



EVALUATION REPORT

FLORIDA BUILDING CODE, 7TH EDITION (2020)

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

Issued February 12, 2021

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

Quality Assurance: UL LLC (QUA9625)

SCOPE

Category: Roofing
Subcategory: Modified Bitumen Roof System
Code Edition: Florida Building Code, 7th Edition (2020) including High-Velocity Hurricane Zones (HVHZ)
Code Sections: 1504.3.1, 1504.6, 1504.7, 1507.2.9.2, 1507.6.5, 1507.10.2, 1507.11.2, 1515.1.1, 1515.1.4, 1515.2.4, 1523.1.1, 1523.6.2
Properties: Wind Resistance, Physical Properties, Impact Resistance

PRODUCT DESCRIPTION

Products	Specification	Description
JM BaseGrip SD/SA	ASTM D 4601	Self-adhering, asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
DynaBase	ASTM D 6163	A glass reinforced SBS modified bitumen base sheet.
DynaBase HW	ASTM D 6163	A glass reinforced SBS modified bitumen base sheet for heat welded applications.
DynaBase PR	ASTM D 6164	A polyester reinforced SBS modified bitumen base sheet.
DynaBase XT	ASTM D 6163	A glass reinforced SBS modified bitumen base or inner ply sheet.
DynaFast 180 HW	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaFast 180 S	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaFast 250 HW	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaGlas	ASTM D 6163	A glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaGlas 30 FR	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaGlas FR	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaGlas FR CR	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating.
DynaGlas FR CR G	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with reflective roofing granules.
DynaGlas FR XT	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaGrip Base SD/SA	ASTM D 4601	Self-adhering, asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
DynaKap FR T1	ASTM D 6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.

Products	Specification	Description
DynaKap FR T1 CR G	ASTM D 6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with reflective roofing granules.
DynaKap FR T1 HW CR G	ASTM D 6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with reflective roofing granules for use in heat weld applications.
DynaKap T1	ASTM D 6162	A composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 180	ASTM D 6164	A polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 180 FR	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 180 FR CR	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating.
DynaLastic 180 FR CR G	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with reflective roofing granules.
DynaLastic 180 S	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaLastic 250 FR	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 250 FR CR	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating.
DynaLastic 250 FR CR G	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with reflective roofing granules
DynaLastic 250 S	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaMax FR	ASTM D 6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaMax FR CR	ASTM D 6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating.
DynaMax FR HW	ASTM D 6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaMax FR HW CR	ASTM D 6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating for use in heat weld applications..
DynaMax FR Plus	ASTM D 6162	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaMax S	ASTM D 6162	A composite reinforced SBS modified bitumen base or inner ply sheet.
DynaPly T1	ASTM D 6162	A composite reinforced SBS modified bitumen base or inner ply sheet.
DynaWeld 180 S	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaWeld 250 S	ASTM D 6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaWeld Base	ASTM D 6163	A glass reinforced SBS modified bitumen base sheet for heat welded applications.
DynaWeld Cap	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 180 FR	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 180 FR CR	ASTM D 6164	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 180 FR CR G	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with reflective roofing granules

Products	Specification	Description
DynaWeld Cap 250	ASTM D 6164	A polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 250 FR	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 250 FR CR	ASTM D 6164	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	ASTM D 6164	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with reflective granules for use in heat weld applications.
DynaWeld Cap FR	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap FR CR	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating for use in heat weld applications.
DynaWeld Cap FR CR G	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with reflective roofing granules for use in heat weld applications.
DynaWeld Cap FR XT	ASTM D 6163	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
GlasBase Plus	ASTM D 4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
GlasKap	ASTM D 3909	A mineral surfaced, asphalt coated, fiberglass cap sheet.
GlasKap CR	ASTM D 3909	A white mineral surfaced, white acrylic coated, fiberglass cap sheet.
GlasPly IV	ASTM D 2178	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
GlasPly Premier	ASTM D 2178	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
PermaPly 28	ASTM D 4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Ventsulation Felt	ASTM D 4897	Heavy duty fiber glass base sheet impregnated and coated on both sides with asphalt with or without fine mineral stabilizer. Surfaced on the bottom side with coarse mineral granules embedded in asphaltic coating.

REFERENCES

<u>Entity</u>	<u>Report No.</u>	<u>Standards (Year)</u>
Atlantic & Caribbean Roof Consulting, LLC (TST4671)	ACRC 06-003	TAS 114 (2011) FM 4474 (2011)
Atlantic & Caribbean Roof Consulting, LLC (TST4671)	ACRC 06-005	TAS 114 (J) (2011) FM 4474 (2011)
Atlantic & Caribbean Roof Consulting, LLC (TST4671)	ACRC 06-009	TAS 114 (D) (2011) FM 4474 (2011)
Atlantic & Caribbean Roof Consulting, LLC (TST4671)	ACRC 07-014	TAS 114 (2011) FM 4474 (2011)
Atlantic & Caribbean Roof Consulting, LLC (TST4671)	ACRC 14-035	TAS 114 (2011) FM 4474 (2011)
IRT-ARCON (TST5296)	02-011	TAS 114 (J) (2011) FM 4474 (2011)
IRT-ARCON (TST5296)	02-026	TAS 114 (J) (2011) FM 4474 (2011)
FM Approvals (TST1867)	0V7A4.AM	FM 4470 (2016)
FM Approvals (TST1867)	0W6A2.AM	FM 4470 (2016)
FM Approvals (TST1867)	0X0A9.AM	FM 4470 (2016)
FM Approvals (TST1867)	0X7A4.AM	FM 4470 (2016)
FM Approvals (TST1867)	0Z8A9.AM	FM 4470 (2016)
FM Approvals (TST1867)	107A4.AM	FM 4470 (2016)
FM Approvals (TST1867)	3000949	FM 4470 (2016)
FM Approvals (TST1867)	3001457	FM 4470 (2016)
FM Approvals (TST1867)	3001482	FM 4470 (2016)
FM Approvals (TST1867)	3001629	FM 4470 (2016)
FM Approvals (TST1867)	3006346	FM 4470 (2016)
FM Approvals (TST1867)	3007148	FM 4470 (2016)
FM Approvals (TST1867)	3009499	FM 4470 (2016)
FM Approvals (TST1867)	3011248	FM 4470 (2016)
FM Approvals (TST1867)	3012064	FM 4470 (2016)
FM Approvals (TST1867)	3012974	FM 4470 (2016)
FM Approvals (TST1867)	3014090	FM 4470 (2016)
FM Approvals (TST1867)	3015484	FM 4470 (2016)
FM Approvals (TST1867)	3020600	FM 4470 (2016)
FM Approvals (TST1867)	3020703	FM 4470 (2016)
FM Approvals (TST1867)	3025158	FM 4474 (2011)
FM Approvals (TST1867)	3026130	FM 4470 (2016)
FM Approvals (TST1867)	3026151	FM 4470 (2016)
FM Approvals (TST1867)	3031797	FM 4470 (2016)
FM Approvals (TST1867)	3036559	FM 4470 (2016)
FM Approvals (TST1867)	3037222	FM 4470 (2016)
FM Approvals (TST1867)	3037540	FM 4470 (2016)
FM Approvals (TST1867)	3039653	FM 4470 (2016)
FM Approvals (TST1867)	3040205	FM 4470 (2016)
FM Approvals (TST1867)	3040986	FM 4470 (2016)
FM Approvals (TST1867)	3043824	FM 4470 (2016)
FM Approvals (TST1867)	3046174	FM 4470 (2016)
FM Approvals (TST1867)	3053933	FM 4470 (2016)
FM Approvals (TST1867)	3054150	FM 4470 (2016)
FM Approvals (TST1867)	3055167	FM 4470 (2016)
FM Approvals (TST1867)	3061218	FM 4470 (2016)
FM Approvals (TST1867)	3061804	FM 4470 (2016)
FM Approvals (TST1867)	3D4A4.AM	FM 4470 (2016)
FM Approvals (TST1867)	PR449524	FM 4470 (2016)
FM Approvals (TST1867)	PR450753	FM 4470 (2016)
FM Approvals (TST1867)	PR451973	FM 4470 (2016)
FM Approvals (TST1867)	PR453769	FM 4470 (2016)
FM Approvals (TST1867)	PR454134	FM 4470 (2016)
FM Approvals (TAS1867)	PR455182	FM 4470 (2016)
Nemo etc. (TST6049)	4a-CEL-19-LSWUS-01.C	FM 4474 (2011) TAS 114 (J) (2011)

Entity	Report No.	Standards (Year)
PRI Construction Materials Technologies (TST5878)	GPGC-046-02-01	FM 4470 (2016)
PRI Construction Materials Technologies (TST5878)	JMC-065-02-01	ASTM D 6163 (2000(2015)E1)
PRI Construction Materials Technologies (TST5878)	JMC-066-02-01	ASTM D 6163 (2000(2015)E1)
PRI Construction Materials Technologies (TST5878)	JMC-070-02-01	ASTM D 2178 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-071-02-01	ASTM D 2178 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-072-02-01	ASTM D 4601 (2004(2012)E1)
PRI Construction Materials Technologies (TST5878)	JMC-074-02-01	ASTM D 4897 (2001(2009))
PRI Construction Materials Technologies (TST5878)	JMC-075-02-04.2	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-078-02-01	ASTM D 6164 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-081-02-01.02	ASTM G 155 (2013)
PRI Construction Materials Technologies (TST5878)	JMC-091-02-01	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-093-02-01	ASTM D 6298 (2013)
PRI Construction Materials Technologies (TST5878)	JMC-096-02-01	ASTM G155 (2013)
PRI Construction Materials Technologies (TST5878)	JMC-105-02-01	TAS 117 (B & C) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-106-02-01	ASTM D 4601 (2004(2012)E1)
PRI Construction Materials Technologies (TST5878)	JMC-107-02-01 Rev 6	ASTM D 4601 (2004(2012)E1)
PRI Construction Materials Technologies (TST5878)	JMC-108-02-01	TAS 117 (A & B) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-113-02-01	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-114-02-01	ASTM D 6162 (2000A(2015)E1)
PRI Construction Materials Technologies (TST5878)	JMC-118-02-02	ASTM G 155 (2013)
PRI Construction Materials Technologies (TST5878)	JMC-131-02-01	ASTM D 6164 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-132-02-01	ASTM D 903 (1998(2010))
PRI Construction Materials Technologies (TST5878)	JMC-141-02-01	ASTM D 1876 (2008(2015)e1)
PRI Construction Materials Technologies (TST5878)	JMC-168-02-01	ASTM D 5147 (2014)
PRI Construction Materials Technologies (TST5878)	JMC-171-02-01	TAS 117(A & B) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-171-02-02	TAS 114(C) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-171-02-03	FM 4474 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-171-02-04	TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-171-02-07	ASTM D 6164 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-171-02-10	TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-171-02-11	ASTM G 155 (2013)
PRI Construction Materials Technologies (TST5878)	JMC-222-02-01	ASTM D 6162 (2000A(2015)E1)
PRI Construction Materials Technologies (TST5878)	JMC-222-02-02A	ASTM D 6164 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-222-02-02	FM 4474 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-225-02-01	TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-01	UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-02	FM 4474 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-02	TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-02	FM 4474 (B) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-02	ASTM D 6162 (2000A(2015)E1)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-02	ASTM D 5147 (2014)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-02	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-02	ASTM D 6163 (2000(2015)E1)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-02	ASTM D 5147 (2014)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-02	TAS 110 (2000)

Entity	Report No.	Standards (Year)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-03	ASTM D 6163 (2000)(2015)E1 TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-05	ASTM D 6164 (2011) TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-222-02-04	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-227-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-04	ASTM D 6162 (2000A(2015)E1) TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-234-02-06	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-238-02-01	ASTM D 6163 (2000)(2015)E1 ASTM D 5147 (2014) ASTM D 4798 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-238-02-03	ASTM D 6164 (2011) TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-242-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-242-02-02	FM 4474 (B) (2011) TAS 114 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-242-02-03	FM 4474 (C) (2011) ASTM D 5147 (2014)
PRI Construction Materials Technologies (TST5878)	JMC-243-02-01	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-245-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011) UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-245-02-02	FM 4474 (B) (2011) TAS 114 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-246-02-01	FM 4474 (B) (2011) TAS 114 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-267-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011) UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-267-02-02	FM 4474 (B) (2011) TAS 114 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-268-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011) UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-272-02-01	FM 4474 (D) (2011) TAS 114 (J) (2011) UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-277-02-01	TAS 114 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-308-02-01	FM 4474 (B) (2011) TAS 114 (D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-339-02-03	ASTM C 1289 (2015); ASTM E 84 (2016)
PRI Construction Materials Technologies (TST5878)	JMC-339-02-04	ASTM C 1289 (2015); ASTM E 84 (2016)
PRI Construction Materials Technologies (TST5878)	507T0002	FM 4474 (D) (2011) TAS 114 (J) (2011) UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	507T0003	FM 4474 (B) (2011) TAS 114 (D) (2011)
PRI Construction Materials Technologies (TST5878)	507T0061	FM 4474 (B) (2011) TAS 114 (D) (2011) UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	507T0065	FM 4474 (B) (2011) TAS 114 (D) (2011) UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	507T0069	ASTM D 6164 (2011)
Trinity ERD (TST6049)	00257.03.05-1	ASTM D 6162 (2000A(2015)E1) ASTM D 6163 (2000)(2015)E1 ASTM D 6164 (2011) ASTM D 6298 (2013)

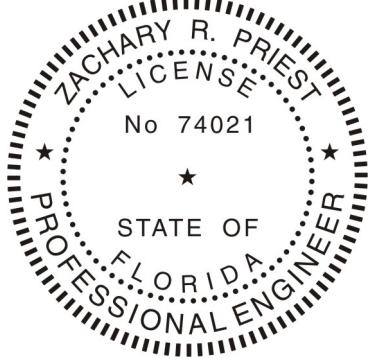
Entity	Report No.	Standards (Year)
Trinity ERD (TST6049)	02843.02.05-10	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	02843.02.07	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	10390A-10.97-1	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	10390A-12.97-1	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	10391.01.03	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	4251.08.96-1	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	4670.03.01-1	TAS 117 (A & B) (1995)
Trinity ERD (TST6049)	4670.07.97-1	TAS 117 (1995)
Trinity ERD (TST6049)	4670.10.95-1	TAS 117 (B) (1995)
Trinity ERD (TST6049)	4674.11.01-1-R4	TAS 117 (B) (1995) TAS 114 (J) (2011)
Trinity ERD (TST6049)	A35880.04.12	TAS 117 (1995)
Trinity ERD (TST6049)	J13700.05.10-1-R1	ASTM D 6163 (2000(2015)E1) ASTM G 155 (2013)
Trinity ERD (TST6049)	J13700.05.10-1-R2	ASTM D 6164 (2011) ASTM G 155 (2013)
Trinity ERD (TST6049)	J17040.11.09	ASTM D 6164 (2011)
Trinity ERD (TST6049)	J34190.03.11	TAS 114 (J) (2011) FM 4474 (2011)
Trinity ERD (TST6049)	J45020.07.13	TAS 114 (2011) FM 4474 (2011)
Trinity ERD (TST6049)	J5260.03.07	TAS 114 (J) (2011) FM 4474 (2011)
Trinity ERD (TST6049)	J6990.12.07	ASTM D 6162 (2000A(2015)E1) ASTM D 6164 (2011)
Trinity ERD (TST6049)	J7670.06.08	ASTM D 3909 (2014)
Trinity ERD (TST6049)	JM-11190.03.16	FM 4474 (D) (2011) TAS 114 (J) (2011)
Trinity ERD (TST6049)	JM-SC11320.03.16	TAS 114 (D) (2011) FM 4474 (2011)

LIMITATIONS

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

COMPLIANCE STATEMENT

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



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

CERTIFICATION OF INDEPENDENCE

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

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

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

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

APPENDICES

- 1) [APPENDIX A](#) – Installation (4 pages)
- 2) [APPENDIX B](#) – Nomenclature and Approved Assemblies (44 pages)

INSTALLATION

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

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

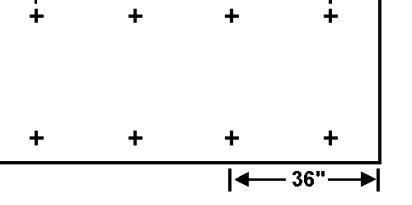
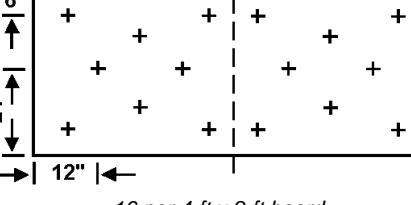
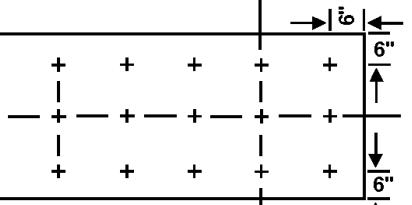
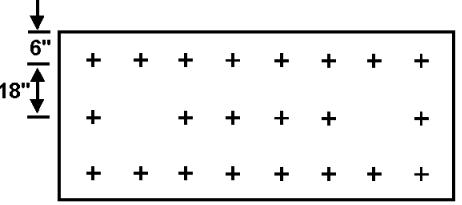
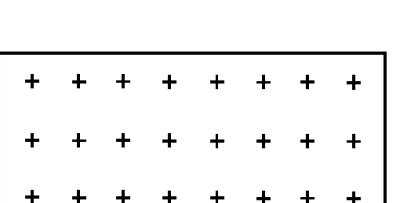
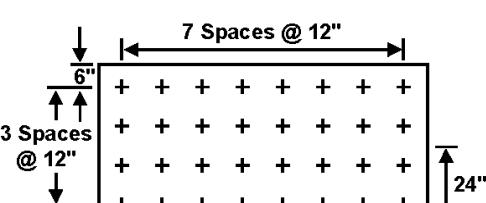
Component	Product	Installation Detail
Fastening Systems	JM All Purpose Fastener	#14 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	JM APB Plates	2-inch diameter; Galvalume steel plate with reinforcing ribs and barbs
	JM High Load Plates	2 3/8-inch diameter; Galvalume steel plate with eyehooks
	JM High Load Fastener	#15 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	JM High Load LH Fastener	Large Head #15 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	JM Lightweight Concrete (LWC) Base Fastener	Min. 1.7-inch shank; Pre-Assembled with 2.7-inch galvalume coated steel plate. Full embedment of shank into substrate
	JM Metal Membrane Batten	Membrane anchors and metal strips
	JM Polymer Auger Fastener	Min. 2-inch embedment into gypsum or cementitious wood fiber decks
	JM Polymer Auger Plate 3"	For use with Polymer Auger Fastener; 3-inch round plate
	JM Polymer Membrane Batten	Membrane anchors and plastic strips
	JM Structural Concrete Deck Fasteners	Hammer-in fasteners; Min. 1-inch penetration into concrete deck
	JM UltraFast Fastener #12 Hex Head	#12 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	JM UltraFast 3" Round Metal Plate	3-inch diameter round; Galvalume steel plate
	JM UltraFast Plastic Plate	3-inch diameter round; High Density Polyolefin plate
	JM UltraFast Metal Plate (Square)	3-inch square; Galvalume steel plate
	JM UltraLok	Min. 1.4-inch shank; Pre-Assembled with 2.7-inch galvalume coated steel plate. Full embedment of shank into substrate
	Trufast Deep Well Batten Bar	Galvalume steel membrane batten with recessed holes
	Trufast Straight Line Batten Bar	Galvalume steel membrane batten for use with Twin-Loc Nail without integrated plate
	Trufast Twin-Loc Nail	Min. 1.4-inch shank; Base sheet fastener with and without integrated 2.7-inch diameter plate.
	TRUFAST VERSA-FAST Fastener	Min. 2 1/4-inch embedment into; for LWIC or Gypsum decks
	TRUFAST VERSA-FAST Metal Plate	3-inch diameter; 0.017-inch thick Galvalume steel plate with one (1) center hole and eight (8) equally spaced perimeter holes for multiple fastening
Insulation Adhesives	JM One-Step Foamable Adhesive	Ribbon adhered in 3/4 to 1-inch wide beads
	JM Two Part Urethane Insulation Adhesive or JM Two-Part UIA	
	JM Two-Part Urethane Adhesive Canister or JM Two-Part UIA Canister	
	JM Roofing System Urethane Adhesive	Ribbon adhered in 3/4-inch wide beads
	ASTM D 312, Type IV Asphalt	Fully adhered within the EVT range at a rate of 20-40 lbs/100 ft ²
Membrane Adhesives	JM MBR Bonding Adhesive	Fully adhered at a rate of 1.5-2.0 gal/100 ft ²
	JM MBR Cold Application Adhesive	
	JM Premium Cold Application Adhesive	Fully adhered at a rate of 1.5-2.0 gal/100 ft ²
Insulation/Cover Boards	EPS	Min. 0.5-inch, min. 1.8 pcf (HVHZ) or min. 1.5 pcf (non-HVHZ) expanded polystyrene; Adhered boards shall be a maximum 4-ft x 4-ft



Component	Product	Installation Detail
Insulation/Cover Boards (Cont'd)	Georgia-Pacific DensDeck	Min. 1/4-inch thick
	Georgia-Pacific DensDeck Prime	
	Georgia-Pacific DensDeck StormX Prime	Min. 5/8-inch thick
	JM ENRGY 3 and tapered	
	JM ENRGY 3 AGF and tapered	Min. 1/2-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4-ft x 4-ft
	JM ENRGY 3 CGF and tapered	
	JM ENRGY 3 FR and tapered	Min. 1/2-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4-ft x 4-ft
	JM Invinsa Roof Board	Min. 1/4-inch thick; Adhered boards shall be a maximum 4-ft x 4-ft
	JM Invinsa FR Roof Board	Min. 1/4-inch thick; Adhered boards shall be a maximum 4-ft x 4-ft
	JM ProtectoR HD	1/2-inch thick; Min. 80 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	JM ProtectoR HD FR	
	JM DuraBoard	
	JM Retro-Fit Board	Min. 1/2-inch thick; Adhered boards shall be a maximum 4-ft x 4-ft
	JM RetroPlus Roof Board	
	JM Fesco Board	Min. 3/4-inch thick
	JM SECUROCK Gypsum-Fiber Roof Board	
	JM SECUROCK Glass-Mat Roof Board	Min. 1/4-inch thick
	JM DuraFoam	Min. 1.5-inch thick; Adhered boards shall be a maximum 4-ft x 4-ft
	JM FescoFoam	
Base/Ply Sheets	National Gypsum DEXcell Cement Roof Board	Min. 7/16-inch thick; Adhered boards shall be a maximum 4-ft x 4-ft
	National Gypsum DEXcell Glass Mat Roof Board	
	National Gypsum DEXcell FA Glass Mat Roof Board	Min. 1/4-inch thick
	DynaBase	
	DynaBase HW	
	DynaBase PR	
	DynaBase XT	
	DynaFast 180 HW	
	DynaFast 180 S	
	DynaFast 250 HW	
	DynaLastic 180 S	
	DynaLastic 250 S	
	DynaMax S	
	DynaPly T1	
	DynaWeld 180 S	
	DynaWeld 250 S	
	DynaWeld Base	
	GlasBase Plus	
	GlasPly IV	
	GlasPly Premier	
	PermaPly 28	
	Ventsulation Felt	
Cap Sheets	JM BaseGrip SD/SA	Min. 3 5/8-inch side-laps; Self-adhered
	DynaGrip Base SD/SA	
	DynaGlas	
	DynaGlas 30 FR	
	DynaGlas FR	Min. 3-inch side-laps; Min. 6-inch end-laps
	DynaGlas FR CR	
	DynaGlas FR CR G	

Component	Product	Installation Detail
Cap Sheets (Cont'd)	DynaGlas FR XT	Min. 3-inch side-laps; Min. 6-inch end-laps
	DynaKap FR T1	
	DynaKap FR T1 CR G	
	DynaKap FR T1 HW CR G	
	DynaKap T1	
	DynaLastic 180	
	DynaLastic 180 FR	
	DynaLastic 180 FR CR	
	DynaLastic 180 FR CR G	
	DynaLastic 250 FR	
	DynaLastic 250 FR CR	
	DynaLastic 250 FR CR G	
	DynaMax FR	
	DynaMax FR CR	
	DynaMax FR HW	
	DynaMax FR HW CR	
	DynaMax FR Plus	
	DynaWeld Cap	
	DynaWeld Cap 180 FR	
	DynaWeld Cap 180 FR CR	
	DynaWeld Cap 180 FR CR G	
	DynaWeld Cap 250	
	DynaWeld Cap 250 FR	
	DynaWeld Cap 250 FR CR	
	DynaWeld Cap 250 FR CR G	
	DynaWeld Cap FR	
	DynaWeld Cap FR CR	
	DynaWeld Cap FR CR G	
	DynaWeld Cap FR XT	
	GlasKap	
	GlasKap CR	
Cellular Lightweight Concrete	Celcore MF	Slurry coat min. 1/8-inch thick; 1-inch thick EPS board (1 lbs/ft ³); Min. 2-inch thick top coat; Celcore PVA curing compound applied at rate of 300 ft ² /gal
	Celcore MF with HS Rheology Modifying Admixture	
	Celcore S-1	Applied in a continuous film with a broom prior to placement of the Celcore lightweight concrete
	Mearlcrete	Slurry coat min. 1/8-inch thick; Min. 1-inch thick EPS board (1 lbs/ft ³); Min. 2-inch top coat;
	Elastizell	
	Concrecel	
Vapor Barrier	Cellular Lightweight Concrete	
	DynaBase HW	Min. 3-inch wide side-laps; Min. 6-inch end laps; Torch adhered to primed concrete deck
	DynaWeld 180 S	
	DynaWeld Cap 180 FR	
	Vapor Barrier SA	Self-adhered to wood, gypsum or concrete decks primed with JM SA Primer Low VOC for JM SA Primer at a rate of 0.5 gal/100 ft ² ; Min. 3-inch sides laps; Min. 6-inch end laps
	Vapor Barrier SAR	

Insulation/Cover Board Fastening Patterns

 <p>3 Spaces @ 24"</p> <p>8 per 4-ft x 8-ft board (Max. 4.0-ft² contributory area per fastener)</p>	 <p>6"</p> <p>24"</p> <p>16 per 4-ft x 8-ft board (Max. 2.0-ft² contributory area per fastener)</p>
 <p>18 per 4-ft x 8-ft board (Max. 1.78-ft² contributory area per fastener)</p>	 <p>18"</p> <p>12"</p> <p>22 per 4-ft x 8-ft board (Max. 1.45-ft² contributory area per fastener)</p>
 <p>18"</p> <p>6"</p> <p>24 per 4-ft x 8-ft board (Max. 1.33-ft² contributory area per fastener)</p>	 <p>3 Spaces @ 12"</p> <p>6"</p> <p>7 Spaces @ 12"</p> <p>24"</p> <p>32 per 4-ft x 8-ft board (Max. 1.0-ft² contributory area per fastener)</p>

NOMENCLATURE

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

Name	Definition									
2-Part UIA	JM Two-Part Urethane Insulation Adhesive, JM Two-Part UIA, JM Two-Part Urethane Adhesive Canister, or JM Two-Part UIA Canister									
AP Fasteners & Plates	All Purpose Fastener or Structural Concrete Deck Fastener (concrete only) and UltraFast 3" Round Metal Plate or UltraFast Square Recessed Metal Plate									
APB Fasteners & Plates	JM APB Plates and JM High Load Fasteners									
As Tested	Information provided to the report user based on the as tested condition of the roof system									
CA SBS BUR Ply	One or more plies of GlasBase Plus, PermaPly 28, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase XT, DynaBase PR, DynaMax S, or DynaPly T1 fully bonded in MBR Cold Application Adhesive									
CA SBS Cap	DynaGlas, DynaGlas 30 FR, DynaGlas FR, DynaGlas FR CR, DynaGlas FR CR G, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaKap T1, DynaKap T1 FR, DynaKap FR T1 CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded in MBR Cold Application Adhesive									
CA SBS Ply	One or more plies of DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase XT, DynaBase PR, DynaMax S, or DynaPly T1 fully bonded in MBR Cold Application Adhesive									
Celcore MF	Celcore MF with HS Rheology Modifying Admixture cellular lightweight concrete									
Cover Board	One layer of any of the following products: -Georgia-Pacific DensDeck -Georgia-Pacific DensDeck Prime - Georgia-Pacific DensDeck StormX Prime -JM Invinsa Roof Board -JM Invinsa FR Roof Board -JM ProtectorR HD <div style="float: right;"> -JM ProtectorR HD FR-JM SECUROCK Glass-Mat Roof Board -JM SECUROCK Gypsum-Fiber Roof Board -National Gypsum DEXcell FA Glass Mat Roof Board -National Gypsum DEXcell Glass Mat Roof Board -National Gypsum DEXcell Cement Roof Board </div>									
Deck Detail	All decks shall be designed by others in accordance with FBC requirements. As <i>Tested</i> deck construction details are described as follows:									
	<table border="1"> <tr> <td>Concrete Deck</td> <td>Min. f_c = 2,500 psi at 28 days</td> </tr> <tr> <td rowspan="7">Steel Deck</td> <td>Min. 22 ga, Wide Rib Deck (Type WR) conforming to ANSI/SDI-RD1.0 & FBC; 0.5% Vented for LWIC applications only. The following nomenclature is used to further describe the As <i>Tested</i> condition:</td> </tr> <tr> <td>$F<\#>$ Number $<\#>$ #12-24 HWH self-drilling screws or equivalent fastener at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration</td> </tr> <tr> <td>$G<\#>$ Min. Grade $<\#>$ of Steel Deck</td> </tr> <tr> <td>$L<\#>$ Max. span of $<\#>$ ft</td> </tr> <tr> <td>P Min. 5/8-inch diameter puddle welds at each flute used to secure the deck to the structural supports</td> </tr> <tr> <td>$S<\#>$ 1/4 "-14 HWH x7/8" self-drilling screws or equivalent fastener secured $<\#>$-inch o.c. along the panel side laps</td> </tr> <tr> <td>W 3/4-inch O.D. flat washer used with indicated fastener</td> </tr> </table>	Concrete Deck	Min. f_c = 2,500 psi at 28 days	Steel Deck	Min. 22 ga, Wide Rib Deck (Type WR) conforming to ANSI/SDI-RD1.0 & FBC; 0.5% Vented for LWIC applications only. The following nomenclature is used to further describe the As <i>Tested</i> condition:	$F<\#>$ Number $<\#>$ #12-24 HWH self-drilling screws or equivalent fastener at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration	$G<\#>$ Min. Grade $<\#>$ of Steel Deck	$L<\#>$ Max. span of $<\#>$ ft	P Min. 5/8-inch diameter puddle welds at each flute used to secure the deck to the structural supports	$S<\#>$ 1/4 "-14 HWH x7/8" self-drilling screws or equivalent fastener secured $<\#>$ -inch o.c. along the panel side laps
Concrete Deck	Min. f_c = 2,500 psi at 28 days									
Steel Deck	Min. 22 ga, Wide Rib Deck (Type WR) conforming to ANSI/SDI-RD1.0 & FBC; 0.5% Vented for LWIC applications only. The following nomenclature is used to further describe the As <i>Tested</i> condition:									
	$F<\#>$ Number $<\#>$ #12-24 HWH self-drilling screws or equivalent fastener at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration									
	$G<\#>$ Min. Grade $<\#>$ of Steel Deck									
	$L<\#>$ Max. span of $<\#>$ ft									
	P Min. 5/8-inch diameter puddle welds at each flute used to secure the deck to the structural supports									
	$S<\#>$ 1/4 "-14 HWH x7/8" self-drilling screws or equivalent fastener secured $<\#>$ -inch o.c. along the panel side laps									
	W 3/4-inch O.D. flat washer used with indicated fastener									



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]
[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
 SBS Modified Roofing Systems

APPENDIX B

Name	Definition	
Deck Detail (Cont'd)	Wood Deck	The following nomenclature is used to further describe the <i>As Tested</i> condition:
		<i>T<#></i> Min. <#>-inch thickness of the plywood
		<i>L<#></i> Max. span of <#> inches
		<i>0.113-<#1>/<#2></i> 0.113-inch x 2-3/8-inch ring shank nails; Secured <#1> of fasteners at all intermediate supports and at the number <#2> of fasteners at the perimeter of each board
		<i>10d-<#1>/<#2></i> 10d ring shank nails; Secured <#1>-inch o.c. at all intermediate supports and <#2>-o.c. at the perimeter of each board
		<i>8d-<#1>/<#2></i> 8d ring shank nails; Secured <#1>-inch o.c. at all intermediate supports and <#2>-o.c. at the perimeter of each board
		<i>#8-<#1>/<#2></i> #8 x 2-inch wood screws; Secured <#1>-inch o.c. at all intermediate supports and <#2>-o.c. at the perimeter of each board
		<i>#12-<#1>/<#2></i> #12-3" Olympic STC screws; Secured <#1>-inch o.c. at all intermediate supports and <#2>-o.c. at the perimeter of each board
DensDeck		Min. 1/4-inch Georgia-Pacific DensDeck
DensDeck Prime		Min. 1/4-inch Georgia-Pacific DensDeck Prime; or DensDeck StormX Prime
DEXcell FA		Min. 1/4-inch National Gypsum DEXcell FA Glass Mat Roof Board
DEXcell Cement		National Gypsum DEXcell Cement Roof Board
E3		JM ENRGY 3, JM ENRGY 3 AGF, or JM ENRGY 3 CGF. JM ENRGY 3 FR permitted to be used in systems as loose fill layer only.
HA SBS BUR Base		One ply of PermaPly 28, DynaBase, DynaBase XT, or GlasBase Plus fully bonded in ASTM D 312, Type IV Asphalt
HA SBS BUR Base 2		One ply of PermaPly 28, DynaBase, DynaBase XT, GlasBase Plus, DynaPly T1, GlasPly IV, or GlasPly Premier fully bonded in ASTM D 312, Type IV Asphalt
HA SBS BUR Base 3		One ply of PermaPly 28, DynaBase, DynaBase XT, GlasBase Plus, DynaPly T1, DynaBase PR, DynaLastic 180 S, DynaLastic 250 S, DynaLastic 250 FR S fully bonded in ASTM D 312, Type IV Asphalt
HA SBS BUR Ply		One or more plies of GlasPly IV, GlasPly Premier, GlasBase Plus, PermaPly 28, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase XT, DynaBase PR, DynaMax S, or DynaPly T1 fully bonded in ASTM D 312, Type IV Asphalt
HA SBS BUR Ply 2		One or more plies of GlasPly IV, GlasPly Premier, GlasBase Plus, PermaPly 28, DynaLastic 180 S, DynaLastic 250 S, DynaBase, DynaBase XT, DynaBase PR, DynaPly T1, DynaLastic 250 FR S fully bonded in ASTM D 312, Type IV Asphalt
HA SBS Cap		DynaGlas, DynaGlas 30 FR, DynaGlas FR, DynaGlas FR CR, DynaGlas FR CR G, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaKap T1, DynaKap T1 FR, DynaKap FR T1 CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded in ASTM D 312, Type IV Asphalt
HA SBS Ply		One or more plies of DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase XT, DynaBase PR, DynaMax S, or DynaPly T1 fully bonded in ASTM D 312, Type IV Asphalt
HL Fasteners & Plates		JM High Load Fasteners and JM High Load Plates
INVINSA		JM Invinsa or JM Invinsa FR Roof Board



Name	Definition
<i>Insulation</i>	One or more layers in any combination of: -JM DuraBoard -JM DuraFoam -JM ENRGY 3 -JM ENRGY 3 AGF -JM ENRGY 3 CGF -JM ENRGY 3 FR -JM Fesco Board -JM FescoFoam -JM Invinsa Roof Board -JM Invinsa FR Roof Board -JM Retro-Fit Board -JM RetroPlus Roof Board -JM SECUROCK Glass-Mat Roof Board -JM SECUROCK Gypsum-Fiber Roof Board -EPS (flute fill only)
<i>LWIC</i>	Poured-in-place Cellular Lightweight Concrete with encapsulated insulation board
<i>MA Base</i>	One ply of PermaPly 28, GlasBase Plus, Ventsulation Felt, DynaBase, DynaBase XT, DynaBase PR, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaMax S, or DynaPly T1 mechanically attached as prescribed per the approved assembly
<i>MA Base 2</i>	One ply of DynaBase, DynaBase XT, DynaBase PR, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaMax S, or DynaPly T1 mechanically attached as prescribed per the approved assembly
<i>MA Base 3</i>	One ply of GlasBase Plus, Ventsulation Felt, DynaBase, DynaBase XT, DynaBase PR, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaMax S, or DynaPly T1 mechanically attached as prescribed per the approved assembly
<i>MBR BA SBS BUR Base</i>	One ply of PermaPly 28, DynaBase, DynaBase XT, or GlasBase Plus fully bonded in MBR Bonding Adhesive
<i>MBR BA SBS BUR Base 2</i>	One ply of PermaPly 28, DynaBase, DynaBase XT, DynaBase PR, GlasBase Plus, DynaPly T1, DynaLastic 180 S, DynaLastic 250 S, DynaLastic 250 FR S fully bonded in MBR Bonding Adhesive
<i>MBR BA SBS BUR Ply</i>	One or more plies of GlasBase Plus, PermaPly 28, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase XT, DynaBase PR, DynaMax S, or DynaPly T1 fully bonded in MBR Bonding Adhesive
<i>MBR BA SBS Cap</i>	DynaGlas, DynaGlas 30 FR, DynaGlas FR, DynaGlas FR CR, DynaGlas FR CR G, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaKap T1, DynaKap T1 FR, DynaKap FR T1 CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded in MBR Bonding Adhesive
<i>MBR BA SBS Ply</i>	One or more plies of DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase XT, DynaBase PR, DynaMax S, or DynaPly T1 fully bonded in MBR Bonding Adhesive
<i>MCRF</i>	Minimum Characteristic Resistance Force as determined by TAS 105 for the named fastener in the selected assembly
<i>MDP</i>	Maximum Design Pressure
<i>OSFA</i>	JM One-Step Foamable Adhesive
<i>PCA SBS BUR Ply</i>	One or more plies of GlasBase Plus, GlasPly IV, GlasPly Premier, PermaPly 28, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase XT, DynaBase PR, DynaMax S, or DynaPly T1 fully bonded in MBR Cold Application Adhesive
<i>PCA SBS Cap</i>	DynaGlas, DynaGlas 30 FR, DynaGlas FR, DynaGlas FR CR, DynaGlas FR CR G, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaLastic 180 FR CR G, DynaLastic 250 FR, DynaLastic 250 FR CR, DynaLastic 250 FR CR G, DynaKap T1, DynaKap T1 FR, DynaKap FR T1 CR G, DynaMax FR, DynaMax FR CR, or DynaMax FR Plus fully bonded in MBR Cold Application Adhesive



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]
[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
 SBS Modified Roofing Systems

APPENDIX B

Name	Definition
PCA SBS Ply	One or more plies of DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase XT, DynaBase PR, DynaMax S, or DynaPly T1 fully bonded in MBR Cold Application Adhesive
Preliminarily Secured	Fastened at minimum rate of five (5) fasteners per 4-ft x 8-ft board or four (4) fasteners per 4-ftx 4-ft board
Recover	Where assemblies are used to recover an existing roof, the existing roof shall consist of only one layer of roofing, i.e. recovering a previously recovered roof is not permitted. Recover roofing shall be conducted in compliance with FBC Section 1511 outside of the HVHZ and FBC Section 1521 within the HVHZ. For mechanically fastened roof assemblies, i.e. systems x-M-#, the insulation layer is optional, or any INSULATION board or slip sheet may be used as separation layer prior to installing the approved roof assembly.
RSUA	JM Roofing System Urethane Adhesive
SA VB	One ply of JM Vapor Barrier SAR or JB Vapor Barrier SA, self-adhered
SBS TA VB	One ply DynaBase HW torched adhered over concrete deck prepared with ASTM D 41 primer
SC Fasteners & Plates	JM Structural Concrete Fastener and UltraFast 3" Round Metal Plate or UltraFast Square Recessed Metal Plate
SECUROCK	Min. 1/4-inch JM SECUROCK Gypsum-Fiber Roof Board
TA SBS Base	One or more plies of DynaWeld Base, DynaBase HW, DynaFast 180 HW, DynaWeld 180 S, DynaWeld 250 S, and DynaFast 250 HW fully bonded by torch adhering
TA SBS Base 2	One or more plies of DynaBase HW, DynaFast 180 HW, DynaWeld 180 S, DynaWeld 250 S, and DynaFast 250 HW fully bonded by torch adhering
TA SBS Cap	DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaWeld Cap 180 FR, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR CR G, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaWeld 250 Cap FR CR G, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR CR fully bonded by torch adhering
TA SBS Cap 2	DynaWeld Cap, DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap FR CR G, DynaWeld Cap FR XT, DynaWeld Cap 180 FR, DynaWeld Cap 180 FR CR, DynaWeld Cap 180 FR CR G, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering
TA SBS Cap 3	DynaWeld Cap FR XT, DynaWeld Cap 180 FR, DynaWeld Cap 180 FR CR, DynaWeld 180 FR CR G, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR, DynaKap FR T1 HW CR G, DynaMax FR HW, or DynaMax FR HW CR fully bonded by torch adhering
TA SBS Ply	One or more plies of DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S, DynaFast 250 HW fully bonded by torch adhering
UF Fasteners & Plates	UltraFast Fastener with UltraFast 3" Round Metal Plate or UltraFast Square Recessed Metal Plate
VB SAR*	<p>One ply of JM Vapor Barrier SAR applied to concrete deck primed with JM SA Primer Low VOC up to a maximum <i>MDP</i> as shown below. The <i>MDP</i> of the roof assembly shall be limited to the lesser of rating of the <i>Approved Assembly</i> and the <i>MDP</i> below.</p> <ol style="list-style-type: none"> 1. Board layers adhered to Vapor Barrier SAR in OSFA applied at 12" o.c.; <i>MDP</i> = -135psf 2. Board layers adhered to Vapor Barrier SAR in 2-Part UIA applied at 12" o.c.; <i>MDP</i> = -82.5psf 3. Not for use with RSUA



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]
[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
 SBS Modified Roofing Systems

APPENDIX B

APPROVED ASSEMBLIES

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

1. *MDPs* were calculated using a 2:1 margin of safety per FBC Section 1504.9 and 1523.4.
2. Refer to **LIMITATIONS** and **NOMENCLATURE** sections of this evaluation when using the table(s) below.
3. Refer to **INSTALLATION** section of this report for installation detail when the information is not explicitly stated for the selected assembly.
4. The on-center (o.c.) spacing given is the maximum allowable attachment spacing for the rated system.
5. As *Tested* information for roof deck construction is provided for information only. The addition of the As *Tested* deck information does not obviate the requirement for rational design of the roof deck and roof deck attachment in accordance with FBC requirements.
6. Prior to application of the approved assembly an optional vapor barrier, such as 4-6 mil polyethylene or JM Vapor Barrier SA, JM Vapor Barrier SAR, DynaGrip Base SD/SA or DynaBase HW adhered to SECUROCK Gypsum-Fiber Roof Board, *DensDeck Prime*, or DEXcell FA Glass Mat Roof Board may be installed over concrete or steel decks when the approved assembly contains insulation or the membrane fastened through to the deck.

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

Assemblies with All Layers Adhered over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-A-1	OPTIONAL HA SBS BUR Base 2	Min. 1.5-inch <i>E3</i> fully adhered in ASTM D 312, Type IV Asphalt	DuraBoard or Min. 1/2-inch FescoBoard fully adhered in ASTM D 312, Type IV Asphalt	MBR BA SBS BUR Base	OPTIONAL MBR BA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-82.5 (Lim. 9)



Assemblies with All Layers Adhered over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-A-2	SA VB	Min. 1.5-inch ENRGY 3 secured with 2-Part UIA ribbons spaced 12-inch o.c.	DensDeck Prime or DEXcell FA secured with 2-Part UIA ribbons spaced 12-inch o.c.	DynaGrip Base SD/SA self-adhered	OPTIONAL TA SBS Ply	TA SBS Cap	-82.5 (Lim. 9)
C-A-3	SA VB	Min. 1-inch ENRGY 3 secured with 2-Part UIA ribbons spaced 12-inch o.c.	DensDeck Prime, or SECUROCK secured with 2-Part UIA ribbons spaced 12-inch o.c.	CA SBS Ply	OPTIONAL CA SBS Ply	CA SBS Cap	-82.5 (Lim. 9)
C-A-4	SA VB	Min. 1-inch ENRGY 3 secured with 2-Part UIA ribbons spaced 12-inch o.c.	DEXcell FA secured with 2-Part UIA ribbons spaced 12-inch o.c.	MBR BA SBS Ply	OPTIONAL MBR BA SBS Ply	MBR BA SBS Cap	-82.5 (Lim. 9)
C-A-5	SA VB	Min. 1-inch ENRGY 3 secured with 2-Part UIA ribbons spaced 12-inch o.c.	DEXcell FA secured with 2-Part UIA ribbons spaced 12-inch o.c.	HA SBS Ply	OPTIONAL HA SBS Ply	HA SBS Cap	-82.5 (Lim. 9)
C-A-6	OPTIONAL VB SAR*	Min. 1.5-inch E3 secured with 2-Part UIA, RSUA, or OSFA in ribbons spaced 12-inch o.c.	FescoBoard secured with 2-Part UIA ribbons spaced 12-inch o.c.	MBR BA SBS BUR Base; or GlasPly Premier, GlasPly IV or PermaPly 28 fully bonded in ASTM D 312 Type IV Asphalt	OPTIONAL MBR BA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-112.5 (Lim. 9)
C-A-7	SA VB	Min. 1.5-inch ENRGY 3 secured with RSUA or OSFA ribbons spaced 12-inch o.c.	DensDeck Prime or DEXcell FA secured with RSUA or OSFA ribbons spaced 12-inch o.c.	DynaGrip Base SD/SA self-adhered	OPTIONAL TA SBS Ply	TA SBS Cap	-135 (Lim. 9)
C-A-8	SA VB	Min. 1-inch ENRGY 3 secured with RSUA or OSFA ribbons spaced 12-inch o.c.	DensDeck Prime, or SECUROCK secured with RSUA or OSFA ribbons spaced 12-inch o.c.	CA SBS Ply	OPTIONAL CA SBS Ply	CA SBS Cap	-135 (Lim. 9)
C-A-9	SA VB	Min. 1-inch ENRGY 3 secured with RSUA or OSFA ribbons spaced 12-inch o.c.	DEXcell FA secured with RSUA or OSFA ribbons spaced 12-inch o.c.	MBR BA SBS Ply	OPTIONAL MBR BA SBS Ply	MBR BA SBS Cap	-135 (Lim. 9)
C-A-10	SA VB	Min. 1-inch ENRGY 3 secured with RSUA or OSFA ribbons spaced 12-inch o.c.	DEXcell FA secured with RSUA or OSFA ribbons spaced 12-inch o.c.	HA SBS Ply	OPTIONAL HA SBS Ply	HA SBS Cap	-135 (Lim. 9)
C-A-11	OPTIONAL VB SAR*	Min. 1.5-inch E3 secured with MBR Bonding Adhesive or 2-Part UIA ribbons spaced 12-inch o.c.	DuraBoard MBR Bonding Adhesive or 2-Part UIA ribbons spaced 12-inch o.c.	MBR BA SBS BUR Base	OPTIONAL MBR BA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-147.5 (Lim. 9)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]
[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
 SBS Modified Roofing Systems

APPENDIX B

Assemblies with All Layers Adhered over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-A-12	-	Min. 1.5-inch <i>E3</i> fully adhered in MBR Bonding Adhesive	-	MBR BA SBS BUR Base	OPTIONAL MBR BA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-147.5 (Lim. 9)
C-A-13	OPTIONAL DynaGrip Base SD/SA self-adhered over deck primed with ASTM D 41 primer	Min. 1-inch ENRGY 3 secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	<i>DensDeck Prime</i> , or SECUROCK secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	CA SBS Ply	OPTIONAL CA SBS Ply	CA SBS Ply	-150 (Lim. 9)
C-A-14	OPTIONAL DynaGrip Base SD/SA self-adhered over deck primed with ASTM D 41 primer	Min. 1-inch ENRGY 3 secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	<i>DEXcell FA</i> secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	MBR BA SBS Ply	OPTIONAL MBR BA SBS Ply	MBR BA SBS Cap	-150 (Lim. 9)
C-A-15	OPTIONAL DynaGrip Base SD/SA self-adhered over deck primed with ASTM D 41 primer	Min. 1-inch ENRGY 3 secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	<i>DEXcell FA</i> secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	HA SBS Ply	OPTIONAL HA SBS Ply	HA SBS Cap	-150 (Lim. 9)
C-A-16	OPTIONAL HA SBS BUR Base 2	Min. 1.5-inch <i>E3</i> , FescoFoam, or DuraFoam fully adhered in ASTM D 312, Type IV Asphalt	Retro-Fit Board or DuraBoard fully adhered in ASTM D 312, Type IV Asphalt	HA SBS BUR Base 2	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-155 (Lim. 9)
C-A-17	OPTIONAL HA SBS BUR Base 2	Min. 1.5-inch <i>E3</i> , FescoFoam, DuraFoam, FescoBoard, Retro-Fit Board or Min. 3/4-inch DuraBoard fully adhered in ASTM D 312, Type IV Asphalt	OPTIONAL Retro-Fit Board or Min. 3/4-inch DuraBoard fully adhered in ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-167.5 (Lim. 9)
C-A-18	DynaGrip Base SD/SA self-adhered over deck primed with ASTM D 41 primer	Min. 1.5-inch ENRGY 3 secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	<i>DensDeck Prime</i> or <i>DEXcell FA</i> secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	DynaGrip Base SD/SA self-adhered	OPTIONAL TA SBS Ply	TA SBS Cap	-180 (Lim. 9)
C-A-19	OPTIONAL VB SAR*	Min. 1-inch ENRGY 3 secured with 2-Part UIA ribbons spaced 12-inch o.c.	-	DynaGrip Base SD/SA	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-185 (Lim. 9)



Assemblies with All Layers Adhered over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-A-20	OPTIONAL VB SAR*	Min. 1-inch ENRGY 3 secured with 2-Part UIA ribbons spaced 12-inch o.c.	DEXcell FA secured with 2-Part UIA ribbons spaced 12-inch o.c.	TA SBS Ply	OPTIONAL TA SBS Ply	TA SBS Cap	-185 (Lim 9)
C-A-21	-	FescoBoard or Min. 3/4-inch DuraBoard fully adhered in MBR Bonding Adhesive	-	HA SBS BUR Base 2 or MBR BA SBS BUR Base	OPTIONAL MBR BA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-187.5 (Lim. 9)
C-A-22	OPTIONAL VB SAR*	DuraBoard secured with 2-Part UIA ribbons spaced 12-inch o.c.	-	MBR BA SBS BUR Base	OPTIONAL MBR BA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-187.5 (Lim. 9)
C-A-23	-	Min. 1.5-inch ENRGY 3 secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	DensDeck Prime or DEXcell FA secured with OSFA, 2-Part UIA, or RSUA ribbons spaced 12-inch o.c.	DynaGrip Base SD/SA self-adhered	OPTIONAL TA SBS Ply	TA SBS Cap	-195 (Lim. 9)
C-A-24	DynaBase HW torch adhered	OPTIONAL Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF secured in RSUA spaced 12-inch o.c.	SECUROCK secured with RSUA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-225 (Lim. 9)
C-A-25	SBS TA VB	Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF secured in RSUA spaced 12-inch o.c.	SECUROCK secured with RSUA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-245 (Lim. 9)
C-A-26	-	Min. 1.5-inch ENRGY 3 secured in RSUA spaced 12-inch o.c.	-	MBR BA SBS BUR Base	OPTIONAL HA SBS Ply; or TA SBS Ply	HA SBS Cap; or TA SBS Cap	-245 (Lim. 9)
C-A-27	-	-	-	HA BUR SBS Base or DynaPly T1 fully bonded in ASTM D 312 Type IV Asphalt	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-275 (Lim. 9)
C-A-28	OPTIONAL VB SAR*	FescoBoard secured in 2-Part UIA ribbons spaced 12-inch o.c.	-	HA BUR SBS Base	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-285 (Lim. 9)
C-A-29	-	Min. 1.5-inch ENRGY 3 CGF secured with RSUA ribbons spaced 12-inch o.c.	DensDeck Prime secured with RSUA ribbons spaced 12-inch o.c.	HA SBS BUR Ply or TA SBS Ply	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-285 (Lim 9)
C-A-30	DynaBase HW torch adhered	Min. 1.5-inch ENRGY 3 CGF secured in RSUA spaced 12-inch o.c.	SECUROCK secured with RSUA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-292.5 (Lim. 9)



Assemblies with All Layers Adhered over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-A-31	OPTIONAL VB SAR*	DuraBoard or Retro-Fit Board secured in 2-Part UIA ribbons spaced 12-inch o.c.	-	HA BUR SBS Base	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-305 (Lim. 9)
C-A-32	-	Min. 1.5-inch ENERGY 3, ENRGY 3 AGF, FescoFoam or DuraFoam fully adhered in ASTM D 312, Type IV Asphalt	OPTIONAL FescoBoard, Retro-Fit Board or Min. 3/4-inch DuraBoard fully adhered in ASTM D 312, Type IV Asphalt	GlasPly Premier, GlasPly IV or PermaPly 28 fully bonded in ASTM D 312 Type IV Asphalt	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-305 (Lim. 9)
C-A-33	-	-	-	TA SBS Ply	OPTIONAL TA SBS Ply	TA SBS Cap	-315 (Lim. 9)
C-A-34	OPTIONAL VB SAR*	Min. 2-inch ENRGY 3 or ENRGY 3 AGF fully adhered in MBR Bonding Adhesive or secured with 2-Part UIA ribbons spaced 12-inch o.c.	SECUROCK fully adhered in MBR Bonding Adhesive or secured with 2-Part UIA ribbons spaced 12-inch o.c	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-367.5 (Lim 9)
C-A-35	-	Min. 2-inch ENRGY 3 or ENRGY 3 AGF fully adhered in MBR Bonding Adhesive or secured with 2-Part UIA ribbons spaced 12-inch o.c.	-	HA SBS BUR Base or MBR BA SBS BUR Base	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-367.5 (Lim 9)
C-A-36	-	Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF fully adhered in MBR Bonding Adhesive	-	MBR BA SBS BUR Base	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-375 (Lim. 9)
C-A-37	OPTIONAL VB SAR*	Min. 2-inch ENRGY 3 secured with 2-Part UIA ribbons spaced 12-inch o.c.	DEXcell FA secured with 2-Part UIA ribbons spaced 12-inch o.c.	TA SBS Ply	OPTIONAL TA SBS Ply	TA SBS Cap	-390 (Lim 9)
C-A-38	-	Min. 2-inch ENRGY 3 AGF secured with 2-Part UIA ribbons spaced 12-inch o.c. or fully adhered in ASTM D 312, Type IV Asphalt	SECUROCK secured with 2-Part UIA ribbons spaced 12-inch o.c. or fully adhered in ASTM D 312, Type IV Asphalt	HA SBS BUR Ply or TA SBS Ply	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-397.5 (Lim 9)
C-A-39	OPTIONAL VB SAR*	Min. 2-inch ENRGY 3 secured with 2-Part UIA ribbons spaced 12-inch o.c.	SECUROCK secured with 2-Part UIA ribbons spaced 12-inch o.c.	HA SBS BUR Ply or TA SBS Ply	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-442.5 (Lim 9)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]
[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
 SBS Modified Roofing Systems

APPENDIX B

Assemblies with All Layers Adhered over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-A-40	-	Min. 1.5-inch ENRGY 3 CGF secured with RSUA ribbons spaced 12-inch o.c.	DensDeck Prime secured with RSUA ribbons spaced 6-inch o.c.	HA SBS BUR Ply or TA SBS Ply	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-492.5 (Lim 9)
C-A-41	-	Min. 2-inch ENRGY 3 fully adhered in ASTM D 312, Type IV Asphalt	SECUROCK fully adhered in ASTM D 312, Type IV Asphalt	HA SBS BUR Ply or TA SBS Ply	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-495 (Lim 9)
C-A-42	-	-	-	DynaBase or DynaBase XT fully bonded in MBR Bonding Adhesive	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-495 (Lim 9)
C-A-43	-	Min. 2-inch ENRGY 3 fully adhered in ASTM D 312, Type IV Asphalt	SECUROCK fully adhered in ASTM D 312, Type IV Asphalt	TA SBS Ply	-	TA SBS Cap	-536.5 (Lim 9)

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-AM-1	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DEXcell Cement	AP Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
C-AM-2	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DEXcell FA	AP Fasteners & Plates secured at a rate of 1 fastener per 3.2ft ²	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
C-AM-3	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DEXcell FA	AP Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
C-AM-4	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 5/8-inch DEXcell FA	AP Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)



Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-AM-5	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	TA SBS Base; or HA SBS Ply	OPTIONAL TA SBS Ply; or HA SBS Ply	TA SBS Cap; or HA SBS Cap	-45 (Non-HVHZ; Lim. 7)
C-AM-6	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	HA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
C-AM-7	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
C-AM-8	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	HA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
C-AM-9	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
C-AM-10	OPTIONAL Insulation under Min 1.5-inch ENRGY 3, FescoFoam or DuraFoam; or Min. 1-inch Fesco Board or DuraBoard	AP Fasteners & Plates secured at a rate of 16 per 4-ft x 8-ft Board	FescoFoam or DuraFoam; Min. 1-inch Fesco Board; Retro-Fit, RetroPlus or DuraBoard	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-52.5 (Lim. 7)
C-AM-11	OPTIONAL Insulation under Min. 1-inch E3; FescoFoam, FescoBoard, DuraFoam or Min. 3/4-inch DuraBoard	Simultaneously fastened with Top Insulation	FescoFoam, FescoBoard, DuraFoam, Retro-Fit Board or Min 3/4-inch DuraBoard	AP Fasteners & Plates at a rate of 16 per 4-ft x 8-ft Board	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply ; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-52.5 (Lim. 7)



Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-AM-12	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	Invinsa	RSUA or 2-Part UIA ribbons spaced 12-inch o.c.	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-52.5 (Lim. 7)
C-AM-13	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 1.8ft ²	TA SBS Base; or HA SBS Ply	OPTIONAL TA SBS Ply; or HA SBS Ply	TA SBS Cap; or HA SBS Cap	-52.5 (Lim. 7)
C-AM-14	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	SECUROCK	AP Fasteners & Plates secured at a rate of 18 per 4-ft x 8-ft Board	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
C-AM-15	OPTIONAL Insulation under Min 1.5-inch ENRGY 3, FescoFoam or DuraFoam	AP Fasteners & Plates secured at a rate of 18 per 4-ft x 8-ft Board	FescoFoam, DuraFoam, Retro-Fit, RetroPlus or DuraBoard	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
C-AM-16	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 18 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
C-AM-17	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 18 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-60 (Lim. 7)
C-AM-18	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	SECUROCK	AP Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
C-AM-19	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	SECUROCK	AP Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-60 (Lim. 7)



Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-AM-20	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	Min 1.5-inch ENRGY 3 or ENRGY 3 CGF	AP Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-60 (Lim. 7)
C-AM-21	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	Min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	MBR BA SBS BUR Base	OPTIONAL HA SBS Ply; or TA SBS Ply	HA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
C-AM-22	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	Min. 1.5-inch E3	AP Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	DynaBase, DynaBase XT or fully bonded in MBR Bonding Adhesive	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-67.5 (Lim. 7)
C-AM-23	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-67.5 (Lim. 7)
C-AM-24	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-67.5 (Lim. 7)
C-AM-25	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	Min 1.5-inch ENRGY 3 or ENRGY 3 CGF	AP Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-67.5 (Lim. 7)
C-AM-26	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	Min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	MBR BA SBS BUR Base	OPTIONAL HA SBS Ply; or TA SBS Ply	HA SBS Cap; or TA SBS Cap	-67.5 (Lim. 7)
C-AM-27	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 1.8ft ²	TA SBS Base; or HA SBS Ply	OPTIONAL TA SBS Ply; or HA SBS Ply	TA SBS Cap; or HA SBS Cap	-67.5 (Lim. 7)
C-AM-28	OPTIONAL Insulation under Min. 2-inch ENRGY 3, FescoFoam, or DuraFoam	AP Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	Retro-Fit, RetroPlus, DuraBoard; or Min. 2-inch FescoFoam or DuraFoam	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-75 (Lim. 7)



Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-AM-29	OPTIONAL Insulation under Min. 1-inch E3	Simultaneously fastened with Top Insulation	Min 3/4-inch DuraBoard	AP Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-75 (Lim. 7)
C-AM-30	OPTIONAL Insulation under Min. 1.5-inch E3, FescoFoam or DuraFoam; FescoBoard; Min. 3/4-inch DuraBoard	Simultaneously fastened with Top Insulation	Min 1/2-inch SECUROCK	AP Fasteners & Plates at a rate of 18 per 4-ft x 8-ft Board	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-75 (Lim. 7)
C-AM-31	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime or DEXcell FA	AP Fasteners & Plates at a rate of 18 per 4-ft x 8-ft Board	TA SBS Ply	OPTIONAL TA SBS Ply	TA SBS Cap	-75 (Lim. 7)
C-AM-32	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime or DEXcell FA	AP Fasteners & Plates at a rate of 18 per 4-ft x 8-ft Board	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-75 (Lim. 7)
C-AM-33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime	AP Fasteners & Plates secured at a rate of 1 fastener per 1.6ft ²	TA SBS Base; or HA SBS Ply	OPTIONAL TA SBS Ply; or HA SBS Ply	TA SBS Cap; or HA SBS Cap	-75 (Lim. 7)
C-AM-34	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 32 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-82.5 (Lim. 7)
C-AM-35	OPTIONAL Insulation under Min. 1-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch SECUROCK	AP Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-82.5 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**
 Johns Manville Corporation
 SBS Modified Roofing Systems
APPENDIX B**Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)**

System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
C-AM-36	OPTIONAL Insulation under Min. 1-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime or DEXcell FA	AP Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	TA SBS Ply	OPTIONAL TA SBS Ply	TA SBS Cap	-82.5 (Lim. 7)
C-AM-37	OPTIONAL Insulation under Min. 1-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime or DEXcell FA	AP Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-82.5 (Lim. 7)
C-AM-38	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DEXcell FA	AP Fasteners & Plates secured at a rate of 32 per 4-ft x 8-ft Board	TA SBS Base 2	OPTIONAL TA SBS Ply	TA SBS Cap	-82.5 (Lim. 7)
C-AM-39	OPTIONAL Insulation under Min. 2-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-90 (Lim. 7)
C-AM-40	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	UF Fasteners & Plates or UltraFast Fasteners with UltraFast Plastic Plates at a rate of 32 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-90 (Lim. 7)
C-AM-41	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime	AP Fasteners & Plates secured at a rate of 32 per 4-ft x 8-ft Board	TA SBS Base; or HA SBS Ply	OPTIONAL TA SBS Ply; or HA SBS Ply	TA SBS Cap; or HA SBS Cap	-112.5 (Lim. 7)

Mechanically Fastened Assemblies over Concrete Deck (New, Existing, or Recover)

System No.	Base Insulation	Top Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
C-M-1	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	All Purpose Fasteners and APB Plates spaced 18-inch o.c within min. 4-inch heat welded side lap.	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply ; MBR BA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-47.5 (Lim. 9)
C-M-2	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 HW or DynaFast 250 HW	All Purpose Fasteners and APB Plates spaced 18-inch o.c within min. 4-inch heat welded side lap.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-47.5 (Lim. 9)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]
[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
 SBS Modified Roofing Systems

APPENDIX B

Mechanically Fastened Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Top Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
C-M-3	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S or DynaFast 250 HW	All Purpose Fasteners and High Load Plates spaced 6-inch o.c. within min. 4-inch heat welded side lap in rows max. 70-inch o.c.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-52.5 (Lim. 7)
C-M-4	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	All Purpose Fasteners and High Load Plates spaced 6-inch o.c. within min. 4-inch heat welded side lap in rows max. 70-inch o.c.	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-52.5 (Lim. 7)
C-M-5	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	MA Base	AP Fasteners & Plates 9-inch o.c. at min. 4-inch side lap and 18-inches o.c. in two equally spaced, staggered rows in the field of the roll	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply ; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 9)
C-M-6	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaLastic 180 S or DyanLastic 250 S	All Purpose Fasteners and High Load Plates spaced 12-inch o.c. within the min. 5-inch heat welded side lap	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply ; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-67.5 (Lim. 7)
C-M-7	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaLastic 180 S or DyanLastic 250 S	All Purpose Fasteners and APB Plates spaced 12-inch o.c. within min. 4-inch heat welded side laps	TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
C-M-8	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaLastic 180 S or DyanLastic 250 S	All Purpose Fasteners and APB Plates spaced 12-inch o.c. within min. 4-inch heat welded side laps	TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
C-M-9	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	All Purpose Fastener and High Load Plates spaced 12-inch o.c. within min. 4-inch heat welded side lap.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
C-M-10	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	All Purpose Fasteners and High Load Plates spaced 12-inch o.c. within min. 4-inch heat welded side lap.	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)



Mechanically Fastened Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Top Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
C-M-11	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	All Purpose Fasteners and APB Plates spaced 6-inch o.c within min. 4-inch heat welded side lap.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-105 (Lim.7)
C-M-12	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	All Purpose Fasteners and APB Plates spaced 6-inch o.c within min. 4-inch heat welded side lap.	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-105 (Lim.7)
C-M-13	OPTIONAL Insulation under Min. 1.5-inch E3	Retro-Fit Board	DynaLastic 180 S	Attached in min. 4-inch side lap 6-inch o.c. with JM Structural Concrete Fasteners or JM All Purpose Fasteners and High Load Plates	TA SBS Ply	TA SBS Cap	-112.5 (Lim. 7)
C-M-14	OPTIONAL Insulation under Min. 1.5-inch E3	Retro-Fit Board or Min. 5/8-inch Plywood	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	Attached in min. 5-inch, heat welded side lap 6-inch o.c. with JM Structural Concrete Fasteners or JM All Purpose Fasteners and High Load Plates or APB Plates	OPTIONAL TA SBS Ply	TA SBS Cap	-112.5 (Lim. 7)
C-M-15	OPTIONAL Insulation under Min. 1.5-inch E3	Min. 5/8-inch Plywood	DynaLastic 180 S	Attached in min. 5-inch, heat welded side lap 6-inch o.c. with JM Structural Concrete Fasteners or JM All Purpose Fasteners and High Load Plates	OPTIONAL TA SBS Ply	TA SBS Cap	-135 (Lim. 7)
C-M-16	OPTIONAL Insulation under Min. 1.5-inch E3	Retro-Fit Board	DynaLastic 180 S	Attached in min. 5-inch, heat welded side lap 6-inch o.c. with JM Structural Concrete Fasteners or JM All Purpose Fasteners and High Load Plates	OPTIONAL TA SBS Ply	TA SBS Cap	-135 (Lim. 7)
C-M-17	OPTIONAL Insulation under Min. 1.5-inch E3	Min. 5/8-inch Plywood	DynaLastic 180 S	Attached in min. 4-inch side lap 6-inch o.c. with JM Structural Concrete Fasteners or JM All Purpose Fasteners and High Load Plates	TA SBS Ply	TA SBS Cap	-150 (Lim. 7)
C-M-18	OPTIONAL Insulation under Min. 1.5-inch E3	Retro-Fit Board	DynaLastic 180 S	Attached in min. 4-inch side lap 6-inch o.c. with JM Structural Concrete Fasteners or JM All Purpose Fasteners and High Load Plates	TA SBS Ply	TA SBS Cap	-150 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]

[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
SBS Modified Roofing Systems

APPENDIX B

Assemblies with All Layers Adhered over Cementitious Wood Fiber Deck (New or Existing)

System No.	Base Insulation	Base Attachment	Top Insulation	Top Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
CW-A-1	SECUROCK	2-Part UIA applied 12-inch o.c.	-	-	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-165 (Lim. 9)

Assemblies with Adhered Membranes over Insulated Cementitious Wood Fiber Deck (New, Existing or Recover)

System No.	Base Insulation or Anchor Sheet	Base or Anchor Attachment	Top Insulation	Top Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
CW-AM-1	FescoBoard or Min. 1/2-inch DuraBoard	Twin-Loc Nail secured at a rate of 1 per 2ft ²	FescoBoard, Retro-Fit, RetroPlus or Min. 3/4-inch DuraBoard	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Lim. 7; Non-HVHZ)
CW-AM-2	MA Base	Twin-Loc Nails with integral plate spaced 9-inch o.c. at the 3-inch side lap and two rows (2) staggered 12-inch o.c. in the field	Min. 1.3-inch ENRGY 3, FescoFoam, DuraFoam, FescoBoard, Retro-Fit Board or Min. 3/4-inch DuraBoard	ASTM D 312, Type IV Asphalt	HA SBS BUR BASE	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-82.5 (Lim. 7)

Mechanically Attached Assemblies over Cementitious Wood Fiber Deck (New or Existing)

System No.	Insulation	Base Ply	Base Ply Attachment	Ply Sheet	Cap Sheet	MDP (psf)
CW-M-1	Min. 375 psi Celcore MF with HS Rheology Admixture poured in place	DynaWeld Base	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	OPTIONAL TA SBS Ply	TA SBS Cap	-45 (Lim. 7)
CW-M-2	Min. 375 psi Celcore MF with HS Rheology Admixture poured in place	DynaWeld Base	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in three (3) equally spaced, staggered rows in the field	OPTIONAL TA SBS Ply	TA SBS Cap	-52.5 (Lim. 7)
CW-M-3	Min. 475 psi Celcore MF with HS Rheology Admixture poured in place	DynaFast 180 HW, DynaFast 180 S or DynaFast 250 HW	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)



Mechanically Attached Assemblies over Cementitious Wood Fiber Deck (New or Existing)

System No.	Insulation	Base Ply	Base Ply Attachment	Ply Sheet	Cap Sheet	MDP (psf)
CW-M-4	Min. 475 psi Celcore MF with HS Rheology Admixture poured in place	DynaFast 180 S	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
CW-M-5	Min. 375 psi Celcore MF with HS Rheology Admixture poured in place	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 6-inch o.c. in 4-inch side laps, 6-inch o.c. in three (3) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
CW-M-6	-	MA Base	Twin-Loc Nails with integral plate spaced 9-inch o.c. at the 3-inch side lap and two rows (2) staggered 12-inch o.c. in the field	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-82.5 (Lim. 7)
CW-M-7	OPTIONAL Insulation	DynaFast 180HW, DynaFast 180S, or DynaFast 250HW	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps and 6-inch o.c. in one intermediate row centered in the field of the roll	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-90 (Lim. 7)
CW-M-8	OPTIONAL Insulation	DynaFast 180S	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps and 6-inch o.c. in one intermediate row centered in the field of the roll	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-90 (Lim. 7)

Assemblies with Adhered Membranes over Insulated Poured Gypsum Deck (New, Existing or Recover)

System No.	Base Insulation or Anchor Sheet	Base or Anchor Attachment	Top Insulation	Top Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
G-AM-1	Min. 1.5-inch ENRGY	Polymer Auger Fasteners and Plates secured at a rate of 8 per 4-ft x 8-ft Board	FescoBoard, Retro-Fit, RetroPlus or Min. 3/4-inch DuraBoard	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Lim. 7; Non-HVHZ)
G-AM-2	FescoBoard or Min. 3/4-inch DuraBoard	Polymer Auger Fasteners and Plates secured at a rate of 16 per 4-ft x 8-ft Board	FescoBoard, Retro-Fit, RetroPlus or Min. 3/4-inch DuraBoard	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Lim. 7; Non-HVHZ)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES][INSTALLATION]; [NOMENCLATURE]Johns Manville Corporation
SBS Modified Roofing Systems

APPENDIX B

Assemblies with Adhered Membranes over Insulated Poured Gypsum Deck (New, Existing or Recover)

System No.	Base Insulation or Anchor Sheet	Base or Anchor Attachment	Top Insulation	Top Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
G-AM-3	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	FescoBoard or Min. 3/4-inch DuraBoard	Polymer Auger Fasteners and Plates secured at a rate of 16 per 4-ft x 8-ft Board	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Lim. 7; Non-HVHZ)
G-AM-4	MA Base or DynaPly T1	Twin-Loc Nails with integral plate spaced 9-inch o.c. at the 3-inch side lap and two rows (2) staggered 12-inch o.c. in the field	Min 1.4-inch E3, FescoFoam, DuraFoam, Fesco Board, Retro-Fit, RetroPlus or Min 3/4-inch DuraBoard	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-75 (Lim. 7)

Mechanically Attached Assemblies over Poured Gypsum Deck (New or Existing)

System No.	Insulation	Base Ply	Base Ply Attachment	Ply Sheet	Cap Sheet	MDP (psf)
G-M-1	Insulation	MA Base	Polymer Auger Fasteners and Plates spaced 9-inch o.c. at the side lap and two rows (2) staggered 12-inch o.c. in the field	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Lim. 7; Non-HVHZ)
G-M-2	-	MA Base	Min. 1.8-inch Twin-Loc Nails with integral plate spaced 9-inch o.c. at the 3-inch side lap and two rows (2) staggered 12-inch o.c. in the field	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-75 (Lim. 7)
G-M-3	OPTIONAL Insulation	DynaFast 180HW, DynaFast 180S, or DynaFast 250HW	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps and 6-inch o.c. in one intermediate row centered in the field of the roll	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-90 (Lim. 7)
G-M-4	OPTIONAL Insulation	DynaFast 180S	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps and 6-inch o.c. in one intermediate row centered in the field of the roll	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-90 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]
[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
 SBS Modified Roofing Systems

APPENDIX B

Lightweight Concrete Assemblies with All Layers Adhered over Concrete Deck (New or Existing)								
System No.	Vapor Barrier	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
LC-A-1	-	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA ribbons spaced 12-inch o.c.	MBR BA SBS BUR Base	OPTIONAL CA SBS Ply; HA SBS Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; or TA SBS Cap	-77.5 (Lim. 9)
LC-A-2	-	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	<u>Base Layer:</u> Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF <u>Top Layer:</u> SECUROCK	Base and Top layer secured with RSUA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-77.5 (Lim. 9)
LC-A-3	-	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3	2-Part UIA ribbons spaced 12-inch o.c.	MBR BA SBS BUR Base	OPTIONAL CA SBS Ply; HA SBS Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; or TA SBS Cap	-80 (Lim. 9)
LC-A-4	-	Min. 300 psi LWIC	<u>Base Layer:</u> Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF <u>Top Layer:</u> SECUROCK	2-Part UIA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-80 (Lim. 9)
LC-A-5	-	Min. 310 psi Elastizell with Zell-Crete Fibers	Min. 1.5-inch ENRGY 3	2-Part UIA ribbons spaced 12-inch o.c.	MBR BA SBS BUR Base	OPTIONAL HA SBS Ply; or TA SBS Ply	HA SBS Cap; or TA SBS Cap	-130 (Lim. 9)
LC-A-6	-	Min. 310 psi Elastizell with Zell-Crete Fibers	<u>Base Layer:</u> Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF <u>Top Layer:</u> SECUROCK	2-Part UIA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-130 (Lim. 9)
LC-A-7	-	Min. 260 psi LWIC	SECUROCK	2-Part UIA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-210 (Lim. 9; Non-HVHZ)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B**

Mechanically Fastened Lightweight Concrete Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LC-M-1	-	Min. 280 psi LWIC	MA Base	1.4-inch JM UltraLok or 1.7-inch LWC CR Base Sheet Fastener Fastener installed 7-inch o.c. in 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-30 (Lim. 7; Non-HVHZ)
LC-M-2	-	Min. 200 psi LWIC	MA Base	1.4-inch JM UltraLok Fastener installed 9-inch o.c. in 3-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-30 (Lim. 7; Non-HVHZ)
LC-M-3	-	Min. 280 psi LWIC	MA Base	1.4-inch JM UltraLok or 1.7-inch LWC CR Base Sheet Fastener Fastener installed 7-inch o.c. in 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip Base SD/SA	HA SBS Cap or TA SBS Cap	-30 (Lim. 7; Non-HVHZ)
LC-M-4	-	Min. 200 psi LWIC	MA Base	1.4-inch JM UltraLok Fastener installed 9-inch o.c. in 3-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip Base SD/SA	HA SBS Cap or TA SBS Cap	-30 (Lim. 7; Non-HVHZ)
LC-M-5	OPTIONAL SBS TA VB	Min. 380 psi Elastizell with Zell-Crete Fibers	DynaFast 180 HW, or DynaFast 250 HW	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 9-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-37.5 (Lim. 7; Non-HVHZ)
LC-M-6	OPTIONAL SBS TA VB	Min. 380 psi Elastizell with Zell-Crete Fibers	DynaFast 180 S	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 9-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-37.5 (Lim. 7; Non-HVHZ)
LC-M-7		Min. 300 psi LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-37.5 (Lim. 7; Non-HVHZ)
LC-M-8		Min. 300 psi LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip SD/SA followed by optional TA SBS Ply	TA SBS Cap	-37.5 (Lim. 7; Non-HVHZ)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**
 Johns Manville Corporation
 SBS Modified Roofing Systems
APPENDIX B

Mechanically Fastened Lightweight Concrete Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LC-M-9		Min. 300 psi LWIC	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 6.4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base)	TA SBS Cap 2 (Min. 4-inch side laps)	-37.5 (Lim. 7; Non-HVHZ)
LC-M-10	OPTIONAL SBS TA VB	Min. 310 psi Elastizell with Zell-Crete Fibers	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-45 (Lim.7)
LC-M-11	OPTIONAL SBS TA VB	Min. 310 psi Elastizell with Zell-Crete Fibers	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip SD/SA followed by optional TA SBS Ply	TA SBS Cap	-45 (Lim.7)
LC-M-12	OPTIONAL SBS TA VB	Min. 310 psi Elastizell with Zell-Crete Fibers	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 6.4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base)	TA SBS Cap 2 (Min. 4-inch side laps)	-45 (Lim.7)
LC-M-13	OPTIONAL SBS TA VB	Min. 300 psi Celcore MF	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	OPTIONAL TA SBS Ply	TA SBS Cap	-45 (Lim. 7)
LC-M-14	OPTIONAL SBS TA VB	Min. 350 psi Celcore MF	MA Base 3	Min. 1.7-inch JM LWC CR Base Fastener installed 12-inch o.c. in 4-inch side laps, 12-inch o.c. in three (3) equally spaced, staggered rows in the field	TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-45 (Lim. 7)
LC-M-15	-	Min. 200 psi LWIC (MCRF \geq 169 lbf with 1.7-inch LWC CR Base Sheet Fastener)	Invinsa Roof Board	Min. 1.8-inch JM UltraLok secured at a rate of 32 per 4-ft x 8-ft board	DynaGrip Base SD/SA with OPTIONAL TA SBS Ply	TA SBS Cap; HA SBS Cap; (Min. 4-inch side laps)	-45 (Lim. 7)
LC-M-16	OPTIONAL SBS TA VB	Min. 330 psi Celcore MF	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in three (3) equally spaced, staggered rows in the field	OPTIONAL TA SBS Ply	TA SBS Cap	-52.5 (Lim. 7)
LC-M-17	OPTIONAL SBS TA VB	Min. 410 psi Celcore MF and Celcore S-1	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 12-inch o.c. in 4-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-52.5 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B**

Mechanically Fastened Lightweight Concrete Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LC-M-18	OPTIONAL SBS TA VB	Min. 410 psi Celcore MF and Celcore S-1	DynaFast 180 HW, DynaFast 180 S or DynaFast 250 HW	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-52.5 (Lim. 7)
LC-M-19	OPTIONAL SBS TA VB	Min. 410 psi Celcore MF and Celcore S-1	DynaFast 180 S	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-52.5 (Lim. 7)
LC-M-20	DynaWeld Cap 180 FR	Min 360 psi Celcore MF and Celcore S-1	DynaBase PR, DynaLastic 180 S, or DynaLastic 250 S	Min. 1.7-inch JM LWC CR Base Fastener installed 9-inch o.c. in 3-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base or DynaBase HW)	TA SBS Cap 3 (Min. 4-inch side laps)	-52.5 (Lim. 7)
LC-M-21	DynaWeld 180 S	Min 360 psi Celcore MF	DynaBase PR, DynaLastic 180 S, or DynaLastic 250 S	Min. 1.7-inch JM LWC CR Base Fastener installed 9-inch o.c. in 3-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base or DynaBase HW)	TA SBS Cap 3 (Min. 4-inch side laps)	-52.5 (Lim. 7)
LC-M-22	OPTIONAL SBS TA VB	Min. 410 psi Celcore MF and Celcore S-1	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 12-inch o.c. in 4-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	TA SBS Cap	-60 (Lim. 7; Non-HVHZ)
LC-M-23	-	Min. 200 psi Mearlcrete	PermaPly 28 or Ventsulation	Min. 1.7-inch LWC Base Sheet Fastener installed 7-inch o.c. in 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-60 (Lim. 7)
LC-M-24	OPTIONAL SBS TA VB	Min. 480 psi Celcore MF	DynaFast 180 HW, DynaFast 180 S or DynaFast 250 HW	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
LC-M-25	OPTIONAL SBS TA VB	Min. 400 psi Elastizell with Zell-Crete Fibers	DynaFast 180 HW, or DynaFast 250 HW	All Purpose Fasteners and High Load Plates spaced 12-inch o.c. within min. 5-inch heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
LC-M-26	OPTIONAL SBS TA VB	Min. 400 psi Elastizell with Zell-Crete Fibers	DynaFast 180 S	All Purpose Fasteners and High Load Plates spaced 12-inch o.c. within min. 5-inch heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B**

Mechanically Fastened Lightweight Concrete Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LC-M-27	OPTIONAL SBS TA VB	Min. 480 psi Celcore MF	DynaFast 180 S	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
LC-M-28	OPTIONAL SBS TA VB	Min. 380 psi Celcore MF	PermaPly 28	Min. 1.7-inch JM LWC Base Fastener installed 6-inch o.c. in 4-inch side laps, 6-inch o.c. in three (3) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
LC-M-29	-	Min. 310 LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply;	CA SBS Cap or PCA SBS Cap;	-60 (Lim. 7)
LC-M-30	-	Min 340 psi Celcore MF over deck treated with Celcore S-1	PermaPly 28	M Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply;	CA SBS Cap or PCA SBS Cap;	-60 (Lim. 7)
LC-M-31	-	Min 340 psi Celcore MF	DynaBase	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	HA SBS BUR Ply; or TA SBS Ply	HA SBS Cap or TA SBS Cap 2	-60 (Lim. 7)
LC-M-32	-	Min. 310 LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip SD/SA followed by optional TA SBS Ply	TA SBS Cap 2	-67.5 (Lim. 7)
LC-M-33	-	Min. 310 LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	HA SBS BUR Pl; or TA SBS Ply	HA SBS Cap or TA SBS Cap 2	-67.5 (Lim. 7)
LC-M-34	-	Min 340 psi Celcore MF over deck treated with Celcore S-1	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	HA SBS BUR Pl; or TA SBS Ply	HA SBS Cap or TA SBS Cap 2	-67.5 (Lim. 7)
LC-M-35	-	Min 340 psi Celcore MF over deck treated with Celcore S-1	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip SD/SA followed by optional TA SBS Ply	TA SBS Cap 2	-67.5 (Lim. 7)



Mechanically Fastened Lightweight Concrete Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LC-M-36	-	Min 340 psi Celcore MF over deck treated with Celcore S-1	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 6.4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base)	TA SBS Cap 2 (Min. 4-inch side laps)	-67.5 (Lim. 7)
LC-M-37	DynaWeld Cap 180 FR	Min 360 psi Celcore MF and Celcore S-1	DynaBase PR, DynaLastic 180 S, or DynaLastic 250 S	Min. 1.7-inch JM LWC CR Base Fastener installed 9-inch o.c. in 3-inch side laps, 9-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base or DynaBase HW)	TA SBS Cap 3 (Min. 4-inch side laps)	-67.5 (Lim. 7)
LC-M-38	DynaWeld 180 S	Min 360 psi Celcore MF	DynaBase PR, DynaLastic 180 S, or DynaLastic 250 S	Min. 1.7-inch JM LWC CR Base Fastener installed 9-inch o.c. in 3-inch side laps, 9-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base or DynaBase HW)	TA SBS Cap 3 (Min. 4-inch side laps)	-67.5 (Lim. 7)
LC-M-39	-	Min. 350 psi Celcore MF	DynaFast 180 S	(4) 2.25" VERSA-FAST Fasteners installed in each VERSA-FAST Metal Plate; Plates spaced 10-inch o.c. within the 5-inch wide, torched adhered side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
LC-M-40	-	Min. 350 psi Celcore MF	DynaFast 180 HW or DynaFast 250 HW	(4) 2.25" VERSA-FAST Fasteners installed in each VERSA-FAST Metal Plate; Plates spaced 10-inch o.c. within the 5-inch wide, torched adhered side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
LC-M-41	OPTIONAL SBS TA VB	Min. 400 psi Elastizell with Zell-Crete Fibers	PermaPly 28, GlasBase Plus, DynaBase, or Ventsulation Felt	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	HA SBS BUR Pl; or TA SBS Ply	HA SBS Cap or TA SBS Cap	-75 (Lim. 7)
LC-M-42	-	Min. 360 psi Concrecel	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 6-inch o.c. in 4-inch side laps, 6-inch o.c. in three (3) equally spaced, staggered rows in the field	HA SBS BUR Pl; or TA SBS Ply	HA SBS Cap or TA SBS Cap	-120 (Lim. 7)

Lightweight Concrete Assemblies with All Layers Adhered over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Base Insulation	Base Insulation Attachment	Base Sheet	Ply Sheet	Cap Sheet
LS-A-1	G33	Min 340 psi Celcore MF over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA ribbons spaced 12-inch o.c.	MBR BA SBS BUR Base	OPTIONAL CA SBS Ply; HA SBS Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; or TA SBS Cap



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]
[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
 SBS Modified Roofing Systems

APPENDIX B

Lightweight Concrete Assemblies with All Layers Adhered over Steel Deck (New or Existing)

System No.	Deck Detail	LWIC	Base Insulation	Base Insulation Attachment	Base Sheet	Ply Sheet	Cap Sheet	MDP (psf)
LS-A-2	G33	Min 340 psi Celcore MF over deck treated with Celcore S-1	<u>Base Layer:</u> Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF <u>Top Layer:</u> SECUROCK	Base and Top layer secured with RSUA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-77.5 (Lim. 9)
LS-A-3	G33	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3	2-Part UIA ribbons spaced 12-inch o.c.	MBR BA SBS BUR Base	OPTIONAL CA SBS Ply; HA SBS Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; or TA SBS Cap	-80 (Lim. 9)
LS-A-4	G33	Min. 300 psi LWIC	<u>Base Layer:</u> Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF <u>Top Layer:</u> SECUROCK	2-Part UIA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-80 (Lim. 9)
LS-A-5	G33	Min. 310 psi Elastizell with Zell-Crete Fibers	Min. 1.5-inch ENRGY 3	2-Part UIA ribbons spaced 12-inch o.c.	MBR BA SBS BUR Base	OPTIONAL HA SBS Ply; or TA SBS Ply	HA SBS Cap; or TA SBS Cap	-130 (Lim. 9)
LS-A-6	G33	Min. 310 psi Elastizell with Zell-Crete Fibers	<u>Base Layer:</u> Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF <u>Top Layer:</u> SECUROCK	2-Part UIA ribbons spaced 12-inch o.c.	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	MBR BA SBS Cap; HA SBS Cap; or TA SBS Cap	-130 (Lim. 9)

Mechanically Fastened Lightweight Concrete Assemblies over Steel Deck (New or Existing)

System No.	Deck Detail	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LS-M-1	L5, G33	Min. 280 psi LWIC	MA Base	1.4-inch JM UltraLok or 1.7-inch LWC CR Base Sheet Fastener Fastener installed 7-inch o.c. in 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-30 (Lim. 7; Non-HVHZ)



Mechanically Fastened Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LS-M-2	L5, G33	Min. 200 psi LWIC	MA Base	1.4-inch JM UltraLok Fastener installed 9-inch o.c. in 3-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-30 (Lim. 7; Non-HVHZ)
LS-M-3	L5, G33	Min. 280 psi LWIC	MA Base	1.4-inch JM UltraLok or 1.7-inch LWC CR Base Sheet Fastener Fastener installed 7-inch o.c. in 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip Base SD/SA	HA SBS Cap or TA SBS Cap	-30 (Lim. 7; Non-HVHZ)
LS-M-4	L5, G33	Min. 200 psi LWIC	MA Base	1.4-inch JM UltraLok Fastener installed 9-inch o.c. in 3-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip Base SD/SA	HA SBS Cap or TA SBS Cap	-30 (Lim. 7; Non-HVHZ)
LS-M-5	L5, G33, P, S12	Min. 380 psi Elastizell with Zell-Crete Fibers	DynaFast 180 HW, or DynaFast 250 HW	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 9-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-37.5 (Lim. 7; Non-HVHZ)
LS-M-6	L5, G33, P, S12	Min. 380 psi Elastizell with Zell-Crete Fibers	DynaFast 180 S	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 9-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-37.5 (Lim. 7; Non-HVHZ)
LS-M-7	L6, G33, P, S18	Min. 300 psi LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-37.5 (Lim. 7; Non-HVHZ)
LS-M-8	L6, G33, P, S18	Min. 300 psi LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip SD/SA followed by optional TA SBS Ply	TA SBS Cap	-37.5 (Lim. 7; Non-HVHZ)
LS-M-9	L6, G33, P, S18	Min. 300 psi LWIC	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 6.4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base)	TA SBS Cap 2 (Min. 4-inch side laps)	-37.5 (Lim. 7; Non-HVHZ)
LS-M-10	L6, G33, P, S18	Min. 310 psi Elastizell with Zell-Crete Fibers	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-45 (Lim.7)
LS-M-11	L6, G33, P, S18	Min. 310 psi Elastizell with Zell-Crete Fibers	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip SD/SA followed by optional TA SBS Ply	TA SBS Cap	-45 (Lim.7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B****Mechanically Fastened Lightweight Concrete Assemblies over Steel Deck (New or Existing)**

System No.	Deck Detail	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LS-M-12	<i>L6, G33, P, S18</i>	Min. 310 psi Elastizell with Zell-Crete Fibers	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 6.4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base)	TA SBS Cap 2 (Min. 4-inch side laps)	-45 (Lim.7)
LS-M-13	<i>L5, G33, F1, S12</i>	Min. 300 psi Celcore MF	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	OPTIONAL TA SBS Ply	TA SBS Cap	-45 (Lim. 7)
LS-M-14	<i>L5, G33, P, S12</i>	Min. 350 psi Celcore MF and Celcore S-1	MA Base 3	Min. 1.7-inch JM LWC CR Base Fastener installed 12-inch o.c. in 4-inch side laps, 12-inch o.c. in three (3) equally spaced, staggered rows in the field	TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-45 (Lim. 7)
LS-M-15	<i>L5, G33, F1, S12</i>	Min. 200 psi LWIC (MCRF ≥169 lbf with 1.7-inch LWC CR Base Sheet Fastener)	Invinsa Roof Board	Min. 1.8-inch JM UltraLok secured at a rate of 32 per 4-ft x 8-ft board	DynaGrip Base SD/SA with OPTIONAL TA SBS Ply	TA SBS Cap; HA SBS Cap; (Min. 4-inch side laps)	-45 (Lim. 7)
LS-M-16	<i>L5, G33, F1, S12</i>	Min. 330 psi Celcore MF	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in three (3) equally spaced, staggered rows in the field	OPTIONAL TA SBS Ply	TA SBS Cap	-52.5 (Lim. 7)
LS-M-17	<i>L5, G33, P, S12</i>	Min. 400 psi Celcore MF and Celcore S-1	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 12-inch o.c. in 4-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-52.5 (Lim. 7)
LS-M-18	<i>L5, G33, P, S15</i>	Min. 400 psi Celcore MF and Celcore S-1	DynaFast 180 HW, DynaFast 180 S or DynaFast 250 HW	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-52.5 (Lim. 7)
LS-M-19	<i>L5, G33, P, S15</i>	Min. 400 psi Celcore MF and Celcore S-1	DynaFast 180 S	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-52.5 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B****Mechanically Fastened Lightweight Concrete Assemblies over Steel Deck (New or Existing)**

System No.	Deck Detail	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LS-M-20	L6, G33, P, S24	Min 360 psi Celcore MF and Celcore S-1 applied over DynaWeld Cap 180 FR torch adhered to Min. 1/2-inch DensDeck Prime fastened with UF Fasteners & Plates secured at a rate of 1 fastener per 2ft ²	DynaBase PR, DynaLastic 180 S, or DynaLastic 250 S	Min. 1.7-inch JM LWC CR Base Fastener installed 9-inch o.c. in 3-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base or DynaBase HW)	TA SBS Cap 3 (Min. 4-inch side laps)	-52.5 (Lim. 7)
LS-M-21	L5, G33	Min. 410 psi Celcore MF and Celcore S-1	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 12-inch o.c. in 4-inch side laps, 12-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply	TA SBS Cap	-60 (Lim. 7; Non-HVHZ)
LS-M-22	L5, G33, P, S12	Min. 400 psi Elastizell with Zell-Crete Fibers	DynaFast 180 HW or DynaFast 250 HW	HL Fasteners & Plates spaced 12-inch o.c. within min. 5-inch heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
LS-M-23	L5, G33, P, S12	Min. 400 psi Elastizell with Zell-Crete Fibers	DynaFast 180 S	HL Fasteners & Plates spaced 12-inch o.c. within min. 5-inch heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
LS-M-24	L5, G33, P, S15	Min. 480 psi Celcore MF	DynaFast 180 HW, DynaFast 180 S or DynaFast 250 HW	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
LS-M-25	L5, G33, P, S15	Min. 480 psi Celcore MF	DynaFast 180 S	Min. 1.8-inch Twin-Loc Nails and Straight Line Batten Bar spaced 6-inch o.c. within the 4-inch wide heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
LS-M-26	L5, G33, F1, S20	Min. 380 psi Celcore MF	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 6-inch o.c. in 4-inch side laps, 6-inch o.c. in three (3) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
LS-M-27	L5, G33, F1, S20	Min. 310 LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply;	CA SBS Cap; PCA SBS Cap;	-60 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**

Johns Manville Corporation
SBS Modified Roofing Systems

APPENDIX B**Mechanically Fastened Lightweight Concrete Assemblies over Steel Deck (New or Existing)**

System No.	Deck Detail	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LS-M-28	<i>L6, G33, P, S18</i>	Min 340 psi Celcore MF over deck treated with Celcore S-1	PermaPly 28	M Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	CA SBS BUR Ply; PCA SBS BUR Ply;	CA SBS Cap; PCA SBS Cap;	-60 (Lim. 7)
LS-M-29	<i>L6, G33, P, S24</i>	Min 340 psi Celcore MF with HS Rheology Admixture	DynaBase	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	HA SBS BUR Ply; or TA SBS Ply	HA SBS Cap or TA SBS Cap 2	-60 (Lim. 7)
LS-M-30	<i>L6, G33, P, S24</i>	Min 340 psi Celcore MF applied over DynaWeld Base torch adhered to 5/8-inch SECUROCK fastened with OMG 3" Galvalume Steel Plates and OMG Heavy Duty at a rate of 1 fastener per 1.6ft ²	DynaBase, Dynamastic 180 S, GlasBase Plus, GlasPly Premier, or Ventsulation Felt	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	HA SBS BUR Ply; or TA SBS Ply	HA SBS Cap or TA SBS Cap 2	-60 (Lim. 7)
LS-M-31	<i>L5, G33, F1, S20</i>	Min. 310 LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip SD/SA followed by optional TA SBS Ply	TA SBS Cap 2	-67.5 (Lim. 7)
LS-M-32	<i>L5, G33, F1, S20</i>	Min. 310 LWIC	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	HA SBS BUR Ply; or TA SBS Ply	HA SBS Cap or TA SBS Cap 2	-67.5 (Lim. 7)
LS-M-33	<i>L6, G33, P, S18</i>	Min 340 psi Celcore MF over deck treated with Celcore S-1	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	HA SBS BUR Ply; or TA SBS Ply	HA SBS Cap or TA SBS Cap 2	-67.5 (Lim. 7)
LS-M-34	<i>L6, G33, P, S18</i>	Min 340 psi Celcore MF over deck treated with Celcore S-1	PermaPly 28	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 3-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	DynaGrip SD/SA followed by optional TA SBS Ply	TA SBS Cap 2	-67.5 (Lim. 7)
LS-M-35	<i>L6, G33, P, S18</i>	Min 340 psi Celcore MF over deck treated with Celcore S-1	MA Base 2	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in min. 6.4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base)	TA SBS Cap 2 (Min. 4-inch side laps)	-67.5 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]
[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
 SBS Modified Roofing Systems

APPENDIX B

Mechanically Fastened Lightweight Concrete Assemblies over Steel Deck (New or Existing)

System No.	Deck Detail	LWIC	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Ply Sheet	Cap Sheet	MDP (psf)
LS-M-36	L6, G33, P, S24	Min 360 psi Celcore MF and Celcore S-1 applied over DynaWeld Cap 180 FR torch adhered to Min. 1/2-inch DensDeck Prime fastened with UF Fasteners & Plates secured at a rate of 1 fastener per 2ft ²	DynaBase PR, DynaLastic 180 S, or DynaLastic 250 S	Min. 1.7-inch JM LWC CR Base Fastener installed 9-inch o.c. in 3-inch side laps, 9-inch o.c. in two (2) equally spaced, staggered rows in the field	TA SBS Ply (no DynaWeld Base or DynaBase HW)	TA SBS Cap 3 (Min. 4-inch side laps)	-67.5 (Lim. 7)
LS-M-37	G33, P, L6, S18	Min. 350 psi Celcore MF over deck treated with Celcore S-1	DynaFast 180 S	(4) 2.25" VERSA-FAST Fasteners installed in each VERSA-FAST Metal Plate; Plates spaced 10-inch o.c. within the 5-inch wide, torched adhered side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
LS-M-38	G33, P, L6, S18	Min. 350 psi Celcore MF over deck treated with Celcore S-1	DynaFast 180 HW or DynaFast 250 HW	(4) 2.25" VERSA-FAST Fasteners installed in each VERSA-FAST Metal Plate; Plates spaced 10-inch o.c. within the 5-inch wide, torched adhered side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
LS-M-39	L5, G33, P, S12	Min. 400 psi Elastizell with Zell-Crete Fibers	PermaPly 28, GlasBase Plus, Ventsulation Felt	Min. 1.7-inch JM LWC CR Base Fastener installed 7-inch o.c. in 4-inch side laps, 7-inch o.c. in two (2) equally spaced, staggered rows in the field	HA SBS BUR Ply; or TA SBS Ply	HA SBS Cap or TA SBS Cap	-75 (Lim. 7)

Adhered Recover Assemblies

System No.	Deck Detail	Existing Roof Cover	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
R-A-1	Concrete Deck	Granular Mod Bit or BUR	Min. 1-inch ENRGY 3 secured with OSFA, 2-Part UIA or RSUA ribbons spaced 12-inch o.c.	DensDeck Prime, DEXcell FA or SECUROCK secured with OSFA, 2-Part UIA or RSUA ribbons spaced 12-inch o.c.	CA SBS Ply	OPTIONAL CA SBS Ply	CA SBS Cap	-150 (Lim. 9)
R-A-2	Concrete Deck	Granular Mod Bit or BUR	Min. 1-inch ENRGY 3 secured with OSFA, 2-Part UIA or RSUA ribbons spaced 12-inch o.c.	DEXcell FA secured with OSFA, 2-Part UIA or RSUA ribbons spaced 12-inch o.c.	MBR BA SBS Ply	OPTIONAL MBR BA SBS Ply	MBR BA SBS Cap	-150 (Lim. 9)

Adhered Recover Assemblies								
System No.	Deck Detail	Existing Roof Cover	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
R-A-3	Concrete Deck	Granular Mod Bit or BUR	Min. 1-inch ENRGY 3 secured with OSFA, 2-Part UIA or RSUA ribbons spaced 12-inch o.c.	DEXcell FA secured with OSFA, 2-Part UIA or RSUA ribbons spaced 12-inch o.c.	HA SBS Ply	OPTIONAL HA SBS Ply	HA SBS Cap	-150 (Lim. 9)
R-A-4	Concrete Deck	Granular Mod Bit or BUR	Min. 1.5-inch ENRGY 3 secured with OSFA, 2-Part UIA or RSUA ribbons spaced 12-inch o.c.	DensDeck Prime or DEXcell FA secured with OSFA, 2-Part UIA or RSUA ribbons spaced 12-inch o.c.	DynaGrip Base SD/SA self-adhered	OPTIONAL TA SBS Ply	TA SBS Cap	-195 (Lim. 9)

Mechanically Fastened Assemblies over Recover with Adhered Membranes						
System No.	Deck Detail	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
R-M-1	Min. 200 psi LWIC over Steel Deck (G33, P, L5, S12)	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	HL Fasteners & Plates spaced 6-inch o.c. within 4-inch heat welded side lap.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-97.5 (Lim. 7)
R-M-2	Min. 200 psi LWIC over Steel Deck (G33, P, L5, S12)	DynaFast 180 S	HL Fasteners & Plates spaced 6-inch o.c. within min. 4-inch heat welded side lap	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-97.5 (Lim. 7)

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
S-AM-1	L3, G33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DEXcell Cement	UF Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-2	L3, G33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DEXcell FA	UF Fasteners & Plates secured at a rate of 1 fastener per 3.2ft ²	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES][INSTALLATION]; [NOMENCLATURE]Johns Manville Corporation
SBS Modified Roofing Systems

APPENDIX B

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
S-AM-3	L3, G33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DEXcell FA	UF Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-4	L3, G33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 5/8-inch DEXcell FA	UF Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-5	L5, G33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	TA SBS Base 2	OPTIONAL TA SBS Ply	TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-6	L5, G33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	UltraFast Metal Plate (Square) and High Load fasteners secured at a rate of 1 fastener per 5.33ft ²	DynaGrip Base SD/SA self-adhered	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-7	L5, G33	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	DynaGrip Base SD/SA self-adhered	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-8	L5, G33	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	HA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-9	L5, G33	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 1/2-inch DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-10	L5, G33	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	HA SBS BUR Ply; or TA SBS Ply	OPTIONAL HA SBS BUR Ply or TA SBS Ply	HA SBS Cap or TA SBS Cap	-45 (Non-HVHZ; Lim. 7)
S-AM-11	L5, G33	Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-45 (Non-HVHZ; Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]

[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
SBS Modified Roofing Systems

APPENDIX B

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
S-AM-12	L5, G80, P	OPTIONAL Insulation under Min 1.5-inch ENRGY 3, FescoFoam or DuraFoam; or Min. 1-inch Fesco Board or DuraBoard	UF Fasteners & Plates secured at a rate of 16 per 4-ft x 8-ft Board	FescoFoam or DuraFoam; Min. 1-inch Fesco Board; Retro-Fit, RetroPlus or DuraBoard	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-52.5 (Lim. 7)
S-AM-13	L5, G80, P	OPTIONAL Insulation under Min. 1.5-inch E3; FescoBoard; Min. 3/4-inch DuraBoard	Simultaneously fastened with Top Insulation	FescoFoam or DuraFoam; Fesco Board; Retro-Fit, RetrPlus, or DuraBoard	UF Fasteners & Plates or UltraFast Fasteners with UltraFast Plastic Plates at a rate of 16 per 4-ft x 8-ft Board	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-52.5 (Lim.7)
S-AM-14	L6, G33, P, S20	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	Invinsa	RSUA or 2-Part UIA ribbons spaced 12-inch o.c.	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-52.5 (Lim. 7)
S-AM-15	L6, G33, F1, S12	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 1.8ft ²	TA SBS Base; or HA SBS Ply	OPTIONAL TA SBS Ply; or HA SBS Ply	TA SBS Cap; or HA SBS Cap	-52.5 (Lim. 7)
S-AM-16	L6, G33, P, S20	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	SECUROCK	UF Fasteners & Plates secured at a rate of 18 per 4-ft x 8-ft Board	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
S-AM-17	L6, G33, F1, S24	OPTIONAL Insulation under Min 1.5-inch ENRGY 3, FescoFoam or DuraFoam	UF Fasteners & Plates secured at a rate of 18 per 4-ft x 8-ft Board	FescoFoam, DuraFoam, Retro-Fit, RetroPlus or DuraBoard	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
S-AM-18	L6, G33, F1, S30	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 18 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES][INSTALLATION]; [NOMENCLATURE]Johns Manville Corporation
SBS Modified Roofing Systems

APPENDIX B

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
S-AM-19	L6, G33, F1, S30	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 18 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12- inch o.c.	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-60 (Lim. 7)
S-AM-20	L6, G33, P, S24	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	SECUROCK	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
S-AM-21	L6, G33, P, S24	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	SECUROCK	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-60 (Lim. 7)
S-AM-22	L6, G33, F2, S24	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	Min 1.5-inch ENRGY 3 or ENRGY 3 CGF	UF Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-60 (Lim. 7)
S-AM-23	L6, G33, P, S24	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	Min 1.5-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	CA SBS Ply, PCA SBS Ply, or MBR BA SBS BUR Base	OPTIONAL CA SBS Ply; PCA SBS Ply; HA SBS Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
S-AM-24	L6, G80, F1, S24	OPTIONAL Insulation under Min. 3/4-inch DuraBoard or FescoBoard	Simultaneously fastened with Top Insulation	Min. 1.5-inch E3	UF Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	DynaBase, DynaBase XT or fully bonded in MBR Bonding Adhesive	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-67.5 (Lim. 7)
S-AM-25	L6, G80, F1, S30	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	2-Part UIA applied 12- inch o.c.	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-67.5 (Lim. 7)
S-AM-26	L6, G80, F1, S30	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	2-Part UIA applied 12- inch o.c.	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-67.5 (Lim. 7)
S-AM-27	L6, G33, P, S24	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	Min 1.5-inch ENRGY 3 or ENRGY 3 CGF	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-67.5 (Lim. 7)



Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
S-AM-28	L6, G33, P, S24	OPTIONAL Insulation	Simultaneously fastened with Top Insulation	Min 1.5-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	MBR BA SBS BUR Base	OPTIONAL CA SBS Ply; PCA SBS Ply; HA SBS Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-67.5 (Lim. 7)
S-AM-29	L6, G33, F1, S12	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 1.8ft ²	TA SBS Base 2	OPTIONAL TA SBS Ply	TA SBS Cap	-67.5 (Lim. 7)
S-AM-30	L6, G33, F1, S30	OPTIONAL Insulation under Min. 2-inch ENRGY 3, FescoFoam, or DuraFoam	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	Retro-Fit, RetroPlus, or DuraBoard; or Min. 2-inch FescoFoam or DuraFoam	ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-75 (Lim. 7)
S-AM-31	L6, G80, F1, S30	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min. 3/4-inch DuraBoard	UF Fasteners & Plates or UltraFast Fasteners with UltraFast Plastic Plates at a rate of 24 per 4-ft x 8-ft Board	TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-75 (Lim. 7)
S-AM-32	L6, G80, F1, S30	OPTIONAL Insulation under Min. 1.5-inch E3, FescoFoam or DuraFoam; FescoBoard; Min. 3/4-inch DuraBoard	Simultaneously fastened with Top Insulation	Min 1/2-inch SECUROCK	UF Fasteners & Plates or UltraFast Fasteners with UltraFast Plastic Plates at a rate of 18 per 4-ft x 8-ft Board	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-75 (Lim. 7)
S-AM-33	L6, G80, F1, S30	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime or DEXcell FA	UF Fasteners & Plates at a rate of 18 per 4-ft x 8-ft Board	TA SBS Ply	OPTIONAL TA SBS Ply	TA SBS Cap	-75 (Lim. 7)
S-AM-34	L6, G80, F1, S30	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime or DEXcell FA	UF Fasteners & Plates at a rate of 18 per 4-ft x 8-ft Board	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-75 (Lim. 7)
S-AM-35	L6, G33, F1, S12	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime	UF Fasteners & Plates secured at a rate of 1 fastener per 1.6ft ²	TA SBS Base; or HA SBS Ply	OPTIONAL TA SBS Ply; or HA SBS Ply	TA SBS Cap; or HA SBS Cap	-75 (Lim. 7)
S-AM-36	L6, G33, F1, S24	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 32 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-82.5 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]

[INSTALLATION]; [NOMENCLATURE]

Johns Manville Corporation
SBS Modified Roofing Systems

APPENDIX B

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)

System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
S-AM-37	L6, G33, F2, S24	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch SECUROCK	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-82.5 (Lim. 7)
S-AM-38	L6, G33, F2, S24	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime or DEXcell FA	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	TA SBS Ply	OPTIONAL TA SBS Ply	TA SBS Cap	-82.5 (Lim. 7)
S-AM-39	L6, G33, F2, S24	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime or DEXcell FA	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-82.5 (Lim. 7)
S-AM-40	L6, G33, F2, S24	OPTIONAL Insulation under Min. 1.5-inch E3	Simultaneously fastened with Top Insulation	Min 1/2-inch DEXcell FA	UF Fasteners & Plates secured at a rate of 32 per 4-ft x 8-ft Board	TA SBS Base 2	OPTIONAL TA SBS Ply	TA SBS Cap	-82.5 (Lim. 7)
S-AM-41	L6, G80, F1, S24	OPTIONAL Insulation under Min. 2-inch ENRGY 3	UF Fasteners & Plates secured at a rate of 22 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-90 (Lim. 7)
S-AM-42	L6, G80, F1, S24	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	UF Fasteners & Plates or UltraFast Fasteners with UltraFast Plastic Plates at a rate of 32 per 4-ft x 8-ft Board	Min 1/2-inch SECUROCK	2-Part UIA applied 12-inch o.c.	CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-90 (Lim. 7)
S-AM-43	L6, G33, F2, S24	OPTIONAL Insulation under Min 1.5-inch ENRGY 3	Simultaneously fastened with Top Insulation	Min 1/2-inch DensDeck Prime	UF Fasteners & Plates secured at a rate of 32 per 4-ft x 8-ft Board	TA SBS Base; or HA SBS Ply	OPTIONAL TA SBS Ply; or HA SBS Ply	TA SBS Cap; or HA SBS Cap	-112.5 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B**

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Top Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
S-M-1	L5, G33	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	APB Fasteners & Plates spaced 18-inch o.c. within min. 4-inch heat welded side lap.	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply ; MBR BA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-47.5 (Lim. 9)
S-M-2	L5, G33	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 HW or DynaFast 250 HW	APB Fasteners & Plates spaced 18-inch o.c. within min. 4-inch heat welded side lap.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-47.5 (Lim. 9)
S-M-3	L6, G33, F1W, S24	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 HW or DynaFast 250 HW	HL Fasteners & Plates spaced 6-inch o.c. within min. 4-inch heat welded side lap in rows max. 70-inch o.c.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-52.5 (Lim. 7)
S-M-4	L6, G33, F1W, S24	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	HL Fasteners & Plates spaced 6-inch o.c. within min. 4-inch heat welded side lap in rows max. 70-inch o.c.	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-52.5 (Lim. 7)
S-M-5	L5, G33	OPTIONAL Insulation	Min 1.5-inch E3; or FescoFoam, DuraFoam, FescoBoard or Retro-Fit Board	MA Base	UF Fasteners & Plates 9-inch o.c. at min. 4-inch side lap and 18-inches o.c. in two equally spaced, staggered rows in the field of the roll	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply ; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 9)
S-M-6	L6, G33, F1, S24	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaLastic 180 S or DyanLastic 250 S	HL Fasteners & Plates spaced 12-inch o.c. within the min. 5-inch heat welded side lap	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply ; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-67.5 (Lim. 7)
S-M-7	L6, G33, F1, S24	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaLastic 180 S or DyanLastic 250 S	APB Fasteners & Plates spaced 12-inch o.c. within min. 4-inch heat welded side laps	TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
S-M-8	L6, G33, F1, S24	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaLastic 180 S or DyanLastic 250 S	APB Fasteners & Plates spaced 12-inch o.c. within min. 4-inch heat welded side laps	TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B**

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Top Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
S-M-9	L6, G33, P	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	HL Fasteners & Plates spaced 12-inch o.c. within min. 4-inch heat welded side lap.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
S-M-10	L6, G33, P	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	HL Fasteners & Plates spaced 12-inch o.c. within min. 4-inch heat welded side lap.	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-67.5 (Lim. 7)
S-M-11	L6, G33, P	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	High Load LH Fasteners and Polymer Membrane Batten OR High Load Fasteners and Metal Membrane Batten or Deep Well Batten strip spaced 6-inch o.c. within min. 4-inch heat welded side laps in rows max. 71-inch o.c.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-90 (Lim.7)
S-M-12	L6, G33, P	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	High Load LH Fasteners and Polymer Membrane Batten OR High Load Fasteners and Deep Well Batten strip spaced 6-inch o.c. inside 4-inch heat welded side laps in rows max. 71-inch o.c.	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-90 (Lim.7)
S-M-13	L6, G33, P	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	APB Fasteners & Plates spaced 6-inch o.c. within 4-inch heat welded side lap.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-105 (Lim.7)
S-M-14	L6, G33, P	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	APB Fasteners & Plates spaced 6-inch o.c. within 4-inch heat welded side lap.	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-105 (Lim.7)
S-M-15	L6,G80 , F2W, S24	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	HL Fasteners & Plates spaced 6-inch o.c. within min. 4-inch heat welded side laps	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-105 (Lim.7)
S-M-16	L6, G33, F2W, S14	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaLastic 180 S or DyanLastic 250 S	HL Fasteners & Plates spaced 6-inch o.c. over min. 4-inch side laps	TA SBS Ply	TA SBS Cap	-112.5 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B**

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Top Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
S-M-17	L6, G33, F2W, S14	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	HL Fasteners & Plates or APB Fastener & Plates spaced 6-inch o.c. over min. 5-inch side laps	OPTIONAL TA SBS Ply	TA SBS Cap	-112.5 (Lim. 7)
S-M-18	L6, G33, F2W, S14	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaLastic 180 S or DyanLastic 250 S	HL Fasteners & Plates spaced 6-inch o.c. within min. 5-inch heat welded side laps	OPTIONAL TA SBS Ply	TA SBS Cap	-112.5 (Lim. 7)
S-M-19	L6, G33, F2W, S14	OPTIONAL Insulation under Min 1-inch E3	Min. 5/8-inch Plywood	DynaLastic 180 S or DyanLastic 250 S	HL Fasteners & Plates spaced 6-inch o.c. within min. 5-inch heat welded side laps	OPTIONAL TA SBS Ply	TA SBS Cap	-135 (Lim. 7)
S-M-20	L6, G33, F2W, S14	OPTIONAL Insulation under Min 1-inch E3	Retro-Fit Board	DynaLastic 180 S or DyanLastic 250 S	HL Fasteners & Plates spaced 6-inch o.c. within min. 5-inch heat welded side laps	OPTIONAL TA SBS Ply	TA SBS Cap	-135 (Lim. 7)
S-M-21	L6, G80, F1W	OPTIONAL Insulation	Min 1-inch E3	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	HL Fasteners & Plates spaced 6-inch o.c. within min. 4-inch heat welded side lap.	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-142.5 (Lim. 7)
S-M-22	L6, G33, F2W, S14	OPTIONAL Insulation under Min 1-inch E3	Min. 5/8-inch Plywood	DynaLastic 180 S or DyanLastic 250 S	HL Fasteners & Plates spaced 6-inch o.c. over min. 4-inch side laps	TA SBS Ply	TA SBS Cap	-150 (Lim. 7)
S-M-23	L6, G33, F2W, S14	OPTIONAL Insulation under Min 1-inch E3	Retro-Fit Board	DynaLastic 180 S or DyanLastic 250 S	HL Fasteners & Plates spaced 6-inch o.c. over min. 4-inch side laps	TA SBS Ply	TA SBS Cap	-150 (Lim. 7)
S-M-24	L6, G80, F1W	OPTIONAL Insulation	Min 1-inch E3 with OPTIONAL Cover Board	DynaFast 250 HW	HL Fasteners & Plates spaced 6-inch o.c. within min. 4-inch heat welded side laps	OPTIONAL DyanFast 250 HW fully torch adhered (Min. 4-inch side laps)	DynaWeld 180 FR, DynaWeld 180 FR CR, DyanWeld 250, DyanWeld 250 FR, or DyanWeld 250 FR CR (Min. 4-inch side laps)	-165 (Lim.7)
S-M-25	L6, G33, F2W, S14	OPTIONAL Insulation under Min 1-inch E3	Min. 5/8-inch Plywood	DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW	HL Fasteners & Plates pr APB Fastener & Plates spaced 12-inch o.c. over min. 4-inch side laps and 12-inch o.c. in three, equally spaced, staggered rows in the field of the roll	TA SBS Ply	TA SBS Cap	-180 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B**

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Top Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
S-M-26	L6, G33, F2W, S14	DensDeck, OPTIONAL Insulation under Min 1-inch E3	Min. 5/8-inch Plywood	DynaLastic 180 S or DyanLastic 250 S	HL Fasteners & Plates spaced 12-inch o.c. over min. 4-inch side laps and 12-inch o.c. in three, equally spaced, staggered rows in the field of the roll	TA SBS Ply	TA SBS Cap	-195 (Lim. 7)

Assemblies with All Layers Adhered over Wood Deck (New or Existing)							
System No.	Deck Detail	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
W-A-1	T15/32	-	Min. 1.5-inch ENRGY 3 secured in RSUA 12-inch o.c.	CA SBS Ply, PCA SBS Ply, or MBR BA SBS BUR Base	OPTIONAL CA SBS Ply; PCA SBS Ply; HA SBS Cap; or TA SBS Cap	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-45 (Lim. 9; Non- HVHZ)

Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)									
System No.	Deck Detail	Anchor Sheet	Anchor Attachment	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	
W-AM-1	T19/32, L24, #12- 6/6	PermaPly 28 or Ventsulation	UF Fasteners & Plates 8-inch o.c. at 3-inch side lap and three rows staggered in the center of the roll 8-inch o.c.	1.5-inch E3 in ASTM D 312, Type IV Asphalt	FescoFoam, DuraFoam, Fesco Board, Retro-Fit, RetroPlus or DuraBoard in ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-52.5 (Lim.7)
W-AM-2	T15/32, L24, #8- 6/6	Two plies PermaPly 28, DynaBase, GlasBase Plus or Ventsulation	Min. 12 ga. ring shank nails and min. 32 ga., 1½-inch diameter tin caps 9- inch o.c. at 3-inch side lap and two rows staggered in center 12-inch o.c.	1.5-inch E3 in ASTM D 312, Type IV Asphalt	FescoFoam, DuraFoam, Fesco Board, Retro-Fit, RetroPlus or DuraBoard in ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-52.5 (Lim.7)
W-AM-3	T15/32, L24, 0.113-6/6	-	-	OPTIONAL Min. 0.5-inch E3	Min. 2-inch ENRGY 3 fastened with UF Fasteners & Plates secured at a rate of 16 per 4-ft x 8-ft Board	MBR BA SBS BUR Base	OPTIONAL CA SBS Ply; PCA SBS Ply; HA SBS Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap	-52.5 (Lim. 7)



CREEK

TECHNICAL SERVICES, LLC

[APPROVED ASSEMBLIES]**[INSTALLATION]; [NOMENCLATURE]**Johns Manville Corporation
SBS Modified Roofing Systems**APPENDIX B****Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)**

System No.	Deck Detail	Anchor Sheet	Anchor Attachment	Base Insulation	Top Insulation	Base Ply	Ply Sheet	Cap Sheet	MDP (psf)
W-AM-4	T15/32, L24, 0.113-6/6	-	-	OPTIONAL Min. 0.5-inch E3	Min. 2-inch ENRGY or ENRGY 3 CGF 3 fastened with UF Fasteners & Plates secured at a rate of 16 per 4-ft x 8-ft Board	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-52.5 (Lim. 7)
W-AM-5	T15/32, L24, 0.113-6/6	-	-	Min. 1.5-inch ENRGY 3 fastened with UF Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Invisa RSUA or 2-Part UIA ribbons spaced 12-inch o.c.	DynaGrip Base SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-52.5 (Lim. 7)
W-AM-6	T19/32, L24, #8-6/6	PermaPly 28 or Ventsulation	Min. 12 ga. ring shank nails and min. 32 ga., 1 1/2-inch diameter tin caps 9-inch o.c. at 3-inch side lap and two rows staggered in center 9-inch o.c.	Min. 1.5-inch E3 adhered in ASTM D 312, Type IV Asphalt	FescoFoam, DuraFoam, Fesco Board, Retro-Fit, RetroPlus or DuraBoard in ASTM D 312, Type IV Asphalt	HA SBS BUR Base	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
W-AM-7	T19/32, L24, 10d-6/6	-	-	Min. 1.5-inch ENRGY 3 fastened with UF Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	DuraBoard in ASTM D 312, Type IV Asphalt	OPTIONAL HA SBS BUR Base or MBR BA SBS BUR Base	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
W-AM-8	T15/32, L24, 0.113-6/6	-	-	Min. 1.5-inch ENRGY 3 fastened with UF Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 0.5-inch SECUROCK in RSUA applied 12-inch o.c.	CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	CA SBS Cap; PCA SBS Cap; HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
W-AM-9	T15/32, L24, 0.113-6/6	-	-	Min. 1.5-inch ENRGY 3 fastened with UF Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 0.5-inch SECUROCK in RSUA applied 12-inch o.c.	DynaGrip Base SD/SA or BaseGrip SD/SA	OPTIONAL TA SBS Ply	TA SBS Cap	-67.5 (Lim. 7)

Mechanically Fastened Assemblies over Wood Deck (New, Existing, or Recover)

System No.	Deck Detail	Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
W-M-1	T19/32, L24, #12-6/6	OPTIONAL Min. 1.3-inch Insulation	PermaPly 28 or Ventsulation	UF Fasteners & Plates 8-inch o.c. at side lap and three rows staggered in center of the roll 8-inch o.c.	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-52.5 (Lim. 7)



Mechanically Fastened Assemblies over Wood Deck (New, Existing, or Recover)							
System No.	Deck Detail	Insulation	Base Sheet	Base Sheet Attachment	Ply Sheet	Cap Sheet	MDP (psf)
W-M-2	T19/32, L24, #8-6/6	-	Two plies PermaPly 28, DynaBase, GlasBase Plus or Ventsulation	Min. 12 ga. ring shank nails and min. 32 ga., 1½-inch diameter tin caps 9- inch o.c. at 3-inch side lap and two rows staggered in center 12-inch o.c.	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-52.5 (Lim. 7)
W-M-3	T15/32, L24, #8-6/6	OPTIONAL Insulation under Min. 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 HW, DynaFast 180 S, DynaFast 250 HW	APB Fasteners & Plates spaced 9- inch o.c. within 4-inch heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
W-M-4	T15/32, L24, #8-6/6	OPTIONAL Insulation under Min. 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	APB Fasteners & Plates spaced 9- inch o.c. inside 4-inch heat welded side laps	OPTIONAL CA SBS BUR Ply; PCA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; PCA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-60 (Lim. 7)
W-M-5	T19/32, L24, #8-6/6	-	PermaPly 28 or Ventsulation	Min. 12 ga. ring shank nails and min. 32 ga., 1½-inch diameter tin caps 9- inch o.c. at 3-inch side lap and two rows staggered in center 9-inch o.c.	OPTIONAL HA SBS BUR Ply; MBR BA SBS BUR Ply; or TA SBS Ply	HA SBS Cap; MBR BA SBS Cap; or TA SBS Cap	-60 (Lim. 7)
W-M-6	T15/32, L24, #8-6/6	OPTIONAL Insulation under Min. 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 HW, DynaFast 180 S, DynaFast 250 HW	High Load LH Fasteners and Polymer Membrane Batten or High Load Fasteners and Deep Well Batten strip spaced 6-inch o.c. within the 4-inch heat welded side laps	OPTIONAL TA SBS Ply (Min. 4-inch side laps)	TA SBS Cap (Min. 4-inch side laps)	-82.5 (Lim. 7)
W-M-7	T15/32, L24, #8-6/6	OPTIONAL Insulation under Min. 1-inch E3 with OPTIONAL Cover Board	DynaFast 180 S	High Load LH Fasteners and Polymer Membrane Batten or High Load Fasteners and Deep Well Batten strip spaced 6-inch o.c. within the 4-inch heat welded side laps	OPTIONAL CA SBS BUR Ply; HA SBS BUR Ply; or TA SBS Ply (Min. 4-inch side laps)	CA SBS Cap; HA SBS Cap; or TA SBS Cap (Min. 4-inch side laps)	-82.5 (Lim. 7)

END OF REPORT