



EVALUATION REPORT

FLORIDA BUILDING CODE, 7TH EDITION (2020)

Manufacturer: JOHNS MANVILLE CORPORATION
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Manufacturing Plants: Scottsboro, AL

Quality Assurance: UL LLC (QUA9625)

SCOPE

Category: Roofing
Subcategory: Single Ply Roof System
Code Edition: Florida Building Code, 7th Edition (2020) including High-Velocity Hurricane Zones (HVHZ)
Code Sections: 1504.3.1, 1504.6, 1504.7, 1507.13, 1515.1.1, 1515.1.4, 1515.2.4, 1523.1.1, 1523.6.2, 1523.6.5.2.9
Properties: Wind Resistance, Physical Properties, Impact Resistance

PRODUCT DESCRIPTION

Products	Specification	Description
JM TPO-45	ASTM D 6878 TAS 110	Nominal 45-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
JM TPO-60	ASTM D 6878 TAS 110	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
JM TPO-80	ASTM D 6878 TAS 110	Nominal 80-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
JM TPO FB 115	ASTM D 6878 TAS 110	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
JM TPO FB 135	ASTM D 6878 TAS 110	Nominal 80-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
JM TPO FB 150	ASTM D 6878 TAS 110	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and heavy polyester fleece backing
JM TPO FB 175	ASTM D 6878 TAS 110	Nominal 80-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and heavy polyester fleece backing
JM TPO SA-60 mil	ASTM D 6878 TAS 110	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and a self-adhesive backing

REFERENCES

<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-026	TAS 114(D) (2011)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-027	TAS 114(D) (2011)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-028	TAS 114(D) (2011)
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FM Approvals (TST1867)	3009502	FM 4470 (2016)
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FM Approvals (TST1867)	3014692	FM 4470 (2016)
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FM Approvals (TST1867)	3015444	FM 4470 (2016)
FM Approvals (TST1867)	3016629	FM 4470 (2016)
FM Approvals (TST1867)	3018579	FM 4450 (1989)
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FM Approvals (TST1867)	3025168	FM 4470 (2016)
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FM Approvals (TST1867)	3025245	FM 4470 (2016)
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FM Approvals (TST1867)	3028040	FM 4470 (2016)
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FM Approvals (TST1867)	3030351	FM 4470 (2016)
FM Approvals (TST1867)	3030383	FM 4470 (2016)
FM Approvals (TST1867)	3031670	FM 4470 (2016)
FM Approvals (TST1867)	3032235	FM 4470 (2016)
FM Approvals (TST1867)	3033308	FM 4470 (2016)
FM Approvals (TST1867)	3035191	FM 4470 (2016)
FM Approvals (TST1867)	3035538	FM 4470 (2016)
FM Approvals (TST1867)	3037110	FM 4470 (2016)
FM Approvals (TST1867)	3037540	FM 4450 (1989)
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FM Approvals (TST1867)	3040105	FM 4470 (2016)
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FM Approvals (TST1867)	3044716	FM 4470 (2016)
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FM Approvals (TST1867)	3058326	FM 4470 (2016)
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FM Approvals (TST1867)	3059030	FM 4470 (2016)
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FM Approvals (TST1867)	3060138	FM 4470 (2016)

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<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
FM Approvals (TST1867)	3060573	FM 4470 (2016)
FM Approvals (TST1867)	3060614	FM 4470 (2016)
FM Approvals (TST1867)	3061218	FM 4470 (2016)
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Intertek – York (ATI) (TST1558)	J0080.01-109-18	FM 4474 (2011); TAS 114(J) (2011); UL 1897 (2012)
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PRI Construction Materials Technologies (TST5878)	JMC-086-02-01	FM 4474 (2011); TAS 114(J) (2011)
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PRI Construction Materials Technologies (TST5878)	JMC-108-02-01	FM 4474 (2011); TAS 114 (J) (2011)
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PRI Construction Materials Technologies (TST5878)	JMC-114-02-01	FM 4474 (2011); TAS 114 (J) (2011)
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PRI Construction Materials Technologies (TST5878)	JMC-132-02-01	FM 4474 (2011); TAS 114(D) (2011)
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PRI Construction Materials Technologies (TST5878)	JMC-143-02-01	FM 4474 (2011); TAS 114(D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-162-02-01	FM 4474 (2011); TAS 114(D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-163-02-01	FM 4474 (2011); TAS 114(J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-168-02-01	FM 4474 (2011); TAS 114(J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-193-02-01	FM 4474 (2011); TAS 114(J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-193-02-01A	FM 4474 (2011); TAS 114(D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-196-02-01	TAS 117(A&B) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-201-02-01A	FM 4474 (2011); TAS 114(J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-201-02-01B	FM 4474 (2011); TAS 114(J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-205-02-01	ASTM D 3746 [(1985)(2015)]
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PRI Construction Materials Technologies (TST5878)	JMC-225-02-01	FM 4474 (2011)
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PRI Construction Materials Technologies (TST5878)	JMC-246-02-01	FM 4474(B) (2011); TAS 114(D) (2011)
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PRI Construction Materials Technologies (TST5878)	JMC-277-02-01	FM 4474(B) (2011); TAS 114(D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-278-02-01A	FM 4474(C) (1995)
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PRI Construction Materials Technologies (TST5878)	JMC-278-02-03	FM 4474(D) (2011); TAS 114(J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-303-02-01	FM 4474(D) (2011); TAS 114(J) (2011); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-306-02-01	FM 4474(B) (2011); TAS 114(D) (2011)
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PRI Construction Materials Technologies (TST5878)	JMC-311-02-01	FM 4474(B) (2011); TAS 114(D) (2011)
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PRI Construction Materials Technologies (TST5878)	JMC-325-02-01.1	TAS 110 (2000)
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PRI Construction Materials Technologies (TST5878)	JMC-343-02-01	FM 4474(D) (2011); TAS 114(J) (2011); UL 1897 (2012)
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PRI Construction Materials Technologies (TST5878)	JMC-353-02-01	FM 4474(D) (2011); TAS 114(J) (2011); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-353-02-02	TAS 114(D) (2011)
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PRI Construction Materials Technologies (TST5878)	410T0026	FM 4474(D) (2011); TAS 114(J) (2011); UL 1897 (2012)
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<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
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PRI Construction Materials Technologies (TST5878)	507T0019	ASTM D 2178 (2015)
PRI Construction Materials Technologies (TST5878)	507T0009	FM 4474(C) (1995)
PRI Construction Materials Technologies (TST5878)	507T0031	FM 4474(C) (1995)
PRI Construction Materials Technologies (TST5878)	507T0031A.1	FM 4474(C) (1995)
PRI Construction Materials Technologies (TST5878)	507T0036	FM 4474(D) (2011); TAS 114(J) (2011); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	507T0036B	FM 4474(D) (2011); TAS 114(J) (2011); UL 1897 (2012)
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PRI Construction Materials Technologies (TST5878)	507T0040B	ASTM D 6878 (2013)
PRI Construction Materials Technologies (TST5878)	507T0058	ASTM D 6878 (2013)
PRI Construction Materials Technologies (TST5878)	507T0059	FM 4474(D) (2011); TAS 114(J) (2011)
PRI Construction Materials Technologies (TST5878)	507T0062	FM 4474(D) (2011); TAS 114(J) (2011)
PRI Construction Materials Technologies (TST5878)	507T0141	FM 4474(B) (2011); TAS 114(D) (2011)
PRI Construction Materials Technologies (TST5878)	507T0142	FM 4474(B) (2011);
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PRI Construction Materials Technologies (TST5878)	507T0193	FM 4474(D) (2011); TAS 114(J) (2011)
PRI Construction Materials Technologies (TST5878)	507T0199	TAS 114(D) (2011)
PRI Construction Materials Technologies (TST5878)	507T0218	FM 4474(C) (1995)
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PRI Construction Materials Technologies (TST5878)	507T0225	FM 4474(D) (2011); TAS 114(J) (2011);
PRI Construction Materials Technologies (TST5878)	507T0226	TAS 114(D) (2011);
PRI Construction Materials Technologies (TST5878)	507T0226A	TAS 114(D) (2011);
PRI Construction Materials Technologies (TST5878)	507T0229	FM 4474(D) (2011); TAS 114(J) (2011);
PRI Construction Materials Technologies (TST5878)	507T0231	FM 4474(C) (1995)
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PRI Construction Materials Technologies (TST5878)	507T0230	TAS 114(D) (2011); TAS 114(J) (2011);
PRI Construction Materials Technologies (TST5878)	507T0234.1	TAS 114(D) (2011); TAS 114(J) (2011);
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PRI Construction Materials Technologies (TST5878)	507T0256A	FM 4474(C)
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Robert J.M. Nieminen, P.E.	Compliance Letter 02/09/2017	TAS 114 (2011)
Trinity ERD (TST6049)	J33600.08.13	TAS 110 (2000)
Trinity ERD (TST6049)	J45020.05.13-1	TAS 114(C) (1995)
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Trinity ERD (TST6049)	JM-SC11190.03.16	TAS 114(J) (2011)
Trinity ERD (TST6049)	JM-SC11320.03.16	TAS 114(D) (2011)
Trinity ERD (TST6049)	JM-SC12145.02.17	FM 4474(C) (1995)
Trinity ERD (TST6049)	SC4910	FM 4474 (2011); TAS 114(J) (2011)
Trinity ERD (TST6049)	SFS-SC10010.02.16-R1	FM 4474(D) (2011); TAS 114(J) (2011); UL 1897 (2012)

LIMITATIONS

1. Fire classification is not within the scope of this evaluation.
2. Foam plastic insulation shall be separated from the building interior in accordance with the FBC 2603.4 and 2603.6.
3. The roof deck and the roof deck attachment information are provided based on testing. FBC requirements for the rational design of the roof deck, including the attachment, are not within the scope of this evaluation.
4. In the HVHZ, fastener spacing for insulation attachment is determined using a Minimum Characteristic Force (F') of 275 lbf as demonstrated via testing to TAS 105. If the field tested fastener value is below 275 lbf, then insulation attachment shall not be acceptable.
5. In the HVHZ, fastener spacing for base sheets or membrane attachment shall meet the minimum fastener resistance value and the *MDP* for the specified assembly. It is permissible for a qualified professional to submit a revised fastener spacing utilizing the withdrawal resistance value obtained from TAS 105 testing and calculations performed in accordance with RAS 117 and/or RAS 137, when the fastener resistance is found less than required.
6. In the HVHZ, if mechanical attachment through the lightweight insulating concrete to the structural deck is proposed, a field fastener withdrawal test shall be conducted in compliance with TAS 105 to determine equivalent or increased attachment densities. Revised fastener densities shall be submitted utilizing the withdrawal resistance value obtained from TAS 105 testing and calculations performed in accordance with RAS 117 and/or RAS 137.
7. **HVHZ:** For assemblies containing mechanical attachment, the allowable uplift pressure for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. The attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in the periphery zones. Calculations shall be conducted in compliance with RAS 117 and/or RAS 137.
Non-HVHZ: For assemblies containing mechanical attachment or adhered in ribbon-applied adhesive, the allowable uplift pressure for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. The attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in the periphery zones. Calculations shall be conducted in compliance with RAS 117, RAS 137, or Section 2.2.10.1 FM LPDS 1-29 (February 2020).
8. Reroofing applications shall be examined in accordance with FBC Section 1511 outside of the HVHZ and FBC Section 1521 within the HVHZ. For mechanically fastened systems, a field withdrawal resistance test (TAS 105 in the HVHZ; ANSI/SPRI FX-1 or TAS 105 in the non-HVHZ) shall be conducted by a qualified professional to ensure the fastener meets the minimum design load requirements of the system. For adhered systems, a field uplift resistance test (TAS 124 in the HVHZ; ASTM E 907, FM LPDS 1-52, ANSI/SPRI IA-1, or TAS 124 in the non-HVHZ) shall be conducted to confirm conformance of the existing to the minimum design loads.
9. **HVHZ:** For assemblies containing fully adhered or ribbon adhered attachment, or where extrapolation of the assembly is not permitted, the *MDP* for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16 without augmentation.
Non-HVHZ: For assemblies adhered in ribbon-applied adhesive, the allowable uplift pressure for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. The attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in the periphery zones. Calculations shall be conducted in compliance with Section 2.2.10.1 FM LPDS 1-29 (February 2020).
10. Installation of the evaluated products shall comply with this report, the FBC, and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and FBC compliant installation detail shall prevail.
11. The minimum roof slope shall be 1/4:12 for new construction.
12. All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.

COMPLIANCE STATEMENT

The products evaluated herein by Zachary R. Priest, P.E. have demonstrated compliance with the Florida Building Code, 7th Edition (2020) including High-Velocity Hurricane Zones (HVHZ) as evidenced in the referenced documents submitted by the named manufacturer.



This item has been
digitally signed and
sealed by Zachary R.
Priest, PE, on 8/15/2022.

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electronic copies.

Zachary R. Priest, P.E.
Florida Registration No. 74021
Organization No. ANE9641

CERTIFICATION OF INDEPENDENCE

CREEK Technical Services, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

CREEK Technical Services, LLC is not owned, operated, or controlled by any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

APPENDICES

- 1) [APPENDIX A](#) – Installation (9 pages)
- 2) [APPENDIX B](#) – Nomenclature (6 pages)
- 3) [APPENDIX C](#) – Approved Assemblies for JM TPO Single-Ply Membranes (82 pages)

APPENDIX A - INSTALLATION
INSTALLATION

Note - Refer to the [APPROVED ASSEMBLIES](#) section of this report for specific installation details of a selected assembly.

Unless otherwise specified in this report the following installation details shall be met for the named products:

Component	Product	Installation Detail
Fasteners, Battens & Plates	JM All Purpose Fastener	#14 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	JM APB Plates	2-inch diameter; Galvalume steel plate with reinforcing ribs and barbs
	JM Extra High Load Fastener	#21 fastener; Min. 3/4-inch penetration through the top rib of the steel deck
	JM Extra High Load Plates	3-inch diameter; Galvalume steel plate with eyehooks
	JM High Load Plates	2 3/8-inch diameter; Galvalume steel plate with eyehooks
	JM High Load Plus Plates	2 3/4-inch diameter; Galvalume steel plate with barbs
	JM High Load Fastener	#15 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	JM High Load LH Fastener	#15 fastener with oversized head; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	JM UltraFast Fastener	#12 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	JM UltraFast Metal Plate (Round) or UltraFast Plate Metal Recessed	3-inch diameter round; Galvalume steel plate; Only for use with the following products: ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, ENRGY 3 FR, ENRGY 3 C1, ENRGY 3 C1 CGF, RetroPlus, Retro-Fit, SeparatoR, SeparatoR CGF, SeparatoR CGF FR, DuraBoard, DuraFoam, Fesco, and Fesco Foam
	JM UltraFast Metal Plate (Square) or UltraFast Plate Metal Flat	3-inch square; Galvalume steel plate
	JM UltraLok Fastener	Min. 1.8-inch galvanized steel tube and coated-steel locking staple pre-assembled with 2.7-inch diameter Galvalume steel plate
	JM Polymer Membrane Batten	Membrane anchors and plastic strips
	JM Purlin Fastener	Min. 3/4-inch penetration through purlin
	JM Structural Concrete Deck Fastener	Concrete deck only; Min. 1-inch penetration into concrete deck
	JM TPO RhinoPlate	Min. 3-inch diameter for TPO membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with min. 60 mil thick bareback membrane
	OMG 3 in. Ribbed Galvalume Plate (Flat)	3-inch diameter round; Galvalume steel plate
	OMG #12 Standard Roofgrip	#12 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	OMG CR Base Sheet Fastener	Base sheet fastener with 1.75-inch galvanized steel shank coated with CR-10 and integrated 2.75-inch diameter Galvalume plate.
	OMG XHD	#15 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	SFS Intec Dekfast DF-#12-PH3 Fastener	#12 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	SFS Intec Dekfast DF-#14-PH3 Fastener	#15 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	SFS Intec Dekfast DF-#15-PH3 Fastener	#15 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	SFS Intec Dekfast PLT-H-2-7/8	2-7/8" hexagonal galvalume steel stress plate
	SFS Intec Dekfast PLT-R-3	3-inch diameter round; Galvalume steel plate



APPENDIX A - INSTALLATION

Component	Product	Installation Detail
Fasteners, Battens & Plates (Cont'd)	SFS Intec FI-P-6.8-TPO	Min. 3-inch diameter for TPO membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with min. 60 mil thick bareback membrane
	SFS Intec <i>isofast</i> PLT-R-2-3/8-BL	2 3/8-inch diameter; Galvalume steel plate
	Trufast 2.4" Barbed Metal Seam Plate	2.4-inch diameter; Galvalume steel plate
	Trufast 2.4" Barbed Metal Seam Plate (14-Barb)	
	Trufast 2.4" Scoop Seam Plate	
	Trufast 3" Metal Insulation Plate	3-inch diameter round; Galvalume steel plate
	Trufast #12 Purlin Fastener	Installed into min. 16ga. steel purlins
	Trufast #12 DP Fastener	#12 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	Trufast #14 HD Fastener	#14 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	Trufast #15 EHD Fastener	#15 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	Trufast Fluted Concrete Nails	Concrete deck only; Min. 1-inch penetration into concrete deck
	Trufast Deep Well Batten Bar	Galvalume steel membrane batten with recessed holes
	Trufast Straight Line Batten Bar	Galvalume steel membrane batten for use with Twin-Loc Nail without integrated plate
	Trufast TPO IW Plates	Min. 3-inch diameter for TPO membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with min. 60 mil thick bareback membrane
	Trufast Twin Loc-Nail	Min. 1.4-inch shank; Base sheet fastener with and without integrated 2.7-inch diameter plate
Insulation Adhesives	Trufast VERSA-FAST fastener	1/4-inch thread diameter; 2 1/4-inch length
	JM MBR Bonding Adhesive	Fully adhered at a rate of 1.5-2.0 gal/100 ft ²
	JM One-Step Foamable Adhesive	Ribbon adhered in 3/4 to 1-inch wide beads
	ICP Adhesives CR-20	
	OMG OlyBond 500	
	JM Two Part Urethane Insulation Adhesive Canister or JM Two-Part UIA Canister	Ribbon adhered in 3/4 to 1-inch wide beads
	JM Two Part Urethane Insulation Adhesive or JM Two-Part UIA	
	JM Roofing System Urethane Adhesive	
Insulation/Cover Boards	JM Urethane Insulation Adhesive	Ribbon adhered in 1/2-inch wide beads
	ASTM D 312, Type IV asphalt	Fully adhered within the EVT range at a rate of 25-40 lbs/100 ft ²
	EPS	Min. 1/2-inch, min. 1.8 pcf (HVHZ) or min. 1.5 pcf (non-HVHZ) expanded polystyrene; Adhered boards shall be a maximum 4-ft x 4-ft
	Georgia-Pacific DensDeck	Min. 1/4-inch thick
	Georgia-Pacific DensDeck Prime	
	Georgia-Pacific DensDeckStorm X Prime	Min. 5/8-inch thick
	JM ENRGY 3	Min. 1/2-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	JM ENRGY 3 C1	
	JM ENRGY 3 AGF	
	JM ENRGY 3 CGF	
	JM ENRGY 3 C1 CGF	
	JM ENRGY 3 FR	
	JM Fesco Board	Min. 3/4-inch thick; Min. 20 psi
	JM Fesco Foam	Min. 1 1/2-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4 ft x 4 ft

APPENDIX A - INSTALLATION

Component	Product	Installation Detail
Insulation/Cover Boards (Cont'd)	JM Invinso Roof Board	1/4-inch thick; Adhered boards shall be a maximum 4 ft x 4 ft
	JM Invinso Foam Roof Board	
	JM Invinso FR Roof Board	1/4-inch thick; Adhered boards shall be a maximum 4 ft x 4 ft
	JM ProtectoR Foam	Min. 2-inch thick; Min. 80psi top layer; Min. 20psi bottom layer; Adhered boards shall be a maximum 4 ft x 4 ft
	JM ProtectoR HD	1/2-inch thick; Min. 80 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	JM ProtectoR HD FR	
	JM Retro-Fit Board	1/2-inch thick; Adhered boards shall be a maximum 4 ft x 4 ft
	JM RetroPlus Roof Board	
	JM SECUROCK Glass-Mat Roof Board	Min. 1/4-inch thick
	JM SECUROCK Gypsum-Fiber Roof Board	
	JM SeparatoR	1/2-inch thick; Min. 25 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	JM SeparatoR CGF	
	JM SeparatoR FR	
	National Gypsum DEXcell Cement Roof Board	Min. 7/16-inch thick; Adhered boards shall be a maximum 4 ft x 4 ft
	National Gypsum DEXcell Glass Mat Roof Board	Min. 1/4-inch thick
	National Gypsum DEXcell FA Glass Mat Roof Board	
TPO Membrane Adhesives	ASTM D 312, Type IV asphalt	Fully adhered within the EVT range at a rate of 25-40 lbs/100 ft; For use only with JM TPO FB 150 and 175 membranes only
	JM All Season Sprayable Bonding Adhesive	For JM TPO smooth backed membranes, the adhesive is applied at a total rate of 1,000ft ² /canister; Applied simultaneously to underside of membrane and substrate; For JM TPO fleece backed membranes the adhesive is applied both to the substrate and the underside of the membrane at a rate of 0.21-0.23 gal/100ft ² for a total application rate of 0.41-0.47gal/100ft ²
	JM Roofing System Urethane Adhesive	Ribbon adhered in 3/4 to 1-inch wide beads; For use only with JM TPO Fleece Backed membranes only
	JM Membrane Bonding Adhesive (TPO & EPDM)	Fully adhered at rate of 50-90 ft ² /gal(1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate; For use with JM TPO smooth backed membranes only
	JM LVOC Membrane Adhesive (TPO & EPDM)	Fully adhered at rate of 50-90 ft ² /gal(1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate; For use with JM TPO smooth backed membranes only
	JM TPO 1168 Membrane Adhesive	Fully adhered at rate of 50-90 ft ² /gal(1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate; For use with JM TPO smooth backed membranes only
	JM TPO Water Based Membrane Adhesive	Bareback TPO shall be fully adhered in two-sided application at a combined rate of 0.6-0.8 gal/100ft ² or one-sided application applied to the substrate at a rate of 0.4-0.5 gal/100ft ² ; Fleeceback TPO shall be fully adhered in one-sided application applied to the substrate at a rate of 0.6-0.8 gal/100ft ²
	JM Two Part Urethane Insulation Adhesive Canister	Applied in spatter pattern at a rate of 0.32 gal/100ft ² or 1/2-inch wide beads; For use only with JM TPO Fleece Backed membranes only
SA Primer	JM SA Primer Low VOC	Applied at rate of 0.5 gal/100ft ²
	JM SA Primer	Applied 0.75-1.25 gal/100ft ² on porous surfaces and 0.25-0.75 gal/100ft ² on nonporous surfaces

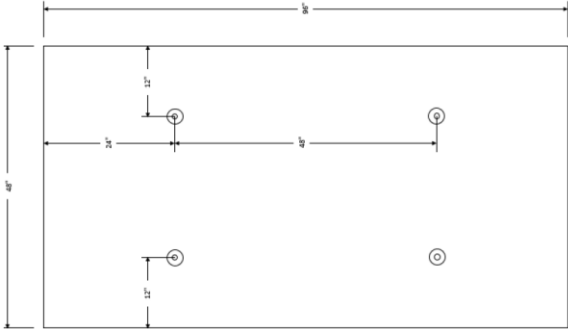
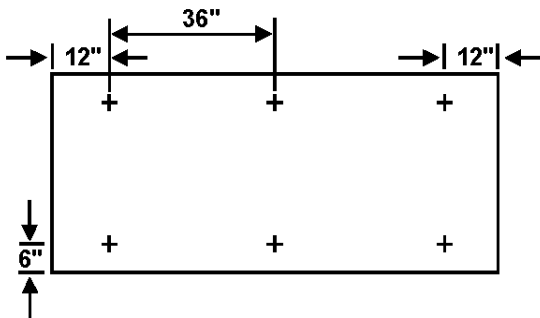
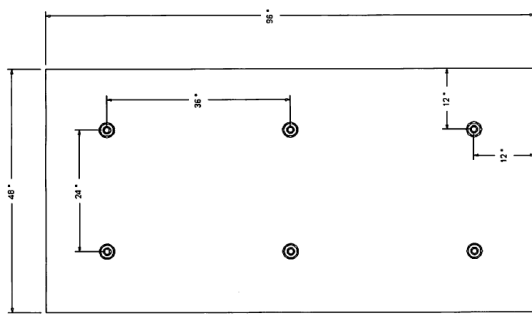
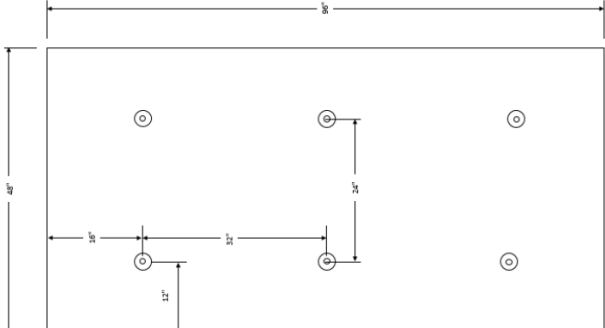
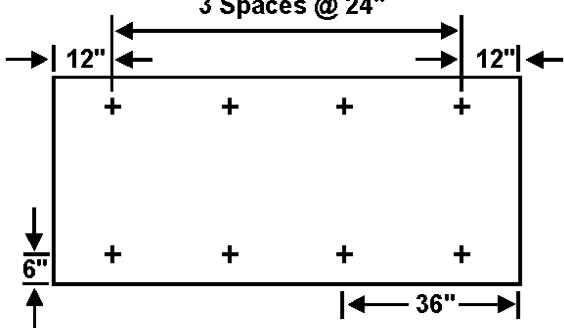
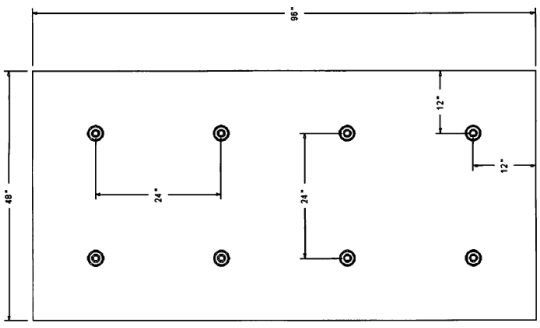
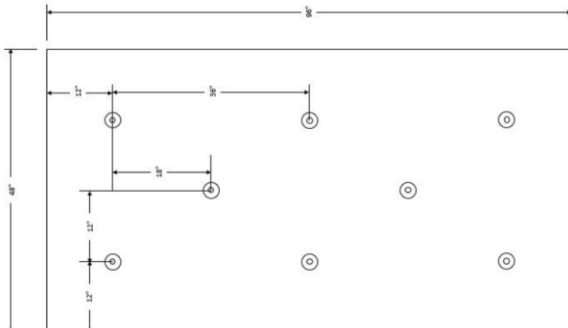
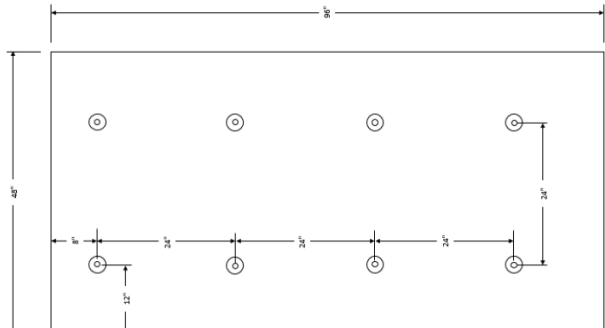


APPENDIX A - INSTALLATION

Component	Product	Installation Detail
SA Primer (Cont'd)	JM All Season Sprayable Bonding Adhesive	Applied at rate of 500 ft ² /canister
Vapor Barriers	JM DynaBase HW	Min. 3-inch wide side-laps; Min. 6-inch end laps; Torch adhered ; Concrete decks primed prior to torch
	JM DynaWeld Base	
	JM DynaWeld Cap	
	JM DynaBase	Min. 3-inch wide side-laps; Min. 6-inch end laps; Applied with hot or cold <i>approved</i> adhesives
	JM DynaBase PR	
	JM DynaLastic 180 S	
	JM DynaLastic 250 S	Min. 3-inch wide side-laps; Min. 6-inch end laps; Applied with hot or cold <i>approved</i> adhesives
	JM DynaFast 180 S	
	JM DynaGrip Base SD/SA	
	JM Vapor Barrier SA	Self-adhered to primed wood, gypsum or concrete decks; Min. 3-inch sides laps; Min. 6-inch end laps
Vapor Barrier Adhesives	JM Vapor Barrier SAR	Self-adhered to primed wood, gypsum or concrete decks; Min. 3-inch sides laps; Min. 6-inch end laps
	DynaSet 1k	Min. 4-inch laps sealed at a rate of 1.5-2.0gal/100ft ² ; Applied to substrate in 0.5-0.75-inch wide continuous ribbons
	DynaSet 2k	
Base Sheets	JM DynaBase	Min. 3-inch wide side-laps; Min. 6-inch end laps; Applied with hot or cold <i>approved</i> adhesives
	JM DynaBase HW	Min. 3-inch wide side-laps; Min. 6-inch end laps; Torch adhered
	JM DynaFast 180 S	Min. 3-inch wide side-laps; Min. 6-inch end laps; Side-laps shall be installed perpendicular to the direction of the steel deck ribs and parallel to the direction of the wood trusses for mechanically attached systems
	JM Ventsulation Felt	Min. 4-inch wide side-laps; Min. 6-inch end laps
TPO Single-Ply Membranes	JM TPO-45	Min. 2-inch wide side-laps with min. 1.5-inch wide heat weld for adhered systems; In-lap fastened systems shall have min. 6-inch wide side-laps with min. 1.5-inch wide heat weld; Side-laps shall be installed perpendicular to the direction of the steel deck ribs and parallel to the direction of the wood trusses for mechanically attached systems
	JM TPO-60	
	JM TPO-80	
	JM TPO FB 115	
	JM TPO FB 135	
	JM TPO FB 150	
	JM TPO FB 175	
	JM TPO SA-60 mil	
Cellular Lightweight Concrete	Celcore MF with HS Rheology Admixture	Slurry coat min. 1/8-inch thick; 1-inch thick EPS board (1 lbs/ft ³); Min. 2-inch thick top coat; Celcore PVA curing compound applied at rate of 300 ft ² /gal
	Mearlcrete	Slurry coat min. 1/8-inch thick; 1" thick EPS board (1 lbs/ft ³); Min. 2-inch thick top coat
	Elastizell	
	Concrecel	
	Cellular Lightweight Concrete	

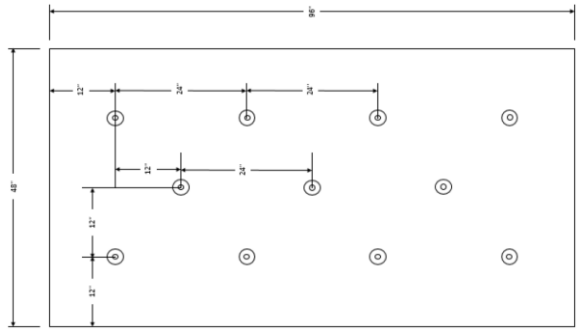
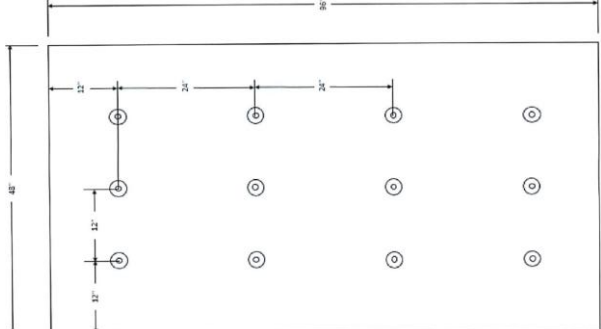
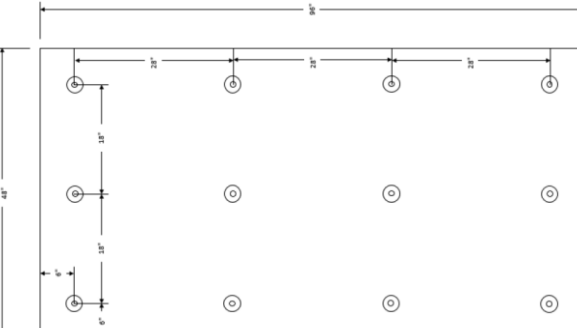
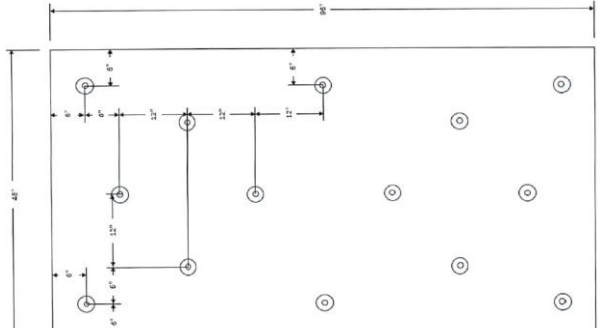
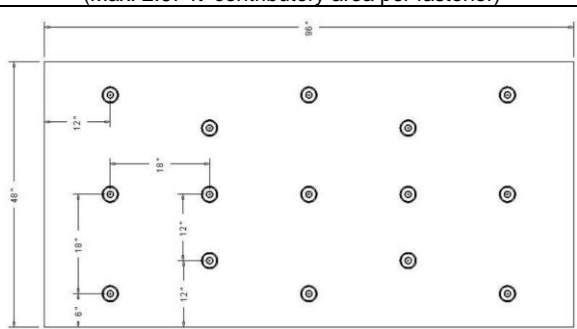
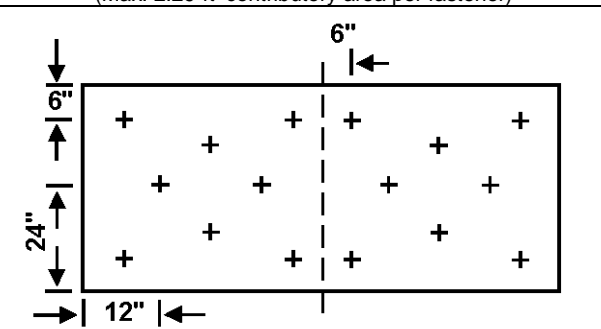
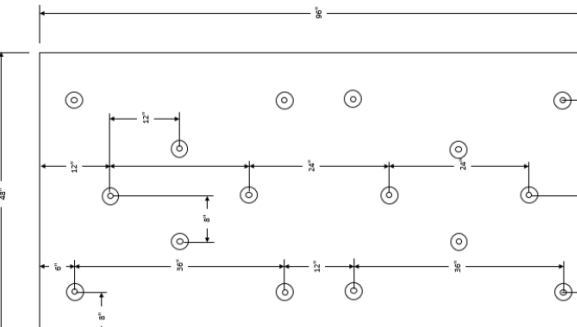
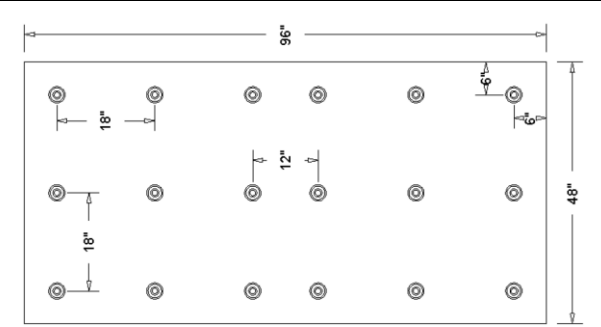


APPENDIX A - INSTALLATION

Insulation/Cover Board Fastening Patterns	
 <p>4 per 4-ft x 8-ft board (Max. 8.0-ft² contributory area per fastener)</p>	 <p>6 per 4-ft x 8-ft board Pattern #1 (Max. 5.33-ft² contributory area per fastener)</p>
 <p>6 per 4-ft x 8-ft board Pattern #2 (Max. 5.33-ft² contributory area per fastener)</p>	 <p>6 per 4-ft x 8-ft Type N (Max. 5.33-ft² contributory area per fastener)</p>
 <p>8 per 4-ft x 8-ft board Pattern #1 (Max. 4.0-ft² contributory area per fastener)</p>	 <p>8 per 4-ft x 8-ft board Pattern #2 (Max. 4.0-ft² contributory area per fastener)</p>
 <p>8 per 4-ft x 8-ft board Pattern #3 (Max. 4.0-ft² contributory area per fastener)</p>	 <p>8 per 4-ft x 8-ft board Type N (Max. 4.0-ft² contributory area per fastener)</p>

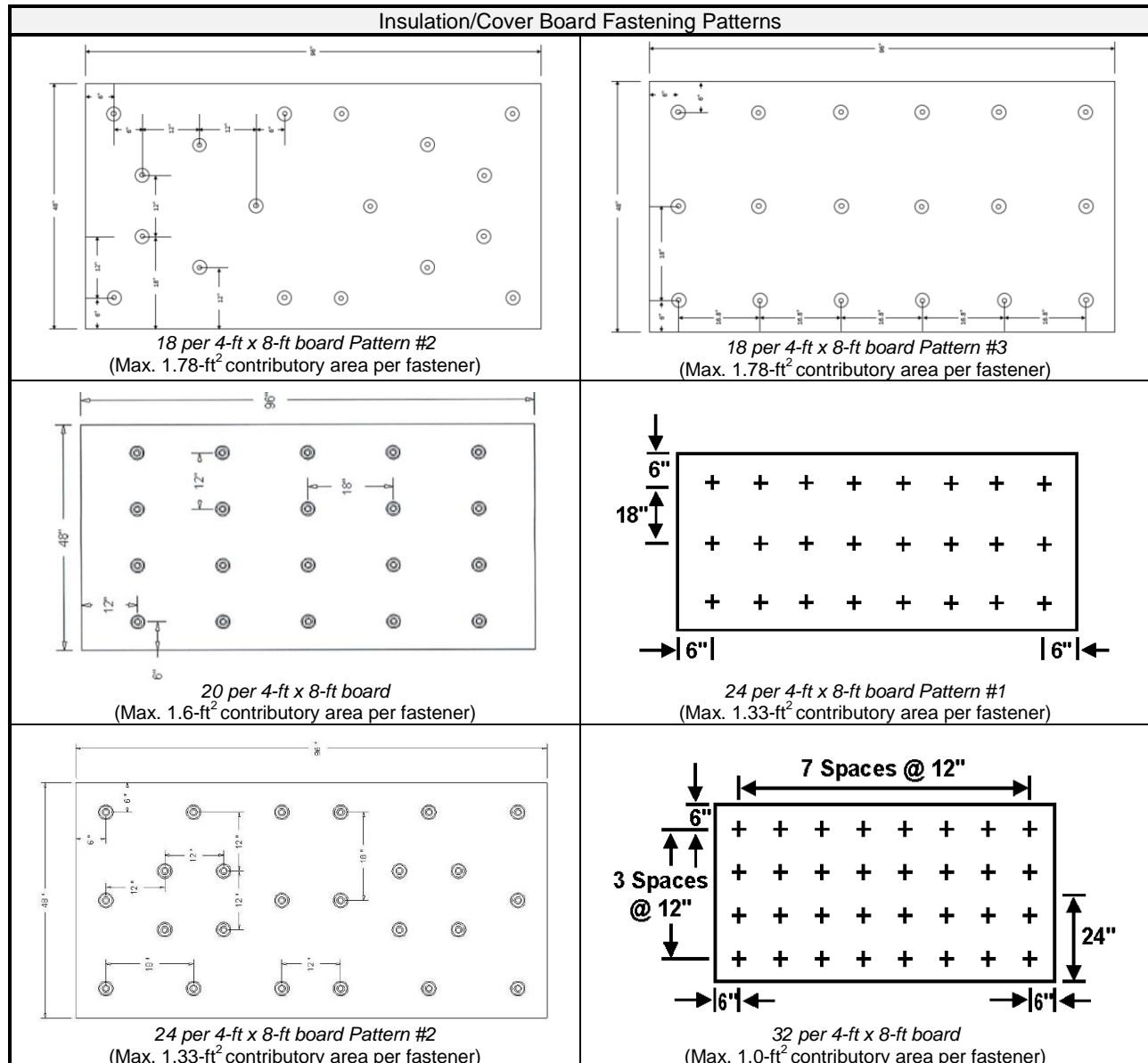


APPENDIX A - INSTALLATION

Insulation/Cover Board Fastening Patterns	
 <p>11 per 4-ft x 8-ft board (Max. 2.9-ft² contributory area per fastener)</p>	 <p>12 per 4-ft x 8-ft board Pattern #1 (Max. 2.67-ft² contributory area per fastener)</p>
 <p>12 per 4-ft x 8-ft board Pattern #2 (Max. 2.67-ft² contributory area per fastener)</p>	 <p>14 per 4-ft x 8-ft board (Max. 2.29-ft² contributory area per fastener)</p>
 <p>15 per 4-ft x 8-ft board (Max. 2.13-ft² contributory area per fastener)</p>	 <p>16 per 4-ft x 8-ft board (Max. 2.0-ft² contributory area per fastener)</p>
 <p>16 per 4-ft x 8-ft board Type N (Max. 2.0-ft² contributory area per fastener)</p>	 <p>18 per 4-ft x 8-ft board Pattern #1 (Max. 1.78-ft² contributory area per fastener)</p>



APPENDIX A - INSTALLATION

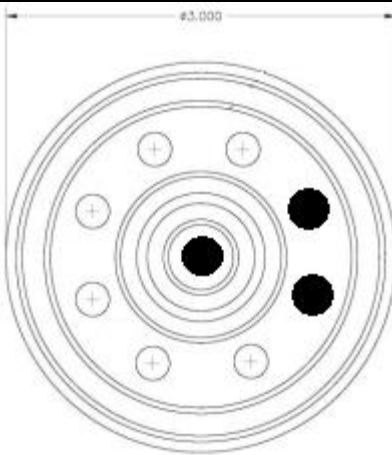
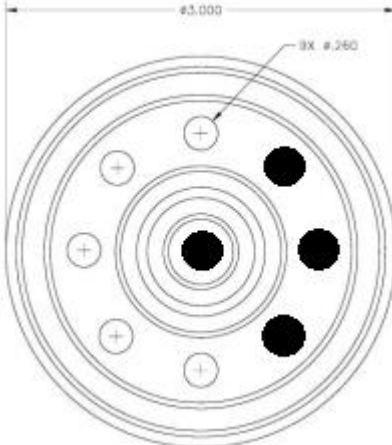




APPENDIX A - INSTALLATION

Alternate Fastener Patterns for Induction Weld Assemblies Only	
Description	Fastening Array Repeated Using the Geometric Grid Shown Below
1.5-ft x 2-ft staggered grid	
2-ft x 2-ft staggered grid	
2-ft x 3-ft staggered grid	

APPENDIX A - INSTALLATION

VERSА-FAST Metal plate Fastening Pattern	
Description	Fastening Pattern
3 Fasteners/ Plate	 <p>VERSА-FAST Fasteners located on the side of the plate that is in closest proximity to the weld seam</p>
4 Fasteners/ Plate	 <p>VERSА-FAST Fasteners located on the side of the plate that is in closest proximity to the weld seam</p>

APPENDIX B – NOMENCLATURE
NOMENCLATURE

The following naming conventions are utilized to specify products in the [APPROVED ASSEMBLIES](#) section of this report. Refer to the nomenclature below when deciphering the allowable products for use in the selected assembly. Installation requirements shall be as noted in the [APPROVED ASSEMBLIES](#) section of this report.

Name	Definition				
1168	JM 1168 Membrane Adhesive				
2-Part UIA	JM Two Part Urethane Insulation Adhesive, JM Two-Part UIA, JM Two Part Urethane Insulation Adhesive Canister, or JM Two-Part UIA Canister				
2-Part UIA-C(B)	JM Two Part Urethane Insulation Adhesive Canister or JM Two-Part UIA Canister applied in 1/2-inch wide beads				
2-Part UIA-C(S)	JM Two Part Urethane Insulation Adhesive Canister or JM Two-Part UIA Canister applied in spatter application at a rate of 3.5-3.9 lbs/100ft ²				
AP Fasteners & Plates	All Purpose Fastener, Trufast #14 HD Fastener or Structural Concrete Deck Fastener (concrete only) and UltraFast Metal Plate (Round) or UltraFast Metal Plate (Square) or UltraFast Plate Metal Flat				
AP Fasteners & Plates (Square)	All Purpose Fastener, Trufast #14 HD Fastener or Structural Concrete Deck Fastener (concrete only) and UltraFast Metal Plate (Square) or UltraFast Plate Metal Flat				
AP Fasteners & Trufast Plates	All Purpose Fastener, Trufast #14 HD Fastener or Structural Concrete Deck Fastener (concrete only) and Trufast 3" Metal Insulation Plate				
APB Fasteners & Plates	JM APB Plates and JM High Load Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>) or JM All Purpose Fasteners (<i>Concrete Deck</i>)				
As Tested	Information provided to the report user based on the as tested condition of the roof system				
ASBA	JM All Season Sprayable Bonding Adhesive				
Cover Board	One layer of any of the following products: -Georgia-Pacific DensDeck -Georgia-Pacific DensDeck Prime - Georgia-Pacific DensDeck StormX Prime -JM Invinsa Roof Board -JM Invinsa FR Roof Board -JM ProtectorR HD -JM ProtectorR HD FR -JM SECUROCK Glass-Mat Roof Board -JM SECUROCK Gypsum-Fiber Roof Board -JM Separator -JM Separator CGF -JM Separator FR -National Gypsum DEXcell FA Glass Mat Roof Board -National Gypsum DEXcell Glass Mat Roof Board -National Gypsum DEXcell Cement Roof Board				
Deck Detail	All decks shall be designed by others in accordance with FBC requirements. As Tested deck construction details are described as follows: <table border="1"> <tr> <td>Concrete Deck</td><td>Min. $f'_c = 2,500$ psi at 28 days</td></tr> <tr> <td>CWF Deck</td><td>Min. 2.5-inch thick Tectum I cementitious wood fiber panels</td></tr> </table>	Concrete Deck	Min. $f'_c = 2,500$ psi at 28 days	CWF Deck	Min. 2.5-inch thick Tectum I cementitious wood fiber panels
Concrete Deck	Min. $f'_c = 2,500$ psi at 28 days				
CWF Deck	Min. 2.5-inch thick Tectum I cementitious wood fiber panels				

APPENDIX B – NOMENCLATURE

Name	Definition
<i>Deck Detail (Cont'd)</i>	Min. 22 ga, Wide Rib Deck (Type WR) conforming to ANSI/SDI-RD1.0 & FBC; 0.5% Vented for <i>LWIC</i> applications only. The following nomenclature is used to further describe the <i>As Tested</i> condition.
	<i>F<#></i> <#> of #12-24 HWH self-drilling screws or equivalent fasteners at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration
	<i>G<#></i> Min. Grade <#> of <i>Steel Deck</i>
	<i>H<#></i> <#> of Hilti X-HSN 24 fastener or equivalent fasteners at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration
	<i>L<#></i> Max. span of <#> ft
	<i>P</i> Min. 5/8-inch diameter puddle welds at each flute used to secure the deck to the structural supports
	<i>S<#></i> 1/4 "-14 HWH x7/8" self-drilling screws or equivalent fastener secured <#>-inch o.c. along the panel side laps
	<i>SD<#></i> <#> of SFS Intec SD5-#12-HW5/16 Fasteners at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration
	<i>SDL<#></i> SDL-#14-HW5/16 secured <#>-inch o.c. along the panel side laps
	<i>HS<#></i> Hilti S0SLC 01M fastener or equivalent fastener secured <#>-inch o.c. along the panel side laps
	<i>W</i> 3/4-inch O.D. flat washer used with indicated fastener
	HVHZ: APA Span-Rated sheathing. The following nomenclature is used to further describe the <i>As Tested</i> condition:
	<i>T<#>P</i> Min. <#>-inch thickness of the plywood
	<i>T<#>O</i> Min. <#>-inch thickness of the OSB
	<i>L<#></i> Max. span of <#> inches
	<i>N<#></i> Min. 0.113-inch diameter x 2-3/8-inch ring shank nails spaced <#>-inch o.c. at all intermediate supports and at the perimeter of each board
	<i>16S<#></i> Min. 16 ga. staples, 1.5-inch x 1-inch crown spaced <#>-inch o.c. at all intermediate supports and at the perimeter of each board
<i>DF</i>	Dekfast DF-#12-PH3 <i>Steel Deck</i> , or <i>Wood Deck</i>), Dekfast DF-#14-PH# (<i>Concrete Deck</i> , <i>Steel Deck</i> , or <i>Wood Deck</i>), or Dekfast DF-#15-PH3 (<i>Steel Deck</i> , or <i>Wood Deck</i>) with Dekfast PLT-R-3
<i>DensDeck</i>	Min. 1/4-inch Georgia-Pacific DensDeck
<i>DensDeck Prime</i>	Min. 1/4-inch Georgia-Pacific DensDeck Prime; or Georgia-Pacific DensDeck StormX Prime
<i>DEXcell CB</i>	Min. 1/4-inch National Gypsum DEXcell Cement Roof Board
<i>DEXcell FA</i>	Min. 1/4-inch National Gypsum DEXcell FA Glass Mat Roof Board
<i>E3</i>	JM ENRGY 3, JM ENRGY 3 AGF, JM ENRGY 3 CGF or JM ENRGY 3 FR
<i>E3 C1</i>	JM ENRGY 3 C1 or JM ENRGY 3 C1 CGF
<i>EPS</i>	ASTM C 578 expanded polystyrene insulation board, min. Type IX in HVHZ
<i>Extra HL Fasteners & Plates</i>	JM Extra High Load Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>) or JM All Purpose Fasteners (<i>Concrete Deck</i>) and JM Extra High Load Plates
FASTENERS	JM UltraFast Fastener, Trufast #12 DP Fastener, Dekfast DF-#12-PH3, JM All Purpose Fastener, Trufast #14 HD Fastener, Dekfast DF-#14-PH3, JM High Load Fastener, Dekfast DF-#15-PH3, or Trufast #15 EHD Fastener

APPENDIX B – NOMENCLATURE

Name	Definition																																																
Fasteners & Plates	Choose one of the following fastener and plate combinations for the given conditions: <table><tr><th>Board or Base Sheet</th><th>Fastener</th><th>Plate</th><th>Roof Deck</th></tr><tr><td>Any</td><td>JM All Purpose Fastener, JM Structural Concrete Deck Fastener, Dekfast DF-#14-PH3, or Trufast #14 HD Fastener</td><td>JM UltraFast Metal Plate (Square), UltraFast Plate Metal Flat, UltraFast Metal Plate (Round), or UltraFast Plate Metal Recessed</td><td>Concrete</td></tr><tr><td>Any</td><td>JM UltraFast Fastener, Trufast #12 DP Fastener, Trufast #14 HD Fastener, JM High Load Fastener, Dekfast DP-#15-PH3, or Trufast #15 EHD Fastener</td><td>JM UltraFast Metal Plate (Square), UltraFast Plate Metal Flat, UltraFast Metal Plate (Round), or UltraFast Plate Metal Recessed</td><td>Steel</td></tr><tr><td>Any</td><td>JM UltraFast Fastener, Trufast #12 DP Fastener, Dekfast DF-#12-PH3, JM All Purpose Fastener, Dekfast DF-#14-PH3, JM High Load Fastener, Dekfast DF-#15-PH3, or Trufast #15 EHD Fastener</td><td>JM UltraFast Metal Plate (Square), UltraFast Plate Metal Flat, UltraFast Metal Plate (Round), or UltraFast Plate Metal Recessed</td><td>Plywood</td></tr><tr><td>Any</td><td>Dekfast DF-#14-PH3</td><td>Dekfast PLT-R-3</td><td>Concrete</td></tr><tr><td>Any</td><td>Dekfast DF-#12-PH3 or Dekfast DP-#15-PH3</td><td>Dekfast PLT-R-3</td><td>Steel</td></tr><tr><td>Any</td><td>Dekfast DF-#12-PH3, Dekfast DF-#14-PH#, or Dekfast DF-#15-PH3</td><td>Dekfast PLT-R-3</td><td>Plywood</td></tr><tr><td>Any</td><td>JM All Purpose Fastener, JM Structural Concrete Deck Fastener, or Trufast #14 HD Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Concrete</td></tr><tr><td>ENRGY 3, Separator CGF, DensDeck Prime, DEXcell FA, or SECUROCK</td><td>JM UltraFast Fastener or JM High Load Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Steel</td></tr><tr><td>ENRGY 3, Separator CGF, DensDeck Prime, DEXcell FA, or SECUROCK</td><td>JM UltraFast Fastener, JM All Purpose Fastener or JM High Load Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Plywood</td></tr><tr><td>Any</td><td>Trufast #12 DP Fastener, Trufast #14 HD Fastener, or Trufast #15 EHD Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Steel</td></tr><tr><td>Any</td><td>Trufast #12 DP Fastener or Trufast #15 EHD Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Plywood</td></tr></table>	Board or Base Sheet	Fastener	Plate	Roof Deck	Any	JM All Purpose Fastener, JM Structural Concrete Deck Fastener, Dekfast DF-#14-PH3, or Trufast #14 HD Fastener	JM UltraFast Metal Plate (Square), UltraFast Plate Metal Flat, UltraFast Metal Plate (Round), or UltraFast Plate Metal Recessed	Concrete	Any	JM UltraFast Fastener, Trufast #12 DP Fastener, Trufast #14 HD Fastener, JM High Load Fastener, Dekfast DP-#15-PH3, or Trufast #15 EHD Fastener	JM UltraFast Metal Plate (Square), UltraFast Plate Metal Flat, UltraFast Metal Plate (Round), or UltraFast Plate Metal Recessed	Steel	Any	JM UltraFast Fastener, Trufast #12 DP Fastener, Dekfast DF-#12-PH3, JM All Purpose Fastener, Dekfast DF-#14-PH3, JM High Load Fastener, Dekfast DF-#15-PH3, or Trufast #15 EHD Fastener	JM UltraFast Metal Plate (Square), UltraFast Plate Metal Flat, UltraFast Metal Plate (Round), or UltraFast Plate Metal Recessed	Plywood	Any	Dekfast DF-#14-PH3	Dekfast PLT-R-3	Concrete	Any	Dekfast DF-#12-PH3 or Dekfast DP-#15-PH3	Dekfast PLT-R-3	Steel	Any	Dekfast DF-#12-PH3, Dekfast DF-#14-PH#, or Dekfast DF-#15-PH3	Dekfast PLT-R-3	Plywood	Any	JM All Purpose Fastener, JM Structural Concrete Deck Fastener, or Trufast #14 HD Fastener	Trufast 3" Metal Insulation Plates	Concrete	ENRGY 3, Separator CGF, DensDeck Prime, DEXcell FA, or SECUROCK	JM UltraFast Fastener or JM High Load Fastener	Trufast 3" Metal Insulation Plates	Steel	ENRGY 3, Separator CGF, DensDeck Prime, DEXcell FA, or SECUROCK	JM UltraFast Fastener, JM All Purpose Fastener or JM High Load Fastener	Trufast 3" Metal Insulation Plates	Plywood	Any	Trufast #12 DP Fastener, Trufast #14 HD Fastener, or Trufast #15 EHD Fastener	Trufast 3" Metal Insulation Plates	Steel	Any	Trufast #12 DP Fastener or Trufast #15 EHD Fastener	Trufast 3" Metal Insulation Plates	Plywood
	Board or Base Sheet	Fastener	Plate	Roof Deck																																													
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	Any	Dekfast DF-#12-PH3 or Dekfast DP-#15-PH3	Dekfast PLT-R-3	Steel																																													
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Any	Trufast #12 DP Fastener or Trufast #15 EHD Fastener	Trufast 3" Metal Insulation Plates	Plywood																																														
HL Fasteners & Plates	Any one of the following fastener and plate combinations: 1) JM High Load Fasteners (Wood Deck or Steel Deck), Trufast #15 EHD Fasteners (Steel Deck) or JM All Purpose Fasteners (Concrete Deck) and JM High Load Plates; 2) Trufast #15 EHD Fasteners (Steel Deck) or Trufast #14 HD Fasteners (Concrete Deck) and 2.4" Scoop Seam Plate, 2.4" Barbed Metal Seam Plate, or 2.4" Barbed Metal Seam Plate (14-Barb); 3) JM High Load Fasteners (Wood Deck or Steel Deck) or Dekfast DF-#14-PH3 (Concrete Deck) and isofast PLT-R-2-3/8-6B-B plates;																																																

APPENDIX B – NOMENCLATURE

Name	Definition
<i>INSULATION</i>	One of more layers in any combination of the following products: -Approved EPS board -ENRGY 3 -ENRGY 3 AGF -ENRGY 3 CGF -ENRGY 3 FR -ENRGY 3 C1 -ENRGY 3 C1 CGF -Fesco Board -Fesco Foam -Invinsa Roof Board -Invinsa FR Roof Board -ProtectoR Foam -ProtectoR HD -ProtectoR HD FR -Retro-Fit Board -RetroPlus Roof Board -SECUROCK Glass-Mat Roof Board -SECUROCK Gypsum-Fiber Roof Board -SeparatoR -SeparatoR CGF -SeparatoR FR
<i>INVINSA</i>	JM Invinsa or JM Invinsa FR Roof Board
<i>ISOWELD-#15</i>	isoweld FI-P-6.8-TPO plates and DEKFAST DF-#15-PH3 Fasteners
<i>ISOWELD-#12</i>	isoweld FI-P-6.8-TPO plates and DEKFAST DF-#12-PH3 Fasteners
<i>IW</i>	Any one of the following fastener and plate combinations: 1) JM All Purpose Fasteners, JM High Load Fasteners, JM Structural Concrete Deck Fasteners, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3, Trufast #14 HD Fasteners, or Trufast #15 EHD Fasteners and JM TPO RhinoPlates; 2) Trufast #14 HD Fasteners, Trufast #15 EHD Fasteners or Trufast Fluted Concrete Nails and Trufast TPO IW Plates; 3) JM All Purpose Fasteners, JM High Load Fasteners, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 and <i>isoweld</i> FI-P-6.8-TPO plates;
<i>JM TPO</i>	One ply of any one of the following products: JM TPO-45, JM TPO-60, or JM TPO-80
<i>JM TPO FB</i>	One ply of any one of the following products: JM TPO FB 115 or JM TPO FB 135
<i>JM TPO FB w/DynaBase HW</i>	JM TPO FB 115 or JM TPO FB 135 adhered over a torch applied DynaBase HW base ply
<i>JM TPO HFB</i>	One ply of any one of the following products: JM TPO FB 150 or JM TPO FB 175
<i>JM TPO SA</i>	One ply of any one of the following products: JM TPO SA-60 mil
<i>LVOC MA</i>	JM LVOC Membrane Adhesive (TPO & EPDM)
<i>LWIC</i>	Poured-in-place Cellular Lightweight Concrete with encapsulated insulation board
<i>MBA</i>	JM Membrane Bonding Adhesive (TPO & EPDM)
<i>MCRF</i>	Minimum Characteristic Resistance Force as determined by TAS 105 for the named fastener in the selected assembly
<i>MDP</i>	Maximum Design Pressure

APPENDIX B – NOMENCLATURE

Name	Definition
<i>OMG Fasteners & Plates</i>	OMG XHD fasteners and 3 in. Ribbed Galvalume Plates (Flat)
<i>OSFA</i>	JM One-Step Foamable Adhesive
<i>PLT-R-3</i>	Dekfast PLT-R-3 plates
<i>Preliminarily Secured</i>	Fastened at minimum rate of 5 per 4 ft x 8 ft board or 4 per 4 ft x 4 ft board.
<i>ProtectoR</i>	JM ProtectoR HD or JM ProtectoR HD FR Roof Board
<i>Recover</i>	Where assemblies are used to recover an existing roof, the existing roof shall consist of only one layer of roofing, i.e. recovering a previously recovered roof is not permitted. Recover roofing shall be conducted in compliance with FBC Section 1511 outside of the HVHZ and FBC Section 1521 within the HVHZ. For mechanically fastened roof assemblies and induction welded assemblies, i.e. systems x-M-# and x-W-#, the insulation layer is optional, or any INSULATION board or slip sheet may be used as separation layer prior to installing the approved roof assembly.
<i>Retro-Fit</i>	JM Retro-Fit Board
<i>RetroPlus</i>	JM RetroPlus Roof Board
<i>RhinoPlates</i>	Any one of the following fastener and plate combinations: 4) JM High Load Fasteners (<i>Steel or Wood Deck</i>), Trufast #15 EHD Fasteners (<i>Steel Deck</i>), or JM All Purpose Fasteners (<i>Concrete Deck</i>) and JM TPO RhinoPlates; 5) Trufast #15 EHD Fasteners (<i>Steel Deck</i>), Trufast #14 HD Fasteners (<i>Concrete Deck</i>), or Trufast Fluted Concrete Nails (<i>Concrete Deck</i>) and Trufast TPO IW Plates; 6) JM High Load Fasteners (<i>Steel or Wood Deck</i>), JM All Purpose Fasteners (<i>Concrete Deck</i>), Dekfast DF-#14-PH3 (<i>Concrete Deck</i>) and isoweld FI-P-6.8-TPO plates;
<i>RSUA</i>	JM Roofing System Urethane Adhesive
<i>SECUROCK</i>	Min. 1/4-inch JM SECUROCK Gypsum-Fiber Roof Board
<i>StormX</i>	DensDeck StormX Prime
<i>TF</i>	Trufast #12 DP Fastener (<i>Steel Deck or Wood Deck</i>), Trufast #14 HD Fastener (<i>Concrete Deck, Steel Deck, or Wood Deck</i>), or Trufast #15 EHD Fasteners (<i>Concrete Deck, Steel Deck or Wood Deck</i>) with Trufast 3" Metal Insulation Plate
<i>TPO Bonding Adhesives</i>	Any one of the following products: -JM Membrane Bonding Adhesive (TPO & EPDM) -JM LVOC Membrane Adhesive (TPO & EPDM) -JM TPO Water Based Membrane Adhesive
<i>TPO WBMA</i>	JM TPO Water Based Membrane Adhesive
<i>Trufast Seam Plates</i>	Trufast 2.4" Scoop Seam Plates and Trufast #15 EHD Fasteners
<i>Trufast IW Plates</i>	Trufast TPO IW Plates and Trufast #15 EHD Fasteners (steel deck only), Trufast #14 HD Fasteners (concrete deck only), or Trufast Fluted Concrete Nails (concrete deck only)
<i>UF</i>	JM UltraFast Fasteners (<i>Steel Deck or Wood Deck</i>), JM All Purpose Fasteners (<i>Concrete Deck, Steel Deck, or Wood Deck</i>), or JM High Load Fasteners (<i>Wood Deck or Steel Deck</i>) with JM UltraFast Metal Plate (Square), UltraFast Plate Metal Flat, UltraFast Metal Plate (Round), or UltraFast Plate Metal Recessed
<i>UIA</i>	JM Urethane Insulation Adhesive
<i>UltraFast Fasteners & Trufast Plates</i>	JM UltraFast Fasteners (<i>Steel Deck and Wood Deck</i>), Trufast #12 DP Fasteners, JM All Purpose Fasteners (<i>Concrete Deck</i>), or Trufast #14 HD Fasteners and Trufast 3" Metal Insulation Plates
<i>UltraFast Plates</i>	UltraFast Metal Plate (Square), UltraFast Plate Metal Flat, UltraFast Metal Plates (Round), or UltraFast Plate Metal Recessed
<i>UltraFast Plates (Square)</i>	UltraFast Metal Plate (Square) or UltraFast Plate Metal Flat

APPENDIX B – NOMENCLATURE

Name	Definition																																																																																
Vapor Barrier	One of the following vapor barriers installed over the deck: -4mil or 6mil Polyethylene, loose laid -JM Vapor Barrier SA or JM Vapor Barrier SAR, self-adhered to minimum 0.5-inch thick SECUROCK Gypsum-Fiber Roof Board, DEXcell FA Glass Mat Roof Board or DEXcell Cement Roof Board. The thermal barrier may be primed with JM SA Primer Low VOC, or SA Primer -DynaGrip Base SD/SA, self-adhered to minimum 0.5-inch thick SECUROCK Gypsum-Fiber Roof Board or DEXcell FA Glass Mat Roof Board -DynaBase HW, torch applied to minimum 0.5-inch thick DEXcell FA Glass Mat Roof Board																																																																																
Vapor Barriers for Adhered Assemblies over Concrete Deck	One of the following options may be utilized as allowed by the <i>Approved Assembly</i> . The <i>MDP</i> shall be limited to the lesser of rating of the <i>Approved Assembly</i> and the <i>MDP</i> for the chosen vapor barrier.																																																																																
	<table><tr><th>Primer</th><th>Vapor Barrier</th><th>VB Application</th><th>Insulation Adhesive</th><th>MDP (psf)</th></tr><tr><td>None</td><td>DynaBase HW</td><td>Torch adhered</td><td>OSFA 12-inch o.c.</td><td>-172.5</td></tr><tr><td>None</td><td>DynaBase HW</td><td>Torch adhered</td><td>2-Part UIA 12-inch o.c.</td><td>-135</td></tr><tr><td>None</td><td>DynaBase HW</td><td>Torch adhered</td><td>RSUA 12-inch o.c.</td><td>-195</td></tr><tr><td>ASTM D 41</td><td>DynaGrip Base SD/SA</td><td>Self-adhered</td><td>OSFA 12-inch o.c.</td><td>-90</td></tr><tr><td>ASTM D 41</td><td>DynaGrip Base SD/SA</td><td>Self-adhered</td><td>2-Part UIA 12-inch o.c.</td><td>-97.5</td></tr><tr><td>ASTM D 41</td><td>DynaGrip Base SD/SA</td><td>Self-adhered</td><td>RSUA 12-inch o.c.</td><td>-82.5</td></tr><tr><td>None</td><td>DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 1k</td><td>DynaSet 1k 12-inch o.c.</td><td>OSFA, 2-Part UIA, or RSUA 12-inch o.c.</td><td>-232.5</td></tr><tr><td>None</td><td>DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 1k</td><td>DynaSet 1k 12-inch o.c.</td><td>ASTM D 312, Type IV Asphalt</td><td>-337.5</td></tr><tr><td>None</td><td>DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 2k</td><td>DynaSet 2k 12-inch o.c.</td><td>OSFA, 2-Part UIA, or RSUA 12-inch o.c.</td><td>-97.5</td></tr><tr><td>None</td><td>DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 2k</td><td>DynaSet 2k 12-inch o.c.</td><td>ASTM D 312, Type IV Asphalt</td><td>-75</td></tr><tr><td>ASTM D 41</td><td>DynaWeld Base</td><td>Torch adhered</td><td>OSFA 12-inch o.c.</td><td>-150</td></tr><tr><td>ASTM D 41</td><td>DynaWeld Base</td><td>Torch adhered</td><td>2-Part UIA 12-inch o.c.</td><td>-120</td></tr><tr><td>ASTM D 41</td><td>DynaWeld Base</td><td>Torch adhered</td><td>RSUA 12-inch o.c.</td><td>-285</td></tr><tr><td>JM SA Primer Low VOC</td><td>JM Vapor Barrier SA or SAR</td><td>Self-adhered</td><td>OSFA or RSUA 12-inch o.c.</td><td>-135</td></tr><tr><td>JM SA Primer Low VOC</td><td>JM Vapor Barrier SA or SAR</td><td>Self-adhered</td><td>2-Part UIA 12-inch o.c.</td><td>-82.5</td></tr></table>	Primer	Vapor Barrier	VB Application	Insulation Adhesive	MDP (psf)	None	DynaBase HW	Torch adhered	OSFA 12-inch o.c.	-172.5	None	DynaBase HW	Torch adhered	2-Part UIA 12-inch o.c.	-135	None	DynaBase HW	Torch adhered	RSUA 12-inch o.c.	-195	ASTM D 41	DynaGrip Base SD/SA	Self-adhered	OSFA 12-inch o.c.	-90	ASTM D 41	DynaGrip Base SD/SA	Self-adhered	2-Part UIA 12-inch o.c.	-97.5	ASTM D 41	DynaGrip Base SD/SA	Self-adhered	RSUA 12-inch o.c.	-82.5	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 1k	DynaSet 1k 12-inch o.c.	OSFA, 2-Part UIA, or RSUA 12-inch o.c.	-232.5	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 1k	DynaSet 1k 12-inch o.c.	ASTM D 312, Type IV Asphalt	-337.5	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 2k	DynaSet 2k 12-inch o.c.	OSFA, 2-Part UIA, or RSUA 12-inch o.c.	-97.5	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 2k	DynaSet 2k 12-inch o.c.	ASTM D 312, Type IV Asphalt	-75	ASTM D 41	DynaWeld Base	Torch adhered	OSFA 12-inch o.c.	-150	ASTM D 41	DynaWeld Base	Torch adhered	2-Part UIA 12-inch o.c.	-120	ASTM D 41	DynaWeld Base	Torch adhered	RSUA 12-inch o.c.	-285	JM SA Primer Low VOC	JM Vapor Barrier SA or SAR	Self-adhered	OSFA or RSUA 12-inch o.c.	-135	JM SA Primer Low VOC	JM Vapor Barrier SA or SAR	Self-adhered	2-Part UIA 12-inch o.c.	-82.5
	Primer	Vapor Barrier	VB Application	Insulation Adhesive	MDP (psf)																																																																												
	None	DynaBase HW	Torch adhered	OSFA 12-inch o.c.	-172.5																																																																												
	None	DynaBase HW	Torch adhered	2-Part UIA 12-inch o.c.	-135																																																																												
	None	DynaBase HW	Torch adhered	RSUA 12-inch o.c.	-195																																																																												
	ASTM D 41	DynaGrip Base SD/SA	Self-adhered	OSFA 12-inch o.c.	-90																																																																												
	ASTM D 41	DynaGrip Base SD/SA	Self-adhered	2-Part UIA 12-inch o.c.	-97.5																																																																												
	ASTM D 41	DynaGrip Base SD/SA	Self-adhered	RSUA 12-inch o.c.	-82.5																																																																												
	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 1k	DynaSet 1k 12-inch o.c.	OSFA, 2-Part UIA, or RSUA 12-inch o.c.	-232.5																																																																												
	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 1k	DynaSet 1k 12-inch o.c.	ASTM D 312, Type IV Asphalt	-337.5																																																																												
	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 2k	DynaSet 2k 12-inch o.c.	OSFA, 2-Part UIA, or RSUA 12-inch o.c.	-97.5																																																																												
	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 2k	DynaSet 2k 12-inch o.c.	ASTM D 312, Type IV Asphalt	-75																																																																												
	ASTM D 41	DynaWeld Base	Torch adhered	OSFA 12-inch o.c.	-150																																																																												
	ASTM D 41	DynaWeld Base	Torch adhered	2-Part UIA 12-inch o.c.	-120																																																																												
	ASTM D 41	DynaWeld Base	Torch adhered	RSUA 12-inch o.c.	-285																																																																												
JM SA Primer Low VOC	JM Vapor Barrier SA or SAR	Self-adhered	OSFA or RSUA 12-inch o.c.	-135																																																																													
JM SA Primer Low VOC	JM Vapor Barrier SA or SAR	Self-adhered	2-Part UIA 12-inch o.c.	-82.5																																																																													
Vapor Barriers for Adhered Assemblies over CWF Deck	One of the following options may be utilized as allowed by the <i>Approved Assembly</i> . The <i>MDP</i> shall be limited to the lesser of rating of the <i>Approved Assembly</i> and the <i>MDP</i> for the chosen vapor barrier.																																																																																
	<table><tr><th>Thermal Barrier</th><th>TB Adhesive</th><th>Primer</th><th>Vapor Barrier</th><th>VB Application</th><th>Insulation Adhesive</th><th>MDP (psf)</th></tr><tr><td>SECUROCK</td><td>RSUA 12-inch o.c.</td><td>ASTM D 41</td><td>DynaWeld Cap</td><td>Torch adhered</td><td>RSUA 12-inch o.c.</td><td>-250</td></tr></table>	Thermal Barrier	TB Adhesive	Primer	Vapor Barrier	VB Application	Insulation Adhesive	MDP (psf)	SECUROCK	RSUA 12-inch o.c.	ASTM D 41	DynaWeld Cap	Torch adhered	RSUA 12-inch o.c.	-250																																																																		
Thermal Barrier	TB Adhesive	Primer	Vapor Barrier	VB Application	Insulation Adhesive	MDP (psf)																																																																											
SECUROCK	RSUA 12-inch o.c.	ASTM D 41	DynaWeld Cap	Torch adhered	RSUA 12-inch o.c.	-250																																																																											
VERSA-FAST	Trufast VERSA-FAST Plates and Fasteners																																																																																

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES
APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

The following notes shall be observed when using the assembly tables below.

1. Allowable pressures were calculated using a 2:1 margin of safety per FBC Section 1504.9.
2. Refer to [LIMITATIONS](#) and [NOMENCLATURE](#) sections of this evaluation when using the table(s) below.
3. Refer to [INSTALLATION](#) section of this report for installation detail when the information is not explicitly stated for the selected assembly.
4. The on-center (o.c.) spacing given is the maximum allowable attachment spacing for the rated system.
5. JM Vapor Barrier SA or JM Vapor Barrier SAR may be installed direct to deck prior to installing the roof assembly components for the following assembly types: C-M-#, C-W-#, LC-M-#, LC-W-#, LS-M-#, LS-W-#, S-M-#, S-W-#, W-M-#, and W-W-#
6. As Tested information for roof deck construction is provided for information only. The addition of the As Tested deck information does not obviate the requirement for rational design of the roof deck and roof deck attachment in accordance with FBC requirements.

Assembly System Numbers and Definitions	
C-A-#	Adhered Assemblies over <i>Concrete Deck</i> (New or Existing)
C-AM-#	Assemblies with Adhered Membranes over Insulated <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
C-M-#	Mechanically Fastened Assemblies over <i>Concrete Deck</i>
C-W-#	Induction Welded Assemblies over <i>Concrete Deck</i>
CW-A-#	Adhered Assemblies over Cementitious Wood Fiber Decks (New or Existing)
CW-AM-#	Assemblies with Adhered Membranes over Cementitious Wood Fiber Decks (New or Existing)
G-A-#	Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)
G-AM-#	Assemblies with Adhered Membranes over Insulated Gypsum Deck (New or Existing)
LC-A-#	Adhered Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New or Existing)
LC-AM-#	Lightweight Concrete Assemblies with Adhered Membranes over <i>Concrete Deck</i> (New or Existing)
LC-M-#	Mechanically Fastened Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
LC-W-#	Induction Welded Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
LS-A-#	Adhered Lightweight Concrete Assemblies over <i>Steel Deck</i> (New or Existing)
LS-AM-#	Lightweight Concrete Assemblies with Adhered Membranes over <i>Steel Deck</i> (New or Existing)
LS-M-#	Mechanically Fastened Lightweight Concrete Assemblies over <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
LS-W-#	Induction Welded Lightweight Concrete Assemblies over <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
R-A-#	Adhered <i>Recover</i> Assemblies
R-M-#	Mechanically Fastened <i>Recover</i> Assemblies
R-W-#	Induction Welded <i>Recover</i> Assemblies
S-A-#	Adhered Assemblies over <i>Steel Deck</i> (New or Existing)
S-AM-#	Assemblies with Adhered Membranes over Insulated <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
S-M-#	Mechanically Fastened Assemblies over <i>Steel Deck</i> (New, Existing or <i>Recover</i>)
S-W-#	Induction Welded Assemblies over <i>Steel Deck</i>
W-M-#	Mechanically Fastened Assemblies over <i>Wood Deck</i> (New or Existing)
W-W-#	Induction Welded Assemblies over <i>Wood Deck</i> (New or Existing)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-1	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch ENRGY 3 in RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	<i>DensDeck Prime</i> or StormX in RSUA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-45 (Lim. 9)
C-A-2	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch E3 in RSUA or 2-Part UIA applied 12-inch o.c.	OPTIONAL SECUROCK or JM Invinsa in RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-67.5 (Lim. 9)
C-A-3	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch E3 in RSUA or 2-Part UIA applied 12-inch o.c.	OPTIONAL SECUROCK, JM Invinsa or ProtectoR HD in RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-67.5 (Lim. 9)
C-A-4	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch ENRGY 3 in OSFA or 2-Part UIA applied 12-inch o.c.	OPTIONAL JM Invinsa or ProtectoR HD in 2-Part UIA applied 12-inch o.c.	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA, ASBA	-105 (Lim. 9)
C-A-5	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch ENRGY 3 in OSFA or 2-Part UIA applied 12-inch o.c.	OPTIONAL JM Invinsa or ProtectoR HD in 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-105 (Lim. 9)
C-A-6	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	INVINSA in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-105 (Lim. 9)
C-A-7	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch E3 or ProtectoR Foam in OSFA, RSUA or 2-Part UI applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-105 (Lim. 9)
C-A-8	-	RetroPlus in ASTM D 312, Type IV asphalt	-	JM TPO	MBA	-105 (Lim. 9)
C-A-9	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch E3 or ProtectoR Foam in OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	-	JM TPO FB	RSUA applied 4-inch o.c.; or 2-Part UIA-C(S)	-112.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-10	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch ENRGY 3 in RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	DensDeck Prime or StormX in RSUA applied 12-inch o.c.	JM TPO FB	RSUA applied 4-inch o.c.	-135 (Lim. 9)
C-A-11	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch ENRGY 3 CGF, ENRGY 3 FR or ProtectoR Foam in 2-Part UIA applied 12-inch o.c.	-	JM TPO	TPO WBMA, ASBA, or MBA	-142.5 (Lim. 9)
C-A-12	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	Min. 1-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	JM TPO	ASBA or MBA	-157.5 (Lim. 9)
C-A-13	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch ENRGY 3 or ProtectoR Foam applied in 2-Part UIA at 12-inch o.c.	-	JM TPO	TPO WBMA or ASBA	-165 (Lim. 9)
C-A-14	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	DensDeck Prime in OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO FB w/DynaBase HW	RSUA applied 12-inch o.c.	-165 (Lim. 9)
C-A-15	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch E3 or ProtectoR Foam in 2-Part UIA applied 12-inch o.c.	-	JM TPO	LVOC MA	-172.5 (Lim. 9)
C-A-16	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	OPTIONAL Min. 1.5-inch ENRGY 3, ENRGY 3 CGF or ENRGY 3 FR in 2-Part UIA applied 12-inch o.c.	SECUROCK in 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA, ASBA, 1168, or MBA	-180 (Lim. 9)
C-A-17	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	OPTIONAL Min. 1.5-inch ENRGY 3, ENRGY 3 CGF or ENRGY 3 FR in 2-Part UIA applied 12-inch o.c.	DEXcell CB or DEXcell FA in 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA or ASBA	-180 (Lim. 9)
C-A-18	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1.5-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	DEXcell CB in 2-Part UIA or RSUA applied 12-inch o.c.	JM TPO FB w/DynaBase HW	RSUA applied 12-inch o.c.	-180 (Lim. 9)
C-A-19	OPTIONAL <i>Vapor Barriers for Adhered Assemblies over Concrete Deck</i>	Min. 1-inch ENRGY 3, in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	ProtectoR in OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA, ASBA, or MBA	-187.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-20	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	Min. 1.5-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR, or ProtectoR Foam in 2-Part UIA applied 12-inch o.c.	-	JM TPO FB	TPO WBMA	-187.5 (Lim. 9)
C-A-21	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	Min. 1.5-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR, or ProtectoR Foam in 2-Part UIA applied 12-inch o.c.	-	JM TPO	TPO WBMA (Two-sided application only) or ASBA	-195 (Lim. 9)
C-A-22	DynaWeld Base over deck primed with ASTM D 41 primer	Min. 0.5-inch E3 C1 or E3 (less ENRGY 3 FR) in 2-Part UIA, RSUA, or OSFA applied 12-inch o.c.	DensDeck Prime in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-195 (Lim. 9)
C-A-23	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	Min. 1.5-inch ENRGY 3, in OSFA or RSUA applied 12-inch o.c.	ProtectoR in OSFA or RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: LVOC MA or MBA JM TPO FB: 2-Part UIA-C(S)	-210 (Lim. 9)
C-A-24	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	Min. 1.5-inch ENRGY 3, in OSFA or RSUA applied 12-inch o.c.	ProtectoR in OSFA or RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-210 (Lim. 9)
C-A-25	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	Min. 1.5-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	DEXcell FA in OSFA or RSUA; applied 12-inch o.c.	JM TPO	ASBA	-217.5 (Lim. 9)
C-A-26	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	Min. 1.5-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	DEXcell FA in OSFA or RSUA; applied 12-inch o.c.	JM TPO FB w/DynaBase HW	RSUA applied 12-inch o.c.	-217.5 (Lim. 9)
C-A-27	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	Min. 1.5-inch ENRGY 3 in RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	DensDeck Prime or StormX in RSUA applied 12-inch o.c.	JM TPO FB	RSUA applied 4-inch o.c.	-217.5 (Lim. 9)
C-A-28	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	Min. 1.5-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	ProtectoR HD in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	JM TPO	ASBA or MBA	-225 (Lim. 9)
C-A-29	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	Min. 1-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	DensDeck Prime in OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA, ASBA, or 1168	-232.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-30	DynaBase HW	SECUROCK in RSUA applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-247.5 (Lim. 9)
C-A-31	DynaBase HW torch adhered over deck primed with ASTM D 41 primer	Min. 1.5-inch ENRGY 3 CGF in RSUA applied 12-inch o.c.	SECUROCK in RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-247.5 (Lim. 9)
C-A-32	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	SECUROCK in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-247.5 (Lim. 9)
C-A-33	DynaWeld Cap over deck primed with ASTM D 41 primer	Min. 0.5-inch E3 C1 or E3 (less ENRGY 3 FR) in 2-Part UIA, RSUA, or OSFA applied 12-inch o.c.	DensDeck Prime in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-247.5 (Lim. 9)
C-A-34	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	INVINSA in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO	TPO WBMA (Two-sided application only) or ASBA	-255 (Lim. 9)
C-A-35	OPTIONAL Vapor Barriers for Adhered Assemblies over Concrete Deck	INVINSA in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO FB	TPO WBMA	-277.5 (Lim. 9)
C-A-36	-	Min. 1.5-inch ENRGY 3 in 2-Part UIA-C(B) applied 12-inch o.c.	-	JM TPO FB	2-Part UIA-C(S)	-277.5 (Lim. 9)
C-A-37	DynaBase HW	SECUROCK in RSUA applied 12-inch o.c.	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA (Two-sided application only), LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-292.5 (Lim. 9)
C-A-38	DynaBase HW torch adhered over deck primed with ASTM D 41 primer	Min. 1.5-inch ENRGY 3 CGF in RSUA applied 12-inch o.c.	SECUROCK in RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA (Two-sided application only), LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-292.5 (Lim. 9)
C-A-39	-	Min. 1.5-inch E3 or ProtectoR Foam in 2-Part UIA applied 12-inch o.c.	-	JM TPO	MBA	-322.5 (Lim. 9)
C-A-40	-	DEXcell CB in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO FB	TPO WBMA	-322.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-41	OPTIONAL DynaGrip SD/SA over deck primed with ASTM D 41 primer	Min. 1-inch E3 C1 or E3 (less ENRGY 3 FR) in 2-Part UIA, RSUA, or OSFA applied 12-inch o.c.	DensDeck Prime in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-337.5 (Lim. 9)
C-A-42	-	SECUROCK in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-345 (Lim. 9)
C-A-43	-	SECUROCK in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO	LVOC MA	-360 (Lim. 9)
C-A-44	-	DEXcell CB or DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO	LVOC MA, TPO WBMA (Two-sided application only), MBA, or 1168 (DEXcell FA only)	-390 (Lim. 9)
C-A-45	-	DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-390 (Lim. 9)
C-A-46	-	DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO	ASBA	-390 (Lim. 9)
C-A-47	-	DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-390 (Lim. 9)
C-A-48	-	DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO HFB	ASTM D 312, Type IV Asphalt	-390 (Lim. 9)
C-A-49	-	-	-	JM TPO FB	2-Part UIA-C(S)	-457.5 (Lim. 9)
C-A-50	-	SECUROCK in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO	TPO WBMA	-465 (Lim. 9)
C-A-51	-	INVinsa in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO	MBA applied 0.83 gal/100ft ²	-465 (Lim. 9)
C-A-52	-	SECUROCK in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO FB	2-Part UIA-C(S)	-465 (Lim. 9)
C-A-53	-	SECUROCK in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO	MBA applied 0.83 gal/100ft ²	-495 (Lim. 9)
C-A-54	-	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-502.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-1	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.375-inch SECUROCK	Fasteners & Plates secured 1 fastener per 2.67ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-45 (Lim. 7; Non- HVHZ)
C-AM-2	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates secured 1 fastener per 4.0ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-45 (Lim. 7; Non- HVHZ)
C-AM-3	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 or ProtectoR Foam	AP Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² , TPO WBMA, ASBA or LVOC MA	-45 (Lim. 7; Non- HVHZ)
C-AM-4	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 2.0ft ²	RetroPlus	RSUA or 2-Part UIA applied 12-inch o.c	JM TPO	MBA	-45 (Lim. 7; Non- HVHZ)
C-AM-5	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 2.67ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 12-inch o.c	JM TPO SA	Self-adhered	-45 (Lim. 7)
C-AM-6	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 2.67ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 12-inch o.c	JM TPO or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S) or TPO WBMA	-45 (Lim. 7)
C-AM-7	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	Fasteners & Plates secured 1 fastener per 4ft ²	JM TPO SA	Self-adhered	-45 (Lim. 9)
C-AM-8	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	Fasteners & Plates secured 1 fastener per 4ft ²	JM TPO (Min. 60 mil) or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S) or TPO WBMA	-45 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-9	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-45 (Lim. 7)
C-AM-10	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7)
C-AM-11	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	AP Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO FB	TPO WBMA or RSUA applied 12-inch o.c.	-45 (Lim. 7)
C-AM-12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 8 per 4-ft x 8-ft board Pattern 2	JM TPO FB w/DynaBase HW	RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
C-AM-13	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-14	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
C-AM-15	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-16	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-52.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-17	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	JM Invinsa	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-52.5 (Lim. 7)
C-AM-18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	JM Invinsa or Protector HD	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
C-AM-19	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.67ft ²	JM TPO	MBA applied 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA or ASBA	-52.5 (Lim. 7)
C-AM-20	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.67ft ²	JM TPO FB	2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-21	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.67ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
C-AM-22	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO	MBA applied 0.83 gal/100ft ² to both membrane and substrate or TPO WBMA	-52.5 (Lim. 7)
C-AM-23	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	Fasteners & Plates secured 1 fastener per 1.33ft ²	Base Ply: DynaBase HW Membrane: JM TPO HFB	Base Ply: Torch Adhered Membrane: ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-25	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-26	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	Base Ply: DynaBase HW Membrane: JM TPO HFB	Base Ply: Torch Adhered Membrane: ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-27	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3 or ProtectoR Foam	AP Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-28	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3 or ProtectoR Foam	AP Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO FB	2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-29	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3 or ProtectoR Foam	AP Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO	LVOC MA or MBA applied at 0.55 gal/100ft ²	-52.5 (Lim. 7)
C-AM-30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
C-AM-31	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² ; LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-32	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-34	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
C-AM-35	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 0.5-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft, LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-60 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-36	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 0.5-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-60 (Lim. 7)
C-AM-37	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-38	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	Fasteners & Plates secured 1 fastener per 1.00ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
C-AM-39	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3 or ProtectoR Foam	AP Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO	LVOC MA	-60 (Lim. 7)
C-AM-40	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
C-AM-41	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-60 (Lim. 7)
C-AM-42	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
C-AM-43	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: MBA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-44	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 1.5-inch E3 or E3 C1	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-45	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO FB	2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-46	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Fasteners & Plates secured 1 fastener per 1ft ²	SECUROCK, or JM InvinSA	RSUA or 2-Part UIA applied 6-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-67.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-47	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min 1.5- inch ENRGY 3	Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 0.5-inch SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	TPO WBMA or ASBA	-67.5 (Lim. 7)
C-AM-48	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min 1.5- inch ENRGY 3	Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 0.5-inch SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
C-AM-49	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA or ASBA	-67.5 (Lim. 7)
C-AM-50	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
C-AM-51	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENERGY 3 or ProtectoR Foam	Fasteners & Plates s secured 1 fastener per 2ft ²	JM TPO	MBA or LVOC MA applied at 1.1 gal/100ft ² , TPO WBMA (two-sided application only) or ASBA	-67.5 (Lim. 7)
C-AM-52	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENERGY 3	Fasteners & Plates secured 1 fastener per 2ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-67.5 (Lim. 7)
C-AM-53	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO	TPO WBMA, ASBA, or MBA	-67.5 (Lim. 7)
C-AM-54	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 0.5-inch ProtectoR HD, DEXcell FA, or SECUROCK	OSFA, RSUA, 2-Part UIA-C(B) or 2-Part UIA applied 6-inch o.c.	JM TPO FB	RSUA 6-inch o.c.	-67.5 (Lim. 7)
C-AM-55	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-67.5 (Lim. 7)
C-AM-56	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-67.5 (Lim. 7)
C-AM-57	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-67.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-58	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	Fasteners & Plates at a rate of 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-75 (Lim. 7)
C-AM-59	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	Fasteners & Plates at a rate of 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied 0.83 gal/100ft ² , LVOC MA or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-75 (Lim. 7)
C-AM-60	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF), E3 C1, or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO	MBA, LVOC MA applied at 1.1 gal/100ft ² , TPO WBMA (two-sided application only) or ASBA	-75 (Lim. 7)
C-AM-61	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
C-AM-62	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinsa Foam	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-75 (Lim. 7)
C-AM-63	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinsa Foam	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO SA	Self-adhered	-75 (Lim. 7)
C-AM-64	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-75 (Lim. 7)
C-AM-65	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
C-AM-66	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	TPO WBMA, ASBA, or MBA	-82.5 (Lim. 7)
C-AM-67	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
C-AM-68	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-69	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	<i>Fasteners & Plates</i> secured 1 fastener per 1.33ft ²	JM TPO	MBA, LVOC MA, or ASBA	-82.5 (Lim. 7)
C-AM-70	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	<i>Fasteners & Plates</i> secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
C-AM-71	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	<i>Fasteners & Plates</i> secured 1 fastener per 1.33ft ²	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
C-AM-72	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	<i>Fasteners & Plates</i> secured 1 fastener per 1.6ft ²	ProtectoR HD	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO	TPO WBMA, MBA, LVOC MA, or ASBA	-82.5 (Lim. 7)
C-AM-73	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	<i>AP Fasteners & Plate</i> secured 1 fastener per 1.6ft ²	ProtectoR HD	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
C-AM-74	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	<i>AP Fasteners & Plate</i> secured 1 fastener per 1.6ft ²	ProtectoR HD	OSFA, RSUA, 2-Part UIA-C(B) or 2-Part UIA applied 6-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
C-AM-75	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	<i>AP Fasteners & Plate</i> secured 1 fastener per 1.6ft ²	Min. 0.5-inch <i>DensDeck Prime</i> , <i>DEXcell FA</i> , or <i>SECUROCK</i>	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO	ASBA, TPO WBMA, MBA or LVOC MA	-82.5 (Lim. 7)
C-AM-76	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	<i>AP Fasteners & Plate</i> secured 1 fastener per 1.6ft ²	Min. 0.5-inch <i>DensDeck Prime</i> , <i>DEXcell FA</i> , or <i>SECUROCK</i>	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
C-AM-77	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	<i>AP Fasteners & Plate</i> secured 1 fastener per 1.6ft ²	Min. 1.5-inch E3 or E3 C1	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO	ASBA, TPO WBMA, MBA or LVOC MA	-82.5 (Lim. 7)
C-AM-78	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	<i>AP Fasteners & Plate</i> secured 1 fastener per 1.6ft ²	Min. 1.5-inch E3 or E3 C1	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
C-AM-79	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.625-inch <i>DensDeck Prime</i>	<i>Fasteners & Plates</i> secured 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or ASBA	-90 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-80	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.625-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-90 (Lim. 7)
C-AM-81	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.625-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-90 (Lim. 7)
C-AM-82	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	RSUA or 2-Part UIA applied 6-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: 2-Part UIA-C(S)	-90 (Lim. 7)
C-AM-83	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or TPO WBMA	-105 (Lim. 7)
C-AM-84	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-105 (Lim. 7)
C-AM-85	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-105 (Lim. 7)
C-AM-86	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, ASBA, or 1168	-112.5 (Lim. 7)
C-AM-87	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-112.5 (Lim. 7)
C-AM-88	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF), E3 C1, or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.1 gal/100ft ² or TPO WBMA (Two-sided application only)	-120 (Lim. 7)
C-AM-89	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-120 (Lim. 7)
C-AM-90	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, or LVOC MA	-120 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-91	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	Fasteners & Plates secured 1 fastener per 1ft ²	ProtectoR HD	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 4-inch o.c.	JM TPO	TPO WBMA, MBA, LVOC MA, or ASBA	-120 (Lim. 7)
C-AM-92	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO	ASBA or MBA	-127.5 (Lim. 7)
C-AM-93	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1ft ²	JM TPO FB	2-Part UIA-C(S)	-135 (Lim. 7)
C-AM-94	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO or JM TPO FB	TPO WBMA (Two-sided application only for JM TPO)	-150 (Lim. 7)
C-AM-95	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-150 (Lim. 7)

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-M-1	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 12-inch o.c. with JM All Purpose Fasteners and JM High Load Plus Plates; Fastener rows max. 114-inch o.c.	-30 (Lim. 7; Non-HVHZ)
C-M-2	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7; Non-HVHZ)
C-M-3	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with Trufast Seam Plates; Fastener rows max. 90-inch o.c.	-30 (Lim. 7; Non-HVHZ)
C-M-4	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-M-5	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with <i>HL Fasteners & Plates</i> ; Fastener rows max. 66-inch .c.	(-45 Lim. 7)
C-M-6	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO	Attached in-lap 12-inch o.c. with JM All Purpose Fasteners and JM High Load Plus Plates; Fastener rows max. 90-inch o.c.	-45 (Lim. 7)
C-M-7	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with <i>HL Fasteners & Plates</i> ; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
C-M-8	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with <i>HL Fasteners & Plates</i> ; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
C-M-9	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with <i>HL Fasteners & Plates</i> ; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
C-M-10	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO	Attached in-lap 6-inch o.c. with <i>HL Fasteners & Plates</i> ; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
C-M-11	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with <i>HL Fasteners & Plates</i> ; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
C-M-12	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with <i>HL Fasteners & Plates</i> ; Fastener rows max. 138-inch o.c.	(-60 Lim. 7)
C-M-13	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with <i>Trufast Seam Plates</i> ; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
C-M-14	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO	Attached in-lap 6-inch o.c. with <i>HL Fasteners & Plates</i> ; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-M-15	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)
C-M-16	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 66-inch o.c.	(-105 Lim. 7)

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-W-1	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
C-W-2	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	RhinoPlates 12-inch o.c. with rows max. 72-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
C-W-3	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 at a rate of 1 fastener per 4.0-ft ²	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
C-W-4	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 24" o.c. in rows 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
C-W-5	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 12" o.c. in rows 60" o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
C-W-6	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced in a 2-ft x 3-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
C-W-7	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Trufast IW Plates attached 1 fastener per 5.33ft ² ; End joints offset 12-inches between board rows	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-W-8	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	RhinoPlates at a rate of 6 per 4-ft x 8-ft board Pattern #2 (1 fastener per 5.33-ft ²); Board installed with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-52.5 (Lim. 7)
C-W-9	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Trufast IW Plates attached 1 fastener per 4.0ft ² ; End joints offset 12-inches between board rows	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-52.5 (Lim. 7)
C-W-10	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced in a 2-ft x 2-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-60 (Lim. 7)
C-W-11	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #2 (1 fastener per 4.0-ft ²); Board installed with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-67.5 (Lim. 7)
C-W-12	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	RhinoPlates at a rate of 12 per 4-ft x 8-ft board Pattern #1 (1 fastener per 2.67-ft ²)	JM TPO (Min. 60 mil)	Induction welded to weld plates	-75 (Lim. 7)
C-W-13	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 at a rate of 1 fastener per 3.2-ft ²	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-75 (Lim. 7)
C-W-14	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced in a 1.5-ft x 2-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-82.5 (Lim. 7)
C-W-15	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	RhinoPlates in a 24-inch by 16-inch grid pattern	JM TPO (Min. 60 mil)	Induction welded to weld plates	-90 (Lim. 7)
C-W-16	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	RhinoPlates at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	JM TPO (Min. 60 mil)	Induction welded to weld plates	-90 (Lim. 7)
C-W-17	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	RhinoPlates at a rate of 12 per 4-ft x 8-ft board Pattern #1 (1 fastener per 2.67-ft ²); Board installed with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-W-18	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Trufast IW Plates attached 6-inch o.c. in rows 60-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
C-W-19	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 18" o.c. in rows 18" o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
C-W-20	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
C-W-21	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Trufast IW Plates attached 1 fastener per 2.0ft ² ; End joints offset 12-inches between board rows	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-105 (Lim. 7)

Adhered Assemblies over Cementitious Wood Fiber Deck (New or Existing)								
System No.	Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-A-1	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA or RSUA applied 12-inch o.c.	JM Invinso or Protector R HD	OSFA, 2-Part UIA, or RSUA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c., TPO WBMA	-122.5 (Lim. 9)
CW-A-2	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	OPTIONAL SECUROCK	RSUA, OSFA, or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or MBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-135 (Lim. 9)
CW-A-3	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	OPTIONAL SECUROCK	RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-135 (Lim. 9)
CW-A-4	-	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: LVOC MA, ASBA, 1168, or MBA JM TPO FB: RSUA applied 12-inch o.c.	-140 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Cementitious Wood Fiber Deck (New or Existing)								
System No.	Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-A-5	-	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-140 (Lim. 9)
CW-A-6	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC, ASBA, or MBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-150 (Lim. 9)
CW-A-7	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	SECUROCK	RSUA, OSFA, or 2-Part UIA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-157.5 (Lim. 9)
CW-A-8	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	SECUROCK	RSUA, OSFA, or 2-Part UIA applied 12-inch o.c.	-	-	JM TPO SA	Self-adhered	-157.5 (Lim. 9)
CW-A-9	-	Min. 1.5-inch ENRGY 3 or ProtectoR Foam	OSFA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC, ASBA, or MBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-157.5 (Lim. 9)
CW-A-10	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	Min. 1.5-inch ENRGY 3	OSFA or RSUA applied 12-inch o.c.	Protector R HD	OSFA or RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: LVOC MA, ASBA or MBA JM TPO FB: 2-Part UIA-C(S)	-157.5 (Lim. 9)
CW-A-11	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	Min. 1.5-inch ENRGY 3	OSFA or RSUA applied 12-inch o.c.	DensDeck Prime	OSFA or RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, ASBA, 1168 or MBA JM TPO FB: 2-Part UIA-C(S)	-157.5 (Lim. 9)
CW-A-12	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	JM Invinsa	RSUA applied 12-inch o.c.	-	-	JM TPO FB	TPO WBMA	-160 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Cementitious Wood Fiber Deck (New or Existing)								
System No.	Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-A-13	-	Min. 475 psi Celcore MF with HS Rheology Admixture installed	Poured-in-place	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-167.5 (Lim. 9)
CW-A-14	-	Min. 475 psi Celcore MF with HS Rheology Admixture installed	Poured-in-place	-	-	JM TPO FB	RSUA applied 4-inch o.c.	-197.5 (Lim. 9)
CW-A-15	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: MBA or 1168 JM TPO FB: 2-Part UIA-C(S)	-255 (Lim. 9; HVHZ only)
CW-A-16	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	Min. 1.5-inch E3 C1 or E3 (less ENRGY 3 FR)	RSUA applied 12-inch o.c.	DensDeck Prime	RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-255 (Lim. 9; HVHZ only)
C-W-A-17	OPTIONAL Vapor Barriers for Adhered Assemblies over CWF Deck	Min. 1.5-inch ENRGY 3 CGF	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA (Two-sided application only), LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-255 (Lim. 9; HVHZ only)

Assemblies with Adhered Membranes over Cementitious Wood Fiber Deck (New or Existing)							
System No.	Base Insulation/Sheet	Base Insulation/Sheet Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-AM-1	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch E3 or E3 C1	2-Part UIA, applied 12-inch o.c.	JM TPO	TPO WBMA, LVOC MA, ASBA, 1168 or MBA	-45 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Cementitious Wood Fiber Deck (New or Existing)							
System No.	Base Insulation/Sheet	Base Insulation/Sheet Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-AM-2	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch ENRGY 3	2-Part UIA, applied 12-inch o.c.	JM TPO FB	TPO WBMA	-45 (Lim. 7; Non-HVHZ)
CW-AM-3	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch E3 or E3 C1	2-Part UIA, applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
CW-AM-4	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch E3 or E3 C1	2-Part UIA, applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
CW-AM-5	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: ProtectoR HD, StormX, or DensDeck Prime	2-Part UIA, applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168 or MBA JM TPO FB: TPO WBMA	-45 (Lim. 7; Non-HVHZ)
CW-AM-6	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: Invinsa	2-Part UIA, applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, ASBA, or 1168 JM TPO FB: TPO WBMA	-45 (Lim. 7; Non-HVHZ)
CW-AM-7	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: SeparatoR CGF or SECUR ROCK	2-Part UIA, applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: ASBA JM TPO FB: TPO WBMA	-45 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Cementitious Wood Fiber Deck (New or Existing)							
System No.	Base Insulation/Sheet	Base Insulation/Sheet Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-AM-8	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: <i>DensDeck Prime, StormX, or SECUROCK</i>	2-Part UIA, applied 12-inch o.c.	JM TPO FB HFB	ASTM D 312 Type IV Asphalt	-45 (Lim. 7; Non-HVHZ)
CW-AM-9	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: <i>DEXcell FA</i>	2-Part UIA, applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-1	OPTIONAL Min. 0.5-inch E3 over OPTIONAL GlasPly IV, GlasPly Premier, PermaPly 28, or DynaBase in ASTM D 312, Type IV asphalt	2-Part UIA applied 12-inch o.c.	ProtectoR HD	2-Part UIA, RSUA or OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or MBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-45 (Lim. 9; Non-HVHZ)
G-A-2	OPTIONAL Min. 0.5-inch E3 over OPTIONAL GlasPly IV, GlasPly Premier, PermaPly 28, or DynaBase in ASTM D 312, Type IV asphalt	2-Part UIA applied 12-inch o.c.	ProtectoR HD	2-Part UIA, RSUA or OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 9; Non-HVHZ)
G-A-3	Min. 1.5-inch E3 (no FR) or ProtectoR Foam	2-Part UIA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or MBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-75 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-4	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	JM Invinsa	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² to both membrane and substrate or ASBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-75 (Lim. 9)
G-A-5	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	ProtectoR HD	2-Part UIA applied 12-inch o.c.	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or ASBA	-75 (Lim. 9)
G-A-6	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	JM Invinsa or ProtectoR HD	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-75 (Lim. 9)
G-A-7	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-75 (Lim. 9)
G-A-8	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-75 (Lim. 9)
G-A-9	Min. 1.5-inch ENRGY 3 or ProtectoR Foam	OSFA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or MBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-77.5 (Lim. 9)
G-A-10	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	JM Invinsa	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² to both membrane and substrate JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-77.5 (Lim. 9)
G-A-11	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	ProtectoR HD	OSFA applied 12-inch o.c.	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or ASBA	-77.5 (Lim. 9)
G-A-12	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	JM Invinsa or ProtectoR HD	OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-13	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA or OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-77.5 (Lim. 9)
G-A-14	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA or OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
G-A-15	-	-	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-85 (Lim. 9)
G-A-16	Min. 1.5-inch E3 (no FR) or ProtectoR Foam	2-Part UIA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or MBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-90 (Lim. 9)
G-A-17	JM InvinSA	OSFA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-92.5 (Lim. 9)
G-A-18	Min. 1.5-inch E3 or ProtectoR Foam	OSFA applied 12-inch o.c.	-	-	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-150 (Lim. 9; Non- HVHZ)
G-A-19	Min. 1.5-inch ENRGY 3 or ProtectoR Foam	OSFA applied 12-inch o.c.	-	-	JM TPO	MBA applied at 0.55 gal/100ft ²	-150 (Lim. 9; Non- HVHZ)
G-A-20	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	ProtectoR	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, MBA or ASBA JM TPO FB: 2-Part UIA-C(S)	-150 (Lim. 9; Non- HVHZ)
G-A-21	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	ProtectoR	OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-150 (Lim. 9; Non- HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-22	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	DensDeck Prime	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, MBA, ASBA, or 1168 JM TPO FB: 2-Part UIA-C(S)	-150 (Lim. 9; Non- HVHZ)
G-A-23	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	DensDeck Prime	OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-150 (Lim. 9; Non- HVHZ)
G-A-24	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	DensDeck Prime	OSFA applied 12-inch o.c.	JM TPO HFB	ASTM D 312, Type IV Asphalt	-150 (Lim. 9; Non- HVHZ)
G-A-25	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-150 (Lim. 9; Non- HVHZ)
G-A-26	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-150 (Lim. 9; Non- HVHZ)
G-A-27	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	OSFA applied 12-inch o.c.	JM TPO HFB	ASTM D 312, Type IV Asphalt	-150 (Lim. 9; Non- HVHZ)
G-A-28	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	INVinsa	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-150 (Lim. 9; Non- HVHZ)
G-A-29	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	DEXcell CB	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO MA (LowVOC), LVOC MA, TPO WBMA, MBA or ASBA JM TPO FB: TPO WBMA	-150 (Lim. 9; Non- HVHZ)
G-A-30	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	DEXcell FA	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO MA (LowVOC), LVOC MA, TPO WBMA, MBA, ASBA, or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-150 (Lim. 9; Non- HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-31	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	DEXcell FA	OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-150 (Lim. 9; Non-HVHZ)
G-A-32	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	DEXcell FA	OSFA applied 12-inch o.c.	JM TPO HFB	ASTM D 312, Type IV Asphalt	-150 (Lim. 9; Non-HVHZ)
G-A-33	-	-	-	-	JM TPO FB	RSUA applied 6-inch o.c.	-155 (Lim. 9)
G-A-34	Min. 1.5-inch E3 or ProtectoR Foam	RSUA applied 12-inch o.c.	-	-	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-187.5 (Lim. 9; Non-HVHZ)
G-A-35	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	ProtectoR	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, MBA or ASBA JM TPO FB: 2-Part UIA-C(S)	-187.5 (Lim. 9; Non-HVHZ)
G-A-36	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	ProtectoR	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-187.5 (Lim. 9; Non-HVHZ)
G-A-37	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DensDeck Prime	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, MBA, ASBA, or 1168 JM TPO FB: 2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)
G-A-38	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DensDeck Prime	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-210 (Lim. 9; Non-HVHZ)
G-A-39	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DensDeck Prime	RSUA applied 12-inch o.c.	JM TPO HFB	ASTM D 312, Type IV Asphalt	-210 (Lim. 9; Non-HVHZ)
G-A-40	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-210 (Lim. 9; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-41	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA (Two-sided application only), LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)
G-A-42	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM TPO HFB	ASTM D 312, Type IV Asphalt	-210 (Lim. 9; Non-HVHZ)
G-A-43	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	INVINSA	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² JM TPO FB: TPO WBMA	-210 (Lim. 9; Non-HVHZ)
G-A-44	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell CB	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO MA (LowVOC), LVOC MA, TPO WBMA (Two-sided application only) or MBA JM TPO FB: TPO WBMA	-210 (Lim. 9; Non-HVHZ)
G-A-45	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell FA	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO MA (LowVOC), LVOC MA, TPO WBMA (Two-sided application only), MBA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)
G-A-46	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell FA	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-210 (Lim. 9; Non-HVHZ)
G-A-47	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell FA	RSUA applied 12-inch o.c.	JM TPO HFB	ASTM D 312, Type IV Asphalt	-210 (Lim. 9; Non-HVHZ)
G-A-48	Min. 1.5-inch ENRGY 3 or ProtectoR Foam	RSUA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.55 gal/100ft ² JM TPO FB: 2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Gypsum Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
G-AM-1	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch E3 or E3 C1	2-Part UIA, applied 12-inch o.c.	JM TPO	TPO WBMA, LVOC MA, ASBA, 1168 or MBA	-45 (Lim. 7; Non-HVHZ)
G-AM-2	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch ENRGY 3	2-Part UIA, applied 12-inch o.c.	JM TPO FB	TPO WBMA	-45 (Lim. 7; Non-HVHZ)
G-AM-3	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch E3 or E3 C1	2-Part UIA, applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
G-AM-4	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch E3 or E3 C1	2-Part UIA, applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
G-AM-5	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: ProtectoR HD, StormX, or DensDeck Prime	2-Part UIA, applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168 or MBA JM TPO FB: TPO WBMA	-45 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Gypsum Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
G-AM-6	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: Invinsa	2-Part UIA, applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, ASBA, or 1168 JM TPO FB: TPO WBMA	-45 (Lim. 7; Non-HVHZ)
G-AM-7	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: SeparatoR CGF or SECUROCK	2-Part UIA, applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: ASBA JM TPO FB: TPO WBMA	-45 (Lim. 7; Non-HVHZ)
G-AM-8	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: DensDeck Prime, StormX or SECUROCK	2-Part UIA, applied 12-inch o.c.	JM TPO FB HFB	ASTM D 312 Type IV Asphalt	-45 (Lim. 7; Non-HVHZ)
G-AM-9	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Base layer: Min. 0.5-inch E3 or E3 C1 Top layer: DEXcell FA	2-Part UIA, applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
G-AM-10	-	-	PermaPly 28	Min. 1.8-inch JM UltraLok Fastener secured 7-inch o.c. at the lap and 7-inch o.c. in two (2) equally spaced and staggered rows in the field	JM TPO HFB	ASTM D 312, Type IV hot asphalt	-52.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-1	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRG Y 3 followed by SeparatoR CGF	OSFA or RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-45 (Lim. 9)
LC-A-2	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRG Y 3 followed by DensDeck Prime	OSFA or RSUA applied 12-inch o.c.	JM TPO FB	TPO WBMA	-45 (Lim. 9)
LC-A-3	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRG Y 3 or ProtectoR Foam	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² , TPO WBMA (two-sided application only), LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-77.5 (Lim. 9)
LC-A-4	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRG Y 3 or ProtectoR Foam	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
LC-A-5	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRG Y 3 or ENRG Y 3 CGF Top Layer: SECUROCK	Base and Top layer secured with RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA ASBA, 1168, or MBA JM TPO FB: TPO WBM, ASBA or 2-Part UIA-C(S)	-77.5 (Lim. 9)
LC-A-6	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRG Y 3 or ENRG Y 3 CGF Top Layer: SECUROCK	Base and Top layer secured with RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
LC-A-7	Min. 300 psi LWIC	Min. 1.5-inch ENRG Y 3 or ProtectoR Foam	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² , TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-80 (Lim. 9)
LC-A-8	Min. 300 psi LWIC	Min. 1.5-inch ENRG Y 3 or ProtectoR Foam	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-80 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-9	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-80 (Lim. 9)
LC-A-10	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-80 (Lim. 9)
LC-A-11	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRG Y 3 followed by DEXcell FA, <i>SECUROCK</i> , ProtectoR HD or SeparatoR CGF	OSFA applied 12-inch o.c.	JM TPO FB	TPO WBMA	-90 (Lim. 9)
LC-A-12	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRG Y 3 followed by ProtectoR HD, <i>SECUROCK</i> , or <i>StormX</i>	OSFA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-90 (Lim. 9)
LC-A-13	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRG Y 3 followed by <i>DensDeck Prime</i>	OSFA applied 12-inch o.c.	JM TPO HFB	ASTM D 312 Type IV Asphalt	-90 (Lim. 9)
LC-A-14	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRG Y 3 followed by DEXcell FA or <i>SECUROCK</i>	RSUA applied 12-inch o.c.	JM TPO FB	TPO WBMA	-105 (Lim. 9)
LC-A-15	Min. 383.5 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL JM Vapor Barrier SA, DynaBase HW, or DynaWeld 180 S over ASTM D 41 primed concrete	-	-	JM TPO FB	RSUA applied 6-inch o.c.	-112.5 (Lim. 9)
LC-A-16	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRG Y 3 followed by ProtectoR HD or <i>SECUROCK</i>	RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-112.5 (Lim. 9)
LC-A-17	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRG Y 3 followed by <i>DensDeck Prime</i>	RSUA applied 12-inch o.c.	JM TPO HFB	ASTM D 312 Type IV Asphalt	-112.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-18	Min. 310 psi Elastizell with Zell-Crete Fibers	Min. 1.5-inch ENRGY 3 or ProtectoR Foam	2-Part UIA applied 12-inch o.c	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² , TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-130 (Lim. 9)
LC-A-19	Min. 310 psi Elastizell with Zell-Crete Fibers	Min. 1.5-inch ENRGY 3 or ProtectoR Foam	2-Part UIA applied 12-inch o.c	JM TPO SA	Self-adhered	-130 (Lim. 9)
LC-A-20	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-130 (Lim. 9)
LC-A-21	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-130 (Lim. 9)
LC-A-22	Min. 375 psi Concrecel	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-147.5 (Lim. 9)
LC-A-23	Min. 475 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL DynaBase HW	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-167.5 (Lim. 9)
LC-A-24	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase PR under Min. 1.5-inch ENRGY 3	DynaBase PR applied in DynaSet 1k 12-inch o.c.; ENRGY 3 applied in RSUA 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA, LVOC MA, 1168, ASBA, or TPO WBMA (Two-sided application only) JM TPO FB: TPO WBMA, or 2-Part UIA-C(S)	-170 (Lim. 9; HVHZ only)
LC-A-25	Min. 375 psi Concrecel	-	-	JM TPO FB	RSUA applied 6-inch o.c.	-172.5 (Lim. 9)
LC-A-26	Min. 700psi cellular lightweight concrete (MCRF = 152lbf with JM Lightweight Concrete (LWC) CR Base Fasteners)	-	-	JM TPO FB	2-Part UIA-C(S) or TPO WBMA	-180 (Lim. 9)
LC-A-27	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRGY 3 followed by ProtectoR HD or SeparatoR CGF	RSUA applied 12-inch o.c.	JM TPO FB	TPO WBMA	-187.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-28	Min. 300 psi Celcore MF with HS Rheology Admixture installed over torch adhered DynaWeld 180 S	-	-	JM TPO FB	TPO WBMA	-202.5 (Lim. 9)
LC-A-29	Min. 360 psi Celcore MF with HS Rheology Admixture installed over torch adhered DynaWeld 180 S	-	-	JM TPO FB	RSUA applied 8-inch o.c.	-202.5 (Lim. 9)
LC-A-30	Min. 300 psi Celcore MF with HS Rheology Admixture installed over torch adhered DynaWeld 180 S	-	-	JM TPO	ASBA, LVOC MA, or MBA	-202.5 (Lim. 9)
LC-A-31	Min. 360 psi Celcore MF with HS Rheology Admixture	-	-	JM TPO	ASBA or LVOC MA	-222.5 (Lim. 9)
LC-A-32	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 0.5-inch ENRG Y 3 followed by StormX	RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-240 (Lim. 9)
LC-A-33	Min. 375 psi Concrecel	-	-	JM TPO	LVOC MA or MBA	-257.5 (Lim. 9)
LC-A-34	Min. 475 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL DynaBase HW	-	-	JM TPO FB	RSUA applied 4-inch o.c.	-257.5 (Lim. 9)
LC-A-35	Min. 350 psi Celcore MF with HS Rheology Admixture	Min. 1.5-inch ENRG Y 3	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA, LVOC MA, 1168, or ASBA JM TPO FB: 2-Part UIA-C(S)	-277.5 (Lim. 9; HVHZ only)
LC-A-36	Min. 213.5 Elastizell with Zell-Crete Fibers (no EPS Board)	-	-	JM TPO FB	RSUA applied 6-inch o.c.	-290 (Lim. 9)
LC-A-37	Min. 300 psi Celcore MF with HS Rheology Admixture installed over torch adhered DynaWeld Cap 180 FR treated with Celcore S-1	-	-	JM TPO	ASBA, LVOC MA, or MBA	-305 (Lim. 9)
LC-A-38	Min. 300 psi Celcore MF with HS Rheology Admixture installed over torch adhered DynaWeld Cap 180 FR treated with Celcore S-1	-	-	JM TPO FB	TPO WBMA	-305 (Lim. 9)
LC-A-39	Min. 360 psi Celcore MF with HS Rheology Admixture installed over torch adhered DynaWeld Cap 180 FR treated with Celcore S-1	-	-	JM TPO FB	RSUA applied 8-inch o.c.	-305 (Lim. 9)
LC-A-40	Min. 360 psi Celcore MF with HS Rheology Admixture	-	-	JM TPO	MBA	-337.5 (Lim. 9)
LC-A-41	Min. 360 psi Celcore MF with HS Rheology Admixture	-	-	JM TPO FB	RSUA applied 8-inch o.c.	-502.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Lightweight Concrete Assemblies with Adhered Membranes over <i>Concrete Deck (New or Existing)</i>						
System No.	LWIC	Base Sheet	Insulation	Cover Board	Membrane	MDP (psf)
LC-AM-1	Min. 200 psi Elastizell with Zell-Crete Fibers	PermaPly 28 secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 9-inch o.c. at the lap and 9-inch o.c. in two (2) equally spaced staggered rows in the field	-	-	JM TPO HFB fully adhered in ASTM D 312 hot asphalt	-45 (Lim. 7)
LC-AM-2	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with Min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ENRGY 3 or ENRGY 3 CGF adhered in 2-Part UIA applied 12-inch o.c.	-	JM TPO adhered in TPO WBMA, MBA, ASBA, LVOC MA, or 1168	-45 (Lim. 7)
LC-AM-3	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with Min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ENRGY 3 or ENRGY 3 CGF adhered in 2-Part UIA applied 12-inch o.c.	-	JM TPO SA	-45 (Lim. 7)
LC-AM-4	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with Min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ENRGY 3 or ENRGY 3 CGF adhered in 2-Part UIA applied 12-inch o.c.	-	JM TPO FB adhered in 2-Part UIA-C(S)	-45 (Lim. 7)
LC-AM-5	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	-	JM Invinsa, Protector HD, SeparatoR CGF, SECUROCK or DensDeck Prime adhered in 2-Part UIA applied 12-inch o.c.	JM TPO adhered in TPO WBMA	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Lightweight Concrete Assemblies with Adhered Membranes over Concrete Deck (New or Existing)						
System No.	LWIC	Base Sheet	Insulation	Cover Board	Membrane	MDP (psf)
LC-AM-6	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	-	SECUROCK or DensDeck Prime adhered in 2-Part UIA applied 12-inch o.c.	JM TPO HFB adhered in ASTM D 312 hot asphalt	-45 (Lim. 7)

Mechanically Fastened Lightweight Concrete Assemblies over Concrete Deck (New, Existing, or Recover)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-M-1	Min. 200 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-67.5 (Lim. 7)

Induction Welded Lightweight Concrete Assemblies over Concrete Deck (New or Existing) (New, Existing, or Recover)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-W-1	Min. 200 psi Elastizell with Zell-Crete Fibers	-	JM TPO RhinoPlates and JM All Purpose Fasteners secured (into Concrete Deck) 6-inch o.c. in rows spaced 96-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to plates	-60 (Lim. 7)

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-A-1	G33	Min. 475 psi Celcore MF with HS Rheology	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-45 (Lim. 9)
LS-A-2	G33, P, L6, S18	Min. 700psi cellular lightweight concrete (MCRF = 121lbf with JM Lightweight Concrete (LWC) CR Base Fasteners)	-	-	JM TPO FB	2-Part UIA-C(S)	-52.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-A-3	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3 or Protector Foam	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² , TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-77.5 (Lim. 9)
LS-A-4	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3 or Protector Foam	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
LS-A-5	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: SECUROCK	Base and Top layer secured with RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-77.5 (Lim. 9)
LS-A-6	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: SECUROCK	Base and Top layer secured with RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
LS-A-7	G33	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3 or Protector Foam	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² , TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-80 (Lim. 9)
LS-A-8	G33	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3 or Protector Foam	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-80 (Lim. 9)
LS-A-9	G33	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-80 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-A-10	G33	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-80 (Lim. 9)
LS-A-11	G80, P, L5, S15	Min. 250 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO FB	RSUA applied 6-inch o.c.	-97.5 (Lim. 9)
LS-A-12	G80, P, L5, S15	Min. 250 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO	LVOC MA	-97.5 (Lim. 9)
LS-A-13	G33	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA ribbons spaced 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, 1168, or MBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-130 (Lim. 9)
LS-A-14	G33	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-130 (Lim. 9)
LS-A-15	G33	Min. 200 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO	MBA applied at 0.83 gal/100ft ²	-180 (Lim. 9; HVHZ only)
LS-A-16	G33	Min. 700psi cellular lightweight concrete (MCRF = 152lbf with JM Lightweight Concrete (LWC) CR Base Fasteners)	-	-	JM TPO FB	2-Part UIA-C(S)	-180 (Lim. 9; HVHZ only)
LS-A-17	G33	Min. 150 psi LWIC	-	-	JM TPO	MBA applied at 0.83 gal/100ft ²	-265 (Lim. 9; HVHZ only)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Lightweight Concrete Assemblies with Adhered Membranes over <i>Steel Deck</i> (New or Existing)							
System No.	Deck Detail	LWIC	Base Sheet	Insulation	Cover Board	Membrane	MDP (psf)
LS-AM-1	G33, P, L6, S18	Min. 200 psi Elastizell with Zell-Crete Fibers	PermaPly 28 secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 9-inch o.c. at the lap and 9-inch o.c. in two (2) equally spaced staggered rows in the field	-	-	JM TPO HFB adhered in ASTM D 312 hot asphalt	-45 (Lim. 7)
LS-AM-2	G33, P, L6, S24	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ENRGY 3 or ENRGY 3 CGF adhered in 2-Part UIA applied 12-inch o.c.	-	JM TPO adhered in TPO WBMA, MBA, ASBA, LVOC MA, or 1168	-45 (Lim. 7)
LS-AM-3	G33, P, L6, S24	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ENRGY 3 or ENRGY 3 CGF adhered in 2-Part UIA applied 12-inch o.c.	-	JM TPO SA	-45 (Lim. 7)
LS-AM-4	G33, P, L6, S24	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ENRGY 3 or ENRGY 3 CGF adhered in 2-Part UIA applied 12-inch o.c.	-	JM TPO FB adhered in 2-Part UIA-C(S)	-45 (Lim. 7)
LS-AM-5	G33, P, L6, S24	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ENRGY 3 or ENRGY 3 CGF adhered in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO FB adhered in RSUA applied 4-inch o.c.	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Lightweight Concrete Assemblies with Adhered Membranes over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Base Sheet	Insulation	Cover Board	Membrane	MDP (psf)
LS-AM-6	G33, P, L6, S24	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ENRGY 3 adhered in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO HFB adhered in ASTM D 312 hot asphalt	-45 (Lim. 7)
LS-AM-7	G33, P, L6, S24	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	-	JM Invinsa, Protector HD, Separator CGF, SECUROCK or DensDeck Prime adhered in 2-Part UIA applied 12-inch o.c.	JM TPO adhered in TPO WBMA	-45 (Lim. 7)
LS-AM-8	G33, P, L6, S24	Min. 350 psi Celcore MF with HS Rheology Admixture	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with min. 1.7-inch LWC CR Base Sheet Fasteners secured 7-inch o.c. at the 3-inch lap and 7-inch o.c. in two (2) equally spaced staggered rows in the field	-	SECUROCK or DensDeck Prime adhered in 2-Part UIA applied 12-inch o.c.	JM TPO HFB adhered in ASTM D 312 hot asphalt	-45 (Lim. 7)

Mechanically Fastened Lightweight Concrete Assemblies over Steel Deck (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-M-1	G33, P, L6, S18	Min. 200 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO	Attached in-lap 6-inch o.c. with HL Fastener & Plates; Fastener rows max. 90-inch o.c.	-67.5 (Lim. 7)

Induction Welded Lightweight Concrete Assemblies over Steel Deck (New or Existing) (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-W-1	G33, P, L6, S18	Min. 200 psi Elastizell with Zell-Crete Fibers	-	JM TPO RhinoPlates and High Load Fasteners (into Steel Deck) secured 6-inch o.c. in rows spaced 96-inch o.c.-	JM TPO (Min. 60 mil)	Induction welded to plates	-60 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies						
System No.	Existing Roof	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
R-A-1	BUR or Mod-Bit Roofing with mineral surfacing	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-45 (Lim. 9)
R-A-2	BUR or Granular Mod-Bit Roofing over Steel Deck, cementitious panel, gypsum, or treated wood	-	DensDeck Prime in RSUA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-45 (Lim. 9)
R-A-3	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 1.5-inch ENRGY 3 in RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	DensDeck Prime or StormX in RSUA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-45 (Lim. 9)
R-A-4	BUR or Granular Mod-Bit Roofing over cementitious panel, gypsum, or treated wood	-	DensDeck Prime in 2-Part UIA or RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-45 (Lim. 9)
R-A-5	BUR or Granular Mod-Bit Roofing over Steel Deck, cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in RSUA, 2-Part UIA, 2-Part UIA-C(B), or OSFA applied 12-inch o.c.	SeparatoR CGF or SeparatoR FR adhered in RSUA, 2-Part UIA, 2-Part UIA-C(B), or OSFA applied 12-inch o.c.	JM TPO SA	Self adhered	-90 (Lim. 9)
R-A-6	BUR or Granular Mod-Bit Roofing over Steel Deck, cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in RSUA, 2-Part UIA, 2-Part UIA-C(B), or OSFA applied 12-inch o.c.	SeparatoR CGF or SeparatoR FR adhered in RSUA, 2-Part UIA, 2-Part UIA-C(B), or OSFA applied 12-inch o.c.	JM TPO	LVOC MA or 1168	-105 (Lim. 9)
R-A-7	BUR or Granular Mod-Bit Roofing over Steel Deck, cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in RSUA, 2-Part UIA, 2-Part UIA-C(B), or OSFA applied 12-inch o.c.	ProtectoR HD adhered in RSUA, 2-Part UIA, 2-Part UIA-C(B), or OSFA applied 12-inch o.c.	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-105 (Lim. 9)
R-A-8	BUR or Granular Mod-Bit Roofing over Steel Deck, cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in RSUA, 2-Part UIA, 2-Part UIA-C(B), or OSFA applied 12-inch o.c.	ProtectoR HD adhered in RSUA, 2-Part UIA, 2-Part UIA-C(B), or OSFA applied 12-inch o.c.	JM TPO	MBA, LVOC MA, ASBA, 1168, or TPO WBMA	-105 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies						
System No.	Existing Roof	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
R-A-9	BUR or Granular Mod-Bit Roofing over <i>Steel Deck</i> , cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	ProtectoR HD adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO SA</i>	Self adhered	-105 (Lim. 9)
R-A-10	BUR or Granular Mod-Bit Roofing over <i>Steel Deck</i> , cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>DEXcell FA</i> adhered in <i>RSUA</i> or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>TPO WBMA</i> or <i>ASBA</i>	-105 (Lim. 9)
R-A-11	BUR or Granular Mod-Bit Roofing over <i>Steel Deck</i> , cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>DEXcell FA</i> adhered in <i>RSUA</i> or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	<i>2-Part UIA-C(S)</i>	-105 (Lim. 9)
R-A-12	BUR or Granular Mod-Bit Roofing over <i>Steel Deck</i> , cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>DEXcell FA</i> adhered in <i>RSUA</i> or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO HFB</i>	ASTM D 312 Type IV Asphalt	-105 (Lim. 9)
R-A-13	BUR or Granular Mod-Bit Roofing over <i>Steel Deck</i> , cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>TPO WBMA</i> , <i>LVOC MA</i> , <i>TPO WBMA</i> , <i>ASBA</i> , or 1168	-105 (Lim. 9)
R-A-14	BUR or Granular Mod-Bit Roofing over <i>Steel Deck</i> , cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO SA</i>	Self adhered	-105 (Lim. 9)
R-A-15	BUR or Granular Mod-Bit Roofing over <i>Steel Deck</i> , cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	<i>2-Part UIA-C(S)</i>	-105 (Lim. 9)
R-A-16	BUR or Granular Mod-Bit Roofing over <i>Steel Deck</i> , cementitious panel, or treated wood	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO HFB</i>	ASTM D 312 Type IV Asphalt	-105 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies						
System No.	Existing Roof	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
R-A-17	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	SeparatoR CGF or SeparatoR FR adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	<i>RSUA</i> applied 4-inch o.c.	-112.5 (Lim. 9)
R-A-18	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	SeparatoR CGF or SeparatoR FR adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO SA</i>	Self adhered	-120 (Lim. 9)
R-A-19	BUR or Granular Mod-Bit Roofing over over Concrete Deck, Steel Deck, cementitious panel, or treated wood	-	Min. 1-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>MBA</i> , <i>LVOC MA</i> , <i>ASBA</i> , 1168, or <i>TPO WBMA</i>	-157.5 (Lim. 9)
R-A-20	BUR or Granular Mod-Bit Roofing over Concrete Deck, Steel Deck, cementitious panel, or treated wood	-	Min. 1-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO SA</i>	Self adhered	-157.5 (Lim. 9)
R-A-21	BUR or Granular Mod-Bit Roofing over over Concrete Deck, Steel Deck, cementitious panel, or treated wood	-	Min. 1-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	2-Part <i>UIA-C(S)</i> or <i>RSUA</i> applied 12-inch o.c.	-157.5 (Lim. 9)
R-A-22	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>DEXcell FA</i> adhered in <i>RSUA</i> or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>TPO WBMA</i>	-180 (Lim. 9)
R-A-23	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>TPO WBMA</i> , <i>LVOC MA</i> , <i>TPO WBMA</i> , <i>ASBA</i> , or 1168	-180 (Lim. 9)
R-A-24	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or applied 12-inch o.c.	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO SA</i>	Self adhered	-180 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies						
System No.	Existing Roof	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
R-A-25	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	2-Part <i>UIA-C(S)</i>	-180 (Lim. 9)
R-A-26	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO HFB</i>	ASTM D 312 Type IV Asphalt	-180 (Lim. 9)
R-A-27	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	SeparatoR CGF or SeparatoR FR adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	<i>TPO WBMA</i>	-187.5 (Lim. 9)
R-A-28	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	ProtectoR HD adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>TPO WBMA</i>	-187.5 (Lim. 9)
R-A-29	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	ProtectoR HD adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	<i>TPO WBMA</i>	-187.5 (Lim. 9)
R-A-30	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	SeparatoR CGF or SeparatoR FR adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>TPO WBMA</i>	-195 (Lim. 9)
R-A-31	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	ProtectoR HD adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	2-Part <i>UIA-C(S)</i>	-210 (Lim. 9)
R-A-32	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	ProtectoR HD adhered in <i>RSUA</i> , 2-Part <i>UIA</i> , 2-Part <i>UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>LVOC MA</i>	-210 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies						
System No.	Existing Roof	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
R-A-33	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	ProtectoR HD adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO SA</i>	Self-adhered	-210 (Lim. 9)
R-A-34	BUR over Concrete Deck	Min. 1.5-inch <i>E3</i> (no FR) adhered in <i>2-Part UIA</i> applied 12-inch o.c.	-	<i>JM TPO HFB</i>	ASTM D 312 Type IV Asphalt	-217.5 (Lim. 9)
R-A-35	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	SeparatoR CGF or SeparatoR FR adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>LVOC MA</i> or 1168	-217.5 (Lim. 9)
R-A-36	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>DEXcell FA</i> adhered in <i>RSUA</i> or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>ASBA</i>	-217.5 (Lim. 9)
R-A-37	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>DEXcell FA</i> adhered in <i>RSUA</i> or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	<i>2-Part UIA-C(S)</i>	-217.5 (Lim. 9)
R-A-38	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>DEXcell FA</i> adhered in <i>RSUA</i> or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO HFB</i>	ASTM D 312 Type IV Asphalt	-217.5 (Lim. 9)
R-A-39	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 1.5-inch ENRGY 3 in <i>RSUA</i> , <i>OSFA</i> or <i>2-Part UIA</i> applied 12-inch o.c.	<i>DensDeck Prime</i> or <i>StormX</i> in <i>RSUA</i> applied 12-inch o.c.	<i>JM TPO FB</i>	<i>RSUA</i> applied 4-inch o.c.	-217.5 (Lim. 9)
R-A-40	BUR or Granular Mod-Bit Roofing over Concrete Deck	OPTIONAL Min. 0.5-inch ENRGY 3 adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	ProtectoR HD adhered in <i>RSUA</i> , <i>2-Part UIA</i> , <i>2-Part UIA-C(B)</i> , or <i>OSFA</i> applied 12-inch o.c.	<i>JM TPO</i>	<i>ASBA</i> or <i>MBA</i>	-225 (Lim. 9)
R-A-41	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	Min. 1.5-inch ENRGY 3 adhered in <i>RSUA</i> applied 12-inch o.c.	-	<i>JM TPO</i>	<i>MBA</i> or 1168	-210 (Lim. 9; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies						
System No.	Existing Roof	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
R-A-42	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	Min. 1.5-inch ENRGY 3 adhered in RSUA applied 12-inch o.c.	-	JM PVC FB	2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)
R-A-43	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	Min. 1.5-inch ENRGY 3 adhered in RSUA applied 12-inch o.c.	DensDeck Prime adhered in RSUA applied 12-inch o.c.	JM TPO	MBA or LVOC MA	-210 (Lim. 9; Non-HVHZ)
R-A-44	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	Min. 1.5-inch ENRGY 3 adhered in RSUA applied 12-inch o.c.	DensDeck Prime adhered in RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)
R-A-45	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	Min. 1.5-inch ENRGY 3 adhered in RSUA applied 12-inch o.c.	DensDeck Prime adhered in RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-210 (Lim. 9; Non-HVHZ)
R-A-46	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	-	DensDeck Prime adhered in RSUA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-247.5 (Lim. 9; Non-HVHZ)
R-A-47	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	-	DensDeck Prime adhered in RSUA applied 12-inch o.c.	JM TPO	MBA or LVOC MA	-285 (Lim. 9; Non-HVHZ)
R-A-48	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	-	DensDeck Prime adhered in RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-285 (Lim. 9; Non-HVHZ)
R-A-49	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	-	DensDeck Prime adhered in RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-285 (Lim. 9; Non-HVHZ)
R-A-50	BUR or Granular Mod-Bit Roofing over Steel Deck or Concrete Deck	-	DensDeck Prime in 2-Part UIA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-337.5 (Lim. 9)
R-A-51	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	-	ProtectoR HD adhered in RSUA applied 12-inch o.c.	JM TPO	MBA or LVOC MA	-400 (Lim. 9)
R-A-52	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	-	ProtectoR HD adhered in RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-400 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies						
System No.	Existing Roof	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
R-A-53	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	-	ProtectoR HD adhered in RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-400 (Lim. 9)
R-A-54	Granular Mod-Bit Roofing or Granular BUR over Concrete Deck	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-440 (Lim. 9)

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-1	Steel Deck (G33) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with High Load Fasteners and JM High Load Plus Plates for Steel Deck or JM All Purpose Fasteners and JM High Load Plus Plates for Concrete Deck; Fastener rows max. 114-inch o.c.	-30 (Lim. 7; Non-HVHZ)
R-M-2	Steel Deck (G80) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fastener & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
R-M-3	Wood Deck (T19/32)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 4-inch o.c. with APB Fasteners & Plates; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
R-M-4	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch E3 or Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 60-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
R-M-5	Existing metal roof having Min. 14 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch E3 or Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 60-inch o.c.	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-6	Steel Deck (G80, F2W, L6, S24) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 12-inch o.c. with High Load Fasteners and JM High Load Plus Plates for Steel Deck or JM All Purpose Fasteners and JM High Load Plus Plates for Concrete Deck; Fastener rows max. 90-inch o.c.	-45 (Lim. 7)
R-M-7	Steel Deck (G80, F1, L6, S18) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
R-M-8	Steel Deck (G80, F1, L6, S18) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
R-M-9	Steel Deck (G80, F1, L6, S18) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
R-M-10	Wood Deck (T19/32, L24, N6)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 54-inch o.c.	-60 (Lim. 7)
R-M-11	Steel Deck (G80, F1, L6, S18) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
R-M-12	Steel Deck (G33, L6, P) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
R-M-13	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch E3 or Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-14	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch E3 or Cover Board	<i>Preliminarily Secured</i>	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 138-inch o.c.	-67.5 (Lim. 7)
R-M-15	Steel Deck (G33, L6, P) or Concrete Deck	OPTIONAL INSULATION	<i>Preliminarily Secured</i> or secured with top layer	Min. 0.5-inch E3 or Cover Board	<i>Preliminarily Secured</i>	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)
R-M-16	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch E3 or Cover Board	<i>Preliminarily Secured</i>	JM TPO	Attached in-lap 6-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)
R-M-17	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch E3 or Cover Board	<i>Preliminarily Secured</i>	JM TPO	Attached in-lap 6-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 60-inch o.c.	-82.5 (Lim. 7)
R-M-18	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch E3 or Cover Board	<i>Preliminarily Secured</i>	JM TPO	Attached in-lap 6-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)
R-M-19	Steel Deck (G33, L6, P) or Concrete Deck	OPTIONAL INSULATION	<i>Preliminarily Secured</i> or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	<i>Preliminarily Secured</i>	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)
R-M-20	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch E3 or Cover Board	<i>Preliminarily Secured</i>	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 66-inch o.c.	-105 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-W-1	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch E3 or Cover Board	JM Purlin Fasteners and JM TPO RhinoPlates secured 18-inch o.c. along the purlins	JM TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
R-W-2	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch E3 or Cover Board	JM Purlin Fasteners and JM TPO RhinoPlates secured 6-inch o.c. along the purlins with fastener rows max. 120-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
R-W-3	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>ISOWELD</i> -#12 or <i>ISOWELD</i> -#15 spaced 12-inch o.c. along the purlins	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
R-W-4	Steel Deck (G33, L6, P) or Concrete Deck	OPTIONAL Min. 1.5-inch INSULATION	<i>Preliminarily Secured</i> or secured with top layer	Min. 0.5-inch E3 or Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
R-W-5	Wood Deck (T15/32, L24, N6)	OPTIONAL INSULATION	<i>Preliminarily Secured</i> or secured with top layer	Min. 0.5-inch E3 or Cover Board	Min. 2.25-inch JM All Purpose Fastener and JM TPO RhinoPlates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured max. 24-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-52.5 (Lim. 7)
R-W-6	Wood Deck (T15/32, L24, N6)	OPTIONAL INSULATION	<i>Preliminarily Secured</i> or secured with top layer	Min. 0.5-inch E3 or Cover Board	Min. 2.25-inch JM All Purpose Fastener and JM TPO RhinoPlates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured max. 9-inch o.c. through sheathing into wood structural supports in rows max. 48" o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-60 (Lim. 7)
R-W-7	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch E3 or Cover Board	JM Purlin Fasteners and JM TPO RhinoPlates secured 12-inch o.c. along the purlins	JM TPO (Min. 60 mil)	Induction welded to weld plates	-67.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-W-8	Steel Deck (G33, L6, P) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates at a rate of 12 per 4-ft x 8-ft board Pattern #1 (1 fastener per 2.67-ft ²)	JM TPO (Min. 60 mil)	Induction welded to weld plates	-75 (Lim. 7)
R-W-9	Steel Deck (G33, F2W, L6) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	JM TPO (Min. 60 mil)	Induction welded to weld plates	-90 (Lim. 7)
R-W-10	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1-inch E3 or EPS placed between ribs	Preliminarily Secured or secured with top layer	OPTIONAL INSULATION	Attached with Trufast TPO IW Plates and Trufast #12 Purlin Fasteners spaced 6-inch o.c. along the purlins	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
R-W-11	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch E3 or Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 6-inch o.c. along the purlins	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
R-W-12	Wood Deck (T15/32, L24, N6)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Min. 2.25-inch JM All Purpose Fastener and JM TPO RhinoPlates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 6-inch o.c. through sheathing into wood structural supports in rows max. 48" o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-112.5 (Lim. 7)
R-W-13	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	Min. 1.5-inch E3 or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch E3 or Cover Board	JM Purlin Fasteners and JM TPO RhinoPlates secured 6-inch o.c. along the purlins	JM TPO (Min. 60 mil)	Induction welded to weld plates	-120 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Steel Deck (New or Existing)							
System No.	Deck	Vapor Barrier	Base Insulation	Top Insulation	Membrane	Membrane Attachment	MDP (psf)
S-A-1	G33	Optional JM Vapor Barrier SA	OPTIONAL Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF applied in RSUA spaced 12-inch o.c.	Min. 1.5-inch ENRGY 3 applied in RSUA spaced 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-45 (Lim. 9; Non-HVHZ)
S-A-2	G33	Optional JM Vapor Barrier SA	OPTIONAL Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF applied in RSUA spaced 12-inch o.c.	Min. 1.5-inch ENRGY 3 applied in RSUA spaced 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 9; Non-HVHZ)
S-A-3	G33	Optional JM Vapor Barrier SA	Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF applied in RSUA spaced 12-inch o.c.	ProtectoR HD, SECUROCK, or DensDeck Prime applied in 2-Part UIA, OSFA, or RSUA spaced 12" o.c.	JM TPO or JM TPO FB	JM TPO: MBA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-45 (Lim. 9; Non-HVHZ)
S-A-4	G33	Optional JM Vapor Barrier SA	Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF applied in RSUA spaced 12-inch o.c.	ProtectoR HD, DEXcell FA, SECUROCK, or DensDeck Prime applied in 2-Part UIA, OSFA, or RSUA spaced 12" o.c.	JM TPO SA	Self-adhered	-45 (Lim. 9; Non-HVHZ)

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-1	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	Fasteners & Plates at a rate of 1 fastener per 2.67ft ²	JM TPO SA	Self-adhered	-30 (Lim. 7 Non-HVHZ)
S-AM-2	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	Fasteners & Plates at a rate of 1 fastener per 2.67ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S), ASBA or TPO WBMA	-30 (Lim. 7 Non-HVHZ)
S-AM-3	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 2-inch Fesco Foam	Fasteners & Plates secured 1 fastener per 5.3ft ²	JM TPO	MBA, or LVOC MA	-37.5 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-4	G33	ProtectoR attached with Fasteners & Plates at 8 per 4-ft x 8-ft board Pattern #2; JM Vapor SA or JM Vapor Barrier SAR with JM SA Primer or JM SA Primer Low VOC	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	OSFA, RSUA, or 2-Part UIA applied 12-inch o.c.	ProtectoR, Retro-Fit, RetroPlus, SeparatorR CGF, Separator FR, INVINSA, DensDeck, DensDeck Prime, DEXcell FA, or SECUROCK	OSFA, RSUA, or 2-Part UIA applied 12-inch o.c.	JM TPO, JM TPO FB, JM TPO SA, or JM TPO HFB	JM TPO: TPO WBMA, MBA LVOC MA, or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S), ASBA or TPO WBMA JM TPO: self-adhered JM TPO HFB: ASTM D 312 Type IV Asphalt	-37.5 (Lim. 7; Non-HVHZ)
S-AM-5	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	OMG #12 Standard Roofgrip or UltraFast Fastener and OMG 3 in. Ribbed Galvalume Plate (Flat) or UltraFast Plate Metal Flat secured 8 per 4-ft x 8-ft board Pattern 3	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-37.5 (Lim. 7; Non-HVHZ)
S-AM-6	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	OMG #12 Standard Roofgrip or UltraFast Fastener and OMG 3 in. Ribbed Galvalume Plate (Flat) or UltraFast Plate Metal Flat secured 8 per 4-ft x 8-ft board Pattern 3	JM TPO HFB	ASTM D 312 Type IV Asphalt	-37.5 (Lim. 7; Non-HVHZ)
S-AM-7	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	OMG #12 Standard Roofgrip or UltraFast Fastener and OMG 3 in. Ribbed Galvalume Plate (Flat) or UltraFast Plate Metal Flat secured 8 per 4-ft x 8-ft board Pattern 3	JM TPO SA	Self-adhered	-37.5 (Lim. 7; Non-HVHZ)
S-AM-8	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	Fasteners & Plates at a rate of 1 fastener per 2.67ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-9	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	Fasteners & Plates at a rate of 1 fastener per 2.67ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S), TPO WBMA, or ASBA	-45 (Lim. 7)
S-AM-10	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	Fasteners & Plates secured 1 fastener per 4ft ²	JM TPO SA	Self-adhered	-45 (Lim. 9)
S-AM-11	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	Fasteners & Plates secured 1 fastener per 4ft ²	JM TPO (Min. 60 mil) or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S), TPO WBMA, or ASBA	-45 (Lim. 9)
S-AM-12	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 2-inch Invinso Foam	Fasteners & Plates secured 1 fastener per 5.3ft ²	JM TPO	MBA, TPO WBMA, LVOC MA, or ASBA	-45 (Lim. 7; Non-HVHZ)
S-AM-13	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 2-inch Invinso Foam	Fasteners & Plates secured 1 fastener pr 5.3ft ²	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
S-AM-14	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.375-inch SECUROCK	Fasteners & Plates secured 1 fastener per 2.67ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² or ASBA JM TPO FB: TPO WBMA or ASBA	-45 (Lim. 7; Non-HVHZ)
S-AM-15	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.375-inch SECUROCK	Fasteners & Plates secured 1 fastener per 2.67ft ²	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
S-AM-16	G33	OPTIONAL JM Vapor Barrier SA or SAR	-	-	Min. 1.5-inch ENRGY 3, ENRGY 3 CGF, or ProtectoR Foam	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
S-AM-17	G33	OPTIONAL JM Vapor Barrier SA or SAR	-	-	Min. 1.5-inch ENRGY 3, ENRGY 3 CGF, or ProtectoR Foam	RSUA applied 12-inch o.c.	JM TPO	MBA, LVOC MA, TPO WBMA or ASBA	-45 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-18	G33	OPTIONAL JM Vapor Barrier SA or SAR	-	-	Min. 1.5-inch ENRGY 3, ENRGY 3 CGF, or Protector Foam	RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
S-AM-19	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 4.0ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-45 (Lim. 9)
S-AM-20	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 4.0ft ²	JM TPO SA	Self-adhered	-45 (Lim. 9)
S-AM-21	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 or Protector Foam	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA, ASBA or LVOC MA	-45 (Lim. 9)
S-AM-22	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 or Protector Foam	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO SA	Self-adhered	-45 (Lim. 9)
S-AM-23	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 2.0ft ²	RetroPlus	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO	MBA	-45 (Lim. 9)
S-AM-24	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA; Applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA or ASBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-45 (Lim. 7)
S-AM-25	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-26	22 GA Type N; G80, H1, L12, HS24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3	JM All Purpose Fasteners and Dekfast PLT-H-2-7/8 Plates secured at a rate of 16 per 4-ft x 8-ft board Type N	JM TPO	ASBA, LVOC MA or MBA	-45 (Lim. 7)
S-AM-27	22 GA Type N; G80, H1, L12, HS24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3	JM All Purpose Fasteners and Dekfast PLT-H-2-7/8 Plates secured at a rate of 16 per 4-ft x 8-ft board Type N	JM TPO FB	2-Part UIA-C(S)	-45 (Lim. 7)
S-AM-28	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 4 per 4-ft x 8-ft board	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
S-AM-29	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 4 per 4-ft x 8-ft board	JM TPO HFB	ASTM D 312 Type IV Asphalt	-45 (Lim. 7; Non-HVHZ)
S-AM-30	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 4 per 4-ft x 8-ft board	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
S-AM-31	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Fasteners & Plates secured 1 fastener per 2.67ft ²	StormX	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
S-AM-32	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Fasteners & Plates secured 1 fastener per 2.67ft ²	StormX	RSUA applied 12-inch o.c.	JM TPO HFB	ASTM D 312 Type IV Asphalt	-45 (Lim. 7; Non-HVHZ)
S-AM-33	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Fasteners & Plates secured 1 fastener per 2.67ft ²	StormX	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
S-AM-34	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 8 per 4-ft x 8-ft board Pattern 2	JM TPO FB w/DynaBase HW	RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-35	G33	Min. 0.5-inch DensDeck Prime secured with DF or TF at 1 fastener per 4ft ² over OPTIONAL Vapor Barrier	Min. 1.5-inch ENRGY 3	2-Part UIA, OSFA, or RSUA applied 12" o.c.	OPTIONAL ProtectoR HD, SECUROCK, or DensDeck Prime	2-Part UIA, OSFA, or RSUA applied 12" o.c.	JM TPO or JM TPO FB	JM TPO: MBA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
S-AM-36	G33	Min. 0.5-inch DensDeck Prime secured with DF or TF at 1 fastener per 4ft ² over OPTIONAL Vapor Barrier	Min. 1.5-inch ENRGY 3	2-Part UIA, OSFA, or RSUA applied 12" o.c.	OPTIONAL ProtectoR HD, DEXcell FA, SECUROCK, or DensDeck Prime	2-Part UIA, OSFA, or RSUA applied 12" o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
S-AM-37	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	DF or Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-52.5 (Lim. 7)
S-AM-38	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	DF or Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-39	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-52.5 (Lim. 7)
S-AM-40	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-41	G33, P, L6, S20	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	JM Invinsa	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-52.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-42	G33, P, L6, S20	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	JM Invinsa or Protector HD	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-43	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or TPO WBMA or ASBA	-52.5 (Lim. 7)
S-AM-44	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.67ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA or ASBA	-52.5 (Lim. 7)
S-AM-45	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.67ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-46	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	DF or Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO HFB	Base Ply: Torch Adhered Membrane: ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-47	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	DF or Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-48	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-49	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO HFB	Base Ply: Torch Adhered Membrane: ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-50	G33, F2, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3 or Protector Foam	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-51	G33, F2, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3 or Protector Foam	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO FB	2-Part UIA-C(S)	-52.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-52	G33, F2, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3 or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO	LVOC MA or MBA applied at 0.55 gal/100ft ²	-52.5 (Lim. 7)
S-AM-53	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-54	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² , LVOC MA applied at 0.83 gal/100ft ² or ASBA JM TPO FB: TPO WBMA or ASBA	-52.5 (Lim. 7)
S-AM-55	G33, F1, L6, S12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & TruFast Plates secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-52.5 (Lim. 7)
S-AM-56	G33, F1, L6, S12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & TruFast Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-57	G33, F1, L6, S12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & TruFast Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-58	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 8 per 4-ft x 8-ft board Pattern #3	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-52.5 (Lim. 7)
S-AM-59	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 8 per 4-ft x 8-ft board Pattern #3	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-60	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 8 per 4-ft x 8-ft board Pattern #3	JM TPO SA	Self-adhered	-52.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-61	G33, F1, L6, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-62	G33, F1, L6, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-60 (Lim. 7)
S-AM-63	G33, F2W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	DF or Fasteners & Plates secured 1 fastener per 1.00ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-64	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	DF or Fasteners & Plates secured 1 fastener per 1.00ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-65	G33, F2W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	DF or Fasteners & Plates secured 1 fastener per 1.00ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-60 (Lim. 7)
S-AM-66	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3 or Protector Foam	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO	LVOC MA or MBA applied at 0.55 gal/100ft ²	-60 (Lim. 7)
S-AM-67	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
S-AM-68	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3 or Protector Foam	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-60 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-69	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
S-AM-70	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: MBA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-71	G33, F2, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO FB	2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-72	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	UltraFast Fasteners & Plate) 1 fastener per 1.6ft ²	Min. 1.5-inch E3 or E3 C1	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-73	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	OMG #12 Standard Roofgrip fasteners and OMG 3 in. Ribbed Galvalume Plate (Flat) or UltraFast Plate Metal Flat secured 16 per 4-ft x 8-ft board	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-74	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	OMG #12 Standard Roofgrip fasteners and OMG 3 in. Ribbed Galvalume Plate (Flat) or UltraFast Plate Metal Flat secured 16 per 4-ft x 8-ft board	JM TPO HFB	ASTM D 312 Type IV Asphalt	-60 (Lim. 7)
S-AM-75	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	OMG #12 Standard Roofgrip fasteners and OMG 3 in. Ribbed Galvalume Plate (Flat) or UltraFast Plate Metal Flat secured 16 per 4-ft x 8-ft board	JM TPO SA	Self-adhered	-60 (Lim. 7)
S-AM-76	G33, F2W, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Fasteners & Plates secured 1 fastener per 1ft ²	SECUROCK or JM InvinSA	RSUA or 2-Part UIA applied 6-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-67.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-77	L6, G80, F1, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA	-67.5 (Lim. 7)
S-AM-78	L6, G80, F1, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO FB	TPO WBMA, ASBA or 2-Part UIA-C(S)	-67.5 (Lim. 7)
S-AM-79	L6, G80, F1, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
S-AM-80	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA or ASBA	-67.5 (Lim. 7)
S-AM-81	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
S-AM-82	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO	TPO WBMA or ASBA	-67.5 (Lim. 7)
S-AM-83	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENERGY 3 or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 2ft ²	JM TPO	MBA, LVOC MA applied at 1.1 gal/100ft ² , TPO WBMA (two-sided application only) or ASBA	-67.5 (Lim. 7)
S-AM-84	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENERGY 3 or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 2ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-67.5 (Lim. 7)
S-AM-85	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	UltraFast Fasteners & Plate secured 1 fastener per 1.6ft ²	Min. 0.5-inch ProtectoR HD, DEXcell FA, or SECUROCK	OSFA, RSUA, 2-Part UIA-C(B) or 2-Part UIA applied 6-inch o.c.	JM TPO FB	RSUA 6-inch o.c.	-67.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-86	G33, F1, L6, S12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-67.5 (Lim. 7)
S-AM-87	G33, F1, L6, S12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-67.5 (Lim. 7)
S-AM-88	G33, F1, L6, S12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	Fasteners & Plates secured or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
S-AM-89	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 12 per 4-ft x 8-ft board	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-67.5 (Lim. 7)
S-AM-90	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 12 per 4-ft x 8-ft board	JM TPO HFB	ASTM D 312 Type IV Asphalt	-67.5 (Lim. 7)
S-AM-91	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 12 per 4-ft x 8-ft board	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
S-AM-92	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	Fasteners & Plates at a rate of 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-75 (Lim. 7)
S-AM-93	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	Fasteners & Plates at a rate of 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² , LVOC MA or ASBA JM TPO FB: TPO WBMA, ASBA or 2-Part UIA-C(S)	-75 (Lim. 7)
S-AM-94	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF), E3 C1, or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO	MBA, LVOC MA applied at 1.1 gal/100ft ² , TPO WBMA (two-sided application only) or ASBA	-75 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-95	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
S-AM-96	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinso Foam	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA or ASBA	-75 (Lim. 7)
S-AM-97	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinso Foam	Fasteners & Plates secured 1 fastener per 2.0ft ²	JM TPO SA	Self-adhered	-75 (Lim. 7)
S-AM-98	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA or ASBA	-75 (Lim. 7)
S-AM-99	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
S-AM-100	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 14 per 4-ft x 8-ft board	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA or ASBA	-75 (Lim. 7)
S-AM-101	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 14 per 4-ft x 8-ft board	JM TPO HFB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
S-AM-102	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 14 per 4-ft x 8-ft board	JM TPO SA	Self-adhered	-75 (Lim. 7)
S-AM-103	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
S-AM-104	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-105	G80, F1W, L6, S24	Min. 0.5-inch DEXcell FA; Fasteners & Plates secured 1 fastener per 1.0ft ² ; JM Vapor Barrier SA self-adhered over SA Primer	Min. 1.5-inch E3	RSUA or 2-Part UIA applied 6-inch o.c.	Min. 0.5-inch DEXcell FA	RSUA applied 6-inch o.c.	JM TPO FB	RSUA applied 6-inch o.c.	-82.5 (Lim. 7)
S-AM-106	G33, F2, L6, S24	Min. 0.5-inch DEXcell FA secured with top layer; JM Vapor Barrier SA self-adhered	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO FB	RSUA applied 4-inch o.c.	-82.5 (Lim. 7)
S-AM-107	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF), E3 C1, or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA or LVOC MA applied at 1.1 gal/100ft ² or TPO WBMA (two-sided application only)	-82.5 (Lim. 7)
S-AM-108	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-82.5 (Lim. 7)
S-AM-109	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-82.5 (Lim. 7)
S-AM-110	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-82.5 (Lim. 7)
S-AM-111	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
S-AM-112	G33, H1, L6, SH24	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates 1 fastener per 1.33ft ²	JM TPO	MBA, LVOC MA, or ASBA	-82.5 (Lim. 7)
S-AM-113	G33, H1, L6, SH24	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-114	G33, H1, L6, SH24	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	Fasteners & Plates 1 fastener per 1.33ft ²	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
S-AM-115	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	Fasteners & Plates secured 1 fastener per 1.6ft ²	ProtectoR HD	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO	TPO WBMA, MBA, LVOC MA, or ASBA	-82.5 (Lim. 7)
S-AM-116	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	UltraFast Fasteners & Plate secured 1 fastener per 1.6ft ²	ProtectoR HD	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
S-AM-117	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	UltraFast Fasteners & Plate secured 1 fastener per 1.6ft ²	ProtectoR HD	OSFA, RSUA, 2-Part UIA-C(B) or 2-Part UIA applied 6-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
S-AM-118	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 0.5-inch DensDeck Prime, DEXcell FA, or SECUROCK	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO	ASBA, TPO WBMA, MBA or LVOC MA	-82.5 (Lim. 7)
S-AM-119	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 0.5-inch DensDeck Prime, DEXcell FA, or SECUROCK	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
S-AM-120	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 1.5-inch E3 or E3 C1	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO	ASBA, TPO WBMA, MBA or LVOC MA	-82.5 (Lim. 7)
S-AM-121	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 1.5-inch E3 or E3 C1	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 6-inch o.c.	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
S-AM-122	G33, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA, 2-Part UIA-C(B) or 2-Part UIA applied 4-inch o.c.	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, ASBA, or LVOC MA	-82.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-123	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 or Protector Foam	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, or LVOC MA	-82.5 (Lim. 7)
S-AM-124	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3, E3 C1, or Protector Foam	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	ASBA or MBA	-82.5 (Lim. 7)
S-AM-125	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 12 per 4-ft x 8-ft board Pattern #2	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
S-AM-126	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 12 per 4-ft x 8-ft board Pattern #2	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA or ASBA	-82.5 (Lim. 7)
S-AM-127	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 12 per 4-ft x 8-ft board Pattern #2	JM TPO HFB	ASTM D 312 Type IV Asphalt	-82.5 (Lim. 7)
S-AM-128	G80, F2, L6, S12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.625-inch DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA or ASBA	-90 (Lim. 7)
S-AM-129	G80, F2, L6, S12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.625-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-90 (Lim. 7)
S-AM-130	G80, F2, L6, S12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min 0.625-inch DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-90 (Lim. 7)
S-AM-131	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	E3 (no AGF) or E3 C1	FASTENERS and PLT-R-3 or UltraFast Plates (Square) secured 24 per 4-ft x 8-ft board Pattern #2	JM TPO	MBA or LVOC MA applied at 1.1 gal/100ft ² or TP WBMA (two-sided application only)	-90 (Lim. 7)
S-AM-132	G33, P, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	RSUA or 2-Part UIA applied 6-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA, LVOC MA, ASBA or 1168 JM TPO FB: 2-Part UIA-C(S)	-90 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-133	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 18 per 4-ft x 8-ft board Pattern #1	JM TPO SA	Self-adhered	-97.5 (Lim. 7)
S-AM-134	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 18 per 4-ft x 8-ft board Pattern #1	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA (two-sided application only), or ASBA	-97.5 (Lim. 7)
S-AM-135	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or TPO WBMA	-105 (Lim. 7)
S-AM-136	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	Fasteners & Plates secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-105 (Lim. 7)
S-AM-137	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-105 (Lim. 7)
S-AM-138	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA (two-sided application only), or ASBA	-112.5 (Lim. 7)
S-AM-139	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates or UltraFast Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-112.5 (Lim. 7)
S-AM-140	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF), E3 C1, or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, or LVOC MA	-112.5 (Lim. 7)
S-AM-141	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3, E3 C1, or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	ASBA or MBA	-112.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-142	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 20 per 4-ft x 8-ft board or 18 per 4-ft x 8-ft board Pattern #2	JM TPO SA	Self-adhered	-112.5 (Lim. 7)
S-AM-143	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 20 per 4-ft x 8-ft board or 18 per 4-ft x 8-ft board Pattern #2	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA (two-sided application only), or ASBA	-112.5 (Lim. 7)
S-AM-144	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF), E3 C1, or ProtectoR Foam	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA or LVOC MA applied at 1.1 gal/100ft ² or TP WBMA (two-sided application only)	-120 (Lim. 7)
S-AM-145	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-120 (Lim. 7)
S-AM-146	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	Fasteners & Plates at a rate of 1 fastener per 1ft ²	JM TPO	MBA or ASBA	-120 (Lim. 7)
S-AM-147	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, or LVOC MA	-120 (Lim. 7)
S-AM-148	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch E3 or E3 C1	Fasteners & Plates secured 1 fastener per 1ft ²	ProtectoR HD	OSFA, RSUA, 2-Part UIA-C(B), or 2-Part UIA applied 4-inch o.c.	JM TPO	TPO WBMA, MBA, LVOC MA, or ASBA	-120 (Lim. 7)
S-AM-149	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO	ASBA or MBA	-127.5 (Lim. 7)
S-AM-150	G80, F2, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1ft ²	JM TPO FB	2-Part UIA-C(S)	-135 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-151	G80, F2, L6, S24	Min. 0.5-inch DEXcell FA secured with top layer; JM Vapor Barrier SA self-adhered	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO FB	RSUA applied 4-inch o.c.	-142.5 (Lim. 7)
S-AM-152	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or UltraFast Fasteners & TruFast Plates secured 1 fastener per 1.00ft ²	JM TPO or JM TPO FB	TPO WBMA (two-sided application only for JM TPO)	-150 (Lim. 7)
S-AM-153	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or UltraFast Fasteners & TruFast Plates secured 1 fastener per 1.00ft ²	JM TPO SA	Self-adhered	-150 (Lim. 7)

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-M-1	G33, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with High Load Fasteners and JM High Load Plus Plates; Fastener rows max. 114-inch o.c.	-30 (Lim. 7; Non-HVHZ)
S-M-2	G33, F, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7; Non-HVHZ)
S-M-3	G80, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
S-M-4	G33, F, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
S-M-5	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-M-6	G33, P, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7; Non-HVHZ)
S-M-7	G33, F1, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with Trufast Seam Plates; Fastener rows max. 90-inch o.c.	-30 (Lim. 7; Non-HVHZ)
S-M-8	G33, P, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 66-inch o.c.	(-45 Lim. 7)
S-M-9	G80, F2W, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 12-inch o.c. with High Load Fasteners and JM High Load Plus Plates; Fastener rows max. 90-inch o.c.	-45 (Lim. 7)
S-M-10	G80, F1, L6, S18	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
S-M-11	G80, F1, L6, S18	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
S-M-12	22 GA Type N; G80, H1, L12, HS24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 8-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-45 (Lim. 7)
S-M-13	G80, F1, L6, S18	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
S-M-14	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
S-M-15	22 GA Type N; G80, H1, L12, HS24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 8-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-M-16	G80, F1, L6, S18	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
S-M-17	G33, P, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
S-M-18	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-60 (Lim. 7)
S-M-19	G33, P, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-60 (Lim. 7)
S-M-20	G33, F1, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with Trufast Seam Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
S-M-21	G80, P, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-67.5 (Lim. 7)
S-M-22	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-67.5 (Lim. 7)
S-M-23	G33, P, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)
S-M-24	G33, P, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)
S-M-25	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 66-inch o.c.	(-105 Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-W-1	G33	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with All Purpose Fasteners and JM TPO RhinoPlates at a rate of 6 per 4-ft x 8-ft board Pattern #2	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-37.5 (Lim. 7; Non-HVHZ)
S-W-2	22 GA Type N; G80, H1, L12, HS24	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with RhinoPlates at a rate of 6 per 4-ft x 8-ft board Type N; Insulation/Cover Boards laid perpendicular to deck flutes; Boards ends offset 8-inch from previous row	JM TPO	Induction welded to Weld plates	-37.5 (Lim. 7; Non-HVHZ)
S-W-3	G33, P, L6	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-4	G33, H1, L6, SH24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with RhinoPlates fastened 12-inch o.c.; Fastener rows max. 72-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-5	G33, F1, L6, S30	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#15 at a rate of 1 fastener per 4.0-ft ²	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-6	G80, SD1W, L6, SDL24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 24" o.c. in rows 24-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-7	G80, SD1W, L6, SDL24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 12-inch o.c. in rows 60-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-8	G80, F1, L6, S36	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced in a 2-ft x 3-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-9	G33	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Trufast IW Plates attached 1 fastener per 5.33ft ² ; Boards placed perpendicular to deck ribs; End joints offset 12-inches between board rows	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7; Non-HVHZ)
S-W-10	G33, H1, L6, SH24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with RhinoPlates at a rate of 6 per 4-ft x 8-ft board Pattern #2 (1 fastener per 5.33-ft ²); Board length perpendicular to deck flutes with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-52.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-W-11	G33, F1, L6, S12	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Trufast IW Plates attached 1 fastener per 4.0ft ² ; Boards placed perpendicular to deck ribs; End joints offset 12-inches between board rows	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-52.5 (Lim. 7)
S-W-12	22 GA Type N; G80, H1, L12, HS24	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with RhinoPlates at a rate of 8 per 4-ft x 8-ft board Type N; Insulation/Cover Boards laid perpendicular to deck flutes; Boards ends offset 8-inch from previous row	JM TPO	Induction welded to Weld plates	-52.5 (Lim. 7)
S-W-13	G33, P, L6, S36	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced in a 2-ft x 2-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-60 (Lim. 7)
S-W-14	G33, F1, L6, S12	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Trufast IW Plates attached 6-inch o.c. in rows 60-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-60 (Lim. 7)
S-W-15	G33, H1, L6, SH24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #2 (1 fastener per 4.0-ft ²); Board length perpendicular to deck flutes with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-67.5 (Lim. 7)
S-W-16	G33, F2, L6, S18	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-67.5 (Lim. 7)
S-W-17	G33, P, L6	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with RhinoPlates at a rate of 12 per 4-ft x 8-ft board (1 fastener per 2.67-ft ²)	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-75 (Lim. 7)
S-W-18	G33, F1, L6, S30	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#15 at a rate of 1 fastener per 3.2-ft ²	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-75 (Lim. 7)
S-W-19	G33, F2, L6, S24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with RhinoPlates in a 24-inch by 16-inch grid pattern	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-82.5 (Lim. 7)
S-W-20	G33, P, L6, S36	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced in a 1.5-ft x 2-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-82.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-W-21	G33, F1W, L6, S12	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Trufast IW Plates attached 1 fastener per 2.0ft ² ; Boards placed perpendicular to deck ribs; End joints offset 12-inches between board rows	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-82.5 (Lim. 7)
S-W-22	G80, F2, L6, S24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with RhinoPlates in a 24-inch by 16-inch grid pattern	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-23	G33, F2W, L6	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with RhinoPlates at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-24	G33, H1, L6, S24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with RhinoPlates at a rate of 12 per 4-ft x 8-ft board Pattern #1 (1 fastener per 2.67-ft ²); Board length perpendicular to deck flutes with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-25	G33, F1, L5, S30	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 6-inch o.c. in rows 60-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-26	G80, F1, L6, S12	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Trufast IW Plates attached 6-inch o.c. in rows 60-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-27	G80, SD1W, L6, SDL24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 18-inch o.c. in rows 18-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
S-W-28	G80, SD1W, L6, SDL24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 6-inch o.c. in rows 60-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
S-W-29	G80, F1W, L6, S12	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Trufast IW Plates attached 1 fastener per 2.0ft ² ; Boards placed perpendicular to deck ribs; End joints offset 12-inches between board rows	JM TPO (Min. 60 mil)	Induction welded to Weld plates	-105 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
W-AM-1	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	JM All Purpose Fasteners and UltraFast Plates (Square) secured at a rate of 12 per 4-ft x 8-ft board Pattern #1	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² , LVOC MA or ASBA JM TPO FB: 2-Part UIA-C(S), TPO WBMA or ASBA	-30 (Lim. 7; Non-HVHZ)
W-AM-2	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	JM All Purpose Fasteners and UltraFast Plates (Square) secured at a rate of 12 per 4-ft x 8-ft board Pattern #1	JM TPO SA	Self-adhered	-30 (Lim. 7; Non-HVHZ)
W-AM-3	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	Trufast VERSA-FAST fastener and PLT-R-3 secured at a rate of 11 per 4-ft x 8-ft board	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² , LVOC MA or ASBA JM TPO FB: 2-Part UIA-C(S), TPO WBMA or ASBA	-30 (Lim. 7; Non-HVHZ)
W-AM-4	T15/32P, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	Trufast VERSA-FAST fastener or FASTENERS and PLT-R-3 secured at a rate of 11 per 4-ft x 8-ft board	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² , LVOC MA or ASBA JM TPO FB: 2-Part UIA-C(S), TPO WBMA or ASBA	-30 (Lim. 7; Non-HVHZ)
W-AM-5	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	Trufast VERSA-FAST fastener and PLT-R-3 secured at a rate of 11 per 4-ft x 8-ft board	JM TPO SA	Self-adhered	-30 (Lim. 7; Non-HVHZ)
W-AM-6	T15/32P, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	Trufast VERSA-FAST fastener or FASTENERS and PLT-R-3 secured at a rate of 11 per 4-ft x 8-ft board	JM TPO SA	Self-adhered	-30 (Lim. 7; Non-HVHZ)
W-AM-7	T7/16O, L24, N6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR	Fasteners & Plates at a rate of 1 fastener per 2-ft ²	JM TPO SA	Self-adhered	-37.5 (Lim. 7; Non-HVHZ)
W-AM-8	T7/16O, L24, N6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR	Fasteners & Plates at a rate of 1 fastener per 2-ft ²	JM TPO (Min. 60 mil) or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² , LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-37.5 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
W-AM-9	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	Fasteners & Plates secured at a rate of 1 per 2.13ft ²	JM TPO or JM TPO FB	JM TPO: MBA, TPO WBMA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S), TPO WBMA or ASBA	-37.5 (Lim. 7; Non-HVHZ)
W-AM-10	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	Fasteners & Plates secured at a rate of 1 per 2.13ft ²	JM TPO SA	Self-adhered	-37.5 (Lim. 7; Non-HVHZ)
W-AM-11	T15/32P, L24	-	-	ProtectoR HD	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-37.5 (Lim. 7; Non-HVHZ)
W-AM-12	T15/32P, L24	-	-	ProtectoR HD	RSUA applied 12-inch o.c.	JM TPO	MBA, LVOC MA, TPO WBMA or ASBA	-37.5 (Lim. 7; Non-HVHZ)
W-AM-13	T15/32P, L24	-	-	ProtectoR HD	RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-37.5 (Lim. 7; Non-HVHZ)
W-AM-14	19/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	DF, TF or UF secured 1 fastener per 4ft ²	JM TPO or JM TPO FB	JM TPO: MBA, TPO WBMA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-37.5 (Lim. 7; Non-HVHZ)
W-AM-15	19/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	DF, TF or UF secured 1 fastener per 4ft ²	JM TPO SA	Self-adhered	-37.5 (Lim. 7; Non-HVHZ)
W-AM-16	T7/16O, L24	-	-	ProtectoR HD	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA, TPO WBMA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S), TPO WBMA or ASBA	-45 (Lim. 7; Non-HVHZ)
W-AM-17	T7/16O, L24	-	-	ProtectoR HD	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
W-AM-18	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	JM All Purpose Fasteners and UltraFast Plates (Square) secured at a rate of 15 per 4-ft x 8-ft board	JM TPO or JM TPO FB	JM TPO: MBA, TPO WBMA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S), TPO WBMA or ASBA	-45 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
W-AM-19	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	JM All Purpose Fasteners and UltraFast Plates (Square) secured at a rate of 15 per 4-ft x 8-ft board	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
W-AM-20	19/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 1.5-inch E3 (no AGF) or E3 C1	DF or TF secured 12 per 4-ft x 8-ft board Pattern #1	JM TPO or JM TPO FB	JM TPO: MBA, TPO WBMA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
W-AM-21	19/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	DF or TF secured 12 per 4-ft x 8-ft board Pattern #1	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
W-AM-22	T15/32P, L24, N6	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	Trufast VERSA-FAST fastener or FASTENERS and PLT-R-3 secured at a rate of 18 per 4-ft x 8-ft board Pattern #3	JM TPO or JM TPO FB	JM TPO: MBA, TPO WBMA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S), TPO WBMA or ASBA	-45 (Lim. 7)
W-AM-23	T15/32P, L24, N6	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	Trufast VERSA-FAST fastener or FASTENERS and PLT-R-3 secured at a rate of 18 per 4-ft x 8-ft board Pattern #3	JM TPO SA	Self-adhered	-45 (Lim. 7)
W-AM-24	T19/32P, L24, N6	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	FASTENERS (no UltraFast Fastener) with UltraFast Plates (Square) secured at a rate of 18 per 4-ft x 8-ft board Pattern #1	JM TPO or JM TPO FB	JM TPO: MBA, TPO WBMA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-60 (Lim. 7)
W-AM-25	T19/32P, L24, N6	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	FASTENERS (no UltraFast Fastener) with UltraFast Plates (Square) secured at a rate of 18 per 4-ft x 8-ft board Pattern #1	JM TPO SA	Self-adhered	-60 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Wood Deck (New or Existing)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-M-1	T19/32P, L24	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 4-inch o.c. with JM APB Plates and High Load Fasteners; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
W-M-2	T7/16O, L24	As required	Min. 0.5-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with VERSA-FAST at a rate of 4 Fasteners/Plate; Fastener rows max. 138-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
W-M-3	T19/32P, L24, N6	As required	Min. 0.5-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with VERSA-FAST at a rate of 3 Fasteners/Plate; Fastener rows max. 138-inch o.c.	-52.5 (Lim. 7)
W-M-4	T19/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 54-inch o.c.	-60 (Lim. 7)

Induction Welded Assemblies over Wood Deck (New or Existing)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-W-1	T7/16O or T15/32P, L24	As required	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	JM All Purpose Fasteners (min. 1-inch embedment into wood supports) and JM TPO Rhino Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 12-inch o.c. through sheathing into wood structural supports in row max. 8-ft o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-37.5 (Lim. 7; Non-HVHZ)
W-W-2	T7/16O or T15/32P, L24	As required	OPTIONAL INSULATION	Loose laid	ProtectoR	JM All Purpose Fasteners (min. 1-inch embedment into wood supports) and JM TPO Rhino Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 48-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-37.5 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Wood Deck (New or Existing)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-W-3	T15/32P, L24	As required	Min. 0.5-inch INSULATION	Loose laid	OPTIONAL Cover Board	Trufast VERSA-FAST or FASTENERS and JM TPO Rhino Plates secured at a rate of 1 fastener per 4ft ²	JM TPO (Min. 60 mil)	Induction welded to weld plates	-37.5 (Lim. 7; Non-HVHZ)
W-W-4	T19/32P, L24	As required	Min. 0.5-inch INSULATION	Loose laid	OPTIONAL Cover Board	IW secured at a rate of 1 fastener per 4ft ²	JM TPO (Min. 60 mil)	Induction welded to weld plates	-37.5 (Lim. 7; Non-HVHZ)
W-W-5	T7/160 or T15/32P, L24	As required	Min. 1-inch E3 or E3 C1	Loose laid	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM TPO Rhino Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 48-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7; Non-HVHZ)
W-W-6	T7/160 or T15/32P, L24	As required	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.75-inch embedment into wood supports) and JM TPO Rhino Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 18-inch o.c. through sheathing into wood structural supports in row max. 4-ft o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7; Non-HVHZ)
W-W-7	T15/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM TPO Rhino Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 24-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-52.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Wood Deck (New or Existing)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-W-8	T15/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM TPO Rhino Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 9-inch o.c. through sheathing into wood structural supports in rows max. 48" o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-60 (Lim. 7)
W-W-9	T15/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM TPO Rhino Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 6-inch o.c. through sheathing into wood structural supports in rows max. 48" o.c.	JM TPO (Min. 60 mil)	Induction welded to weld plates	-112.5 (Lim. 7)

END OF REPORT