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	3
1B	Wood	New, Reroof (Tear-Off), Recover	D	Insulated, Mechanically Attached Roof Cover	3
2A	Steel or Conc.	New, Reroof (Tear-Off), Recover	B	Mechanically Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover	3
2B-1	Steel or Conc.	New, Reroof (Tear-Off), Recover	C-1	Mechanically Attached Insulation, Bonded Roof Cover	4
2B-1	Steel or Conc.	New, Reroof (Tear-Off), Recover	C-2	Mechanically Attached Insulation, Plate-Bonded or Strip-Bonded Roof Cover	5
2C	Steel or Conc.	New, Reroof (Tear-Off), Recover	D	Insulated, Mechanically Attached Roof Cover	6-7
3A-1	Concrete	New, Reroof (Tear-Off)	A-1a	Bonded Insulation, Bonded Roof Cover	8
3A-2	Concrete	New, Reroof (Tear-Off)	A-1b	Bonded Temp Roof, Bonded Insulation, Bonded Roof Cover	9
4A	LWIC	New, Reroof (Tear-Off)	F	Non-Insulated, Bonded Roof Cover	10
5A	Gypsum	Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	10
6A	Various	Recover	A-1	Bonded Insulation, Bonded Roof Cover	11
6B	Various	Recover Over Existing Metal Roof	C-2	Mech. Attached Insulation, Plate-Bonded Roof Cover	12
6C	Various	Recover Over Existing Metal Roof	D	Insulated, Mechanically Attached Roof Cover	13

The following notes apply to the systems outlined herein:

1. Roof decks shall be in accordance with FBC requirements to the satisfaction of the AHJ. Wind load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.

2. Unless otherwise noted, fasteners and stress plates for insulation attachment shall be as follows. Fasteners shall be of sufficient length for the following engagements:
   - Steel Deck: UltraFast #12 or #14 with UltraFast 3 in. Round Metal Plates or UltraFast Square Recessed Metal Plates. Minimum ¾-inch steel penetration, engage the top flute of the steel deck.
   - Concrete Deck: UltraFast #14 with UltraFast 3 in. Round Metal Plates or UltraFast Square Recessed Metal Plates or JM Structural Concrete Deck Fasteners and Plates. Minimum 1-inch embedment. Fasteners installed with a pilot hole in accordance with the fastener manufacturer's published installation instructions.

3. Unless otherwise noted, insulation may be any one layer or combination of polyisocyanurate, polystyrene, wood fiberboard, perlite, DensDeck, DensDeck Prime, DensDeck DuraGuard, SECUROCK Gypsum-Fiber Roof Board, SECUROCK Glass-Mat Roof Board or Invinsa Roof Board that meets the QA requirements of F.A.C. Rule 9B-72 and is documented as meeting FBC 1505.1 and, for foam plastic, FBC 2603.4.1 or 2603.6, when installed with the roof cover.

4. Minimum 200 psi, minimum 2-inch thick lightweight insulating concrete may be substituted for rigid insulation board for System Type D (mechanically attached membrane), whereby the membrane fasteners are installed through the LWIC to engage the structural steel or concrete deck. The structural deck shall be of equal or greater configuration to the steel and concrete deck listings.

5. Preliminary insulation attachment for System Type D = Minimum four fasteners per 4 x 8 ft board or minimum two fasteners per 4 x 4 ft board.

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:
   - Hot asphalt [HA]: Full coverage at 25 lbs/sq.
   - JM Urethane Insulation Adhesive [JM UIA]: Continuous ¾-inch beads, 12" o.c.
   - JM Two-Part Urethane Insulation Adhesive [JM UIA-2]: Continuous ¾-inch beads, 12" o.c.
   - JM Green Two-Part Urethane Insulation Adhesive [JM GUIA-2]: Continuous ¾-inch beads, 12" o.c.

- Weather Tite One Step Foamable Adhesive [WT OSFA]: Continuous ¾-inch beads, 12" o.c.
- MBR Bonding Adhesive [MBR-BA] Continuous ¾-inch beads, 12" o.c.
- 3M CR-20 [CR-20]: Continuous 2½ to 3½-inch ribbons, 12" o.c.
- *Note: When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, adhesive ribbons shall be staggered from layer-to-layer a distance of one-half the ribbon spacing.*
- *Note: 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*

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:
   - JM Two-Part Urethane Insulation Adhesive [JM UIA-2]: MDP: -315.0 psf (Min. 0.5-inch thick)
   - JM Green Two-Part Urethane Insulation Adhesive [JM GUIA-2]: MDP: -315.0 psf (Min. 0.5-inch thick)
   - WeatherTite One Step Foamable Adhesive [TW OSFA]: MDP: -157.5 psf (Min. 0.5-inch thick)
   - 3M CR-20 [CR-20]: MDP: -117.5 psf (Min. 1.0-inch thick)
8. Bonded polyisocyanurate insulation boards shall be maximum 4 x 4 ft.
9. For mechanically attached components or partially bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed the Zone 1 design pressure determined in accordance with FBC Chapter 16, and Zones 2 and 3 shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are RAS 117, FM LPDS 1-29 and ANSI/SPRI WD1. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.1.5.1(a) of FM LPDS 1-29 for Zone 2/3 enhancements.
10. 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, and no rational analysis is permitted.
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 shall be in accordance with TAS 105 or ANSI/SPRI FX-1.
12. For existing substrates in a bonded recover or re-roof installation, the existing roof surface or existing roof deck shall be examined for compatibility and bond performance with the selected adhesive, and the existing roof system (for recover) shall be capable of resisting project design pressures on its own merit to the satisfaction of the AHJ, as documented through field uplift testing in accordance with ASTM E907, FM LPDS 1-52, ANSI/SPRI IA-1 or TAS 124.
13. For System Type D, steel deck applications, the roof membrane shall be run with its length perpendicular to the steel deck flutes.
14. For Recover Applications using System Type D, the insulation is optional. Alternatively, Invinsa Roof Board, DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board may be used as a separator board, preliminarily attached prior to roof cover installation. The existing roof system shall be suitable for a recover application.
15. For adhered membrane systems, side laps shall be minimum 2-inch wide sealed with min. 1.5-inch heat weld. Adhesive application rates are as follows:
   - JM TPO Membrane Adhesive (Water Based) [JM TPO MA-WB]: Applied to the substrate at a rate of 120 ft^2/gal (3.0 m^2/L).
   - JM TPO Membrane Adhesive (Solvent Based) [JM TPO MA-SB]: Applied to the membrane and substrate at a combined rate of 60 ft^2/gal (1.5 m^2/L).
   - JM TPO Membrane Adhesive (Low VOC) [JM TPO MA-LVOC]: Applied to the membrane and substrate at a combined rate of 60 ft^2/gal (1.5 m^2/L)
   - TACC FA-141: Applied to the membrane and substrate at a combined rate of 60 ft^2/gal (1.5 m^2/L).
16. **"MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609.1.5 for determination of design wind loads.**

TABLE 1A: WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER
SYSTEM TYPE C: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Base Insulation Layer	Top Insulation Layer			Roof Cover		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
W-1	Min. 3/4" FM Approved Plywood or wood plank at max 24" spans	One or more layers, any combination, loose laid	Min. 7/16-inch OSB	See Note 2	1 per 2 ft^2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*

TABLE 1B: WOOD DECKS - NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER
SYSTEM TYPE D: INSULATED, MECHANICALLY ATTACHED ROOF COVER

System No.	Deck (See Note 1)	Insulation		Roof Cover			MDP (psf)
		Type	Attach	Membrane	Fasteners	Attach	
W-2	Min. 19/32" plywood at 24" spans with blocking at unsupported joints attached with 10d ring shank nails spaced 4" o.c. at perimeter and intermediate supports	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-60.0

TABLE 2A: STEEL or CONCRETE DECKS - NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER
SYSTEM TYPE B: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover		MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Type	Attach	
SC-1	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 2-inch ENRGY 3	See Note 2	1 per 4 ft^2	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	JM UIA-2, WT OSFA or CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-37.5*
SC-2	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 2-inch ENRGY 3	See Note 2	1 per 2.67 ft^2	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	JM UIA-2, WT OSFA or CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
SC-3	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 1.5-inch ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	See Note 2	1 per 2 ft^2	One or more layers Min. 1.5-inch ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	Hot Asphalt	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
SC-4	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 1.5-inch ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	See Note 2	1 per 2 ft^2	One or more layers Min. 1.5-inch ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA or JM UIA-2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*

TABLE 2B-1: STEEL or CONCRETE DECKS - NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER

SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Base Insulation Layer	Top Insulation Layer			Roof Cover		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
JM TPO APPLICATIONS:								
SC-5	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	One or more layers, any combination, loose laid	Min. ¼-inch Invinsa Roof Board	See Note 2	1 per 2 ft^2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-30.0*
SC-6	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	See Note 2	1 per 4 ft^2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-45.0*
SC-7	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	See Note 2	1 per 2 ft^2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-45.0*
SC-8	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	(Optional) One or more layers, any combination, loose laid	Min. 7/16-inch APA rated OSB	See Note 2	1 per 2 ft^2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-45.0*
SC-9	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	See Note 2	1 per 1.78 ft^2	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM TPO MA-LVOC or TACC FA-141	-52.5
SC-10	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	One or more layers, any combination, loose laid	Min. 7/16-inch APA rated OSB	See Note 2	1 per 1.78 ft^2	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM TPO MA-LVOC or TACC FA-141	-75.0
JM TPO FB APPLICATIONS:								
SC-11	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	See Note 2	1 per 4 ft^2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-37.5*
SC-12	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	One or more layers, any combination, loose laid	Min. ¼" SECUROCK Gypsum-Fiber Roof Board	See Note 2	1 per 2.67 ft^2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-37.5*
SC-13	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	See Note 2	1 per 2 ft^2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
SC-14	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	One or more layers, any combination, loose laid	Min. 7/16-inch OSB	See Note 2	1 per 2 ft^2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
SC-15	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	One or more layers, any combination, loose laid	Min. 5/8" SECUROCK Gypsum-Fiber Roof Board	See Note 2	1 per 4 ft^2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*

TABLE 2B-2: STEEL or CONCRETE DECKS - NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER SYSTEM TYPE C-2: MECHANICALLY ATTACHED INSULATION, PLATE-BONDED or STRIP-BONDED ROOF COVER						
System No.	Deck (See Note 1)	Insulation Layer	Attachment		Roof Cover / Adhesive	MDP (psf)
			Fasteners	Density		
SC-1.	Min. 22 ga., type B, Grade 33 steel at max. 6 ft span or min. 2,500 psi concrete	One or more layers, any combination	JM TPO RhinoPlates and UltraGard High Load Fasteners	18-inch o.c. at rows spaced 60-inch o.c.	JM TPO 45, 60, 72 or 80 bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps. Laps sealed with 1.5-inch heat weld	-37.5
SC-2.	Min. 22 ga., type B, Grade 33 steel at max. 6 ft span or min. 2,500 psi concrete	One or more layers, any combination	JM TPO RhinoPlates and UltraGard High Load Fasteners	6-inch o.c. at rows spaced 120-inch o.c.	JM TPO 45, 60, 72 or 80 bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps. Laps sealed with 1.5-inch heat weld.	-45.0
SC-3.	Min. 22 ga., type B, Grade 33 steel at max. 6 ft span or min. 2,500 psi concrete	One or more layers, any combination	JM TPO RhinoPlates and UltraGard High Load Fasteners	12-inch o.c. at rows spaced 60-inch o.c.	JM TPO 45, 60, 72 or 80 bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps. Laps sealed with 1.5-inch heat weld.	-52.5
SC-4.	Min. 22 ga., type B, Grade 33 steel at max. 6 ft span or min. 2,500 psi concrete	One or more layers, any combination	JM TPO RhinoPlates and UltraGard High Load Fasteners	6-inch o.c. at rows spaced 60-inch o.c.	JM TPO 45, 60, 72 or 80 bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps. Laps sealed with 1.5-inch heat weld.	-105.0
SC-5.	Min. 22 ga., type B, Grade 33 steel at max. 6 ft span or min. 2,500 psi concrete	One or more layers, any combination	JM TPO RhinoPlates and UltraGard High Load Fasteners	1 per 5.33 ft² (6 parts per 4 x 8 ft board)	JM TPO 45, 60, 72 or 80 bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps. Laps sealed with 1.5-inch heat weld.	-45.0*
SC-6.	Min. 22 ga., type B, Grade 33 steel at max. 6 ft span or min. 2,500 psi concrete	One or more layers, any combination	JM TPO RhinoPlates and UltraGard High Load Fasteners	1 per 4 ft² (8 parts per 4 x 8 ft board)	JM TPO 45, 60, 72 or 80 bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps. Laps sealed with 1.5-inch heat weld.	-67.5
SC-7.	Min. 22 ga., type B, Grade 33 steel at max. 6 ft span or min. 2,500 psi concrete	One or more layers, any combination	JM TPO 10" RPS fastened with JM UltraGard High Load Plates and UltraGard High Load Fasteners	Fasteners 6-inch o.c. through RPS at rows spaced 114-inch o.c.	JM TPO 45, 60, 72 or 80 underside is primed with Primer 240 or ADCO SPC-3 Primer and walked-in over the self-adhering RPS. Laps sealed with 1.5-inch heat weld.	-52.5

TABLE 2C: STEEL or CONCRETE DECKS - NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER SYSTEM TYPE D: INSULATED, MECHANICALLY ATTACHED ROOF COVER							
System No.	Deck (See Note 1)	Insulation		Roof Cover			MDP (psf)
		Type	Attach	Membrane	Fasteners	Attach	
SYSTEMS OVER MIN. GRADE 33 STEEL DECK OR STRUCTURAL CONCRETE (AS NOTED)							
SC-16	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-30.0
SC-17	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	12-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-30.0
SC-18	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	12-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-37.5
SC-19	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
SC-20	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
SC-21	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-60.0
SC-22	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (5 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 54-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-82.5
SYSTEMS OVER MIN. GRADE 80 STEEL DECK OR STRUCTURAL CONCRETE (AS NOTED)							
SC-23	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-37.5
SC-24	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	12-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-37.5

TABLE 2C: STEEL or CONCRETE DECKS - NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER SYSTEM TYPE D: INSULATED, MECHANICALLY ATTACHED ROOF COVER							
System No.	Deck (See Note 1)	Insulation		Roof Cover			MDP (psf)
		Type	Attach	Membrane	Fasteners	Attach	
SC-25	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
SC-26	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
SC-27	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	12-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
SC-28	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-52.5
SC-29	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-52.5

TABLE 3A-1: CONCRETE DECKS - NEW CONSTRUCTION or REROOF (Tear-Off) SYSTEM TYPE A-1a: BONDED INSULATION, BONDED ROOF COVER									
System No.	Deck (See Note 1)	Prime	Base Insulation Layer		Top Insulation Layer		Roof Cover		MDP (psf)
			Type	Attach	Type	Attach	Type	Attach	
JM TPO APPLICATIONS:									
C-1	Min. 2,500 psi concrete	None	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA or WT OSFA	(Optional) Min. ¼" DensDeck or Invinsa Roof Board	JM UIA or WT OSFA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-75.0
C-2	Min. 2,500 psi concrete	None	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA-2	(Optional) Min. ¼" DensDeck or Invinsa Roof Board	JM UIA-2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
C-3	Min. 2,500 psi concrete	None	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Min. ¼" DensDeck	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
C-4	Min. 2,500 psi concrete	None	Min. 1.5" ENRGY 3, PSI-25 or JM ISO 3	JM UIA or JM UIA-2	Min. ¼" Invinsa Roof Board	JM UIA, JM UIA-2 or MBR-BA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB or JM TPO MA-SB	-105.0
C-5	Min. 2,500 psi concrete	None	Min. 1.5" ENRGY 3, PSI-25 or JM ISO 3	JM UIA, JM UIA-2 or CR-20	Min. ¼" Invinsa Roof Board	CR-20 or Fully adhered in MBR-BA at 1.5 gal/sq	JM TPO 45, 60, 72 or 80	JM TPO MA-WB or JM TPO MA-SB	-112.5
C-6	Min. 2,500 psi concrete	None	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA or CR-20	(Optional) Additional layers of base insulation	JM UIA or CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM TPO MA-LVOC or TACC FA-141	-217.5
JM TPO FB APPLICATIONS:									
C-7	Min. 2,500 psi concrete	None	Min. 1.5" ENRGY 3, PSI-25 or JM ISO 3	HA, JM UIA, JM UIA-2, JM GUIA-2, WT OSFA or CR-20	(Optional) Additional layers of base insulation	HA, JM UIA, JM UIA-2, JM GUIA-2, WT OSFA or CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-105.0
C-8	Min. 2,500 psi concrete	None	Min. 1.5" ENRGY 3	HA, JM UIA, JM UIA-2, WT OSFA or CR-20	Min. ¼" SECUROCK Gypsum-Fiber Roof Board	HA, JM UIA, JM UIA-2, WT OSFA or CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-105.0

TABLE 3A-2: CONCRETE DECKS - NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE A-1b: BONDED TEMP ROOF, BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Prime	Temp Roof		Base Insulation Layer		Top Insulation Layer		Roof Cover		MDP (psf)
			Type	Attach	Type	Attach	Type	Attach	Type	Attach	
JM TPO APPLICATIONS:											
C-9	Min. 2,500 psi concrete	D41 primer	JM DynaGlas	MBR Adhesive	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Min. ¼" DensDeck	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-67.5
C-10	Min. 2,500 psi concrete	D41 primer	JM DynaGlas	Hot asphalt	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Min. ¼" DensDeck	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
C-11	Min. 2,500 psi concrete	D41 primer	JM APPeX 4.5M	Torched	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Min. ¼" DensDeck	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
C-12	Min. 2,500 psi concrete	D41 primer	JM DynaGrip Cap or *JM*CleanBond Cap	Self-Adhered	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Min. ¼" DensDeck	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
C-13	Min. 2,500 psi concrete	D41 primer	JM APPeX 4.5M	Torched	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-168.5
C-14	Min. 2,500 psi concrete	D41 primer	JM DynaGlas	Hot asphalt	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-217.5
C-15	Min. 2,500 psi concrete	D41 primer	JM DynaGrip Cap or *JM*CleanBond Cap	Self-Adhered	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-217.5
JM TPO FB APPLICATIONS:											
C-16	Min. 2,500 psi concrete	D41 primer	JM DynaGlas	MBR Adhesive	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Additional layers of base insulation or Min. ¼" SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-67.5
C-17	Min. 2,500 psi concrete	D41 primer	JM DynaGlas	Hot asphalt	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Additional layers of base insulation or Min. ¼" SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-105.0
C-18	Min. 2,500 psi concrete	D41 primer	JM APPeX 4.5M	Torched	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Additional layers of base insulation or Min. ¼" SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-105.0
C-19	Min. 2,500 psi concrete	D41 primer	JM DynaGrip Cap or *JM*CleanBond Cap	Self-Adhered	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Additional layers of base insulation or Min. ¼" SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-105.0

TABLE 4A: LIGHTWEIGHT CONCRETE DECKS - NEW CONSTRUCTION or REROOF (Tear-Off) SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER					
System No.	Deck (See Note 1)		Roof Cover		MDP (psf)
	Structural	LWC	Type	Attach	
LWC-1	Min. 2,500 psi concrete	Min. 350 psi, min. 2" thick Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture, with optional 1" thick, 1.0 pcf EPS holey board and surfacing of Celcore PVA Curing Compound.	JM TPO 45, 60, 72 or 80	JM TPO MA-LVOC	-367.5

TABLE 5A: GYPSUM DECKS - REROOF (Tear-Off) SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER								
System No.	Deck (See Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover		MDP (psf)
		Type	Attach	Type	Attach	Type	Attach	
JM TPO APPLICATIONS:								
G-1.	Existing poured gypsum or gypsum plank	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA-2	(Optional) Min. ¼" DensDeck or Invinsa Roof Board	JM UIA-2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
G-2.	Existing poured gypsum or gypsum plank	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Min. ¼" DensDeck	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
G-3.	Existing poured gypsum or gypsum plank	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA-2	(Optional) Additional layers of base insulation	JM UIA-2	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM TPO MA-LVOC or TACC FA-141	-112.5
G-4.	Existing poured gypsum or gypsum plank	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM TPO MA-LVOC or TACC FA-141	-217.5
JM TPO FB APPLICATIONS:								
G-5.	Existing poured gypsum or gypsum plank	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA-2 or CR-20	(Optional) Additional layers of base insulation or Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	JM UIA-2 or CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-105.0

TABLE 6A: RECOVER APPLICATIONS SYSTEM TYPE A: BONDED INSULATION, BONDED ROOF COVER								
System No.	Substrate	Base Insulation Layer		Top Insulation Layer		Roof Cover		MDP (psf)
		Type	Attach	Type	Attach	Type	Attach	
JM TPO APPLICATIONS:								
R-1	Existing asphaltic BUR	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA or WT OSFA	(Optional) Min. ¼" DensDeck or Invinsa Roof Board	JM UIA or WT OSFA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-75.0
R-2	Existing asphaltic BUR	Min. ¼" DensDeck or Invinsa Roof Board	JM UIA or WT OSFA	N/A	N/A	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-75.0
R-3	Existing asphaltic BUR	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA-2	Min. ¼" DensDeck or Invinsa Roof Board	JM UIA-2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
R-4	Existing asphaltic BUR	Min. ¼" DensDeck or Invinsa Roof Board	JM UIA-2	N/A	N/A	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
R-5	Existing asphaltic BUR or mineral surface cap sheet	Min. ¼" DensDeck	CR-20	N/A	N/A	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB or TACC FA-141	-105.0
R-6	Existing asphaltic BUR	None	N/A	Min. ¼" Invinsa Roof Board	Fully adhered in MBR-BA at 1.5 gal/sq.	JM TPO 45, 60, 72 or 80	JM TPO MA-WB or JM TPO MA-SB	-112.5
R-7	Existing asphaltic BUR	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA-2	(Optional) Additional layers of base insulation	JM UIA-2	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM TPO MA-LVOC or TACC FA-141	-120.0
R-8	Existing asphaltic BUR	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA	(Optional) Additional layers of base insulation	JM UIA	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM TPO MA-LVOC or TACC FA-141	-157.5
R-9	Existing asphaltic BUR or mineral surface cap sheet	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM TPO MA-LVOC or TACC FA-141	-217.5
JM TPO FB APPLICATIONS:								
R-10	Existing asphaltic BUR	Min. 1.5" ENRGY 3, PSI-25, JM ISO 3 or ValuTherm	JM UIA, JM UIA-2 or CR-20	(Optional) Additional layers of base insulation or Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	JM UIA-2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-105.0

TABLE 6B: RECOVER OVER EXISTING METAL PANEL ROOF SYSTEM TYPE C-2: MECHANICALLY ATTACHED INSULATION, PLATE-BONDED ROOF COVER						
System No.	Deck (See Note 1)	Insulation Layer	Attachment		Roof Cover / Adhesive	MDP (psf)
			Fasteners	Density		
R-1.	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY-3, PSI-25, JM ISO 3 or ValuTherm between ribs or over panels of existing non-structural metal roof followed by additional base layer or Min. ¼-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Preliminary Securement: UltraFast Plate-Bonded Securment: JM Purlin Fasteners with JM TPO RhinoPlates	Insulation preliminarily secured with fasteners/plates in Note 2. JM Purlin Fasteners with JM TPO Rhino Plates spaced 6-inch o.c. at every-other structural steel support (max. 120-inch o.c.)	JM TPO bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps	-45.0
R-2.	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY-3, PSI-25, JM ISO 3 or ValuTherm between ribs or over panels of existing non-structural metal roof followed by additional base layer or Min. ¼-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Preliminary Securement: UltraFast Plate-Bonded Securment: JM Purlin Fasteners with JM TPO RhinoPlates	Insulation preliminarily secured with fasteners/plates in Note 2. JM Purlin Fasteners with JM TPO Rhino Plates spaced 18-inch o.c. at every structural steel support (max. 60-inch o.c.)	JM TPO bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps	-45.0
R-3.	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY-3, PSI-25, JM ISO 3 or ValuTherm between ribs or over panels of existing non-structural metal roof followed by additional base layer or Min. ¼-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Preliminary Securement: UltraFast Plate-Bonded Securment: JM Purlin Fasteners with JM TPO RhinoPlates	Insulation preliminarily secured with fasteners/plates in Note 2. JM Purlin Fasteners with JM TPO Rhino Plates spaced 12-inch o.c. at every structural steel support (max. 60-inch o.c.)	JM TPO bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps	-67.5
R-4.	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY-3, PSI-25, JM ISO 3 or ValuTherm between ribs or over panels of existing non-structural metal roof followed by additional base layer or Min. ¼-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Preliminary Securement: UltraFast Plate-Bonded Securment: JM Purlin Fasteners with JM TPO RhinoPlates	Insulation preliminarily secured with fasteners/plates in Note 2. JM Purlin Fasteners with JM TPO Rhino Plates spaced 6-inch o.c. at every structural steel support (max. 60-inch o.c.)	JM TPO bonded to JM TPO RhinoPlates with Rhinobond Plate bonding tool at 6 seconds per plate so tool reaches 400°F and cooled with RhinoBond Cooling Clamps	-120.0

TABLE 6C: RECOVER OVER EXISTING METAL PANEL ROOF SYSTEM TYPE D: INSULATED, MECHANICALLY ATTACHED ROOF COVER								
System No.	Deck (See Note 1)	Insulation			Roof Cover			MDP (psf)
		Base Layer	Top Layer	Attach	Membrane	Fasteners	Attachment	
R-1.	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY-3, PSI-25, JM ISO 3 or ValuTherm between ribs or over panels of existing non-structural metal roof	Additional base layer or Min. ¼-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Prelim. Attached	JM TPO 45, 60, 72 or 80	JM Purlin Fasteners with UltraGard High Load Plates	Fasteners spaced 12-inch o.c. within 5-inch wide laps engage structural supports spaced 60-inch o.c. Laps sealed with 1.5-inch heat weld.	-37.5
R-2.	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY-3, PSI-25, JM ISO 3 or ValuTherm between ribs or over panels of existing non-structural metal roof	Additional base layer or Min. ¼-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Prelim. Attached	JM TPO 45, 60, 72 or 80	JM Purlin Fasteners with UltraGard Extra High Load Plates	Fasteners spaced 12-inch o.c. within 5-inch wide laps engage structural supports spaced 60-inch o.c. Laps sealed with 1.5-inch heat weld.	-45.0
R-3.	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY-3, PSI-25, JM ISO 3 or ValuTherm between ribs or over panels of existing non-structural metal roof	Additional base layer or Min. ¼-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Prelim. Attached	JM TPO 45, 60, 72 or 80	JM Purlin Fasteners with UltraGard High Load Plates	Fasteners spaced 6-inch o.c. within 5-inch wide laps engage structural supports spaced 60-inch o.c. Laps sealed with 1.5-inch heat weld.	-82.5