City of Belle Isle Job Site Card ROOFING PERMIT 2018-08-009

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 2018-09-009
Site Address: 1130 Waltham Ave 32809
Class: Residential
Description of Work:
Re-roof 2800 & 800 FLAT SQFT Asphalt Shingles & Modified Bitumen / BUR (Build Up Roof)

Issue Date: 08-06-2018
Parcel Number 24-23-29-3400-00-072
Subdivision:

Issued To: Gold Key Roofing
Name: Hewitt, Jeffrey
Payment Date & Method: 8 / 9 / 2018

Business Phone: 407 851-0680
Contractor License CCC1329157

☑ Visa ☐ Master Card ☐ Amex ☐ Discover ☐ Check / Money Order # 0767

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			
Both new & re-roof Code 710 In-Progress			
Both new & re-roof Code 720 Final			

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 pm. 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.

RECEIVED AUG - 3 2018 BY:

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: _____ **ROOF PERMIT NUMBER** 2018-08-009

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

Project Address 1130 WALTHAM AVE, Belle Isle, FL X 32809 ___ 32812

Property Owner JEFFERY A MAULL Phone _____

Property Owner's Mailing Address 1130 WALTHAM AVE City ORLANDO

State FL Zip Code 32809 Parcel Id Number: 24-23-29-3400-00-072

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

Class of Building: Old [X] New [ ] **Type of Building:** Residential [X] Commercial [ ] Other [ ]
Type of Work: New Roof [ ] ReRoof [X]

- REQUIRED! **Florida Product Approval Screen Printout from www.floridabuilding.org showing the Code Version**
- REQUIRED! **Florida Product Approval Installation Instructions from www.floridabuilding.org (not the manufacturer instructions)**
- REQUIRED! **Copies of your General Liability & Worker's Comp Insurance Certificate & State and Local Licenses**

Please indicate the nature of work by completing the information below: flat 8,000 + 8400 = 16,400

Roof Square Footage: 2805 / 80 FLAT **Number of Stories:** 1 **Job Valuation:** $8,800.00

Type: Asphalt Shingles [X] Metal [ ] Modified Bitumen [X] Other: BUR (BUILT UP ROOF)

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

LICENSE HOLDER SIGNATURE _____ LICENSE # CCC1329157

LICENSE HOLDER NAME JEFFREY HEWITT COMPANY NAME GOLD KEY

Street Address 4874 S. ORANGE AVE

City ORLANDO State FL Zip Code 32806 Phone Number 407-851-0680

Email Address JESSICA@GOLDKEYROOFING.COM

Building Official: SM Date 8-6-18

✓ Verified Contractor's Licenses & Insurance are on file 1 Date 8-3-2018

✓ NOC
✓ AOI

Zoning Fee	$	30.00
Permit Fee	$	105.-
Review Fee	$	—
3½ Florida Surcharge	$	4.00
Total Permit Fee	$	139.00

2.5 min

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

1ST 11C 25
5 x 16 50
105

PAID 8-9-2018
VISA 0767

Permit Number: 2018-08-009
Folio/Parcel ID #: 24-23-29-3400-00-072
Prepared by: Gold Key
4874 S Orange Ave
Orlando, Fl 32806
Return to: Gold Key
4874 S Orange Ave
Orlando, Fl 32806

DOC# 20180355338
06/15/2018 12:35:07 PM Page 1 of 1
Rec Fee: $10.00
Phil Diamond, Comptroller
Orange County, FL
MB - Ret To: GOLD KEY ROOFING

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)
   1130 Waltham Ave - SUB HARNEY HOMESTEAD C/53 THE E 115 FT OF W 642.83 FT OF N 119.5 FT OF S 1545 FT...
2. **General description of improvement**
   ReRoof
3. **Owner information or Lessee information if the Lessee contracted for the improvement**
   Name Jeffery A Maull
   Address 1130 Waltham Ave orlando FL 32809
   Interest in Property owner
   Name and address of fee simple titleholder (if different from Owner listed above)
   Name N/A
   Address N/A
4. **Contractor**
   Name Gold Key Roofing Telephone Number 407-851-0680
   Address 4874 S Orange Ave Orlando, Fl 32806
5. **Surety** (if applicable, a copy of the payment bond is attached)
   Name N/A Telephone Number N/A
   Address N/A Amount of Bond $ N/A
6. **Lender**
   Name N/A Telephone Number N/A
   Address N/A
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 N/A Telephone Number N/A
   Address N/A
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 N/A Telephone Number N/A
   Address N/A
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) N/A

I hereby certify that this is a true copy of the document as reflected in the Official Records
PHIL DIAMOND, COUNTY COMPTROLLER
BY: [signature] D.C.
DATED: 6-15-18

SEAL

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.

[signature] Owner
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 12 day of 6/18 by Jeffery A Maull Sr
month/year — name of person

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

[signature]
Signature of Notary Public – State of Florida

Print, type, or stamp commissioned name of Notary Public

Personally Known ____ OR Produced ID ✓
Type of ID Produced FLDL

RACHEL ANN KRANTZ
MY COMMISSION # GG 027999
EXPIRES: September 18, 2018
Bonded Thru Notary Public Underwriters

Form content revised: 10/17/12

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: _____ PERMIT # 2018-08-009

PROJECT ADDRESS 1130 WALTHAM AVE, Belle Isle, FL [X] 32809 [ ] 32812

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

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

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

Product Type	Manufacturer	Model/Series	FL Product Approval #
WALL PANELS			
Sliding			
Soffits			
Storefront			
Glass Block			
Other			
ROOFING PRODUCTS			
Asphalt Shingles	CERTAINTEED	ASPHALT	FL5444-R13
Non Struct Metal			
Roofing Tiles			
Single Ply Roof	CERTAINTEED	FLINTELAS	FL477-R8
Other			
UNDERLAYMENT	CERTAINTEED	ROOFRUNNER	FL21841-R2
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 _____ **Date** _____

Product Approval
USER: Public User

OFFICE OF THE SECRETARY

FL #	FL5444-R13
Application Type	Revision
Code Version	2017
Application Status	Pending FBC Approval
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	Asphalt Shingles
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	Robert Nieminen
Florida License	PE-59166
Quality Assurance Entity	UL LLC
Quality Assurance Contract Expiration Date	03/09/2020
Validated By	John W. Knezevich, PE ✓ Validation Checklist - Hardcopy Received
Certificate of Independence	FL5444_R13_COI_2018_01_COI_NIEMINEN.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D3161	2016
ASTM D3462	2010
ASTM D7158	2011

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	01/24/2018
Date Validated	01/29/2018
Date Pending FBC Approval	01/30/2018

Summary of Products

FL #	Model, Number or Name	Description
5444.1	CertainTeed Asphalt Roof Shingles	3-tab, 4-tab, strip (no-cut-outs), laminated and architectural asphalt roof shingles
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Refer to ER Section 5 for Limits of Use		**Installation Instructions** FL5444_R13_II_2018_01_FINAL_ER_CERTAINTEED_ASPHALT SHINGLES_FL5444-R13.pdf Verified By: Robert Nieminen, PE PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL5444_R13_AE_2018_01_FINAL_ER_CERTAINTEED_ASPHALT SHINGLES_FL5444-R13.pdf Created by Independent Third Party: Yes

Back Next

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

ENGINEER | EVALUATE | TEST | CONSULT | CERTIFY

EVALUATION REPORT

CertainTeed Corporation
20 Moores Road
Malvern, PA 19355
(610) 651-5847

Evaluation Report 3532.09.05-R14
FL5444-R13
Date of Issuance: 09/22/2005
Revision 14: 01/24/2018

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

DESCRIPTION: CertainTeed Asphalt Roof Shingles.

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

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

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

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

This Evaluation Report consists of pages 1 through 13.

Prepared by:

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

ROBERT J. M. NIEMINEN III LICENSE No. 59166 STATE OF FLORIDA PROFESSIONAL ENGINEER

The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 01/24/2018. This does not serve as an electronically signed document.

CERTIFICATION OF INDEPENDENCE:

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

NEMO | etc.

ROOFING SYSTEMS EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Asphalt Shingles
Compliance Statement: **CertainTeed Asphalt Roof Shingles**, as produced by **CertainTeed Corporation**, have demonstrated compliance with the following sections of the **6th Edition (2017) Florida Building Code** and **6th Edition (2017) Florida Building Code, Residential Volume** through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

Section	Property	Standard	Year
1507.2.5, R905.2.4	Physical Properties	ASTM D3462	2010
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D3161	2016
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D7158	2011

3. REFERENCES:

Entity	Examination	Reference	Date
UL (TST 1740)	ASTM D3161	94NK9632	05/15/1998
UL (TST 1740)	ASTM D3161	99NK26506	11/23/1999
UL (TST 1740)	ASTM D3161	03CA12702	05/27/2003
UL (TST 1740)	ASTM D3161	03CA12702	06/16/2003
UL (TST 1740)	ASTM D3161	03NK29847	10/03/2003
UL (TST 1740)	ASTM D3161	04CA11329	05/24/2004
UL (TST 1740)	ASTM D3161	04CA32986	12/03/2004
UL (TST 1740)	ASTM D3161	05NK07049	04/15/2005
UL (TST 1740)	ASTM D3161	05NK16778	05/12/2005
UL (TST 1740)	ASTM D3161	05CA16778	05/12/2005
UL (TST 1740)	ASTM D3161	05NK14836	05/22/2005
UL (TST 1740)	ASTM D3161	05NK22800	06/22/2005
UL (TST 1740)	ASTM D3462	R684	09/21/2005
UL (TST 1740)	ASTM D7158	05NK08037	06/28/2006
UL (TST 1740)	ASTM D3161 & D3462	09CA28873	07/23/2009
UL (TST 1740)	ASTM D3462	10CA41303	10/07/2010
UL (TST 1740)	ASTM D3161	10CA41303	10/08/2010
UL (TST 1740)	ASTM D7158	10CA41303	10/27/2010
UL (TST 1740)	ASTM D3161 & D3462	10CA44960	11/11/2010
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	13CA32897	11/21/2013
UL LLC (TST 9628)	ASTM D3161, D3462	TFWZ.R684	04/22/2014
UL LLC (TST 9628)	ASTM D7158	TGAH.R684	04/22/2014
UL LLC (TST 9628)	ASTM D3161 & D3462	4786334434	09/16/2014
UL LLC (TST 9628)	ASTM D3161 & D3462	4786570826	02/12/2015
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	4786570717	12/16/2015
UL LLC (TST 9628)	ASTM D3161 & D3462	4787195678	02/09/2016
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	4787380356	10/26/2016
UL LLC (TST 9628)	ASTM D3462	4787380357	10/13/2016
UL LLC (TST 9628)	ASTM D7158	4787380357	11/08/2016
UL LLC (TST 9628)	ASTM D3161	4787380357	11/09/2016
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	4787586427	01/25/2017
UL LLC (TST 9628)	ASTM D3161 & D3462	4788042412	11/15/2017
UL LLC (QUA 9625)	Quality Control	Service Confirmation	Exp. 03/09/2020

4. PRODUCT DESCRIPTION:

4.1 **Asphalt Shingles:**

4.1.1 **CT20™, XT™ 25, XT™ 30** and **XT™ 30 IR** are fiberglass reinforced, 3-tab asphalt roof shingles.

4.1.2 **Arcadia™, Belmont®, Belmont® IR, Carriage House Shangle®, Grand Manor Shangle®, Landmark™, Landmark™ IR, Landmark™ Pro, Landmark™ Premium, Landmark™ TL, Landmark™ Solaris** and **Landmark™ Solaris IR** are fiberglass reinforced, laminated asphalt roof shingles.

4.1.3 **NorthGate™** is a fiberglass reinforced, laminated, SBS modified bitumen roof shingle.

4.1.4 **Presidential Shake™, Presidential Shake™ IR, Presidential Shake TL™** and **Presidential Solaris™** are fiberglass reinforced, architectural asphalt roof shingles.

4.1.5 **Hatteras™, Highland Slate™** and **Highland Slate™ IR** are fiberglass reinforced, 4-tab asphalt roof shingles.

4.1.6 **Patriot™** is a fiberglass reinforced asphalt roof strip-shingle (with no cut-outs) providing a laminated appearance through an intermittent shadow line with contrasting blend drops for color definition.

4.2 **Hip & Ridge Shingles:**

4.2.1 **Presidential Accessory, Accessory for Hatteras, Shangle Ridge™, Shadow Ridge™, Cedar Crest™, Cedar Crest™ IR, NorthGate Ridge** and **NorthGate Accessory** are fiberglass reinforced accessory shingles for hip and ridge installation.

4.3 **Accessory Starter Strips:**

4.3.1 **SwiftStart® Starter Shingle is** a starter strip for asphalt roof shingles. Its overall size of 15-1/4" x 38-3/4" yields two (2) 7-5/8" x 38-3/4" starter pieces per shingle.

4.4 Any of the above listed shingles may be produced in AR (algae resistant) versions.

5. LIMITATIONS:

5.1 This is a building code evaluation. Neither NEMO|etc. nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

5.2 This Evaluation Report is not for use within FBC HVHZ jurisdictions.

5.3 Fire Classification is not part of this Evaluation Report; refer to current Approved Roofing Materials Directory for fire ratings of this product.

5.4 **Wind Classification:**

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

5.4.2 **Presidential Accessory, Accessory for Hatteras, Shangle Ridge, Shadow Ridge, Cedar Crest, NorthGate Ridge** and **NorthGate Accessory hip & ridge shingles** have been evaluated in accordance with **ASTM D3161, Class F**. All except **NorthGate Ridge** and **NorthGate Accessory** require use of **BASF Sonolastic NP 1 adhesive** or **Henkel PL® Polyurethane Roof & Flashing Sealant**, applied as specified in manufacturer's application instructions, for use in wind zones up to V_{asd} = 150 mph (V_{ult} = 194 mph). Refer to Section 6 for installation requirements to meet this wind rating.

5.4.3 **SwiftStart® Starter Shingle** has been evaluated in accordance with **ASTM D3161, Class F**. Refer to Section 6 for installation requirements to meet this wind rating.

5.4.4 Classification by **ASTM D7158** applies to **exposure category B or C** and a **building height of 60 feet or less**. Calculations by a qualified design professional are required for conditions outside these limitations. Contact the shingle manufacturer for data specific to each shingle.

5.4.4.1 **Analysis in accordance with ASTM D7158** indicates the measured uplift resistance (R_T) for the CertainTeed asphalt Roof shingles listed in Section 4.1 through 4.6 (*except Presidential Solaris™*) exceeds the calculated uplift force (F_T) at a maximum design wind speed of **V_{asd} = 150 mph (V_{ult} = 194 mph)** for **residential buildings** located in **Exposure D conditions** with **no topographical variations (flat terrain)** having a **mean roof height less than or equal to 60 feet**. The shingles are permissible under Code for installation in these conditions using the installation procedures detailed in this Evaluation Report and CertainTeed minimum requirements, subject to minimum codified fastening requirements established within any local jurisdiction, which shall take precedence.

5.5 All products in the roof assembly shall have quality assurance audits in accordance with **FAC Rule 61G20-3**.

6. INSTALLATION:

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

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

6.2 Installation of asphalt shingles shall comply with the **CertainTeed Corporation** current published instructions, using minimum four (4) nails per shingle in accordance with **FBC 1507.2.7** or **Section R905.2.6** and the minimum requirements herein.

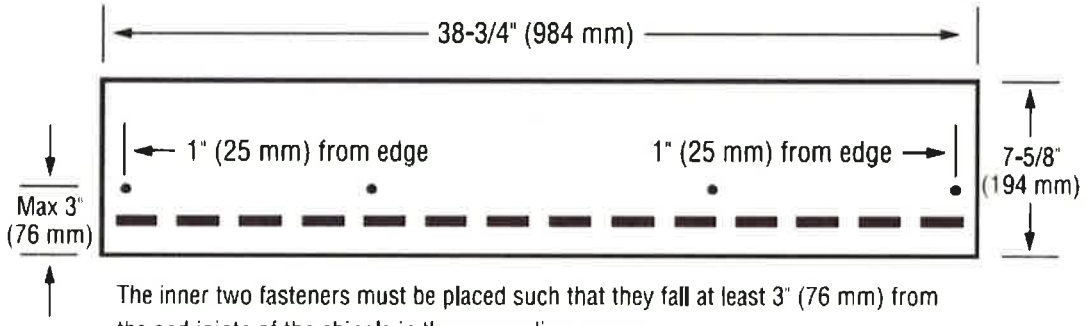
6.2.1 Fasteners shall be in accordance with manufacturer's published requirements, but not less than **FBC 1507.2.6 or R905.2.5**. Staples are not permitted.

6.2.2 Where the roof slope exceeds 21 units vertical in 12 units horizontal, use the "Steep Slope" directions.

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

6.4 SWIFTSTART® STARTER SHINGLE:

Fastening: Use four nails, located as shown below

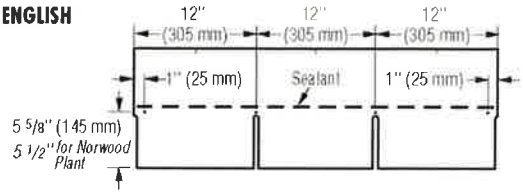


The inner two fasteners must be placed such that they fall at least 3" (76 mm) from the end joints of the shingle in the succeeding course.

6.5 CT20™, XT™ 25, XT™ 30, XT™ 30 IR:

LOW AND STANDARD SLOPE

ENGLISH



METRIC

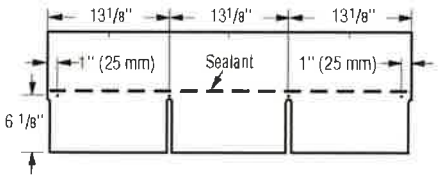
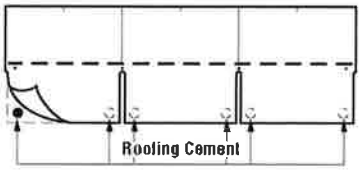


*Figure 11-3: Use **four** nails for every full shingle.*

STEEP SLOPE

Use **four** nails and six spots of asphalt roofing cement* for every full shingle (*Figure 11-4*). Asphalt roofing cement meeting ASTM D4586 Type II is suggested.



Apply 1" (25 mm) spots of asphalt roofing cement under each tab corner.

*Figure 11-4: Use **four** nails and six spots of asphalt cement on steep slopes.*

***CAUTION:** Excessive use of roofing cement can cause shingles to blister.

6.5.1 Hip & Ridge for CT20™, XT™ 25, XT™ 30, XT™ 30 IR: Cut Shingles

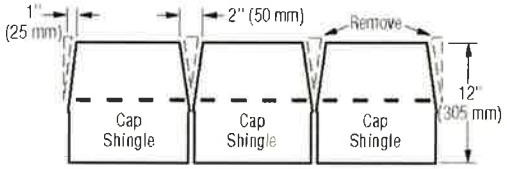


Figure 11-24: Cut tabs, then trim back to make cap shingles (English dimensions shown).

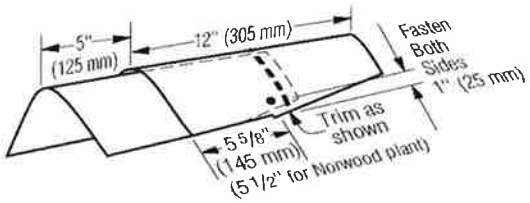


Figure 11-25: Installation of caps along the hips and ridges.

6.5.1.1 For **ASTM D3161, Class F** performance use BASF **"Sonolastic® NP1™"** adhesive or Henkel **"PL® Polyurethane Roof & Flashing Sealant"**, in accordance with CertainTeed requirements.

6.6 ARCADIA™:

LOW AND STANDARD SLOPE

Use SIX nails for every full shingle located as shown below.

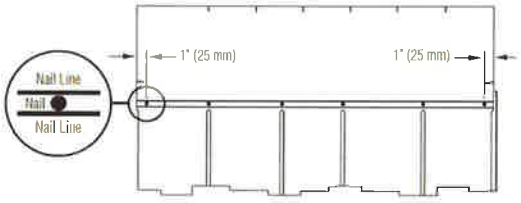


Figure 2: Use six nails for every full shingle.

STEEP SLOPE

Use SIX nails and FOUR spots of asphalt roofing cement for every full shingle as shown below. Apply asphalt roofing cement 1"(25 mm) from edge of shingle. Asphalt roofing cement meeting ASTM D 4586 Type II is suggested.

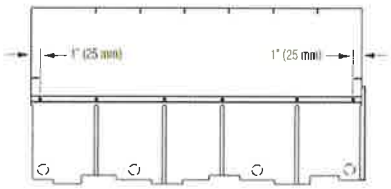
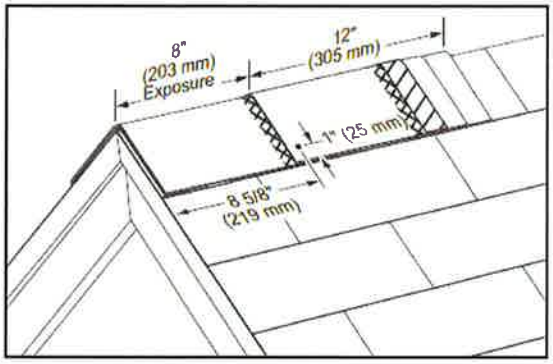


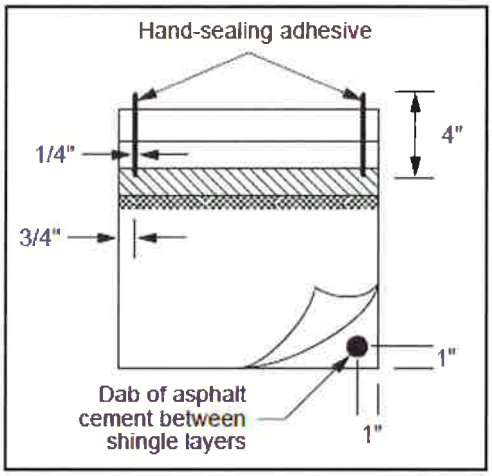
Figure 3: Use six nails and four spots of asphalt roofing cement on steep slopes.

6.6.1 **Hip & Ridge for Arcadia™: Cedar Crest™, Cedar Crest™ IR**

Use two (2), minimum 1¾-inch long fasteners per shingle. For the starter shingle, place fastener 1-inch from each side edge and about 2-inch up from the starter shingle's exposed butt edge, ensuring minimum ¾-inch embedment into the deck, or full penetration through the deck. For each full Cedar Crest shingle, place fasteners 8-5/8-inch up from its exposed butt edge and 1-inch from each side edge.

For **ASTM D3161, Class F** performance use BASF "**Sonolastic® NP1™**" adhesive or Henkel "**PL® Polyurethane Roof & Flashing Sealant**", in accordance with CertainTeed requirements, to **hand-seal Cedar Crest shingles**. Apply NP 1 or PL adhesive from the middle of the shingle's raised overlay on the top piece and extending approximately 4-inch along the sides of the headlap along a line ¾ to 1-inch from each side of the shingle's headlap. Immediately align and apply the overlying shingle, gently pressing tab sides into the adhesive, and install nails. To secure the other side, apply a 1-inch diameter spot of NP 1 or PL adhesive between the shingle layers.

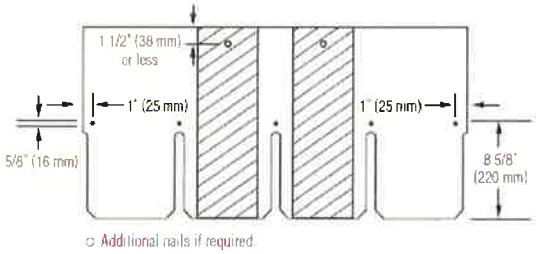




6.7 BELMONT® OR BELMONT® IR:

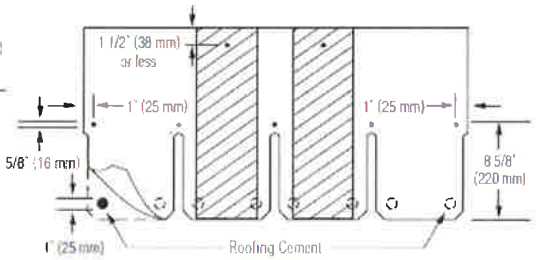
Low and Standard Slope (2:12 to 21:12):

Use FIVE nails for every full Belmont shingle, located as shown below.



Steep Slope (greater than 21:12):

Use SEVEN nails and EIGHT spots of asphalt roofing cement** for every full Belmont shingle. Apply asphalt roofing cement 1" (25mm) from edge of shingle. See below. Asphalt roofing cement meeting ASTM D4586 Type II is suggested.



6.7.1 **Hip & Ridge for Belmont® or Belmont® IR:**

6.7.1.1 **Option 1:** For Belmont®, refer to instructions herein for **Cedar Crest™** or **Cedar Crest™ IR** hip and ridge shingles. For Belmont® IR, refer to instructions herein for **Cedar Crest™ IR** hip and ridge shingles.

6.7.1.2 **Option 2:** For Belmont®: **Shangle® Ridge**

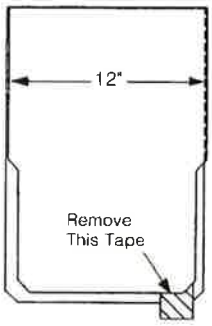


Figure 17-18: Shangle® Ridge.

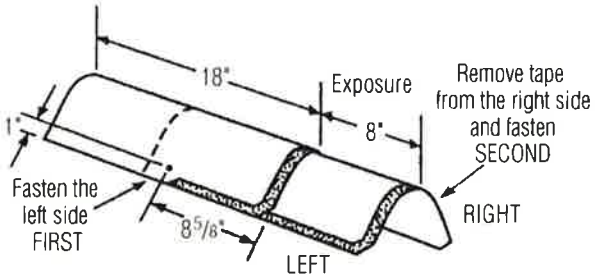


Figure 17-19: Installation of Shangle® Ridge shingles on hips and ridges.

6.7.1.3 For **ASTM D3161, Class F** performance use BASF **"Sonolastic® NP1™"** adhesive or Henkel **"PL® Polyurethane Roof & Flashing Sealant"**, in accordance with CertainTeed requirements.

6.8 CARRIAGE HOUSE SHANGLE® AND GRAND MANOR SHANGLE®:

LOW AND STANDARD SLOPE

Use **five** nails for every full Shangle.

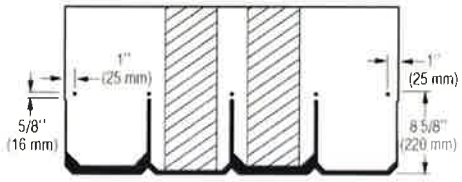


Figure 17-4: Use five nails for every full Grand Manor Shangle, Carriage House Shangle, or Centennial Slate.

STEEP SLOPE

Use **seven** nails and three spots of asphalt roofing cement for every full Grand Manor Shangle. Use **five** nails and three spots of asphalt roofing cement for every full Carriage House Shangle and Centennial Slate. Apply asphalt roofing cement 1" (25 mm) from edge of shingle (*Figure 17-5*). Asphalt roofing cement meeting ASTM D4586 Type II is suggested.

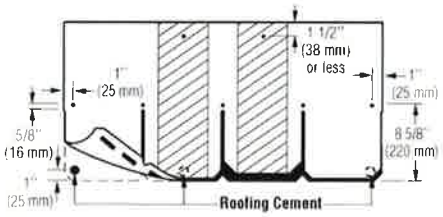


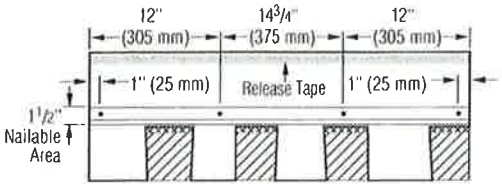
*Figure 17-5: When installing Grand Manor Shangles on steep slopes, use **seven** nails and three spots of asphalt roofing cement.*

6.8.1 **Hip & Ridge for Carriage House Shangle® and Grand Manor Shangle:** Refer to instructions herein for **Shangle® Ridge** hip and ridge shingles

6.9 LANDMARK™, LANDMARK™ IR, LANDMARK™ PRO, LANDMARK™ PREMIUM, LANDMARK™ TL, LANDMARK™ SOLARIS, LANDMARK™ SOLARIS IR, NORTHGATE:

LOW AND STANDARD SLOPE

METRIC DIMENSIONS



LANDMARK TL

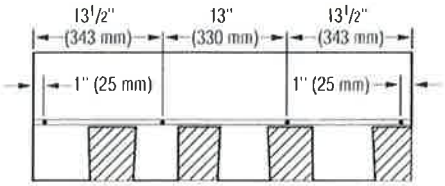
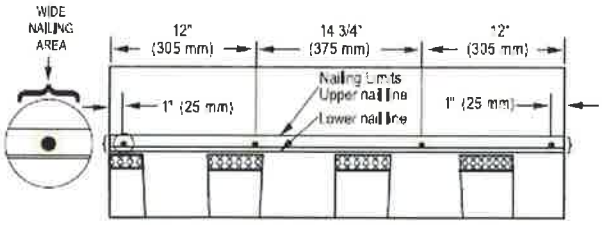


Figure 13-4: Use four nails for every full shingle.

NorthGate:

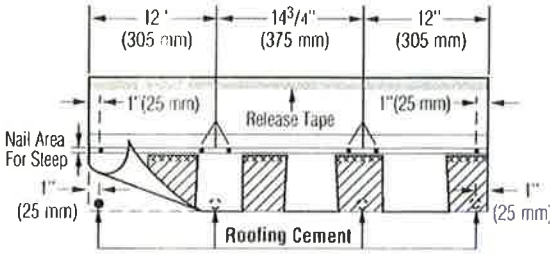


Nailing areas for low and standard slopes (from 2:12 to 21:12)
Nail between upper & lower lines as shown above.

STEEP SLOPE

Use six nails and four spots of asphalt roofing cement for every full laminated shingle. See below. Asphalt roofing cement should meet ASTM D4586 Type II. Apply 1" spots of asphalt roofing cement unde each corner and at about 12" to 13" in from each edge.

METRIC DIMENSIONS



LANDMARK TL

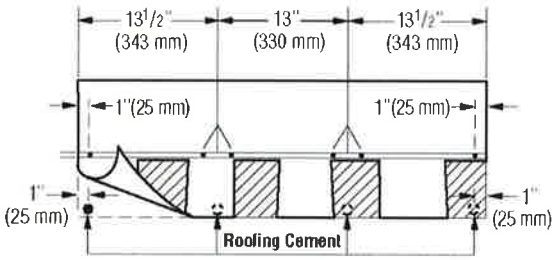
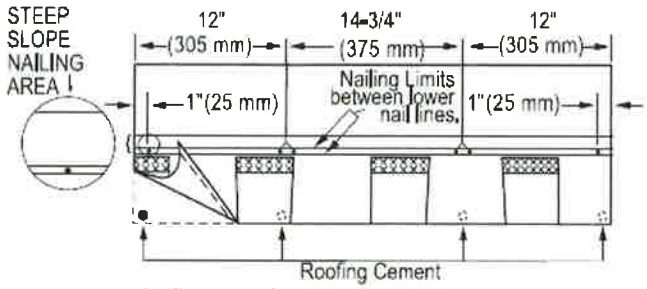


Figure 13-5: Use six nails and four spots of asphalt roofing cement on steep slopes.

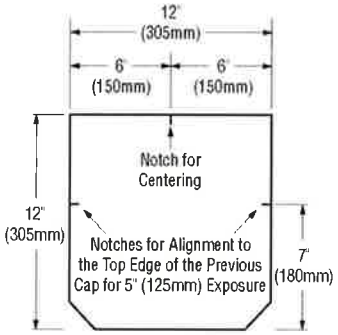
NorthGate:



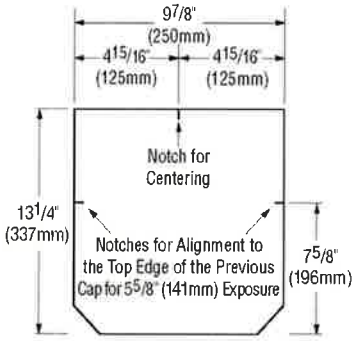
Nailing areas for steep slopes (greater than 21:12) **and "Storm-Nailing"**
Nail between lower 2 nail lines as shown above.

6.9.1 **Hip & Ridge for Landmark™, Landmark™ IR, Landmark™ Pro, Landmark™ Premium, Landmark™ TL, Landmark™ Solaris, Landmark™ Solaris IR, NorthGate:**

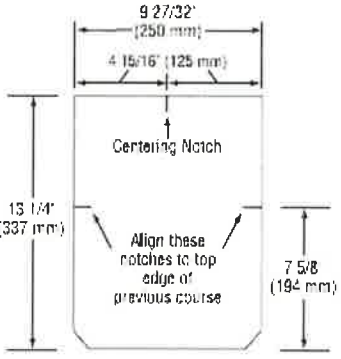
6.9.1.1 **Option 1:** Shadow Ridge™ or NothGate Accessory



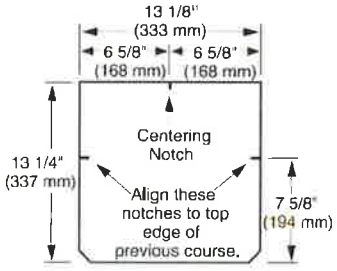
English Dimension
Shadow Ridge™



Metric Dimension
Shadow Ridge™



NorthGate Ridge



NorthGate Accessory

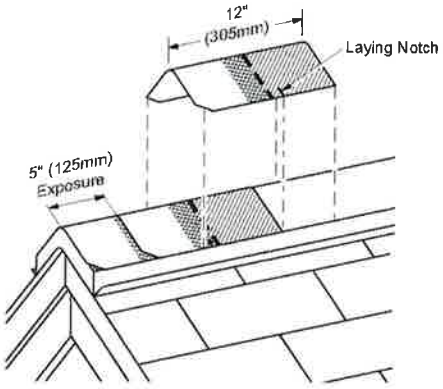


Figure 13-20: Use laying notches to center shingles on hips and ridges, and to locate the correct exposure.

6.9.1.2 For **ASTM D3161, Class F** performance use BASF "**Sonolastic® NP1™**" adhesive or Henkel "**PL® Polyurethane Roof & Flashing Sealant**", in accordance with CertainTeed requirements.

6.9.1.3 **Option 2:** Refer to instructions herein for **Cedar Crest™, Cedar Crest™ IR** hip and ridge shingles.

6.10 PRESIDENTIAL SHAKE™, PRESIDENTIAL SHAKE™ IR, PRESIDENTIAL SHAKE TL™, PRESIDENTIAL SOLARIS™:

LOW AND STANDARD SLOPE:

For low and standard slopes, use five nails for each full Presidential shingle as shown below.

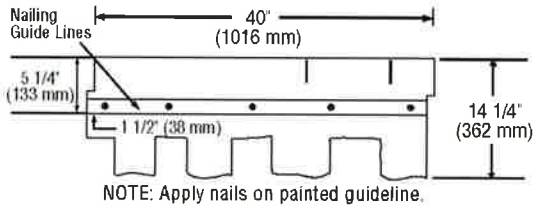


Figure 16-6: Fastening Presidential and Presidential TL Shake shingles on low and standard slopes.

STEEP SLOPE:

For steep slopes, use nine nails for each full Presidential shingle and apply 1" diameter spots of asphalt roofing cement under each shingle tab. After applying 5 nails in between the nailing guide lines, apply 4 nails 1" above tab cutouts making certain tabs of overlying shingle cover nails.

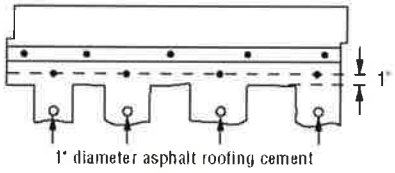


Figure 16-7: Fastening Presidential and Presidential T/L Shake shingles on steep slopes.

6.10.1 **Hip & Ridge for Presidential Shake™, Presidential Shake™ IR, Presidential Shake TL™, Presidential Solaris™:**

6.10.1.1 **Option 1:** Presidential Accessory

PRESIDENTIAL ACCESSORY

Presidential accessory shingles can be used for covering hips and ridges. Apply shingles up to the ridge (expose no more than 7" from the bottom edge of the "tooth." Fasten each accessory with two fasteners. The fasteners must be 1¾" long or longer, so they penetrate either ¾" into the deck or completely through the deck. Presidential accessory comes in two different sizes: Accessory produced in Birmingham, AL is 12" x 12"; Portland, OR produces 9⅞" x 13¼" accessory.

6.10.1.2 For **ASTM D3161, Class F** performance use BASF "**Sonolastic® NP1™**" adhesive or Henkel "**PL® Polyurethane Roof & Flashing Sealant**", in accordance with CertainTeed requirements.

6.10.1.3 **Option 2:** Refer to instructions herein for **Cedar Crest™, Cedar Crest™ IR** hip and ridge shingles.

6.11 HATTERAS™:

LOW, STANDARD AND STEEP SLOPE:

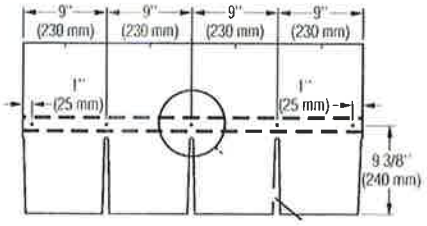


Figure 15-3: Fastening Hatteras Shingles on Low and Standard Slopes

For low and standard slopes, use five nails for each full Hatteras shingle as shown above.

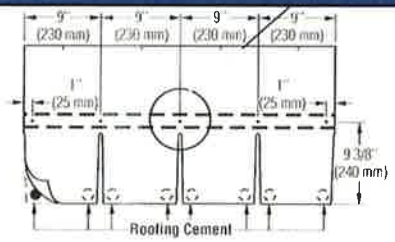


Figure 15-4: Fastening Hatteras Shingles on Steep Slopes

For steep slopes, use five nails and eight spots of asphalt roofing cement for each full Hatteras shingle as shown above. Apply 1" (25mm) diameter spots of roofing cement (ASTM D 4586 Type II suggested) under each tab corner. Press shingle into place; do not expose cement.

CAUTION: Too much roofing cement can cause shingles to blister.

6.11.1 **Hip & Ridge for Hatteras™:**

6.11.1.1 **Option 1:** Accessory for Hatteras

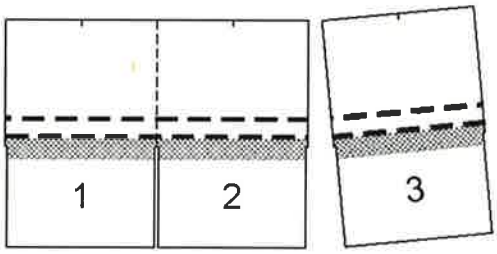
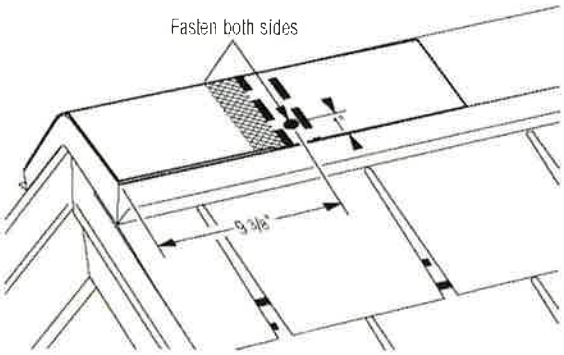


Figure 15-14: 18 three-piece units separate to make 54 Hatteras Accessory shingles.



6.11.1.2 **Option 2:** Cut Hatteras Shingles

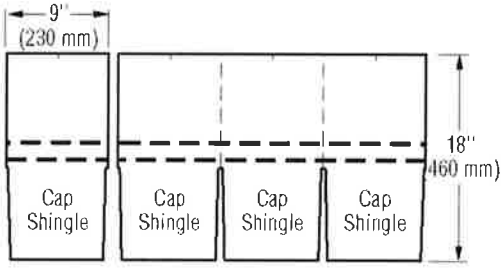


Figure 15-20: Cut Hatteras shingles to make cover cap.

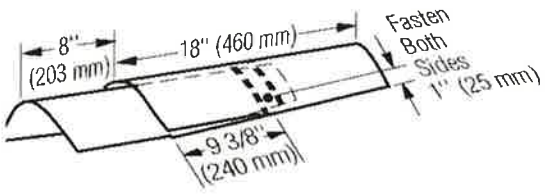


Figure 15-21: Installation of caps along hips and ridges.

6.11.1.3 For **ASTM D3161, Class F** performance use BASF "**Sonolastic® NP1™**" adhesive or Henkel "**PL® Polyurethane Roof & Flashing Sealant**", in accordance with CertainTeed requirements.

6.12 HIGHLAND SLATE™, HIGHLAND SLATE™ IR:

LOW AND STANDARD SLOPE:

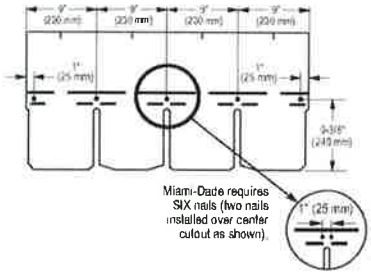


Figure 11-3: Use FIVE nails for every Highland Slate shingle.

STEEP SLOPE:

Use **FIVE** nails and **EIGHT** spots of asphalt roofing cement* for each full Highland Slate shingle. For Miami-Dade, **SIX nails** are required. Apply 1" diameter spots of asphalt roofing cement under each tab corner. Asphalt roofing cement meeting ASTM D4586 Type II is suggested.

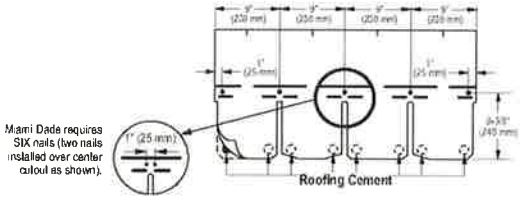


Figure 11-3A: Use FIVE nails and eight spots of asphalt roofing cement under each tab corner.

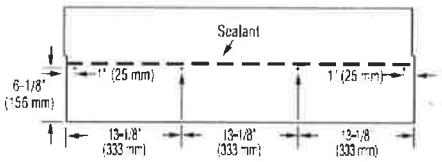
*CAUTION: Excessive use of roofing cement can cause shingles to blister.

6.12.1 Hip & Ridge for Highland Slate™, Highland Slate™ IR: Refer to instructions herein for **Cedar Crest™**, **Cedar Crest™ IR** or **Shangle Ridge™** hip and ridge shingles.

6.13 PATRIOT™:

LOW AND STANDARD SLOPE

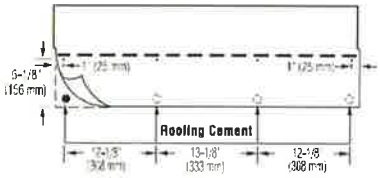
Use FOUR nails for every full shingle located as shown below.



STEEP SLOPE

Use FOUR nails and four spots of asphalt roofing cement for every full shingle as shown below. Asphalt roofing cement meeting ASTM D4586 Type II is suggested. Apply 1" (25 mm) spots of asphalt roofing cement as shown.

CAUTION: Excessive use of roofing cement can cause shingles to blister.



6.13.1 Hip & Ridge for Patriot™: Refer to instructions herein for **Cedar Crest™**, **Cedar Crest™ IR**, **Shadow Ridge™**, **NorthGate** or **Shangle Ridge™** hip and ridge shingles.

7. LABELING:

7.1 Each unit shall bear a permanent label with the manufacturer's name, logo, city, state and logo of the Accredited Quality Assurance Agency noted herein.

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

8. BUILDING PERMIT REQUIREMENTS:

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

9. MANUFACTURING PLANTS:

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

10. QUALITY ASSURANCE ENTITY:

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

- END OF EVALUATION REPORT -

FL #	FL21841-R2
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	Underlayments
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	Robert Nieminen
Florida License	PE-59166
Quality Assurance Entity	QAI Laboratories
Quality Assurance Contract Expiration Date	01/01/2023
Validated By	John W. Knezevich, PE ✓ Validation Checklist - Hardcopy Received
Certificate of Independence	FL21841_R2_COI_2017_01_COI_Nieminen.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D1970 (tear)	2015
ASTM D226 (physicals)	2009

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	09/06/2017
Date Validated	09/12/2017
Date Pending FBC Approval	09/15/2017
Date Approved	12/12/2017

Summary of Products

FL #	Model, Number or Name	Description
21841.1	RoofRunner High Performance Synthetic Underlayment	Synthetic underlayment for use with asphalt-shingle 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
Other: Refer to ER Section 5 for Limits of Use.

Installation Instructions
FL21841_R2_II_2017_09_FINAL_CERTAINTEED_ROOFRUNNER_FL21841-R2.pdf
Verified By: Robert Nieminen PE-59166
Created by Independent Third Party: Yes

Evaluation Reports
FL21841_R2_AE_2017_09_FINAL_CERTAINTEED_ROOFRUNNER_FL21841-R2.pdf
Created by Independent Third Party: Yes

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EXTERIOR RESEARCH & DESIGN, LLC.
Certificate of Authorization #9503
353 CHRISTIAN STREET, UNIT #13
OXFORD, CT 06478
(203) 262-9245

EVALUATION REPORT

CertainTeed Corporation
20 Moores Road
Malvern, PA 19355
(610) 651-5847

Evaluation Report 13500.02.17-R2
FL21841-R2
Date of Issuance: 02/10/2017
Revision 2: 09/05/2017

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

DESCRIPTION: RoofRunner™ High Performance Synthetic Roofing Underlayment

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

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

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

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

This Evaluation Report consists of pages 1 through 3.

Prepared by:

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

The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 09/05/2017. This does not serve as an electronically signed document.

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

ROOFING COMPONENT EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Compliance Statement: **RoofRunner™ High Performance Synthetic Roofing Underlayment**, as produced by **CertainTeed Corporation**, has demonstrated compliance with the following sections of the **6th Edition (2017) Florida Building Code** through testing in accordance with applicable sections of the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

Section	Properties	Standard	Year
1507.2.3 / 1507.1.1	Unrolling, Breaking Strength, Pliability	ASTM D226	2009
1507.1.1	Tear strength	ASTM D1970	2015

3. REFERENCES:

Entity	Examination	Reference	Date
ERD (TST6049)	Tear strength	CTR-SC16080.17	07/31/2017
QAI (TST9808)	Physical Properties, AC188	RJ3502P-1	11/05/2014
QAI (QUA7628)	Traceability/Inspections	Service Confirmation	02/09/2017

4. PRODUCT DESCRIPTION:

4.1 **RoofRunner™** is a synthetic polymer-based scrim-reinforced underlayment designed for use on roof decks as a water-resistant layer beneath asphalt roofing shingles; meets ASTM D226 physical property requirements and ASTM D1970 tear strength per the **Exception** of **FBC 1507.1.1**. **RoofRunner™** consists of a woven polyolefin base with a layer of nonwoven polyolefin sheet and a polymer coating on the back side. **RoofRunner™** is available in rolls 48-inch x 250-ft; nominal unit weight of 2.25 lbs/square.

5. LIMITATIONS:

5.1 This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

5.2 This Evaluation Report is not for use in FBC HVHZ jurisdictions.

5.3 Fire Classification is not part of this Evaluation Report; refer to current Approved Roofing Materials Directory or test report from accredited testing/listing agency for fire ratings of this product.

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

5.5 **RoofRunner™** shall not be installed on roof slopes below 2:12.

5.6 **Allowable roof covers:**

TABLE 1: ROOF COVER OPTIONS

Underlayment	Asphalt Shingles	Nail-On Tile	Foam-On Tile	Metal	Wood Shakes & Shingles	Slate
RoofRunner™	Yes	No	No	No	No	No

5.7 **Exposure Limitations:**

CertainTeed recommends primary roofing be installed within 48 hours of underlayment installation for re-roof applications or within 10-days of underlayment installation for new construction applications.

6. INSTALLATION:

6.1 **RoofRunner™ High Performance Synthetic Roofing Underlayment** shall be installed in accordance with **CertainTeed Corporation** published installation instructions subject to the Limitations set forth in Section 5 herein and the specifics noted below.

6.2 Install in compliance with the requirements for ASTM D226 underlayment in **FBC 1507.1.1**, taking into account the wider sheet-width of **RoofRunner™** for double-layer applications.

6.3 Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application.

6.4 Corrosion resistant fasteners shall be plastic cap nails with minimum 1-inch diameter head. **Do not use staples.** Ensure fasteners are installed at 90 degree angle to the deck with flush contact between the plastic cap or metal cap and the upper surface of the underlayment. Fasteners shall be of sufficient length to penetrate through the underside of plywood or OSB decks, or minimum ¾-inch embedment into dimensional lumber / tongue-and-grove wood decks.

6.5 Install a leak barrier of ASTM D1970, such as **CertainTeed WinterGuard (FL11288)**, or equal holding Florida Statewide Product Approval at vulnerable leak areas, including but not limited to eaves, valleys, rakes, skylights and dormers. At eaves and valleys, install the leak barrier prior to installation of **RoofRunner™**. Along the rake, install **RoofRunner™**, leaving 6 to 8-inch of the deck exposed, and then install the leak barrier over the **RoofRunner™** and exposed decking. At other areas, install the leak barrier over the **RoofRunner™**.

6.6 Single Layer; Roof Slope > 4:12:
Starting at the eave, lay printed-side up and fasten at the circular targets printed on the top surface; 15-inch o.c. vertically and 12-inch o.c. horizontally (parallel to eaves). On vertical side/end laps install 8 fasteners equally spaced at 6-inch o.c. centered in the lap to hold the underlayment in place. Continue upslope in a similar manner, maintaining minimum 3-inch wide horizontal and minimum 6-inch wide vertical laps, and fasten as noted above. Offset vertical end laps from course to course at least 3 feet.

6.7 Double Layer; 2:12 < Roof Slope < 4:12:
Starting at the eave, lay a 25.5-inch wide starter strip, printed-side up and fastened to hold in place. Then install a full 48-inch wide sheet, printed-side up, over the starter strip and fasten at the circular targets printed on the top surface; 15-inch o.c. vertically and 12-inch o.c. horizontally (parallel to eaves). On vertical side/end laps install 8 fasteners equally spaced at 6-inch o.c. centered in the lap to hold the underlayment in place. Continue upslope in a similar manner, maintaining minimum 25.5-inch wide horizontal laps (resulting in maximum 22.5-inch exposure) and minimum 12-inch wide vertical laps, and fasten as noted above. Offset vertical end laps from course to course at least 3 feet. Offset vertical end laps from course to course at least 3 feet.

6.8 **RoofRunner™** may not be used in any exposed application, including but not limited to crickets, exposed valleys or exposed roof to wall details.

7. BUILDING PERMIT REQUIREMENTS:

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

8. MANUFACTURING PLANTS:

Dadra, India

9. QUALITY ASSURANCE ENTITY:

Quality Auditing Institute, Ltd. – QUA7628; (604) 527-8378, mlansdowne@qai.org

- END OF EVALUATION REPORT -

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

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 ⅜ 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.

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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

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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. ¼-inch Structodek High Density Fiberboard Roof Insulation, min. ¼-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*

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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

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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		
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

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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

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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

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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 structrual 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 structrual 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 structrual 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

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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

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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

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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

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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

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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

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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

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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

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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. ¼-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. ¼-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. ¼-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. ¼-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

TRINITY ERD

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

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD
2601 BLAIR STONE ROAD
TALLAHASSEE FL 32399-0783

(850) 487-1395

HEWITT, JEFFREY ALLAN
GOLD KEY ROOFING LLC
6021 SOUTH ORANGE AVENUE
ORLANDO FL 32809

Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbeque restaurants, and they keep Florida's economy strong.

Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto **www.myfloridalicense.com**. There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department's initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CCC1329157 ISSUED: 08/16/2016

CERTIFIED ROOFING CONTRACTOR
HEWITT, JEFFREY ALLAN
GOLD KEY ROOFING LLC

IS CERTIFIED under the provisions of Ch.489 FS.
Expiration date AUG 31, 2018
L1608160002259

DETACH HERE

RICK SCOTT, GOVERNOR

KEN LAWSON, SECRETARY

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

LICENSE NUMBER	
CCC1329157	

The ROOFING CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2018

HEWITT, JEFFREY ALLAN
GOLD KEY ROOFING LLC
6021 SOUTH ORANGE AVENUE
ORLANDO FL 32809

ISSUED: 08/16/2016

DISPLAY AS REQUIRED BY LAW

SEQ # L1608160002259

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/13/2017

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 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
FRSA Self Insurers Fund, Inc.
4099 Metric Drive
Winter Park, FL 32792

CONTACT NAME: Debra Guidry, CPCU
PHONE (A/C, No, Ext): (800) 767-3772 FAX (A/C, No): (407) 671-2520
E-MAIL ADDRESS: debra@frsasif.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: FRSA Self Insurers Fund / Evanston Insurance Co.	35378
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	
INSURER F:	

INSURED
Gold Key Roofing, LLC
4874 S. Orange Avenue
Orlando, FL 32806

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	
	COMMERCIAL GENERAL LIABILITY			N/A			EACH OCCURRENCE	$
	☐ CLAIMS-MADE ☐ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$
	☐ POLICY ☐ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG	$
	OTHER:							$
	AUTOMOBILE LIABILITY			N/A			COMBINED SINGLE LIMIT (Ea accident)	$
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	☐ HIRED AUTOS ☐ NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
	☐ UMBRELLA LIAB ☐ OCCUR			N/A			EACH OCCURRENCE	$
	☐ EXCESS LIAB ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N	N/A	N	870-040079 / 3DY3150	01/01/2018	01/01/2019	X PER STATUTE ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							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)

REMARKS: Non-cancelable, without 30 days prior written notice, except for non-payment of premium which will be a 10 day written notice.

Jeffrey Allan Hewitt, Qualifier
Lic #CCC1329157

CERTIFICATE HOLDER

Attn:

City of Belle Isle
1600 Nela Ave.
Belle Isle, FL 32809

CANCELLATION

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

AUTHORIZED REPRESENTATIVE
Debra Guidry CPCU
Underwriting Manager

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 2/15/2018

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 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
Frank H. Furman, Inc.
1314 East Atlantic Blvd.
P. O. Box 1927
Pompano Beach FL 33061

CONTACT NAME: Griselidys Acosta
PHONE (A/C, No, Ext): (954) 943-5050 FAX (A/C, No): (954) 942-6310
E-MAIL ADDRESS: gris@furmaninsurance.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: Security National Insurance Company	33120
INSURER B: MAPFRE	
INSURER C:	
INSURER D:	
INSURER E:	
INSURER F:	

INSURED
Gold Key Roofing, LLC Gold Key International Inc
4874 S. Orange Avenue
Orlando FL 32806

COVERAGES **CERTIFICATE NUMBER:** 18/19 MASTER **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			SES154145300	2/19/2018	2/19/2019	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	POLICY X PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:						Employee Benefits Liability	$ 1,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO			5204070002276	2/19/2018	2/19/2019	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	ALL OWNED AUTOS SCHEDULED AUTOS						BODILY INJURY (Per person)	$
	X HIRED AUTOS X NON-OWNED AUTOS						BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
							PIP-Basic	$ 10,000
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N N/A If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE OTH-ER	
							E.L. EACH ACCIDENT	$
							E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

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

CERTIFICATE HOLDER

City of Belle Isle
1600 Nela Ave
Orlando, 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
Dirk DeJong/GA

Harry W. Hewitt
(407)851-0680

CITY OF EDGEWOOD
LOCAL BUSINESS TAX RECEIPT

405 LARUE AVENUE, EDGEWOOD FL 32809-3406
LICENSE YEAR: OCT 1, 2017 - SEPT 30, 2018

No: 1872
Date: 8/14/17

Address: 4874 S. Orange Avenue
EDGEWOOD FL 32806
Activity: ROOFING AND CONSTRUCTION

BUS TAX	98.12
PENALTY	
TRANSFER	
Total Paid	**98.12**
October 1	0.00
November 1	0.00
December 1	0.00
January 1	0.00

Issued to: Gold Key Roofing
Harry W. Hewitt
4874 S. Orange Avenue
EDGEWOOD FL 32806

A

MUST BE POSTED CONSPICUOUSLY AT PLACE OF BUSINESS

Bea L. Meeks, CBTO, City Clerk

RICK SINGH, CFA - ORANGE COUNTY PROPERTY APPRAISER

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

1130 Waltham Ave

< 24-23-29-3400-00-072 >

Name(s)
Maull Hilary Wood
Maull Jeffery A Sr

Mailing Address On File
1130 Waltham Ave
Belle Isle, FL 32809-4250

Incorrect Mailing Address?

Physical Street Address
1130 Waltham Ave

Postal City and Zipcode
Orlando, Fl 32809

Property Use
0103 - Single Fam Class III

Municipality
Belle Isle

View 2017 Property Record Card

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

2018 values will be available in August of 2018.

Property Description

View Plat

SUB OF HARNEY HOMESTEAD C/53 THE E 175 FT OF W 642.83 FT OF N 119.5 FT OF S 154.5 FT & E 59.68 FT OF W 467.89 FT OF N 18 FT OF S 154.5 FT & E 60.32 FT OF W 408.15 FT OF N 150 FT ALL IN LOT 7 & BEG SE COR OF E 75 FT OF W 269/83 FT OF N 150 FT OF LOT 7 TH RUN E 197.48 FT S00-28-01E 11.10 FT N89-42-36W 197.60 FT N00-08-50E 10.10 FT TO POB

Total Land Area 30,977 sqft (+/-) | 0.71 acres (+/-) GIS Calculated Notice

Land

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

Page 1 of 1 (1 total records)

Buildings

Important Information			Structure			
More Details	**Model Code:**	01 - Single Fam Residence	**Actual Year Built:**	1954	**Gross Area:**	2843 sqft
	Type Code:	0103 - Single Fam Class III	**Beds:**	3	**Living Area:**	1870 sqft
	Building Value:	working...	**Baths:**	2.0	**Exterior Wall:**	Aluminum Or Vinyl Siding
	Estimated New Cost:	working...	**Floors:**	1	**Interior Wall:**	Drywall

Page 1 of 1 (1 total records)

Extra Features

Description	Date Built	Units	XFOB Value
FPL2 - Average Fireplace	01/01/1954	1 Unit(s)	working...
PT1 - Patio 1	01/01/2005	1 Unit(s)	working...

Page 1 of 1 (2 total records)

This Data Printed on 06/08/2018 and System Data Last Refreshed on 06/07/2018