



ENGINEER

EVALUATE

TEST

CONSULT

P.E. EVALUATION REPORT (PEER)

Mule-Hide Products Co., Inc.

1195 Prince Hall Dr.
Beloit, WI 53511
(608) 365-3111

PEER-MHCRL-001.A.R10
FL10703-R11 (NON-HVHZ)
Date of Issuance: 11/04/2009
Revision 10: 10/06/2023

SCOPE:

This P.E. Evaluation Report (henceforth 'PEER') is issued under **F.A.C. Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **8th Edition (2023) Florida Building Code sections noted herein.**

DESCRIPTION: Mule-Hide EPDM Single Ply Roof Systems (NON-HVHZ)

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein.

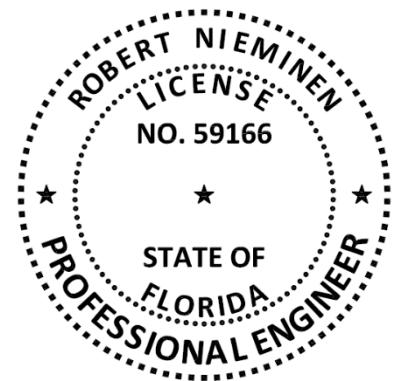
CONTINUED COMPLIANCE: This PEER is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our PEERs by the named client constitutes agreement to notify NEMO ETC, LLC of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO ETC, LLC requires a complete review of its PEER relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO P.E. Evaluated" may be displayed in advertising literature. If any portion of the PEER is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire PEER shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This PEER consists of pages 1 through 4, plus a 34-page Appendix.

Prepared by:



CERTIFICATION OF INDEPENDENCE:

1. NEMO ETC, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the PEERs are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

ROOFING SYSTEMS EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Single Ply Roof Systems
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: Mule-Hide EPDM Single Ply Roof Systems, as produced by Mule-Hide Products Co., Inc., have demonstrated compliance with the following sections of the 8th Edition (2023) Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

| Section | Property | Standard | Year |
|-----------|---------------------|----------------------|----------------------|
| 1504.3.1 | Wind resistance | FM 4474 | 2011 |
| 1504.3.1 | Wind resistance | UL 1897 | 2015 |
| 1504.6 | Physical properties | ASTM G155 | 2013 |
| 1504.7 | Impact resistance | FM 4470, Section 4.6 | 2016 |
| 1507.12.2 | Material standard | ASTM D4637 | 2015 |
| 1523.6.2 | Wind resistance | TAS 114 | 2011 (per 2023 Code) |

3. REFERENCES:

| Entity | Examination | Reference | Date |
|------------------------|-----------------|----------------------|------------|
| NEMO | PEER | PEER-CRL-001.A.R8 | 09/19/2023 |
| ATI (TST1558) | UL1897 | G0671.02-109-44 | 01/10/2017 |
| FM Approvals (TST1867) | FM 4470/4474 | 3057831 | 02/22/2017 |
| UL LLC (TST9628) | UL 1897 | 03CA16620 | 12/05/2003 |
| UL LLC (TST9628) | UL 1897 | 4787536226 | 10/31/2016 |
| UL LLC (QUA9625) | Quality Control | ML R13850 | 09/27/2007 |
| UL, LLC (QUA9625) | Quality Control | Service Confirmation | 07/06/2022 |
| UL, LLC (QUA9625) | Quality Control | Florida BCIS | Current |

4. PRODUCT DESCRIPTION:

This PEER covers Mule-Hide EPDM Single Ply Roof Systems installed in accordance with Mule-Hide Products Co., Inc. published installation instructions and the [Limitations of Use](#) herein.

TABLE 1: EVALUATED MEMBRANES

| TYPE | PRODUCT | | MATERIAL STANDARD | | | PLANT(S) |
|-----------------------|--|------------|-------------------|------|-------|--------------------------------|
| | | | REFERENCE | TYPE | GRADE | |
| ROOF COVER OR CAP PLY | Mule-Hide Standard Black EPDM | 45, 60, 90 | ASTM D4637 | I | N/A | Carlisle, PA Greenville, IL |
| | Mule-Hide White-on-Black EPDM | 60, 90 | ASTM D4637 | I | N/A | Carlisle, PA |
| | Mule-Hide Standard Reinforced EPDM | 45, 60, 75 | ASTM D4637 | II | N/A | Carlisle, PA |
| | Mule-Hide Standard EPDM Fleece-Backed | 45, 60, 90 | ASTM D4637 | III | N/A | Carlisle, PA |
| | Mule-Hide White-on-Black Fleece-Backed | 45, 60, 90 | ASTM D4637 | III | N/A | Carlisle, PA |

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this PEER, or previous versions thereof, is/was used for permitting or design guidance. PEERs are not to be construed as representing any attributes not specifically listed, nor are PEERs to be construed as an endorsement of the subject, or a recommendation for its use. There is no warranty by NEMO ETC, LLC or Robert Nieminen, P.E., express or implied, as to any finding or other matter in this PEER, or as to any product covered by the PEER.
- 5.2 This PEER is not for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 This PEER pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This PEER does not include evaluation of fire classification. Refer to **FBC 1505** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.
- 5.5 This PEER does not include evaluation of roof edge termination. Refer to **FBC 1504.5** for requirements and limitations regarding edge securement for low-slope roofs.
- 5.6 Refer to **FBC 1511** for requirements and limitations regarding recover installations.
- 5.6.1 For mechanically attached components over existing roof decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing shall be in accordance with [ANSI/SPRI FX-1](#) or [Testing Application Standard TAS 105](#).
- 5.6.2 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance with [ANSI/SPRI IA-1](#), [ASTM E907](#), [FM Loss Prevention Data Sheet 1-52](#) or [Testing Application Standard TAS 124](#) shall be conducted on mock-ups of the proposed new roof assembly.
- 5.6.3 For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing in accordance with [ASTM E907](#), [FM Loss Prevention Data Sheet 1-52](#) or [Testing Application Standard TAS 124](#).
- 5.7 Refer to Appendix 1 for system attachment requirements for wind load resistance.
- 5.7.1 “MDP” = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per **FBC 1504.9** has already been applied). Refer to **FBC 1609** for determination of design wind loads.
- 5.7.2 For mechanically attached components or partially-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with **FBC Chapter 16**. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are [ANSI/SPRI WD1](#), [FM Loss Prevention Data Sheet 1-29](#), [Roofing Application Standard RAS 117](#) or [RAS 137](#). Assemblies marked with an asterisk* carry the limitations set forth in **Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29** for Zone 2/3 enhancements.
- 5.7.3 For assemblies with all components fully bonded in place, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with **FBC Chapter 16**. No rational analysis is permitted for these systems.

- 5.8 All components in the roof assembly shall have quality assurance audit in accordance with **F.A.C. Rule 61G20-3**. Refer to the Product Approval of the component manufacturer for components listed in Appendix 1 that are produced by a Product Manufacturer other than the report holder on [Page 1](#) of this PEER.

6. INSTALLATION:

Mule-Hide EPDM Single Ply Roof Systems shall be installed in accordance with **Mule-Hide Products Co., Inc.** published installation instructions, subject to the [Limitations of Use](#) noted herein.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the named QA entity for manufacturing facilities covered by **F.A.C. Rule 61G20-3** QA requirements. Refer to [Section 4](#) herein for products and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

[UL, LLC – QUA9625](#); (360) 817-5512; bsai.inspections@ul.com

- THE 34-PAGES THAT FOLLOW FORM PART OF THIS PEER -

FBC NON-HVHZ

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

| TABLE | DECK | APPLICATION | TYPE | DESCRIPTION | PAGE |
|--------------------|------------------------------------|---------------------------------|------|---|------|
| 1A | Wood | New, Reroof (Tear-Off), Recover | C | Mechanically Attached Insulation, Bonded Roof Cover | 4 |
| 1B | Wood | New | F | Non-Insulated, Bonded Roof Cover | 6 |
| 2A | Steel or Structural Concrete | New, Reroof (Tear-Off), Recover | B-1 | Mechanically Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover | 7 |
| 2B | Steel | New, Reroof (Tear-Off), Recover | B-2 | Mech Attached Base Insulation, Bonded Temp Roof, Bonded Top Insulation, Bonded Roof Cover | 10 |
| 2C | Steel or Structural Concrete | New, Reroof (Tear-Off), Recover | C-1 | Mechanically Attached Insulation, Bonded Roof Cover | 11 |
| 2D | Steel or Structural Concrete | New, Reroof (Tear-Off), Recover | D-1 | Insulated, Mechanically Attached Roof Cover (Stress Plates) | 18 |
| 2E | Steel or Structural Concrete | New, Reroof (Tear-Off), Recover | D-1 | Insulated, Mechanically Attached Roof Cover (Battens) | 19 |
| 3A | Structural Concrete | New, Reroof (Tear-Off) | A-1 | Bonded Insulation, Bonded Roof Cover | 21 |
| 3B | Structural Concrete | New, Reroof (Tear-Off) | F | Non-Insulated, Bonded Roof Cover | 27 |
| 4A | LWC / Steel or Structural Concrete | New | F | Non-Insulated, Bonded Roof Cover | 27 |
| 5A | Various | Recover | A-1 | Bonded Insulation, Bonded Roof Cover | 29 |
| 5B | Various | Recover | F | Non-Insulated, Bonded Roof Cover | 34 |

The following notes apply to the systems outlined herein:

- The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- Unless otherwise noted, fasteners and stress plates shall be as follows. Fasteners shall be of sufficient length for the following engagements:

| FASTENER/PLATE OPTIONS | | |
|------------------------|--|---|
| DECK TYPE | PARTS | MINIMUM ENGAGEMENT |
| Wood | Mule-Hide Drill Point Fastener or Mule-Hide HDP Fastener with Mule-Hide 3 in. Insulation Plate, OMG #12 or #14 Roofgrip with Flat Bottom Plate, OMG #12 Standard or #14 HD with OMG Standard metal plate, Dekfast #12 or #14 with Hex Plate, Trufast #12 DP or Trufast #14 HD with Trufast 3" Metal Insulation Plate Plates. | Minimum ¾-inch plywood penetration or minimum 1-inch wood plank embedment |
| Steel | Mule-Hide Drill Point Fastener or Mule-Hide HDP Fastener with Mule-Hide 3 in. Insulation Plate, OMG #12 or #14 Roofgrip with Flat Bottom Plate, OMG #12 Standard or #14 HD with OMG Standard metal plate, Dekfast #12 or #14 with Hex Plate, Trufast #12 DP or Trufast #14 HD with Trufast 3" Metal Insulation Plate Plates. | Minimum ¾-inch steel penetration and engage the top flute of the steel deck |
| Structural Concrete | Mule-Hide HDP Fastener or Mule-Hide Fluted Concrete Nail with Mule-Hide 3 in. Insulation Plate, OMG #14 Roofgrip with Flat Bottom Plate, OMG #14 HD or CD-10 with OMG Standard metal plate, Dekfast #14 with Hex Plate, Trufast #14 HD or Trufast Fluted Concrete Nail with Trufast 3" Metal Insulation Plate Plates | Minimum 1-inch embedment. Fastener installed with a pilot hole in accordance with the fastener manufacturer's published installation instructions |

- Unless otherwise noted, insulation may be any one layer or combination of FBC Approved (Local or Statewide) board(s) that meet FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover.

- 4 Minimum 200 psi, minimum 2-inch thick FBC Approved lightweight insulating concrete may be substituted for rigid insulation board for System Types B-1, C-1, C-2, D-1 or D-2, whereby fasteners are installed through the lightweight insulating concrete to engage the structural deck. The structural deck shall be of equal or greater type, thickness and strength to the steel and structural concrete deck listings. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. This is a wind uplift resistance allowance and does not purport to address non-wind-uplift-related issues, such as deck venting or moisture levels within the LWIC and the potential effect on overlying components.
- 5 Preliminary insulation attachment for System Type D: Unless otherwise noted, refer to Section 2.2.10.1.3 of [FM Loss Prevention Data Sheet 1-29](#). For systems where a vapor barrier is installed, refer to Table 6 of [FM Loss Prevention Data Sheet 1-29](#). For systems where no vapor barrier is installed, Mule-Hide Drill Point may be used in place of Mule-Hide HDP Fastener for preliminary attachment purposes over wood and steel deck.
- 6 Unless otherwise noted, insulation adhesive application rates are as follows.
 - Ribbon or bead width is at the time of application; the ribbons/beads shall expand as noted in the manufacturer’s published instructions.
 - When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, board joints shall be staggered.
 - The maximum edge distance from the adhesive ribbon to the edge of the insulation board shall be not less than one-half the specified ribbons spacing.
 - “FULL” or “SPLATTER” applications may be used wherever “RIBBON” is referenced for insulation securement.

| INSULATION ADHESIVE REFERENCES | | | |
|---|------------------|-----------------------------|--|
| ADHESIVE | METHOD | REFERENCE | MINIMUM RATE |
| Helix Max Low-Rise Adhesive | full-coverage | Helix Max LRA (FULL) | Full-coverage at 1 gal./square. |
| Helix Max Low-Rise Adhesive | splatter-applied | Helix Max LRA (SPLATTER) | Splatter-applied at 0.5 gal/square (wet) = 4.7 lb/square (dry) |
| Helix Max Low-Rise Adhesive | ribbon-applied | Helix Max LRA (RIBBON) | Continuous 1-inch wide ribbons, 12-inch o.c. |
| Helix Max Low-Rise Adhesive – Dual Tank | full-coverage | Helix Max LRA-DT (FULL) | Continuous 0.5-inch wide, wet-beads, 4-inch o.c.. or spray-applied at 1 gal./square. |
| Helix Max Low-Rise Adhesive – Dual Tank | splatter-applied | Helix Max LRA-DT (SPLATTER) | Splatter-applied at 0.4 gal/square (wet) = 3.7 lb/square (dry) |
| Helix Max Low-Rise Adhesive – Dual Tank | ribbon-applied | Helix Max LRA-DT (RIBBON) | Continuous 0.5-inch wide, wet-beads, 12-inch o.c. |
| OlyBond 500 | ribbon-applied | OB500 | Continuous 0.75-inch wide ribbons, 12-inch o.c. (PaceCart, SpotShot or Canister) |

- 7 Unless otherwise noted, all insulations are flat-stock or taper board of the minimum thickness noted. Tapered polyisocyanurate at the following thickness limitations may be substituted with the following Maximum Design Pressure (MDP) limitations. In no case shall these values be used to ‘increase’ the MDP listings in the tables; rather if MDP listing below meets or exceeds that listed for a particular system in the tables, then the thinner board listed below may be used as a drop-in for the equivalent thicker material listed in the table.

| MDP LIMITATIONS FOR TAPERED POLYISOCYANURATE INSULATIONS | | | | |
|--|--|--------------|-----------------------------|-----------|
| ADHESIVE | INSULATION | | MIN. TAPERED THICKNESS (IN) | MDP (psf) |
| | LISTED PRODUCT | FBC FILE NO. | | |
| Helix Max LRA | Any polyisocyanurate listed with adhesive herein | Various | 0.5 | -157.5 |
| OlyBond 500 | Any polyisocyanurate listed with adhesive herein | Various | 0.5 | -187.5 |

- 8 For adhered roof insulation and board-size: Unless otherwise noted, refer to Section 2.2.10.6.2 of [FM Loss Prevention Data Sheet 1-29](#).
- 9 For mechanically attached components or partially-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with FBC Chapter 16. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are [ANSI/SPRI WD1](#), [FM Loss Prevention Data Sheet 1-29](#), [Roofing Application Standard RAS 117](#) and [RAS 137](#). Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.10.1 of [FM Loss Prevention Data Sheet 1-29](#) for Zone 2/3 enhancements.
- 10 For assemblies with all components fully bonded, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with FBC Chapter 16. No rational analysis is permitted for these systems.

- 11 For mechanically attached components over existing decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing and analysis shall be in accordance with [ANSI/SPRI FX-1](#) or [Testing Application Standard](#) TAS 105.
- 12 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance shall be conducted on mock-ups of the proposed new roof assembly. For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing. Field uplift testing shall be in accordance with ASTM E907, [FM Loss Prevention Data Sheet](#) 1-52 or [Testing Application Standard](#) TAS 124.
- 13 Refer to FBC 1511 for requirements and limitations regarding recover installations. For Structural Concrete Deck or Recover Applications using System Type C-1, C-2, D-1 or D-2, the insulation is optional. Alternatively, an FBC Approved insulation board or coverboard may be used as a separation layer. Board products shall be preliminarily attached prior to roof cover installation ([Note 5](#)). The separator component shall be documented as meeting FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover in Recover applications.
- 14 Lightweight insulating concrete (LWIC) shall be cast in accordance with FBC Section 1917 to the satisfaction of the Authority Having Jurisdiction. For systems where specific LWIC is referenced, refer to current LWIC Product Approval for specific deck construction and limitations. Unless otherwise noted, for systems where specific LWIC is not referenced, the minimum design mix shall be 300 psi. In all cases, the minimum top-coat thickness is 2-inches. For LWIC over structural concrete, reference is made to FBC Section 1917.4.1, Point 1. For “pre-existent” LWIC references, listings were established through testing over lightweight concrete cast using only foaming agent (ASTM C896), water and Portland cement (ASTM C150), with no proprietary additives, in accordance with procedures adopted by Miami-Dade BCCO (FBC CER1592). Use of these listings in new construction or re-roof (tear-off) applications is at the discretion of the Designer or Record and Authority Having Jurisdiction.
- 15 For single-ply membranes in System Type D-1 steel deck applications, the roof membrane shall be run with its length perpendicular to the steel deck flutes. For bonded membrane applications, unless otherwise noted, refer to the following.

| MEMBRANE / ADHESIVE COMBINATIONS | | | |
|----------------------------------|---|----------------------|---|
| MEMBRANE | ADHESIVE | METHOD | RATE |
| Non-Fleece Roof Covers | Mule-Hide Bonding Adhesive | Contact (both sides) | 60 ft ² /gal (1.67 gal/square) |
| Non-Fleece Roof Covers | Aqua Base 120 Bonding Adhesive | Contact (both sides) | 50 to 60 ft ² /gal (1.67 to 2.0 gal/square) |
| Non-Fleece Roof Covers | Mule-Hide Low VOC Bonding Adhesive | Contact (both sides) | 60 ft ² /gal (1.67 gal/square) |
| Non-Fleece Roof Covers | AeroWeb | Contact (both sides) | 222 ft ² /gal (0.45 gal/square) |
| Non-Fleece Roof Covers | Mule-Hide Acrylic Water Base Bonding Adhesive | Wet-lay (substrate) | 100 ft ² /gal (1 gal/square) |
| Non-Fleece Roof Cover | Mule-Hide FR Adhesive | Wet-lay (substrate) | 100 to 120 ft ² / gal (0.83 to 1 gal/square) |
| FleeceBACK Roof Covers | Aqua Base 120 Bonding Adhesive | Wet lay (substrate) | 100 to 120 ft ² / gal (0.83 to 1 gal/square) |
| FleeceBACK Roof Covers | Helix Max LRA | Wet lay (substrate) | RIBBON spaced as noted herein or FULL Coverage = 1 gal/square or continuous ribbons, maximum 4-inch o.c. or splatter-applied at 0.5 gal/square (wet) = 4.7 lb/square (dry) |
| FleeceBACK Roof Covers | Helix Max LRA-DT | Wet lay (substrate) | RIBBON spaced as noted herein or FULL Coverage = 1 gal/square or continuous ribbons, maximum 4-inch o.c. or splatter-applied at 0.4 gal/square (wet) = 3.7 lb/square (dry) |

- 16 Vapor barrier options for use over structural concrete deck followed by bonded insulation carry the following MDP limitations. The lesser of the MDP listings below vs. those in Table 3A applies.

| VAPOR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK; FOLLOWED BY ADHESIVE-APPLIED INSULATION PER Table 3A : | | | | | |
|---|---|--------------------------|---------------|--|-----------|
| OPTION # | PRIMER | VAPOR BARRIER | | INSULATION ADHESIVE (NOTES 6, 7, 8) | MDP (PSF) |
| | | TYPE | APPLICATION | | |
| C-VB-1. | 702 Primer, 702 LV Primer, CAV-GRIP Primer or AeroWeb | F5 Air and Vapor Barrier | Self-adhering | Helix Max LRA (RIBBONS) | -157.5 |
| C-VB-2. | 702 Primer, 702 LV Primer, CAV-GRIP Primer or AeroWeb | F5 Air and Vapor Barrier | Self-adhering | Helix Max LRA-DT (RIBBONS) | -172.5 |
| C-VB-3. | 702 Primer, 702 LV Primer, CAV-GRIP Primer or AeroWeb | F5 Air and Vapor Barrier | Self-adhering | Helix Max LRA or Helix Max LRA-DT (RIBBONS, 6-inch o.c. or SPLATTER) | -270.0 |

| VAPOR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK; FOLLOWED BY ADHESIVE-APPLIED INSULATION PER Table 3A : | | | | | |
|---|----------------------------|--|-------------|---|-----------|
| OPTION # | PRIMER | VAPOR BARRIER | | INSULATION ADHESIVE (NOTES 6, 7, 8) | MDP (PSF) |
| | | TYPE | APPLICATION | | |
| C-VB-4. | CAV-GRIP Primer or AeroWeb | F5 Air and Vapor Barrier | | Helix Max LRA (FULL COVERAGE, 1 gal/square), Helix Max LRA (SPLATTER) or Helix Max LRA-DT (SPLATTER) | -427.5 |
| C-VB-5. | ASTM D41 | Carlisle SureMB 90 Base, SureMB 90 Poly Base or SureMB 120 Poly Base | | Hot asphalt at 25 lbs/square | -172.5 |
| C-VB-6. | ASTM D41 | Carlisle SureMB 90TG or 120TG Base | | Hot asphalt at 25 lbs/square | -180.0 |
| C-VB-7. | None | Carlisle SureMB 90 Base, SureMB 90 Poly Base or SureMB 120 Poly Base | | Helix Max LRA (RIBBON) or Helix Max LRA-DT (RIBBON) | -180.0 |
| C-VB-8. | None | Carlisle SureMB 90 Base, SureMB 90 Poly Base or SureMB 120 Poly Base | | Helix Max LRA (RIBBON, 6-inch o.c. or SPLATTER) or Helix Max LRA-DT (RIBBON, 6-inch o.c. or SPLATTER) | -255.0 |
| C-VB-9. | ASTM D41 | Carlisle SureMB 90TG or 120TG Base | | Helix Max LRA or Helix Max LRA-DT (RIBBON) | -307.5 |
| C-VB-10. | ASTM D41 | Carlisle SureMB 90TG or 120TG Base | | Helix Max LRA or Helix Max LRA-DT ((RIBBON, 6-inch o.c. or SPLATTER) | -495.0 |

- 17 For membrane attachment using batten-strips, end laps shall be spliced with sufficient dimension to allow for minimum 2-fasteners at each batten-strip lap.
- 18 Side laps shall be sealed in accordance with Mule-Hide requirements:
 - Primed with Mule-Hide Tape Primer and adhered with Mule-Hide In-Seam Tape.
 - Cleaned with Mule-Hide Splice Cleaner and adhered with Mule-Hide Black or White Splice Adhesive.
- 19 “MDP” = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609 for determination of design wind loads. ([Note 9](#) and [Note 10](#))

| TABLE 1A: WOOD DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER | | | | | | | |
|---|---|---|--|---|---------------------------|--|--------------|
| System No. | Deck (Note 1) | Base Insulation Layer (Note 3 , Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
| | | | Type | Fasteners (Note 2 , Note 11) | Attach | | |
| MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB: | | | | | | | |
| W-1 | Min. 19/32-inch CDX plywood or wood plank; 2-ft spans | (Optional) One or more layers, any combination, loose laid | Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Drill Point Fastener with SecurFast Insulation Fastening Plate | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -30.0 |
| W-2 | Min. 19/32-inch CDX plywood or wood plank; 2-ft spans | (Optional) One or more layers, any combination, loose laid | Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Drill Point Fastener with Insulation Fastening Plate | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -37.5 |

**TABLE 1A: WOOD DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3, Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|---|---|---|--|--|---------------------------|---|-----------|
| | | | Type | Fasteners (Note 2, Note 11) | Attach | | |
| W-3 | Min. 19/32" plywood or wood plank | (Optional) One or more layers, any combination, loose laid | Min. 0.5-inch thick HP Recovery Board, Fiber Base HD1, GP High Density Roof Fiberboard, min. 0.25-inch thick DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board, min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1, H-Shield CG, PSI-25, Multi-Max FA-3 | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| W-4 | Min. 19/32" plywood or wood plank | (Optional) One or more layers, any combination, loose laid | Min. 1.5-inch ACFoam Composite/FB, H-Shield-WF Plus | Note 2 | 1 per 3.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| W-5 | Min. 19/32" plywood or wood plank | (Optional) One or more layers, any combination, loose laid | Min. 2.0-inch Poly ISO 2, ACFoam III, Poly ISO 1, H-Shield CG, PSI-25, Multi-Max FA-3 | Note 2 | 1 per 4.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| W-6 | Min. 23/32-inch plywood | (Optional) One or more layers, any combination, loose laid | Min 0.5-inch SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 3.2 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| MEMBRANE APPLIED IN LOW VOC BONDING ADHESIVE: | | | | | | | |
| W-7 | Min. 23/32-inch plywood | (Optional) One or more layers, any combination, loose laid | Min 0.5-inch SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 3.2 ft ² | Mule-Hide Standard Black EPDM, Mule-Hide White-on-Black EPDM, Mule-Hide Standard Reinforced EPDM or Mule-Hide FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive | -45.0* |
| MEMBRANE APPLIED IN MULE-HIDE ACRYLIC WATER BASE BONDING ADHESIVE: | | | | | | | |
| W-8 | Min. 19/32" plywood or wood plank; max. 24" spans | (Optional for Recover) One or more layers, any combination, min. 1.5-inch thick, loose laid | Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation or Min. 0.5-inch Dens Deck Prime, SECUROCK Gypsum-Fiber Roof Board | Mule-Hide Drill Point, Mule-Hide HDP or Mule-Hide EHD Fastener with Mule-Hide 3 in. Insulation Plate | 1 per 2.0 ft ² | Mule-Hide White on Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -30.0* |
| W-9 | Min. 19/32" plywood or wood plank; max. 24" spans | (Optional for Recover) One or more layers, any combination, min. 1.5-inch thick, loose laid | Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation | Mule-Hide Drill Point, Mule-Hide HDP or Mule-Hide EHD Fastener with Mule-Hide 3 in. Insulation Plate | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM or Standard Reinforced EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -37.5* |

**TABLE 1A: WOOD DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3, Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|---|---|---|---|--|---------------------------|--|-----------|
| | | | Type | Fasteners (Note 2, Note 11) | Attach | | |
| W-10 | Min. 19/32" plywood or wood plank; max. 24" spans | (Optional for Recover) One or more layers, any combination, min. 1.5-inch thick, loose laid | Min. 0.5-inch Dens Deck Prime, SECUROCK Gypsum-Fiber Roof Board or Min. 7/16-inch APA rated OSB | Mule-Hide Drill Point, Mule-Hide HDP or Mule-Hide EHD Fastener with Mule-Hide 3 in. Insulation Plate | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM or Standard Reinforced EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -45.0* |
| MEMBRANE APPLIED IN HELIX MAX LRA, HELIX LRA-DT: | | | | | | | |
| W-11 | Min. 19/32-inch CDX plywood or wood plank; 2-ft spans | (Optional) One or more layers, any combination, loose laid | Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -30.0 |
| W-12 | Min. 19/32-inch CDX plywood or wood plank; 2-ft spans | (Optional) One or more layers, any combination, loose laid | Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -37.5 |
| W-13 | Min. 23/32-inch plywood | (Optional) One or more layers, any combination, loose laid | Min 0.5-inch SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 3.2 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -45.0* |

**TABLE 1B: WOOD DECKS – NEW CONSTRUCTION
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Roof Cover (Note 15) | | MDP (psf) |
|---|--|--|---|-----------|
| | | Membrane | Application | |
| MEMBRANE APPLIED IN MULE-HIDE ACRYLIC WATER BASE BONDING ADHESIVE: | | | | |
| W-14 | Min. 7/16" thick Mule-Hide FR Deck Panel A, Barrier Technology Corp "Blazeguard A", Mule-Hide FR Deck Panel C or Barrier Technology Corp "Blazeguard C" attached to wood supports spaced max. 24" o.c. using No. 8 x 2½-inch long course thread screws spaced 6" o.c. at all supports. | Mule-Hide Standard EPDM or White-on-Black EPDM | Mule-Hide Acrylic Water Base Bonding Adhesive | -120.0 |
| MEMBRANE APPLIED IN MULE-HIDE FR ADHESIVE: | | | | |
| W-15 | Min. 15/32" APA rated plywood at max. 24" spans | Mule-Hide Standard EPDM or White-on-Black EPDM | Mule-Hide FR Adhesive | -120.0 |
| W-16 | Min. 15/32" APA rated OSB at max. 24" spans | Mule-Hide Standard EPDM or White-on-Black EPDM | Mule-Hide FR Adhesive | -127.5 |
| W-17 | Min. 7/16" APA rated OSB at max. 24" spans | Mule-Hide Standard EPDM or White-on-Black EPDM | Mule-Hide FR Adhesive | -187.5 |

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer | | | Top Insulation Layer | | Roof Cover (Note 15) | MDP (psf) |
|---|---|---|---|---------------------------|--|---|--|-----------|
| | | Type | Fasten (Note 2, Note 11) | Attach | Type | Attach (Notes 6,7&8) | | |
| MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB: | | | | | | | | |
| SC-1 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 0.5-inch DensDeck followed by min. 2-inch Insulfoam VIII | Note 2 | 1 per 2.7 ft ² | Min. 1.5-inch InsulLam (OSB) | Helix Max LRA (RIBBON, 6-inch o.c.) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -37.5* |
| SC-2 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 0.5-inch DensDeck followed by min. 2-inch Insulfoam VIII | Note 2 | 1 per 2.0 ft ² | Min. 2-inch Insulfoam HD Composite | Helix Max LRA (RIBBON, 6-inch o.c.) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| SC-3 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.8 ft ² | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -52.5 |
| SC-4 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 2.0 ft ² | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -60.0 |
| SC-5 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 2-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.8 ft ² | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -60.0 |
| SC-6 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 2-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.6 ft ² | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -67.5 |

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer | | | Top Insulation Layer | | Roof Cover (Note 15) | MDP (psf) |
|---|---|---|---|---------------------------|---|--|--|-----------|
| | | Type | Fasten (Note 2, Note 11) | Attach | Type | Attach (Notes 6,7&8) | | |
| SC-7 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.3 ft ² | Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -82.5 |
| SC-8 | Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 2-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.3 ft ² | Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -90.0 |
| SC-9 | Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 2-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.0 ft ² | Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -112.5 |
| SC-10 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 2-inch Poly ISO 1 | Note 2 | 1 per 1.3 ft ² | Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -60.0 |
| MEMBRANE APPLIED IN HELIX MAX LRA, HELIX LRA-DT: | | | | | | | | |
| SC-11 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | One or more layers Min. 1.5-inch Poly ISO 1, or AC Foam II | Note 2 | 1 per 2.0 ft ² | Min. 0.25-inch DensDeck, DensDeck Prime | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -37.5* |
| SC-12 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 0.5-inch DensDeck or DensDeck Prime | Note 2 | 1 per 2.0 ft ² | Min. 1.5-inch Kingspan GreenGuard Extruded Polystyrene followed by min. 0.25-inch DensDeck Prime | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -37.5* |
| SC-13 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 0.5-inch DensDeck followed by min. 2-inch Insulfoam VIII | Note 2 | 1 per 2.7 ft ² | Min. 1.5-inch InsulLam (OSB) | Helix Max LRA (RIBBON, 6-inch o.c.) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -37.5* |

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer | | | Top Insulation Layer | | Roof Cover (Note 15) | MDP (psf) |
|------------|---|---|---|---------------------------|--|---|--|-----------|
| | | Type | Fasten (Note 2, Note 11) | Attach | Type | Attach (Notes 6,7&8) | | |
| SC-14 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | One or more layers Min. 1.5-inch Poly ISO 1, or AC Foam II | Note 2 | 1 per 2.0 ft ² | Additional layers of base insulation | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -45.0* |
| SC-15 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 | Note 2 | 1 per 3.2 ft ² | Min. 1.0-inch base insulation | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -45.0* |
| SC-16 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 | Note 2 | 1 per 3.2 ft ² | Min. 0.25-inch DensDeck Prime | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -45.0* |
| SC-17 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 2.0-inch Poly ISO 1 | Note 2 | 1 per 4.0 ft ² | Min. 1.0-inch base insulation | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -45.0* |
| SC-18 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 2.0-inch Poly ISO 1 | Note 2 | 1 per 4.0 ft ² | Min. 0.25-inch DensDeck Prime | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -45.0* |
| SC-19 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 0.5-inch DensDeck followed by min. 2-inch Insulfoam VIII | Note 2 | 1 per 2.0 ft ² | Min. 2-inch Insulfoam HD Composite | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6 or SPLATTER) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL) | -45.0* |
| SC-20 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 2.0 ft ² | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch DensDeck Prime, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -60.0 |
| SC-21 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 | Note 2 | 1 per 1.6 ft ² | Min. 1.0-inch base insulation | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6 or SPLATTER) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -67.5 |
| SC-22 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 2-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.6 ft ² | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch DensDeck Prime, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -67.5 |

TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER

| System No. | Deck (Note 1) | Base Insulation Layer | | | Top Insulation Layer | | Roof Cover (Note 15) | MDP (psf) |
|------------|---|--|---|---------------------------|---|--|--|-----------|
| | | Type | Fasten (Note 2, Note 11) | Attach | Type | Attach (Notes 6,7&8) | | |
| SC-23 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.3 ft ² | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -82.5 |
| SC-24 | Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 2-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.3 ft ² | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -90.0 |
| SC-25 | Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 2-inch Poly ISO 1, Poly ISO 1-DWD | Steel: Drill Point Fastener with Insulation Fastening Plate Concrete: Note 2 | 1 per 1.0 ft ² | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch DensDeck Prime, Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -112.5 |

TABLE 2B: STEEL DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-2: MECHANICALLY ATTACHED BASE INSULATION, BONDED TEMP ROOF, BONDED TOP INSULATION, BONDED ROOF COVER

| System No. | Deck (Note 1) | Base Insulation Layer | | | Temp Roof | Insulation | | Roof Cover (Note 15) | MDP (psf) |
|---|-------------------------------------|--|----------------------------|---------------------------|--|--|---|--|-----------|
| | | Type | Fastener (Note 2, Note 11) | Attach | | Type | Attach (Notes 6,7&8) | | |
| MEMBRANE APPLIED IN HELIX MAX LRA, HELIX LRA-DT: | | | | | | | | | |
| SC-26 | Min. 22 ga., type B, Grade 33 steel | Min. 0.5-inch DensDeck Prime or min. 0.625-inch SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 2.0 ft ² | CAV-GRIP Primer followed by F5 Air and Vapor Barrier, self-adhered | <u>Insulation:</u> Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | <u>Insulation:</u> Helix Max LRA or Helix Max LRA-DT (RIBBON) <u>Coverboard:</u> Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -45.0* |

TABLE 2B: STEEL DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-2: MECHANICALLY ATTACHED BASE INSULATION, BONDED TEMP ROOF, BONDED TOP INSULATION, BONDED ROOF COVER

| System No. | Deck (Note 1) | Base Insulation Layer | | | Temp Roof | Insulation | | Roof Cover (Note 15) | MDP (psf) |
|------------|-------------------------------------|------------------------------|--|---------------------------|---|---|---|--|-----------|
| | | Type | Fastener (Note 2, Note 11) | Attach | | Type | Attach (Notes 6,7&8) | | |
| SC-27 | Min. 22 ga., type B, Grade 33 steel | Min. 0.5-inch DensDeck Prime | Note 2 | 1 per 2.0 ft ² | CAV-GRIP or CCW-702 Primer followed by F5 Air and Vapor Barrier, self-adhered | Min. 1.5-inch Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -52.5 |
| SC-28 | Min. 22 ga., type B, Grade 33 steel | Min. 0.5-inch DensDeck Prime | Drill Point Fastener with Insulation Fastening Plate | 1 per 1.6 ft ² | SureMB 90TG or SureMB 120TG, torch-applied | Insulation: Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD Coverboard: Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Insulation: Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) Coverboard: Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -67.5 |

TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3, Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|---|---|--|-----------------------------|--|---------------------------|--|-----------|
| | | | Type | Fasteners (Note 2, Note 11) | Attach | | |
| MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB: | | | | | | | |
| SC-29 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD, loose laid | Min. 0.5-inch Poly ISO 1-HD | Steel: Drill Point Fastener with ACCUTRAC Fastening Plate Concrete: HD 14-10, CD-10 or HP Concrete Spike (1/4) with ACCUTRAC Insulation Fastening Plate | 1 per 4.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -30.0* |

**TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3 , Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|------------|---|---|---|---|---------------------------|--|--------------------------------|
| | | | Type | Fasteners (Note 2 , Note 11) | Attach | | |
| SC-30 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch thick, one or more layers, any combination, loose laid | Min. 0.5-inch Poly ISO 1-HD | Note 2 | 1 per 2.7 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -37.5* |
| SC-31 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 0.5-inch thick HP Recovery Board | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| SC-32 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 0.25-inch thick DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| SC-33 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 1-inch Poly ISO 1 | Note 2 | 1 per 1.6 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| SC-34 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 1.5-inch Poly ISO 1, Poly ISO 2, ACFoam III, H-Shield CG, PSI-25, Multi-Max FA-3 | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| SC-35 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2.0-inch Poly ISO 1, Poly ISO 2, ACFoam III, H-Shield CG, PSI-25, Multi-Max FA-3 | Note 2 | 1 per 4.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| SC-36 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 1.5-inch ACFoam Composite/FB, H-Shield-WF Plus | Note 2 | 1 per 3.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| SC-37 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Min. 0.5-inch Poly ISO 1-HD90 | Note 2 | 1 per 4.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -45.0* |
| SC-38 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1-inch Poly ISO 1 | Min. 0.5-inch DensDeck Prime | Note 2 | 1 per 1.6 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -52.5 |

**TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3 , Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|------------|---|---|--|---|---------------------------|--|--------------|
| | | | Type | Fasteners (Note 2 , Note 11) | Attach | | |
| SC-39 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Min. 0.5-inch Poly ISO 1-HD90 | Note 2 | 1 per 1.8 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -60.0 |
| SC-40 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2-inch Poly ISO 1-DWD, H-Shield CG | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -60.0 |
| SC-41 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board, followed by min. 1.5-inch Styrofoam Roofmate or Highload 60 | Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 1.3 ft ² | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -67.5 |
| SC-42 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 | Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 1.3 ft ² | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -67.5 |
| SC-43 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2.0-inch Poly ISO 1 or Poly ISO 2 | Note 2 | 1 per 1.6 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -75.0 |
| SC-44 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1-inch Poly ISO 1 | Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 1.6 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -75.0 |
| SC-45 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 2-inch Poly ISO 1 | Min. 7/16-inch APA rated OSB | Note 2 | 1 per 1.6 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -82.5 |
| SC-46 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board, followed by min. 1.5-inch Styrofoam Roofmate or Highload 60 | Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -97.5 |
| SC-47 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 | Min. 0.5-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -97.5 |
| SC-48 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 | Min. 7/16-inch APA rated OSB | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -105.0 |

**TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3, Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|---|---|--|--|--|---------------------------|--|-----------|
| | | | Type | Fasteners (Note 2, Note 11) | Attach | | |
| SC-49 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2-inch Poly ISO 1-DWD, H-Shield CG, Poly ISO 1-HD-Composite | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -112.5 |
| SC-50 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Min. 0.5-inch Poly ISO 1-HD90 | Note 2 | 1 per 1.3 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -112.5 |
| SC-51 | Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2-inch Poly ISO 1-DWD, H-Shield CG, Poly ISO 1-HD-Composite | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -127.5 |
| SC-52 | Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | 0.5-inch EcoStorm VSH | Steel: Drill Point Fastener and Insulation Fastening Plate or SecurFast Insulation Fastening Plate Concrete: Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Bonding Adhesive or AeroWeb | -150.0 |
| MEMBRANE APPLIED IN AQUA BASE 120 BA ADHESIVE: | | | | | | | |
| SC-53 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 0.5-inch HP Recovery Board or min. 0.25-inch DensDeck Prime | Note 2 | 1 per 4.0 ft ² | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA | -30.0* |
| SC-54 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | None | Min. 0.5-inch HP Recovery Board | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA | -37.5* |
| SC-55 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, Poly ISO 1 | Min. 0.5-inch HP Recovery Board | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA | -45.0* |
| SC-56 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 0.25-inch DensDeck Prime | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA | -45.0* |
| SC-57 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 7/16" APA Rated oriented strand board | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA | -45.0* |
| SC-58 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 1-inch Poly ISO 1 | Note 2 | 1 per 1.6 ft ² | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA | -45.0* |

**TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3, Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|---|---|--|--|-----------------------------|---------------------------|---|-----------|
| | | | Type | Fasteners (Note 2, Note 11) | Attach | | |
| SC-59 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Aqua Base 120 BA | -45.0* |
| SC-60 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, Poly ISO 1 | Min. 0.5-inch HP Recovery Board | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Aqua Base 120 BA | -45.0* |
| SC-61 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 0.25-inch DensDeck Prime | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Aqua Base 120 BA | -45.0* |
| SC-62 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Aqua Base 120 BA | -45.0* |
| MEMBRANE APPLIED IN LOW VOC BONDING ADHESIVE: | | | | | | | |
| SC-63 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 1.5-inch Polyiso HP-H or Poly ISO 1, H-Shield | Note 2 | 1 per 3.2 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive | -45.0* |
| SC-64 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2.0-inch Polyiso HP-H or Poly ISO 1, H-Shield | Note 2 | 1 per 4 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive | -45.0* |
| SC-65 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, ACFoam II, Polyiso HP-H, HP-N, HP-W, Poly ISO 1, H-Shield, ENRGY 3 | Min. 0.5-inch HP Recovery Board | Note 2 | 1 per 2 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive | -45.0* |
| SC-66 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2.0-inch Polyiso HP-H or Poly ISO 1, H-Shield | Note 2 | 1 per 1.6 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive | -75.0 |
| SC-67 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2-inch Poly ISO 1-DWD | Note 2 | 1 per 1 ft ² | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM / Mule-Hide Low VOC Bonding Adhesive | -75.0 |
| MEMBRANE APPLIED IN MULE-HIDE ACRYLIC WATER BASE BONDING ADHESIVE: | | | | | | | |

**TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3 , Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|------------|---|--|---|---|---------------------------|---|--------------|
| | | | Type | Fasteners (Note 2 , Note 11) | Attach | | |
| SC-68 | Min. 22 ga., type B, Grade 33 steel or Min. 2,500 psi structural concrete | (Optional for Recover) One or more layers, any combination, min. 1.5-inch thick, loose laid | Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation or Min. 0.5-inch Dens Deck Prime, SECUROCK Gypsum-Fiber Roof Board | Mule-Hide Drill Point (steel only), Mule-Hide HDP or Mule-Hide EHD (steel only) Fastener or Mule-Hide Fluted Concrete Nail (<i>concrete only</i>) with Mule-Hide 3 in. Insulation Plate | 1 per 2.0 ft ² | Mule-Hide White on Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -30.0* |
| SC-69 | Min. 22 ga., type B, Grade 33 steel or Min. 2,500 psi structural concrete | (Optional for Recover) One or more layers, any combination, min. 1.5-inch thick, loose laid | Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation | Mule-Hide Drill Point (steel only), Mule-Hide HDP or Mule-Hide EHD (steel only) Fastener or Mule-Hide Fluted Concrete Nail (<i>concrete only</i>) with Mule-Hide 3 in. Insulation Plate | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM or Standard Reinforced EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -37.5* |
| SC-70 | Min. 22 ga., type B, Grade 33 steel or Min. 2,500 psi structural concrete | (Optional for Recover) One or more layers, any combination, min. 1.5-inch thick, loose laid | Min. 0.5-inch Dens Deck Prime, SECUROCK Gypsum-Fiber Roof Board or Min. 7/16-inch APA rated OSB | Mule-Hide Drill Point (steel only), Mule-Hide HDP or Mule-Hide EHD (steel only) Fastener or Mule-Hide Fluted Concrete Nail (<i>concrete only</i>) with Mule-Hide 3 in. Insulation Plate | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM or Standard Reinforced EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -45.0* |
| SC-71 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 0.25-inch Dens Deck or SECUROCK Gypsum-Fiber Roof Board or Min. 1.5-inch Poly ISO 1 or H-Shield, loose laid. | Min. 7/16-inch Mule-Hide FR Deck Panel A, FR Deck Panel C | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard Black EPDM or White-on-Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -45.0* |
| SC-72 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 0.25-inch Dens Deck or SECUROCK Gypsum-Fiber Roof Board or Min. 1.5-inch Poly ISO 1 or H-Shield, loose laid. | Min. 7/16-inch APA rated OSB, Mule-Hide FR Deck Panel A, FR Deck Panel C | Note 2 | 1 per 1.6 ft ² | Mule-Hide Standard Black EPDM or White-on-Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -82.5 |
| SC-73 | Min. 22 ga., type B, Grade 33 steel or Min. 2,500 psi structural concrete | Min. 0.25-inch Dens Deck or SECUROCK Gypsum-Fiber Roof Board or Min. 1.5-inch Poly ISO 1 or H-Shield, loose laid. | Min. 7/16-inch APA rated OSB, Mule-Hide FR Deck Panel A, FR Deck Panel C | Mule-Hide HD Fasteners and Mule-Hide 3 in. Insulation Plates or Trufast #14 HD Fasteners and Trufast 3" Metal Insulation Plate plates | 1 per 1.3 ft ² | Mule-Hide Standard Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -105.0 |
| SC-74 | Min. 22 ga., type B, Grade 33 steel or Min. 2,500 psi structural concrete | (Optional) Min. 0.25-inch Dens Deck or SECUROCK Gypsum-Fiber Roof Board or Min. 1.5-inch Poly ISO 1 or H-Shield, loose laid. | Min. 2-inch Poly ISO 1-NB or H-Shield NB or Min. 3-inch Poly ISO 1 Cool-Vent or Cool-Vent | Mule-Hide HD Fasteners and Mule-Hide 3 in. Insulation Plates or Trufast #14 HD Fasteners and Trufast 3" Metal Insulation Plate plates | 1 per 1.3 ft ² | Mule-Hide Standard Black EPDM / Mule-Hide Acrylic Water Base Bonding Adhesive | -105.0 |

**TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3, Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|--|---|--|-------------------------------------|---|---------------------------|--|-----------|
| | | | Type | Fasteners (Note 2, Note 11) | Attach | | |
| MEMBRANE APPLIED IN, HELIX MAX LRA, HELIX LRA-DT: | | | | | | | |
| SC-75 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD, loose laid | Min. 0.5-inch Poly ISO 1-HD | Steel: Drill Point Fastener with ACCUTRAC Fastening Plate Concrete: HD 14-10, CD-10 or HP Concrete Spike (1/4) with ACCUTRAC Fastening Plate | 1 per 4.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -30.0* |
| SC-76 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch thick, one or more layers, any combination, loose laid | Min. 0.5-inch Poly ISO 1-HD | Note 2 | 1 per 2.7 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -37.5* |
| SC-77 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch thick, one or more layers, any combination, loose laid | Min 0.5-inch HP Recovery Board | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (RIBBON, 12-inch o.c.) | -45.0* |
| SC-78 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch thick, one or more layers, any combination, loose laid | Min 0.5-inch DensDeck Prime | Note 2 | 1 per 2.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (RIBBON, 12-inch o.c.) | -45.0* |
| SC-79 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Min. 0.5-inch Poly ISO 1-HD90 | Note 2 | 1 per 4.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL) | -45.0* |
| SC-80 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Min. 0.5-inch Poly ISO 1-HD90 | Note 2 | 1 per 1.8 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL) | -60.0 |
| SC-81 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch thick, one or more layers, any combination, loose laid | Min 7/16-inch APA or TECO rated OSB | Note 2 | 1 per 1.9 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -75.0 |
| SC-82 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch thick, one or more layers, any combination, loose laid | 0.5-inch EcoStorm VSH | Steel: Drill Point Fastener and Insulation Fastening Plate or SecurFast Insulation Fastening Plate Concrete: Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -82.5 |
| SC-83 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch thick, one or more layers, any combination, loose laid | Min. 0.5-inch DensDeck Prime | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL) | -97.5 |
| SC-84 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2-inch Poly ISO 1 | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL) | -112.5 |

**TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

| System No. | Deck (Note 1) | Base Insulation Layer (Note 3, Note 13) | Top Insulation Layer | | | Roof Cover (Note 15) | MDP (psf) |
|------------|---|--|--|-----------------------------|---------------------------|--|-----------|
| | | | Type | Fasteners (Note 2, Note 11) | Attach | | |
| SC-85 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Min. 0.5-inch Poly ISO 1-HD90 or EcoStorm VSH | Note 2 | 1 per 1.3 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL) | -112.5 |
| SC-86 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch thick, one or more layers, any combination, loose laid | Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA (FULL) | -127.5 |
| SC-87 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | (Optional) One or more layers, any combination, loose laid | Min. 2-inch Poly ISO 1-DWD, H-Shield CG | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -135.0 |
| SC-88 | Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5-inch thick, one or more layers, any combination, loose laid | Min 7/16-inch APA or TECO rated OSB | Note 2 | 1 per 1.0 ft ² | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed / Helix Max LRA or Helix Max LRA-DT (FULL) | -135.0 |

**TABLE 2D: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER (STRESS PLATES)**

| System No. | Deck (Note 1) | Insulation (Note 3, Note 13) | | Roof Cover (Note 15) | | | MDP (psf) |
|------------|--|--|-----------------|---|---|---|-----------|
| | | Type | Attach (Note 5) | Membrane | Fasteners (Note 11) | Attachment | |
| SC-89 | Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM (0.070" thick) | Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates | 12-inch o.c. within 7-inch wide laps spaced 115-inch o.c. | -30.0 |
| SC-90 | Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates | 12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. | -30.0 |
| SC-91 | Min. 22 ga, type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates | 6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. | -37.5 |
| SC-92 | Min. 22 ga, type B, Grade 40 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM (0.070" thick) | Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates | 6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. | -52.5 |
| SC-93 | Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates | 6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. | -52.5 |

**TABLE 2D: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER (STRESS PLATES)**

| System No. | Deck (Note 1) | Insulation (Note 3, Note 13) | | Roof Cover (Note 15) | | | MDP (psf) |
|------------|--|--|-----------------|---|---|--|-----------|
| | | Type | Attach (Note 5) | Membrane | Fasteners (Note 11) | Attachment | |
| SC-94 | Min. 22 ga, type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates | 6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. | -52.5 |
| SC-95 | Min. 22 ga, type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide White-on-Black Fleece-Backed 145 | Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates | 6-inch o.c. within 6-inch wide laps spaced 112-inch o.c. | -52.5 |
| SC-96 | Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM (0.070" thick) | Mule-Hide HD Fasteners or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Polymer Seam Plates | 6-inch o.c. within 7-inch wide laps spaced 115-inch o.c. | -60.0 |

**TABLE 2E: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER (BATTENS)**

| System No. | Deck (Note 1) | Insulation (Note 3, Note 13) | | Roof Cover (Note 15) | | | MDP (psf) |
|------------|--|--|-----------------|--|---|---|-----------|
| | | Type | Attach (Note 5) | Membrane | Fasteners (Note 11) | Attachment | |
| SC-97 | Min. 22 ga, type B, Grade 40 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Metal Batten Bars | Fasteners 12-inch o.c. through batten within 6-inch wide laps spaced 114-inch o.c. | -30.0 |
| SC-98 | Min. 22 ga, type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with OMG Polymer Batten Strip. | Fasteners 12-inch o.c. through batten within 6-inch wide laps spaced 90-inch o.c. | -30.0 |
| SC-99 | Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Metal Batten Bars | Fasteners 12-inch o.c. through batten within 6-inch wide laps spaced 90-inch o.c. | -30.0 |
| SC-100 | Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Metal Batten Bars | Fasteners 12-inch o.c. through batten within min. 5-inch wide laps spaced max 115-inch o.c. | -37.5 |
| SC-101 | Min. 22 ga, type B, Grade 40 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Metal Batten Bars | Fasteners 6-inch o.c. through batten within 6-inch wide laps spaced 114-inch o.c. | -52.5 |

**TABLE 2E: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER (BATTENS)**

| System No. | Deck (Note 1) | Insulation (Note 3 , Note 13) | | Roof Cover (Note 15) | | | MDP (psf) |
|------------|--|---|--------------------------------------|--|---|---|--------------------------------|
| | | Type | Attach (Note 5) | Membrane | Fasteners (Note 11) | Attachment | |
| SC-102 | Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Metal Batten Bars | Fasteners 6-inch o.c. through batten within min. 5-inch wide laps spaced max. 115-inch o.c. | -60.0 |
| SC-103 | Min. 22 ga, type B, Grade 33 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with OMG Polymer Batten Strip. | Fasteners 6-inch o.c. through batten within 6-inch wide laps spaced 90-inch o.c. | -60.0 |
| SC-104 | Min. 22 ga, type B, Grade 80 steel or min. 2,500 psi structural concrete | Min. 1.5" thick, one or more layers, any combination | Prelim attach | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide EHD Fasteners (steel only) or Mule-Hide Fluted Concrete Nail (concrete only) with Mule-Hide Metal Batten Bars | Fasteners 6-inch o.c. through batten within 6-inch wide laps spaced 90-inch o.c. | -82.5 |

**TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

NOTE: REFER TO [NOTE 16](#) FOR VAPOR BARRIER OPTIONS

| System No. | Roof Deck (Note 1) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|---|---|---|---|--|---|--|---------------------------------------|------------------------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB: | | | | | | | | |
| C-1. | Min. 2,500 psi structural concrete (primed) | Min. 0.5-inch Poly ISO 1 | Hot Asphalt | (Optional) Additional layers of base insulation | Hot Asphalt | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -157.5 |
| C-2. | Min. 2,500 psi structural concrete (primed) | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Hot Asphalt | (Optional) Additional layers of base insulation | Hot Asphalt | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -330.0 |
| C-3. | Min. 2,500 psi structural concrete (primed) | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Hot Asphalt | Min 0.5-inch HP Recovery Board, GP High Density Roof Fiberboard or Temple Fiber Base HD1 or HD6 | Hot Asphalt | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -330.0 |
| C-4. | Min. 2,500 psi structural concrete (primed) | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Hot Asphalt | Min. 0.25-inch DensDeck, DensDeck Prime | Hot Asphalt | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -352.5 |
| C-5. | Min. 2,500 psi structural concrete | Min. 1.5-inch InsulLam (OSB) | Helix Max LRA or Helix Max LRA-DT (FULL) | None | N/A | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -105.0 |
| C-6. | Min. 2,500 psi structural concrete | Min. 0.5-inch Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | (Optional) Additional layers of base insulation | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -157.5 |
| C-7. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min 0.5-inch HP Recovery Board | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -157.5 |
| C-8. | Min. 2,500 psi structural concrete | Min. 0.5-inch Poly ISO 1, Poly ISO 1-DWD | Helix Max LRA or Helix Max LRA-DT (RIBBON) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -157.5 |
| C-9. | Min. 2,500 psi structural concrete | Min. 0.5-inch Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -157.5 |
| C-10. | Min. 2,500 psi structural concrete | Min. 1.5-inch InsulLam (GYP) | Helix Max LRA (FULL) | None | N/A | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -157.5 |

**TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

NOTE: REFER TO [NOTE 16](#) FOR VAPOR BARRIER OPTIONS

| System No. | Roof Deck (Note 1) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|------------|------------------------------------|---|--|--|--|--|---------------------------------------|-----------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| C-11. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 0.25-inch DensDeck, DensDeck Prime | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -232.5 |
| C-12. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | (Optional) Additional layers of base insulation | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -240.0 |
| C-13. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 2-inch H-Shield-WF | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -240.0 |
| C-14. | Min. 2,500 psi structural concrete | Min. 1.5-inch InsulLam (WF) | Helix Max LRA (FULL) | None | N/A | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -255.0 |
| C-15. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 1-DWD or H-Shield CG | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 1.5-inch Poly ISO 1-HD-Composite | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -270.0 |
| C-16. | Min. 2,500 psi structural concrete | Min. 1.5-inch Insulfoam HD Composite | Helix Max LRA (FULL) | None | N/A | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -270.0 |
| C-17. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (FULL) | (Optional) Additional layers of base insulation | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -330.0 |
| C-18. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (FULL) | Min 0.5-inch HP Recovery Board | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -330.0 |
| C-19. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, AC Foam III, Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (FULL) | Min. 2-inch H-Shield-WF | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -330.0 |
| C-20. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD or Min. 1-inch Insulfoam I, II, IX, VIII, XIV or XV | Helix Max LRA (RIBBON) | Insulation: (Optional) Additional layer(s) base insulation Coverboard: Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -352.5 |
| C-21. | Min. 2,500 psi structural concrete | 0.5-inch EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (FULL) | None | N/A | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -495.0 |

**TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

NOTE: REFER TO [NOTE 16](#) FOR VAPOR BARRIER OPTIONS

| System No. | Roof Deck (Note 1) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|---|---|--|---|---|---|--|---------------------------------------|--------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| C-22. | Min. 2,500 psi structural concrete | Min. 1.5-inch InsulLam (OSB) | Helix Max LRA (FULL) | None | N/A | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -105.0 |
| C-23. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1 | OB500 | Min 0.5-inch HP Recovery Board | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -120.0 |
| C-24. | Min. 2,500 psi structural concrete | Min. 1.0-inch Foamular 250 | OB500 | Min 0.5-inch HP Recovery Board | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -120.0 |
| C-25. | Min. 2,500 psi structural concrete | Min. 2.0-inch, min. 1.0 pcf, Insulfoam | OB500 | Min. 0.25-inch DensDeck or DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -120.0 |
| C-26. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, ACFoam III | OB500 | (Optional) Additional layers of base insulation | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -150.0 |
| C-27. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1 | OB500 | Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -150.0 |
| C-28. | Min. 2,500 psi structural concrete | Min. 0.5-inch Poly ISO 1 | OB500 | (Optional) Additional layers of base insulation | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -157.5 |
| C-29. | Min. 2,500 psi structural concrete | Min. 1.0-inch Styrofoam Roofmate or Highload 60 | OB500 | Min. 0.25-inch DensDeck, DensDeck Prime | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -232.5 |
| C-30. | Min. 2,500 psi structural concrete | Min. 1.0-inch Foamular 250 | OB500 | Min. 0.25-inch DensDeck or DensDeck Prime | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -277.5 |
| MEMBRANE APPLIED IN AQUA BASE 120 BA ADHESIVE: | | | | | | | | |
| C-31. | Min. 2,500 psi structural concrete (primed) | (Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1 | Hot Asphalt | Min. 0.5-inch HP Recovery Board | Hot Asphalt | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -90.0 |
| C-32. | Min. 2,500 psi structural concrete (primed) | Min. 0.5-inch Poly ISO 1 | Hot Asphalt | (Optional) Additional layers of base insulation | Hot Asphalt | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -157.5 |

TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER
 NOTE: REFER TO [NOTE 16](#) FOR VAPOR BARRIER OPTIONS

| System No. | Roof Deck (Note 1) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|------------|---|---|--|---|--|--|------------------|-----------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| C-33. | Min. 2,500 psi structural concrete (primed) | Min. 1.5-inch Poly ISO 2, Poly ISO 1 | Hot Asphalt | (Optional) Additional layers of base insulation | Hot Asphalt | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -165.0 |
| C-34. | Min. 2,500 psi structural concrete (primed) | (Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1 | Hot Asphalt | Min. 0.25-inch DensDeck Prime | Hot Asphalt | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -165.0 |
| C-35. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 0.5-inch HP Recovery Board | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -90.0 |
| C-36. | Min. 2,500 psi structural concrete | Min. 1-inch Insulfoam I | Helix Max LRA (FULL or RIBBON) | Min. 0.5-inch HP Recovery Board | Helix Max LRA (FULL or RIBBON) | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -90.0 |
| C-37. | Min. 2,500 psi structural concrete | Min. 1.5-inch InsulLam (WF) | Helix Max LRA (FULL) | None | N/A | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -90.0 |
| C-38. | Min. 2,500 psi structural concrete | Min. 0.5-inch Poly ISO 1 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | (Optional) Additional layers of base insulation | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -157.5 |
| C-39. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | (Optional) Additional layers of base insulation | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -165.0 |
| C-40. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 0.25-inch DensDeck Prime | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -165.0 |
| C-41. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Helix Max LRA or Helix Max LRA-DT (FULL) | (Optional) Additional layers of base insulation | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Aqua Base 120 BA | -232.5 |
| C-42. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 2, Poly ISO 1 | OB500 | (Optional) Additional layers of base insulation | OB500 | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -105.0 |
| C-43. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1 | OB500 | Min. 0.5-inch HP Recovery Board | OB500 | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -90.0 |
| C-44. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1 | OB500 | Min. 0.25-inch DensDeck Prime | OB500 | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -150.0 |

**TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

NOTE: REFER TO [NOTE 16](#) FOR VAPOR BARRIER OPTIONS

| System No. | Roof Deck (Note 1) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|---|---|---|---|--|---|---|---|--------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| MEMBRANE APPLIED IN LOW VOC BONDING ADHESIVE: | | | | | | | | |
| C-45. | Min. 2,500 psi structural concrete | Min. 0.5-inch Poly ISO 1, H-Shield | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Low VOC Bonding Adhesive | -75.0 |
| C-46. | Min. 2,500 psi structural concrete | Min. 1.5-inch Insulam (GYP) | Helix Max LRA (FULL) | None | N/A | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Low VOC Bonding Adhesive | -75.0 |
| C-47. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 1-DWD or H-Shield CG | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 1.5-inch Poly ISO 1-HD Composite, Poly ISO 1-HD-Composite or H-Shield HD Composite | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Low VOC Bonding Adhesive | -285.0 |
| C-48. | Min. 2,500 psi structural concrete | Min. 1.5-inch Insulfoam HD Composite | Helix Max LRA (FULL) | None | N/A | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Low VOC Bonding Adhesive | -472.5 |
| C-49. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 1-DWD or H-Shield CG | Helix Max LRA or Helix Max LRA-DT (FULL) | Min. 1.5-inch Poly ISO 1-HD Composite | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Low VOC Bonding Adhesive | -495.0 |
| MEMBRANE APPLIED IN HELIX MAX LRA, HELIX LRA-DT: | | | | | | | | |
| C-50. | Min. 2,500 psi structural concrete | (Optional) Min. 0.5-inch Poly ISO 1, Poly ISO 1-DWD or Min. 1-inch Insulfoam I, II, IX, VIII, XIV or XV | Helix Max LRA or Helix Max LRA-DT (RIBBON) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | -90.0 |
| C-51. | Min. 2,500 psi structural concrete | Min. 1-inch Insulfoam I | Helix Max LRA (RIBBON) | Min. 0.5-inch HP Recovery Board | Helix Max LRA (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -142.5 |
| C-52. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 0.5-inch HP Recovery Board | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -157.5 |
| C-53. | Min. 2,500 psi structural concrete | Min. 1.5-inch Kingspan GreenGuard or Min. 1.0-inch Dow STYROFOAM ROOFMATE | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 0.5-inch HP Recovery Board | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -157.5 |

**TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

NOTE: REFER TO [NOTE 16](#) FOR VAPOR BARRIER OPTIONS

| System No. | Roof Deck (Note 1) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|------------|---|---|---|--|---|---|--|--------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| C-54. | Min. 2,500 psi structural concrete | Min. 0.5-inch Poly ISO 1, Poly ISO 1-DWD | Helix Max LRA or Helix Max LRA-DT (RIBBON) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -157.5 |
| C-55. | Min. 2,500 psi structural concrete | (Optional) Poly ISO 1, or AC Foam II | Helix Max LRA or Helix Max LRA-DT (FULL) | Poly ISO 1-NB | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -187.5 |
| C-56. | Min. 2,500 psi structural concrete | Min. 0.5-inch HP Recovery Board | Helix Max LRA (RIBBON) | None | N/A | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -202.5 |
| C-57. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 1, or AC Foam II | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Min. 7/16-inch APA rated OSB or min. 0.25-inch DensDeck or DensDeck Prime | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -240.0 |
| C-58. | Min. 2,500 psi structural concrete | Min. 1.5-inch InsulLam (WF) | Helix Max LRA (FULL) | None | N/A | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -255.0 |
| C-59. | Min. 2,500 psi structural concrete | Min. 1-inch Insulfoam I | Helix Max LRA (FULL) | Min. 0.5-inch HP Recovery Board | Helix Max LRA (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -300.0 |
| C-60. | Min. 2,500 psi structural concrete | Min. 1-inch FM Approved EPS (BASF, NOVA, or Huntsman beads) | Helix Max LRA or Helix Max LRA-DT (FULL) | Min. 0.5-inch HP Recovery Board | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -322.5 |
| C-61. | Min. 2,500 psi structural concrete | Min. 1.5-inch Poly ISO 1 or Poly ISO 2 | Helix Max LRA or Helix Max LRA-DT (FULL) | Min. 0.5-inch HP Recovery Board | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -330.0 |
| C-62. | Min. 2,500 psi structural concrete | Min. 1.5-inch Kingspan GreenGuard or Min. 1.0-inch Dow STYROFOAM ROOFMATE | Helix Max LRA or Helix Max LRA-DT (FULL) | Min. 0.5-inch HP Recovery Board | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -330.0 |

**TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

NOTE: REFER TO [NOTE 16](#) FOR VAPOR BARRIER OPTIONS

| System No. | Roof Deck (Note 1) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|------------|------------------------------------|---|--|--|--|---|--|---------------------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| C-63. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 1, Poly ISO 1-DWD or Min. 1-inch Insulfoam I, II, IX, VIII, XIV or XV | Helix Max LRA (RIBBON) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -352.5 |
| C-64. | Min. 2,500 psi structural concrete | (Optional) Min. 1.5-inch Poly ISO 1, or AC Foam II | Helix Max LRA or Helix Max LRA-DT (FULL) | Min. 7/16-inch APA rated OSB or min. 0.25-inch DensDeck or DensDeck Prime | Helix Max LRA or Helix Max LRA-DT (FULL) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -457.5 |
| C-65. | Min. 2,500 psi structural concrete | Min. 1.5-inch Insullam (OSB) | Helix Max LRA (FULL) | None | N/A | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -457.5 |
| C-66. | Min. 2,500 psi structural concrete | EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (FULL) | None | N/A | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -495.0 |

**TABLE 3B: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER**

| System No. | Roof Deck (Note 1) | Roof Cover (Note 15) | | MDP (psf) |
|------------|------------------------------------|---|---|---------------------------|
| | | Membrane | Application | |
| C-67. | Min. 2,500 psi structural concrete | Mule-Hide White-on-Black EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -240.0 |
| C-68. | Min. 2,500 psi structural concrete | Mule-Hide Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -240.0 |
| C-69. | Min. 2,500 psi structural concrete | Mule-Hide Standard Black EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -315.0 |
| C-70. | Min. 2,500 psi structural concrete | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL). | -495.0 |

**TABLE 4A: LIGHTWEIGHT CONCRETE OVER STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER**

| System No. | Deck (Note 1) | LWC (Note 14) | | Roof Cover (Note 15) | | MDP (psf) |
|---|-------------------------------|-------------------------------|-------------------|--------------------------------------|-------------|---------------------------|
| | | Type | Surface Treatment | Membrane | Application | |
| CELCORE (FL2037): | | | | | | |
| MEMBRANE APPLIED IN HELIX MAX LRA, HELIX MAX LRA-DT: | | | | | | |

**TABLE 4A: LIGHTWEIGHT CONCRETE OVER STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER**

| System No. | Deck (Note 1) | LWC (Note 14) | | Roof Cover (Note 15) | | MDP (psf) |
|---|--|---|--|---|--|-----------|
| | | Type | Surface Treatment | Membrane | Application | |
| LWC-1 | Min. 22 ga., Type BV, Grade 33 steel; max. 6 ft spans | Min. 36 pcf wet cast density, min. 200 psi, min. 2-inch thick Celcore MF Cellular Concrete. | (Optional) Celcore PVA Curing Compound | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -60.0 |
| LWC-2 | Min. 22 ga., Type BV, Grade 33 steel; max. 4 ft spans. | Min. 38 pcf wet cast density, min. 200 psi, min. 2-inch thick Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture. | Celcore PVA Curing Compound | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -67.5 |
| LWC-3 | Min. 22 ga., Type BV, Grade 33 steel; max. 6 ft spans | Min. 36 pcf wet cast density, min. 200 psi, min. 2-inch thick Celcore MF Cellular Concrete. When walkable, LWIC is attached with Mule-Hide HDP Fastener with Mule-Hide 3 in. Insulation Plate at a density of 1 per 9 ft ² . | (Optional) Celcore PVA Curing Compound | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -67.5 |
| LWC-4 | Min. 22 ga., Type BV, Grade 33 steel; max. 6 ft spans | Min. 36 pcf wet cast density, min. 200 psi, min. 2-inch thick Celcore MF Cellular Concrete. When walkable, LWIC is attached with Mule-Hide HDP Fastener with Mule-Hide 3 in. Insulation Plate at a density of 1 per 1.0 ft ² . | (Optional) Celcore PVA Curing Compound | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -120.0 |
| ELASTIZELL (FL4994): | | | | | | |
| MEMBRANE APPLIED IN HELIX MAX LRA, HELIX MAX LRA-DT: | | | | | | |
| LWC-5 | Min. 22 ga., Type BV, Grade 33 steel; max. 6 ft spans. | Min. 27 pcf wet cast density, min. 250 psi, min. 2-inch thick, Elastizell Range II LWIC | None | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -30.0 |
| LWC-6 | Min. 22 ga., Type BV, Grade 33 steel; max. 5 ft spans. | Min. 27 pcf wet cast density, min. 250 psi, min. 2-inch thick, Elastizell Range II LWIC | None | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -45.0 |
| LWC-7 | Min. 22 ga., Type BV, Grade 33 steel; max. 5 ft spans; primed with Zell Bonding Agent. | Min. 27 pcf wet cast density, min. 250 psi, min. 2-inch thick, Elastizell Range II LWIC | None | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -60.0 |
| LWC-8 | Min. 2,500 psi structural concrete | Min. 27 pcf wet cast density, min. 250 psi, min. 2-inch thick, Elastizell Range II LWIC | None | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -90.0 |

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

^A The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

| System No. | Substrate (Note 1 , Note 12) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|---|--|--|---|--|---|--|---------------------------------------|--------------------------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| MEMBRANE APPLIED IN MULE-HIDE BONDING ADHESIVE OR AEROWEB: | | | | | | | | |
| R-1 | Existing asphaltic BUR | Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1 | Hot Asphalt | (Optional) Additional layers of base insulation | Hot Asphalt | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -330.0 |
| R-2 | Existing asphaltic BUR | Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1 | Hot Asphalt | Min 0.5-inch HP Recovery Board, GP High Density Roof Fiberboard or Temple Fiber Base HD1 or HD6 | Hot Asphalt | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -330.0 |
| R-3 | Existing asphaltic BUR | Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1 | Hot Asphalt | Min. 0.25-inch DensDeck, DensDeck Prime | Hot Asphalt | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -352.5 |
| R-4 | Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen | Min. 1-inch Poly ISO 1, Poly ISO 1-DWD | Helix Max LRA or Helix Max LRA-DT (RIBBON) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> (Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -167.5 |
| R-5 | Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed) | Min. 1-inch Poly ISO 1, Poly ISO 1-DWD | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> (Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -167.5 |

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

^ The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

| System No. | Substrate (Note 1, Note 12) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|------------|--|---|---|--|-------------------------|--|---------------------------------------|--------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| R-6 | Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen | Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | None | N/A | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -302.5 |
| R-7 | Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed) | Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | None | N/A | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -302.5 |
| R-8 | Existing asphaltic BUR or mineral surface cap | Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1 | OB500 | (Optional) Additional layers of base insulation | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -120.0 |
| R-9 | Existing asphaltic BUR or mineral surface cap | Min. 1.5-inch Poly ISO 2, ACFoam III, Poly ISO 1 | OB500 | Min 0.5-inch HP Recovery Board, GP High Density Roof Fiberboard or Temple Fiber Base HD1 or HD6 or min. 0.25-inch DensDeck or DensDeck Prime | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -120.0 |
| R-10 | Existing asphaltic BUR or mineral surface cap | Min. 1.0-inch Foamular 250 or Styrofoam Roofmate or Highload 60 or min. 2.0-inch, min. 1.0 pcf, Insulfoam | OB500 | Min 0.5-inch HP Recovery Board, GP High Density Roof Fiberboard or Temple Fiber Base HD1 or HD6 or min. 0.25-inch DensDeck or DensDeck Prime | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -120.0 |
| R-11 | Existing asphaltic BUR or mineral surface cap | Min. 1.0-inch Foamular 250 | OB500 | Min. 0.25-inch DensDeck or DensDeck Prime | OB500 | Mule-Hide Standard Black EPDM, White-on-Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Bonding Adhesive or AeroWeb | -120.0 |

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

[^] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

| System No. | Substrate (Note 1, Note 12) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|---|---|---|-------------------------|---|-------------------------|---|------------------------------------|--------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| MEMBRANE APPLIED IN AQUA BASE 120 BA ADHESIVE: | | | | | | | | |
| R-12 | Existing asphaltic BUR | Min. 1.5-inch Poly ISO 2, Poly ISO 1 | Hot Asphalt | (Optional) Additional layers of base insulation | Hot Asphalt | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -165.0 |
| R-13 | Existing asphaltic BUR | (Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1 | Hot Asphalt | Min. 0.5-inch HP Recovery Board | Hot Asphalt | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -90.0 |
| R-14 | Existing asphaltic BUR | (Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1 | Hot Asphalt | Min. 0.25-inch DensDeck Prime | Hot Asphalt | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -165.0 |
| R-15 | Existing asphaltic BUR or mineral surface cap | Min. 1.5-inch Poly ISO 2, Poly ISO 1 | OB500 | (Optional) Additional layers of base insulation | OB500 | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -105.0 |
| R-16 | Existing asphaltic BUR or mineral surface cap | (Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1 | OB500 | Min. 0.5-inch HP Recovery Board | OB500 | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -90.0 |
| R-17 | Existing asphaltic BUR or mineral surface cap | (Optional) Min. 1.5-inch Poly ISO 2, Poly ISO 1 | OB500 | Min. 0.25-inch DensDeck Prime | OB500 | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Aqua Base 120 BA | -150.0 |
| MEMBRANE APPLIED IN LOW VOC BONDING ADHESIVE: | | | | | | | | |
| R-18 | Existing asphaltic BUR or mineral surface cap | Min. 0.5-inch Poly ISO 1, H-Shield | OB500 | Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board | OB500 | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Low VOC Bonding Adhesive | -75.0* |
| R-19 | Existing asphaltic BUR or mineral surface cap | Min. 1.5-inch Insulam (GYP) | OB500 | None | N/A | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Low VOC Bonding Adhesive | -75.0* |
| R-20 | Existing asphaltic BUR or mineral surface cap | Min. 1.5-inch Insulfoam HD Composite | OB500 | None | N/A | Mule-Hide Standard Black EPDM, Standard Reinforced EPDM or FR Reinforced EPDM | Mule-Hide Low VOC Bonding Adhesive | -120.0* |

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

[^] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

| System No. | Substrate (Note 1, Note 12) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|---|--|--|---|--|--|---|---|--------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| MEMBRANE APPLIED IN HELIX MAX LRA OR HELIX MAX LRA-DT: | | | | | | | | |
| R-21 | Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen | (Optional) Min. 1-inch Poly ISO 1, Poly ISO 1-DWD | Helix Max LRA or Helix Max LRA-DT (RIBBON) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | -90.0 |
| R-22 | Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed) | Min. 1-inch Poly ISO 1, Poly ISO 1-DWD | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | -90.0 |
| R-23 | Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed) | Min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | None | N/A | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | -90.0 |

TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

[^] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

| System No. | Substrate (Note 1, Note 12) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|------------|--|---|---|--|--|---|--|--------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| R-24 | Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen | Min. 1-inch Poly ISO 1, Poly ISO 1-DWD | Helix Max LRA or Helix Max LRA-DT (RIBBON) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> (Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -167.5 |
| R-25 | Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed) | Min. 1-inch Poly ISO 1, Poly ISO 1-DWD | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | <u>Insulation:</u> (Optional) Additional layer(s) base insulation <u>Coverboard:</u> (Optional) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -167.5 |
| R-26 | Existing fully-adhered granule-surfaced asphalt built-up roof (BUR), smooth-surfaced asphalt built-up roof (BUR), granule-surfaced APP or SBS modified bitumen or smooth-surfaced SBS modified bitumen | Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON) | None | N/A | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -302.5 |

**TABLE 5A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

[^] The reported MDP documents the allowable maximum design pressure of the new insulation, coverboard and roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

| System No. | Substrate (Note 1 , Note 12) | Base Insulation Layer | | Top Insulation Layer | | Roof Cover (Note 15) | | MDP (psf) |
|------------|--|---|---|----------------------|---|---|--|--------------|
| | | Type | Attach (Notes 6,7&8) | Type | Attach (Notes 6,7&8) | Membrane | Application | |
| R-27 | Existing fully-adhered asphalt built-up roof (BUR) with flood coat & gravel (loose gravel removed) | Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Poly ISO 1-HD, Poly ISO 1-HD90 or EcoStorm VSH | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6-inch o.c.) | None | N/A | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -302.5 |

**TABLE 5B: RECOVER APPLICATIONS
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER**

[^] The reported MDP documents the allowable maximum design pressure of the new roof cover when adhered to the substrate, irrespective of the deck type (See Note 1) or performance of the substrate (See Note 12). The deck and substrate shall be capable of resisting the project design pressure requirements, not to exceed the noted MDP, to the satisfaction of the Authority Having Jurisdiction.

| System No. | Substrate (Note 1 , Note 12) | Roof Cover (Note 15) | | MDP (psf) |
|------------|--|---|--|--------------|
| | | Membrane | Application | |
| R-28 | Existing, fully-adhered EPDM roof cover over insulated steel deck | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (RIBBON, 12) | -30.0 |
| R-29 | Existing, fully-adhered EPDM roof cover over insulated steel deck | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (RIBBON, 6) | -75.0 |
| R-30 | Existing, fully-adhered EPDM roof cover over insulated or non-insulated structural concrete deck | Mule-Hide Standard EPDM Fleece-Backed or White-on-Black Fleece-Backed | Helix Max LRA or Helix Max LRA-DT (FULL) | -315.0 |