

## Florida Building Code 8th Edition (2023)

## High Velocity Hurricane Zone Uniform Roofing Application Form for Miami-Dade County

## INSTRUCTION PAGE

COMPLETE THE NECESSARY SECTIONS OF THE UNIFORM ROOFING PERMIT APPLICATION FORM AND ATTACH THE REQUIRED DOCUMENTS BELOW:

Roof System	Required Sections of the Permit Application Form	Attachments Required See List Below
Low Slope Application	A,B,C	1,2,3,4,5,6,7
Asphaltic Shingles	A,B,D	1,2,4,5,6,7
Concrete or Clay Tile	A,B,D,E	1,2,3,4,5,6,7
Metal Roofs	A,B,D	1,2,3,4,5,6,7
Wood Shingles and Shakes	A,B,D	1,2,4,5,6,7
Other	As Applicable	1,2,3,4,5,6,7

## ATTACHMENTS REQUIRED:

1.	Fire Directory Listing Page
2.	From Product Approval: Front Page Specific System Description Specific System Limitations General Limitations Applicable Detail Drawings
3.	Design calculations per Chapter 16, or if applicable, RAS 127 or RAS 128
4.	Other Component Product Approval
5.	Municipal Permit Application
6.	Owner's Notification for Roofing Considerations (Reroofing Only)
7.	Any Required Roof Testing / Calculation Documentation

Florida Building Code 8th Edition (2023)

High Velocity Hurricane Zone Uniform Roofing Application Form for Miami-Dade County

**Section A (General Information)**

Master Permit Number: \_\_\_\_\_

Process Number: \_\_\_\_\_

Contractor's Name: \_\_\_\_\_

Job Address: \_\_\_\_\_

**ROOF CATEGORY**

- Low Slope                       Mechanically Fastened Tile                       Mortar / Adhesive Set Tile  
 Asphaltic Shingles                       Metal Panel/ Shingles                       Wood Shingles / Shakes

**ROOF TYPE**

- New Roof                       Repair                       Maintenance                       Reroofing                       Recovering

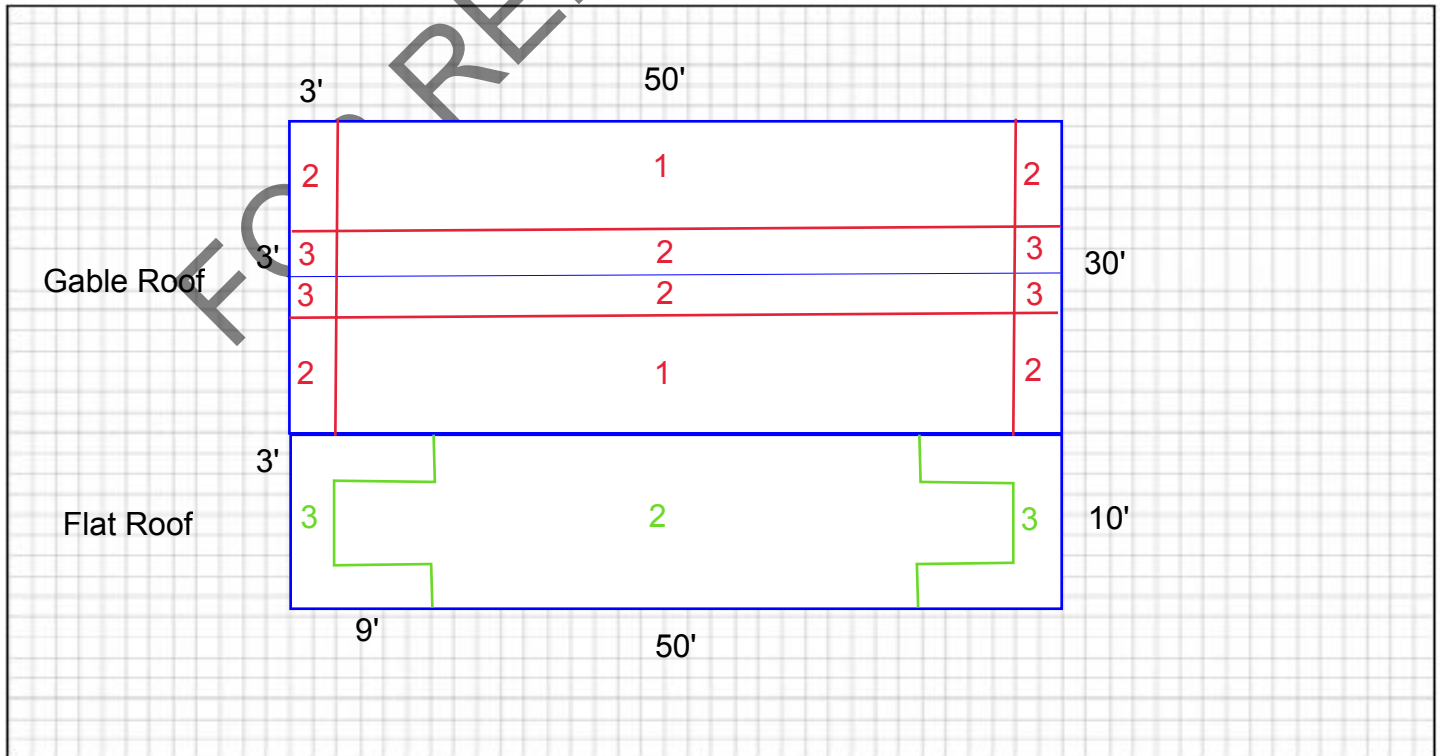
**ROOF SYSTEM INFORMATION**

Low Slope Roof Area (ft<sup>2</sup>) \_\_\_\_\_                      Steep Sloped Roof Area (ft<sup>2</sup>) \_\_\_\_\_                      Total (ft<sup>2</sup>) \_\_\_\_\_

Are there gas vents on the roof?    Yes    No    If Yes what type?    Natural    LPX  
 Is there an existing roof top Solar System?    Yes    No    If yes will it be reinstalled?    Yes    No

**Section B (Roof Plan)**

Sketch Roof Plan: Illustrate all levels and sections, roof drains, scuppers, overflow scuppers and overflow drains. Include dimensions of sections and levels, clearly identify dimensions of elevated pressure zones and location of parapets.



Section C (Low Sloped Roof Systems)

Fill in Specific Roof Assembly Components and Identify manufacturer

(If a component is not used, identify as "NA")

System Manufacturer: \_\_\_\_\_

Product Approval # \_\_\_\_\_

Design Wind Pressures, from RAS 128 or Calculations:

Zone 1': \_\_\_\_\_ Zone 1: \_\_\_\_\_ Zone 2: \_\_\_\_\_

Zone 3: \_\_\_\_\_

Max. Design Pressure, from the specific product approval system: \_\_\_\_\_

Deck Type: \_\_\_\_\_

Gauge / Thickness: \_\_\_\_\_

Slope: \_\_\_\_\_

Anchor/ Base Sheet & No. of Ply(s): \_\_\_\_\_

Anchor/ Base Sheet Fastener/ Bonding Material: \_\_\_\_\_

Insulation Base Layer: \_\_\_\_\_

Base Insulation Size and Thickness: \_\_\_\_\_

Base Insulation Fastener/ Bonding Material: \_\_\_\_\_

Top Insulation Layer: \_\_\_\_\_

Top Insulation Size and Thickness: \_\_\_\_\_

Top Insulation Fastener/Bonding Material: \_\_\_\_\_

Base Sheet(s) & No. of Ply(s): \_\_\_\_\_

Base Sheet Fastener/ Bonding Material: \_\_\_\_\_

Ply Sheet(s) and No. of Ply(s): \_\_\_\_\_

Ply Sheet Fastener/ Bonding Material: \_\_\_\_\_

Top Ply: \_\_\_\_\_

Top Ply Fastener/ Bonding Material: \_\_\_\_\_

Surfacing: \_\_\_\_\_

Fastener Spacing for Anchor/Base Sheet Attachment:

Zone 1' \_\_\_\_\_ " oc @ Laps, # Rows \_\_\_\_\_ @ \_\_\_\_\_ " oc

Zone 1 \_\_\_\_\_ " oc @ Laps, # Rows \_\_\_\_\_ @ \_\_\_\_\_ " oc

Zone 2 \_\_\_\_\_ " oc @ Laps # Rows \_\_\_\_\_ @ \_\_\_\_\_ " oc

Zone 3 \_\_\_\_\_ " oc @ Laps, # Rows \_\_\_\_\_ @ \_\_\_\_\_ " oc

Number of Fasteners Per Insulation Board

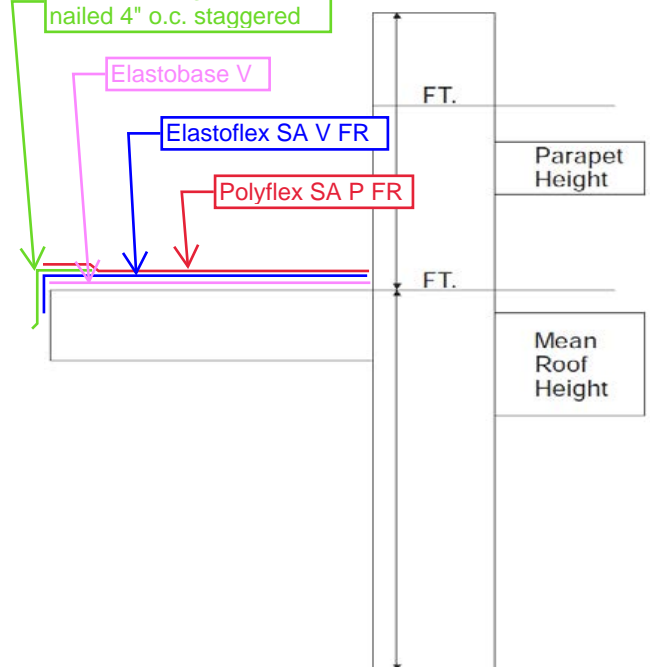
Zone 1: \_\_\_\_\_ Zone1: \_\_\_\_\_ Zone 2: \_\_\_\_\_ Zone 3: \_\_\_\_\_

Illustrated Components Noted and Details as Applicable:

Woodblocking, Gutter, Edge Termination, Stripping, Flashing, Continuous Cleat, Cant Strip, Base Flashing, Counterflashing, Coping, Etc.

Indicate: Mean Roof Height, Parapet Height, Height Base Flashing, Component Material, Material Thickness, Fastener Type, Fastener Spacing or Submit Manufactures Details that Comply with RAS 111 and Chapter 16.

3"x3" min. edge metal; nailed 4" o.c. staggered



FBC 2023 – RAS 128  
 Low-slope (flat) Design Wind Uplift Pressures  
 (Based on Miami-Dade residential wind speed of 175 mph)

**TABLE 1**  
 MINIMUM ASD DESIGN WIND UPLIFT PRESSURES IN PSF  
 FOR ROOF SLOPE—LESS THAN 1<sup>1</sup>/<sub>2</sub>:12  
 RISK CATEGORY II EXPOSURE CATEGORY “C”

Eave Height	Roof Pressure Zones			
	1'	1	2	3
≤ 15'	-37	-64	-84	-115
> 15' to ≤ 20'	-39	-68	-89	-122
> 20' to ≤ 25'	-41	-71	-94	-128
> 25' to ≤ 30'	-42	-74	-97	-133
> 30' to ≤ 35'	-44	-76	-101	-137
> 35' to ≤ 40'	-45	-78	-103	-141
> 40' to ≤ 45'	-46	-80	-106	-145
> 45' to ≤ 50'	-47	-82	-109	-148
> 50' to ≤ 55'	-48	-84	-111	-151
> 55' to ≤ 60'	-49	-85	-113	-154

**TABLE 2**  
 MINIMUM ASD DESIGN WIND UPLIFT PRESSURES IN PSF  
 FOR ROOF SLOPE—LESS THAN 1<sup>1</sup>/<sub>2</sub>:12  
 RISK CATEGORY II EXPOSURE CATEGORY “D”

Eave Height	Roof Pressure Zones			
	1'	1	2	3
≤ 15'	-45	-77	-102	-139
> 15' to ≤ 20'	-47	-81	-107	-146
> 20' to ≤ 25'	-49	-85	-112	-152
> 25' to ≤ 30'	-50	-87	-115	-157
> 30' to ≤ 35'	-52	-90	-118	-161
> 35' to ≤ 40'	-53	-92	-121	-165
> 40' to ≤ 45'	-54	-94	-124	-169
> 45' to ≤ 50'	-55	-96	-126	-172
> 50' to ≤ 55'	-56	-97	-128	-175
> 55' to ≤ 60'	-57	-99	-130	-177

FOR REFERENCE ONLY

TABLE 1G: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF) SYSTEM TYPE E-2: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET (NAILS), BONDED ROOF COVER							
System No.	Deck <a href="#">(Note 1)</a>	Base Sheet			Roof Cover <a href="#">(Note 15)</a>		MDP <a href="#">(psf)</a>
		Type	Fasten <a href="#">(Note 11)</a>	Attach	Base Ply	Cap Ply	
<b>SELF-ADHERING BASE PLY:</b>							
W-74.	Min. 15/32-inch (existing) or min. 19/32-inch (new) APA rated CDX plywood	PolyAnchor, loose-laid with 4-inch laps followed by Elastobase SA, self-adhered	32 ga., 1-5/8-inch diameter tin caps with 12 ga. annular ring shank nails	6-inch o.c. at min. 4-inch lap and 9-inch o.c. at three (3), equally spaced, staggered center rows	SBS-SA	SBS-SA	-45.0*
W-75.	Min. 19/32-inch APA rated CDX plywood	Elastobase V, Elastobase P (poly-film top)	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 (3), equally spaced, staggered center rows	SBS-SA	SBS-SA, APP-SA, SBS-TA, APP-TA	-60.0
W-76.	Min. 15/32-inch (existing) or min. 19/32-inch (new) APA rated CDX plywood	Elastobase P (poly-film top)	32 ga., 1-5/8-inch diameter tin caps with 12 ga. annular ring shank nails	7-inch o.c. at min. 4-inch lap and 7-inch o.c. at four (4), equally spaced center rows	SBS-SA or SBS-TA	SBS-SA, APP-SA, SBS-TA or APP-TA	-75.0
W-77.	Min. 19/32-inch APA rated CDX plywood	Elastobase V, Elastobase P (poly-film top)	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 (4), equally spaced, staggered center rows	SBS-SA	SBS-SA, APP-SA, SBS-TA, APP-TA	-97.5
W-78.	Min. 19/32-inch APA rated CDX plywood	Elastobase V, Elastobase P (poly-film top)	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails. <i>Note: Tin caps are to be primed with PG100 or ASTM D41 primer.</i>	6-inch o.c. in 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	Elastoflex SA V (2.0mm), Elastoflex SA V FR (2.0mm), Elastoflex SA V Plus (2.5mm) or Elastoflex SA V Plus FR (2.5mm)	SBS-SA, APP-SA, SBS-TA, APP-TA	-112.5

TABLE 1H: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER SYSTEM TYPE E-2: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET (SCREWS & PLATES), BONDED ROOF COVER							
System No.	Deck <a href="#">(Note 1)</a>	Base Sheet			Roof Cover <a href="#">(Note 15)</a>		MDP <a href="#">(psf)</a>
		Type	Fasten <a href="#">(Note 11)</a>	Attach	Base Ply	Cap	
<b>NO BASE PLY:</b>							
W-79.	Min. 19/32-inch APA rated CDX plywood	Elastobase V, Elastobase P, Elastovent or Polyglass G2 Base	#14 Polygrip with Polygrip Hex Plate, OMG #14 Roofgrip with Accutrac Flat Bottom or Trufast #14 HD with Trufast 3" Metal Insulation Plate	12-inch o.c. in 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	None	SBS-AA, SBS-TA, APP-TA	-52.5
W-80.	Min. 19/32-inch APA rated CDX plywood	Elastobase V, Elastobase P or Elastovent	OMG #12 Roofgrip with OMG Accutrac Flat Bottom	12-inch o.c. in 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	None	SBS-AA, SBS-TA, APP-TA	-60.0
W-81.	Min. 19/32-inch APA rated plywood	Elastobase V, Elastobase P or Elastovent	Trufast Versa Fastener (min. 3/4" penetration) & Plate; 2 screws per plate installed 180° into the holes of the plate, parallel to the width-direction of the sheet*	12-inch o.c. at min. 4-inch lap and 12-inch o.c. at two (2), equally spaced, staggered center rows	None	SBS-AA, SBS-TA, APP-TA	-67.5
		<i>Note: *For re-roof or recover construction, field withdrawal resistance testing <a href="#">(Note 11)</a> shall yield MCRF &gt; 199 lbf. Additional Versa-Fast Fastener within each Versa-Fast Plate may be utilized to produce Minimum Characteristic Resistance Force (MCRF)</i>					

MEMBRANE / ADHESIVE COMBINATIONS			
REFERENCE	LAYER	MATERIAL	APPLICATION
SBS-SA	Base Ply	One or more plies Elastobase SA, Elastoflex SA V (2.0mm), <b>Elastoflex SA V FR</b> (2.0mm), Elastoflex SA V Plus (2.5mm), Elastoflex SA V Plus FR (2.5mm) or Elastoflex SA Base	Self-Adhering
	Cap Ply	Elastoflex SA P, Elastoflex SA P FR, Polyfresko G SBS SA, Polyfresko G SBS SA FR	
	<b>Note:</b>	<b>Unless otherwise noted, permissible membrane substrates for SBS-SA are limited to the SBS-SA Base Ply options herein, Elastobase V or Elastobase P with a poly-film top surface.</b>	
APP-CA1	Cap Ply	Polyflex G FR	PG350 at 1.5-2.0 gal/square
APP-TA	Base Ply or Ply	One or more plies Polybase V, Polyflex, Polybond	Torch-Applied
	Cap Ply	Polyflex, Polyflex G, Polyflex G FR, Polybond, Polybond G, Polyfresko G, Polyfresko G FR	
APP-SA	Cap Ply	Polyflex SA P, <b>Polyflex SA P FR</b> , Polyfresko G SA, Polyfresko G SA FR, Polykool	Self-Adhering
	<b>Note:</b>	<b>Unless otherwise noted, permissible membrane substrates for APP-SA are limited to the SBS-SA Base Ply options herein, Elastobase V or Elastobase P with a poly-film top surface.</b>	
SBS-LRF-CR	Base Ply	Modifleece	Polyglass LRF CR, spatter-applied at 3.75 lbs/square
SBS-LRF-M-PG	Base Ply	Modifleece	Polyglass LRF M-PG, Low-Pressure Spray at 0.55 to 0.75 gal/square
SBS-LRF-PG-ECO	Base Ply	Modifleece	Polyglass LRF-PG ECO, spatter-applied at 0.3 gal./square
SBS-LRF-OB500	Base Ply	Modifleece	OlyBond 500 Canister, spatter-applied at 0.32 gal/square

- 15A DETEC Systems “TruGround® Conductive Primer” may be applied to DensDeck Prime and SECURROCK Gypsum-Fiber Roof Board with no adverse effect on system wind uplift performance.
- 15B Surfacing materials which hold current FBC Approval for use over modified bitumen membranes may be applied to the Cap Ply without adverse effect on the system wind load performance. Refer to current Polyglass or KM Coatings [Florida Product Approval](#) or [Miami-Dade NOA](#) for approved surfacing materials and a Roofing Materials Directory for fire ratings associated with surfacing usage.
- 16 **Thermal Barrier and/or Vapor or Air Barrier Options:**
- 16A **Structural Concrete Decks:** The lesser of the MDP listings below vs. that for the selected assembly applies.

VAPOR OR AIR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK; ADHERED INSULATION					
OPTION #	PRIMER	VAPOR OR AIR BARRIER		INSULATION ADHESIVE PER <a href="#">TABLE 3A</a> <a href="#">(NOTES 6,7,8)</a>	MDP (psf)*
		TYPE	APPLICATION		
C-VB-1.	PG100	Elastoflex SA V (2.0mm)	Self-Adhering	INSTA STIK or P-LRF-CR, 12-inch o.c.	-60.0
C-VB-2.	PG100	Polybase V	Torch-applied	INSTA STIK or P-LRF-CR, 12-inch o.c.	-75.0
C-VB-3.	PG100	Elastoflex SA P, Polyfresko G SBS SA	Self-Adhering	INSTA STIK, 12-inch o.c.	-75.0
C-VB-4.	PG100	Polyflex or Polybond	Torch-applied	P-LRFM, M-PG-1, OB500 or P-LRF-CR, 12-inch o.c.	-135.0
C-VB-5.	PG100	Elastoflex SA P, Polyfresko G SBS SA	Self-Adhering	P-LRFM, 12-inch o.c.	-157.5
C-VB-6.	PG100	Polyflex or Polybond	Torch-applied	P-LRFM, M-PG-1, OB500 or P-LRF-CR, 6-inch o.c.	-185.0
C-VB-7.	None	PolyVap SA S	Self-adhering	P-LRFM or P-LRFM-PG, 6-inch o.c.	-202.5
C-VB-8.	PG100	Elastoflex SA P, Polyfresko G SBS SA	Self-Adhering	P-LRF-CR, 12-inch o.c.	-270.0
C-VB-9.	PG100	Elastobase SA, Elastoflex SA V (2.0mm), Elastoflex SA V FR (2.0mm), Elastoflex SA V Plus (2.5mm) or Elastoflex SA V Plus FR (2.5mm) (with sanded-top-surface)	Self-Adhering	P-LRFM, M-PG-1, OB500 or P-LRF-CR, 12-inch o.c.	-240.0
C-VB-10.	PG100	SBS-TA (with sanded-top-surface)	Torch-applied	P-LRFM, M-PG-1, OB500 or P-LRF-CR, 12-inch o.c.	-240.0



October 1, 2024

ROOF COVERINGS ATTACHMENT CALCULATIONS

Client: XYZ Roofing

All calculations are based on FBC 2023 8<sup>th</sup> Edition and ASCE 7-22

Project Criteria and Coefficients:

Location: 1234 Main St, Miami, FL (Miami-Dade County – HVHZ)

Construction Type: Reroof

Risk Category: II

ASCE 7-22, TABLE 1.5-1

Exposure: C

ASCE 7-22, SECT. 26.7.3

Basic Wind Speed: 175 mph

ASCE 7-22, FIGURE 26.5-1

Building Height: <15 feet

Slope: <7 degrees (flat roof)

FIGURE 30.3-2A for GC<sub>p</sub>

Enclosure Class: Enclosed

ASCE 7-22, DEFINITIONS 26.2

K<sub>z</sub>: 0.85

ASCE 7-22, TABLE 26.10-1

K<sub>zt</sub>: 1.0

ASCE 7-22, SECT. 26.8.2

K<sub>d</sub>: 0.85

ASCE 7-22, TABLE 26.6-1

K<sub>e</sub>: 1.0

ASCE 7-22, TABLE 26.9-1

$q_z = 0.00256 * K_z * K_{zt} * K_e * V^2 = 66.64 \text{ lb/ft}^2$

ASCE 7-22, EQN. 26-10-1

GC<sub>pi</sub> = +/- 0.18

ASCE 7-22, TABLE 26.11-1

$P = q_z K_d (GC_p - GC_{pi})$

Uplift Pressures based using ASCE 7-22 (FBC Chapter 16)

**Zone 1': -37 PSF**

GC<sub>p</sub> = -0.9

**Zone 1: -64 PSF**

GC<sub>p</sub> = -1.7

**Zone 2: -85 PSF**

GC<sub>p</sub> = -2.3

**Zone 3: -115 PSF**

GC<sub>p</sub> = -3.2

Zone Widths:

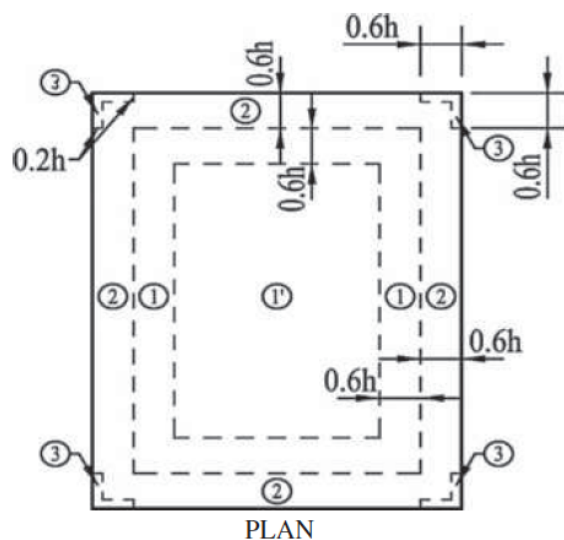
Zone widths based on a building height of 15 feet:

Zone 3:  $(0.6 * H) \times (0.2 * H) = 9' \times 9' \times 3'$

Zone 2:  $(0.6 * H) = 9'$

Zone 1\*:  $(0.6 * H) = 9'$

Zone 1'\*: Building Width – 36'







October 1, 2024

ROOF COVERINGS ATTACHMENT CALCULATIONS

Roof System Data:

FBC HVHZ Approval: FL1654-R35 HVHZ

System No: W-64, Page 16 of 71

Manufacturer: Polyglass, USA

Deck: Min 19/32" Wood Deck, Non-insulated (1" nom. Plank allowed)

Base Sheet: Elastobase V

Fasteners: 32 ga., 1-5/8" dia. tin caps and 11 ga. annular ring shank nails, 8" o.c. at min. 4" lap and 8" o.c. at three (3) equally spaced, staggered center rows.

Base Ply: Elastoflex SA V FR, self-adhered (SBS-SA)

Cap Ply: Polyflex SA P FR, self-adhered (APP-SA)

Maximum Design Pressure: **-60 PSF**

Base Sheet Fastener Spacing Calculations per RAS No. 117

Sheet Width: 39.375 in.

Lap Width: 4 in.

Net sheet width: 2.95 ft.

Net Length per square (B): 33.92 ft

Fastener Spacing at Laps (A): 8 in.

Fastener Spacing at Sheet Rows (A): 8 in.

Total Rows (C): 4 - 1 at lap and 3 in sheet

Fasteners per Square (D): 204 fasteners

$$\left(\frac{1 \text{ fastener}}{A}\right) \times \left(\frac{12 \text{ in.}}{\text{ft.}}\right) \times \left(\frac{B}{\text{row}}\right) \times \left(\frac{C}{\text{square}}\right) = D$$

Fastener Density: 0.49 ft<sup>2</sup> per fastener

Fastener Value: 29.48 lbf (F<sub>y</sub>)

Row spacing (RS4 - 4 rows): 8.8 in.

Row spacing (RS5 - 5 rows): 7 in.

Fastener Spacing:

$$FS = \frac{f_y \times 144}{P \times RS}$$

FS = fastener spacing (in.);

f<sub>y</sub> = fastener value (lbf);

P = design pressure (psf); and

RS = row spacing (in.);

Zone 1' FS where P=Zone 1' **-37 PSF**: 11.4" – use 8" per FPA

Zone 1 FS where P=Zone 1 **-64 PSF**: 6.5" – use 6"

Zone 2 FS where P=Zone 2 **-84 PSF**: 5"

Zone 3 FS where P=Zone 3 **-115 PSF**: 3.6" – use extra row

@RS5: 4.6 – use 4"





YOUR SOLUTION TO ROOFING, WATERPROOFING AND MORE

# BUILDING ENVELOPE ASSOCIATES

Building Envelope Associates  
102 NE 2nd Street, Suite 278  
Boca Raton, FL 33432

774-313-9602  
kelsey@FLBEA.com

October 1, 2024

## ROOF COVERINGS ATTACHMENT CALCULATIONS - SUMMARY

### Uplift Pressures

Zone 1': -37 PSF      Zone 1: -64 PSF      Zone 2: -85 PSF      Zone 3: -115 PSF

### Base Sheet (Elastobase V) Attachment:

Zone 1': Fasten at **8" o.c.** in 4" lap and **8" o.c.** in **three (3)** field rows

Zone 1: Fasten at **6" o.c.** in 4" lap and **6" o.c.** in **three (3)** field rows

Zone 2: Fasten at **5" o.c.** in 4" lap and **5" o.c.** in **three (3)** field rows

Zone 3: Fasten at **4" o.c.** in 4" lap and **4" o.c.** in **four (4)** field rows

### Membranes:

One (1) Ply of Polyglass Elastoflex SA V FR, self-adhered

One (1) Ply of Polyglass Polyflex SA P FR, self-adhered

### UL CLASSIFICATION

The above referenced assemblies achieve UL Class A Classifications in accordance with Polyglass TGFU.R14571, Assembly #49 on page 12/37, shown below.

**49. Deck:** C-15/32

**Incline:** 2

**Insulation (Optional):** — Polyisocyanurate, perlite, wood fiber or polyisocyanurate/perlite board, any thickness.

**Base Sheet:** — "Elastobase" or "Elastovent", mechanically fastened; or "Elastoflex SA V FR" or "Elastoflex SA V Plus FR", self-adhered.

**Ply Sheet (Optional):** — "Elastoflex SA V Plus FR", "Elastoflex SA V FR" or "Elastoflex SA V FR Base Vent", self-adhered.

**Membrane:** — "Polyflex SA P FR", "Polyfresko G SA P FR", "Elastoflex SA P FR" or "Polyfresko G SBS SA P FR", self-adhered; or "Duflex G FR", "XtraFlex APP Dual", "Polyflex G FR", "Modibond G FR", "XtraFlex APP G FR", "Elastoflex S6 G FR", "Polyfresko G SBS FR", "Elastoflex VG FR", "XtraFlex SBS POLY G", "XtraFlex SBS POLY G T", "XtraFlex SBS Glass G", "XtraFlex SBS Glass GT" or "Elastoshield TS G FR", heat fused.

Location: 1234 Main St, Miami, FL (Miami-Dade County – HVHZ)

CALCULATIONS BY:

Kelsey Rae McMenemy, P.E.

No. 89826



High Velocity Hurricane Zone Uniform Roofing Application Form for Miami-Dade County

Section D (Steep Sloped Roof System)

Roof System Manufacturer: \_\_\_\_\_

Product Control Number: \_\_\_\_\_

Minimum Design Wind Pressures, From Applicable RAS 127 Table or Calculations:

Zone1: \_\_\_\_\_ Zone 2: \_\_\_\_\_ Zone3: \_\_\_\_\_

Slope Range: ≥ 2:12 to ≤ 4:12 > 4:12 to ≤ 6:12 > 6:12 to ≤ 12:12

Roof Shape: All Hip Roof Gable Roof or Partial Gable/Hip Roof

Deck Type: \_\_\_\_\_

Underlayment Type: Polystick TU Max; MDP = -165 psf

Roof Slope: \_\_\_\_\_ : 12

Insulation: \_\_\_\_\_

Fire Barrier: \_\_\_\_\_

Ridge Ventilation? \_\_\_\_\_

Fastener Type & Spacing: N/A

Cap Sheet Type: N/A

Mean Roof Height: \_\_\_\_\_

Cap Sheet Attachment: N/A

Roof Covering: \_\_\_\_\_

Drip Edge Type & Size: \_\_\_\_\_

FBC 2023 – RAS 127  
 Steep-slope Design Wind Uplift Pressures  
 (Based on Miami-Dade residential wind speed of 175 mph)

**TABLE 1 – GABLE ROOFS**  
 MINIMUM ASD DESIGN WIND UPLIFT PRESSURES IN PSF  
 FOR ROOF SLOPE – 1.5:12 TO LESS THAN 4.5:12  
 RISK CATEGORY II EXPOSURE CATEGORY “C”

Roof Mean Height	Roof Pressure Zones See Figure 1		
	1	2	3
≤ 15'	-74	-98	-128
> 15' to ≤ 20'	-78	-104	-136
> 20' to ≤ 25'	-82	-108	-142
> 25' to ≤ 30'	-85	-113	-148
> 30' to ≤ 35'	-88	-116	-153
> 35' to ≤ 40'	-91	-120	-157
> 40' to ≤ 45'	-93	-123	-162
> 45' to ≤ 50'	-95	-126	-165
> 50' to ≤ 55'	-97	-128	-169
> 55' to ≤ 60'	-98	-130	-171

**TABLE 7 – HIP ROOFS**  
 MINIMUM ASD DESIGN WIND UPLIFT PRESSURES IN PSF  
 FOR ROOF SLOPE – 1.5:12 TO LESS THAN 4.5:12  
 RISK CATEGORY II EXPOSURE CATEGORY “C”

Roof Mean Height	Roof Pressure Zones See Figure 3		
	1	2	3
≤ 15'	-67	-88	-94
> 15' to ≤ 20'	-71	-93	-100
> 20' to ≤ 25'	-75	-97	-104
> 25' to ≤ 30'	-78	-101	-109
> 30' to ≤ 35'	-80	-105	-113
> 35' to ≤ 40'	-82	-107	-115
> 40' to ≤ 45'	-85	-110	-119
> 45' to ≤ 50'	-86	-112	-121
> 50' to ≤ 55'	-88	-115	-124
> 55' to ≤ 60'	-89	-117	-125

**TABLE 4A: ALLOWABLE DESIGN PRESSURES,  
ADHERED, DIRECT-TO-DECK UNDERLAYMENT SYSTEMS**

Unless otherwise noted, referenced back-nailing shall utilize corrosion resistant "nails and tin caps" meeting the specifications set forth in [FBC HVHZ 1517.5](#).

SYSTEM No.	DECK	PRIMER	JOINT TREATMENT	BASE PLY	CAP PLY	MDP (PSF)
UDL-2.	<b>New:</b> Plywood, APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category <b>Reroof:</b> Plywood, APA rated sheathing, 32/16, Exposure 1, <b>PS1</b> , 15/32 category	(Optional) PG100 or ASTM D41	Elastoflex SA V Flashing Strips	(Optional) Polystick MTS Plus, self-adhered and back-nailed <a href="#">back-nailed</a> max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-135.0
UDL-3.	Nominal 1-inch <b>wood plank</b>	(Optional) PG100 or ASTM D41	None	(Optional) Polystick MTS Plus, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-150.0
<b>UDL-4.</b>	<b>New:</b> Plywood, APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category <b>Reroof:</b> Plywood, APA rated sheathing, 32/16, Exposure 1, <b>PS1</b> , 15/32 category	None	None	None	Polystick TU Max, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	<b>-165.0</b>
UDL-5.	<b>New:</b> Plywood, APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category <b>Reroof:</b> Plywood, APA rated sheathing, 32/16, Exposure 1, <b>PS1</b> , 15/32 category	(Optional) PG100 at 0.5 gal/sq.	None	Polystick MTS Plus, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	Polystick TU Max, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-202.5
UDL-6.	<b>New:</b> Plywood, APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category <b>Reroof:</b> Plywood, APA rated sheathing, 32/16, Exposure 1, <b>PS1</b> , 15/32 category	PG100 at 0.5 gal/sq.	None	None	Polystick TU Max, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-255.0
UDL-7.	Structural concrete	PG100 or ASTM D41	None	(Optional) Polystick MTS Plus, self-adhered and back-nailed using FBC HVHZ approved fasteners and plates, max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and back-nailed using FBC HVHZ approved fasteners and plates, max. 12-inch o.c.	-202.5
UDL-8.	Structural concrete	PG100 or ASTM D41	None	None	Elastoflex S6 G, applied in full mopping of hot asphalt and back-nailed using FBC HVHZ approved fasteners and plates, max. 12-inch o.c. or Polyflex G, torch-applied and back-nailed using FBC HVHZ approved fasteners and plates, max. 12-inch o.c.	-622.5

**TABLE 4B: ALLOWABLE DESIGN PRESSURES,  
MECHANICALLY ATTACHED, MULTI-PLY UNDERLAYMENT SYSTEMS**

\*\*Nails shall be corrosion resistant and be of sufficient length to penetrate through the sheathing by min. 3/16-inch

Unless otherwise noted, referenced back-nailing shall utilize corrosion resistant "nails and tin caps" meeting the specifications set forth in [FBC HVHZ 1517.5](#).

SYSTEM No.	DECK	BASE SHEET		BASE PLY	CAP PLY	MDP (PSF)
		TYPE	ATTACH			
UDL-9.	<b>Plywood</b> , APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8" diameter tin caps; 6-inch o.c. at the 4-inch wide side laps and 12-inch o.c. at two (2) equally spaced center rows.	(Optional) Polystick MTS Plus, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-45.0

High Velocity Hurricane Zone Uniform Roofing Application Form for Miami-Dade County

Section D (Steep Sloped Roof System)

Roof System Manufacturer: \_\_\_\_\_

Product Control Number: \_\_\_\_\_

Minimum Design Wind Pressures, From Applicable RAS 127 Table or Calculations:

Zone1: \_\_\_\_\_ Zone 2: \_\_\_\_\_ Zone3: \_\_\_\_\_

Slope Range: ≥ 2:12 to ≤ 4:12 > 4:12 to ≤ 6:12 > 6:12 to ≤ 12:12

Roof Shape: All Hip Roof Gable Roof or Partial Gable/Hip Roof

Deck Type: \_\_\_\_\_

Underlayment Type: Polyanchor HV

Roof Slope: \_\_\_\_\_ : 12

Insulation: \_\_\_\_\_

Fire Barrier: \_\_\_\_\_

Ridge Ventilation? \_\_\_\_\_

Fastener Type & Spacing: 12 ga. RS nails and tin caps

Cap Sheet Type: Polystick TU Max; MDP = -135 psf

Mean Roof Height: \_\_\_\_\_

Cap Sheet Attachment: self-adhered

Roof Covering: \_\_\_\_\_

Drip Edge Type & Size: \_\_\_\_\_

**TABLE 4B: ALLOWABLE DESIGN PRESSURES,  
MECHANICALLY ATTACHED, MULTI-PLY UNDERLAYMENT SYSTEMS**

\*\*Nails shall be corrosion resistant and be of sufficient length to penetrate through the sheathing by min. 3/16-inch

Unless otherwise noted, referenced back-nailing shall utilize corrosion resistant “nails and tin caps” meeting the specifications set forth in [FBC HVHZ 1517.5](#).

SYSTEM No.	DECK	BASE SHEET		BASE PLY	CAP PLY	MDP (psf)
		TYPE	ATTACH			
UDL-17.	<b>Plywood</b> , APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category	Elastobase V (poly-film top surface)	Min. 11 ga. x 3/8-inch head-diameter, annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 4-inch o.c. at the 4-inch wide side laps and 4-inch o.c. at four (4) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-97.5
UDL-18.	<b>New:</b> Plywood, APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category <b>Reroof:</b> Plywood, APA rated sheathing, 32/16, Exposure 1, <b>PS1</b> , 15/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 5-inch o.c. at the 4-inch wide side laps and 5-inch o.c. at four (4) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-105.0
UDL-19.	<b>Plywood</b> , APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 6-inch o.c. at the 2-inch wide side laps and 6-inch o.c. at three (3) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-112.5
UDL-20.	<b>Plywood</b> , APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 5-inch o.c. at the 4-inch wide side laps and 5-inch o.c. at three (3) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-120.0
UDL-21.	<b>Plywood</b> , APA rated sheathing, 40/20, Exposure 1, <b>PS1</b> , 19/32 category	PolyAnchor HV	Min. 12 ga. annular ring shank roofing nails** with 32 ga., 1-5/8-inch diameter tin caps; 6-inch o.c. at the 4-inch wide side laps and 6-inch o.c. at four (4) equally spaced staggered center rows.	(Optional) Polystick MTS Plus, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	Polyflex SA P, Polyflex SA P FR, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick MTS Plus or Polystick XFR, self-adhered and <a href="#">back-nailed</a> max. 12-inch o.c.	-135.0

5.9 Exposure Limitations:

TABLE 5: EXPOSURE LIMITATIONS		
UNDERLAYMENT	PREPARED ROOF COVER INSTALLATION TYPE	MAXIMUM EXPOSURE (DAYS)
Elastobase V, Elastobase P, Polyglass G2 Base or PolyAnchor HV	Mechanically attached	30
Polystick IR-Xe	Mechanically attached	90
Polystick MTS Plus, Polystick TU Max, Polystick TU P or Polystick XFR	Any type (per <a href="#">Table 2</a> )	180
Polystick TU Plus	Any type (per <a href="#">Table 2</a> )	360
Elastoflex S6 G or Polyflex SA P	Adhesive-set tile roof system	180
Elastoflex S6 G, Elastoflex S6 G FR, Polyflex G, Polyflex G FR, Polyflex SA P or Polyflex SA P FR	Mechanically attached	UNLIMITED