City of Belle Isle Job Site Card Roof PERMIT 2019-04-024

PERMIT MUST BE POSTED ON SITE - 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 of all your inspections -

Permit Number: 2019- 04-024
Issue Date: 04/09/2019
Site Address: 2621 Trentwood Blvd 32812
Parcel #: 30-23-30-1692-01-020
Class: □ Residential **Subdivision:**
Description of Work: Roof Square Footage: 3400 ASPHALT SHINGLES with underlayment
OTHER: BUILT UP CERTAINTEED FLINTGLAS , SINGLE PLY ROOF FLINTLASTIC
Number of Stories: 1

Issued: D R AND G INCORPORATED
Name: MORRIS, RICHARD L
Business Phone: 407 349-5579
Contractor License: CCC1330106
Payment Date & Method: 4 / 12 / 2019 □ Picked up or sent by Email □ Emailed
□ Visa □ Master Card □ Amex □ Discover □ Check / Money Order # AMEX 72008

Schedule Inspections via Email at: BIDscheduling@universalengineering.com
SCHEDULE INSPECTIONS BY 3:00 PM CUT OFF TIME
Inspection Results Will Be Sent Out the Following Business Day

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."

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.**

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 in your request: Permit #, project address, type of inspection, date of the requested inspection, a contact name & a contact phone number. AM or PM may be requested but cannot be guaranteed. **OSHA Approved Access to the Roof must be made Available to the Inspector.**

RECEIVED APR - 8 2019

RECEIVED - 2019

RECEIVED APR 08 2019

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: 4-8-19 **ROOF PERMIT NUMBER** 2019-04-024

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

Project Address 2621 Trentwood Blvd, Belle Isle, FL ___32809 X 32812

Property Owner John Hines Phone 407 493 6132

Property Owner's Mailing Address 2621 Trentwood Blvd ~~Belle I~~ City Belle Isle

State Fl Zip Code 32812 **Parcel Id Number:** 30-23-30-1692-01-020

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: 10,200 715

Roof Square Footage: 3400 **Number of Stories:** 1 **Job Valuation: $** 25,550.00

Type: Asphalt Shingles ☒ Metal ☐ Modified Bitumen ☒ Other: Built up

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 Richard Morris LICENSE # CCC1330106

LICENSE HOLDER NAME Richard L. Morris COMPANY NAME D R & G, Inc.

Street Address 1260 Saratoga Ln

City Geneva State Fl Zip Code 32732 Phone Number 4073495579

Email Address morr8250@bellsouth.net

✓ NOC
✓ PA

Zoning Fee	$ 30.00
Building Fee	$ 150.00 ✓
Review Fee	$ —
1% BCAIB Fee	$ 2.00
1.5% DCA Fee	$ 2.25
Total Permit Fee	$ 184.25

Building Official: [signature] Date 4-9-19

Verified Contractor's Licenses & Insurance are on file [initials] Date 4-8-19

PENDING - LOCAL LICENSE

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 ______

30 25 125   1ST LIC 25 2525 125 150

PAID 4-12-19 AMEX 72008

Permit Number 2019-04-024 Notarize
Folio/Parcel ID # 30-23-30-1692-01-020
Prepared by Gail Morris
1260 Saratoga ln
Geneva, Fl 32732
Return to: D R and G, Inc
1260 Saratoga Ln
Geneva, Fl. 32732

DOCN 20190194057
04/01/2019 11:15:55 AM Page 1 of 1
Rec Fee: $10.00
Phil Diamond, Comptroller
Orange County, FL
IP - Ret To: D R AND G INC

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)
   2621 Trentwood Blvd 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 John R. Hines or Catherine B. Hines
   Address 2621 Trentwood Blvd 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 D R and G, Inc. Telephone Number 407 349 5579
   Address 1260 Saratoga Ln, Geneva, Fl 32732
5. **Surety** (if applicable, a copy of the payment bond is attached)
   Name Telephone Number
   Address Amount of Bond $
6. **Lender** if any
   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 may not be before the completion of construction and final payment to the contractor, but 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.

Catherine B. Hines
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 this 21st day of March (month/year) by Catherine Baker Hines (name of person)

as Trustee (Type of authority, e.g., officer, trustee, attorney in fact) for JCH Trust (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
Notary Public
State of Florida
My Commission Expires 07/12/2022
Commission No. GG 238051

Personally Known ____ OR Produced ID ✓
Type of ID Produced Florida Driver License

Form content revised 10/17/12

State of FLORIDA, County of ORANGE
I hereby certify that this is a true copy of the document as reflected in the Official Records
PHIL DIAMOND, COUNTY COMPTROLLER
BY: _____, D.C.
DATED: 4/1/19

COUNTY COMPTROLLER SEAL ORANGE COUNTY FLORIDA

City of Belle Isle

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

Product Approval Form

DATE: 4-8-19

PERMIT # 2019-04-024

PROJECT ADDRESS 2621 Trentwood Blvd, Belle Isle, FL ___32809 X 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:

- **NOTE: The Installation instructions must be posted on-site before your first inspection!!**

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	Tamko	Heritage	FL18355R-4
Non Struct Metal			
Roofing Tiles			
Single Ply Roof	Certainteed	Flintlastic	FL2533R-21
Underlayment	FT Synthetics	Platinum	FL20853R-2
Other Built-up	Certainteed	Flintglas	FL477R-8
OTHER			

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 Rachel Morris

Date 4/5/19

FL #	FL18355-R4
Application Type	Revision
Code Version	2017
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer	TAMKO Building Products, Inc.
Address/Phone/Email	PO Box 1404 Joplin, MO 64802 (417) 624-6644 Ext 2305 kerri_eden@tamko.com
Authorized Signature	Kerri Eden kerri_eden@tamko.com
Technical Representative Address/Phone/Email	Kerri Eden PO Box 1404 Joplin, MO 64802 (417) 624-6644 Ext 2305 kerri_eden@tamko.com
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	Zachary R. Priest
Florida License	PE-74021
Quality Assurance Entity	UL LLC
Quality Assurance Contract Expiration Date	01/07/2019
Validated By	Locke Bowden ☑ Validation Checklist - Hardcopy Received
Certificate of Independence	FL18355_R4_COI_TBP15001.4 2017 FBC Eval Report Shingles final.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D 3161	2016
ASTM D 3462	2010
ASTMD D 7158	2011
TAS 100	1995

Equivalence of Product Standards Certified By: Approved Testing Lab
FL18355_R4_Equiv_UL letter for standards for FBC 2017.pdf

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	09/25/2017
Date Validated	09/27/2017
Date Pending FBC Approval	10/08/2017
Date Approved	12/12/2017

Summary of Products

FL #	Model, Number or Name	Description
18355.1	Glass-Seal, Elite Glass-Seal, Heritage, Heritage Premium, Heritage Woodgate, Heritage Vintage, Hip and Ridge, and Vintage Hip and Ridge Shingles	ASTM D 3462 asphalt shingles and hip and ridge shingles
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** See evaluation report for limits of use.		**Installation Instructions** FL18355_R4_II_TBP15001.4 2017 FBC Eval Report Shingles final.pdf Verified By: Zachary R. Priest PE-74021 Created by Independent Third Party: Yes **Evaluation Reports** FL18355_R4_AE_TBP15001.4 2017 FBC Eval Report Shingles final.pdf Created by Independent Third Party: Yes

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CREEK
TECHNICAL SERVICES, LLC

Certificate of Authorization No. 29824
17520 Edinburgh Dr
Tampa, FL 33647
(813) 480-3421

EVALUATION REPORT

FLORIDA BUILDING CODE, 6TH EDITION (2017)

Issued September 25, 2017

Manufacturer: TAMKO BUILDING PRODUCTS
220 West 4th Street
Joplin, MO 64801
(417) 624-6644

Manufacturing Plants: Joplin, MO
Phillipsburg, KS
Frederick, MD
Dallas, TX
Tuscaloosa, AL

Quality Assurance: UL LLC (QUA9625)

SCOPE

Category: Roofing
Subcategory: Asphalt Shingles
Code Sections: 1504.1.1, 1507.2.5, 1507.2.7.1, 1523.6.5.1
Properties: Physical properties, Wind Resistance, Wind Driven Rain

REFERENCES

Entity	Report No.	Standard	Year
PRI Construction Materials Technologies (TST5878)	TAP-043-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-051-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-054-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-114-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-117-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-130-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-131-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-165-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-280-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-303-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-307-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-314-02-01 Rev 2	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-315-02-01	ASTM D 6381	2008(2013)e1
PRI Construction Materials Technologies (TST5878)	TAP-317-02-01	TAS 100	1995
UL LLC (TST9628)	02NK9507	ASTM D 3161	2016
UL LLC (TST9628)	04NK24366	ASTM D 3462	2010A
UL LLC (TST9628)	05NK28006	ASTM D 6381	2008(2013)e1
		UL 2390	
UL LLC (TST9628)	06NK03898	ASTM D 7158	2011
		ASTM D 3161	2016
UL LLC (TST9628)		ASTM D 3462	2010A
UL LLC (TST9628)	08CA59132	ASTM D 3161	2016
	09NK07896	ASTM D 3161	2016
UL LLC (TST9628)		ASTM D 3462	2010A
UL LLC (TST9628)	10CA50498	ASTM D 3462	2010A
UL LLC (TST9628)	10CA64882	ASTM D 3161	2016
	11NK14014	ASTM D 3161	2016
UL LLC (TST9628)		ASTM D 3462	2010A
UL LLC (TST9628)	12CA24551	ASTM D 3161	2016
UL LLC (TST9628)	4786110543	ASTM D 6381	2008(2013)e1
UL LLC (TST9628)	4787043752	ASTM D 3161	2016
	4787148748	ASTM D 7158	2011
		ASTM D 3161	2016
CREEK Technical Services LLC (ANE11669)	TBP15001.3	ASTM D 3462	2010A
		Calculations	2017
TBP15001.4	FL18355-R4		

PRODUCT DESCRIPTION

Elite Glass-Seal® (Frederick, Joplin & Tuscaloosa)	12-1/4" x 36", ASTM D 3161, Class F and ASTM D 7158, Class H self-sealing, 3-tab asphalt shingle with fiberglass mat coated on both sides with asphalt and surfaced with ceramic granules complying with ASTM D 3462.
Glass-Seal (Frederick & Tuscaloosa)	12-1/4" x 36", ASTM D 3161, Class F and ASTM D 7158, Class H self-sealing, 3-tab asphalt shingle with fiberglass mat coated on both sides with asphalt and surfaced with ceramic granules complying with ASTM D 3462.
Glass-Seal (Joplin)	12-1/4" x 36", ASTM D 7158, Class H self-sealing, 3-tab asphalt shingle with fiberglass mat coated on both sides with asphalt and surfaced with ceramic granules complying with ASTM D 3462. Shingles shall be used in the non-HVHZ only.
Heritage® (Dallas, Frederick, Joplin, Phillipsburg & Tuscaloosa)	13-1/4" x 39-3/8", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Premium (Dallas, Frederick, Phillipsburg & Tuscaloosa)	13-1/4" x 39-3/8", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Premium (Frederick)	12" x 36", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Vintage® (Phillipsburg)	17-1/2" x 40", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Woodgate (Dallas & Frederick)	13-1/4" x 39-3/8", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Woodgate (Frederick)	12" x 36-3/8", ASTM D 3161, Class F fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462. Shingles shall be used in the non-HVHZ only.
Hip and Ridge Shingles (Frederick & Joplin)	12-1/4" x 12", ASTM D 3161, Class F fiberglass reinforced, hip and ridge asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Vintage® Hip and Ridge (Phillipsburg)	12" x 12", ASTM D 3161, Class F fiberglass reinforced, hip and ridge asphalt shingle surfaced with mineral granules complying with ASTM D 3462.

INSTALLATION

Elite Glass-Seal® (Frederick, Joplin & Tuscaloosa) & **Glass-Seal** (Frederick, Joplin (Non-HVHZ) & Tuscaloosa)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
	Installation (HVHZ):	Installed with 5-1/8 inch exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5-1/8-inch exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.

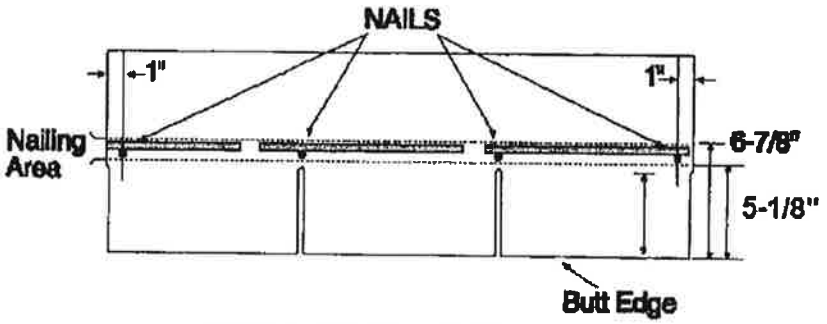

Figure 1. Elite Glass-Seal & Glass-Seal 4 Nail Pattern (Non-HVHZ only)

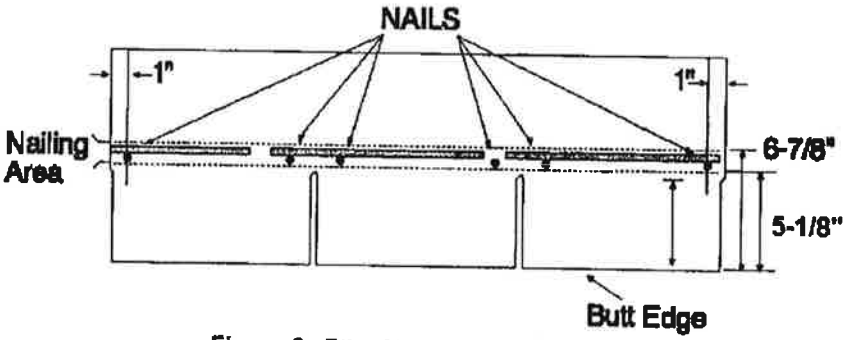

Figure 2. Elite Glass-Seal & Glass-Seal 6 Nail Pattern

Heritage® (Dallas, Frederick, Joplin, Phillipsburg & Tuscaloosa) & **Heritage® Premium** (Dallas, Frederick Phillipsburg & Tuscaloosa) & **Heritage® Woodgate** (Dallas & Frederick)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
	Installation (HVHZ):	Installed with 5-5/8 in. exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5-5/8 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.

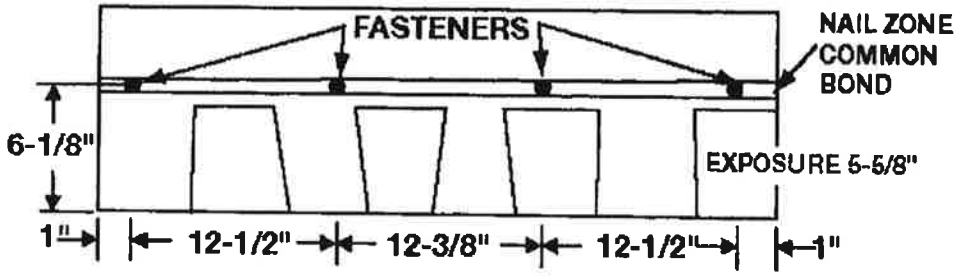

Figure 3. Heritage®, Heritage® Premium, and Heritage® Woodgate (Dallas) 4 Nail Pattern (non-HVHZ only)

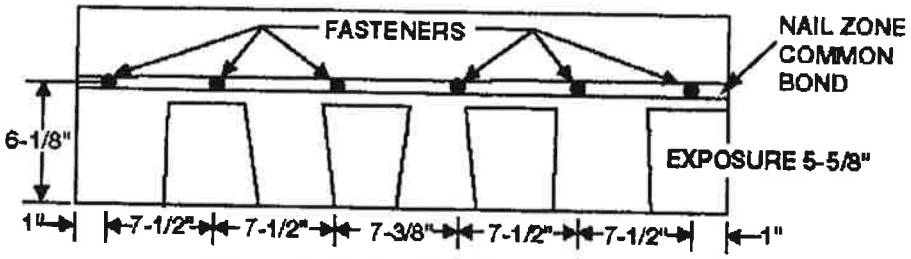

Figure 4. Heritage® & Heritage® Premium 6 Nail Pattern

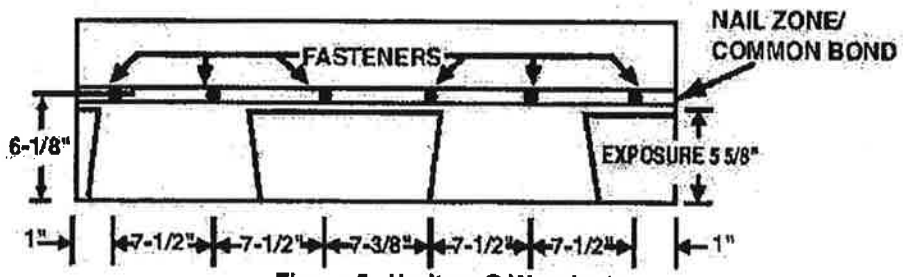

Figure 5. Heritage® Woodgate
6 Nail Pattern

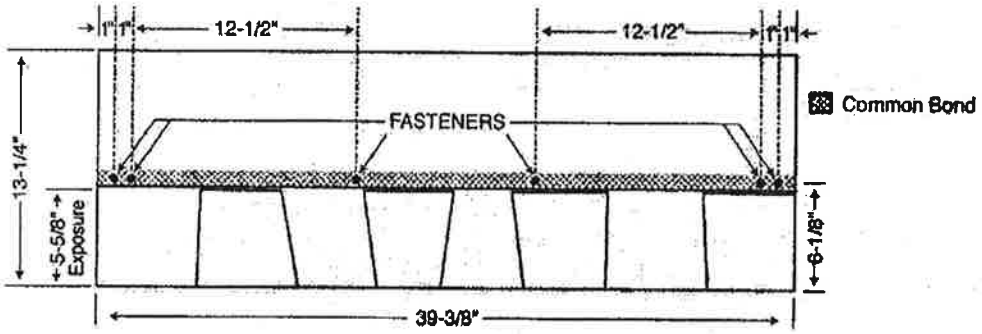

Figure 6. Heritage®, Heritage® Premium, & Heritage® Woodgate
Alternate 6 Nail Pattern

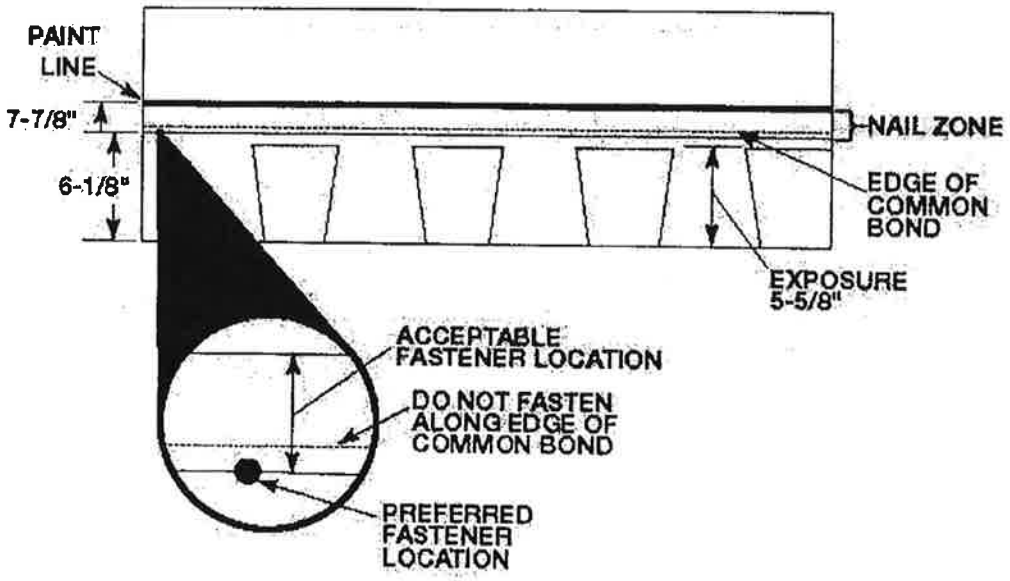

Figure 7. Heritage® (Tuscaloosa)
Expanded Nail Zone
Nail patterns from Figures 3, 4, and 6 may be placed in the nail zone as described above

Heritage® Premium (Frederick)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12. .
	Installation (HVHZ):	Installed with 5 in. exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.

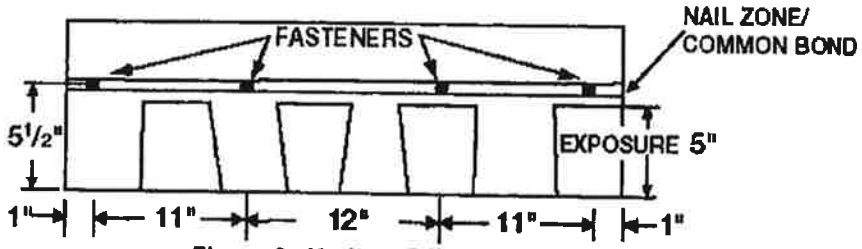

Figure 8. Heritage® Premium (Frederick)
4 Nail Pattern (non-HVHZ only)

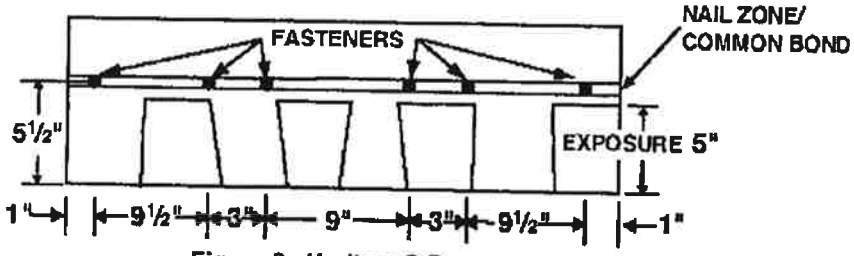

Figure 9. Heritage® Premium (Frederick)
6 Nail Pattern

Heritage® Woodgate
(Frederick)

Basic Wind Speed (V_{ult}):	Max. 194 mph
Basic Wind Speed (V_{asd}):	Max. 150 mph
Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
Underlayment:	In accordance with FBC requirements.
Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
Installation (Non-HVHZ):	Installed with 5 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.

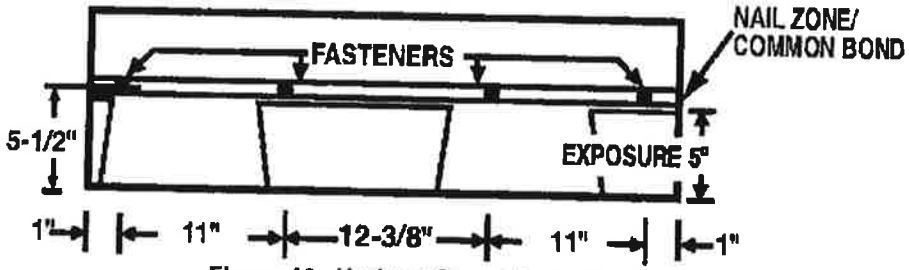

Figure 10. Heritage® Woodgate (Frederick)
4 Nail Pattern (non-HVHZ only)

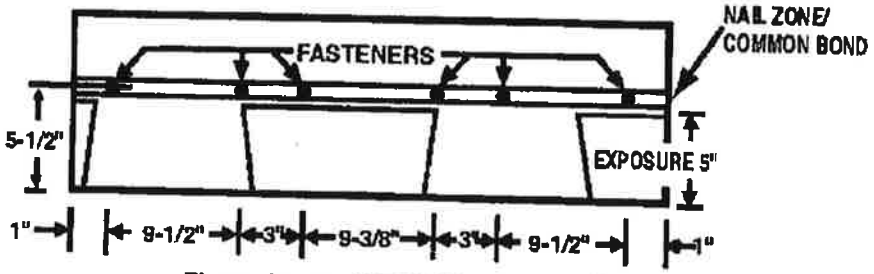

Figure 11. Heritage® Woodgate (Frederick)
6 Nail Pattern

Heritage® Vintage® (Phillipsburg)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
	Installation (HVHZ):	Installed with 5 in. exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "5 Nail Pattern" or "6 Nail Pattern" detailed below.

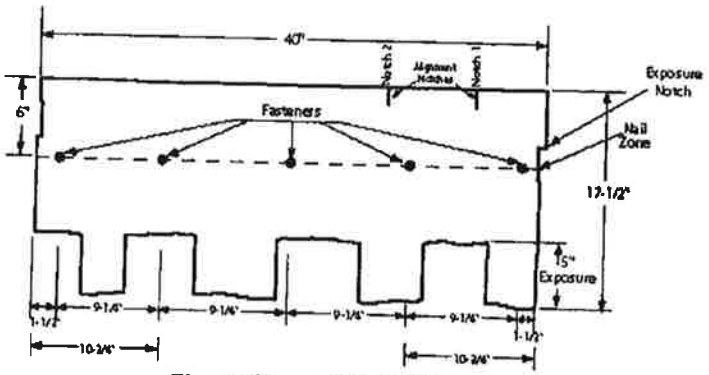

Figure 12. Heritage® Vintage® 5 Nail Pattern (non-HVHZ only)

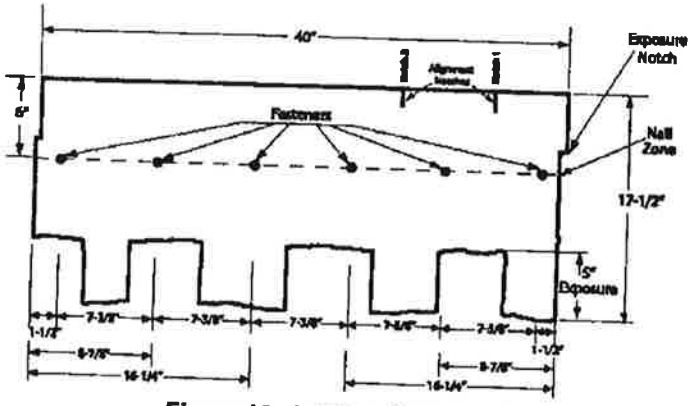

Figure 13. Heritage® Vintage® 6 Nail Pattern

Hip & Ridge
(Frederick & Joplin)

Basic Wind Speed (V_{ult}):	Max. 194 mph
Basic Wind Speed (V_{asd}):	Max. 150 mph
Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
Underlayment:	In accordance with FBC requirements.
Min. slope:	2:12 and in accordance with FBC requirements.
Installation:	Installed with 5-1/8 inch exposure in accordance with the FBC and manufacturer's published installation instructions. The direction of the exposed end shall be away from the prevailing wind.

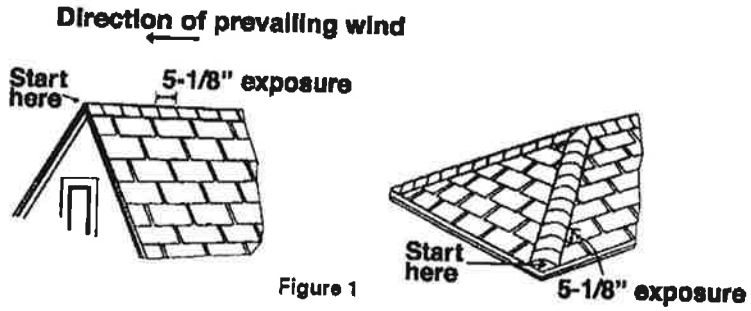

Figure 1

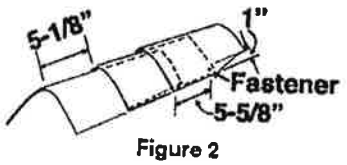

Figure 2

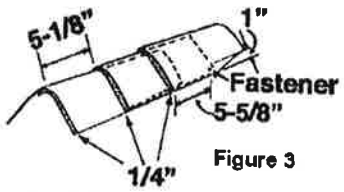

Figure 3

Figure 14. Hip & Ridge (Frederick & Joplin)

LIMITATIONS

1) Fire Classification is not within the scope of this evaluation.
2) The roof deck and the roof deck attachment shall be designed by others to meet the minimum design loads established for components and cladding and in accordance with FBC requirements.
3) The mean roof height shall be restricted to a maximum 33 ft in the HVHZ.
4) Classification to ASTM D 7158 applies to exposure B & C with a building mean roof height of 60-ft or less.
5) Deck substrates shall be clean, dry, and free from any irregularities and debris. All fasteners in the deck shall be checked for protrusion and corrected prior to underlayment application.
6) Shingles shall be installed starting at the eave in horizontal layers such that the laps shed water from the deck.
7) Installation of the evaluated products shall comply with this report, the FBC, and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and code compliant detail shall prevail.
8) All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.

COMPLIANCE STATEMENT

The products evaluated herein by Zachary R. Priest, P.E. have demonstrated compliance with the Florida Building Code, 6th Edition (2017) as evidenced in the referenced documents submitted by the named manufacturer.

2017.09.25
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Zachary R. Priest, P.E.
Florida Registration No. 74021
Organization No. ANE11669

CERTIFICATION OF INDEPENDENCE

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

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

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

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

END OF REPORT

dbpr

Product Approval
USER: Public User

FL #	FL2533-R21
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.hamer@saint-gobain.com
Authorized Signature	Mark Hamer mark.d.hamer@saint-gobain.com
Technical Representative	Mark D. Hamer
Address/Phone/Email	18 Moores Road Malvern, PA 19355 (610) 651-5847 Mark.D.Hamer@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	03/09/2020
Validated By	John W. Knezevich, PE ✓ Validation Checklist - Hardcopy Received
Certificate of Independence	FL2533_R21_COI_2018_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

Search Criteria

Refine Search

Code Version	2017	FL#	2533
Application Type	ALL	Product Manufacturer	ALL
Category	ALL	Subcategory	ALL
Application Status	ALL	Compliance Method	ALL
Quality Assurance Entity	ALL	Quality Assurance Entity Contract Expired	ALL
Product Model, Number or Name	ALL	Product Description	ALL
Approved for use in HVHZ	ALL	Approved for use outside HVHZ	ALL
Impact Resistant	ALL	Design Pressure	ALL
Other	ALL		

Search Results - Applications

FL#	Type	Manufacturer	Validated By	Status
FL2533-R21 History	Revision	CertainTeed Corporation-Roofing **Category:** Roofing **Subcategory:** Modified Bitumen Roof System	John W. Knezevich, PE (954) 772-6224	Approved

*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

Product Approval Method	Method 1 Option D
Date Submitted	12/11/2018
Date Validated	12/17/2018
Date Pending FBC Approval	12/19/2018
Date Approved	02/19/2019

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_R21_II_2018_12_FINAL_A1_ER_CERTAINTEED_MODBIT_FL2533-R21.pdf
Verified By: Robert Nieminen, PE PE-59166
Created by Independent Third Party: Yes

Evaluation Reports
FL2533_R21_AE_2018_12_FINAL_ER_CERTAINTEED_MODBIT_FL2533-R21.pdf
Created by Independent Third Party: Yes

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 Cap 30; Flintlastic Cap 30 CoolStar; 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-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 Cap 30; Flintlastic Cap 30 CoolStar; 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-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 Cap 30; Flintlastic Cap 30 CoolStar; 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; Flintlastic GTS CoolStar; Flintlastic GTS-FR; Flintlastic GTS-FR CoolStar; FlintClad	
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 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.

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TABLE 1E-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-51	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-52	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-53	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-54	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-55	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-56	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-57	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-58	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-59	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-60	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

NEMO|etc.

TABLE 1E-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 25)		MDP (psf)
		Base	Fasteners	Attack	Ply	Cap	
W-61	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-62	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-63	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-64	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-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; 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-66	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-67	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-68	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-69	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-70	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-71	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

NEMO | etc.

TABLE 1E-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-72	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-73	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-74	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-75	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-76	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-77	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-78	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-79	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 1E-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-80	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-81	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-82	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-83	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-84	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-85	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-86	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-87	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-88	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 1E-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-89	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-90	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-91	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-92	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-93	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-94	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-95	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-96	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 1F: 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-97	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-98	Min. 15/32-inch plywood at max 24-inch spans	FlintPrime or FlintPrime SA	SBS-SA	(Optional) SBS-SA	SBS-SA	-127.5

Florida dbpr

Product Approval
USER: Public User

FL #	FL20853-R2
Application Type	Revision
Code Version	2017
Application Status	Approved
	*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.
Comments	
Archived	
Product Manufacturer Address/Phone/Email	FT Synthetics Inc. 13120 76 Ave Unit 1 Surrey, NON-US 98225 (604) 594-3439 rrobson@ftsyn.com
Authorized Signature	Russ Robson rrobson@ftsyn.com
Technical Representative Address/Phone/Email	Russ Robson 12179 86 Ave Surrey, NON-US 00000 (604) 594-3439 rrobson@ftsyn.com
Quality Assurance Representative Address/Phone/Email	
Category	Roofing
Subcategory	Underlayments
Compliance Method	Evaluation Report from a Product Evaluation Entity
Evaluation Entity	Intertek Testing Services NA, Inc.
Quality Assurance Entity	Intertek Testing Services NA, Inc. - QA Entity
Quality Assurance Contract Expiration Date	01/01/2020
Validated By	Intertek Testing Services NA, Inc.
Certificate of Independence	

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D226	2009

Equivalence of Product Standards Certified By	
Sections from the Code	
Product Approval Method	Method 1 Option C

Date Submitted	01/08/2018
Date Validated	01/10/2018
Date Pending FBC Approval	
Date Approved	01/14/2018

Summary of Products

FL #	Model, Number or Name	Description
20853.1	FT Synthetics Roof Underlayments	Synthetic Roofing Underlayment
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:**		**Installation Instructions** FL20853_R2_II_FT Synthetics Roof Underlayments Installation Instructions.pdf Verified By: Intertek Testing Services NA, Inc. Created by Independent Third Party: **Evaluation Reports** FL20853_R2_AE_2018-01-01 CCRR-1028.pdf

Back Next

PLATINUM

Synthetic Roofing Underlayment

Installation Instructions:

Caution: Always follow Safety Instruction, Building Codes and Safe Work Practices issues by the local Govt. bodies (e.g. OSHA / WCB)

FT Synthetics products should be installed with Plastics Cap or Metal Cap nails with either ring shank or smooth shank Nails. DO NOT USE STAPLES. Use of staples will void the Manufacturer's warranty.

FT Synthetics products are a secondary layer protection approved for installation over Plywood with proper fasteners. FT Synthetics underlayment is an air, vapour and water barrier with <1 Perm. FT Synthetics underlayment is laid out horizontally with printed side up using 6" vertical laps and 4" horizontal laps. The overlaps ensure that the water runs over the overlaps without getting under the material. Before installing the underlayment ensure that the roof is clear of any debris or any sharp protrusions.

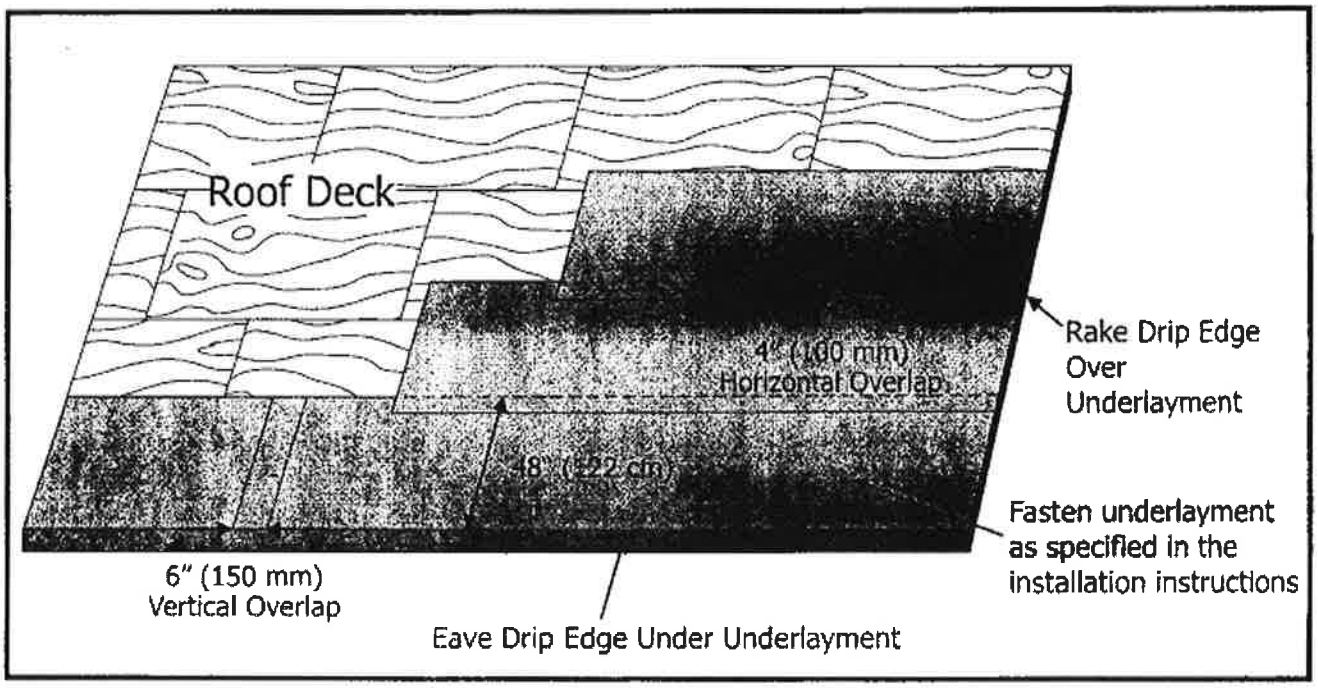
Product must be attached to the roofing structure using 1" plastic or metal cap nails. Product must be fastened with the nail pattern printed on the product. All anchoring must be performed flush to the roof, 90 degrees to the roof deck that will hold the material tightly with the plywood. The use of every other anchoring location printed on the product is also acceptable. For prolonged exposure, double the overlaps and use every anchor location. Product has 180 Days UV protection but it should not be considered a final roofing system. A proper final roofing system should be installed over the product to get the proper protection. Product is a secondary barrier used over plywood, under a roofing system like wood and asphalt shingles, tiles, slate and metal roof.

Safety Notification:

FT Synthetics products are designed with the GRIPSPOT technology for better skid protection for the roofer but product may become slippery due to high moisture, frost, rain, water, dust, debris or other conditions. Use precautions when working on the roof. Follow all local and federal safety codes when installing any roofing system including FT Synthetics products. Failure to adhere to those procedures may result in serious injury or even death.

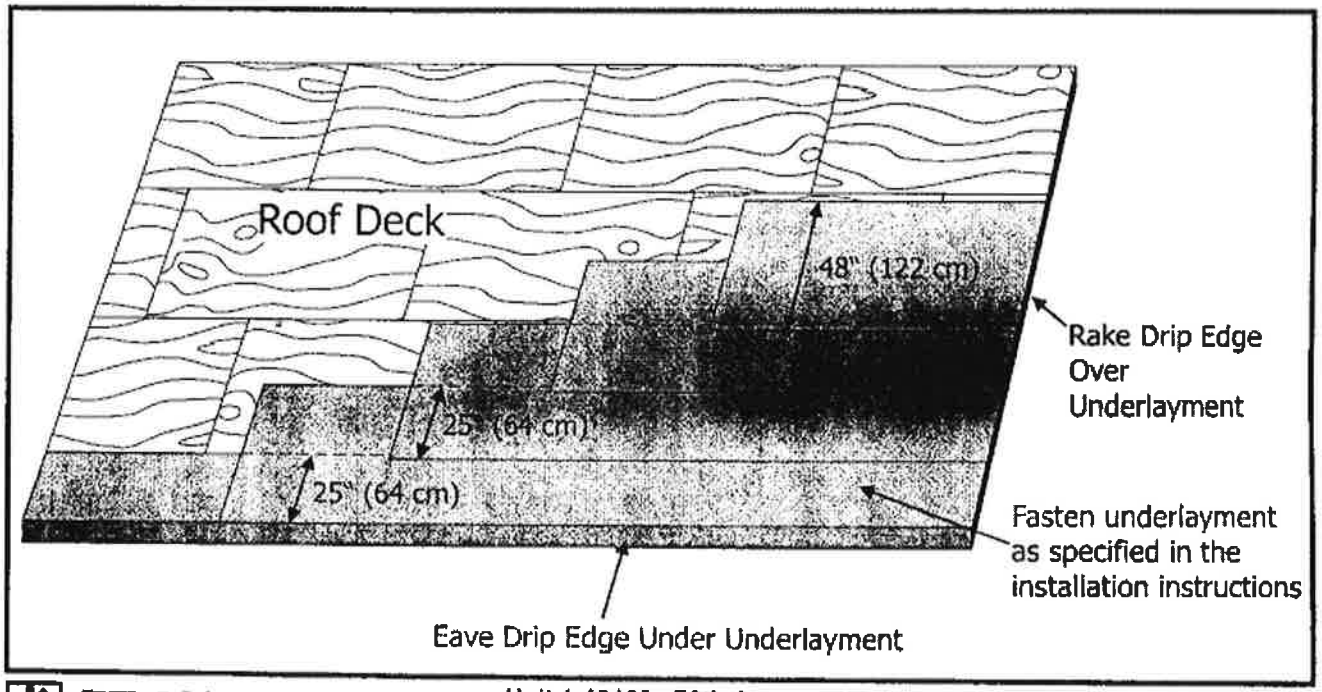
Single Layer Application of FT PLATINUM

For slopes greater that 4:12 FT PLATINUM should be installed horizontally starting from the bottom of the roof with a 4 inch overlaps working up the roof.



Double Layer Application of FT PLATINUM

For slopes 2:12 to 4:12 FT PLATINUM should be installed horizontally starting from the bottom of the roof with a 4 inch overlaps working up the roof.



FT SYNTHETICS
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www.ftsyn.com

dbpr **Product Approval**
USER: Public User

FL #	FL477-R8
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
Technical Representative	Mark D. Harner
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	Built up Roofing
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	03/09/2020
Validated By	John W. Knezevich, PE Validation Checklist - Hardcopy Received
Certificate of Independence	FL477_R8_COI_2017_01_COI_Nieminen.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D2178	2004
ASTM D3909	2012
ASTM D4601	2012
ASTM D4897	2009
FM 4470	2012
FM 4474	2011

Equivalence of Product Standards Certified By

Sections from the Code

dbpr **Product Approval**
USER: Public User

Search Criteria Refine Search

Code Version	2017	FL#	477
Application Type	ALL	Product Manufacturer	ALL
Category	ALL	Subcategory	ALL
Application Status	ALL	Compliance Method	ALL
Quality Assurance Entity	ALL	Quality Assurance Entity Contract Expired	ALL
Product Model, Number or Name	ALL	Product Description	ALL
Approved for use in HVHZ	ALL	Approved for use outside HVHZ	ALL
Impact Resistant	ALL	Design Pressure	ALL
Other	ALL		

Search Results - Applications

FL#	Type	Manufacturer	Validated By	Status
FL477-R8 History	Revision	CertainTeed Corporation-Roofing **Category:** Roofing **Subcategory:** Built up Roofing	John W. Knezevich, PE (954) 772-6224	Approved

*Approved by DBPR Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.

Product Approval Method	Method 1 Option D
Date Submitted	09/14/2017
Date Validated	09/15/2017
Date Pending FBC Approval	09/19/2017
Date Approved	12/12/2017

Summary of Products

FL #	Model, Number or Name	Description
477.1	Flintglas Built-Up Roof Systems	Built Up 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.) The DP listed in this application relates to one specific assembly. Refer to the ER Appendix for all assemblies and max design pressures. 2.) Refer to ER Section 5 for Limits of Use.

Installation Instructions
FL477_R8_II_2017_09_FINAL_A1_ER_CERTAINTEED_BUR_FL477-R8.pdf
Verified By: Robert Nieminen PE-59166
Created by Independent Third Party: Yes

Evaluation Reports
FL477_R8_AE_2017_09_FINAL_ER_CERTAINTEED_BUR_FL477-R8.pdf
Created by Independent Third Party: Yes

TABLE 1E-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		
CONVENTIONAL SYSTEMS:						
W-18	Min. 19/32-inch thick exterior grade plywood	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base or 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, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-19	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base or 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, equally spaced, staggered center rows	System 1, 2, 3 or 4	-52.5
W-20	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20 or 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, equally spaced, staggered center rows	System 3 or 4	-52.5
W-21	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 3 or 4	-60.0
W-22	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 3 or 4	-82.5
W-23	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 3 or 4	-105.0
HYBRID SYSTEMS:						
W-24	Min. 19/32-inch thick exterior grade plywood	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; 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, equally spaced, staggered center rows	System 8	-45.0*
W-25	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; 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, equally spaced, staggered center rows	System 7 or 8	-52.5
W-26	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 8	-52.5
W-27	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 8	-60.0
W-28	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 8	-82.5
W-29	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 8	-105.0

TABLE 1E-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		
CONVENTIONAL SYSTEMS:						
W-30	Min. 23/32-inch thick exterior grade plywood	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-30.0*
W-31	Min. 23/32-inch thick exterior grade plywood	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 24-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-32	Min. 23/32-inch thick exterior grade plywood	Yosemite Venting Base	Note 2	12-inch o.c. at 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-33	Min. 23/32-inch thick exterior grade plywood	Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-34	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows	System 2, 3 or 4	-97.5
W-35	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three, equally spaced, staggered center rows	System 3 or 4	-105.0
W-36	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows	System 2, 3 or 4	-127.5
HYBRID SYSTEMS:						
W-37	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows. Stress plates shall be primed with ASTM D41 primer or FlintPrime SA.	System 7 or 8	-97.5
W-38	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three, equally spaced, staggered center rows	System 8	-105.0
W-39	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows. Stress plates shall be primed with ASTM D41 primer or FlintPrime SA.	System 7 or 8	-127.5

FLORIDA DEPARTMENT OF
Business & Professional Regulation

Florida dbpr

Product Approval
USER: Public User

OFFICE OF THE SECRETARY

FL #	FL477-R8
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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Quality Assurance Representative	
Address/Phone/Email	
Category	Roofing
Subcategory	Built up Roofing
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	03/09/2020
Validated By	John W. Knezevich, PE ☑ Validation Checklist - Hardcopy Received
Certificate of Independence	FL477_R8_COI_2017_01_COI_Nieminen.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D2178	2004
ASTM D3909	2012
ASTM D4601	2012
ASTM D4897	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	09/14/2017
Date Validated	09/15/2017
Date Pending FBC Approval	09/19/2017
Date Approved	12/12/2017

Summary of Products

FL #	Model, Number or Name	Description
477.1	Flintglas Built-Up Roof Systems	Built Up 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.) The DP listed in this application relates to one specific assembly. Refer to the ER Appendix for all assemblies and max design pressures. 2.) Refer to ER Section 5 for Limits of Use.		**Installation Instructions** FL477_R8_II_2017_09_FINAL_A1_ER_CERTAINTEED_BUR_FL477-R8.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL477_R8_AE_2017_09_FINAL_ER_CERTAINTEED_BUR_FL477-R8.pdf Created by Independent Third Party: Yes

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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. Wind 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, Tru-Fast HD with MP-3 Plates or FlintFast #14 Fastener with FlintFast 3" Insulation Plates. Minimum ¾-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, Tru-Fast DP or HD with MP-3 or FlintFast #12 or #14 Fastener with FlintFast 3" Insulation Plates. Minimum ¾-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, Tru-Fast HD or CF with MP-3 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 or gypsum-based coverboard that meets the QA requirements of F.A.C. Rule 61G20-3 and is documented as meeting FBC 1505.1 and, for foam plastic, 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 ¾ 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 ¾ to 1 inch wide ribbons, 12-inch o.c.
   - Millennium One Step Foamable Adhesive (M-OSFA): Continuous ¼ to ½-inch wide ribbons, 12-inch o.c.
   - Millennium PG-1 Pump Grade Adhesive (M-PG1): Continuous ½ to ¾-inch wide ribbons, 12-inch o.c.
   - OMG OlyBond 500 or OlyBond Green (OB500): Continuous ¾-inch wide ribbons, 12-inch o.c. (PaceCart or SpotShot)
   - ICP Adhesives CR-20: Continuous 2.5 to 3.5-inch wide ribbons, 12-inch o.c.
   - *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 thick)
   - Ashland Pliodeck (A-PD) @ 6-inch o.c. MDP -277.5 psf (Min. 1.0-inch thick)
   - Dow INSTA-STIK Quik Set Insulation Adhesive (D-IS): MDP -120.0 psf (Min. 1.0-inch thick)
   - Millennium One Step Foamable Adhesive (M-OSFA): MDP -157.5 psf (Min. 1.0-inch thick)
   - Millennium PG-1 Pump Grade Adhesive (M-PG1): MDP -157.5 psf (Min. 1.0-inch thick)
   - OMG OlyBond 500 (OB500): MDP -45.0 psf (Min. 0.5-inch thick Multi-Max FA-3)
   - OMG OlyBond 500 (OB500): MDP -187.5 psf (Min. 0.5-inch thick ISO 95+ GL)
   - OMG OlyBond 500 (OB500): MDP -315.0 psf (Min. 0.5-inch thick ENRGY 3)
   - OMG OlyBond 500 (OB500): MDP -487.5 psf (Min. 0.5-inch thick ACFoam II)
   - ICP Adhesives CR-20: MDP -117.5 psf (Min. 1.0-inch thick)
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 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 Recover Applications using System Type D, the insulation is optional; however, the existing roof system shall be suitable for a recover application.

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.

15. Unless otherwise noted, a Flintglas® Built-Up Roof Cover consists of one of the following. Systems shall be surfaced in accordance with CertainTeed requirements to meet the fire resistance requirements of FBC 1505.1.

System Type	Description
1	Three or four plies Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI applied in hot asphalt at 25 lb/square with flood coat & gravel or approved roof coating.
2	One ply Glasbase, All Weather/Empire Base, Flexiglas Base or Flintlastic Base 20 followed by two or three plies Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI applied in hot asphalt at 25 lb/square with flood coat & gravel or approved roof coating.
3	Two or three plies Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI, followed by Flintglas Mineral Surface Cap or Flintlgas Mineral Surface Cap CoolStar applied in hot asphalt at 25 lb/square.
4	One ply Glasbase, All Weather/Empire Base, Flexiglas Base or Flintlastic Base 20 followed by two or three plies Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI, followed by Flintglas Mineral Surface Cap or Flintlgas Mineral Surface Cap CoolStar applied in hot asphalt at 25 lb/square.
5	Yosemite Venting Base applied in hot asphalt in 24-inch diameter spots in grid with spots spaced 30-inch o.c. followed by two or three plies Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI applied in hot asphalt at 25 lb/square with flood coat & gravel or approved roof coating.
6	Yosemite Venting Base applied in hot asphalt in 24-inch diameter spots in grid with spots spaced 30-inch o.c. followed by one or two plies Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI, followed by Flintglas Mineral Surface Cap or Flintlgas Mineral Surface Cap CoolStar applied in hot asphalt at 25 lb/square.
7	Black Diamond Base Sheet or Flintlastic UltraGlass SA self-adhered, followed by two or three plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI applied in hot asphalt at 25 lb/square with flood coat & gravel or approved roof coating.
8	Black Diamond Base Sheet or Flintlastic UltraGlass SA self-adhered, followed by one or two plies Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI, followed by Flintglas Mineral Surface Cap or Flintlgas Mineral Surface Cap CoolStar applied in hot asphalt at 25 lb/square.

16. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609 for determination of design wind loads.

TABLE 1A: WOOD DECKS – NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Anchor Sheet			Base Insulation		Top Insulation		Roof Cover (Note 15)	MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Type	Attach		
CONVENTIONAL SYSTEMS:										
W-1	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base, Flintlastic Base 20 or Poly SMS 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, equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	Min. ¼-inch DensDeck primed with ASTM D41 primer	HA	System 1, 2, 3 or 4	-45.0*
W-2	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base or Poly SMS 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, 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 or CR-20, 4-inch o.c.	Min. ¼-inch DensDeck primed with ASTM D41 primer	HA full coverage or OB500, M-OSFA, A-PD, D-IS or CR-20, 6-inch o.c.	System 3 or 4	-52.5
W-3	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base or Poly SMS 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, 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 or CR-20, 4-inch o.c.	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	HA full coverage or OB500, M-OSFA, A-PD, D-IS or CR-20, 6-inch o.c.	System 3 or 4	-60.0
HYBRID SYSTEMS:										
W-4	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase, All Weather Empire, Flexiglas Base, Flintlastic Base 20 or Poly SMS 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, 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	System 8	-45.0*
W-5	Min. 19/32-inch plywood at max. 24-inch spans	Glasbase or Flintglas Premium Ply Sheet Type VI or Poly SMS 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, 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	System 8	-60.0

TABLE 1B: 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		
W-6	Min. 23/32-inch thick exterior grade plywood	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3, H-Shield	Note 2	1 per 2 ft^2	Min. ½-inch Structodek High Density Fiberboard Roof Insulation, min. ¾-inch FescoBoard (homogeneous), min. ¼-inch SECUROCK Gypsum-Fiber Roof Board, DensDeck or DensDeck Prime	HA	System 1, 2, 3 or 4	-45.0*

TABLE 1C: 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		
W-7	Min. 23/32-inch thick exterior grade plywood	(Optional) One or more layers, any combination, loose laid	Min. ½-inch Structodek High Density Fiberboard Roof Insulation, min. ¾-inch FescoBoard (homogeneous), min. ¼-inch SECUROCK Gypsum-Fiber Roof Board, DensDeck or DensDeck Prime	Note 2	1 per 2 ft^2	System 1, 2, 3 or 4	-45.0*

TABLE 1D: WOOD DECKS – NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER
SYSTEM TYPE D: PRELIMINARILY ATTACHED INSULATION, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer(s)		Base or Anchor Sheet			Roof Cover (Note 15)	MDP (psf)
		Type	Attach	Base	Fasteners	Attach		
CONVENTIONAL SYSTEMS:								
W-8	Min. 23/32-inch thick exterior grade plywood	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-30.0*
W-9	Min. 23/32-inch thick exterior grade plywood	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 24-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-10	Min. 23/32-inch thick exterior grade plywood	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Yosemite Venting Base	Note 2	12-inch o.c. at 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-11	Min. 23/32-inch thick exterior grade plywood	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*

TABLE 1D: WOOD DECKS – NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER
SYSTEM TYPE D: PRELIMINARILY ATTACHED INSULATION, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer(s)		Base or Anchor Sheet			Roof Cover (Note 15)	MDP (psf)
		Type	Attach	Base	Fasteners	Attach		
W-12	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; Flexiglas; Flintlastic Base 20 or Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows. Stress plates shall be primed with ASTM D41 primer or FlintPrime SA.	System 2, 3 or 4	-97.5
W-13	Min. 19/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; Flexiglas; Flintlastic Base 20 or Poly SMS Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three, equally spaced, staggered center rows	System 3 or 4	-105.0
W-14	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; Flexiglas; Flintlastic Base 20 or Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows. Stress plates shall be primed with ASTM D41 primer or FlintPrime SA.	System 2, 3 or 4	-127.5
HYBRID SYSTEMS:								
W-15	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; Flexiglas; Flintlastic Base 20 or Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows. Stress plates shall be primed with ASTM D41 primer or FlintPrime SA.	System 7 or 8	-97.5
W-16	Min. 19/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; Flexiglas; Flintlastic Base 20 or Poly SMS Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three, equally spaced, staggered center rows	System 8	-105.0
W-17	Min. 15/32-inch plywood at max 24-inch spans	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows. Stress plates shall be primed with ASTM D41 primer or FlintPrime SA.	System 7 or 8	-127.5

TABLE 1E-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		
CONVENTIONAL SYSTEMS:						
W-18	Min. 19/32-inch thick exterior grade plywood	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base or 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, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-19	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base or 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, equally spaced, staggered center rows	System 1, 2, 3 or 4	-52.5
W-20	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20 or 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, equally spaced, staggered center rows	System 3 or 4	-52.5
W-21	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 3 or 4	-60.0
W-22	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 3 or 4	-82.5
W-23	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 3 or 4	-105.0
HYBRID SYSTEMS:						
W-24	Min. 19/32-inch thick exterior grade plywood	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; 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, equally spaced, staggered center rows	System 8	-45.0*
W-25	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; 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, equally spaced, staggered center rows	System 7 or 8	-52.5
W-26	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 8	-52.5
W-27	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 8	-60.0
W-28	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 8	-82.5
W-29	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; 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, equally spaced, staggered center rows	System 8	-105.0

TABLE 1E-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		
CONVENTIONAL SYSTEMS:						
W-30	Min. 23/32-inch thick exterior grade plywood	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-30.0*
W-31	Min. 23/32-inch thick exterior grade plywood	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 24-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-32	Min. 23/32-inch thick exterior grade plywood	Yosemite Venting Base	Note 2	12-inch o.c. at 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-33	Min. 23/32-inch thick exterior grade plywood	Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
W-34	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows	System 2, 3 or 4	-97.5
W-35	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three, equally spaced, staggered center rows	System 3 or 4	-105.0
W-36	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows	System 2, 3 or 4	-127.5
HYBRID SYSTEMS:						
W-37	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows. Stress plates shall be primed with ASTM D41 primer or FlintPrime SA.	System 7 or 8	-97.5
W-38	Min. 19/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three, equally spaced, staggered center rows	System 8	-105.0
W-39	Min. 15/32-inch plywood at max 24-inch spans	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base	Flintfast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast MP3 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, equally spaced, staggered center rows. Stress plates shall be primed with ASTM D41 primer or FlintPrime SA.	System 7 or 8	-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		
S-1	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	Note 2	1 per 4 ft^2	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	HA, D-IS, M-OSFA, OB500 or CR-20	System 1, 2, 3 or 4	-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 ISO, ENRGY 3 or H-Shield	Note 2	1 per 2 ft^2	Min. ½-inch Structodek High Density Fiberboard Roof Insulation, min. ¾-inch FescoBoard (homogeneous).	HA	System 1, 2, 3 or 4	-45.0*
S-3	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	Note 2	1 per 2 ft^2	Min. ¼-inch DensDeck or DensDeck Prime	HA	System 1, 2, 3 or 4	-45.0*
S-4	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	Note 2	1 per 2 ft^2	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	HA, D-IS, M-OSFA, OB500 or CR-20	System 1, 2, 3 or 4	-45.0*
S-5	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	Note 2	1 per 3.2 ft^2	Min. ½-inch Structodek High Density Fiberboard Roof Insulation, min. ¾-inch FescoBoard (homogeneous) or min. ¼-inch DensDeck or DensDeck Prime.	HA	System 1, 2, 3, 4, 5 or 6	-45.0*
S-6	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Mult-Max FA3	Note 2	1 per 1.33 ft^2	Min. ¾-inch FescoBoard (homogeneous)	HA	System 4	-52.5
S-7	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	Note 2	1 per 1.6 ft^2	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	HA, D-IS, M-OSFA, OB500 or CR-20	System 1, 2, 3 or 4	-60.0
S-8	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Mult-Max FA3	Note 2	1 per 1.33 ft^2	Min. ½-inch Structodek High Density Fiberboard	HA	System 4	-67.5

TABLE 2B: STEEL OR STRUCTURAL CONCRETE 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(s)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners	Attach		
CONVENTIONAL SYSTEMS:							
S-9	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	(Optional) One or more layers, any combination, loose laid	Min. ¾-inch FescoBoard (homogeneous)	Note 2	1 per 2.67 ft^2	System 1, 2, 3 or 4	-30.0*
S-10	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	(Optional) One or more layers, any combination, loose laid	Min. ½-inch Structodek High Density Fiberboard Roof Insulation	Note 2	1 per 4 ft^2	System 1, 2, 3 or 4	-37.5*
S-11	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	One or more layers, any combination, min. 2-inch, loose laid	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 4 ft^2	System 1, 2, 3 or 4	-45.0*
S-12	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	(Optional) One or more layers, any combination, loose laid	Min. ½-inch Structodek High Density Fiberboard Roof Insulation, min. ¾-inch FescoBoard (homogeneous) or min. ¼-inch DensDeck	Note 2	1 per 2 ft^2	System 1, 2, 3 or 4	-45.0*
S-13	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	(Optional) One or more layers, any combination, loose laid	Min. 1-inch FescoBoard (homogeneous) or min. 1.5-inch FescoBoard (laminated)	Note 2	1 per 1.6 ft^2	System 5 or 6	-45.0*
S-14	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	(Optional) One or more layers, any combination, loose laid	Min. ½-inch Structodek, Structodek HD, GP HD Roof Fiberboard or Temple HD1 or HD6	Note 2	1 per 2 ft^2	System 5 or 6	-45.0*
S-15	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 ENRGY 3, loose laid.	Min. ½-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.78 ft^2	System 1, 2, 3 or 4	-60.0
S-16	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ACFoam II, FlintBoard or H-Shield, loose laid	Min. ½-inch SECUROCK Gypsum-Fiber Roof Board	FlintFast 3" Plates with FlintFast #14 or Trufast MP-3 with Trufast HD	1 per 1.33 ft^2	System 1 or 2 *(with hot asphalt @ 60 lb/square & gravel at 400 lb/square)*, 3 or 4	-157.5
S-17	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ACFoam II, FlintBoard or H-Shield, loose laid	Min. ½-inch DensDeck Prime	FlintFast 3" Plates with FlintFast #14 or Trufast MP-3 with Trufast HD	1 per 1 ft^2	System 1 or 2 *(with hot asphalt @ 60 lb/square & gravel at 400 lb/square)*, 3 or 4	-157.5
S-18	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ACFoam II, FlintBoard or H-Shield, loose laid	Min. ½-inch SECUROCK Gypsum-Fiber Roof Board	FlintFast 3" Plates with FlintFast #14 or Trufast MP-3 with Trufast HD	1 per 1 ft^2	System 1 or 2 *(with hot asphalt @ 60 lb/square & gravel at 400 lb/square)*, 3 or 4	-172.5
HYBRID SYSTEMS:							
S-19	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	(Optional) One or more layers, any combination, loose laid	Min. ¼-inch DensDeck; DensDeck Prime	Note 2	1 per 2 ft^2	System 8	-30.0*
S-20	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	(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	System 8	-52.5

TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (Tear-Off) or RECOVER
SYSTEM TYPE D: PRELIMINARILY ATTACHED INSULATION, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer(s)		Base or Anchor Sheet			Roof Cover (Note 15)	MDP (psf)
		Type	Attach	Base	Fasteners	Attach		
S-21	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-30.0*
S-22	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; All Weather/Empire Base; Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 24-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
S-23	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Yosemite Venting Base	Note 2	12-inch o.c. at 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
S-24	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 36-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
S-25	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	Note 2	12-inch o.c. at 3-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	System 3 or 4	-52.5
S-26	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Glasbase	OMG Flat Bottom Plates with OMG #14 HD (Accutrac)	6-inch o.c. at 4-inch lap and 6-inch o.c. in two, equally spaced, staggered center rows	System 3 or 4	-67.5
S-27	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Note 2	6-inch o.c. at 4-inch lap and 6-inch o.c. in two, equally spaced, staggered center rows	System 3 or 4	-67.5
S-28	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch, One or more layers, any combination	Prelim. Attached	Poly SMS Base	Note 2	12-inch o.c. at 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	System 2, 3 or 4	-112.5

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TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

Sys. No.	Deck (Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
			Type	Attach	Type	Attach		
C-1.	Structural concrete	ASTM D41	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	HA	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	HA	System 1, 2, 3 or 4	-225.0
C-2.	Structural concrete	ASTM D41	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	HA	Min. ½-inch Structodek High Density Fiberboard	HA	System 1, 2, 3 or 4	-227.0
C-3.	Structural concrete	ASTM D41	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	HA	Min. ¼-inch DensDeck or DensDeck Prime	HA	System 1, 2, 3 or 4	-240.0
C-4.	Structural concrete	ASTM D41	Min. 1.5-inch ACFoam II or FlintBoard ISO	HA	Min. ¾-inch FescoBoard (homogeneous)	HA	System 1, 2, 3 or 4	-412.0
C-5.	Structural concrete	ASTM D41	Min. 1.5-inch ACFoam II or FlintBoard ISO	HA	Min. ½-inch DuraBoard (homogeneous)	HA	System 1, 2, 3 or 4	-430.0
C-6.	Structural concrete	None	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	A-PD	Min. ½-inch Structodek High Density Fiberboard or Min. ¼-inch DensDeck	A-PD	System 1, 2, 3 or 4	-105.0
C-7.	Structural concrete	None	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	A-PD 6-inch o.c.	Min. ½-inch Structodek High Density Fiberboard or Min. ¼-inch DensDeck	A-PD 6-inch o.c.	System 1, 2, 3 or 4	-217.5
C-8.	Structural concrete	None	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	A-PD	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	A-PD	System 1, 2, 3 or 4	-217.5
C-9.	Structural concrete	None	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	D-IS	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	D-IS	System 1, 2, 3 or 4	-225.0
C-10.	Structural concrete	None	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-OSFA	Min. ½-inch Structodek High Density Fiberboard	M-OSFA	System 1, 2, 3 or 4	-127.5
C-11.	Structural concrete	None	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-PG1	Min. ½-inch Structodek High Density Fiberboard	M-PG1	System 1, 2, 3 or 4	-180.0
C-12.	Structural concrete	None	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-OSFA	Min. ¼-inch DensDeck	M-OSFA	System 1, 2, 3 or 4	-232.5
C-13.	Structural concrete	None	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-PG1	Min. ¼-inch DensDeck	M-PG1	System 1, 2, 3 or 4	-240.0
C-14.	Structural concrete	None	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-OSFA or M-PG1	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA or M-PG1	System 1, 2, 3 or 4	-225.0
C-15.	Structural concrete	None	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	OB500	Min. ½-inch Structodek High Density Fiberboard	OB500	System 1, 2, 3 or 4	-120.0
C-16.	Structural concrete	None	Min. 1.5-inch thick ACFoam II or FlintBoard ISO.	OB500	Min. ¼-inch DensDeck or DensDeck Prime	OB500	System 1, 2, 3 or 4	-150.0
C-17.	Structural concrete	None	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	OB500	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	OB500	System 1, 2, 3 or 4	-225.0

TABLE 3A: CONCRETE DECKS – NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

Sys. No.	Deck (Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
			Type	Attach	Type	Attach		
C-18.	Structural concrete	None	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ½-inch Structodek High Density Fiberboard or DuraBoard (homogeneous) or min. 1.5-inch FescoBoard (laminated)	CR-20	System 1, 2,3 or 4	-180.0
C-19.	Structural concrete	None	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	System 1, 2, 3 or 4	-225.0
C-20.	Structural concrete	None	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ¼-inch DensDeck	CR-20	System 1, 2, 3 or 4	-240.0

TABLE 3B: CONCRETE 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)
C-21.	Structural concrete	ASTM D41	System 7 or 8	-240.0
C-22.	Structural concrete	ASTM D41	System 1, 2, 3, 4	-635.0

TABLE 4A: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	LWC (Note 14)	Base Insulation Layer		Coverboard		Roof Cover (Note 15)	MDP (psf)
			Type	Attach	Type	Attach		
LWC-1	Structural concrete	Min. 200 psi, min. 2-inch thick Elastizell	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	A-PD 6-inch o.c.	Min. ½-inch Structodek High Density Fiberboard or Min. ¼-inch DensDeck	A-PD 6-inch o.c.	System 1, 2, 3 or 4	-187.5
LWC-2	Structural concrete	Min. 200 psi, min. 2-inch thick Elastizell	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	A-PD 6-inch o.c.	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	A-PD 6-inch o.c.	System 1, 2, 3 or 4	-217.5
LWC-3	Structural concrete	Min. 200 psi, min. 2-inch thick Elastizell	Min. 1.5-inch thick ACFoam II or FlintBoard ISO.	OB500	Min. ¼-inch DensDeck or DensDeck Prime	OB500	System 1, 2, 3 or 4	-150.0
LWC-4	Structural concrete	Min. 200 psi, min. 2-inch thick Elastizell	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	OB500	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	OB500	System 1, 2, 3 or 4	-225.0
LWC-5	Structural concrete	Min. 200 psi, min. 2-inch thick Celcore, Elastizell or Celcore	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ½-inch Structodek High Density Fiberboard or DuraBoard (homogeneous) or min. 1.5-inch FescoBoard (laminated)	CR-20	System 1, 2, 3 or 4	-180.0
LWC-6	Structural concrete	Min. 200 psi, min. 2-inch thick Celcore, Elastizell or Celcore	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board or DensDeck or DensDeck Prime	CR-20	System 1, 2, 3 or 4	-180.0

TABLE 4C: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE E: MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Base Sheet			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners	Attach		
CONVENTIONAL SYSTEMS:							
LWC-7	Min. 26 ga. steel at max 5 ft spans or structural concrete	Min. 200 psi, min 2-inch thick Range II Elastizell Lightweight Insulating Concrete.	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	Trufast FM-90 Base Ply Fasteners or Twin Loc-Nails (1.8 inch)	7½-inch o.c. at the 4-inch lap and 7½-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-30.0
LWC-8	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 200 psi, min 2-inch thick Range II Elastizell Lightweight Insulating Concrete.	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	Trufast FM-90 Base Ply Fasteners or Twin Loc-Nails (1.8 inch)	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0
LWC-9	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 250 psi, min 2-inch thick Mearlcrete.	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	OMG CR Base Ply Fasteners (1.7)	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0
LWC-10	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 250 psi, min 2-inch thick Mearlcrete.	Poly SMS Base	OMG CR Base Ply Fasteners (1.7)	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-52.5
LWC-11	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 300 psi, min 2-inch thick Mearlcrete.	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	OMG CR Base Ply Fasteners (1.7)	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	System 3 or 4	-52.5
LWC-12	Min. 22 ga. steel at max 5 ft spans or structural concrete	Concrecel Bonding Agent on deck; Min. 300 psi, min 2¼-inch thick Concrecel Concrete.	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	OMG CR Base Ply Fasteners (1.7)	7-inch o.c. at the 3-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-52.5
LWC-13	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Approved cellular lightweight insulating concrete. *Note: To qualify the LWIC under this assembly, a 1.8-inch Twin Loc-Nail shall achieve an average withdrawal of 88 lbf when tested per TAS 105 or ANSI/SPRI FX-1*	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	9-inch o.c. at the 4-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-60.0
LWC-14	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Approved cellular lightweight insulating concrete. *Note: To qualify the LWIC under this assembly, a 1.8-inch Twin Loc-Nail shall achieve an average withdrawal of 77 lbf when tested per TAS 105 or ANSI/SPRI FX-1*	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-67.5
LWC-15	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 350 psi, min. 3-inch thick Approved cellular lightweight insulating concrete. *Note: To qualify the LWIC under this assembly, a 1.8-inch Twin Loc-Nail shall achieve an average withdrawal of 97 lbf when tested per TAS 105 or ANSI/SPRI FX-1*	Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Trufast FM-90 Base Ply Fasteners	7-inch o.c. at the 4-inch lap and 10-inch o.c. in two, equally spaced, staggered center rows	System 3 or 4	-67.5

TABLE 4C: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE E: MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Base Sheet			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners	Attach		
LWC-16	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Approved cellular lightweight insulating concrete. *Note: To qualify the LWIC under this assembly, a 1.8-inch Twin Loc-Nail shall achieve an average withdrawal of 110 lbf when tested per TAS 105 or ANSI/SPRI FX-1*	Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	9-inch o.c. at the 4-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows	System 3 or 4	-75.0
LWC-17	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 300 psi, min 2-inch thick Celcore Cellular Concrete. After setting to support foot traffic, Celcore PVA Curing Compound is applied.	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	Trufast FM-90 Base Ply Fasteners	7-inch o.c. at the 3-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	System 3 or 4	-75.0
HYBRID SYSTEMS:							
LWC-18	Min. 26 ga. steel at max 5 ft spans or structural concrete	Min. 200 psi, min 2-inch thick Range II Elastizell Lightweight Insulating Concrete.	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	Trufast FM-90 Base Ply Fasteners or Twin Loc-Nails (1.8 inch)	7½-inch o.c. at the 4-inch lap and 7½-inch o.c. in two, equally spaced, staggered center rows	System 8	-30.0
LWC-19	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 200 psi, min 2-inch thick Range II Elastizell Lightweight Insulating Concrete.	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	Trufast FM-90 Base Ply Fasteners or Twin Loc-Nails (1.8 inch)	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	System 8	-45.0
LWC-20	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Approved cellular lightweight insulating concrete. *Note: To qualify the LWIC under this assembly, a 1.8-inch Twin Loc-Nail shall achieve an average withdrawal of 88 lbf when tested per TAS 105 or ANSI/SPRI FX-1*	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base or Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	9-inch o.c. at the 4-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows	System 8	-60.0
LWC-21	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 350 psi, min. 3-inch thick Approved cellular lightweight insulating concrete. *Note: To qualify the LWIC under this assembly, a 1.8-inch Twin Loc-Nail shall achieve an average withdrawal of 97 lbf when tested per TAS 105 or ANSI/SPRI FX-1*	Flexiglas Base; Flintlastic Base 20 or Poly SMS Base	Trufast FM-90 Base Ply Fasteners	7-inch o.c. at the 4-inch lap and 10-inch o.c. in two, equally spaced, staggered center rows	System 8	-67.5
LWC-22	Min. 22 ga. steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Approved cellular lightweight insulating concrete. *Note: To qualify the LWIC under this assembly, a 1.8-inch Twin Loc-Nail shall achieve an average withdrawal of 110 lbf when tested per TAS 105 or ANSI/SPRI FX-1*	Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	9-inch o.c. at the 4-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows	System 8	-75.0

TABLE 5A: CEMENTITIOUS WOOD FIBER DECKS – NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
		Type	Attach	Type	Attach		
CONVENTIONAL SYSTEMS:							
CWF-1.	Tectum	Min. 1.5-inch FlintBoard ISO, ACFoam II, ENRGY 3 or Multi-Max FA3	OB500	Min. ½-inch Structodek High Density Fiberboard, Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board or DensDeck or DensDeck Prime	OB500	System 1, 2, 3 or 4	-45.0
CWF-2.	Tectum	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ½-inch Structodek High Density Fiberboard or DuraBoard (homogeneous) or min. 1.5-inch FescoBoard (laminated), min. ¼-inch SECUROCK Gypsum-Fiber Roof Board or DensDeck or DensDeck Prime	CR-20	System 1, 2, 3 or 4	-52.5
HYBRID SYSTEMS:							
CWF-3.	Tectum	Min. 1.5-inch FlintBoard ISO, ACFoam II, ENRGY 3 or Multi-Max FA3	OB500	Min. ¼-inch DensDeck or DensDeck Prime	OB500	System 7 or 8	-30.0
CWF-4.	Tectum	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ¼-inch DensDeck or DensDeck Prime	CR-20	System 7 or 8	-30.0
CWF-5.	Tectum	Min. 1.5-inch FlintBoard ISO, ACFoam II, ENRGY 3 or Multi-Max FA3	OB500	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	OB500	System 7 or 8	-45.0
CWF-6.	Tectum	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	System 7 or 8	-45.0

TABLE 5B: CEMENTITIOUS WOOF FIBER DECKS – NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Anchor Sheet			Base Insulation		Top Insulation		Roof Cover (Note 15)	MDP (psf)
		Type	Fasteners	Attach	Type	Attach	Type	Attach		
CONVENTIONAL SYSTEMS:										
CWF-7.	Tectum	All Weather / Empire Base or Poly SMS Base	Insuldeck Loc-Nails	9-inch o.c. at the 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	HA	Min. ¾-inch FescoBoard (homogeneous) or min. ½-inch Structodek High Density Fiberboard	HA	System 1, 2, 3 or 4	-30.0*
CWF-8.	Tectum	All Weather / Empire Base or Poly SMS Base	Insuldeck Loc-Nails	7½-inch o.c. at the 4-inch lap and 7½-inch o.c. in two, equally spaced, staggered center rows	(Optional) Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	HA	Min. ¾-inch FescoBoard (homogeneous) or min. ½-inch Structodek High Density Fiberboard	HA	System 1, 2, 3 or 4	-45.0*
CWF-9.	Tectum	Glasbase; Flexiglas Base; Flintlastic Base 20 or All Weather / Empire Base or Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	HA	Min. ¾-inch FescoBoard (homogeneous) or min. ½-inch Structodek High Density Fiberboard	HA	System 4	-60.0
HYBRID SYSTEMS:										
CWF-10.	Tectum	Glasbase; Flexiglas Base; Flintlastic Base 20 or All Weather / Empire Base or Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	HA	None	N/A	System 8	-60.0

TABLE 5C: CEMENTITIOUS WOOD FIBER 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(s)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners	Attach		
CWF-11.	Tectum	(Optional) One or more layers, any combination, loose laid	Min. ½-inch Structodek High Density Fiberboard Roof Insulation	OMG Polymer GypTec with 3" GypTec Plate	1 per 2 ft^2	System 1, 2, 3 or 4	-45.0*
CWF-12.	Tectum	(Optional) One or more layers, any combination, loose laid	Min. ¼-inch DensDeck or DensDeck Prime	OMG Polymer GypTec with 3" GypTec Plate	1 per 1.78 ft^2	System 1, 2, 3 or 4	-45.0*
CWF-13.	Tectum	(Optional) One or more layers, any combination, loose laid	Min. ½-inch Structodek High Density Fiberboard Roof Insulation, min. ¼-inch DensDeck or DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Trufast Twin Loc-Nails (minimum 1-inch embedment into deck)	1 per 2 ft^2	System 1, 2, 3 or 4	-45.0*

TABLE 5D: CEMENTITOUS WOOD FIBER DECKS – NEW CONSTRUCTION or REROOF (Tear-Off)
SYSTEM TYPE E: MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)	MDP (psf)
		Base	Fasteners	Attach		
CWF-14.	Tectum	All Weather / Empire Base or Poly SMS Base	Trufast Insuldeck Loc-Nails	9-inch o.c. at the 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-30.0*
CWF-15.	Tectum	All Weather / Empire Base or Poly SMS Base	Trufast Insuldeck Loc-Nails	7½-inch o.c. at the 4-inch lap and 7½-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
CWF-16.	Tectum	Glasbase; Flexiglas Base; Flintlastic Base 20 or All Weather / Empire Base or Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	System 3 or 4	-67.5

TABLE 6A: GYPSUM DECKS – REROOF (Tear-Off)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
		Type	Attach	Type	Attach		
G-1.	Existing sound gypsum or gypsum plank	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-OSFA	Min. ½-inch Structodek High Density Fiberboard	M-OSFA	System 1, 2, 3 or 4	-127.5
G-2.	Existing sound gypsum or gypsum plank	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-OSFA	Min. ¼-inch DensDeck	M-OSFA	System 1, 2, 3 or 4	-232.5
G-3.	Existing sound gypsum or gypsum plank	Min. 2-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-OSFA	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA	System 1, 2, 3 or 4	-202.5
G-4.	Existing sound gypsum or gypsum plank	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	OB500	Min. ½-inch Structodek High Density Fiberboard	OB500	System 1, 2, 3 or 4	-120.0
G-5.	Existing sound gypsum or gypsum plank	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	OB500	Min. ¼-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	OB500	System 1, 2, 3 or 4	-135.0
G-6.	Existing sound gypsum or gypsum plank	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ½-inch Structodek High Density Fiberboard or DuraBoard (homogeneous) or min. 1.5-inch FescoBoard (laminated)	CR-20	System 1, 2, 3 or 4	-180.0
G-7.	Existing sound gypsum or gypsum plank	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	System 1, 2, 3 or 4	-225.0
G-8.	Existing sound gypsum or gypsum plank	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ¼-inch DensDeck	CR-20	System 1, 2, 3 or 4	-240.0

TABLE 6B: GYPSUM DECKS – REROOF (Tear-Off)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Anchor Sheet			Base Insulation		Top Insulation		Roof Cover (Note 15)	MDP (psf)
		Type	Fasteners (Note 11)	Attach	Type	Attach	Type	Attach		
CONVENTIONAL SYSTEMS:										
G-9.	Existing sound gypsum or gypsum plank	All Weather / Empire Base or Poly SMS Base	Trufast FM-75 or FM-90 Base Ply Fasteners	9-inch o.c. at the 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	(Optional) Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	HA	Min. ¾-inch FescoBoard (homogeneous) or min. ½-inch Structodek High Density Fiberboard	HA	System 1, 2, 3 or 4	-45.0*
G-10.	Existing sound gypsum or gypsum plank	Glasbase; Flexiglas Base; Flintlastic Base 20 or All Weather / Empire Base or Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	HA	Min. ¾-inch FescoBoard (homogeneous) or min. ½-inch Structodek High Density Fiberboard	HA	System 4	-60.0
HYBRID SYSTEMS:										
G-11.	Existing sound gypsum or gypsum plank	Glasbase; Flexiglas Base; Flintlastic Base 20 or All Weather / Empire Base or Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	HA	None	N/A	System 8	-60.0

TABLE 6C: GYPSUM DECKS – REROOF (Tear-Off)
SYSTEM TYPE C: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer(s)	Top Insulation Layer			Roof Cover (Note 15)	MDP (psf)
			Type	Fasteners (Note 11)	Attach		
G-12.	Existing sound gypsum or gypsum plank	(Optional) One or more layers, any combination, loose laid	Min. ½-inch Structodek High Density Fiberboard Roof Insulation	OMG Polymer GypTec with 3" GypTec Plate	1 per 2 ft^2	System 1, 2, 3 or 4	-45.0*
G-13.	Existing sound gypsum or gypsum plank	(Optional) One or more layers, any combination, loose laid	Min. ¼-inch DensDeck or DensDeck Prime	OMG Polymer GypTec with 3" GypTec Plate	1 per 1.78 ft^2	System 1, 2, 3 or 4	-45.0*
G-14.	Existing sound gypsum or gypsum plank	(Optional) One or more layers, any combination, loose laid	Min. ½-inch Structodek High Density Fiberboard Roof Insulation, Min. ¼-inch DensDeck or DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Trufast Twin Loc-Nails (minimum 1-inch embedment into deck)	1 per 2 ft^2	System 1, 2, 3 or 4	-45.0*

TRINITY ERD

TABLE 6D: GYPSUM DECKS – REROOF (Tear-Off)
SYSTEM TYPE E: MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)	MDP (psf)
		Base	Fasteners (Note 11)	Attach		
G-15.	Existing sound gypsum or gypsum plank	All Weather / Empire Base or Poly SMS Base	Trufast FM-75 or FM-90 Base Ply Fasteners	9-inch o.c. at the 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	System 1, 2, 3 or 4	-45.0*
G-16.	Existing sound gypsum or gypsum plank	Glasbase; Flexiglas Base; Flintlastic Base 20 or All Weather / Empire Base or Poly SMS Base	Min. 1.8-inch Trufast Twin Loc-Nail	9-inch o.c. at the 4-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows	System 3 or 4	-67.5

TABLE 7A: RECOVER APPLICATIONS
SYSTEM TYPE A: BONDED INSULATION, BONDED ROOF COVER

System No.	Substrate (Notes 1 & 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
		Type	Attach	Type	Attach		
R-1	Existing fully bonded BUR or modified bitumen roof cover	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3, H-Shield or Multi-Max FA3	HA	Min. ½-inch Structodek High Density Fiberboard, Min. ¾-inch FescoBoard (homogeneous) or Min. ½-inch DuraBoard (homogeneous), min. ¼-inch SECUROCK Gypsum-Fiber Roof Board, DensDeck or DensDeck Prime	HA	System 1, 2, 3 or 4	-105.0
R-2	Existing fully bonded, smooth surface BUR or modified bitumen	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	A-PD 6-inch o.c.	Min. ½-inch Structodek High Density Fiberboard, min. ¼-inch SECUROCK Gypsum-Fiber Roof Board or DensDeck	A-PD 6-inch o.c.	System 1, 2, 3 or 4	-52.5
R-3	Existing fully bonded, mineral surface BUR or modified bitumen	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	A-PD 6-inch o.c.	Min. ½-inch Structodek High Density Fiberboard, min. ¼-inch SECUROCK Gypsum-Fiber Roof Board or DensDeck	A-PD 6-inch o.c.	System 1, 2, 3 or 4	-172.5
R-4	Existing fully bonded BUR or modified bitumen roof cover	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-OSFA	Min. ½-inch Structodek High Density Fiberboard	M-OSFA	System 1, 2, 3 or 4	-127.5
R-5	Existing fully bonded BUR or modified bitumen roof cover	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-OSFA	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board or DensDeck	M-OSFA	System 1, 2, 3 or 4	-157.5
R-6	Existing fully bonded BUR or modified bitumen roof cover	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	M-PG1	Min. ½-inch Structodek High Density Fiberboard, min. ¼-inch SECUROCK Gypsum-Fiber Roof Board or DensDeck	M-PG1	System 1, 2, 3 or 4	-180.0
R-7	Existing fully bonded BUR or modified bitumen roof cover	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or H-Shield	OB500	Min. ½-inch Structodek High Density Fiberboard, min. ¼-inch SECUROCK Gypsum-Fiber Roof Board, DensDeck or DensDeck Prime	OB500	System 1, 2, 3 or 4	-120.0
R-8	Existing fully bonded BUR or modified bitumen roof cover	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ½-inch Structodek High Density Fiberboard or DuraBoard (homogeneous) or min. 1.5-inch FescoBoard (laminated)	CR-20	System 1, 2, 3 or 4	-180.0

TABLE 7A: RECOVER APPLICATIONS
SYSTEM TYPE A: BONDED INSULATION, BONDED ROOF COVER

System No.	Substrate (Notes 1 & 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)	MDP (psf)
		Type	Attach	Type	Attach		
R-9	Existing fully bonded BUR or modified bitumen roof cover	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ¼-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	System 1, 2, 3 or 4	-225.0
R-10	Existing fully bonded BUR or modified bitumen roof cover	Min. 1.0-inch ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3 or min. 1.3-inch ACFoam III, Min. 1.5-inch Multi-Max FA3 or Ultra-Max	CR-20	Min. ¼-inch DensDeck	CR-20	System 1, 2, 3 or 4	-240.0

RICK SCOTT, GOVERNOR

JONATHAN ZACHEM, SECRETARY

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

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

MORRIS, RICHARD L

D R AND G INCORPORATED
1260 SARATOGA LN
GENEVA FL 32732

LICENSE NUMBER: CCC1330106

EXPIRATION DATE: AUGUST 31, 2020

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

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ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 08/07/2018

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

Aubrey Rogers Insurance Agency, Inc
2400 N.W. 6th Street

Gainesville FL 32609

CONTACT NAME: Ashley Muldowney
PHONE (A/C, No, Ext): (352) 373-2003 FAX (A/C, No): (352) 376-2235
E-MAIL ADDRESS: ashley@aubreyrogers.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Security National Insurance Company	19879
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

D R & G, Inc.
1260 Saratoga Lane

Geneva FL 32732

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 X POLICY [ ] PRO-JECT [ ] LOC OTHER			SES1659499-00	08/07/2018	08/07/2019	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 $ 50,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS 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)

CCC1330106

CERTIFICATE HOLDER

City of Belle Isle
1600 Nela Avenue
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

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/18/2018

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	CONTACT NAME:	
FrankCrum Insurance Agency, Inc. 100 South Missouri Avenue Clearwater, FL 33756	PHONE: (800) 277-1620 X 4800	FAX: (727) 797-0704
	E-MAIL ADDRESS:	
	INSURERS(S) AFFORDING COVERAGE	NAIC#
	INSURER A: Frank Winston Crum Insurance Company	11600
INSURED	INSURER B:	
	INSURER C:	
	INSURER D:	
FRANKCRUM L/C/F D R AND G, INC 100 SOUTH MISSOURI AVENUE CLEARWATER, FL 33756	INSURER E:	
	INSURER F:	

COVERAGES — CERTIFICATE NUMBER: 512053 — 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 INSRD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY						EACH OCCURENCE	$
	CLAIMS MADE ☐ OCCUR ☐						DAMAGE TO RENTED PREMISES (Ea occurence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER						GENERAL AGGREGATE	$
	POLICY ☐ PROJECT ☐ LOC ☐						PRODUCTS-COMP/OP AGG	$
	OTHER							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE UNIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB ☐ OCCUR						EACH OCCURENCE	$
	EXCESS LIAB ☐ CLAIMS MADE						AGGREGATE	$
	DED ☐ RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N	N/A		WC201900000	01/01/2019	01/01/2020	X PER STATUE ☐ OTHER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐						E.L. EACH ACCIDENT	$1,000,000
	(Mandatory in NH)						E.L. DISEASE-EA EMPLOYEE	$1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE-POLICY LIMIT	$1,000,000

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

EFFECTIVE 07/04/2001, COVERAGE IS FOR 100% OF THE EMPLOYEES OF FRANKCRUM LEASED TO D R AND G, INC. (CLIENT) FOR WHOM THE CLIENT IS REPORTING HOURS TO FRANKCRUM. COVERAGE IS NOT EXTENDED TO STATUTORY EMPLOYEES.

CERTIFICATE HOLDER	CANCELLATION
CITY OF BELLE ISLE 1600 NELA AVE BELLE ISLE, FL 32809-6199	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

SEMINOLE COUNTY BUSINESS TAX RECEIPT

JOEL M. GREENBERG, SEMINOLE COUNTY TAX COLLECTOR
PO BOX 630 | SANFORD, FL 32772 | 407-665-1000
WWW.SEMINOLECOUNTY.TAX

VALID THROUGH 09/30/19

DR & G INCORPORATED
1260 SARATOGA LN
GENEVA, FL 32732

Account #: 040557

GAIL H MORRIS (PRES)

REGULATED
License # - CCC1330106
Qualifier- RICHARD L MORRIS

Receipt #: OLHS2018082900519 Amount Paid: $ 45.00 Date Paid: 08/29/2018