MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Johns Manville Corporation
717 17th Street
Denver, CO 80202

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Johns Manville Modified Bitumen Roofing Systems over Recover Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

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

This NOA renews and revises NOA No. 16-0413.23 and consists of pages 1 through 47.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Materials:	SBS
Deck Type:	Recover
Maximum Design Pressure:	See Specific Deck Type

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
JM BaseGrip SD/SA	36" x 72’	ASTM D4601	Glass reinforced, self-adhering SBS modified bitumen base sheet
DynaBase	39-3/8” x 49’2”	ASTM D 6163	A glass reinforced SBS modified bitumen base sheet.
DynaBase HW	39-3/8” x 49’2”	ASTM D 6163	A glass reinforced SBS modified bitumen base sheet for heat welded applications.
DynaBase PR	39-3/8” x 49’2”	ASTM D6164	A polyester reinforced SBS modified bitumen base sheet.
DynaBase XT	39-3/8" x 49’-2”	ASTM D 6163	A glass reinforced SBS modified bitumen base or inner ply sheet.
DynaClad	39-3/8" x 33’10”	ASTM D6298	A glass reinforced base sheet SBS modified bitumen membrane surfaced with foil.
DynaFast 180 HW	39-3/8” x 49’2”	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaFast 180 S	39-3/8” x 49’2”	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaFast 250 HW	39-3/8” x 32’10”	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaGlas	39-3/8" x 32’-10"	ASTM D6163	A glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaGlas 30 FR	39-3/8" x 32’-10”	ASTM D6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaGlas FR	39-3/8" x 32’-10”	ASTM D6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaGlas FR CR	39-3/8" x 32’-10”;	ASTM D6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating for use in heat weld applications.
DynaGlas FR CR G	39-3/8" x 32’10”	ASTM D6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules and cool roof coating.
DynaGlas FR XT	39-3/8" x 32’-10”	ASTM D6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules.

Product	Dimensions	Test Specification	Product Description
DynaGrip Base SD/SA	39-3/8" x 65'-7"	ASTM D4601	Glass reinforced, self-adhering SBS modified bitumen base sheet
DynaKap FR T1	39-3/8" x 32'-10"	ASTM D6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaKap FR T1 CR G	39-3/8" x 32'10"	ASTM D6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules and cool roof coating.
DynaKap FR T1 HW CR G	39-3/8" x 32'10"	ASTM D6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules with cool roof coating for use in heat weld applications.
DynaLastic 180	39-3/8" x 32'-10"	ASTM D6164	A polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 180 FR	39-3/8" x 32'-10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 180 FR CR	39-3/8" x 32'-10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 180 FR CR G	39-3/8" x 32'10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules and cool roof coating.
DynaLastic 180 S	39-3/8" x 32'10"	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaLastic 250 FR	39-3/8" x 32'-10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 250 FR CR	39-3/8" x 32'-10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating.
DynaLastic 250 FR CR G	39-3/8" x 32'10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules, cool roof coating and a reflective white coating.
DynaLastic 250 S	39-3/8" x 32'-10"	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaMax FR	39-3/8" x 32'-10"	ASTM D6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaMax FR CR	39-3/8" x 32'-10"	ASTM D6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaMax FR Plus	39-3/8" x 32'-10"	ASTM D6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaMax FR HW	39-3/8" x 32'-10"	ASTM D6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.

Product	Dimensions	Test Specification	Product Description
DynaMax FR HW CR	39-3/8" x 32'-10"	ASTM D6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaMax S	39-3/8" x 32'-10"	ASTM D6162	A composite reinforced SBS modified bitumen base or inner ply sheet.
DynaPly T1	39-3/8" x 32'-10"	ASTM D6162	A composite reinforced SBS modified bitumen base or inner ply sheet.
DynaWeld 180 S	39-3/8" x 32'-10"	ASTM D6162	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaWeld 250 S	39-3/8" x 32'-10"	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaWeld Base	39'-3/8" x 32'-10"	ASTM D6163	A glass reinforced SBS modified bitumen base sheet for heat welded applications.
DynaWeld Cap	39'-3/8" x 32'-10"	ASTM D6163	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 180 FR	39-3/8" x 32'-10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 180 FR CR	39-3/8" x 32'-10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 250	39-3/8" x 32'-10"	ASTM D6164	A polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 250 FR	39-3/8" x 32'-10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 250 FR CR	39-3/8" x 32'-10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating for use in heat weld applications.
DynaWeld Cap 250 FR CR G	39-3/8" x 32'10"	ASTM D6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules, cool roof coating and a reflective white coating for use in heat weld applications.
DynaWeld Cap FR	39'-3/8" x 32'-10"	ASTM D6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap FR CR	39'-3/8" x 32'-10"	ASTM D6163	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating for use in heat weld applications.

Product	Dimensions	Test Specification	Product Description
DynaWeld Cap FR CR G	39-3/8" x 32'10"	ASTM D6163	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules, cool roof coating and a white reflective coating for use in heat weld applications.
DynaWeld Cap FR XT	39-3/8" x 32'10"	ASTM D6163	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
GlasBase Plus	36" x 108'	ASTM D4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
GlasKap	36" x 36'	ASTM D3909	A mineral surfaced, asphalt coated, fiberglass cap sheet.
GlasKap Plus	36" x 36'	ASTM D3909	A mineral surfaced, asphalt coated, fiberglass cap sheet.
GlasPly IV	36" x 180'	ASTM D2178	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
GlasPly Premier	36" x 180'	ASTM D2178	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
PermaPly 28	36" x 106'	ASTM D4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Ventsulation Felt	36" x 36'	ASTM D4897	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.
MBR Bonding Adhesive	N/A	proprietary	A two-component urethane cold application adhesive.
MBR Cold Application Adhesive	5, 55, and 350 gal.	ASTM D3019 Type III	One-part, elastomeric cold application adhesive
JM Roofing System Urethane Adhesive	Various	Proprietary	A two-component, cold-applied adhesive
JM Two Part Urethane Insulation Adhesive	Various	Proprietary	A two-component, cold-applied adhesive
One-Step Foamable Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive
Bestile Industrial Roof Cement	various	ASTM D4586 Type I	A trowel grade, cutback bitumen flashing grade cement mixture including inorganic fibers and mineral stabilizers.
USII RetroDrain	various	N/A	One piece, aluminum fabricated drain for retro-fit applications.
Hercules RetroDrain	various	N/A	Cast aluminum, heavy-duty drain for retro-fit applications.

Product	Dimensions	Test Specification	Product Description
DynaTred & DynaTred Plus Roof Walkway	various	N/A	Preformed, skid-resistant boards.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI,	Polyisocyanurate Insulation.	Johns Manville
ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI	Isocyanurate Insulation with glass reinforced facers	Johns Manville
ENRGY 3 FR, ENRGY 3 FR 25 PSI	Isocyanurate Insulation with inorganic coated glass reinforced facers; bottom face is premium coated for combustible decks.	Johns Manville
Fesco Foam, DuraFoam	Polyisocyanurate Insulation with perlite facer	Johns Manville
Invinsa Roof Board	High density polyisocyanurate board	Johns Manville
JM SECUROCK Gypsum-Fiber Roof Board	Rigid, gypsum-based board stock	Johns Manville

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	UltraFast Fastener	Insulation fastener for wood and steel or Concrete.	#12 x 8" Max. Length, #3 Phillips head	Johns Manville
2.	UltraFast 3" Round Metal Plate or UltraFast Square Metal Plate	Galvalume AZ55 steel plate	3" round & 3" square	Johns Manville
3.	Lightweight Concrete (LWC) CR Base Fastener	Galvanized double spreading leg fastener for securing base sheets to lightweight insulating concrete.	1.2" or 1.7" leg length; 2.7" dia. Plate	Johns Manville
4.	High Load Fasteners	Insulation and membrane fastener for steel, wood or concrete.	#15 x 14" Max. Length #3 Phillips head	Johns Manville
5.	Structural Concrete Deck Fasteners	Insulation fastener for concrete decks.	Various	Johns Manville
6.	High Load Plate	Steel Seam plate with reinforcing ribs and eyehooks	2-3/8" round	Johns Manville
7.	High Load LH	#15 Large Head fastener for steel, wood, or concrete.	#15 x 14" max. #3 Phillips head	Johns Manville
8.	Polymer Membrane Batten	Membrane anchors plastic strips.	1" x250' coil	Johns Manville
9.	APB Plates	2" round steel membrane plates	2" round	Johns Manville
10.	Trufast Deep Well Coiled Batten Bar	Galvalume coated steel membrane batten.	1" x 100' coil	Altenloh, Brink & Co. U.S., Inc.
11.	Trufast Twin Loc-Nail Batten Fastener	Base sheet fastener *with and without* integrated Plate.	2.7" dia. Plate	Altenloh, Brink & Co. U.S., Inc.
12.	Trufast Twin-Loc Coiled Batten Bar	Oval pre-punched metal batten bar.	1" x100' coil	Altenloh, Brink & Co. U.S., Inc.
13.	All Purpose Fastener	Insulation fastener for wood, concrete and steel.	#14 x 16" max. length; #3 Phillips head	Johns Manville

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
FM Approvals	3001482	FM 4470	08/11/98
	3001629	FM 4470	09/10/98
	0Z8A9.AM	FM 4470	09/10/98
	3D4A4.AM	FM 4470	09/28/98
	3002823	FM 4470	04/01/99
	3003468	FM 4450	02/02/00
	3006346	FM 4450	08/15/00
	3007148	FM 4450	04/19/00
	3012974	FM 4450	06/03/02
	3011248	FM 4470	11/01/02
	3009499	FM 4470	04/04/01
	3001457	FM 4470	03/04/02
	3014090	FM 4470	09/05/02
	3020600	FM 4470	01/21/05
	3026130	FM 4470	04/26/06
	3026151	FM 4470	08/15/06
	3026728	FM 4470	11/22/06
	3037222	FM 4470	10/02/09
	3037540	FM 4470	10/20/10
	3043824	FM 4470	06/28/06
	3026728	FM 4470	11/22/06
	3053754	FM 4470	03/04/15
	3046174	FM 4470	04/03/13
	3036559	FM 4470	10/02/09
	3052113	FM 4470	08/29/14
UL LLC	R10167	UL 790	05/12/21
Exterior Research & Design, LLC	02843.02.05-10 R1	TAS 114	02/10/05
Trinity|ERD	J7670.06.08	ASTM D3909	06/16/08
	J34190.03.11	TAS 114	04/04/11
	J5260.03.07	TAS 114	03/06/07
	J45020.07.13	TAS 114 (J)	07/12/13
	JM-11190.03.16	TAS 114 (J)	03/11/16
PRI Construction Materials Technologies, LLC	JMC-065-02-01	ASTM D6163	05/29/12
	JMC-066-02-01	ASTM D6163	06/04/12
	JMC-069-02-01	ASTM D3909	06/04/12
	JMC-070-02-01	ASTM D2178	04/17/12
	JMC-071-02-01	ASTM D2178	04/17/12
	JMC-072-02-02.1	ASTM D4601	05/25/16
	JMC-074-02-01	ASTM D4897	04/17/12
	JMC-075-02-04.3	ASTM D6164	03/29/16
	JMC-078-02-01	ASTM D6298	07/17/12
	JMC-081-02-01.02	TAS 117 B & C	06/11/12
	JMC-091-02-01.1	ASTM D4601	05/26/16
	JMC-093-02-01	ASTM D4601	08/02/12
	JMC-105-02-02 Rev 1	ASTM D6162	05/22/13
	JMC-106-02-01	ASTM D6164	04/15/13

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency/Identifier	Name	Report	Date
PRI Construction Materials Technologies, LLC	JMC-107-02-01.7	ASTM D903/D1876/D5147 TAS 114(C)/TAS 117 A & B	03/31/16
	JMC-108-02-01	TAS 114 (J)	04/16/13
	JMC-109-02-01 Rev 2	TAS 114 (J)	11/11/13
	JMC-113-02-01	ASTM D6164	04/19/13
	JMC-114-02-01	TAS 114 (J)	05/13/13
	JMC-131-02-01	TAS 114 (D)	04/17/13
	JMC-141-02-01	TAS 114 (J)	04/18/13
	JMC-147-02-01	ASTM D4601	05/28/13
	JMC-168-02-01	TAS 114 (J)	08/20/13
	JMC-171-02-01	ASTM D6163	01/10/14
	JMC-171-02-02	ASTM D6163	01/10/14
	JMC-171-02-03	ASTM D6164	01/10/14
	JMC-171-02-04.1	ASTM D6163	05/26/16
	JMC-171-02-07.1	ASTM D6164	05/26/16
	JMC-171-02-10	ASTM D6162	01/10/14
	JMC-171-02-11	ASTM D6164	03/14/14
	JMC-227-02-01.3	ASTM D6162	06/29/16
	JMC-234-02-01.2	ASTM D6162	06/29/16
	JMC-234-02-02	ASTM D6163	04/29/15
	JMC-234-02-03.1	ASTM D6163	05/26/16
	JMC-234-02-04	ASTM D6162	03/23/16
	JMC-234-02-05	ASTM D6164	04/29/15
	JMC-234-02-06.1	ASTM D6164	05/26/16
	JMC-238-02-01.1	ASTM D6163	06/29/16
	JMC-238-02-03	ASTM D6164	12/01/15
	JMC-238-02-04	ASTM D6162	03/31/16
	JMC-243-02-01	ASTM D5147/D4798	02/29/16
	JMC-242-02-02	TAS 114 (D)	11/18/15
	JMC-268-02-01	TAS 114 (J)	03/29/16
	ADCO-001-02-01	Physical Properties	06/16/13

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
Robert Nieminen, P.E.	Signed/Sealed Calculations	B(2), C(4)	03/11/16
Zachary R. Priest, P.E.	Signed/Sealed Calculations	C(2)	03/30/16
		C(3)	04/07/16
Zachary R. Priest, P.E.	Signed/Sealed Calculations	C(5), D(1)	05/06/16
		D(2), D(3), D(4), D(5), D(6), D(7), D(8)	04/23/16
Zachary R. Priest, P.E.	Signed/Sealed Calculations	D(9), D(10), E(2), E(3), E(4), E(5)	04/25/16

APPROVED ASSEMBLIES

Membrane Type: SBS

Deck Type 1I: Recover, Insulated

Deck Description: $^{15}/_{32}$" or greater plywood for existing construction over wood supports spaced maximum 24" o.c. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 180 lbf when tested with UltraFast Fasteners and UltraFast Square Recessed Metal Plates.

System Type B(1): Base layer of insulation mechanically attached, top layer fully adhered with approved asphalt or adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**1 with 2**	**1:1.33-ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive and applied in ¾-1" wide beads spaced maximum 12" o.c.. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW fully bonded by torch adhering with minimum 3" side laps
Or
One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180S, DynaFast 180 S, DynaPly T1, DynaMax S, DynaLastic 250 S applied in hot asphalt within EVT range at a rate of 20-25 lbs./sq. or MBR Cold Application Adhesive at rate of 1.5 gal/sq. with minimum 4" side laps.
Or
One ply of DynaGrip Base SD/SA or JM BaseGrip SD/SA self-adhered with a hot asphalt or heat welded ply and/or cap sheet.

Ply Sheet:	(Optional) One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW torch adhered with minimum 4” side laps. Or One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S fully bonded with MBR Cold Application Adhesive at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq.
Membrane:	One ply of DynaWeld Cap, DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering with minimum 4” side laps Or One ply of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded with MBR Cold Application Adhesive at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Minimum 22 gage, type B, Grade 40 steel attached to supports having a maximum span of 6 ft. o.c. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 152 lbf when tested with UltraFast Fasteners (steel) or Structural Concrete Deck Fastener and All Purpose Fasteners (concrete) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(2): Base layer of insulation mechanically fastened, top layer fully adhered with approved asphalt.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**1 with 2 (Steel) 13 with 2 or 5 with 2 (Concrete)**	**1:1.45 ft²**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Invinsa Roof Board Minimum 0.25" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with JM Roofing System Urethane Adhesive or JM Two Part Urethane Insulation Adhesive, . Apply continuous ribbons 12-inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: DynaGrip Base SD/SA fully bonded by self-adhering.

Ply Sheet: (Optional) One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S fully bonded with asphalt applied in the EVT range at a rate of 20-40 lbs./sq.
Or
One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW fully bonded by torch adhering

Membrane:	One ply of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded with asphalt applied in the EVT range at a rate of 20-40 lbs./sq. Or One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering
Maximum Design Pressure:	-52.5 psf. (See general limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: $^{15}/_{32}$" or greater plywood for existing construction over wood supports spaced maximum 24" o.c. and attached with minimum 0.113 x 2-3/8" ring shank nails spaced maximum 6" o.c. along all intermediate supports and at the perimeter. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 210 lbf when tested with UltraFast Fasteners and UltraFast Square Recessed Metal Plates.

System Type C(1): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1/2" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 2" thick	**1 with 2**	**1:2-ft^2**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaMax S, or DynaLastic 250 S fully bonded in MBR Cold Application Adhesive applied at a rate of 1.5 gal/sq. with minimum 3" side laps Or One ply of DynaGrip Base SD/SA or JM BaseGrip SD/SA fully bonded by self-adhering with minimum 4" side laps.
Ply Sheet:	(Optional) One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW torch adhered with minimum 4" side laps.
Membrane:	DynaWeld Cap, DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering with minimum 4" side laps
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Minimum 22 gage, type B, Grade 33 steel attached to supports having a maximum span of 6 ft. o.c. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 196 lbf when tested with UltraFast Fasteners (steel) or Structural Concrete Deck Fastener and All Purpose Fastener (concrete) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(2): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

One or more layers of the following insulations:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**1 with 2 (Steel)** **13 with 2 or 5 with 2 (Concrete)**	**1:1.45 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of DynaGrip Base SD/SA or BaseGrip SD/SA fully bonded by self-adhering with minimum 4" side laps.
Or
DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaMax S, or DynaLastic 250 S fully bonded in MBR Cold Application Adhesive applied at a rate of 1.5 gal/sq. with minimum 3" side laps.

Ply sheet:	(Optional) One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S fully bonded with MBR Cold Application Adhesive (not for use with self-adhering base) at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq. Or One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW fully bonded by torch adhering.
Membrane:	One ply of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded with MBR Cold Application Adhesive (not for use with self-adhering base) at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq. Or One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Minimum 22 gage, type B, Grade 33 steel attached to supports having a maximum span of 6 ft. o.c. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 174 lbf when tested with UltraFast Fasteners (steel) or Structural Concrete Deck Fastener and All Purpose Fastener (concrete) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(3): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

One or more layers of the following insulations:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
JM SECUROCK Gypsum Fiber Roof Board	**1 with 2 (Steel)**	
Minimum 0.25" thick	**13 with 2 or 5 with 2 (Concrete)**	**1:1.45 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of DynaGrip Base SD/SA or JM BaseGrip SD/SA self-adhered with minimum 4" side laps.
Or
One or more plies of GlasPly Premier (hot asphalt only), DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180S, DynaFast 180 S, DynaPly T1, DynaMax S, DynaLastic 250 S applied in hot asphalt within EVT range at a rate of 20-25 lbs./sq. or MBR Cold Application Adhesive at rate of 1.5 gal/sq. with minimum 4" side laps.
Or
One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW torch adhered with minimum 4" slide laps.

Ply sheet:	(Optional) One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S fully bonded with MBR Cold Application Adhesive at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq. Or One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW fully bonded by torch adhering
Membrane:	One ply of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded with MBR Cold Application Adhesive at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq. Or One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering.
Maximum Design Pressure:	-60 psf. (See General Limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Minimum 22 gage, type B, Grade 40 steel attached to supports having a maximum span of 6 ft. o.c. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 213 lbf when tested with UltraFast Fasteners (steel) or Structural Concrete Deck Fastener and All Purpose Fastener (concrete) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(4): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
JM SECUROCK Gypsum Fiber Roof Board	**1 with 2 (Steel)**	
Minimum 0.25" thick	**13 with 2 or 5 with 2 (Concrete)**	**1:1.78 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S fully bonded with MBR Cold Application Adhesive at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq.
Or
One or more plies of DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW fully bonded by torch adhering
Or \
One ply of DynaGrip Base SD/SA or JM BaseGrip SD/SA self-adhered with a hot asphalt or heat welded ply and/or cap sheet.

Ply sheet:	(Optional) One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S fully bonded with MBR Cold Application Adhesive at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq. Or One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW fully bonded by torch adhering
Membrane:	One ply of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded with MBR Cold Application Adhesive at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq. Or One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering
Maximum Design Pressure:	-60 psf. (See General Limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Minimum 22 ga. Type B, Grade 80 steel deck attached to supports spaced a maximum 6-ft o.c. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 267 lbf when tested with Structural Concrete Deck Fastener and All Purpose Fastener in accordance with TAS 105. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type C(5): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI, Fesco Foam, DuraFoam Minimum 2.0" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
JM SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**1 with 2 (Steel) 13 with 2 or 5 with 2 (Concrete)**	**1:1.78 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of PermaPly 28, DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, DynaMax S, or GlasBase Plus adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or with MBR Bonding Adhesive at an application rate of 1.5 gal./sq.
Or,
One ply of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S adhered to the insulated substrate with MBR Cold Application Adhesive at an application rate of 1.5 gal./sq.
Or
One or more plies of DynaWeld 180 S, DynaWeld Base, DynaBase HW, DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.
Or
One ply of DynaGrip Base SD/SA or BaseGrip SD/SA self-adhered with a hot asphalt or heat welded ply and/or cap sheet.

Ply Sheet:	(Optional unless a GlasKap membrane listed in the membrane options is used.) One or more plies of GlasPly Premier, GlasPly IV, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase PR, DynaBase XT, DynaMax S or DynaPly T1 adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or with MBR Bonding Adhesive at an application rate of 1.5 gal./sq. Or One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S adhered with MBR Cold Application Adhesive at an application rate of 1.5 gal./sq. Or One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.
Membrane:	One or more plies of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus or DynaPly T1 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., MBR Bonding Adhesive at an application rate of 1.5 gal./sq., MBR Cold Application Adhesive at an application rate of 1.5 gal./sq. Or One ply DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR heat welded. Or (Requires to be used with a Modified Bitumen Ply Sheet listed above.) GlasKap or, GlasKap Plus adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq. 2. (Optional with FR membranes) Henry 280 in two coats applied at a rate of 1.0 gal./sq./coat.
Maximum Design Pressure:	-75 psf. (See general limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete.

System Type C(6): All layers of insulation simultaneously mechanically fastened

All General and System limitations apply.

One or more layers of the following insulations:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 2" thick	**1 with 2 or 5 with 2**	**1:1.45 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of DynaGrip Base SD/SA or BaseGrip SD/SA fully bonded by self-adhering with minimum 4" side laps.
Or
DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaMax S, or DynaLastic 250 S fully bonded in MBR Cold Application Adhesive applied at a rate of 1.5 gal/sq. with minimum 3" side laps.

Ply sheet: (Optional) One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S fully bonded with MBR Cold Application Adhesive (not for use with self-adhering base) at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq.
Or
One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW fully bonded by torch adhering

Membrane:	One ply of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded with MBR Cold Application Adhesive (not for use with self-adhering base) at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq. Or One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering
Maximum Design Pressure:	-90 psf. (See General Limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete.

System Type C(7): All layers of insulation simultaneously mechanically fastened

All General and System limitations apply.

One or more layers of the following insulations:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 2" thick	**1 with 2 or 5 with 2**	**1:1.78 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of DynaGrip Base SD/SA or BaseGrip SD/SA fully bonded by self-adhering with minimum 4" side laps.
Or
DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaMax S, or DynaLastic 250 S fully bonded in MBR Cold Application Adhesive applied at a rate of 1.5 gal/sq. with minimum 3" side laps.

Ply sheet: (Optional) One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaLastic 180 S, DynaFast 180 S, DynaPly T1, DynaLastic 250 S, or DynaMax S fully bonded with MBR Cold Application Adhesive (not for use with self-adhering base) at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq.
Or
One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, or DynaFast 250 HW fully bonded by torch adhering

Membrane:	One ply of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded with MBR Cold Application Adhesive (not for use with self-adhering base) at a rate of 1.5 gal/sq. or asphalt applied in the EVT range at a rate of 20-40 lbs./sq. Or One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 80 steel deck with supports at a maximum 6 ft. o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 309 lbf when tested with High Load Fasteners (steel) or with All Purpose Fasteners (concrete) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(1): All layers of insulation simultaneously mechanically fastened with base sheet.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S fastened to the deck through the insulation as described below:

Fastening: Fasten base sheet with High Load Fasteners (steel) or with All Purpose Fasteners (concrete) and High Load Plates at a minimum 4" side lap at 6" o.c. Side laps are heat welded.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq.

Cap Sheet: One ply of DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -105 psf. (See general limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 50 steel deck with supports at a maximum 6 ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 311 lbf when tested with High Load Fasteners in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(2): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the insulation with High Load Fastener and APB Plate or High Load Plate spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaMax FR HW, DynaMax FR HW CR, DynaKap FR T1 HW CR G, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, or DynaWeld Cap 250 FR CR G heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 105 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 80 steel deck with supports at a maximum 6 ft. o.c. or structural concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 488 lbf when tested with High Load Fasteners (steel deck) or with All Purpose Fasteners (concrete deck) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(3): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 250 HW mechanically fastened through the optional insulation with High Load Fasteners (steel) or All Purpose Fasteners (concrete) and High Load Plate spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 250 HW a heat welded while maintaining 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 165 psf. in concrete deck (See General Limitation #7)
- 150 psf. in steel deck. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 33 steel deck with supports at a maximum 6 ft. o.c. or structural concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 398 lbf when tested with High Load Fasteners (steel) or with All Purpose Fasteners (concrete deck) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(4): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the optional insulation with High Load Fastener (steel) or with All Purpose Fasteners (concrete deck) and High Load Plate spaced 12" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaMax FR HW, DynaMax FR HW CR, DynaKap FR T1 HW CR G, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, or DynaWeld Cap 250 FR CR G heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 67.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 33 steel deck with supports at a maximum 6 ft. o.c. or structural concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 398 lbf when tested with High Load Fasteners (steel) or with All Purpose Fasteners (concrete deck) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(5): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the optional insulation with High Load Fastener (steel) or with All Purpose Fasteners (concrete deck) and High Load Plate spaced 12" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq

Membrane: One ply of DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 67.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 40 steel deck with supports at a maximum 6 ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 533 lbf when tested with High Load Fasteners in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(6): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1” thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the optional insulation with High Load LH Fastener and Polymer Membrane Batten or High Load Fastener and Trufast Deep Well Coiled Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps in rows 71” o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4” side laps and 6” end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaMax FR HW, DynaMax FR HW CR, DynaKap FR T1 HW CR G, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, or DynaWeld Cap 250 FR CR G heat welded while maintaining 4” side laps and 6” end laps.

Maximum Design Pressure: - 90 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 40 steel deck with supports at a maximum 6 ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 533 lbf when tested with High Load Fasteners in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(7): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the optional insulation with High Load LH fastener and Polymer Membrane Batten or High Load Fastener and Trufast Deep Well Coiled Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps in rows 71" o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq

Membrane: One ply of DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 90 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 80 steel deck with supports at a maximum 6 ft. o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 422 lbf when tested with High Load Fasteners (steel) or with All Purpose Fasteners (concrete deck) (concrete) in accordance with TAS 105. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(8): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the optional insulation with High Load Fastener (steel) or with All Purpose Fasteners (concrete deck) and High Load Plates spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaMax FR HW, DynaMax FR HW CR, DynaKap FR T1 HW CR G, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, or DynaWeld Cap 250 FR CR G heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 142.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 33 steel deck with supports at a maximum 6 ft. o.c. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 307 lbf when tested with High Load Fasteners (steel deck) or with All Purpose Fasteners (concrete deck) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(9): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S or DynaFast 250 HW mechanically fastened through the insulation with High Load Fastener (steel) or with All Purpose Fasteners (concrete deck) and High Load Plate spaced 6" o.c. in every other lap of the minimum 4" torch welded side laps in rows 70" o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaMax FR HW, DynaMax FR HW CR, DynaKap FR T1 HW CR G, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, or DynaWeld Cap 250 FR CR G heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 33 steel deck with supports at a maximum 6 ft. o.c. or structural concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 307 lbf when tested with High Load Fasteners in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(10): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the insulation with High Load Fastener (steel) or All Purpose Fasteners (concrete) and High Load Plate spaced 6" o.c. in every other lap of the minimum 4" torch welded side laps in rows 70" o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq

Membrane: One ply of DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Wood deck with supports at a maximum 24" o.c. and secured with #8 wood screws with a maximum 6" o.c. spacing. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 244 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(11): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened through the insulation with High Load LH and Polymer Membrane Batten or High Load Fastener and Trufast Deep Well Coiled Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaMax FR HW, DynaMax FR HW CR, DynaKap FR T1 HW CR G, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, or DynaWeld Cap 250 FR CR G heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Wood deck with supports at a maximum 24" o.c. and secured with #8 wood screws with a maximum 6" o.c. spacing. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 265 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(12): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the insulation with High Load Fasteners & APB Plates or High Load Plates spaced 9" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaMax FR HW, DynaMax FR HW CR, DynaKap FR T1 HW CR G, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, or DynaWeld Cap 250 FR CR G heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Wood deck with supports at a maximum 24" o.c. and secured with #8 wood screws with a maximum 6" o.c. spacing. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 265 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(13): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the insulation with High Load Fasteners & APB Plates, or High Load Plates spaced 9" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq.

Membrane: One ply of DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Cementitious Wood Fiber attached 8" o.c. with ¼"-14 PH screws and 2" diameter metal plates to structural supports having a maximum spacing of 32" o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 131 lbf when tested with 1.8" Trufast Twin Loc-Nail Batten Fasteners in accordance with TAS 105.

System Type E(1): Base sheet mechanically fastened with optional insulation.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened through the optional insulation with 1.8" Trufast Twin Loc-Nail Batten Fasteners and Trufast Twin-Loc Coiled Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps and 6" o.c. in one intermediate row in the center of the sheet for maximum row spacing of 17.5".

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One or more plies of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaMax FR HW, DynaMax FR HW CR, DynaKap FR T1 HW CR G, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, or DynaWeld Cap 250 FR CR G heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -90 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: A 1/8" slurry coat of Min. 500 psf. Celcore MF with Celcore HS Rheology Modifying Admixture Lightweight Concrete cast over structural concrete or minimum 22 ga., Grade 33 steel deck with structural supports a maximum 5ft. o.c. supports fastened with 5/8" puddle welds attached at each flute along intermediate supports. Side laps attached with #1/4-14x7/8" HWH self-driling screws with ½" washers spaced 15" o.c. A 1" thick EPS board is placed in the slurry coat followed by a 2" top coat applied the following day. A curing compound is applied after setting the to coat at 300 ft^2/gal. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 178 lbf when tested with 1.8" Trufast Twin Loc-Nail Batten Fastener in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type E(2): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened with 1.8" Trufast Twin Loc-Nail Batten Fastener and Trufast Twin-Loc Coiled Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One or more plies of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaMax FR HW, DynaMax FR HW CR, DynaKap FR T1 HW CR G, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, or DynaWeld Cap 250 FR CR G heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: A 1/4" slurry coat of Min. 440 psf. Celcore MF with Celcore HS Rheology Modifying Admixture Lightweight concrete over concrete or minimum 22 ga., Grade 33 steel deck with structual supports a maximum 5-ft o.c. supports fastened with 5/8" puddle welds attached at each flute along intermediate supports. Side laps attached with #1/4-14x7/8" HWH screws spaced 12" o.c. A 1" thick EPS board is placed in the slurry coat followed by a 2" top coat of lightweight concrete applied the following day. A curing compound is applied after setting the to coat at 300 ft^2/gal. Steel deck must be treated with Celcore S-1 prior to placement of the lightweight concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 155 lbf when tested with 1.8" Trufast Twin Loc-Nail Batten Fastener in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type E(3): Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: (Option 1): One ply of DynaFast 180 HW or DynaFast 250 HW installed with Trufast Twin Loc Coiled Batten Bar and 1.8" Trufast Twin Loc-Nail Batten Fastener fastened 6" o.c. within the torch adhered 4" side laps.

(Option 2): One ply of DynaFast 180 S Trufast Twin Loc Coiled Batten Bar and 1.8" Trufast Twin Loc-Nail Batten Fastener fastened 6" o.c. within the torch adhered 4" side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in applicable Building Code.

Ply Sheet (Optional): (Option 1) One or more plies of DynaFast 180 HW, DynaFast 250 HW, or DynaWeld 250 S torch adhered.

(Option 2 – only over DynaFast 180 S) One or more plies of DynaFast 180 S, DynaPly T1, DynaLastic 180 S, or DynaLastic 250 S, fully adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal.

Membrane:	(Option 1) DynaWeld Cap, DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR torch adhered with 3-inch side laps. (Option 2 – only over Base Sheet Option 2 or Ply Sheet Option 2) DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal. with 3-inch side laps.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: A 1/8" slurry coat of generic min. 180 psi. Lightweight concrete over 22 ga., Grade 33 steel deck with structual supports a maximum 5-ft o.c. supports fastened with #12-24 HWH Screws attached at each. Side laps attached with #1/4-14x7/8" HWH screws spaced 12" o.c. A 1" thick EPS board is placed in the slurry coat followed by a 2" top coat of lightweight concrete applied the following day. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 289 lbf when tested with High Load Fasteners in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type E(4): Base sheet mechanically fastened over existing SBS modified roofing.

All General and System limitations apply.

Base Sheet: (Option 1): One ply of DynaFast 180 HW or DynaFast 250 HW installed with High Load Fasteners and High Load Plates fastened 6" o.c. within the torch adhered 4" side laps.
(Option 2): One ply of DynaFast 180 S installed with High Load Fasteners and High Load Plates fastened 6" o.c. within the torch adhered 4" side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in applicable Building Code.

Ply Sheet (Optional): (Option 1) One or more plies of DynaFast 180 HW, DynaFast 250 HW, or DynaWeld 250 S torch adhered.

(Option 2 – only over DynaFast 180 S) DynaFast 180 S, DynaPly T1, DynaLastic 180 S, or DynaLastic 250 S, fully adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal.

Membrane: (Option 1) DynaWeld Cap, DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR torch adhered with 3-inch side laps.

(Option 2 – only over Base Sheet Option 2 or Ply Sheet Option 2) DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal. with 3-inch side laps.

Maximum Design Pressure: -97.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7: Recover, Non-insulated

Deck Description: A 1/8" slurry coat of min. 450 psi. Elastizell with Zell-Crete Fibers Lightweight concrete over minimum 22 ga., Grade 33 steel deck with structual supports a maximum 5-ft o.c. supports fastened with 5/8" puddle welds attached at each flute along intermediate supports. Side laps attached with #1/4-14x7/8" HWH screws spaced 12" o.c. A 1" thick EPS board is placed in the slurry coat followed by a 2" top coat of lightweight concrete. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 344 lbf when tested with High Load Fasteners in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type E(5): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened with High Load Fasteners and High Load Plates spaced 12" o.c. in the center of the minimum 5" heat welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): (Option 1- only over DynaFast 180 S**)** One or more plies of DynaFast 180 S, DynaPly T1, or DynaLastic 250 S adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal.

(Option 2 **–** only over DynaFast 180 HW or DynaFast 250 HW) One or more plies of DynaFast 180 HW, DynaWeld 250 S, or DynaFast 180 HW torch adhered.

Membrane: (Option 1 – not over DynaFast 180 HW or 250 HW) One or more plies of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus with 4" side laps adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2/ gal.

(Option 2 - not over DynaFast 180 HW or 250 HW) One or more plies of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaGlas FR CR G, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaGlas FR XT, DynaKap FR T1, DynaKap FR T1 CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus with 4" side laps adhered in ASTM D 312, Type IV asphalt applied at a rate of 20 – 40 lbs./sq.

Membrane:	(Option 3) DynaWeld Cap, DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR, DynaWeld Cap FR XT, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld Cap 250 FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR with 4" side laps torch adhered.
Maximum Design Pressure:	-60 psf. (See General Limitation #7)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.
2. All assemblies listed herein shall be installed in compliance with the applicable sections of FBC 1521. Uplift performance of assemblies bonded to existing roofing system shall be verified per 1521.10. Uplift performance of assemblies mechanically attached through existing roofing system shall be verified per 1521.11.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE