City of Belle Isle Job Site Permit Card ROOF 2020-04-070

Subdivision

Site Address: **5135 Belleville Ave 32812**

Class: **Residential**

Parcel Number: **17-23-30-4379-02-000**

==========

Description of Work: **ROOF - total square footage: 3006**
Number of Stories: 1
ASPHALT SHINGLES with underlayment
MODIFIED BITUMEN

==========

Issued: BFARR CONTRACTING, FARR, BRIAN JAMES License # **CCC1331432**

Contact # 321 444-6446 **Payment/ Issued Date & Method:** 4 / 24 / **2020**

☐ Picked up or sent by _____ ☑ Emailed

☐ **Visa** ☐ **Master Card** ☑ **Amex** ☐ **Discover** ☐ **Check / Money Order#**

5 1 0 1 5

ROOF	INSPECTOR	DATE	COMMENTS
NEW ROOFS ONLY Code 700 Deck Nailing, Dry-In, Flashing			This inspection only applies for a brand new roof only!
Both new & re-roof Code 710 In - Progress			This inspection consists of all underlayment/black paper coverage and only **25% shingle coverage.**
Both new & re-roof Code 720 Final			After the In Progress has been passed, **then the entire roof is covered** with shingles.

PLEASE NOTE: In order to schedule any inspections, the **PERMIT / plans-specs.** must be issued and **POSTED** on the **JOB SITE! THIS WILL AVOID ANY FAILED INSPECTIONS & RE-INSPECTION FEES.** A permit **expires** in 6 months if approved inspections are not recorded /scheduled within that time frame. You are responsible for scheduling and keeping track all of your inspections -
☆ **Inspection requests are to be emailed to BIDscheduling@UniversalEngineering.com; a confirmation email will be sent back to you upon scheduling. Next-Day Inspection requests must be made by 3:00 p.m. Please include the following requirements in your request:**

- **Project Address**
- **Corresponding Permit Number**
- **Type of Inspection** (Please reference your permit card for inspection codes)
- **Date of Inspection** (If no date is specified, the inspection will be scheduled for the next business day)
- **Contact Name**
- **Contact Phone Number**
- **Gate / Entry code** (If applicable)
- **AM, PM, or Any Time** (We do our best to accommodate time requests but cannot guarantee an exact arrival)

Universal Engineering Sciences - 3532 Maggie Blvd., Orlando, FL 32811407-581-8161 * Fax 407-581-0313 www.universalengineering.com

RECEIVED APRIL-22- 2020 COBI – UES

City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

APPLICATION FOR ROOFING PERMIT

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

DATE OF APPLICATION: 4-21-20 **ROOF PERMIT NUMBER** 2020-04-070

PLEASE PRINT. The undersigned hereby applies for a permit to make installations as indicated below:

Project Address 5135 Belleville Ave, Belle Isle, FL 32809 32812

Property Owner James Chronister Phone 407 456 1277 HOMEOWNER'S CONTACT NUMBER PENDING

Property Owner's Mailing Address 5135 Belleville Ave City Belle Isle

State FL Zip Code 32812 **Parcel Id Number:** 17-23-30-4379-02-00

REQUIRED! To obtain this information, please visit http://www.ocpafl.org/Searches/ParcelSearch.aspx

Class of Building: Old ☒ New ☐ **Type of Building:** Residential ☒ Commercial ☐ Other ☐

Type of Work: New Roof ☐ ReRoof ☒

- **REQUIRED! Florida Product Approval Form – NOTE: installation instructions must be posted on-site before your first inspection!!**

Please indicate the nature of work by completing the information below:

Roof Square Footage: 3000 **Number of Stories:** 1 **Job Valuation:** $ 18490.00

Type: Asphalt Shingles ☒ Metal ☐ Modified Bitumen ☒ Other: _____

I hereby certify that the above is true and correct to the best of my knowledge and make Application for Permit as outlined above, and if same is granted I agree to conform to all Florida Building Code Regulations and City Ordinances regulating same and in accordance with plans submitted. The issuance of this permit does not grant permission to violate any applicable Town and/or State of Florida codes and/or ordinances. By signing below, I recognize Republic Services is by legal contract the sole authorized provider of garbage, recycling, yard waste, and commercial garbage and construction debris collection and disposal services with the city limits of the City. Contractors, homeowners and commercial businesses may contact Republic Services at 407-293-8000 to setup accounts for Commercial, Construction Roll Off, or other services needed. Rates are fixed by contract and are available at City Hall or from Republic Services. The City enforces the contract through its code enforcement office. Failure to comply will result in a stop work order.

LICENSE HOLDER SIGNATURE _____ LICENSE # CCC1331432

LICENSE HOLDER NAME Brian Farr COMPANY NAME BFARR Contracting

Street Address 3500 Aloma Ave C-6

City WP State FL Zip Code 32792 Phone Number 321-444-6446

Email Address roofing@bfarrcontracting.com

Building Official: OTC **Date** 4.22.2022

✓ Verified Contractor's Licenses & Insurance are on file JH **Date** 4.22.2022

Zoning Fee	$ 30.-
Building Fee	$ 115.-
Review Fee	$ 0
1% BCAIB Fee	$ 2 min
1.5% DCA Fee	$ 2 min
Total Permit Fee	$ 149.-

NOTE: The Building Permit Number is required if the Roof Installation is associated with any construction or alteration where a Building Permit has been issued. Building Permit Number _____

1ST 1K
18x5

25
90
115

Visa 5105
PAID
4.24.2020

Permit Number: 2020-04-070
Folio/Parcel ID #: 17-23-30-4378-02-200
Prepared by: BEARR Contracting
3500 Aloma Ave C-6
W.P. FL 32792
Return to:

DOC # 20200246055
04/21/2020 11:57 AM Page 1 of 1
Rec Fee: $10.00
Deed Doc Tax: $0.00
Mortgage Doc Tax: $0.00
Intangible Tax: $0.00
Phil Diamond, Comptroller
Orange County, FL
Ret To: SIMPLIFILE LC

NOTICE OF COMMENCEMENT

State of Florida, County of Orange

The undersigned hereby gives notice that improvement will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

1. **Description of property** (legal description of the property, and street address if available)
5135 Belleville Ave Belle Isle, FL 32812
2. **General description of improvement**
Re-Roof
3. **Owner information or Lessee information if the Lessee contracted for the improvement**
Name James Chronister
Address 5135 Belleville Ave, Belle Isle FL 32812
Interest in Property
Name and address of fee simple titleholder (if different from Owner listed above)
Name
Address
4. **Contractor**
Name BEARR Contracting Telephone Number 32792
Address 3500 Aloma Ave C-6 W.P. FL 32792
5. **Surety** (if applicable, a copy of the payment bond is attached)
Name Telephone Number
Address Amount of Bond $
6. **Lender**
Name Telephone Number
Address
7. **Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by §713.13(1)(a)7, Florida Statutes.**
Name Telephone Number
Address
8. **In addition to himself or herself, Owner designates the following to receive a copy of the Lienor's Notice as provided in §713.13(1)(b), Florida Statutes.**
Name Telephone Number
Address
9. **Expiration date of notice of commencement** (the expiration date will be 1 year from the date of recording unless a different date is specified)

WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

X _____ James Chronister
Signature of Owner or Lessee, or Owner's or Lessee's Authorized Officer/Director/Partner/Manager — Signatory's Title/Office

The foregoing instrument was acknowledged before me by means of [ ] physical presence or [ ] online notarization, this 21 day of April 20 by James Chronister
month/year — name of person

as Owner for
Type of authority: owner, officer, trustee, attorney in fact — Name of party on behalf of whom instrument was executed

Signature of Notary Public – State of Florida

Print, type, or stamp commissioned name of Notary Public

Personally Known ____ OR Produced ID
Type of ID Produced FL DL

CHRISTIE HALLEY
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG250460
Expires 8/20/2022

Form content revised: 01/01/20

State of FLORIDA. County of ORANGE.
Per §668.50, F.S., which defines and permits electronic signatures, I certify that this is a true copy of the document as reflected in the Official Records.
PHIL DIAMOND, COUNTY COMPTROLLER

J Vatalaro 04/21/2020
Deputy Comptroller Date

COUNTY COMPTROLLER * ORANGE COUNTY, FLORIDA * SEAL

City of Belle Isle

1600 Nela Avenue, Belle Isle, FL 32809
Tel 407-851-7730 * Fax 407-240-2222 * www.cityofbelleislefl.org

Product Approval Form

DATE: 4-21-20 PERMIT # 2020-04-070

PROJECT ADDRESS 5135 Belleville Ave, Belle Isle, FL 32809 32812

As required by Florida Statue 553.842 and Florida Administrative Code 9B-72m, please provide the information and approval numbers of the building components listed below if they will be utilized on the building or structure. FL Approved products are listed online at **www.floridabuilding.org** or can be obtained from the local product supplier. The following information must be turned in with permit application and available onsite for inspections:

1. **This Product Approval Cover Sheet**
2. **Internet screen showing PA#, approval and code edition stamped**
3. **Manufacturer's *installation* details and requirements for each product stamped**

Product Type	Manufacturer	Model/Series	FL Product Approval #
EXTERIOR DOORS			
Swinging			
Sliding			
Sectional/Rollup			
Other			
WINDOWS			
Single/Dbl Hung			
Horizontal Slider			
Casement			
Fixed			
Mullion			
Skylights			
Other			
STRUCTURAL COMPONENTS			
Wood Connectors			
Wood Anchors			
Truss Plates			
Insulation Forms			
Lintels			
Other			

Product Type	Manufacturer	Model/Series	FL Product Approval #
WALL PANELS			
Sliding			
Soffits			
Storefront			
Glass Block			
Other			
ROOFING PRODUCTS			
Asphalt Shingles	GAF	Timberline	FL10124
Non Struct Metal			
Roofing Tiles			
Single Ply Roof	Certainteed		FL2533
Other			
Vents	GAF	Ridgevent	FL6267
OTHER			
FL10626-R17 Revision GAF Category:Roofing Subcategory:~~Underlayments~~ John W. Knezevich, PE (954) 772-6224 Approved			

It is the applicant's responsibility to verify that specific products have been installed in accordance with their limitations and with the minimum required design pressures for the structure. Specific compliance will be verified during field inspections.

Applicant Signature _____ Date 4-21-20

RETAIN A COPY FOR OFFICE USE AND RETURN ORIGINAL TO APPLICANT

Updated 12-2012 **FORM #PRODAPP012**

FL #	FL10626-R17
Application Type	Revision
Code Version	2017
Application Status	Approved
Comments	
Archived	
Product Manufacturer Address/Phone/Email	GAF 1 Campus Drive Parisppany, NJ 07054 (800) 766-3411 mstieh@gaf.com
Authorized Signature	Robert Nieminen lreith@nemoetc.com
Technical Representative Address/Phone/Email	William Broussard 1 Campus Drive Parsippany, NJ 07054 (800) 766-3411 TechnicalQuestionsGAF@gaf.com
Quality Assurance Representative Address/Phone/Email	
Category	Roofing
Subcategory	Underlayments
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	12/16/2022
Validated By	John W. Knezevich, PE ✓ Validation Checklist - Hardcopy Received
Certificate of Independence	FL10626_R17_COI_2019_01_COI_NIEMINEN.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D1970	2015
ASTM D226 (physicals)	2009
ASTM D4533 (tear)	2015
ASTM D6164	2011
ASTM D6757	2016
FM 4474	2011
FRSA/TRI April 2012 (04-12)	2012

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	12/16/2019
Date Validated	12/16/2019
Date Pending FBC Approval	12/19/2019
Date Approved	02/11/2020

Summary of Products

FL #	Model, Number or Name	Description
10626.1	GAF Roof Underlayments	Roofing Underlayments for use in sloped roof systems
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** +N/A/-442.5 **Other:** 1.) The design pressure noted in this application relates to one particular underlayment system. Refer to ER Section 5.6.4 for details. 2.) Refer to ER Section 5 for other Limits of Use.		**Installation Instructions** FL10626_R17_II_2019_12_FINAL_ER_GAF_UNDERLAYMENTS_FL10626-R17.pdf Verified By: Robert Niemien 59166 Created by Independent Third Party: Yes **Evaluation Reports** FL10626_R17_AE_2019_12_FINAL_ER_GAF_UNDERLAYMENTS_FL10626-R17.pdf Created by Independent Third Party: Yes

Back Next

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

ENGINEER | EVALUATE | TEST | CONSULT | CERTIFY

EVALUATION REPORT

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

Evaluation Report 01506.04.08-R17
FL10626-R17
Date of Issuance: 04/25/2008
Revision 17: 12/13/2019

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 and Florida Building Code, Residential Volume. The products described herein have been evaluated for compliance with the **6th Edition (2017) Florida Building Code** sections noted herein.

DESCRIPTION: GAF Roof Underlayments

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 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 11.

Prepared by:

Robert J.M. Nieminen, P.E.
Florida Registration No. 59166, Florida DCA ANE1983

The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 12/13/2019. 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 COMPONENT EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Compliance Statement: **GAF Roof Underlayments**, as produced by **GAF**, have demonstrated compliance with the following sections of the 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:

Section	Property	Standard	Year
1504.3.1	Wind Uplift	FM 4474	2011
1507.1.1, R905.1.1 Exception	Unrolling, Breaking Strength, Pliability	ASTM D226	2009
1507.1.1, R905.1.1 Exception	Tear Strength	ASTM D4533	2015
1507.2.3 / 1507.1.1	Physical Properties	ASTM D6757	2016
1507.2.4 / 1507.1.1, 1507.2.9.2	Physical Properties	ASTM D1970	2015
1507.3.3, R905.3.3	Physical properties	FRSA/TRI April 2012 (04-12)	2012
1507.11.2	Physical Properties	ASTM D6164	2011

3. REFERENCES:

Entity	Examination	Reference	Date
ERD (TST 6049)	Physical Properties	R3360.02.07-2-R1	03/13/2007
ERD (TST 6049)	Physical Properties	G12110.12.08	12/02/2008
ERD (TST 6049)	FRSA/TRI April 2012 (Slippage)	G34150.08.11	11/14/2011
ERD (TST 6049)	ASTM D6164	G40630.01.14-2B	01/07/2014
ERD (TST 6049)	ASTM D6164	G46160.09.14-3A	09/09/2014
ERD (TST 6049)	ASTM D1970	GAF-SC13285.03.17-3	03/01/2017
ERD (TST 6049)	ASTM D1970	GAF-SC13285.03.17-4	03/01/2017
PRI (TST 5878)	Physical properties	BRY-003-02-01	03/19/2002
PRI (TST 5878)	ASTM D1970	GAF-026-02-01	03/26/2002
PRI (TST 5878)	ASTM D1970	GAF-027-02-01	03/26/2002
PRI (TST 5878)	Physical properties	GAF-042-02-01	06/03/2005
PRI (TST 5878)	Physical properties	GAF-224-02-01	07/27/2009
PRI (TST 5878)	ASTM D1970	GAF-238-02-01	03/03/2010
PRI (TST 5878)	ASTM D1970	GAF-275-02-01	11/11/2010
PRI (TST 5878)	Physical properties	GAF-349-02-01	07/03/2012
PRI (TST 5878)	Wind Uplift	GAF-434-02-01	09/16/2013
PRI (TST 5878)	Wind Uplift	GAF-434-02-03	09/16/2013
PRI (TST 5878)	Wind Uplift	GAF-434-02-04	09/16/2013
PRI (TST 5878)	FBC 1507.1.1 (Exception)	GAF-818-02-01	12/05/2017
PRI (TST 5878)	FBC 1507.1.1 (Exception)	GAF-826-02-01	06/04/2018
PRI (TST 5878)	FBC 1507.1.1 (Exception)	GAF-847-02-01	06/04/2018
PRI (TST 5878)	FBC 1507.1.1 (Exception)	GAF-914-02-01	04/10/2019
PRI (TST 5878)	FBC 1507.1.1 (Exception)	376T0012	07/15/2019
PRI (TST 5878)	FBC 1507.1.1 (Exception)	376T0018 x 2	07/31/2019
PRI (TST 5878)	ASTM D1970	376T0032	10/22/2019
UL (TST 1740)	Physical properties	02NK22569	06/04/2002
UL (TST 1740)	ASTM D6757	10NK11990	05/18/2011
Miami-Dade (CER 1592)	HVHZ compliance	16-1216.02	02/02/2017
Miami-Dade (CER 1592)	HVHZ compliance	18-0119.15	02/22/2018
ICC-ES (EVL2396)	IBC/IRC compliance	ESR-2053	07/01/2017
ICC-ES (EVL2396)	IBC/IRC compliance	ESR-2808	07/01/2017
ICC-ES (EVL2396)	IBC/IRC compliance	ESR-1322	01/01/2018
ICC-ES (EVL2396)	IBC/IRC compliance	ESR-3286	02/01/2018
UL, LLC (QUA 9625)	Quality Control	Service Confirmation	12/17/2018

4. PRODUCT DESCRIPTION:

	Product	Specification	Plant(s)	Description
4.1	Liberty™ SBS Self-Adhering Base/Ply Sheet	ASTM D1970	Mt. Vernon, IN	smooth-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen roof underlayment
4.2	StormGuard® Film Surfaced Leak Barrier	ASTM D1970	Mt. Vernon, IN Savannah, GA	film-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen roof underlayment; also used as a secondary water barrier to seal roof decks
4.3	WeatherWatch® Mineral Surfaced Leak Barrier	ASTM D1970	Mt. Vernon, IN Savannah, GA Arkadelphia, AR	mineral-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen roof underlayment; also used as a secondary water barrier to seal roof decks
4.4	Deck-Armor™ Premium Breathable Roof Deck Protection	FBC 1507.1.1 & R905.1.1 (Exception)	North Bay, ON Dadra, India	non-woven, spun-bonded polypropylene laminated polyethylene scrim sheet roof underlayment
4.5	FeltBuster® High-Traction Synthetic Roofing Felt	FBC 1507.1.1 & R905.1.1 (Exception)	Richmond, VA	non-asphaltic, polypropylene roofing underlayment
4.6	Shingle-Mate® Roof Deck Protection	FBC 1507.1.1 & R905.1.1 (Exception)	Pryor, OK	fiberglass reinforced, asphaltic roof underlayment
4.7	StormSafe™ Anchor Sheet	FBC 1507.1.1 & R905.1.1 (Exception)	North Bay, ON	polypropylene woven fabric which serves as an anchor sheet in two-ply roof underlayment systems
4.8	Tiger Paw™ Roof Deck Protection	FBC 1507.1.1 & R905.1.1 (Exception)	Dadra, India North Bay, ON Parzai, India Umerkui Kilvani, India	non-woven, polypropylene reinforced, polymer coated roof underlayment
4.9	RoofPro™ SBS-Modified All-Purpose Underlayment	AC165	Fontana, CA	fiberglass-reinforced, SBS modified bitumen roof underlayment
4.10	VersaShield® Fire-Resistant Roof Deck Protection	ASTM D6757 (physicals)	Conover, NC	non-asphaltic, fiberglass-based roof underlayment and/or fire barrier
4.11	Ruberoid® Mop Granule	ASTM D6164	Savannah, GA	granule-surfaced, polyester-reinforced, asphalt-applied SBS modified bitumen roof underlayment
4.12	Ruberoid® Mop Granule FR	ASTM D6164	Savannah, GA	granule-surfaced, polyester-reinforced, asphalt-applied SBS modified bitumen roof underlayment

5. LIMITATIONS:

5.1 This is a building code evaluation. Neither NEMO ETC, LLC 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 current Approved Roofing Materials Directory or test report from accredited testing agency for fire ratings of this product.

5.4 GAF Roof Underlayments may be used with any prepared roof cover where the product is specifically referenced within FBC approval documents. If not listed, a request may be made to the Authority Having Jurisdiction for approval based on this evaluation combined with supporting data for the prepared roof covering.

5.5 Allowable Roof Covers:

TABLE 1: ROOF COVER OPTIONS

Underlayment	Asphalt Shingles	Nail-On Tile	Foam-On Tile	Metal	Wood Shakes & Shingles	Slate or Simulated Slate
Liberty™ SBS Self-Adhering Base/Ply Sheet	Yes	No	No	No	No	No
StormGuard® Film Surfaced Leak Barrier	Yes	No	No	Yes	No	No
WeatherWatch® Mineral Surfaced Leak Barrier	Yes	No	No	No	No	No
Deck-Armor™ Premium Breathable Roof Deck Protection	Yes	No	No	Contact GAF	Contact GAF	Contact GAF
FeltBuster® High-Traction Synthetic Roofing Felt	Yes	No	No	No	No	No
Shingle-Mate® Roof Deck Protection	Yes	No	No	No	No	No
Tiger Paw™ Roof Deck Protection	Yes	No	No	Contact GAF	Contact GAF	Contact GAF
RoofPro™ SBS-Modified All-Purpose Underlayment	Yes	No	No	No	Yes	Yes
VersaShield® Fire-Resistant Roof Deck Protection	Yes	No	No	No	No	No
Ruberoid® Mop Granule	Yes	Yes	Yes See 5.5.1	No	Yes	Yes
Ruberoid® Mop Granule FR	Yes	Yes	Yes See 5.5.1	No	Yes	Yes

5.5.1 "Foam-On Tile" is limited to use of the following Approved tile adhesives / underlayment combinations.

TABLE 1A: ALLOWABLE TILE ADHESIVE / UNDERLAYMENT COMBINATIONS[1]

Adhesive	Florida Product Approval	Underlayments
DuPont TileBond™	FL22525	Ruberoid® Mop Granule; Ruberoid® Mop Granule FR

[1] Refer to Tile Manufacturer's or Adhesive Manufacturer's Florida Product Approval for Overturning Moment Resistance Performance.

5.6 Allowable Substrates:

TABLE 2: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS			
Underlayment	**Application**	**Primer**	**Substrates**
Liberty™ SBS Self-Adhering Base/Ply Sheet	self-adhering	(Optional) ASTM D41	plywood
StormGuard® Film Surfaced Leak Barrier			
Weather Watch® Mineral Surfaced Leak Barrier			
Liberty™ SBS Self-Adhering Base/Ply Sheet	self-adhering	None	ASTM D226 felt
StormGuard® Film Surfaced Leak Barrier			
Weather Watch® Mineral Surfaced Leak Barrier			
Liberty™ SBS Self-Adhering Base/Ply Sheet	self-adhering	ASTM D41	metal (flashing metal, valley metal, etc.)
StormGuard® Film Surfaced Leak Barrier			
Weather Watch® Mineral Surfaced Leak Barrier			
Ruberoid® Mop Granule	hot asphalt	ASTM D41	structural concrete
Ruberoid® Mop Granule FR			
Ruberoid® Mop Granule	hot asphalt	None	GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth
Ruberoid® Mop Granule FR			

5.6.1 Wind Resistance for Underlayment Systems in Foam-On Tile Applications:
The following wind uplift limitations apply to underlayment systems that are not prescriptively addressed in FRSA/TRI April 2012 (04-12) and are used in foam-on or mortar-set tile applications. 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 FRSA/TRI April 2012 (04-12), Appendix A, Table 1A or FBC 1609 for determination of design wind loads.

#1 Maximum Design Pressure = **-45 psf**.

Deck: Min. 19/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth mechanically attached with 12 ga., min. 1.25-inch long ring shank nails through 32 ga., 1-5/8-inch diameter tin caps spaced 9-inch o.c. at the min. 4-inch wide side laps and 9-inch o.c. at two (2), equally spaced, staggered center rows in the field of the sheet.

Cap Sheet: Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square.

#2 Maximum Design Pressure = **-75 psf**.

Deck: Min. 19/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth mechanically attached with 12 ga., min. 1.25-inch long ring shank nails through 32 ga., 1-5/8-inch diameter tin caps spaced 8-inch o.c. at the min. 4-inch wide side laps and 8-inch o.c. at three (3), equally spaced, staggered center rows in the field of the sheet.

Cap Sheet: Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square.

#3 Maximum Design Pressure = **-97.5 psf**.

Deck: Min. 19/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.

Base Sheet: GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth mechanically attached with 11 ga., min. 1.25-inch long ring shank nails through 32 ga., 1-5/8-inch diameter tin caps spaced 4-inch o.c. at the min. 2-inch wide side laps and 4-inch o.c. at four (4), equally spaced center rows in the field of the sheet.

Cap Sheet: Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square.

#4 Maximum Design Pressure = **-442.5 psf**.

Deck: Min. 2,500 psi structural concrete to meet project requirements to satisfaction of Authority Having Jurisdiction

Base Sheet: GAFGLAS #75 Base Sheet, Tri-Ply #75 Base Sheet, GAFGLAS #80 Ultima Base Sheet, GAFGLAS Ply 4, Tri-Ply Ply 4 or GAFGLAS Flex Ply 6 applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square.

Cap Sheet: Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square.

5.6.1.1 For mechanically attached Base Sheet, the maximum design pressure for the selected assembly shall meet or exceed that required under FRSA/TRI April 2012 (04-12), Appendix A, Table 1A.

Alternatively, the maximum design pressure for the selected assembly shall meet or exceed the Zone 1 design pressure determined in accordance with FBC 1609. In this case, Zones 2 and 3 shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are ANSI/SPRI WD1, FM Loss Prevention Data Sheet 1-29 and Roofing Application Standard RAS 117. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (January 2016) for Zone 2/3 enhancements.

5.7 Exposure Limitations:

TABLE 3: EXPOSURE LIMITATIONS

Underlayment	Maximum Exposure (days)
Deck-Armor™ Premium Breathable Roof Deck Protection, FeltBuster® High-Traction Synthetic Roofing Felt, Shingle-Mate® Roof Deck Protection, StormSafe™ Anchor Sheet, Tiger Paw™ Roof Deck Protection, RoofPro™ SBS-Modified All-Purpose Underlayment, Liberty™ SBS Self-Adhering Base/Ply Sheet, StormGuard® Film Surfaced Leak Barrier and WeatherWatch® Mineral Surfaced Leak Barrier	30
VersaShield® Fire-Resistant Roof Deck Protection, Ruberoid® Mop Granule and Ruberoid® Mop Granule FR	180

5.8 Tile Slippage Limitations (TAS 103 per FRSA/TRI April 2012 (04-12)):

When loading roof tiles on the underlayment in direct-deck tile assemblies, the maximum roof slope shall be as follows. These slope limitations can only be exceeded by using battens during loading of the roof tiles.

TABLE 4: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS

Underlayment	Tile Profile	Staging Method	Maximum Slope
Ruberoid® Mop Granule	Flat	Max. 10-tile stack	4:12
	Flat	Max. 6-tile stack (4 over 2)	5:12
	Lugged	Max. 10-tile stack	5:12
Ruberoid® Mop Granule FR	Flat or Lugged	Max. 6-tile stack (4 over 2)	5:12
	Lugged	Max. 10-tile stack	4:12

6. INSTALLATION:

6.1 **GAF Roof Underlayments** shall be installed in accordance with **GAF** published installation instructions subject to the Limitations set forth in Section 5 herein and the specifics noted below.

6.2 Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application and prime the substrate (if applicable).

6.3 Install self-adhering underlayments when ambient temperatures are minimum 45°F and rising.

6.4 All metal surfaces shall be primed with **Matrix™ 307 Premium Asphalt Primer** or alternate **GAF** accepted **ASTM D41** primer prior to application of self-adhering membranes.

6.5 **Deck-Armor™ Premium Breathable Roof Deck Protection:**

6.5.1 Shall be installed in compliance with the requirements for ASTM D226, Type I or II underlayment in **FBC Table 1507.1.1 or R905.1.1** for the type of prepared roof covering to be installed, considering the wider sheet-width for double-layer applications.

6.5.2 **Fasteners:**

Minimum fasteners shall be 1-inch diameter plastic-capped corrosion resistant nails or 1-inch diameter plastic-capped, corrosion resistant staples, unless restricted by Code.

Code Reference: The Exception statement in FBC 1507.1.1 and FBC R905.1.1 states: *"...except metal cap nails shall be required where the ultimate design wind speed, V_{ault}, equals or exceeds 150 mph."*

6.5.3 **Slopes of 4:12 or greater:**

End (vertical) laps shall be minimum 6-inches and side (horizontal) laps shall be minimum 4-inches. End (vertical) laps shall be offset from course to course not less than 6 feet.

Minimum attachment shall be in accordance with FBC Table 1507.1.1 or R905.1.1. Secure end laps 6-inch o.c. When batten systems are to be installed atop the underlayment, the underlayment need only be preliminarily attached pending attachment of the battens.

6.5.4 **Slopes of 2:12 to less than 4:12:**

End (vertical) laps shall be minimum 6-inches and side (horizontal) laps shall be minimum 28.5-inches (for 54-inch wide rolls) or minimum 25.5-inches (for 48-inch wide rolls). End (vertical) laps shall be offset from course to course not less than 6 feet.

Begin by fastening a full-width along the eaves or install full-width leak barrier. Place a full-width sheet over the starter, completely overlapping the starter course. Continue upslope, maintaining minimum 28.5-inch side laps (for 54-inch wide rolls) or minimum 25.5-inch side laps (for 48-inch wide rolls), resulting in a double-layer application.

Minimum attachment shall be in accordance with FBC Table 1507.1.1 or R905.1.1. Secure end laps 6-inch o.c. When batten systems are to be installed atop the underlayment, the underlayment need only be preliminarily attached pending attachment of the battens.

6.5.3 Optional, or if required by the Authority Having Jurisdiction: Install a leak barrier of Liberty™ SBS Self-Adhering Base/Ply Sheet; StormGuard® Film Surfaced Leak Barrier or WeatherWatch® Mineral Surfaced Leak Barrier at vulnerable leak areas, including but not limited to eaves, valleys, rakes, skylights and dormers. At eaves and valleys, install the leak barrier prior to installation of the underlayment. Along the rake, install the underlayment, leaving 6 to 8-inch of the deck exposed, and then install the leak barrier over the underlayment and exposed decking. At other areas, install the leak barrier over the underlayment.

6.6 FeltBuster® High-Traction Synthetic Roofing Felt or Tiger Paw™ Roof Deck Protection:

6.6.1 Shall be installed in compliance with the requirements for ASTM D226, Type I or II underlayment in **FBC Table 1507.1.1 or R905.1.1** for the type of prepared roof covering to be installed, considering the wider sheet-width for double-layer applications.

6.6.2 **Fasteners:**

Minimum fasteners shall be 1-inch diameter plastic-capped corrosion resistant nails or 1-inch diameter plastic-capped, corrosion resistant staples, unless restricted by Code.

Code Reference: The Exception statement in FBC 1507.1.1 and FBC R905.1.1 states: *"...except metal cap nails shall be required where the ultimate design wind speed, V_{ult}, equals or exceeds 150 mph."*

6.6.3 **Slopes of 4:12 or greater:**

End (vertical) laps shall be minimum 6-inches and side (horizontal) laps shall be minimum 4-inches. End (vertical) laps shall be offset from course to course not less than 6 feet.

Minimum attachment shall be in accordance with FBC Table 1507.1.1 or R905.1.1. Secure end laps 6-inch o.c. When batten systems are to be installed atop the underlayment, the underlayment need only be preliminarily attached pending attachment of the battens.

6.6.4 **Slopes of 2:12 to less than 4:12:**

End (vertical) laps shall be minimum 6-inches and side (horizontal) laps shall be minimum 25.5-inches. End (vertical) laps shall be offset from course to course not less than 6 feet.

Begin by fastening a full-width along the eaves or install full-width leak barrier. Place a full-width sheet over the starter, completely overlapping the starter course. Continue upslope, maintaining minimum 25.5-inch side laps, resulting in a double-layer application.

Minimum attachment shall be in accordance with FBC Table 1507.1.1 or R905.1.1. Secure end laps 6-inch o.c. When batten systems are to be installed atop the underlayment, the underlayment need only be preliminarily attached pending attachment of the battens.

6.6.5 Optional, or if required by the Authority Having Jurisdiction: Install a leak barrier of Liberty™ SBS Self-Adhering Base/Ply Sheet; StormGuard® Film Surfaced Leak Barrier or WeatherWatch® Mineral Surfaced Leak Barrier at vulnerable leak areas, including but not limited to eaves, valleys, rakes, skylights and dormers. At eaves and valleys, install the leak barrier prior to installation of the underlayment. Along the rake, install the underlayment, leaving 6 to 8-inch of the deck exposed, and then install the leak barrier over the underlayment and exposed decking. At other areas, install the leak barrier over the underlayment.

6.7 StormSafe™ Anchor Sheet:

6.7.1 StormSafe™ Anchor Sheet is limited to use as a mechanically attached base layer in 2-ply underlayment systems.

6.7.2 **Fasteners:**

Minimum fasteners shall be 1-inch diameter plastic- or steel-capped corrosion resistant nails; corrosion-resistant nails & 1-5/8-inch tin-caps; or Drill-Tec screws and plates, unless restricted by Code.

Code Reference: The Exception statement in FBC 1507.1.1 and FBC R905.1.1 states: *"...except metal cap nails shall be required where the ultimate design wind speed, V_{ult}, equals or exceeds 150 mph."*

6.7.3 Starting at the eave, fasten the eave edge and 6-inch wide end-laps 6-inch o.c. Fasten in the field of the roll 12-inch o.c. in two, equally spaced, staggered center rows.

Continue upslope in a similar manner, maintaining minimum 3-inch side-laps and minimum 6-inch end-laps. Fasten 6-inch o.c. in the laps and 12-inch o.c. in two, equally spaced, staggered center rows in the field. Ensure all end laps are staggered at least 3-feet apart.

One the same day, install Liberty™ SBS Self-Adhering Base/Ply; StormGuard® Film Surfaced Leak Barrier or WeatherWatch® Mineral Surfaced Leak Barrier over the StormSafe™ Anchor Sheet.

6.8 RoofPro™ SBS-Modified All-Purpose Underlayment and Shingle-Mate® Roof Deck Protection:

6.8.1 Shall be installed in compliance with the requirements for ASTM D226, Type I or II underlayment in **FBC Table 1507.1.1 or R905.1.1** for the type of prepared roof covering to be installed.

6.8.2 **Fasteners:**

As required in **FBC Table 1507.1.1 or R905.1.1** for the type of prepared roof covering to be installed. No hammer tacks or staples are permitted.

Code Reference: The Exception statement in FBC 1507.1.1 and FBC R905.1.1 states: *"...except metal cap nails shall be required where the ultimate design wind speed, V_{ault}, equals or exceeds 150 mph."*

6.8.3 Optional, or if required by the Authority Having Jurisdiction: Install a leak barrier of Liberty™ SBS Self-Adhering Base/Ply Sheet; StormGuard® Film Surfaced Leak Barrier or WeatherWatch® Mineral Surfaced Leak Barrier at vulnerable leak areas, including but not limited to eaves, valleys, rakes, skylights and dormers. At eaves and valleys, install the leak barrier prior to installation of the underlayment. Along the rake, install the underlayment, leaving 6 to 8-inch of the deck exposed, and then install the leak barrier over the underlayment and exposed decking. At other areas, install the leak barrier over the underlayment.

6.9 VersaShield® Fire-Resistant Roof Deck Protection:

6.9.1 Shall be installed in compliance with the codified requirements for **ASTM D6757** underlayment in **FBC Table 1507.1.1** for the type of prepared roof covering to be installed.

6.9.2 **Fasteners:**

Minimum fasteners shall be 1-inch diameter plastic-capped or metal-capped corrosion resistant nails or 1-inch diameter plastic-capped, corrosion resistant staples, unless restricted by Code.

Code Reference: The Exception statement in FBC 1507.1.1 and FBC R905.1.1 states: *"...except metal cap nails shall be required where the ultimate design wind speed, V_{ault}, equals or exceeds 150 mph."*

6.9.3 **Slopes of 4:12 or greater:**

End (vertical) laps shall be minimum 6-inches and side (horizontal) laps shall be minimum 4-inches. End (vertical) laps shall be offset from course to course not less than 6 feet.

Minimum attachment shall be in accordance with FBC Table 1507.1.1 or R905.1.1. Secure end laps 6-inch o.c. When batten systems are to be installed atop the underlayment, the underlayment need only be preliminarily attached pending attachment of the battens.

6.9.4 **Slopes of 2:12 to less than 4:12:**

End (vertical) laps shall be minimum 6-inches and side (horizontal) laps shall be minimum 22-inches. End (vertical) laps shall be offset from course to course not less than 6 feet.

Begin by fastening a half-width starter strip along the eaves or install full-width leak barrier. Place a full-width sheet over the starter, completely overlapping the starter course. Continue upslope, maintaining minimum 22-inch side laps, resulting in a double-layer application.

Minimum attachment shall be in accordance with FBC Table 1507.1.1 or R905.1.1. Secure end laps 6-inch o.c. When batten systems are to be installed atop the underlayment, the underlayment need only be preliminarily attached pending attachment of the battens.

6.9.5 Optional, or if required by the Authority Having Jurisdiction: Install a leak barrier of **Liberty™ SBS Self-Adhering Base/Ply Sheet; StormGuard® Film Surfaced Leak Barrier or WeatherWatch® Mineral Surfaced** at vulnerable leak areas, including but not limited to eaves, valleys, rakes, skylights and dormers. At eaves and valleys, install the leak barrier prior to installation of the underlayment. Along the rake, install the underlayment, leaving 6 to 8-inch of the deck exposed, and then install the leak barrier over the underlayment and exposed decking. At other areas, install the leak barrier over the underlayment.

6.10 Liberty™ SBS Self-Adhering Base/Ply Sheet:

6.10.1 Shall be installed in compliance with the codified requirements for **ASTM D1970** underlayment in **FBC Table 1507.1.1** for the type of prepared roof covering to be installed.

6.10.2 The minimum and maximum roof slopes are ½:12 and 6:12, respectively. Back-nailing is required when slope is 1:12 or greater. Back-nailing shall consist of minimum 1-inch square or round cap nails spaced 18" o.c. encapsulated within min. 3-inch side laps.

6.10.3 Non-Tile Applications:

Shall be fully self-adhered to the substrates noted in **Section 5.6**. For direct-bond to deck applications plywood shall be primed with **Matrix™ 307 Premium Asphalt Primer** or alternate **GAF** accepted **ASTM D41** primer at ½ to ¾ gallon per square.

Prior to removal of release film, align sheets properly starting at the low-point of the roof (eave) with the selvage edge upslope and for minimum 2-inch overhang at eaves and rakes. Roll out sheet and allow to 'relax' for min. 30 minutes. Remove the lower piece of release film and bond to substrate and fold the overhanging 2-inch over the eave and nail into place 12" o.c. Remove the top piece of release film and bond to substrate. Install primed drip edge and fasten to meet **FBC Chapter 16** wind load requirements. Install 1/8-inch troweling of **Matrix™ 201 Premium SBS Flashing Cement** over drip edge.

Continue upslope in a similar manner, maintaining minimum 3-inch side-laps and minimum 6-inch end-laps. Ensure all end laps are staggered at least 18-inch apart.

Use a weighted lawn or linoleum roller to ensure complete adhesion to the substrate. Use a hand roller to firmly bond side and end laps.

6.11 StormGuard® Film Surfaced Leak Barrier:

6.11.1 Shall be installed in compliance with the codified requirements for **ASTM D1970** underlayment in **FBC Table 1507.1.1** for the type of prepared roof covering to be installed.

6.11.2 Back-nailing is required. Back-nailing shall consist of minimum 1-inch square or round cap nails spaced 18" o.c. encapsulated within min. 3-inch side laps.

6.11.3 Non-Tile Applications:

Shall be fully self-adhered to the substrates noted in **Section 5.6**. Prior to removal of release film, align sheets properly starting at the low-point of the roof (eave) with the selvage edge upslope and for minimum 2-inch overhang at eaves and rakes. Remove the lower piece of release film and bond to substrate and fold the overhanging 2-inch over the eave and nail into place 12" o.c. Remove the top piece of release film and bond to substrate. Install primed drip edge and fasten to meet **FBC Chapter 16** wind load requirements. Install 1/8-inch troweling of **Matrix™ 201 Premium SBS Flashing Cement** over drip edge.

Continue upslope in a similar manner, maintaining minimum 3-inch side-laps and minimum 6-inch end-laps. Ensure all end laps are staggered at least 18-inch apart.

Use a hand roller to firmly bond side and end laps.

6.12 WeatherWatch® Mineral Surfaced Leak Barrier:

6.12.1 Shall be installed in compliance with the codified requirements for **ASTM D1970** underlayment in **FBC Table 1507.1.1** for the type of prepared roof covering to be installed.

6.12.2 **WeatherWatch® Mineral Surfaced Leak Barrier** may be installed as a secondary water barrier using minimum 4-inch wide rolls to seal plywood deck joints prior to installation of the primary underlayment system.

6.12.3 Back-nailing is required. Back-nailing shall consist of minimum 1-inch square or round cap nails spaced 18" o.c. encapsulated within min. 4-inch side laps.

6.12.4 Non-Tile Applications:

Shall be fully self-adhered to the substrates noted in **Section 5.6**. Prior to removal of release film, align sheets properly starting at the low-point of the roof (eave) with the selvage edge upslope and for minimum 2-inch overhang at eaves and rakes. Remove the lower piece of release film and bond to substrate and fold the overhanging 2-inch over the eave and nail into place 12" o.c. Remove the top piece of release film and bond to substrate. Install primed drip edge and fasten to meet **FBC Chapter 16** wind load requirements. Install 1/8-inch troweling of **Matrix™ 201 Premium SBS Flashing Cement** over drip edge.

Continue upslope in a similar manner, maintaining minimum 3-inch side-laps and minimum 6-inch end-laps. Ensure all end laps are staggered at least 18-feet apart.

Use a hand roller to firmly bond side and end laps.

6.13 Ruberoid® Mop Granule; Ruberoid® Mop Granule FR:

6.13.1 **Ruberoid® Mop Granule** or **Ruberoid® Mop Granule FR** shall be installed in compliance with current **GAF** published installation requirements.

6.13.2 For use in tile applications, **Ruberoid® Mop Granule** or **Ruberoid® Mop Granule FR** are for use as an alternate to "Mineral Surface Roll Roofing" (ASTM D6380, Class M) in the "Single Ply System" from **FRSA/TRI April 2012 (04-12)** beneath mechanically fastened tile roof systems or the Hot Asphalt applied "Cap Sheet" in the "Two Ply System" from **FRSA/TRI April 2012 (04-12)** beneath mechanically fastened or adhered tile roof systems.

6.13.3 Fully adhere in **ASTM D312**, Type IV hot-asphalt to the substrates noted in **Section 5.6**. Side laps shall be minimum 4-inch and end-laps minimum 6-inch wide, and offset end-laps minimum 3-feet from course to course. Side and end-laps shall be fully adhered in a complete mopping of hot asphalt with asphalt extending approximately 3/8-inch beyond the lap edge.

6.13.4 Consult **GAF** instructions regarding back-nailing requirements.

6.14 Tile Staging (Ruberoid® Mop Granule; Ruberoid® Mop Granule FR):

6.14.1 Tile shall be loaded and staged in a manner that prevents tile slippage and/or damage to the underlayment. Refer to **Table 4** herein, and **GAF** published requirements for tile staging.

6.14.2 Battens and/or Counter-battens, as required by the tile manufacturer and **FRSA/TRI April 2012 (04-12)** must be used on all roof slopes greater than 7:12. Precautions should be taken as needed, such as the use of battens or nail-boards, to prevent tile sliding and/or damage to the underlayment during the loading process.

7. BUILDING PERMIT REQUIREMENTS:

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

8. MANUFACTURING PLANTS:

Contact the manufacturer or the named QA entity for plants covered under **Rule 61G20-3 QA** requirements. Refer to Section 4 herein for product & production locations having met codified physical properties specifications.

9. QUALITY ASSURANCE ENTITY:

UL, LLC. – QUA9625; (847) 664-3281

- END OF EVALUATION REPORT -

FLORIDA DEPARTMENT OF
Business & Professional Regulation

Florida dbpr

Product Approval
USER: Public User

OFFICE OF THE SECRETARY

FL #	FL2533-R23
Application Type	Revision
Code Version	2017
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	CertainTeed Corporation-Roofing
Address/Phone/Email	20 Moores Road Malvern, PA 19355 (610) 893-5400 mark.d.harner@saint-gobain.com
Authorized Signature	Mark Harner mark.d.harner@saint-gobain.com
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Address/Phone/Email	18 Moores Road Malvern, PA 19355 (610) 651-5847 Mark.D.Harner@saint-gobain.com
Quality Assurance Representative	
Address/Phone/Email	
Category	Roofing
Subcategory	Modified Bitumen Roof System
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	11/13/2022
Validated By	John W. Knezevich, PE ☑ Validation Checklist - Hardcopy Received
Certificate of Independence	FL2533_R23_COI_2019_01_COI_NIEMINEN.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D6162	2008
ASTM D6163	2008
ASTM D6164	2011
ASTM D6222	2011
ASTM D6509	2009
FM 4470	2012
FM 4474	2011

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	06/20/2019
Date Validated	06/20/2019
Date Pending FBC Approval	06/22/2019
Date Approved	08/13/2019

Summary of Products

FL #	Model, Number or Name	Description
2533.1	Flintlastic Modified Bitumen Roof Systems	Modified Bitumen Roof Systems
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** +N/A/-635 **Other:** 1.) Refer to ER Section 5 for Limits of Use. 2.) The design pressure noted in this application relates to one specific system. Refer to the ER Appendix for all systems and max design pressures.		**Installation Instructions** FL2533_R23_II_2019_06_FINAL_A1_ER_CERTAINTEED_MODBIT_FL2533-R23.pdf Verified By: Robert Nieminen, PE PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL2533_R23_AE_2019_06_FINAL_ER_CERTAINTEED_MODBIT_FL2533-R23.pdf Created by Independent Third Party: Yes

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NEMO | etc.

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

The following notes apply to the systems outlined herein:

1. The roof system evaluation herein pertains to above-deck roof components. Roof decks 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.

2. Unless otherwise noted, fasteners and stress plates for insulation attachment shall be as follows. Fasteners shall be of sufficient length for the following engagements:
   - Wood Deck: OMG #14 Roofgrip with Flat Bottom Plate (Accutrac), OMG HD with OMG 3 in. Galvalume Steel Plate, Dekfast #14 with Hex Plate or 3" Round Insulation Plate, Trufast HD with Trufast 3" Metal Insulation Plates or FlintFast #14 Fastener with FlintFast 3" Insulation Plates. Minimum 0.75-inch plywood penetration or minimum 1-inch wood plank embedment.
   - Steel Deck: OMG #12 or #14 Roofgrip with Recessed or Flat Bottom Plate (Accutrac), OMG #12 Standard or HD with OMG 3 in. Galvalume Steel Plate, Dekfast #12 or #14 with Hex Plate or 3" Round Insulation Plate, Trufast DP or HD with Trufast 3" Metal Insulation Plates or FlintFast #12 or #14 Fastener with FlintFast 3" Insulation Plates. Minimum 0.75-inch steel penetration and engage the top flute of the steel deck.
   - Structural Concrete: OMG #14 Roofgrip with Recessed or Flat Bottom Plate (Accutrac), OMG HD or CD-10 with OMG 3 in. Galvalume Steel Plate, Dekfast #14 or DekSpike with Hex Plate or 3" Round Insulation Plate, Trufast HD or CF with Trufast 3" Metal Insulation Plates or FlintFast #14 Fastener with FlintFast 3" Insulation Plates. Minimum 1-inch embedment. Fasteners installed with a pilot hole in accordance with the fastener manufacturer's published installation instructions.

3. Unless otherwise noted, insulation may be any one layer or combination of polyisocyanurate, polystyrene, wood fiberboard, perlite, GlasRoc Roof Board or gypsum-based roof board that meets the QA requirements of F.A.C. Rule 61G20-3 and is documented as meeting FBC 1505.1 and, for foam plastic, FBC Chapter 26, when installed with the roof cover.

4. Minimum 200 psi, minimum 2-inch thick lightweight insulating concrete may be substituted for, or installed beneath rigid insulation board for System Type D (mechanically attached base sheet, bonded roof cover), whereby the base sheet screws and plates are installed through the LWIC to engage the structural steel or concrete deck. The structural deck shall be of equal or greater configuration to the steel and concrete deck listings. 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. Preliminary insulation attachment for System Type D: Unless otherwise noted, refer to Section 2.2.10.1.3 of FM Loss Prevention Data Sheet 1-29 (January 2016).

6. 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
   - Ashland Pliodeck (A-PD): Continuous 0.75 inch wide ribbons, 12-inch o.c. *Ribbons of subsequent layers shall be perpendicular to those in the layer below.*
   - Dow INSTA-STIK Quik Set Insulation Adhesive (D-IS): Continuous 0.75 to 1 inch wide ribbons, 12-inch o.c.
   - ICP Adhesives Polyset BOARD-MAX: Continuous 3-inch ribbons, 12-inch o.c.
   - ICP Adhesives Polyset CR-20: Continuous 2.5 to 3-inch wide ribbons, 12-inch o.c.
   - Millennium One Step Foamable Adhesive (M-OSFA): Continuous 0.25 to 0.5-inch wide ribbons, 12-inch o.c.
   - Millennium PG-1 Pump Grade Adhesive (M-PG1): Continuous 0.5 to 0.75-inch wide ribbons, 12-inch o.c.
   - OMG OlyBond 500 or OlyBond Green (OB500): Continuous 0.75-inch wide ribbons, 12-inch o.c. (PaceCart or SpotShot)
   - *Note: When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, boards shall be staggered from layer-to-layer.*
   - *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.*

7. 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. 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:
   - Ashland Pliodeck (A-PD) @ 12-inch o.c. MDP -105.0 psf (Min. 1.0-inch)
   - Ashland Pliodeck (A-PD) @ 6-inch o.c. MDP -277.5 psf (Min. 1.0-inch)
   - Dow INSTA-STIK Quik Set Insulation Adhesive (D-IS): MDP -120.0 psf (Min. 1.0-inch)
   - ICP Adhesives Polyset CR-20: MDP -117.5 psf (Min. 1.0-inch)
   - Millennium One Step Foamable Adhesive (M-OSFA): MDP -157.5 psf (Min. 1.0-inch)
   - Millennium PG-1 Pump Grade Adhesive (M-PG1): MDP -157.5 psf (Min. 1.0-inch)
   - OMG OlyBond 500 (OB500): MDP -45.0 psf (Min. 0.5-inch Multi-Max FA3)
   - OMG OlyBond 500 (OB500): MDP -187.5 psf (Min. 0.5-inch ISO 95+ GL)
   - OMG OlyBond 500 (OB500): MDP -315.0 psf (Min. 0.5-inch ENRGY 3)
   - OMG OlyBond 500 (OB500): MDP -487.5 psf (Min. 0.5-inch ACFoam II)

8. Bonded polyisocyanurate insulation boards shall be maximum 4 x 4 ft.

9. For mechanically attached components or partially bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed the Zone 1 design pressure determined in accordance with FBC Chapter 16, and Zones 2 and 3 shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are ANSI/SPRI WD1, FM Loss Prevention Data Sheet 1-29 and Roofing Application Standard RAS 117. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (January 2016) for Zone 2/3 enhancements.

10. 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, and no rational analysis is permitted.

11. For mechanically attached components over existing decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing and analysis shall be in accordance with ANSI/SPRI FX-1 or Testing Application Standard TAS 105.

12. For existing substrates in a bonded recover or re-roof installation, the existing roof surface or existing roof deck shall be examined for compatibility and bond performance with the selected adhesive, and the existing roof system (for recover) shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through 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.

13. For Concrete Deck or Recover Applications using System Type D, the insulation is optional.

14. Lightweight Insulating Concrete (LWC) shall be cast in accordance with FBC Section 1917 to the satisfaction of the Authority Having Jurisdiction. For systems where specific LWC is referenced, refer to current LWC Product Approval for specific deck construction and limitations. For systems where specific LWC is not referenced, the minimum design mix shall be 300 psi. In all cases, the minimum top-coat thickness is 2-inches. For LWC over structural concrete, reference is made to FBC Section 1917.4.1, Point 1. For "pre-existent" LWC references, listings were established through testing over lightweight concrete cast using only foaming agent (ASTM C896), water and Portland cement (ASTM C150), with no proprietary additives, in accordance with procedures adopted by Miami-Dade BCCO (FBC CER1592). Unless otherwise noted, use of these listings in new construction or re-roof (tear-off) applications is at the discretion of the Designer of Record and Authority Having Jurisdiction.

15. Unless otherwise noted, refer to the following references for bonded base, ply or cap sheet applications.

CertainTeed Flintlastic® Modified Bitumen Components & Application Methods

REFERENCE	LAYER	MATERIAL	APPLICATION
BP-AA (Base and Ply sheets, Asphalt-Applied)	Base	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20	Hot asphalt at 20-40 lbs/square
	Ply	One or more Flintglas Ply 4; Flintglas Premium Ply 6	
BP-AA2 (Base, Spot-Asphalt-Applied)	Base	Yosemite Venting Base	Hot asphalt in 24-inch diameter spots in 30-inch grid pattern
BP-AA3 (Base, Spot-Asphalt-Applied)	Base	Yosemite Venting Base	Hot asphalt in 9-inch diameter spots in grid pattern noted herein.
BP-AA4 (Base, Strip-Asphalt-Applied)	Base	Yosemite Venting Base	Hot asphalt in 9-inch wide ribbons spaced as noted herein.
BP-CA2	Base/Ply	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20	Henry #903 Adhesive at 1.5 gal/square
BP-CA3	Base/Ply	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20	Millennium Hurricane Force Membrane Adhesive, beads spaced 6-inch o.c.
SBS-AA (SBS, Asphalt-Applied)	Base	Flintlastic Base 20; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	Hot asphalt at 20-40 lbs/square
	Ply	One or more Flintlastic Base 20; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	
	Cap	Flintlastic FR Cap 30; Flintlastic FR Cap 30 CoolStar; Flintlastic FR Dual Cap; Flintlastic FR-P; Flintlastic FR-P CoolStar; Flintlastic Premium FR-P; Flintlastic Premium FR-P CoolStar; Flintlastic GMS; Flintlastic GMS CoolStar	

CertainTeed Flintlastic® Modified Bitumen Components & Application Methods (continued)			
REFERENCE	**LAYER**	**MATERIAL**	**APPLICATION**
SBS-CA1 (SBS, Cold-Applied)	Base	Flintlastic Base 20; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	FlintBond Brush or Karnak No. 81 Cold Process Modified Bitumen Adhesive Brush Grade at 1 gal/square
	Note:	Base ply cures overnight prior to application of the ply or cap ply.	
	Ply	Flintlastic Base 20; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	
	Cap	Flintlastic FR Cap 30; Flintlastic FR Cap 30 CoolStar; Flintlastic FR Dual Cap; Flintlastic FR-P; Flintlastic FR-P CoolStar; Flintlastic Premium FR-P; Flintlastic Premium FR-P CoolStar; Flintlastic GMS; Flintlastic GMS CoolStar	
SBS-CA2 (SBS, Cold-Applied)	Base	Flintlastic Base 20; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	Henry #903 Adhesive at 1.5 gal/square.
	Ply	Flintlastic Base 20; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	
	Cap	Flintlastic FR Cap 30; Flintlastic FR Cap 30 CoolStar; Flintlastic FR Dual Cap; Flintlastic FR-P; Flintlastic FR-P CoolStar; Flintlastic Premium FR-P; Flintlastic Premium FR-P CoolStar; Flintlastic GMS; Flintlastic GMS CoolStar	
SBS-CA3 (SBS, Cold-Applied)	Base	Flintlastic Base 20; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	Millennium Hurricane Force Membrane Adhesive, beads spaced 6-inch o.c.
	Ply	Flintlastic Base 20; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	
	Cap	Flintlastic FR Cap 30; Flintlastic FR Cap 30 CoolStar; Flintlastic FR Dual Cap; Flintlastic FR-P; Flintlastic FR-P CoolStar; Flintlastic Premium FR-P; Flintlastic Premium FR-P CoolStar; Flintlastic GMS; Flintlastic GMS CoolStar	
SBS-TA (SBS, Torch-Applied)	Base	Flintlastic Ultra Poly SMS Base; Flintlastic Base 20 T	Torch-Applied
	Ply	One or more Flintlastic Ultra Poly SMS Base; Flintlastic Base 20 T	
	Cap	Flintlastic FR Cap 30 T; Flintlastic FR Cap 30 T CoolStar; Flintlastic GTS-FR; Flintlastic GTS-FR CoolStar	
APP-TA (APP, Torch-Applied)	Base	One or more Flintlastic APP Base T; Flintlastic STA; Flintlastic STA Plus	Torch-Applied
	Cap	Flintlastic STA; Flintlastic STA Plus; Flintlastic GTA; Flintlastic GTA CoolStar; Flintlastic GTA-FR; Flintlastic GTA-FR CoolStar	
SBS-SA-H (SBS, Self-Adhering, Hybrid Systems)	Base/Ply	Black Diamond Base Sheet; Flintlastic Ultra Glass SA	Self-Adhering
SBS-SA (SBS, Self-Adhering)	Base	Flintlastic SA PlyBase; Flintlastic SA Mid Ply	Self-Adhering
	Ply	Flintlastic SA PlyBase; Flintlastic SA Mid Ply	
	Cap	Flintlastic SA Cap; Flintlastic SA Cap FR CoolStar; Flintlastic SA Cap FR; Flintlastic SA Cap FR CoolStar	

16. Vapor barrier options for use over **structural concrete deck** followed by adhered insulation carry the following MDP limitations. The **lesser** of the MDP listings below vs. those in **Table 3A** applies:

Vapor Barrier Options; Structural Concrete Deck; Adhered Insulation per Table 3A; (The lesser of the MDP listings below vs. those in **Table 3A** applies)					
OPTION #	**PRIMER**	**VAPOR BARRIER**		**INSULATION ADHESIVE**	**MDP (PSF)**
		TYPE	**ATTACH**		
VB-1.	FlintPrime	Flintlastic SA PlyBase	Self-adhering	OB500, 12-inch o.c.	-82.5
VB-2.	FlintPrime	Flintlastic GTA	Torch-applied	M-OSFA or M-PG1, 12-inch o.c.	-420.0
VB-3.	FlintPrime	Flintlastic Base 20 T, Flintlastic FR Cap 30 T or Flintlastic GTS	Torch-applied	M-OSFA or M-PG1, 12-inch o.c.	-495.0

17. "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.

NEMO | etc.

TABLE 1A: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

Sys. No.	Deck (Note 1)	Base Insulation		Top Insulation		Roof Cover (Note 15)			MDP (psf)
		Type	Attach	Type	Attach	Base	Ply	Cap	
SELF-ADHERING SYSTEMS:									
W-1	Min. 15/32-inch APA rated CDX plywood at max. 24-inch spans	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard ISO H, H-Shield	M-OSFA or M-PG1	(Optional) Additional layer(s) of base insulation and/or min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board. Top surface shall be primed with FlintPrime or FlintPrime SA.	M-OSFA or M-PG1	SBS-SA	(Optional) SBS-SA	SBS-SA	-60.0
W-2	Min. 15/32-inch APA rated CDX plywood at max. 24-inch spans; blocked 48-inch o.c.	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard ISO H, H-Shield	M-OSFA or M-PG1, 6-inch o.c.	(Optional) Additional layer(s) of base insulation and/or min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board. Top surface shall be primed with FlintPrime or FlintPrime SA.	M-OSFA or M-PG1, 6-inch o.c.	SBS-SA	(Optional) SBS-SA	SBS-SA	-97.5
HYBRID SYSTEMS:									
W-3	Min. 15/32-inch APA rated CDX plywood at max. 24-inch spans	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard ISO H, H-Shield	M-OSFA or M-PG1	(Optional) Additional layer(s) of base insulation and/or min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board.	M-OSFA or M-PG1	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
W-4	Min. 15/32-inch APA rated CDX plywood at max. 24-inch spans; blocked 48-inch o.c.	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard ISO H, H-Shield	M-OSFA or M-PG1, 6-inch o.c.	(Optional) Additional layer(s) of base insulation and/or min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board.	M-OSFA or M-PG1, 6-inch o.c.	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-97.5
CONVENTIONAL SYSTEMS:									
W-5	Min. 15/32-inch APA rated CDX plywood at max. 24-inch spans	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard ISO H, H-Shield	M-OSFA or M-PG1	Optional additional layers of base insulation, followed by min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA or M-PG1	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
W-6	Min. 15/32-inch APA rated CDX plywood at max. 24-inch spans; blocked 48-inch o.c.	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard ISO H, H-Shield	M-OSFA or M-PG1, 6-inch o.c.	Optional additional layers of base insulation, followed by min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board.	M-OSFA or M-PG1, 6-inch o.c.	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-97.5

TABLE 1B: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER

Sys. No.	Deck (Note 1)	Anchor Sheet			Base Insulation		Top Insulation		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Type	Attach	Base	Ply	Cap	
SELF-ADHERING SYSTEMS:												
W-7	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base, Flintlastic Base 20; Poly SMS; Ultra Poly SMS; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	9-inch o.c. in 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	Min. 0.25-inch Dens Deck primed with FlintPrime or FlintPrime SA	HA	SBS-SA	(Optional) SBS-SA	SBS-SA	-45.0*
W-8	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base, Poly SMS or Ultra Poly SMS	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 4-inch o.c.	Min. 0.25-inch Dens Deck primed with FlintPrime or FlintPrime SA	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 6-inch o.c.	SBS-SA	(Optional) SBS-SA	SBS-SA	-52.5
W-9	Min. 19/32-inch plywood at max. 24-inch spans	Yosemite Venting Base Sheet	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	Min. 0.25-inch Dens Deck primed with FlintPrime or FlintPrime SA	HA	SBS-SA	(Optional) SBS-SA	SBS-SA	-52.5
W-10	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base, Poly SMS or Ultra Poly SMS	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 4-inch o.c.	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board primed with FlintPrime or FlintPrime SA	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 6-inch o.c.	SBS-SA	(Optional) SBS-SA	SBS-SA	-60.0
W-11	Min. 19/32-inch plywood at max. 24-inch spans	Yosemite Venting Base Sheet	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board primed with FlintPrime or FlintPrime SA	HA	SBS-SA	(Optional) SBS-SA	SBS-SA	-60.0
HYBRID SYSTEMS:												

NEMO | etc.

TABLE 1B: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER

Sys. No.	Deck (Note 1)	Anchor Sheet			Base Insulation		Top Insulation		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Type	Attach	Base	Ply	Cap	
W-12	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base, Flintlastic Base 20; Poly SMS; Ultra Poly SMS; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	9-inch o.c. in 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	None	N/A	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-13	Min. 19/32-inch plywood at max. 24-inch	Glasbase; Flintglas Premium Ply 6; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	None	N/A	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
CONVENTIONAL SYSTEMS:												
W-14	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base, Flintlastic Base 20; Poly SMS; Ultra Poly SMS; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	9-inch o.c. in 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	Min. 0.25-inch Dens Deck primed with FlintPrime (ASTM D41) primer	HA	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-15	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base, Poly SMS or Ultra Poly SMS	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 4-inch o.c.	Min. 0.25-inch Dens Deck primed with FlintPrime (ASTM D41) primer	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 6-inch o.c.	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
W-16	Min. 19/32-inch plywood at max. 24-inch spans	Yosemite Venting Base Sheet	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	Min. 0.25-inch Dens Deck primed with FlintPrime (ASTM D41) primer	HA	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5

TABLE 1B: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF) SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER												
Sys. No.	Deck (Note 1)	Anchor Sheet			Base Insulation		Top Insulation		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Type	Attach	Base	Ply	Cap	
W-17	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base, Poly SMS or Ultra Poly SMS	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 4-inch o.c.	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 6-inch o.c.	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
W-18	Min. 19/32-inch plywood at max. 24-inch spans	Yosemite Venting Base Sheet	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0

TABLE 1C: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Base	Ply	Cap	
HYBRID SYSTEMS:										
W-19	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H.	FlintFast #12 or #14 with FlintFast 3" Insulation Plates	1 per 1.33 ft^2	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H.	HA, D-IS, M-OSFA, M-PG1 or OB500	SBS-SA-H	(Optional) APP-TA	APP-TA	-67.5
CONVENTIONAL SYSTEMS:										
W-20	Min. 23/32-inch exterior grade plywood at max. 24-inch spans	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3, H-Shield	Note 2	1 per 2 ft^2	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation, min. 0.75-inch FescoBoard (homogeneous)	HA	BP-AA or SBS-AA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-21	Min. 23/32-inch exterior grade plywood at max. 24-inch spans	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3, H-Shield	Note 2	1 per 2 ft^2	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board, Dens Deck or Dens Deck Prime	HA	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-22	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H.	FlintFast #12 or #14 with FlintFast 3" Insulation Plates	1 per 1.33 ft^2	Optional additional layer(s) of base insulation followed by Min. 0.25-inch SECUROCK Gypsum-Fiber Roof board	HA, D-IS, M-OSFA, M-PG1 or OB500	APP-TA	(Optional) APP-TA	APP-TA	-90.0

NEMO|etc.

TABLE 1D: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer	Top Insulation Layer			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners	Attach	Base	Ply	Cap	
SELF-ADHERING SYSTEMS:									
W-23	Min. 15/32-inch plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14	1 per 3.2 ft²	SBS-SA	(Optional) SBS-SA	SBS-SA	-30.0*
W-24	Min. 19/32-inch exterior grade plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch Dens Deck	Note 2	1 per 1.33 ft²	Apply FlintPrime or FlintPrime SA to board & plates, followed by SBS-SA	(Optional) SBS-SA	SBS-SA	-45.0
W-25	Min. 19/32-inch exterior grade plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 3/8-inch SECUROCK Gypsum-Fiber Roof Board	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14	1 per 2.7 ft²	SBS-SA	(Optional) SBS-SA	SBS-SA	-45.0*
W-26	Min. 19/32-inch plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield, Multi-Max FA3 or FlintBoard ISO	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14	1 per 2 ft²	Apply FlintPrime or FlintPrime SA to board & plates, followed by SBS-SA	(Optional) SBS-SA	SBS-SA	-45.0*
W-27	Min. 15/32-inch plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch FlintBoard ISO	FlintFast #14 HD with FlintFast 3" Insulation Plates or Trufast HD with Trufast 3" Metal Insulation Plates	1 per 1.6 ft²	Apply FlintPrime to board & plates, followed by SBS-SA	(Optional) SBS-SA	SBS-SA	-52.5
W-28	Min. 19/32-inch plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield, Multi-Max FA3 or FlintBoard ISO	Note 2	1 per 1.45 ft²	Apply FlintPrime or FlintPrime SA to board & plates, followed by SBS-SA	(Optional) SBS-SA	SBS-SA	-60.0
HYBRID SYSTEMS:									
W-29	Min. 15/32-inch plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch Dens Deck; Dens Deck Prime	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14	1 per 2 ft²	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-30.0*
W-30	Min. 15/32-inch plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch FlintBoard ISO	FlintFast #14 HD with FlintFast 3" Insulation Plates or Trufast HD with Trufast 3" Metal Insulation Plates	1 per 1.6 ft²	SBS-SA-H	(Optional) SBS-TA or APP-TA	SBS-TA or APP-TA	-52.5
W-31	Min. 15/32-inch plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	Note 2	1 per 1.33 ft²	SBS-SA-H	(Optional) BP-AA or SBS-AA	SBS-AA	-52.5
W-32	Min. 19/32-inch plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield, FlintBoard ISO_H	Note 2	1 per 1.45 ft²	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0

TABLE 1D: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE C: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER									
System No.	Deck (Note 1)	Base Insulation Layer	Top Insulation Layer			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners	Attach	Base	Ply	Cap	
W-33	Min. 15/32-inch plywood at max. 24-inch spans	(Optional) Min. 1.5-inch, One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield, FlintBoard ISO_H	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14	1 per 1.33 ft^2	SBS-SA-H	(Optional) SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-75.0
W-34	Min. 19/32-inch exterior grade plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	Note 2	1 per 1.33 ft^2	SBS-SA-H	(Optional) SBS-TA or APP-TA	SBS-TA or APP-TA	-82.5
CONVENTIONAL SYSTEMS:									
W-35	Min. 23/32-inch exterior grade plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation, min. 0.75-inch FescoBoard (homogeneous)	Note 2	1 per 2 ft^2	BP-AA or SBS-AA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-36	Min. 15/32-inch plywood at max. 24-inch spans	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board, Dens Deck or Dens Deck Prime	FlintFast #12 or #14 HD with FlintFast 3" Insulation Plates	1 per 2 ft^2	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-37	Min. 15/32-inch plywood at max. 24-inch spans	(Optional for Recover) Min. 1.5-inch, One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	FlintFast #12 or #14 HD with FlintFast 3" Insulation Plates	1 per 1.45 ft^2	APP-TA	(Optional) APP-TA	APP-TA	-60.0
W-38	Min. 19/32-inch exterior grade plywood at max. 24-inch spans	(Optional for Concrete or Recover) Min. 2-inch ACFoam II, FlintBoard, H-Shield or ENRGY 3, loose laid.	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	FlintFast #12 or #14 HD with FlintFast 3" Insulation Plates	1 per 1.78 ft^2	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
W-39	Min. 15/32-inch plywood at max. 24-inch spans	(Optional for Recover) Min. 1.5-inch, One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	FlintFast #12 or #14 HD with FlintFast 3" Insulation Plates	1 per 1.33 ft^2	APP-TA	(Optional) APP-TA	APP-TA	-67.5

NEMO | etc.

TABLE 1E: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D: INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer(s) (Note 13)		Base or Anchor Sheet			Roof Cover (Note 15)		MDP (psf)
		Type	Attach	Base	Fasteners	Attach	Ply	Cap	
SELF-ADHERING SYSTEMS:									
W-40	Min. 19/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic SA NailBase	Note 2	8-inch o.c. at min. 3-inch lap and 8-inch o.c. in two (2), equally spaced, staggered center rows; Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA	(Optional) SBS-SA	SBS-SA	-82.5*
W-41	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic SA NailBase	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at min. 2-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows; Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA.	(Optional) SBS-SA	SBS-SA	-97.5*
W-42	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic SA NailBase	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at min. 2-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows; Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA.	(Optional) SBS-SA	SBS-SA	-127.5*
HYBRID SYSTEMS:									
W-43	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows; Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA.	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-97.5
W-44	Min. 19/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three (3), equally spaced, staggered center rows	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-105.0
W-45	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows; Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA.	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-127.5
CONVENTIONAL SYSTEMS:									

TABLE 1E: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D: INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer(s) (Note 13)		Base or Anchor Sheet			Roof Cover (Note 15)		MDP (psf)
		Type	Attach	Base	Fasteners	Attach	Ply	Cap	
W-46	Min. 23/32-inch exterior grade plywood at max. 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20; Yosemite Venting Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two (2), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-30.0*
W-47	Min. 23/32-inch exterior grade plywood at max. 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20; Yosemite Venting Base	Note 2	12-inch o.c. at 4-inch lap and 24-inch o.c. in two (2), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-48	Min. 23/32-inch exterior grade plywood at max. 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Poly SMS Base; Ultra Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two (2), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-49	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows.	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-97.5
W-50	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic APP Base T	OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows.	APP-TA	APP-TA	-97.5
W-51	Min. 15/32-inch plywood at max 24-inch spans	One or more layers, any thickness or combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Flintfast 3 in. Insulation Plates with FlintFast #14; Trufast 3" Metal Insulation Plates with Trufast HD	8-inch o.c. at 4-inch lap and 8-inch o.c. at three (3) equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP_TA	-97.5
W-52	Min. 19/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three (3), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-105.0
W-53	Min. 19/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic APP Base T	OMG 3 in. Round Metal Plates with OMG #14 HD or Dekfast Hex Plate with Dekfast #14	7-inch o.c. at 3-inch lap and 7-inch o.c. in three (3), equally spaced, staggered center rows	APP-TA	APP-TA	-105.0

TABLE 1E: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE D: INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER									
System No.	Deck (Note 1)	Insulation Layer(s) (Note 13)		Base or Anchor Sheet			Roof Cover (Note 15)		MDP (psf)
		Type	Attach	Base	Fasteners	Attach	Ply	Cap	
W-54	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows.	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-127.5
W-55	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic APP Base T	OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows.	APP-TA	APP-TA	-127.5
COLD-APPLIED SYSTEMS:									
W-56	Min. 15/32-inch plywood at max 24-inch spans	Min. 1-inch, One or more layers, any combination	Loose-laid	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base; Yosemite Venting Base; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD	8-inch o.c. at 4-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) SBS-CA1	SBS-CA1	-52.5

TABLE 1F-1: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE E: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
		Base	Fasteners	Attach	Ply	Cap	
SELF-ADHERING SYSTEMS:							
W-57	Min. 15/32-inch plywood at max 24-inch spans	Flintlastic SA NailBase	Simplex MAXX Cap	9-inch o.c. at min. 3-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows; Stress plates shall be primed with FlintPrime (ASTM D41) primer.	(Optional) SBS-SA	SBS-SA	-45.0*
W-58	Min. 15/32-inch plywood at max 24-inch spans	Flintlastic SA NailBase	Min. 1-inch long, 12 ga. Simplex Metal Cap Nails	6-inch o.c. at min. 2-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	(Optional) SBS-SA	SBS-SA	-52.5
W-59	Min. 19/32-inch plywood at max. 24-inch spans	Flintlastic SA NailBase	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. at min. 2-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) SBS-SA	SBS-SA	-52.5
W-60	Min. 19/32-inch plywood at max. 24-inch spans	Flintlastic SA NailBase	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. at min. 2-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) SBS-SA	SBS-SA	-60.0
W-61	Min. 15/32-inch plywood at max 24-inch spans	Flintlastic SA NailBase	Simplex MAXX Cap	8-inch o.c. at min. 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows; Stress plates shall be primed with FlintPrime (ASTM D41) primer.	(Optional) SBS-SA	SBS-SA	-67.5
W-62	Min. 19/32-inch plywood at max 24-inch spans	Flintlastic SA NailBase	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	6-inch o.c. at min. 2-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	(Optional) SBS-SA	SBS-SA	-75.0
W-63	Min. 15/32-inch plywood at max 24-inch spans	Flintlastic SA NailBase	Cap nails: 1-inch diameter, 0.032-inch thick metal cap with 0.120" shank diameter, annular ring shank nails	7-inch o.c. at min. 4-inch laps and 7-inch o.c. in five (5), equally spaced, staggered center rows	(Optional) SBS-SA	SBS-SA	-75.0
W-64	Min. 19/32-inch plywood at max 24-inch spans	Flintlastic SA NailBase	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	4-inch o.c. at min. 2-inch lap and 4-inch o.c. in four (4), equally spaced, staggered center rows	(Optional) SBS-SA	SBS-SA	-105.0
HYBRID SYSTEMS:							
W-65	Min. 19/32-inch exterior grade plywood at max. 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	9-inch o.c. at 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-45.0*
W-66	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base	Min. 1-inch long, 12 ga. Simplex Metal Cap Nails	6-inch o.c. at 3-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-52.5

TABLE 1F-1: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE E: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
		Base	Fasteners	Attach	Ply	Cap	
W-67	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. at 4-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-52.5
W-68	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. at 4-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-60.0
W-69	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-82.5
W-70	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	4-inch o.c. at 3-inch lap and 4-inch o.c. in four (4), equally spaced, staggered center rows	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-105.0
CONVENTIONAL SYSTEMS:							
W-71	Min. 19/32-inch exterior grade plywood at max. 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	9-inch o.c. at 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-72	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Yosemite Venting Base	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 18-inch o.c. in two (2), equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-73	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Flintlastic APP Base T	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 18-inch o.c. in two (2), equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-45.0*
W-74	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Min. 1-inch long, 12 ga. Simplex Metal Cap Nails	6-inch o.c. at 3-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
W-75	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. at 4-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
W-76	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Yosemite Venting Base	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
W-77	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Flintlastic APP Base T	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-52.5

TABLE 1F-1: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE E: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
		Base	Fasteners	Attach	Ply	Cap	
W-78	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. at 4-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
W-79	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Cap nails: 1-inch diameter, 0.032-inch thick metal cap with 0.120-inch shank diameter, annular ring shank nails.	6-inch o.c. at 4-inch lap and 6-inch o.c. at five (5) equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA or SBS-TA	SBS-AA or SBS-TA	-67.5
W-80	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-82.5
W-81	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Yosemite Venting Base	Simplex MAXX Cap	6-inch o.c. at 2-inch lap and 6-inch o.c. in two (2), equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-90.0
W-82	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Flintlastic APP Base T	Simplex MAXX Cap	6-inch o.c. at 2-inch lap and 6-inch o.c. in two (2), equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-90.0
W-83	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	4-inch o.c. at 3-inch lap and 4-inch o.c. in four (4), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-105.0
W-84	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Yosemite Venting Base	Simplex MAXX Cap	6-inch o.c. at 2-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-105.0
W-85	Min. 15/32-inch exterior grade plywood at max. 24-inch spans	Flintlastic APP Base T	Simplex MAXX Cap	6-inch o.c. at 2-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-105.0

NEMO | etc.

TABLE 1F-2: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE E: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER							
System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
		Base	Fasteners	Attach	Ply	Cap	
SELF-ADHERING SYSTEMS:							
W-86	Min. 19/32-inch plywood at max 24-inch spans	Flintlastic SA NailBase	Note 2	8-inch o.c. at min. 3-inch lap and 8-inch o.c. in two (2), equally spaced, staggered center rows. Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA	(Optional) SBS-SA	SBS-SA	-82.5*
W-87	Min. 15/32-inch plywood at max 24-inch spans	Flintlastic SA NailBase	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at min. 2-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows. Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA.	(Optional) SBS-SA	SBS-SA	-97.5*
W-88	Min. 15/32-inch plywood at max 24-inch spans	Flintlastic SA NailBase	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at min. 2-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows. Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA.	(Optional) SBS-SA	SBS-SA	-127.5*
HYBRID SYSTEMS:							
W-89	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows. Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA.	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-97.5
W-90	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three (3), equally spaced, staggered center rows	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-105.0
W-91	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows. Stress plates shall be primed with FlintPrime (ASTM D41) primer or FlintPrime SA.	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-127.5
CONVENTIONAL SYSTEMS:							
W-92	Min. 23/32-inch exterior grade plywood at max. 24-inch spans	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20; Yosemite Venting Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two (2), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-30.0*
W-93	Min. 23/32-inch exterior grade plywood at max. 24-inch spans	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20; Yosemite Venting Base	Note 2	12-inch o.c. at 4-inch lap and 24-inch o.c. in two (2), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-94	Min. 23/32-inch exterior grade plywood at max. 24-inch spans	Poly SMS Base; Ultra Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two (2), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*

TABLE 1F-2: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE E: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
		Base	Fasteners	Attach	Ply	Cap	
W-95	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-97.5
W-96	Min. 15/32-inch plywood at max 24-inch spans	Flintlastic APP Base T	OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows.	APP-TA	APP-TA	-97.5
W-97	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Flintfast 3 in. Insulation Plates with FlintFast #14; Trufast 3" Metal Insulation Plates with Trufast HD	8-inch o.c. at 4-inch lap and 8-inch o.c. at three (3) equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA or SBS-TA	SBS-AA or SBS-TA	-97.5
W-98	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three (3), equally spaced, staggered center rows	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-105.0
W-99	Min. 19/32-inch plywood at max 24-inch spans	Flintlastic APP Base T	OMG 3 in. Round Metal Plates with OMG #14 HD or Dekfast Hex Plate with Dekfast #14	7-inch o.c. at 3-inch lap and 7-inch o.c. in three (3), equally spaced, staggered center rows	APP-TA	APP-TA	-105.0
W-100	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-127.5
W-101	Min. 15/32-inch plywood at max 24-inch spans	Flintlastic APP Base T	OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows.	APP-TA	APP-TA	-127.5
COLD-APPLIED SYSTEMS:							
W-102	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base; Yosemite Venting Base; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD	8-inch o.c. at 4-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) SBS-CA1	SBS-CA1	-52.5

TABLE 1G: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER

System No.	Deck (Note 1)	Primer	Roof Cover (Note 15)			MDP (psf)
			Base	Ply	Cap	
W-103	Min. 15/32-inch plywood at max 24-inch spans	FlintPrime or FlintPrime SA	SBS-SA-H	(Optional) SBS-TA, APP-TA	SBS-TA, APP-TA	-112.5
W-104	Min. 15/32-inch plywood at max 24-inch spans	FlintPrime or FlintPrime SA	SBS-SA	(Optional) SBS-SA	SBS-SA	-127.5

TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Base	Ply	Cap	
SELF-ADHERING SYSTEMS:										
S-1	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 4 ft²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA, D-IS, M-OSFA, OB500, ICP BOARD-MAX or CR-20	SBS-SA	(Optional) SBS-SA	SBS-SA	-37.5*
S-2	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 2 ft²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA, D-IS, M-OSFA, OB500, ICP BOARD-MAX or CR-20	SBS-SA	(Optional) SBS-SA	SBS-SA	-45.0*
HYBRID SYSTEMS:										
S-3	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 1.45 ft²	Additional layer(s) base insulation	HA, D-IS, M-OSFA, OB500, ICP BOARD-MAX or CR-20	Flintlastic Ultra Glass SA	(Optional) SBS-AA, SBS-TA, APP-TA	SBS-AA, SBS-TA, APP-TA	-37.5
S-4	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 1.45 ft²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA, D-IS, M-OSFA, OB500, ICP BOARD-MAX or CR-20	Flintlastic Ultra Glass SA	(Optional) SBS-AA, SBS-TA, APP-TA	SBS-AA, SBS-TA, APP-TA	-52.5
S-5	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H.	FlintFast #12 or #14 with FlintFast 3" Insulation Plates	1 per 1.45 ft²	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H.	HA, D-IS, M-OSFA, M-PG1 or OB500	SBS-SA-H	(Optional) APP-TA	APP-TA	-67.5
S-6	Min. 22 ga., type B, Grade 40 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H	FlintFast #12 (steel only) or #14 HD with FlintFast 3" Insulation Plates or Trufast #12 (steel only) or HD with Trufast 3" Metal Insulation Plates	1 per 1.6 ft²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS, M-OSFA, M-PG1 or OB500	SBS-SA-H	(Optional) SBS-TA or APP-TA	SBS-TA or APP-TA	-75.0
S-7	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ENRGY 3	FlintFast #12 (steel only) or #14 HD with FlintFast 3" Insulation Plates or Trufast #12 (steel only) or HD with Trufast 3" Metal Insulation Plates	1 per 1 ft²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	OB500, 4-inch o.c.	SBS-SA-H	(Optional) SBS-TA or APP-TA	SBS-TA or APP-TA	-90.0*
CONVENTIONAL SYSTEMS:										

NEMO|etc.

TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Base	Ply	Cap	
S-8	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 4 ft²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA, D-IS, M-OSFA, OB500, ICP BOARD-MAX or CR-20	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-37.5*
S-9	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 2 ft²	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation, min. 0.75-inch FescoBoard (homogeneous).	HA	BP-AA or SBS-AA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
S-10	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 2 ft²	Min. 0.25-inch Dens Deck or Dens Deck Prime	HA	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
S-11	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 2 ft²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA, D-IS, M-OSFA, OB500, ICP BOARD-MAX or CR-20	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
S-12	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 3.2 ft²	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation, min. 0.75-inch FescoBoard (homogeneous).	HA	BP-AA or SBS-AA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
S-13	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 3.2 ft²	Min. 0.25-inch Dens Deck or Dens Deck Prime	HA	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
S-14	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard, ENRGY 3 or Mult-Max FA3	Note 2	1 per 1.33 ft²	Min. 0.75-inch FescoBoard (homogeneous)	HA	BP-AA or SBS-AA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
S-15	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard, ENRGY 3 or H-Shield	Note 2	1 per 1.6 ft²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA, D-IS, M-OSFA, OB500, ICP BOARD-MAX or CR-20	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
S-16	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard, ENRGY 3 or Mult-Max FA3	Note 2	1 per 1.33 ft²	Min. 0.5-inch Structodek High Density Fiberboard	HA	BP-AA or SBS-AA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-67.5

TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Base	Ply	Cap	
S-17	Min. 22 ga., type B, Grade 40 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H	FlintFast #12 (steel only) or #14 HD with FlintFast 3" Insulation Plates or Trufast #12 (steel only) or HD with Trufast 3" Metal Insulation Plates	1 per 1.6 ft^2	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS, M-OSFA, M-PG1 or OB500	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-75.0
S-18	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ENRGY 3	FlintFast #12 (steel only) or #14 HD with FlintFast 3" Insulation Plates or Trufast #12 (steel only) or HD with Trufast 3" Metal Insulation Plates	1 per 1 ft^2	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	OB500, 4-inch o.c.	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-90.0*
COLD-APPLIED SYSTEMS:										
S-19	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H	FlintFast #12 (steel only) or #14 HD with FlintFast 3" Insulation Plates or Trufast #12 (steel only) or HD with Trufast 3" Metal Insulation Plates	1 per 2 ft^2	Min. 1.5-inch ACFoam III, FlintBoard Iso Cold, H-Shield CG or FlintBoard Iso $Cold_H$	OB500, ICP BOARD-MAX or CR-20	SBS-CA1	None	SBS-CA1	-45.0*
S-20	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H	FlintFast #12 (steel only) or #14 HD with FlintFast 3" Insulation Plates or Trufast #12 (steel only) or HD with Trufast 3" Metal Insulation Plates	1 per 2 ft^2	Optional min. 1.5-inch additional layer(s) base insulation, followed by min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS, M-OSFA, M-PG1, OB500, ICP BOARD-MAX or CR-20	SBS-CA1	None	SBS-CA1	-45.0*
S-21	Min. 22 ga., type B, Grade 40 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield or FlintBoard ISO_H	FlintFast #12 (steel only) or #14 HD with FlintFast 3" Insulation Plates or Trufast #12 (steel only) or HD with Trufast 3" Metal Insulation Plates	1 per 1.6 ft^2	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS, M-OSFA, M-PG1 or OB500	SBS-CA1	None	SBS-CA1	-75.0
S-22	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ENRGY 3	FlintFast #12 (steel only) or #14 HD with FlintFast 3" Insulation Plates or Trufast #12 (steel only) or HD with Trufast 3" Metal Insulation Plates	1 per 1 ft^2	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	OB500, 4-inch o.c.	SBS-CA1	None	SBS-CA1	-90.0*

Florida dbpr

Product Approval
USER: Public User

OFFICE OF THE SECRETARY

FL #	FL10124-R26
Application Type	Revision
Code Version	2017
Application Status	Approved
Comments	
Archived	
Product Manufacturer	GAF
Address/Phone/Email	1 Campus Drive Parisppany, NJ 07054 (800) 766-3411 mstieh@gaf.com
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Quality Assurance Representative	
Address/Phone/Email	
Category	Roofing
Subcategory	Asphalt Shingles
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	12/16/2022
Validated By	John W. Knezevich, PE ✓ Validation Checklist - Hardcopy Received
Certificate of Independence	FL10124_R26_COI_2020_01_COI_NIEMINEN.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D1970	2015
ASTM D3161	2016
ASTM D3462	2010
ASTM D7158	2011
TAS 107	1995

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	02/12/2020
Date Validated	02/13/2020
Date Pending FBC Approval	02/16/2020
Date Approved	04/07/2020

Summary of Products

FL #	Model, Number or Name	Description
10124.1	GAF Asphalt Roof Shingles	Fiberglass reinforced 3-tab, laminated, 5-tab and hip/ridge asphalt shingles
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Refer to ER, Section 5.		**Installation Instructions** FL10124_R26_II_2020_02_FINAL_ER_GAF_ASPHALT SHINGLES_FL10124-R26.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL10124_R26_AE_2020_02_FINAL_ER_GAF_ASPHALT SHINGLES_FL10124-R26.pdf Created by Independent Third Party: Yes

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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 01506.01.08-R28
FL10124-R26
Date of Issuance: 01/03/2008
Revision 28: 02/03/2020

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 and Florida Building Code, Residential Volume. The products described herein have been evaluated for compliance with the **6th Edition (2017) Florida Building Code** sections noted herein.

DESCRIPTION: GAF Asphalt Roof Shingles

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein and **FBC 1507.2.7.1 / R905.2.6.1**

CONTINUED COMPLIANCE: This Evaluation Report is valid until 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 7.

Prepared by:

Robert J.M. Nieminen, P.E.
Florida Registration No. 59166, Florida DCA ANE1983

The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 02/03/2020. This does not serve as an electronically signed document.

CERTIFICATION OF INDEPENDENCE:

1. NEMO|etc. 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. 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: Asphalt Shingles
Compliance Statement: GAF Asphalt Roof Shingles, as produced by GAF, have demonstrated compliance with the following sections of the 6th Edition (2017) Florida Building Code and Florida Building Code, Residential Volume 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:

Section	Property	Standard	Year
1507.2.4, R905.2.3	Physical Properties	ASTM D1970	2015
1507.2.5, R905.2.4	Physical Properties	ASTM D3462	2010
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D3161	2016
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D7158	2011
1507.2.7.1, R905.2.6.1	Wind Resistance	TAS 107	1995

3. REFERENCES:

Entity	Examination	Reference	Date
PRI (TST 5878)	Physical Properties	GAF-025-02-01	03/27/2002
PRI (TST 5878)	ASTM D3462	GAF-059-02-01	09/02/2004
PRI (TST 5878)	ASTM D3462	GAF-080-02-01	05/25/2005
PRI (TST 5878)	Physical Properties	GAF-324-02-01	12/01/2011
PRI (TST 5878)	ASTM D1970 (QuickStart)	GAF-340-02-01	03/13/2012
PRI (TST 5878)	Wind Driven Rain	GAF-407-02-01	01/21/2013
PRI (TST 5878)	Wind Driven Rain	GAF-895-02-01	11/20/2018
PRI (TST 5878)	Wind Driven Rain	GAF-896-02-01	11/20/2018
PRI (TST 5878)	ASTM D3462	GAF-897-02-01	11/08/2018
PRI (TST 5878)	ASTM D3462	GAF-898-02-01	11/08/2018
PRI (TST 5878)	ASTM D3462	GAF-899-02-01	11/15/2018
UL (TST 1740)	ASTM D3462	93NK6295	11/29/1993
UL (TST 1740)	ASTM D3462	99NK43835	01/12/2000
UL (TST 1740)	TAS 107	94NK9632	03/29/2000
UL (TST 1740)	ASTM D3462	01NK06632	02/02/2001
UL (TST 1740)	ASTM D3161, TAS 107	01NK9226	05/21/2001
UL (TST 1740)	ASTM D3161	01NK37122	12/18/2001
UL (TST 1740)	ASTM D3462	01NK37122	12/19/2001
UL (TST 1740)	ASTM D3161, TAS 107	02NK12980	04/10/2002
UL (TST 1740)	ASTM D3161, TAS 107	02NK30871	09/09/2002
UL (TST 1740)	ASTM D3161	03CA5367	03/11/2003
UL (TST 1740)	ASTM D3462	03NK26444	10/17/2003
UL (TST 1740)	ASTM D3462	04NK13850	06/07/2004
UL (TST 1740)	ASTM D3161	04NK13850	06/23/2004
UL (TST 1740)	ASTM D3161	04NK30546	03/10/2005
UL (TST 1740)	ASTM D3462	04NK22009	05/06/2005
UL (TST 1740)	ASTM D3161	04NK22009	05/09/2005
UL (TST 1740)	ASTM D3462	05NK27924	02/10/2006
UL (TST 1740)	ASTM D3161	05NK27924	02/11/2006
UL (TST 1740)	ASTM D3161, D3462	06CA18077	06/05/2006
UL (TST 1740)	ASTM D3161, D3462	06CA18074	06/16/2006
UL (TST 1740)	ASTM D3161, D3462	06CA35251	10/18/2006
UL (TST 1740)	ASTM D3462	06CA31603	12/01/2006
UL (TST 1740)	ASTM D3161, D3462	06CA41095	12/27/2006
UL (TST 1740)	ASTM D3161	07NK05228	03/13/2007

Entity	Examination	Reference	Date
UL (TST 1740)	ASTM D3161	06CA31611	04/04/2007
UL (TST 1740)	ASTM D3161	06CA61148	04/09/2007
UL (TST 1740)	ASTM D3161, D3462	07CA31742	11/08/2007
UL (TST 1740)	ASTM D3161, D7158, D3462	08CA06100	03/13/2008
UL, LLC. (TST 9628)	ASTM D3161	4788698165	03/24/2008
UL (TST 1740)	ASTM D3161, D3462	07CA55908	04/01/2008
UL (TST 1740)	ASTM D3161, D3462	09CA10592	03/26/2009
UL (TST 1740)	ASTM D3161, D3462	09CA06856	05/15/2009
UL (TST 1740)	ASTM D3161, D7158, D3462	09NK06647	08/01/2009
UL (TST 1740)	ASTM D3161, D7158, D3462	09CA27281	08/27/2009
UL (TST 1740)	ASTM D3161, D7158, D3462	10CA35554	03/05/2010
UL (TST 1740)	ASTM D3161, D7158, D3462	10CA13686	05/15/2010
UL (TST 1740)	ASTM D3462	10CA07264	05/27/2010
UL (TST 1740)	ASTM D3462	10CA11953	10/29/2010
UL (TST 1740)	ASTM D3161, D7158, D3462	10NK11951	10/30/2010
UL (TST 1740)	ASTM D3161, D7158, D3462	10NK12070	11/04/2010
UL (TST 1740)	ASTM D3161, D7158, D3462	08CA06100	01/30/2010
UL (TST 1740)	ASTM D3161, D7158, D3462	10CA53934	03/31/2011
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA48924	10/22/2011
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA47919	12/03/2011
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA48408	12/08/2011
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA48725	12/09/2011
UL, LLC. (TST 9628)	ASTM D3462	12CA34891	10/12/2012
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	12CA58151	02/15/2013
UL, LLC. (TST 9628)	ASTM D3161	12CA38083	02/26/2013
UL, LLC. (TST 9628)	ASTM D3161	13CA32332	06/18/2013
UL, LLC. (TST 9628)	ASTM D3161	13CA37934	08/02/2013
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4786875675	07/17/2015
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4787434542	05/17/2016
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788717529	09/09/2016
UL, LLC. (TST 9628)	ASTM D3161	4788669132	12/13/2018
UL, LLC. (TST 9628)	ASTM D3161	4788891098	02/14/2019
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788932264	08/16/2019
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4789115488	08/16/2019
UL, LLC. (TST 9628)	ASTM D3161	4788959558	10/17/2019
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4786508528	11/01/2019
UL, LLC. (TST 9628)	ASTM D3161	4789132672	11/27/2019
UL, LLC. (QUA 9625)	Quality Control	Service Confirmation	10/18/2018

4. PRODUCT DESCRIPTION:

4.1 ACCESSORY STARTER STRIPS:

4.1.1 Pro-Start® Eave/Rake Starter Strip Shingles and WeatherBlocker™ Premium Eave/Rake Starter Strip Shingles are starter strips for asphalt roof shingles. Meets ASTM D3462.

4.1.2 QuickStart® Peel & Stick Starter Roll is a is a mineral-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen starter strip, nominal 9-inch x 33 ft roll, for use with asphalt shingles with exposure of 6-inch or less. Meets ASTM D1970.

4.1.3 StarterMatch™ Starter Strip Shingles are color-coordinated starter strips for use with Grand Canyon® and Grand Sequoia® series asphalt shingles. StarterMatch™ are installed as the second starter for Grand Canyon® and Grand Sequoia® series installations. Meets ASTM D3462.

4.2 ASPHALT SHINGLES:

4.2.1 Marquis WeatherMax®, Royal Sovereign® and Sentinel® are a fiberglass reinforced 3-tab asphalt roof shingles.

4.2.2 Camelot®, Camelot® II, Fortitude™, Glenwood™, Grand Canyon®, Grand Sequoia®, Grand Sequoia® IR, Grand Sequoia® ArmorShield®, Grand Sequoia® AS, Sienna®, Timberline® American Harvest®, Timberline® AH, Timberline® ArmorShield® II, Timberline® AS II, Timberline® Natural Shadow®, Timberline® NS, Timberline® HD, Timberline® HDZ™, Timberline® Cool Series, Timberline® CS, Timberline® Ultra HD, Timberline® UHD and Woodland® are fiberglass reinforced, laminated asphalt roof shingles.

4.2.3 Slateline™ is a fiberglass reinforced 5-tab asphalt roof shingle.

4.3 HIP & RIDGE SHINGLES:

4.3.1 Seal-A-Ridge® Protective Ridge Cap Shingles (fka, Seal-A-Ridge® Ridge Cap Shingles), Seal-A-Ridge® ArmorShield®, Seal-A-Ridge® AS and Timbertex® Premium Ridge Cap Shingles are fiberglass reinforced, hip and ridge asphalt roof shingles.

5. LIMITATIONS:

5.1 This is a building code evaluation. Neither NEMO ETC, LLC 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 current Approved Roofing Materials Directory for fire ratings of this product.

5.4 Wind Classification:

5.4.1 Pro-Start® Eave/Rake Starter Strip Shingles and WeatherBlocker™ Premium Eave/Rake Starter Strip Shingles are Classified in accordance with FBC Tables 1507.2.7.1 and R905.2.6.1 to ASTM D3161, Class F, indicating the shingles are acceptable for use in all wind zones up to V_{asd} = 150 mph (V_{ult} = 194 mph).

5.4.2 The GAF asphalt shingles noted in Section 4.2 are Classified in accordance with FBC Tables 1507.2.7.1 and R905.2.6.1 to ASTM D3161, Class F and/or ASTM D7158, Class H, indicating the shingles are acceptable for use in all wind zones up to V_{asd} = 150 mph (V_{ult} = 194 mph). Refer to Section 6 for installation requirements to meet this wind rating.

Note: Classification by ASTM D7158 applies only to exposure category B or C, as defined in FBC 1609.4.3, and a mean roof height of 60 feet or less. Calculations by a qualified design professional are required for conditions outside these limitations. Contact the shingle manufacturer for data specific to each shingle.

5.4.3 The GAF hip & ridge shingles noted in Section 4.3 are Classified in accordance with FBC Tables 1507.2.7.1 and R905.2.6.1 to ASTM D3161, Class F, indicating the shingles are acceptable for use in all wind zones up to V_{asd} = 150 mph (V_{ult} = 194 mph). Refer to Section 6 for installation requirements to meet this wind rating.

5.5 All products in the roof assembly shall have quality assurance audit in accordance with F.A.C. Rule 61G20-3.

6. INSTALLATION:

6.1 GENERAL:

6.1.1 Roof deck, slope, underlayment and fasteners shall comply with FBC 1507.2 / R905.2 and the shingle manufacturer's minimum requirements.

6.1.2 Underlayment shall be acceptable to GAF and shall hold current Florida Statewide Product Approval, or be Locally Approved per Rule 61G20-3, per FBC Sections 1507.2.3, 1507.2.4 or R905.2.3.

6.1.3 Fasteners shall be in accordance with manufacturer's published requirements, but not less than FBC 1507.2.6 or R905.2.5. Staples are not permitted.

6.1.4 GAF asphalt shingles are acceptable for use in reroof (tear-off) or recover applications, subject to the limitations set forth in FBC Section 1511 or R908 and GAF published installation instructions.

6.2 STARTER SHINGLES OR STARTER STRIP:

6.2.1 Installation of Pro-Start® Eave/Rake Starter Strip Shingles, WeatherBlocker™ Premium Eave/Rake Starter Strip Shingles and QuickStart® Peel & Stick Starter Roll shall comply with the GAF current published instructions.

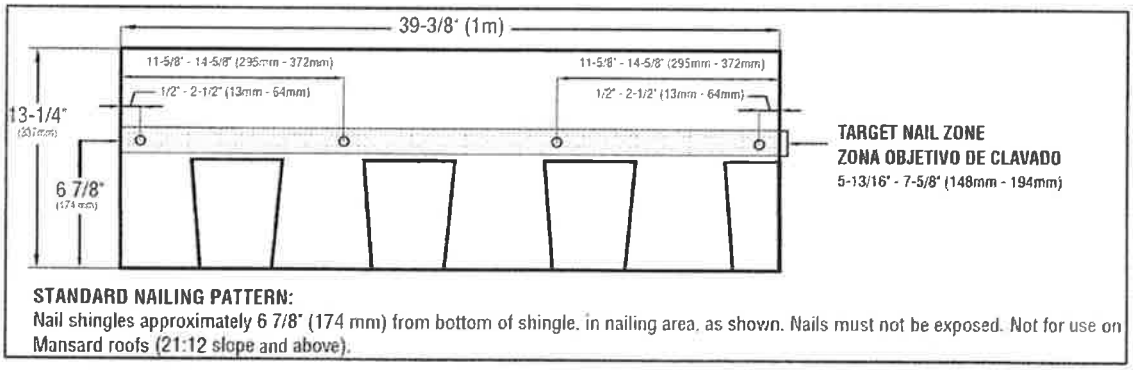
6.3 ASPHALT SHINGLES:

6.3.1 Installation of asphalt shingles shall comply with the GAF current published instructions, using minimum four (4) nails per shingle in accordance with FBC 1507.2.7 or R905.2.6, with the following exceptions:

- Camelot®, Camelot® II, Grand Canyon®, Grand Sequoia®, Grand Sequoia® IR, Grand Sequoia® ArmorShield®, and Woodland® require minimum five (5) nails per shingle.
- Slateline™ requires minimum six (6) nails per shingle.

6.3.2 Fasteners shall be in accordance with manufacturer's published requirements, but not less than FBC 1507.2.6 or R905.2.5. Staples are not permitted.

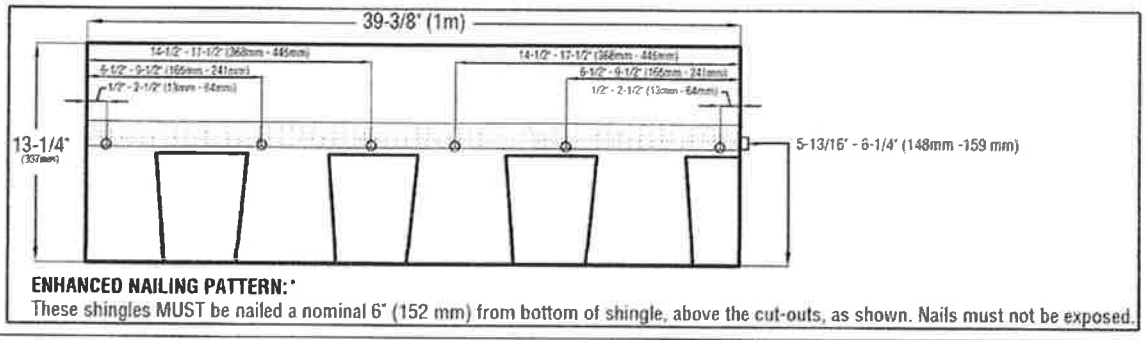
6.3.2.1 Fastening for Fortitude™, Timberline® AH, Timberline® CS and Timberline® HDZ™; slopes 2:12 up to 21:12



STANDARD NAILING PATTERN:
Nail shingles approximately 6 7/8" (174 mm) from bottom of shingle, in nailing area, as shown. Nails must not be exposed. Not for use on Mansard roofs (21:12 slope and above).

6.3.3 Where the roof slope exceeds 21 units vertical in 12 units horizontal, special methods of fastening are required. Contact the GAF for details.

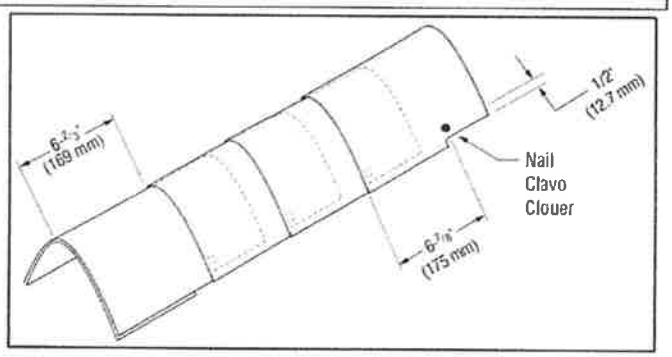
6.3.3.1 **Fastening for Fortitude™, Timberline® AH, Timberline® CS and Timberline® HDZ™; slopes greater than 21:12**



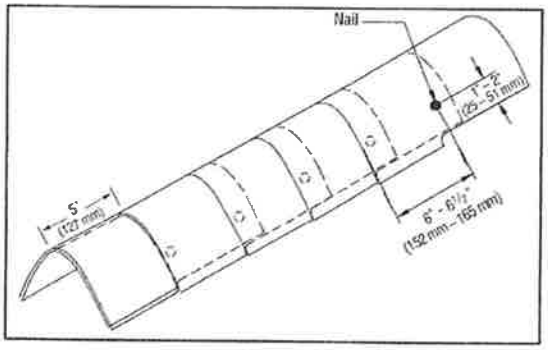
ENHANCED NAILING PATTERN:*
These shingles MUST be nailed a nominal 6" (152 mm) from bottom of shingle, above the cut-outs, as shown. Nails must not be exposed.

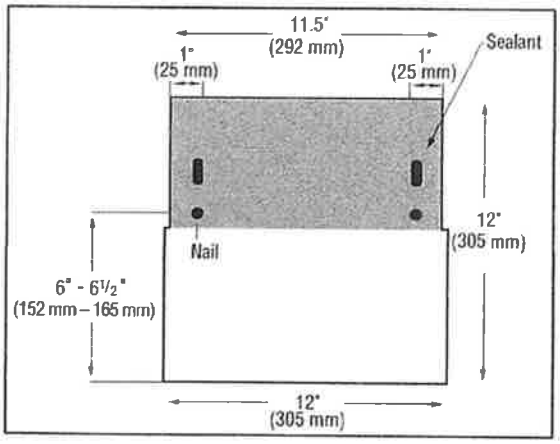
6.4 HIP & RIDGE SHINGLES:

6.4.1 Installation of Seal-A-Ridge® Protective Ridge Cap Shingles (fka, Seal-A-Ridge® Ridge Cap Shingles) shall comply with the GAF current published instructions with a minimum two (2) nails, minimum 3/8-inch head diameter located 6-7/8-inch back from the exposed end and 0.5-inch from the edge.

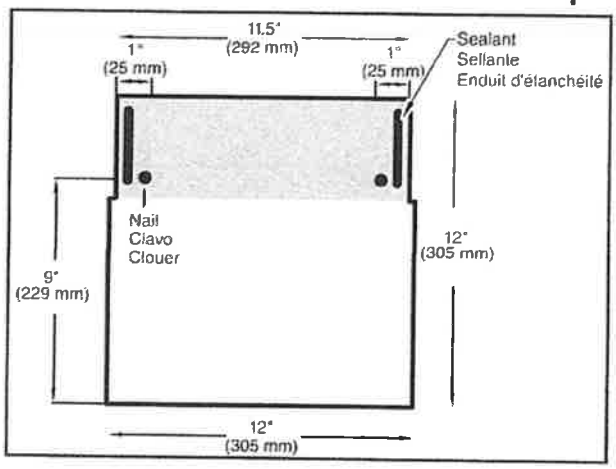


6.4.2 Installation of Seal-A-Ridge® ArmorShield® and Seal-A-Ridge® AS shall comply with the GAF current published instructions with a minimum two (2) nails, minimum 3/8-inch head diameter, per shingle located 6 to 6.5-inch back from the exposed end and 1 to 2-inch from the edge, and nominal 0.25-inch diameter beads of Henkel "Loctite PL S30 Roof & Flashing Sealant".





6.4.3 Installation of Timbertex® Premium Ridge Cap Shingles shall comply with GAF current published instructions with a minimum two (2) nails, minimum 3/8-inch head diameter, per shingle and beads of Sonneborn "NP1 Gun Grade Polyurethane Sealant" or Henkel "PL Roofing and Flashing Sealant".



6.4.3 Fasteners shall be in accordance with GAF published requirements, but not less than FBC 1507.2.6 or R905.2.5. Staples are not permitted.

7. LABELING:

7.1 Labeling shall be in accordance with the requirements the Accredited Quality Assurance Agency noted herein.

7.2 Asphalt shingle wrappers shall indicate compliance with one of the required classifications detailed in **FBC Table 1507.2.7.1 / R905.2.6.1**.

8. BUILDING PERMIT REQUIREMENTS:

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

9. MANUFACTURING PLANTS:

Contact the named QA entity for information on which plants produce products covered by Florida Rule 61G20-3 QA requirements.

10. QUALITY ASSURANCE ENTITY:

UL LLC – QUA9625; (414) 248-6409; karen.buchmann@ul.com

- END OF EVALUATION REPORT -

FL #	FL6267-R16
Application Type	Revision
Code Version	2017
Application Status	Approved
Comments	
Archived	
Product Manufacturer	GAF
Address/Phone/Email	1 Campus Drive Parisppany, NJ 07054 (800) 766-3411 mstieh@gaf.com
Authorized Signature	Robert Nieminen lreith@nemoetc.com
Technical Representative	William Broussard
Address/Phone/Email	1 Campus Drive Parsippany, NJ 07054 (800) 766-3411 TechnicalQuestionsGAF@gaf.com
Quality Assurance Representative	
Address/Phone/Email	
Category	Roofing
Subcategory	Roofing Accessories that are an Integral Part of the Roofing System
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	FL6267_R16_COI_2019_01_COI_NIEMINEN.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM E330	2002
ASTM G155	2005
TAS 100(A)	1995
TAS 110	2000
TAS 114, Appendix E	1995

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	08/14/2019
Date Validated	08/15/2019
Date Pending FBC Approval	08/21/2019
Date Approved	10/15/2019

Summary of Products

FL #	Model, Number or Name	Description
6267.1	GAF Roof Ventilation Products	Low profile roof ventilation products
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** +N/A/-215 **Other:** 1.) The noted design pressures applies to one particular vent installation. Refer to Section 5.4 for height limitations and/or Section 5.5 for vent installations and allowable design pressures. 2.) Refer to ER Section 5 for Limits of Use.		**Installation Instructions** FL6267_R16_II_2019_08_FINAL_GAF_VENTILATION_FL6267-R16.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL6267_R16_AE_2019_08_FINAL_GAF_VENTILATION_FL6267-R16.pdf Created by Independent Third Party: Yes

Back Next

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

ENGINEER | EVALUATE | TEST | CONSULT | CERTIFY

EVALUATION REPORT

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

Evaluation Report 01506.02.06-R16
FL6267-R16
Date of Issuance: 02/28/2006
Revision 16: 08/14/2019

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 and Florida Building Code, Residential Volume. The products described herein have been evaluated for compliance with the **6th Edition (2017) Florida Building Code** sections referenced herein.

DESCRIPTION: GAF Roof Ventilation Products

LABELING: Labeling shall be in accordance with the requirements 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 11.

Prepared by:

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ROOFING COMPONENT EVALUATION:

1. SCOPE:

Product Category: Roofing

Sub-Category: Roofing Accessories that are an Integral Part of the Roofing System

Compliance Statement: **GAF Roof Ventilation Products**, as produced by **GAF**, have demonstrated compliance with the following sections of the **6th 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:

Section	Property	Standard	Year
1504.3	Wind	ASTM E330	2002
1506.5 / 1517.5.1	Corrosion Resistance (of nails)	TAS 114, Appendix E	1995
1523.6.5.2.13	Wind Driven Rain	TAS 100(A)	1995
1523.6.5.2.13.1	Physical Properties	TAS 110	2000
2615.2	Weatherometer	ASTM G155	2005

3. REFERENCES:

Entity	Examination	Reference	Date
ATI (TST 1558)	Physical Properties	01-49035.01	03/02/2004
ATI (TST 1558)	Wind Driven Rain	01-44964.01	01/15/2004
ATI (TST 1558)	Wind Driven Rain	60172.01-122-18	10/07/2005
ATI (TST 1558)	Physical Properties	59665.02-106-31	09/16/2005
ATI (TST 1558)	Wind Driven Rain	84608.01-106-18	11/12/2008
ATI (TST 1558)	Wind Driven Rain	A5250.01-109-18	02/18/2011
ATI (TST 1558)	Wind Uplift	87074.01-109-44	12/03/2008
ATI (TST 1558)	Wind Uplift	C2396.01-109-44	11/05/2012
ATI (TST 1558)	Wind Uplift	D1957.01-109-44	03/04/2014
ATI (TST 1558)	Wind Uplift	E0818.01-109-44	09/23/2014
ATI (TST 1558)	Physical Properties	D2702.01-106-18	06/30/2014
ATI (TST 1558)	Wind Uplift	E6744.01-109-44	04/30/2015
ATI (TST 1558)	Wind Driven Rain	G2331.01-109-44	01/10/2017
ATI (TST 1558)	Wind Driven Rain	G4123.01-109-18	01/10/2017
ATI (TST 1558)	Wind Uplift	G4123.02-109-44	01/10/2017
ITS (TST 1558)	Physical Properties	H5341.01-106-18 R1	01/22/2018
ITS (TST 1558)	Wind Driven Rain	G2331.03-109-18-R1	06/11/2019
PRI (TST 5878)	Weatherometer	HBP-007-02-01	06/24/2004
PRI (TST 5878)	Physical Properties	HBP-002-02-01	06/06/2001
PRI (TST 5878)	Wind Driven Rain	HBP-01-02-01	11/02/2000
PRI (TST 5878)	Wind Driven Rain	BRY-021-02-01	12/31/2003
PRI (TST 5878)	Physical Properties	BRY-025-02-01	09/17/2004
PRI (TST 5878)	Physical Properties	GAF-138-02-06	02/09/2007
PRI (TST 5878)	Wind Driven Rain	GAF-138-02-04	02/09/2007
PRI (TST 5878)	Wind Driven Rain	GAF-310-02-01	07/07/2011
PRI (TST 5878)	Wind Driven Rain	376T0008	07/25/2019
ETC Labs (TST 2411)	Physical Properties	ETC-01-718-10379.0	01/16/2000
ETC Labs (TST 2411)	Physical Properties	ETC-03-718-14602.0	01/20/2004
ETC Labs (TST 2411)	Physical Properties	ETC-07-718-19959.0	09/27/2007
Miami-Dade (CER 1592)	Various	Various NOAs	Current
Miami-Dade (CER 1592)	Corrosion Resistance (of nails)	Certification L 17-0606.01	06/26/2017
Miami-Dade (CER 1592)	Corrosion Resistance (of nails)	Certification L 17-0821.08	09/25/2017
Miami-Dade (CER 1592)	Corrosion Resistance (of nails)	Certification L 15-0421.09	05/07/2015
UL, LLC. (QUA 9625)	Quality Control	Service Confirmation	12/17/2018

4. PRODUCT DESCRIPTION:

	Name	Description	Published NFVA (in^2/ft)	Manufacturing Location(s)
4.1	**Cobra® Exhaust Vent**	Low-profile attic ridge vent of mesh-construction for use in shingle roof systems with 12-inch width ridge cap shingles. The product measures 10½-inch wide supplied in 20 and 50 ft long rolls, and is supplied with corrosion resistant 1¾-inch coil nails (nail gun version) or 2½-inch Smart Nails™ (hand nail version).	14.1 (nail gun version) 16.9 (hand nail version)	Acworth, GA
4.2	**Cobra® Rigid Vent 3™**	Plastic, low-profile attic ridge vent for use in shingle roof systems with 12-inch width ridge caps. The product measures 13-13/16-inch wide supplied in 48-inch long sections, and is supplied with 3-inch corrosion resistant ring shank nails.	18	Cumming, GA New Columbia, PA
4.3	**Cobra® Rigid Vent 3™ - 9"**	Plastic, low-profile attic ridge vent for use in shingle roof systems with 10-inch width ridge caps. The product measures 11½-inch wide supplied in 48-inch long sections, and is supplied with 3-inch corrosion resistant ring shank nails.	18	Cumming, GA
4.4	**Cobra® Snow Country™**	Plastic, low-profile attic ridge vent with filter for use in shingle roof systems with 12-inch width ridge cap shingles. The product measures 13-13/16-inch wide supplied in 48-inch long sections.	18	Cumming, GA New Columbia, PA
4.5	**Cobra® Snow Country Advanced™**	Plastic, low-profile attic ridge vent with filter for use in shingle roof systems with 12-inch width ridge caps. The product measures 13-13/16-inch wide supplied in 48-inch long sections, and is supplied with 3-inch corrosion resistant ring shank nails.	18	Cumming, GA New Columbia, PA
4.6	**Cobra® Snow Country Advanced™ - 9"**	Plastic, low-profile attic ridge vent with filter for use in shingle roof systems with 10-inch width ridge caps. The product measures 11½-inch wide supplied in 48-inch long sections, and is supplied with 3-inch corrosion resistant ring shank nails.	18	Cumming, GA
4.7	**Cobra® RidgeRunner®**	Polypropylene plastic, low-profile attic ridge vent for use in shingle roof systems with 12-inch width ridge cap shingles. The product measures 11½-inch wide supplied in 20 ft long rolls, and is supplied with corrosion resistant 1¾-inch coil nails.	12.5	Cumming, GA
4.8	**TruSlate® Ridge Vent**	Plastic, low-profile attic ridge vent for use in TruSlate® roof systems. The product measures 11.4-inch wide supplied in 48-inch long sections.	20	Cumming, GA
4.9	**Cobra® Hip Vent**	Plastic, low-profile attic hip vent with filter for use in shingle roof systems with 12-inch width hip shingles. The product, only for use on hips, measures nominal 11.4-inch wide supplied in 48-inch long sections, and is supplied with corrosion resistant 1¾-inch coil nails.	9	Cumming, GA

	Name	Description	Published NFVA (in^2/ft)	Manufacturing Location(s)
4.10	**Cobra® IntakePro™ Rooftop Intake Vent**	Woven plastic material pressed to form the molded shape. A woven fabric material is utilized on the top, bottom and front, below the vent channel of the mold. The vent is configured into a roll-out form.	9	Enka, NC

5. LIMITATIONS:

5.1 This is a building code evaluation. Neither NEMO ETC, LLC 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 **Minimum Roof Slopes:**

Product	Minimum Slope
Cobra® Exhaust Vent	2:12
Cobra® Rigid Vent 3™	3:12
Cobra® Rigid Vent 3™ - 9"	3:12
Cobra® Snow Country™	3:12
Cobra® Snow Country Advanced™	3:12
Cobra® Snow Country Advanced™ - 9"	3:12
Cobra® RidgeRunner®	3:12
TruSlate® Ridge Vent	5:12
Cobra® Hip Vent	Min. 3:12 to max. 12:12
Cobra® IntakePro™ Rooftop Intake Vent	4:12

5.4 Unless otherwise determined through use of performance levels in Section 5.5, the maximum mean roof height for **Cobra® Exhaust Vent, Cobra® Rigid Vent 3, Cobra® Rigid Vent 3 – 9", Cobra® Snow Country™, Cobra® Snow Country Advanced™, Cobra® Snow Country Advanced™ – 9", Cobra® RidgeRunner®, TruSlate® Ridge Vent, Cobra® Hip Vent** and **Cobra® IntakePro™ Rooftop Intake Vent** shall be 33 ft.

5.5 **Maximum Allowable Design Pressures**: The following performance levels may be utilized for projects where the maximum mean roof height exceeds 33 ft. The Allowable Design Pressure shall meet or exceed critical design pressure determined by a qualified design professional in accordance with **FBC Chapter 16**. No rational analysis is permitted.

Substrate:	Product	Allowable Design Pressure (psf)
Min. 7/16-inch plywood	Cobra® Exhaust Vent (nail gun version)	-150
Min. 7/16-inch plywood	Cobra® Exhaust Vent (hand nail version)	-180
Min. 7/16-inch plywood	Cobra® Rigid Vent 3™, Rigid Vent 3™ - 9", Snow Country™, Snow Country Advanced™ and Snow Country Advanced™ - 9"	-215
Min. 7/16-inch OSB or plywood	Cobra® RidgeRunner®	-180
Min. 7/16-inch plywood	TruSlate® Ridge Vent	-190
Min. 7/16-inch plywood	Cobra® Hip Vent	-205
Min. 7/16-inch plywood	Cobra® IntakePro™ Rooftop Intake Vent	-175

5.5.1 Allowable 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.

5.6 Installation shall result in minimum net free ventilation area requirements set forth in **FBC Sections 1203.2**. When more than one level of roof ridge existing over a single attic space, use ridge vents only at the high ridge.

6. INSTALLATION:

6.1 **GAF Roof Ventilation Products** shall be installed in accordance with **GAF** published installation requirements subject to the Limitations set forth in Section 5 herein and the specifics noted below.

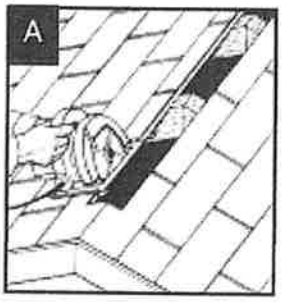
6.2 COBRA® EXHAUST VENT:

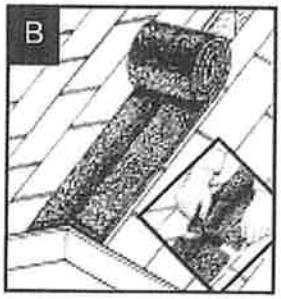
6.2.1 Chalk a cut-line 1-inch off each side of the ridge and cut a slot along the apex of the roof measuring 2-inch (for truss construction) or 3½-inch (for ridge pole construction). The slot should terminate 6-inches from each end and 12-inches from hip intersections or chimneys. Cut only the sheathing; do not cut trusses. Figure A.

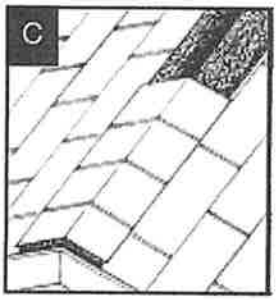
6.2.2 Unroll the vent along the entire length of the ridge, covering uncut 6-inch sheathing area on both ends. Shorter lengths can be joined by caulking and butting the ends. Figure B.

6.2.3 Apply a bead of polyurethane roof sealant to the underside of the entire perimeter of the vent and nail with min. 2½-inch galvanized roofing nails at each corner and 10-inch o.c.

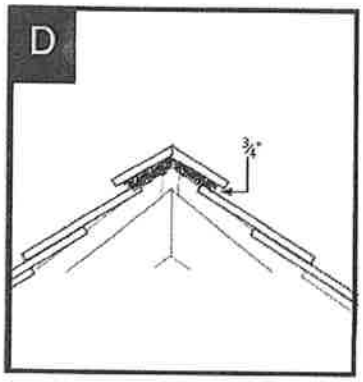
6.2.4 Apply a bead of polyurethane roof sealant in the shape of a "C" to the underside of the entire perimeter of the cap shingles, and install cap shingles directly over the vent using Smart Nails™ or 1¾-inch corrosion resistant coil nails (supplied with the vent). Figure C.



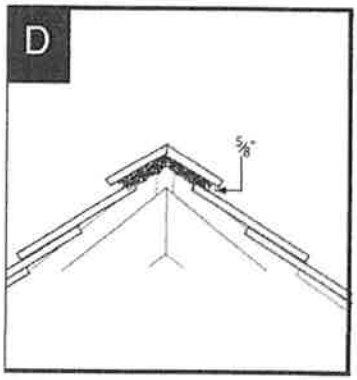




6.2.5 **Cobra® Exhaust Vent (hand nail version)** and **Cobra® Exhaust Vent (nail gun version)** have a ¾-inch or 5/8-inch nominal thickness, respectively, to facilitate ventilation. Care shall be taken not to crush or compact the product during installation. Figure D.



Hand-Nail Version

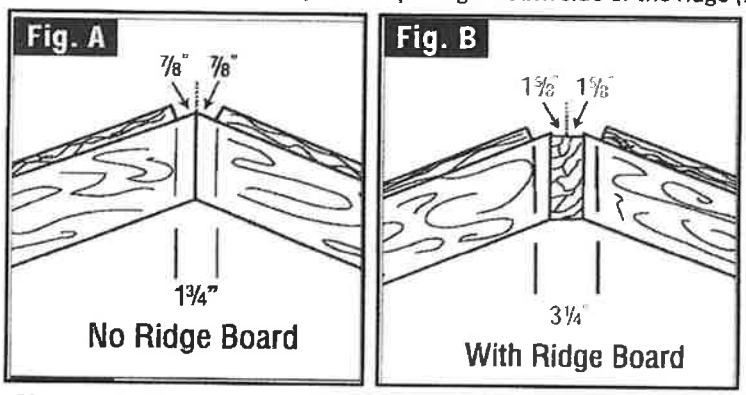


Nail Gun Version

6.3 **COBRA® RIGID VENT 3™, RIGID VENT 3™ - 9", SNOW COUNTRY™, SNOW COUNTRY ADVANCED™ AND SNOW COUNTRY ADVANCED™ - 9":**

6.3.1 Mark-off and cut the slot opening as follows, ensuring that the ends of the opening stop at least 6-inch from any end walls and at least 12-inch from hip and ridge intersections or chimneys.

- **No Ridge Board:** Cut a 7/8-inch opening on each side of the ridge (Figure A).
- **With Ridge Board:** Cut a 1-5/8-inch opening on each side of the ridge (Figure B).



6.3.2 **Vent Placement:** Starting at one end of the slot, place, center and conform the Cobra® rigid vent over the slot with the vent firmly against the roof surface, ensuring the vent extends past the slot opening by at least 6-inch.

6.3.3 **Fasteners:** For **Cobra® Rigid Vent 3™, Cobra® Rigid Vent 3™ - 9", Cobra® Snow Country Advanced™** and **Cobra® Snow Country Advanced™ - 9"** only, use the 3-inch corrosion resistant ring shank nails (included). For **Cobra® Snow Country™**, use corrosion resistant nails at least 3-inch or longer. Nails must always penetrate through plywood decks or at least ¾-inch into wood planks. NOTE: **GAF** recommends 3-inch corrosion resistant ring shank nails for increased uplift resistance.

6.3.4 **Spacing:** Attach the vent section through the pre-molded nailing holes located at 3, 12, 24, 36 and 45-inch from the start of each 48-inch vent piece.

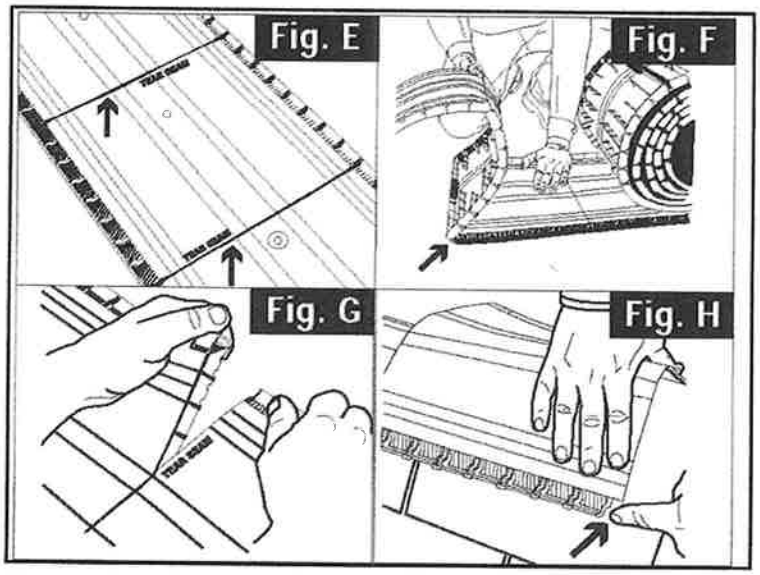
6.3.5 **Joints:** Apply the subsequent Cobra® rigid vent sections over the length of the ridge using the overlap/underlap tabs.

6.3.6 **Ridge Shingles:** Install ridge shingles in accordance with shingle manufacturer's published installation instructions, using corrosion resistant nails detailed in 6.3.3. A nail line is inscribed on top of the Cobra® rigid vent to serve as a guide.

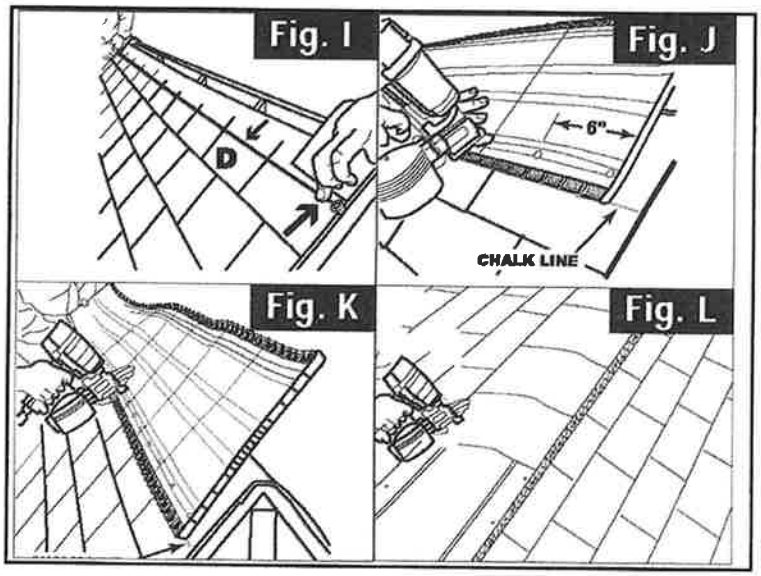
6.4 COBRA® RIDGERUNNER®

6.4.1 Cut slot per 6.3.1.

6.4.2 Tear a 1-foot section to be used as a template for laying the vent out (Figure E-G) and center the template/ locator over the ridge cap shingles at the beginning of the vent slot. Note the location of the baffle (Figure H). Make sure to do this at both ends of the installation.



6.4.3 Measure the distance from the edge of the roof slot to the exterior baffle (D). Establish a chalk line along one side of the ridge (Figure I). Unroll the vent and use the included 1-3/4-inch pneumatic corrosion resistant roofing nails to attach the first side of the ridge vent with the exterior of the baffle aligned with the chalk line (Figure J). Proceed with using the 1' interval EasyTear™ system to custom size the vent to the appropriate length. If the EasyTear™ system can not be utilized, use a utility knife to size the vent. Nail gun targets are embossed on the part as a guide for property attaching vent to the roof. The vent should be fastened on 6-inch centers (Figure K).



6.4.4 For installations over extra-thick shingles, a bead of polyurethane roof sealant may be applied to the underside of the outer baffle of the vent along both sides of the ridge and at exposed edges where the vent meets the shingles to fill any open space between the vent and shingles below.

6.4.5 **NOTE:** When fastening the vent and cap shingles, be sure that the included 1 3/4-inch corrosion resistant coil nails completely penetrate plywood or provide at least 3/4-inch penetration into wood planks. In the case they do not, you must use alternate corrosion resistant nails that provide the required penetration. Proceed with attaching the other side of the vent. When beginning to nail down the second side, do NOT begin at the end; begin between the first and second one-foot sections and then return to fasten the first one-foot section. This will allow for proper fit.

6.4.6 Install ridge shingles in accordance with shingle manufacturer's published installation instructions, using the nail-lines on top of the ridge vent for proper lapping.

6.5 TRUSLATE® RIDGE VENT:

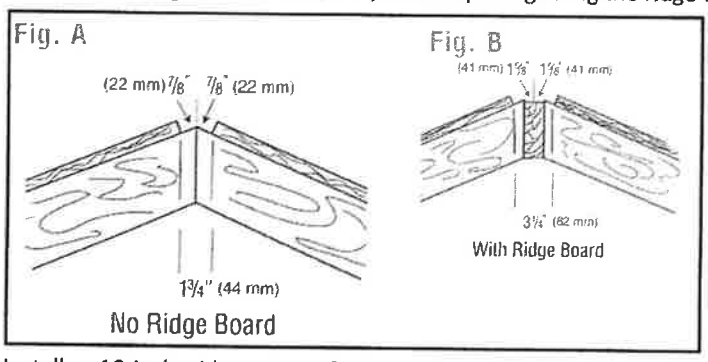
6.5.1 DO NOT use on hips.

6.5.2 Install **TruSlate® Ridge Vent** before installing the field slates.

6.5.3 After determining the total length of **TruSlate® Ridge Vent** required (for proper ventilation), determine the necessary slot opening. Mark-off and cut the slot opening, ensuring the ends of the opening stop at least 6-inch from any end walls and at least 12-inch from hip and ridge intersections or chimneys.

Roofs without a ridge board: Cut a 7/8-inch opening along the ridge on each side (Figure A).

Roofs with a ridge board: Cut a 1-5/8-inch opening along the ridge on each side (Figure B).

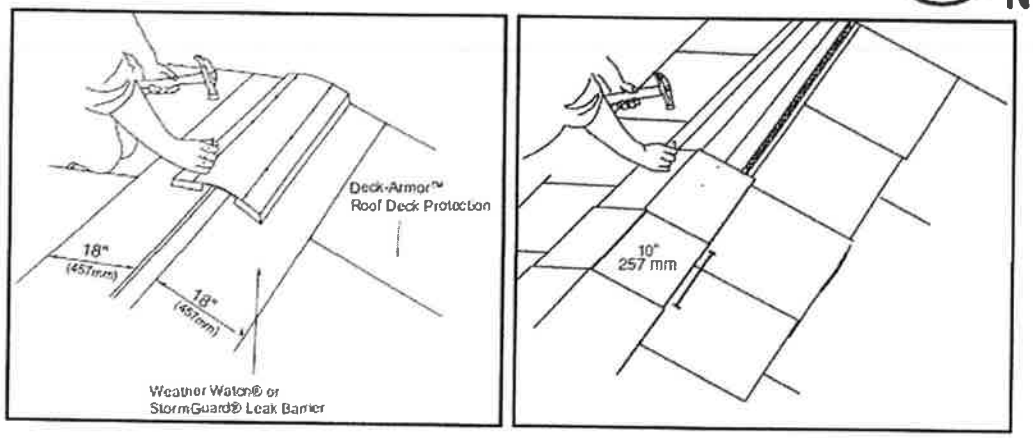


6.5.4 Install an 18-inch wide section of ASTM D1970 self-adhering leak barrier (holding Florida Statewide Product Approval or Approved on a Local Basis) from the edge of the ridge slot extending down towards the roof deck on both side of the slot.

6.5.5 Place the **TruSlate® Ridge Vent** over the ridge slot, "peaked" and centered over the ridge slot, and attach using minimum 3-inch long corrosion resistant ring-shank nails through the pre-molded nail holes on the vent, located 3-inch from the ends and 9-inch o.c. Fasteners shall penetrate through plywood decks or embed minimum ¾-inch into wood plank decks.

6.5.6 Continue over the length of the ridge, utilizing the male/female connectors to connect units. Ensure the finished ends include the pre-molded end caps. Cover all exposed nail heads on the vent with silicone caulk. Install a bead of exterior grade silicone sealant at the downslope leading edges of the ridge vent, at the junction of the leading edge and the leak-barrier below.

6.5.7 Install the top course of TruSlate® field slates, UnderBlock™ UV & Moisture Barrier and TruSlate® trim slates in accordance with GAF published installation instructions. Install **TruSlate® trim slates** with 10-inch exposure using minimum **1-5/8-inch long deck screws** through pre-drilled holes, through the ridge vent to engage the wood deck.

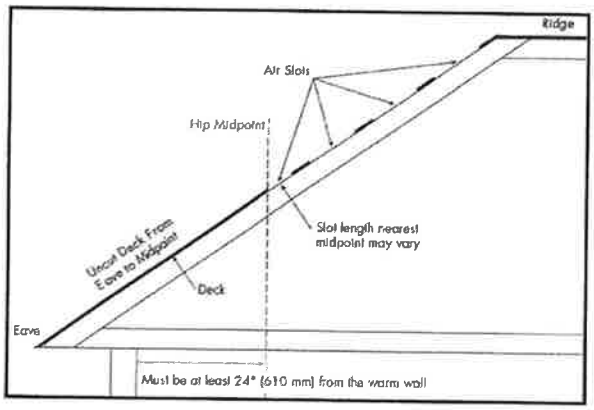


6.6 COBRA® HIP VENT

6.6.1 The roof deck shall consist of minimum of 7/16 inch thick plywood or OSB wood structural panels. Use only on roofs with slopes between 3:12 and 12:12. Install only on hips. Do not install Cobra® Hip Vent on ridges.

6.6.2 **Sequencing:** If ridge ventilation will be installed, always install the ridge vent to the end of the ridge before installing **Cobra® Hip Vent**.

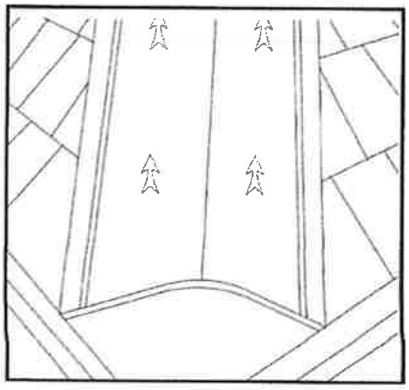
6.6.3 **Hip Air Slot:** Determine the number of **Cobra® Hip Vent** sections needed for proper ventilation and the location for cuts in the roof hip. **Cobra® Hip Vent** is installed over a 2½ inch wide slot opening centered on the hip beginning at 12 inches below the top of the hip and extending 36 inches down the hip for every 4 foot section of **Cobra® Hip Vent** needed. Leave 12 inches of the hip uncut after each 36 inch opening, and the lowest opening must stop at the mid-point of the hip and more than 24 inches in from the exterior warm wall. Wider openings and slots below the midpoint of the hip will not improve ventilation and must be avoided. Cut away the shingles first with a roofing knife, and then cut the deck with a circular saw. The saw should be adjusted so that the rafters or trusses are not cut. Note: The roof decking must be re-nailed to the rafter at the edge closest to the hip to compensate for the nails removed when the hip slot was cut.



6.6.4 On plywood or OSB roof decks, where a sheathing seam intersects the hip air slot, stop cutting the air slot 2-inches (51 mm) **before** the seam and continue cutting the slot 2-inches (51 mm) **after** the seam, leaving a total of 4-inches (102 mm) of uncut deck at the seam. Then, proceed with cutting down to the previously marked 36-inch (914 mm) point. The air slot may be widened, in this case, to 5/8-inch (16 mm) on each side of the hip rafter to maintain proper NFVA.

6.6.5 **Sealant:** Seal all cut-edges of the asphalt shingles to the roof sheathing along all sides of the hip air slot openings, using a bead of ASTM C920 polyurethane sealant, to prevent water infiltration.

6.6.6 **Orientation:** Always install **Cobra® Hip Vent** with the "Towards Peak" arrows on the top surface of the vent pointing up towards the peak of the roof.



6.6.7 **Attachment: Cobra® Hip Vent** is fastened to the deck starting at the bottom of the hip and then up along the entire length of the hip (this includes un-cut portions of the hip). Fasten **Cobra® Hip Vent** to the deck with the included 1¾-inch inch long collated galvanized steel roofing nails, or longer corrosion resistant roofing fasteners, to achieve penetration through plywood or OSB decks or minimum 3/4-inch embedment into wood planks. Attach the **Cobra® Hip Vent** section through the pre-marked 6-inch increment nail targets.

6.6.8 **Joints & Terminations:** Apply the subsequent **Cobra® Hip Vent** sections over the length of the hip using the overlap/underlap tabs. For roofs with ridge vents, lengths of the hip vent must be butted tightly to sections of ridge vents and install a 3 inch by 12-inch strip of self-adhering leak barrier over all junctions. For roofs without ridge vents, sections of hip vent from adjacent hip runs must be mitered together tightly where they intersect and install a 3 inch by 12-inch strip of self-adhering leak barrier over all junctions. Refer to GAF published installation instruction for details.

6.6.9 **Ridge Shingles: Cobra® Hip Vent** is then covered with ridge cap shingles and this entire assembly is nailed to the sheathing with the included 1¾-inch inch long collated galvanized steel roofing nails. Depending on the field and ridge cap shingles used, longer length corrosion resistant fasteners may be necessary. The ridge cap shingles are installed per the shingle manufacturer's instructions and Florida Product Approval, with a minimum of two nails per shingle and a shingle to shingle nail spacing of 8 inches on center or less. Refer to the shingle manufacturer's Florida Product Approval for ridge cap shingle fastening and sealing requirements. Do not overdrive the nails or crush/compact the product during installation.

6.7 COBRA® INTAKEPRO™ ROOFTOP INTAKE VENT

6.7.1 The roof deck shall consist of minimum of 7/16 inch thick plywood or OSB wood structural panels. Use only on roofs with minimum slope of 4:12. Install only on eave edges of the roof.

6.7.2 Determine the length of Cobra® IntakePro™ Rooftop Intake Vent sections needed for proper ventilation and the location for cuts near the roof eave edge. Install a metal drip edge at the eave of the roof. Measure up 6 and 7 inches up from the edge of the metal drip edge and strike chalk lines parallel to the eave of the roof. Cut a 1 inch wide air slot opening along the chalk lines, stopping a minimum of 12" (305 mm) from rake/gable edges, side/end walls, and hip intersections, and stopping a minimum of 24" (610 mm) from the center of valley intersections. The saw should be adjusted so that the rafters or trusses are not cut.

Note: After cutting the air slot, clear all debris blocking access into the attic space. Be sure to flatten attic insulation near the air slot to allow for proper intake airflow near the air slot. Attic baffles may be used to help prevent insulation from blocking intake airflow into the attic space.

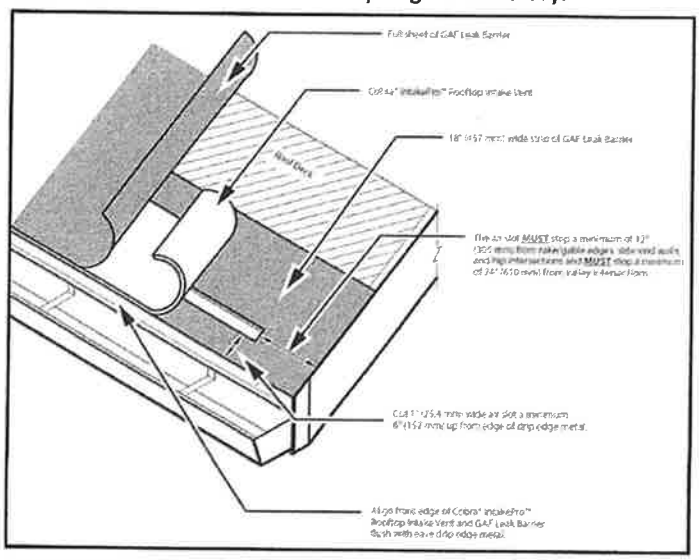
6.7.3 Install a minimum 18 inch (457mm) wide FBC Approved peel-and-stick leak barrier down to the roof deck. Align peel-and-stick leak barrier flush to the edge of the roof on top of the drip edge metal. Use a sharp utility knife to cut the leak barrier, re-opening the 1 inch (25 mm) air slot that was previously cut in the deck.

6.7.4 Each roll of Cobra® IntakePro™ Rooftop Intake Vent comes with two pieces of end cap fabric. To begin the vent run, place one piece of end cap fabric overhanging halfway over the rake/gable edge and parallel to the eave drip edge. Fasten the fabric to the roof deck using two roofing nails, one high and one low. If necessary, a piece of FBC Approved peel-and-stick leak barrier can be used in lieu of end cap fabric.

6.7.5 With the pre-marked dotted nail line and GAF logo facing up toward the sky, position the vent on top of the fabric end cap and flush to the rake/gable edge and eave drip edge. The front venting face of the vent should be flush with the drip edge metal below. Using the included 1-3/4 inch (44 mm) pneumatic coil nails, fasten the vent every 6 inches (152 mm) along the pre-marked nail line and fasten every 12 inches (305 mm), approximately 1-1/2 inches (38 mm) down from the up-slope edge of the vent. Do NOT nail within 1 inch (25 mm) from the side, top, or bottom edges of the vent.

6.7.6 Continue installing vent toward the opposite gable/rake edge or termination point. When installing multiple rolls, adjoin the rolls by butting them tightly together. There should be no gap between adjoining sections. The vent must always extend a minimum of 12 inches (305 mm) past any air slots. Miter cut the vent at any valley and hip intersections, ensuring the vent sections are butted tightly together. For terminations at gable and rake edges, cover the end of the vent run using the included fabric end cap in the same manner as the start of the vent run.

6.7.7 Install FBC Approved peel-and-stick leak barrier completely covering the top of the vent and extending from the eave edge to a minimum of 24 inches (610 mm) in from the building's warm wall. The leak barrier should not overhang the vent. Install rake drip edge if necessary.



6.7.8 Begin installing the shingle starter course. The starter course and first course of field shingles should overhang the front edge of the Cobra® IntakePro™ Rooftop Intake Vent by 1/4 – 3/4 inches (6 – 19 mm) to provide a drip edge. Using the included 1-3/4 inch (44 mm) pneumatic coil nails, fasten the starter strip and field shingles as per manufacturer's installation instructions. Ensure the field shingles are not fastened into the open air intake slot below.

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. QUALITY ASSURANCE ENTITY:

UL, LLC. – QUA9625; (847) 664-3281

- END OF EVALUATION REPORT -

RICK SCOTT, GOVERNOR

JONATHAN ZACHEM, SECRETARY

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE BUILDING CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

FARR, BRIAN JAMES

BFARR CONTRACTING
3500 ALOMA AVE STE C6
WINTER PARK FL 32792

LICENSE NUMBER: CBC1261115

EXPIRATION DATE: AUGUST 31, 2020

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

Tax Collector Scott Randolph **Local Business Tax Receipt** **Orange County, Florida**

2019 **EXPIRES** **9/30/2020**

5000	BUSINESS OFFICE	$30.00	1 EMPLOYEE	1801	CERT BUILDING CONTR	$30.00	1 EMPLOYEE	5000-1169647

TOTAL TAX $60.00
PREVIOUSLY PAID $60.00
TOTAL DUE $0.00

FARR BRIAN JAMES

BFARR ENTERPRISES LLC
3123 LOWNDES DR
WINTER PARK FL 32792

3123 LOWNDES DR (MOBILE)
U - WINTER PARK, 32792

PAID: $60.00 0099-00902833 8/16/2019

Tax Collector Scott Randolph **Local Business Tax Receipt** **Orange County, Florida**

This local Business Tax Receipt is in addition to and not in lieu of any other tax required by law or municipal ordinance. Businesses are subject to regulation of zoning, health and other lawful authorities. This receipt is valid from October 1 through September 30 of receipt year. Delinquent penalty is added October 1.

2019 **EXPIRES** **9/30/2020**

5000	BUSINESS OFFICE	$30.00	1 EMPLOYEE	1801	CERT BUILDING CONTR	$30.00	1 EMPLOYEE	5000-1169647

TOTAL TAX $60.00
PREVIOUSLY PAID $60.00
TOTAL DUE $0.00

FARR BRIAN JAMES

BFARR ENTERPRISES LLC
3123 LOWNDES DR
WINTER PARK FL 32792

3123 LOWNDES DR (MOBILE)
U - WINTER PARK, 32792

PAID: $60.00 0099-00902833 8/16/2019

SCOTT RANDOLPH, TAX COLLECTOR · ORANGE COUNTY, FLORIDA ·

This receipt is official when validated by the Tax Collector.

Orange County Code requires this local Business Tax Receipt to be displayed conspicuously at the place of business in public view. It is subject to inspection by all duly authorized officers of the County.

JIMMY PATRONIS
CHIEF FINANICAL OFFICER

STATE OF FLORIDA
DEPARTMENT OF FINANCIAL SERVICES
DIVISION OF WORKERS' COMPENSATION

* * CERTIFICATE OF ELECTION TO BE EXEMPT FROM FLORIDA WORKERS' COMPENSATION LAW * *

CONSTRUCTION INDUSTRY EXEMPTION

This certifies that the individual listed below has elected to be exempt from Florida Workers' Compensation law.

EFFECTIVE DATE: 6/10/2018 **EXPIRATION DATE:** 6/9/2020

PERSON: BRIAN J FARR **EMAIL:** BRIAN@BFARRCONTRACTING.COM

FEIN: 811201664

BUSINESS NAME AND ADDRESS:

BFARR ENTERPRISES LLC

BFARR CONTRACTING

3123 LOWNDES DR

WINTER PARK, FL 32792

SCOPE OF BUSINESS OR TRADE:

Licensed Building Contractor | Licensed Roofing Contractor | Carpentry - Installation Of Cabinet Work or Interior Trim | Contractor-Project Manager, Construction Executive, Construction Manager or Construction Superintendent

IMPORTANT: Pursuant to Chapter 440.05(14), F.S., an officer of a corporation who elects exemption from this chapter by filing a certificate of election under this section may not recover benefits or compensation under this chapter. Pursuant to Chapter 440.05(12), F.S., Certificates of election to be exempt... apply only within the scope of the business or trade listed on the notice of election to be exempt. Pursuant to Chapter 440.05(13), F.S., Notices of election to be exempt and certificates of election to be exempt shall be subject to revocation if, at any time after the filing of the notice or the issuance of the certificate, the person named on the notice or certificate no longer meets the requirements of this section for issuance of a certificate. The department shall revoke a certificate at any time for failure of the person named on the certificate to meet the requirements of this section.

BFARR-1

OP ID: ST

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/03/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER TILTON & UNGER INSURANCE AND F 3 CYPRESS BRANCH WAY SUITE 101 PO BOX 352859 PALM COAST, FL 32135 PATRICIA P TILTON, CIC 386-447-4448	CONTACT NAME: PATRICIA TILTON, CIC PHONE (A/C, No, Ext): 386-447-4448 FAX (A/C, No): 386-447-5300 E-MAIL ADDRESS: INFO@TILTONUNGER.COM
INSURED BFARR Enterprises, LLC 3123 Lowndes Drive Winter Park, FL 32792	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : UNITED SPECIALTY INSURANCE — 12537 INSURER B : INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [ ] PRO-JECT [ ] LOC OTHER:			DCG00575-05	11/12/2019	11/12/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY [ ] SCHEDULED AUTOS HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $
	UMBRELLA LIAB [ ] OCCUR EXCESS LIAB [ ] CLAIMS-MADE DED [ ] RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N [ ] N / A If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CITYBEL

CITY OF BELLE ISLE
1600 NELA AVE
BELLE ISLE, FL 32809

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
PATRICIA P TILTON, CIC

ACORD 25 (2016/03)

RICK SINGH, CFA - ORANGE COUNTY PROPERTY APPRAISER

Searches | Sales Search | Results | **Property Record Card** | My Favorites | Sign up for e-Notify...

5135 Belleville Ave < 17-23-30-4379-02-000 >

Name(s)
Chronister James E

Mailing Address On File
5135 Belleville Ave
Belle Isle, FL 32812-1006
Incorrect Mailing Address?

Physical Street Address
5135 Belleville Ave

Postal City and Zipcode
Orlando, Fl 32812

Property Use
0103 - Single Fam Class III

Municipality
Belle Isle

View 2019 Property Record Card

Property Features | **Values, Exemptions and Taxes** | **Sales Analysis** | **Location Info** | **Market Stats** | Update Information

2020 values will be available in August of 2020.

View Plat

Property Description

LAKE CONWAY ESTATES SECTION 3 Y/19 LOT 200

Total Land Area 11,870 sqft (+/-) | 0.27 acres (+/-) GIS Calculated Notice

Land

Land Use Code	Zoning	Land Units	Unit Price	Land Value	Class Unit Price	Class Value
0100 - Single Family	R-1-AA	1 LOT(S)	working...	working...	working...	working...

Page 1 of 1 (1 total records)

Buildings

Important Information			Structure			
More Details	**Model Code:**	01 - Single Fam Residence	**Actual Year Built:**	1968	**Gross Area:**	3006 sqft
	Type Code:	0103 - Single Fam Class III	**Beds:**	4	**Living Area:**	1990 sqft
	Building Value:	working...	**Baths:**	2.0	**Exterior Wall:**	Concrete Block Stucco
	Estimated New Cost:	working...	**Floors:**	1	**Interior Wall:**	Drywall

Page 1 of 1 (1 total records)

Extra Features

Description	Date Built	Units	XFOB Value
FPL2 - Fireplace 2	12/31/1994	1 Unit(s)	working...
WLDC - Wall Dec	01/01/2000	44 Unit(s)	working...

Page 1 of 1 (2 total records)

This Data Printed on 04/21/2020 and System Data Last Refreshed on 04/20/2020

What are you looking to do today? You can also type your question below.