City of Belle Isle

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

PERMIT CARD – PLEASE POST AT JOB SITE

THIS DOCUMENT BECOMES YOUR PERMIT WHEN PROPERLY VALIDATED

Per FBC 105.3.3: An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "**NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies.**" The issuance of this permit does not grant permission to violate any applicable City, Orange County, State of Florida and/or Federal codes and/or ordinances. Separate permits are required for Signs, Roofing, Electrical, Gas, Plumbing and Mechanical services. This permit becomes VOID if the work authorized is not commenced within 6 months, or is suspended or abandoned for a period of 6 months after commencement. WORK SHALL BE CONSIDERED SUSPENDED IF AN APPROVED INSPECTION HAS NOT BEEN MADE WITHIN A 6 MONTH PERIOD. PERMISSION IS GRANTED TO DO THE FOLLOWING WORK ACCORDING TO THE CONDITIONS HEREON AND THE APPROVED PLANS AND SPECIFICATIONS, SUBJECT TO COMPLIANCE WITH THE ORDINANCES OF THE CITY OF BELLE ISLE, FLORIDA.

Scope of Work: REROOF: 50sq, modified bitumen
Comments: None

Project Information
Address: 2728 Nela Avenue, Belle Isle, FL 32809
Parcel ID: 19-23-30-5892-00-190
Property Owner: Nela 2728 Land Trust, Robert Benson Trustee
Phone Number: 407-782-1069

****

Company Name: Jasper Contractors, Inc.
Contractor Name: Stephen, Michael H.
License Number: CCC1329651
Address: 5380 E. Colonial Drive, Orlando, FL 32807
Phone Number: 407-278-7788

Permit Number: 2015-12-013

Date of Application: 12/11/2014
Date Permit Issued: 12/17/2014

WARNING TO OWNER: "YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU 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." ON THE JOB INSPECTION(S) MUST BE MADE BEFORE PROCEEDING WITH SUBSEQUENT WORK. THIS CARD MUST BE DISPLAYED OUTSIDE AND BE PROTECTED FROM THE WEATHER WHILE BEING VISIBLE FROM THE STREET UNTIL THE FINAL INSPECTIONS HAVE BEEN APPROVED.

BUILDING FEATURES

IMPACT FEES
Traffic $
School $

ZONING FEES
Zoning Fee $30.00

UNIVERSAL ENG - BUILDING FEES

Boat Dock $
Boat House $
Building $
Demo $
Door(s) $
Driveway $
Electrical $
Fence $
Gas $
Irrigation $
Low Voltage $
Mechanical $
Plumbing $
Pool $
Roofing $120.00
Screen Encl $
Shed $
Temp Pole $
Window(s) $

SURCHARGE FEES

Surcharge Fee $2.00
Surcharge Fee $2.00

TOTAL FEES $154.00

Date Paid 12-17-14
CC or Check # Visa 1999
Amount Paid 154.00

The person accepting this permit shall conform to the terms of the application on file and construction shall conform to the requirements of the Florida Building Code (FS 553).

BUILDING INSPECTOR USE ONLY

IF APPLICABLE:
Have Zoning Approval Conditions Been Met? YES NO **Have Stormwater Approval Conditions Been Met?** YES NO **Silt fencing in place?** YES NO **Turbidity Barrier in place?** YES NO

☐ **BUILDING**
1st _____ (Footing/Foundation)
Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? ____
2nd _____ (Slab)
3rd _____ (Lintel)(Wall Reinforcing on Masonry Building)
4th _____ (Exterior Framing)(Roof/Wall Sheathing)
5th _____ (Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins & Windows/Doors Installed)
6th _____ (Insulation to be Made After Roof Installed)
7th _____ (Drywall)
8th _____ (Sidewalk/Driveway)
9th _____ (Other)
10th _____ (Final – After MEP and Other Applicable Finals)

☐ **ROOFING** **OSHA APPROVED ACCESS MUST BE MADE AVAILABLE TO INSPECTOR**
1ST ROOFING Deck Nailing/Dry-in/Flashing _____
2nd ROOFING Covering In-Progress _____
3rd ROOFING Covering Final _____

☐ **PLUMBING** (Pool-Piping, Solar, Irrigation, Water Treatment Equip, Etc...)
☐
1ST _____ (Underground) 2nd _____ (Sewer)
3rd _____ (Rough-In/Tub Set) 4th _____ (Final)

CHECK APPROPRIATE BOX
☐ **GAS** __**Natural** ___**LP** ☐ **MECHANICAL** ☐**ELECTRICAL** ☐ **LOW VOLTAGE**
1st _____ (Rough-In) 2nd _____ (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 1pm. 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.

For a copy of your permit, or to check inspection results, please visit https://universalengineering.sharefile.com/f/fo94edc4-832d-44bd-9809-ecf32f9e2e63
login ID = cobi@universalengineering.com password = universal13

received 12-11-14

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: 12/10/2014 **ROOF PERMIT NUMBER** 2015-12-013

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

Project Address 2728 Nela Ave, Belle Isle, FL ☑ 32809 ☐ 32812

Property Owner Nela 2728 Land Trust & Robert Benson Trustee Phone 407-782-1069

Property Owner's Mailing Address 2728 Nela Ave City Belle Isle

State FL Zip Code 32809 **Parcel Id Number:** 19-23-30-5892-00-190

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

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

Type of Work: New Roof ☐ ReRoof ☑

- **REQUIRED! Florida Product Approval 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:

Roof Square Footage: 50 **Number of Stories:** 1 **Job Valuation: $** 20,000

Type: Asphalt Shingles ☑ Metal ☐ Modified Bitumen ☑ Other: Rhino Underlayment FL15216

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 # CCC1329051

LICENSE HOLDER NAME MICHAEL STEPHEN COMPANY NAME Jasper Contractors

Street Address 5380 E. Colonial Dr.

City Orlando State FL Zip Code 32807 Phone Number 407-278-7788

Email Address permit@jasperinc.org

Building Official: CG **Date** 12-17-14

Verified Contractor's Licenses & Insurance are on file CG **Date** 12-17-14

Zoning Fee	$ 30.00
Permit Fee	$ 120.00
Review Fee	$ n/a
3% Florida Surcharge	$ 4.00
Total Permit Fee	$ 154.00

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 _____

1000.00 = 25.00
19000.00 = 95.00
120.00

PROJECT NUMBER 0115.1400551.0000

TASK NUMBER 01

CITY OF BELLE ISLE

Permit Application Review Sheet

Permit Number	2015-12-013
Property Owner	Robert Benson Trustee
Address	2728 Nela Ave
Nature of Improvement	Roof - reroof 50 sq. asphalt shingles
Received Application	12-10-14
Sent for Stormwater Review	
Stormwater Approved	/
Sent for Zoning Review	
Zoning Approved	/
Applied for Variance	
Variance Approved	
Sent to BO for Review	12-11-14
Building Official Approved	12-17-14

Comments	
1. Susan 12-11-14	app is incomplete - emailed to
2.	kdarby@jasperinc.org &
3.	Rachel review WO#
4.	NOC ✓ FL BL ✓ WC ✓
5.	WC / GL has wrong address - emailed
6. 12-17-14 cg	emailed Contr its ready
7.	
8.	
9.	
10.	
11.	
12.	

Permit Number.
Folio/Parcel ID #: 19-23-30-5892-00-190
Prepared by Rachel Holcomb
5380 E Colonial Dr
Orlando, FL 32805
Return to

DOC # 20140622228 B: 10845 P: 8204
12/10/2014 08:31 AM Page 1 of 1
Rec Fee: $10.00
Deed Doc Tax: $0.00
Mortgage Doc Tax: $0.00
Intangible Tax: $0.00
Martha O. Haynie, Comptroller
Orange County, FL
Ret To: SIMPLIFILE LC

NOTICE OF COMMENCEMENT

State of Florida, County of Orange

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

1. **Description of property** (legal description of the property, and street address if available)
7769/1590 INCOMPLETE LEGAL-NELA ISLE ANNEX R/74 LOT 19 & LAND ON S TO WATERS OF LAKE
2. **General description of improvement**
Re-Roofing
3. **Owner information or Lessee information if the Lessee contracted for the improvement**
Name Nela 2728 Land Trust & Robert Benson
Address 2728 NelaAve Orlando, FL 32809
Interest in Property
Name and address of fee simple titleholder (if different from Owner listed above)
Name
Address
4. **Contractor**
Name Jasper Contractors Telephone Number 407-278-7788
Address 5380 E Colonial Dr Orlando, FL 32805
5. **Surety** (if applicable, a copy of the payment bond is attached)
Name Telephone Number
Address Amount of Bond $
6. **Lender**
Name Telephone Number
Address
7. **Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by §713.13(1)(a)7, Florida Statutes.**
Name Telephone Number
Address
8. **In addition to himself or herself, Owner designates the following to receive a copy of the Lienor's Notice as provided in §713.13(1)(b), Florida Statutes.**
Name Telephone Number
Address
9. **Expiration date of notice of commencement** (the expiration date may not be before the completion of construction and final payment to the contractor, but will be 1 year from the date of recording unless a different date is specified)

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

Robert J Benson as President of
Robert J Benson Inc as Trustee
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 2 day of 12/14 (month/year) by Robert Benson (name of person)
as President of Land Trustee (Type of authority, e.g., officer, trustee, attorney in fact) for Nela 2728 Land Trust (Name of party on behalf of whom instrument was executed)

Signature of Notary Public – State of Florida
Print, type, or stamp commissioned name of Notary Public

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

RACHEL HOLCOMB
Notary Public, Georgia
Paulding County
My Commission Expires
2.18.18

Form content revised: 10/17/12

Shingles

2728 Nela

TRINITY ERD

EXTERIOR RESEARCH & DESIGN, LLC.
Certificate of Authorization #9503
353 CHRISTIAN STREET, UNIT #13
OXFORD, CT 06478
PHONE: (203) 262-9245
FAX: (203) 262-9243

EVALUATION REPORT

Owens Corning
One Owens Corning Parkway
Toledo, OH 43659

Evaluation Report 037940.02.12-R2
FL10674-R8
Date of Issuance: 02/06/2012
Revision 2: 12/19/2012

SCOPE:
This Evaluation Report is issued under Rule 9N-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 designed to comply with the 2010 FBC and 2010 FBC Residential Volume sections noted herein.

DESCRIPTION: Owens Corning Asphalt Roof Shingles

LABELING: Each unit shall bear labeling 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 6.

Prepared by:

Robert J.M. Nieminen, P.E.
Florida Registration No. 59165, Florida DCA ANEI983

The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 12/19/2012
This does not serve as an electronically signed document. Signed, sealed hardcopies have been transmitted to the Product Approval Administrator and to the named client

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.

TRINITY ERD

ROOFING SYSTEMS EVALUATION:

1. SCOPE:

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

2. STANDARDS:

Section	Property	Standard	Year
1507.2.5, R905.2.4	Physical Properties	ASTM D3462	2007
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D3161, Class F	2006
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D7158, Class H	2007

3. REFERENCES:

Entity	Examination	Reference	Date
UL LLC (CER9626)	Physicals & Wind Resistance	File R2453, Vol. 3	02/15/2007
UL LLC (CER9626)	Physicals & Wind Resistance	20120516-R2453	05/16/2012
UL LLC (TST9628)	Physical Properties	06CA20263	04/18/2006
UL LLC (TST9628)	Wind Resistance	11CA34308	02/18/2012
Miami-Dade (CER1592)	FBC HVHZ Compliance	07-1116.12	02/14/2008
Miami-Dade (CER1592)	FBC HVHZ Compliance	09-0915.12	12/16/2009
Miami-Dade (CER1592)	FBC HVHZ Compliance	10-0817.09	10/27/2010
Miami-Dade (CER1592)	FBC HVHZ Compliance	10-0817.10	10/27/2010
Miami-Dade (CER1592)	FBC HVHZ Compliance	10-0817.08	10/27/2010
Miami-Dade (CER1592)	FBC HVHZ Compliance	10-0817.07	10/27/2010
Miami-Dade (CER1592)	FBC HVHZ Compliance	11-0411.03	06/16/2011
Miami-Dade (CER1592)	FBC HVHZ Compliance	12-0309.01	07/19/2012
UL LLC (QUA9625)	Quality Control	Service Confirmation R2453	Exp. 09/26/2014

4. PRODUCT DESCRIPTION:

4.1 Asphalt Shingles:

4.1.1 Classic® and Supreme® are fiberglass reinforced, 3-tab asphalt roof shingles.

4.1.2 Berkshire® are fiberglass reinforced, 4-tab asphalt roof shingles.

4.1.3 Duration®, TruDefinition® Duration®, Duration® Premium Cool, TruDefinition® Duration® Designer Color Collection, TruDefinition® Oakridge®, Oakridge® and WeatherGuard® HP are fiberglass reinforced, laminated asphalt roof shingles.

4.2 Berkshire® Hip & Ridge Shingles, High Ridge, Hip & Ridge with Sealant, WeatherGuard® HP Hip & Ridge Shingles and ProEdge Hip & Ridge Shingles are fiberglass reinforced, hip and ridge asphalt roof shingles.

4.3 Starter Strip Plus and Starter Shingle Roll are starter strips for asphalt roof shingles.

5. LIMITATIONS:

5.1 This Evaluation Report is not for use in the HVHZ.

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

5.3 Wind Classification:

5.3.1 All Owens Corning 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.

5.3.2 All Owens Corning hip & ridge shingles and Starter Strip Plus noted herein are Classified in accordance with FBC Tables 1507.2.7.1 and R905.2.6.1 to ASTM D3161, Class F, indicating the shingles are acceptable for 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.

5.3.3 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.

5.3.4 Refer to Owens Corning published information on wind resistance and installation limitations.

5.4 All products in the roof assembly shall have quality assurance audit in accordance with the Florida Building Code and F.A.C. Rule 9N-3.

6. INSTALLATION:

6.1 Underlayment:

6.1.1 Underlayment shall be acceptable to Owens Corning and shall hold current Florida Statewide Product Approval, or be Locally Approved per Rule 9N-3, per FBC Sections 1507.2.3, 1507.2.4 or R905.2.3.

6.2 Asphalt Shingles:

6.2.1 Installation of asphalt shingles shall comply with the manufacturer's current published instructions, using minimum four (4) nails per shingle in accordance with FBC Sections 1507.2 or R905.2, with the following exceptions:

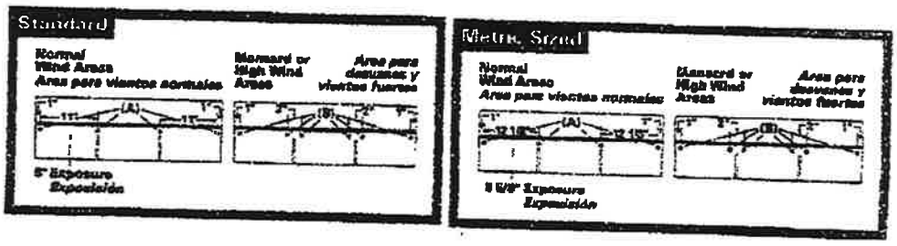
- Berkshire® shingles require minimum five (5) nails per shingle.
- WeatherGuard® HP shingles require minimum six (6) nails per shingle.
- Starter Strip Plus requires minimum five (5) nails per strip.

Refer to Owens Corning published information on wind resistance and installation limitations.

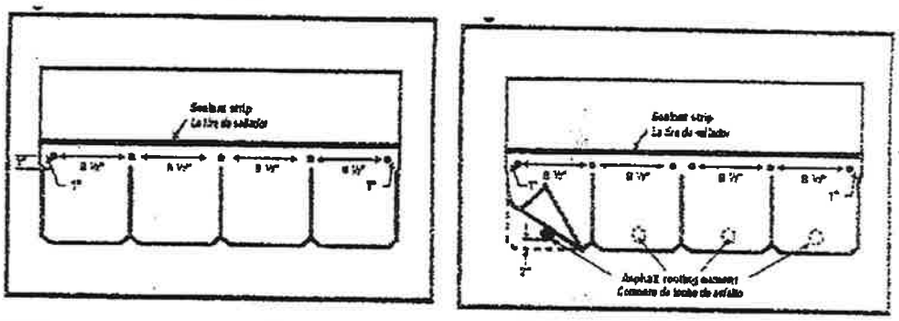
6.2.2 Fasteners shall be in accordance with the manufacturer's published requirements, but not less than FBC 1507.2.6 or R905.2.5. Staples are not permitted.

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

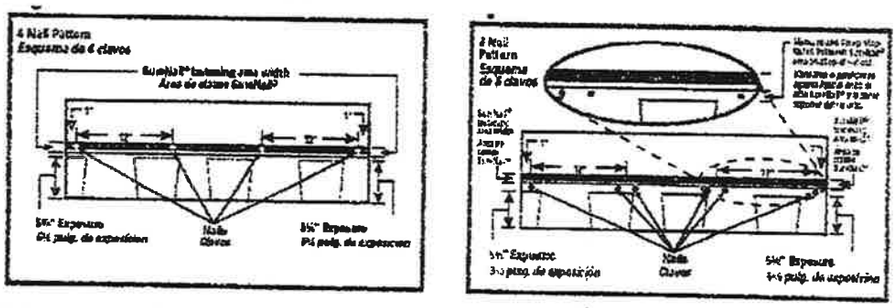
6.2.5 Minimum Nailing – Classic® & Supreme:



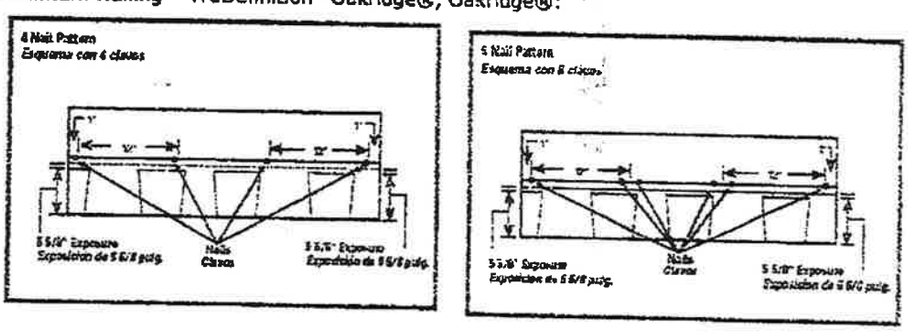
6.2.6 Minimum Nailing – Berkshire®:



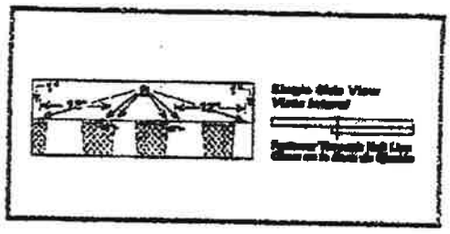
6.2.7 Minimum Nailing – Duration®, TruDefinition® Duration, Duration® Premium Cool & TruDefinition® Duration® Designer Color Collection:



6.2.8 Minimum Nailing – TruDefinition® Oakridge®, Oakridge®:



6.2.9 Minimum Nailing – WeatherGuard® HP:

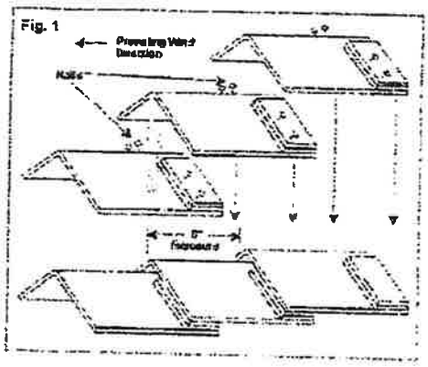


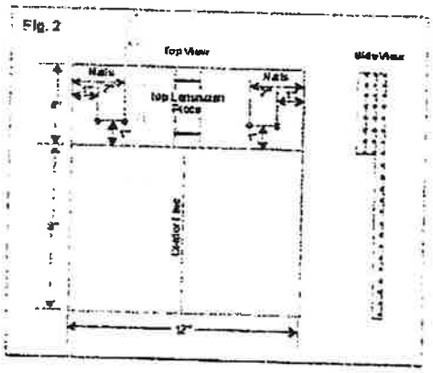
6.3 Hip & Ridge Shingles:

6.3.1 Installation of Berkshire® Hip and Ridge Shingles, High Ridge, Hip & Ridge with Sealant, WeatherGuard® HP Hip and Ridge Shingles and ProEdge Hip & Ridge Shingles shall comply with the manufacturer's current published instructions, using four (4) nails per shingle. Refer to Owens Corning published information on wind resistance and installation limitations, including the use of hand-sealing for wind warranties.

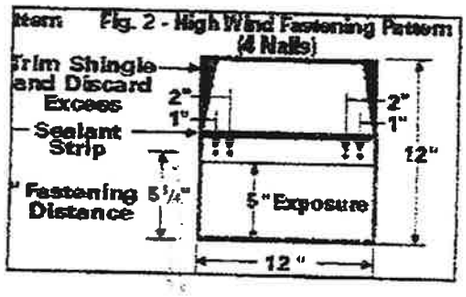
6.3.2 Fasteners shall be in accordance with the manufacturer's published requirements, but not less than FBC 1507.2.6 or R905.2.5. Staples are not permitted.

6.3.3 Minimum Nailing – Berkshire® Hip & Ridge and High Ridge:

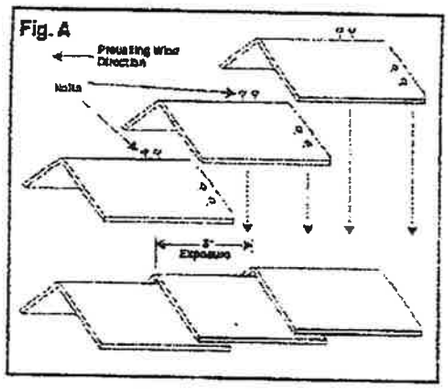


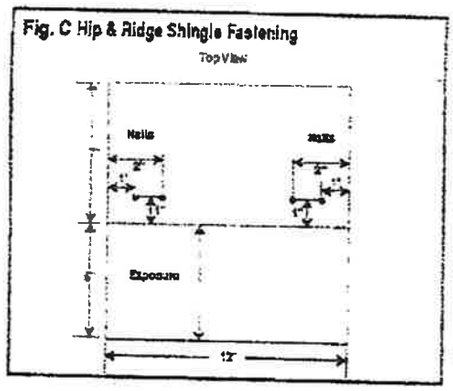


6.3.4 Minimum Nailing – Hip & Ridge with Sealant:

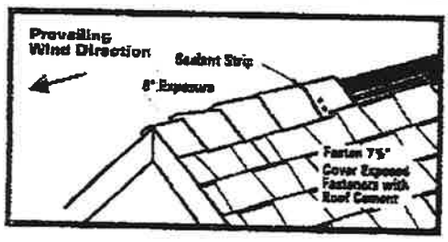


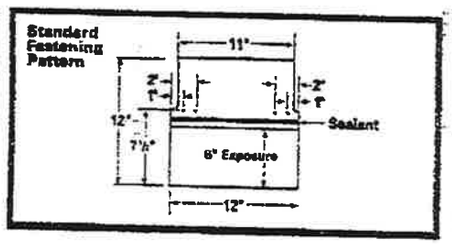
6.3.5 Minimum Nailing – WeatherGuard® HP Hip and Ridge:





6.3.6 Minimum Nailing - ProEdge Hip & 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 9N-3 QA requirements.

10. QUALITY ASSURANCE ENTITY:

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

- END OF EVALUATION REPORT -

TRINITY | ERD

Certificate of Authorization #9503

August 01, 2011

RE: Certification of Independence, Florida F.A.C. Rule 9N-3

To Whom It May Concern:

This letter serves to document the following in accordance with Florida F.A.C. Rule 9N-3:

1. Exterior Research & Design, LLC. d/b/a 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. Exterior Research & Design, LLC. d/b/a 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.

Please contact our office with any questions.

Sincerely,

Robert Nieminen, P.E.
Florida Reg. No. 59166
Vice President
Email: robertnieminen@trinityerd.com

TRINITY | ERD

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Please contact our office with any questions.

Sincerely,

Robert Nieminen, P.E.
Florida Reg. No. 59166
Vice President
Email: robertnieminen@trinityerd.com

EXTERIOR RESEARCH & DESIGN, LLC.
Certificate of Authorization #9503
353 CHRISTIAN STREET, UNIT #13
OXFORD, CT 06478
PHONE: (203) 262-9245
FAX: (203) 262-9243

EVALUATION REPORT

Interwrap, Inc.
32923 Mission Way
Mission, BC V2V-6E4
Canada

Evaluation Report I40510.02.12
FL15216
Date of Issuance: 02/17/2012

SCOPE:
This Evaluation Report is issued under Rule 9N-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 designed to comply with the 2010 Florida Building Code sections noted herein.

DESCRIPTION: RhinoRoof Underlayment

LABELING: Each unit shall bear labeling 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.

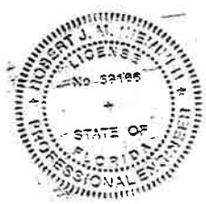
ADVERTISEMENT: The Evaluation Report number preceded by the words "Trinity|ERD Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

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 4.

Prepared by:

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



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 02/17/2012
This does not serve as an electronically signed document. Signed, sealed hardcopies have been transmitted to the Product Approval Administrator and to the named client

CERTIFICATION OF INDEPENDENCE:
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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.

ROOFING COMPONENT EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Compliance Statement: RhinoRoof Underlayment, as produced by Interwrap, Inc., has demonstrated compliance with the intent of following sections of the 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	Unrolling, Breaking Strength, Pliability, Loss on Heating	ASTM D226	2006
1507.2.3	Unrolling, Tear Strength, Pliability, Loss on Heating, Liquid Water Transmission, Breaking Strength, Dimensional Stability	ASTM D4869	2005

3. REFERENCES:

Entity	Examination	Reference	Date
ITS (TST1509)	Physical Properties	100539395COQ-006	10/27/2011
ITS (TST1509)	Physical Properties	100539395COQ-002	10/27/2011
ITS (QUA1673)	Quality Control	Inspection Report	12/13/2011

4. PRODUCT DESCRIPTION:

4.1 **RhinoRoof** is a multilayered polymer woven coated synthetic roof underlayment intended as an alternate to ASTM D226, Type I (a.k.a., 15 lb saturated asphalt felt) or D4869 Type II felt. RhinoRoof is available in 42-inch wide rolls, and can be produced in various other sizes.

5. LIMITATIONS:

5.1 This Evaluation Report is not for use in the HVHZ.

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

5.3 RhinoRoof Underlayment 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 AHJ for approval based on this evaluation combined with supporting data for the prepared roof covering.

5.4 Allowable roof covers applied atop RhinoRoof Underlayment are follows:

Table 1: Roof Cover Options

Underlayment	Asphalt Shingles	Nail-On Tile	Foam-On Tile	Metal	Wood Shakes & Shingles	Slate or Simulated Slate
RhinoRoof	Yes	No	No	No	No	No

5.5 Exposure Limitations:

5.5.1 RhinoRoof Underlayment shall not be left exposed for longer than 30-days after installation.

6. INSTALLATION:

6.1 RhinoRoof shall be installed in accordance with Interwrap, Inc. published installation instructions subject to the Limitations set forth in Section 5 herein and the specifics noted below.

6.2 Install RhinoRoof in compliance with manufacturer's published installation instructions and the requirements for ASTM D226, Type I or D4869, Type II underlayments in FBC Sections 1507 for the type of prepared roof covering to be installed.

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 Fasteners:

6.4.1 For exposure $\leq$ 24 hours, corrosion resistant fasteners may be 1-inch roofing nails with a 3/8-inch diameter head, or those noted in 6.4.2. The use of staples is prohibited.

6.4.2 For exposure > 24 hours up to maximum 30 days, corrosion resistant fasteners shall be minimum 1-inch diameter plastic or metal cap nails or FBC HVHZ nails & 1-5/8" diameter tin caps (with the rough edge facing up). The use of staples is prohibited.

6.5 Single Layer; Roof Slope > 4:12:

End (vertical) laps shall be minimum 6-inches and side (horizontal) laps shall be minimum 4-inches. Refer to Interwrap, Inc. recommendations for alternate lap configurations and/or the use of sealant under certain conditions.

For exposure $\leq$ 24 hours, use of every-other fastening location printed on the surface is acceptable. For exposure > 24 hours up to maximum 30-days, use of every fastening location printed on the surface is required.

When batten systems are to be installed atop the underlayment, the underlayment need only be preliminarily attached pending attachment of the battens on the same day. Battens shall not be positioned over cap nails. If this occurs, remove the cap nail and patch the hole in accordance with Interwrap published instructions.

6.6 Double Layer; 2:12 < Roof Slope < 4:12:

End (vertical) laps shall be minimum 12-inches and side (horizontal) laps shall be minimum half-sheet-width plus 1-inch.

Double layer application; begin by fastening a half-width plus 1-inch starter strip along the eaves. Place a full-width sheet over the starter, completely overlapping the starter course. Continue as noted in 6.5, but maintaining minimum half-width plus 1-inch side (horizontal) laps, resulting in a double-layer application.

7. LABELING:

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.

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 manufacturer or the named QA entity for information on plants covered under Rule 9N-3 QA requirements.

10 QUALITY ASSURANCE ENTITY:

Intertek Testing Services NA Inc.-ETL/Warnock Hersey – QUA1673; (604) 520-3321

- END OF EVALUATION REPORT -

EXTERIOR RESEARCH & DESIGN, LLC.
Certificate of Authorization #9503
353 CHRISTIAN STREET, UNIT #13
OXFORD, CT 06478
PHONE: (203) 262-9245
FAX: (203) 262-9243

EVALUATION REPORT

Interwrap, Inc.
32923 Mission Way
Mission, BC V2V-6E4
Canada

Evaluation Report I40510.02.12
FL15216
Date of Issuance: 02/17/2012

SCOPE:
This Evaluation Report is issued under Rule 9N-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 designed to comply with the 2010 Florida Building Code sections noted herein.

DESCRIPTION: RhinoRoof Underlayment

LABELING: Each unit shall bear labeling 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.

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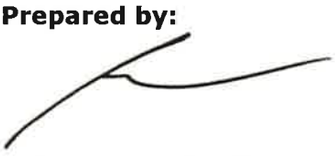
Prepared by:



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

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This does not serve as an electronically signed document. Signed, sealed hardcopies have been transmitted to the Product Approval Administrator and to the named client

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ROOFING COMPONENT EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Compliance Statement: RhinoRoof Underlayment, as produced by Interwrap, Inc., has demonstrated compliance with the intent of following sections of the 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	Unrolling, Breaking Strength, Pliability, Loss on Heating	ASTM D226	2006
1507.2.3	Unrolling, Tear Strength, Pliability, Loss on Heating, Liquid Water Transmission, Breaking Strength, Dimensional Stability	ASTM D4869	2005

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4.1 **RhinoRoof** is a multilayered polymer woven coated synthetic roof underlayment intended as an alternate to ASTM D226, Type I (a.k.a., 15 lb saturated asphalt felt) or D4869 Type II felt. RhinoRoof is available in 42-inch wide rolls, and can be produced in various other sizes.

5. LIMITATIONS:

5.1 This Evaluation Report is not for use in the HVHZ.

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Underlayment	Asphalt Shingles	Nail-On Tile	Foam-On Tile	Metal	Wood Shakes & Shingles	Slate or Simulated Slate
RhinoRoof	Yes	No	No	No	No	No

5.5 Exposure Limitations:

5.5.1 RhinoRoof Underlayment shall not be left exposed for longer than 30-days after installation.

6. INSTALLATION:

6.1 RhinoRoof shall be installed in accordance with Interwrap, Inc. published installation instructions subject to the Limitations set forth in Section 5 herein and the specifics noted below.

6.2 Install RhinoRoof in compliance with manufacturer's published installation instructions and the requirements for ASTM D226, Type I or D4869, Type II underlayments in FBC Sections 1507 for the type of prepared roof covering to be installed.

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 Fasteners:

6.4.1 For exposure $\leq$ 24 hours, corrosion resistant fasteners may be 1-inch roofing nails with a 3/8-inch diameter head, or those noted in 6.4.2. The use of staples is prohibited.

6.4.2 For exposure > 24 hours up to maximum 30 days, corrosion resistant fasteners shall be minimum 1-inch diameter plastic or metal cap nails or FBC HVHZ nails & 1-5/8" diameter tin caps (with the rough edge facing up). The use of staples is prohibited.

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End (vertical) laps shall be minimum 12-inches and side (horizontal) laps shall be minimum half-sheet-width plus 1-inch.

Double layer application; begin by fastening a half-width plus 1-inch starter strip along the eaves. Place a full-width sheet over the starter, completely overlapping the starter course. Continue as noted in 6.5, but maintaining minimum half-width plus 1-inch side (horizontal) laps, resulting in a double-layer application.

7. LABELING:

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.

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 manufacturer or the named QA entity for information on plants covered under Rule 9N-3 QA requirements.

10 QUALITY ASSURANCE ENTITY:

Intertek Testing Services NA Inc.-ETL/Warnock Hersey – QUA1673; (604) 520-3321

- END OF EVALUATION REPORT -

Evaluation Report

"Stampco Ventilator"

Off Ridge Vent Assembly

Manufacturer:

Stampco, Inc.

2930 Mercury Road
Jacksonville, FL 32207
(904) 737-6144

for

Florida Product Approval

 # FL 16160.1

Florida Building Code 2010
Per Rule 61G20-3

Method:	**2 - B**
Category:	**Roofing**
Sub - Category:	**Roofing Accessories that are an Integral Part of the Roof System**

Product Name:	"Stampco Ventilator"
Product Description:	Off Ridge Vent Assembly
Material:	Steel
Support:	Wood Deck

Prepared by:

James L. Buckner, P.E., SECB
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Project Manager: Youry Demosthenes
Report No. 13-100-STVent-RV-ER
Date: 1 / 10 / 13

James L. Buckner, P.E.
Florida P.E. # 31242
1/11/13

Contents:

Evaluation Report Pages 1 – 7

CBUCK, Inc.
1399 N. Killian Drive, Suite 4, West Palm Beach, Florida 33403
Phone: (561)491-9927 Fax: (561)491-9928 Website: www.cbuckinc.net

Manufacturer: **Stampco, Inc.**

Product Name: **"Stampco Ventilator"**

Product Category: Roofing

Product Sub-Category Roofing Accessories that are an Integral part of the Roofing System

Compliance Method: State Product Approval Rule 61G20-3.005 (2) (b)

Product/System Description: The Stampco Ventilator is a low profile, off-ridge vent for pitched roofs. It is fabricated from 26 gauge, G-90 primed, galvanized steel with a galvanized steel mesh covering. The Stampco Ventilator is mechanically attached to Plywood Deck.

Product Assembly as Evaluated: Refer to Page 4 of this report for product assembly structural components:

1. Ridge Vent
2. Fasteners

Support:

Type:
Wood Deck
(Design of support system is outside the scope of this evaluation)

Description:
- 15/32" or greater Plywood , or
- Wood plank deck (based on minimum density/specific gravity of 0.42)

Roof Slope: Slope shall be in compliance with FBC 2010, Chapter 15 based on the type of roof covering.

Performance:

Wind Resistance

Design Uplift Pressure: **- 45 PSF**

Performance Standards: The following test protocols were performed to demonstrate compliance with the intent of the code as this product is not addressed specifically in the code.

- **ASTM E330-02 –** *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

Code Compliance: The product described herein has demonstrated compliance with Florida Building Code 2010, Section 1714.2.

Evaluation Report Scope: This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.

Limitations and Conditions of Use:

- Scope of "Limitations and Conditions of Use" for this evaluation:
  This evaluation report for "Optional Statewide Approval" contains technical documentation, specifications and installation method(s) which include "Limitations and Conditions of Use" throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under "Optional Statewide Approval".
- Option for application outside "Limitations and Conditions of Use"
  Rule 61G20-3.005(1)(e) allows engineering analysis for "project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code". Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.
- Refer to applicable building code section for ventilation requirements.
- Design of support system is outside the scope of this report.
- Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation.
- This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)

Quality Assurance: The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **Keystone Certifications, Inc.** (FBC Organization #: QUA 1824).

Components/Materials (by Manufacturer):

Ridge Vent: "Stampco Ventilator"

Ventilator Unit:

Material:	Steel
Thickness:	26 gauge (min.)
Yield Strength:	40 ksi min.
Corrosion Resistance:	In compliance with FBC Section 1507.4.3: • ASTM A792 coated, or • ASTM A653 G90 galvanized steel
Dimensions:	
Width:	28"
Height:	4-1/2"
Lengths:	4', 6', 8' and 10'

Fastener(s):

Base Fastener:

Type:	Annular Ring Shank Roofing Nails
Size:	11 gauge × 1-1/2" (min.)
Corrosion Resistance:	Per FBC Section 1506.5
Standard:	Per ASTM F 1667

Alternate Fastener:

Type:	Hex-Head Wood Screw
Size:	#10 × 1-1/2" (min.)
Corrosion Resistance:	Per FBC Section 1506.6 and 1507.4.4
Standard:	Per ANSI/ASME B18.6.4

Roof Adhesive:

Type:	Heavy bodied Flashing Cement
Description:	Asbestos-free asphalt based roof cement
Application Size :	1/4" thick (min.)
Standard:	Per ASTM D 4586 Type I

Installation:

Installation Method:
(Refer to drawings on Pages 6-7 of this report.)

- Prepare deck opening by trimming any shingles & nails that may interfere with ridge vent installation.
- Apply roof cement to the underside, back and side flanges of the ridge vent. Cement should be a 1/4" thick and extend 2" onto roof underlayment. (Install cement in compliance with manufacturer's installation guidelines.)
- Position vent flange beneath loosened shingles and align with deck opening.
- Attach the "Ventilator" unit side flanges to deck with nails or screws spaced **8" o.c.** and 1-1/2" from each end.
- Minimum fastener penetration thru bottom of support, 3/16".
- Apply Roofing Cement to exposed fastener heads.

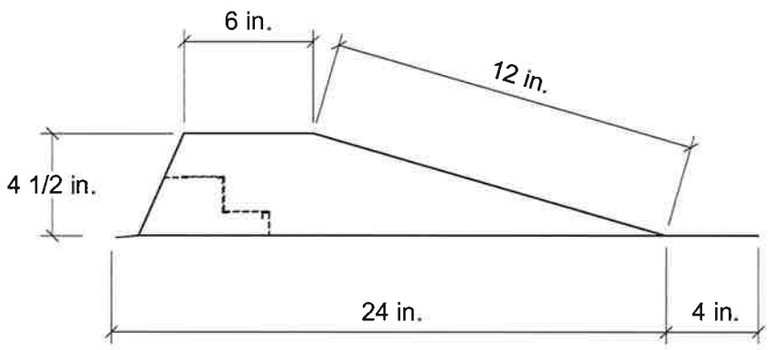
Install the "Stampco Ventilator" off ridge vent assembly in compliance with the installation method listed in this report and applicable code sections of FBC 2010. The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

Evaluated Reference Data:

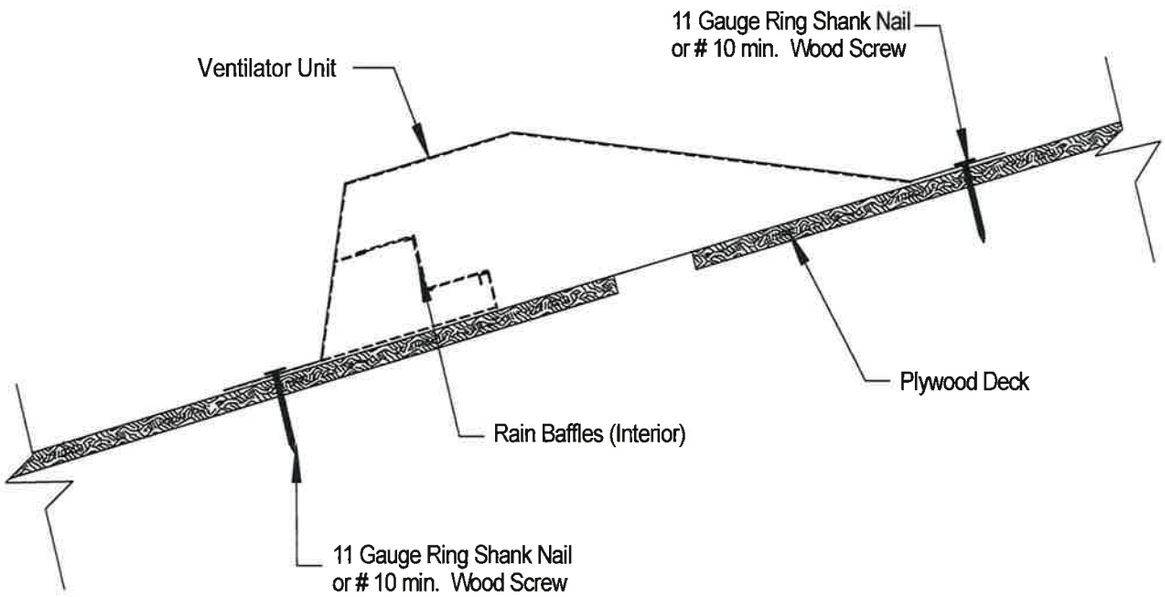
1. ASTM E330-02 Uniform Static Air Pressure Difference Test
   PRI Asphalt Technologies, Inc.(FBC Organization #TST ID: 5878)
   Report #: STPC-003-02-01, Report Date: 1/7/13
2. Quality Assurance
   By Keystone Certifications, Inc. (QUA ID: 1824)
   Stampco, Inc. Licensee # 447
3. Certification of Independence
   By James L. Buckner, P.E. @ CBUCK Engineering
   (FBC Organization # ANE 1916)

Installation Method
Stampco, Inc.
"Ventilator" (Off Ridge Vent) Attached to Plywood Deck

Profile Drawings

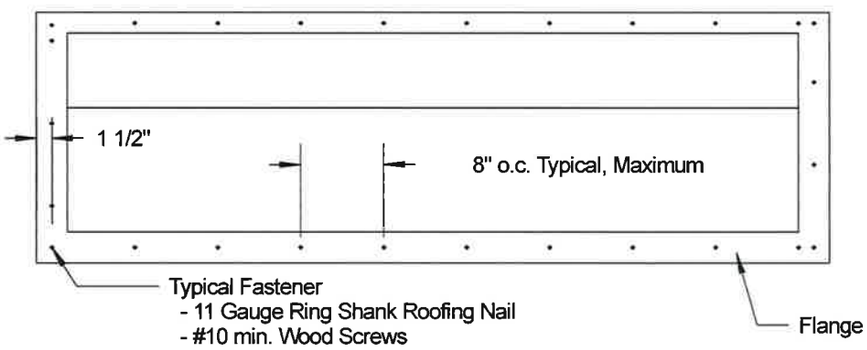


Side View



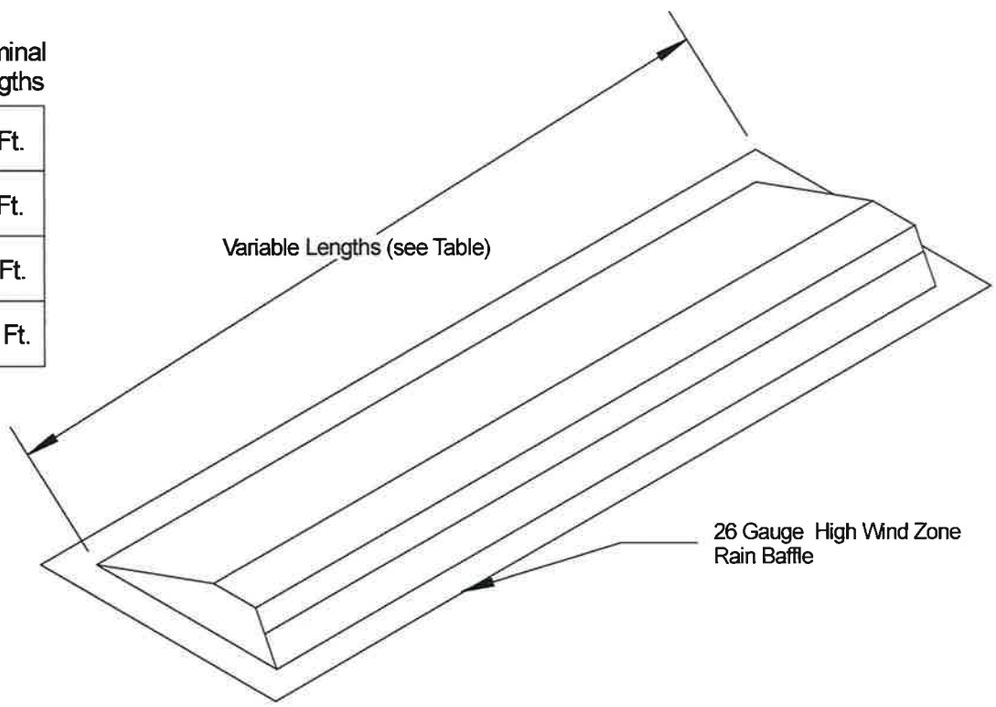
Side Assembly View

Installation Method
Stampco, Inc.
"Ventilator" (Off Ridge Vent) Attached to Plywood Deck



Top View
(Typical Fastening Pattern)

Nominal Lengths
4 Ft.
6 Ft.
8 Ft.
10 Ft.



Typical Isometric View

Pipe Jacks

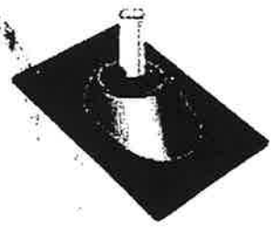
IPS CORPORATION

WATERTITE ROOF FLASHINGS

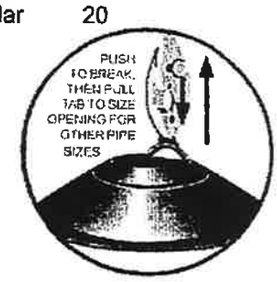
- Florida Building Commission Approved Under FL3066
- Warranted for the Life of the Roof *
- Much More Environmentally Friendly Than Lead
- Eliminate Inventory Loss Caused by Damaged Product
- Years of Proven Performance in Areas of Similar UV Exposure **

Multi-Size Roof Vent Flashing

Ordering #	Size	Description	Case Quantity	List Price
HB31	1-1/2", 2" or 3"	Hard Base Plastic Roof Flashing With Elastomer Collar	20	
HB34	3" or 4"	Hard Base Plastic Roof Flashing With Elastomer Collar	20	



- Fits Any Pitched Roof From Flat to 45°
- Always Have the Correct Flashing on the Job
- Patented Design
- Over 10 Million "3-N-1" Style Roof Flashings Successfully Installed Since 1990



Standard Size Roof Vent

Ordering #	Size	Description	Case Quantity	List Price
HB1	1-1/2"	Standard Size Hard Base Roof Flashing With Elastomer Collar	20	
HB2	2"	Standard Size Hard Base Roof Flashing With Elastomer Collar	20	
HB3	3"	Standard Size Hard Base Roof Flashing With Elastomer Collar	20	
HB4	4"	Standard Size Hard Base Roof Flashing With Elastomer Collar	20	

IPS manufactures a complete line of galvanized, aluminum and all flex based flashings that are Florida approved

IPS Corporation Water-Tite Roof Flashing Lifetime Warranty

IPS Corporation warrants that its Water-Tite roof flashings shall be free from manufacturing defects and agrees to replace the Water-Tite roof flashing in the event of failure due to defective materials or workmanship by manufacturer. The warranty shall cover the Water-Tite roof flashing for the lifetime of the original roof covering system*.

1) This warranty shall be Null and Void in the event any of the following occur:
   a) The roof flashing is not installed in accordance with the recommended installation of the manufacturer
   b) Manufacturers installation instructions are not followed, or:
   c) There is any abuse, misuse, alteration or defacement of the roof flashing
2) Under no circumstances shall the manufacturer be obligated under the terms of this warranty to make any adjustment beyond replacemnet of the defective material.

** 2002 Clear Sky Index
Published by the National Weather Service

	Tampa Bay, FL (Days)	Houston, TX (Days)
Extreme	63	56
Very High	149	141
High	49	37
Moderate	81	108

SUNBELT MARKETING, INC.

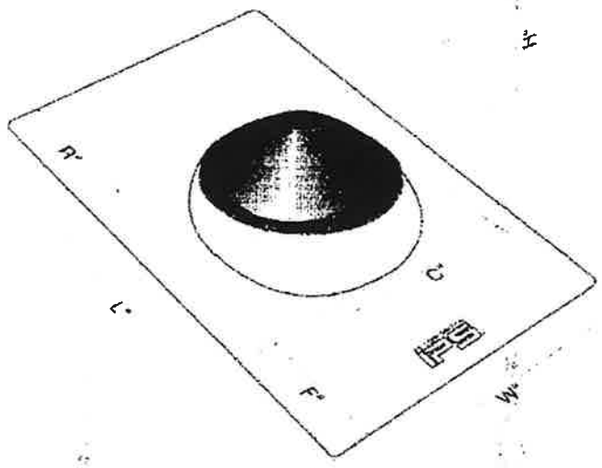
Atlanta • Tampa • Dallas

3255 S. Sweetwater Dr., Lithia Springs, GA 30122
Phone 770-739-3740 Fax 770-739-3750

WATER-TITE IPS CORPORATION Aluminum Base, Standard Roof Flashing

SPECIFICATION

Furnish and install roof vent flashing with 25 mil. aluminum base, fitted with elastomer collar. Unit shall be Water-Tite item number checked below as manufactured by IPS Corporation, as per corresponding dimensional characteristics, or equivalent. ***(Do not use Petroleum based mastics, sealing compounds, or paints on collar portion of all flashings, on all hardbase, flexible , or rain collars.)***



Roof Vent Flashing Dimensional Characteristics									
✓	Product Code #	Model	Vent Size	Dim. W	Dim. L	Dim. R	Dim. F	Dim. C	Dim. H
	81900	AB 1	1-1/4" - 1-1/2"	8-3/4"	12-1/2"	3-1/2"	2-3/8"	4-1/4"	2-1/4"
	81905	AB 2	2"	8-3/4"	12-1/2"	3-1/2"	2-3/8"	4-1/4"	2-1/4"
	81910	AB 3	3"	10-3/4"	14-1/2"	2-5/8"	2-3/8"	5-1/2"	2"
	81915	AB 4	4"	12"	16"	3-3/4"	2-3/4"	6-1/2"	2-1/8"
	81916	AB 5	1/2", 3/4", 1"	8-3/4"	12-1/2"	3-1/2"	2-3/8"	4-1/4"	2-1/4"
	81920	AB 118	1-1/4" - 1-1/2"	18"	18"	6-1/4"	5-7/8"	4-1/4"	2-1/4"
	81925	AB 218	2"	18"	18"	6-1/4"	5-7/8"	4-1/4"	2-1/4"
	81930	AB 318	3"	18"	18"	5-3/8"	5-1/8"	5-1/2"	2"
	81935	AB 418	4"	18"	18"	4-3/4"	3-3/4"	6-1/2"	2-1/8"
	81937	AB 518	1/2", 3/4", 1"	18"	18"	6-1/4"	5-7/8"	4-1/4"	2-1/4"

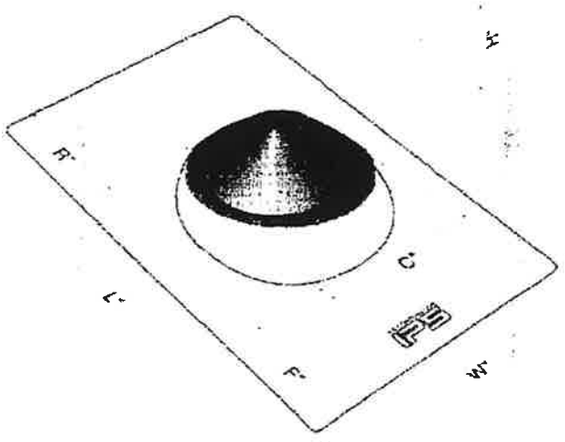
IPS CORPORATION
500 Distribution Parkway, Collierville, TN 38017 ▪ 800-888-8312 ▪ Fax: 901-853-5008 ▪ www.ipscorp.com

02/2014 Rev B

WATER-TITE IPS CORPORATION Galvanized Base, Standard Roof Flashing

SPECIFICATION

Furnish and install roof vent flashing with 24 gauge galvanized steel base, fitted with elastomer collar. Unit shall be Water-Tite item number checked below as manufactured by IPS Corporation, as per corresponding dimensional characteristics, or equivalent. ***(Do not use Petroleum based mastics, sealing compounds, or paints on collar portion of all flashings, on all hardbase, flexible , or rain collars.)***



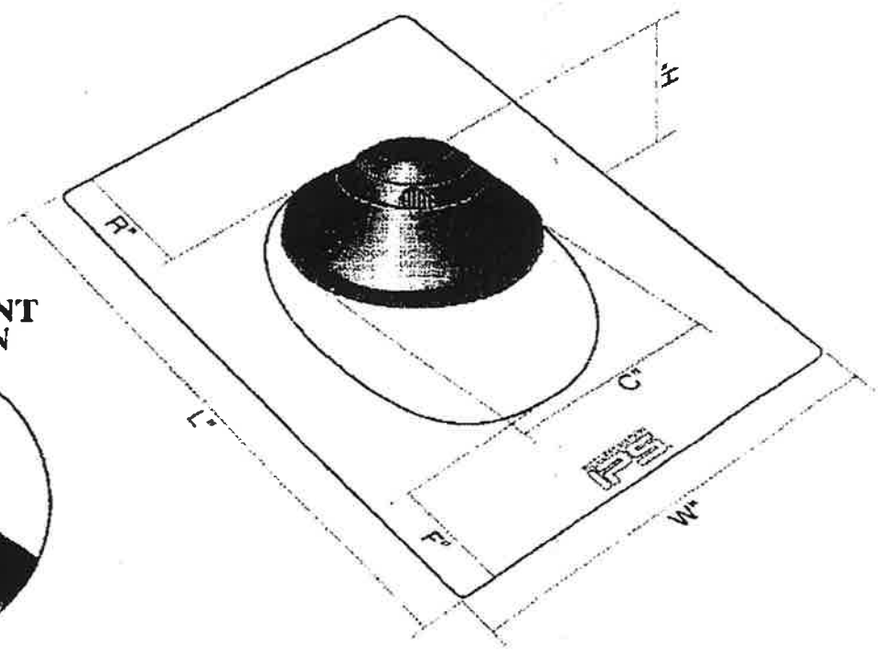
✓ PROD. CODE	Roof Vent Flashing Dimensional Characteristics							
	Model	Vent Size	Dim. W	Dim. L	Dim. R	Dim. F	Dim. C	Dim. H
81850	GB 1	1 1/4" - 1 1/2"	8 3/4"	12 1/2"	3 1/2"	2 3/8"	4 1/4"	2 1/4"
81855	GB 2	2"	8 3/4"	12 1/2"	3 1/2"	2 3/8"	4 1/4"	2 1/4"
81860	GB 3	3"	10 3/4"	14 1/2"	2 5/8"	2 3/8"	5 1/2"	2"
81865	GB 4	4"	12"	16"	3 3/4"	2 3/4"	6 1/2"	2 1/8"
81870	GB 5	1/2", 3/4", 1"	8 3/4"	12 1/2"	3 1/2"	2 3/8"	4 1/4"	2 5/8"
81872	GB 118	1 1/4" - 1 1/2"	18"	18"	6 1/4"	5 7/8"	4 1/4"	2 1/4"
81874	GB 218	2"	18"	18"	6 1/4"	5 7/8"	4 1/4"	2 1/4"
81876	GB 318	3"	18"	18"	5 3/8"	5 1/8"	5 1/2"	2"
81878	GB 418	4"	18"	18"	4 3/4"	3 3/4"	6 1/2"	2 1/8"
81879	GB 518	1/2", 3/4", 1"	18"	18"	6 1/4"	5 7/8"	4 1/4"	2 5/8"

IPS CORPORATION www.ipscorp.com watertite@ipscorp.com
500 Distribution Parkway, Collierville, TN 38017, USA ■ TEL: 901-853-5001 ■ WATS: 800-888-8312 ■ FAX: 901-853-5008

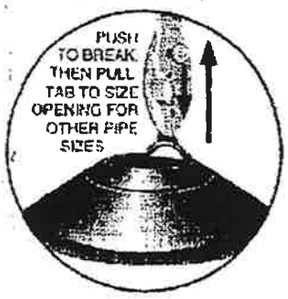
WATER-TITE IPS CORPORATION Galvanized Base, Multi-Size Roof Flashing

SPECIFICATION

Furnish and install roof vent flashing with 24 gauge galvanized steel base, fitted with adjustable, multi-size elastomer collar. Unit shall be Water-Tite item number checked below as manufactured by IPS Corporation, as per corresponding dimensional characteristics, or equivalent. ***(Do not use Petroleum based mastics, sealing compounds, or paints on collar portion of all flashings, on all hardbase, flexible , or rain collars.)***



ADJUSTMENT FUNCTION



✓ PROD. CODE	Roof Vent Flashing Dimensional Characteristics							
	Model	Vent Size	Dim. W	Dim. L	Dim. R	Dim. F	Dim. C	Dim. H
	81710	GB 31	1¼" - 3"	10¾"	14½"	2⅝"	2⅜"	5½"	2⅛"
	81713	GB 3118	1¼" - 3"	18"	18"	5⅜"	5⅛"	5½"	2⅛"
	81712	GB 34	3" - 4"	12"	16"	3¾"	2¾"	6½"	2¼"
	81714	GB 3418	3" - 4"	18"	18"	4¾"	3¾"	6½"	2¼"

IPS CORPORATION www.ipscorp.com watertite@ipscorp.com
500 Distribution Parkway, Collierville, TN 38017, USA ■ TEL: 901-853-5001 ■ WATS: 800-888-8312 ■ FAX: 901-853-5008

Adjustable Multi-Size Roof Flashings

ADJUSTABLE 3 N 1® HARD PLASTIC BASE ROOF FLASHINGS

- Adjustable multi-size flashing fit 1 1/4" - 3" and 3" - 4" vent pipe
- Tested for ultraviolet, ozone, and weather resistance
- Elastomer collar heat tested to 180 degrees fahrenheit
- Fits any roof pitch to 45 degrees
- Approved for Type "B" installations
- 100% Flexible

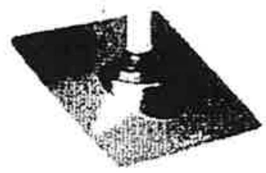
Download Hard Plastic Base, Adjustable Multi-Size Roof Flashing Specification (pdf)

	11 1/8" x 15" Base for 1 1/4", 1 1/2", 2" or 3" Vent Pipe	HB 31	81700	20	11
	12" x 15 1/2" Base for 3" or 4" Vent Pipe	HB 34	81702	20	13

ADJUSTABLE 3 N 1® ALL FLEXIBLE ROOF FLASHINGS

- Adjustable multi-size flashing fit 1 1/4" - 3" and 3" - 4" vent pipe
- Tested for ultraviolet, ozone, and weather resistance
- Elastomer collar heat tested to 180 degrees fahrenheit
- Fits any roof pitch to 45 degrees
- Approved for Type "B" installations

10" x 13 1/4" Base for 1 1/4", 1 1/2", 2" or 3" Vent Pipe	FB 31	81705	20	13
12" x 14 3/4" Base for 3" or 4" Vent Pipe	FB 34	81707	20	19



ADJUSTABLE 3 N 1® GALVANIZED STEEL BASE ROOF FLASHINGS

- 24 gauge galvanized base
- Adjustable multi-size flashing fit 1 1/4" - 3" and 3" - 4" vent pipe
- Tested for ultraviolet, ozone, and weather resistance
- Elastomer collar heat tested to 180 degrees fahrenheit
- Fits any roof pitch to 45 degrees
- Approved for Type "B" installations

Download Galvanized Base, Adjustable Multi-Size Roof Flashing Specification (bulletin-Spec-GB Multi-Size Roof Flash.pdf).

10 3/4" x 14 1/2" Base for 1 1/4", 1 1/2", 2" or 3" Vent Pipe	GB 31	81710	20	27
18" x 18" Base for 1 1/4", 1 1/2", 2" or 3" Vent Pipe	GB 3118	81713	15	32
1 1/4", 1 1/2", 2" or 3" Galvanized Bent Edge Flashing	GB 3118BE	81723	10	22
3" or 4" Galvanized Bent Edge Flashing	GB 3418BE	81724	10	23
12" x 16" Base for 3" or 4" Vent Pipe	GB 34	81712	20	29
18" x 18" Base for 3" or 4" Vent Pipe	GB 3418	81714	15	34

ADJUSTABLE 3 N 1® ALUMINUM BASE ROOF FLASHINGS

- Adjustable multi-size flashing fit 1 1/4" - 3" and 3" - 4" vent pipe
- Tested for ultraviolet, ozone, and weather resistance
- Elastomer collar heat tested to 180 degrees fahrenheit

- Fits any roof pitch to 45 degrees
- Approved for Type "B" installations

Download Aluminum Base, Adjustable Multi-Size Roof Flashing Specification (pdf, search: Spec AB Multi-Size Roof Flashing.pdf).

	10 3/4" x 14 1/2" Base for 1 1/4", 1 1/2", 2", or 3" Vent Pipe	AB 31	81715	20	13
	18" x 18" Base for 1 1/4", 1 1/2", 2", or 3" Vent Pipe	AB 3118	81718	15	17
	12" x 16" Base for 3" or 4" Vent Pipe	AB 34	81717	20	15
	18" x 18" Base for 3" or 4" Vent Pipe	AB 3418	81719	15	17

ADJUSTABLE 3 N 1® COPPER BASE ROOF FLASHINGS

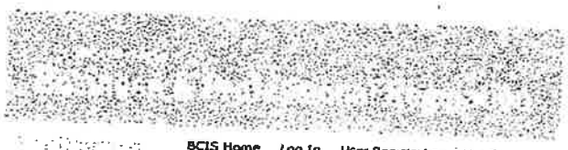
- Adjustable multi-size flashing fit 1 1/4" - 3" and 3" - 4" vent pipe
- Tested for ultraviolet, ozone, and weather resistance
- Elastomer collar heat tested to 180 degrees fahrenheit
- Fits any roof pitch to 45 degrees
- Approved for Type "B" Installations

10 3/4" x 14 1/2" Base for 1 1/4", 1 1/2", 2", or 3" Vent Pipe	CB 31	81940	5	7
12" x 16" Base for 3" or 4" Vent Pipe	CB 34	81941	5	8

CAUTION: Do NOT use petroleum Base Mastics, Sealing Compounds or Paints on collar portion of all flashings, on all flexible or hard plastic base flashings, or on rain collars.

COLLAR HEAT RATING: 180° F Continuous Service - 225°F Intermittent up to 30 min.

- 3-IN-1 Roof Flashings
- 3+4 Roof Flashings
- 3+4 Roof Flashings Fits 3" or 4" Vent Pipes
- Fits Any Roof Pitch - from Flat to 45°
- Tested Fully for Ultraviolet, Ozone and Weather Resistance



FL #	FL3066-R1
Application Type	Revision
Code Version	2004
Application Status	Approved
Comments	
Archived	
Product Manufacturer Address/Phone/Email	IPS Corporation 202 Industrial Park Lane Collierville, TN 38017 (901) 853-5001 Ext 5054 raelyne.flanders@ipscorp.com
Authorized Signature	Teresa Ryan teresar@ipscorp.com
Technical Representative Address/Phone/Email	
Quality Assurance Representative Address/Phone/Email	
Category	Roofing
Subcategory	Other
Other Subcategory	Roof Flashing
Compliance Method	Evaluation Report from a Product Evaluation Entity
Evaluation Entity	SBCCI PST and ESI
Quality Assurance Entity	Architectural Testing, Inc.
Quality Assurance Contract Expiration Date	
Validated By	Steven M. Urich, PE Validation Checklist - Hardcopy Received
Certificate of Independence	

Referenced Standard and Year (of Standard)

Standard	Year
Alternative materials and methods	1994
Alternative materials, methods, and equipment	1997
Flashings	1997
Flashings	1994
General Materials	1994
Materials	1997

Equivalence of Product Standards Certified By	
Sections from the Code	

Product Approval
USER: Public User

FL #	FL3595-R4
Application Type	Revision
Code Version	2010
Application Status	Approved
	*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.
Comments	
Archived	
Product Manufacturer Address/Phone/Email	Lomanco, Inc 2101 West Main Jacksonville, AR 72076 (501) 982-6511 acarter@lomanco.com
Authorized Signature	Andrew Carter acarter@lomanco.com
Technical Representative Address/Phone/Email	Andrew Carter 2101 West Main Street Jacksonville, AR 72076 (501) 982-6511 Ext 361 acarter@lomanco.com
Quality Assurance Representative Address/Phone/Email	Andrew Carter 2101 West Main Street Jacksonville, AR 72078 (501) 982-6511 Ext 361 acarter@lomanco.com
Category	Roofing
Subcategory	Roofing Accessories that are an Integral Part of the Roofing System
Compliance Method	Certification Mark or Listing
Certification Agency	Miami-Dade BCCO - CER
Validated By	Miami-Dade BCCO - VAL

Referenced Standard and Year (of Standard)	**Standard**	**Year**
	Miami-Dade TAS 100(A)	1995

Equivalence of Product Standards
Certified By

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Lomanco, Inc.
2101 W. Main Street
Jacksonville, AR 72076

SCOPE:
This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: **BIB-14/ BEB-14 WhirlyBird® Wind Turbine**

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA 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 renews NOA # 05-0823.06 consists of pages 1 through 5.
The submitted documentation was reviewed by Alex Tigera.

MIAMI-DADE COUNTY APPROVED

ROOFING COMPONENT APPROVAL

Category:	Roofing
Sub-Category:	Ventilation
Type:	Turbine
Materials	Aluminum
Deck	Wood

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

Product	Dimensions	Test Specification	Product Description
BIB-14/ BEB-14 WhirlyBird®	22" wide at base 17-1/8" high Base 0.0253" thick Elbow & Dome 0.032" thick Vanes 0.019" thick Rotor Band 0.0305" thick Extrusions 0.125" thick	TAS 100(A)	14" diameter opening turbine ventilation system.

MANUFACTURING LOCATION

1 Jacksonville, AR

EVIDENCE SUBMITTED

Test Agency	Test Identifier	Description	Date
PRI Asphalt Technologies, Inc.	LOM-019-02-01	TAS 100(A)	09/01/10

APPROVED ASSEMBLY:

System Type A: Mechanical attachment of turbine vent over composite shingles

Cutout: At chosen location (see Lomanco instructions for proper placement) and centered between two roof rafters, cut a 14" diameter hole through shingles and sheathing boards. Seal around top and sides of hole with approved roofing cement.

Installation Determine roof pitch in compliance with Lomanco instructions and align roof pitch number on elbow with indicator line on flashing. Place three short screws through holes that line up with pre-drilled holes in base.

Place mounting base unit flat on the shingles on its flashing, and coat underside of base flashing with roofing cement In its pitch-adjusted position, carefully slide upper half of flashing up roof beneath shingles previously rolled back until base is centered over cutout. Rolling back the shingles where necessary, and rechecking pitch setting for vertical alignment, secure the base unit to the roof deck with a minimum of fourteen ring shank roofing nails, equally spaced, approximately ¾" from edge of base per detail drawing "Base". Nails shall be of sufficient length to penetrate through roof sheathing a minimum of ½". Apply roofing cement to underside of shingles overlapping flashing, and press them down onto the flashing.

Rotate top of elbow to level position by turning counterclockwise. Place locking clamp across seam and tighten as shown in Lomanco instructions with approved sheet metal screw. Seal all seams and nails with approved roofing cement.

Position whirlybird on the base. Line up the pre-drilled holes in the brackets and base and fasten with approved long sheet metal screws.

After installation, verify that whirlybird turns freely. If necessary, minor adjustment may be made by gently prying lowest point of turbine upward to remove any wobble.

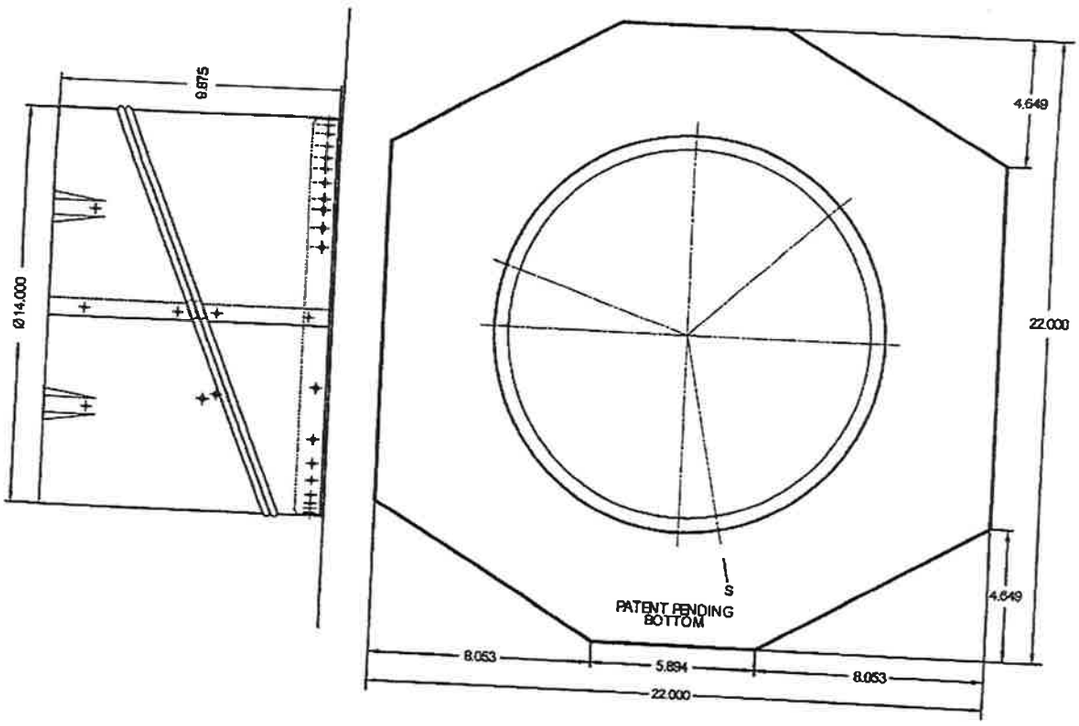
Net Free Area: Refer to manufacturers published literature.

Slope: Minimum 2" on 12"

LIMITATIONS:

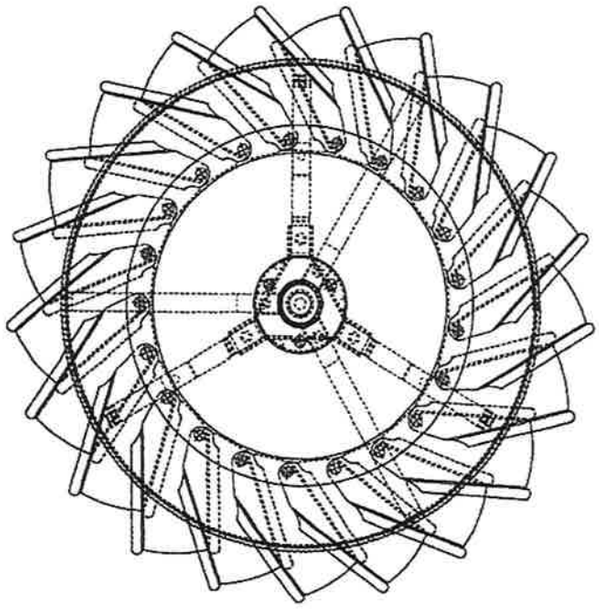
1. Refer to applicable building codes for required ventilation.
2. This acceptance is for installations over asphaltic shingle or low slope roofing.
3. BIB-14/BEB-14 Whirlybird® turbine roof ventilators shall not be installed on roof mean heights greater than 33 ft

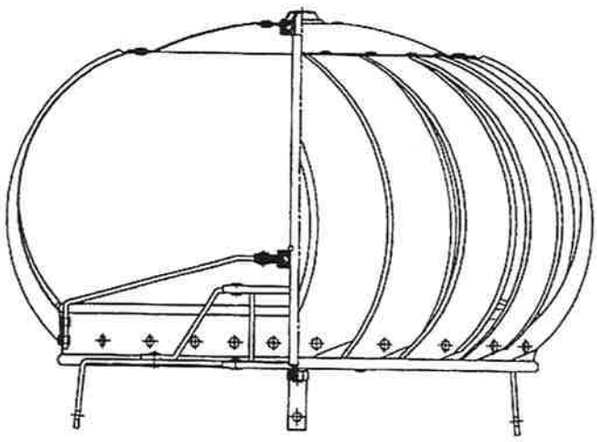
DETAIL DRAWINGS



Base

DETAILED DRAWINGS (CONTINUED)





BIB-14, BEB-14

END OF THIS ACCEPTANCE

EXTERIOR RESEARCH & DESIGN, LLC.
Certificate of Authorization #9503
353 Christian Street
Oxford, CT 06478
PHONE: (203) 262-9245
FAX: (203) 262-9243

EVALUATION REPORT

Polyglass USA, Inc.
150 Lyon Drive
Fernley, NV 89408

Evaluation Report P9290.02.08-R10
FL1654-R12
Date of Issuance: 02/11/2008
Revision 10: 08/21/2013

SCOPE:
This Evaluation Report is issued under Rule 9N-3 and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been designed to comply with the 2010 Florida Building Code sections noted herein.

DESCRIPTION: Polyglass SBS and APP Modified Bitumen Roof Systems

LABELING: Each unit shall bear labeling in accordance with the requirements the Accredited Quality Assurance Agency noted herein.

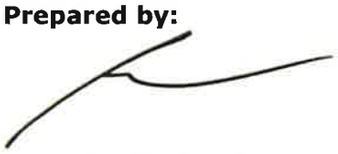
CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to 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 5, plus a 31-page Appendix.

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 08/21/2013
This does not serve as an electronically signed document. Signed, sealed hardcopies have been transmitted to the Product Approval Administrator and to the named client

CERTIFICATION OF INDEPENDENCE:
1. Exterior Research & Design, LLC. d/b/a 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. Exterior Research & Design, LLC. d/b/a 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.

ROOFING SYSTEMS EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Modified Bitumen Roof Systems
Compliance Statement: Polyglass SBS and APP Modified Bitumen Roof Systems, as produced by Polyglass USA, Inc., have demonstrated compliance with the following sections of the Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

Section	Property	Standard	Year
1504.3.1	Wind	FM 4474	2004
1504.7	Impact	FM 4470	1992
1507.11.2	Physical Properties	ASTM D6163	2000
1507.11.2	Physical Properties	ASTM D6164	2005
1507.11.2	Physical Properties	ASTM D6222	2002
1507.11.2	Physical Properties	ASTM D6509	2000

3. REFERENCES:

Entity	Examination	Reference	Date
ERD (TST6049)	Physical Properties	P10490.10.08-2	10/30/2008
ERD (TST6049)	FM 4470/4474	P13760.09.09	09/10/2009
ERD (TST6049)	FM 4470/4474	P13770.09.09	09/10/2009
ERD (TST6049)	FM 4470/4474	P30540.11.09-R1	11/30/2009
ERD (TST6049)	FM 4470/4474	P30550.12.09	12/02/2009
ERD (TST6049)	Physical Properties	P33960.12.10	12/30/2010
ERD (TST6049)	FM 4470/4474	P33970.03.11	03/15/2011
ERD (TST6049)	Physical Properties	P37590.03.13-3A	03/06/2013
ERD (TST6049)	FM 4470/4474	P39680.03.13	03/04/2013
ERD (TST6049)	Physical Properties	P37590.03.13-1-R1	06/26/2013
ERD (TST6049)	Physical Properties	P37590.03.13-2-R1	07/01/2013
ERD (TST6049)	Physical Properties	P37590.07.13-2	07/01/2013
ERD (TST6049)	Physical Properties	P37590.03.13-5-R1	07/01/2013
ERD (TST6049)	Physical Properties	P37590.07.13-1	07/02/2013
ERD (TST6049)	FM 4470/4474	P41630.08.13	08/06/2013
FM Approvals (TST1867)	FM 4470	2W7A7.AM	08/04/1994
FM Approvals (TST1867)	FM 4470	0D3A3.AM	04/04/1997
FM Approvals (TST1867)	FM 4470	2D0A0.AM	12/23/1998
FM Approvals (TST1867)	FM 4470	2D5A9.AM	06/22/1999
FM Approvals (TST1867)	FM 4470	3006646	01/04/2000
FM Approvals (TST1867)	FM 4470	3001334	01/25/2000
FM Approvals (TST1867)	FM 4470	3001334	02/15/2000
FM Approvals (TST1867)	FM 4470	3000857	01/12/2000
FM Approvals (TST1867)	FM 4470	3004091	01/12/2000
FM Approvals (TST1867)	FM 4470	3006115	05/02/2001
FM Approvals (TST1867)	FM 4470	3012321	07/29/2002
FM Approvals (TST1867)	FM 4470	3014692	08/05/2003
FM Approvals (TST1867)	FM 4470	3014751	08/27/2003
FM Approvals (TST1867)	FM 4470	3007170	01/13/2004
FM Approvals (TST1867)	FM 4470	3019317	06/30/2004
FM Approvals (TST1867)	FM 4470	3020703	07/30/2004
FM Approvals (TST1867)	FM 4470/4474	3018332	01/31/2006
FM Approvals (TST1867)	FM 4470/4474	3023368	03/20/2006
FM Approvals (TST1867)	FM 4470/4474	3024594	05/23/2006
FM Approvals (TST1867)	FM 4470/4474	3023458	07/18/2006
FM Approvals (TST1867)	FM 4470/4474	3030668	09/12/2007
FM Approvals (TST1867)	FM 4470/4474	3032172	06/12/2009
PRI (TST5878)	Physical Properties	PUSA-062-02-01	12/04/2007

Entity	Examination	Reference	Date
PRI (TST5878)	Physical Properties	PUSA-061-02-02	01/28/2008
PRI (TST5878)	Physical Properties	PUSA-064-02-02	02/27/2008
PRI (TST5878)	Physical Properties	PUSA-062-02-02	12/04/2008
Miami-Dade (CER1592)	HVHZ Compliance	Various NOAs	Various
Miami-Dade (CER1592)	Proposal for Review	10-0823	10/12/2010
UL LLC (QUA9625)	Quality Control	Service Confirmation, R14571	Exp. 08/08/2015

4. PRODUCT DESCRIPTION:

This Evaluation Report covers Polyglass Modified Bitumen Roof Systems installed in accordance with Polyglass USA, Inc. published installation instructions and the Limitations / Conditions of Use herein. The following Polyglass membranes make up the subject systems.

Table 1: Roll-Goods for Polyglass Modified Bitumen Roof Systems

Type	Product	Specification		
		Reference	Grade	Type
Base Sheets	Polyglass G2 Base	ASTM D4601	N/A	II
	Polyglass APP Base	ASTM D6509	N/A	N/A
SBS Membranes	Elastobase	ASTM D6163	S	I
	Elastoflex V	ASTM D6163	S	I
	Elastoflex SA V Base	ASTM D6163, Table 2	S	I
	Elastoflex SA V FR Base	ASTM D6163, Table 2	S	I
	Elastoflex SA V Plus	ASTM D6163	S	I
	Elastoflex SA V Plus FR	ASTM D6163	S	I
	Elastobase Poly	ASTM D6164	S	I
	Elastoflex S6	ASTM D6164	S	I
	Elastoflex S6 G	ASTM D6164	G	I
	Elastoflex S6 G FR	ASTM D6164	G	I
	Polyfresko MOP	ASTM D6164	S	I
	Polyfresko MOP FR	ASTM D6164	S	I
	Elastoshield TS G	ASTM D6164	G	I
	Elastoshield TS G FR	ASTM D6164	G	I
	Elastoflex SA P	ASTM D6164	G	I
	Elastoflex SA P FR	ASTM D6164	G	I
	Polyfresko SBS SAP	ASTM D6164	S	I
	Polyfresko SBS SAP FR	ASTM D6164	S	I
APP Membranes	Polyflex	ASTM D6222	S	I
	Polyflex G	ASTM D6222	G	I
	Polyflex G FR	ASTM D6222	G	I
	Polyfresko Torch	ASTM D6222	S	I
	Polyfresko Torch FR	ASTM D6222	S	I
	Polybond	ASTM D6222	S	I
	Polybond G	ASTM D6222	G	I
	Polyflex SA P	ASTM D6222	G	I
	Polyflex SA P FR	ASTM D6222	G	I
	Polyfresko APP SAP	ASTM D6222	S	I
	Polyfresko APP SAP FR	ASTM D6222	S	I
	Polykool	ASTM D6222	S	I
	Polybianko	ASTM D6222	S	I

5. LIMITATIONS:

5.1 This Evaluation Report is not for use in HVHZ.

5.2 Refer to a current Roofing Materials Directory for fire ratings of this product.

5.3 For steel deck installations, foam plastic insulation shall be separated from the building interior in accordance with FBC 2603.4 unless the exceptions stated in FBC 2603.4.1 and 2603.6 apply.

5.4 Unless otherwise noted in Appendix 1, roof decking and its attachment shall be specified and installed to meet project design criteria to the satisfaction of the AHJ.

5.5 For recover installations, the existing roof shall be examined in accordance with FBC 1510.

5.6 For mechanically attached insulation or membrane or strip-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. 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 RAS 117 and FM LPDS 1-29. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.1.5.1(a) of FM LPDS 1-29 for Zone 2/3 enhancements.

5.7 For fully-adhered insulation, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with FBC Chapter 16. No rational analysis is permitted for these systems

5.8 For mechanically attached insulation or membrane over existing roof 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 TAS 105 or ANSI/SPRI FX-1.

5.9 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance with ASTM E907, FM LPDS 1-52, ANSI/SPRI IA-1 or TAS 124 shall be conducted on mock-ups of the proposed new roof assembly.

5.10 For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the AHJ, as documented through field uplift testing in accordance with ASTM E907, FM LPDS 1-52 or TAS 124.

5.11 Metal edge attachment (except gutters), shall be designed and installed for wind loads in accordance with FBC Chapter 16 and tested for resistance in accordance with ANSI/SPRI ES-1 or RAS 111, except the basic wind speed shall be determined from FBC Figure 1609.

5.12 All products in the roof assembly shall have quality assurance audit in accordance with the FBC and F.A.C. Rule 9N-3.

6. INSTALLATION:

6.1 Polyglass Modified Bitumen roof systems shall be installed in accordance with Polyglass USA, Inc. published installation instructions, subject to the Limitations / Conditions of Use noted herein.

6.2 System attachment requirements for wind load resistance are set forth in Appendix 1.

6.3 Any of the following FBC Approved coatings may be applied to the top roof membrane without adverse effect on the system wind load performance. Refer to current Roofing Materials Directory for fire ratings associated with coating usage.

- PG200 Non Fibered Roof Coating or Mule-Hide 111 Non-Fibrated Roof Coating;
- PG300 Fibered Roof Coating or Mule-Hide 102 Fibrated Roof Coating;
- PG600 Non-Fibered Aluminum Roof Coating or Mule-Hide 416 Standard Non-Fibrated Aluminum Roof Coating;
- PG650 Fibered Aluminum Roof Coating or Mule-Hide 406 Standard Fibrated Aluminum Roof Coating;
- PG700 White Reflective Roof Coating;
- PG800 Non-Fibered Asphalt Emulsion Roof Coating or Mule-Hide 311 Emulsion Non-Fibrated;
- PG850 Fibered Asphalt Emulsion Roof Coating or Mule-Hide 301 Emulsion Fibrated;
- Polyplus 60 Premium Non-Fibered Aluminum Roof Coating or Mule-Hide 410 Premium Non-Fibrated Aluminum Roof Coating;
- Polyplus 65 Premium Fibered Aluminum Roof Coating or Mule-Hide 401 Premium Fibrated Aluminum Roof Coating;
- Polybrite 70 White Elastomeric Roof Coating.

7. BUILDING PERMIT REQUIREMENTS:

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

8. MANUFACTURING PLANTS:

Contact the noted QA agency for information on product locations covered for F.A.C. Rule 9N-3 QA requirements

9. QUALITY ASSURANCE ENTITY:

UL LLC – QUA9625; (314) 578-3406, k.chancellor@us.ul.com

- THE 31-PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

Table	Deck	Application	Type	Description
1A-1	Wood	New or Reroof (Tear-Off)	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded R
1A-2	Wood	New, Reroof (Tear-Off) or Recover	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded R
1B	Wood	New, Reroof (Tear-Off) or Recover	B	Mech. Attached Base Insulation, Bonded Top Insulation, Bon
1C	Wood	New, Reroof (Tear-Off) or Recover	C	Mech. Attached Insulation, Bonded Roof Cover
1D	Wood	New, Reroof (Tear-Off) or Recover	D	Prelim. Attached Insulation, Mech. Attached Base Sheet, Bor
1E	Wood	New or Reroof (Tear-Off)	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Co
1F	Wood	New or Reroof (Tear-Off)	F	Non-Insulated, Bonded Roof Cover
2A	Steel or Conc.	New, Reroof (Tear-Off) or Recover	B	Mech. Attached Base Insulation, Bonded Top Insulation, Bon
2B	Steel or Conc.	New, Reroof (Tear-Off) or Recover	C	Mech. Attached Insulation, Bonded Roof Cover
2C	Steel or Conc.	New, Reroof (Tear-Off) or Recover	D	Prelim. Attached Insulation, Mech. Attached Base Sheet, Bor
3A-1	Concrete	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover
3A-2	Concrete	New or Reroof (Tear-Off)	A-1	Bonded Temporary Roof, Bonded Insulation, Bonded Roof Co
3B	Concrete	New or Reroof (Tear-Off)	F	Non-Insulated, Bonded Roof Cover
4A	LWIC	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover
4B	LWIC	New or Reroof (Tear-Off)	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded R
4C	LWIC	New or Reroof (Tear-Off)	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Co
5A	CWF	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover
5B	CWF	New, Reroof (Tear-Off) or Recover	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded R
5C	CWF	New, Reroof (Tear-Off) or Recover	B	Mech. Attached Base Insulation, Bonded Top Insulation, Bon
5D	CWF	New, Reroof (Tear-Off) or Recover	C	Mech. Attached Insulation, Bonded Roof Cover
5E	CWF	New, Reroof (Tear-Off) or Recover	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Co
6A	Gypsum	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover
6B	Gypsum	New, Reroof (Tear-Off) or Recover	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded R
6C	Gypsum	New, Reroof (Tear-Off) or Recover	C	Mech. Attached Insulation, Bonded Roof Cover
6D	Gypsum	New, Reroof (Tear-Off) or Recover	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Co
7A	Various	Recover	A-1	Bonded Insulation, Bonded Roof Cover
7B	Various	Recover	F	Non-Insulated, Bonded Base Sheet, Bonded Roof Cover

The following notes apply to the systems outlined herein:

1. Roof decks shall be in accordance with FBC requirements to the satisfaction of the AHJ. Wind load resistance of the roof deck shall b and/or FBC Approval documentation.
2. Insulation / base sheet fasteners shall be of sufficient length for the following deck engagement:
   - Wood: Minimum 0.75-inch penetration.
   - Steel: Minimum 0.75-inch penetration and engage the top flute of the steel deck.
   - Concrete: Minimum 1-inch embedment into pilot hole in accordance with fastener manufacturer's published installation instruction
3. Unless otherwise noted, insulation may be any one layer or combination of polyisocyanurate, polystyrene, wood fiberboard, perlite, D DuraGuard, SECUROCK Gypsum-Fiber Roof Board or SECUROCK Glass-Mat Roof Board that meets the QA requirements of F.A.C. Rul FBC 1505.1 and, for foam plastic, FBC 2603.4.1 or 2603.6, when installed with the roof cover.

4. Minimum 200 psi, minimum 2-inch thick lightweight insulating concrete may be substituted for rigid insulation board for System Type bonded roof cover), whereby the base sheet fasteners are installed through the LWIC to engage the structural steel or concrete deck. or greater configuration to the steel and concrete deck listings.
5. Unless otherwise noted, insulation adhesive application rates are as follows. Ribbon or bead width is at the time of application; the ri the manufacturer's published instructions.
   - HA (HA): Full coverage at 25-30 lbs/square.
   - Dow Insta-Stik Roofing Adhesive (D-IS): Continuous 0.75 to 1-inch wide ribbons, 12-inch o.c.
   - Millennium One Step Foamable Adhesive (M-OSFA): Continuous 0.25 to 0.5-inch wide ribbons, 12-inch o.c.
   - OMG OlyBond 500 (OB500): Continuous 0.75 to 1-inch wide ribbons, 12-inch o.c. (PaceCart or SpotShot) *where OlyBond 500 is referenced.*
   - OlyBond Classic (OB Classic): Full coverage at 1 gal/square.
   - 3M CR-20: Continuous 2.5-3.5-inch wide ribbons, 12-inch o.c. *Note: TITESET may be us*
   - *Note: When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, adhesive ribbons sha distance of one-half the ribbon spacing.*
   - *Note: The maximum edge distance from the adhesive ribbon to the edge of the insulation board shall be not less than one-half the*
6. Unless otherwise noted, all insulations are flat stock or taper board of the minimum thickness noted. Tapered polyisocyanurate at the substituted with the following Maximum Design Pressure (MDP) limitations. In no case shall these values be used to 'increase' the MI listing below meets or exceeds that listed for a particular system in the tables, then the thinner board listed below may be used a material listed in the table:
   - Millennium One Step Foamable Adhesive (M-OSFA): MDP -157.5 psf (Min. 0.5-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)
   - 3M CR-20: MDP -117.5 psf (Min. 1.0-inch thick)
7. Bonded polyisocyanurate insulation boards shall be maximum 4 x 4 ft.
8. For mechanically attached components or partially bonded insulation, the maximum design pressure for the selected assembly sha pressure determined in accordance with FBC Chapter 16, and Zones 2 and 3 shall employ an attachment density designed by a qua elevated pressure criteria. Commonly used methods are RAS 117 and FM LPDS 1-29. Assemblies marked with an asterisk* can 2.2.1.5.1(a) of FM LPDS 1-29 for Zone 2/3 enhancements.
9. For fully bonded assemblies, the maximum design pressure for the selected assembly shall meet or exceed critical design pressur Chapter 16, and no rational analysis is permitted.
10. For mechanically attached components over existing decks, fasteners shall be tested in the existing deck for withdrawal resistance. review the data for comparison to the minimum requirements for the system. Testing and analysis shall be in accordance with TAS 105
11. For existing substrates in a bonded recover installation, the existing roof system shall be examined for compatibility and bond perform the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the AHJ, as docu accordance with ASTM E907, FM LPDS 1-52, ANSI/SPRI IA-1 or TAS 124.
12. For Recover Applications using System Type D, the insulation is optional; however, the existing roof system shall be suitable for a recov

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

TABLE 1: POLYGLASS ROOF COVERS

Reference	Layer	Material
BP-AA (Base and Ply sheets, Asphalt-Applied)	Base	Polyglass G2 Base, FBC Approved ASTM D4601, Type II
	Ply	FBC Approved ASTM D2178, Type IV or VI or ASTM D4601, Type II
SBS-AA (SBS, Asphalt-Applied)	Base or Ply	Elastobase, Elastobase Poly, Elastoflex V, Elastoflex S6
	Cap	Elastoflex S6, Elastoflex S6 G, Elastoflex S6 G FR, Elastoshield TS-G, Elastoshield TS-G FR, Polyfresko MOP, Poly
SBS-TA (SBS, Torch-Applied)	Base or Ply	Elastoflex V, Elastoflex S6
	Cap	Elastoflex V, Elastoflex S6, Elastoflex S6 G, Elastoflex S6 G FR, Elastoshield TS-G, Elastoshield TS-G FR, Polyfresk Polyfresko MOP FR
SBS-SA (SBS, Self-Adhering)	Base	Elastoflex SA V Base, Elastoflex SA V FR Base, Elastoflex SA V Plus, Elastoflex SA V Plus FR
	Cap	Elastoflex SA P, Elastoflex SA P FR, Polyfresko SBS SAP, Polyfresko SBS SAP FR
APP-TA (APP, Torch-Applied)	Base or Ply	Polyglass APP Base, Polyflex, Polybond
	Cap	Polyflex, Polyflex G, Polyflex G FR, Polybond, Polybond G, Polyfresko Torch, Polyfresko Torch FR
APP-SA (APP, Self-Adhering)	Cap	Polyflex SA P, Polyflex SA P FR, Polyfresko APP SAP, Polyfresko APP SAP FR, Polykool, Polybianko

14. Any of the following FBC Approved coatings may be applied to the top roof membrane without adverse effect on the system wind load r Materials Directory for fire ratings associated with coating usage.
    - PG200 Non Fibered Roof Coating or Mule-Hide 111 Non-Fibrated Roof Coating;
    - PG300 Fibered Roof Coating or Mule-Hide 102 Fibrated Roof Coating;
    - PG600 Non-Fibered Aluminum Roof Coating or Mule-Hide 416 Standard Non-Fibrated Aluminum Roof Coating;
    - PG650 Fibered Aluminum Roof Coating or Mule-Hide 406 Standard Fibrated Aluminum Roof Coating;
    - PG700 White Reflective Roof Coating;
    - PG800 Non-Fibered Asphalt Emulsion Roof Coating or Mule-Hide 311 Emulsion Non-Fibrated;
    - PG850 Fibered Asphalt Emulsion Roof Coating or Mule-Hide 301 Emulsion Fibrated;
    - Polyplus 60 Premium Non-Fibered Aluminum Roof Coating or Mule-Hide 410 Premium Non-Fibrated Aluminum Roof Coating;
    - Polyplus 65 Premium Fibered Aluminum Roof Coating or Mule-Hide 401 Premium Fibrated Aluminum Roof Coating;
    - Polybrite 70 White Elastomeric Roof Coating.
15. The following represent priming requirements for gypsum-based coverboards:
    - DensDeck and DensDeck Prime shall be field-primed with PG100 prior to self-adhering or torch-applied membrane application. No priming is requi
    - SECUROCK Gypsum-Fiber Roof Board or DensDeck DuraGuard do not require field priming for any membrane application.
16. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 160 loads.

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

System No.	Deck (See Note 1)	Anchor Sheet			Base Insulation		Top Insulation		
		Type	Fasten	Attach	Type	Attach	Type	Attach	Ba
W-1	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	Elastobase, Elastobase Poly, Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows	(Optional) FBC Approved, ASTM C1289 polyiso	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	BP or SB AA
W-2	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	Elastobase, Elastobase Poly, Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows	(Optional) FBC Approved, ASTM C1289 polyiso	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	HA	SB SA
W-3	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows	(Optional) FBC Approved, ASTM C1289 polyiso	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	BP or SB AA
W-4	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows	(Optional) FBC Approved, ASTM C1289 polyiso	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	HA	SB SA
W-5	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly	32 ga., 1-5/8-inch diameter tin caps with 12 ga. annular ring shank nails	6-inch o.c. in 4-inch lap and 6-inch o.c. in four, equally spaced, staggered center rows	Min. 2-inch ACFoam II, III, H-Shield, H-Shield CG, Multi-Max FA3 or ENRGY-3	D-IS, OB500, CR-20 or M-OSFA, atop fastener rows, 7-inch o.c.	Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	D-IS, OB500, CR-20 or M-OSFA	BP or SB AA

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

System No.	Deck (See Note 1)	Anchor Sheet			Base Insulation		Top Insulation		
		Type	Fasten	Attach	Type	Attach	Type	Attach	Ba
W-6	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly	32 ga., 1-5/8-inch diameter tin caps with 12 ga. annular ring shank nails	6-inch o.c. in 4-inch lap and 6-inch o.c. in four, equally spaced, staggered center rows	Min. 2-inch ACFoam II, III, H-Shield, H-Shield CG, Multi-Max FA3 or ENRGY-3	D-IS, OB500, CR-20 or M-OSFA, atop fastener rows, 7-inch o.c.	(Optional) Additional layers of base insulation	D-IS, OB500, CR-20 or M-OSFA	SB SA

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

System No.	Deck (See Note 1)	Anchor Sheet			Base Insulation		Top Insulation		
		Type	Fasten	Attach	Type	Attach	Type	Attach	Ba
W-7	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	Elastobase, Elastobase Poly, Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	OMG Flat Bottom Plates (square) with Roofgrip #14, Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) FBC Approved, ASTM C1289, type II polyiso-cyanurate	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	BP-A/ SBS-/
W-8	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	Elastobase, Elastobase Poly, Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	OMG Flat Bottom Plates (square) with Roofgrip #14, Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) FBC Approved, ASTM C1289, type II polyiso-cyanurate	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	HA	SBS-S
W-9	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly	OMG Flat Bottom Plates (square) with Roofgrip #12	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) FBC Approved, ASTM C1289, type II polyiso-cyanurate	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	BP-A/ SBS-/
W-10	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly	OMG Flat Bottom Plates (square) with Roofgrip #12	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) FBC Approved, ASTM C1289, type II polyiso-cyanurate	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	HA	SBS-S

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

System No.	Deck (See Note 1)	Base Insulation Layer			Top Insulation Layer			
		Type	Fasten	Attach	Type	Attach	Base	
W-11	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	Min. 1.5-inch ENRGY 3, H-Shield or Polytherm	Dekfast Hex with Dekfast #12 or TruFast MP-3 with TruFast DP	1 per 1.33 ft^2	Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	(Optional if using AA Ply) BP-AA, SBS-AA	(Opt Base BP-A SBS
W-12	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Min. 1.5-inch ENRGY 3, H-Shield or Polytherm	Dekfast Hex with Dekfast #12 or TruFast MP-3 with TruFast DP	1 per 1.33 ft^2	Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	(Optional if using AA Ply) BP-AA, SBS-AA	(Opt Base BP-A SBS

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

System No.	Deck (See Note 1)	Base Insulation Layer	Top Insulation Layer				
			Type	Fasten	Attach	Base	
W-13	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	(Optional) One or more layers, any combination, loose laid	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation or min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Dekfast Galvalume Steel Hex with Dekfast #12 DP	1 per 1.33 ft^2	(Optional if using AA Ply) BP-AA, SBS-AA	(Opt Base BP-A SBS
W-14	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails	(Optional) One or more layers, any combination, loose laid	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation or min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Dekfast Galvalume Steel Hex with Dekfast #12 DP	1 per 1.33 ft^2	(Optional if using AA Ply) BP-AA, SBS-AA	(Opt Base BP-A SBS
W-15	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with #8 screws	(Optional) One or more layers, any combination, loose laid	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation or min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Dekfast Galvalume Steel Hex with Dekfast #12 DP	1 per 1.33 ft^2	(Optional if using AA Ply) BP-AA, SBS-AA	(Opt Base BP-A SBS
W-16	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with #8 screws	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, H-Shield or Polytherm	Dekfast Galvalume Steel Hex with Dekfast #12 DP or TruFast MP-3 with TruFast DP	1 per 1.33 ft^2	SBS-SA	(Opt mor TA c

TABLE 1D: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D: PRELIMINARILY ATTACHED INSULATION, MECHANICALLY ATTACHED BASE SHEET, BONDE

System No.	Deck (See Note 1)	Insulation Layer(s)		Base Sheet			
		Type	Attach	Base	Fasten	Attach	
W-17	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	One or more layers, any combination	Prelim. Attached	Elastobase, Elastobase Poly, Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	OMG Flat Bottom Plates (square) with Roofgrip #14, Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	((m A A
W-18	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	One or more layers, any combination	Prelim. Attached	Elastobase or Elastobase Poly with poly top surface	OMG Flat Bottom Plates (square) with Roofgrip #14, Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	O S A
W-19	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	One or more layers, any combination	Prelim. Attached	Elastobase or Elastobase Poly	OMG Flat Bottom Plates (square) with Roofgrip #12	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	((m A A
W-20	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	One or more layers, any combination	Prelim. Attached	Elastobase or Elastobase Poly with poly top surface	OMG Flat Bottom Plates (square) with Roofgrip #12	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	O S A

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

System No.	Deck (See Note 1)	Base Sheet			
		Base	Fasten	Attach	
W-21	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	(Opt SBS APP-
W-22	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Opt SBS APP-
W-23	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	Elastobase, Elastobase Poly, Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows	(Opt mor AA, TA
W-24	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	Elastobase or Elastobase Poly with poly top surface	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows	(Opt mor TA c
W-25	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	Elastobase, Elastobase Poly, Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	OMG Flat Bottom Plates (square) with Roofgrip #14, Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Opt mor AA, TA
W-26	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d common nails	Elastobase or Elastobase Poly with poly top surface	OMG Flat Bottom Plates (square) with Roofgrip #14, Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	One SA, TA
W-27	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Polyglass APP Base	Original Simplex Cap Nails *(1-inch metal head diameter, 11 gauge x min. 1.25-inch long annular grooved shank)*	6-inch o.c. at 3-inch lap and 6-inch o.c. in four, equally spaced, staggered center rows	(Opt APP-
W-28	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase (with poly top surface)	Original Simplex Cap Nails *(1-inch metal head diameter, 11 gauge x min. 1.25-inch long annular grooved shank)*	6-inch o.c. at 3-inch lap and 6-inch o.c. in four, equally spaced, staggered center rows	(Opt or A
W-29	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase (with sand top surface)	Original Simplex Cap Nails *(1-inch metal head diameter, 11 gauge x min. 1.25-inch long annular grooved shank)*	6-inch o.c. at 3-inch lap and 6-inch o.c. in four, equally spaced, staggered center rows	(Opt SBS APP-
W-30	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Elastobase, Elastobase Poly, Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows	(Opt mor AA, TA

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

System No.	Deck (See Note 1)	Base Sheet			
		Base	Fasten	Attach	
W-31	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly with poly top surface	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 4-inch lap and 8-inch o.c. in three, equally spaced, staggered center rows	(Opt mor TA c
W-32	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly	OMG Flat Bottom Plates (square) with Roofgrip #12	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Opt mor AA, TA
W-33	Min. 19/32-inch plywood at max. 24-inch spans attached 4-inch o.c. with 8d common nails or 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly with poly top surface	OMG Flat Bottom Plates (square) with Roofgrip #12	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	One SA, TA
W-34	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase	Simplex MAXX Cap	6-inch o.c. at 2-inch lap and 6-inch o.c. in two, equally spaced, staggered center rows	(Opt SBS APP-
W-35	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Polyglass APP Base	OMG #12 Standard Roofgrip or OMG #14 Heavy Duty (min. 1-5/8-inch long) with OMG 3" Round Metal Plates or OMG Flat Bottom Metal Plates	6-inch o.c. at 4-inch lap and 6-inch o.c. in three, equally spaced, staggered center rows	(Opt
W-36	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase (with sand top surface)	OMG #12 Standard Roofgrip or OMG #14 Heavy Duty (min. 1-5/8-inch long) with OMG 3" Round Metal Plates or OMG Flat Bottom Metal Plates	6-inch o.c. at 4-inch lap and 6-inch o.c. in three, equally spaced, staggered center rows	(Opt SBS APP-
W-37	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase (with sand top surface)	Trufast #12 DP or Trufast #14 HD (min. 1-5/8-inch long) with Trufast 3" Metal Insulation Plates	6-inch o.c. at 4-inch lap and 6-inch o.c. in three, equally spaced, staggered center rows	(Opt SBS
W-38	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly with poly top surface	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails.	4-inch o.c. in 4-inch lap and 4-inch o.c. in four, equally spaced, staggered center rows	(Opt mor TA c
W-39	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase	Simplex MAXX Cap	6-inch o.c. at 2-inch lap and 6-inch o.c. in three, equally spaced, staggered center rows	(Opt SBS APP-

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

System No.	Deck (See Note 1)	Base Sheet			
		Base	Fasten	Attach	
W-40	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	6-inch o.c. in 4-inch lap and 6-inch o.c. in four, equally spaced, staggered center rows	(Opt mor AA, TA
W-41	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with #8 screws	Elastobase or Elastobase Poly with poly top surface	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails. Note: Tin caps are to be primed with PG100 or ASTM D41 primer.	6-inch o.c. in 4-inch lap and 6-inch o.c. in four, equally spaced, staggered center rows	(Opt mor *Elas or E Base* APP-
W-42	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Polyglass APP Base	OMG #12 Standard Roofgrip or OMG #14 Heavy Duty (min. 1-5/8-inch long) with OMG 3" Round Metal Plates or OMG Flat Bottom Metal Plates	6-inch o.c. at 4-inch lap and 6-inch o.c. in five, equally spaced, staggered center rows	(Opt
W-43	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase (with sand top surface)	OMG #12 Standard Roofgrip or OMG #14 Heavy Duty (min. 1-5/8-inch long) with OMG 3" Round Metal Plates or OMG Flat Bottom Metal Plates	6-inch o.c. at 4-inch lap and 6-inch o.c. in five, equally spaced, staggered center rows	(Opt SBS APP-
W-44	Min. 15/32-inch thick exterior grade plywood attached per Code to meet pressure requirements.	Elastobase (with sand top surface)	Trufast #12 DP or Trufast #14 HD (min. 1-5/8-inch long) with Trufast 3" Metal Insulation Plates	6-inch o.c. at 4-inch lap and 6-inch o.c. in five, equally spaced, staggered center rows	(Opt SBS

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

System No.	Deck (See Note 1)	Primer	Roof Cover		
			Joint Treatment	Base	Ply
W-45	Min. 19/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with 8d ring shank nails	(Optional) PG100	None	SBS-SA	(Optional) SB SBS-TA or AF
W-46	Min. 15/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with #12 screws	(Optional) PG100	Plywood joints are covered with 4-inch wide strips of Elastoflex SA V Plus, rolled into place to create continuous bond.	Elastoflex SA V Base or Elastoflex SA V FR Base	(Optional) SB SBS-TA or AF
W-47	Min. 15/32-inch plywood at max. 24-inch spans attached 6-inch o.c. with #12 screws	(Optional) PG100	Plywood joints are covered with 4-inch wide strips of Elastoflex SA V Plus, rolled into place to create continuous bond.	Elastoflex SA V Plus or Elastoflex SA V Plus FR	(Optional) SB SBS-TA or AF

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

System No.	Deck (See Note 1)	Base Insulation Layer			Top Insulation Layer			
		Type	Fasten	Attach	Type	Attach	Base	
SC-1.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield or Polytherm	Dekfast Hex with Dekfast #14, Trufast MP-3 with Trufast HD or OMG 3-inch Galv Plate with OMD HD	1 per 2 ft^2	Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	(Optional if using AA Ply) BP-AA, SBS-AA	(Op Bas BP- SB
SC-2.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 2-inch ACFoam II, ENRGY 3, H-Shield or Polytherm	Dekfast Hex with Dekfast #14, Trufast MP-3 with Trufast HD or OMG 3-inch Galv Plate with OMD HD	1 per 4 ft^2	Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	(Optional if using AA Ply) BP-AA, SBS-AA	(Op Bas BP- SB
SC-3.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ENRGY 3, H-Shield or Polytherm	Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	1 per 1.33 ft^2	Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	(Optional if using AA Ply) BP-AA, SBS-AA	(Op Bas BP- SB
SC-4.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	Min. 1.5-inch ENRGY 3, H-Shield or Polytherm	Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	1 per 1.33 ft^2	Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	BP-AA, SBS-AA (Top surface primed with PG100 primer)	On SB API

TABLE 2B: STEEL OR CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVI
SYSTEM TYPE C: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Base Insulation Layer	Top Insulation Layer				
			Type	Fasten	Attach	Base	
SC-5.	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. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	OMG 3-inch Galvalume Steel Plate with OMG #14 HD	1 per 1.78 ft^2	(Optional if using AA Ply) BP-AA, SBS-AA	(C A m A Ai
SC-6.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	One or more layers, any combination, loose laid	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation or min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Dekfast Galvalume Steel Hex with Dekfast #12 (steel only) or #14 or TruFast MP-3 with TruFast DP (steel only) or HD	1 per 1.33 ft^2	(Optional if using AA Ply) BP-AA, SBS-AA	(C A m A Al
SC-7.	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 ENRGY 3, H-Shield or Polytherm	Dekfast Galvalume Steel Hex with Dekfast #12 (steel only) or #14 or TruFast MP-3 with TruFast DP (steel only) or HD	1 per 1.33 ft^2	SBS-SA	(C m Sl or

TABLE 2C: STEEL OR CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVI
SYSTEM TYPE D: PRELIMINARILY ATTACHED INSULATION, MECHANICALLY ATTACHED BASE SHEET, BONDE
NOTE: INSULATION IS OPTIONAL FOR RECOVER APPLICATIONS

System No.	Deck (See Note 1)	Insulation Layer(s)		Base Sheet			
		Type	Attach	Base	Fasten	Attach	
SC-8.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	One or more layers, any combination	Prelim. Attached	Elastobase, Elastobase Poly or JM Perma-Ply 28	OMG Flat Bottom Plates (square) with Roofgrip #14, Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	12-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	((m A A
SC-9.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	One or more layers, any combination	Prelim. Attached	Elastobase, Elastobase Poly, Polyglass G2 Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	OMG Flat Bottom Plates (square) with Roofgrip #14, Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	((m A A
SC-10.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	One or more layers, any combination	Prelim. Attached	Elastobase or Elastobase Poly with poly top surface	OMG Flat Bottom Plates (square) with Roofgrip #14, Dekfast Hex with Dekfast #14 or TruFast MP-3 with TruFast HD	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	O S A
SC-11.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	One or more layers, any combination	Prelim. Attached	Elastobase or Elastobase Poly	OMG Flat Bottom Plates (square) with Roofgrip #12 (steel only) or #14	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	((m A A
SC-12.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	One or more layers, any combination	Prelim. Attached	Elastobase or Elastobase Poly with poly top surface	OMG Flat Bottom Plates (square) with Roofgrip #12 (steel only) or #14	12-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	O S A
SC-13.	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structrual concrete	One or more layers, any combination	Prelim. Attached	Polyflex	Dekfast isofast IF-2.375-AT Plates with Dekfast #15 HS	12-inch o.c. in the 5-inch wide, heat-welded side lap	((
SC-14.	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structrual concrete	One or more layers, any combination	Prelim. Attached	Polybond or Polyflex	Trufast 2.4 in. Barbed Seam Plates with Trufast EHD Fasteners	12-inch o.c. in the 6-inch wide, heat-welded side lap	((
SC-15.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structrual concrete	One or more layers, any combination	Prelim. Attached	Polybond, Polyflex	Dekfast Hex with Dekfast #14 or OMG Flat Bottom Plates with OMG Roofgrip #14	12-inch o.c. in the 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	((Sl or

TABLE 3A-1: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roo	
			Type	Attach	Type	Attach	Base	
SELF-ADHERING SYSTEMS WITH BASE INSULATION AND OPTIONAL TOP INSULATION OF THE SAME TYPE:								
C-1	Concrete	(Optional) PG100	Min. 1.5-inch H-Shield or Multi-Max FA3	D-IS	(Optional) additional layers(s) of base insulation	D-IS	SBS-SA	(Optiona more SE TA or AF
C-2	Concrete	(Optional) PG100	Min. 1.5-inch ACFoam II or ENRGY 3	D-IS	(Optional) additional layers(s) of base insulation	D-IS	SBS-SA	(Optiona more SE TA or AF
C-3	Concrete	None	Min. 1.5-inch, min. 1.5 pcf EPS insulation board	D-IS	(Optional) additional layers of base insulation	D-IS	SBS-SA	(Optiona more SE TA or AF
C-4	Concrete	None	Min. 1.5-inch, min. 2.0 pcf EPS insulation board	OB500	(Optional) additional layers of base insulation	OB500	SBS-SA	(Optiona more SE TA or AF
C-5	Concrete	None	Min. 1.5-inch ENRGY 3	OB500	(Optional) additional layers(s) of base insulation	OB500	SBS-SA	(Optiona more SE TA or AF
C-6	Concrete	None	Min. 1.5-inch ACFoam II, or H-Shield	OB500	(Optional) additional layers(s) of base insulation	OB500	SBS-SA	(Optiona more SE TA or AF
C-7	Concrete	None	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield or Multi-Max FA3	M-OSFA	(Optional) additional layers(s) of base insulation	M-OSFA	SBS-SA	(Optiona more SE TA or AF
C-8	Concrete	None	Min. 1.5-inch, min. 2.0 pcf EPS insulation board	CR-20	(Optional) additional layers of base insulation	CR-20	SBS-SA	(Optiona more SE TA or AF
C-9	Concrete	None	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG , Multi-Max FA3, or ISO 95+ GL	CR-20	(Optional) additional layers(s) of base insulation	CR-20	SBS-SA	(Optiona more SE TA or AF
C-10	Concrete	None	Min. 2-inch ACFoam II or H-Shield	OB Classic	(Optional) additional layers(s) of base insulation	OB Classic	SBS-SA	(Optiona more SE TA or AF
C-11	Concrete	PG100	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG or Multi-Max FA3	HA	(Optional) additional layers(s) of base insulation	HA	SBS-SA	(Optiona more SE TA or AF
SELF-ADHERING SYSTEMS WITH BASE INSULATION AND COVERBOARD:								
C-12	Concrete	None	Min. 1.5-inch Multi-Max FA3	D-IS	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS	SBS-SA	(Optiona more SE TA or AF

TABLE 3A-1: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roo	
			Type	Attach	Type	Attach	Base	
C-13	Concrete	None	Min. 1.5-inch, min. 2.0 pcf ASTM C578 Expanded Polystyrene	D-IS	Min. 0.25-inch DensDeck, DensDeck Prime	D-IS	SBS-SA	(Optiona more SE TA or AF
C-14	Concrete	None	Min. 2-inch ACFoam II, ENRGY-3 or H-Shield	D-IS	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS	SBS-SA	(Optiona more SE TA or AF
C-15	Concrete	None	Min. 1.5-inch ENRGY 3	OB500	Min. 0.25-inch DensDeck, DensDeck Prime	OB500	SBS-SA	(Optiona more SE TA or AF
C-16	Concrete	None	Min. 1.5-inch ACFoam II, H-Shield or ISO 95+GL	OB500	Min. 0.25-inch DensDeck, DensDeck Prime	OB500	SBS-SA	(Optiona more SE TA or AF
C-17	Concrete	None	Min. 2-inch ACFoam II, ENRGY-3 or H-Shield	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-SA	(Optiona more SE TA or AF
C-18	Concrete	None	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield or Multi-Max FA3	M-OSFA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA	SBS-SA	(Optiona more SE TA or AF
C-19	Concrete	None	Min. 2-inch ACFoam II, ENRGY-3 or H-Shield	M-OSFA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA	SBS-SA	(Optiona more SE TA or AF
C-20	Concrete	None	Min. 1.5-inch, min. 2.0 pcf ASTM C578 Expanded Polystyrene	CR-20	Min. 0.25-inch DensDeck, DensDeck Prime	CR-20	SBS-SA	(Optiona more SE TA or AF
C-21	Concrete	None	Min. 2-inch ACFoam IV, min. 1.5-inch Ultra-Max or Multi-Max FA-3, min. 1.3-inch ACFoam III or min. 1.0-inch ISO 95+GL, H-Shield, H-Shield CG or ENRGY 3	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Optiona more SE TA or AF
C-22	Concrete	None	Min. 2-inch ACFoam II, ENRGY-3 or H-Shield	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Optiona more SE TA or AF
C-23	Concrete	None	Min. 2-inch ACFoam II or H-Shield	OB Classic	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB Classic	SBS-SA	(Optiona more SE TA or AF
C-24	Concrete	PG100	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG or Multi-Max FA3	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	SBS-SA	(Optiona more SE TA or AF
ASPHALT AND/OR TORCH APPLIED SYSTEMS:								

TABLE 3A-1: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roo	
			Type	Attach	Type	Attach	Base	
C-25	Concrete	None	Min. 2-inch ACFoam II or H-Shield	D-IS	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS	BP-AA, SBS-AA	(Optiona more BF
C-26	Concrete	None	Min. 2-inch ACFoam II or H-Shield	D-IS	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS	APP-TA	(Optiona more AF
C-27	Concrete	None	Min. 2-inch ACFoam II or H-Shield	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	BP-AA, SBS-AA	(Optiona more BF
C-28	Concrete	None	Min. 2-inch ACFoam II or H-Shield	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	APP-TA	(Optiona more AF
C-29	Concrete	None	Min. 2-inch ACFoam II or H-Shield	M-OSFA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA	BP-AA, SBS-AA	(Optiona more BF
C-30	Concrete	None	Min. 2-inch ACFoam II or H-Shield	M-OSFA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA	APP-TA	(Optiona more AF
C-31	Concrete	None	Min. 2-inch ACFoam IV, min. 1.5-inch Ultra-Max or Multi-Max FA-3, min. 1.3-inch ACFoam III or min. 1.0-inch ISO 95+GL, H-Shield, H-Shield CG or ENRGY 3	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	BP-AA, SBS-AA	(Optiona more BF
C-32	Concrete	None	Min. 2-inch ACFoam IV, min. 1.5-inch Ultra-Max or Multi-Max FA-3, min. 1.3-inch ACFoam III or min. 1.0-inch ISO 95+GL, H-Shield, H-Shield CG or ENRGY 3	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	APP-TA	(Optiona more AF
C-33	Concrete	None	(Optional) Min. 2-inch ACFoam II or H-Shield	OB Classic	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB Classic	BP-AA, SBS-AA	(Optiona more BF
C-34	Concrete	None	(Optional) Min. 2-inch ACFoam II or H-Shield	OB Classic	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB Classic	APP-TA	(Optiona more AF
C-35	Concrete	PG100	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG or Multi-Max FA3	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	BP-AA, SBS-AA	(Optiona more BF
C-36	Concrete	PG100	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG or Multi-Max FA3	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	APP-TA	(Optiona more AF

TABLE 3A-1: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roo	
			Type	Attach	Type	Attach	Base	
C-37	Concrete	PG100	Min. 0.75-inch Fesco Board (homogeneous)	HA	None	N/A	(Optional if using AA Ply) One or more BP-AA, SBS-AA	(Optiona Base) O BP-AA, S SBS-TA
C-38	Concrete	PG100	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG or Multi-Max FA3	HA	Min. 0.75-inch Fesco Board (homogeneous)	HA	(Optional if using AA Ply) One or more BP-AA, SBS-AA	(Optiona Base) O BP-AA, S SBS-TA
C-39	Concrete	PG100	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	None	N/A	(Optional if using AA Ply) One or more BP-AA, SBS-AA	(Optiona Base) O BP-AA, S SBS-TA
C-40	Concrete	PG100	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG or Multi-Max FA3	HA	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	(Optional if using AA Ply) One or more BP-AA, SBS-AA	(Optiona Base) O BP-AA, S SBS-TA
C-41	Concrete	PG100	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG or Multi-Max FA3	HA	Min. 0.25-inch DensDeck Prime	HA	(Optional if using AA Ply) One or more BP-AA, SBS-AA	(Optiona Base) O BP-AA, S SBS-TA
C-42	Concrete	PG100	Min. 0.25-inch DensDeck Prime	HA	None	N/A	(Optional if using AA Ply) One or more BP-AA, SBS-AA	(Optiona Base) O BP-AA, S SBS-TA

TABLE 3A-2: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED TEMP ROOF, BONDED INSULATION, BONDED ROOF COVER

Syste m No.	Deck (See Note 1)	Prime	Temp Roof	Base Insulation Layer		Top Insulation Layer			
				Type	Attach	Type	Attach	Base	
C-43	Conc	PG100	Elastoflex SA V Plus	Min. 1.5-inch, min. 2.0 pcf ASTM C578 Expanded Polystyrene or Min. 1.5-inch ACFoam II, ENRGY-3, H-Shield or Multi-Max FA3	D-IS	(Optional if using polyisocyanurate base insulation) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	D-IS	SBS-SA	(Optic more SBS-T
C-44	Conc	PG100	Elastoflex SA P or Polyglass Base (torched)	Min. 1.5-inch, min. 2.0 pcf ASTM C578 Expanded Polystyrene or Min. 1.5-inch ACFoam II or ENRGY 3	D-IS	(Optional if using polyisocyanurate base insulation) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	D-IS	SBS-SA	(Optic more SBS-T

TABLE 3A-2: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED TEMP ROOF, BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Prime	Temp Roof	Base Insulation Layer		Top Insulation Layer			
				Type	Attach	Type	Attach	Base	
C-45	Conc	PG100	Elastoflex SA V Plus	Min. 1.5-inch, min. 2.0 pcf ASTM C578 Expanded Polystyrene or Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG, Multi-Max FA3 or ISO 95+GL	CR-20	(Optional if using polyisocyanurate base insulation) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Optic more SBS-"
C-46	Conc	PG100	Polyglass Base, (torched)	Min. 1.5-inch, min. 2.0 pcf ASTM C578 Expanded Polystyrene or Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG, Multi-Max FA3 or ISO 95+GL	CR-20	(Optional if using polyisocyanurate base insulation) Min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Optic more SBS-"
C-47	Conc	PG100	Elastoflex SA P	Min. 1.5-inch, min. 2.0 pcf ASTM C578 Expanded Polystyrene	CR-20	Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Optic more SBS-"
C-48	Conc	PG100	Elastoflex SA P	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG, Multi-Max FA3 or ISO 95+GL	CR-20	(Optional) Additional layers of base insulation	CR-20	SBS-SA	(Optic more SBS-"
C-49	Conc	PG100	Elastoflex SA P	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG, Multi-Max FA3 or ISO 95+GL	CR-20	Min. 0.5-inch Temple HD6 or Structodek High Density Fiberboard Roof Insulation or min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Optic more SBS-"

TABLE 3B: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, BONDED BASE SHEET, BONDED ROOF COVER

System No.	Deck (See Note 1)	Primer	Roof Cover		
			Base	Ply	
C-50	Concrete	PG100	SBS-SA	(Optional) SBS-SA, SBS-TA or APP-TA	SBS-SA, APP-
C-51	Concrete	PG100	BP-AA (Optional if using asphalt applied Ply)	(Optional if using asphalt applied Base) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-

TABLE 4A: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)		Base Insulation Layer		Coverboard		Ro	
	Struct. Deck	LWC	Type	Attach	Type	Attach	Base	
SELF-ADHERING SYSTEMS WITH BASE INSULATION AND OPTIONAL TOP INSULATION OF THE SAME TYPE:								
LWC-1	Concrete	Min. 200 psi, min 2-inch Elastizell	Min. 1.5-inch, min. 2.0 pcf ASTM C578 expanded polystyrene	OB500	(Optional) Additional layers of base insulation	OB500	SBS-SA	(Optiona more SE TA or AF
LWC-2	Concrete	Min. 200 psi, min 2-inch Elastizell	Min. 1.5-inch ACFoam II, ENRGY 3, ISO 95+ GL or H-Shield	OB500	(Optional) Additional layers of base insulation	OB500	SBS-SA	(Optiona more SE TA or AF
LWC-3	Concrete	Min. 200 psi, min. 2-inch Elastizell	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, ISO 95+ GL, H-Shield, H-Shield CG, Multi-Max FA3 or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	(Optional) Additional layers of base insulation	CR-20	SBS-SA	(Optiona more SE TA or AF
LWC-4	Concrete	Min. 200 psi, min. 2-inch Celcore or Mearlcrete	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, ISO 95+ GL, H-Shield, H-Shield CG, Multi-Max FA3 or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	(Optional) Additional layers of base insulation	CR-20	SBS-SA	(Optiona more SE TA or AF
SELF-ADHERING SYSTEMS WITH BASE INSULATION AND COVERBOARD:								
LWC-5	Concrete	Min. 200 psi, min 2-inch Elastizell	Min. 1.5-inch, min. 2.0 pcf ASTM C578 expanded polystyrene	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-SA	(Optiona more SE TA or AF
LWC-6	Concrete	Min. 200 psi, min 2-inch Elastizell	Min. 1.5-inch ACFoam II, ENRGY 3, ISO 95+ GL or H-Shield	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-SA	(Optiona more SE TA or AF
LWC-7	Concrete	Min. 200 psi, min. 2-inch Elastizell	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, ISO 95+ GL, H-Shield, H-Shield CG, Multi-Max FA3 or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Optiona more SE TA or AF
LWC-8	Concrete	Min. 200 psi, min. 2-inch Celcore or Mearlcrete	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, ISO 95+ GL, H-Shield, H-Shield CG, Multi-Max FA3 or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Optiona more SE TA or AF
ASPHALT AND/OR TORCH APPLIED SYSTEMS:								
LWC-9	Concrete	Min. 200 psi, min 2-inch Elastizell	Min. 1.5-inch ACFoam II, ENRGY 3, ISO 95+ GL or H-Shield	OB500	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	BP-AA, SBS-AA, APP-TA	(Optiona more BP AA, SBS TA

TABLE 4A: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)		Base Insulation Layer		Coverboard		Ro	
	Struct. Deck	LWC	Type	Attach	Type	Attach	Base	
LWC-10	Concrete	Min. 200 psi, min. 2-inch Elastizell	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, ISO 95+ GL, H-Shield, H-Shield CG, Multi-Max FA3 or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	BP-AA, SBS-AA, APP-TA	(Optiona more BP AA, SBS TA
LWC-11	Concrete	Min. 200 psi, min. 2-inch Celcore or Mearlcrete	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, ISO 95+ GL, H-Shield, H-Shield CG, Multi-Max FA3 or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	BP-AA, SBS-AA, APP-TA	(Optiona more BP AA, SBS TA

TABLE 4B: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROO

System No.	Deck (See Note 1)		Anchor Sheet			Base Insulation		Top Insulation		
	Struct	LWC	Type	Fasten	Attach	Type	Attach	Type	Attach	Base
LWC-12	Min. 22 ga., Type B, vented steel at max. 5 ft spans	Min. 300 psi Approved cellular LWC	GAFGLAS #75	OMG CR BSF	7-inch o.c. at 4-inch lap and 7-inch o.c. in two, equally spaced center rows	(Optional) Min. 1.5-inch ACFoam II, H-Shield, Multi-Max FA3 or Polytherm	HA	Min. 1.5-inch Thermaroof Composite, Polytherm Composite, or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation or min. 0.75-inch Fesco Board (homogeneous)	HA	(Optional if using AA Ply) BP-AA, SBS-AA
LWC-13	Min. 22 ga., Type B, vented steel at max. 5 ft spans	Min. 300 psi Approved cellular LWC	GAFGLAS #75	OMG CR BSF	7-inch o.c. at 4-inch lap and 7-inch o.c. in two, equally spaced center rows	Min. 1.5-inch ACFoam II, H-Shield, Multi-Max FA3 or Polytherm	HA	None	N/A	SBS-SA

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

System No.	Deck (See Note 1)		Base Sheet (See Note A below)			
	Structural Deck	Lightweight Concrete	Type (See Note A)	Fasten	Attach	
'GENERIC' CELLULAR LIGHTWEIGHT INSULATING CONCRETE:						
LWC-14	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick cellular LWC. *Note: To qualify the LWIC under this assembly, an OMG CR BPF shall achieve an average withdrawal of 53 lbf when tested per TAS 105 or ANSI/SPRI FX-1*	B3	OMG CR BPF	7-inch o.c. in a 3-inch lap and 7-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
CELCORE CELLULAR LIGHTWEIGHT INSULATING CONCRETE:						
LWC-15	Min. 0.0179-inch Tensilform S-75 or min. 0.0205-inch Tensilform 75 at max. 5 ft spans or structural concrete	Min. 200 psi, min. 2-inch thick Celcore	B1, B2, B3 or B7	ES FM-90 or OMG CR BPF	8-inch o.c. in a 3-inch lap and 16-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-16	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 200 psi, min. 2-inch thick Celcore	B1 through B12	ES FM-90 or OMG CR BPF	7-inch o.c. in a 3-inch lap and 7-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-17	Min. 26 ga., type HF steel at max 5 ft spans or structural concrete	Min. 225 psi, min. 2-inch thick Celcore MF	B1, B2, B3, B4, B7, B8, B10, B11 or B12	OMG CR BPF	9-inch o.c. in a 3-inch lap and 9-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-18	Min. 22 ga., type B steel at max 6 ft spans or structural concrete	Min. 225 psi, min. 2-inch thick Celcore MF	B1, B2, B3, B4, B7, B8, B10, B11 or B12	OMG CR BPF	7-inch o.c. in a 3-inch lap and 14-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-19	Min. 22 ga., type B steel at max 6 ft spans or structural concrete	Min. 225 psi, min. 2-inch thick Celcore MF	B1, B2, B3, B4, B7, B8, B10, B11 or B12	OMG CR BPF	9-inch o.c. in a 3-inch lap and 9-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-20	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 225 psi, min. 2-inch thick Celcore MF	B1 or B2	ES Twin Loc-Nail	9-inch o.c. in a 4-inch lap and 18-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-21	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 225 psi, min. 2-inch thick Celcore MF	B2 *(with poly-film top surface)*	ES Twin Loc-Nail	9-inch o.c. in a 4-inch lap and 18-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-22	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Celcore MF	B2	ES FM-90	8-inch o.c. in a 4-inch lap and 8-inch o.c. in three equally spaced, staggered center rows	

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

System No.	Deck (See Note 1)		Base Sheet (See Note A below)			
	Structural Deck	Lightweight Concrete	Type (See Note A)	Fasten	Attach	
LWC-23	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Celcore MF	B2 *(with poly-film top surface)*	ES FM-90	8-inch o.c. in a 4-inch lap and 8-inch o.c. in three equally spaced, staggered center rows	
LWC-24	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Celcore	B1 through B12	ES FM-90 or OMG CR BPF	7-inch o.c. in a 3-inch lap and 7-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-25	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Celcore MF	Elastobase Poly	ES FM-260	10-inch o.c. in a 4-inch lap and 10-inch o.c. in three equally spaced, staggered center rows	
ELASTIZELL CELLULAR LIGHTWEIGHT INSULATING CONCRETE:						
LWC-26	Min. 0.0179-inch Tensilform S-75 or min. 0.0205-inch Tensilform 75 at max. 5 ft spans or structural concrete	Min. 200 psi, min. 2-inch thick Elastizell Range II	B1 through B12	ES FM-90 or OMG CR BPF	7.5-inch o.c. in a 3-inch lap and 7.5-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-27	Min. 0.0179-inch Tensilform S-75 or min. 0.0205-inch Tensilform 75 at max. 5 ft spans or structural concrete	Min. 200 psi, min. 2-inch thick Elastizell Range II	B2 *(with poly-film top surface)*	ES FM-90 or OMG CR BPF	7.5-inch o.c. in a 3-inch lap and 7.5-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-28	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 200 psi, min. 2-inch thick Elastizell Range II	B1 through B12	ES FM-90 or OMG CR BPF	7-inch o.c. in a 3-inch lap and 7-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-29	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 200 psi, min. 2-inch thick Elastizell Range II	B2 *(with poly-film top surface)*	ES FM-90 or OMG CR BPF	7-inch o.c. in a 3-inch lap and 7-inch o.c. in two, equally spaced, staggered rows in the field of the sheet	
LWC-30	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 350 psi, min. 2-inch thick Elastizell with Zell-Crete Fibers, supplemental attached with Roofgrip #21 and 3-inch plates at 1 per 8 ft2	B2	ES Twin Loc-Nails (min. 1.8-inch)	6-inch o.c. in a 4-inch lap and 6-inch o.c. in three, equally spaced, staggered rows in the field of the sheet	
LWC-31	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 350 psi, min. 2-inch thick Elastizell with Zell-Crete Fibers, supplemental attached with Roofgrip #21 and 3-inch plates at 1 per 8 ft2	B2 *(with poly-film top surface)*	ES Twin Loc-Nails (min. 1.8-inch)	6-inch o.c. in a 4-inch lap and 6-inch o.c. in three, equally spaced, staggered rows in the field of the sheet	
MEARLCRETE CELLULAR LIGHTWEIGHT INSULATING CONCRETE:						

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

System No.	Deck (See Note 1)		Base Sheet (See Note A below)		
	Structural Deck	Lightweight Concrete	Type (See Note A)	Fasten	Attach
LWC-32	Min. 24 ga., type B steel at max 5 ft spans or structural concrete	Min. 200 psi, min. 2-inch thick Mearlcrete	B1 through B12	ES FM-90 or OMG CR BPF	7.5-inch o.c. in a 3-inch lap and 10-inch o.c. in two, equally spaced, staggered rows in the field of the sheet
LWC-33	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Mearlcrete	B1, B2 or B12	ES FM-90 or OMG CR BPF	7-inch o.c. in a 4-inch lap and 7-inch o.c. in two, equally spaced, staggered rows in the field of the sheet
LWC-34	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Mearlcrete	B2 *(with poly-film top surface)*	ES FM-90 or OMG CR BPF	7-inch o.c. in a 4-inch lap and 7-inch o.c. in two, equally spaced, staggered rows in the field of the sheet
LWC-35	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Mearlcrete	B1, B2, B3, B7 or B11	ES FM-90 or OMG CR BPF	7-inch o.c. in a 4-inch lap and 7-inch o.c. in two, equally spaced, staggered rows in the field of the sheet
LWC-36	Min. 22 ga., type B steel at max 5 ft spans or structural concrete	Min. 300 psi, min. 2-inch thick Mearlcrete	B2 *(with poly-film top surface)*	ES FM-90 or OMG CR BPF	7-inch o.c. in a 4-inch lap and 7-inch o.c. in two, equally spaced, staggered rows in the field of the sheet

A. Base Sheets options are coded as follows:
- B1: *Polyglass G2 Base*;
- B2: *Elastobase or Elastobase Poly*;
- B3: *GAFGLAS #75*;
- B4: *Stratavent Eliminator Venting Base Sheet (Nailable)*;
- B5: *GAFGLAS Ply 4*;
- B6: *GAFGLAS FlexPly 6*;
- B7: *JM Perma Ply No. 28*;
- B8: *JM Vensulation*;
- B9: *JM GlasPly IV*;
- B10: *JM GlasPly Premier*;
- B11: *Tamko Glass-Base*;
- B12: *Tamko Vapor-Chan*

TABLE 5A: CEMENTITIOUS WOOD FIBER DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Base Insulation Layer		Top Insulation Layer			
		Type	Attach	Type	Attach	Base	
CWF-1	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Min. 1.5-inch ACFoam II, ISO 95+GL, H-Shield, Polytherm, ENRGY-3	D-IS or OB500	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	D-IS or OB500	BP-AA, SBS-AA	
CWF-2	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Min. 1.5-inch ACFoam II, ISO 95+GL, H-Shield, Polytherm, ENRGY-3	D-IS or OB500	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	D-IS or OB500	SBS-TA, SBS-SA or APP-TA	
CWF-3	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Min. 1.5-inch ACFoam II, ISO 95+GL, H-Shield, Polytherm, ENRGY-3	CR-20	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	CR-20	BP-AA, SBS-AA	
CWF-4	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Min. 1.5-inch ACFoam II, ISO 95+GL, H-Shield, Polytherm, ENRGY-3	CR-20	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-TA, SBS-SA or APP-TA	

TABLE 5B: CEMENTITIOUS WOOD FIBER DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF

SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROO

System No.	Deck (See Note 1)	Anchor Sheet			Base Insulation		Top Insulation		
		Type	Fasten	Attach	Type	Attach	Type	Attach	Base
CWF-5	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Elastobase, Elastobase Poly, Polyglass G2 Base	ES Inuldek Loc-Nail	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, ACFoam III, ISO95+GL, H-Shield, ENRGY 3, Polytherm or Multi-Max FA3,	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	BP-AA, SBS-AA
CWF-6	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Elastobase, Elastobase Poly, Polyglass G2 Base	ES Inuldek Loc-Nail	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, ACFoam III, ISO95+GL, H-Shield, ENRGY 3, Polytherm or Multi-Max FA3,	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	HA	SBS-TA, SBS-SA or APP-TA
CWF-7	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Elastobase, Elastobase Poly, Polyglass G2 Base	ES Twin Loc-Nail	9-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, ACFoam III, ISO95+GL, H-Shield, ENRGY 3, Polytherm or Multi-Max FA3,	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	BP-AA, SBS-AA
CWF-8	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Elastobase, Elastobase Poly, Polyglass G2 Base	ES Twin Loc-Nail	9-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, ACFoam III, ISO95+GL, H-Shield, ENRGY 3, Polytherm or Multi-Max FA3,	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board	HA	SBS-TA, SBS-SA or APP-TA

TABLE 5C: CEMENTITIOUS WOOD FIBER DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RE
SYSTEM TYPE B: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED R

System No.	Deck (See Note 1)	Base Insulation Layer			Top Insulation Layer		R	
		Type	Fasten	Attach	Type	Attach	Base	
CWF-9	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Min. 2-inch H-Shield or Polytherm	OMG Polymer GypTec Plate with Polymer GypTec or TruFast TL 3 in. Plate with TL Fastener	1 per 4 ft^2	Min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	(Optional if using AA Ply) BP-AA, SBS-AA	(Opt Base BP-A SBS

TABLE 5D: CEMENTITIOUS WOOD FIBER DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RE
SYSTEM TYPE C: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Base Insulation Layer	Top Insulation Layer			R	
			Type	Fasten	Attach	Base	
CWF-10	Min. 2.5-inch Tectum Plank or Tectum LS Plank	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	ES Twin Loc-Nails (min. 1-inch embedment)	1 per 2 ft^2	(Optional if using AA Ply) BP-AA, SBS-AA	(Opt Base BP-A SBS

TABLE 5E: CEMENTITIOUS WOOD FIBER DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF
SYSTEM TYPE E: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COV

System No.	Deck (See Note 1)	Base Sheet			
		Base	Fasten	Attach	
CWF-11	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Elastobase, Elastobase Poly, Polyglass G2 Base	ES Inuldek Loc-Nail	9-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional BP-AA, SI or APP-TA
CWF-12	Min. 2.5-inch Tectum Plank or Tectum LS Plank	Elastobase, Elastobase Poly, Polyglass G2 Base	ES Twin Loc-Nails	9-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	(Optional BP-AA, SI or APP-TA

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

System No.	Deck (See Note 1)	Base Insulation Layer		Top Insulation Layer		F	
		Type	Attach	Type	Attach	Base	
G-1	Existing, sound poured gypsum or gypsum plank deck	Min. 1.5-inch ACFoam II, ENRGY 3 or H-Shield or min. 2.0 pcf, ASTM C578 expanded polystyrene	OB500	(Optional) additional layers(s) of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-SA	(Opt mor TA c
G-2	Existing, sound poured gypsum or gypsum plank deck	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield or Multi-Max FA3	M-OSFA	(Optional) additional layers(s) of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA	SBS-SA	(Opt mor TA c
G-3	Existing, sound poured gypsum or gypsum plank deck	Min. 1.5-inch, min. 2.0 pcf EPS insulation board	CR-20	(Optional) additional layers of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Opt mor TA c
G-4	Existing, sound poured gypsum or gypsum plank deck	Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	CR-20	None	N/A	(Optional if using AA Ply) BP-AA, SBS-AA	(Opt Base BP-A SBS
G-5	Existing, sound poured gypsum or gypsum plank deck	Min. 1.5-inch ACFoam II, ACFoam III, ENRGY 3, H-Shield, H-Shield CG or Multi-Max FA3	CR-20	(Optional) additional layers(s) of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Opt mor TA c

TABLE 6B: GYPSUM DECKS – REROOF (TEAR-OFF)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROO

System No.	Deck (See Note 1)	Anchor Sheet			Base Insulation		Top Insulation		
		Type	Fasten	Attach	Type	Attach	Type	Attach	Bas
G-6	Existing, sound poured gypsum or gypsum plank deck	Elastobase, Elastobase Poly, Polyglass G2 Base	ES FM-45 or FM-60	9-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, ACFoam III, ISO95+GL, H-Shield, ENRGY 3, Polytherm or Multi-Max FA3,	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	BP-A/ SBS-/

TABLE 6B: GYPSUM DECKS – REROOF (TEAR-OFF)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROO

System No.	Deck (See Note 1)	Anchor Sheet			Base Insulation		Top Insulation		
		Type	Fasten	Attach	Type	Attach	Type	Attach	Bas
G-7	Existing, sound poured gypsum or gypsum plank deck	Elastobase, Elastobase Poly, Polyglass G2 Base	ES FM-75 or FM-90 or Twin Loc-Nails	9-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, ACFoam III, ISO95+GL, H-Shield, ENRGY 3, Polytherm or Multi-Max FA3,	HA	Min. 0.25-inch DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	HA	BP-A/ SBS-/

TABLE 6C: GYPSUM DECKS – REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

System No.	Deck (See Note 1)	Base Insulation Layer	Top Insulation Layer			F	
			Type	Fasten	Attach	Base	
G-8	Existing sound poured gypsum or gypsum plank deck	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board or min. 0.5-inch Structodek High Density Fiberboard Roof Insulation	ES Twin Loc-Nails (min. 1-inch embedment)	1 per 2 ft^2	(Optional if using AA Ply) BP-AA, SBS-AA	(Opt Base BP-A SBS

TABLE 6D: GYPSUM DECKS – REROOF (TEAR-OFF)
SYSTEM TYPE E: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COV

System No.	Deck (See Note 1)	Base Sheet			
		Base	Fasten	Attach	
G-9	Existing sound poured gypsum or gypsum plank deck	Elastobase, Elastobase Poly, Polyglass G2 Base	ES FM-45 or FM-60	9-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	(Optional) C AA, SBS-AA APP-TA
G-10	Existing sound poured gypsum or gypsum plank deck	Elastobase, Elastobase Poly, Polyglass G2 Base	ES FM-75 or FM-90 or Twin Loc-Nails	9-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	(Optional) C AA, SBS-AA APP-TA

TABLE 7A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Substrate (See Notes 1 & 11)	Base Insulation Layer		Top Insulation Layer		F	
		Type	Attach	Type	Attach	Base	
R-1	Existing asphaltic roof	Min. 1.5-inch Multi-Max FA3	D-IS	(Optional) additional layers(s) of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS	SBS-SA	(Opt mor TA c
R-2	Existing asphaltic roof	Min. 1.5-inch ACFoam II or ENRGY 3 or min. 2.0 pcf EPS insulation board	D-IS	(Optional) additional layers(s) of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	D-IS	SBS-SA	(Opt mor TA c
R-3	Existing asphaltic roof	Min. 1.5-inch, min. 2.0 pcf EPS insulation board	OB500	(Optional) additional layers of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-SA	(Opt mor TA c
R-4	Existing asphaltic roof	Min. 1.5-inch ACFoam II, ENRGY 3 or H-Shield	OB500	(Optional) additional layers(s) of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	OB500	SBS-SA	(Opt mor TA c
R-5	Existing asphaltic roof	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield or Multi-Max FA3	M-OSFA	(Optional) additional layers(s) of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA	SBS-SA	(Opt mor TA c
R-6	Existing asphaltic roof	Min. 2-inch ACFoam IV, min. 1.5-inch Ultra-Max or Multi-Max FA-3, min. 1.3-inch ACFoam III or min. 1.0-inch ISO 95+GL, H-Shield, H-Shield CG or ENRGY 3 or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	(Optional) additional layers(s) of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Opt mor TA c
R-7	Existing asphaltic roof	Min. 2-inch ACFoam II, ENRGY-3 or H-Shield or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	(Optional) additional layers(s) of base insulation and/or min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	SBS-SA	(Opt mor TA c
R-8	Existing asphaltic roof	Min. 1.5-inch Multi-Max FA3	D-IS	Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	D-IS	BP-AA, SBS-AA, SBS-TA, SBS-SA, APP-TA	(Opt mor AA, TA
R-9	Existing asphaltic roof	Min. 1.5-inch ACFoam II or ENRGY 3 or min. 2.0 pcf EPS insulation board	D-IS	Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	D-IS	BP-AA, SBS-AA, SBS-TA, SBS-SA, APP-TA	(Opt mor AA, TA

TABLE 7A: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Substrate (See Notes 1 & 11)	Base Insulation Layer		Top Insulation Layer		R	
		Type	Attach	Type	Attach	Base	
R-10	Existing asphaltic roof	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield or ISO 95+GL	OB500	Min. 0.25-inch DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	OB500	BP-AA, SBS-AA, SBS-TA, SBS-SA, APP-TA	(Opt mor AA, TA
R-11	Existing asphaltic roof	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield or Multi-Max FA3	M-OSFA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	M-OSFA	BP-AA, SBS-AA, SBS-TA, SBS-SA, APP-TA	(Opt mor AA, TA
R-12	Existing asphaltic roof	Min. 2-inch ACFoam IV, min. 1.5-inch Ultra-Max or Multi-Max FA-3, min. 1.3-inch ACFoam III or min. 1.0-inch ISO 95+GL, H-Shield, H-Shield CG or ENRGY 3 or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	BP-AA, SBS-AA	(Opt mor
R-13	Existing asphaltic roof	Min. 2-inch ACFoam IV, min. 1.5-inch Ultra-Max or Multi-Max FA-3, min. 1.3-inch ACFoam III or min. 1.0-inch ISO 95+GL, H-Shield, H-Shield CG or ENRGY 3 or min. 2.0 pcf ASTM C578 expanded polystyrene	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	APP-TA	(Opt mor

TABLE 7B: RECOVER APPLICATIONS
SYSTEM TYPE F: NON-INSULATED, BONDED BASE SHEET, BONDED ROOF COVER

System No.	Substrate (See Notes 1 & 11)	Primer	Roof Cover		
			Base	Ply	
R-14	Existing asphaltic roof	PG100	BP-AA (Optional if using asphalt applied Ply)	(Optional if using asphalt applied Base) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/11/2014

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
JRS Risk Risk Services, LLC
P.O. Box 43505
Atlanta GA 30336

CONTACT NAME: Wendy Mosteller
PHONE A/C, No, Ext): 678-921-4652 FAX A/C, No): 678-921-4651
E-MAIL ADDRESS: mosteller@jrstld.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: First Mercury Insurance Company	
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	
INSURER F:	

INSURED
Jasper Contractors, Inc
1955 Vaughn Road
Suite 209
Kennesaw GA 30144

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 INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	**GENERAL LIABILITY** ☑ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☐ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PROJECT ☐ LOC			GA - CGL0000044819 - 01	07/15/14	07/15/15	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ☐ NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident)	$
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
	☐ **UMBRELLA LIAB** ☐ OCCUR ☐ **EXCESS LIAB** ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $						EACH OCCURRENCE	$
							AGGREGATE	$
								$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ N / A **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below						☐ WC STATUTORY LIMITS ☐ OTHER	
							E.L. EACH ACCIDENT	$
							E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
Evidence of Coverage.

CERTIFICATE HOLDER
City of Belle Isle
1600 Nela Avenue
Belle Isle FL 32809

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

AUTHORIZED REPRESENTATIVE
James J. Benedict

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/11/2014

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
SUNZ Insurance Solutions LLC
7405 N Tamiami Trail
Sarasota, FL 34243

CONTACT NAME:
PHONE (A/C, No, Ext): 941-306-3077 FAX (A/C, No): 727-497-1280
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : SUNZ Insurance Company	34762
INSURER B : Aspen Re - London - Best Rating "A"	
INSURER C : Catlin Syndicate - Lloyds - Best Rating "A"	
INSURER D : Brit Syndicate - Lloyds - Best Rating "A"	
INSURER E :	
INSURER F :	

INSURED
Howard Leasing, Inc.
6302 Manatee Avenue West, Suite K
Bradenton FL 34209

COVERAGES **CERTIFICATE NUMBER:** 22622578 **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						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						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						EACH OCCURRENCE	$
	☐ EXCESS LIAB ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N			WCPEO0000040 05	5/14/2014	5/14/2015	✓ PER STATUTE ✓ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N	N / A		WCPEO0000040 04	5/14/2013	5/14/2014	E.L. EACH ACCIDENT	$ 1,000,000
	(Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
B C D	Workers Compensation Excess Coverage						This is for informational purposes and nothing shall create any right under such reinsurance.	

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

Coverage provided for all leased employees but not subcontractors of: Jasper Contractors Inc.
Location Effective: 06/01/2012

CERTIFICATE HOLDER

434

City of Belle Isle
1600 Nela Avenue
Belle Isle FL

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
Glen J Distefano

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD
1940 NORTH MONROE STREET
TALLAHASSEE FL 32399-0783

(850) 487-1395

STEPHEN, MICHAEL H
JASPER CONTRACTORS INC
125 N WEINBACH SUITE 810
EVANSVILLE IN 47711

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

CCC1329651 ISSUED: 07/16/2014

CERTIFIED ROOFING CONTRACTOR
STEPHEN, MICHAEL H
JASPER CONTRACTORS INC

IS CERTIFIED under the provisions of Ch.489 FS.
Expiration date : AUG 31, 2016 L1407160001232

DETACH HERE

RICK SCOTT, GOVERNOR

KEN LAWSON, SECRETARY

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

LICENSE NUMBER
CCC1329651

The ROOFING CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2016

STEPHEN, MICHAEL H
JASPER CONTRACTORS INC
125 N WEINBACH SUITE 810
EVANSVILLE IN 47711

ISSUED: 07/16/2014 DISPLAY AS REQUIRED BY LAW SEQ # L1407160001232