



EVALUATION REPORT

FLORIDA BUILDING CODE, 7TH EDITION (2020)

Manufacturer: JOHNS MANVILLE CORPORATION
 P.O. Box 5108
 Denver, CO 80217
 (303) 978-2478
www.jm.com

Issued February 12, 2021

Manufacturing Plants: Southgate, CA
 Oklahoma City, OK
 Macon, GA

Quality Assurance: UL LLC (QUA9625)

SCOPE

Category: Roofing
Subcategory: Modified Bitumen Roof System
Code Edition: Florida Building Code, 7th Edition (2020) including High-Velocity Hurricane Zones (HVHZ)
Code Sections: 1504.3.1, 1504.6, 1507.2.9.2, 1507.10.2, 1507.11.2, 1515.1.1, 1515.1.4, 1523.1.1, 1523.6.2
Properties: Wind Resistance, Physical Properties

PRODUCT DESCRIPTION

Products	Specification	Description
JM APP Base	ASTM D 6509	APP modified asphalt, fiberglass reinforced, smooth surfaced base sheet.
APPeX 4S	ASTM D 6222	APP modified asphalt, polyester reinforced, smooth surfaced membrane for use as a Base or Ply sheet only.
APPeX 4S Embossed	ASTM D 6222	APP modified asphalt, polyester reinforced, smooth surfaced membrane for use as a Base or Ply sheet only.
APPeX 4.5 M	ASTM D 6222	APP modified asphalt, polyester reinforced, mineral surfaced membrane.
APPeX4.5 M FR	ASTM D 6222	APP modified asphalt, polyester reinforced, fire-retardant, mineral surfaced membrane.
DynaBase HW	ASTM D 6163	A glass reinforced SBS modified bitumen base sheet for heat welded applications.
DynaFast 180 HW	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaFast 180 S	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaFast 250 HW	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaWeld 250 S	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
GlasBase Plus	ASTM D 4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
GlasPly IV	ASTM D 2178	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
GlasPly Premier	ASTM D 2178	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
PermaPly 28	ASTM D 4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Tricor M FR	ASTM D 6223	APP modified asphalt, polyester/glass reinforced, granule surfaced membrane.

Products	Specification	Description
Tricor M FR CR	ASTM D 6223	APP modified asphalt, polyester/glass reinforced, coated granule surfaced membrane.
Tricor S	ASTM D 6223	APP modified asphalt, polyester/glass reinforced, smooth surfaced membrane for use as a Base or Ply sheet only.
Ventsulation Felt	ASTM D 4897	Heavy duty fiber glass base sheet impregnated and coated on both sides with asphalt with or without fine mineral stabilizer. Surfaced on the bottom side with coarse mineral granules embedded in asphaltic coating.

REFERENCES

<u>Entity</u>	<u>Report No.</u>	<u>Standards (Year)</u>
FM Approvals (TST1867)	0V7A4.AM	FM 4470 (2016)
FM Approvals (TST1867)	0W6A2.AM	FM 4470 (2016)
FM Approvals (TST1867)	0X0A9.AM	FM 4470 (2016)
FM Approvals (TST1867)	0X7A4.AM	FM 4470 (2016)
FM Approvals (TST1867)	3001482	FM 4470 (2016)
FM Approvals (TST1867)	3002823	FM 4470 (2016)
FM Approvals (TST1867)	3003468	FM 4470 (2016)
FM Approvals (TST1867)	3007148	FM 4470 (2016)
FM Approvals (TST1867)	3009499	FM 4470 (2016)
FM Approvals (TST1867)	3011248	FM 4470 (2016)
FM Approvals (TST1867)	3012974	FM 4470 (2016)
FM Approvals (TST1867)	3037540	FM 4470 (2016)
FM Approvals (TST1867)	3043824	FM 4470 (2016)
FM Approvals (TST1867)	3052113	FM 4470 (2016)
FM Approvals (TST1867)	3056303	FM 4470 (2016)
FM Approvals (TST1867)	3063554	FM 4470 (2016)
FM Approvals (TST1867)	PR453769	FM 4470 (2016)
Nemojetc. (TST6049)	4a-CEL-19-LSWUS-01.C	FM 4474 (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-030-02-01	TAS 110 (2000) ASTM D 5147 (2014) ASTM D 6222 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-030-02-02	TAS 110 (2000) ASTM D 5147 (2014) ASTM D 6222 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-030-02-03	TAS 110 (2000) ASTM D 5147 (2014) ASTM D 6222 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-053-02-01	ASTM D 5147 (2014) ASTM D 6222 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-054-02-01	ASTM D 5147 (2014) ASTM D 6223 (2002(2009)E1)
PRI Construction Materials Technologies (TST5878)	JMC-055-02-01	ASTM D 6509 (2009(2015))
PRI Construction Materials Technologies (TST5878)	JMC-070-02-01	ASTM D 2178 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-071-02-01	ASTM D 2178 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-072-02-02	ASTM D 4601 (2004(2012)E1)
PRI Construction Materials Technologies (TST5878)	JMC-074-02-01	ASTM D 4897 (2001(2009))
PRI Construction Materials Technologies (TST5878)	JMC-075-02-04.2	TAS 110 (2000) ASTM D 6164 (2011) ASTM G 155 (2013)
PRI Construction Materials Technologies (TST5878)	JMC-093-02-01	ASTM D 4601 (2004(2012)E1)
PRI Construction Materials Technologies (TST5878)	JMC-106-02-01	ASTM D 6164 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-107-02-01 Rev 6	ASTM D 903 (1998(2010)) ASTM D 1876 (2008(2015)e1) ASTM D 5147 (2014) TAS 117(A & B) (1995) TAS 114(C) (1995)

<u>Entity</u>	<u>Report No.</u>	<u>Standards (Year)</u>
PRI Construction Materials Technologies (TST5878)	JMC-108-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-113-02-01	ASTM D 6164 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-114-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-118-02-02	FM 4474 (C) (2011) TAS 114 (C) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-126-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-131-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-132-02-01	FM 4474 (B) (2011) TAS 114 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-141-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-167-02-01	FM 4474 (C) (2011) TAS 114 (C) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-168-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-222-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-222-02-02	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-222-02-04	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-242-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-245-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011) UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-267-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011) UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-272-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011) UL 1897 (2012)
Trinity ERD (TST6049)	02843.02.05-10	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	10390A-10.97-1	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	10390A-12.97-1	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	10391.01.03	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	4361-2.04.97-1	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	J34190.03.11	TAS 114 (J) (2011) FM 4474 (2011)
Trinity ERD (TST6049)	J45020.05.13-1	TAS 114 (C) (1995)
Trinity ERD (TST6049)	J5260.03.07	TAS 114 (J) (2011) FM 4474 (2011)
Trinity ERD (TST6049)	JM-11190.03.16	FM 4474 (D) (2011) TAS 114 (J) (2011)

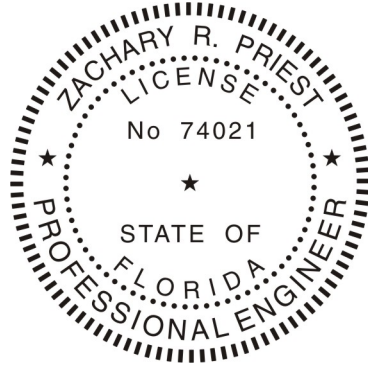


LIMITATIONS

1. Fire classification is not within the scope of this evaluation.
2. 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 scope of this evaluation.
3. Foam plastic insulation shall be installed in accordance with the FBC Section 2603.4 and 2603.6.
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.



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 (2 pages)
- 2) [APPENDIX B](#) – Nomenclature and Approved Assemblies (10 pages)

INSTALLATION

Note - Refer to the [APPROVED ASSEMBLIES](#) section of this report within Appendix B 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
Fastening Systems	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 High Load Plates	2 3/8-inch diameter; Galvalume steel plate with eyehooks
	JM High Load Fastener	#15 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	JM Lightweight Concrete (LWC) CR Base Sheet Fastener	Min. 1.7-inch shank; Pre-Assembled with 2.7-inch galvalume coated steel plate. Full embedment of shank into substrate
	JM Polymer Membrane Batten	Membrane anchors and plastic strips
	JM Structural Concrete Deck Fasteners	Hammer-in fasteners; Min. 1-inch penetration into concrete deck
	JM UltraFast Fastener #12 Hex Head	#12 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	JM UltraFast 3" Round Metal Plate	3-inch diameter round; Galvalume steel plate
	JM UltraFast Square Metal Plate	3-inch square; Galvalume steel plate
	Trufast Deep Well Coiled Batten Bar	Galvalume steel membrane batten with recessed holes
	OMG 3" Round Metal Plate	3-inch diameter round; Galvalume steel plate
	Trufast Twin Loc-Nail Batten Fastener	Min. 1.8" length base sheet fastener for use with Twin Loc Coiled Batten Bar
	Trufast Twin Lock Coiled Batten Bar	1" x 100' pre-punched oval coil metal batten bar
	TRUFAST VERSA-FAST Fastener	Min. 2 1/4-inch embedment into; for LWIC or Gypsum decks
TRUFAST VERSA-FAST Metal Plate	3-inch diameter; 0.017-inch thick Galvalume steel plate with one (1) center hole and eight (8) equally spaced perimeter holes for multiple fastening	
Insulation Adhesives	ASTM D 312, Type IV Asphalt	Fully adhered within the EVT range at a rate of 20-40 lbs/100 ft ²
	JM Two Part Urethane Insulation Adhesive or JM Two-Part UIA	Ribbon adhered in 3/4 to 1-inch wide beads
	JM Two-Part Urethane Adhesive Canister or JM Two-Part UIA Canister	
	JM One-Step Foamable Adhesive	Ribbon adhered in 3/4 to 1-inch wide beads
	JM Roofing System Urethane Adhesive	Ribbon adhered in 3/4-inch wide beads
Membrane Adhesives	ASTM D 312, Type IV Asphalt	Fully adhered within the EVT range at a rate of 20-40 lbs/100 ft ²
Insulation/Cover Boards	Blue Ridge Fiber Board Strucktodek® High-Density Fiber Board Roof Insulation	Min. 1/2-inch thick; Adhered boards shall be a maximum 4-ft x 4-ft
	JM ENRGY 3 and tapered	Min. 1/2-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4-ft x 4-ft
	JM ENRGY 3 AGF and tapered	
	JM ENRGY 3 CGF and tapered	
	JM ENRGY 3 FR and tapered	Min. 1/2-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4-ft x 4-ft
	JM DuraBoard	Min. 1/2-inch thick; Adhered boards shall be a maximum 4-ft x 4-ft
	JM Retro-Fit Board	
	JM Fesco Board	Min. 3/4-inch thick
JM DuraFoam	Min. 1.5-inch thick; Adhered boards shall be a maximum 4-ft x 4-ft	
JM FescoFoam		



Component	Product	Installation Detail
Insulation/Cover Boards (Cont'd)	JM SECUROCK Gypsum-Fiber Roof Board	Min. 1/4-inch thick
Base/Ply Sheets	JM APP Base	Min. 4-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
	APPeX 4S	
	APPeX 4S Embossed	
	Tricor S	
	DynaFast 180 HW	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
	DynaFast 180 S	
	DynaFast 250 HW	
	DynaWeld 250 S	
	GlasBase Plus	
	GlasPly IV	
	GlasPly Premier	
	PermaPly 28	
Ventsulation Felt		
Cap Sheets	APPeX 4.5 M	Min. 4-inch wide side-laps; Min. 6-inch end laps
	APPeX 4.5 M FR	
	Tricor M FR	
	Tricor M FR CR	
Cellular Lightweight Concrete	Celcore MF with HS Rheology Admixture	Slurry coat min. 1/4-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
	Celcore S-1	Steel deck is treated by applying a continuous film with a broom prior to placement of the Celcore lightweight concrete
	Elastizell	Slurry coat min. 1/8-inch thick; Min. 1-inch thick EPS board (1 lbs/ft ³); Min. 2-inch top coat;
	Cellular Lightweight Concrete	
Vapor Barrier	DynaBase HW	Min. 3-inch wide side-laps; Min. 6-inch end laps; Torch adhered to primed concrete deck
	JM APP Base	Min. 4-inch wide side-laps; Min. 6-inch end laps; Torch adhered to primed concrete deck

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](#) and [INSTALLATION](#) section of this report.

Name	Definition		
<i>2-Part UIA</i>	JM Two-Part Urethane Insulation Adhesive, JM Two-Part UIA, JM Two-Part Urethane Adhesive Canister, or JM Two-Part UIA Canister		
<i>AP Fasteners & Plates</i>	All Purpose Fastener or Structural Concrete Deck Fastener (concrete only) and UltraFast 3" Round Metal Plate or UltraFast Square Recessed Metal Plate		
<i>APB Fasteners & Plates</i>	JM APB Plates and JM High Load Fasteners		
<i>APPex 4S</i>	One or more plies of APPeX 4S or APPeX 4S Embossed fully bonded by torch adhering		
<i>As Tested</i>	Information provided to the report user based on the as tested condition of the roof system		
<i>Asphalt</i>	ASTM D 312, Type IV asphalt, concrete deck shall be primed with ASTM D 41 primer prior to application		
<i>Batten Bar</i>	High Load LH and Polymer Membrane Batten or High Load Fastener and Trufast Deep Well Coiled Batten Bar		
<i>Deck Detail</i>	All decks shall be designed by others in accordance with FBC requirements. As Tested deck construction details are described as follows:		
	<i>Concrete Deck</i>	Min. $f_c = 2,500$ psi at 28 days	
	<i>Steel Deck</i>	Min. 22 ga, ($F_y = 40$ ksi) Wide Rib Deck (Type WR) conforming to ANSI/SDI-RD1.0 & FBC; 0.5% Vented for LWIC applications only. The following nomenclature is used to further describe the As Tested condition:	
		<i>F<#></i>	Number <#> #12-24 HWH self-drilling screws or equivalent fastener at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration
		<i>G<#></i>	Min. Grade <#> of Steel Deck
		<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>W</i>	3/4-inch O.D. flat washer used with indicated fastener	
	<i>Wood Deck</i>	The following nomenclature is used to further describe the As Tested condition:	
		<i>T<#></i>	Min. <#>-inch thickness of the plywood or wood plank
		<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>#8-<#1>/<#2></i>	#8 x 2-inch wood screws; Secured <#1>-inch o.c. at all intermediate supports and <#2> -o.c. at the perimeter of each board		
<i>DynaFast 1</i>	One ply of DynaFast 180 HW or DynaFast 250 HW mechanically attached as prescribed per the approved assembly		
<i>DynaFast 2</i>	One ply of DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW mechanically attached as prescribed per the approved assembly		
<i>E3</i>	JM ENRGY 3, JM ENRGY 3 AGF, or JM ENRGY 3 CGF. JM ENRGY 3 FR permitted to be used in systems as loose fill layer only.		
<i>FB</i>	One or more plies of PermaPly 28, GlasBase Plus or Ventsulation Felt preliminarily fastened below Base Sheet as a Fire Barrier		



Name	Definition
<i>HA BUR Base</i>	One ply of PermaPly 28 or GlasBase Plus fully bonded in ASTM D 312, Type IV Asphalt
<i>HA BUR Base 2</i>	One ply of PermaPly 28, GlasBase Plus, GlasPly Premier or GlasPly IV fully bonded in ASTM D 312, Type IV Asphalt
<i>HA BUR Ply</i>	One or more plies of GlasPly IV or GlasPly Premier fully bonded in ASTM D 312, Type IV Asphalt
<i>HL Fasteners & Plates</i>	JM High Load Fasteners (steel or wood deck only) or JM All Purpose Fasteners (concrete deck only) and JM High Load Plates
<i>LWIC</i>	Poured-in-place Cellular Lightweight Concrete with encapsulated insulation board
<i>MA Base</i>	Two or more plies of PermaPly 28 or Ventsulation Felt mechanically attached as prescribed per the approved assembly
<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
<i>OSFA</i>	JM One-Step Foamable Adhesive
<i>Preliminarily Secured</i>	Fastened at minimum rate of four (4) fasteners per 4-ft x 8-ft board or two (2) fasteners per 4-ft x 4-ft 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, i.e. systems x-M-#, 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>RSUA</i>	JM Roofing System Urethane Adhesive
<i>SECUROCK</i>	Min. 1/4-inch JM SECUROCK Gypsum-Fiber Roof Board
<i>Structodek HD</i>	Min. 1/2-inch Blue Ridge Fiber Board Structodek® High-Density Fiber Board Roof Insulation
<i>TA APP Cap</i>	One ply of APPeX 4.5 M or APPeX4.5 M FR fully bonded by torch adhering
<i>TA APP Cap 2</i>	One ply of APPeX 4.5 M, APPeX4.5 M FR, Tricor M FR or Tricor M FR CR fully bonded by torch adhering
<i>TA APP Ply</i>	One or more plies of JM APP Base, APPeX 4S, or APPeX 4S Embossed fully bonded by torch adhering
<i>TA APP Ply 2</i>	One or more plies of APPeX 4S, APPeX 4S Embossed, or Tricor S fully bonded by torch adhering
<i>TA APP Ply 3</i>	One or more plies of JM APP Base, APPeX 4S, APPeX 4S Embossed, or Tricor S fully bonded by torch adhering
<i>TA SBS Ply</i>	One or more plies of DynaFast 180 HW, DynaFast 250 HW or DynaWeld 250 S fully bonded by torch adhering
<i>TA VB</i>	One ply DynaBase HW torched adhered over concrete deck prepared with ASTM D 41 primer
<i>TA VB 2</i>	One JM APP Base torched adhered over concrete deck prepared with ASTM D 41 primer
<i>UF Fasteners & Plates</i>	UltraFast Fastener with UltraFast 3" Round Metal Plate or UltraFast Square Metal Plate
<i>UF Fasteners & Plates (Square)</i>	UltraFast Fastener with UltraFast Square Metal Plate

APPROVED ASSEMBLIES

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

1. MDPs were calculated using a 2:1 margin of safety per FBC Section 1504.9 and 1523.4.
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. 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.
6. Prior to application of the approved assembly an optional vapor barrier, such as 4-6 mil polyethylene or JM Vapor Barrier SA, JM, Vapor Barrier SAR, DynaGrip Base SD/SA or DynaBase HW adhered to SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime, or DEXcell FA Glass Mat Roof Board may be installed over concrete or steel decks when the approved assembly contains insulation or the membrane fastened through to the deck.

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

Assemblies with All Layers Adhered over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation	Top Insulation	Base Sheet	Ply Sheet	Cap Sheet	MDP (psf)
C-A-1	-	Min. 1.5-inch E3, FescoFoam or DuraFoam fully adhered in <i>Asphalt</i>	DuraBoard fully adhered in <i>Asphalt</i>	TA APP Ply	OPTIONAL TA APP Ply	TA APP Cap	-67.5 (Lim. 9)
C-A-2	-	Min. 1.5-inch E3 fully adhered in <i>Asphalt</i>	DuraBoard or FescoBoard fully adhered in <i>Asphalt</i>	PermaPly 28 fully bonded in <i>Asphalt</i> (OPTIONAL with HA BUR Ply)	OPTIONAL TA APP Ply or HA BUR Ply	TA APP Cap	-120 (Lim. 9)
C-A-3	-	Retro-Fit Board, DuraBoard, Fesco Board, or min. 1.5-inch E3, FescoFoam or DuraFoam fully adhered in <i>Asphalt</i>	-	PermaPly 28 fully bonded in <i>Asphalt</i>	OPTIONAL TA APP Ply	TA APP Cap	-150 (Lim. 9)
C-A-4	-	Min. 1.5-inch ENRGY 3 secured with RSUA ribbons spaced 12-inch o.c.	DensDeck Prime secured with RSUA ribbons spaced 12-inch o.c.	JM APP Base torch adhered	OPTIONAL APPeX 4S	TA APP Cap	-195 (Lim. 9)
C-A-5	-	Min. 2-inch ENRGY 3 secured in 2-Part UIA or OSFA spaced 12-inch o.c.	SECUROCK secured with 2-Part UIA or OSFA ribbons spaced 12-inch o.c.	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-232.5 (Lim. 9)



Assemblies with All Layers Adhered over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation	Top Insulation	Base Sheet	Ply Sheet	Cap Sheet	MDP (psf)
C-A-6	TA VB	Min. 1.5-inch ENRGY 3 secured in RSUA spaced 12-inch o.c.	SECUROCK primed with ASTM D 41 primer secured with RSUA ribbons spaced 12-inch o.c.	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-245 (Lim. 9)
C-A-7	-	Min. 1.5-inch ENRGY 3 CGF fully adhered in Asphalt	DuraBoard fully adhered in Asphalt	PermaPly 28 fully bonded in ASTM D 312 Type IV Asphalt	OPTIONAL TA APP Ply	TA APP Cap	-277.5 (Lim. 9)
C-A-8	TA VB	Min. 1.5-inch ENRGY 3 CGF secured in RSUA spaced 12-inch o.c.	SECUROCK primed with ASTM D 41 primer secured with RSUA ribbons spaced 12-inch o.c.	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-292.5 (Lim. 9)
C-A-9	-	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF or FescoFoam fully adhered in Asphalt	DuraBoard fully adhered in Asphalt	PermaPly 28 fully bonded in Asphalt	OPTIONAL TA APP Ply	TA APP Cap	-305 (Lim. 9)
C-A-10	-	-	-	PermaPly 28 fully bonded in Asphalt	OPTIONAL TA APP Ply	TA APP Cap	-305 (Lim. 9)
C-A-11	-	-	-	TA APP Ply	OPTIONAL TA APP Ply	TA APP Cap	-315 (Lim. 9)

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Sheet	Ply Sheet	Cap Sheet	MDP (psf)
C-AM-1	Min. 1.5-inch E3, FescoFoam or DuraFoam	AP Fasteners & Plates secured at a rate of 1 fastener per 2 ft ²	Retro-Fit Board, DuraBoard, Structodek HD, or Fesco Board	Asphalt	PermaPly 28 fully bonded in Asphalt	OPTIONAL TA APP Ply	TA APP Cap	-45 (Lim. 7)
C-AM-2	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	TA APP Ply 3	OPTIONAL TA APP Ply 3	TA APP Cap 2	-45 (Non-HVHZ; Lim. 7)
C-AM-3	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	TA APP Ply 3	OPTIONAL TA APP Ply 3	TA APP Cap 2	-45 (Non-HVHZ; Lim. 7)
C-AM-4	Min. 1.5-inch E3, FescoFoam or DuraFoam	AP Fasteners & Plates secured at a rate of 1 fastener per 1.33 ft ²	Retro-Fit Board, DuraBoard, Structodek HD, or Fesco Board	Asphalt	PermaPly 28 fully bonded in Asphalt	OPTIONAL TA APP Ply	TA APP Cap	-52.5 (Lim. 7)
C-AM-5	OPTIONAL Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 3/4-inch DuraBoard	AP Fasteners & Plates secured at a rate of 1 per 1.33 ft ²	TA APP Ply	-	TA APP Cap	-67.5 (Lim. 7)



Assemblies with Adhered Membranes over Insulated <i>Concrete Deck</i> (New, Existing, or Recover)								
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Sheet	Ply Sheet	Cap Sheet	MDP (psf)
C-AM-6	OPTIONAL Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 3/4-inch DuraBoard	AP Fasteners & Plates secured at a rate of 1 per 1.33 ft ²	TA APP Ply	-	TA APP Cap	-75 (Lim. 7)
C-AM-7	Min. 2-inch E3	AP Fasteners & Plates secured at a rate of 1 per 1.45 ft ²	Min. 1/2-inch Retro-Fit Board or DuraBoard	Asphalt	3 plies HA BUR Ply	-	TA APP Cap	-75 (Lim. 7)

Mechanically Fastened Assemblies over <i>Concrete Deck</i> (New, Existing, or Recover)							
System No.	Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)	
C-M-1	OPTIONAL Retro-Fit Board DuraBoard, Fesco Board, or Min. 1.5-inch E3, FescoFoam or DuraFoam <i>Preliminarily Secured</i>	MA Base	AP Fasteners & Plates spaced 9-inch o.c. in the 4-inch lap and 12-inch o.c. in two rows staggered in field of the sheet	OPTIONAL TA APP Ply	TA APP Cap	-52.5 (Lim. 7)	
C-M-2	Retro-Fit Board DuraBoard, Fesco Board, or Min. 1.5-inch E3, FescoFoam or DuraFoam <i>Preliminarily Secured</i>	GlasBase Plus	AP Fasteners & Plates spaced 9-inch o.c. in the 4-inch lap and 12-inch o.c. in two rows staggered in field of the sheet	OPTIONAL TA APP Ply	TA APP Cap	-97.5 (Lim. 7)	

Mechanically Fastened Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New or Existing)							
System No.	Vapor Barrier	LWIC	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LC-M-1	-	Min. 300 psi <i>Existing</i> Cellular Lightweight Concrete (MCRF ≥ 83lbf)	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 3-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	TA APP Cap 2	-37.5 (Lim. 7; Non-HVHZ)
LC-M-2	-	Min. 400 psi Celcore MF with HS Rheology Admixture	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 12-inch o.c. in 4-inch lap and 12-inch o.c. in three (3) equally spaced, staggered rows in the field	TA APP Ply 2	TA APP Cap 2	-45 (Lim. 7)
LC-M-3	-	Min. 310 psi Elastizell with Zell-Crete Fibers	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 3-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	TA APP Cap 2	-45 (Lim. 7)
LC-M-4	OPTIONAL DynaBase HW torch applied over deck primed with ASTM D 41 primer	Min. 440 psi Celcore MF with HS Rheology Admixture	DynaFast 1	Trufast Twin Loc-Nail Batten Fastener and Trufast Twin Lock Coiled Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-52.5 (Lim. 7)



Mechanically Fastened Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New or Existing)							
System No.	Vapor Barrier	LWIC	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LC-M-5	OPTIONAL DynaBase HW torch applied over deck primed with ASTM D 41 primer	Min. 500 psi Celcore MF with HS Rheology Admixture	<i>DynaFast 1</i>	Trufast Twin Loc-Nail Batten Fastener and Trufast Twin Lock Coiled Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL <i>TA SBS Ply</i>	<i>TA APP Cap 2</i>	-60 (Lim. 7)
LC-M-6	-	Min. 440 psi Elastizell with Zell-Crete Fibers	<i>DynaFast 1</i>	<i>HL Fasteners & Plates</i> spaced 12-inch o.c within 5-inch heat welded side laps	OPTIONAL <i>TA SBS Ply</i>	<i>TA APP Cap 2</i>	-60 (Lim. 7)
LC-M-7	-	Min. 430 psi <i>Existing</i> Cellular Lightweight Concrete (<i>MCRF</i> ≥ 106lbf)	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 4-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	<i>TA SBS Ply</i>	<i>TA APP Cap 2</i>	-67.5 (Lim. 7)
LC-M-8	-	Min. 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 3-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	<i>TA SBS Ply</i>	<i>TA APP Cap 2</i>	-67.5 (Lim. 7)
LC-M-9	-	Min. 350 psi Celcore MF with HS Rheology Admixture	<i>DynaFast 1</i>	(4) 2.25" VERSA-FAST Fasteners installed in each VERSA-FAST Metal Plate; Plates spaced 10-inch o.c. within the 5-inch wide, torched adhered side laps	OPTIONAL <i>TA SBS Ply</i>	<i>TA APP Cap 2</i>	-67.5 (Lim. 7)
LC-M-10	-	Min. 440 psi Elastizell with Zell-Crete Fibers	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 4-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	<i>TA SBS Ply</i>	<i>TA APP Cap 2</i>	-75 (Lim. 7)

Mechanically Fastened Lightweight Concrete Assemblies over <i>Steel Deck</i> (New or Existing)							
System No.	<i>Deck Detail</i>	LWIC	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LS-M-1	G33, L6, P, S18	Min. 300 psi <i>Existing</i> Cellular Lightweight Concrete (<i>MCRF</i> ≥ 83lbf)	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 3-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	<i>TA SBS Ply</i>	<i>TA APP Cap 2</i>	-37.5 (Lim. 7; Non-HVHZ)
LS-M-2	G33, L5, P, S12	Min. 400 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 12-inch o.c. in 4-inch lap and 12-inch o.c. in three (3) equally spaced, staggered rows in the field	<i>TA APP Ply 2</i>	<i>TA APP Cap 2</i>	-45 (Lim. 7)



Mechanically Fastened Lightweight Concrete Assemblies over <i>Steel Deck</i> (New or Existing)							
System No.	Deck Detail	LWIC	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LS-M-3	G33, L6, P, S18	Min. 310 psi Elastizell with Zell-Crete Fibers	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 3-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	TA APP Cap 2	-45 (Lim. 7)
LS-M-4	G33, L5, P, S12W	Min. 440 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	DynaFast 1	Trufast Twin Loc-Nail Batten Fastener and Trufast Twin Lock Coiled Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-52.5 (Lim. 7)
LS-M-5	G33, L5, P, S15W	Min. 500 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	DynaFast 1	Trufast Twin Loc-Nail Batten Fastener and Trufast Twin Lock Coiled Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-60 (Lim. 7)
LS-M-6	G33, L5, P, S12	Min. 440 psi Elastizell with Zell-Crete Fibers	DynaFast 1	HL Fasteners & Plates spaced 12-inch o.c within 5-inch heat welded side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-60 (Lim. 7)
LS-M-7	G33, L5, F1, S20	Min. 430 psi Existing Cellular Lightweight Concrete (MCRF ≥ 106lb)	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 4-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	TA APP Cap 2	-67.5 (Lim. 7)
LS-M-8	G33, L6, P, S18	Min. 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 3-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	TA APP Cap 2	-67.5 (Lim. 7)
LS-M-	G33, P, L6, S18	Min. 350 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	DynaFast 1	(4) 2.25" VERSA-FAST Fasteners installed in each VERSA-FAST Metal Plate; Plates spaced 10-inch o.c. within the 5-inch wide, torched adhered side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-67.5 (Lim. 7)
LS-M-9	G33, L5, P, S12	Min. 440 psi Elastizell with Zell-Crete Fibers	JM APP Base	1.7-inch Lightweight Concrete (LWC) CR Base Sheet Fastener installed 7-inch o.c. in 4-inch lap and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	TA APP Cap 2	-75 (Lim. 7)



Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
S-AM-1	G33	Min. 1.5-inch E3	UF Fasteners & Plates secured at a rate of 1 per 4.0 ft ²	Min. 1/2-inch SECUROCK	2-Part UIA spaced 12-inch o.c.	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-45 (Lim. 7; Non-HVHZ)
S-AM-2	G33	Min. 2-inch E3	UF Fasteners & Plates secured at a rate of 1 per 5.33 ft ²	Min. 1/2-inch SECUROCK	2-Part UIA spaced 12-inch o.c.	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-45 (Lim. 7; Non-HVHZ)
S-AM-3	G33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	UltraFast Metal Plate (Square) and High Load fasteners secured at a rate of 1 fastener per 5.33ft ²	JM APP Base torch adhered	OPTIONAL APPeX 4S	TA APP Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-4	G33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	JM APP Base torch adhered	OPTIONAL APPeX 4S	TA APP Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-5	L5, G33	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	TA APP Ply 3	OPTIONAL TA APP Ply 3	TA APP Cap 2	-45 (Non-HVHZ; Lim. 7)
S-AM-6	L5, G33	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	TA APP Ply 3	OPTIONAL TA APP Ply 3	TA APP Cap 2	-45 (Non-HVHZ; Lim. 7)
S-AM-7	L6, G33, F1, S30	Min. 1.5-inch E3	UF Fasteners & Plates secured at a rate of 1 per 1.78 ft ²	Min. 1/2-inch SECUROCK	2-Part UIA spaced 12-inch o.c.	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-60 (Lim. 7)
S-AM-8	L6, G33, P, S20	OPTIONAL Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	SECUROCK	UF Fasteners & Plates secured at a rate of 1 per 1.78 ft ²	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-60 (Lim. 7)
S-AM-9	L6, G33, P, S20	OPTIONAL Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime or DEXcell FA	UF Fasteners & Plates secured at a rate of 1 per 1.78 ft ²	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-60 (Lim. 7)
S-AM-10	L6, G33, F1, S30	OPTIONAL Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 3/4-inch DuraBoard	UF Fasteners & Plates secured at a rate of 1 per 1.33 ft ²	TA APP Ply	-	TA APP Cap	-67.5 (Lim. 7)



Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
S-AM-11	L6, G80, F1, S30	Min. 1.5-inch E3	UF Fasteners & Plates secured at a rate of 1 per 1.33 ft ²	Min. 1/2-inch SECUROCK	2-Part UIA spaced 12-inch o.c.	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-67.5 (Lim. 7)
S-AM-12	L6, G80, F1, S30	OPTIONAL Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 3/4-inch DuraBoard	UF Fasteners & Plates secured at a rate of 1 per 1.33 ft ²	TA APP Ply	-	TA APP Cap	-75 (Lim. 7)
S-AM-13	L6, G33, F1, S30	Min. 2-inch E3	UF Fasteners & Plates secured at a rate of 1 per 1.45 ft ²	Min. 1/2-inch Retro-Fit Board or DuraBoard	Asphalt	3 plies HA BUR Ply	-	TA APP Cap	-75 (Lim. 7)
S-AM-14	L6, G80, F1, S30	Min. 2-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch SECUROCK	JM All Purpose fasteners and OMG 3" Round Metal Plates secured at a rate of 1 per 1.78 ft ²	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-75 (Lim. 7)
S-AM-15	L6, G33, F2, S24	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch SECUROCK	UF Fasteners & Plates secured at a rate of 1 per 1.45 ft ²	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-75 (Lim. 7)
S-AM-16	L6, G33, F2, S24	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch Prime or DEXcell FA	UF Fasteners & Plates secured at a rate of 1 per 1.45 ft ²	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-75 (Lim. 7)
S-AM-17	L6, G33, F2, S24	Min. 2-inch E3	UF Fasteners & Plates secured at a rate of 1 per 1.45 ft ²	Min. 1/2-inch SECUROCK	2-Part UIA spaced 12-inch o.c.	APPeX 4S	OPTIONAL APPeX 4S	TA APP Cap	-75 (Lim. 7)

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)							
System No.	Deck Detail	Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
S-M-1	L6, G33, F1, S24	Min. 1-inch E3 Preliminarily Secured	DynaFast 1	HL Fasteners & Plates spaced 6-inch o.c. in every other lap within the 4-inch wide heat welded side laps in row spaced max. 70-inches	OPTIONAL TA SBS Ply	TA APP Cap 2	-52.5 (Lim. 7)
S-M-2	L6, G33, P	Min. 1.5-inch E3 Preliminarily Secured	DynaFast 2	HL Fasteners & Plates spaced 12-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-67.5 (Lim. 7)



Mechanically Fastened Assemblies over <i>Steel Deck (New, Existing, or Recover)</i>							
System No.	Deck Detail	Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
S-M-3	L6, G33, P	Min. 1-inch E3 Preliminarily Secured	DynaFast 2	Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps in row spaced max. 71-inches	OPTIONAL TA SBS Ply	TA APP Cap 2	-90 (Lim. 7)
S-M-4	L6, G50, P	Min. 1.5-inch E3 Preliminarily Secured	DynaFast 2	APB Fasteners & Plates or HL Fasteners & Plates spaced 6-inch o.c within 4-inch heat welded side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-105 (Lim. 7)
S-M-5	L6, G80, F1W, S24	Min. 1-inch E3 Preliminarily Secured	DynaFast 2	HL Fasteners & Plates spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-105 (Lim. 7)

Mechanically Fastened Assemblies over <i>Wood Deck (New, Existing, or Recover)</i>								
System No.	Deck Detail	Fire Barrier	Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
W-M-1	T15/32, L24, N6	-	-	MA Base	UF Fasteners & Plates (Square) spaced 9-inch o.c. in a 4-inch lap and two rows staggered in center 12-inch o.c.	OPTIONAL TA APP Ply	TA APP Cap	-52.5 (Lim. 7)
W-M-2	T19/32 (New only) or T15/32, L24, #8-6/6	OPTIONAL Any approved fire barrier	Min. 1.5-inch E3 Preliminarily Secured	DynaFast 2 above OPTIONAL FB	APB Fasteners & Plates or HL Fasteners & Plates spaced 9-inch o.c within 4-inch heat welded side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-60 (Lim. 7)
W-M-3	T19/32 (New only) or T15/32, L24, #8-6/6	OPTIONAL Any approved fire barrier	Min. 1.5-inch E3 Preliminarily Secured	DynaFast 2 above OPTIONAL FB	Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply	TA APP Cap 2	-82.5 (Lim. 7)

END OF REPORT