UNION
CORRUGATING COMPANY

SL150 Standing Seam

Master Details

Architectural / Solid Substrate / Steep Slope

- Rigid Insulation over Metal Decking -

The following details are sample details 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.

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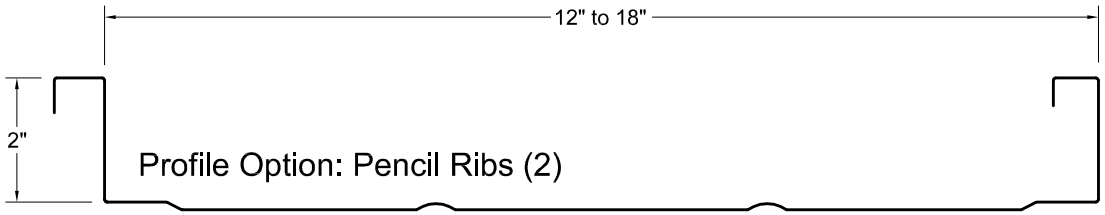
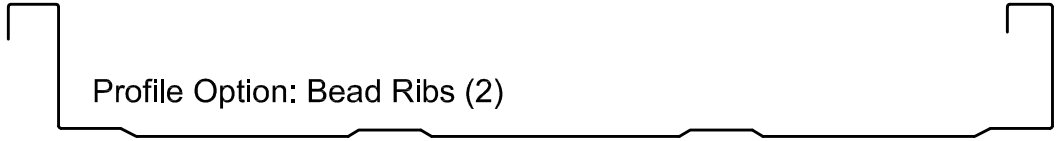
(888) MTL-ROOF

Rev. 8/09

INDEX

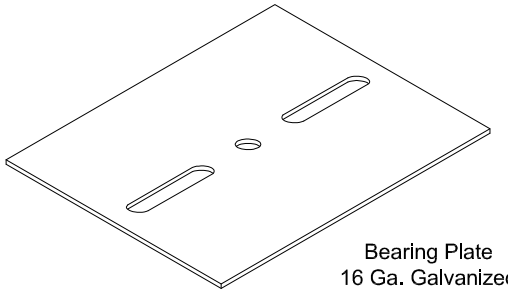


Profile Option: Pencil Ribs (2)

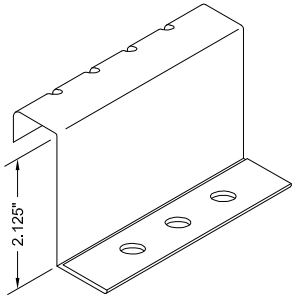


Profile Option: Bead Ribs (2)

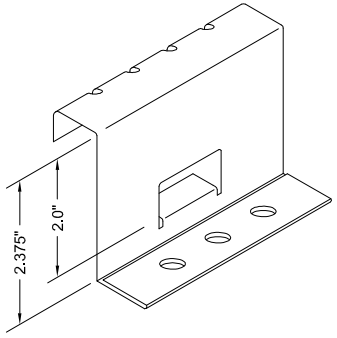
Profile Option: Striations (Standard Profile)



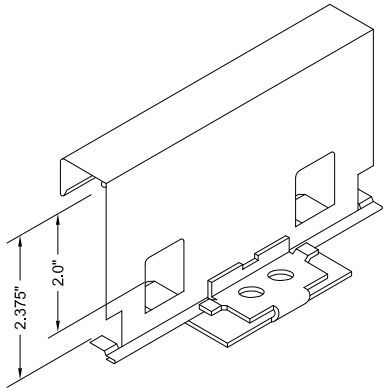
Bearing Plate
16 Ga. Galvanized



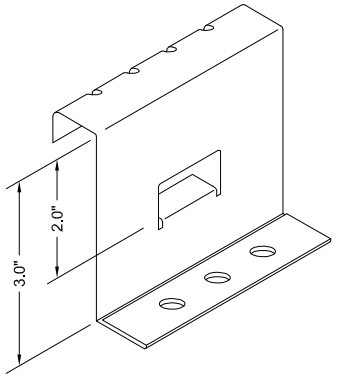
ML200 Utility Clip
22 Ga. Galvanized
2-1/8" Tall



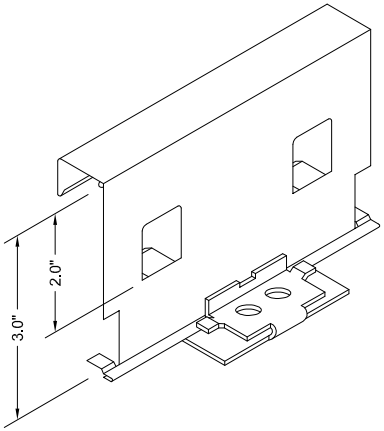
ML200 Low Fixed Clip
22 Ga. Galvanized
2-3/8" Tall with 3/8" Substrate Standoff
Use with up to 3" of blanket insulation



ML200 Low Floating Clip
22 Ga. Galvanized w/ 16 Ga. Base
2-3/8" Tall with 3/8" Substrate Standoff
Use with up to 3" of blanket insulation



ML200 High Fixed Clip
22 Ga. Galvanized
3" Tall with 1" Substrate Standoff
Use with up to 6" of blanket insulation



ML200 High Floating Clip
22 Ga. Galvanized w/ 16 Ga. Base
3" Tall with 1" Substrate Standoff
Use with up to 6" of blanket insulation

UNION CORRUGATING COMPANY

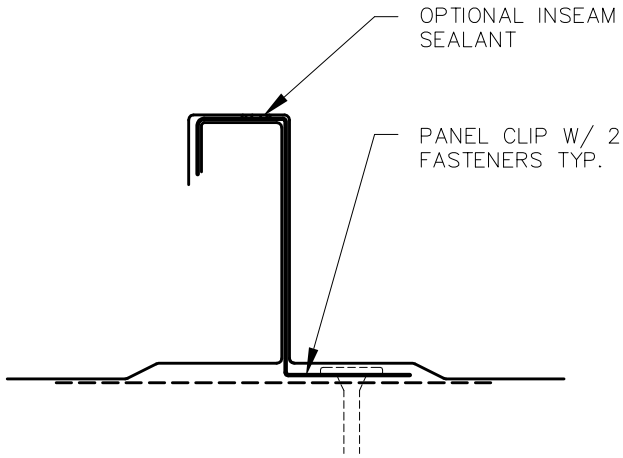
Description: ML200 SYSTEM OVERVIEW

Detail No.: ML200-SOV1

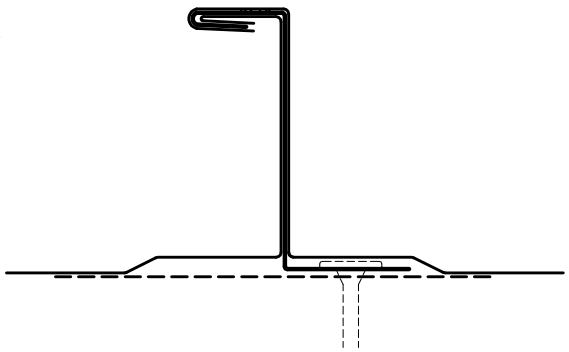
Substrate: GENERAL INFORMATION

Project Name:

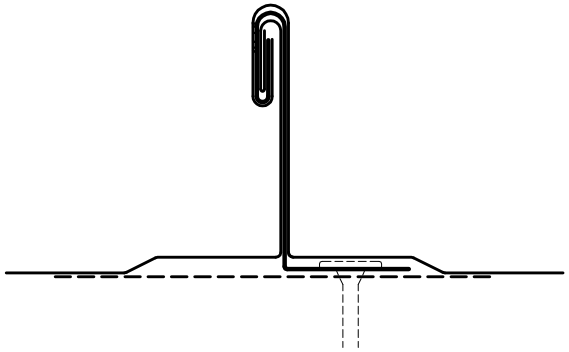
Location:



Seam Profile - Unseamed

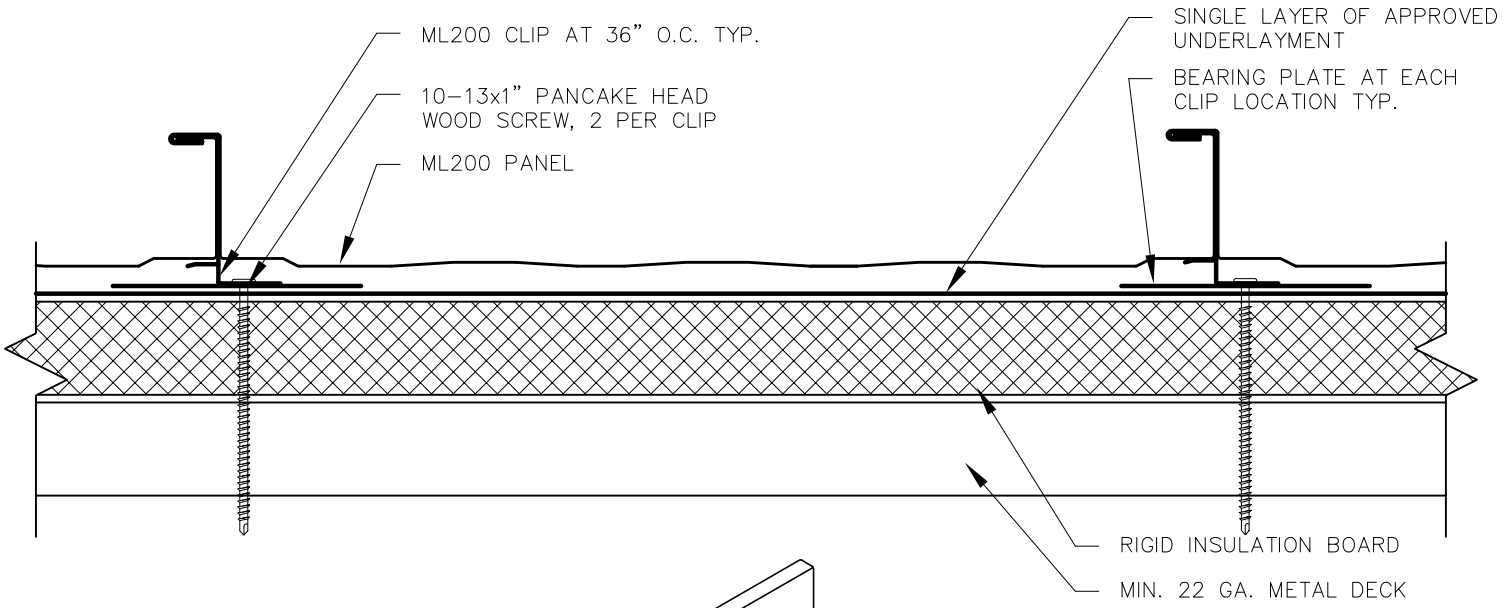


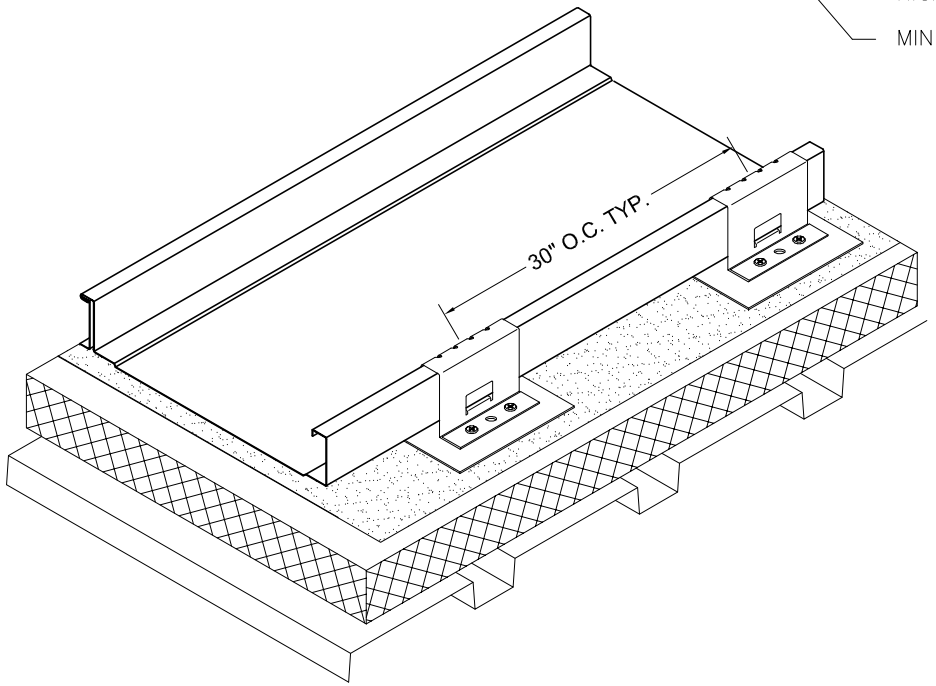
Seam Profile - Seamed 90 Degrees



Seam Profile - Seamed 180 Degrees

UNION CORRUGATING COMPANY	Description: ML200 SYSTEM OVERVIEW (CONT.)	Detail No.: ML200-SOV2
	Substrate: GENERAL INFORMATION	Project Name: Location:





UNION CORRUGATING COMPANY

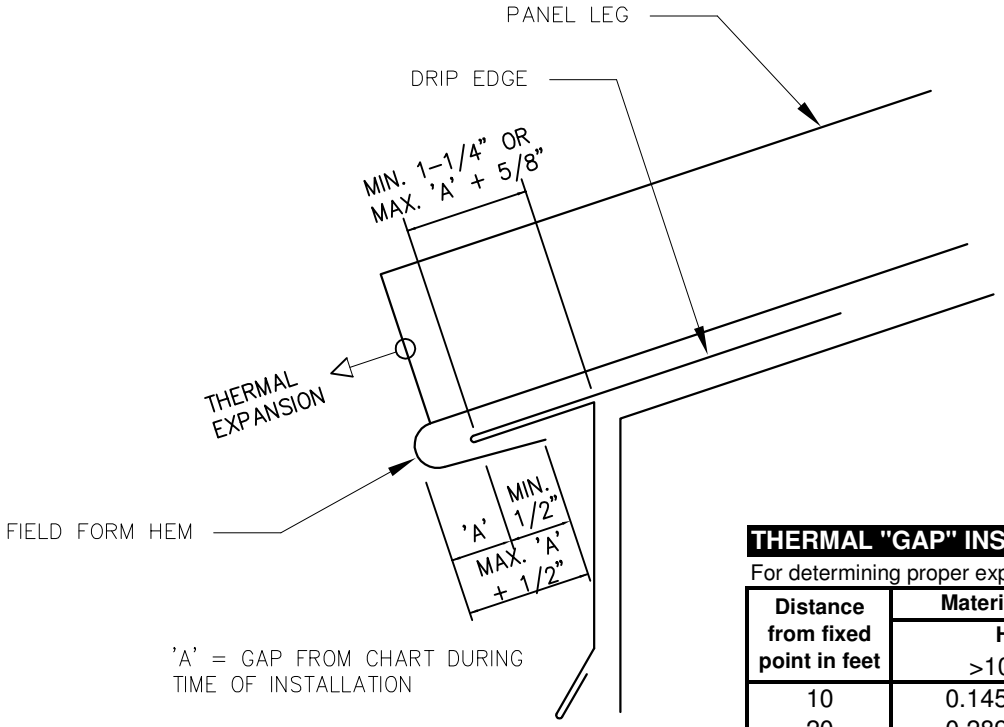
Description: ML200 APPLICATION - METAL DECK

Detail No.: ML200-MD-APP

Substrate: GENERAL INFORMATION

Project Name:

Location:



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

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

Distance from fixed point in feet	Material Temperature (Surface Temperature) During Installation					
	Hot >100° F		Warm 100° to 50° F		Cold <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
* Coefficient of thermal expansion for steel: 0.0000067

UNION CORRUGATING COMPANY

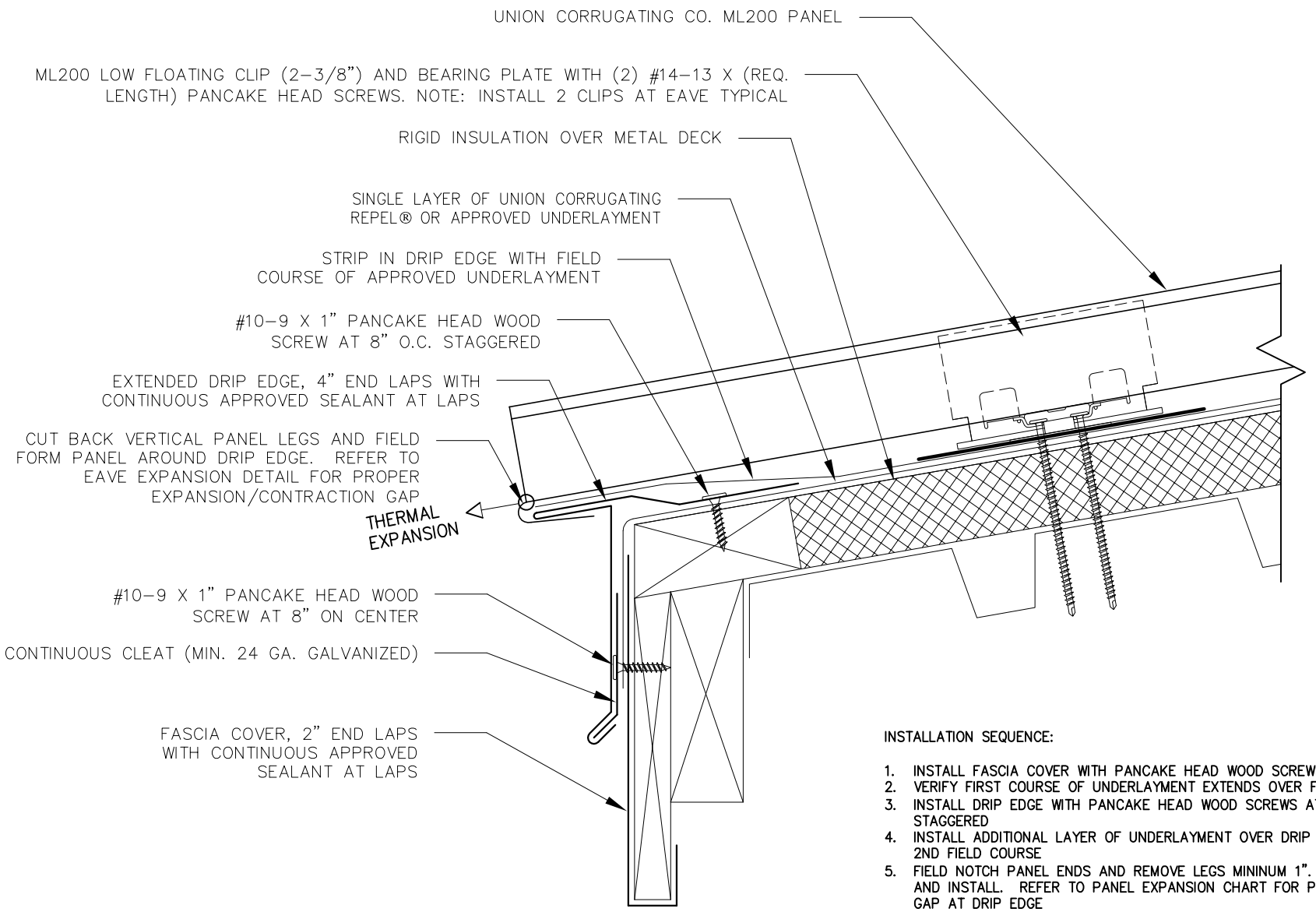
Description: THERMAL GAP INSTALLATION CHART

Detail No.: ML200-INFO-1.00

Substrate: GENERAL INFORMATION

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL FASCIA COVER WITH PANCAKE HEAD WOOD SCREWS AT 12" O.C. MAX.
2. VERIFY FIRST COURSE OF UNDERLAYMENT EXTENDS OVER FASCIA COVER
3. INSTALL DRIP EDGE WITH PANCAKE HEAD WOOD SCREWS AT 8" ON CENTER STAGGERED
4. INSTALL ADDITIONAL LAYER OF UNDERLAYMENT OVER DRIP EDGE AND UNDER 2ND FIELD COURSE
5. FIELD NOTCH PANEL ENDS AND REMOVE LEGS MININUM 1". FORM PANEL HEM AND INSTALL. REFER TO PANEL EXPANSION CHART FOR PROPER INSTALLATION GAP AT DRIP EDGE
6. INSTALL 2 PANEL CLIPS AT EAVES TYPICAL (WITHIN 12" OF EAVE) AND CONTINUE INSTALLING CLIPS AT REQUIRED SPACING

UNION CORRUGATING COMPANY

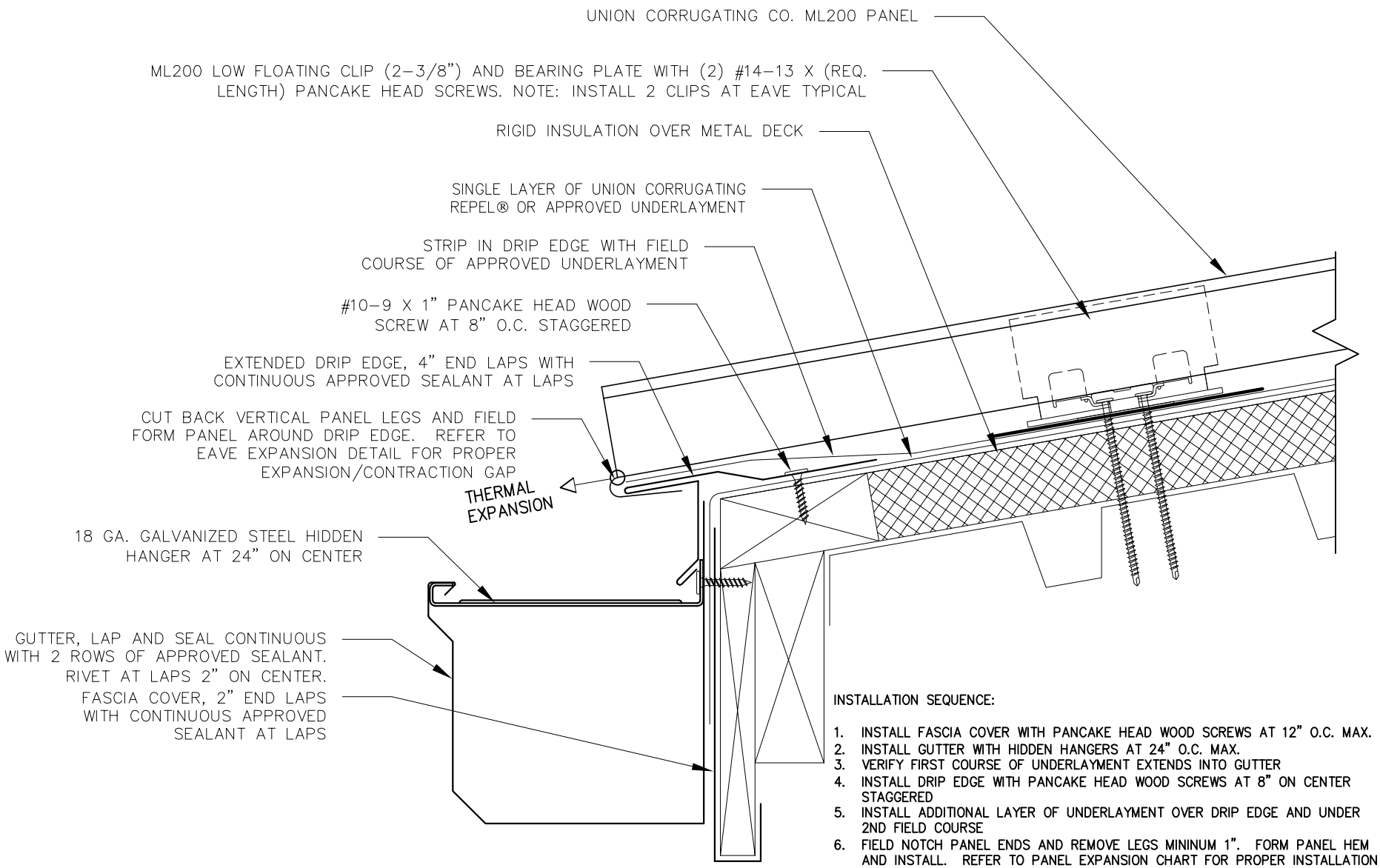
Description: EXTENDED EAVE

Detail No.: ML200-MD-1.00

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL FASCIA COVER WITH PANCAKE HEAD WOOD SCREWS AT 12" O.C. MAX.
2. INSTALL GUTTER WITH HIDDEN HANGERS AT 24" O.C. MAX.
3. VERIFY FIRST COURSE OF UNDERLAYMENT EXTENDS INTO GUTTER
4. INSTALL DRIP EDGE WITH PANCAKE HEAD WOOD SCREWS AT 8" ON CENTER STAGGERED
5. INSTALL ADDITIONAL LAYER OF UNDERLAYMENT OVER DRIP EDGE AND UNDER 2ND FIELD COURSE
6. FIELD NOTCH PANEL ENDS AND REMOVE LEGS MININUM 1". FORM PANEL HEM AND INSTALL. REFER TO PANEL EXPANSION CHART FOR PROPER INSTALLATION GAP AT DRIP EDGE
7. INSTALL 2 PANEL CLIPS AT EAVES TYPICAL (WITHIN 12" OF EAVE) AND CONTINUE INSTALLING CLIPS AT REQUIRED SPACING

UNION CORRUGATING COMPANY

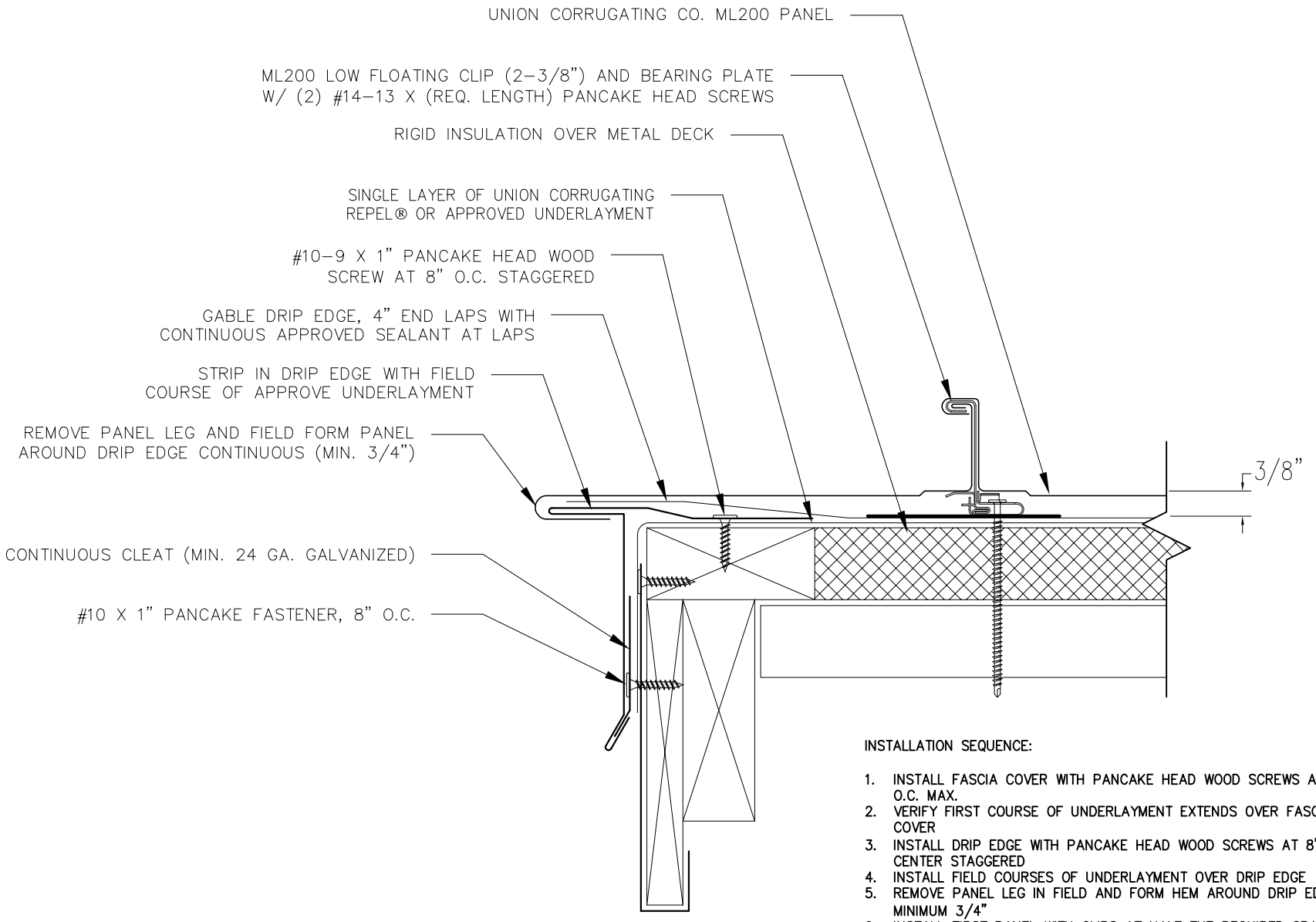
Description: EXTENDED EAVE WITH GUTTER

Detail No.: ML200-MD-1.10

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL FASCIA COVER WITH PANCAKE HEAD WOOD SCREWS AT 12" O.C. MAX.
2. VERIFY FIRST COURSE OF UNDERLAYMENT EXTENDS OVER FASCIA COVER
3. INSTALL DRIP EDGE WITH PANCAKE HEAD WOOD SCREWS AT 8" ON CENTER STAGGERED
4. INSTALL FIELD COURSES OF UNDERLAYMENT OVER DRIP EDGE
5. REMOVE PANEL LEG IN FIELD AND FORM HEM AROUND DRIP EDGE MINIMUM 3/4"
6. INSTALL FIRST PANEL WITH CLIPS AT HALF THE REQUIRED SPACING AS FOR FIELD OF ROOF.

UNION CORRUGATING COMPANY

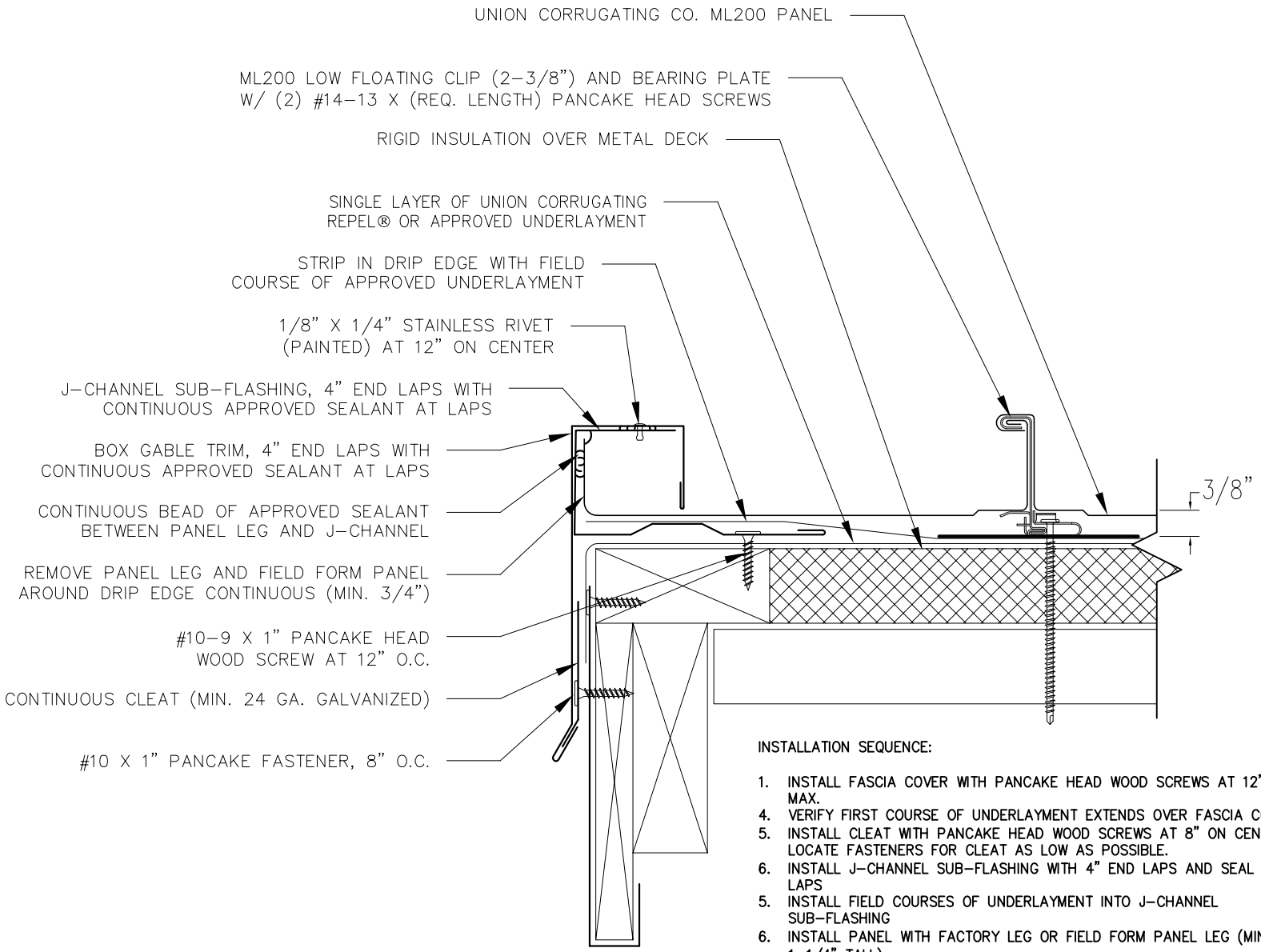
Description: GABLE DETAIL - EXTENDED DRIP STYLE

Detail No.: ML200-MD-2.10

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL FASCIA COVER WITH PANCAKE HEAD WOOD SCREWS AT 12" O.C. MAX.
4. VERIFY FIRST COURSE OF UNDERLAYMENT EXTENDS OVER FASCIA COVER
5. INSTALL CLEAT WITH PANCAKE HEAD WOOD SCREWS AT 8" ON CENTER. LOCATE FASTENERS FOR CLEAT AS LOW AS POSSIBLE.
6. INSTALL J–CHANNEL SUB–FLASHING WITH 4" END LAPS AND SEAL AT LAPS
5. INSTALL FIELD COURSES OF UNDERLAYMENT INTO J–CHANNEL SUB–FLASHING
6. INSTALL PANEL WITH FACTORY LEG OR FIELD FORM PANEL LEG (MIN. 1–1/4" TALL)
7. INSTALL FIRST PANEL WITH CLIPS AT HALF THE REQUIRED SPACING AS FOR FIELD OF ROOF.
8. INSTALL BOX GABLE TRIM WITH 4" END LAPS AND SEAL AT LAPS

UNION CORRUGATING COMPANY

Description:

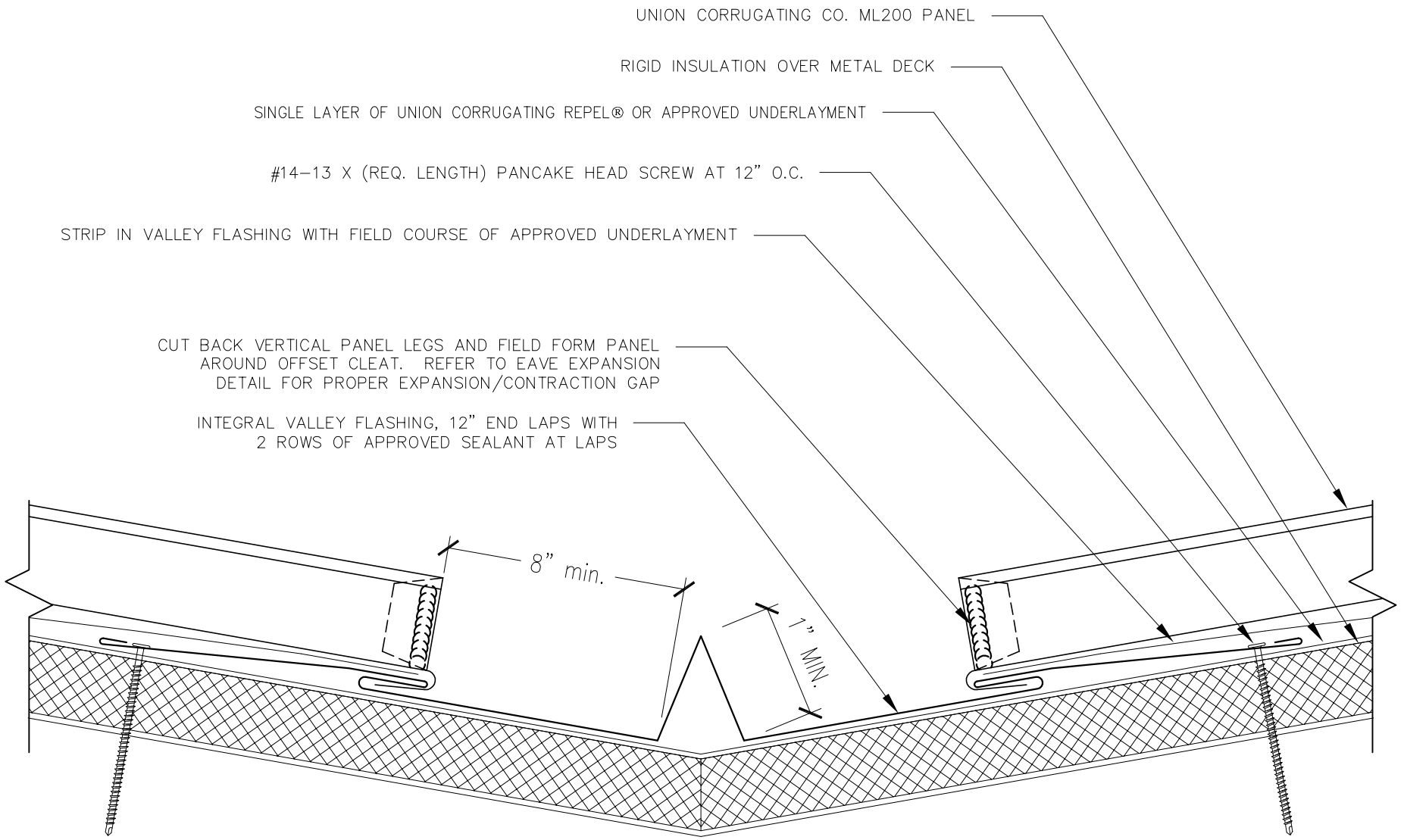
GABLE DETAIL - BOX STYLE

Detail No.: ML200-MD-2.30

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL VALLEY FLASHING WITH 12" END LAPS AND SEALANT AT LAPS
2. INSTALL FIELD COURSES OF UNDERLAYMENT OVER VALLEY FLASHING TO OFFSET HEM
3. FIELD NOTCH AND HEM PANELS MINIMUM 1" AT ENDS. INSTALL INTO OFFSET HEM OF VALLEY FLASHING. PLACE PANEL CLIPS ABOVE VALLEY FLASHING.
4. APPLY BEAD OF SEALANT IN END OF PANE SEAM AND FOLD TAB OF SEAM AROUND (DOWNSLOPE) TO CLOSE END OF RIB

UNION CORRUGATING COMPANY

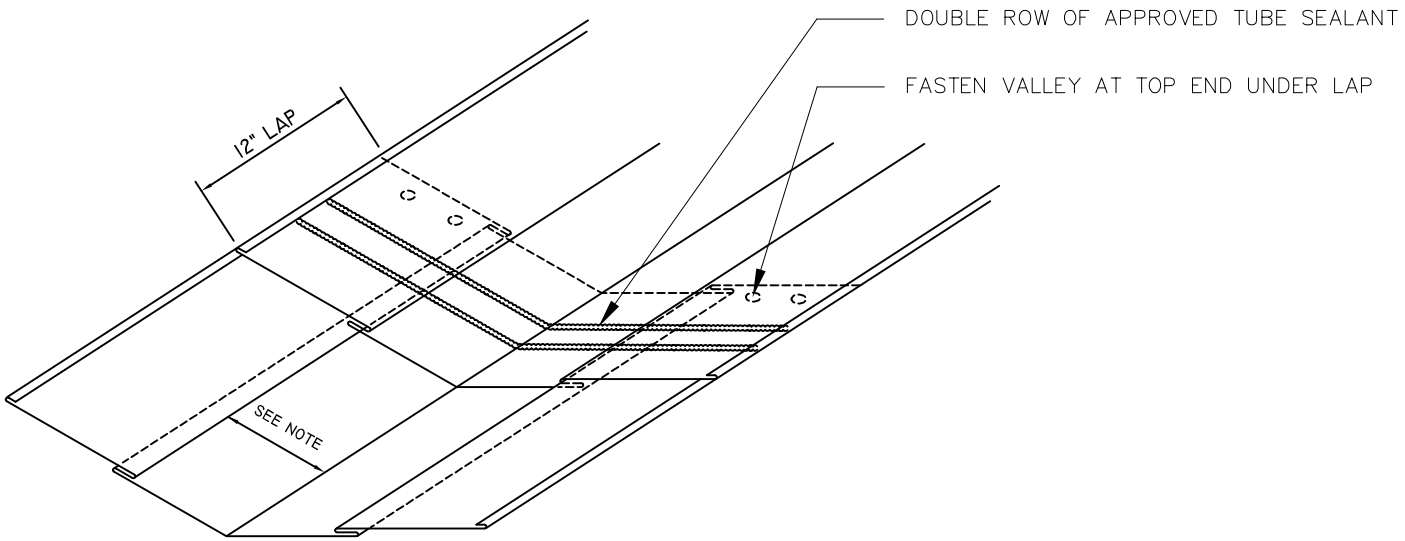
Description: VALLEY DETAIL - INTEGRAL CLEAT

Detail No.: ML200-MD-3.10

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



TELESCOPING VALLEY FLASHING LAP

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

UNION CORRUGATING COMPANY

Description:

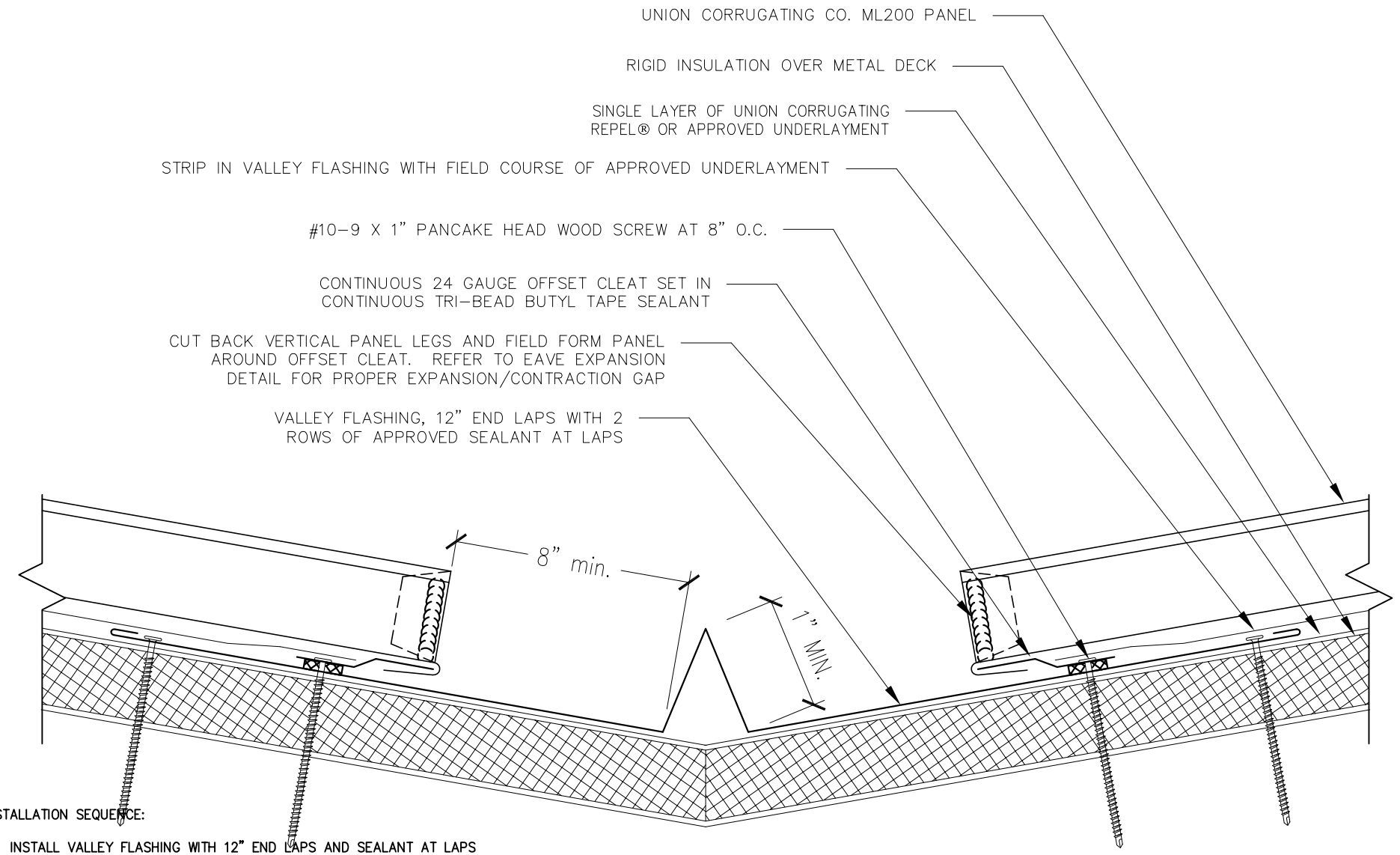
VALLEY LAP DETAIL

Detail No.: ML200-MD-3.10a

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL VALLEY FLASHING WITH 12" END LAPS AND SEALANT AT LAPS
2. INSTALL CONTINUOUS OFFSET CLEAT 8" MIN. FROM CENTER OF VALLEY, SET IN BEAD OF TAPE
3. INSTALL FIELD COURSES OF UNDERLAYMENT OVER VALLEY FLASHING TO OFFSET HEM
4. FIELD NOTCH AND HEM PANELS MINIMUM 1" AT ENDS. INSTALL INTO OFFSET HEM OF VALLEY FLASHING. PLACE PANEL CLIPS ABOVE VALLEY FLASHING.
5. APPLY BEAD OF SEALANT IN END OF PANE SEAM AND FOLD TAB OF SEAM AROUND (DOWNSLOPE) TO CLOSE END OF RIB

UNION CORRUGATING COMPANY

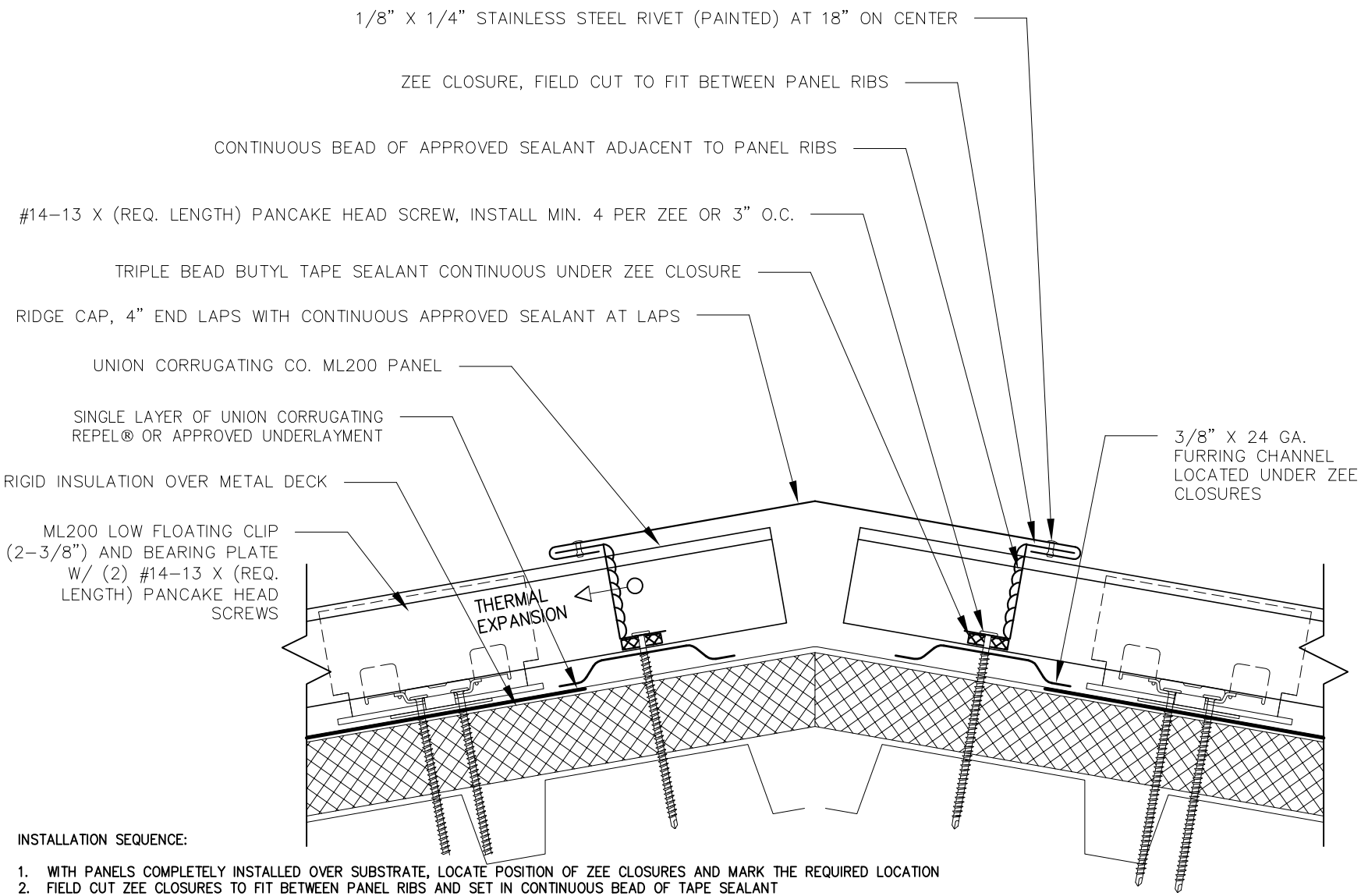
Description: VALLEY - WITH OFFSET CLEAT

Detail No.: ML200-MD-3.20

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. WITH PANELS COMPLETELY INSTALLED OVER SUBSTRATE, LOCATE POSITION OF ZEE CLOSURES AND MARK THE REQUIRED LOCATION
2. FIELD CUT ZEE CLOSURES TO FIT BETWEEN PANEL RIBS AND SET IN CONTINUOUS BEAD OF TAPE SEALANT
3. USE MINIMUM 4 SCREWS PER ZEE CLOSURE OR AT 3" ON CENTER. VERIFY CLOSURE IS FREE OF GAPS OR VOIDS ADJACENT TO PANEL
4. APPLY BEAD OF SEALANT UP EACH SIDE OF ZEE CLOSURE ADJACENT TO PANEL LEGS
5. INSTALL HIP OR RIDGE COVER WITH 4" END LAPS AND SEAL AT LAPS. RIVET CAP TO ZEES AT 18" ON CENTER BOTH SIDES

UNION CORRUGATING COMPANY

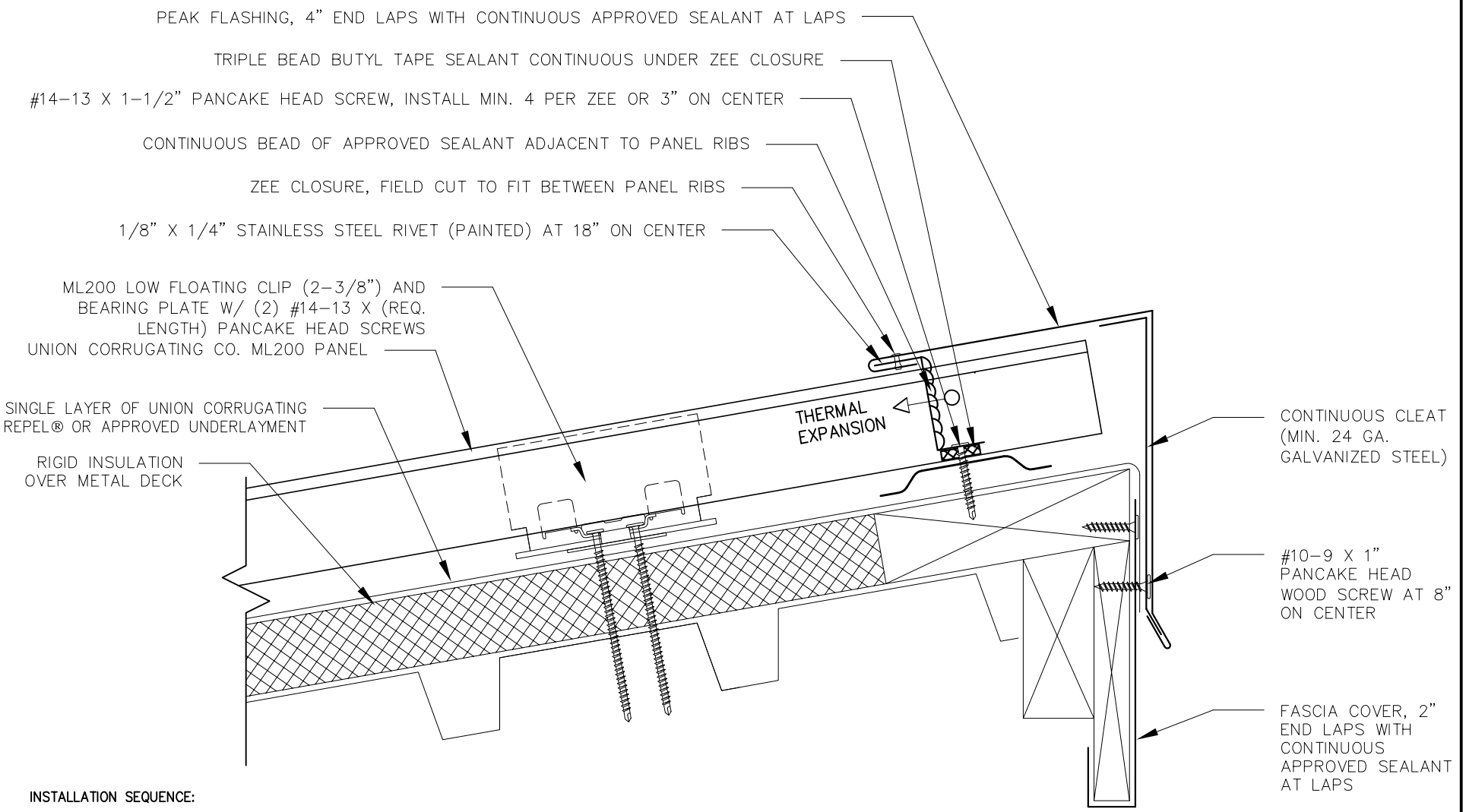
Description: **HIP AND RIDGE DETAIL**

Detail No.: ML200-MD-4.10

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL FASCIA COVER WITH PANCAKE HEAD WOOD SCREWS AT 12" O.C. MAX.
2. VERIFY LAST COURSE OF UNDERLAYMENT EXTENDS OVER PEAK AND COVERS TOP OF FASCIA TRIM
3. WITH PANELS COMPLETELY INSTALLED OVER SUBSTRATE, LOCATE POSITION OF ZEE CLOSURES AND MARK THE REQUIRED LOCATION
4. FIELD CUT ZEE CLOSURES TO FIT BETWEEN PANEL RIBS AND SET IN CONTINUOUS BEAD OF TAPE SEALANT
5. USE MINIMUM 4 SCREWS PER ZEE CLOSURE OR AT 3" ON CENTER. VERIFY CLOSURE IS FREE OF GAPS OR VOIDS ADJACENT TO PANEL
6. APPLY BEAD OF SEALANT UP EACH SIDE OF ZEE CLOSURE ADJACENT TO PANEL LEGS
7. INSTALL CONTINUOUS CLEAT AT FASCIA WITH PANCAKE HEAD WOOD SCREWS AT 8" ON CENTER MAX.
8. INSTALL PEAK FLASHING WITH 4" END LAPS AND SEAL AT LAPS. RIVET CAP TO ZEES AT 18" ON CENTER

UNION CORRUGATING COMPANY

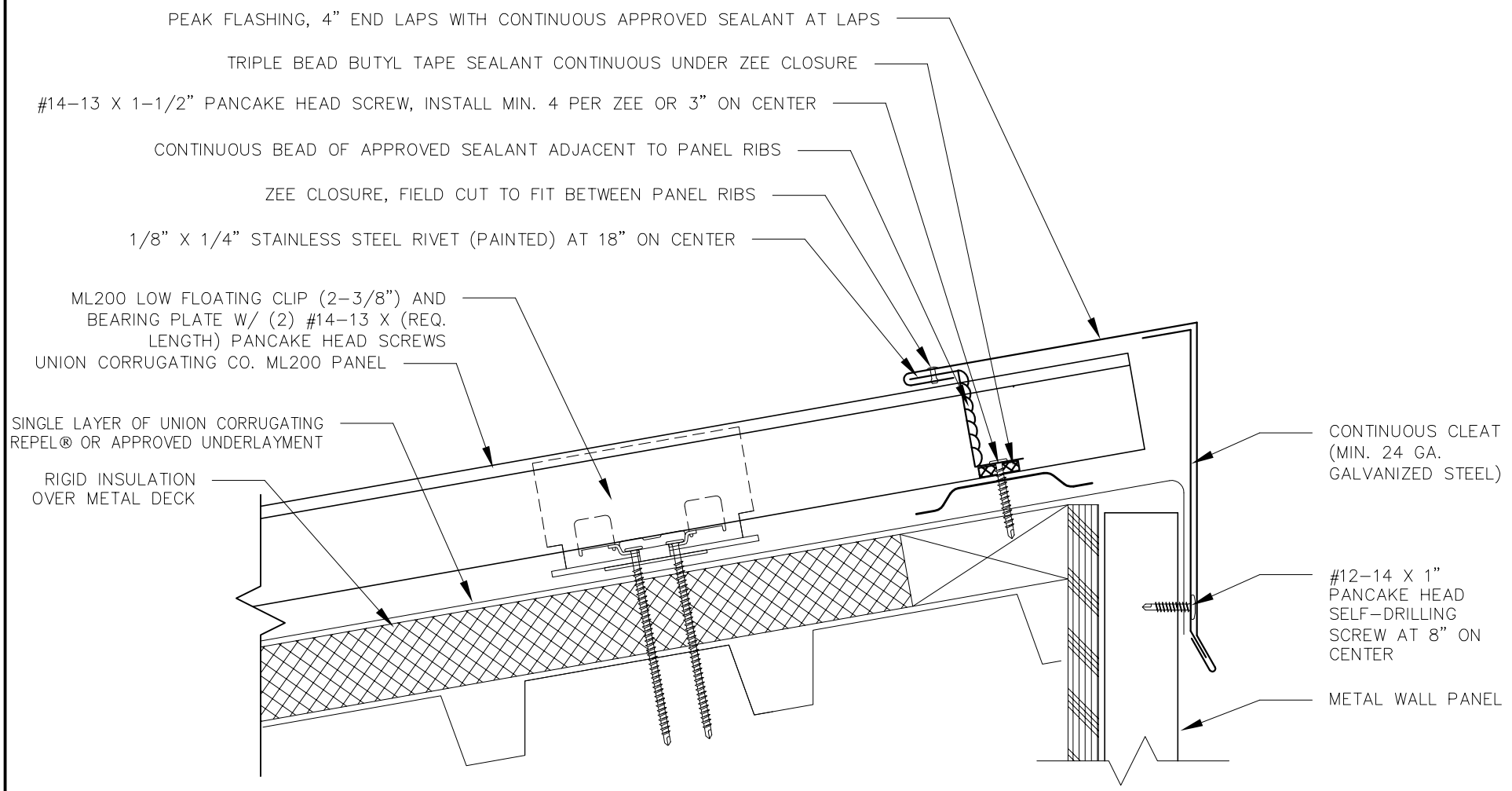
Description: **PEAK DETAIL**

Detail No.: ML200-MD-5.10

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL WALL PANELS AS REQUIRED
2. VERIFY LAST COURSE OF UNDERLAYMENT EXTENDS OVER PEAK AND COVERS TOP OF WALL PANELS
3. WITH PANELS COMPLETELY INSTALLED OVER SUBSTRATE, LOCATE POSITION OF ZEE CLOSURES AND MARK THE REQUIRED LOCATION
4. FIELD CUT ZEE CLOSURES TO FIT BETWEEN PANEL RIBS AND SET IN CONTINUOUS BEAD OF TAPE SEALANT
5. USE MINIMUM 4 SCREWS PER ZEE CLOSURE OR AT 3" ON CENTER. VERIFY CLOSURE IS FREE OF GAPS OR VOIDS ADJACENT TO PANEL
6. APPLY BEAD OF SEALANT UP EACH SIDE OF ZEE CLOSURE ADJACENT TO PANEL LEGS
7. INSTALL CONTINUOUS CLEAT AT FASCIA WITH PANCAKE HEAD SELF–DRILLING SCREWS AT 8" ON CENTER MAX.
8. INSTALL PEAK FLASHING WITH 4" END LAPS AND SEAL AT LAPS. RIVET CAP TO ZEES AT 18" ON CENTER

UNION CORRUGATING COMPANY

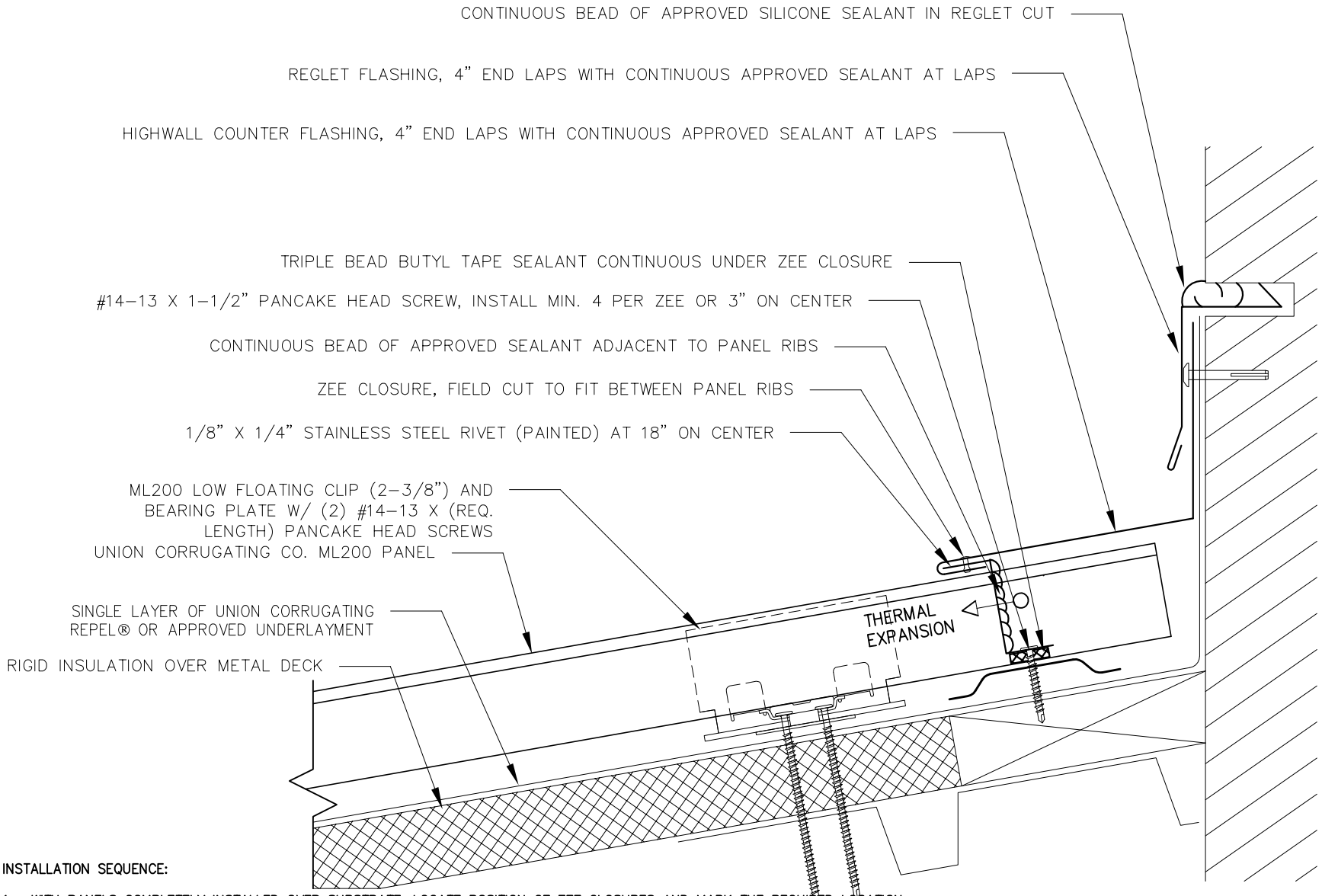
Description: PEAK DETAIL - WITH WALL PANELS

Detail No.: ML200-MD-5.40

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. WITH PANELS COMPLETELY INSTALLED OVER SUBSTRATE, LOCATE POSITION OF ZEE CLOSURES AND MARK THE REQUIRED LOCATION
2. FIELD CUT ZEE CLOSURES TO FIT BETWEEN PANEL RIBS AND SET IN CONTINUOUS BEAD OF TAPE SEALANT
3. USE MINIMUM 4 SCREWS PER ZEE CLOSURE OR AT 3" ON CENTER. VERIFY CLOSURE IS FREE OF GAPS OR VOIDS ADJACENT TO PANEL
4. APPLY BEAD OF SEALANT UP EACH SIDE OF ZEE CLOSURE ADJACENT TO PANEL LEGS
5. INSTALL HEADWALL FLASHING WITH 4" END LAPS AND SEAL AT LAPS. RIVET TO ZEES AT 18" ON CENTER
6. INSTALL REGLET FLASHING INTO CUT IN MASONRY AND SEAL CONTINUOUS WITH APPROVED SILICONE SEALANT

UNION CORRUGATING COMPANY

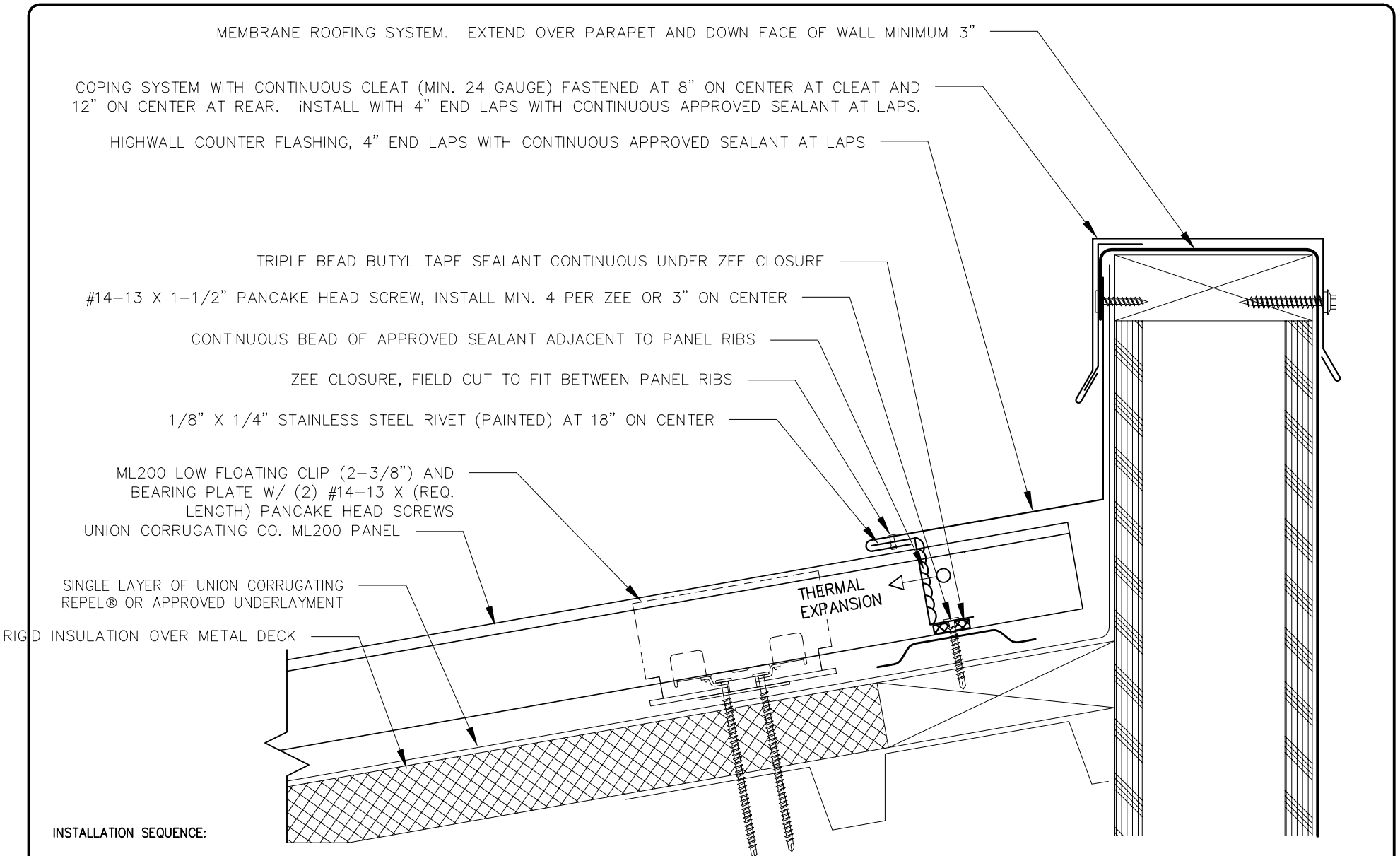
Description: HEADWALL DETAIL - REGLET

Detail No.: ML200-MD-6.11

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. WITH PANELS COMPLETELY INSTALLED OVER SUBSTRATE, LOCATE POSITION OF ZEE CLOSURES AND MARK THE REQUIRED LOCATION
2. FIELD CUT ZEE CLOSURES TO FIT BETWEEN PANEL RIBS AND SET IN CONTINUOUS BEAD OF TAPE SEALANT
3. USE MINIMUM 4 SCREWS PER ZEE CLOSURE OR AT 3" ON CENTER. VERIFY CLOSURE IS FREE OF GAPS OR VOIDS ADJACENT TO PANEL
4. APPLY BEAD OF SEALANT UP EACH SIDE OF ZEE CLOSURE ADJACENT TO PANEL LEGS
5. INSTALL HEADWALL FLASHING WITH 4" END LAPS AND SEAL AT LAPS. RIVET TO ZEES AT 18" ON CENTER
6. INSTALL CONTINUOUS CLEAT AND FASTEN AT 8" ON CENTER. INSTALL COPING CAP WITH 4" END LAPS AND SEAL

UNION CORRUGATING COMPANY

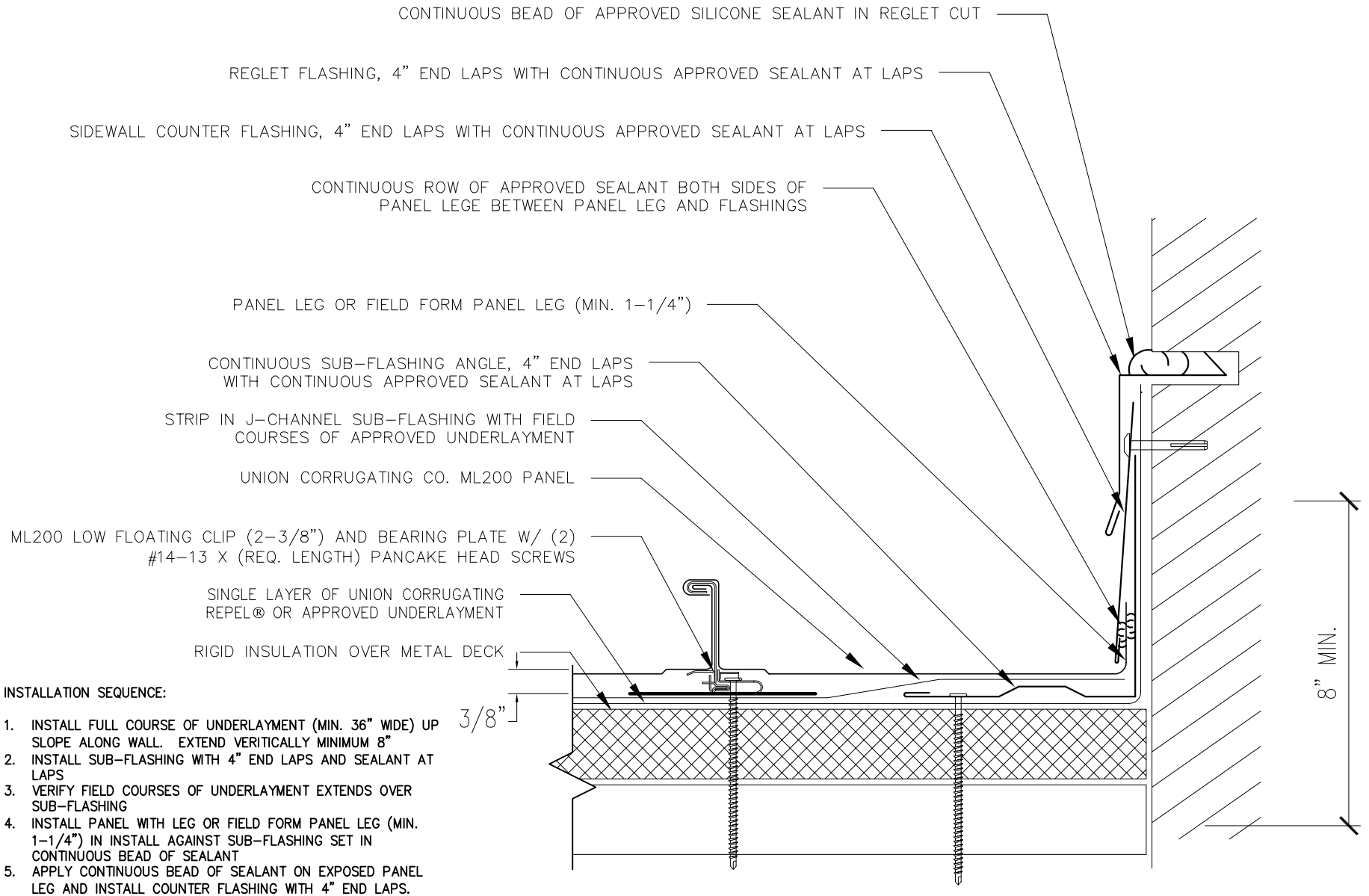
Description: **HEADWALL DETAIL - PARAPET COPING**

Detail No.: ML200-MD-6.20

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL FULL COURSE OF UNDERLAYMENT (MIN. 36" WIDE) UP SLOPE ALONG WALL. EXTEND VERITICALLY MINIMUM 8"
2. INSTALL SUB-FLASHING WITH 4" END LAPS AND SEALANT AT LAPS
3. VERIFY FIELD COURSES OF UNDERLAYMENT EXTENDS OVER SUB-FLASHING
4. INSTALL PANEL WITH LEG OR FIELD FORM PANEL LEG (MIN. 1-1/4") IN INSTALL AGAINST SUB-FLASHING SET IN CONTINUOUS BEAD OF SEALANT
5. APPLY CONTINUOUS BEAD OF SEALANT ON EXPOSED PANEL LEG AND INSTALL COUNTER FLASHING WITH 4" END LAPS. CLEAT MAY BE REQUIRED IF COUNTER FLASHING IS OVER 6"
6. INSTALL REGLET COUNTER FLASHING WITH 4" END LAPS AND SEAL WITH APPROVED SILICONE SEALANT

UNION CORRUGATING COMPANY

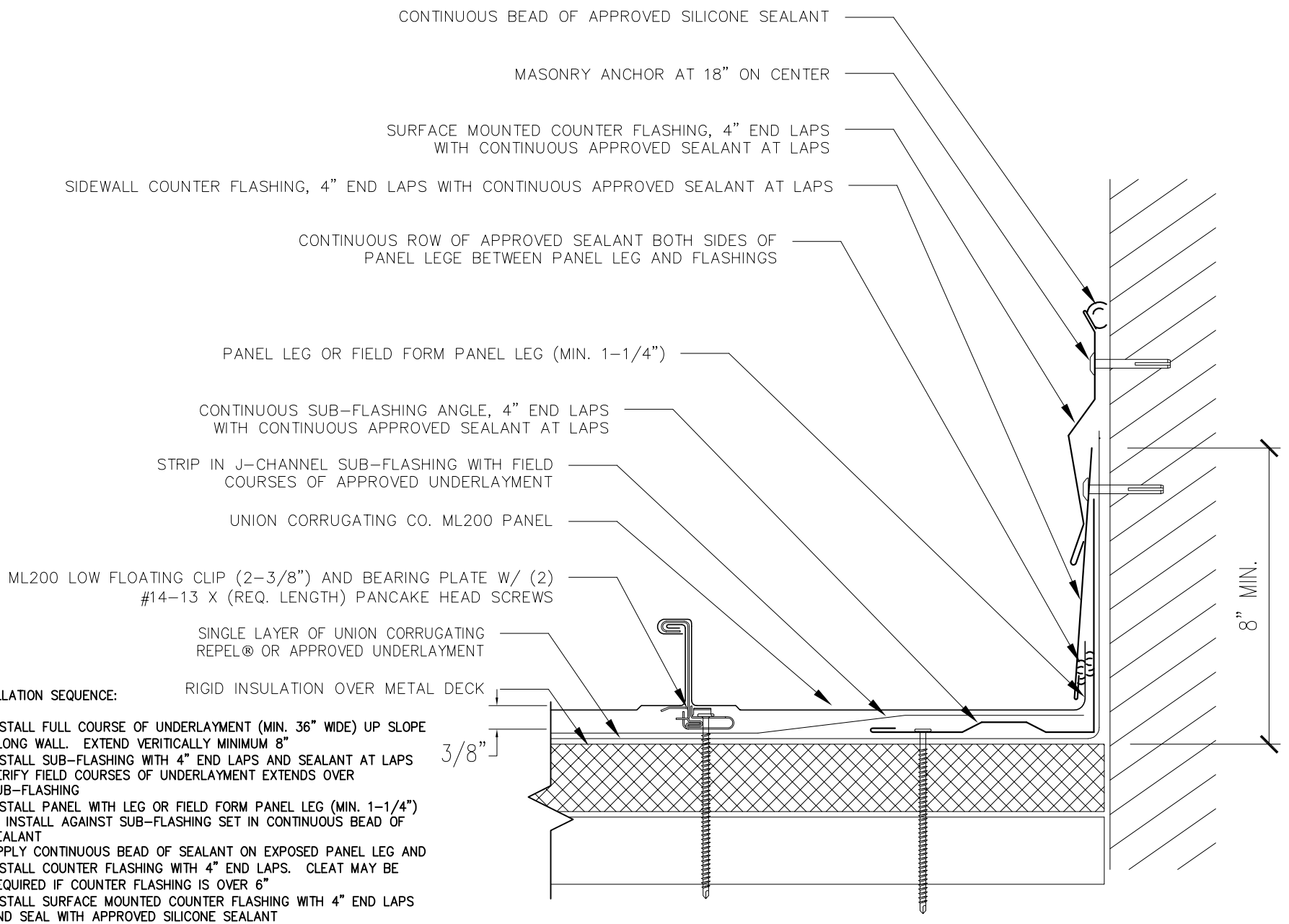
Description: **SIDEWALL DETAIL - REGLET**

Detail No.: ML200-MD-7.11

Substrate: **RIGID INSULATION OVER METAL DECK**

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL FULL COURSE OF UNDERLAYMENT (MIN. 36" WIDE) UP SLOPE ALONG WALL. EXTEND VERITICALLY MINIMUM 8"
2. INSTALL SUB-FLASHING WITH 4" END LAPS AND SEALANT AT LAPS
3. VERIFY FIELD COURSES OF UNDERLAYMENT EXTENDS OVER SUB-FLASHING
4. INSTALL PANEL WITH LEG OR FIELD FORM PANEL LEG (MIN. 1-1/4") IN INSTALL AGAINST SUB-FLASHING SET IN CONTINUOUS BEAD OF SEALANT
5. APPLY CONTINUOUS BEAD OF SEALANT ON EXPOSED PANEL LEG AND INSTALL COUNTER FLASHING WITH 4" END LAPS. CLEAT MAY BE REQUIRED IF COUNTER FLASHING IS OVER 6"
6. INSTALL SURFACE MOUNTED COUNTER FLASHING WITH 4" END LAPS AND SEAL WITH APPROVED SILICONE SEALANT

UNION CORRUGATING COMPANY

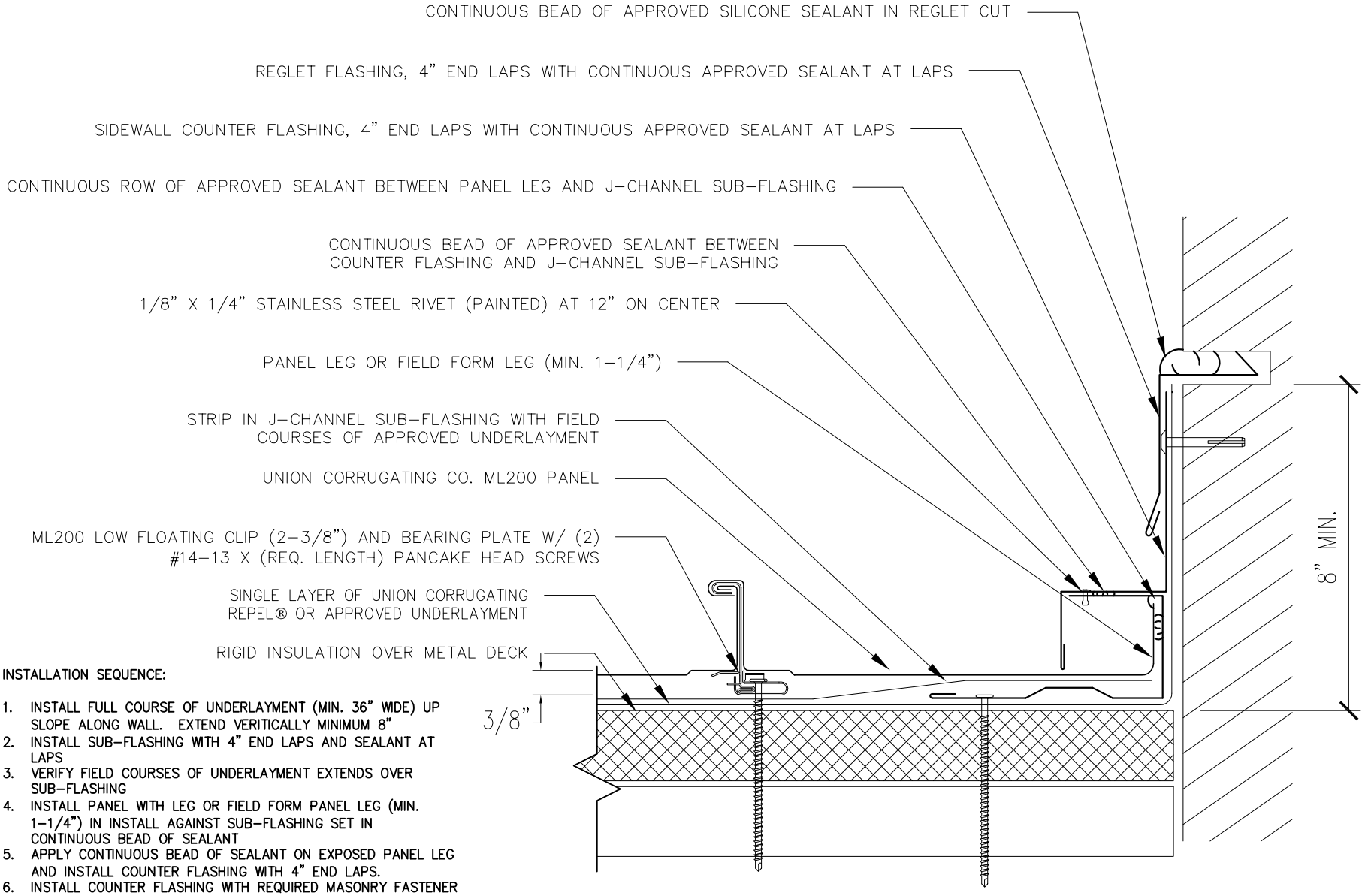
Description: **SIDEWALL DETAIL - SURFACE MOUNT**

Detail No.: ML200-MD-7.12

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL FULL COURSE OF UNDERLAYMENT (MIN. 36" WIDE) UP SLOPE ALONG WALL. EXTEND VERITICALLY MINIMUM 8"
2. INSTALL SUB-FLASHING WITH 4" END LAPS AND SEALANT AT LAPS
3. VERIFY FIELD COURSES OF UNDERLAYMENT EXTENDS OVER SUB-FLASHING
4. INSTALL PANEL WITH LEG OR FIELD FORM PANEL LEG (MIN. 1-1/4") IN INSTALL AGAINST SUB-FLASHING SET IN CONTINUOUS BEAD OF SEALANT
5. APPLY CONTINUOUS BEAD OF SEALANT ON EXPOSED PANEL LEG AND INSTALL COUNTER FLASHING WITH 4" END LAPS.
6. INSTALL COUNTER FLASHING WITH REQUIRED MASONRY FASTENER AND RIVET TO J-CHANNEL SUB-FLASHING AT 18" ON CENTER
7. INSTALL REGLET COUNTER FLASHING WITH 4" END LAPS AND SEAL WITH APPROVED SILICONE SEALANT

UNION CORRUGATING COMPANY

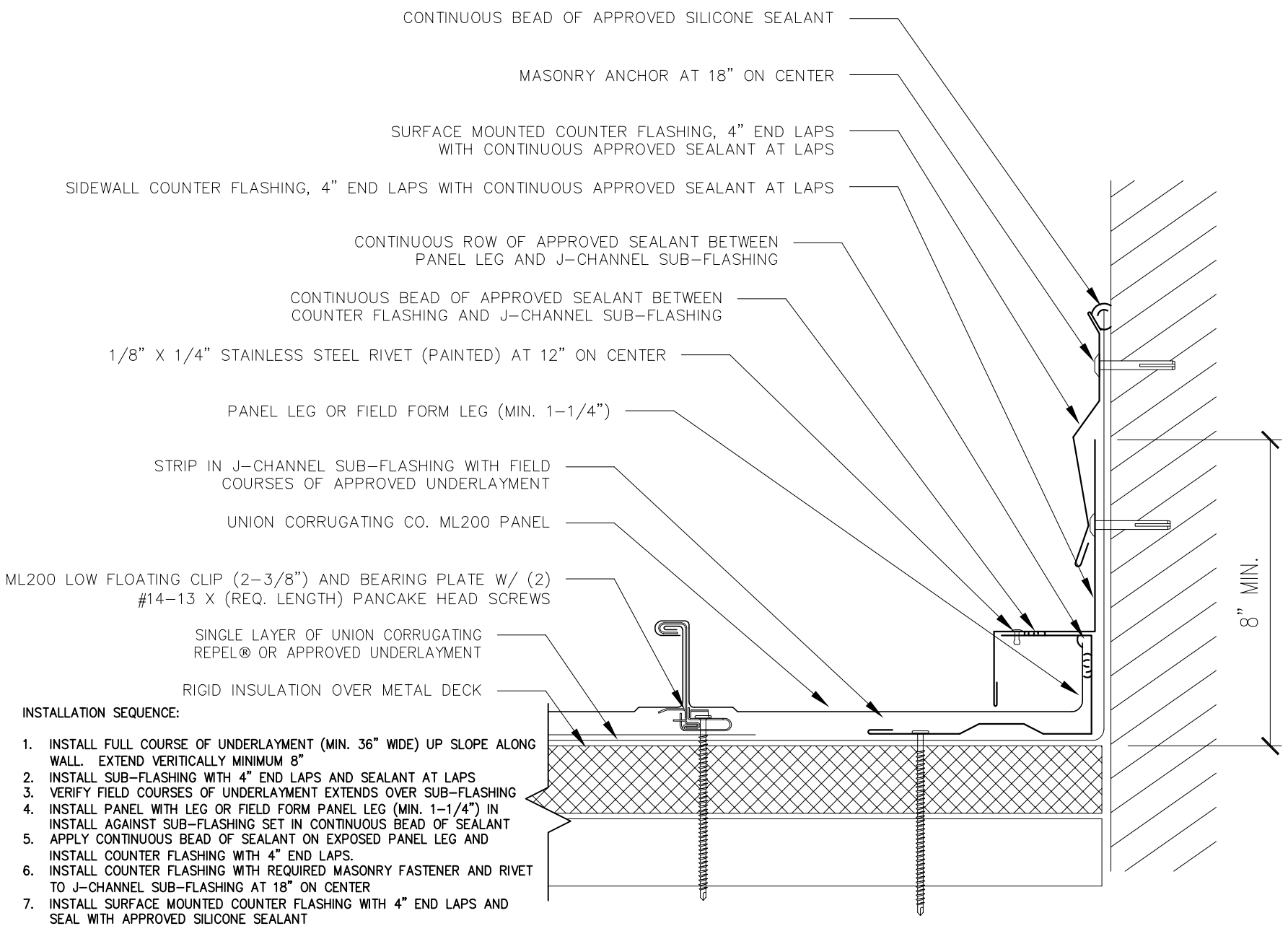
Description: **SIDEWALL DETAIL - REGLET**

Detail No.: ML200-MD-7.21

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



INSTALLATION SEQUENCE:

1. INSTALL FULL COURSE OF UNDERLAYMENT (MIN. 36" WIDE) UP SLOPE ALONG WALL. EXTEND VERITICALLY MINIMUM 8"
2. INSTALL SUB-FLASHING WITH 4" END LAPS AND SEALANT AT LAPS
3. VERIFY FIELD COURSES OF UNDERLAYMENT EXTENDS OVER SUB-FLASHING
4. INSTALL PANEL WITH LEG OR FIELD FORM PANEL LEG (MIN. 1-1/4") IN INSTALL AGAINST SUB-FLASHING SET IN CONTINUOUS BEAD OF SEALANT
5. APPLY CONTINUOUS BEAD OF SEALANT ON EXPOSED PANEL LEG AND INSTALL COUNTER FLASHING WITH 4" END LAPS.
6. INSTALL COUNTER FLASHING WITH REQUIRED MASONRY FASTENER AND RIVET TO J-CHANNEL SUB-FLASHING AT 18" ON CENTER
7. INSTALL SURFACE MOUNTED COUNTER FLASHING WITH 4" END LAPS AND SEAL WITH APPROVED SILICONE SEALANT

UNION CORRUGATING COMPANY

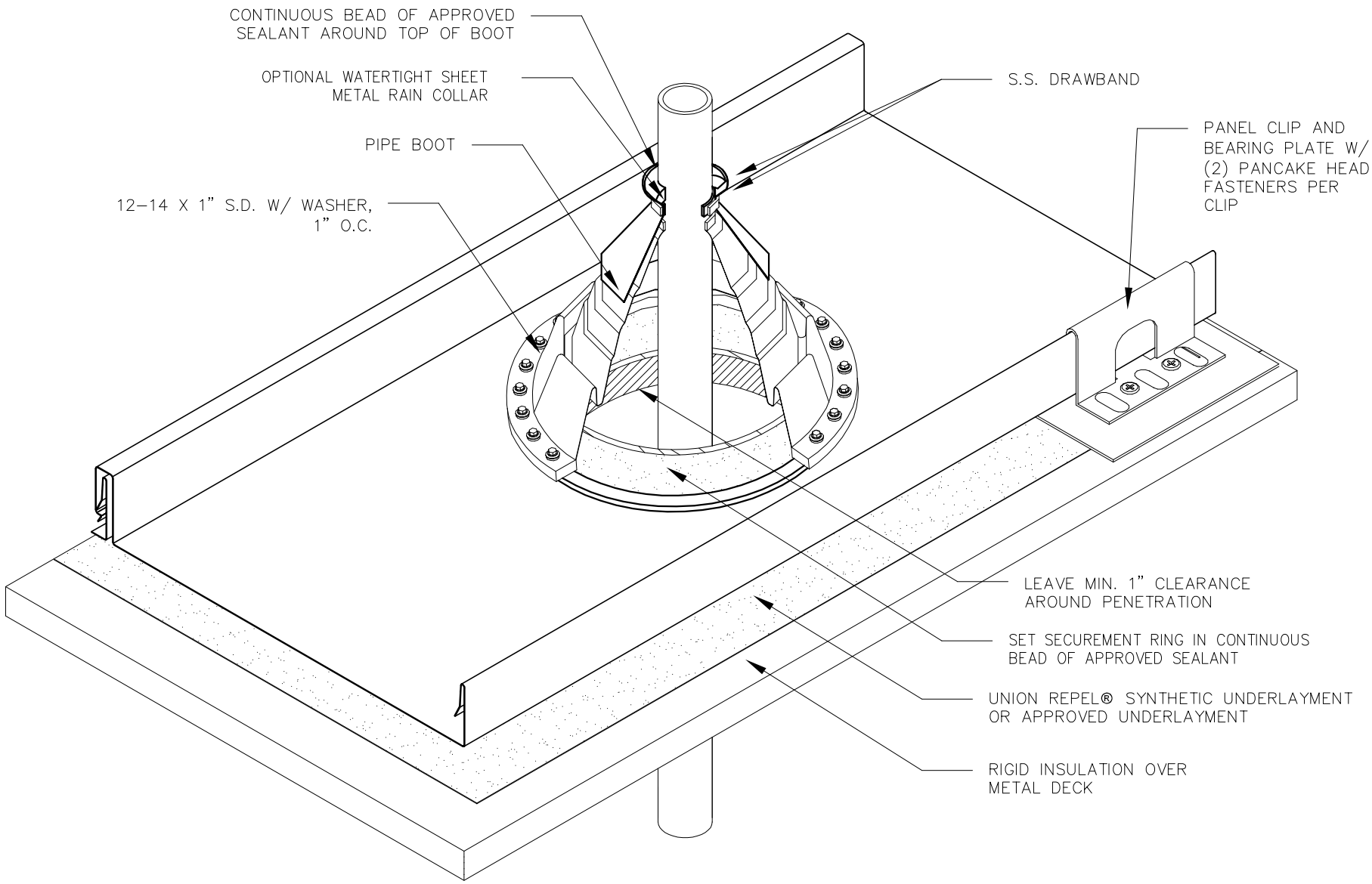
Description: **SIDEWALL DETAIL - SURFACE MOUNT**

Detail No.: ML200-MD-7.22

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location:



UNION CORRUGATING COMPANY

Description:

PIPE PENETRATION

Detail No.: ML200-MD-10.10

Substrate: RIGID INSULATION OVER METAL DECK

Project Name:

Location: