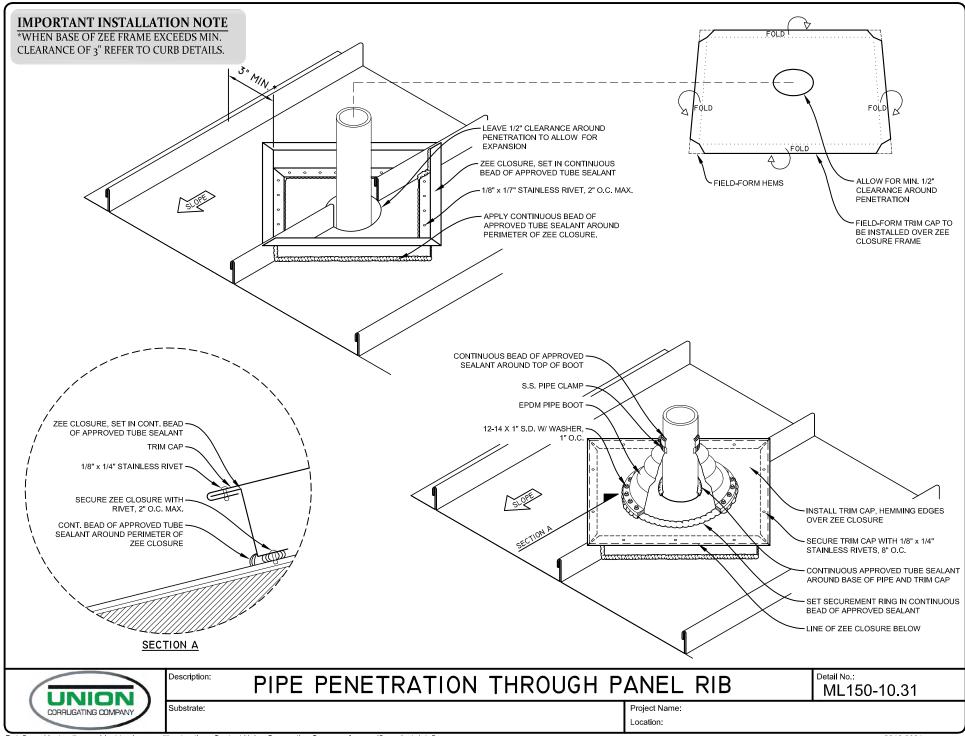


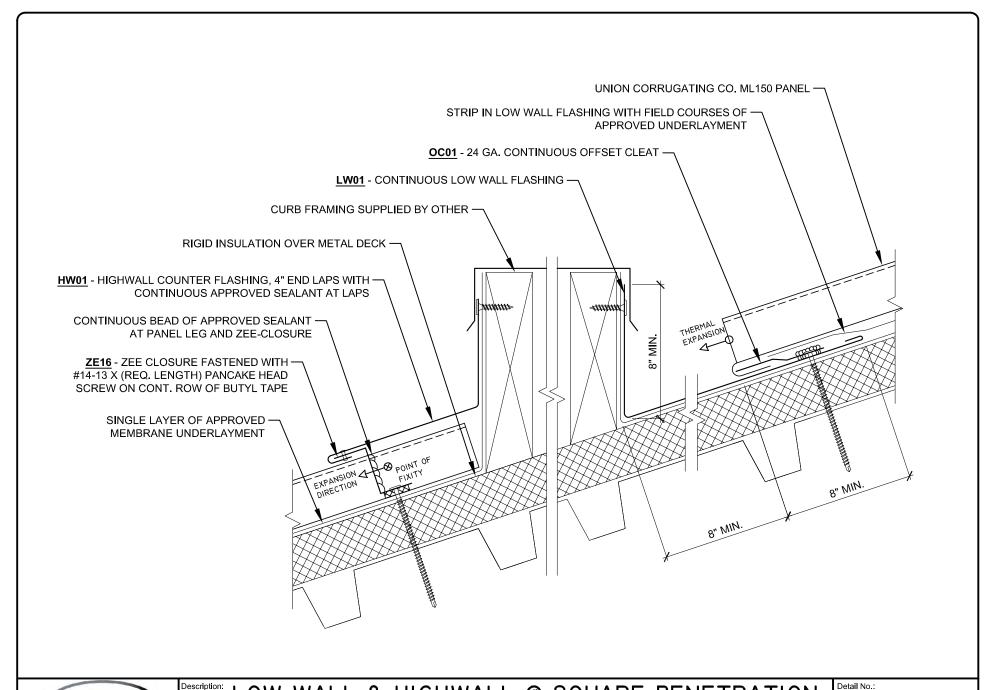














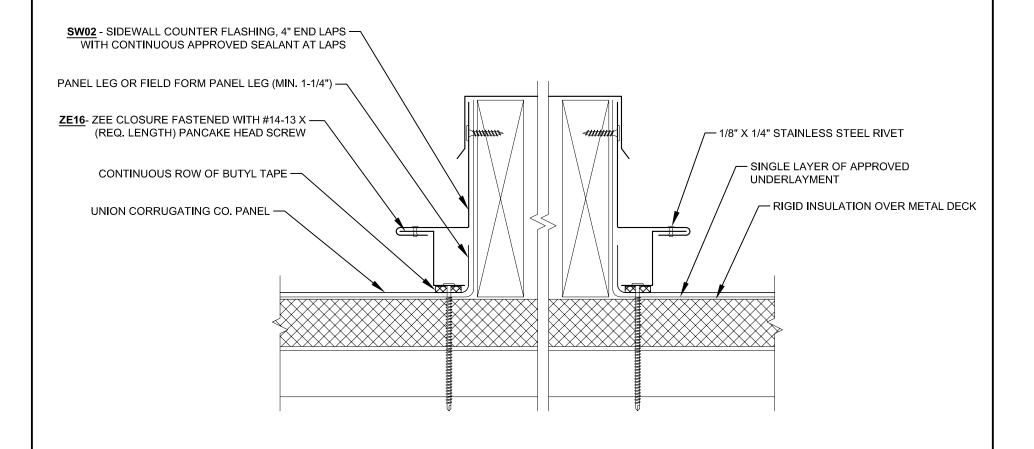
Description: LOW WALL & HIGHWALL @ SQUARE PENETRATION

ITON | ML150-MD-10.40

RIGID INSULATION OVER METAL DECK

Project Name: Location:

Substrate:



SIDEWALL @ SQUARE PENETRATION

Project Name: Location:

RIGID INSULATION OVER METAL DECK

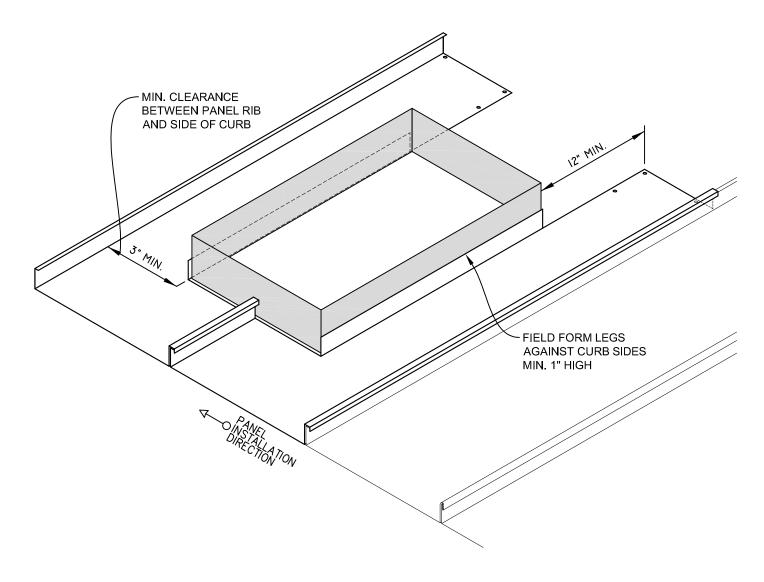
Substrate:

ML150-MD-10.41

Detail No.:

STEP I

INSTALL PANELS AROUND CURB





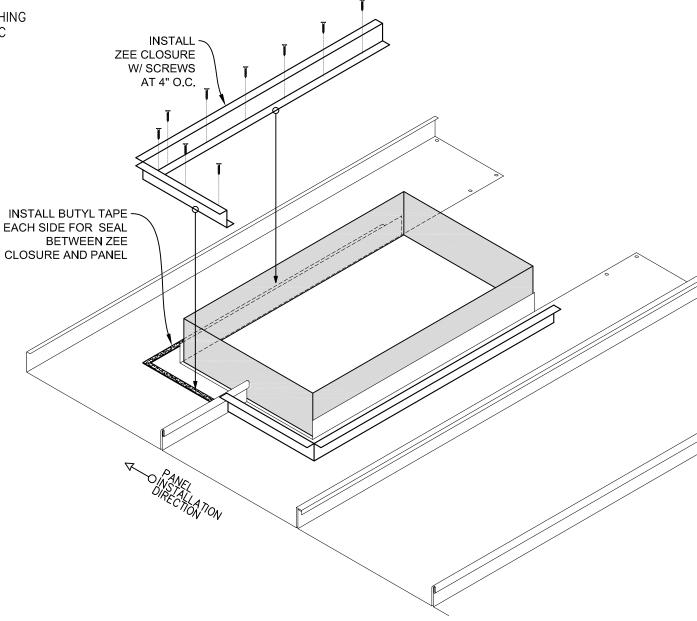
MLI50 CURB DETAILS - STEP I

ML150-CRB: 1 of 6

Substrate:

STEP 2

APPLY ZEE CLOSURE FLASHING OVER DOUBLE BEAD MASTIC





Description: MLI50 CURB DETAILS - STEP 2

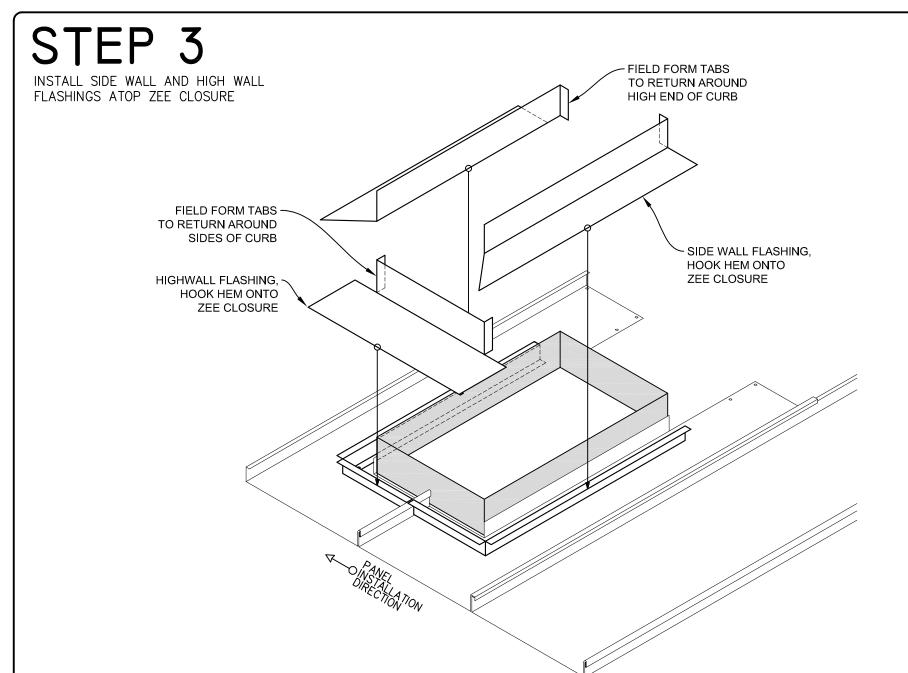
etail No.:

ML150-CRB: 2 of 6

Substrate:

Project Name:

Location:



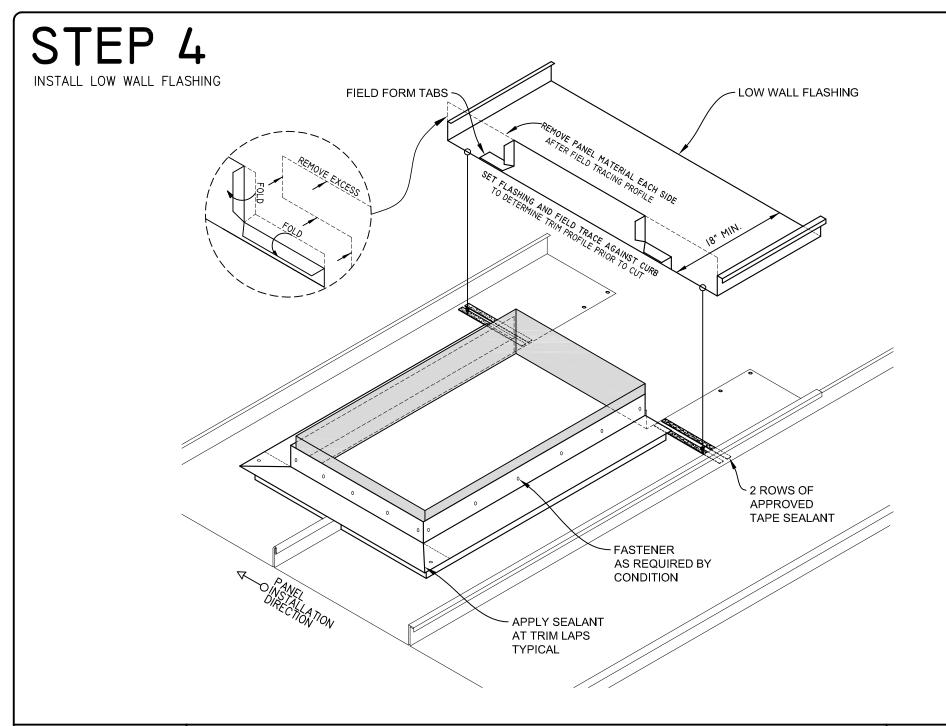


MLI50 CURB DETAILS - STEP 3

Detail No.:

ML150-CRB: 3 of 6

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MLI50 CURB DETAILS - STEP 4

ML150-CRB: 4 of 6

Project Name:

Location:

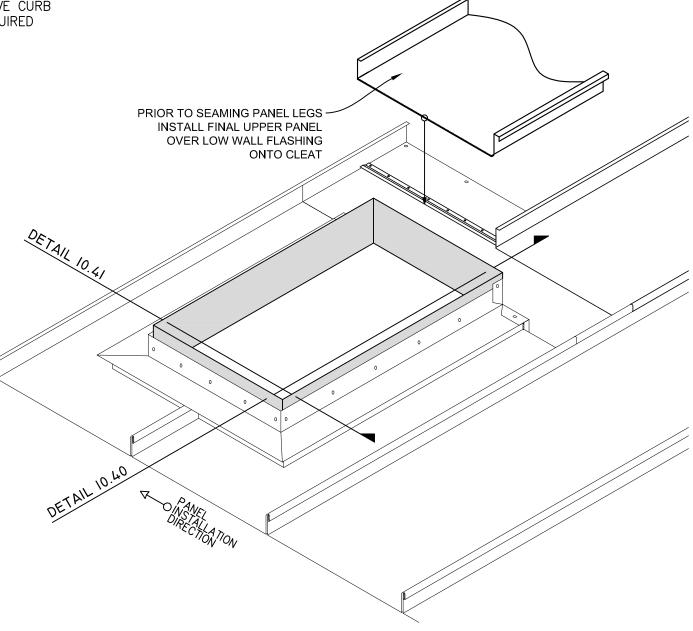
Description:

Substrate:

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: MLI50 CURB DETAILS - STEP 5 ML150-CRB: 5 of 6 Substrate: Project Name:

Location:

STEP 6 INSTALL FINAL PANEL ABOVE CURB SEAL AND FASTEN AS REQUIRED





MLI50 CURB DETAILS - STEP 6

Detail No.: ML150-CRB: 6 of 6

Substrate: