



Roofers Application Packet

BUILDING DEPARTMENT

Revision Date: 11/30/2022

Form I.D. Number: 013.1

On December 31, 2020, the building code for Broward County changed from the 2017 Florida Building Code 6th Edition to the 2020 Florida Building Code 7th Edition with High Velocity Hurricane Zone Requirements. The following is a brief summary of the changes for Roofing:

- Roofing requirements will be from Chapter 15 of the 2020 Florida Building Code 7th Edition and the supplemental "Test Protocols for High Velocity Hurricane Zones."
- The High Velocity Hurricane Zone Uniform Permit Application" form is required for every permit issued. See attachment.
- All roofing work shall be in accordance with Dade County Notices of Acceptance and Roof Application Standards (R.A.S.)
- Other components such as roof vents and skylights must have Notice of Acceptance at time of permit.
- All re-roofs require an "Owner Notification for Roofing Considerations" form completed at time of permit. See attachment.
- Tile roofing permits require uplift calculations using method 1, 2 or 3 of Section E in the Uniform Permit Application.
- All nails used for roofing are to be ring shank and meet ASTM G85 standards for corrosion resistance.
- All tile roofs require an uplift test to be performed before final approval.
- Cap sheet in progress inspections are required for all deck types.
- Shingle roofs cannot be applied to roofs over 33 feet in mean height unless allowed by N.O.A.
- The only prescriptive roof system shall be in accordance with R.A.S. 150 "Built-up Roof Standard."
- For re-roofs, roof sheathing to be re-nailed per FBC 2322.2.8.

You will need to purchase a copy of the 2020 Florida Building Code 7th Edition and "Test Protocols for High Velocity Hurricane Zones" to understand all requirements.



SECTION 1524
HIGH-VELOCITY HURRICANE ZONES-
REQUIRED OWNERS NOTIFICATION FOR ROOFING CONSIDERATIONS

1524.1 SCOPE.

As it pertains to this section, it is the responsibility of the roofing contractor to provide the owner with the required roofing permit, and to explain to the owner the content of this section. The provisions of Chapter 15 of the Florida Building Code, Building govern the minimum requirements and standards of the industry for roofing system installations. Additionally, the following items should be addressed as part of the agreement between the owner and the contractor. The owner's initial in the designated space indicates that the item had been explained.

- 1. Aesthetics – workmanship. Reserved
2. Re-nailing wood decks. When replacing roofing, the existing wood roof deck may have to be re-nailed in accordance with the current provisions of Chapter 16 (High Velocity Hurricane Zones) of the Florida Building Code, Building. (The roof deck is usually concealed prior to removing the existing roof system.)
3. Common roofs. Reserved
4. Exposed ceilings. Exposed, open beam ceilings are where the underside of the roof decking can be viewed from below. The owner may wish to maintain the architectural appearance; therefore, roofing nail penetrations of the underside of the decking may not be acceptable. The owner provides the option of maintaining this appearance.
5. Ponding water. Reserved.
6. Overflow scuppers (wall outlets). It is required that rainwater flow off so that the roof is not overloaded from a buildup of water. Perimeter/edge walls or other roof extensions may block this discharge if overflow scuppers (wall outlets) are not provided. It may be necessary to install overflow scuppers in accordance with the requirements of Chapter 15 and 16 herein and the Florida Building Code, Plumbing.

Owner's/Agent's Signature

Date

Contractor's Signature

Date



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SECTION 1525 HIGH-VELOCITY HURRICANE ZONES—UNIFORM PERMIT APPLICATION

Florida Building Code 7th Edition (2020)
High-Velocity Hurricane Zone Uniform Permit Application Form

INSTRUCTION PAGE

COMPLETE THE NECESSARY SECTIONS OF THE UNIFORM ROOFING PERMIT APPLICATION FORM AND ATTACH THE REQUIRED DOCUMENTS AS NOTED 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
Prescriptive BUR-RAS 150	A,B,C	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 of Product Approval
5.	Municipal Permit Application
6.	Owners Notification for Roofing Considerations (Reroofing Only)
7.	Any Required Roof Testing/Calculation Documentation



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Section A (General Information)

Master Permit No. _____ Process No. _____

Contractor's Name _____

Job Address _____

ROOF CATEGORY

- | | | |
|--------------------|----------------------------|---------------------------|
| Low Slope | Mechanically Fastened Tile | Mortar/Adhesive Set Tiles |
| Asphaltic Shingles | Metal Panel/Shingles | Wood Shingles/Shakes |
| | Prescriptive BUR-RAS 150 | |

ROOF TYPE

- | | | | | |
|----------|--------|-------------|-----------|------------|
| New Roof | Repair | Maintenance | Reroofing | Recovering |
|----------|--------|-------------|-----------|------------|

ROOF SYSTEM INFORMATION

Low Slope Roof Area(SF):	Steep Sloped Roof Area(SF):	Total(SF):
--------------------------	-----------------------------	------------



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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.



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Section C (Low Slope Application)

Fill in specific roof assembly components and identify manufacturer (If a component is not used, identify as "NA").

System Manufacturer: _____ Product Approval No: _____

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 & Thickness: _____

Base Insulation Fastener/Bonding Material: _____

Top Insulation Layer: _____ Top Insulation Size & Thickness: _____

Top Insulation Fastener/Bonding Material: _____

Base Sheet(s) & No. of Ply(s): _____

Base Sheet Fastener/Bonding Material: _____

Ply Sheet(s) & No. of Ply(s): _____

Ply Sheet Fastener/Bonding Material: _____

Top Ply: _____

Top Ply Fastener/Bonding Material: _____

Surfacing: _____



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Fastener Spacing for Anchor/Base Sheet Attachment:

Zone 1': _____ " oc @ Lap, # Rows _____ @ _____ " oc

Zone 1: _____ " oc @ Lap, # Rows _____ @ _____ " oc

Zone 2: _____ " oc @ Lap, # Rows _____ @ _____ " oc

Zone 3: _____ " oc @ Lap, # Rows _____ @ _____ " oc

Number of Fasteners Per Insulation Board:

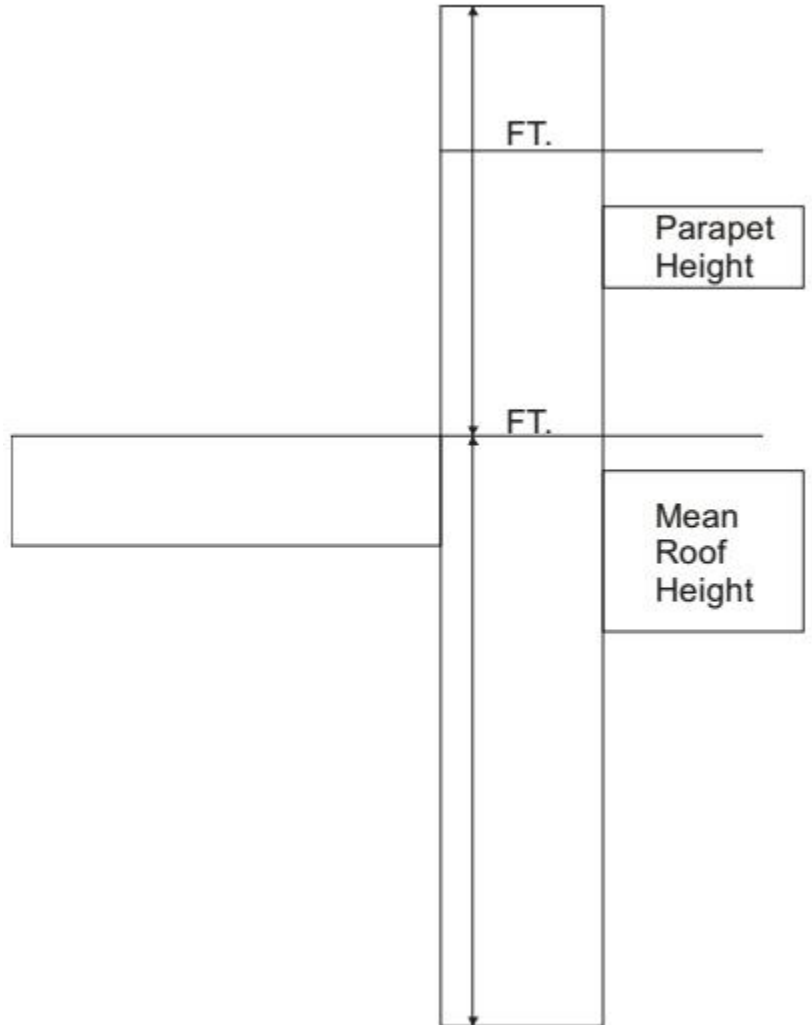
Zone 1': _____ Zone 1: _____ Zone 2: _____ Zone 3: _____

Illustrate Components Noted and Details as Applicable:

Wood Blocking, Gutter, Edge Termination, Stripping, Flashing, Continuous Cleat, Cant Strip, Base Flashing, Counter Flashing, Coping, Etc.

Indicate:

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





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Section D (Steep Sloped Roof System)

Roof System Manufacturer: _____

Notice of Acceptance Number: _____

Minimum Design Wind Pressures, If Applicable (From RAS 127 or Calculations):

Zone 1: _____ Zone 2e: _____ Zone 2n: _____ Zone 2r: _____ Zone 3e: _____ Zone 3r: _____

Deck Type:

Type Underlayment:

Insulation:

Fire Barrier:

Fastener Type & Spacing:

Adhesive Type:

Type Cap Sheet:

Roof Covering:

Type & Size Drip Edge:

Roof Slope:
_____: 12

Ridge Ventilation?

Mean Roof Height: _____



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Section E (Tile Calculations)

For Moment based tile systems, choose either Method 1 or 2. Compare the values for M_r with the values from M_f . If the M_f values are greater than or equal to the M_r values, for each area of the roof, then the tile attachment method is acceptable.

Method 1 "Moment Based Tile Calculations Per RAS 127"

(Zone 1: _____ \times λ _____ = _____) – Mg: _____ = M_{r1} _____ Product Approval M_f _____

(Zone 2e: _____ \times λ _____ = _____) – Mg: _____ = M_{r2e} _____ Product Approval M_f _____

(Zone 2n: _____ \times λ _____ = _____) – Mg: _____ = M_{r2n} _____ Product Approval M_f _____

(Zone 2r: _____ \times λ _____ = _____) – Mg: _____ = M_{r2r} _____ Product Approval M_f _____

(Zone 3e: _____ \times λ _____ = _____) – Mg: _____ = M_{r3e} _____ Product Approval M_f _____

(Zone 3r: _____ \times λ _____ = _____) – Mg: _____ = M_{r3r} _____ Product Approval M_f _____

Method 2 "Simplified Tile Calculations Per Table Below"

Required Moment of Resistance (M_r) From Table Below _____ Product Approval M_f _____

M _r Required Moment Resistance*					
Mean Roof Height Roof Slope	15'	20'	25'	30'	40'
2:12	34.4	36.5	38.2	39.7	42.2
3:12	32.2	34.4	36.0	37.4	39.8
4:12	30.4	32.2	33.8	35.1	37.3
5:12	28.4	30.1	31.6	32.8	34.9
6:12	26.4	28.0	29.4	30.5	32.4
7:12	24.4	25.9	27.1	28.2	30.0

*Must be used in conjunction with a list of moment based tile systems endorsed by the Broward County Board of Rules and Appeals.

For Uplift based tile systems use Method 3. Compare the values for F' with the values for F_r . If the F' values are greater than or equal to the F_r values, for each area of the roof, then the tile attachment method is acceptable.



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Method 3 "Uplift Based Tile Calculations Per RAS 127"

(Zone 1: ___ x L ___ = ___ x w: = ___) – W: ___ x cos r ___ = F_{r1} ___ Prod Appr F' ___

(Zone 2e: ___ x L ___ = ___ x w: = ___) – W: ___ x cos r ___ = F_{r2e} ___ Prod Appr F' ___

(Zone 2n: ___ x L ___ = ___ x w: = ___) – W: ___ x cos r ___ = F_{r2n} ___ Prod Appr F' ___

(Zone 2r: ___ x L ___ = ___ x w: = ___) – W: ___ x cos r ___ = F_{r2r} ___ Prod Appr F' ___

(Zone 3e: ___ x L ___ = ___ x w: = ___) – W: ___ x cos r ___ = F_{r3e} ___ Prod Appr F' ___

(Zone 3r: ___ x L ___ = ___ x w: = ___) – W: ___ x cos r ___ = F_{r3r} ___ Prod Appr F' ___

Where to Obtain Information		
Description	Symbol	Where to find
Design Pressure	Zones 1, 2e, 2n, 2r, 3e, 3r	From applicable table in RAS 127 or by an engineering analysis prepared by PE based on ASCE 7
Mean Roof Height	H	Job Site
Roof Slope	θ	Job Site
Aerodynamic Multiplier	λ	Product Approval
Restoring Moment due to Gravity	M_g	Product Approval
Attachment Resistance	M_f	Product Approval
Required Moment Resistance	M_g	Calculated
Minimum Attachment Resistance	F'	Product Approval
Required Uplift Resistance	F_r	Calculated
Average Tile Weight	W	Product Approval
Tile Dimensions	L = length W = width	Product Approval
All calculations must be submitted to the building official at the time of permit application.		



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SIMPLIFIED ROOF UPLIFT CHART FOR ROOFING APPLICATIONS													
This simplified chart represents the worst case wind pressures for the various roof slopes and heights. This chart is based on a Tributary Area = 10 SF which is required for roofing applications. If the roof height is less than 30 feet, but not exactly 15, 20, or 25 feet, you will need to go to the next higher roof height. If your roof height is higher than 30 feet, these charts do not apply. Refer to Roof Chart Diagrams on Page 1 for Roof Zone Locations													
Mean Roof Height = 15 Feet													
Flat Roof		Gable Roof 1.51 to 4:12			Gable Roof 4.1 to 6:12		Gable Roof 6.1: to 12:12		Hip Roof 1.51 to 4:12			Hip Roof 4.1 to 6:12	
Positive*	15.4/38.0		Positive	23.2	Positive	23.2	Positive	34.7		Positive	28.3	Positive	28.3
Zone		Zone	Roof	Overhang	Roof	Overhang	Roof	Overhang	Zone	Roof	Overhang	Roof	Overhang
1	-60.5	1, 2e	-70.1	-80.4	-54.0	-64.3	-63.7	-83.6	1	-63.7	-74.0	-50.8	-60.8
1'	-34.8	2n & 2r	-102	-113	-86.2	-96.5	-70.1	-90.1	2e	-89.4	-99.7	-70.1	-79.0
2	-79.8	3e	-102	-132	-86.2	-116	-86.7	-107	2r	-83.0	-93.3	-70.1	-79.0
3*	-109	3r	-122	-151	-102	-128	-70.1	-90.1	3	-89.4	-119	-70.1	-95.3
Mean Roof Height = 20 Feet													
Flat Roof		Gable Roof 1.51 to 4:12			Gable Roof 4.1 to 6:12		Gable Roof 6.1: to 12:12		Hip Roof 1.51 to 4:12			Hip Roof 4.1 to 6:12	
Positive*	16.4/40.3		Positive	24.6	Positive	24.6	Positive	36.9		Positive	30.1	Positive	30.1
Zone		Zone	Roof	Overhang	Roof	Overhang	Roof	Overhang	Zone	Roof	Overhang	Roof	Overhang
1	-64.2	1, 2e	-74.5	-85.4	-57.4	-68.3	-67.7	-88.9	1	-67.6	-78.6	-54.0	-64.6
1'	-36.9	2n & 2r	-109	-120	-91.5	-102	-74.5	-95.7	2e	-95.0	-106	-74.5	-84.0
2	-84.8	3e	-109	-140	-91.5	-123	-92.1	-113	2r	-88.1	-99.1	-74.5	-84.0
3*	-116	3r	-129	-161	-108	-136	-74.5	-95.7	3	-95.0	-126	-74.5	-101
Mean Roof Height = 25 Feet													
Flat Roof		Gable Roof 1.51 to 4:12			Gable Roof 4.1 to 6:12		Gable Roof 6.1: to 12:12		Hip Roof 1.51 to 4:12			Hip Roof 4.1 to 6:12	
Positive*	17.2/42.3		Positive	25.8	Positive	25.8	Positive	38.7		Positive	31.5	Positive	31.5
Zone		Zone	Roof	Overhang	Roof	Overhang	Roof	Overhang	Zone	Roof	Overhang	Roof	Overhang
1	-67.3	1, 2e	-78.1	-89.5	-60.2	-71.6	-70.9	-93.1	1	-70.9	-82.4	-58.6	-67.7
1'	-38.7	2n & 2r	-114	-125	-96	-107	-78.1	-100	2e	-99.6	-111	-78.1	-88.0
2	-88.8	3e	-114	-147	-96	-129	-96.6	-119	2r	-92.4	-104	-78.1	-88.0
3*	-121	3r	-135	-168	-113	-143	-78.1	-100	3	-99.6	-133	-78.1	-106
Mean Roof Height = 30 Feet													
Flat Roof		Gable Roof 1.51 to 4:12			Gable Roof 4.1 to 6:12		Gable Roof 6.1: to 12:12		Hip Roof 1.51 to 4:12			Hip Roof 4.1 to 6:12	
Positive*	17.9/43.9		Positive	26.8	Positive	26.8	Positive	40.2		Positive	32.8	Positive	32.8
Zone		Zone	Roof	Overhang	Roof	Overhang	Roof	Overhang	Zone	Roof	Overhang	Roof	Overhang
1	-70.0	1, 2e	-81.1	-93.1	-62.6	-74.5	-73.7	-96.8	1	-73.7	-85.6	-58.8	-70.4
1'	-40.2	2n & 2r	-118	-130	-99.8	-112	-81.1	-104	2e	-103	-115	-81.1	-91.4
2	-92.3	3e	-118	-153	-99.8	-134	-100	-123	2r	-96.0	-108	-81.1	-91.4
3*	-126	3r	-141	-175	-118	-148	-81.1	-104	3	-103	-138	-81.1	-110

* If Parapet >= 3 Ft occurs around entire building use the same Zone 2 pressure for Zone 3 and use the higher positive pressure shown