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**Product Approval**  
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FL #	FL4911-R15
Application Type	Revision
Code Version	2017
Application Status	Approved
Comments	
Archived	<input type="checkbox"/>
Product Manufacturer	GAF
Address/Phone/Email	1 Campus Drive Parispany, NJ 07054 (800) 766-3411 mstieh@gaf.com
Authorized Signature	Robert Nieminen lreith@nemoetc.com
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Address/Phone/Email	1 Campus Drive Parsippany, NJ 07054 (800) 766-3411 TechnicalQuestionsGAF@gaf.com
Quality Assurance Representative	
Address/Phone/Email	
Category	Roofing
Subcategory	Waterproofing

Compliance Method Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer  
 Evaluation Report - Hardcopy Received

Florida Engineer or Architect Name who developed the Evaluation Report Robert Nieminen  
 Florida License PE-59166  
 Quality Assurance Entity UL LLC  
 Quality Assurance Contract Expiration Date 12/17/2021  
 Validated By John W. Knezevich, PE  
 Validation Checklist - Hardcopy Received

Certificate of Independence [FL4911\\_R15\\_COI\\_2020\\_01\\_COI\\_NIEMINEN.pdf](#)

Referenced Standard and Year (of Standard)	<b>Standard</b>	<b>Year</b>
	ASTM D1970	2015
	ASTM D6083	2005
	ASTM D6163	2008
	ASTM D6164	2011
	ASTM D6222	2011
	ASTM D6878	2011
	FM 4474	2011
	TAS 114	2011
	TAS 139	1995

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method Method 1 Option D

Date Submitted 04/10/2020  
 Date Validated 04/10/2020  
 Date Pending FBC Approval 04/17/2020

Date Approved

06/02/2020

**Summary of Products**

FL #	Model, Number or Name	Description
4911.1	GAF Waterproofing and Plaza Deck Systems	Modified Bitumen, Thermoplastic and Liquid Applied Waterproofing and Plaza Deck Systems
<b>Limits of Use</b> <b>Approved for use in HVHZ:</b> No <b>Approved for use outside HVHZ:</b> Yes <b>Impact Resistant:</b> N/A <b>Design Pressure:</b> +N/A/-607.5 <b>Other:</b> 1.) The design pressure herein relates to one specific system. Refer to ER Appendix for all systems and design pressures. 2.) Refer to ER Section 5 for Limits of Use.		<b>Installation Instructions</b> <a href="#">FL4911 R15 II 2020 04 10 FINAL A1 ER GAF WTRPRG FL4911-R15.pdf</a> Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes <b>Evaluation Reports</b> <a href="#">FL4911 R15 AE 2020 04 10 FINAL ER GAF WTRPFG FL4911-R15.pdf</a> Created by Independent Third Party: Yes

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**Product Approval Accepts:**



**NEMO|etc.**

Certificate of Authorization #32455  
353 Christian Street, Unit #13  
Oxford, CT 06478  
(203) 262-9245

ENGINEER

EVALUATE

TEST

CONSULT

**EVALUATION REPORT**

**GAF**

1 Campus Drive  
Parsippany, NJ 07054  
**(800) 766-3411**

**Evaluation Report 01506.09.08-R15**

**FL4911-R15**

**Date of Issuance: 09/26/2008**

**Revision 15: 04/10/2020**

**SCOPE:**

This Evaluation Report is issued under **Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **6<sup>th</sup> Edition (2017) Florida Building Code** sections noted herein.

**DESCRIPTION: GAF Waterproofing and Plaza Deck Systems**

**LABELING:** Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein.

**CONTINUED COMPLIANCE:** This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to notify Robert Nieminen, P.E. of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO|etc. requires a complete review of this Evaluation Report relative to updated Code requirements with each Code Cycle.

**ADVERTISEMENT:** The Evaluation Report number preceded by the words "NEMO|etc. Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

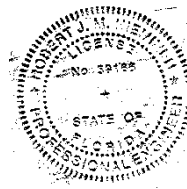
**INSPECTION:** Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 4, plus a 4-page Appendix.

**Prepared by:**

**Robert J.M. Nieminen, P.E.**

*Florida Registration No. 59166, Florida DCA ANE1983*



The facimile seal appearing was authorized by Robert Nieminen, P.E. on 04/10/2020 This does not serve as an electronically signed document.

**CERTIFICATION OF INDEPENDENCE:**

1. NEMO ETC, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO|etc. nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

**ROOFING SYSTEMS EVALUATION:**
**1. SCOPE:**

**Product Category:** Roofing  
**Sub-Category:** Waterproofing

**Compliance Statement:** GAF Waterproofing and Plaza Deck Systems, as produced by GAF, have demonstrated compliance with the following sections of the 6<sup>th</sup> Edition (2017) Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

**2. STANDARDS:**

<u>Section</u>	<u>Property</u>	<u>Standard</u>	<u>Year</u>
1504.3.1	Wind	FM 4474	2011
1515.1.1	Wind	TAS 114	2011
1507.6.3	Physical Properties	ASTM D1970	2015
1507.15.2	Physical Properties	ASTM D6083	2005
1507.11.2	Physicals	ASTM D6163	2008
1507.11.2	Physical Properties	ASTM D6164	2011
1507.11.2	Physical Properties	ASTM D6222	2011
1507.13.2	Physical Properties	ASTM D6878	2011
TAS 110	Physical Properties	TAS 139	1995

**3. REFERENCES:**

<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
ERD (TST6049)	TAS 114	18031.07.02	07/24/2002
ERD (TST6049)	TAS 114	18026.03.02-R2	12/05/2007
ERD (TST6049)	TAS 114	G6040.03.07-R1	12/06/2007
ERD (TST6049)	ASTM D6222	G30250.02.10-2	02/11/2010
ERD (TST6049)	ASTM D6164	G31360.03.10	03/31/2010
ERD (TST6049)	ASTM D6164	G33470.01.11	01/13/2011
ERD (TST6049)	ASTM D6222	G40620.07.12-2	07/17/2012
ERD (TST6049)	Physical Properties	G40630.09.12-1	09/19/2012
ERD (TST6049)	ASTM D6164	G40630.01.14-2A-1	01/07/2014
FM Approvals (TST1867)	FM 4470/4474	3015619	03/15/2006
FM Approvals (TST1867)	FM 4470/4474	3044688	03/16/2012
FM Approvals (TST1867)	FM 4470/4474	3044862	05/11/2012
FM Approvals (TST1867)	FM 4470/4474	3061784	07/25/2018
FM Approvals (TST1867)	FM 4470/4474	3055904	10/25/2018
Miami-Dade (CER1592)	HVHZ compliance	17-0213.08	09/07/2017
Miami-Dade (CER1592)	HVHZ compliance	15-0128.10	03/26/2015
MTI (TST2508)	ASTM D6083	EX14A3A	02/26/2004
PRI (TST5878)	ASTM D6083	GAF-087-02-01	09/26/2005
PRI (TST5878)	TAS 139	GAF-110-02-01	02/15/2006
PRI (TST5878)	TAS 139	GAF-122-02-01	05/07/2006
PRI (TST5878)	ASTM D6083	GAF-084-02-01	05/07/2006
PRI (TST5878)	ASTM D6083	GAF-082-02-01	05/07/2006
PRI (TST5878)	ASTM D6083	GAF-065-02-01	12/14/2006
PRI (TST5878)	ASTM D1970	GAF-238-02-01	03/03/2010
PRI (TST5878)	ASTM D1970	GAF-275-02-01	11/11/2010
PRI (TST5878)	FM 4470/4474	GAF-416-02-01	06/26/2013
PRI (TST5878)	ASTM D6878	GAF-425-02-01	11/11/2013
PRI (TST5878)	FM 4470/4474	GAF-416-02-01	07/24/2014
UL, LLC. (QUA9625)	Quality Assurance	Service Confirmation	05/21/2019

#### 4. PRODUCT DESCRIPTION:

This Evaluation Report covers **GAF Waterproofing and Plaza Deck Systems** installed in accordance with **GAF** published installation instructions and the Limitations / Conditions of Use herein. The following products make up the subject systems.

**TABLE 1A: MEMBRANES FOR GAF WATERPROOFING AND PLAZA DECK SYSTEMS**

Type	Product	Specification		
		Reference	Type	Grade
Modified Bitumen	Liberty™ SBS Self-Adhering Base/Ply Sheet	ASTM D1970	II	N/A
	Ruberoid® SA Universal Base Sheet	ASTM D6163	I	S
	Ruberoid® Mop Smooth 1.5	ASTM D6164	I	S
	Ruberoid® Mop Smooth	ASTM D6164	I	S
	Ruberoid® Mop Plus Smooth	ASTM D6164	II	S
	Ruberoid® Torch Smooth	ASTM D6222	I	S
	Tri-Ply® APP Smooth Membrane	ASTM D6222	I	S
	Ruberoid Mop Granule	ASTM D6164	I	G
	Tri-Ply SBS Granule Cap Sheet	ASTM D6164	I	G
	Ruberoid Mop Plus Smooth	ASTM D6164	II	G
	Ruberoid Torch Granule	ASTM D6222	I	G
	Tri-Ply APP Granule Membrane	ASTM D6222	I	G
Thermoplastic	EverGuard® TPO FB Ultra	ASTM D6878	N/A	N/A

**TABLE 1B: LIQUIDS AND SEALANTS FOR GAF WATERPROOFING SYSTEMS**

Type	Product	Specification	Use
Liquid Applied	TOPCOAT® Membrane	ASTM D6083	Waterproofing
	United Coatings™ Roof Mate™ TCM Coating (formerly TOPCOAT® Membrane)	ASTM D6083	Waterproofing
	TOPCOAT® Surface Seal SB	ASTM D6083	Waterproofing
	United Coatings™ Surface Seal SB Roof Coating	ASTM D6083	Waterproofing
	TOPCOAT® Flashing – Liquid Fabric	N/A	Flashing
	United Coatings™ Roof Mate™ Liquid Fabric	N/A	Flashing
	TOPCOAT® FlexSeal™	TAS 139	Flashing/Detailing
	GAF FlexSeal™ Sealant	TAS 139	Flashing/Detailing
	TOPCOAT® Flashing – Brush Grade	TAS 139	Flashing/Detailing
	United Coatings™ Roof Mate™ Spray Grade Flashing (formerly TOPCOAT® Flashing – Spray Grade)	TAS 139	Flashing
	TOPCOAT® MP-300	N/A	Primer
	GAF XR-2000 Primer (formerly TOPCOAT® XR-2000)	N/A	Primer
	TOPCOAT® Precote	N/A	Primer

#### 5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO|etc. nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This Evaluation Report is not for use in FBC HVHZ jurisdictions.
- 5.3 Fire classification is not part of this evaluation report. Refer to a current Roofing Materials Directory for fire ratings of this product.
- 5.4 The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. Load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.

- 5.5 For assemblies with all components fully bonded in place, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with **FBC Chapter 16**. No rational analysis is permitted for these systems.
- 5.6 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance with **ANSI/SPRI IA-1, ASTM E907, FM Loss Prevention Data Sheet 1-52 or Testing Application Standard TAS 124** shall be conducted on mock-ups of the proposed new roof assembly.
- 5.7 Metal edge attachment (except gutters), shall be designed and installed for wind loads in accordance with FBC Chapter 16 and tested for resistance in accordance with **ANSI/SPRI ES-1 or Roofing Application Standard RAS 111**, except the basic wind speed shall be determined from **FBC Figure 1609.3(1), 1609.3(2) or 1609.3(3)**.
- 5.8 The Authority Having Jurisdiction may require integrity flood testing (**ASTM D5957**) or Electric Field Vector Mapping tests of all waterproofing systems prior to placement of the overburden material. Testing, if required by the Authority Having Jurisdiction, should be conducted by a qualified design professional.
- 5.9 All products in the roof assembly shall have quality assurance audit in accordance with the **F.A.C. Rule 61G20-3**. For non-GAF components listed within wind uplift rated assemblies in Appendix 1, refer to the Product Approval of the component manufacturer.
- 5.9.1 This evaluation pertains to the **GAF** components making up the waterproofing assembly, and performance when used in conjunction with non-**GAF** components, as outlined in Appendix 1. This evaluation does not purport to address QA for non-**GAF** components within the waterproofing assemblies, such as overburden products.

## 6. INSTALLATION:

- 6.1 **GAF Waterproofing and Plaza Deck Systems** shall be installed in accordance with **GAF** published installation instructions by contractors Approved by **GAF**, subject to the Limitations / Conditions of Use noted herein. Flashing and detailing shall be in accordance with **GAF** published installation instructions using **GAF** specified materials to establish a watertight condition.
- 6.2 System attachment requirements for wind load resistance are set forth in Appendix 1. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per **FBC 1504.9** has already been applied). Refer to **FBC 1609** for determination of design wind loads.

## 7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction in order to properly evaluate the installation of this product.

## 8. MANUFACTURING PLANTS:

Contact the named QA entity for manufacturing facilities covered by **F.A.C. Rule 61G20-3** QA requirements.

## 9. QUALITY ASSURANCE ENTITY:

UL, LLC. – QUA9625; (847) 664-3281

**- THE FOUR (4) PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -**

**APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE**

Table	Deck	Application	Type	Description	Page
1A	Structural concrete	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Waterproofing (overburden by Designer or Record)	2
1B	Structural concrete	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Waterproofing (ceramic tile overburden)	3
1C	Structural concrete	New, Reroof (Tear-Off) or Recover	F	Non-Insulated, Bonded Waterproofing	4

**The following notes apply to the systems outlined herein:**

- The roof system evaluation herein pertains to above-deck waterproofing components. Decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. Load resistance of the deck shall be documented through proper codified and/or FBC Approval documentation.
- Unless otherwise noted, insulation adhesive application rates are as follows. Ribbon or bead width is at the time of application; the ribbons/beads shall expand as noted in the manufacturer’s published instructions.
  - Hot asphalt (HA): Full Coverage at 25-30 lbs/square.
  - GAF 2-Part Roofing Adhesive (GAF 2-Part): Continuous 2.5 to 3.5-inch ribbons, 12-inch o.c.
  - LRF Adhesive M (LRF-M): Continuous 0.75 to 1-inch wide ribbons, 12-inch o.c.
  - OlyBond 500 / OlyBond Green (OB500): Continuous ¾ to 1-inch wide ribbons, 12-inch o.c. using OMG PaceCart, SpotShot or Canister delivery methods.
  - *Note: When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, board joints shall be staggered.*
  - *Note: The maximum edge distance from the adhesive ribbon to the edge of the insulation board shall be not less than one-half the specified ribbons spacing.*
- Unless otherwise noted, all insulations are flat stock or taper board of the minimum thickness noted. Tapered polyisocyanurate at the following thickness limitations may be substituted with the following Maximum Design Pressure (MDP) limitations (where MDP is applicable). In no case shall these values be used to ‘increase’ the MDP listings in the tables; rather if MDP listing below meets or exceeds that listed for a particular system in the tables, then the thinner board listed below may be used as a drop-in for the equivalent thicker material listed in the table.
  - GAF 2-Part Roofing Adhesive (GAF 2-Part): MDP = =117.5 psf (Min. 0.5-inch)
  - LRF Adhesive M (LRF-M): MDP = -232.5 psf (Min. 0.5-inch thick EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation)
  - OMG OlyBond 500 (OB500): MDP -315.0 psf (Min. 0.5-inch thick EnergyGuard RH)
  - OlyBond 500 (OB500): MDP = -292.5 psf (Min. 0.5-inch thick EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation)
- Bonded polyisocyanurate insulation boards shall be maximum 4 x 4 ft.
- The maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with FBC Chapter 16, and no rational analysis is permitted.
- Unless otherwise noted, modified bitumen base and top ply membranes are designated as follows based on method of installation:

REFERENCE	LAYER	MEMBRANE	INSTALLATION
SBS-AA <i>(SBS, Asphalt-Applied)</i>	Base Ply or Ply:	One (1) ply (if Cap Ply installed) or minimum two (2) plies (if no Cap Ply installed), Ruberoid Mop Smooth 1.5; Ruberoid Mop Smooth;	Hot asphalt at 25 lbs/sq.
	Cap Ply:	Ruberoid Mop Plus Smooth	
APP-TA <i>(APP, Torch-Applied)</i>	Base Ply or Ply:	One (1) ply (if Cap Ply installed) or minimum two (2) plies (if no Cap Ply installed), Ruberoid Torch Smooth; Tri-Ply APP Smooth Membrane	Heat welded
	Cap Ply:	Ruberoid Torch Granule, Tri-Ply APP Granule Membrane	
SBS-CA <i>(SBS, Cold-Applied)</i>	Base Ply or Ply:	One (1) ply (if Cap Ply installed) or minimum two (2) plies (if no Cap Ply installed), Ruberoid Mop Smooth 1.5; Ruberoid Mop Smooth;	Matrix™ 102 SBS Membrane Adhesive at 1 to 2 gallon/square
	Cap Ply:	Ruberoid Mop Plus Smooth	
SBS-SA <i>(SBS, Self-Adhering)</i>	Base Ply:	Ruberoid Mop Granule, Tri-Ply SBS Granule Cap Sheet, Ruberoid Mop Plus Granule	Self-adhering



7. Overburden of soil and plantings (for 'garden roofs'; root barriers, filter fabric, drainage components, EPS / XPS insulation, etc.) or structural concrete topping slabs which are specified by the Designer of Record, acceptable to the Authority Having Jurisdiction, and do not form part of the load path to the waterproofing system, are permissible over the waterproofing assemblies noted herein with no adverse affect on the wind uplift performance of the waterproofing system. The Authority Having Jurisdiction may require integrity flood testing (ASTM D5957) or electric field vector mapping tests of all waterproofing systems prior to placement of overburden materials. Testing, if required by the Authority Having Jurisdiction, should be conducted by a qualified testing agency or professional.
8. The following insulations are interchangeable within the scope of this Evaluation Report:
- EnergyGuard Polyiso Insulation ⇔ EnergyGuard NH Polyiso Insulation;
  - EnergyGuard Ultra Polyiso Insulation ⇔ EnergyGuard NH Ultra Polyiso Insulation;
  - EnergyGuard HD Polyiso Insulation ⇔ EnergyGuard NH HD Polyiso Insulation;
  - EnergyGuard HD Plus Polyiso Insulation ⇔ EnergyGuard NH HD Plus Polyiso Insulation.
9. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609 for determination of design wind loads.

**TABLE 1A: STRUCTURAL CONCRETE DECKS; NEW CONSTRUCTION OR REROOF (TEAR-OFF)  
SYSTEM TYPE A-1: BONDED INSULATION, BONDED WATERPROOFING (OVERBURDEN BY DESIGNER OF RECORD)**

Sys. No.	Deck (See Note 1)	Prime	VB / Temp Roof	Base Insulation		Top Insulation		Waterproofing System (Note 6)		Wearing Course or Over Burden	MDP (psf)
				Type	Attach	Type	Attach	Base Ply(s)	Cap Ply		
C-1.	Structural concrete	Matrix™ 307 Premium Asphalt Primer or ASTM D41	None	Min. 1.5-inch EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation, EnergyGuard RA, EnergyGuard RH, EnergyGuard RN	HA	Min. 0.5-inch Dens Deck	HA	SBS-AA or APP-TA	(Optional) SBS-AA or APP-TA	As specified by the Designer of Record and acceptable to the AHJ (Note 7)	N/A
C-2.	Structural concrete	(Optional) Matrix™ 307 Premium Asphalt Primer or ASTM D41	None	Min. 1.5-inch EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation, EnergyGuard RA, EnergyGuard RH, EnergyGuard RN	LRF-M, OB500, GAF 2-Part or CR-20	Min. 0.5-inch Dens Deck	LRF-M, OB500, GAF 2-Part or CR-20	SBS-AA or APP-TA	(Optional) SBS-AA or APP-TA	As specified by the Designer of Record and acceptable to the AHJ (Note 7)	N/A
C-3.	Structural concrete	ASTM D41 primer, Matrix™ 307 Premium Asphalt Primer or GAF SA Primer	GAF SA Vapor Retarder	Min. 1.5-inch EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation, EnergyGuard RA, EnergyGuard RH, EnergyGuard RN	OB500	Min. 0.5-inch Dens Deck	HA, LRF-M, OB500, GAF 2-Part or CR-20	SBS-AA or APP-TA	(Optional) SBS-AA or APP-TA	As specified by the Designer of Record and acceptable to the AHJ (Note 7)	N/A
C-4.	Structural concrete	ASTM D41 primer, Matrix™ 307 Premium Asphalt Primer or GAF SA Primer	GAF SA Vapor Retarder	Min. 0.5-inch EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation, EnergyGuard RH, EnergyGuard RN; min. 1-inch EnergyGuard RA	OB500	(Optional) Additional layer(s) base insulation	OB500	Base Ply: SBS-SA Ply: (Optional if using Cap Ply) APP-TA	(Optional if using Ply) APP-TA	As specified by the Designer of Record and acceptable to the AHJ (Note 7)	N/A
C-5.	Structural concrete	ASTM D41 primer, Matrix™ 307 Premium Asphalt Primer or GAF SA Primer	GAF SA Vapor Retarder	Min. 0.5-inch EnergyGuard Polyiso Insulation, EnergyGuard Ultra Polyiso Insulation, EnergyGuard RH, EnergyGuard RN; min. 1-inch EnergyGuard RA	OB500	Min. 0.5-inch Dens Deck Prime, Dens Deck DuraGuard or SECUROCK Gypsum-Fiber Roof Board	OB500	Base Ply: SBS-SA Ply: (Optional) if using Cap Ply) APP-TA	(Optional if using Ply): APP-TA	As specified by the Designer of Record and acceptable to the AHJ (Note 7)	N/A

**TABLE 1B: STRUCTURAL CONCRETE DECKS; NEW CONSTRUCTION OR REROOF (TEAR-OFF)  
SYSTEM TYPE A-1: BONDED INSULATION, BONDED WATERPROOFING (CERAMIC TILE OVERBURDEN)**

System No.	Deck (See Note 1)	Prime	Base Insulation		Top Insulation		Waterproofing System			Wearing Course or Over Burden	MDP (psf)
			Type	Attach	Type	Attach	Membrane	Primer	Coating		
C-6.	Structural concrete	None	Min. 1-inch EnergyGuard Polyiso Insulation or EnergyGuard Ultra Polyiso Insulation	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	EverGuard TPO FB Ultra in LRF-M at 6-inch o.c. <i>(roll into place, creating full coverage)</i>	EverGuard® TPO Base Coat or TPO Red Primer 0.5 gal/sq.	TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating at 1 gal/sq.	Exterior grade ceramic tiles (ANSI A137.1) embedded in FlexBond in accordance with ANSI A108.5 and Custom Building Products instructions	-232.5
C-7.	Structural concrete	None	Min. 1-inch EnergyGuard RH	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	EverGuard TPO FB Ultra in LRF-M at 6-inch o.c. <i>(roll into place, creating full coverage)</i>	EverGuard® TPO Base Coat or TPO Red Primer 0.5 gal/sq.	TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating at 1 gal/sq.	Exterior grade ceramic tiles (ANSI A137.1) embedded in FlexBond in accordance with ANSI A108.5 and Custom Building Products instructions	-322.5
C-8.	Structural concrete	None	Min. 1-inch EnergyGuard RH	OB500, 6-inch o.c.	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500, 6-inch o.c.	EverGuard TPO FB Ultra in LRF-M at 6-inch o.c. <i>(roll into place, creating full coverage)</i>	EverGuard® TPO Base Coat or TPO Red Primer 0.5 gal/sq.	TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating at 1 gal/sq.	Exterior grade ceramic tiles (ANSI A137.1) embedded in FlexBond in accordance with ANSI A108.5 and Custom Building Products instructions	-405.0
C-9.	Structural concrete	None	Min. 1-inch EnergyGuard Polyiso Insulation or EnergyGuard Ultra Polyiso Insulation	LRF-M	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-M	EverGuard TPO FB Ultra in LRF-M at 6-inch o.c. <i>(roll into place, creating full coverage)</i>	EverGuard® TPO Base Coat or TPO Red Primer 0.5 gal/sq.	TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating at 1 gal/sq.	Exterior grade ceramic tiles (ANSI A137.1) embedded in FlexBond in accordance with ANSI A108.5 and Custom Building Products instructions	-232.5
C-10.	Structural concrete	None	Min. 1-inch EnergyGuard RH	LRF-M	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-M	EverGuard TPO FB Ultra in LRF-M at 6-inch o.c. <i>(roll into place, creating full coverage)</i>	EverGuard® TPO Base Coat or TPO Red Primer 0.5 gal/sq.	TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating at 1 gal/sq.	Exterior grade ceramic tiles (ANSI A137.1) embedded in FlexBond in accordance with ANSI A108.5 and Custom Building Products instructions	-337.5
C-11.	Structural concrete	None	Min. 1-inch EnergyGuard RH	LRF-M, 6-inch o.c.	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	LRF-M, 6-inch o.c.	EverGuard TPO FB Ultra in LRF-M at 6-inch o.c. <i>(roll into place, creating full coverage)</i>	EverGuard® TPO Base Coat or TPO Red Primer 0.5 gal/sq.	TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating at 1 gal/sq.	Exterior grade ceramic tiles (ANSI A137.1) embedded in FlexBond in accordance with ANSI A108.5 and Custom Building Products instructions	-412.5

**TABLE 1C: STRUCTURAL CONCRETE DECKS; NEW CONSTRUCTION OR REROOF (TEAR-OFF)  
SYSTEM TYPE F: NON-INSULATED, WATERPROOFING**

System No.	Deck (See Note 1)	Primer	Waterproofing System (Note 6)		Wearing Course or Over Burden	MDP (psf)
			Base Ply(s)	Cap Ply		
C-12.	Structural concrete	Matrix™ 307 Premium Asphalt Primer or ASTM D41	SBS-AA, APP-TA or SBS-CA	(Optional) SBS-AA, APP-TA or SBS-CA	As specified by the Designer of Record and acceptable to the AHJ (Note 7)	N/A
C-13.	Structural concrete	Matrix™ 307 Premium Asphalt Primer or ASTM D41	One or more SBS-AA	SBS-AA	Exterior grade ceramic plaza deck walking tiles embedded in Custom Building Products thin-set mortar applied with a ¼-inch notched trowel in accordance with ANSI A108.5	-447.5
C-14.	Structural concrete	Matrix™ 307 Premium Asphalt Primer or ASTM D41	One or more APP-TA	APP-TA	Exterior grade ceramic plaza deck walking tiles embedded in Custom Building Products thin-set mortar applied with a ¼-inch notched trowel in accordance with ANSI A108.5	-537.5
C-15.	Structural concrete	None	Two or more coats TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating ( <i>formerly TOPCOAT® Membrane</i> ) at 1.25 gallons/square per coat to min. wet mil thickness of 20 mils for each coat. Allow 24 hours to cure and inspect for and repair defects.	One or more finish coats TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating ( <i>formerly TOPCOAT® Membrane</i> ) at 1.75 gallons/square per coat to min. wet mil thickness of 28 mils per coat.	None	-576.0
C-16.	Structural concrete	None	Three coats TOPCOAT® Membrane or United Coatings™ Roof Mate TCM Coating ( <i>formerly TOPCOAT® Membrane</i> ) at 1 gallons/square per coat to min. wet mil thickness of 16 mils for each coat. Allow 24 hours to cure and inspect for and repair defects.		Exterior grade ceramic plaza deck walking tiles embedded in Custom Building Products Polymer Modified Portland Cement applied with a ¼-inch notched trowel in accordance with ANSI A108.5	-607.5
C-17.	Structural concrete	None	Two or more coats TOPCOAT® Surface Seal SB or United Coatings™ Surface Seal SB Roof Coating at 1 gallons/square per coat to min. wet mil thickness of 16 mils for each coat. Allow 24 hours to cure and inspect for and repair defects.		Exterior grade ceramic plaza deck walking tiles embedded in Custom Building Products Polymer Modified Portland Cement applied with a ¼-inch notched trowel in accordance with ANSI A108.5	-591.0