

MOD BIT

POCKET GUIDE



"The name trusted in roofing since 1906"

Mule Hide Products Modified Bitumen Field Installation Guide

Fully Adhered Systems

July, 2018

Installation Guidelines

Page

Self-Adhered Modified Bitumen (SAMB)	4
APP (Torch) Modified Bitumen	6

Self-Adhered Modified Bitumen Details

Membrane Assemblies

10-Year Membrane Assemblies (MH-MBA-1).....	9
15-Year Membrane Assemblies (MH-MBA-2).....	10
20-Year Membrane Assemblies (MH-MBA-3).....	11

Curbs and Walls

Base Flashing w/Cant - Option 1 (MH-MB-C1)	12
Base Flashing w/Cant - Option 2 (MH-MB-C2)	13
Base Flashing w/Cant - Option 3 (MH-MB-C3)	14
Base Flashing w/Cant - Option 4 (MH-MB-C4)	15
Base Flashing - Area Divider - Option 1 (MH-MB-AD1).....	16
Base Flashing - Area Divider - Option 2 (MH-MB-AD2).....	17
Base Flashing - Area Divider - Option 3 (MH-MB-AD3).....	18
Base Flashing - Option 1 (MH-MB-BF1)	19
Base Flashing - Option 2 (MH-MB-BF2)	20
Base Flashing - Option 3 (MH-MB-BF3)	21
Base Flashing - Option 4 (MH-MB-BF4)	22
Base Flashing - Option 5 (MH-MB-BF5)	23
Base Flashing - Option 6 (MH-MB-BF6)	24
Base Flashing - Option 7 (MH-MB-BF7)	25
Base Flashing - Option 8 (MH-MB-BF8)	26
Base Flashing - Option 9 (MH-MB-BF9)	27
Base Flashing - Option 10 (MH-MB-BF10)	28

Corners

Outside Corner (MH-MB-M1).....	29
Inside Corner (MH-MB-M2)	30

Flashing Termination

Wall Flashing Termination - Option 1 (MH-MB-WFT01).....	31
Wall Flashing Termination - Option 2 (MH-MB-WFT02).....	32
Wall Flashing Termination - Option 3 (MH-MB-WFT03).....	33
Wall Flashing Termination - Option 4 (MH-MB-WFT04)	34
Wall Flashing Termination - Option 5 (MH-MB-WFT05).....	35

Drainage

Drain (MH-MB-D1)	36
Retrofit Drain (MH-MB-D2)	37
Scupper (MH-MB-S1)	38
Gutter - Option 1 (MH-MB-G1).....	39

Gutter - Option 2 (MH-MB-G2).....	40
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Pipe/ Penetration Flashings

Pipe Flashing - Option 1 (MH-MB-P1)	41
Pipe Flashing - Option 2 (MH-MB-P2)	42
Pipe Flashing - Option 3 (MH-MB-P3)	43
Pipe Flashing - Option 4 (MH-MB-P4)	44
Pipe Flashing - Option 5 (MH-MB-P5)	45
Penetration Pocket (MHMB-141).....	46
Vertical Sealant Pocket (MHMB-142)	47

Roof Edge Flashings

Edge Metal Flashing - Option 1 (MH-MB-EM1).....	48
Edge Metal Flashing - Option 2 (MH-MB-EM2).....	49
Edge Metal Flashing - Option 3 (MH-MB-EM3).....	50
Edge Metal Flashing - Option 4 (MH-MB-EM4).....	51
Gravel Stop - Option 1 (MH-MB-GS1)	52
Gravel Stop - Option 2 (MH-MB-GS2)	53
Gravel Stop - Option 3 (MH-MB-GS3)	54

Seams

FASTLap End Laps (45 Degree) (MH-MB-110)	55
Cut Cap Sheet End Laps (45 Degree) (MH-MB-111)	56

Miscellaneous

Expansion Joint (MH-MB-EJ1).....	57
Tie-In to Existing Smooth Mod Bit (MH-MB-162)	58
Open Valley (MHMB-180).....	59

Insulation / Base Sheet Attachment

Insulation Attachment - Option 1 (MH-MB-INS1)	60
Insulation Attachment - Option 2 (MH-MB-INS2)	61
Insulation Attachment - Option 3 (MH-MB-INS3)	62
Insulation Attachment - Option 4 (MH-MB-INS4)	63
Insulation Attachment - Option 5 (MH-MB-INS5)	64
Nail Base Fastening Pattern - 1-60 (MH-NB-FM1-60)	65
Nail Base Fastening Pattern - 1-90 (MH-NB-FM1-90)	66

APP (Torch) Modified Bitumen Details

Curbs and Walls

Base Flashing / Noncombustible (MH-MB-UN-CW01T).....	67
Base Flashing / Combustible (MH-MB-UN-CW011T).....	68
Base Flashing w/ Mastic (MH-MB-UN-CW02T)	69
Base Flashing w/ Counterflashing (MH-MB-UN-CW03T)	70
Base Flashing w/ Vented Perimeter (MH-MB-UN-CW04T)	71
Parapet w/ Coping (MH-MB-UN-CW05T)	72
High Wall (MH-MB-UN-CW06T)	73
HVAC - Wood Curb (MH-MB-UN-CW07T).....	74

Prefabricated Metal Curb (MH-MB-UN-CW08T)	75
Area Divider/ Equipment Support (MH-MB-UN-CW010T).....	76
<u>Corners</u>	
Outside Corner Isometric (MH-MB-UN-CR01T)	77
Inside Corner Isometric (MH-MB-UN-CR02T).....	78
<u>Expansion Joints</u>	
Expansion Joint Curb (MH-MB-UN-XJ01T).....	79
Expansion Joint Wall (MH-MB-UN-XJ02T)	80
<u>Drainage</u>	
Roof Drain (MH-MB-UN-DR01T)	81
Drain Insert (MH-MB-UN-DR02T).....	82
Scupper (MH-MB-UN-DR03T).....	83
Gutter w/ Drip Edge (MH-MB-UN-DR04T)	84
Gutter w/ Drip Edge – Option 2 (MH-MB-UN-DR05T)	85
Flanged Gutter Without Drip Edge (MH-MB-UN-DR06T)	86
<u>Pipe/ Penetration Flashings</u>	
Vent Pipe (MH-MB-UN-PP01T)	87
Hot Stack (MH-MB-UN-PP02T)	88
Penetration Pocket (MH-MB-UN-PP03T).....	89
Vertical Sealant Pocket (MH-MB-142)	90
Sleeper (MH-MB-UN-PP05T)	91
Lightning Rod (MH-MB-UN-PP06T).....	92
<u>Roof Edge Flashings</u>	
Drip Edge (MH-MB-UN-RE01T).....	93
Drip Edge - Option 2 (MH-MB-UN-RE02T)	94
Roof Edge On Parapet (MH-MB-UN-RE03T).....	95
<u>Seams</u>	
End Lap (MH-MB-UN-SE01T)	96
End Laps - Option 1 (MH-MB-UN-SE02T)	97
End Laps - Option 2 (MH-MB-UN-SE03T)	98
Back Nailing Parallel w/ Slope (MH-MB-UN-SE04T).....	99
<u>Insulation / Base Sheet Attachment</u>	
Insulation Attachment - Option 1 (MH-MB-INS1)	100
Insulation Attachment - Option 2 (MH-MB-INS2)	101
Insulation Attachment - Option 3 (MH-MB-INS3)	102
Insulation Attachment - Option 4 (MH-MB-INS4)	103
Insulation Attachment - Option 5 (MH-MB-INS5)	104
Nail Base Fastening Pattern - 1-60 (MH-NB-FM1-60)	105
Nail Base Fastening Pattern - 1-90 (MH-NB-FM1-90).....	106

Installation Guidelines for Mule-Hide Self-Adhered Modified Bitumen (SAMB) Membranes

- A. Store membranes at room temperature whenever possible until just prior to installing the rolls. Materials shall be stored in a tidy and safe manner to avoid exceeding the allowable live load of the storage area. Do not double stack pallets of Mule-Hide self-adhering modified bitumen membrane.
- B. Rolls must be stored on ends. If stored on sides the roll can become distorted (egg shaped) and difficult to install.
- C. The minimum application temperature for Mule-Hide SAMB materials is 40°F and rising for 48 consecutive hours.
 - a. In order to perform properly, Mule-Hide SAMB materials require a minimum application temperature of 40°F and rising for 48 consecutive hours. This applies to the roofing materials and approved substrate. During installation, the membrane must be promptly rolled with a minimum 75# roller. Failure to abide by these requirements may result in poor adhesion or cracking issues.
 - b. During periods of colder weather, the Mule-Hide SAMB materials should always be stored at room temperature (60° to 80° F) until just prior to use. Materials that are not stored at room temperature (or not used within 4 hours) should be restored to room temperature prior to use.
- D. The following insulation/cover boards are acceptable for use with a self-adhering modified bitumen roofing system:
 - a. Mule-Hide Poly ISO 1 or Mule-Hide Poly ISO 2 polyisocyanurate insulation.
 - b. High Density (HD) Wood Fiberboards
 - i. Structodek® HD with Primed Red Coating wood fiberboard by Blue Ridge - may be used as an overlay over other insulations. 1/2-inch thick is the minimum requirement when used as an overlay.
 - ii. HD Wood Fiberboard – Asphalt impregnated, coated six sides.
 - c. DensDeck Prime or Securock – A minimum 1/4" thick layer of DensDeck Prime or Securock Gypsum-Fiber Roof Board may be used as an overlay over an approved insulation or as a thermal barrier over a combustible deck. Priming of DensDeck Prime with Mule-Hide #121 Asphalt Primer is not required (unless contaminants such as gypsum dust are present), but if primer is applied it will enhance adhesion.

- E. Application over new Plywood (minimum 15/32" CDX grade) or new Oriented Strand Board (OSB) as a deck or substrate. On new construction, insulation board or Nail Base is recommended, however adhering directly to new plywood or OSB deck is acceptable if the decking is secured with screws or back-out resistant fasteners. OSB must be installed with the rough side up. Decks attached with common or cement coated nails or staples shall be covered with an approved insulation. Marine grade or "Green treated" plywood are not recommended. Check with local building code requirements as adhering a Self-Adhering Modified Bitumen membrane direct to a wood deck may not meet local fire codes.
- F. When adhering directly to an existing plywood or OSB deck Mule-Hide #121 Asphalt Primer must be used.
- G. After adhering the sheet, it is required that uniform pressure be applied to the entire roll area by using a minimum 75# linoleum roller, water filled lawn roller or similar weighted roller.
 - a. Sheet should be rolled in the short dimension first and long dimension second.
 - b. Care must be taken to prevent injury when rolling membrane, especially on sloped surfaces.
- H. When completing end laps, cut the top corner of the top sheet on a 45-degree angle (start the cut approximately 3 inches in from the top edge and finishing down 3 inches from the top edge), also applying Mule-Hide #271 or #421 Mod Bit sealant to the 45-degree cuts. Align the next sheet so the end of the sheet covers the **FASTLap®**. Remove the protective release film from the **FASTLap®** and apply firm even pressure to the seam area. Thoroughly roll the end lap with a silicone roller. End laps should be staggered approximately 3 feet apart.

Refer to Mule-Hide's full specifications for additional requirements, this guide does not replace the Mule-Hide specifications.

Installation Guidelines for Mule-Hide APP (Torch) Modified Bitumen Membranes

The roofing contractor must ensure that all applicators with the application of heat welded modified bitumens are properly trained and carry a valid Certified Roofing Torch Applicator card (**CERTA**) as evidence of training. All applicators must carry, review, understand and adhere to the safety information and guidelines contained in the "Torch Applied/Dos and Don'ts" as published and supplied by the Asphalt Roofing Manufacturers Association from time to time. After installation, to minimize the risk of fire, applicators should thoroughly inspect all areas of the roof where torches have been used (preferably with thermometers), as well as all return air ducts and cross beams. Applicators should provide a minimum of a four-hour fire watch after torching to minimize the risk of fire. Applicators must keep fire extinguishers readily available on site and must follow all relevant federal, state and local laws and rules applicable to the project and the product(s) being used, particularly those relating to safety and fire prevention.

The following is a list of approved cover boards/thermal barriers that may be used in the Mule-Hide APP Torch MB Roof Systems:

1. **Dens Deck Prime by Georgia-Pacific (GP)** – APP Torch and SA Base Sheets may be applied directly to the surface. Minimum thickness of the Dens-Deck Prime is dependent on local wind conditions. Priming of DensDeck Prime with Mule-Hide #121 Asphalt Primer is not required (unless contaminants such as gypsum dust are present), but if primer is applied it will enhance adhesion. Contact the Mule-Hide Technical Service Department for details regarding acceptable thicknesses and fastening patterns.
2. **Securock Gypsum-Fiber Roof Board by United States Gypsum (USG)** Field priming of this product is not required. APP Torch Base Sheet may be heat-welded (torch applied) directly to the surface.
3. SA Base Sheet may also be applied directly an approved substrate.
4. G2 base Sheet or Mule-Hide Nail Base may also attached with appropriate fasteners directly to the substrate.

When attempting to install Mule-Hide Modified Bitumen membranes to a non-acceptable substrate/insulation, Mule-Hide requires the installation of an acceptable material as an overlay before the installation of an appropriate Mule-Hide base sheet.

Do not install modified bitumen membranes at temperatures lower than 40-45 degrees F wherever practicable. Where work is unavoidable at such temperatures the following precautions be taken:

- A. Take extra care during cold weather installation at ambient temperatures of 40-45 degrees F or below and when ambient temperatures are affected by wind or humidity to ensure adequate bonding is achieved between the surfaces to be joined. This applies to both material seam welds and adhesion of the applied product to the appropriately prepared substrate as the substrate can be affected by such temperature constraints as well.
- B. In addition, unrolling of cold materials under very low ambient conditions must be avoided to prevent the likelihood of unnecessary stress cracking. Rolls must be at least 40 degrees F at the time of application. Should the membrane roll become stiff or difficult to install, it should be replaced with a new roll from the heated storage area.
- C. When installing a Mule-Hide APP Modified System Roof System in cooler weather, it is recommended that liquids such as solvents, sealants, etc. be stored at warmer temperatures (60°F or more but not exceeding 80°F) until just prior to use in order to facilitate the installation.
- D. If using the SA Base Sheet, it must be installed in temperatures above 50°F. Temperatures must be 50° F and rising for 48 consecutive hours.

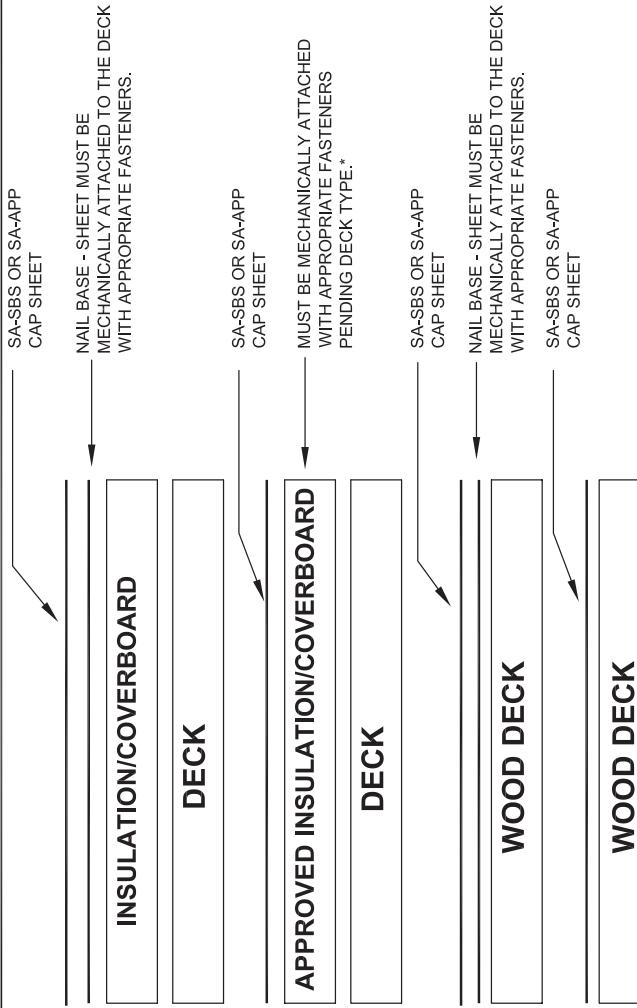
Basic installation guidelines are as follows:

- A. Start at the low point of the roof. The APP Torch Base Sheet is specifically designed to apply direct to approved substrates (cover boards, nailable base sheets, approved deck materials, and overlay materials). Note: some substrates may require priming with Mule-Hide #121 Asphalt Primer.
- B. Application direct to structural concrete, metal, metallic surfaces, smooth BUR, smooth Modified Bitumen and Dens-Deck Prime require the application of Mule-Hide #121 Asphalt Primer prior to application of the APP Torch Base Sheet. Primer must be allowed to dry thoroughly.
- C. Application directly to wood decking is not permitted and requires the installation of an approved base sheet or cover board as a substrate.
- D. When completing end laps, cut the top corner of the top sheet on

a 45-degree angle (start the cut approximately 3 inches in from the top edge and finishing down 3 inches from the top edge). Torch the top sheet down and roll thoroughly with a silicone roller. End laps should be staggered approximately 3 feet apart.

- E. Do not heat the substrate.
- F. Position successive rolls providing a minimum 6" end lap and 3" side lap. Asphalt bleed out shall be 1/4" to 3/8" on all seams.
- G. Laps shall be rolled with a 6" wide roller immediately after heat welding.
- H. APP Torch Base Sheet must be turned up to the top of the cant.

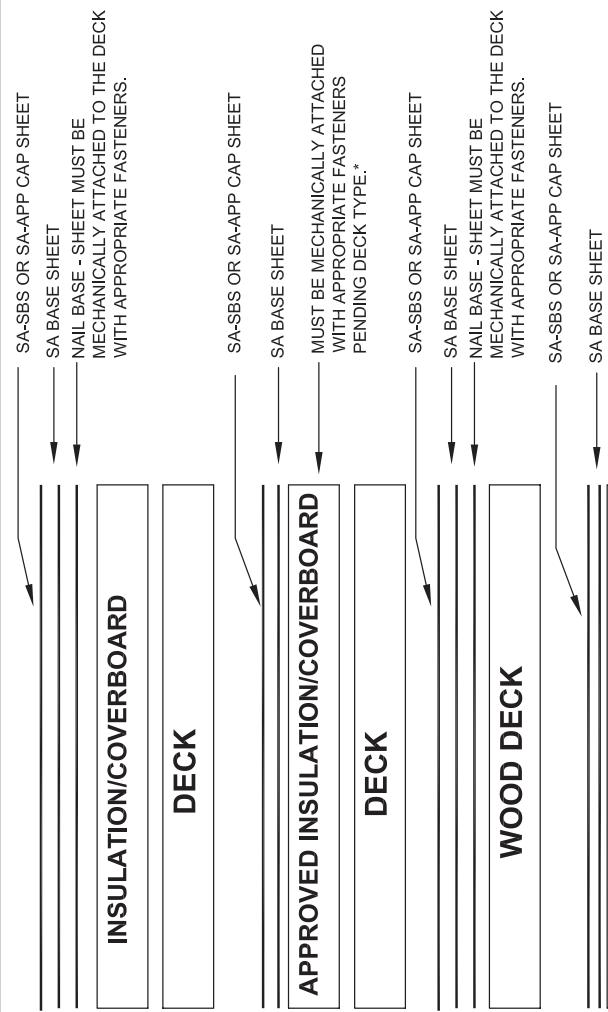
Refer to Mule-Hide's full specifications for additional requirements, this guide does not replace the Mule-Hide specifications.



NOTE: MINIMUM OF ONE PLY CAP SHEET ON VERTICAL SURFACES IS REQUIRED. REFER TO SPECIFIC DETAILS.

* APPROVED INSULATION MAY BE HOT MOPPED TO PRIMED STRUCTURAL CONCRETE DECK. CONTACT MULE-HIDE FOR SPECIFIC INFORMATION AND REQUIREMENTS.

MULE-HIDE PRODUCTS CO., INC. 2003	10-YEAR MEMBRANE ASSEMBLIES	DETAIL NO.: MH-MBA-1
	SELF-ADHERING MOD BIT SYSTEMS	



DETAIL NO.:
MH-MBA-2

MULE-HIDE PRODUCTS CO., INC. 2003	15-YEAR MEMBRANE ASSEMBLIES
	SELF-ADHERING MOD BIT SYSTEMS

SA-SBS OR SA-APP CAP SHEET
SA BASE SHEET
SA BASE SHEET
NAIL BASE - SHEET MUST BE
MECHANICALLY ATTACHED TO THE DECK
WITH APPROPRIATE FASTENERS.

INSULATION/COVERBOARD

DECK

SA-SBS OR SA-APP CAP SHEET

SA BASE SHEET
SA BASE SHEET

MUST BE MECHANICALLY ATTACHED
WITH APPROPRIATE FASTENERS
PENDING DECK TYPE.*

APPROVED INSULATION/COVERBOARD

DECK

SA-SBS OR SA-APP CAP SHEET

SA BASE SHEET
SA BASE SHEET
NAIL BASE - SHEET MUST BE
MECHANICALLY ATTACHED TO THE DECK
WITH APPROPRIATE FASTENERS.

SA-SBS OR SA-APP CAP SHEET
SA BASE SHEET
SA BASE SHEET

WOOD DECK

SA BASE SHEET
SA BASE SHEET

NOTE: MINIMUM OF 2 PLIES REQUIRED FOR VERTICAL SURFACES. REFER TO SPECIFIC DETAILS.

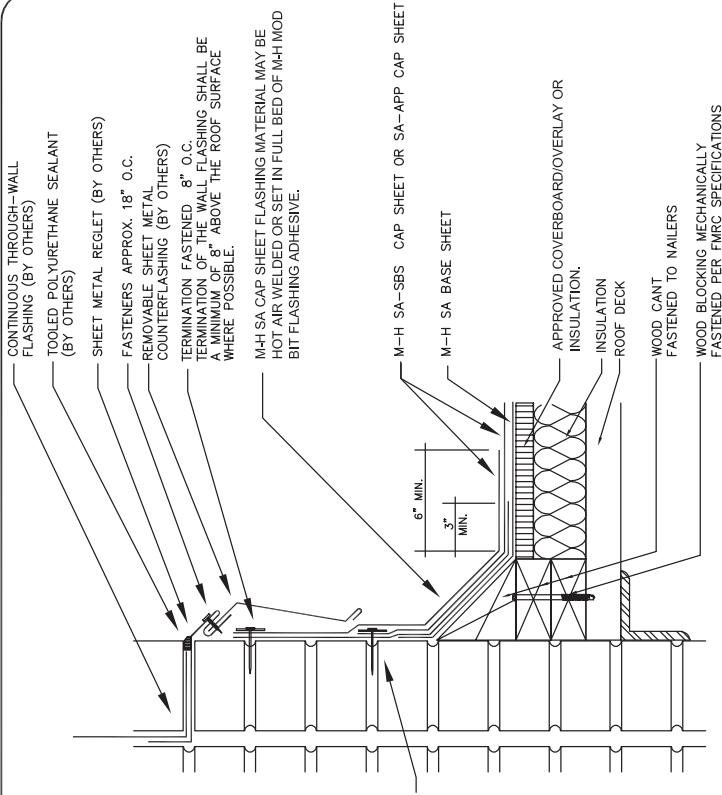
* APPROVED INSULATION MAY BE HOT MOPPED TO PRIMED STRUCTURAL CONCRETE DECK. CONTACT MULE-HIDE FOR SPECIFIC INFORMATION AND REQUIREMENTS.

**MULE-HIDE
PRODUCTS CO.,INC.
2003**

**DETAIL NO.:
MH-MBA-3**

- NOTES:
1. ACCEPTABLE MASONRY, METAL & WOOD SUBSTRATES MUST BE PRIMED WITH M-H #121 ASPHALT PRIMER PRIOR TO APPLICATION OF SELF-ADHERING MEMBRANES.
 2. FLASHING PILES INSTALLED OVER GRANULAR FIELD SHEET MUST BE SET IN A FULL BEDDING OF M-H MOD BIT FLASHING ADHESIVE OR HOT AIR WELDED.
 3. ALL WOOD BLOCKING TO BE ATTACHED PER FMRC GUIDELINES.
 4. IF USING A NON-ACCEPTABLE COVERBOARD/OVERLAY OR INSULATION, THE M-H NAIL BASE MUST BE INSTALLED AND MECHANICALLY ATTACHED TO THE DECK PRIOR TO THE INSTALLATION OF EITHER THE SA BASE SHEET OR SA CAP SHEETS.
 5. METAL FLASHING (BY OTHERS) SHALL BE INSTALLED FOLLOWING NFCA & SMA/NA GUIDELINES.

EXTENSION OF FIELD PILES ABOVE TOP OF CANT REQUIRED, 1" ABOVE FOR SA BASE SHEET AND 2" ABOVE FOR SA CAP SHEETS.
FIELD CAP SHEET TO BE MECHANICALLY ATTACHED 8° ON CENTER.



DETAIL NO.:
MH-MB-C1

BASE FLASHING W/CANT - OPTION 1
SELF-ADHERING MOD BIT SYSTEMS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

<p>NOTES:</p> <ol style="list-style-type: none"> ACCEPTABLE MASONRY, METAL & WOOD SUBSTRATES MUST BE PRIMED WITH M-H #121 ASPHALT PRIMER PRIOR TO APPLICATION OF SELF-ADHERING MEMBRANES. FLASHING FLUES INSTALLED OVER GRANULAR FIELD SHEET MUST BE SET IN A FULL BEDDING OF M-H MOD BIT FLASHING ADHESIVE OR HOT AIR WELDED. ALL WOOD BLOCKING TO BE ATTACHED PER FMRC GUIDELINES. IF USING A NON-ACCEPTABLE COVERBOARD/OVERLAY OR INSULATION, THE M-H NAIL BASE MUST BE INSTALLED AND MECHANICALLY ATTACHED TO THE DECK PRIOR TO THE INSTALLATION OF EITHER THE SA BASE SHEET OR SA CAP SHEETS. METAL FLASHING (BY OTHERS) SHALL BE INSTALLED FOLLOWING NFCA & SMA/NA GUIDELINES. <p>EXTENSION OF FIELD CAP SHEET ABOVE TOP OF CANT REQUIRED. 2" ABOVE FOR SA CAP SHEETS. FIELD CAP SHEET TO BE MECHANICALLY ATTACHED 8" ON CENTER.</p> <p>The diagram illustrates a cross-section of a roof-to-wall junction. Key components labeled include: - CONTINUOUS THROUGH-WALL FLASHING (BY OTHERS) - TOOL ED POLYURETHANE SEALANT (BY OTHERS) - SHEET METAL REGLET (BY OTHERS) - FASTENERS APPROX. 18° O.C. - REMOVABLE SHEET METAL COUNTERFLASHING (BY OTHERS) - TERMINATION FASTENED 8" O.C. - TERMINATION OF THE WALL FLASHING SHALL BE A MINIMUM OF 8" ABOVE THE ROOF SURFACE WHERE POSSIBLE. - M-H SA CAP SHEET FLASHING MATERIAL MAY BE HOT AIR WELDED OR SET IN FULL BED OF M-H MOD BIT FLASHING ADHESIVE. - APPROVED COVERBOARD/OVERLAY OR INSULATION - INSULATION - ROOF DECK - WOOD CANT - FASTENED TO NAILERS - WOOD BLOCKING MECHANICALLY FASTENED PER FMRC SPECIFICATIONS - M-H SA-SES CAP SHEET OR SA-APP CAP SHEET - 6" MIN.</p>	<p>DETAIL NO.: MH-MB-C2</p> <p>MULE-HIDE PRODUCTS CO., INC. 2003</p> <p>BASE FLASHING W/CANT - OPTION 2</p> <p>SELF-ADHERING MOD BIT SYSTEMS</p>
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NOTES:

1. ACCEPTABLE MASONRY, METAL & WOOD SUBSTRATES MUST BE PRIMED WITH M-H #121 ASPHALT PRIMER PRIOR TO APPLICATION OF SELF-ADHERING MEMBRANES.
2. FLASHING FLUES INSTALLED OVER GRANULAR FIELD SHEET MUST BE SET IN A FULL BEDDING OF M-H MOD BIT FLASHING ADHESIVE OR HOT AIR WELDED.
3. ALL WOOD BLOCKING TO BE ATTACHED PER FMRC GUIDELINES.
4. IF USING A NON-ACCEPTABLE COVERBOARD/OVERLAY OR INSULATION, THE M-H NAIL BASE MUST BE INSTALLED AND MECHANICALLY ATTACHED TO THE DECK PRIOR TO THE INSTALLATION OF EITHER THE SA BASE SHEET OR SA CAP SHEETS.
5. METAL FLASHING (BY OTHERS) SHALL BE INSTALLED FOLLOWING NFCA & SMACNA GUIDELINES.

EXTENSION OF FIELD CAP SHEET ABOVE TOP OF CANT REQUIRED. 2" ABOVE FOR SA CAP SHEETS. FIELD CAP SHEET TO BE MECHANICALLY ATTACHED 8" ON CENTER.

CONTINUOUS THROUGH-WALL

FLASHING (BY OTHERS)

TOOLED POLYURETHANE SEALANT (BY OTHERS)

SHEET METAL REGLET (BY OTHERS)

FASTENERS APPROX. 18° O.C.

REMOVABLE SHEET METAL COUNTERFLASHING (BY OTHERS)

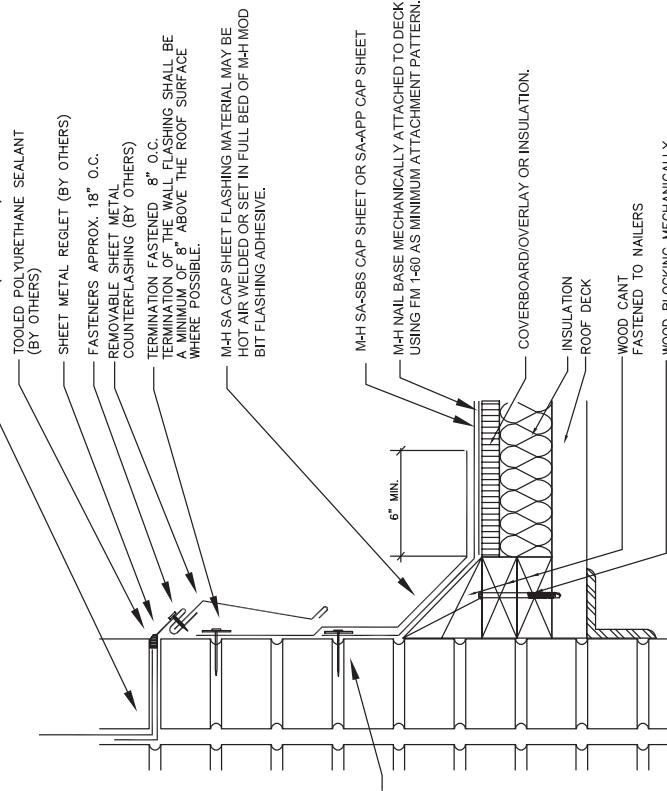
TERMINATION FASTENED 8" O.C. TERMINATION OF THE WALL FLASHING SHALL BE A MINIMUM OF 8" ABOVE THE ROOF SURFACE WHERE POSSIBLE.

M-H SA-SBS CAP SHEET OR SA-APP CAP SHEET
M-H NAIL BASE MECHANICALLY ATTACHED TO DECK
USING FM 1-60 AS MINIMUM ATTACHMENT PATTERN.

COVERBOARD/OVERLAY OR INSULATION.

INSULATION
ROOF DECK

WOOD CANT
FASTENED TO NAILERS
WOOD BLOCKING MECHANICALLY
FASTENED PER FMRC SPECIFICATIONS



DETAIL NO.:
MH-MB-C3

BASE FLASHING W/CANT - OPTION 3
SELF-ADHERING MOD BIT SYSTEMS

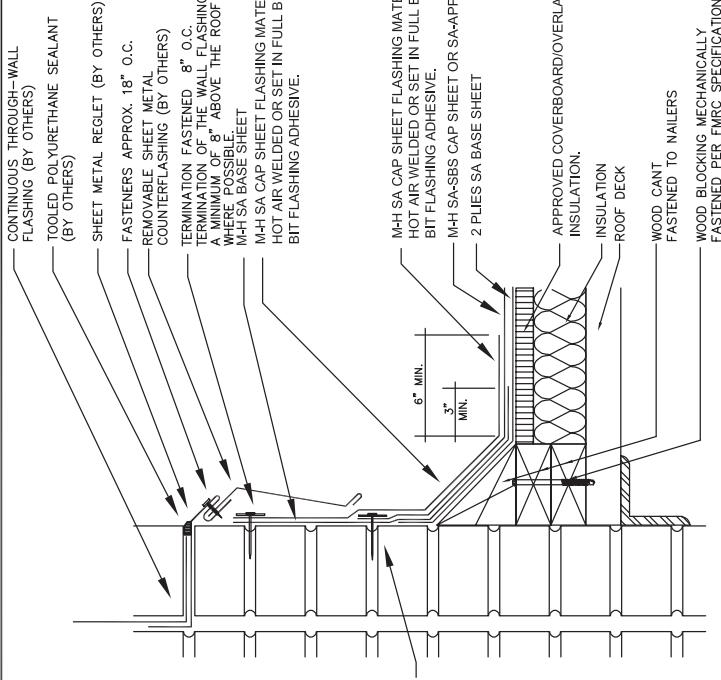
MULE-HIDE
PRODUCTS CO., INC.
2003

NOTES:

- ACCEPTABLE MASONRY, METAL & WOOD SUBSTRATES MUST BE PRIMED WITH M-H #121 ASPHALT PRIMER PRIOR TO APPLICATION OF SELF-ADHERING MEMBRANES.
- FLASHING PILES INSTALLED OVER GRANULAR FIELD SHEET MUST BE SET IN A FULL BEDDING OF M-H MOD BIT FLASHING ADHESIVE OR HOT AIR WELDED.
- ALL WOOD BLOCKING TO BE ATTACHED PER FMRC GUIDELINES.
- IF USING A NONAPPROVED COVERBOARD/OVERLAY OR INSULATION, THE M-H NAIL BASE MUST BE INSTALLED AND MECHANICALLY ATTACHED TO THE DECK PRIOR TO THE INSTALLATION OF THE SA BASE SHEETS.
- METAL FLASHING (BY OTHERS) SHALL BE INSTALLED FOLLOWING NICCA & SMACNA GUIDELINES.

EXTENSION OF FIELD PILES ABOVE TOP OF CANT REQUIRED, 1" ABOVE FOR SA BASE SHEET AND 2" ABOVE FOR SA CAP SHEETS.
FIELD CAP SHEET TO BE MECHANICALLY ATTACHED 8° ON CENTER.

NOTE:
20-YR WARRANTIES REQUIRE 2 PLIES OF SA BASE SHEET ON THE FIELD OF THE ROOF.



DETAIL NO.:
MH-MB-C4

BASE FLASHING W/CANT - OPTION 4
SELF-ADHERING MOD BIT SYSTEMS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

1 PLY INSTALLATION

NOTES:

1. AN AREA DIVIDER IS A RAISED DOUBLE WOOD MEMBER THAT IS PROPERLY ANCHORED TO THE ROOF DECK. AREA DIVIDERS SHOULD NEVER RESTRICT THE FLOW OF WATER.
2. FLASHING REQUIREMENTS TYPICAL FOR BOTH SIDES OF THE AREA DIVIDER.
3. REFER TO THE SHEET METAL SECTION OF THE NRCA ROOFING AND WATERPROOFING MANUAL FOR JOINERY AND SECUREMENT OPTIONS FOR SHEET METAL.

SHEET METAL AREA DIVIDER COVER

GASKETED FASTENERS

MULE-HIDE SA-SBS CAP SHEET OR SAAPP CAP SHEET

CAP SHEET ATTACHMENT
12" O.C. MAX.

6" MIN.

FLASHING MAY BE SET IN A BED OF
MH MOD BIT FLASHING ADHESIVE
OR HOT AIR WELDED. THE 4"
TURN-UP OF THE CAP SHEET MUST

BE SOFTENED WITH HOT AIR TO
EXPOSE ASPHALT OR COATED
WITH MH MOD BIT FLASHING
ADHESIVE PRIOR TO APPLICATION
OF THE CAP SHEET FLASHING
MATERIAL.

APPROVED COVERBOARD,
OVERLAY, APPROVED
INSULATION OR OTHER
APPROVED SUBSTRATE.
INSULATION

WOOD NAILERS

ROOF DECK

DETAIL NO.:

MH-MB-AD1

**BASE FLASHING - AREA DIVIDER
OPTION 1**

SELF-ADHERING MOD BIT SYSTEMS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

NOTES:

1. AN AREA DIVIDER IS A RAISED DOUBLE WOOD MEMBER THAT IS PROPERLY ANCHORED TO THE ROOF DECK. AREA DIVIDERS SHOULD NEVER RESTRICT THE FLOW OF WATER.
2. FLASHING REQUIREMENTS TYPICAL FOR BOTH SIDES OF THE AREA DIVIDER.
3. REFER TO THE SHEET METAL SECTION OF THE NRCA ROOFING AND WATERPROOFING MANUAL FOR JOINERY AND SECUREMENT OPTIONS FOR SHEET METAL.

1 PLY INSTALLATION (WITH NAIL BASE)

SHEET METAL AREA DIVIDER COVER

GASKETED FASTENERS

MULE-HIDE SA-SBS CAP SHEET OR SAAPP CAP SHEET

M-H NAIL BASE MECHANICALLY ATTACHED

CAP SHEET ATTACHMENT 12" O.C. MAX.

4" MIN.

WOOD NAILERS

ROOF DECK

FLASHING MAY BE SET IN A BED OF
M-H MOD BIT FLASHING ADHESIVE
OR HOT AIR WELDED. THE 4"

TURNLUP OF THE CAP SHEET MUST
BE SOFTENED WITH HOT AIR TO
EXPOSE ASPHALT OR COATED
WITH M-H MOD BIT FLASHING
ADHESIVE PRIOR TO THE
APPLICATION OF THE CAP SHEET
FLASHING MATERIAL.

COVERBOARD/OVERLAY OR
INSULATION

FLASHING ON LOW SIDE
8" [200 mm] MINIMUM

6" MIN.

BASE SHEET
ATTACHMENT
8" O.C. →

INSULATION

**MULE-HIDE
PRODUCTS CO., INC.
2003**

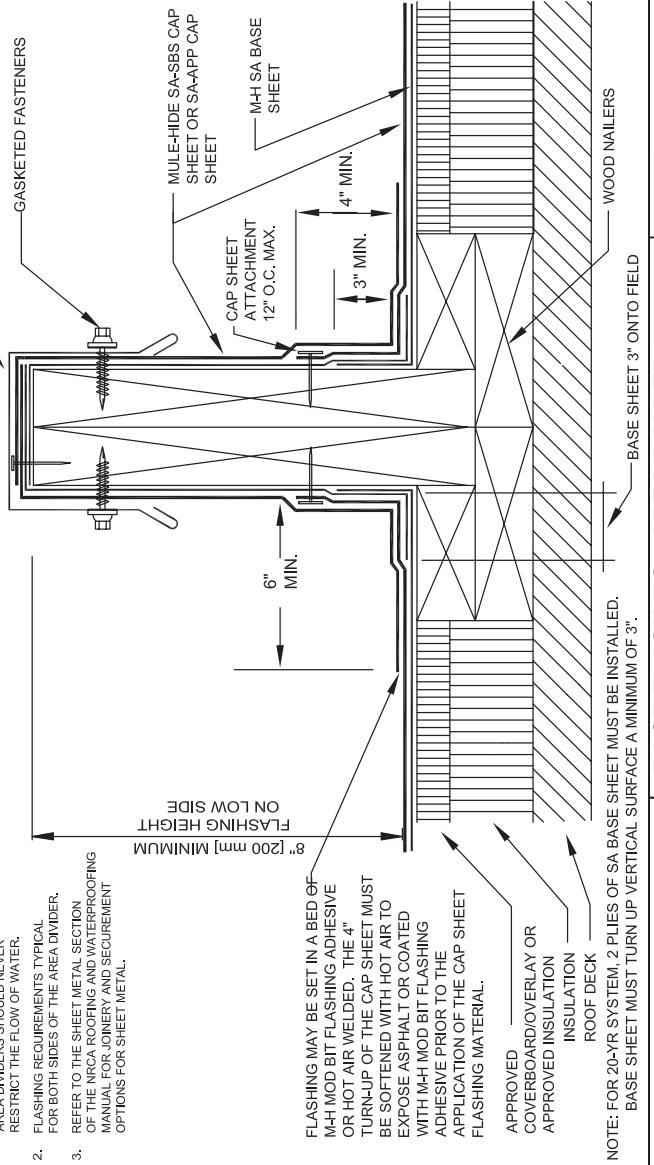
**BASE FLASHING - AREA DIVIDER
OPTION 2**

**DETAIL NO.:
MH-MB-AD2**

2 PLY INSTALLATION

NOTES:

1. AN AREA DIVIDER IS A RAISED DOUBLE WOOD MEMBER THAT IS PROPERLY ANCHORED TO THE ROOF DECK. AREA DIVIDERS SHOULD NEVER RESTRICT THE FLOW OF WATER.
2. FLASHING REQUIREMENTS TYPICAL FOR BOTH SIDES OF THE AREA DIVIDER.
3. REFER TO THE SHEET METAL SECTION OF THE NRCA ROOFING AND WATERPROOFING MANUAL FOR JOINERY AND SECUREMENT OPTIONS FOR SHEET METAL.



**MULE-HIDE
PRODUCTS CO., INC.
2003**

**BASE FLASHING - AREA DIVIDER
OPTION 3**

**DETAIL NO.:
MH-MB-AD3**

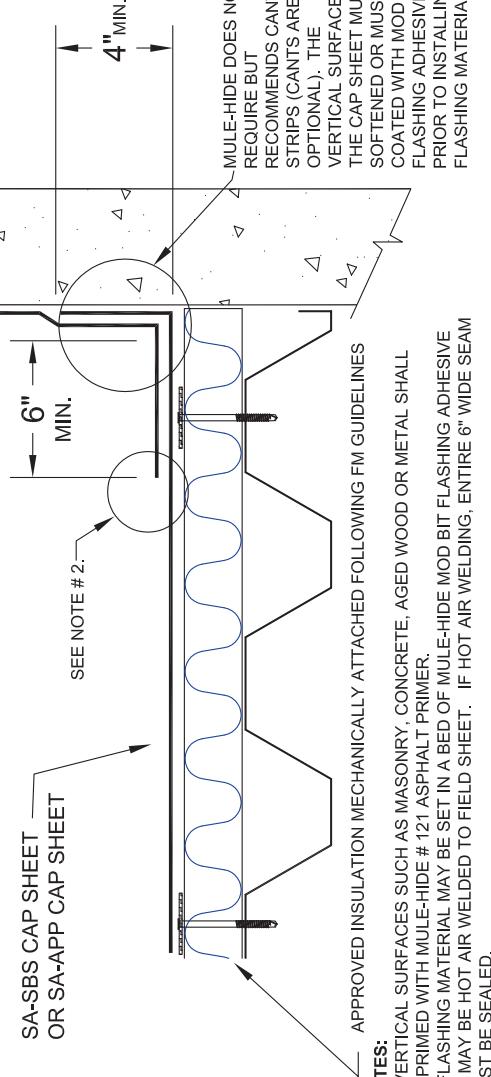
LOW PARAPET WALL FLASHING HEIGHT NOT TO EXCEED 24"

ANY APPROVED TERMINATION

SA-SBS CAP SHEET
OR SA-APP CAP SHEET
ADHERED TO PRIMED
SURFACE.

SA-SBS CAP SHEET
OR SA-APP CAP SHEET

SEE NOTE # 2.



APPROVED INSULATION MECHANICALLY ATTACHED FOLLOWING FM GUIDELINES

NOTES:

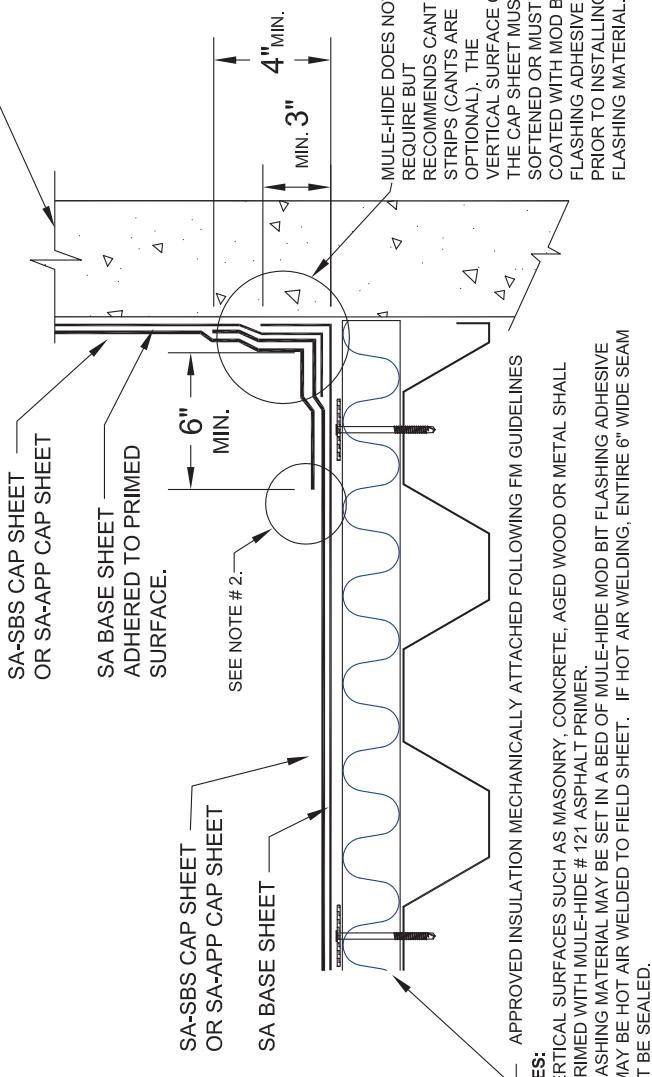
1. VERTICAL SURFACES SUCH AS MASONRY, CONCRETE, AGED WOOD OR METAL SHALL BE PRIMED WITH MULE-HIDE # 121 ASPHALT PRIMER.
2. FLASHING MATERIAL MAY BE SET IN A BED OF MULE-HIDE MOD BIT FLASHING ADHESIVE OR MAY BE HOT AIR WELDED TO FIELD SHEET. IF HOT AIR WELDING, ENTIRE 6" WIDE SEAM MUST BE SEALED.

**MULE-HIDE
PRODUCTS CO., INC.
2003**

BASE FLASHING - OPTION 1

**DETAIL NO.:
MH-MB-BF1**

LOW PARAPET WALL FLASHING HEIGHT NOT TO EXCEED 24"

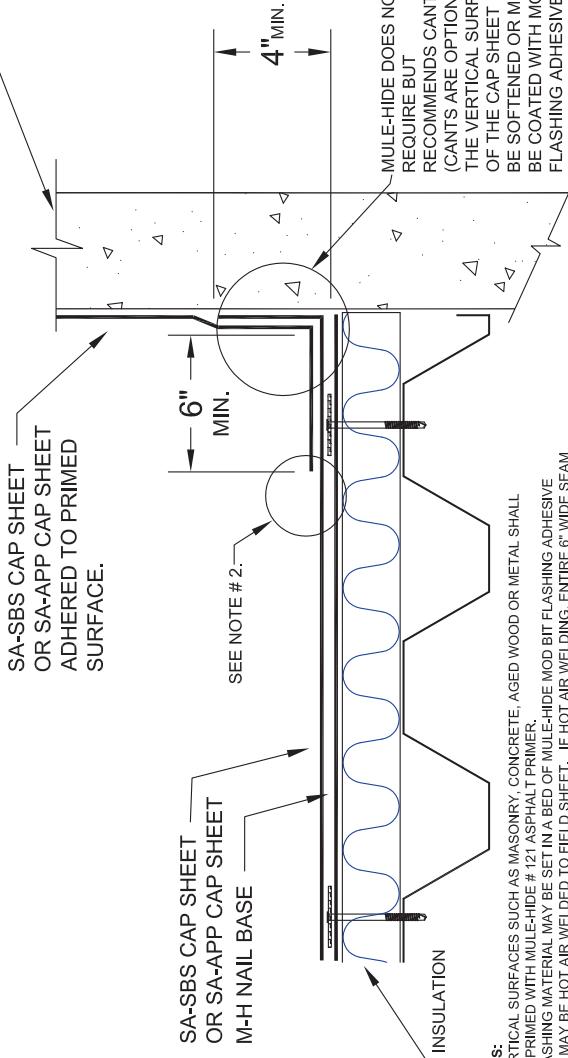


**MULE-HIDE
PRODUCTS CO., INC.
2003**

**BASE FLASHING - OPTION 2
SELF-ADHERING MOD BIT SYSTEMS**

**DETAIL NO.:
MH-MB-BF2**

LOW PARAPET WALL FLASHING HEIGHT NOT TO EXCEED 24"



DETAIL NO.:
MH-MB-BF3

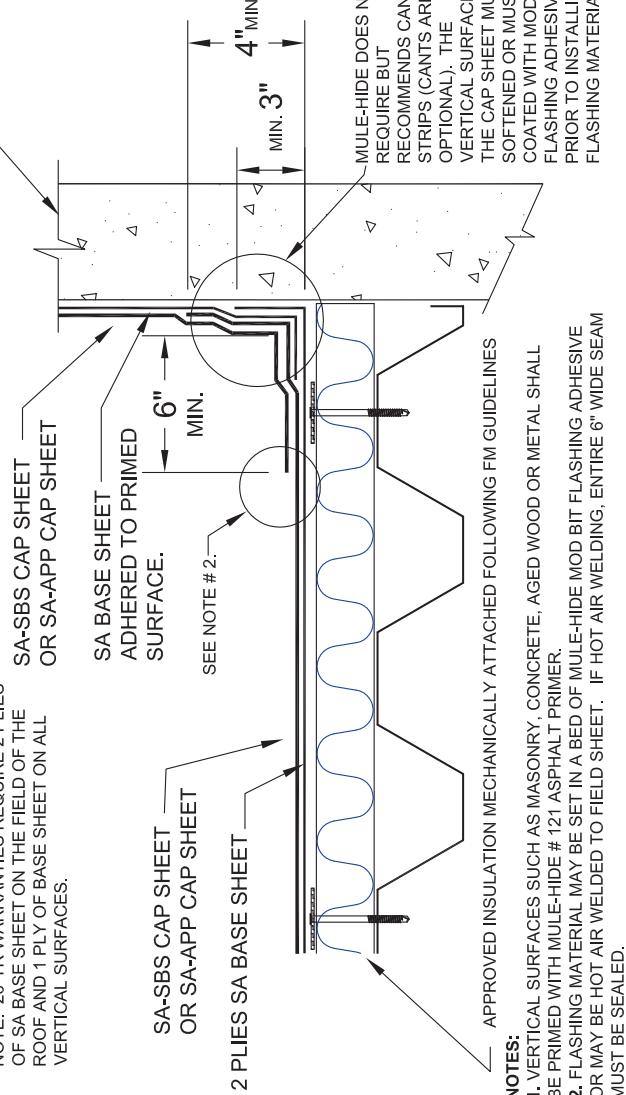
BASE FLASHING - OPTION 3
SELF-ADHERING MOD BIT SYSTEMS

MULE-HIDE
PRODUCTS CO., INC.
2014

LOW PARAPET WALL FLASHING HEIGHT NOT TO EXCEED 24"

NOTE: 20-YR WARRANTIES REQUIRE 2 PLIES OF SA BASE SHEET ON THE FIELD OF THE ROOF AND 1 PLY OF BASE SHEET ON ALL VERTICAL SURFACES.

ANY APPROVED TERMINATION



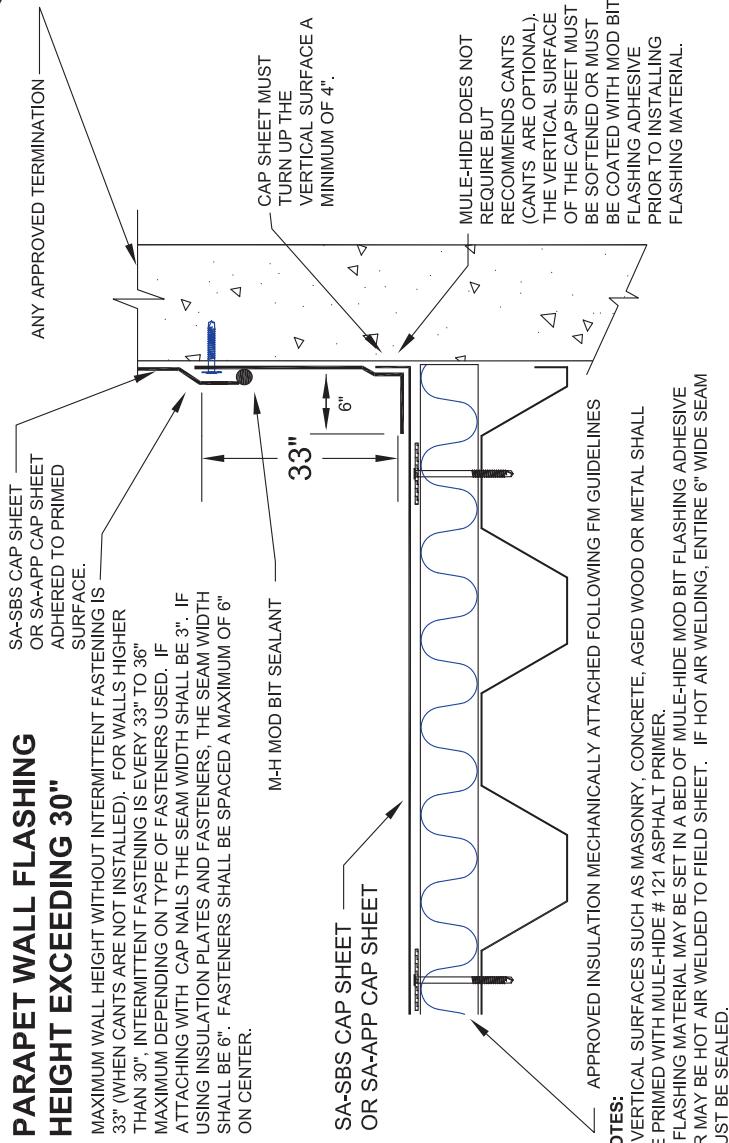
**MULE-HIDE
PRODUCTS CO., INC.**
2014

BASE FLASHING - OPTION 4

**DETAIL NO.:
MH-MB-BF4**

PARAPET WALL FLASHING HEIGHT EXCEEDING 30"

MAXIMUM WALL HEIGHT WITHOUT INTERMITTENT FASTENING IS 33" (WHEN CANTS ARE NOT INSTALLED). FOR WALLS HIGHER THAN 30", INTERMITTENT FASTENING IS EVERY 33" TO 36" MAXIMUM DEPENDING ON TYPE OF FASTENERS USED. IF ATTACHING WITH CAP NAILS THE SEAM WIDTH SHALL BE 3". IF USING INSULATION PLATES AND FASTENERS, THE SEAM WIDTH SHALL BE 6". FASTENERS SHALL BE SPACED A MAXIMUM OF 6" ON CENTER.



MULE-HIDE PRODUCTS CO., INC. 2014	BASE FLASHING - OPTION 5	DETAIL NO.: MH-MB-BF5
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PARAPET WALL FLASHING HEIGHT EXCEEDING 30"

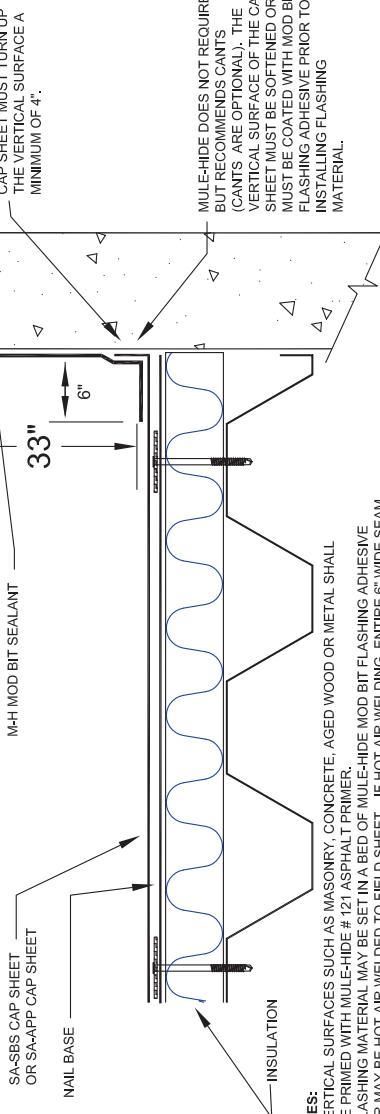
MAXIMUM WALL HEIGHT WITHOUT INTERMITTENT FASTENING IS 33" (WHEN CANTS ARE NOT INSTALLED). FOR WALLS HIGHER THAN 30", INTERMITTENT FASTENING IS EVERY 33" TO 36" MAXIMUM DEPENDING ON TYPE OF FASTENERS USED. IF ATTACHING WITH CAP NAILS THE SEAM WIDTH SHALL BE 3". IF USING INSULATION PLATES AND FASTENERS, THE SEAM WIDTH SHALL BE 6". FASTENERS SHALL BE SPACED A MAXIMUM OF 6" ON CENTER.

S-ABS CAP SHEET
OR SAAPP CAP SHEET
ADHERED TO PRIMED SURFACE.

CAP SHEET MUST TURN UP
THE VERTICAL SURFACE A
MINIMUM OF 4".

M-H MOD BIT SEALANT
M-H APP CAP SHEET

NAIL BASE
INSULATION



NOTES:

1. VERTICAL SURFACES SUCH AS MASONRY, CONCRETE, AGED WOOD OR METAL SHALL BE PRIMED WITH MULE-HIDE #121 ASPHALT PRIMER.
2. FLASHING MATERIAL MAY BE SET IN A BED OF MULE-HIDE MOD BIT FLASHING ADHESIVE OR MAY BE HOT AIR WELDED TO FIELD SHEET. IF HOT AIR WELDING, ENTIRE 6" WIDE SEAM MUST BE SEALED.
3. INSULATION SHOULD BE MECHANICALLY ATTACHED SUFFICIENTLY TO HOLD IN PLACE PRIOR TO INSTALLING THE NAIL BASE.
4. NAIL BASE SHALL BE MECHANICALLY ATTACHED IN COMPLIANCE WITH FM ATTACHMENT GUIDELINES. THE MINIMUM ATTACHMENT PATTERN IS FM 1-60. REFER TO DETAIL: MH-ME-NB-FM 1-60.

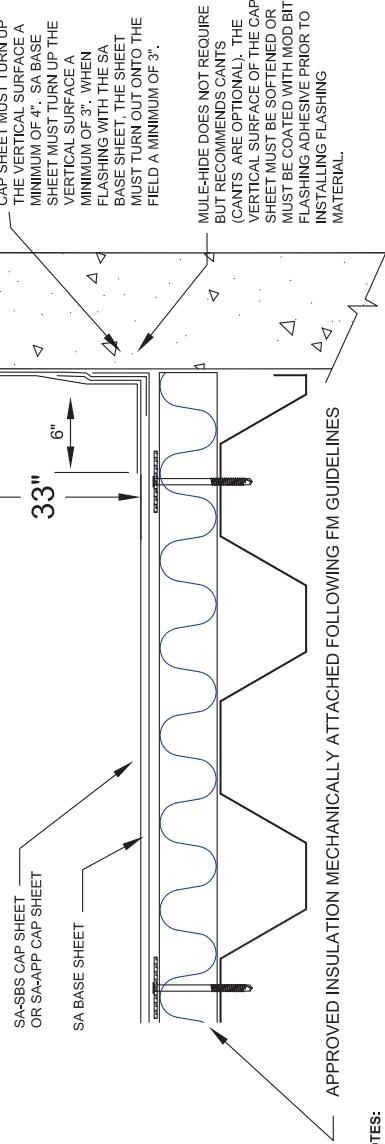
**MULE-HIDE
PRODUCTS CO., INC.
2014**

**BASE FLASHING - OPTION 6
SELF-ADHERING MOD BIT SYSTEMS**

**DETAIL NO.:
MH-MB-BF6**

PARAPET WALL FLASHING HEIGHT EXCEEDING 30"

MAXIMUM WALL HEIGHT WITHOUT INTERMITTENT FASTENING IS 33" (WHEN CANTS ARE NOT INSTALLED). FOR WALLS HIGHER THAN 30", INTERMITTENT FASTENING IS EVERY 33" TO 36" MAXIMUM DEPENDING ON TYPE OF FASTENERS USED. IF ATTACHING WITH CAP NAILS THE SEAM WIDTH SHALL BE 3". IF USING INSULATION PLATES AND FASTENERS, THE SEAM WIDTH SHALL BE 6". FASTENERS SHALL BE SPACED A MAXIMUM OF 6" ON CENTER.



NOTES:

1. VERTICAL SURFACES SUCH AS MASONRY, CONCRETE, AGED WOOD OR METAL SHALL BE PRIMED WITH MULE-HIDE # 211 ASPHALT PRIMER.
2. FLASHING MATERIAL MAY BE SET IN A BED OF MULE-HIDE MOD BIT FLASHING ADHESIVE OR MAY BE HOT AIR WELDED TO FIELD SHEET. IF HOT AIR WELDING, ENTIRE 6" WIDE SEAM MUST BE SEALED.

**MULE-HIDE
PRODUCTS CO., INC.
2003**

BASE FLASHING - OPTION 7
SELF-ADHERING MOD BIT SYSTEMS

**DETAIL NO.:
MH-MB-BF7**

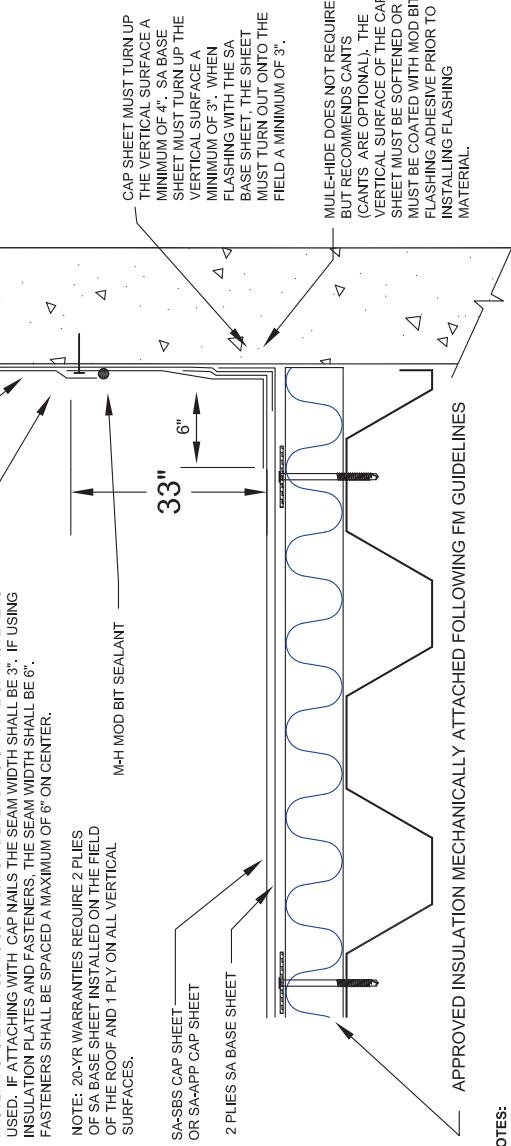
PARAPET WALL FLASHING HEIGHT EXCEEDING 30"

MAXIMUM WALL HEIGHT WITHOUT INTERMITTENT FASTENING IS 33" (WHEN CANTS ARE NOT INSTALLED). FOR WALLS HIGHER THAN 30", INTERMITTENT FASTENING IS EVERY 33" TO 36" MAXIMUM DEPENDING ON TYPE OF FASTENERS USED. IF ATTACHING WITH CAP NAILS THE SEAM WIDTH SHALL BE 3". IF USING INSULATION PLATES AND FASTENERS, THE SEAM WIDTH SHALL BE 6". FASTENERS SHALL BE SPACED A MAXIMUM OF 6" ON CENTER.

NOTE: 20 YR WARRANTY REQUIRES 2 PILES OF SA BASE SHEET INSTALLED ON THE FIELD OF THE ROOF AND 1 PLY ON ALL VERTICAL SURFACES.

SA-SBS CAP SHEET
OR SA-APP CAP SHEET
2 PILES SA BASE SHEET

ANY APPROVED TERMINATION



NOTES:

1. VERTICAL SURFACES SUCH AS MASONRY, CONCRETE, AGED WOOD OR METAL SHALL BE PRIMED WITH MULE-HIDE # 210 ASPHALT PRIMER.
2. FLASHING MATERIAL MAY BE SET IN A BED OF MULE-HIDE MOD BIT FLASHING ADHESIVE OR MAY BE HOT AIR WELDED TO FIELD SHEET. IF HOT AIR WELDING, ENTIRE 6" WIDE SEAM MUST BE SEALED.

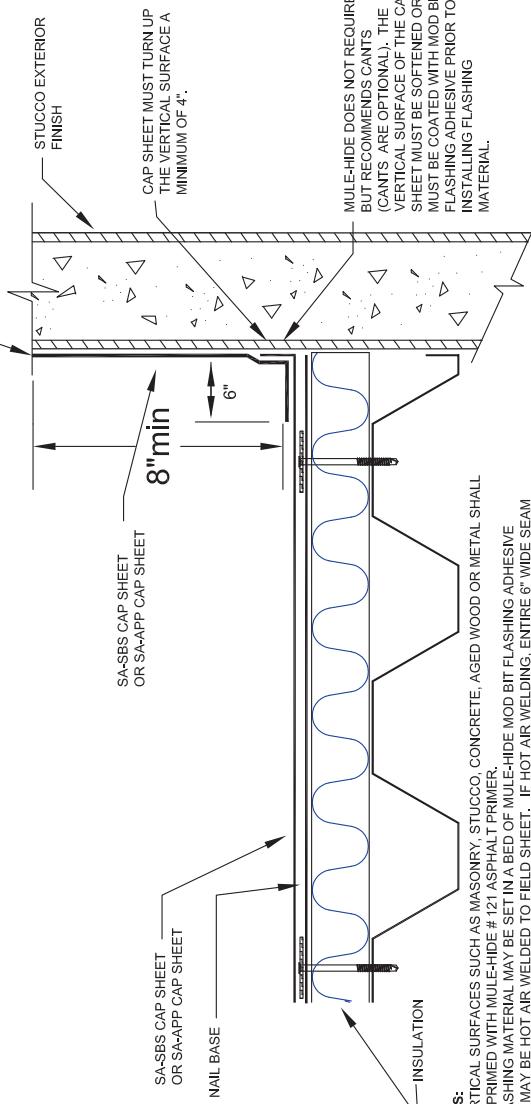
**MULE-HIDE
PRODUCTS CO., INC.
2003**

**BASE FLASHING - OPTION 8
SELF-ADHERING MOD BIT SYSTEMS**

**DETAIL NO.:
MH-MB-BF8**

PARAPET WALL FLASHING SURFACE TERMINATION

ANY APPROVED TERMINATION



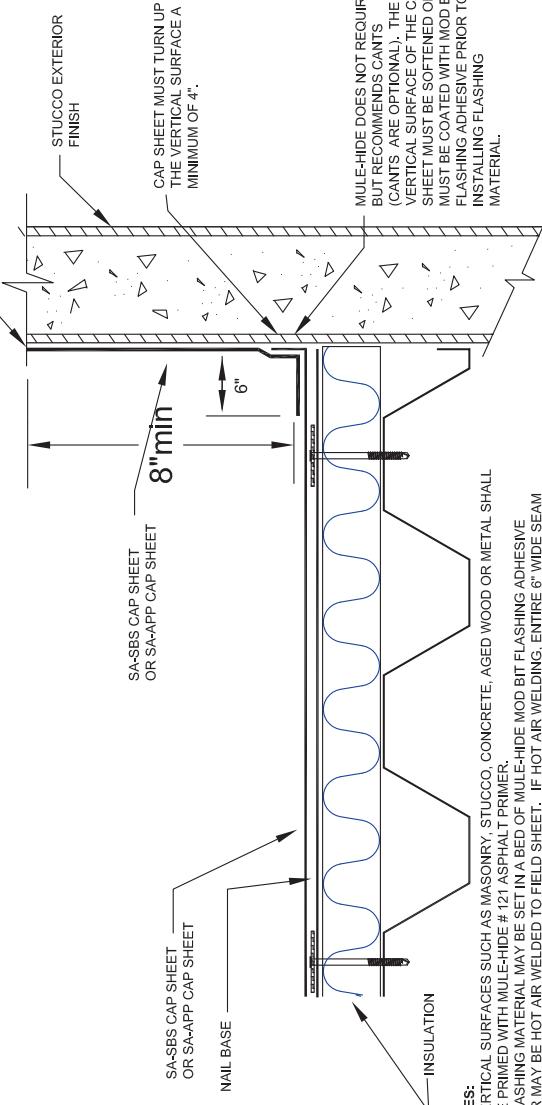
DETAIL NO.:
MH-MB-BF9

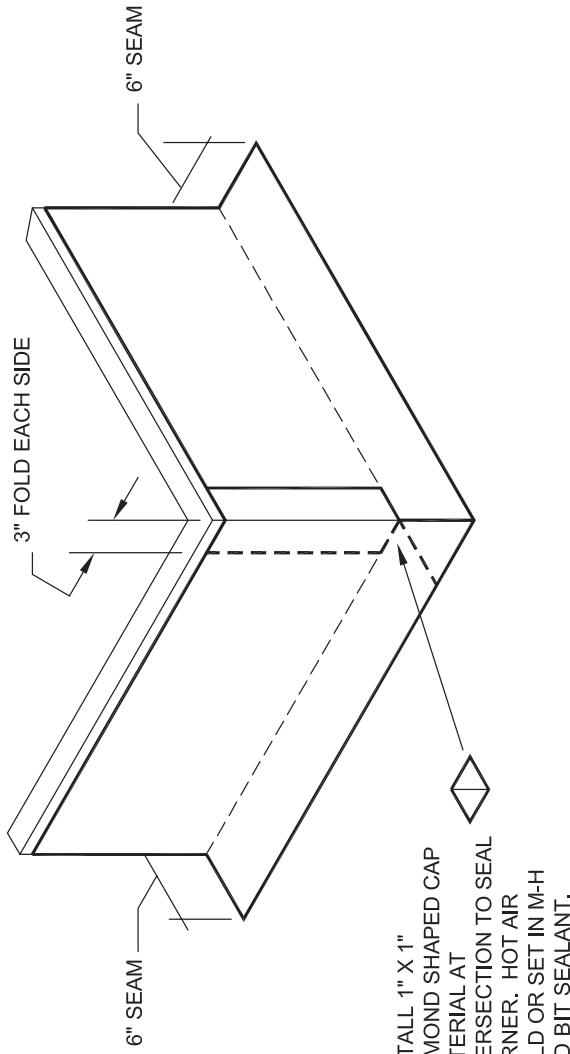
BASE FLASHING - OPTION 9
SELF-ADHERING MOD BIT SYSTEMS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

PARAPET WALL FLASHING SURFACE TERMINATION

ANY APPROVED TERMINATION

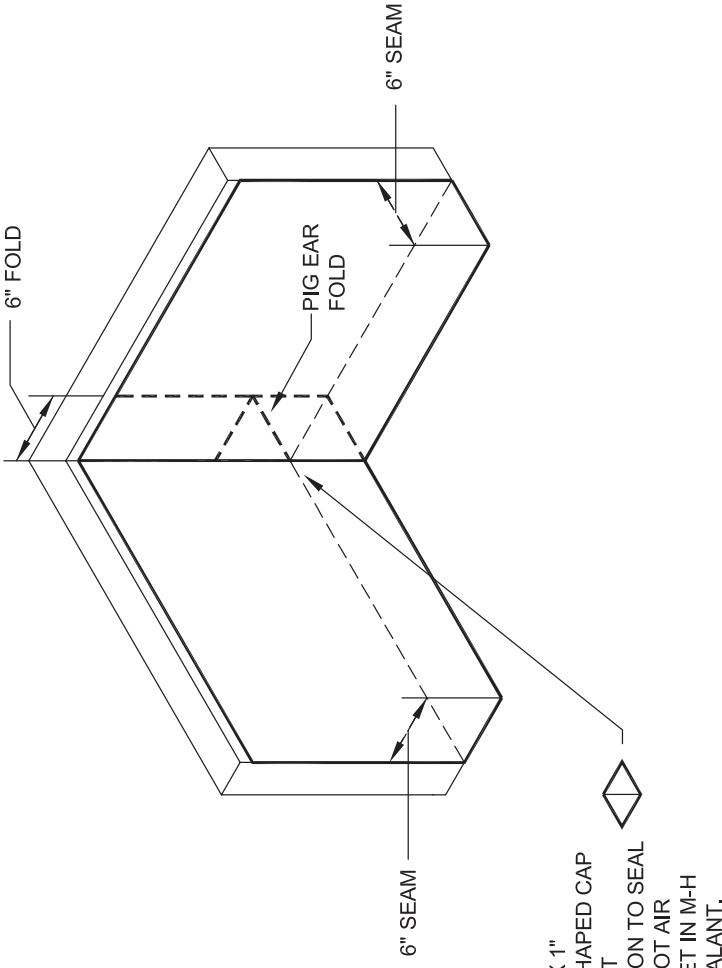




DETAIL NO.:
MH-MB-M1

OUTSIDE CORNER
SELF-ADHERING MOD BIT SYSTEMS

**MULE-HIDE
PRODUCTS CO., INC.
2003**



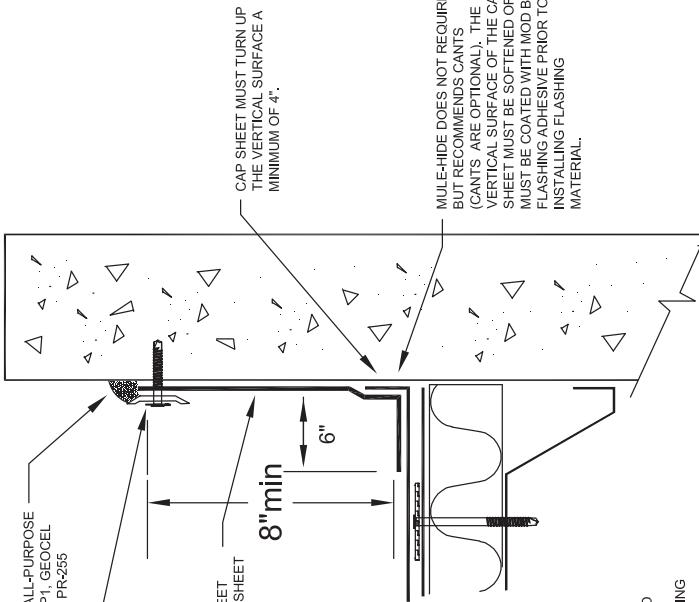
DETAIL NO.:
MH-MB-M2

INSIDE CORNER
SELF-ADHERING MOD BIT SYSTEMS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

PARAPET WALL FLASHING SURFACE TERMINATION

TOP OF FLASHINGS MUST BE MECHANICALLY TERMINATED WITH TERMINATION BAR AND APPROPRIATE FASTENERS SPACED 6" ON CENTER. THE STRUCTURAL WALL CONCRETE, WOOD, ETC., THE TOP OF THE TERMINATION BAR MUST BE SEALED WITH AN APPROVED CAULK, IF NOT INSTALLING A TERMINATION BAR, THE FLASHING MUST BE MECHANICALLY ATTACHED 8" O.C. AND A METAL COUNTERFLASHING MUST BE INSTALLED TO COVER THE TOP OF THE MOD BIT FLASHING MATERIAL.



- NOTES:**
1. VERTICAL SURFACES SUCH AS MASONRY, STUCCO, CONCRETE, AGED WOOD OR METAL SHALL BE PRIMED WITH MULE-HIDE # 121 ASPHALT PRIMER. PRIMER MUST BE THOROUGHLY DRY BEFORE APPLICATION OF SELF-ADHERING MEMBRANES.

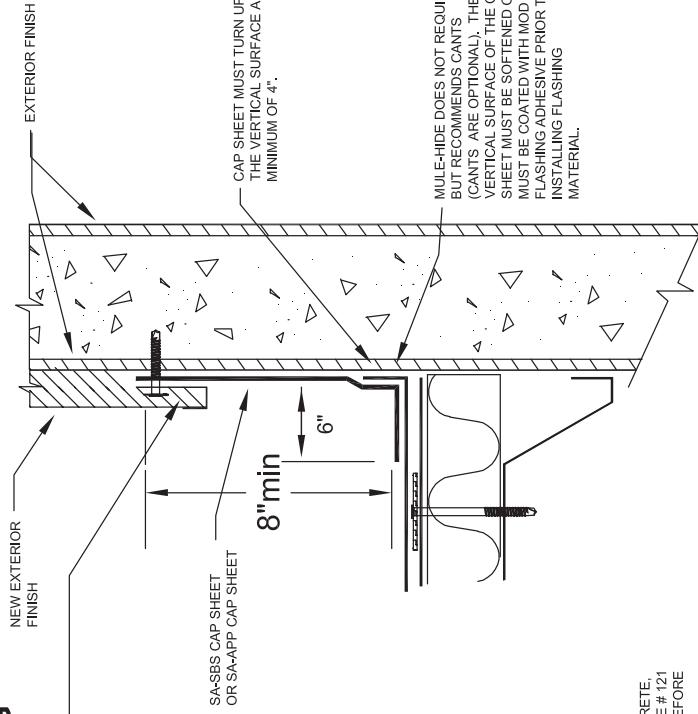
**MULE-HIDE
PRODUCTS CO., INC.
2003**

WALL FLASHING TERMINATION - 1

**DETAIL NO.:
MH-MB-WFT01**

PARAPET WALL FLASHING SURFACE TERMINATION

TOP OF FLASHINGS MUST BE MECHANICALLY TERMINATED. "J" STYLE METAL MATERIAL USED IN CONJUNCTION WITH AN EXTERIOR FINISH MATERIAL (NEW STUCCO OR SIDING) MAY BE INSTALLED OVER THE FLASHINGS (ACTING AS A TERMINATION BAR) WITH APPROPRIATE FASTENERS SPACED 8" ON CENTER. THE FASTENERS MUST PENETRATE AND ANCHOR INTO THE STRUCTURAL WALL (CONCRETE, WOOD, BLOCK, ETC.)



- NOTES:**
1. VERTICAL SURFACES SUCH AS MASONRY, STUCCO, CONCRETE, AGED WOOD OR METAL SHALL BE PRIMED WITH MULE-HIDE #121 ASPHALT PRIMER. PRIMER MUST BE THOROUGHLY DRY BEFORE APPLICATION OF SELF-ADHERING MEMBRANES.

**MULE-HIDE
PRODUCTS CO., INC.
2003**

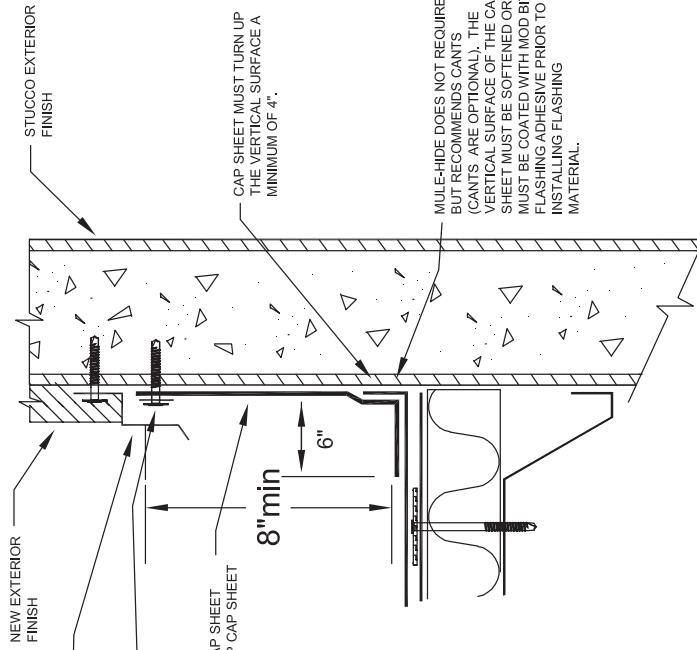
WALL FLASHING TERMINATION - 2

**DETAIL NO.:
MH-MB-WFT02**

PARAPET WALL FLASHING SURFACE TERMINATION

"Z" STYLE METAL MATERIAL USED IN CONJUNCTION WITH AN EXTERIOR FINISH MATERIAL (NEW STUCCO, SIDING, ETC.) MAY BE INSTALLED OVER THE FLASHINGS.

THE TOP OF THE SELF-ADHERING MOD BIT FLASHINGS MUST BE MECHANICALLY ATTACHED WITH APPROPRIATE FASTENERS SPACED A MAXIMUM OF 6" ON CENTER. THE FASTENERS MUST PENETRATE AND ANCHOR INTO THE STRUCTURAL WALL (CONCRETE, WOOD, BLOCK, ETC.).



NOTES:

1. VERTICAL SURFACES SUCH AS MASONRY, STUCCO, CONCRETE, AGED WOOD OR METAL SHALL BE PRIMED WITH MOLE-HIDE #121 ASPHALT PRIMER. PRIMER MUST BE THOROUGHLY DRY BEFORE APPLICATION OF SELF-ADHERING MEMBRANES.

**MULE-HIDE
PRODUCTS CO., INC.
2003**

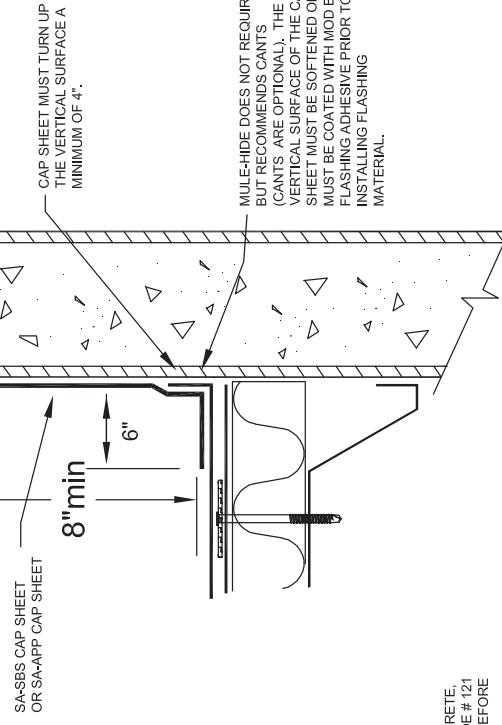
WALL FLASHING TERMINATION - 3

**DETAIL NO.:
MH-MB-WFT03**

PARAPET WALL FLASHING REGLET TERMINATION

TOP OF FLASHINGS MUST BE MECHANICALLY TERMINATED. SELF-ADHERING MOD BIT FLASHINGS MUST BE FASTENED WITH APPROPRIATE FASTENERS SPACED A MAXIMUM OF 8" ON CENTER. THE FASTENERS MUST PENETRATE AND ANCHOR INTO THE STRUCTURAL WALL (CONCRETE, WOOD, BLOCK, ETC.).

METAL WEDGE
CAULK (BY OTHERS)
METAL COUNTERFLASHING (BY OTHERS)



NOTES:

1. VERTICAL SURFACES SUCH AS MASONRY, STUCCO, CONCRETE, AGED WOOD OR METAL SHALL BE PRIMED WITH MULE-HIDE #121 ASPHALT PRIMER. PRIMER MUST BE THOROUGHLY DRY BEFORE APPLICATION OF SELF-ADHERING MEMBRANES.

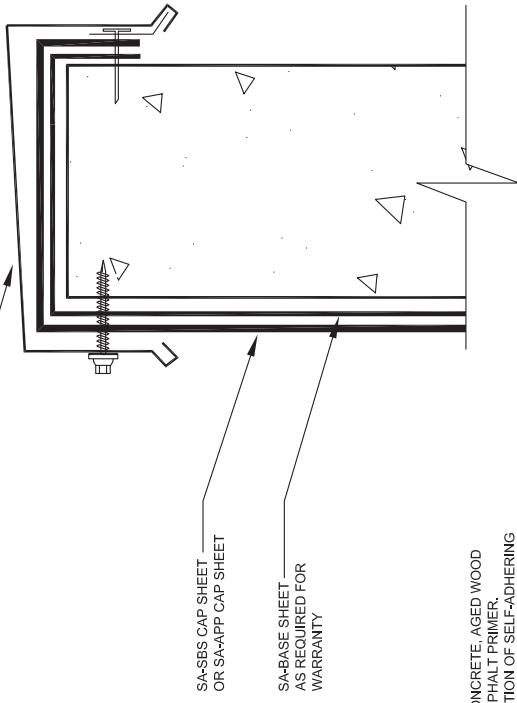
**MULE-HIDE
PRODUCTS CO., INC.
2003**

WALL FLASHING TERMINATION - 4

**DETAIL NO.:
MH-MB-WFT04**

PARAPET WALL FLASHING COPING CAP TERMINATION

OUTSIDE FACE OF FLASHINGS MUST BE MECHANICALLY TERMINATED UNDER THE COPING CAP. CONTINUOUS CLEAT FASTENED 12" O.C. MAX. MUST BE USED WHENEVER OUTSIDE FACE DIMENSIONS IS 4" OR MORE. FASTEN INSIDE FACE OF COPING 24" ON CENTER WITH GROMMETTED FASTENERS.



NOTES:

1. VERTICAL SURFACES SUCH AS MASONRY, STUCCO, CONCRETE, AGED WOOD OR METAL SHALL BE PRIMED WITH MULE-HIDE #121 ASPHALT PRIMER. PRIMER MUST BE THOROUGHLY DRY BEFORE APPLICATION OF SELF-ADHERING MEMBRANES.

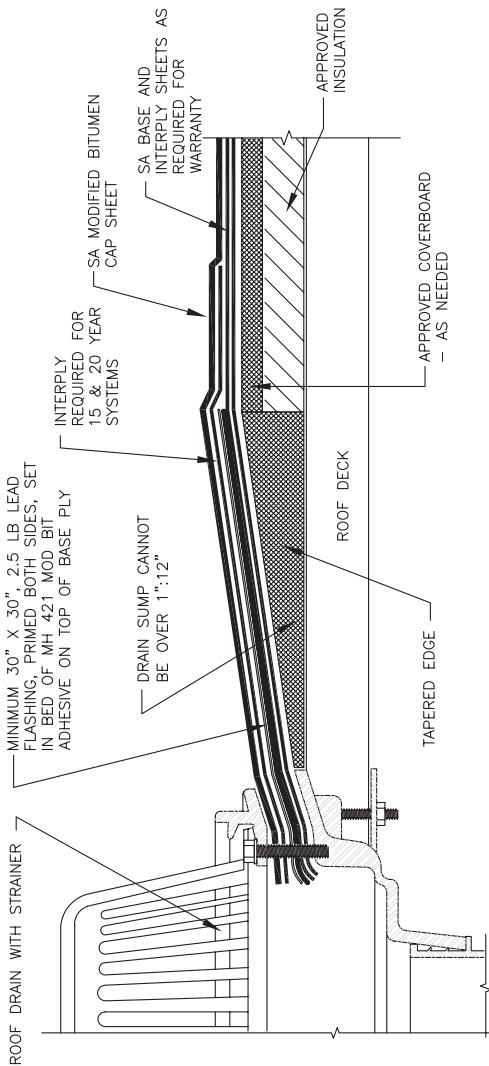
**MULE-HIDE
PRODUCTS CO., INC.
2003**

WALL FLASHING TERMINATION - 5

**DETAIL NO.:
MH-MB-WFT05**

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS
2. IF DRAIN SUMP IS GREATER THAN 1":12", A RETROFIT DRAIN INSERT MUST BE USED
3. A TARGET PATCH OF SA BASE IS REQUIRED IF A FIELD SEAM IS WITHIN 6" – 9" OF CLAMPING RING
4. NO SEAM CAN BE LESS THAN 6" FROM THE DRAIN CLAMPING RING



**MULE-HIDE
PRODUCTS CO., INC.**

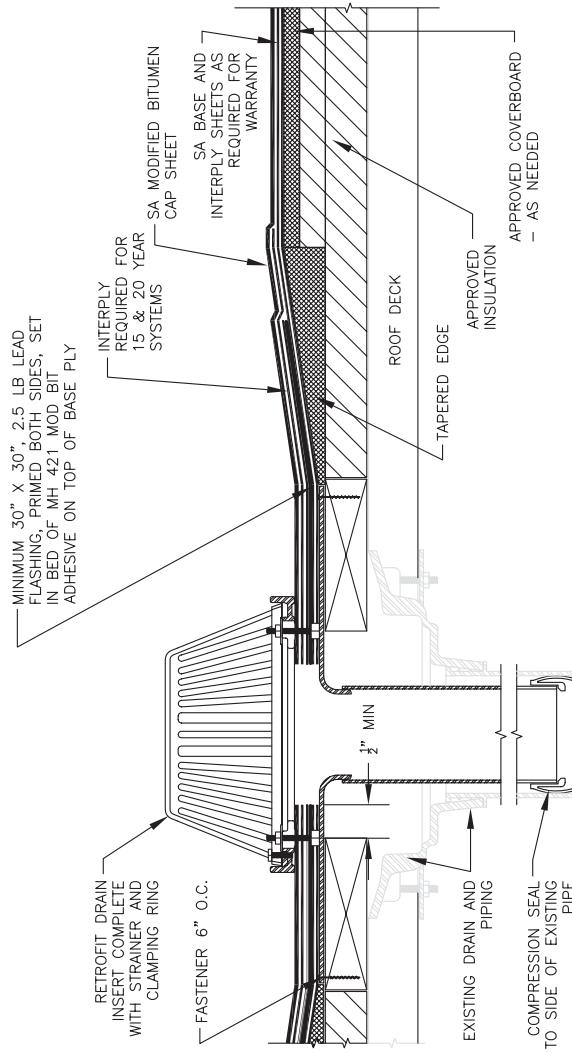
**ROOF DRAIN
SYSTEMS:
SELF-ADHERING MODIFIED BITUMEN**

**DETAIL NO.:
MH-MB-D1**

REVISION DATE: OCTOBER 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS
2. WOOD NAILERS MUST BE INSTALLED AROUND DRAIN
3. A TARGET PATCH OF SA BASE MODIFIED BITUMEN IS REQUIRED IF A FIELD SEAM IS WITHIN 6" - 9" OF CLAMPING RING
4. NO SEAM CAN BE LESS THAN 6" FROM THE DRAIN CLAMPING RING

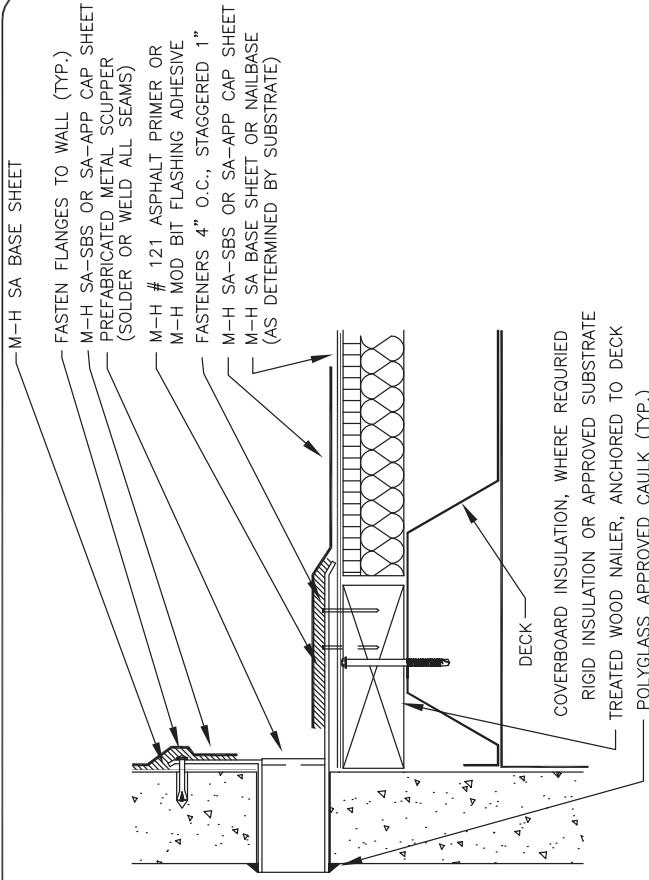


**MULE-HIDE
PRODUCTS CO., INC.**

**RETROFIT
DRAIN INSERT
SYSTEMS:
SELF-ADHERING MODIFIED BITUMEN**

**DETAIL NO.:
MH-MB-D2**

REVISION DATE: MARCH 2015



NOTES:

1. MEMBRANE ENDLAPS MUST BE 6" MINIMUM & FULLY ADHERED AT ALL LOCATIONS WHERE FAST LAP™ IS NOT PRESENT

**MULE-HIDE
PRODUCTS CO., INC.
2003**

SCUPPER - OPTION 1
SELF-ADHERING MOD BIT SYSTEMS

**DETAIL NO.:
MH-MB-S1**

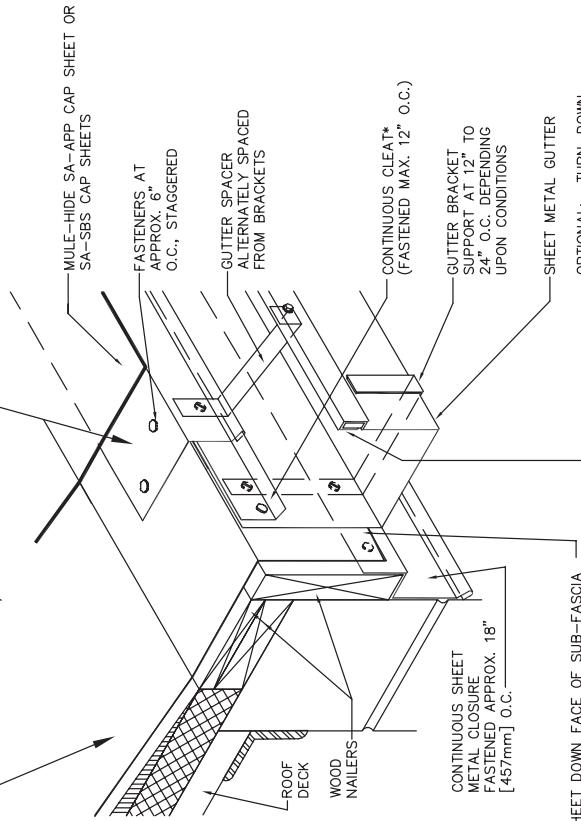
NOTES:

1. ATTACH WOOD NAILER TO WALL/DECK IN ACCORDANCE WITH FMWR GUIDELINES PER SECTION 1-2B REGARDING WIND LOADS TO ROOF SYSTEMS & DECK SECUREMENT.
2. WOOD BLOCKING MAY BE SLOTTED FOR VENTING OF WET-FILLED DECKS OR OTHER APPLICABLE CONSTRUCTIONS.
3. THIS DETAIL SHOULD BE USED ONLY WHERE THE DECK IS SUPPORTED BY THE OUTSIDE WALL.
4. REFER SNACMA RECOMMENDATIONS & DETAILS REGARDING METAL THICKNESS & CLEAT REQUIREMENTS.
5. MEMBRANE ENDLAPS MUST BE 6" MINIMUM & FULLY ADHERED TO THE MEMBRANE THAT IS NOT PRESENT.

* CONTINUOUS CLEAT IS RECOMMENDED TO BE AT LEAST ONE GAUGE HEAVIER THAN EDGE FLASHING METAL.

SHEET METAL EDGE FLASHING
PRIME METAL FLANGE BEFORE STRIPPING (REQUIRED),
WITH MULE-HIDE # 121 ASPHALT PRIMER OR FAST DRY PRIMER IN AEROSOL CAN MEETING ASTM D 41.

MULE-HIDE SA BASE SHEET ADHERED TO APPROVED INSULATION/COVER BOARD

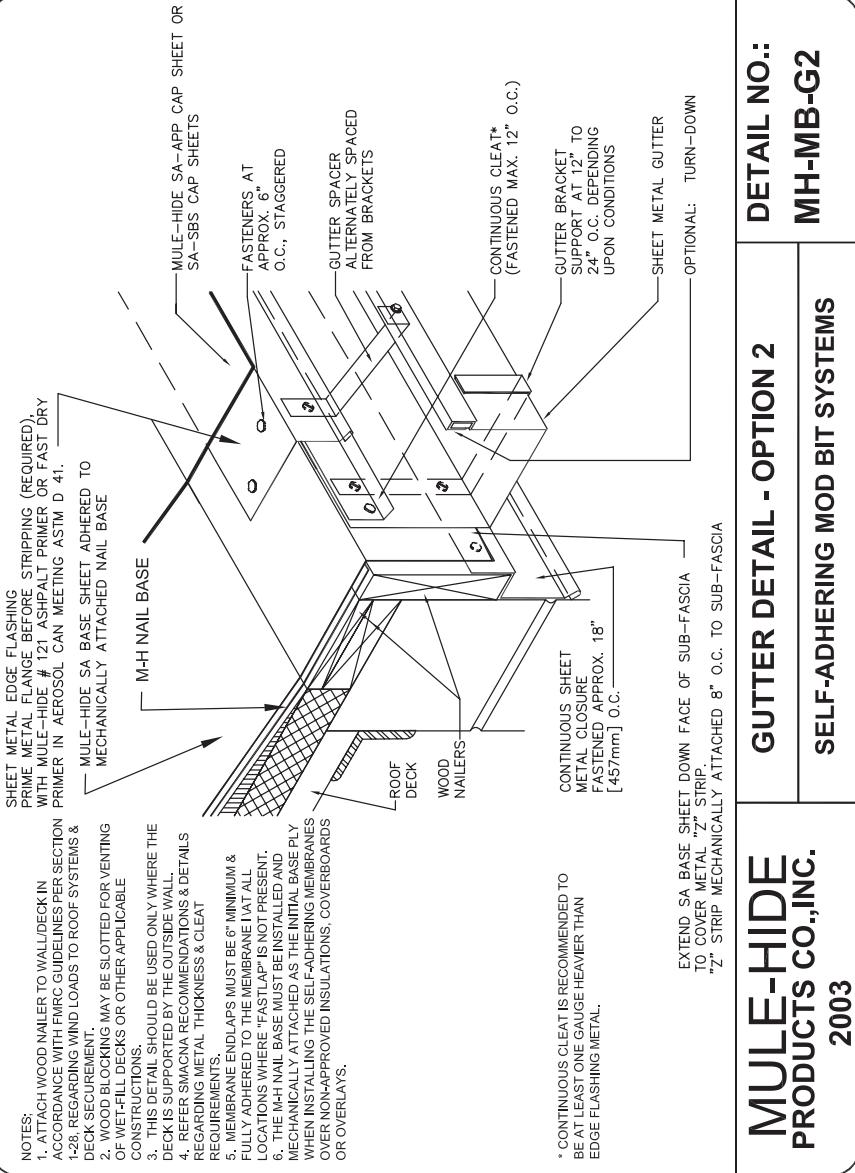


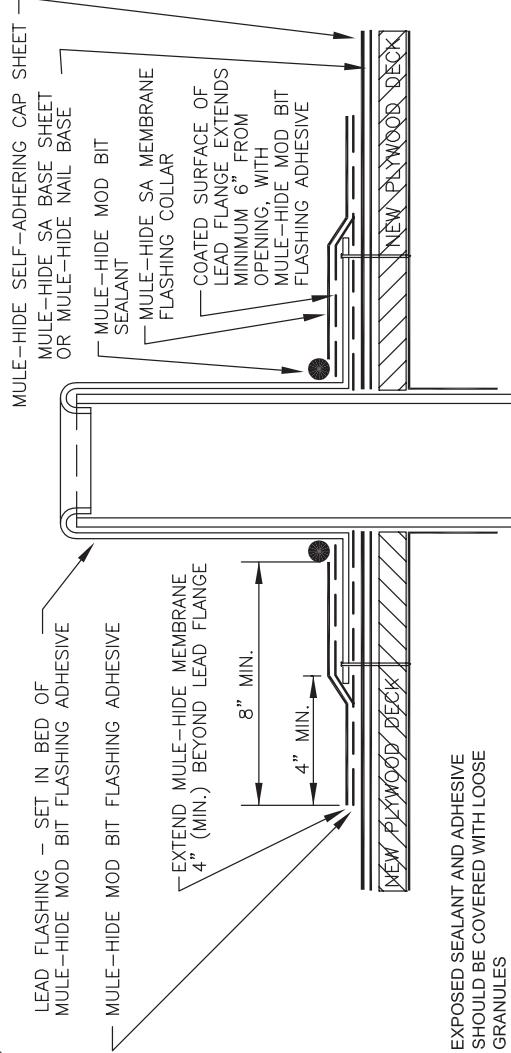
OPTIONAL: TURN-DOWN

**MULE-HIDE
PRODUCTS CO., INC.
2003**

GUTTER DETAIL - OPTION 1

**DETAIL NO.:
MH-MB-G1**





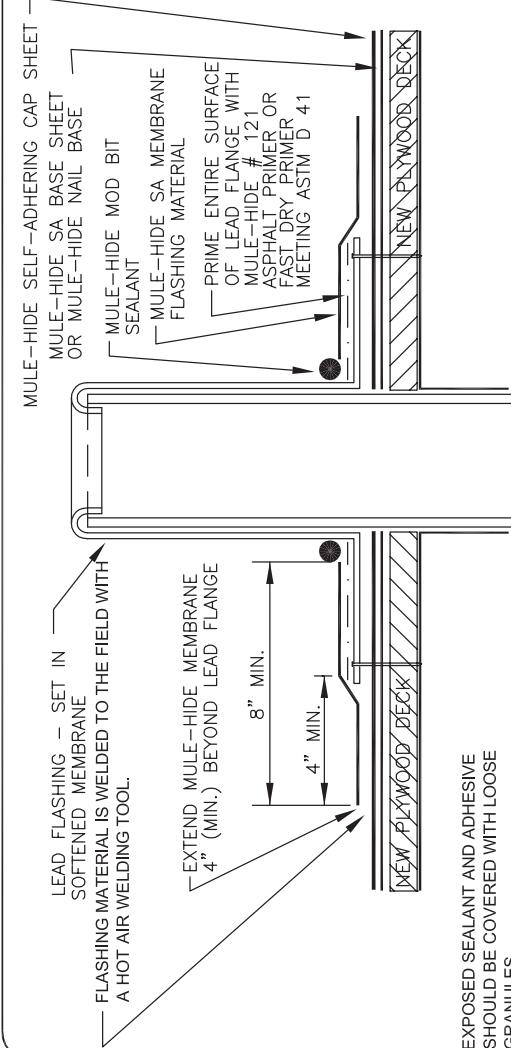
EXPOSED SEALANT AND ADHESIVE
SHOULD BE COVERED WITH LOOSE
GRANULES

NEW PLYWOOD DOES NOT REQUIRE PRIMING. AGED
WOOD MUST BE PRIMED WITH MULE-HIDE # 121
ASPHALT PRIMER. IF ADHERING ONLY ONE PLY OF CAP
SHEET DIRECTLY TO THE WOOD DECK, IT IS
RECOMMENDED THAT ALL JOINTS IN THE PLYWOOD BE
COVERED WITH DUCTAPE.

**MULE-HIDE
PRODUCTS CO., INC.
2003**

PIPE FLASHING - OPTION 1
SELF-ADHERING MOD BIT SYSTEMS

DETAIL NO.:
MH-MB-P1



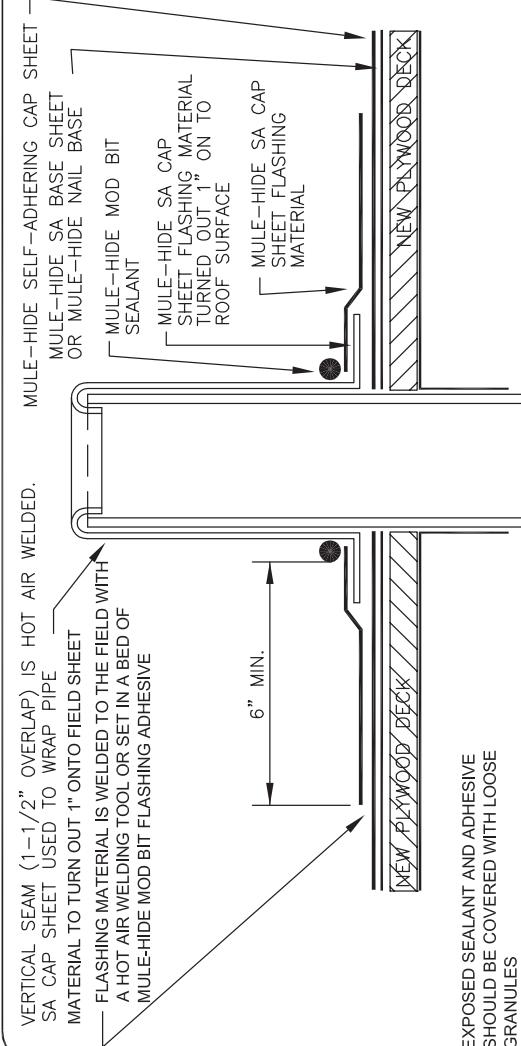
NEW PLYWOOD DOES NOT REQUIRE PRIMING. AGED WOOD MUST BE PRIMED WITH MULE-HIDE # 121 ASPHALT PRIMER. IF ADHERING ONLY ONE PLY OF CAP SHEET DIRECTLY TO THE WOOD DECK, IT IS RECOMMENDED THAT ALL JOINTS IN THE PLYWOOD BE COVERED WITH DUCT TAPE.

NEW APPROVED INSULATION OR OVERLAY MAY BE INSTALLED OVER THE WOOD DECK AND MUST BE MECHANICALLY ATTACHED USING APPROVED FASTENERS AND FASTENING PATTERNS SPECIFICALLY APPROVED FOR THE MATERIAL SELECTED

**MULE-HIDE
PRODUCTS CO., INC.
2003**

PIPE FLASHING - OPTION 2
SELF-ADHERING MOD BIT SYSTEMS

**DETAIL NO.:
MH-MB-P2**



EXPOSED SEALANT AND ADHESIVE
SHOULD BE COVERED WITH LOOSE
GRANULES

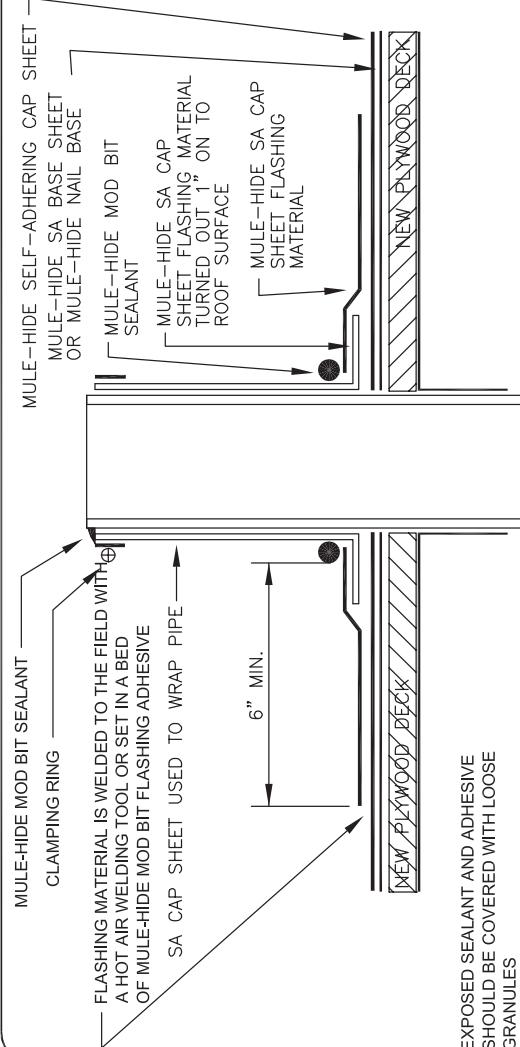
NEW PLYWOOD DOES NOT REQUIRE PRIMING. AGED
WOOD MUST BE PRIMED WITH MULE-HIDE #121
ASPHALT PRIMER. IF ADHERING ONLY ONE PLY OF CAP
SHEET DIRECTLY TO THE WOOD DECK, IT IS
RECOMMENDED THAT ALL JOINTS IN THE PLYWOOD BE
COVERED WITH DUCTAPE.

NEW APPROVED INSULATION OR OVERLAY MAY
BE INSTALLED OVER THE WOOD DECK AND MUST
BE MECHANICALLY ATTACHED USING APPROVED
FASTENERS AND FASTENING PATTERNS SPECIFICALLY
APPROVED FOR THE MATERIAL SELECTED

**MULE-HIDE
PRODUCTS CO., INC.
2003**

PIPE FLASHING - OPTION 3
SELF-ADHERING MOD BIT SYSTEMS

**DETAIL NO.:
MH-MB-P3**



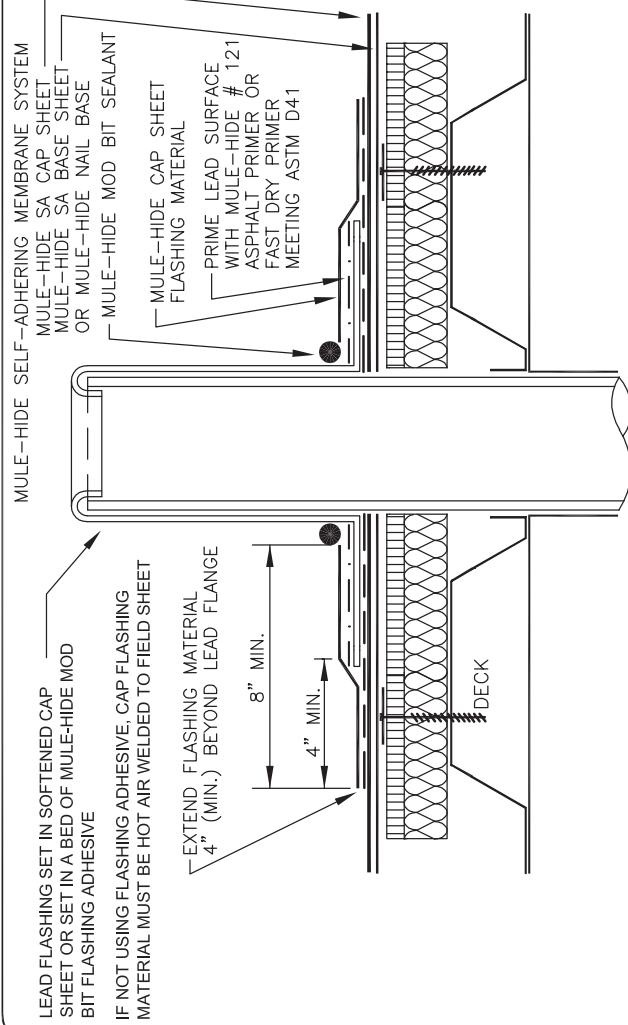
NEW PLYWOOD DOES NOT REQUIRE PRIMING. AGED
WOOD MUST BE PRIMED WITH MULE-HIDE #121
ASPHALT PRIMER. IF ADHERING ONLY ONE PLY OF CAP
SHEET DIRECTLY TO THE WOOD DECK, IT IS
RECOMMENDED THAT ALL JOINTS IN THE PLYWOOD BE
COVERED WITH DUCTAPE.

NEW APPROVED INSULATION OR OVERLAY MAY
BE INSTALLED OVER THE WOOD DECK AND MUST
BE MECHANICALLY ATTACHED USING APPROVED
FASTERERS AND FASTENING PATTERNS SPECIFICALLY
APPROVED FOR THE MATERIAL SELECTED

**MULE-HIDE
PRODUCTS CO., INC.
2003**

PIPE FLASHING - OPTION 4
SELF-ADHERING MOD BIT SYSTEMS

DETAIL NO.:
MH-MB-P4



INSULATION MUST BE MECHANICALLY ATTACHED TO THE DECK USING APPROPRIATE FASTENERS FOR THE DECK TYPE. NON-APPROVED INSULATION SHALL REQUIRE AN APPROVED COVER BOARD OR THE INSTALLATION OF MULE-HIDE'S NAIL BASE. IF USING NAIL BASE, FOLLOW FM ATTACHMENT PATTERN FOR BASE SHEET ATTACHMENTS.

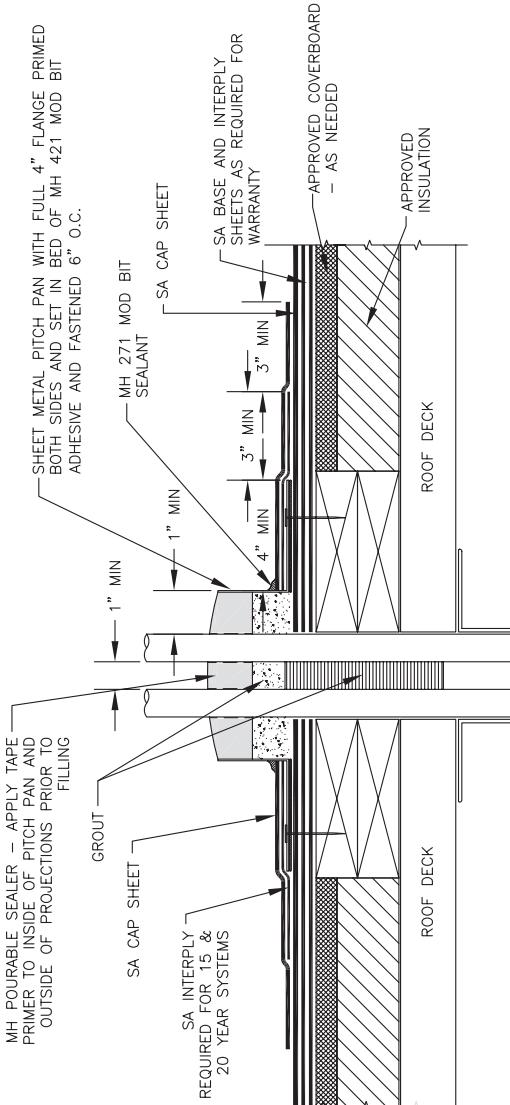
DETAIL NO.:
MH-MB-P5

PIPE FLASHING - OPTION 5
SELF-ADHERING MOD BIT SYSTEMS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. WOOD NAILERS MATCHING THE INSULATION THICKNESS AND EXTENDING BEYOND THE FLANGE ARE REQUIRED.
3. ALL SEAMS OVER GRANULATED SURFACES MUST BE COMPLETED WITH EITHER HOT AIR WELDING OR MH 421 MOD BIT ADHESIVE.



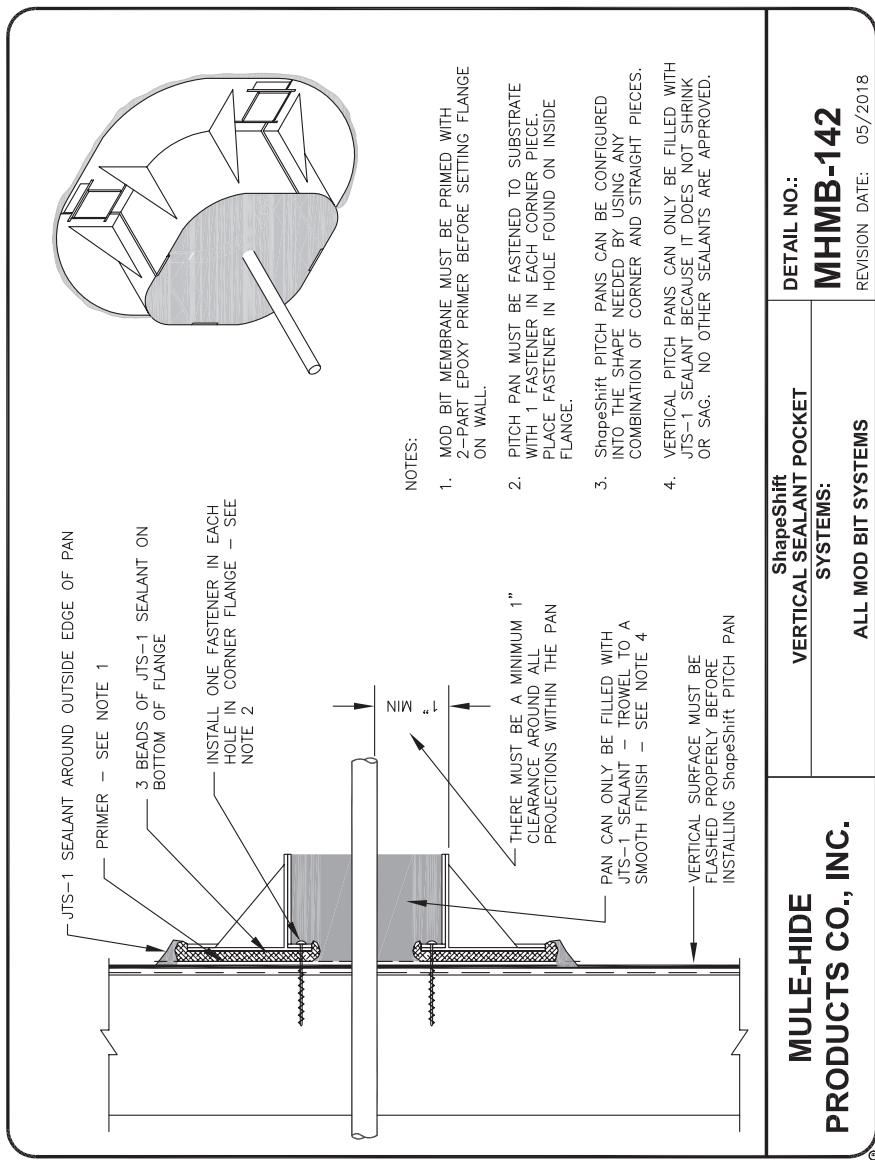
**MULE-HIDE
PRODUCTS CO., INC.**

PENETRATION POCKET
SYSTEMS:
SELF-ADHERING
MODIFIED BITUMEN

DETAIL NO.:

MHMB-141

REVISION DATE: MARCH 2017

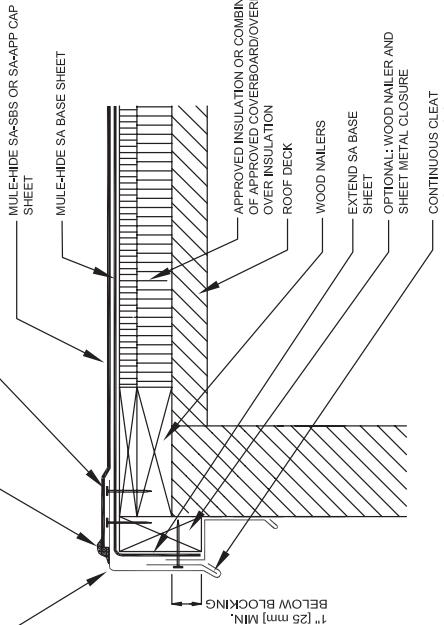


MULE-HIDE MOD BIT SEALANT IF
MEMBRANE IS NOT SET TELISH TO
THE EDGE OF THE METAL. IF
SEALANT IS USED, COVER WITH
LOOSE GRANULES. URETHANE
SEALANT SUCH AS NP-1 MAY ALSO
BE USED.

FASTENERS AT APPROX. 3" to 6" [75
to 150 mm] O.C., STAGGERED.

PERIMETER EDGE METAL SHALL BE
PRIMED WITH MULE-HIDE # 121 ASPHALT
PRIMER OR FAST-DRY PRIMER IN
AEROSOL CAN MEETING ASTM D 41.

1" [25 mm] MIN.
BELOW BLOCKING



NOTES:

1. THIS DETAIL SHOULD BE USED ONLY WHERE THE DECK IS SUPPORTED BY THE OUTSIDE WALL.
2. REFER TO THE SHEET METAL SECTION OF THE NRCA ROOFING AND WATERPROOFING MANUAL FOR IONERY AND SECUREMENT OPTIONS FOR SHEET METAL.

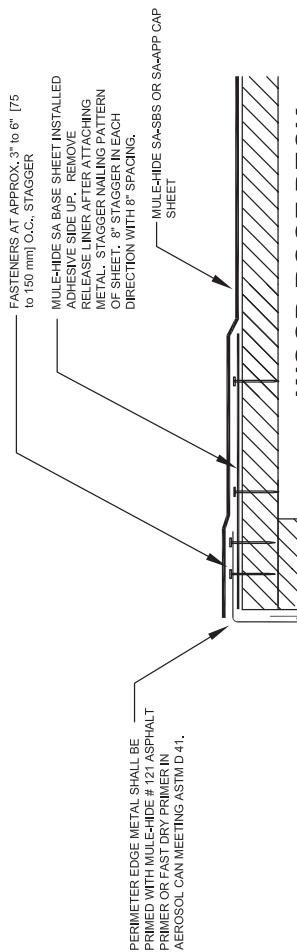
**MULE-HIDE
PRODUCTS CO., INC.
2003**

EDGE METAL FLASHING - OPTION 1

DETAIL NO.:

MH-MB-EM1

SELF-ADHERING MOD BIT SYSTEMS



WOOD ROOF DECK

- NOTES:**
1. THIS DETAIL SHOULD BE USED ONLY WHERE THE DECK IS SUPPORTED BY THE OUTSIDE WALL.
 2. REFER TO THE SHEET METAL SECTION OF THE NRCA ROOFING AND WATERPROOFING MANUAL FOR JOINERY AND SECUREMENT OPTIONS FOR SHEET METAL.
 3. REFER TO THE SHEET METAL SECTION OF THE NRCA ROOFING AND WATERPROOFING MANUAL FOR JOINERY AND SECUREMENT OPTIONS FOR SHEET METAL.
 4. THIS DETAIL IS ONLY AVAILABLE FOR PROJECTS REQUESTING TEN-YEAR MATERIAL OR SYSTEM WARRANTIES.
 5. DECK MUST HAVE A MINIMUM SLOPE OF 1/4" PER FOOT.

CONTINUOUS CLEAT
FASTENED PER TABLE 1.

**DETAIL NO.:
MH-MB-EM2**

EDGE METAL FLASHING - OPTION 2

SELF-ADHERING MOD BIT SYSTEMS

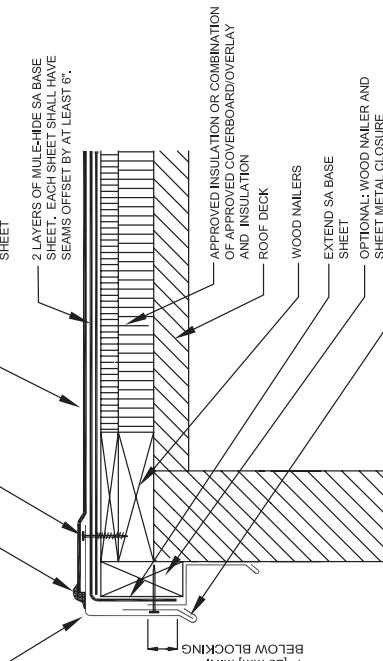
**MULE-HIDE
PRODUCTS CO., INC.
2003**

MULE-HIDE MOD BIT SEALANT IF
MEMBRANE IS NOT SET TULISH TO
THE EDGE OF THE METAL. IF
SEALANT IS USED, COVER WITH
LOOSE GRANULES.

MULE-HIDE SCREW FASTENERS AT
APPROX. 12" O.C. SCREWS SHALL
BE SET 1/2" TO 3/4" IN FROM THE
EDGE OF THE METAL FLANGE. THE
UNDERSIDE OF THE METAL SHALL
HAVE A HEAD OF WATER CUT-OFF
RUNNING UNDER THE LOCATION OF
THE FASTENERS.
MULE-HIDE SA-SBS OR SA-APP CAP
SHEET

PERIMETER EDGE METAL SHALL BE
PRIMED WITH MULE-HIDE # 121 ASPHALT
PRIMER OR FAST-DRY PRIMER IN
AEROSOL CAN MEETING ASTM D 41.

2 LAYERS OF MULE-HIDE SA BASE
SHEET. EACH SHEET SHALL HAVE
SEAMS OFFSET BY AT LEAST 6".



NOTES:

1. THIS DETAIL SHOULD BE USED ONLY WHERE THE DECK IS SUPPORTED BY THE OUTSIDE WALL.
2. REFER TO THE SHEET METAL SECTION OF THE NRCA ROOFING AND WATERPROOFING MANUAL FOR JOINERY AND SECUREMENT OPTIONS FOR SHEET METAL.
3. MULE-HIDE REQUIRES THE USE OF MULE-HIDE SCREWS TO ANCHOR THE EDGE METAL FOR 20-YEAR WARRANTIES.

MULE-HIDE REQUIRES 2 LAYERS OF SA BASE SHEET FOR 20-YEAR WARRANTIES

**MULE-HIDE
PRODUCTS CO., INC.
2003**

EDGE METAL FLASHING - OPTION 3

**DETAIL NO.:
MH-MB-EM3**

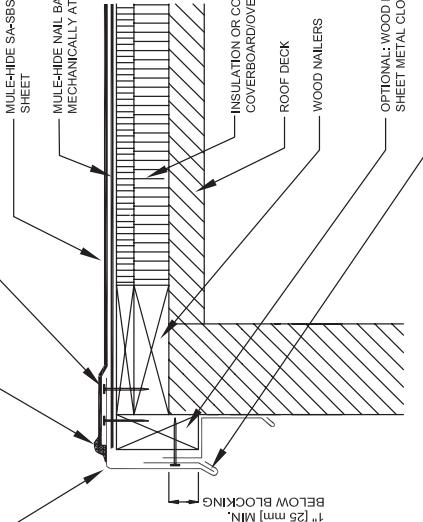
MULE-HIDE MOD BIT SEALANT IF
MEMBRANE IS NOT SET TELISH TO
THE EDGE OF THE METAL. IF
SEALANT IS USED, COVER WITH
LOOSE GRANULES. URETHANE
SEALANT SUCH AS NP-1 MAY ALSO
BE USED.

FASTENERS AT APPROX. 3" to 6" [75
to 150 mm] O.C., STAGGERED.

PERIMETER EDGE METAL SHALL BE
PRIMED WITH MULE-HIDE # 121 ASPHALT
PRIMER OR FAST DRY PRIMER IN
AEROSOL CAN MEETING ASTM D 41.

MULE-HIDE SA-SBS OR SA+APP CAP
SHEET

MULE-HIDE NAIL BASE, MUST BE
MECHANICALLY ATTACHED.



NOTES:

1. THIS DETAIL SHOULD BE USED ONLY WHERE THE DECK IS SUPPORTED BY THE OUTSIDE WALL.
2. REFER TO THE SHEET METAL SECTION OF THE NRCA ROOFING AND WATERPROOFING MANUAL FOR IONERY AND SECUREMENT OPTIONS FOR SHEET METAL.

**MULE-HIDE
PRODUCTS CO., INC.
2003**

EDGE METAL FLASHING - OPTION 4

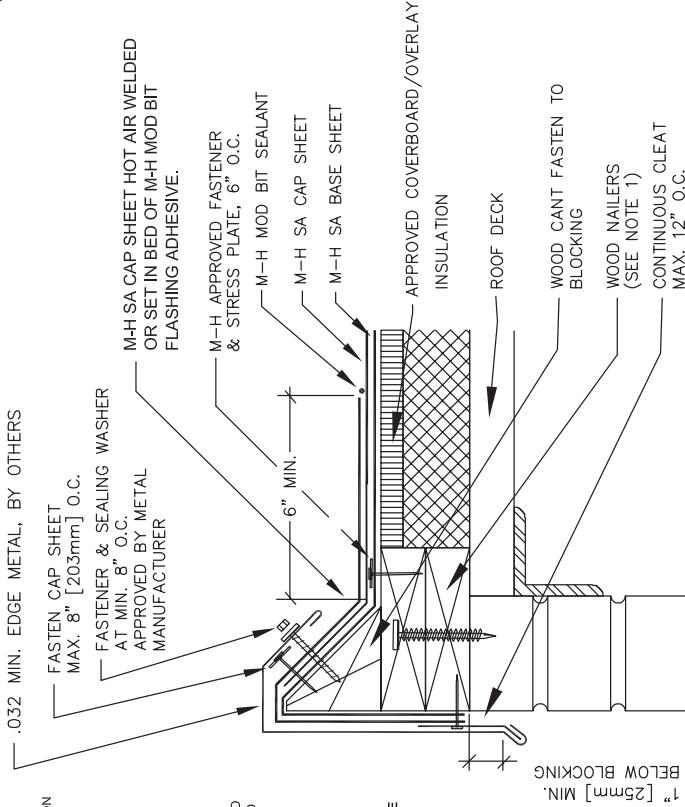
DETAIL NO.:

MH-MB-EM4

SELF-ADHERING MOD BIT SYSTEMS

- NOTES:
1. ATTACH WOOD NAILER TO WALL/DECK IN ACCORDANCE WITH FIRC GUIDELINES AS PER SECTION I-2B, REGARDING WIND LOADS TO ROOF SYSTEMS & DECK SECUREMENT.
 2. REFER TO SWAGNA RECOMMENDATIONS & DETAILS REGARDING METAL THICKNESS & CLEAT REQUIREMENTS.
 3. MEMBRANE ENDLAPS MUST BE 6" MINIMUM & FULLY ADHERED TO MEMBRANE IN ALL LOCATIONS WHERE "FASTFLAP" IS NOT PRESENT.
 4. ALL ACCEPTABLE MANSORY, CONCRETE, METAL & AGED WOOD SUBSTRATES MUST BE PRIMED WITH MULE-HIDE # 121 ASPHALT PRIMER (ASTM D 41).
 5. REFER TO MULE-HIDE APPLICATION GUIDELINES AND PRODUCT DATA SHEETS FOR SUITABLE INSULATION AND ACCEPT MULE-HIDE SELF-ADHERING MEMBRANES.
 6. INSULATION MUST BE ATTACHED IN ACCORDANCE WITH MULE-HIDE MINIMUM REQUIREMENTS.
 7. NON-COMPATIBLE INSULATION SHALL REQUIRE AN APPROVED COVERBOARD TO WHICH THE SA BASE SHEET MAY BE ADHERED. CERTAIN APPROVED COVERBOARDS (UNDERLAYMENTS) MAY REQUIRE PRIMING WITH MULE-HIDE # 121 ASPHALT PRIMER.
 8. IF INSTALLING A 20-YR SYSTEM, 2 PILES OF SA BASE SHEET ARE REQUIRED.

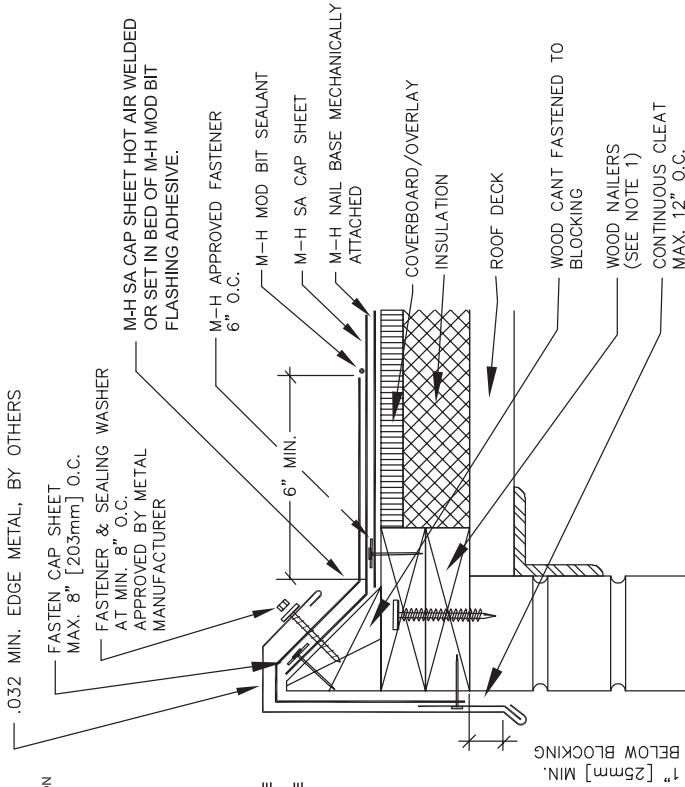
.032 MIN. EDGE METAL, BY OTHERS



MULE-HIDE PRODUCTS CO., INC. 2003	GRAVEL STOP - OPTION # 1	DETAIL NO.: MH-MB-GS1
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- NOTES:
1. ATTACH WOOD NAILER TO WALL/DECK IN ACCORDANCE WITH FIRC GUIDELINES AS PER SECTION I-2B, REGARDING WIND LOADS TO ROOF SYSTEMS & DECK SECUREMENT.
 2. REFER TO SWAGNA RECOMMENDATIONS & DETAILS REGARDING METAL THICKNESS & CLEAT REQUIREMENTS.
 3. MEMBRANE ENDLAPS MUST BE 6" MINIMUM & FULLY ADHERED TO MEMBRANE IN ALL LOCATIONS WHERE "FASTFLAP" IS NOT PRESENT.
 4. ALL ACCEPTABLE MANSORY, CONCRETE, METAL & AGED WOOD SUBSTRATES MUST BE PRIMED WITH MULE-HIDE # 121 ASPHALT PRIMER (ASTM D 41).
 5. INSULATION MUST BE ATTACHED IN ACCORDANCE WITH MULE-HIDE MINIMUM REQUIREMENTS.
 6. IF INSTALLING A 15-YR SYSTEM, 2 PILES OF SA BASE SHEET IS REQUIRED OVER THE NAIL BASE.
 7. IF INSTALLING A 20-YR SYSTEM, 2 PILES OF SA BASE SHEET ARE REQUIRED OVER THE NAIL BASE.

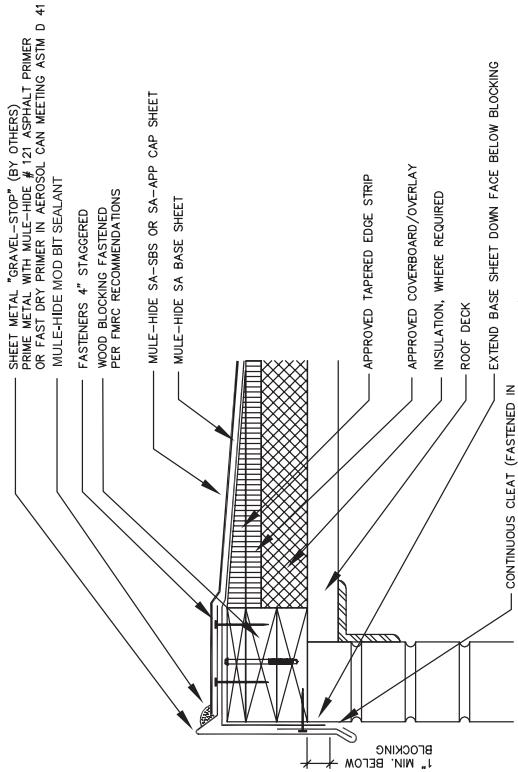
.032 MIN. EDGE METAL, BY OTHERS



**MULE-HIDE
PRODUCTS CO., INC.
2003**

**GRAVEL STOP - OPTION 2
SELF-ADHERING MOD BIT SYSTEMS**

**DETAIL NO.:
MH-MB-GS2**



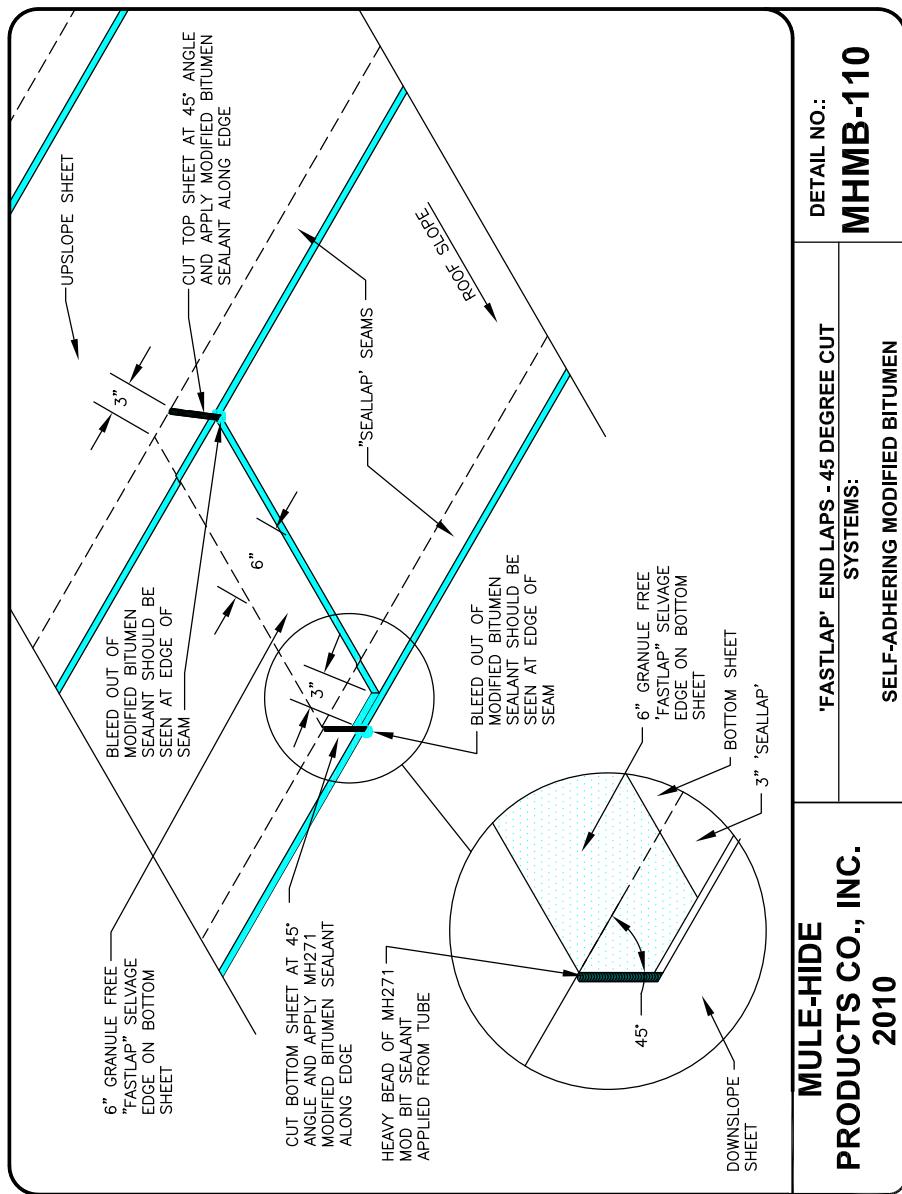
NOTES:

1. ATTACH WOOD NALEP TO WALL/DECK IN ACCORDANCE WITH FMRC GUIDELINES, AS PER SECTION 1-25, REGARDING WINDLOADS.
2. WOOD BLOCKING MAY BE SLOTTED FOR VENTING OF WET-FILL DECKS OR OTHER APPLICABLE CONSTRUCTIONS.
3. THIS DETAIL SHOULD BE USED ONLY WHERE THE DECK IS SUPPORTED BY THE OUTSIDE WALL.
4. REFER TO SMACNA RECOMMENDATIONS & DETAILS REGARDING METAL THICKNESS & CLEAT REQUIREMENTS.
5. MEMBRANE ENDLAPS MUST BE 6" MINIMUM & FULLY ADHERED AT ALL MEMBRANE IN LOCATIONS WHERE "FAST LAP" IS NOT PRESENT.
6. IF INSTALLING A 20-YR SYSTEM, 2 PLIES OF SA BASE SHEET MUST BE INSTALLED.

**MULE-HIDE
PRODUCTS CO.,INC.
2003**

**GRAVEL STOP - OPTION 3
SELF-ADHERING MOD BIT SYSTEMS**

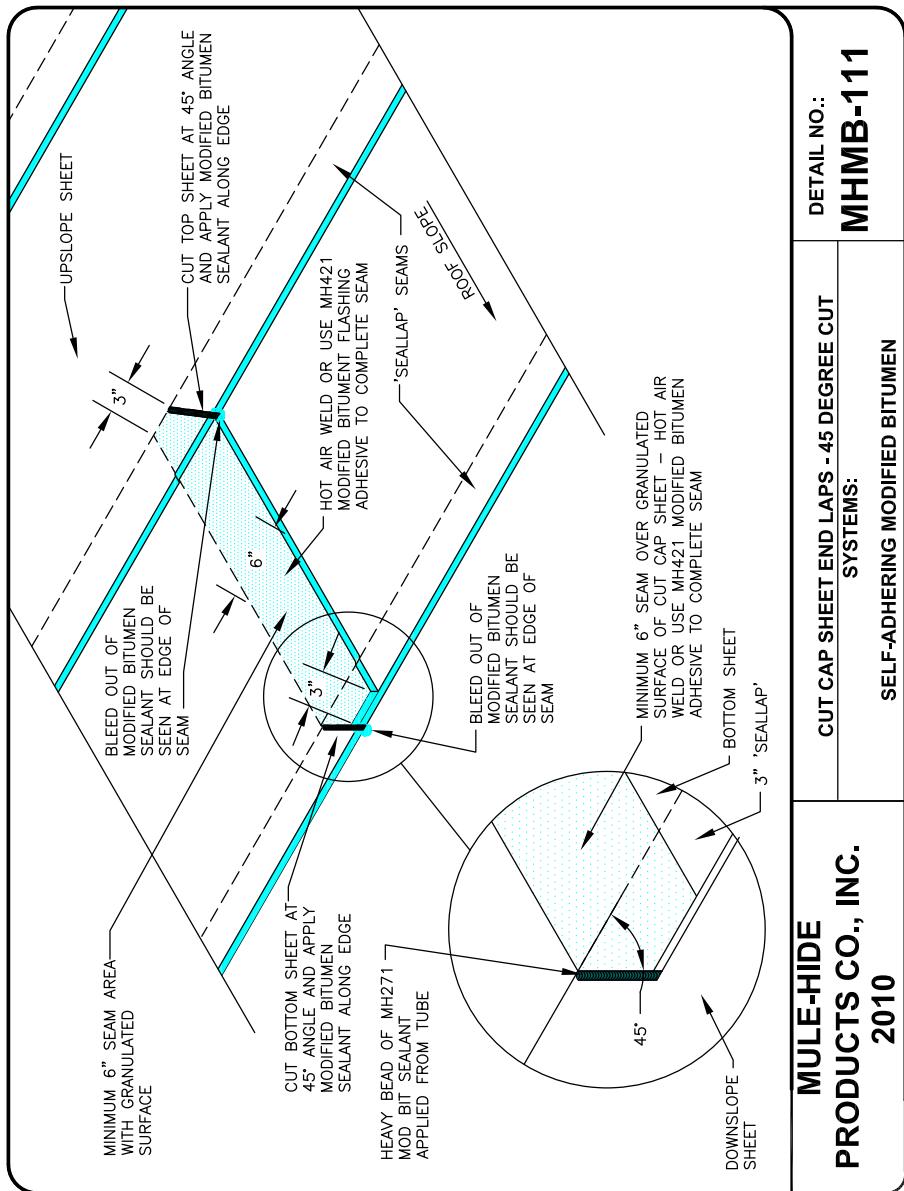
**DETAIL NO.:
MH-MB-GS3**



**MULE-HIDE
PRODUCTS CO., INC.
2010**

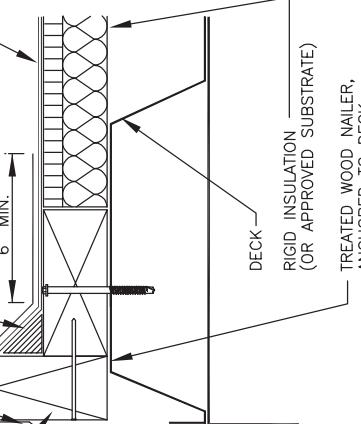
**'FASTFLAP' END LAPS - 45 DEGREE CUT
SYSTEMS:
SELF-ADHERING MODIFIED BITUMEN**

**DETAIL NO.:
MHMB-110**



FLEXIBLE EXPANSION JOINT COVER (BY OTHERS).
 FASTENERS 4" O.C. STAGGERED 1"
 BATT INSULATION FILL (BY OTHERS).
 VAPOR RETARDER (BY OTHERS)
 MULE-HIDE SA CAP SHEET FLASHING MATERIAL
 M-H SA CAP SHEET TURNED UP ABOVE TOP OF
 CANT MINIMUM 2" AND SECURED WITH FASTENERS
 SPACED 8" O.C.
 M-H SA BASE SHEET / SHEETS INSTALLED A
 MINIMUM 1" ABOVE TOP OF CANT. BASE SHEET
 FLASHING SHALL EXTEND 3" ONTO FIELD OF ROOF.*

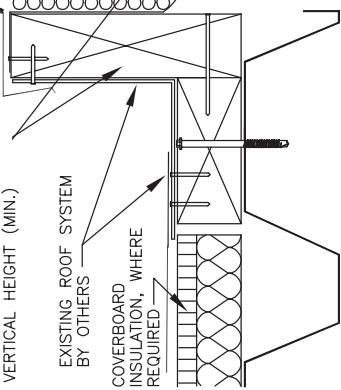
FIRE RETARDANT CANT STRIP, REQ.
 (COVERED WITH M-H SA BASE SHEET)
 M-H SA MEMBRANE SYSTEM



CURB 8" VERTICAL HEIGHT (MIN.)

EXISTING ROOF SYSTEM
 BY OTHERS

COVERBOARD
 INSULATION, WHERE
 REQUIRED

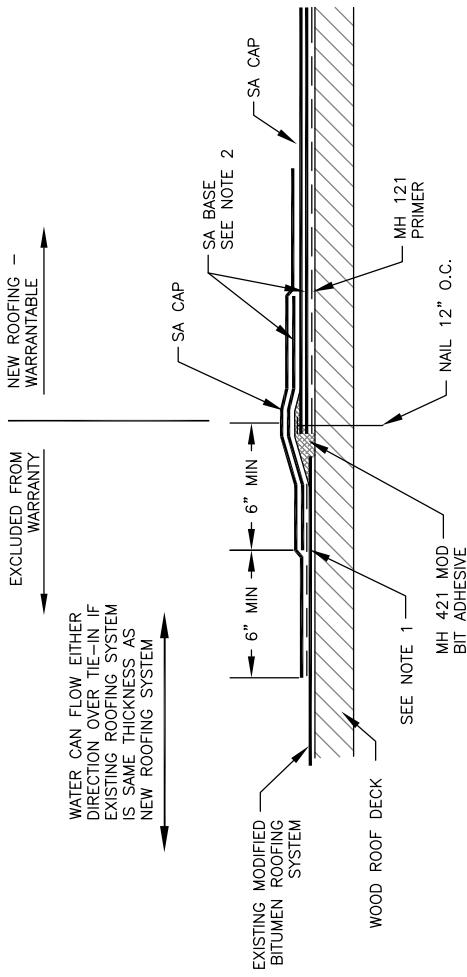


* REFER TO STANDARD BASE FLASHING DETAILS FOR
 INSTALLATION OF BASE SHEET AND BASE SHEET
 FLASHING MATERIAL.

DETAIL NO.:
MH-MB-EJ1

EXPANSION JOINT - OPTION 1
SELF-ADHERING MOD BIT SYSTEMS

**MULE-HIDE
 PRODUCTS CO., INC.
 2003**



NOTES:

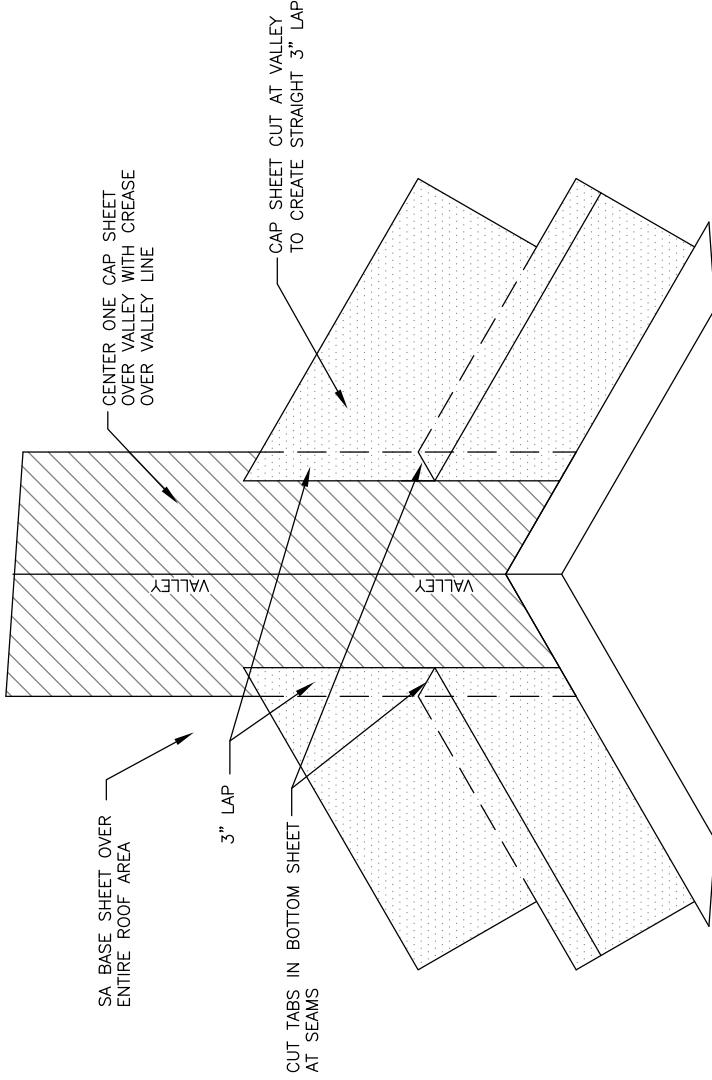
1. EXISTING MEMBRANE MUST BE PRIMED WITH MH 121 PRIMER. IF EXISTING MOD. BIT. IS GRANULAR SURFACED, MH 421 MOD. BIT. ADHESIVE MUST BE USED TO COMPLETE SEAM. IF EXISTING MOD. BIT IS SMOOTH SURFACED, ADHERING DIRECTLY TO THE PRIMED SURFACE IS ACCEPTABLE.
2. 20-YR WARRANTIES REQUIRE 2 PLIES OF SA BASE SHEET ON THE FIELD OF THE ROOF PRIOR TO INSTALLING CAP SHEETS.

**MULE-HIDE
PRODUCTS CO., INC.**

TIE-IN TO EXISTING SMOOTH MOD. BIT.
WITH TEAR-OFF
SYSTEMS:

MHMB**-162**

REVISION DATE: 03/2017



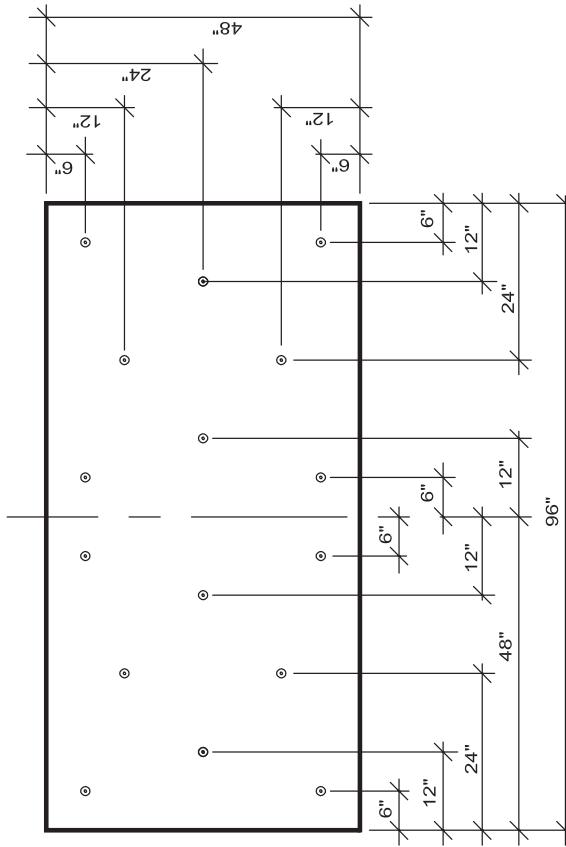
**MULE-HIDE
PRODUCTS CO., INC.**
2010

OPEN VALLEY
SYSTEMS:
SELF-ADHERING MODIFIED BITUMEN

DETAIL NO.:

MHMB-180

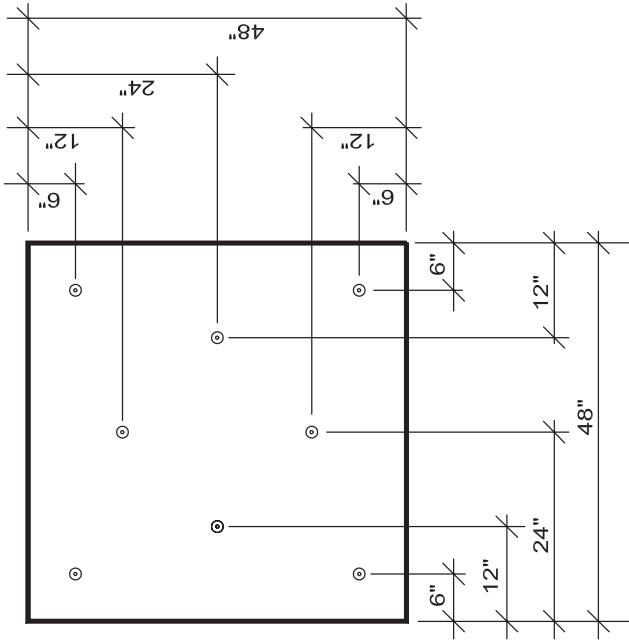
THE ATTACHMENT
PATTERN SHOWN IS THE
STANDARD PATTERN FOR
FIELD ATTACHMENT
REQUIRED BY MULE-HIDE.
THE ATTACHMENT IN THE
PERIMETER AREA IS
INCREASED 50% AND 75%
IN THE CORNERS.



4' X 8' INSULATION ATTACHMENT (1 PER 2 SF.)
STANDARD ATTACHMENT

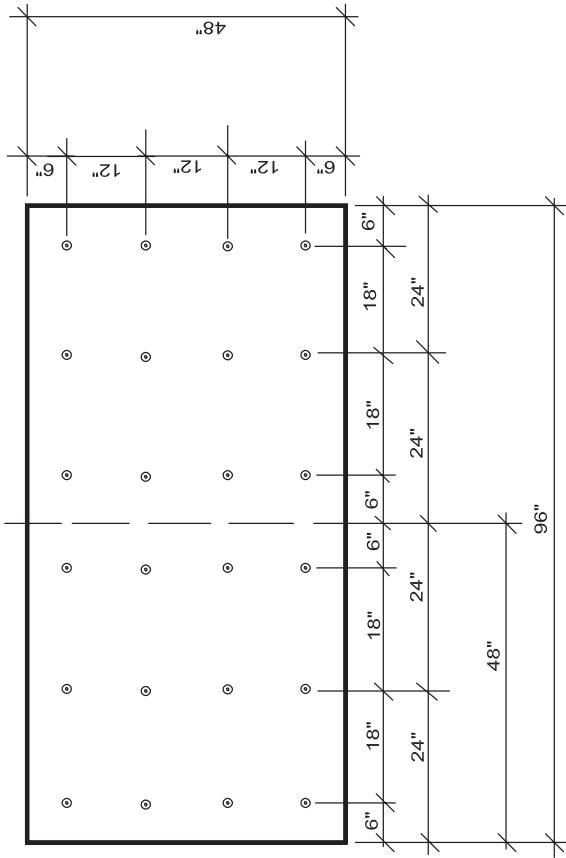
MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 1 SELF-ADHERING MOD BIT SYSTEMS	DETAIL NO.: MH-MB-INS-1
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THE ATTACHMENT
PATTERN SHOWN IS THE
STANDARD PATTERN FOR
FIELD ATTACHMENT
REQUIRED BY MULE-HIDE.
THE ATTACHMENT IN THE
PERIMETER AREA IS
INCREASED 50% AND 75%
IN THE CORNERS.



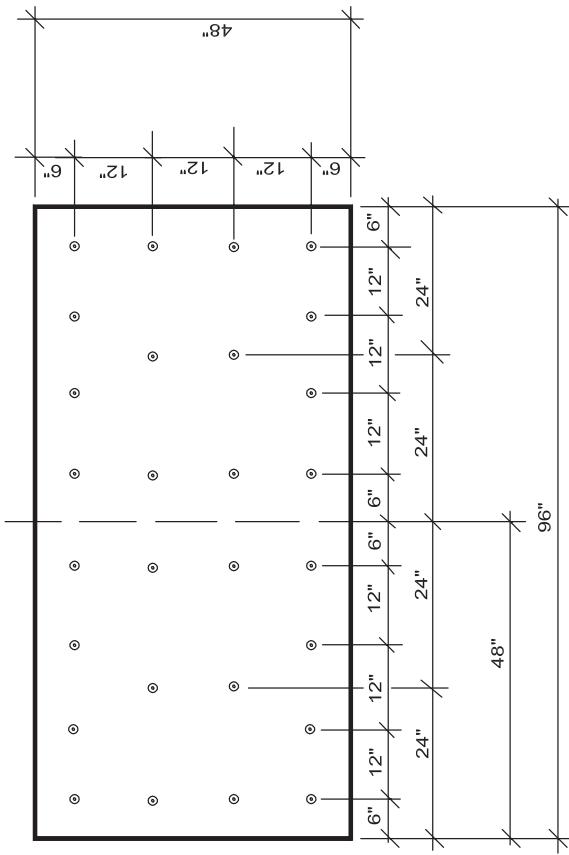
4' X 4' INSULATION ATTACHMENT (1 PER 2 SF.)
STANDARD ATTACHMENT

MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 2	DETAIL NO.: MH-MB-INS-2
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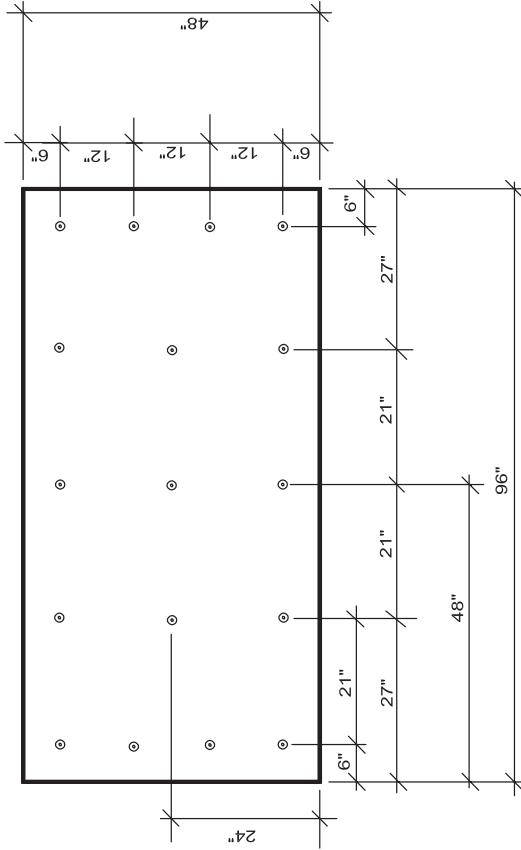
4' X 8' INSULATION ATTACHMENT (1 PER 1.33 SF)
STANDARD ATTACHMENT (24 PER BOARD)

MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 3 SELF-ADHERING MOD BIT SYSTEMS	DETAIL NO.: MH-MB-INS-3
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4' X 8' INSULATION ATTACHMENT (1 PER 1.14 SF)
STANDARD ATTACHMENT (28 PER BOARD)

MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 4 SELF-ADHERING MOD BIT SYSTEMS	DETAIL NO.: MH-MB-INS-4
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4' X 8' ORIENTED STRAND BOARD ATTACHMENT (1 PER 1.88 SF)
STANDARD ATTACHMENT (MINIMUM 7/16" THICK)

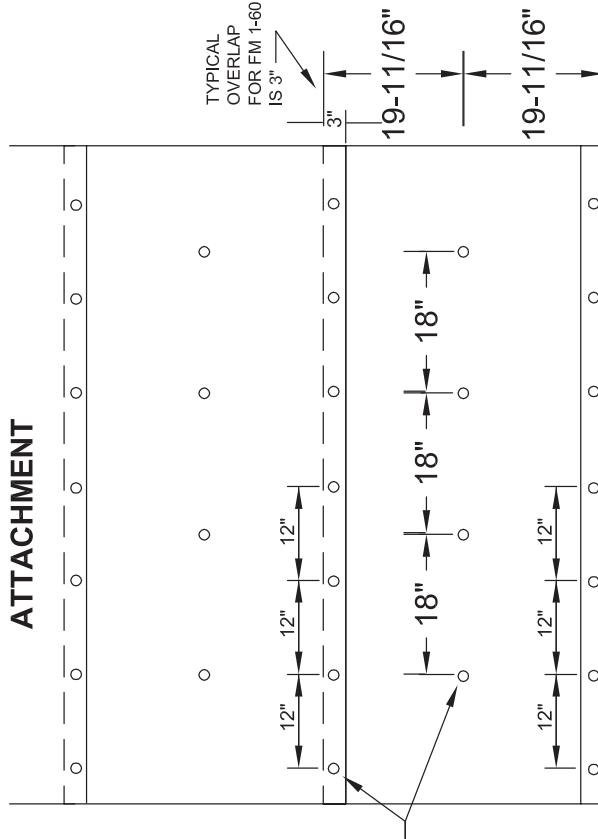
MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 5	DETAIL NO.: MH-MB-INS-5
	SELF-ADHERING MOD BIT SYSTEMS	

**FIELD FASTENING
PATTERN FOR NAIL
BASE**

NOTE: TYPICALLY, CORNERS
REQUIRE 100% INCREASE OF
FASTENERS AND PERIMETERS
REQUIRE 50% INCREASE.

FASTENER PLACEMENT;
12" O.C. @ SEAMS
18" O.C. @ CENTER OF ROLLS

FACTORY MUTUAL APPROVED
FASTENERS AND PLATES



**TYPICAL FM 1-60
ATTACHMENT**

TYPICAL
OVERLAP
FOR FM 1-60
IS 3"

DETAIL NO.:
MH-MB-NB
FM 1-60

NAIL BASE FASTENING PATTERN
SELF-ADHERING MOD BIT SYSTEMS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

**FIELD FASTENING
PATTERN FOR NAIL
BASE SHEET**

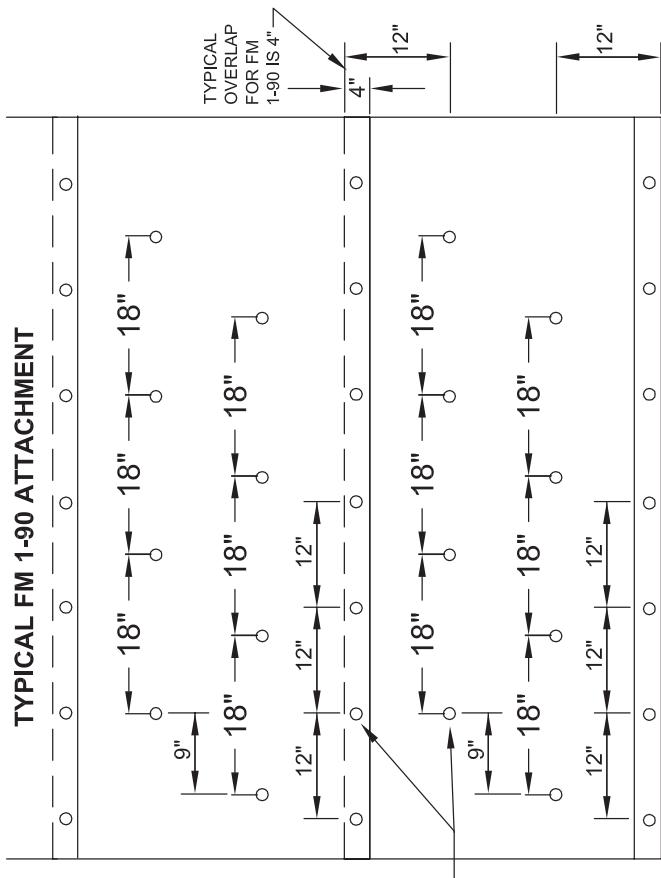
NOTE: TYPICALLY, CORNERS
REQUIRE 100% INCREASE OF
FASTENERS AND PERIMETERS
REQUIRE 50% INCREASE.

FASTENER PLACEMENT:

12" O.C. @ SEAMS
18" O.C. @ FIELD 2 ROWS
SPACED 12" APART AND FROM
SHEET EDGE AND STAGGERED
9"

FACTORY MUTUAL APPROVED
FASTENERS AND PLATES

TYPICAL FM 1-90 ATTACHMENT



39-3/8" WIDE NAIL BASE ROLLS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

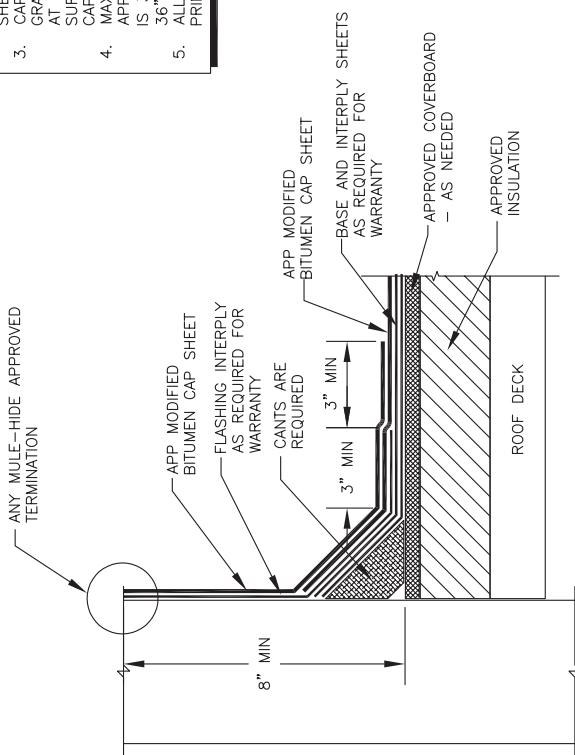
NAIL BASE FASTENING PATTERN

**DETAIL NO.:
MH-MB-NB
FM 1-90**

SELF-ADHERING MOD BIT SYSTEMS

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
4. MAXIMUM FLASHING HEIGHT FOR APP MODIFIED BITUMEN FLASHINGS IS 36". IF WALL IS TALLER THAN 36", SEE DETAIL MHHB-UN-CW07T.
5. ALL VERTICAL SURFACES MUST BE PRIMED



**MULE-HIDE
PRODUCTS CO., INC.**

**BASE FLASHING
NONCOMBUSTIBLE SUBSTRATE
SYSTEMS:
APP MODIFIED BITUMEN**

DETAIL NO.:

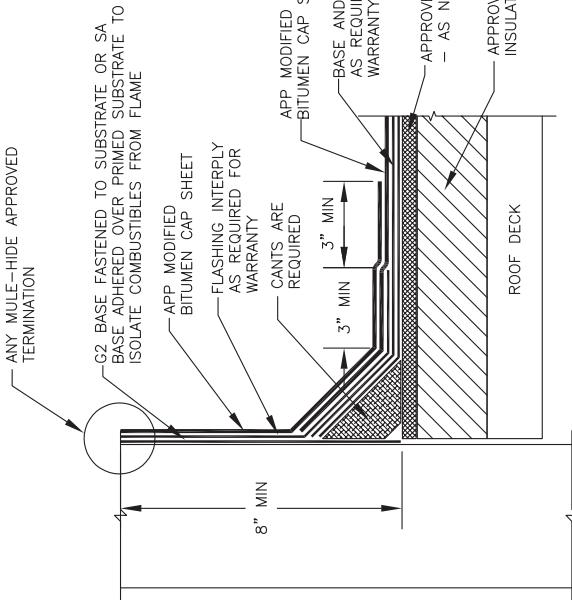
MHHB-UN-CW01T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
4. MAXIMUM FLASHING HEIGHT FOR APP MODIFIED BITUMEN FLASHINGS IS 36". IF WALL IS TALLER THAN 36", SEE DETAIL MMB-UN-CW07T

ANY MULE-HIDE APPROVED TERMINATION



**MULE-HIDE
PRODUCTS CO., INC.**

**BASE FLASHING
COMBUSTIBLE SUBSTRATE
SYSTEMS:
APP MODIFIED BITUMEN**

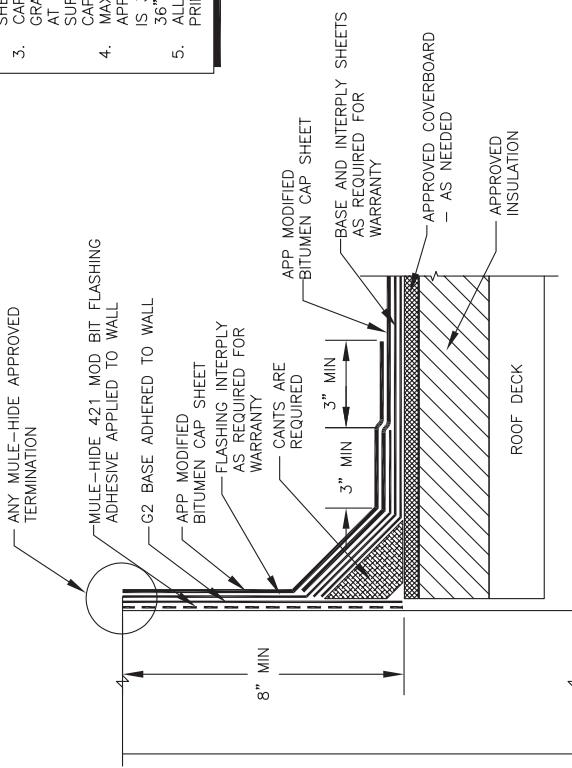
DETAIL NO.:

MHMB-UN-CW11T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
4. MAXIMUM FLASHING HEIGHT FOR APP MODIFIED BITUMEN FLASHINGS IS 36". IF WALL IS TALLER THAN 36", SEE DETAIL MMB-UN-CW07T.
5. ALL VERTICAL SURFACES MUST BE PRIMED.



**MULE-HIDE
PRODUCTS CO., INC.**

**BASE FLASHING
WITH MASTIC
SYSTEMS:
APP MODIFIED BITUMEN**

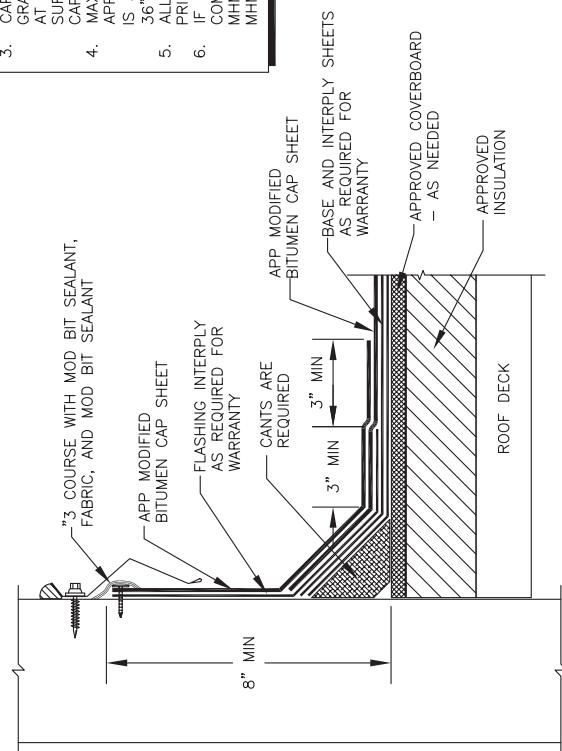
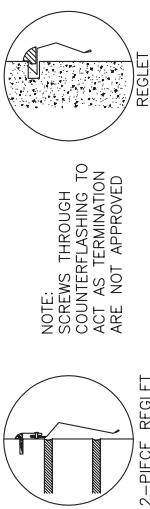
DETAIL NO.:

MHM-B-UN-CW02T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
4. MAXIMUM FLASHING HEIGHT FOR APP MODIFIED BITUMEN FLASHINGS IS 36". IF WALL IS TALLER THAN 36", SEE DETAIL MHMB-UN-CW06T.
5. ALL VERTICAL SURFACES TO BE PRIMED.
6. IF FLASHING SUBSTRATE IS COMBUSTIBLE, REFER TO DETAIL MHMB-UN-CW11T OR MHMB-UN-CW02T.



**MULE-HIDE
PRODUCTS CO., INC.**

**BASE FLASHING
WITH METAL COUNTERFLASHING**
SYSTEMS:
APP MODIFIED BITUMEN

DETAIL NO.:

MHMB-UN-CW03T

REVISION DATE: MARCH 2015

NOTE:

SCREWS THROUGH
COUNTERFLASHING TO
ACT AS TERMINATION
ARE NOT APPROVED

2-Piece REGLET

FASTENED 8" O.C.

METAL COUNTERFLASHING WITH 3"

MINIMUM FACEFLASHING TO
"3" COURSE WITH MOD BIT SEALANT,
FABRIC, AND MOD BIT SEALANT

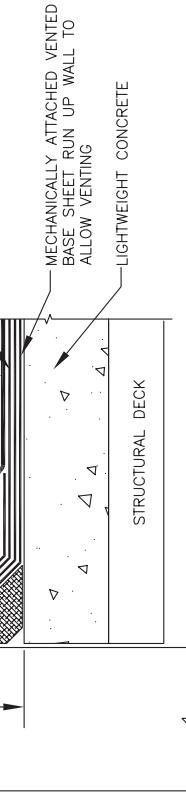
APP MODIFIED
BITUMEN CAP SHEET

FLASHING INTERPLY AS
REQUIRED FOR WARRANTY

CANTS ARE
REQUIRED

APP MODIFIED
BITUMEN CAP SHEET

8" MIN
3" MIN
3" MIN
BASE AND INTERPLY SHEETS
AS REQUIRED FOR
WARRANTY



NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
4. MAXIMUM FLASHING HEIGHT FOR APP MODIFIED BITUMEN FLASHINGS IS 36". IF WALL IS TALLER THAN 36", SEE DETAIL MMBB-UN-CW06T



**MULE-HIDE
PRODUCTS CO., INC.**

**BASE FLASHING
FOR VENTED PERIMETER
SYSTEMS:
APP MODIFIED BITUMEN**

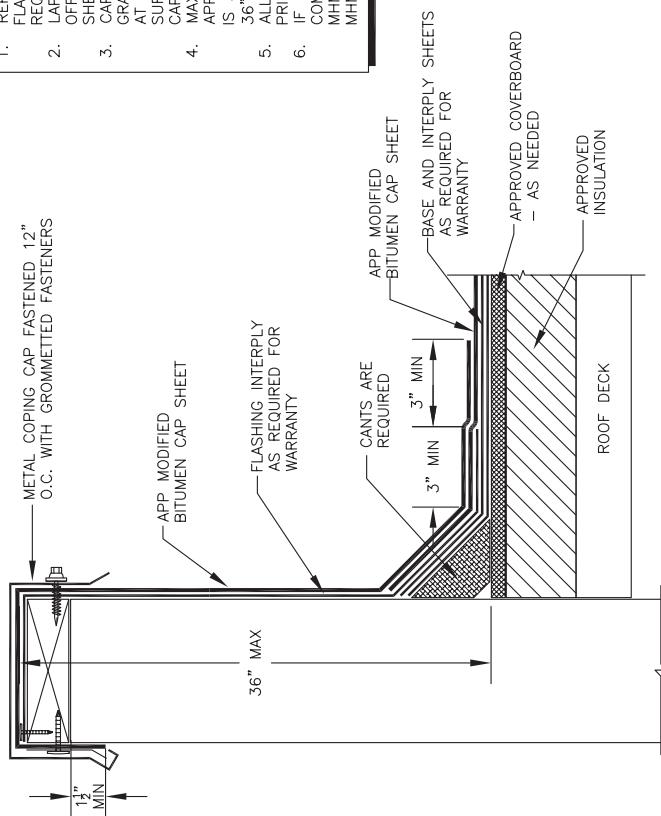
DETAIL NO.:

MHMB-UN-CW04T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
4. MAXIMUM FLASHING HEIGHT FOR APP MODIFIED BITUMEN FLASHINGS IS 36". IF WALL IS TALLER THAN 36", SEE DETAIL MHMB-UN-CW06T.
5. ALL VERTICAL SURFACES TO BE PRIMED.
6. IF FLASHING SUBSTRATE IS COMBUSTIBLE, REFER TO DETAIL MHMB-UN-CW11T OR MHMB-UN-CW02T.



**MULE-HIDE
PRODUCTS CO., INC.**

**PARAPET WALL
WITH METAL COPING
SYSTEMS:
APP MODIFIED BITUMEN**

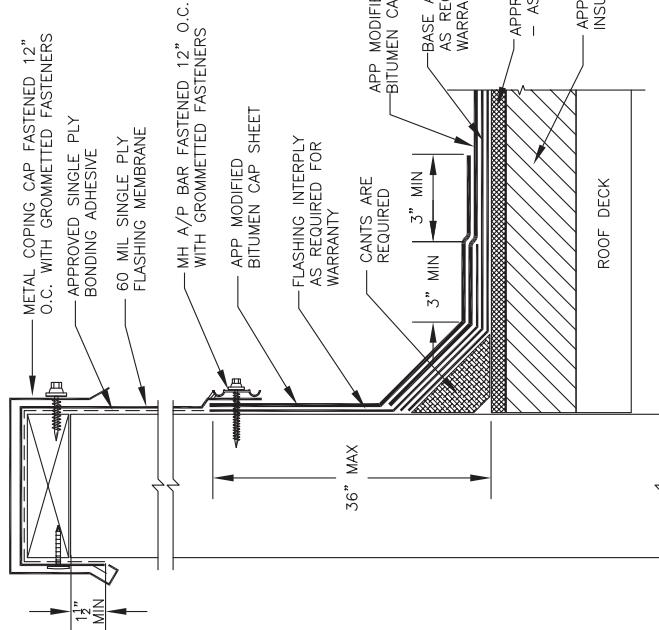
DETAIL NO.:

MHMB-UN-CW05T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPs OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
4. MAXIMUM FLASHING HEIGHT FOR APP MODIFIED BITUMEN FLASHINGS IS 36". IF WALL IS TALLER THAN 36", SEE DETAIL MHMB-UN-CW06T.
5. SINGLE PLY MEMBRANE MUST OVERLAP TOP OF MODIFIED BITUMEN FLASHING PRIOR TO INSTALLING A/P BAR.
6. ALL VERTICAL SURFACES AT APP FLASHINGS TO BE PRIMED.
7. IF FLASHING SUBSTRATE IS COMBUSTIBLE, REFER TO DETAIL MHMB-UN-CW11T OR MHMB-UN-CW02T.



**MULE-HIDE
PRODUCTS CO., INC.**

**HIGH WALL
PARAPET FLASHING
SYSTEMS:
APP MODIFIED BITUMEN**

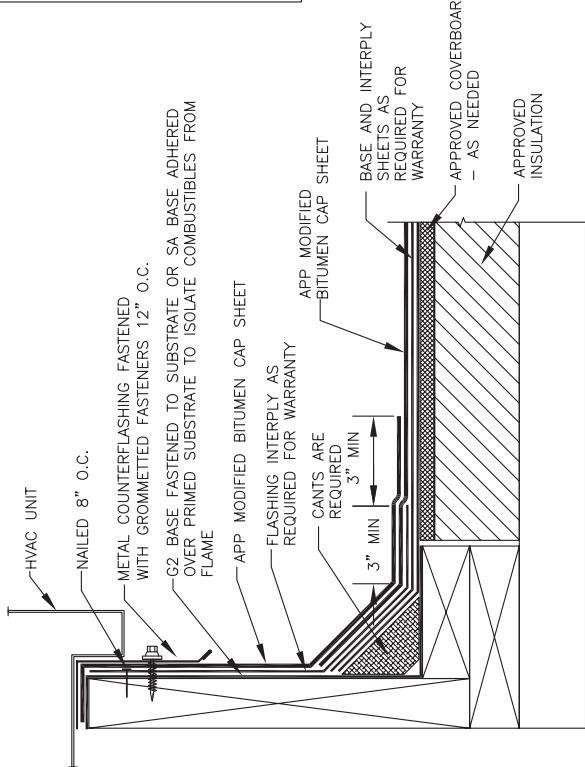
DETAIL NO.:

MHMB-UN-CW06T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES.
3. LAPS IN FLASHING MUST BE OFF SET FROM LAPS IN FIELD SHEET.
4. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPs OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
5. INSTALL HVAC UNITS AFTER THE ROOF MEMBRANE AND FLASHINGS HAVE BEEN INSTALLED, IF POSSIBLE.



**MULE-HIDE
PRODUCTS CO., INC.**

HVAC CURB
WOOD
SYSTEMS:
APP MODIFIED BITUMEN

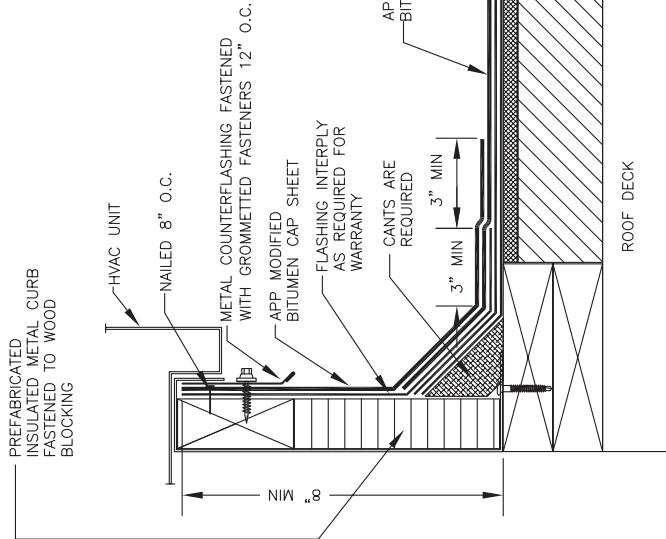
DETAIL NO.:

MHMB-UN-CW07T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES.
3. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
4. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
5. INSTALL HVAC UNITS AFTER THE ROOF MEMBRANE AND FLASHINGS HAVE BEEN INSTALLED, IF POSSIBLE.
6. VERTICAL SURFACES MUST BE PRIMED.
7. ANY COMBUSTIBLE MATERIALS ON PREFABRICATED CURB MUST BE PROTECTED WITH A G2 BASE NAILED IN PLACE OR A SA BASE ADHERED TO A PRIMED SURFACE.



**MULE-HIDE
PRODUCTS CO., INC.**

PREFABRICATED METAL CURB

SYSTEMS:

APP MODIFIED BITUMEN

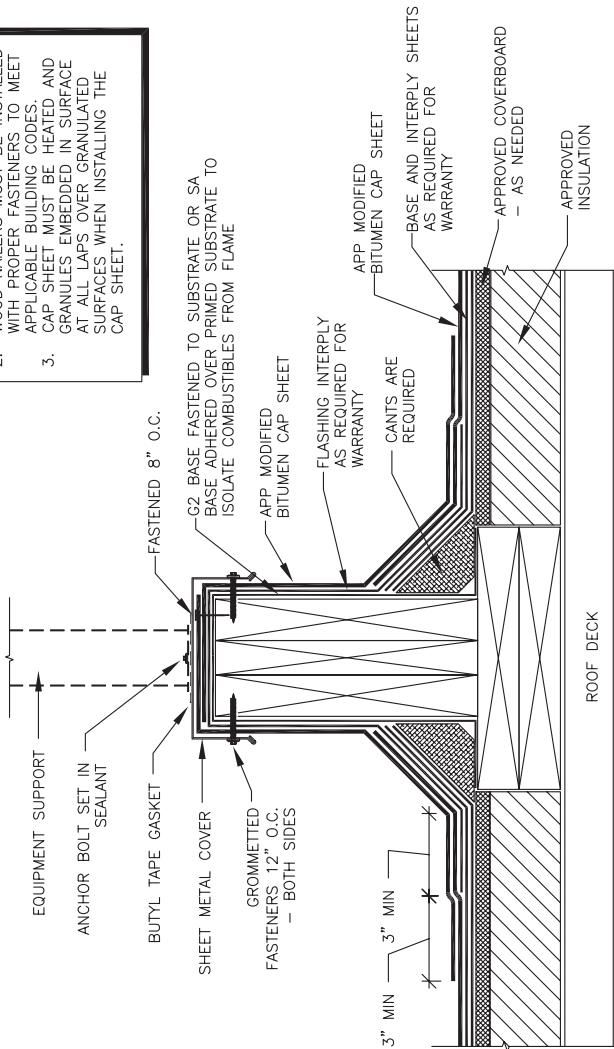
DETAIL NO.:

MHMB-UN-CW08T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



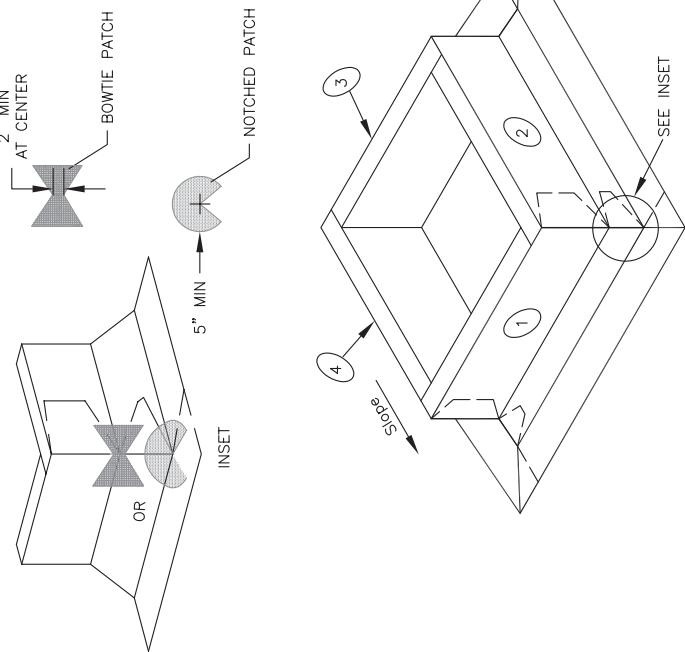
**MULE-HIDE
PRODUCTS CO., INC.**

AREA DIVIDER / EQUIPMENT SUPPORT
WOOD CURB
SYSTEMS:
APP MODIFIED BITUMEN

DETAIL NO.:

MHMB-UN-CW10T

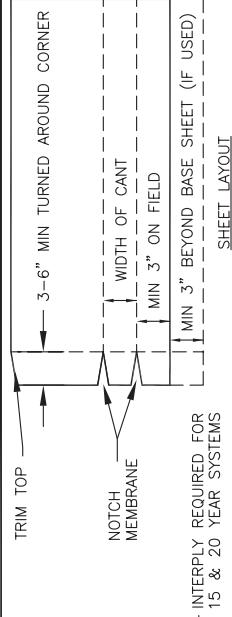
REVISION DATE: MARCH 2015



DETAIL NO.:
MHHMB-UN-CR01T
REVISION DATE: MARCH 2015

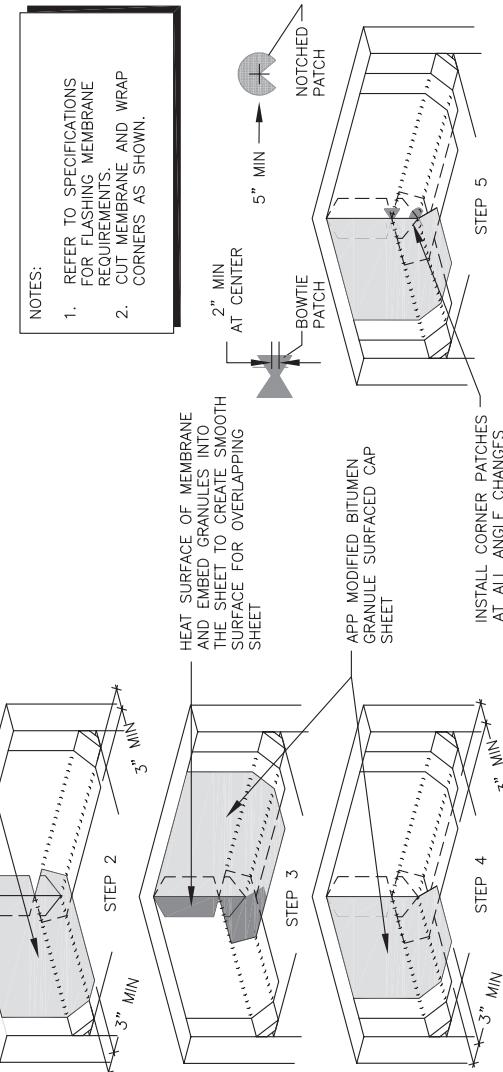
**OUTSIDE CORNER
ISOMETRIC
SYSTEMS:**
APP MODIFIED BITUMEN

**MULE-HIDE
PRODUCTS CO., INC.**



NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. CUT MEMBRANE AND WRAP CORNERS AS SHOWN.



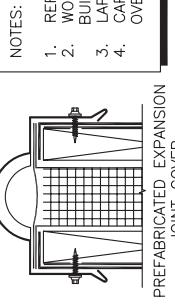
**MULE-HIDE
PRODUCTS CO., INC.**

**INSIDE CORNER
ISOMETRIC
SYSTEMS:
APP MODIFIED BITUMEN**

DETAIL NO.:

MHMB-UN-CR02T

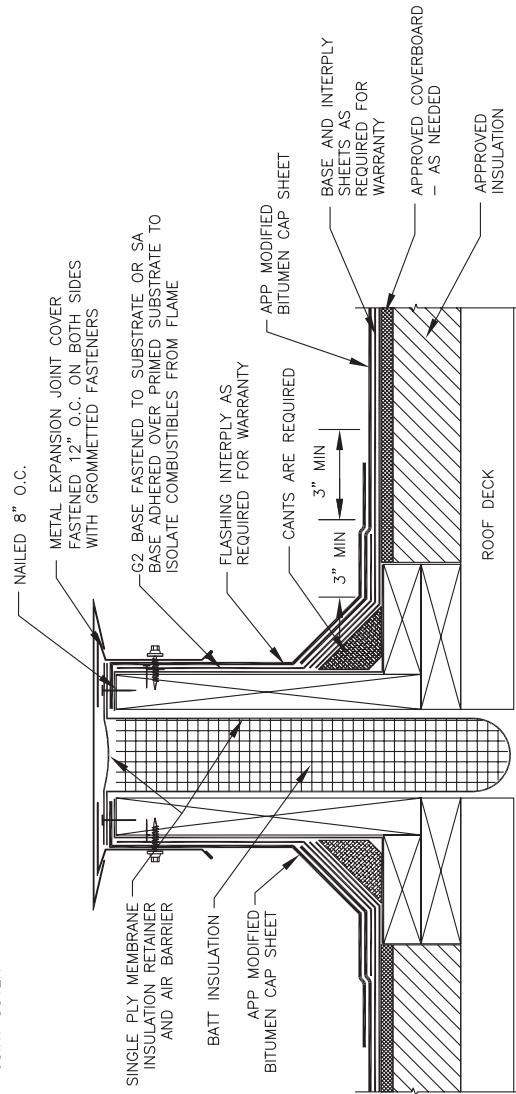
REVISION DATE: MARCH 2015



NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS
2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES.
3. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
4. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.

PREFABRICATED EXPANSION JOINT COVER



**MULE-HIDE
PRODUCTS CO., INC.**

**EXPACTION JOINT
CURB
SYSTEMS:
APP MODIFIED BITUMEN**

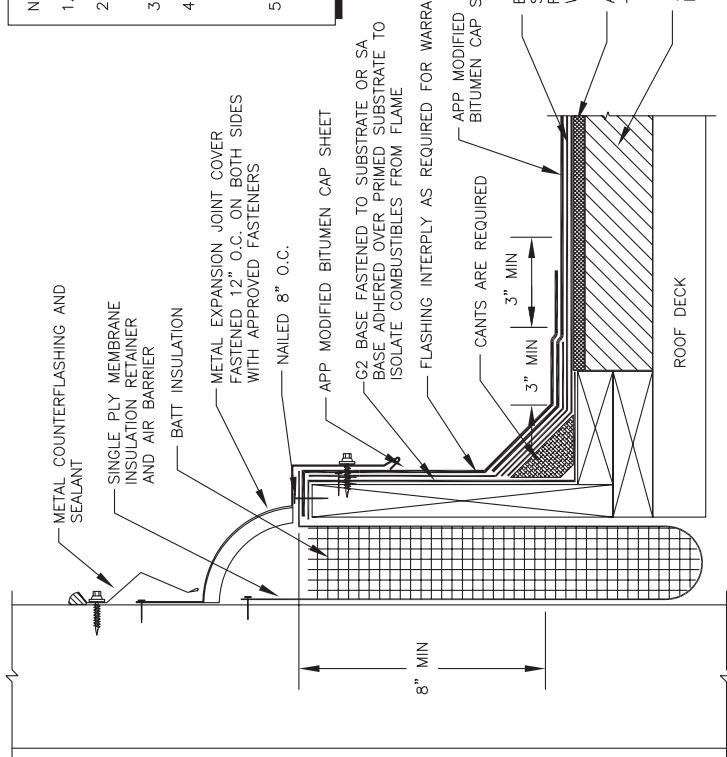
DETAIL NO.:

MHHMB-UN-XJ01T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES.
3. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN FIELD SHEET.
4. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
5. INSTALL HVAC UNITS AFTER THE ROOF MEMBRANE AND FLASHINGS HAVE BEEN INSTALLED, IF POSSIBLE.



**MULE-HIDE
PRODUCTS CO., INC.**

**EXPACTION JOINT
WALL
SYSTEMS:
APP MODIFIED BITUMEN**

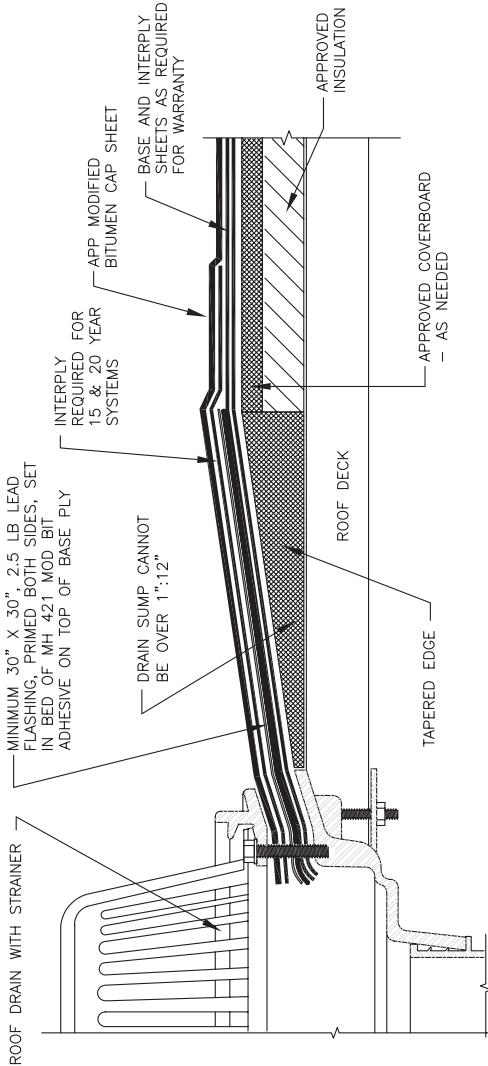
DETAIL NO.:

MHHMB-UN-XJ02T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS
2. IF DRAIN SUMP IS GREATER THAN 1":12", A RETROFIT DRAIN INSERT MUST BE USED
3. A TARGET PATCH OF SMOOTH SURFACED MODIFIED BITUMEN IS REQUIRED IF A FIELD SEAM IS WITHIN 6" - 9" OF CLAMPING RING
4. NO SEAM CAN BE LESS THAN 6" FROM THE DRAIN CLAMPING RING



**MULE-HIDE
PRODUCTS CO., INC.**

ROOF DRAIN
SYSTEMS:
APP MODIFIED BITUMEN

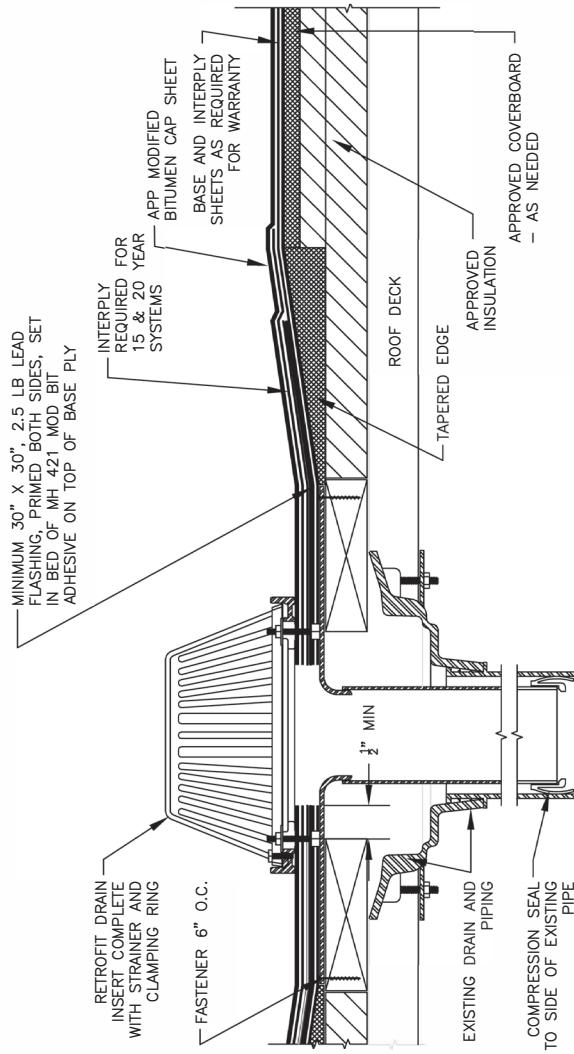
DETAIL NO.:

MHHMB-UN-DR01T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS
2. WOOD NAILERS MUST BE INSTALLED AROUND DRAIN
3. A TARGET PATCH OF SMOOTH SURFACED MODIFIED BITUMEN IS REQUIRED IF A FIELD SEAM IS WITHIN 6" - 9" OF CLAMPING RING
4. NO SEAM CAN BE LESS THAN 6" FROM THE DRAIN CLAMPING RING



**MULE-HIDE
PRODUCTS CO., INC.**

**RETROFIT
SYSTEMS:
APP MODIFIED BITUMEN**

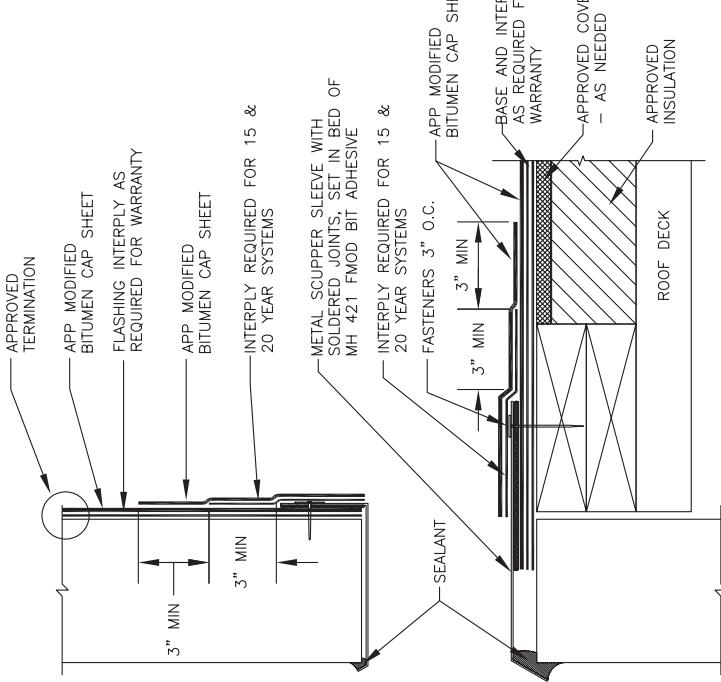
DETAIL NO.:

MHMB-UN-DR02T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN FLASHING MUST BE OFFSET FROM LAPS IN CAP SHEET.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAP OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.
4. MAXIMUM FLASHING HEIGHT FOR APP MODIFIED BITUMEN FLASHINGS IS 36". IF WALL IS TALLER THAN 36", SEE DETAIL MHMB-UN-CW06T



**MULE-HIDE
PRODUCTS CO., INC.**

SYSTEMS:
APP MODIFIED BITUMEN

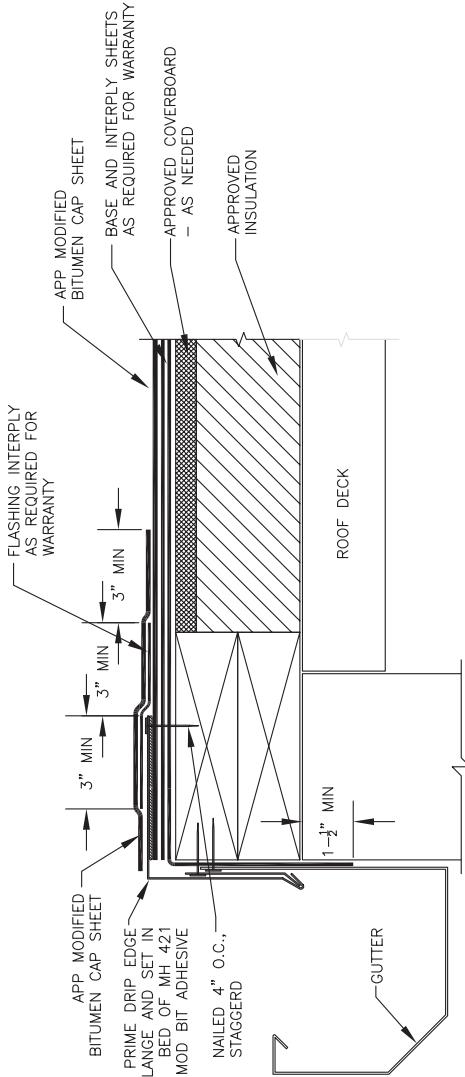
THROUGH WALL SCUPPER

DETAIL NO.:

MHMB-UN-DR03T

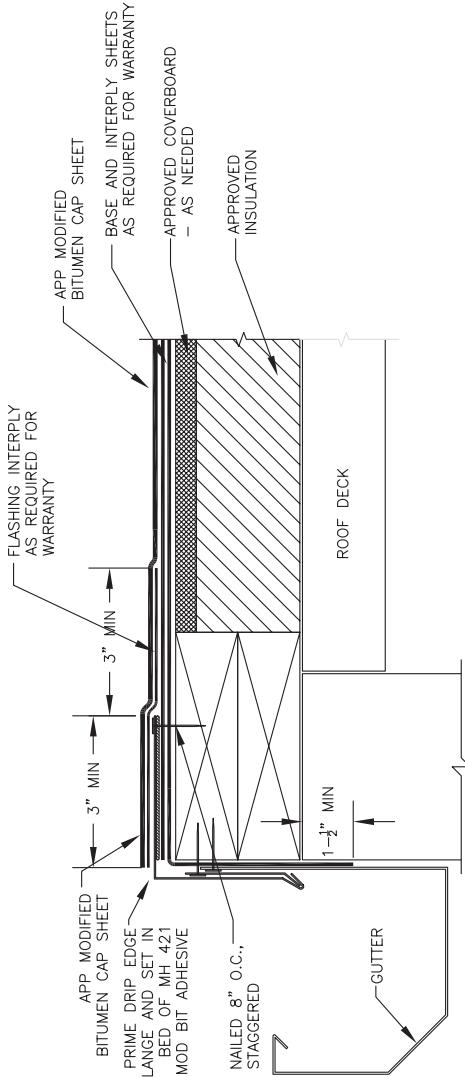
REVISION DATE: MARCH 2015

- NOTES:
1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
 2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES AND EXTEND BEYOND THE METAL FLANGE.
 3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



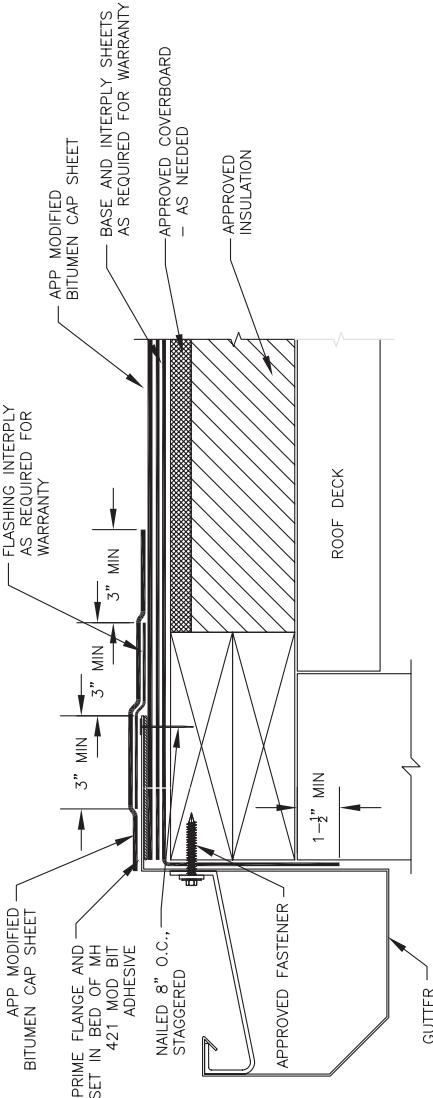
MULE-HIDE PRODUCTS CO., INC.	GUTTER WITH DRIP EDGE SYSTEMS: APP MODIFIED BITUMEN	DETAIL NO.: MHMB-UN-DR04T
		REVISION DATE: MARCH 2015

- NOTES:
1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
 2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES
 3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



MULE-HIDE PRODUCTS CO., INC.	GUTTER WITH DRIP EDGE OPTION 2 SYSTEMS: APP MODIFIED BITUMEN	DETAIL NO.: MHMB-UN-DR05T
		REVISION DATE: MARCH 2015

- NOTES:**
1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
 2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES AND EXTEND BEYOND THE METAL FLANGE.
 3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



**MULE-HIDE
PRODUCTS CO., INC.**

**FLANGED GUTTER
WITHOUT DRIP EDGE
SYSTEMS:
APP MODIFIED BITUMEN**

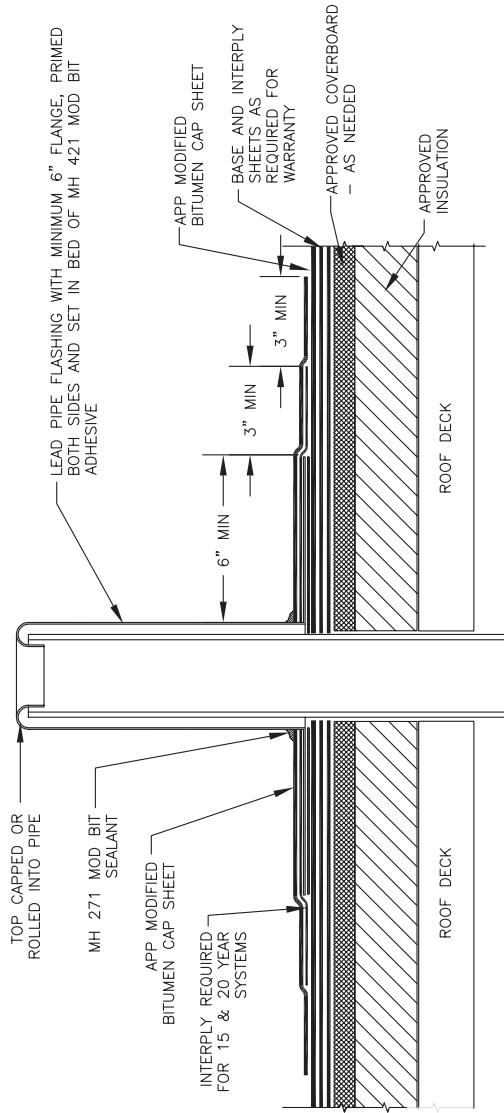
DETAIL NO.:

MHHMB-UN-DR06T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



**MULE-HIDE
PRODUCTS CO., INC.**

VENT PIPE
SYSTEMS:
APP MODIFIED BITUMEN

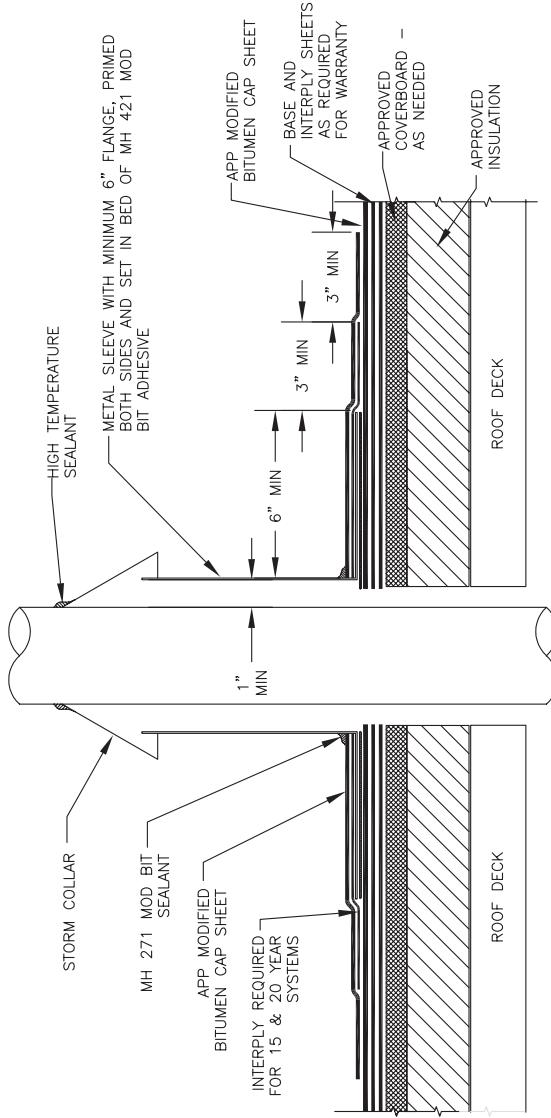
DETAIL NO.:

MHMB-UN-PP01T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. TEMPERATURE OF METAL SLEEVE MUST NOT EXCEED 160° F.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



**MULE-HIDE
PRODUCTS CO., INC.**

HOT STACK
SYSTEMS:
APP MODIFIED BITUMEN

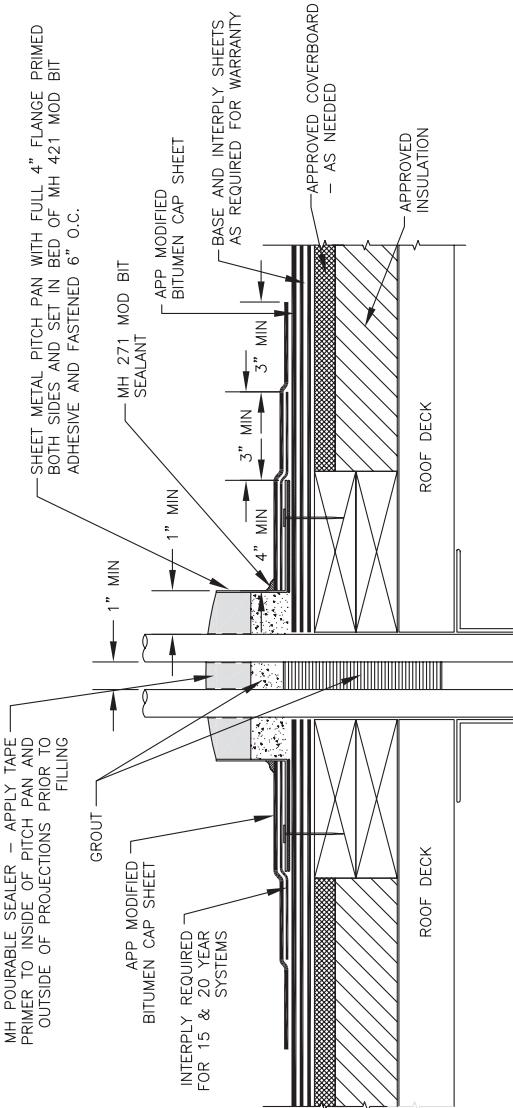
DETAIL NO.:

MHMB-UN-PP02T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. WOOD NAILERS MATCHING THE INSULATION THICKNESS AND EXTENDING BEYOND THE FLANGE ARE REQUIRED.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



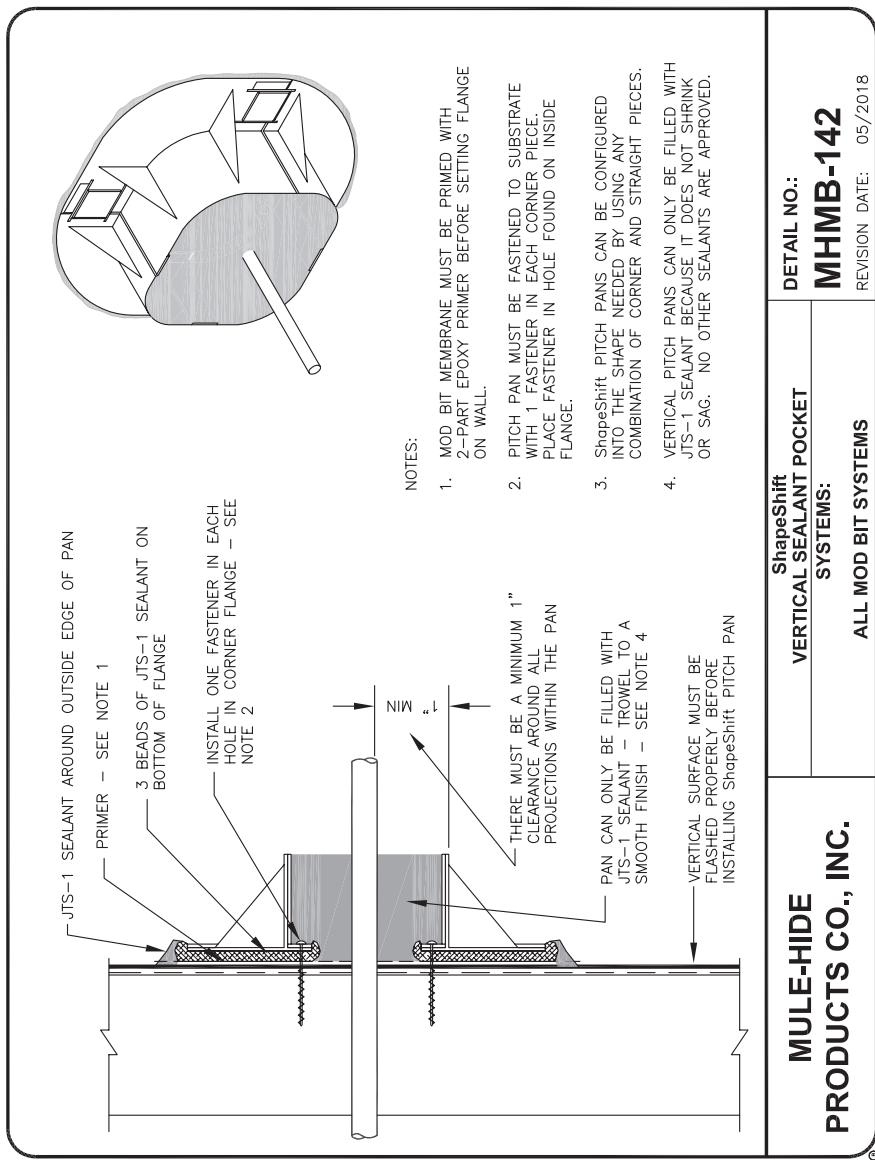
**MULE-HIDE
PRODUCTS CO., INC.**

PENETRATION POCKET
SYSTEMS:
APP MODIFIED BITUMEN

DETAIL NO.:

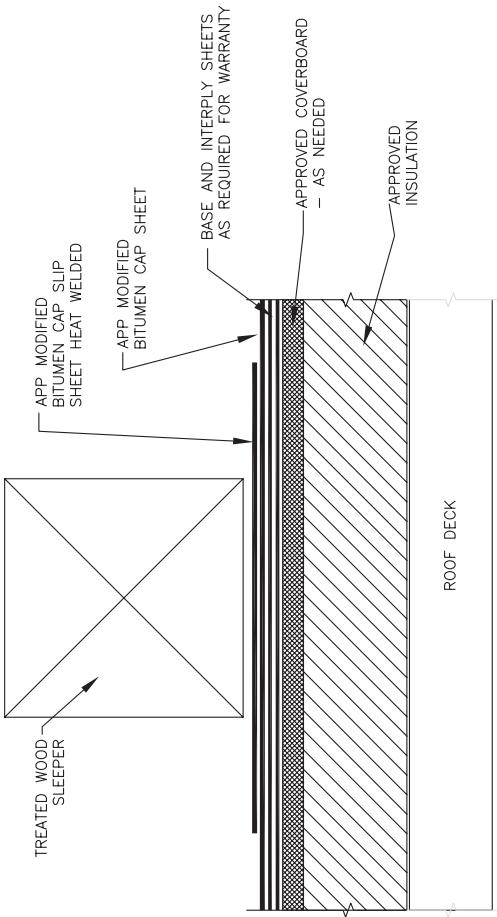
MHMB-UN-PP03T

REVISION DATE: MARCH 2015



NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. DO NOT INSTALL SLEEPERS OVER FASTERER PLATES OR SEAMS.
3. WOOD NAILERS MATCHING THE INSULATION THICKNESS IS REQUIRED WHEN THE WEIGHT SUPPORTED BY THE SLEEPER WILL CRUSH THE INSULATION.
4. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



**MULE-HIDE
PRODUCTS CO., INC.**

**SLEEPER
SYSTEMS:
APP MODIFIED BITUMEN**

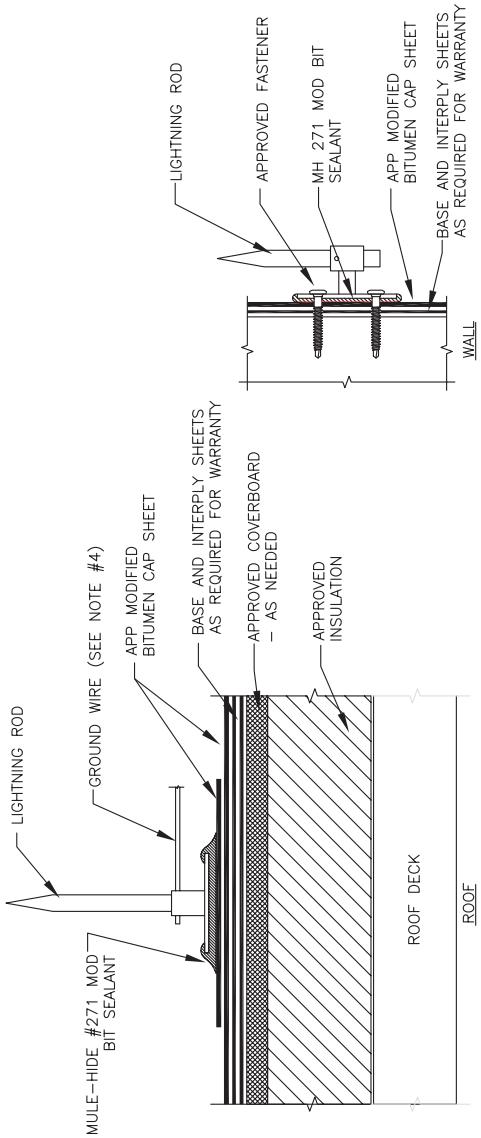
DETAIL NO.:

MHMB-UN-PP05T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. GROUND WIRE SUPPORTS ARE TO BE FLASHED IN A SIMILAR MANNER
3. GROUND WIRE MUST BE ANCHORED SUFFICIENTLY TO PREVENT CONTACT WITH FIELD OR FLASHING
4. INSTALL ANOTHER LAYER OF CAP SHEET IF GROUND WIRE MUST COME IN CONTACT WITH FIELD OR FLASHING MEMBRANE
5. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



**MULE-HIDE
PRODUCTS CO., INC.**

**SYSTEMS:
APP MODIFIED BITUMEN**

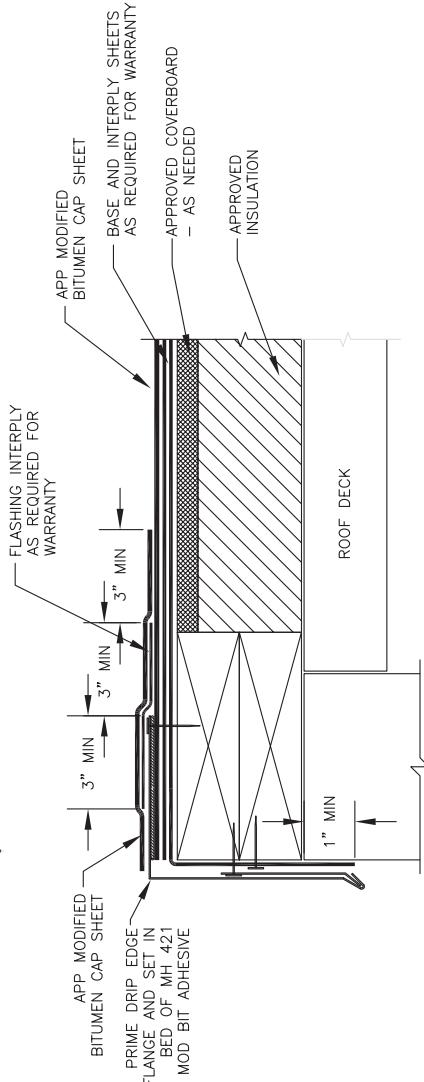
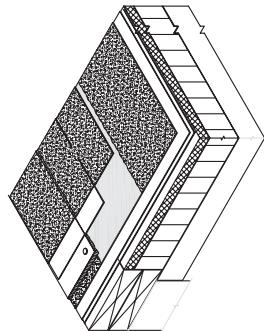
DETAIL NO.:

MHMB-UN-PP06T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES AND EXTEND BEYOND THE METAL FLANGE.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



**MULE-HIDE
PRODUCTS CO., INC.**

SYSTEMS:
APP MODIFIED BITUMEN

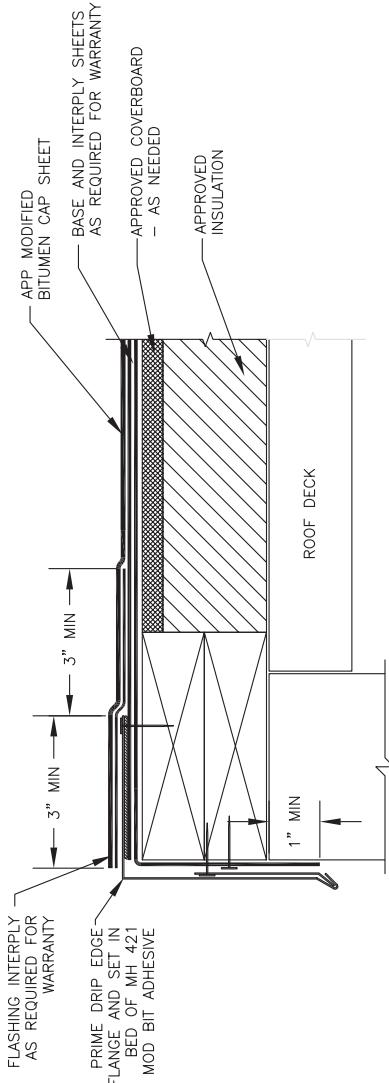
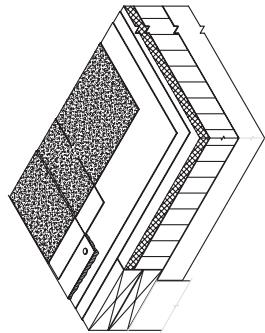
DETAIL NO.:

MHHMB-UN-RE01T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES AND EXTEND BEYOND THE METAL FLANGE.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



**MULE-HIDE
PRODUCTS CO., INC.**

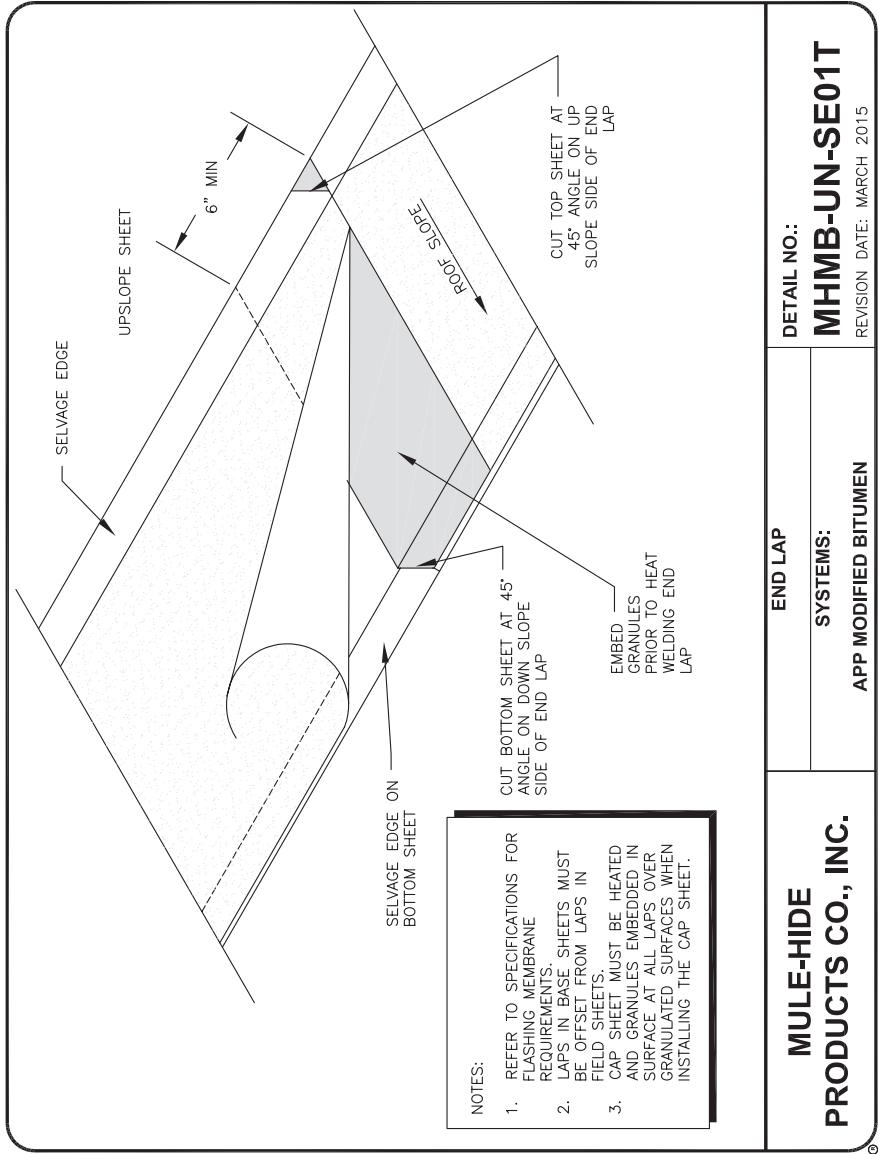
DRIP EDGE
OPTION 2
SYSTEMS:
APP MODIFIED BITUMEN

DETAIL NO.:

MHMB-UN-RE02T

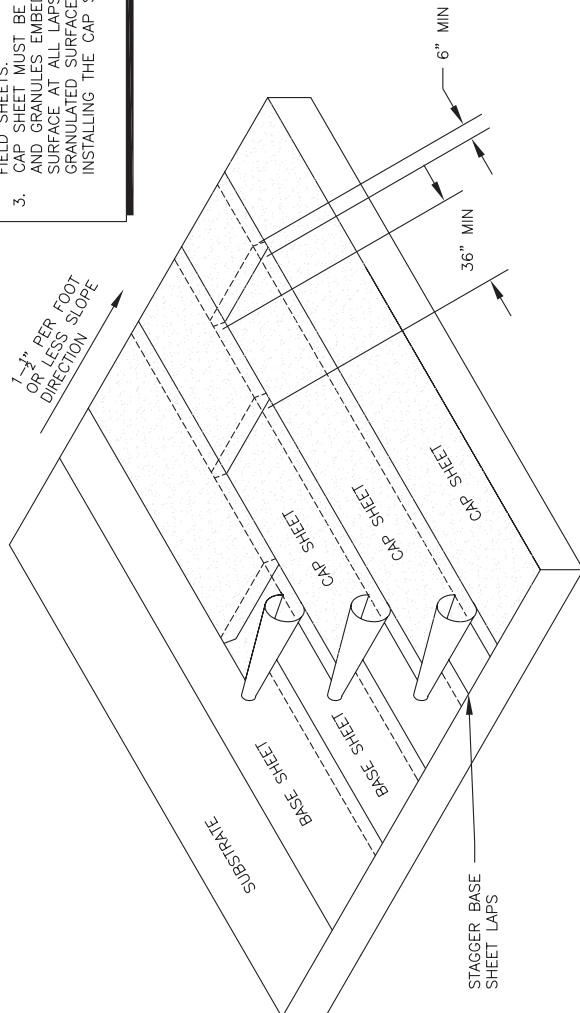
REVISION DATE: MARCH 2015

<p>NOTES:</p> <ol style="list-style-type: none"> REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS. OFFSET FROM LAPS IN FIELD SHEET. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPs OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET. MAXIMUM FLASHING HEIGHT FOR APP MODIFIED BITUMEN FLASHINGS IS 36". IF WALL IS TALLER THAN 36", SEE DETAIL MHMB-UN-CW02T. ALL VERTICAL SURFACES TO BE PRIMED. IF FLASHING SUBSTRATE IS COMBUSTIBLE, REFER TO DETAIL MHMB-UN-CW11T OR MHMB-UN-CW02T. 			
	<table border="1"> <tr> <td data-bbox="834 669 939 1044"> MULE-HIDE PRODUCTS CO., INC. SYSTEMS: APP MODIFIED BITUMEN </td><td data-bbox="834 1044 939 1428"> ROOF EDGE ON PARAPET DETAIL NO.: MHMB-UN-RE03T <small>REVISION DATE: MARCH 2015</small> </td></tr> </table>	MULE-HIDE PRODUCTS CO., INC. SYSTEMS: APP MODIFIED BITUMEN	ROOF EDGE ON PARAPET DETAIL NO.: MHMB-UN-RE03T <small>REVISION DATE: MARCH 2015</small>
MULE-HIDE PRODUCTS CO., INC. SYSTEMS: APP MODIFIED BITUMEN	ROOF EDGE ON PARAPET DETAIL NO.: MHMB-UN-RE03T <small>REVISION DATE: MARCH 2015</small>		



NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN BASE SHEETS MUST BE OFFSET FROM LAPS IN FIELD SHEETS.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



MULE-HIDE
PRODUCTS CO., INC.
©

END LAPS
OPTION 1
SYSTEMS:
APP MODIFIED BITUMEN

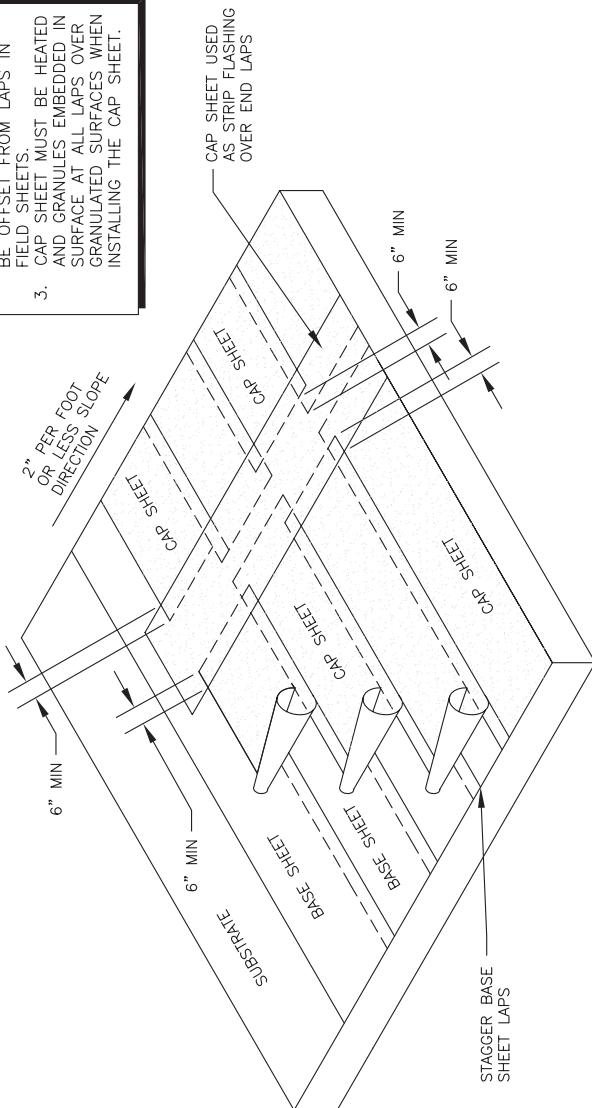
DETAIL NO.:

MHMB-UN-SE02T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. LAPS IN BASE SHEETS MUST BE OFFSET FROM LAPS IN FIELD SHEETS.
3. CAP SHEET MUST BE HEATED AND GRANULES EMBEDDED IN SURFACE AT ALL LAPS OVER GRANULATED SURFACES WHEN INSTALLING THE CAP SHEET.



MULE-HIDE
PRODUCTS CO., INC.
©

END LAPS
OPTION 2
SYSTEMS:
APP MODIFIED BITUMEN

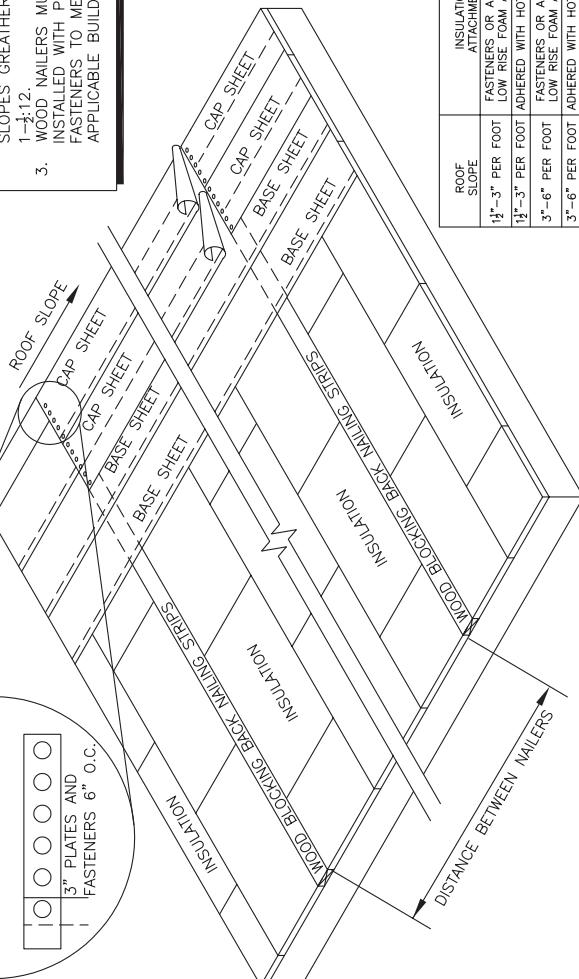
DETAIL NO.:

MHMB-UN-SE03T

REVISION DATE: MARCH 2015

NOTES:

1. REFER TO SPECIFICATIONS FOR FLASHING MEMBRANE REQUIREMENTS.
2. BACK NAILING WOOD BLOCKING STRIPS ARE REQUIRED ON ALL SLOPES GREATER THAN 1 $\frac{1}{4}$:12.
3. WOOD NAILERS MUST BE INSTALLED WITH PROPER FASTENERS TO MEET APPLICABLE BUILDING CODES.



**MULE-HIDE
PRODUCTS CO., INC.**

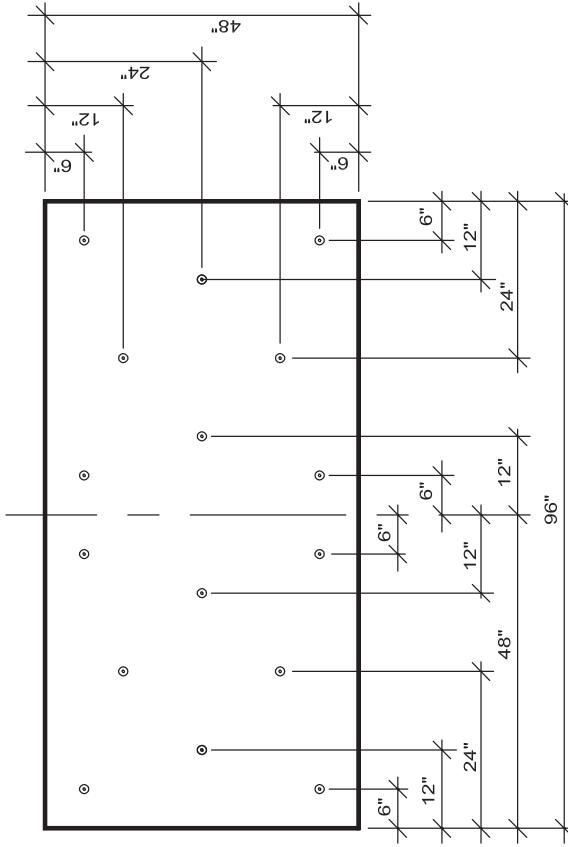
**BACK NAILING
SYSTEMS:
APP MODIFIED BITUMEN**

DETAIL NO.:

MHHMB-UN-SE04T

REVISION DATE: MARCH 2015

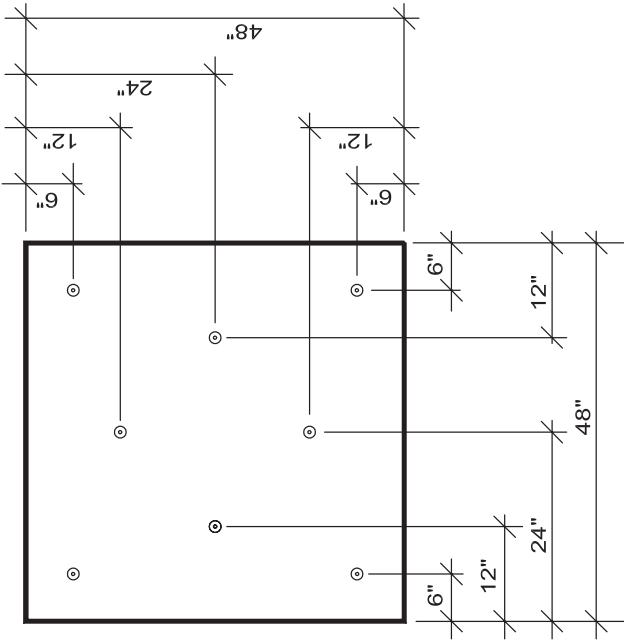
THE ATTACHMENT
PATTERN SHOWN IS THE
STANDARD PATTERN FOR
FIELD ATTACHMENT
REQUIRED BY MULE-HIDE.
THE ATTACHMENT IN THE
PERIMETER AREA IS
INCREASED 50% AND 75%
IN THE CORNERS.



4' X 8' INSULATION ATTACHMENT (1 PER 2 SF.)
STANDARD ATTACHMENT

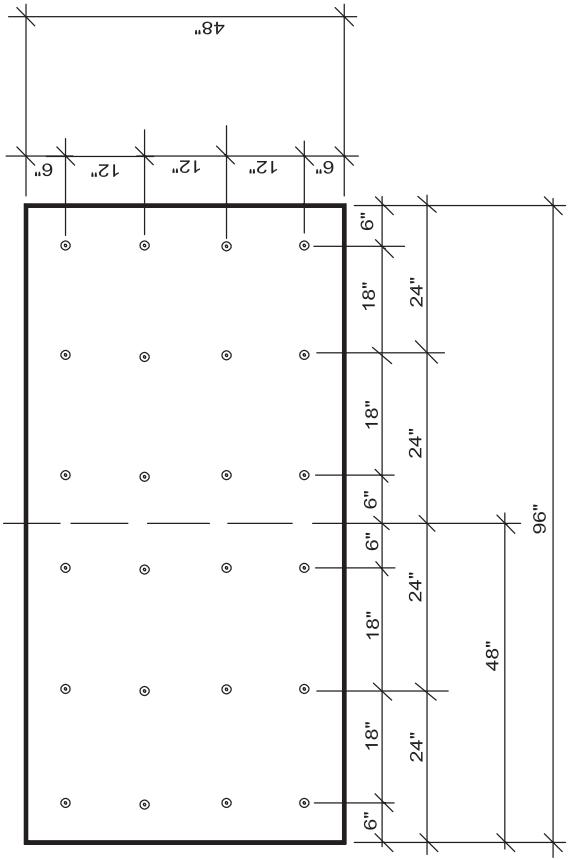
MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 1	DETAIL NO.: MH-MB-INS-1
	SELF-ADHERING MOD BIT SYSTEMS	

THE ATTACHMENT
PATTERN SHOWN IS THE
STANDARD PATTERN FOR
FIELD ATTACHMENT
REQUIRED BY MULE-HIDE.
THE ATTACHMENT IN THE
PERIMETER AREA IS
INCREASED 50% AND 75%
IN THE CORNERS.



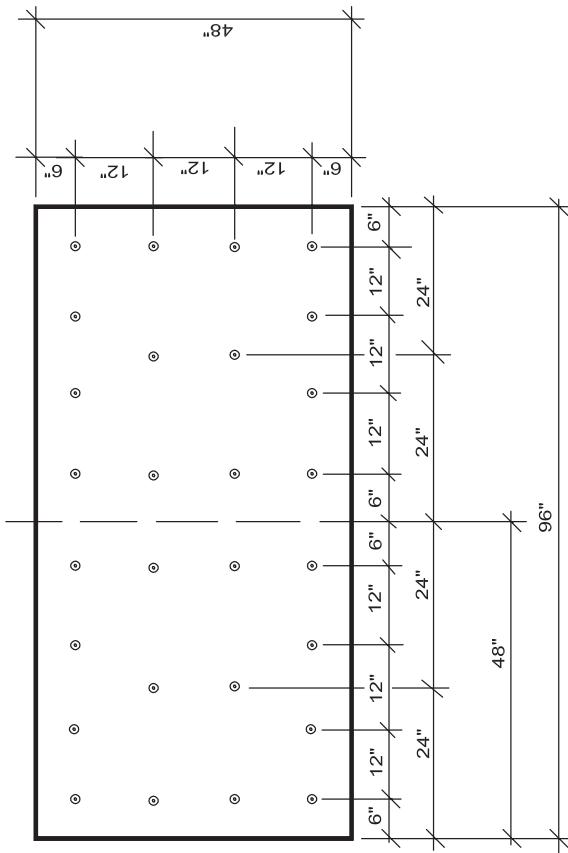
4' X 4' INSULATION ATTACHMENT (1 PER 2 SF.)
STANDARD ATTACHMENT

MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 2 SELF-ADHERING MOD BIT SYSTEMS	DETAIL NO.: MH-MB-INS-2
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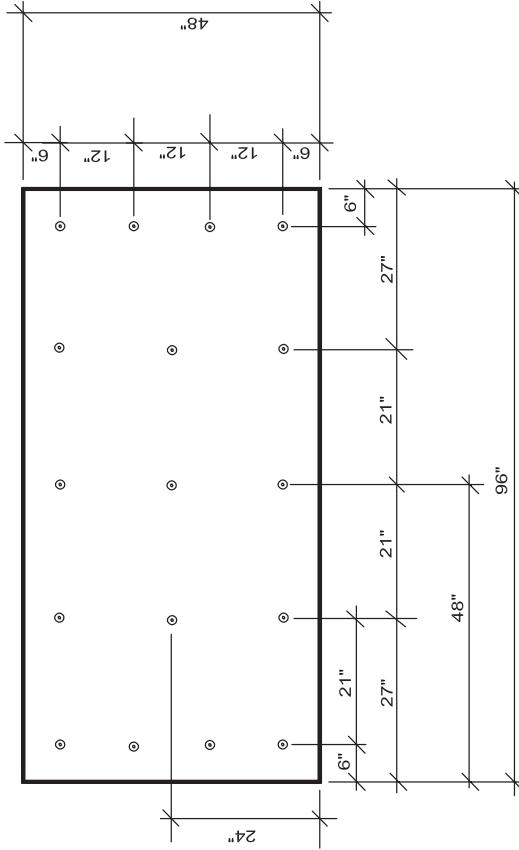
4' X 8' INSULATION ATTACHMENT (1 PER 1.33 SF)
STANDARD ATTACHMENT (24 PER BOARD)

MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 3 SELF-ADHERING MOD BIT SYSTEMS	DETAIL NO.: MH-MB-INS-3
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4' X 8' INSULATION ATTACHMENT (1 PER 114 SF)
STANDARD ATTACHMENT (28 PER BOARD)

MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 4	DETAIL NO.: MH-MB-INS-4
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4' X 8' ORIENTED STRAND BOARD ATTACHMENT (1 PER 1.88 SF)
STANDARD ATTACHMENT (MINIMUM 7/16" THICK)

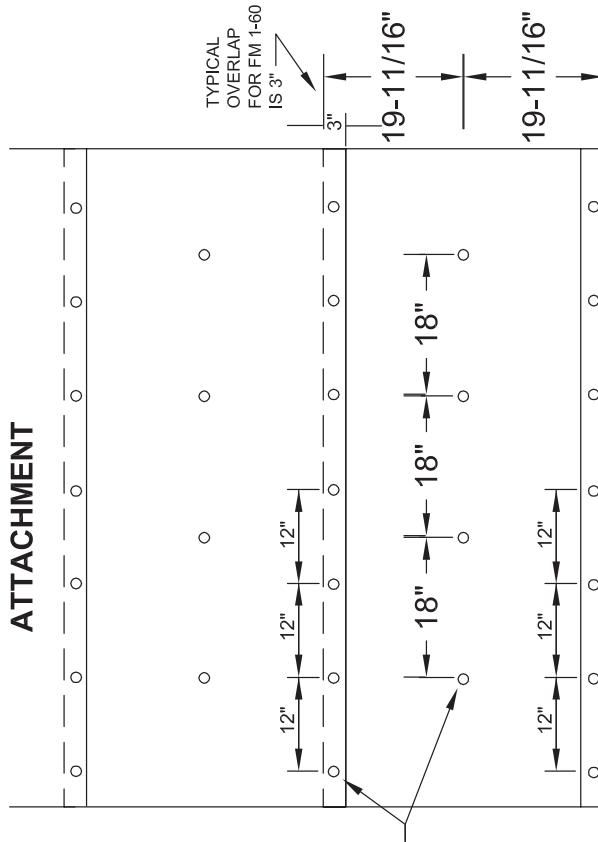
MULE-HIDE PRODUCTS CO., INC. 2003	INSULATION ATTACHMENT - OPTION 5	DETAIL NO.: MH-MB-INS-5
	SELF-ADHERING MOD BIT SYSTEMS	

**FIELD FASTENING
PATTERN FOR NAIL
BASE**

NOTE: TYPICALLY, CORNERS
REQUIRE 100% INCREASE OF
FASTENERS AND PERIMETERS
REQUIRE 50% INCREASE.

FASTENER PLACEMENT;
12" O.C. @ SEAMS
18" O.C. @ CENTER OF ROLLS

FACTORY MUTUAL APPROVED
FASTENERS AND PLATES



39-3/8" WIDE NAIL BASE ROLLS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

NAIL BASE FASTENING PATTERN

**DETAIL NO.:
MH-MB-NB
FM 1-60**

SELF-ADHERING MOD BIT SYSTEMS

**FIELD FASTENING
PATTERN FOR NAIL
BASE SHEET**

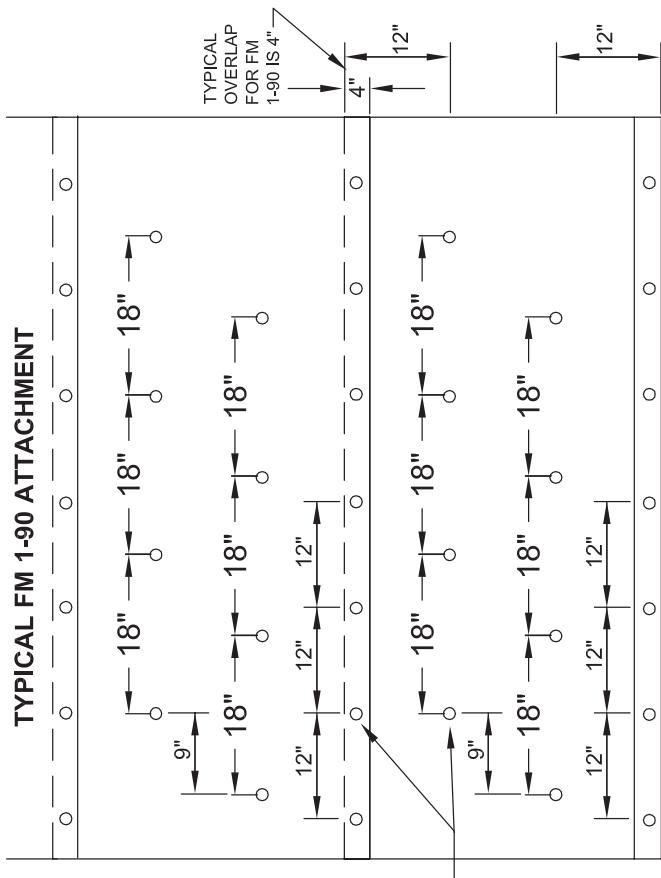
NOTE: TYPICALLY, CORNERS
REQUIRE 100% INCREASE OF
FASTENERS AND PERIMETERS
REQUIRE 50% INCREASE.

FASTENER PLACEMENT:

12" O.C. @ SEAMS
18" O.C. @ FIELD 2 ROWS
SPACED 12" APART AND FROM
SHEET EDGE AND STAGGERED
9"

FACTORY MUTUAL APPROVED
FASTENERS AND PLATES

TYPICAL FM 1-90 ATTACHMENT



39-3/8" WIDE NAIL BASE ROLLS

**MULE-HIDE
PRODUCTS CO., INC.
2003**

NAIL BASE FASTENING PATTERN

**DETAIL NO.:
MH-MB-NB
FM 1-90**

SELF-ADHERING MOD BIT SYSTEMS



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